DMEA 3396

DOCKET INDEX

ACTION DOCUMENTS

1	APPLICATION	DATE RECEIVED	10-29-54
2	CONTRACT	DATE	5-17-55
3	TERMINATION AGREEMENT	DATE	6-8-56
4	CERTIFICATION	DATE	
5	AUDIT REPORT	DATE	
6	AMENDMENTS - NUMBERS 1	DATE	2.8.56

Docket copy

Robin Sawyer
"Appd. Sec. Off."
J. Alt
Winwood
Chambers
Martin
E. Johnson

TERMINATION AGREEMENT

It is agreed this 8th day of June, 1956, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and Yuba Dike Mines, Incorporated, hereinafter called the "Operator," parties to that certain Exploration Project Contract Idm-8798 (Docket No. DMEA-1396), dated May 17, 1955, hereinafter called the "Contract," that:

1. Effective January 21, 1956, 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 only to the fixed unit costs of work performed prior to said effective date.

3. The Operator shall promptly perform all winding-up and settlement actions provided for in the Contract, including the rendering of the final report and final account, and shall keep and preserve records as required by the Contract.

4. 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 C. M. Mitchendorf
Administrator, Defense Minerals
Exploration Administration

YUBA DIKE MINES, INCORPORATED

By Robert Belman
Title President

APPROVED
JUN 26 1956

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AMENDMENT NO. 1
EXPLORATION PROJECT CONTRACT IDM-E798
DATED MAY 17, 1955
DOCKET NO. DMEA-3396
between
THE UNITED STATES OF AMERICA
and
YUBA DIKE MINES, INCORPORATED,
a Nevada corporation

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It is agreed this 8th day of February, 1956 that the contract is amended as follows:

(1) Work under this Contract shall be suspended during the period beginning January 21, 1956, and ending not later than April 1, 1956.

(2) The Government shall not contribute to any costs incurred by the Operator during the period of suspension or to any costs of rehabilitation or repair which, in its opinion, would not have occurred if there had been no suspension of the work.

(3) The Operator, at its own cost and expense, without contribution by the Government, during the period of suspension shall preserve and protect the project work.

(4) The time fixed for the completion of the work is extended to September 15, 1956.

This amendment shall not be construed to increase the estimated total cost of the project, the aggregate amount which the Government may be required to contribute, nor the fixed unit cost of any item of work.

Executed in sextuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

By _____
S. Ricker
Executive Officer
DMEA Field Team, Region II

YUBA DIKE MINES, INCORPORATED

_____
_____
President

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MF-200A
(Revised June 1954)

Docket No. DMEA-[illegible]

Commodity Lead-Zinc

Contract No. Idm-E 798

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
EXPLORATION PROJECT CONTRACT[1]
(Short Form)

It is agreed this 17th day of May, 1955, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and [2] Yuba Pike Mines, Incorporated, a Nevada Corporation, whose mailing address is Winnemucca, Nevada, hereinafter called the "Operator," as follows:

ARTICLE 1. *This contract* is entered into under the authority of the Defense Production Act of 1950, as amended. It consists of this form (MF-200A), the attached Exhibit "A," Annex I, and

The Operator shall not transfer or assign this contract or any right thereunder without the written consent of the Government.

ARTICLE 2. *Operator's property rights.*—(a) The land which is the subject of this contract (hereinafter called "the land") is in the State of Nevada, County of Lincoln, and is described in Annex I.[3]

(b) The Operator represents and undertakes that:

(1) The Operator is the [4] lessee of [5] the mineral rights in the land, in possession and entitled to possession for all of the purposes of this contract, under and by virtue of a [6] assignment, [7] recorded in Book -, page -, official records of said County; and

(2) The Operator's right, title, or interest (whether as owner, lessee, or otherwise) is subject only to the following claims, liens, or encumbrances: None

(c) The Subordination Agreement of the holder of any claim, lien, or encumbrance listed above, and (if the Operator does not hold the legal title) the Consent to Lien of any holder of the legal title of the land (lessor, seller, optionor, etc.), are attached, as follows: Consents to Lien of Amalgamated Pioche Mines and Smelter Corporation and Combined Metals Reduction Company

[1] If sufficient space is not provided in any blank, use an extra sheet of paper and refer to it in the blank.
[2] Insert name, and if an organization, its nature (corporation and place of incorporation, partnership with names of partners, etc.).
[3] State on a separate sheet marked "Annex I" the legal description or enough to identify the property, particularly excluding any areas from which the production is not to be subject to the Government's percentage royalty.
[4] Insert "owner," "lessee," "contract purchaser," "locator," etc.
[5] Insert "the entire interest," "the mineral rights," "an undivided one-third," etc.
[6] Insert "deed," "lease," "contract," "location notice," "patent," etc.
[7] If not recorded, so indicate by inserting "un."

16—70618-1

(d) The Operator shall preserve and maintain his right, title, and interest in the land and his right to the possession thereof for the purposes of this contract, and shall devote the land and all existing improvements, facilities, buildings, installations, and appurtenances to the purposes of this contract. Until the lapse of the time within which the Government may make a certification of discovery or development without any such certification having been made, and after any such certification has been made, the Operator shall neither transfer, convey, nor surrender the land nor any right, title, or interest therein, nor permit nor suffer any claim, lien, or encumbrance thereon, without expressly referring to and providing in the instrument of conveyance, lien, or encumbrance for the preservation of the Government's right to a percentage royalty on production and lien for the payment thereof. If the Government makes no certification of discovery or development within the time limited in Article 7, it shall thereafter have no claim against the land or any production therefrom except for any production referred to in Article 7(b)(1).

ARTICLE 3. *The exploration project.*—The project is a search for indicated or undeveloped deposits of [illegible] The work to be performed is described in Exhibit "A." The Operator on or before August 15, 1955 shall commence the work, and on or before [illegible] (unless the Operator's obligation to complete the work is terminated—see Article 8) shall complete the work.

ARTICLE 4. *Performance of the work.*—(a) *Operator's responsibility.*—The work shall be performed with reasonable diligence, efficiently, expertly, in a workmanlike manner, in accordance with good mining standards and State regulations for health and safety and for liability insurance covering employment; and with suitable and adequate equipment, facilities, materials, supplies, and labor, to bring it to completion within the time fixed.

(b) *Government may inspect.*—The Operator shall consult with and inform the Government on all phases of the work as it progresses. The Government may enter at all reasonable times to inspect the work under the contract, and also after a certification of discovery or development to inspect production operations and underground workings. The operator shall provide the Government with all reasonable means of access for such inspections.

ARTICLE 5. *Contribution by the Government.*—A fixed cost for each unit of work to be performed (per foot of drifting, per foot of drilling, per hour of operations, etc.) is hereby agreed upon, and is set forth in Exhibit "A" in connection with the estimated total cost of the project in the sum of $[illegible] The Government will contribute [illegible] percent of the fixed unit costs as work is performed, in a total sum not in excess of $[illegible]: *Provided,* That until the Operator has rendered to the Government his final report, 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 10 percent of the estimated total cost of the work. The Government will make its contribution on the basis of the monthly vouchers referred to in Article 6(b), but all payments by the Government are provisional only, subject to audit, until the account between the Operator and the Government is finally audited and settled. To the extent that excesses over fixed unit costs or any excess over the estimated total cost may be necessary for the performance of the work, the Operator shall incur and pay such excesses for his own account without contribution by the Government. The Government may make payments directly to independent contractors and suppliers for the account of the Operator rather than to the Operator.

ARTICLE 6. *Reports, accounts, audits.*—(a) *Operator's records.*—The Operator shall keep suitable records and accounts of the units of work performed and of any production in which the Government may have an interest; and shall preserve those with respect to work performed for at least three years after final payment by the Government, and those with respect to production for at least three years after any obligation to pay royalties to the Government has terminated. The Government may inspect and audit said records and accounts at any time, either by itself or by a certified public accountant. The Comptroller General of the United States or his representative, until the expiration of said three-year periods, shall have access to and the right to examine any pertinent books, documents, papers, and records of the Operator. All of the Operator's vouchers and records and accounts relating thereto and the Government's payments thereof remain subject to adjustment until final audit by the Government.

(b) *Progress reports and vouchers.*—The Operator shall provide the Government with five copies of monthly progress reports in three sections as follows: (1) Operator's Monthly Report and Voucher showing a detailed statement of units of work performed during the reporting period; (2) Operator's Unit Cost and Progress Report showing the various types of work performed during the reporting period and the fixed unit costs incurred for each type of work; and (3) a Narrative Report of the work

performed during the reporting period including adequate engineering-geological maps or sketches, drill hole logs and locations, and assay reports on samples taken concurrently with advance in mineralized ground. (Forms for reporting under (1) and (2) above will be provided by the Government.)

(c) *Final report.*—Upon completion of the work or termination of the Government's obligation to contribute to costs, the Operator shall furnish the Government with five copies of a final report (in addition to the final progress report and voucher). This final report shall include a geological and engineering evaluation of the results of the work performed under the contract with an estimate of the ore reserves resulting from such work, complete assay data, adequate geological and engineering maps or sketches, and a summary of the work performed and the unit costs thereof.

(d) *Report of sales.*—The Operator shall provide the Government with suitable accounting and documentary evidence covering all production to which the Government's percentage royalty relates, such as copies of smelter or concentrator settlement sheets, and certified accounts of production and sale or other disposition of production.

(e) *Compliance with requirements.*—If in the opinion of the Government any of the Operator's reports, records, or accounts are insufficient or incomplete, or if the Operator fails to make them, the Government may procure the making or completion of such with suitable attachments as an expense of the work to which the Operator shall contribute. The Government may withhold approval and payment of any vouchers relating to insufficient or incomplete reports, records or accounts.

ARTICLE 7. *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 a sufficient final report and final account (see Article 6) has been rendered, 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, within 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 crude 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 (1½) 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 (½) 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 (1½) percent; on an amount of ten dollars ($10.00) per ton, three and one-half (3½) percent.)

(f) *Time for computation and payment.*—The Government's royalty shall be computed and paid currently upon each lot sold, held, or used in integrated operations, as the case may be, as above provided in this article.

(g) *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.

(h) *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.

(i) *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 production operations.

(j) *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.

ARTICLE 8. *Termination of the Government's obligations.*—(a) If in the opinion of the Government operations at any time have failed to achieve anticipated results that indicate the probability of making a worthwhile discovery, and in the opinion of the Government further operations are not justified, the Government may give the Operator written notice thereof, and thereupon the Government shall be free of all obligation to pay on account of units of work not then performed, and the Operator shall be free of all further obligation to prosecute the work other than such as may be necessary and incidental to winding up, reporting, and accounting.

(b) If in the opinion of the Government the Operator is in any manner in default under the terms of the contract, the Government may give the Operator written notice of such default with a specification of reasonable time within which the default must be cured; and if the Operator fails to cure such default as required, thereupon the Government shall be relieved of all obligation to pay on account of units of work not performed when the notice was given, and the Operator shall be free of all obligation to prosecute the work other than such as may be necessary and incidental to winding up, reporting, and accounting. The remedy provided for the Government in this paragraph "(b)" is in addition to any other remedy provided in this contract, and in addition to any other remedy the law may provide for breach of contract.

(c) The giving of any notice by the Government under the provisions of this Article 8 shall not affect the Government's rights as provided for in the contract with respect to a percentage royalty, and such rights shall be fully preserved.

ARTICLE 9. *Notices to be given by the Government* may be delivered to the Operator, or may be sent by registered mail addressed to the Operator at his mailing address stated in this contract. If mailed, notices are deemed to have been delivered five days after the date of mailing.

ARTICLE 10. *Officials not to benefit.*—No member of or delegate to Congress or resident commissioner shall be admitted to any share or part of this contract or to any benefit that may arise therefrom; but this provision shall not be construed to extend to this contract if made with a corporation for its general benefit.

ARTICLE 11. *Changes and added provisions.*—

Executed in sextuplicate the day and year first above written.

YUKA DIKE MINES, INCORPORATED
(Operator)

By John A. Hedman, President
Yuka Dike Mines, Inc.,

THE UNITED STATES OF AMERICA

By O. Mitchell
Administrator, Leasing
Minerals Exploration
Administration

Putin
J. W. All
Chandler
Selfridge
Johnston

I, Alexander Lloyd, certify that I am the Treasurer & secretary of the corporation named as Operator herein; that John A. Hedman who signed this contract on behalf of the Operator, was then President 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.

Alexander Lloyd

[CORPORATE SEAL]

U. S. GOVERNMENT PRINTING OFFICE 16—70618-1

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JUL - 7 1955

EXPLORATION PROJECT CONTRACT
YUBA DIKE MINES, INCORPORATED
DOCKET NO. DMEA-3396

ANNEX I

The land referred to in Article 2 of the Contract consists of the following mining claims located in the Ely Mining District, Lincoln County, Nevada, as follows:

Patented Claims

Pioche or Meadow Valley	U. S. Lot 40
Queen	U. S. Lot 53
King	U. S. Lot 53
Silver	U. S. Lot 38
Susan Duster	U. S. Lot 2714
Williams and Goodspeed	U. S. Survey 3343
Zero	U. S. Lot 49
Alberta No. 2	U. S. Lot 2714
Alberta	U. S. Lot 2714
Raymond & Ely or Panaca	U. S. Lot 39

Unpatented Claims
Records of Lincoln County

Claim	Book	Page
Wedge	Y	226
Monarch	L	446, Amended
	N	264, 265
South	H	264, Amended
	N	259-262
Eagle	P	10-12
Nappias	Z	29

These claims are shown on the map entitled "Map Showing Property of Nevada Utah & Ohio Kentucky Mining Companies, Ely Mining District, Pioche, Nevada."

EXCLUSION

Excluded from the land referred to in Article 2 of the Contract are portions of the Alberta, Alberta No. 2,

Raymond and Ely (Panaca), Williams and Goodspeed, Zero and Susan Duster claims as shown on the map entitled "Yuba Dike Mines, Inc. . . . Sketch Map Showing the location of Leased ground in Plan & Section . . .," attached hereto and made a part hereof.

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EXPLORATION PROJECT CONTRACT
YUBA DIKE MINES, INCORPORATED
DOCKET NO. DMEA-3396

EXHIBIT "A"

Description of the Work

The work is divided into three stages. The Operator shall perform Stage I and so much of the work set forth in Stages II and III as is approved in advance by the Government.

STAGE I

From the 800 level of the No. 1 Shaft, drill two diamond drill holes in a south to a southeasterly direction for the purpose of intersecting the Yuba dike. The approximate location of the drill holes is shown on the map entitled "Plan and Geologic Map of Part of the 800 Level, Yuba Dike Mines, Inc.," attached hereto and made a part hereof. The size of the holes shall be AX minimum. Each hole shall be approximately 200 feet in length and the aggregate drilling shall not exceed 400 feet.

STAGE II

From the drift, at the location shown on the map described under Stage I, crosscut south through the Yuba dike. The aggregate crosscutting shall not exceed 150 feet. The size of the crosscut shall be not less than 5 feet by 7 feet in cross section in the clear of timber.

STAGE III

From the crosscut, drift easterly and westerly on the Yuba dike. The aggregate drifting shall not exceed 300 feet. The size of the drifts shall not be less than 5 feet by 7 feet in cross section in the clear of timber. The location and extent of the drifts shall have prior approval of the Government.

On the best indications of mineralization, raise 25 feet above each of the above drifts. The aggregate raising shall not exceed 50 feet. The size of the raises shall

be not less than 5 feet by 5 feet in cross section in the clear of timber.

All work shall be timbered as necessary.

FIXED UNIT COSTS

(The fixed unit costs include all costs whatsoever necessary for the performance of the project work)

STAGE I

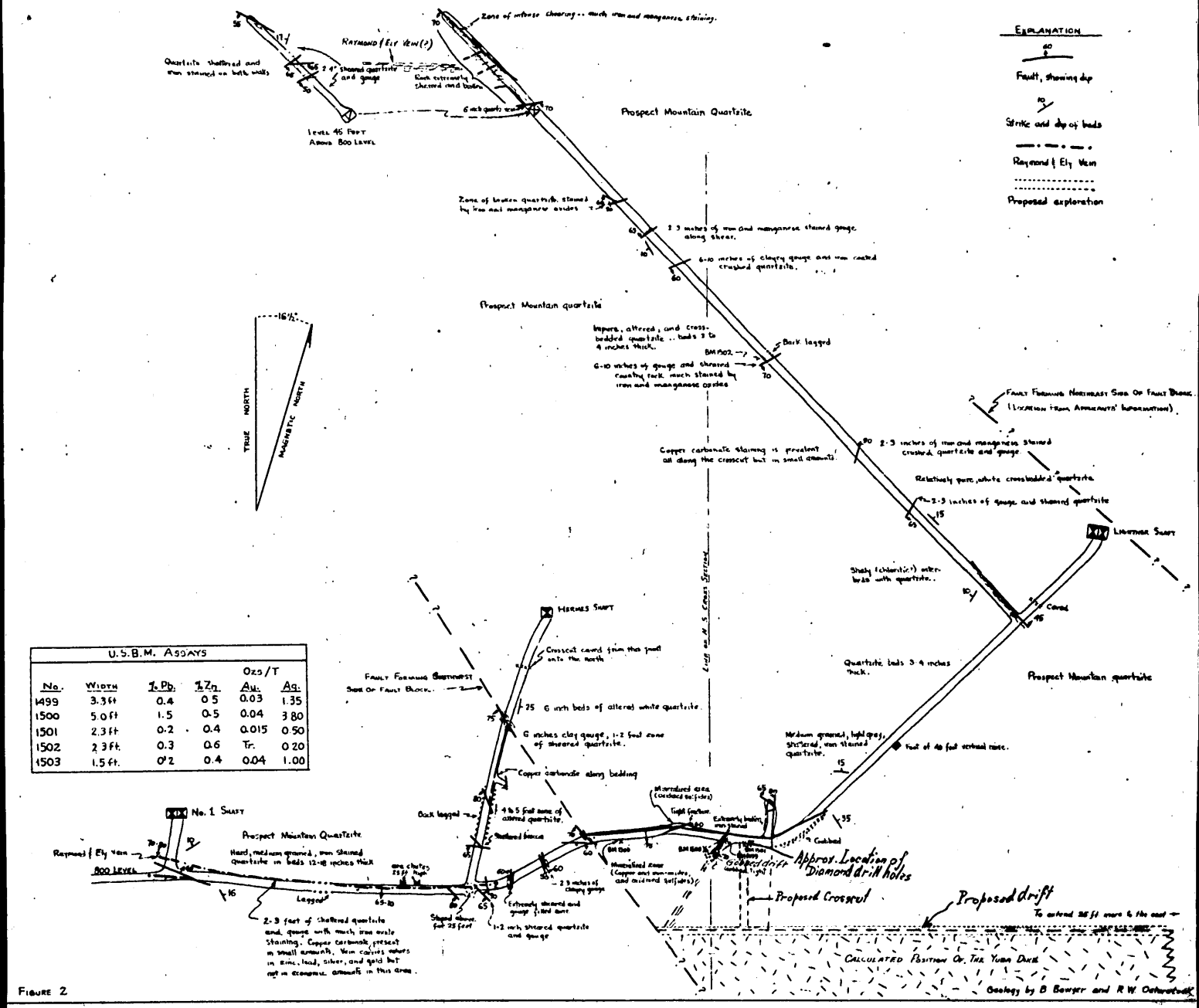
400 feet of diamond drilling @ $7.00/ft.	$ 2,800.00	

STAGE II

150 feet of crosscutting @ $37.00/ft.	$ 5,550.00	

STAGE III

300 feet of drifting @ $37.00/ft.	$11,100.00	
50 feet of raising @ $37.00/ft.	1,850.00	$12,950.00
50 feet of timbered drifts and crosscuts @ $7.00/ft. under Stages II and III.		$ 350.00
50 assays for lead and zinc @ $2.00 sample under Stages I, II, and III.		$ 100.00
Estimated Total Cost of the Project		$21,750.00
Government Participation @ 50%		$10,875.00



U.S.B.M. Assays					
				Ozs/T	
No.	Width	% Pb.	% Zn	Au.	Ag.
1499	3.3 ft	0.4	0.5	0.03	1.35
1500	5.0 ft	1.5	0.5	0.04	3.80
1501	2.3 ft	0.2	0.4	0.015	0.50
1502	2.3 ft.	0.3	0.6	Tr.	0.20
1503	1.5 ft.	0.2	0.4	0.04	1.00

Figure 2

Plan And Geologic Map Of Part Of The 800 Level, Yuba Dike Mines, Inc.

Lincoln County, Nevada

0 20 40 Feet

Docket No. DMEA-3396

MF-203
(Revised July 1, 1954)

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JUL - 7 1955

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 Lincoln, described as follows:1/

Pancos (U. S. Lot 39), Alberta No. 8 (U. S. Survey 3716), Cocoa Doctor (U. S. Survey 3716), Idaho, Pioche Valley (U. S. Lot 40), Deposito, Cocoa (U. S. Lot 63), Ring (U. S. Lot 63), Silver (U. S. Lot 39), Lode mining claims

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/ Pato Dato Mines Incorporated

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 **In paragraph 2 the words "the period fixed in the contract or any amendment thereof has" are substituted for "ten years have."**

AMALGAMATED PIOCHE MINES AND SMELTERS CORPORATION.

Dated this 5th day of May, 1955.

Wm A Roberts [Seal]
President.

[Seal]

C M Madden [Seal]
Secretary.

MF-203
(Revised July 1, 1954)

RECEIVED
JUL - 7 1955

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 Lincoln, described as follows:1/

Panaca (U. S. Lot 39), Alberta No. 2 (U. S. Survey 2714), Susan Duster (U. S. Survey 2714) lode mining claims

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/ Yuba Dike Mines Incorporated

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 In paragraph 3 the words "the period fixed in the contract or any amendment thereof hereof" are substituted for "ten years have."

Dated this 7 day of June, 1955.

Combined Metals Reduction Company [Seal]

by W. H. Kelsey, Vice President [Seal]

[Seal]

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
9/17	C	225
		225

PROJECT SUMMARY REPORT

By: J. W. Alt

March 8, 1957

1. Docket No. DMEA-3396 (Lead-Zinc)
Contract No. Idm-E798
Property: Yuba Dike Mining Claims
Lincoln County, Nevada

Operator: Yuba Dike Mines, Incorporated
Pioche, Nevada

Operator's Property Rights: Lessee
Amalgamated Pioche Mines & Smelter Corp.
Consent to Assign Lease - dated August 6, 1953.
Extension of Lease - dated August 6, 1953.
Owner's Consent to Lien - dated May 5, 1955.

Combined Metals Reduction Company
Consent to Assign Sublease dated August 6, 1953.
Owner's Consent to Lien dated June 7, 1955.

2. Contract dated May 17, 1955. To complete June 1, 1956.

Work Authorized

Stage I

From the 800 level of the No. 1 Shaft drill two diamond drill holes for the purpose of intersecting the Yuba Dike. The aggregate drilling shall not exceed 400 feet.

Stage II

From the drift, crosscut south through the Yuba dike. The aggregate crosscutting shall not exceed 150 feet.

Stage III

From the crosscut, drift easterly and westerly on the Yuba dike. The aggregate drifting shall not exceed 300 feet.

Raising not to exceed 50 feet.

Fixed Unit Costs

Stage I

400 feet of diamond drilling @ $7.00/ft.		$ 2,800.00

Stage II

150 feet of crosscutting @ $37.00/ft.		5,550.00

Stage III

300 feet of drifting @ #37.00/ft.	$11,100.00	
50 feet of raising @ $37.00/ft.	1,850.00	12,950.00
50 feet of timbered drifts and crosscuts @ $7.00/ft. under Stages II and III		350.00
50 assays for lead and zinc @ $2.00/sample under Stages I, II, and III		100.00
Total Estimated cost of the project		$21,750.00
Government's participation, 50%		$10,875.00

Amendments

No. 1 Dated February 8, 1956.

Work suspended from January 21, 1956 to not later than April 1, 1956.

Completion time extended to September 15, 1956.

Work Completed

Diamond drilling, 145 feet @ $7.00/ft.	$1,015.00
Crosscutting, 72 feet @ $37.00/ft.	2,664.00
Drifting, 128 feet @ $37.00/ft.	4,736.00
Sampling and assaying, 9 samples @ $2.00/sample	18.00
Total cost of the project	$8,433.00
Government's participation, 50%	$4,216.50

Work on the project was started on August 10, 1955.

Work on the project was discontinued on December 12, 1955, and the contract was mutually terminated effective January 21, 1956.

3. Audit Certificate. (Report of Review) dated October 1, 1956.

Total cost as billed by the contractor	$8,433.00
Exceptions - None	
Total Accepted Cost	$8,433.00
Government's Participation, 50%	$4,216.50

Operator's final report dated September 20, 1956.

Field Team's final report dated November 30, 1956.

4. Certification Date.

No Certification of Discovery or Development was made as the project was unsuccessful in discovering ore.

5. Comments

The purpose of the project was to explore for ores of lead and zinc on the 800 level of the mine between two areas from which ore was produced during the early days of the mine operation.

The project was justified by the production of ore valued at about $500,000.00 and by the geologic similarity between the productive area and the area to be explored. Ore was inferred in and along both sides of the Yuba granite porphyry dike.

Although the project was successful in finding the dike, the areas disclosing lead and zinc minerals were too small and too low grade to be commerical and do not warrant further developing. Production from the DMEA workings is not probable and the Field Team recommend that no certificate of discovery be issued. The favorable zone was adequately explored and the work thus far has not revealed indications of other exploratory possibilities.

Because of lack of success with the work the project was recessed for reappraisal and finally terminated because it was concluded by both the Operator and the Government that additional work has little likelihood of discovery ore.

Further Government participation in future exploration is not recommended unless new geologic evidence is found from which ore bodies may be inferred.

J. W. Alt

J. W. Alt

JWAlt/er 5/9/57

Copy to: Docket
Base Metals
Chron.

DMEA Form 17
Feb. 58

DEFENSE MINERALS EXPLORATION ADMINISTRATION

WORK COMPLETED ANALYSIS

After final audit or review report is received, prepare original only and file in official docket

Operator: Yuba Dike Mines		Actual Cost	
State: Nevada		Agreed Unit Cost	X
Final Report of Audit		Commodity: Lead-Zinc	Docket No. 3396
Final Report of Review	X		Contract No. Idm-E798

Operation	Authorized by Contract and Amendments		Completed		Net cost after sale of Government Property
	Units	Cost	Units	Cost	
Drifting & Crosscutting 5' x 7'	450' @ $37.00	$16,650.00	200'	$ 7,400.00	$ 7,400.00
Raising 5' x 5'	50' @ 37.00	1,850.00			
~~XXXXXXX~~ Timbered Drifts and crosscuts	50' @ 7.00	350.00			
Winzes					
Drilling Diamond-AX (Specify)	400' @ 7.00	2,800.00	145'	1,015.00	1,015.00
Surface Excavation					
Underground Excavation					
Roads and Trails					
Operating Equipment Purchased					
Surface Rehabilitation & Repairs					
Underground Rehabilitation					
New Building, Improvements, etc.					
Other (Specify) 50 Assays @$2.00 ea.		100.00	9	18.00	18.00
Totals		$21,750.00		$ 8,433.00	* $ 8,433.00

* Net cost total must agree with final report of audit or review.

Prepared by W. P. Klugescheid/er Date

31398

☒ Audited 10/1/56. Perpetual Res. [redacted]K ANALYSIS SHEET - DMEA PROJEC[redacted] ☐ Actual Cost

☐ Certified Analysis as of _____ ☒ Agreed Unit Costs

Incl. Voucher for Dec., 1955

Name YUBA DIKE MINES Docket No. 3,396

State NEVADA Commodity LEAD-ZINC Idm-E No. 798

OPERATION	AUTHORIZED Units	AUTHORIZED Cost	COMPLETED Units	COMPLETED Cost	NET COST
Drifting & Crosscutting (5'x7')	Stage II 150' @ $37.00; Stage III 300' @ $37.00	$5,550.00; 11,100.00	72'; 128' } 200'	2,664.00; 4,736.00	$7,400.00
Raising 5'x5' Stage III	50' @ $37.00	1,850.00			
~~Shafts~~ Timbered Drifts & Crosscuts Stages II + III	50' @ $7.00	350.00			
Winzes					
Drilling (Specify) Diamond (AX) Stage I	400' @ 7.00	2,800.00	145'	1,015.00	1,015.00
Surface Excavation					
Underground Excavation					
Roads and Trails					
Operating Equipment Purchased					
Surface Rehabilitation & Repairs					
Underground Rehabilitation					
New Building, Improvements, etc.					
Other (Specify) 50 assays @ $2.00 Stages I, II + III		100.00	9	18.00	18.00
Totals		$21,750.00		$8,433.00	$8,433.00

Checks Audit.

Amend No. 1.
Recess from: Jan 21, 1956 to April 1, 1956.
Completion date changed to: Sept. 15, 1956. } Made by Board.
Termination Agreement.
Dated June 8, 1956.
Final F.T. Report 11/23/56
Operator's final report 9/20/56

Prepared by W. P. Klugescheid

71626

Fixed Unit Costs.

Stage I.

400' D.D. (AX) @ 7.00 — $2,800.00

Stage II

150' Crosscutting @ 37.00 (5'x7') — 5,550.00

Stage III.

300' Drifting @ 37.00 (5'x7') — 11,100.00

50' Raising @ 37.00 — 1,850.00

$21,300.00

50' of timbered drifts & crosscuts @ 7.00/ft. under Stages II and III. — 350.00

50 assays for lead and zinc @ $2.00 under Stages I, II and III. — 100.00

$21,750.00

~~Spent~~

~~August~~ 1955 ~~Sept Oct. Nov.~~

145' Diamond Drilling @ 7.00 $ 1,015.00

98 Assays @ $2.00 18.00

~~16.00~~

~~93.5 166' 200'~~

~~18'~~ Drifting & Crosscutting @ 37.00 ~~666.00~~

~~3459.50~~

~~6,142.00~~

~~4,400.00~~

~~$7,031.00~~

~~1,697.00~~

~~4,492.50~~

~~4,145.00~~

~~$18,433.00~~

November 6, 1957

Memorandum

To: Jay L. Chambers, Director
Division of Contract Administration & Audit

From: Director, Division of Base Metals

Subject: Concluded Projects

The following dockets are closed and no further action remains. No closing letters are being sent due to excessive time lag but please consider them as having been finalized.

Contract No.	Docket No.	Name
Idm-E21	DMEA-1100	United Park City Mines Company
Idm-E279	DMEA-2044	Harry E. Briggs
Idm-E546	DMEA-2856	Neuberg Bros. & Sloan, Inc.
Idm-E709	DMEA-3198	Chewelah Copper Company, Inc.
Idm-E798	DMEA-3396	Tuba Dike Mines, Inc.
Idm-E821	DMEA-3684	Ogle Swingle
Idm-E878	DMEA-3605	Hurst Majors
Idm-E966	DMEA-4111	Parker Mining & Development Company

W. R. Griswold

W. R. Griswold

WRG/ar
Copy to: Docket
Admr R File
Mr. Dakan, Code 200
Chron.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
WASHINGTON 25, D. C.

RECEIVED DEC 13 1956 D.M.E.A

December 12, 1956

Re: DMEA 339; Contract Idm E-798
Yuba Dike Mines, Inc.
Yuba Dike Mining claims
Lincoln County, Nevada

Memorandum

To: W. R. Griswold, DMEA

From: O. M. Bishop, Branch of Base Metals

Subject: Final report dated November 19, 1956, transmitted November 23 and received December 5, 1956.

Under Contract Idm E-798 the operator diamond drilled 2 holes for a total of 145 feet to locate the Yuba dike, and determine if mineralization occurred on either or both walls. Subsequently a crosscut was driven 72.5 feet along drill hole No. 1 through the dike and drifts were driven east and west totaling 128 feet.

No economic concentration of minerals was discovered by the exploration, therefore the operator requested termination of the work prior to fulfilling all work outlined under the contract.

There would appear to be no basis for issuing a certificate of discovery; I therefore agree with the recommendation of the Executive Officer that none be issued.

O. M. Bishop

O. M. Bishop

Copy to: Division of Minerals
Mr. Kiilsgaard
Mr. Lamb
Mr. Bishop
Files

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

RECEIVED NOV 26 1956 D.M.E.A.

1605 Evans Avenue
Reno, Nevada

November 23, 1956

Memorandum

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

From: Executive Officer, DMEA Field Team, Region II

Subject: Docket No. DMEA-3396 (Lead-Zinc)
Yuba Dike Mining Claims
Lincoln County, Nevada
Contract No. Idm-E 798
(Your letter October 26, 1956)

Enclosed are four copies of our final report on subject contract by G. G. Gentry, Bureau of Mines, and R. M. Smith, Geological Survey.

I agree with the recommendation in the report that a certificate of discovery should not be issued.

S. Ricker

Encls.

Reviewed by
DMEA OPERATING COMMITTEE
11/30/56
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
FRED A. SEATON, SECRETARY

RECEIVED NOV 26 1956

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM REGION II

FINAL REPORT

DMEA-3396, Idm-E798 (Lead-Zinc)
Yuba Dike Mines, Inc.
Yuba Dike mine, Lincoln County, Nevada

by

G. G. Gentry
U. S. Bureau of Mines

R. M. Smith
U. S. Geological Survey

November 19, 1956

Reviewed by
DMEA OPERATING COMMITTEE
11/30/56
(date)

CONTENTS

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Summary	1
Conclusions and Recommendations	2
Location, Accessibility, and Local Facilities	2
Property	3
The DMEA Project	3
Geology	5
Ore Deposits	6
Sampling	7

ILLUSTRATIONS

Figure 1 . . . . . Location map

2 . . . . . Sample map, DMEA workings

3 . . . . . Geologic map, DMEA workings

4 . . . . . Geologic map of part of 800 level

INTRODUCTION

The Yuba Dike mine, Lincoln County, Nevada, was explored by the Yuba Dike Mines, Inc., Pioche, Nevada, in cooperation with the Defense Minerals Exploration Administration, docket DMEA-3396, contract Idm-E798 dated May 17, 1955.

Work was begun on August 10, 1955 and was discontinued on December 12, 1955. Accompanied by Mr. John A. Hedman, president and operator, an examination of the property to evaluate the project was made on May 24, 1956.

The operator requested termination of the project because only very minor amounts of lead and zinc minerals had been found and the success of continued exploration is doubtful. A termination agreement was signed by the Government and by the operator on June 8, 1956.

SUMMARY

The purpose of the project was to explore for ores of lead and zinc on the 800 level of the mine between two areas from which ore was produced during the early days of the mine operation.

The project was justified by the production of ore valued at about $500,000.00 and by the geologic similarity between the productive area and the area to be explored. Ore was inferred in and along both sides of the Yuba granite porphyry dike.

The total work performed consisted of 145 feet of diamond drilling to locate the dike, 72.5 feet of crosscutting to the dike, and 148 feet of drifting along both sides. Only small amounts of lead and zinc minerals were found, and no ore was produced.

CONCLUSIONS AND RECOMMENDATIONS

Although the project was successful in finding the dike, the areas disclosing lead and zinc minerals were too small and too low grade to be commercial and do not warrant further developing. Production from the DMEA workings is not probable and we recommend that no certificate of discovery be issued. The favorable zone was adequately explored, and the work thus far has not revealed indications of other exploratory possibilities. Further Government participation in future exploration is not recommended unless new geologic evidence is found from which ore bodies may be inferred.

LOCATION, ACCESSIBILITY, AND LOCAL FACILITIES

The No. 1 shaft, which is the entrance to the Yuba Dike mine, is one mile southeast of the town of Pioche in the Ely Valley mining district, Lincoln County, Nevada. The mine shaft is reached from the southwest end of the main street of Pioche via an unimproved road, a distance of one mile. Occasional heavy snow storms may render this unimproved section of road temporarily

impassable but nearly year-round operations are feasible.

Sufficient mine labor can usually be obtained in Pioche or Ely, Nevada and the present wage scale is $2.50 per hour. Adequate water and electric power are available at the mine shaft.

PROPERTY

The DMEA exploration was conducted on the Panaca patented mining claim (U. S. Lot 39), and in addition the following lode mining claims were included in the contract:

Alberta No. 2	(U.S.Survey 2714)	Nappias	(U.S.Lot 53)
Susan Duster	(U.S.Survey 2714)	Queen	(U.S.Lot 53)
Wedge	(U.S.Lot 40)	King	(U.S.Lot 53)
Meadow Valley	(U.S.Lot 40)	Silver	(U.S.Lot 38)

THE DMEA PROJECT

Exploratory work approved in the contract was divided into three stages:

Stage I	
Diamond drilling, 400 ft. @ $7.00/ft.	$2,800.00
Stage II	
Crosscutting, 150 ft. @ $37.00/ft.	5,550.00
Stage III	
Drifting, 300 ft. @ $37.00/ft.	11,100.00
Raising, 50 ft. @ $37.00/ft.	1,850.00
Stages II and III	
Timbering drifts and crosscuts, 50 ft. @ $7.00/ft.	350.00
Stages I, II, and III	
50 assays for lead and zinc @ $2.00/ea.	100.00
Total allowable cost	$21,750.00

Government participation at 50 percent $10,875.00

During the period of exploration Amendment No. 1, dated February 8, 1956 was approved suspending work on the project beginning January 21, 1956 and ending not later than April 1, 1956. The time fixed for completion of the work was extended to September 15, 1956.

Two holes were drilled south from the 800 level drift to find the position of the dike, which proved to be 19 feet south of the drift. Core and sludge from the holes revealed much pyrite, sparse lead and zinc sulfieds, and much iron oxide along fractures.

A crosscut was then driven along drill hole No. 1 to and through the dike, and drifts were driven along both walls, 128 feet along the north wall, with DMEA funds, and 20 feet along the south wall at the operator's expense.

The work disclosed two faults of 20 feet or more displacement which cut the dike into segments. One of these segments was explored by the drifts and by drill hole No. 1, another segment was cut in drill hole 2. In none of the DMEA work was there a minable concentration of ore minerals.

Because of the lack of success with the work the project was recessed for reappraisal and finally terminated because it was concluded by both the operator and the Government that additional work has little likelihood of discovering ore.

During the period of exploration, the operator actually expended:

Diamond drilling, 145 ft. @ $7.00/ft.	$1,015.00
Crosscutting, 72 ft. @ $37.00/ft.	2,664.00
Drifting, 128 ft. @ $37.00/ft.	4,736.00
Sampling and Assaying, 9 samples @ $2.00/ea.	18.00
Total	$8,433.00
Government participation at 50 percent	$4,216.50
Unexpended funds	$13,317.00
Government's share unexpended	$6,658.50
Value of production	None
Royalty due the Government	None

The exploration contract was prepared and conducted on a unit and footage basis and no machinery or equipment was purchased or rented for the project.

GEOLOGY

The 800 level in the area explored is near the top of the Prospect Mountain quartzite of Cambrian age which is cut by a granite porphyry dike.

The quartzite is in nearly flat beds each a few inches to a few feet thick which may total as much as 2,000 feet. It is overlain by Pioche shale, the contact exposed at the 600 level of the mine.

The granite porphyry dike averages about 40 feet in thickness, strikes east and dips steeply south. It is highly altered, in places consisting principally of sericite and quartz.

Three sets of steep faults predominate; a north-striking set, a northeast-striking set, and an east-striking set. The north-striking faults offset the dike, are post mineral and have considerable displacements. The other two sets have small displacements.

ORE DEPOSITS

The ore bodies are veins in the east and northeast-striking faults in and along both sides of the dike, or in the quartzite near the dike. They occur in ore shoots which are part of the Yuba Dike ore channel which has been mined intermittently for about 10,000 feet along the strike and 1,400 feet down the dip.

The ore consists of galena and black sphalerite containing small amounts of copper, silver, and gold in a gangue of pyrite and manganosiderite. In the oxidized zone - generally above the 300-foot level - the ore minerals are cerusite, plumbojarosite, and small amounts of copper carbonate, silver chloride, and gold, in a gangue of iron oxide and manganese oxide. Elsewhere in the district manganese oxide is in sufficient quantity to be an ore mineral. The ore minerals cement breccia fragments of quartzite or dike rock.

The largest ore bodies in the mine are at the intersections of the dike or east-striking veins with northeast shear zones. Other ore bodies are along faults in the dike and in the quartzite near the dike.

The DMEA work tested the dike in an area on the 800 level which had not been explored by earlier operators. Other unexplored areas (e.g. the intersection 1,350 feet below the 1200-level of the dike with the Meadow Valley vein) are too remote and the chances of success too small to warrant additional work without more supporting geological evidence.

There are no reserves of any class in the area explored by DMEA.

SAMPLING

During the exploration samples were taken from all locations where some indications of lead-zinc mineralization were observed (refer to assay map).

Sample No.	Width, feet	Oz./T. Au	Oz./T. Ag	% Pb	% Zn	% Cu
BM-1754	1.5			<0.1	0.2	
BM-1755	1.0			<0.1	0.2	
*1775-A	1.0			0.5	0.4	
BM-1842	1.7	0.005	0.30	0.2	0.3	0.3
BM-1843	grab	0.01	0.50	0.2	0.3	0.3
BM-1844	0.7	0.01	0.30	0.2	0.2	0.4
BM-1845	4.6	0.01	0.30	0.2	0.2	0.3
BM-1846	chip-23.0	Trace	Trace	0.2	0.2	0.3
BM-1847	" -9.0	0.01	0.40	0.2	0.2	0.6
BM-1926	1.0	0.01	0.5	0.3	0.6	

*Operator's sample.

Sludge samples analyzed by the operator - Diamond Drill Hole No. 1:

Increment-feet	Oz./T. Au	Oz./T. Ag	% Pb	% Zn
10.0 - 14.7	Trace	0.2	0.5	0.5
14.7 - 21.5	Trace	0.5	0.4	0.45
21.5 - 26.5	Trace	Trace	0.5	0.5
26.5 - 32.9	Trace	Trace	0.5	0.5
32.9 - 38.5	Trace	Trace	0.5	0.5
38.5 - 42.5	Trace	Trace	0.4	0.6
42.5 - 46.3	Trace	1.0	0.4	0.5
46.3 - 52.0	Trace	Trace	0.5	0.5 - bottom of hole.

Sludge samples analyzed by the U. S. Bureau of Mines - Diamond Drill Hole No. 1:

BM Sample No.	Increment-feet	Oz./T. Au	Oz./T. Ag	% Pb	% Zn
1670	10.0 - 14.7	Trace	0.4	0.2	<0.1
1671	14.7 - 21.5	Trace	0.6	0.4	<0.1
1672	21.5 - 26.5	Trace	Trace	<0.1	<0.1
1673	26.5 - 32.9	Trace	Trace	<0.1	<0.1
1674	32.9 - 38.5	Trace	Trace	<0.1	<0.1
1675	38.5 - 42.5	Trace	Trace	0.1	<0.1
1676	42.5 - 46.3	Trace	Trace	<0.1	<0.1
1677	46.3 - 52.0	Trace	Trace	0.1	<0.1 - bottom of hole.

Sludge samples analyzed by the U. S. Bureau of Mines - Diamond Drill Hole No. 2:

BM Sample No.	Increment-feet	% Pb	% Zn
1691	4.7 - 9.0	<0.1	0.1
1692	9.0 - 14.1	<0.1	<0.1
1693	15.4 - 20.3	<0.1	<0.1
1694	20.3 - 27.7	<0.1	0.1
1695	27.7 - 31.5	<0.1	0.1
1696	31.5 - 34.6	<0.1	<0.1
1697	34.6 - 39.3	<0.1	0.1
1698	39.3 - 43.3	<0.1	0.1
1699	43.3 - 47.9	<0.1	0.1
1700	47.9 - 51.4	<0.1	0.1
1701	51.4 - 57.2	<0.1	0.1
1702	57.2 - 62.8	<0.1	0.1

BM Sample No.	Increment-feet	% Pb	% Zn
1703	62.8 - 67.3	0.1	0.2
1704	67.3 - 72.7	0.2	0.3
1705	72.7 - 80.9	0.1	0.1
1706	80.9 - 85.7	0.1	0.1
1707	85.7 - 90.8	<0.1	<0.1
1708	90.8 - 93.0	<0.1	0.1 - bottom of hole.

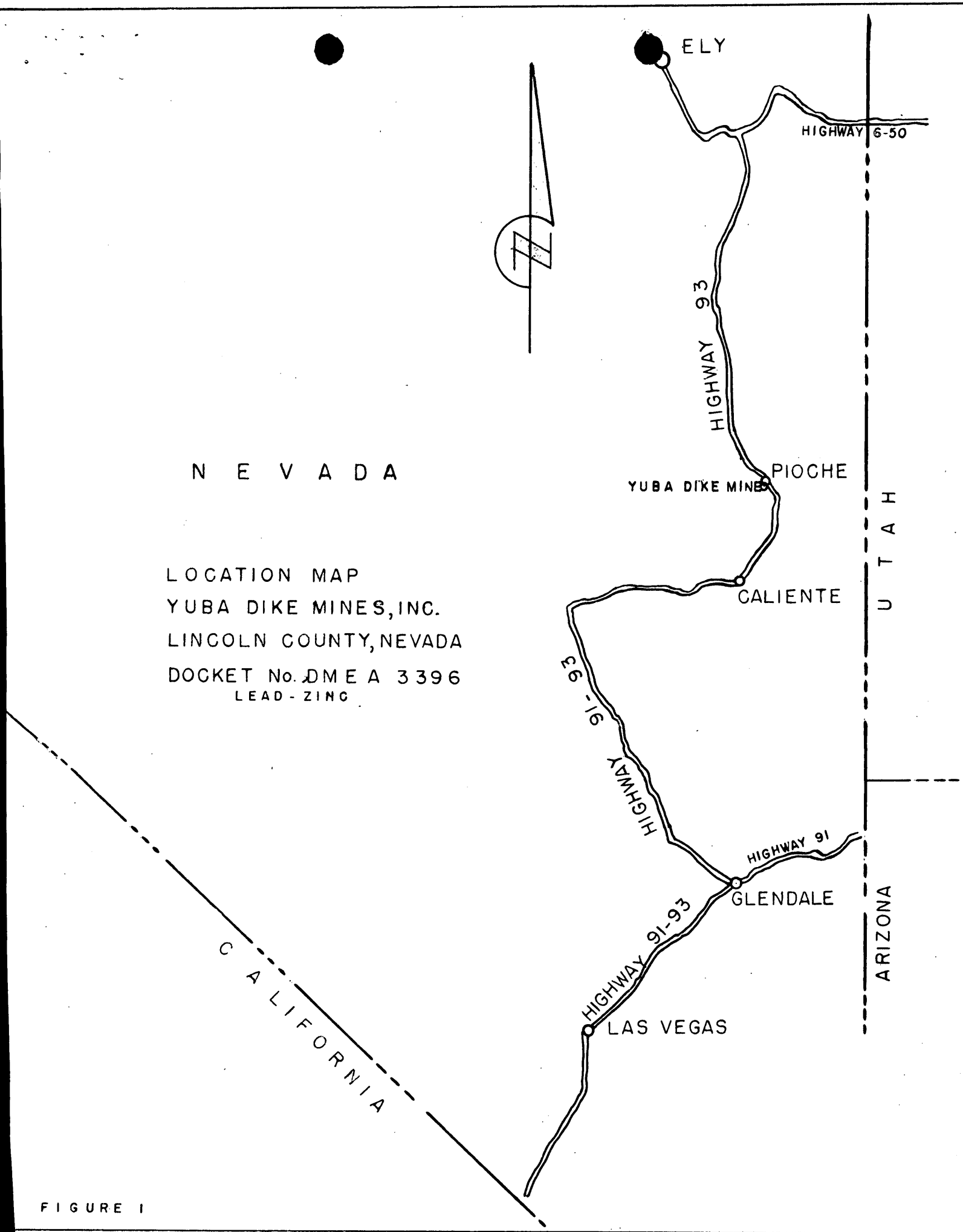

ELY
HIGHWAY 6-50
HIGHWAY 93
N E V A D A
PIOCHE
YUBA DIKE MINES
UTAH
LOCATION MAP
YUBA DIKE MINES, INC.
LINCOLN COUNTY, NEVADA
DOCKET No. DMEA 3396
LEAD-ZINC
CALIENTE
HIGHWAY 91-93
HIGHWAY 91
GLENDALE
HIGHWAY 91-93
ARIZONA
CALIFORNIA
LAS VEGAS

FIGURE 1

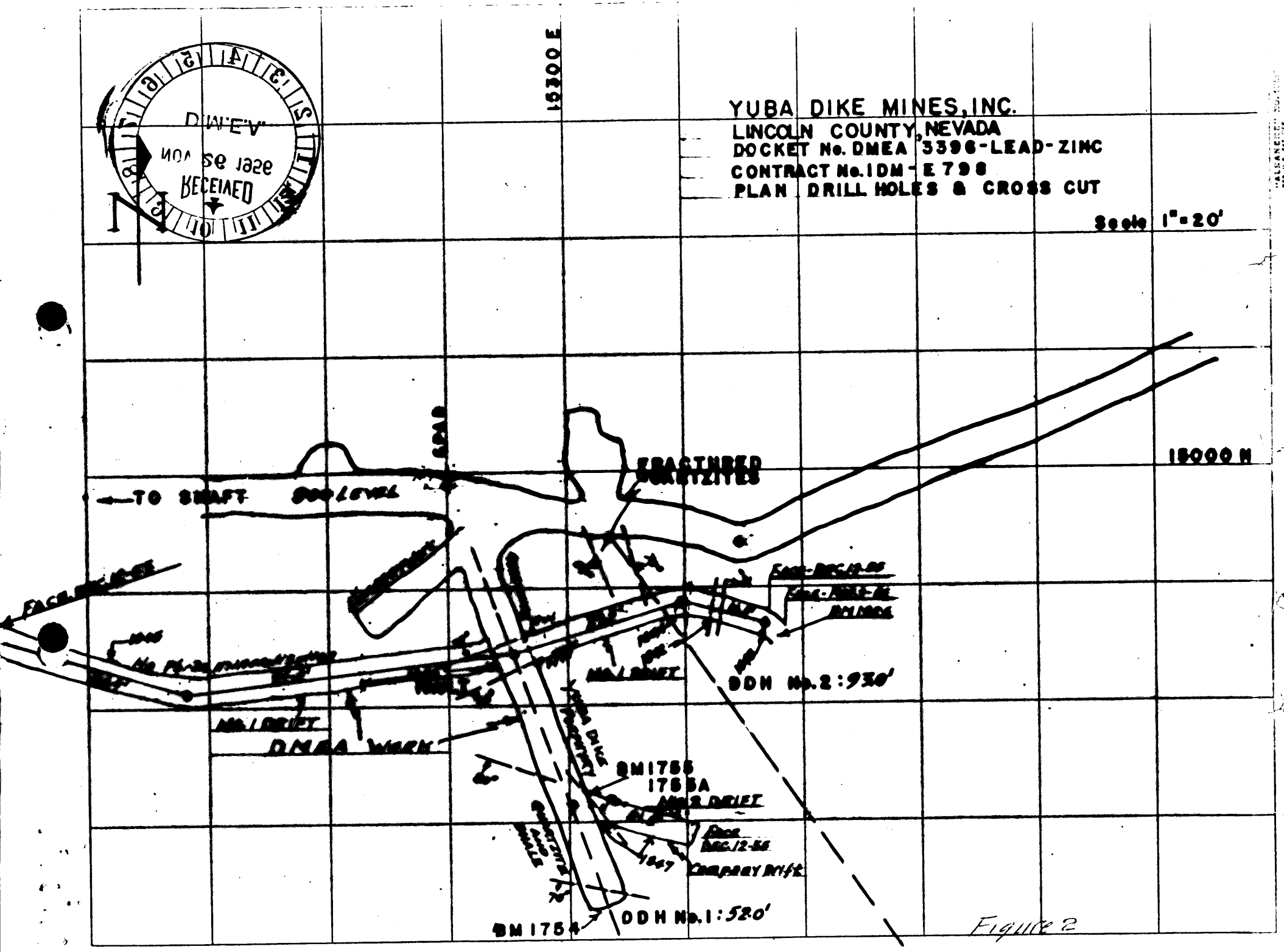
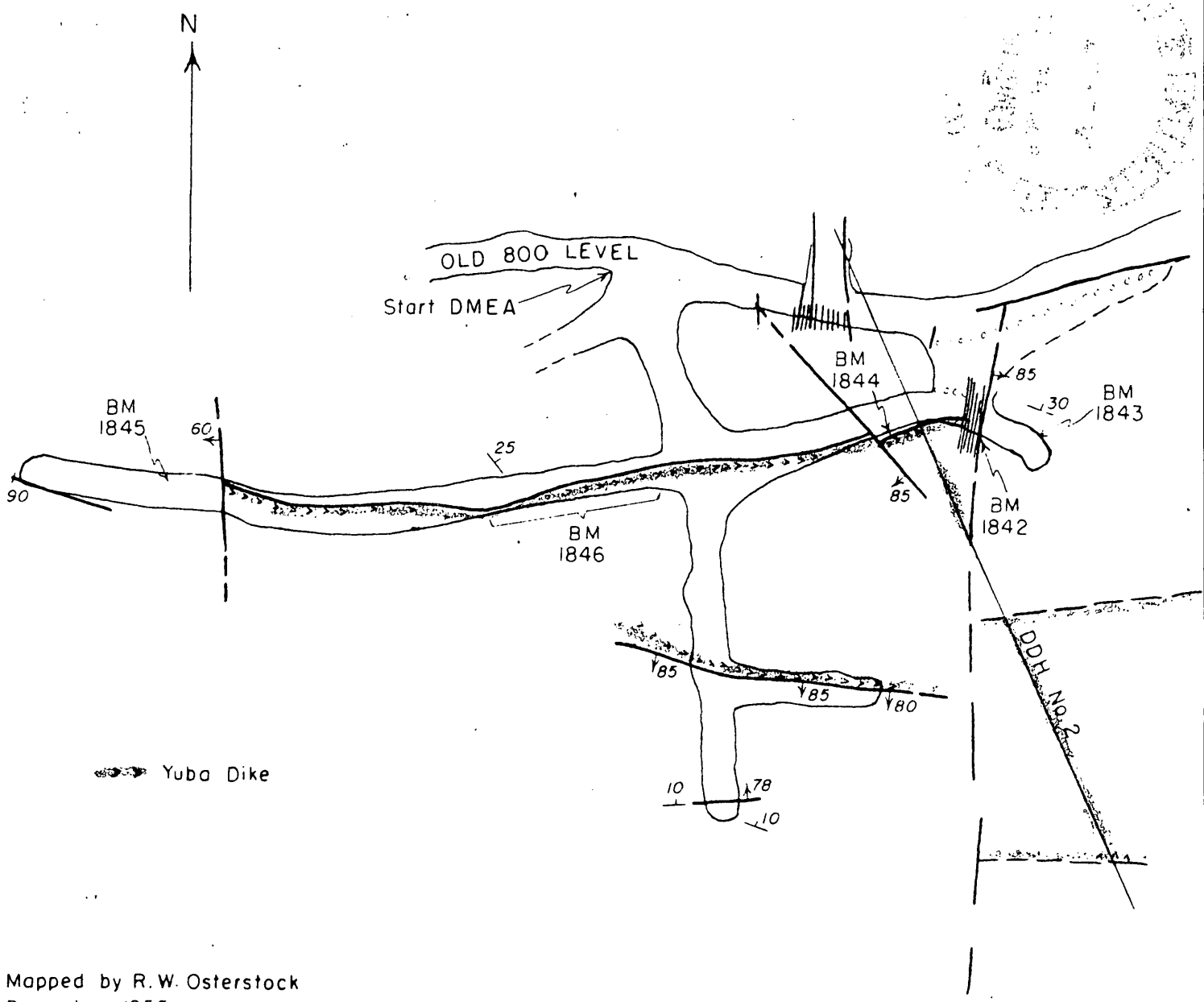

YUBA DIKE MINES, INC.
LINCOLN COUNTY, NEVADA
DOCKET No. DMEA 3396-LEAD-ZINC
CONTRACT No. IDM-E 798
PLAN DRILL HOLES & CROSS CUT
Scale 1" = 20'
15300 E
15000 N
FRACTURED QUARTZITES
TO SHAFT
500 LEVEL
DDH No. 2: 930'
DMEA WORK
BM 1755
1755A
BM 1754
DDH No. 1: 520'
COMPANY DRIFT

Figure 2

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DMEA 3396
Idm E-798
(LEAD-ZINC)



Mapped by R.W. Osterstock
December, 1955

DMEA WORKINGS ON 800 LEVEL, YUBA DIKE MINE
LINCOLN COUNTY, NEVADA

20 0 20 40 Feet

Figure 3

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

RECEIVED 31 1956 D.M.E.A.

1605 Evans Avenue
Reno, Nevada

October 29, 1956

Memorandum

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

From: Executive Officer, DMEA Field Team, Region II

Subject: Docket No. DMEA-3396 (Lead-zinc)
Yuba Dike Mines, Inc.
Yuba Dike Mining Claims
Lincoln County, Nevada
(Contract No. Idm-E798)
(Your letter October 26, 1956)

The Bureau of Mines section of the final report on subject docket has been completed for some time. In the meantime the Geological Survey has been waiting to complete the report until their section has been received from R. W. Osterstock, who was the geologist on the project but has since resigned to join private industry.

Mr. Smith has informed me that they will complete the report based on Osterstock's interim reports and that it will be submitted within two weeks.

S. Ricker

File Copy
Surname
J.C.C.
Signed Selfridge
Matthews

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

OCT 26 1956

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

Re: Docket No. DMEA-3396 (Lead-Zinc)
Yuba Dike Mines, Inc.
Yuba Dike Mining Claims
Lincoln County, Nevada
Contract No. Idm-E798

Dear Mr. Richer:

With reference to the cited terminated contract, please advise us as to when we may expect to receive the final Field Team report.

We are anxious to close our files for this contract and would appreciate receiving the report at your earliest convenience.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (GCS)

APPROVED:

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

Thor H. Kiilsgaard (GCS)
Member, Geological Survey

JWAlt/er 10/25/56
Copy to: Docket
Admr File
Op. Committtee
Base Metals
Mr. Bishop, USBM
Mr. Kiilsgaard, USGS
Chron.

R.C.L.

DMEA

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

RECEIVED
OCT - 1 1956

1605 Evans Avenue
Reno, Nevada

Sept. 27, 1956

Memorandum

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

From: Executive Officer, DMEA Field Team, Region II

Subject: Docket No. DMEA-3396 (Lead-Zinc)
Yuba Dike Mines, Inc.
Yuba Dike Mining Claims
Lincoln County, Nevada
Contract No. Idm-E 798

Enclosed are four copies of the Operator's final report on subject docket.

S. Ricker

Encls.

YUBA DIKE MINES INC.
Pioche, Nevada

RECEIVED
OCT - 1 1956

Subject: Yuba Dike Mines Inc. - Final Report

Date: September 20, 1956

To: J. A. Hedman, President Yuba Dike Mines Inc.

From: O. E. Schrader

Dear John: Docket No. DMEA - 3396

The following is a resume of work completed under the Exploration Project Contract with the Defense Minerals Administration.

Under Stage I of said contract core drilling was started during August 1955 with the drilling of holes #1 and #2. Botheof these holes penetrated the Yuba Dike porphyry and gave us information as the location of said dike. Aggregate core drilling footage of both holes was 145.0 ft. at $7.00 per ft. plus eight sludge samples allowed at $2.00 per sample making a total expenditure under Stage I of $1,031.00.

Under Stage II of contract a cross cut was started near the collar of core drill hole No. 1 and driven south easterly. The "Yuba Dike" porphyry was cut during this operation and was found to have a slight dip to the south and an average thickness of 26.0 ft. although this thickness tends to increase to the east and narrow to the west. Total cross cut completed was 72.0 ft at $37.00 per ft. which equals $2,664.00 plus one sample at $2.00 making a total expenditure under Stage II of $2,666.00.

Under Stage III of contract drifting to the east for 42.0 ft. and to the west for 86.0 ft. along the hanging wall or north side of dike was conpleted.

While drifting to the east a north-south fault was cut which faulted the dike to the south. Last 10 ft. of this advance failed to make contact with dike.

While drifting to the west a strong north-west fault was cut which faulted the dike. The last 38.0 ft. was in crushed quartzite and failed to make contact with the dike.

Drifting along dike contact totaled 128.0 ft. at $37.00 per ft. making a total expenditure under Stage III of $4,736.00.

No comercial minerals were found during the life of this project. All workings have been in a heavily oxidized leached area.

Dristribution of costs follow:

Stage I

Diamond Drill Hole No. 1	52.0 ft. @ $7.00	$ 364.00	
Diamond Drill Hole No. 2	93.0 ft. @ $7.00	651.00	
Eight samples @ $2.00 allowed under Stages I, II, III		16.00	
Total			$1,031.00

Stage II

Cross Cut to southeast 72.0 ft. @ $37.00	$2,664.00	
One sample @ $2.00 allowed under Stages I,II,III	2.00	
Total		$2,666.00

Stage III

Drifting easterly 42.0 ft. @ $37.00	$1,554.00	
Drifting westerly 86.0 ft. @ $37.00	3,182.00	
Total		4,736.00
Grand Total		$8,433.00
DMEA Participation @ 50%		$4,216.50

Very truly yours,

O. E. Schrader

O. E. Schrader
Mine Engineer

A-103

REFERENCES

YUBA DIKE MINES INC.

800 Level No. 1 Mine

Docket No. D.M.E.A.-3396

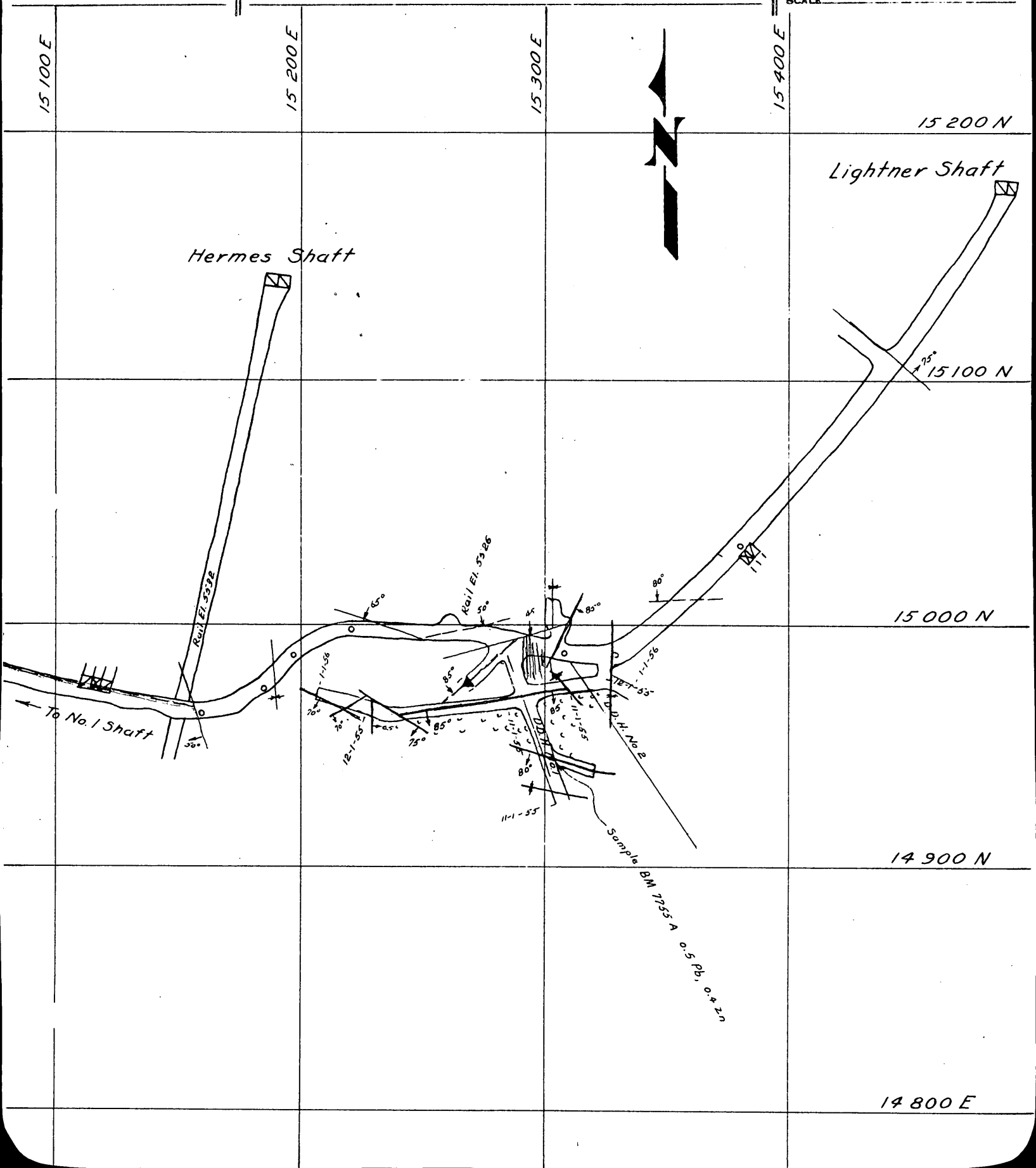
October 16, 1955

MADE BY Schrader

TRACED BY

CHECKED BY

SCALE 1" = 50'



YUBA DIKE MINES INC.
Pioche, Nevada

RECEIVED
OCT - 1 1956

Subject: Yuba Dike Mines Inc. - Final Report

Date: September 20, 1956

To: J. A. Hedman, President Yuba Dike Mines Inc.

From: O. E. Schrader

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Under Stage III of contract drifting to the east for 42.0 ft. and to the west for 86.0 ft. along the hanging wall or north side of dike was conpleted.

While drifting to the east a north-south fault was cut which faulted the dike to the south. Last 10 ft. of this advance failed to make contact with dike.

While drifting to the west a strong north-west fault was cut which faulted the dike. The last 38.0 ft. was in crushed quartzite and failed to make contact with the dike.

Drifting along dike contact totaled 128.0 ft. at $37.00 per ft. making a total expenditure under Stage III of $4,736.00.

No comercial minerals were found during the life of this project. All workings have been in a heavily oxidized leached area.

Dristribution of costs follow:

Stage I

Diamond Drill Hole No. 1	52.0 ft. @ $7.00	364.00
Diamond Drill Hole No. 2	93.0 ft. @ $7.00	651.00
Eight samples @ $2.00 allowed under Stages I,II,III		16.00
Total		$1,031.00

Stage II

Cross Cut to southeast 72.0 ft. @ $37.00	$2,664.00	
One sample @ $2.00 allowed under Stages I,II,III	2.00	
Total		$2,666.00

Stage III

Drifting easterly 42.0 ft. @ $37.00	$1,554.00	
Drifting westerly 86.0 ft. @ $37.00	3,182.00	
Total		4,736.00
Grand Total		$8,433.00
DMFA Participation @ 50%		$4,216.50

Very truly yours,

O. E. Schrader

O. E. Schrader
Mine Engineer

A-103

REFERENCES

YUBA DIKE MINES INC.

800 Level No. 1 Mine

Docket No. D.M.E.A.-3396

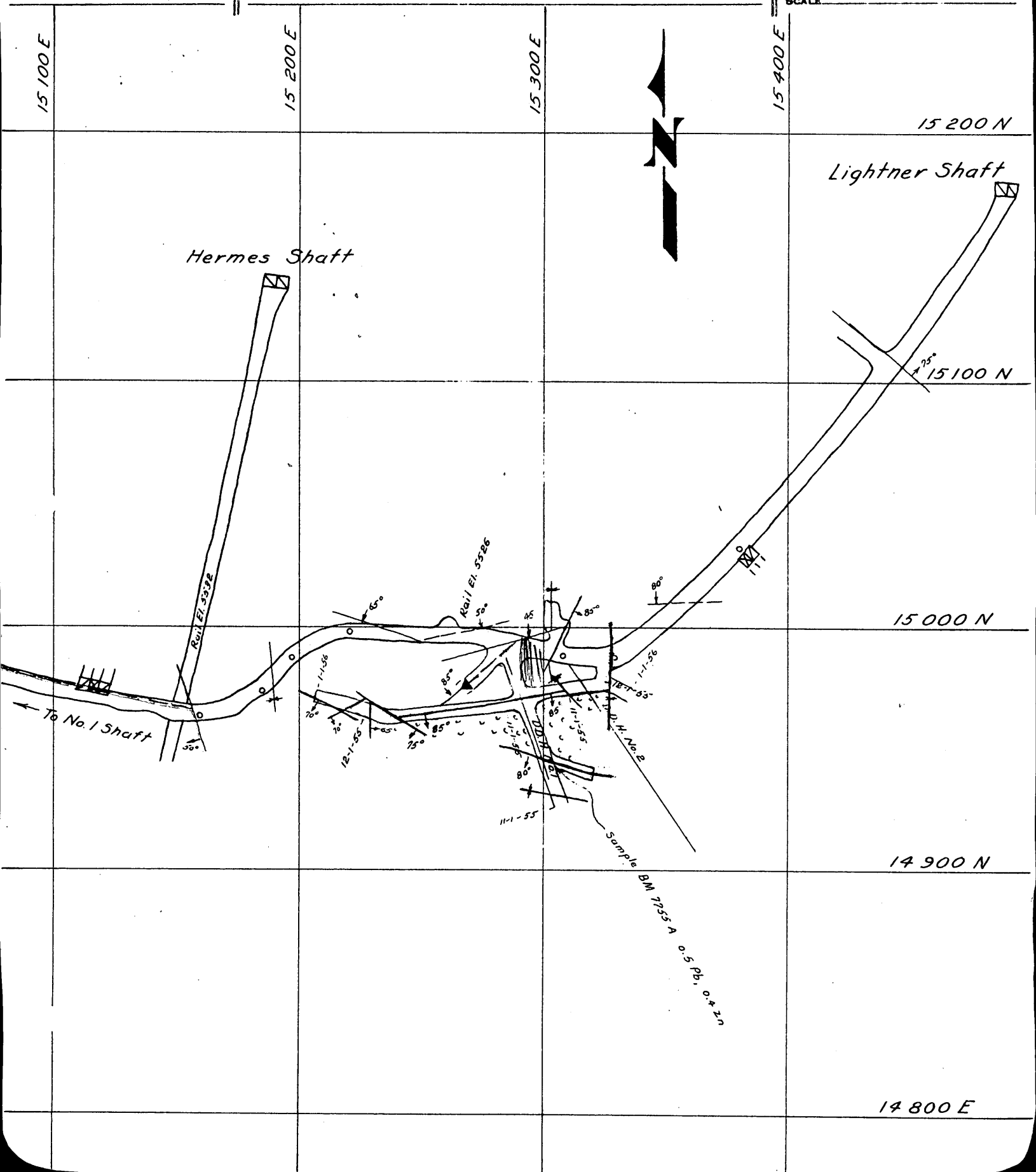
October 16, 1955

MADE BY Schrader

TRACED BY

CHECKED BY

SCALE 1" = 50'



YUBA DIKE MINES INC.
Pioche, Nevada

Subject: Yuba Dike Mines Inc. - Final Report

RECEIVED
OCT - 1 1956

Date: September 20, 1956

To: J. A. Hedman, President Yuba Dike Mines Inc.

From: O. E. Schrader

Dear John: Docket No. DMEA - 3396

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Stage III

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Total		4,736.00
Grand Total		$8,433.00
DMEA Participation @ 50%		$4,216.50

Very truly yours,

O. E. Schrader

O. E. Schrader
Mine Engineer

A-103

REFERENCES

YUBA DIKE MINES INC.

800 Level No. 1 Mine

Docket No. D.M.E.A.-3396

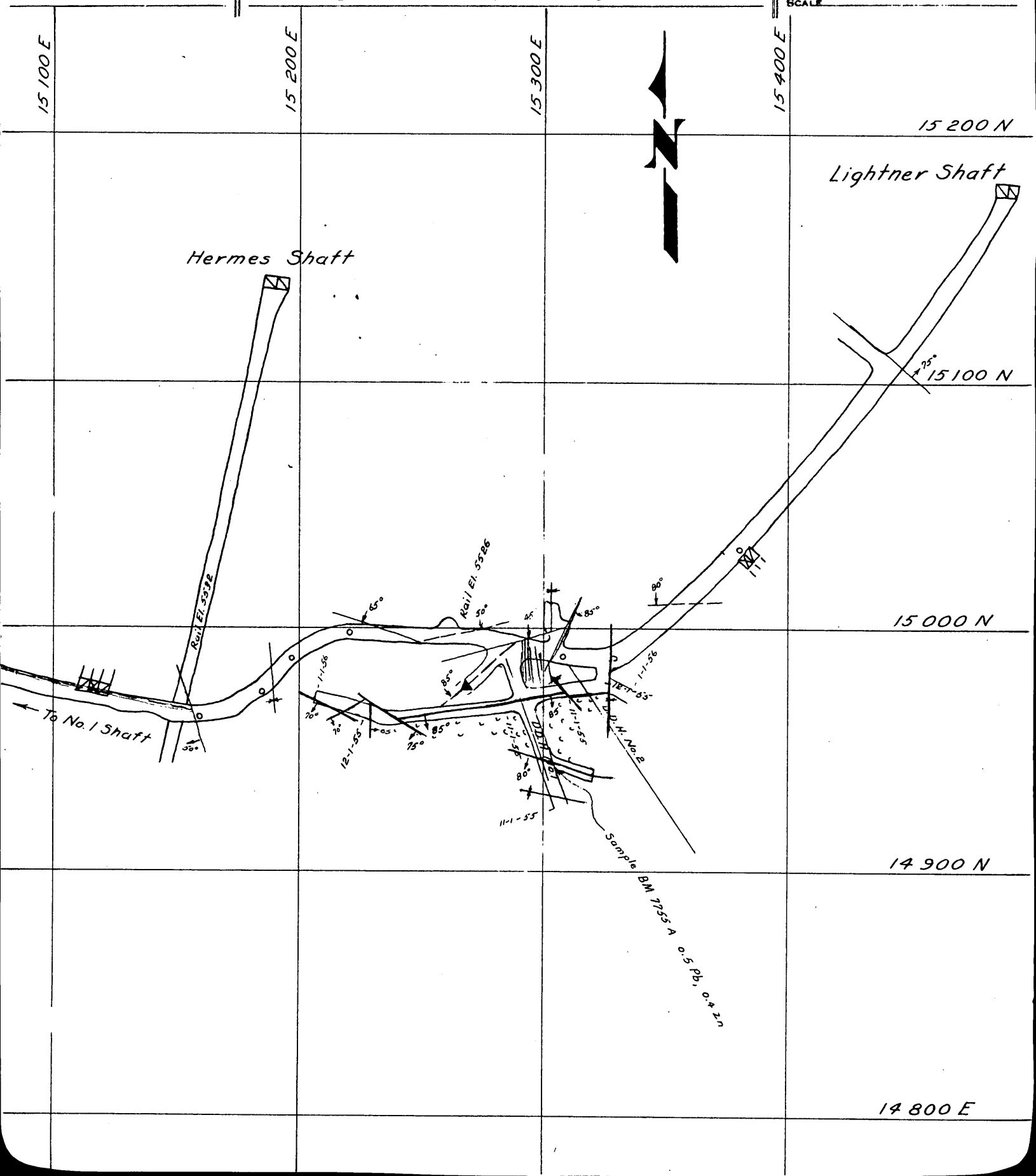
October 16, 1955

MADE BY Schrader

TRACED BY

CHECKED BY

SCALE 1" = 50'



RECEIVED
OCT - 1 1956

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

1605 Evans Avenue
Reno, Nevada

June 26, 1956

Memorandum

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

From: Executive Officer, DMEA Field Team, Region II

Subject: Docket No. DMEA-3396 (Lead-Zinc)
Yuba Dike Mines, Inc.
Yuba Dike Mining Claims
Lincoln County, Nevada
Contract No. Idm-E798

The termination agreement on subject contract, forwarded under your letter of June 11, 1956, has been executed by the Operator, and attached are the Government, Docket, and Division copies. The other copies have been distributed in the usual manner.

S. Ricker

Attach.

RECEIVED
JUN 28 1956

YUBA DIKE MINES, INCORPORATED

PIOCHE, NEVADA

June 19, 1956.

Mr. S. Ricker, Executive Officer
DMEA Field Team, Region 11,
1605 Evans Avenue,
Reno, Nevada.

Dear Mr. Ricker:

We are enclosing signed Termination Agreement on Yuba Dike Mines, Inc. Exploration Contract.

We appreciate and wish to thank you for all your help and cooperation on our project.

Yours very truly,

John A. Hedman.

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

RECEIVED
JUN 18 1956

1605 Evans Avenue
Reno, Nevada

June 14, 1956

Mr. John A. Hedman, President
Yuba Dike Mines, Inc.
Pioche, Nevada

Re: Docket No. DMEA-3396 (Lead-zinc)
Yuba Dike Mines, Inc.
Lincoln County, Nevada
Contract No. Idm-E798

Dear Mr. Hedman:

We are enclosing the original and five copies of a Termination Agreement on subject contract.

If the termination agreement meets with your approval all six copies should be signed by your firm. The copy marked "Operator's Copy" should be retained by you and the original and other four copies should be returned to this office.

If any part of the agreement is not satisfactory to you, the original and all copies should be returned to this office with your suggested changes.

I regret that the project has not been successful, and wish to thank you for your cooperation in our joint effort.

Very truly yours,

S. Ricker
Executive Officer
DMEA Field Team, Region II

Encl.

SRicker:gh
cc: Opr. Com., DMEA, Wash., D.C.
Finance Off., Reg. II
Geo. Mavor
R. M. Smith
File

File Copy
Surname
J. AB
Finnell
Chambers
Martin
Jefferson
Whittenberg

500

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

JUN 11 1956

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

Re: Docket No. DMEA-3396 (Lead-Zinc)
Yuba Bike Mines, Inc.
Yuba Bike Mining Claims
Lincoln County, Nevada
Contract No. Idm-8798

Dear Mr. Ricker:

We are enclosing the original and five copies of a Termination Agreement for the cited property, signed by the Administrator.

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. In the event that the agreement is not satisfactory, and cannot be amended within your delegated authority, return all copies with your recommendation concerning any modification.

Sincerely yours,

W. S. Martin

ACTING Chairman, Operating Committee (SLB)
JWAlt/er 6/5/56
Copy to: Docket
Admr R File
Op. Committee
Base Metals
Mr. Bishop, USBM
Mr. Kiilsgaard, USGS
Chron.

Enclosures

APPROVED:

/s/ Robert W. Geehan (SLB)
Member, Bureau of Mines

Thor H. Kiilsgaard (SLB)
Member, Geological Survey

R.C.B.

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

June 6, 1956

Memorandum

To: The Administrator

From: Chief, Base Metals Division

Subject: Mutual Termination Agreement for Docket No. DMEA-3396, Yuba Dike Mines, Inc., Yuba Dike Mining Claims, Contract No. Idm-E798, Lincoln County, Nevada

The work of the contract was to be done in three stages, the work to be done under Stages II and III to have prior approval of the Government. All work was to be conducted from the 800 level of the No. 1 Shaft.

Work under Stage I was to consist of two diamond drill holes to intersect the Yuba dike, each diamond drill hole to be approximately 200 feet in length.

Stage II work was to consist of crosscutting south through the Yuba dike at not to exceed 150 feet of crosscutting.

Stage III work was to consist of drifting easterly and westerly from the crosscut on the Yuba dike, the amount of drifting not to exceed 300 feet. Also, an allowance was made for 50 feet of raising on the best indications of mineralization.

All work was to be done under fixed unit costs, and the total cost of the project was estimated to be $21,750.00. Government's participation at 50% was $10,875.00.

The work completed consisted of:

Stage I 145 feet of diamond drilling

Stage II 150 feet of crosscutting

Stage III 131 feet of drifting

Total cost of work completed is $8,433.00 (subject to final audit).

Unexpended amount of contract is $13,317.00 (subject to final audit).

All work completed under the terms of the contract showed only sparse lead-zinc mineralization. A number of samples were taken of the drilling, drifting and crosscutting which all assayed low in zinc and lead.

It is our opinion that any further work done under the terms of the contract would not show any increase in mineralization. The Operator is discouraged with the results of the exploration and has indicated that he wants the program reappraised and the remaining funds to be used in exploring other parts of the mine.

The Field Team states: "I believe we should suggest a mutual termination of the contract without prejudice to the property. If at any future time he evolves a sound theory of exploration in another part of the mine that indicates the possibility of an ore discovery, he can make another application for a loan. It seems to us that at the present time we are evolving ideas for continuation merely because there is a balance of unspent funds left on the contract."

We concur with the recommendation of the Field Team that this contract be mutually terminated.

In reply to our telegram, dated June 4, 1956, the Field Team states that no discovery was made and no certification will be recommended.

W. R. Griswold

W. R. GRISWOLD

File Copy
Surname J. ABP

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

500

June 6, 1956

Memorandum

To: The Administrator

From: Chief, Base Metals Division

Subject: Mutual Termination Agreement for Docket No. DMEA-3396, Yuba Dike Mines, Inc., Yuba Dike Mining Claims, Contract No. Ida-E798, Lincoln County, Nevada

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We concur with the recommendation of the Field Team that this contract be mutually terminated.

In reply to our telegram, dated June 4, 1956, the Field Team states that no discovery was made and no certification will be recommended.

W. R. Griswold

W. R. GRISWOLD

~~MRG~~x

JWAlter

Copy to: Docket
Base Metals
Chron.

RmEa

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

RECEIVED
JUN - 7 1956

1605 Evans Avenue
Reno, Nevada

June 5, 1956

Memorandum

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

From: Executive Officer, DMEA Field Team, Region II

Subject: Docket No. DMEA-3396 (Lead-zinc)
Yuba Dike Mines, Inc.
Yuba Dike Mining Claims
Lincoln County, Nevada
Contract No. Idm-E798

Supplementary to my letter of May 17, 1956, I am enclosing an interim report by Glenn G. Gentry dated May 29 in which it is stated that the Operator desires to terminate by mutual agreement above subject contract.

We note in your letter of May 28, 1956 that such an agreement is being prepared.

R. W. Smith
for S. Ricker

Encl.

3596

ACTION ON INTER[illegible]
OR FINAL FIELD TEAM REPORT

Date 6-7

Referred to:

1. ~~Mr. Mittendorf~~
2. ~~Mr. Johnson~~
3. ~~Mr. Chambers~~
4. Docket Control Mails and Files
5. _____ Division
6. Docket Control Mails and Files

Note comments in report regarding:

1. Brat!
2.
3.
4.

and take appropriate action.

- - - - - - - -

Action taken by Division:

Robert E. Adams

BUREAU OF MINES
WASHINGTON, D.C.
JUN 7 8 59 AM '56

INTERIM REPORT

MAY 29 1956

DMEA-3396 (Lead-zinc)
Yuba Dike Mines, Inc.
Yuba Dike Mine (No. 1 shaft)
Pioche, Lincoln County, Nevada
Contract No. Idm-E798

RECEIVED
JUN - 7 1956

Accompanied by John A. Hedman, president, the Yuba Dike mine was visited on May 24. No progress has been made since the inspection on December 12, 1955 which recorded an advance of three feet (see interim report dated 2/16/56).

The diamond drilling, crosscutting and drifting, conducted by the operator, disclosed and followed the Yuba Dike along its contact with the quartzite. However, only very minor amounts of lead and zinc mineralization were found and the value of additional exploration seems questionable.

Therefore, due to the negative results, the Operator now desires to terminate the project by mutual agreement, and it is recommended that his request for termination be approved.

The contract exploration:

Stage	Type of work	Feet		
		Approved	Completed	Uncompleted
I	Diamond drilling	400	145	255
II	Crosscutting	150	72.5	77.5
III	Drifting	300	131	169
	Raising	50	-	50

Financial:

Amount of contract	$21,750
Expenditures as of 12/31/55 .	8,433
Unexpended	$13,317

Contract period: Amendment No. 1, dated February 8, 1956, suspended work under the contract for the period beginning January 21, 1956 and ending not later than April 1, 1956, and the time for completion is extended to September 15, 1956.

Glenn G. Gentry
Mining Engineer

CLASS OF SERVICE

This is a fast message unless its deferred character is indicated by the proper symbol.

WESTERN UNION

TELEGRAM

W. P. MARSHALL, PRESIDENT

1201

SYMBOLS

DL = Day Letter

NL = Night Letter

LT = International Letter Telegram

The filing time shown in the date line on domestic telegrams is STANDARD TIME at point of origin. Time received is STANDARD TIME at point of destination

RECEIVED

JUN - 5 1956

OB252

JUN 4 PM 6 57

O REA432 NL PD=RENO NEV 4=

OPERATING COMMITTEE DEFENSE MINERALS EXPLORATION ADMIN=

INTERIOR BLDG WASHDC=

REURTEL DOCKET DMEA-3396 CONTRACT IDM-E798 YUBA DIKE MINES CORP NO DISCOVERY WAS MADE AND NO CERTIFICATION WILL BE RECOMMENDED=

:ROSCOE M SMITH ACTG EXEC OFCR DMEA FIELD TEAM REGION 2=.

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

File Copy
Surname

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

JUN - 4 1956

Kiilsgaard
Gehen
Martin
Johnson
McKinstry

JWAlt/er Rm 4444. Ext. 3669

TELEGRAM

DMEA Base Metals Division

14X4401(01) Revolving Fund, Defense Production Act, Interior (allocated Working Fund to Office of Secy.)

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

Re Docket DMEA-3396, Contract Idm-2798, Yuba Dike Mines, Inc. At your earliest convenience please send us your ~~comments~~ recommendation regarding a Certification of Discovery for this property.

W. S. Martin
ACTING Chairman, Operating Committee

JWAlt/er (written 6/4/56)
Copy to: Docket
Admr R File
Op. Committee
Base Metals
Mr. Bishop, USBM
Mr. Kiilsgaard, USGS
Chron.
Confirmation Copy

R.C.G.

File Copy
Surname
Subject
Martin
F.E. Brown
Mattendorf

500

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

MAY 28 1956

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

Re: Docket No. DMEA-3396 (Lead-Zinc)
Yuba Dike Mines, Inc.
Yuba Dike Mining Claims
Lincoln County, Nevada
Contract No. Idm-E798

Dear Mr. Ricker:

This is with reference to your memorandum dated May 17, 1956, regarding the cited project. Due to the negative results obtained in the exploration of this property, we are in agreement with your that this contract should be mutually terminated. Therefore, we will have such an agreement prepared and will, within a short time, submit it to you for your approval.

Sincerely yours,

W. S. Martin
ACTING Chairman, Operating Committee (JB)

APPROVED:

/s/ Robert W. Geehan (JB)
Member, Bureau of Mines

Thor H. Kiilsgaard (JB)
Member, Geological Survey

JWAlt/er 5/26/56
Copy to: Docket
Admr R File
Op. Committee
Base Metals
Mr. Bishop, USBM
Mr. Kiilsgaard, USGS
Chron.

RCG

File Copy
Surname
J. Alt

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

May 28, 1956

Memorandum

To: Associate Solicitor, Division of Mineral Resources

From: Chief, Base Metals Division

Subject: Preparation of Mutual Termination Agreement for Contract No. Idm-E798, Docket No. DMEA-3396, Yuba Dike Mines, Inc., Yuba Dike Mining Claims, Lincoln County, Nevada, Lead-Zinc.

Will you please prepare a Mutual Termination Agreement for the cited contract. By Amendment No. 1, work on the project was recessed beginning January 21, 1956 and ending not later than April 1, 1956. Work under the terms of the contract was not resumed on April 1.

Please refer to the memorandum from the Executive Officer, DMEA Field Team, Region II, dated May 17, 1956.

W. R. Griswold

W. R. Griswold

JWAlt/er 5/26/56

Copy to: Docket
Base Metals
Chron.

ACTION ON INTERIM 396
OR FINAL FIELD TEAM REPORT

Date 5·21

Referred to:

1. ~~Mr. Mitterdorf~~
2. ~~Mr. Johnson~~
3. ~~Mr. Chambers~~
4. ~~Docket Control Mails and Files~~
5. ~~[illegible]~~ Division
6. Docket Control Mails and Files

Note comments in report regarding:

1. Requires Division study
2.
3.
4.

and take appropriate action.

- - - - - - - -

Action taken by Division:

5/25/56 - this is being studied.

Robert E. Adams

BUREAU OF MINES
WASHINGTON, D.C.
MAY 21 9 45 AM '56

RmEa

C

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

RECEIVED
MAY 21 1956

1605 Evans Avenue
Reno, Nevada

May 17, 1956

Memorandum

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

From: Executive Officer, DMEA Field Team, Region II

Subject: Docket No. DMEA-3396 (Lead-zinc)
Yuba Dike Mines, Inc.
Yuba Dike Mining Claims
Lincoln County, Nevada
Contract No. Idm-E798

Since my memorandum of May 14, 1956 on subject contract, I have received an Interim Report by R. W. Osterstock, Geological Survey. Four copies of this report are attached. I have also discussed the project with Roscoe Smith and Glenn Gentry, and they do not believe that more work in the project area offers much hope for making a discovery. In addition the letter of April 30, 1956 from the Operator indicates that he wants the program reappraised and is discouraged with the results of the exploration.

I believe we should suggest a mutual termination of the contract with the Operator without prejudice to the property. If at any future time he evolves a sound theory of exploration in another part of the mine that indicates the possibility of an ore discovery, he can make another application for a loan. It seems to us that at the present time we are evolving ideas for continuation merely because there is a balance of unspent funds left on the contract. /?

I would be pleased to have your suggestions.

S. Ricker

Attach.

IN REPLY REFER TO

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
Room 206, 222 So. West Temple
Salt Lake City 1, Utah
May 7, 1956

RECEIVED
MAY 21 1956

9

Memorandum

To: R. M. Smith, DMEA Field Team, Region II

From: R. W. Gerstetock

Subject: DMEA 1956 (Lead-zinc) Contract Ida-8 796 Ibex Dike Mines, Inc. (Ibex Dike Mine), Lincoln County, Nevada.

Discussion of the subject project with John Hedges, the operator, on May 2, 1956 revealed that a new request has been submitted to continue the project in recess until August 1, 1956. Amendment No. 1 dated February 8, 1956 granted recess until April 1, 1956.

Since the date of the last Interim report (1-23-56) the face of the DMEA workings along the north wall of the Ibex dike has been advanced 3 or 4 feet by one round, not yet mucked-out. (See attached map).

Hedges has expressed dissatisfaction with the results of the exploration to date. At no point in the workings has an economically exploitable concentration of ore minerals been exposed; and the chance of encountering such is diminished by the fact that at least one structural intersection, theoretically a favorable locus, contained only traces of ore minerals.

Thus the advisability of continued drifting in the area is questionable. G. G. Gentry (DMEA) in his interim report dated April 6, 1956 suggested that prior to termination of the project some diamond drilling be accomplished. In this I concur except that I would recommend the two proposed DDH's from the face of the drift be oriented as shown on the accompanying map.

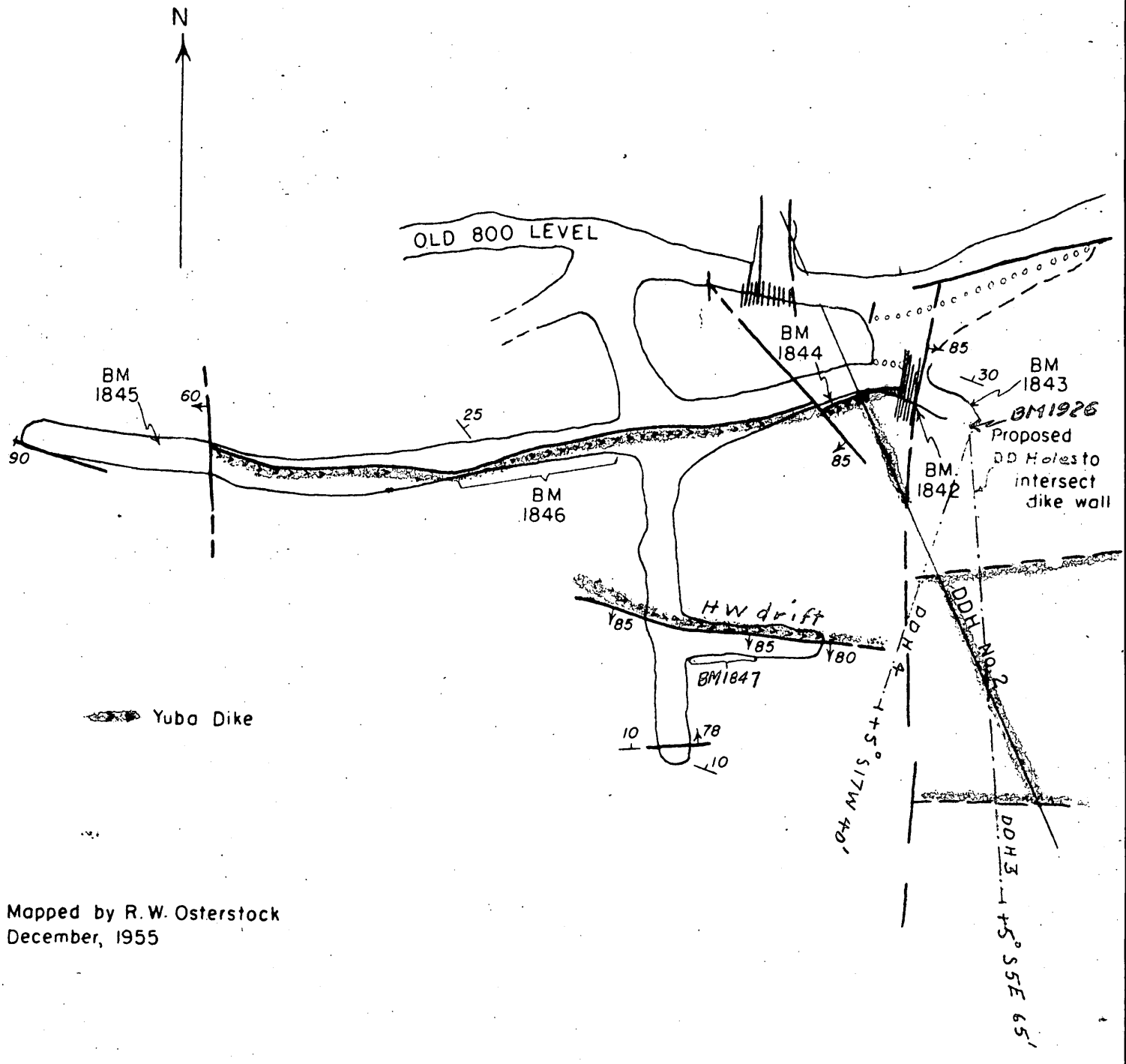
[redacted]

[redacted]

[redacted]

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DMEA 3396
Idm E-798
(LEAD-ZINC)



Mapped by R.W. Osterstock
December, 1955

DMEA WORKINGS ON 800 LEVEL, YUBA DIKE MINE
LINCOLN COUNTY, NEVADA

20 0 20 40 Feet

RECEIVED
MAY 21 1956

YUBA DIKE MINES, INCORPORATED

PIOCHE, NEVADA

April 30, 1956.

S. Ricker, Executive Officer
DMEA Field Team, Region II
1635 Evans Avenue,
Reno, Nevada

RECEIVED
MAY 16 1956

re: Docket No. DMEA-[illegible]
Yuba Dike Mines, Inc
Lincoln County, Nevada
Contract No. [illegible]

Dear Mr. Ricker:

We hereby [illegible] request an additional [illegible] on the above project.

The past month has been spent in cleaning up the work space on the project and our electrical equipment had become water logged, making it necessary to bring it to the surface for drying.

Before continuing this work, would it be possible to re-appraise the program, as our work so far has not been encouraging. In order to save money and time, I believe diamond drilling instead of drifting and raising would bring the best results.

Or if you could grant permission to transfer the balance of the work to a new location where exploration is necessary to locate ore I think we would have a better chance.

Thanking you and awaiting your decision, I am

Yours very truly,

John A. Hartman.

RECEIVED
APR 10 1956

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Office of
Executive Officer
DMEA Field Team
Region II

1605 Evans Avenue
Reno, Nevada

Date 4/17/56

Memorandum

To: Operating Committee, DMEA, Interior Bldg., Wash., D.C.

From: Executive Officer, DMEA Field Team, Region II

Subject: Interim Inspection Report

Attached are four copies of Interim Report on

Docket No. DMEA-3396

Contract No. Idm-E798

Commodity Lead-zinc

Operator Yuba Dike Mines, Inc.

Property Yuba Dike Mine (No. 1 Shaft)
Lincoln County, Nev.

By Glenn G. Gentry

Dated 4/6/56

S. Ricker
Executive Officer
DMEA Field Team, Region II

Attachments

Copy to: R. M. Smith, USGS (w/copy of report)
Finance Officer, Region II (w/copy of report)
File

3396

Date 4-19

Referred to:

1. ~~Mr. Mitchenbaum~~
2. ~~Mr. Johnson~~
3. ~~Mr. Chambers~~
4. ~~Docket Control Mails and Files~~
5. ~~Bus. Ownership~~ Division
6. Docket Control Mails and Files

Note comments in report regarding:

1. Termination indicated —
2. Recommend 2 more
3. D D holes
4.

and take appropriate action.

- - - - -

Action taken by Division:

4/25/56 - Noted. Will terminate upon receipt of recommendation of F. T. Examiner. Officer. J.C.

Initials

APR 19 9 17 AM '56
WASHINGTON, D.C.

INTERIM REPORT

Docket No.: DMEA-3396 (Lead-zinc) April 6, 1956

Yuba Dike Mines, Inc.
Pioche, Nevada

Yuba Dike Mine (No. 1 Shaft)
Pioche, Lincoln County, Nevada

Contract No.: Idm-E798

Accompanied by John A. Hedman, president, the Yuba Dike mine was visited on April 3. No progress has been made since the last inspection on February 9, as amendment No. 1, dated February 8, approved suspension of the work ending not later than April 1, 1956.

On April 1, 1956, the Operator started repairing equipment to be used in continuing the project and drying out the electric motor which powered the underground air compressor.

Sample BM-1926, width 1.0 feet, taken in the face of the southeast drift during the inspection on February 9, analyzed 0.3% Pb, 0.6% Zn, 0.01 ounces Au and 0.50 ounces Ag per ton.

Due to the negative results obtained from the exploration drifting, the Operator is considering requesting termination of the project. However, before termination is agreed upon, the examiner recommends that two diamond drill holes be drilled from the present face of the southeast drift. The purpose of the drill holes would be to explore the area in a southeasterly direction and between the present face of the drift and the intersection of two northeast to southwest faults.

The depth of the two diamond drill holes would probably not exceed 150 feet, and a total of 255 feet of diamond drilling remains uncompleted under the contract.

It is suggested that the first drill hole be extended on a bearing of S. 30° E., inclined plus 5 degrees to a depth of 75 feet. The bearing, inclination and depth of the second drill hole should be contingent upon the results of the first drill hole.

Contract exploration:

		Approved	Completed	Not Completed
Stage I -	Diamond drilling	400 feet	145 feet	255 feet
Stage II -	Crosscutting	150	72.5	77.5
Stage III -	Drifting	300	131	169
	Raising	50	-0-	50

Financial:

Amount of contract:	$21,750.00
*Expenditures as of 12/31/55	8,433.00
Unexpended	$13,317.00

Contract period: To be completed on or before June 1, 1956.

*No expenditures made in January and February 1956.

Glenn G. Gentry
Mining Engineer

C

RECEIVED
FEB 27 1956

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Office of
Executive Officer
DMEA Field Team
Region II

1605 Evans Avenue
Reno, Nevada

Date 2/23/56

Memorandum

To: Operating Committee, DMEA, Interior Bldg., Wash., D.C.

From: Executive Officer, DMEA Field Team, Region II

Subject: Interim Inspection Report

Attached are four copies of Interim Report on

Docket No. DMEA-3396

Contract No. Idm-E798

Commodity Lead-zinc

Operator Yuba Dike Mines, Inc.

Property Yuba Dike Mine, Lincoln County, Nevada

By R. W. Osterstock, USGS

Dated 1/23/56

S. Ricker
Executive Officer
DMEA Field Team, Region II

Attachments

Copy to: R. M. Smith, USGS (w/copy of report)
Finance Officer, Region II (w/copy of report)
File

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
Mineral Deposits Branch
4 HOMEWOOD PLACE
MENLO PARK, CALIFORNIA

RECEIVED
FEB 27 1956

January 23, 1956

Memorandum

To: R. M. Smith, DMEA Field Team, Region II

From: R. W. Osterstock

Subject: DMEA-3396 (lead-zinc) Yuba Dike Mines, Inc.
Yuba Dike mine, Lincoln County, Nevada
Contract No. Idm-E798
INTERIM REPORT

Mr. John Hedman, operator of the subject property, was visited on January 19, 1955 by R. W. Osterstock (USGS). Discussion of DMEA activity at the property revealed that no significant advance had been made since the date of the last inspection on December 14, 1955. The workings, as they existed on that date, are illustrated on the map accompanying my memo dated January 3, 1956. The location of samples taken by the USBM representative are noted on the map; the assays are as follows:

BM Sample No.	% Pb	% Zn	% Cu	Au oz/ton	Ag
1842	0.2	0.3	0.03	0.005	0.30
1843	0.2	0.3	0.03	0.01	0.50
1844	0.2	0.2	0.04	0.01	0.30
1845	0.2	0.2	0.03	0.01	0.30
1846	0.2	0.2	0.03	Tr.	Tr.
1847	0.2	0.2	0.06	0.01	0.40

Mr. Hedman explained that the inactivity on the DMEA project was due mainly to the fact that the underground crew was being utilized to meet work requirements, which are in his lease agreements, in other portions of the mine. Hedman was advised that in order to prevent defaulting his DMEA contract he should file a

request for recess which would provide ample time for completion of his work commitments.

DMEA

RECEIVED
FEB 20 1956

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Office of
Executive Officer
DMEA Field Team
Region II

1605 Evans Avenue
Reno, Nevada

Date 2/17/56

Memorandum

To: Operating Committee, DMEA, Interior Bldg., Wash., D.C.

From: Executive Officer, DMEA Field Team, Region II

Subject: Interim Inspection Report

Attached are four copies of Interim Report on

Docket No. DMEA-3396

Contract No. Idm-E798

Commodity Lead-zinc

Operator Yuba Dike Mines, Inc.

Property Yuba Dike Mine (No. 1 shaft)
Lincoln County, Nevada

By Glenn G. Gentry

Dated 2/16/56

S. Ricker
Executive Officer
DMEA Field Team, Region II

Attachments

Copy to: R. M. Smith, USGS (w/copy of report)
Finance Officer, Region II (w/copy of report)
File

INTERIM REPORT

RECEIVED FEB 20 1956

Docket No.: DMEA-3396 (Lead-zinc) February 16, 1956

Name and address of operator: Yuba Dike Mines, Inc.
John A. Hedman, President
Pioche, Nevada

Name and location of property: Yuba Dike Mine
(No. 1 shaft)
Pioche, Lincoln County, Nevada

Contract No.: Idm-E798

Accompanied by Mr. John A Hedman, the Yuba Dike Mine was visited on February 9. Progress since the last inspection, December 12, 1955, amounted to drilling and blasting one round in the East drift, with an advance of 3 feet.

On January 21, 1956, the operator requested a 60 day recess, due to being short handed and to fulfill a work agreement on the 300 level. In answer to this request and under date of February 8, 1956, amendment No. 1 was issued which approved suspension of the work beginning January 21 and ending not later than April 1, 1956.

The three foot advance in the No. 1 West drift failed to disclose appreciable mineralization, although a seam of smoky quartz from 1/2-inch to 1-1/2 inches wide was noted in the face. This quartz appeared on the contact between the Yuba Dike porphyry and quartzite. One sample, BM-1926, was taken across the porphyry and the analyses will be included in the next interim report.

Samples mentioned in the report of December 12 were analyzed as follows:

Sample No.	Width, feet	Percent Pb	Percent Zn	Percent Cu	Ounces/Tons Au	Ounces/Tons Ag
BM-1842	1.7	0.2	0.3	0.3	0.005	0.30
BM-1843	Grab	0.2	0.3	0.3	0.01	0.50
BM-1844	0.7	0.2	0.2	0.4	0.01	0.30
BM-1845	4.6	0.2	0.2	0.3	0.01	0.30
BM-1846	23.0	0.2	0.2	0.3	Trace	Trace
BM-1847	9.0	0.2	0.2	0.6	0.01	0.40

Work completed - East drift:

	Feet
Stage II - Advance previously reported	42.3
Advance 12/12/55-2/9/56	3.0
Total	45.3

West drift:

Advance previous reported	85.7
Advance 12/12/55-2/9/56	-
Total	85.7

Total advance, both drifts 131.0

Not completed:

Diamond drilling:	255.0
Crosscutting:	77.5
Drifting:	169.0

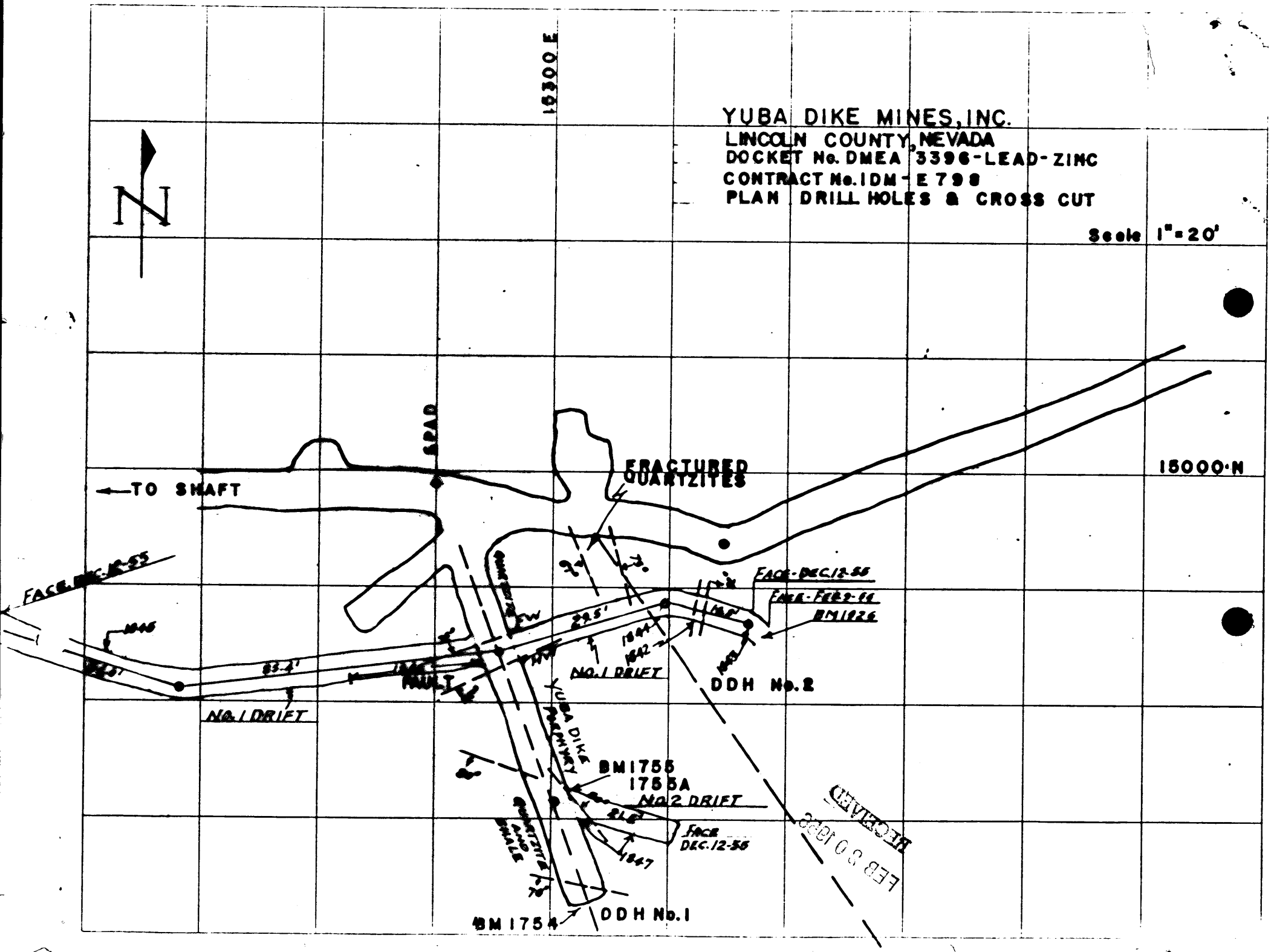
Financial:

Amount of contract:	$21,750.00
Expenditures as of 12/31/55	8,433.00
Unexpended	$13,317.00

Contract period:

To be completed on or before 6/1/56
Unexpended contract time: 3-1/2 months

Glenn G. Gentry
Mining Engineer


YUBA DIKE MINES, INC.
LINCOLN COUNTY, NEVADA
DOCKET No. DMEA 3396-LEAD-ZINC
CONTRACT No. IDM-E 798
PLAN DRILL HOLES & CROSS CUT
Scale 1" = 20'
N
15300 E
15000 N
SPAD
TO SHAFT
FRACTURED QUARTZITES
FACE-DEC. 12-55
FACE-DEC. 12-56
FACE-FEB. 2-56
BM 1826
1846
83.4'
22.5'
1844
1842
NO. 1 DRIFT
DDH No. 2
YUBA DIKE PORPHYRY
BM 1755
1755A
NO. 2 DRIFT
FACE DEC. 12-56
1847
QUARTZITE AND SHALE
BM 1754
DDH No. 1
RECEIVED
FEB 20 1956

10 2n E a

RECEIVED
FEB 15 1956

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

1605 Evans Avenue
Reno, Nevada

February 13, 1956

Memorandum

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

From: Executive Officer, DMEA Field Team, Region II

Subject: Docket No. DMEA-3396 (Lead-zinc)
Yuba Dike Mines Inc.
Yuba Dike Mining Claim
Lincoln County, Nevada
Contract No. Idm-E798

Reference is made to your letter of February 1, 1956 relative to an amendment to subject contract.

Attached are the original and two copies of amendment No. 1 in which operations are suspended from January 21, 1956 and ending not later than April 1, 1956. The remaining copies have been distributed in the usual manner.

S. Ricker

Attach.

C

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

RECEIVED
FEB 10 1956

1605 Evans Avenue
Reno, Nevada

February 8, 1956

Mr. John A. Hedman, President
Yuba Dike Mines, Inc.
Pioche, Nevada

Re: Docket No. DMEA-3396 (Lead-Zinc)
Yuba Dike Mines, Inc.
Lincoln County, Nevada
Contract No. Idm-E798

Dear Mr. Hedman:

We are enclosing the original and five copies of a proposed Amendment No. 1 to above referenced exploration contract signed by the Executive Officer, Defense Minerals Exploration Administration, Region II, for the Government.

If the terms and conditions of the proposed amendment are satisfactory to you, all six copies should be signed by your firm. The copy marked "Operator's Copy" should be retained by you and the original and the other four copies should be returned to this office.

If any part of this amendment does not meet with your approval, the original and all copies should be returned to this office with your suggested changes.

This proposed amendment formalizes my letter of January 24, 1956.

Very truly yours,

S. Ricker
Executive Officer
DMEA Field Team, Region II

Encl.
SRicker:gh

cc: Opr. Com., DMEA, Wash., D. C.
Finance Off., Reg. II
Geo. Mavor
R. M. Smith
File

File Copy
Surname
J. Alt.
Samuel Selfridge
Fergusson
Mitchendorf

500

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

FEB - 1 1956

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

Re: Docket No. DMEA-3396 (Lead-Zinc)
Yuba Dike Mines, Inc.
Yuba Dike Mining Claim
Lincoln County, Nevada
Contract No. Idm-E798

Dear Mr. Ricker:

This is with reference to the copy of your letter to Mr. John A. Hedman, President, Yuba Dike Mines, Inc., dated January 24, regarding the cited project. It is our opinion that you should prepare an amendment allowing the operator to recess operations and, if necessary, extend the time to complete the work of the contract.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (SHB)

APPROVED:

/s/ Robert W. Geehan (SHB)
Member, Bureau of Mines

Thor H. Kiilsgaard (SHB)
Member, Geological Survey

JWAlt/bjl (1/31/56)

Copy to: Docket
Admr. R. File
Op. Committee
Base Metals
Mr. Bishop
Mr. Kiilsgaard
Chron.

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

RECEIVED
JAN 26 1956

1605 Evans Avenue
Reno, Nevada

January 24, 1956

Mr. John A. Hedman, President
Yuba Dike Mines, Inc.,
Pioche, Nevada

Re: DMEA-3396 (Lead-zinc)
Yuba Dike Mines, Inc.
Lincoln County, Nevada
Contract No. Idm-E798

Dear Mr. Hedman:

Reference is made to your letter of January 21, 1956 requesting a recess of 60 days on work on above referenced contract.

We agree to this 60-day recess with the understanding that work shall be resumed on or before April 1, 1956 and that the Government shall be exempt from participation in any costs occurring during the recess period or from any causes due thereto.

Very truly yours,

S. Ricker
Executive Officer
DMEA Field Team, Region II

SRicker:gh
cc: Opr. Com., DMEA, Wash., D.C.
Finance Off., Reg. II
Geo. Mavor
R. M. Smith
File

YUBA DIKE MINES, INCORPORATED

PIOCHE, NEVADA

Ricker 1/24/56

ANSWERED

January 21, 1956.

RECEIVED

JAN 26 1956

Mr. S. Ricker, Executive Officer
DMEA Field Team, Region 11
1605 Evans Avenue,
Reno, Nevada.

Dear Sir:

We wish to ask permission to call a 60 day recess on our Yuba Dike Mines, Inc. Contract No. XDM-R798, Docket No. DMEA 3396, as we are short handed and must fulfill a work agreement on a lease held on nearby ground.

Thanking you and hoping you are able to grant us this intermission in our work, I am

Yours very truly,

John A. Hedman, Pres.

RECEIVED
JAN 1 2

RECEIVED
JAN 1 2 1956

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Office of
Executive Officer
DMEA Field Team
Region II

1605 Evans Avenue
Reno, Nevada

Date: 1/10/56

Memorandum

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

From: Executive Officer, DMEA Field Team, Region II

Subject: Interim Inspection Report

Attached are four copies of Interim Report on -
Docket DMEA 3396

Contract Idm-E 798

Commodity lead-zinc

Operator - Yuba Dike Mines, Inc.

Property - Yuba Dike Mine, Lincoln Co., Nev.

By R. W. Osterstock, USGS

Dated 1/3/56

S. Ricker
Executive Officer,
DMEA Field Team, Region II

Attachments

Copy to: R. M. Smith--USGS (w/copy of report)
Finance Officer, Region II (w/copy of report)
File

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
Mineral Deposits Branch
4 HOMEWOOD PLACE
MENLO PARK, CALIFORNIA

RECEIVED
JAN 12 1956

January 3, 1956

Memorandum

To: DMEA Field Team, Region II

From: R. W. Osterstock

Subject: DMEA-3396 (lead-zinc)
Yuba Dike Mines, Inc.
Yuba Dike mine
Lincoln County, Nevada
Contract No. Idm-E798
INTERIM REPORT

The subject property was visited December 14, 1955 by R. W. Osterstock (USGS) and G. G. Gentry (USBM). Mr. John Hedman, the operator, accompanied the inspectors during the examination.

Crosscutting and drifting operations through and along the Yuba Dike are advanced to the positions indicated on the accompanying geologic sketch map. Operations at the time of the inspection had been suspended pending advice from DMEA personnel relative to a fault structure which had cut off the north wall of the dike in the drift.

Thus far work in the project area has involved diamond drilling two holes from the existing 800 level workings. These holes established the position of the dike south of the 800 level drift. Crosscutting was started along the course of diamond drill hole No. 1 and was continued to a point about 20 feet beyond the south wall of the dike. Drifting operations at the time of the

DEPARTMENT OF INTERIOR
BUREAU OF MINES
REGION II
RECEIVED

1956 JAN 6 PM 1:30

RENO, NEVADA

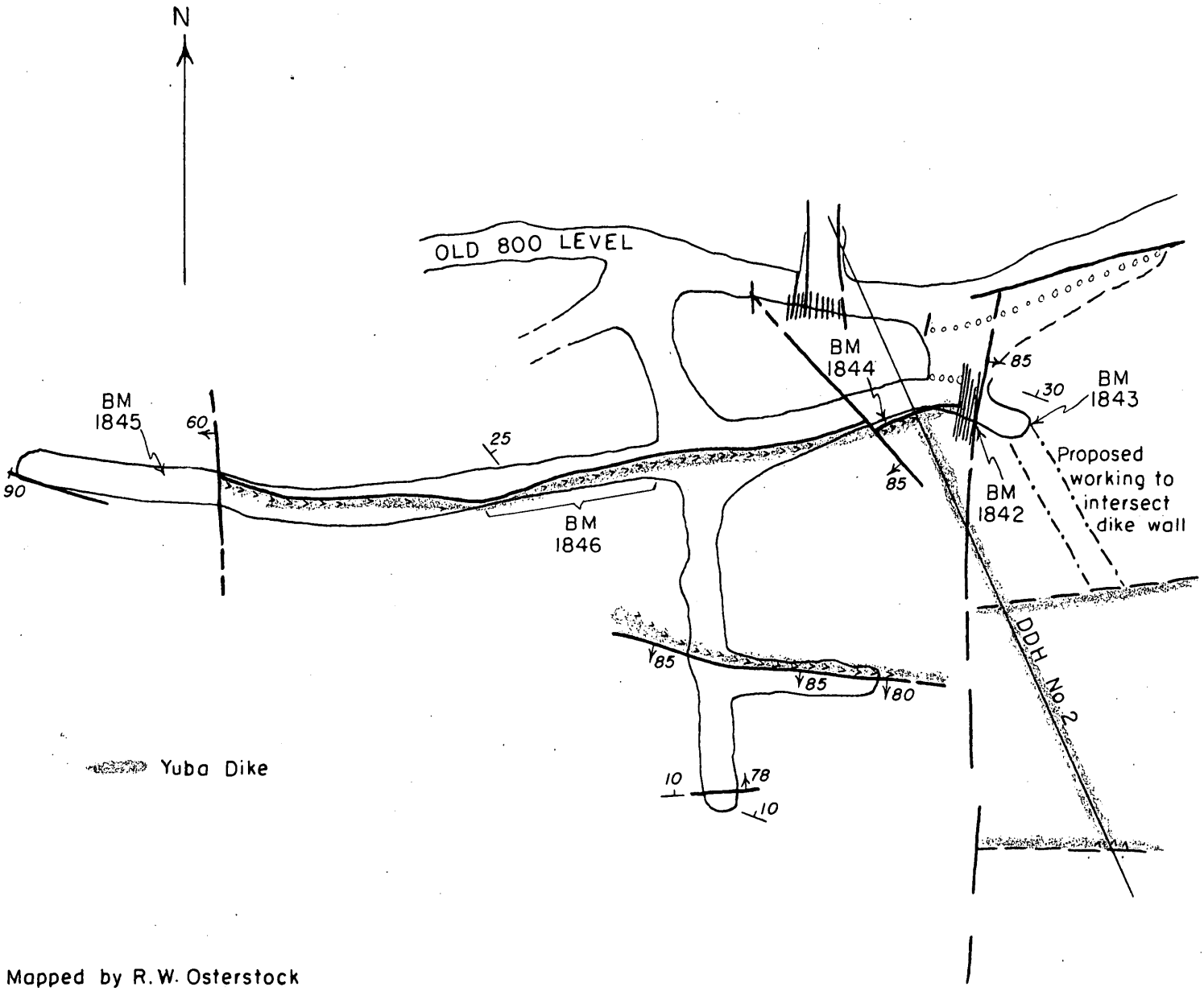
inspection had exposed about 97 feet of the north wall of the dike (both east and west of the crosscut); and about 25 feet of the south wall to the east of the crosscut. The dike contact on the north wall has been cut off by faulting in both ends of the drift. Detailed study of the southwest zone in the east drift reveals that the same fault structure had been encountered earlier in the old 800 level drift.

The apparent thickening of the dike to the east, as was indicated in the two drill holes, may now be safely ascribed to faulting which has offset the eastern segment of the dike about 20 to 25 feet south. The operator was advised, therefore, to turn his drift heading to the southeast as is indicated on the attached map.

At no point in the DMEA workings has there been a minable concentration of ore minerals. At several isolated localities there is, however, evidence that ore minerals were present prior to leaching and oxidation. Sampling has disclosed only minor amounts of metallization along the walls of the dike. Assay data for the USBM samples has not yet been received, and will be reported later.

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DMEA 3396
Idm E-798
(LEAD-ZINC)



Mapped by R.W. Osterstock
December, 1955

DMEA WORKINGS ON 800 LEVEL, YUBA DIKE MINE
LINCOLN COUNTY, NEVADA

20 0 20 40 Feet

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Office of
Executive Officer
DMEA Field Team
Region II

1605 Evans Avenue
Reno, Nevada

Date 12/27/55

Memorandum

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

From: Executive Officer, DMEA Field Team, Region II

Subject: Interim Inspection Report

Attached are four copies of Interim Report on -
Docket DMEA 3396

Contract Idm-E 798

Commodity Lead-zinc

Operator - Yuba Dike Mines, Inc.

Property - Yuba Dike Mine (No. 1 Shaft), Lincoln Co., Nev.

By Glenn G. Gentry

Dated 12/21/55

S. Ricker
Executive Officer
DMEA Field Team, Region II

Attachments

Copy to: R. M. Smith--USGS (w/copy of report)
Finance Officer, Region II (w/copy of report)
File

RECEIVED
DEC 30 1955

INTERIM REPORT

Docket No.: DMEA-3396 (Lead-zinc) December 21, 1955

Name and address of operator: Yuba Dike Mines, Inc.
John A. Hedman, Pres.
Pioche, Nevada

Name and location of property: Yuba Dike Mine
(No. 1 Shaft)
Pioche, Lincoln County, Nevada

Contract No.: Idm-E798

A joint Bureau of Mines-Geological Survey inspection was made of the Yuba Dike mine on December 14, accompanied by Mr. John A. Hedman.

Drifting, following the contact between the Prospect Mountain quartzite and the Yuba Dike porphyry, has been conducted off the crosscut and in both easterly and westerly directions. Only slight indications of sulfide mineralization were noted.

Additional drifting in a westerly direction was discontinued due to lack of mineralization and the fact that the larger portion of the drift was in quartzite. Drifting will be continued in a southeasterly direction along the quartzite-porphyry contact in order to explore the Dike in that area. So far, the results of the project have been disappointing to all parties concerned.

Drift No. 2 has been extended a distance of 19.5 feet in an easterly direction off the crosscut by the Operator and at his expense.

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DEC 30 1955

This No. 2 drift (see sketch attached) was on the hanging wall side of the porphyry and entirely in quartzite which showed no mineralization. Further work in this drift has been discontinued. Samples BM-1842 - BM-1847 inclusive were secured and the analyses will be included in the next interim report.

Work completed:

		Feet
Stage II:	West drift advance	85.7
	East drift advance	42.3
		128.0

Not completed:

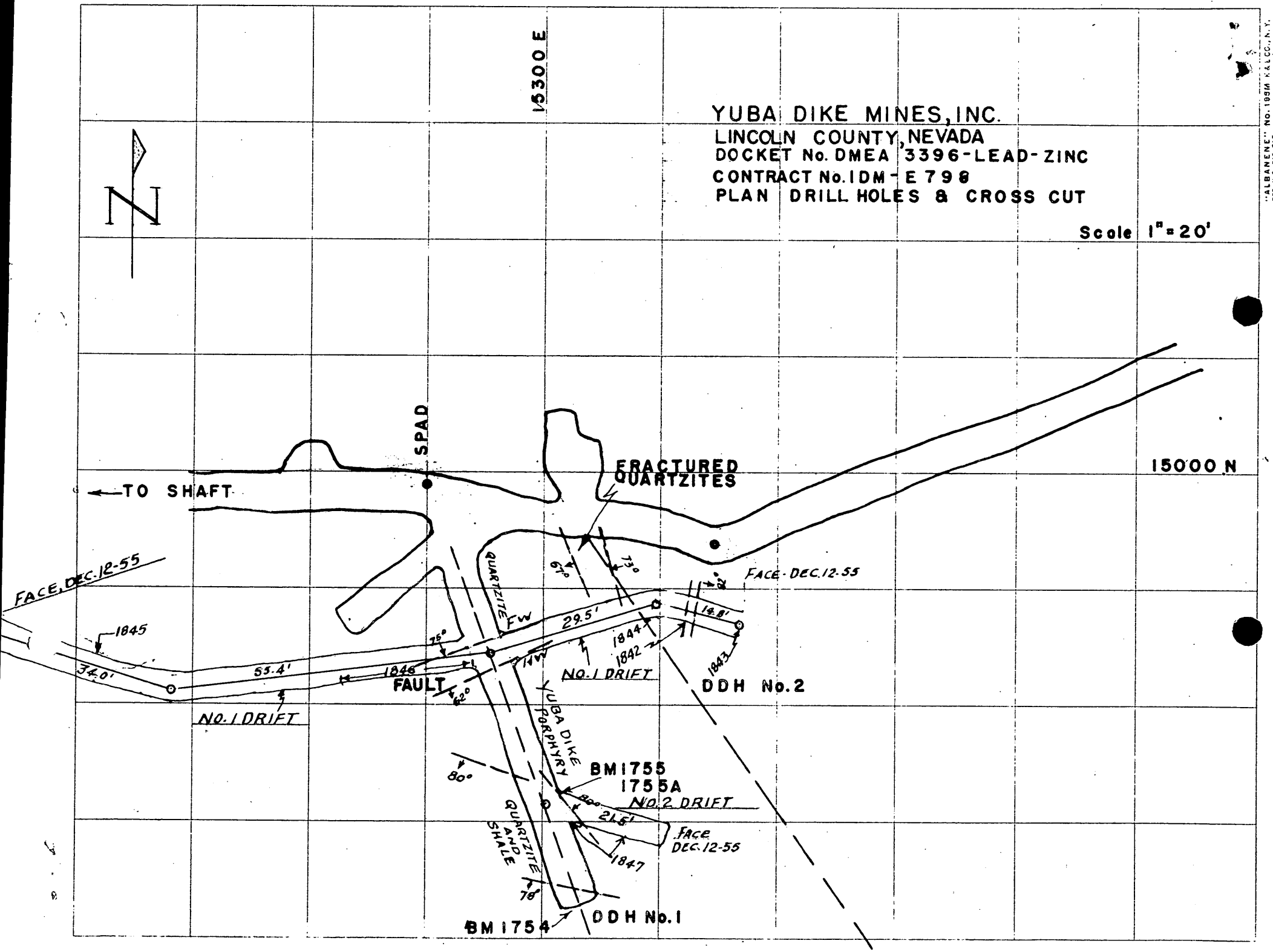
Diamond drilling	255.0
Crosscutting	77.5
Drifting	172.0

Financial:	Amount of contract	$21,750.00
	Expenditures as of 10/31	4,492.50
	Unexpended	$17,257.50

Contract period:

To be completed on or before June 1, 1956
Unexpended contract time: 6 months

Glenn G. Gentry
Mining Engineer


YUBA DIKE MINES, INC.
LINCOLN COUNTY, NEVADA
DOCKET No. DMEA 3396-LEAD-ZINC
CONTRACT No. IDM-E 798
PLAN DRILL HOLES & CROSS CUT
Scale 1" = 20'
15300 E
15000 N
N
SPAD
TO SHAFT
FRACTURED QUARTZITES
FACE, DEC. 12-55
FACE - DEC. 12-55
1845
34.0'
55.4'
1846
FAULT
75°
62°
QUARTZITE
FW
29.5'
14W
67°
73°
1844
1842
1843
14.8'
NO. 1 DRIFT
DDH No. 2
YUBA DIKE PORPHYRY
BM 1755
1755A
NO. 2 DRIFT
80°
21.5'
FACE DEC. 12-55
1847
QUARTZITE AND SHALE
78°
BM 1754
DDH No. 1

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DEC 30 1955

DMEA

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Office of
Executive Officer
DMEA Field Team
Region II

1605 Evans Avenue
Reno, Nevada

Date 11/9/55

Memorandum

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

From: Executive Officer, DMEA Field Team, Region II

Subject: Interim Inspection Report

Attached are four copies of Interim Report on -
Docket DMEA 3396

Contract Idm-E 798

Commodity Lead-zinc

Operator - Yuba Dike Mines, Inc.

Property - Yuba Dike Mine, Lincoln County, Nev.

By Glenn G. Gentry

Dated 11/7/55

RECEIVED
NOV 14 1955

S. Ricker
Executive Officer
DMEA Field Team, Region II

Attachments

Copy to: R. M. Smith--USGS (w/copy of report)
Finance Officer, Region II (w/copy of report)
File

BUREAU OF MINES
WASHINGTON, D. C.

Nov 14 1 42 PM '55

INTERIM REPORT

Docket No.: DMEA-3396 (Lead-zinc) November 7, 1955

Name and address of operator: Yuba Dike Mines, Inc.,
John A. Hedman, President
Pioche, Nevada

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NOV 14 1955

Name and location of property: Yuba Dike Mine
(No. 1 shaft)
Pioche, Lincoln County, Nevada

Contract No.: Idm-E798

Accompanied by Messrs. John A. Hedman and O. E. Schrader, representing the operators, the Yuba Dike Mines was inspected on October 25, 26 and 27, 1955.

Crosscutting following the course of diamond drill hole No. 1 was completed for a distance of 72.5 feet. The crosscut was extended through quartzites for the first 24 feet, thence through 32 feet of Yuba Dike porphyry, thence through 16.5 feet of mixed quartzites and shales. Slight mineralization was noted along a fault, striking N70°E and dipping 75° south at the contact between the quartzites and the Yuba Dike porphyry, and drifting has been started easterly and westerly along this contact. Additional faulting has occurred at 56 feet south of the start of the crosscut. This fault strikes S38°-40°E and dips 80° west. Light mineralization was observed and sample 1755A was taken by the operator which showed 0.5 percent Pb and 0.4 percent Zn.

At his expense, the operator is considering drilling and blasting one or two short rounds along this fault for additional prospecting.

The operator employs three men, 1 hoistman and 2 miners, working a night shift only. The miners are employed on a contract basis for which they receive $15.00 per foot for drilling, blasting and removal of the broken rock. They also furnish the blasting supplies.

Additional ventilation will soon be required and the operator expects to install the necessary equipment.

Sludge samples from DDH No. 2 were analyzed as follows:

Sample No.	Location Feet From	To	%, Pb	%, Zn
BM-1691	4.7	9.0	*0.1	0.1
1692	9.0	14.1	*0.1	*0.1
1693	15.4	20.3	*0.1	*0.1
1694	20.3	27.7	*0.1	0.1
1695	27.7	31.5	*0.1	0.1
1696	31.5	34.6	*0.1	*0.1
1697	34.6	39.3	*0.1	0.1
1698	39.3	43.3	*0.1	0.1
1699	43.3	47.9	*0.1	0.1
1700	47.9	51.4	*0.1	0.1
1701	51.4	57.2	*0.1	0.1
1702	57.2	62.8	*0.1	0.1
1703	62.8	67.3	0.1	0.2
1704	67.3	72.7	0.2	0.3
1705	72.7	80.9	0.1	0.1
1706	80.9	85.7	0.1	0.1
1707	85.7	90.8	*0.1	*0.1
1708	90.8	93.0	*0.1	0.1

Work completed:

Stage I:	Diamond drilling	145.0 feet
Stage II:	Crosscutting	72.5
	Unused crosscutting	77.5 "

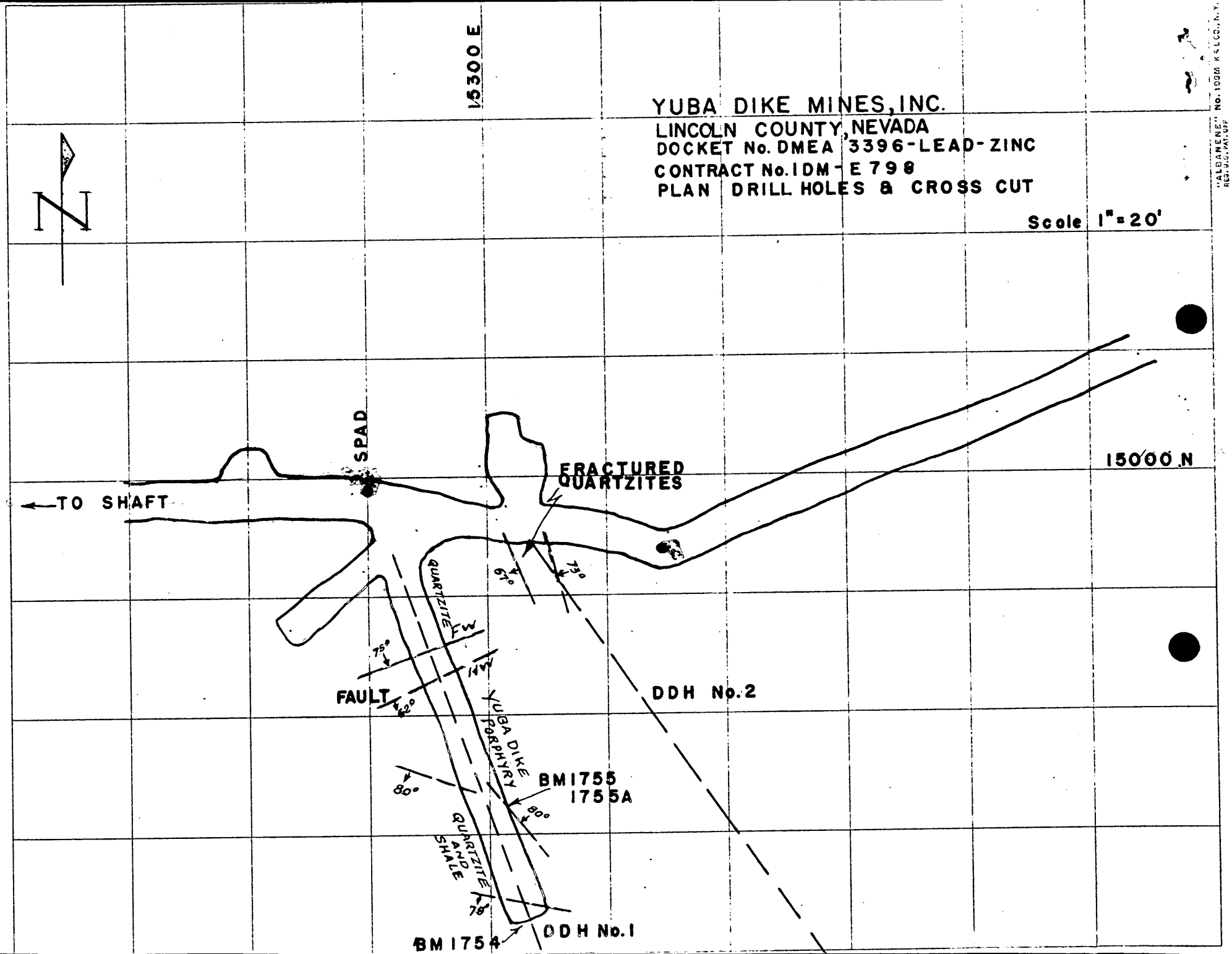
Financial:

Amount of contract	$21,750.00
Expenditures to 9/30/55	1,697.00
Unexpended	$20,053.00

Contract Period:

To be completed on or before 6/1/56
Unexpended contract time - 7 months

Glenn G. Gentry
Mining Engineer


YUBA DIKE MINES, INC.
LINCOLN COUNTY, NEVADA
DOCKET No. DMEA 3396-LEAD-ZINC
CONTRACT No. IDM-E 798
PLAN DRILL HOLES & CROSS CUT
Scale 1" = 20'
N
15300 E
15000 N
SPAD
TO SHAFT
FRACTURED QUARTZITES
73°
67°
QUARTZITE
75°
FAULT
62°
DDH No. 2
YUBA DIKE PORPHYRY
BM 1755
1755A
80°
80°
QUARTZITE AND SHALE
78
DDH No. 1
BM 1754

RECEIVED

OCT 12 1955

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Office of
Executive Officer
DMEA Field Team
Region II

1605 Evans Avenue
Reno, Nevada

10/10/55

Memorandum

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

From: Executive Officer, DMEA Field Team, Region II

Subject: Interim Inspection Report

Attached are the original and three copies of an Interim Report on:

Docket No. DMEA- 3396

Contract No. Idm-E 798

Commodity Lead-zinc

Operator Yuba Dike Mines, Inc.

Property Yuba Dike Mine, Lincoln Co., Nev.

By R. W. Osterstock, USGS

Dated 10/5/55

S. Ricker
S. Ricker
Executive Officer
DMEA Field Team, Region II

Attachments 4

Copy to: Finance Officer, Region II(w/copy of report)
R. M. Smith-USGS(w/copy of report)

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Mineral Deposits Branch
4 Homewood Place
Menlo Park, California

RECEIVED
OCT 12 1955

October 5, 1955

Memorandum

To: DMEA Field Team, Region II

From: R. W. Osterstock, Geologist, U. S. Geological Survey

Subject: Interim report, DMEA-3396, Contract Idm-E798 (lead-zinc), Yuba Dike Mines, Inc., Yuba Dike mine, Lincoln Co., Nev.

The subject property was inspected on September 15, 1955 by R. W. Osterstock, U. S. Geological Survey, and G. G. Gentry, U. S. Bureau of Mines. Mr. J. A. Hedman and A. Lloyd, officers of the company, accompanied the examiners in the field.

Work on the project began in August 1955. Diamond drill hole No. 1 was drilled flat S. 10 E. for 52 feet and DDH No. 2 was drilled flat S. 35 E. for 93 feet. The purpose of these holes was to establish the position of the Yuba Dike, the walls of which constitute the primary target of this exploration program.

Mr. Hedman informed the examiners that crosscutting operations would begin on or about September 16. The initial work will follow DDH No. 1 to and through the Yuba Dike.

Briefly, the logs of the drill holes are as follows:

DDH No. 1 - S. 10 E., flat, 52 feet.

0 -	19	Prospect Mountain quartzite
19 -	46.3	Yuba Dike
46.3-	52	Prospect Mountain quartzite

Core is generally broken, shows some scattered patches of bleaching and alteration in the less pure quartzite, iron oxide stain is common, some Mn stain, few oxidized pyrite crystals. Panning of sludge reveals sparse lead sulfide.

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OCT 12 1955

DDH No. 2 - S. 35 E., flat, 93 feet.

0	-	11	Prospect Mountain quartzite
11	-	75	Yuba Dike
75	-	91.8	Prospect Mountain quartzite
91.8	-	93	Green shale (unit in quartzite)

Entire core broken and shows some bleaching and alteration of the feldspars in the dike, pyrite as fine and coarse grains is fairly well distributed throughout the dike. From 11-23 the dike shows extreme alteration; from 47.5-52.5 there is a highly pyritic zone. Panning of sludge reveals sparse lead and zinc sulfides.

Sludge samples from both diamond drill holes were collected by G. G. Gentry for assay; results of this sampling will be included in the next interim report.

The accompanying sketch map illustrates the position of the Yuba dike as noted in the two drill holes. It is interesting to note the apparent widening of the dike to the east; very likely this thickening is a local feature inasmuch as the dike has been traced over a considerable strike length with little variation in width except for a distinct thickening with depth.

Distribution:
DMEA (4)
USBM (2)
Osterstock
File

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

RECEIVED
SEP 26 1955

Office of
Executive Officer
DMEA Field Team
Region II

1605 Evans Avenue
Reno, Nevada

9/23/55

Memorandum

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

From: Executive Officer, DMEA Field Team, Region II

Subject: Interim Inspection Report

Attached are the original and three copies of an Interim Report on:

Docket No. DMEA- 3396

Contract No. Idm-E 798

Commodity Lead-zinc

Operator Yuba Dike Mines, Inc.

Property Yuba Dike mine, Lincoln Co., Nev.

By Glenn G. Gentry

Dated 9/22/55

S. Ricker
S. Ricker
Executive Officer
DMEA Field Team, Region II

Attachments 4

Copy to: Finance Officer, Region II(w/copy of report)
R. M. Smith-USGS(w/copy of report)

BUREAU OF MINES
WASHINGTON, D. C.

SEP 26 9 32 AM '55

RECEIVED
SEP 26 1955

INTERIM REPORT

Docket No.: DMEA-3396 (Lead-zinc) Sept. 22, 1955

Name and address of operator: Yuba Dike Mines, Inc.
John A. Hedman, Pres.,
Pioche, Nevada

Name and location of property: Yuba Dike mine
(No. 1 shaft)
Pioche, Lincoln County, Nevada

Contract No.: Idm-E798

SUMMARY

Accompanied by Messrs John A. Hedman, Alexander Lloyd, representatives of the mining company and R. W. Osterstock of the U. S. Geological Survey, the Yuba Dike mine was inspected on Sept. 12 and 15.

The diamond drilling has been completed, and crosscutting along the course of drill hole No. 1 was expected to begin on Sept. 16. The operator submitted the following:

Log of drill hole No. 2

Date Started: August 15, 1955
Date Completed: August 20, 1955
Depth of hole: 93 feet
Course: S. 35° E.
Inclination: +5°
Coordinates: N 14,985
E 15,310

0 - 11.7 feet - Fine grained, highly fractured quartzite. Iron oxide stained fractures.

11.7 - 85.5 feet - Porphyry, possible Yuba Dike. Alternating small iron oxide filled stringers or fractures.

Feet From	To	
85.5	92.0	Massive grained quartzite, iron stained.
92.0	93.0	Shale; possible small shale band in the quartzite.

WORK COMPLETED

Diamond drill hole No. 1	52.0 feet
Diamond drill hole No. 2	93.0 feet
Total	145.0 feet

Diamond drilling approved	400 feet
Unused drilling	255 feet

Sludge samples from drill hole No. 1, analyzed by the U. S. Bureau of Mines laboratory, Reno, Nevada, gave the following results:

				Ounces/Ton		Operators Analyses	
BM No.	Depth, feet	%, Pb	%, Zn	Au	Ag	%, Pb	%, Zn
1670	10.0 - 14.7	0.2	*0.1	Trace	0.40	0.5	0.5
1671	14.7 - 21.5	0.4	*0.1	Trace	0.60	0.4	0.45
1672	21.5 - 26.5	*0.1	*0.1	Trace	Trace	0.5	0.5
1673	26.5 - 32.9	*0.1	*0.1	Trace	Trace	0.5	0.5
1674	32.9 - 38.5	*0.1	*0.1	Trace	Trace	0.5	0.5
1675	38.5 - 42.5	0.1	*0.1	Trace	Trace	0.4	0.6
1676	42.5 - 46.3	*0.1	*0.1	Trace	Trace	0.4	0.5
1677	46.3 - 52.0	0.1	*0.1	Trace	Trace	0.5	0.5

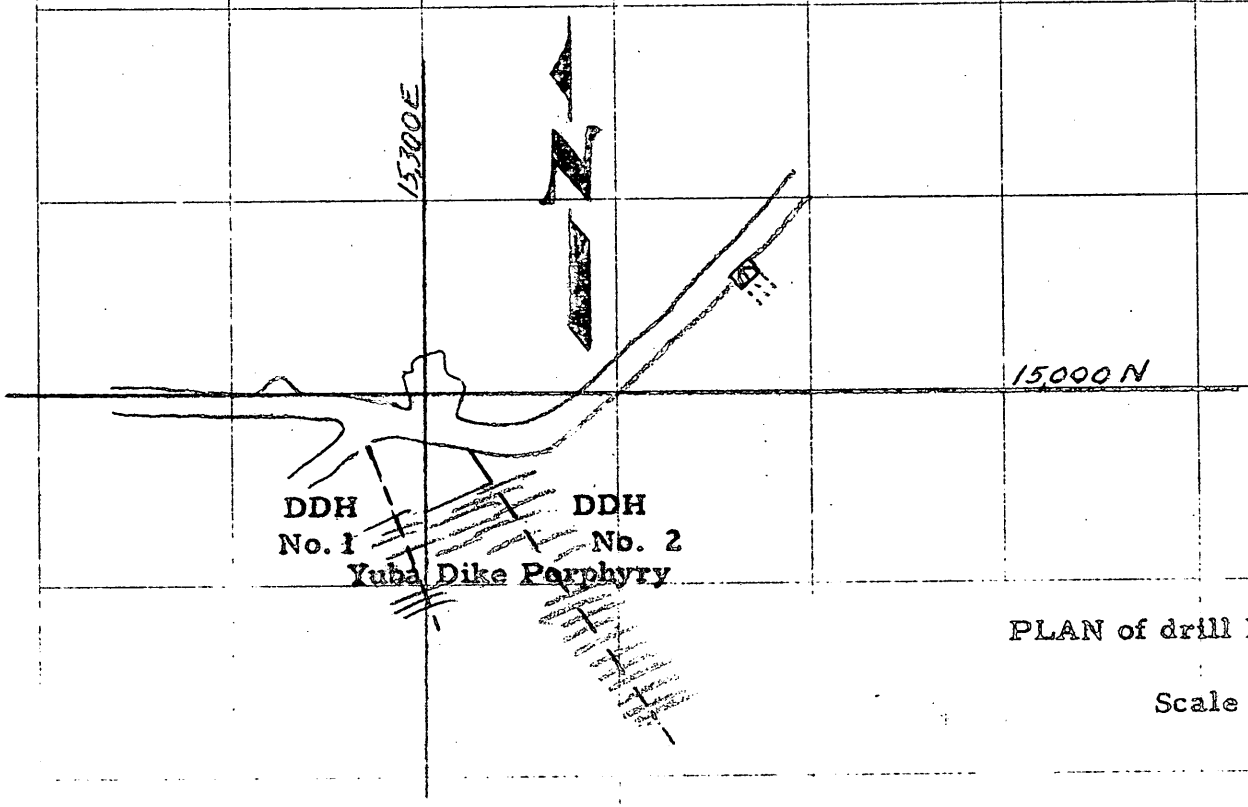
*=Less than.

The analyses of sludge samples from drill hole No. 2 will be submitted in the next interim report.

Financial:	Amount of contract	$21,750
	Expenditures to 8/31	1,031
	Unexpended	$20,719

Contract period: To be completed on or before 6/1/56
Unexpended contract time 8-1/2 months

Glenn G. Gentry
Mining Engineer



PLAN of drill holes on 800-level

Scale 1" = 50'

YUBA DIKE MINES, INC.
Pioche, Lincoln County, Nevada
Docket No. DMEA-3396 (Lead-zinc)
Contract No. Idm-E798

"ALBANENE" No. 1000M & ECO., N.Y.
REF. U.S. PAT. OFF.

RECEIVED
SEP 26 1955

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SEP - 1 1955

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Office of
Executive Officer
DMEA Field Team
Region II

1605 Evans Avenue
Reno, Nevada

8/30/55

Memorandum

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

From: Executive Officer, DMEA Field Team, Region II

Subject: Interim Inspection Report

Attached are the original and three copies of an Interim Report on:

Docket No. DMEA- 3396

Contract No. Idm-E 798

Commodity Lead-zinc

Operator Yuba Dike Mines, Inc.

Property YUBA DIKE MINE (No. 1 Shaft)
Lincoln County, Nevada

By Glenn G. Gentry

Dated 8/29/55

S. Ricker
S. Ricker
Executive Officer
DMEA Field Team, Region II

Attachments: 4

Copy to: Finance Officer, Region II (w/copy of report)
R. M. Smith-USGS (w/copy of report)

BUREAU OF MINES
WASHINGTON, D. C.
SEP 1 8 29 AM '55

INTERIM REPORT

RECEIVED
SEP - 1 1955

Docket No.: DMEA-3396 (Lead-zinc) August 29, 1955

Name and address of operator: Yuba Dike Mines, Inc.
John A. Hedman, Pres.
Pioche, Nevada

Name and location of property: Yuba Dike Mine
(No. 1 Shaft)
Pioche, Lincoln County, Nev.

Contract No.: Idm-E798

SUMMARY

Accompanied by Messrs. John A Hedman and Alexander Lloyd, the Yuba Dike mine was visited on August 12 and 16, 1955. The operator has secured a diamond drilling contractor (Mr. Howard H. Knighten) with adequate equipment, who is conducting the drilling on a contract basis at $5.00 per foot.

WORK COMPLETED

Diamond drill hole No. 1 was started on August 10 and completed on August 13, 1955.

Depth of hole: 52 feet
Course: S. 10° E.; inclination +5°
Core recovery: Estimated at 85 percent

Sludge samples were also secured and the operator has submitted the following analyses of these sludges:

Depth, feet	%, Pb	%, Zn	Ounces/Ton Au	Ounces/Ton Ag
10 - 14.7	0.5	0.5	Trace	0.2
14.7 - 21.5	0.4	0.45	"	1.5
21.5 - 26.5	0.5	0.5	"	Trace
26.5 - 32.9	0.5	0.5	"	"
32.9 - 38.5	0.5	0.5	"	"
38.5 - 42.5	0.4	0.6	"	"
42.5 - 46.3	0.4	0.5	"	1.0
46.3 - 52.0	0.5	0.5	"	Trace

The drill hole encountered iron-stained quartzite for the first 19 feet at which point the Yuba Dike porphyry was encountered and continued for a distance of approximately 21 feet. Quartzite was then entered and continued to the bottom of the hole. The sludges contained a larger quantity of iron sulphides than was noted in the drill core. The sludges were carefully panned, indicating the following log:

10.0 - 14.7	Very heavy iron sulphides
14.7 - 21.5	Heavy " "
21.5 - 26.5	Moderate " "
26.5 - 32.9	Heavy " "
32.9 - 38.5	" " "
38.5 - 42.5	Small amount " "
42.5 - 46.3	Very light " "
46.3 - 52.0	Very heavy " "

Diamond drill hole No. 2 was started on August 16, 1955 at approximately 29 feet east of diamond drill hole No. 1. The course of the drill hole is S. 35° E., inclined at +5°. From the collar to a depth of 12 feet, the hole was drilled through iron stained quartzites and at this depth the Yuba Dike porphyry was encountered. The drill hole has continued in this material to a depth of 27 feet, and should be completed about August 20, 1955. The log of this hole and other pertinent data will be submitted in the next interim report.

Glenn G. Gentry
Mining Engineer

COLLAR

DDH NO.1 DEPTH 52'

STARTED 8-10-55

IRON STAINED QUARTZITES
NO MINERALIZATION

OXIDIZED-PORPHYRITIC MATERIAL-GOUGE-FAULT
LIGHT Fe SULPHIDES

IRON STAINED QUARTZITES
NO MINERALIZATION
IRON STAINED QUARTZITE-LIGHT SULPHIDES
MOSTLY LIGHT COLORED QUARTZITE
LIGHT IRON STAIN - LIGHT SULPHIDES

YUBA DIKE PORPHYRY-SOME Fe STAINS
FEW SPECS SULPHIDES

OXIDIZED- Mn, Fe STAINS - NO SULPHIDES NOTED
YUBA DIKE MATERIAL-HEAVILY Fe STAINED
SOME SULPHIDES and BLACK Mn
YUBA DIKE - LIGHT GRAY- MOTTLED
" IRON STAINED
" LIGHT GRAY
" SOME RED OXIDIZED MATERIAL
Mn STAINS LIGHT SULPHIDES

COURSE S 10°E
INCLINED +5°

"
" LIGHT GRAY- MOTTLED
" " SOME SULPHIDES NOTED

IRON STAINED QUARTZITES

FEW SPECS Fe SULPHIDES

COMPLETED 8-13-55

BOTTOM OF HOLE

YUBA DIKE MINES, INC.
LINCOLN COUNTY, NEVADA
DOCKET No. DMEA 3396
CONTRACT No. 1DM-E798
SCALE 1" = 6'

"ALBANENE" No. 195M K&LCC., N.Y.
REG. U.S. PAT. OFF.

RECEIVED
SEP - 1 1955

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

RECEIVED
JUL 12 1955

Office of
Executive Officer
DMEA Field Team
Region II

1605 Evans Avenue
Reno, Nevada

July 8, 1955

Memorandum

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

From: Executive Officer, DMEA Field Team, Region II

Subject: Interim Inspection Report

Attached are the original and three copies of an Interim Report on:

Docket No. DMEA- 3396

Contract No. Idm-E 798

Commodity Lead-zinc

Operator Yuba Dike Mines, Inc.

Property Yuba Dike Mine
Lincoln Co., Nev.

By Glenn G. Gentry

Dated 7/8/55

S. Ricker
S. Ricker
Executive Officer
DMEA Field Team, Region II

Attachments 4

Copy to: Finance Officer, Region II(w/copy of report)
R. M. Smith-USGS(w/copy of report)

BUREAU OF MINES
WASHINGTON, D. C.

JUL 11 1 24 PM '55

INTERIM REPORT

RECEIVED
JUL 12 1955

Docket No.: DMEA-3396 - Lead-zinc July 8, 1955

Name and address of operator: Yuba Dike Mines, Inc.
John A. Hedman, President
Pioche, Nevada

Name and location of property: Yuba Dike Mine
(No. 1 Shaft)
Pioche, Lincoln County, Nevada

Contract No.: Idm-E798

SUMMARY

The writer visited the office of the Yuba Dike Mines, Inc., on June 28 and 29, 1955 and conferred with Mr. John A. Hedman, president and Mr. Alexander Lloyd, secretary and treasurer. The exploration contract was signed by the above operator at 5:00 p.m. on June 29. Mr. Hedman expects to employ a competent mining engineer to supervise the project and will begin actual operations on or before August 15, 1955.

Glenn G. Gentry
Mining Engineer

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-3396 (Lead-zinc)
Yuba Dike Mines, Inc.,
Yuba Dike Mining Claim
Lincoln County, Nevada
Contract No. Idm-E798

Reference is made to your letter of May 17, 1955 with which you transmitted the original and five copies of the above subject contract.

The contract has been executed on the part of the Operator and one copy retained by him. Distribution has been made of Finance Office and Field Team copies and the original and two remaining copies are being returned to you herewith.

You will note the "Consent to Lien" attached are old forms due to the fact this had been sent to the Operator before the new forms were adopted.

S. Ricker

Encls.

BUREAU OF MINES
WASHINGTON, D. C.
JUL 7 9 25 AM '55

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Office of
Executive Officer
DMEA Field Team
Region II

1605 Evans Avenue
Reno, Nevada

June 14, 1955

RECEIVED
JUN 16 1955

Memorandum

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

From: Executive Officer, DMEA Field Team, Region II

Subject: Interim Inspection Report

Attached are the original and three copies of an Interim Report on:

Docket No. DMEA- 3396

Contract No. Idm-E 798

Commodity Lead-zinc

Operator Yuba Dike Mines, Inc.

Property Yuba Dike Mine

By Glenn G. Gentry

Dated June 14, 1955

S. Ricker
S. Ricker
Executive Officer
DMEA Field Team, Region II

Attachments 4

Copy to: Finance Officer, Region II(w/copy of report)
R. M. Smith-USGS(w/copy of report)

BUREAU OF MINES
WASHINGTON, D.C.
JUN 16 9 30 AM '55

INTERIM REPORT

Docket No.: DMEA-3396 (Lead-zinc) June 14, 1955

RECEIVED
JUN 16 1955

Name and address of operator: Yuba Dike Mines, Inc.
John A Hedman, President
Pioche, Nevada

Name and location of property: Yuba Dike Mine
(No. 1 Shaft)
Pioche, Lincoln County, Nevada

Contract No.: Idm-E798

STATUS OF CONTRACT

This exploration contract, dated May 17, 1955 and signed by the Administrator of DMEA, has not as yet been forwarded to the operator for signature as "Owners Consent to Lien" from the Combined Metals Reduction Company have not been received in this office.

On May 20, 1955, "Owners Consent to Lien" forms were mailed to Mr. John A. Hedman at his Pioche, Nevada address and on June 2, 1955 this matter was discussed with Mr. Alexander Lloyd, a director of the Yuba Dike Mining Company, in his residence in Pioche, Nev. Mr. Hedman was not in Nevada at the time and therefore was not available for consultation.

Mr. Lloyd stated that the "Owners Consent to Lien" forms had been forwarded by Mr. Hedman to the Combined Metals Reduction Co., and that the necessary signatures were expected to be obtained in the near future.

Glenn G. Gentry
Mining Engineer

File Copy
Surname
J.W. Alt
Irwin
Chamberlin
Selfridge
R. Johnson

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

500

MAY 17 1955

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

Re: Docket No. DMEA-3396 (Lead-Zinc)
Yuba Dike Mines, Inc.
Yuba Dike Mining Claim
Lincoln County, Nevada

Dear Mr. Rieker:

We are enclosing the original and five copies of the contract for the cited property, signed by the Administrator, together with Annex I, Exhibit "A" (2 pages), and three maps.

It will be necessary to insert in the contract, in the space provided under Article 3, the date when the Operator shall commence work on the project.

Before the contract can be executed, it will be necessary to attach Consents to Lien from Amalgamated Pioche Mines and Smelter Corporation and the Combined Metals Reduction Company.

If the contract meets with your approval, kindly present it to the Applicant for approval and signature and, when completed, distribute the copies in the usual manner. In the event that the contract 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 (HB)

Enclosures

APPROVED:

M. E. Volin for J. H. Hedges (HB)
Member, Bureau of Mines

Thor H. Kiilsgaard
Member, Geological Survey (HB)

JWAlt/er 5/11/55

Copy to: Docket
Admr R File
Op. Committee
Base Metals
Mr. Bishop, USBM
Mr. Kiilsgaard, USGS
Chron.

R.S.J.

be not less than 5 feet by 5 feet in cross section in the clear of timber.

All work shall be timbered as necessary.

FIXED UNIT COSTS

(The fixed unit costs include all costs whatsoever necessary for the performance of the project work)

STAGE I

400 feet of diamond drilling @ $7.00/ft.	$ 2,800.00	

STAGE II

150 feet of crosscutting @ $37.00/ft.	$ 5,550.00	

STAGE III

300 feet of drifting @ $37.00/ft.	$11,100.00	
50 feet of raising @ $37.00/ft.	1,850.00	
		$12,950.00
50 feet of timbered drifts and crosscuts @ $7.00/ft. under Stages II and III.		$ [illegible].00
50 assays for lead and zinc @ $2.00 each under Stages I, II, and III.		$ 100.00
Estimated Total Cost of the Project		$21,750.00
Government Participation @ 50%		$10,875.00

per. sample
RCR:g.j.b.

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

MAY 9 1955.

Memorandum

To: The Administrator, DMEA
Attention: W. R. Griswold

From: Acting Assistant Solicitor, Defense Minerals

Subject: Docket No. DMEA-3396 (Lead-Zinc), Yuba Dike Mines, Incorporated

Pursuant to the informal resubmission of the subject docket to us, on May 2, we have prepared the attached contract, in satisfactory legal form for execution, subject to the attachment of Consents to Lien from Amalgamated Pioche Mines and Smelter Corporation and the Combined Metals Reduction Company prior to execution.

for Harry C. Brown
J. L. Hofflund
Acting Assistant Solicitor,
Defense Minerals

Attachment

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

MAY 9 1955

Memorandum

To: The Administrator, DMEA
Attention: W. R. Griswold

From: Acting Assistant Solicitor, Defense Minerals

Subject: Docket No. DMEA-3396 (Lead-Zinc), Yuba Dike Mines, Incorporated

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/S/ Henry C. Rubin
for J. L. Hofflund
Acting Assistant Solicitor,
Defense Minerals

Attachment

HCRubin:gjb 5/6/55

Copy to: DMEA Docket
Sol. Docket
W. R. Griswold (2)
H. C. Rubin
J. L. Hofflund
Chron. File

DMEA

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

Defense Minerals Administration
RECEIVED
APR 26 1955

1605 Evans Avenue
Reno, Nevada

April 26, 1955

Memorandum

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

From: Executive Officer, DMEA Field Team, Region II

Subject: Docket No. DMEA-3396 (Lead-zinc)
Yuba Dike Mines, Inc.
Yuba Dike Mining Claim
Lincoln County, Nevada

In reference to telephone conversation with Mr. Alt, regarding above subject docket, I am attaching six copies of sketch map and vertical section of portion of ground leased from the Combined Metals Reduction Company.

I believe that these maps will clarify the questions posed by Mr. Alt relative to pages 7 and 8 of the report by Mr. Gentry and Mr. Osterstock. It is apparent that the upper developed levels were not included in the areas leased from the Combined Metals Reduction Co. I believe, however, that the Government will be amply protected from royalties on any ore that may be produced from the ground below the excluded zone.

S. Ricker

Attach.

BUREAU OF MINES
WASHINGTON, D. C.
APR 29 9 44 AM '55

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

April 21, 1955

Memorandum for the Files

From: J. W. Alt, Base Metals Division

Subject: Yuba Dike Mines, Inc., Yuba Dike Mining Claims, Lincoln County, Nevada County, Nevada, Docket No. DMEA-3396 (Lead-Zinc)

On this date, I phone Spangler Ricker, Executive Officer, Region II, about the land that is deleted in the lease. This deletion is described on pages 7 and 8 of the Field Team report. I told Mr. Ricker that we do not have any maps that give us the elevations which would show these deletions. He was of the opinion that this land should not be deleted and that the limitation should be removed from the lease. He will consult the Applicant in regard to this. If it is to be deleted, I told Mr. Ricker that we would need a map showing this land that is deleted.

He also stated that there is some question now as to whether the Applicant can supply his share of the cost of the proposal exploration work.

He advised me to hold up the application until he gets the information regarding the deletion of the land.

J. W. Alt.
J. W. Alt

JWAlt/er

Copy to: Docket
Base Metals
Chron.

File Copy
Surname

500

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

April 12, 1955

Memorandum

To: Acting Assistant Solicitor, Defense Minerals

From: Base Metals Division

Subject: Preparation of Contract for Docket No. DMEA-3396, Yuba Dike Mines, Incorporated, Yuba Dike Mining Claims, Lincoln County, Nevada (Lead-Zinc)

Will you please prepare a contract for the cited application. A draft of this contract is attached to this memorandum. The copies of the two maps mentioned in the contract will be received in a few days and will be forwarded to your office.

J. W. Alt

J. W. ALT

Attachment

JWAlt/bjl

Copy to: Docket
Base Metals
Chron.

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

April 8, 1955

Memorandum for the Files

From: J. W. Alt, Base Metals Division

Subject: Yuba Dike Mines, Inc., Yuba Dike Mining Claims, Lincoln County, Nevada, Docket No. DMEA-3396 (Lead-Zinc)

On this date I phoned S. Ricker, Executive Officer, Region II, about costs of the work to be done on this project.

I stated that the costs for drifting, crosscutting, raising, and diamond drilling, as recommended by the Field Team, were too high and that these costs were confusing. I told him that we thought that the costs for drifting, crosscutting, and raising could be on unit costs at $37.00 per foot and the timbering at $7.00 per foot. Sampling would be at $2.00 per assay. There would be no allowance for use of equipment; this would be included in the $37.00 per foot for drifting, crosscutting, and raising and in the diamond drilling at $7.00 per foot. He was agreeable to these costs as stipulated in this conversation.

In Ricker's memorandum of April 1, 1955, he listed claims adjacent to the Panaca claim on which the proposed work is to be done. I stated that according to the map we have that there are overlapping claims on the ones which he has listed. He stated that we should, in order to be safe, list the overlapping claims and the claims that he has listed in the claims which are to be included in the contract.

J. W. Alt
J. W. Alt

Copy to: Docket
Base Metals
Chron.

Pl 2n Ea

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

1605 Evans Avenue
Reno, Nevada

April 1, 1955

alt
Docket

Memorandum

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

From: Executive Officer, DMEA Field Team, Region II

Subject: Docket No. DMEA-3396 (Lead-Zinc)
Yuba Dike Mines, Inc.,
Yuba Dike Mining Claims
Lincoln County, Nevada

Reference is made to our telephone conversation as of April 1 with Mr. Alt, regarding proposed contract on above subject docket. We will take up the questions raised as they were brought to our attention.

1. Size of raise?

   Suggest 5 by 5 feet in diameter.

2. Cost of raises, drifts and crosscuts?

   Believe that these could be placed on some unit cost basis.

3. Size of drift and crosscut?

   5 by 7 feet would be agreeable to us instead of 4-1/2 by 6 feet.

4. Time limit?

   We do not believe time limit should be shortened. Too many amendments are continually requested for time extensions on account of unforeseen contingencies, which frequently arise on many of our contracts.

5. Owner's Consent to Lien?

Five sets are being sent to Operator and should be in this office by the time the contract is received.

6. Cleaning out gob drift?

We believe it's a sound suggestion to diamond drill from BM-1501, as shown on map, instead of cleaning out gob drift at a cost of $2,500. Diamond drilling should, therefore, be Stage I. Stage II crosscut would start from BM-1501 after diamond drilling and dependent on drilling results.

7. Claims included under contract?

We believe the following claims are sufficient to cover Government's equity in proposed contract.

Panaca - U.S. Lot 39
Mother Lode - 2014
Alberta No. 2 - 2714
Susan Duster - 2714
Wedge
Pioche or Meadow Valley - U.S. Lot 40
Nappias
Queen - 53
King - 53
Silver - 38

We appreciate having your suggestions.

S. Ricker

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

April 1, 1955

Memorandum for the Files

From: J. W. Alt, Base Metals Division

Subject: Yuba Dike Mines, Inc., Yuba Dike Mining Claims, Lincoln County, Nevada, Docket No. DMEA-3396 (Lead-Zinc)

On this date I phoned S. Ricker, Executive Officer, Region II, in regard to the following items:

Size of raises needed and could they be driven for the same cost as the drifting and crosscutting. Two 25-foot raises are to be driven.

Size of drifts and crosscuts as recommended, $4\frac{1}{2}$' X 6', are too small. Size of drifts and crosscuts should be not less than 5' x 7' in the clear.

Time estimate for completion of the work is slow. Time allowed to drive two 25-foot raises is estimated to take $2\frac{1}{2}$ months, and drifting and crosscutting at only 60 feet per month. We believe that costs could be cut some by speeding up the proposed work.

Owners' Consents to Lien are needed. He stated that he will write to Applicant and request them to send the Owners' Consent to Lien to him.

I informed him that we did not think it was necessary to include in the contract all of the claims as stipulated in the lease, that only the adjacent claims to where the work is to be done should be in the contract and to send us such a map.

I also asked him if it was possible to eliminate the clearing out of the gobbed drift and to do the proposed diamond drilling from the drift somewhere in the vicinity of BM 1501 as shown on the map attached to the report. Then if crosscutting to and through the Yuba Dike is approved, this could be done from the drift and not by making use of the gobbed drift.

Mr. Ricker stated that he would check these itesm with Glenn Gentry and would give us an answer soon.

J. W. Alt

J. W. Alt

JWAlt/er
Copy to: Docket
Base Metals
Chron.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
WASHINGTON 25, D. C.

April 1, 1955

Memorandum

To: W. R. Griswold
Chief, Base Metals Division, DMEA

From: J. H. Hedges, Bureau of Mines

Subject: DMEA-3396 (Lead-Zinc) Yuba Dike Mines, Inc., Yuba Dike Mine, Pioche, Lincoln County, Nevada

The proposal to explore the Yuba Dike-quartzite contact in a hitherto unexplored area in the old Raymond-Ely mine has enough merit to justify a modest project. However, there are discrepancies in the field team report that should be cleared up before any decision is made.

The plan and geologic map which accompanied the report show the Yuba Dike only about 50 feet south of the 800 level drift, yet the proposal calls for cleaning out a 100-foot gobbed drift and drilling 200 feet south from the face to locate and explore the dike. I realize that the location of the dike at this point is not definitely known and it is not apparent how far it may have been projected to plot its probable position in relation to the 800 level at the point selected for exploration. The location and character of the dike could be determined more quickly and at less cost by drilling one or two holes directly from the 800 drift to intersect the dike as stage I of the project. It could then be determined whether the proposed crosscutting and drifting of stage II are justified, and the most advantageous location for the crosscut. I might also point out that $10 a foot for diamond drilling seems high although the small footage involved may be a reasonable explanation if the drilling is to be done by an outside contractor.

I suggest that the points raised here be communicated to the field team for consideration and comment.

J. H. Hedges

J. H. Hedges

Copy to: Division of Minerals
Mr. O. M. Bishop, Room 3617
J. H. Hedges

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
WASHINGTON 25, D. C.

April 1, 1955

Memorandum

To: W. R. Griswold
Chief, Base Metals Division, DMEA

From: J. H. Hedges, Bureau of Mines

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Yuba Dike Mine, Pioche, Lincoln County, Nevada

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Copy to: Division of Minerals
Mr. C. H. Bishop, Room 3617
J. H. Hedges

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
WASHINGTON 25, D. C.

April 1, 1955

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J. H. Hedges

J. H. Hedges

Copy to: Division of Minerals
Mr. O. E. Mishoy, Room 3317
J. H. Hedges

IN REPLY REFER TO:

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

MAR 28 1955

March 25, 1955

Re: DMEA-3396
Yuba Dike Mines, Inc.
(Yuba Dike Mine)
Lincoln Co., Nevada
$40,754.50 - Lead-Zinc

Memorandum

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

From: E. L. Newcomb, U. S. Geological Survey

Subject: Review of proposed exploration program

The applicant proposed to rehabilitate the 1200 level in preparation for crosscutting, drifting and diamond drilling to explore the Yuba Dike and related intersecting fissures.

The Field Team has recommended that exploration be done from the 800 level rather than the 1200 level. Exploration can be done at less expense and the geological target is better located for a successful project.

The work proposed on the 800 level will test for mineralization along the Yuba Dike in three stages.

Stage I
a.) clean out gobbed drift on 800 level.

Stage II
a.) 2 diamond drill holes -- max. total -- 400 feet.
b.) crosscut 150 feet.

Stage III
a.) drift 300 feet.
b.) raise 50 feet.

Inasmuch as the Yuba Dike must be located before possible mineralization can be further explored, the proposed program of three stages is well planned. If results are not favorable at any stage, the project can be terminated after a reasonable amount of work has been done. The bearing and inclination of the diamond drilling should be decided by the Field Team in consultation with the operator.

Ore bodies near the exploration area occur in the Yuba Dike (granite porphyry) and in northeast fissures extending from the dike into the Prospect Mountain quartzite. Past experience has shown that the largest ore shoots frequently occur where the Yuba Dike is intersected by northeast shear zones. The proposed exploration will explore for this type of ore deposit along a strike distance of 300 feet.

The record of past production in the Yuba Dike area has been substantial and there is a reasonable chance that the proposed work will find additional, mineable ore bodies.

I recommend the proposed exploration from the 800 level be approved as a three-stage program.

E. L. Newcomb

E. L. Newcomb

IN REPLY REFER TO:

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

March 25, 1955

Re: DMEA-3396
Yuba Mike Mines, Inc.
(Yuba Mike Mine)
Lincoln Co., Nevada
$40,754.50 - Lead-Zinc

Memorandum

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

From: E. L. Bancroft, U. S. Geological Survey

Subject: Review of proposed exploration program

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I recommend the proposed exploration from the 800 level be approved as a three-stage program.

E. L. Newcomb

ELNewcomb:hlm
G-3/25/55

Copy to: Director's reading, 4212
Branch reading, 4212
DMEA (3)
Docket file
O. M. Bishop, 3617 Interior

IN REPLY REFER TO:

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

March 25, 1955

Re: DMEA-3390
Tuba Dike Mines, Inc.
(Tuba Dike Mine)
Lincoln Co., Nevada
$40,754.50 - Lead-Zinc

Memorandum

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

From: E. L. Bennett, U. S. Geological Survey

Subject: Review of proposed exploration program

The applicant proposed to rehabilitate the 1200 level in preparation for crosscutting, drifting and diamond drilling to explore the Tuba Dike and related intersecting fissures.

The Field Team has recommended that exploration be done from the 800 level rather than the 1200 level. Exploration can be done at less expense and the geological target is better located for a successful project.

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I recommend the proposed exploration from the 800 level be approved as a three-stage program.

E. L. Newcomb

ELNewcomb:hlm
G-3/25/55

Copy to: Director's reading, 5212
Branch reading, 4212
DMEA (3)
Docket file
O. M. Bishop, 3617 Interior

RMEA

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

1605 Evans Avenue
Reno, Nevada

March 16, 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-3396 (Lead-Zinc)
Yuba Dike Mines, Inc.
Yuba Dike Mining Claims
Lincoln County, Nevada

Reference is made to your letter of November 25, 1954 regarding status of above subject docket.

Attached are four copies of a report DMEA-3396, Yuba Dike Mine, Lincoln County, Nevada (Lead-Zinc) by R. W. Osterstock and Ben Bowyer, geologists, U. S. Geological Survey and Glenn G. Gentry, mining engineer, U. S. Bureau of Mines, dated March 9, 1955.

The report recommends 1,000 feet of work including rehabilitation, drifting and crosscutting, raising, and diamond drilling at a total cost of $30,754.50 in order to explore the Yuba dike from the 800 foot level. The dike and contacting quartzites have been highly productive in the areas adjoining the proposed exploration.

Roscoe Smith and I approve the recommendation and believe an exploration contract is justified.

S. Ricker

Reviewed by
DMEA OPERATING COMMITTEE
3-23-55
(date)

DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration
RECEIVED
MAR 18 1955

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION II

DMEA-3396, Yuba Dike Mine

Lincoln County, Nevada

(Lead-Zinc)

R. W. Osterstock, Geologist
Ben Bowyer, Geologist
U. S. Geological Survey

Glenn G. Gentry, Mining Engineer
U. S. Bureau of Mines

March 9, 1955

Reviewed by
DMEA OPERATING COMMITTEE
3-23-55
(date)

EXAMINATION REPORT

Docket No.: DMEA-3396 (Lead-Zinc)

Name and address of applicant: Yuba Dike Mines, Inc.,
John A. Hedman, President
Pioche, Nevada

Name and location of property: Yuba Dike Mine
No. 1 Shaft,
Lincoln County, Nevada

SUMMARY

Under date of October 20, 1954, the Yuba Dike Mines, Inc. applied to the Defense Minerals Exploration Administration for financial assistance in the amount of $94,409.00 for the purpose of rehabilitating the 1200 level, crosscutting, drifting and diamond drilling in order to explore the Yuba Dike in an unknown location from the 1200 level off the No. 1 shaft.

Pursuant to this application, the Yuba Dike mine was examined on February 1 and 2, 1955. During the examination on February 1, the examining engineers were accompanied by Mr. John A. Hedman and F. L. Heidenreich, and on February 2 by Mr. F. L. Heidenreich.

Due to the large amount of drift rehabilitation required on the 1200 level and the estimated increased distance to the unknown location of the Yuba Dike, the examining engineers considered that additional exploration could be done at less expense and a more as-

Reviewed by
DMEA OPERATING COMMITTEE
3-23-55
(date)

sured geological target, by exploring for the Yuba Dike vein from the 800-foot level. Mr. F. L. Heidenreich, manager for the applicant, agreed to the change in location and the proposed exploration work.

CONCLUSIONS AND RECOMMENDATIONS

The examining engineers conclude that exploration is justified to explore for the Yuba dike from the 800-foot level off the No. 1 shaft in an effort to determine the location of the Yuba dike and the degree of mineralization between two areas from which a production of ore having an estimated value of about $500,000.00 had been obtained on the upper levels during the early days of the mine operation. The area to be explored is in entirely virgin ground above and below the 800-level.

The examining engineers recommend that the exploration be conducted in three stages, each stage being dependent upon the successful conclusion of the previous stage and the total cost not to exceed $30,754.50. The time estimated as required for this work is considered to be one year. Government participation at 50% would amount to $15,377.25.

NAME AND LOCATION OF PROPERTY

The No. 1 shaft (which is the working entrance to the Yuba Dike Mine) is situated approximately one mile southeast of the town

of Pioche, Lincoln County, Nev.

The mining claims are located in the Ely Valley Mining district, Lincoln County, Nev., and the proposed exploration work will be conducted on the Panaca patented claim which is designated as U.S. Lot 39. (For detailed description of all mining claims, see indenture of lease dated August 6, 1953 between the Amalgamated Pioche Mines and Smelters Corp., Lessor and Alexander Lloyd, John A. Hedman and F. L. Heidenreich, Lessors; attached to and made apart of the docket.

ACCESSIBILITY

The road from the town of Pioche, Nev. to the No. 1 shaft, a distance of approximately one mile, is an unimproved road having a moderate gradient. For short periods, during severe snow storms and high winds, the road may be closed. However, the operators can usually operate all year without much difficulty.

COMPETENCY OF APPLICANT

Mr. F. L. Heidenreich, one of the lessors and manager of operations, will have supervision of the exploration project. Mr. Heidenreich has had over 20 years mining experience in the Pioche district and has held positions from mucker to mine foreman with the Combined Metals Reduction Co. The examining engineers consider that Mr. Heidenreich is entirely qualified to supervise all of the proposed exploration work. The applicants report that they have sufficient funds on hand to pay their share of the exploration costs.

APPLICANTS PROPERTY RIGHTS

The Yuba Dike Mines, Inc., a Nevada corporation, is incorporated under the laws of the State of Nevada. The officers of the company are reported to be:

Name	Office	Address
John A. Hedman	President and Director	Pioche, Nevada
Allan Gustafson	Vice President	1630 East 70th Street, Chicago, Ill.
F. L. Heidenreich	Secretary and Director	Pioche, Nevada
Alexander Lloyd	Treasurer and Director	Pioche, Nevada
Charles V. Rice	Director	1633 E. 79th Street, Chicago 49, Ill.
John H. Southman	Director	2459 E. 75th Street, Chicago 49, Ill.

Under date of August 6, 1953, the Amalgamated Pioche Mines and Smelters Corp., owners of the mining claims, leased the property to Alexander Lloyd, John A. Hedman and F. L. Heidenreich, all of Pioche, Nevada for a term of 15 years. The mining claims are referred to in the lease as comprising:

Pioche or Meadow Valley,	Patented,	U.S.	Lot	40
Bullion	"	"	"	54
Meridian	"	"	"	56
Cache	"	"	"	54
Silex	"	"	"	54
Queen	"	"	"	53
King	"	"	"	53

Silver	Patented,	U. S.	Lot 38
Greenback Currency	"	"	No. 2725
Yuba	"	"	Lot 42
U. S. Survey	"	"	No. 3342
Alpha	"	"	Lot 52
Richmond	"	"	Lot 52
Juno	"	"	Lot 55
Vesta	"	"	Lot 55
Bedrock	"	"	Lot 55
Treasure	"	"	Lot 55
Burk Washington	"	"	Lot 41
Mazzepa	"	"	Survey No. 3888

And such portion of the Panaca, U.S. Lot 39, that lies east of a vertical plane through a north-south line located 100 feet east of the center of the working compartment of the No. 1 shaft. Also, such portions of the Deerfoot, U.S. Lot No. 52; the Index, U. S. Lot No. 52; and the Williams and Goodspeed, U.S. Survey No. 3343 that lie east of the east side line of the Susan Duster, U.S. Survey No. 2714. Also, all of the following unpatented lode mining claims, to wit:

Enyard,	Recorded	in	Book Z,	pages 28, 29,	records of	Lincoln Co.
Nappias,	"	"	" Z,	" 29		
West,	"	"	" N,	" 262 and 263	"	"
Lookout,	"	"	" E	" 257, 258, 259	"	"
Winter,	"	"	" G,	" 230, 231, amended Book N " 255, 256, 257, records of Lincoln County, Nev.		
Monarch,	"	"	" L,	" 446, amended Book N " 264, 265 records of Lincoln Co.		
South	"	"	" H,	" 264, amended Book N pages 259-262, records of Lincoln County		
Eagle	"	"	" P,	" 10-12 records of Lincoln County		
Bee	"	"	" Z,	" 29-30	"	"
Wedge	"	"	" Y,	" 226	"	"
Triangle Fraction	"	"	Y,	" 225-226	"	"

The foregoing description is intended to cover the property known as "Treasure Hill" and to include all property owned by the lessor in that vicinity not included in the lease dated March 1, 1952 between the Amalgamated Pioche Mines and Smelters Corporation and Combined Metals Reduction Co., recorded in Miscellaneous Book "E", pages 274-284, inclusive, in the Office of the Recorder of Lincoln County, Nevada and the supplemental agreement thereto dated December 17, 1942, recorded in Miscellaneous Book "M", pages 182-185, inclusive, in said office.

Lease Agreement.

This agreement made in duplicate this second day of July 1953 between Combined Metals Reduction Company, a corporation under the laws of Utah, qualified to do business in Nevada, first party (hereinafter referred to as "Combined"), and F. L. Heidenreich, John A. Hedman, and Alexander Lloyd, all of Pioche, Nevada, second parties (hereinafter referred to as lessee)-

1. Combined does hereby demise, lease and let to lessee for a term commencing on the date hereof and ending on April 30, 1962 the following described properties in the Ely Mining District, Lincoln County, Nevada, to-wit:

All of the Alberta, Alberta No. 2 and Susan Duster claims (U.S. Lot 2714); the Zero (U.S. Lot 49); the Scipio (U.S. Lot 50); such portion

of the Panaca (U.S. Lot 39); as lies west of a vertical plane through a north-south line located 100 feet east of the center of the working compartment of the No. 1 shaft; such portions and Goodspeed claims (U.S. Lot 52) and the Williams and Goodspeed claims as lie west of a vertical plane through the east side line of the Zero claim; and limited to ground lying below the following described horizontal and inclined planes:

West of coordinate 13,500 east a horizontal plane at elevation 5,100.

Between coordinates 13,500 east and 13,900 east a horizontal plane at elevation 5,300.

Between coordinates 13,900 East and 14,250 East, a horizontal plane at elevation 5,500.

Between coordinates 14,250 East and 14,500 East, a horizontal plane at elevation 5,600.

Between coordinates 14,500 East and 14,750 East, a horizontal plane at elevation 5,700.

Between coordinates 14,750 East and 15,500 East, a horizontal plane at elevation 5,800.

East of coordinate 15,500 East, a horizontal plane at elevation 5,900.

North and East of the No. 1 shaft, and within the leased portion

of the Panaca claim, horizontal plane at elevation 6,100 and an inclined plane striking N. 45° W., dipping 65° SW, and intersecting the No. 1 shaft at elevation 5,810.

The coordinates referred to above are those of the Combined Metals Reduction Company grid system based on 15,000 East at the center of the No. 1 shaft. The elevations referred to are feet above mean sea level as established on Government bench marks in the area.

In addition to copies of the above leases, the following documents are attached to and made a part of the docket:

Extension of lease, dated Dec. 30, 1953, between the Amalgamated Pioche Mines and Smelters Corporation, lessor and the Yuba Dike Mines, Inc.

Consent to assign lease: Agreement between the Amalgamated Pioche Mines and Smelters Corporation and Alexander Lloyd, John A. Hedman and F. L. Heidenreich, lessees, dated Aug. 6, 1953; lessor consents to assignment of said lease to the Yuba Dike Mines, Inc.

Consent to assign sublease:

Re: Lease agreement between Amalgamated Pioche Mines and Smelters Corporation and Combined Metals Reduction Co. Whereas Combined Metals Reduction Company has subleased to Alexander Lloyd, John A. Hedman and F. L. Heidenreich, a certain portion of said premises. Now, therefore, Amalgamated Pioche and Smelters Corporation does here-

by consent that said sublease may be assigned to Yuba Dike Mines, Inc., a Nevada corporation, its successors and assigns.

Assignment and transfer:

Leases between Amalgamated Pioche Mines and Smelters Corporation and John A. Hedman, Alexander Lloyd, F. L. Heidenreich and lease between Combined Metals Reduction Company and John A. Hedman, Alexander Lloyd, F. L. Heidenreich, assigned and transferred by John A. Hedman, Alexander Lloyd, F. L. Heidenreich on Sept. 1, 1953 to the Yuba Dike Mines, Inc.

Landlord's subordination agreement:

It appears necessary that the applicants furnish Landlord's Subordination Agreement from the owners, the Amalgamated Pioche Mines and Smelters Corporation and from the sublessee, the Combined Metals Reduction Company in order to fully protect the Government in the exploration contract.

DESCRIPTION OF PROPERTY

Surface and surface facilities:

The entrance to the mine workings is via the No. 1 shaft which is presently being used jointly by the applicants and the Combined Metals Reduction Co. The shaft is adequately equipped with a timber headframe and ore bins. The applicant has provided an adequate double drum hoist, operated by an electric motor, warehouses, change room

and other buildings, which may be used as required.

Mine workings and underground facilities:

The No. 1 shaft is a 2-compartment, vertical shaft which has been extended to the 1250-foot level. The shaft is in good condition, timbered, and equipped with mine skips, air, water and electric power lines. Water is pumped from a sump below the 1200 to the 1200-foot level and transferred on that level to pumps operated by the Combined Metals Reduction Co. On the 800-foot level of the No. 1 shaft, the applicant has installed track, mine cars, air and water lines, ventilation equipment and adequate compressor capacity.

PAST OPERATION

During the years 1859-1940 inclusive, the area of the No. 1 shaft is reported to have produced 372,249 tons of ore having a value of $18,926,474.00.

Up to the date of the examination, the applicants report they have expended approximately $75,000.00 on the property in cleaning out and repairing surface buildings, repairing and/or replacing surface machinery and equipment, in repairing the shaft and various levels, and in conducting prospecting on various levels of the mine.

MANPOWER, SUPPLIES, ETC.

It is considered that an adequate number of experienced miners and mine labor may be obtained from the town of Pioche, Nev., and

practically all items of mine supplies may be obtained from either the Combined Metals Reduction Company warehouses or from suppliers in Pioche. The Company also maintains an excellent machine shop at their Caselton Plant, where repairs of equipment may be made.

Adequate water and transmitted electric power is available at the mine.

GEOLOGY

The mine workings, concerned with in the application, are in flatly dipping Prospect Mountain quartzite of Cambrian age. The beds of quartzite range in thickness from one to 18 inches, and well developed cross-bedding is common; where unaltered, the quartzite is medium grained and white. In many places, the quartzite has undergone extensive alteration and fracturing, and commonly is coated with iron and manganese staining.

The collar of the No. 1 shaft is in Cambrian Pioche shale. Within the shale is the Combined Metals limestone member about 50 feet thick, which is the host rock for the limestone replacement deposits that have been so productive in recent years. The basal contact of the Pioche shale with the underlying Prospect Mountain quartzite is near the 600 level. Other Cambrian formations are in the vicinity but are not likely to be encountered in the underground workings of the proposed exploration.

The Yuba dike is a granite porphyry dike that trends east, dips 80° S., and averages 40 feet in thickness. The dike has been extensively altered by sericitization and practically the only original mineral remaining is quartz. Smaller dikes of similar composition are found in the Pioche district but none are known to extend into the area under consideration.

The mine area is crossed by many faults and shear zones. Three trends predominate: (1) Northwest faults, post-mineralization, that have considerable offsets; (2) northeast faults that are in places mineralized but have small offsets; (3) east-west fissures that are considerably mineralized but along which no major offsets are detectable. The Raymond & Ely and Meadow Valley veins are examples of the east-west fissures.

For additional information on the general geology and ore deposits of the area, the reader is referred to U. S. Geological Survey Prof. Paper 171 by Westgate and Knopf.

ORE DEPOSITS

The principal ore deposits near the proposed area for exploration occur in pods and shoots in, and along, the Yuba dike and in northeast trending fissures leading out from the dike into the quartzite; and in replaced breccia zones along the east-west trending Raymond & Ely and Meadow Valley veins which lie 350-450 feet north of the Yuba dike.

The largest ore shoots occur where the dike and veins are intersected by northeast shear zones.

The ore consists of galena altered largely to cerusite and plumbojarosite, silver chlorides, gold, and pyrite altered to iron oxides. In unoxidized ground on the lower levels black sphalerite is common and in the Black Ledge ore shoot it is the predominant ore mineral. Green copper carbonate occurs in small but persistent amounts throughout much of the area. Manganese staining derived from the alteration of manganosiderite is extensive in shear zones and coating fractured quartzite.

The gangue is mainly altered granite porphyry in the deposits associated with the Yuba dike, and shattered quartzite in the fissure deposits.

PROPOSED EXPLORATION

The applicant proposed to rehabilitate the 1200-foot level an approximate distance of 2,605 feet, install necessary machinery and equipment and from this level diamond drill, crosscut, and drift to explore the Yuba dike. The applicant estimated the cost of their proposed exploration at $94,409.00.

Rehabilitation of 2,605 feet of drift on the 1200-foot level is not justified. The cost of the rehabilitation would not warrant the risk involved in such a plan unless more supporting geological evidence is found.

There is no advantage in drilling from the proposed new drift, and better drill sites could be located on the 1400 level. From the maps included with the docket, it is apparent that the "old timers" had tested, with unfavorable results, the dike above, west and east of the proposed area of new drifting.

The plan to diamond drill downward along the Yuba dike for the intersection of the Meadow Valley vein with the dike has some merit. If the dips of the dike and vein remain constant, then the intersection could be expected approximately 1,350 feet below the 1200 level. At such a depth this intersection would be difficult to recognize and the chances of missing it entirely in a diamond drill hole are considerable. Geological evidence that the dips remain constant is lacking. From underground examination, it appears that the dike gradually is dipping less with depth, consequently there is the possibility that there might be no intersection of the vein and dike.

The examining engineers discussed this proposal with F. L. Heidenreich and John A. Hedman and proposed a revised program in three stages from the 800-foot level of the No. 1 shaft to explore the Yuba dike at a closer point at less cost. This change in location was approved by Mr. Heidenreich.

The alternate proposal requires three stages of work to be done on or from the 800 level.

		Feet
Stage 1 -	Clean out the gobbed drift, which is 310 feet east of the No. 1 shaft - estimated maximum distance	100
Stage 2 -	From the face of the gobbed drift, drill two diamond drill holes in a south to southeasterly direction for the purpose of intersecting the Yuba dike, a total of approximately 200 feet each, or a maximum of	400
" 2(a) -	Crosscut from the face of the gobbed drift to the intersection of the Yuba dike as determined by diamond drilling and crosscut through the dike - maximum amount of crosscutting	150
Stage 3 -	Drift along the Yuba dike 150 feet in an easterly and 150 feet in a westerly direction - maximum drifting	300
" 3(a) -	On the best indications of mineralization, raise 25 feet above the level in each of the above drifts - maximum raising.	50

Miscellaneous: Timbering is estimated for a total of 50 linear feet of drifts.

Estimated time required to complete the project:

Stage 1:	Clean out gobbed drift	1 month
Stage 2:	Diamond drilling, 400 feet	1 "
" 2(a):	Crosscutting, 150 feet	2-1/2 "
Stage 3:	Drifting, 300 feet	5 months
" 3(a):	Raising, 50 feet	2-1/2 "
	Total	12 months

The applicant would be expected to begin work on the project within 10 days after approval of the exploration contract.

ESTIMATED EXPLORATION COSTS

Stage 1:	Provide all necessary labor, equipment and supplies, install slusher double drum hoist with cables and scraper, and clean out the gobbed drift 100 feet at $25.00/ft.	$2,500.00
Stage 2:	Provide all necessary labor, equipment and supplies and drill 400 feet of diamond drill holes (size AX) at $10.00/ft.	4,000.00
" 2(a):	Provide all necessary labor, equipment and supplies and crosscut from the face of the gobbed drift, a distance of 150 feet to the intersection of the Yuba dike and through the Yuba dike at $38.37/ft. (Size of crosscut to be 4-1/2 feet by 6 feet in the clear of timbers)	5,775.50
Stage 3:	Provide all necessary labor, equipment and supplies, and drift easterly and westerly along the Yuba dike for a total distance of 300 feet at $38.37/ft. . . . . (Size of drifts to be 4-1/2 feet by 6 feet in the clear)	11,511.00
" 3(a):	Provide all necessary labor, equipment and supplies, and raise from drifts in Stage 3 - 2 raises of 25 feet each, total 50 feet of raising at $40.00/ft.	2,000.00
Miscellaneous:	50 feet of drift to be timbered at $7.00/ft.	350.00
Assaying:	50 samples at $2.00/each	100.00
Rental charges for equipment		4,518.00
	TOTAL	$30,754.50

Government participation at 50% = $15,377.25

Each stage of the exploration is to be dependent upon the successful completion of the prior stage; and the contract, if approved, to be upon a unit or footage basis.

EQUIPMENT

The applicant will furnish all necessary equipment as follows:

	Item	Applicant's valuation
1	Double drum mine hoist - cable - cage	$12,000.00
1	Gardner-Denver air compressor	3,800.00
1	Mine car, 18-inch track ga.	75.00
1	Double drum slusher, cables and scraper	1,200.00
1	Air leg drill	625.00
	Drill steel and bits	200.00
	Air and water hose	150.00
	Ventilation tubing	400.00
	Ventilation blower	500.00
	Small tools	200.00
1	Dump truck, 5-ton capacity	1,500.00
1	Diamond drill machine, rods and bits	1,500.00 ?
200	feet of 30# mine rail, with splice bars, bolts, spikes, ties	150.00
1	Mine track switch	50.00
1,200	feet of 1-inch black iron pipe and fittings and installation	240.00
		$22,590.00

Rental charge:- $22,590.00 ÷ 60 months = $376.50 x 12 months = $4,518.00 or $5.02 per foot

Labor:	Cost per foot
1 Superintendent @ $600.00 per month	$8.00
1 Hoistman @ $14.54 per day	5.04
2 Miners @ $14.54 per day each	10.08
1 Truck driver and topman @ $14.54 per day	5.04
1 Bookkeeper, part time @ $50.00 per month	.66 out
	$28.82
Insurance and taxes @ 15.57%	4.49
	$33.31
Electric power @ $5.00 per day	1.73
Powder - fuse - detonators	2.00
Timbering (50 feet of drifts @ $7.00/ft.)	.70 out
Repairs	.50
Assaying 50 samples @ $2.00 each	.20 out
	$38.44

		Applicant's valuation
	Balance Brot Fwd	$38.44
Add rental charges		5.02
	Total	$43.46

The applicant has submitted the costs as itemized in each stage of the exploration, and as these costs check closely with those detailed above by the examining engineer, it is recommended that the applicant's costs be accepted.

Independent contracts: None

Rehabilitation and repairs of buildings and installations: None

Improvements: None

Resume:

1. The course and attitude of the diamond drill holes should be determined by consultation between representatives of the Government and the applicant prior to the start of drilling.

2. The drill cores should be properly marked and stored for inspection.

3. The applicant should advise the Government the approximate date the gobbed drift clean out will be completed in order that the Government engineers may inspect the drift so that no delay will occur in starting the diamond drilling program.

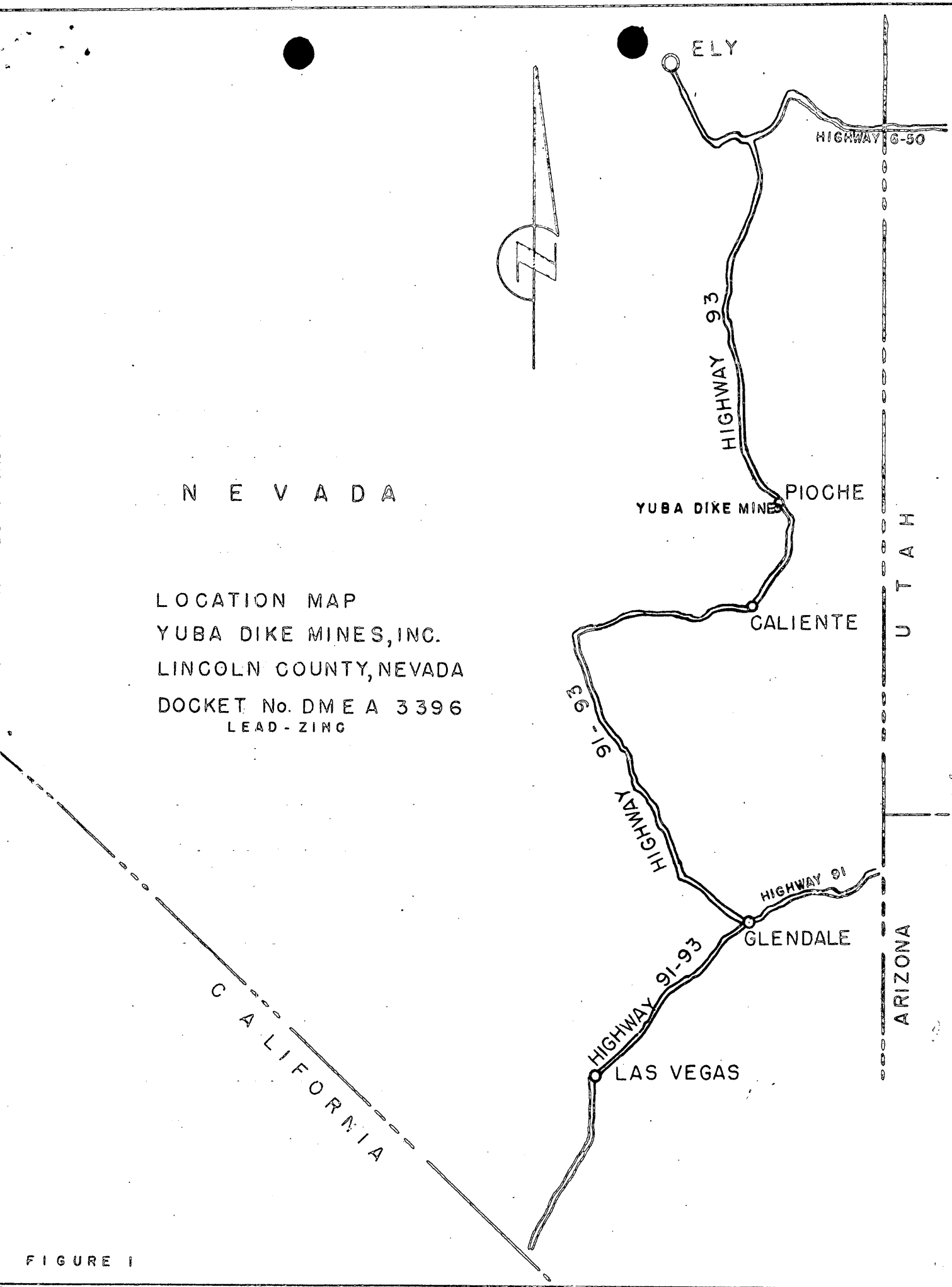
ELY
HIGHWAY 6-50
HIGHWAY 93
NEVADA
PIOCHE
YUBA DIKE MINES
UTAH
CALIENTE
LOCATION MAP
YUBA DIKE MINES, INC.
LINCOLN COUNTY, NEVADA
DOCKET No. DME A 3396
LEAD-ZINC
HIGHWAY 91-93
HIGHWAY 91
GLENDALE
ARIZONA
HIGHWAY 91-93
LAS VEGAS
CALIFORNIA

FIGURE 1

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 1, 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-3396 (Lead-Zinc)
Yuba Dike Mines, Inc.
Yuba Dike Mining Claims
Lincoln County, California

Reference is made to your letter of November 24, 1954, regarding the status of the above-docketed application.

Upon looking over the file, I find that no action has been taken since Mr. Miller's memorandum to you dated October 25, 1954. Mr. Miller had apparently been waiting for instructions from Washington.

We are now referring the application to our Field Team for a joint field examination.

S. Ricker
Executive Officer
DMEA Field Team, Region III

Copy to: Roscoe Smith, USGS
A. C. Johnson, Reno

File Copy
Surname

J.W. ACD
Griswold
Selfridge
Johnson
Mittendorf

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

NOV 24 1954

Mr. Spangler Ricker
Executive Officer
DMEA Field Team, Region III
420 Custom House
555 Battery Street
San Francisco 11, California

Re: Docket No. DMEA-3396 (Lead-Zinc)
Tuba Dike Mines, Inc.
Tuba Dike Mining Claims
Lincoln County, Nevada

Dear Mr. Ricker:

Will you please advise us regarding the status of the cited application. We received your memorandum, dated October 25, 1954, enclosing copies of the revised application.

If the field examination has been made of this property, we would appreciate receiving the Field Team report and recommendations at your earliest convenience.

Sincerely yours,

George C. Selfridge by ESS
Chairman, Operating Committee

JWAlt/er 11/22/54

APPROVED:

J. H. Hedges by ESS
Member, Bureau of Mines

Thor H. Kiilsgaard by ESS
Member, Geological Survey

Copy to: Docket
Admr R File
Op. Committee
Base Metals
Mr. Bishop, USBM
Mr. Kiilsgaard, USGS
Chron.

R.G.B.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
WASHINGTON 25, D. C.

Department of the Interior
Defense Minerals Administration
RECEIVED
NOV 10 1954

November 9, 1954

Memorandum

To: W. R. Griswold, DMEA

From: O. M. Bishop, USBM, Reviewed by Walter E. Lewis

Subject: Docket No. DMEA-3396 (lead-zinc) Yuba Dike Mines, Inc., Yuba Dike Mining claims, Lincoln County, Nevada - Application for $94,409

The application in its present form is of little use in evaluating the merit of the proposed exploration program.

The applicant proposes to rehabilitate the 1,200-level drift from what is apparently the No. 1 shaft (Pioche Phoenix shaft). From the 1,200 level, crosscutting will be done to the Yuba Dike in areas of mineralized fractures. Diamond drill holes will be drilled at advantageous points along the eastern extension of the 1,200 level.

There is little information given that indicates that there would be mineralized fractures in the target area on the Yuba Dike. In addition, the application gives no statement on the nature of the economics involved, assays, proportion of ores oxidized or expected metallurgical recoveries. The extensive rehabilitation work eastward from the No. 1 shaft is apparently proposed merely on the assumption that the Yuba Dike will show fractured areas suitable for mineral deposition.

Judging from the application alone, we are of the opinion that the experience and background of the applicant would admit a better prepared application.

We recommend that the application be referred to the field team. If the field team believes the property has a worthwhile potential, it may assist in planning a suitable program.

It is our opinion that the work can be cut extensively. Little need is seen for the rehabilitation of the 1,200 level east from the shaft. The work, if justified, can be confined to the proposed 400-foot crosscut to the Yuba Dike from a point just east of the shaft in the 1,200 level, or in place of crosscutting, diamond drill holes could be drilled from the same point to intersect the Dike at 100- or 200-foot intervals.

O. M. Bishop

O. M. Bishop

Copy to: Minerals Division
Edward L. Newcomb, Room 5227
O. M. Bishop
Files

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
WASHINGTON 25, D. C.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
NOV 10 1954

November 9, 1954

Memorandum

To: W. R. Griswold, DMEA

From: C. M. Bishop, USBM, Reviewed by Walter E. Lewis

Subject: Docket No. DMEA-3396 (lead-zinc) Yuba Dike Mines, Ind., Yuba Dike Mining claims, Lincoln County, Nevada - Application for $94,409

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UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
WASHINGTON 25, D. C.

Defense Minerals Administration
RECEIVED
NOV 10 1954

November 9, 1954

Memorandum

To: W. R. Griswold, DMEA

From: O. M. Bishop, USBM, Reviewed by Walter E. Lewis

Subject: Docket No. DMEA-3396 (lead-zinc) Yuba Dike Mines, Ind., Yuba Dike Mining claims, Lincoln County, Nevada - Application for $94,409

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O. M. Bishop

O. M. Bishop

Copy to: Minerals Division
Edward L. Newcomb, Room 5227
O. M. Bishop
Files

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

Department of the Interior
Defense Minerals Administration
RECEIVED
OCT 29 1954

420 Custom House
555 Battery Street
San Francisco 11, Calif.

October 25, 1954

Memorandum

To: Defense Minerals Exploration Administration
Interior Building, Washington 25, D. C.

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket No. DMEA-3396 (Lead-Zinc)
Yuba Dike Mines, Incorporated
Yuba Dike Mining Claims
Lincoln County, Nevada

By memorandum dated September 7, 1954, Mr. S. Ricker advised you that Mr. John A. Hedman, President, Yuba Dike Mines, Incorporated, had requested that their application (Docket No. DMEA-3396) be held in abeyance.

When the Corporation requested we hold the application in abeyance, Mr. Hedman asked that that be done "as it is understood that the rehabilitation of the No. 1 Shaft would probably come under the heading of mine development rather than exploration."

Today we received four copies of the Corporation's revised application. Three of the four copies are being sent to you attached herewith. Though there was no covering letter, it is assumed that this latest application is the one to be processed.

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

Attachment

Copy to: Roscoe Smith, USGS
A. C. Johnson, Reno

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Form Approved, Budget Bureau No. 42-R1035.2.

DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration
RECEIVED
OCT 29 1954

APPLICATION FOR AID IN AN EXPLORATION PROJECT, PURSUANT TO DMEA ORDER 1, UNDER THE DEFENSE PRODUCTION ACT OF 1950, AS AMENDED

Not to be filled in by applicant

Docket No. .....
Metal or Mineral .....
Date Received .....
Estimated Cost .....
Participation (Government %) .....

INSTRUCTIONS

1. *Name of applicant.*—(*a*) State here your full legal name, in the form in which you will wish to contract, and your mailing address: YUBA DIKE MINES, INCORPORATED
MOCHE, NEVADA

(*b*) If other than an individual, add to your name above whether a corporation, partnership, etc., and the name of the State in which incorporated or otherwise organized.

(*c*) If a corporation, add to above statement, titles, names and addresses of officers.

(*d*) If a partnership, add to the above statement the names and addresses of all partners.

2. *General.*—Read DMEA Order 1, "Government Aid in Defense Exploration Projects," before completing this application. Submit this application and all accompanying papers in quadruplicate (four copies), with your name and address on each sheet of the application and on all accompanying papers. Where sufficient space is not provided on the form for all required information, state it on an accompanying paper, with a reference in each case to the instruction to which it refers by number. Comply with all applicable instructions; or, if not applicable, so state. File the application with Defense Minerals Exploration Administration, Department of the Interior, Washington 25, D. C., or with the nearest field executive officer thereof.

3. *Applicant's property rights.*—(*a*) State the legal description of the land upon which you wish to explore, including all land which you possess or control that may be benefited by the exploration, and excluding any land or interest in land which is not to be included in the exploration project contract
See Maps and Descriptions.

(*b*) State any mine name by which the property is known. Yuba Dike Mines, Incorporated.

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise
Lessee, Copy of Lease enclosed.

(*d*) If you are not the owner, submit with this application a copy of the lease, contract, or other document under which you control the property.

(*e*) If you own the land, describe any liens or encumbrances on it .....

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice.

4. *Physical description.*—(*a*) Describe in detail any mining or exploration operations which have been or now are being conducted upon the land, including existing mine workings and production facilities. State your interest, if any, in such operations. Also describe accessibility of mine workings for examination purposes.

(*b*) State past and current production, and ore reserves, if any, giving quantities and grades.

(*c*) Describe the geologic features of the property, including mineralization, type of deposit (vein, bedded, etc.), and your reasons for wishing to explore. Illustrate with maps or sketches. Send with your application (but not necessarily as a part of it) any geologic or engineering report, assay maps, or other technologic information you may have, indicating on each whether you require its return to you.

(*d*) State the facts with respect to the accessibility of the project: Access roads, distances to shipping, supply and residence points.

(*e*) State the availability of manpower, materials, supplies, equipment, water, and power.

5. *The exploration project.*—(*a*) [redacted]e the mineral or minerals for which you wi[redacted] explore .....
Lead and Zinc

(*b*) Describe fully the proposed work, including a map or sketch of the property showing a plan (and cross sections if needed) of any present mine workings, and the location of the proposed exploration work as related to such features as contacts, veins, ore-bearing beds, etc.

(*c*) The work will start within ...NOW... days and be completed within ..... months from the date of an exploration project contract.

(*d*) State the operating experience and background of the applicant with relation to the ability to carry out such exploration project, and also that of the person or persons who will supervise the operations.

6. *Estimate of costs.*—Furnish a detailed estimate of the costs of the proposed work (you will have to use a separate sheet), under the following headings. Add the totals under all headings to give the estimated total cost of the project:

(*a*) *Independent contracts.*—(Note.—If the applicant does not intend to let any of the work to contractors, write "none" after this item. To the extent that the work is to be contracted, do not repeat the cost of the contract-work in subsequent items.) State the cost of any proposed independent contracts for the performance of all or any part of the work, expressed in terms of units of work (such as per foot of drilling, per foot of drifting, per hour of bulldozer operations, per cubic yard of material moved, etc.).

(*b*) *Labor, supervision, consultants.*—Include an itemized schedule of numbers, classes and rates of wages, salaries or fees for necessary labor, supervision and engineering and geological consultants.

(*c*) *Operating materials and supplies.*—Furnish an itemized list, including items of equipment costing less than $50 each, and power, water and fuel.

(*d*) *Operating equipment.*—Furnish an itemized list of any operating equipment to be rented, purchased, or which is owned and will be furnished by the Operator, with the estimated rental, purchase price, or suggested use-allowance based on present value, as the case may be.

(*e*) *Rehabilitation and repairs.*—Furnish a detailed list showing the cost of any necessary initial rehabilitation or repairs of existing buildings, installations, fixtures, and movable operating equipment, now owned by the Operator and which will be devoted to the exploration project.

(*f*) *New buildings, improvements, installations.*—Furnish a detailed list showing the cost of any necessary buildings, fixed improvements, or installations to be purchased, installed or constructed for the benefit of the exploration project.

(*g*) *Miscellaneous.*—Furnish a detailed list showing the cost of 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.

(*h*) *Contingencies.*—Give an estimate of any necessary allowances for contingencies not included in the costs stated above.

NOTE.—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 the contract, should be included in the estimate of costs.

7. (*a*) Are you prepared to furnish your share of the cost of the proposed project in accordance with the regulations on Government participation (Sec. 7, DMEA No. 1)?

(*b*) How do you propose to furnish your share of the costs?

☒ Money ☒ Use of equipment owned by you ☐ Other

Explain in detail on acompanying paper.

CERTIFICATION

The undersigned, whether as an individual, corporate officer, partner, or otherwise, both in his own behalf and acting for the applicant, certifies that the information set forth in this form and accompanying papers is correct and complete, to the best of his knowledge and belief.

Dated October 20, 1954

YUBA DIKE MINES, INCORPORATED
PIOCHE, NEVADA
(Applicant)

By Wm H. Eckman
President.

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—66551-1

OCT 29 1957

RESUME'

YUBA DIKE MINES INCORPORATED EXPLORATION PROJECT TO EXPLORE THE YUBA DIKE

1200 Level Drift Rehabilitation	2605'	@ $ 5.89	$15,343
Crosscutting and Drifting	1800'	@ 38.37	69,066
Diamond Drilling	2000'	@ 5.00	10,000
		Total	$ 94,409

The purpose of this exploration project is to prospect for ore shoots along the Yuba Dike. The Yuba Shaft area yielded, according to tax reports (which does not include all the production), 15,916 tons of ore for a total value of $362,754. This production was from 1872 to 1914. The ore was lead and silver. Areas of zinc-lead ore were encountered, but left unmined as this type of ore could not be treated. The proposed exploration work in this area will be about 200 feet below the bottom of the Yuba Shaft which was 1300 feet deep. Please refer to section map included in this report.

The other section to be prospected is between the Black Ledge and the Newark. Approximately 1,000 feet of the dike has not been prospected here. Northeast fissuring encountered in our work on the 800 Level should intersect the dike in this area. The intersections of the northeasters with the dike has resulted in ore shoots along the Yuba Dike, i. e. Yuba, Mazeppi, Newark, Chapman, Black Ledge. The Newark produced 6,252 tons of lead-silver ore for a total value $289,523 in the early days. The Black Ledge has been productive and ore continues below the 1400 Level. The water level is below the 1200 Level.

The production record of this property is in excess of $20,000,000.

Please refer to maps, attached reports and data for more detailed information.

YUBA DIKE MINES, INCORPORATED
BLOCK, NEVADA

PREPARATORY COSTS

Installation Power, Compressor and Charging Equipment on 1200 Station

MATERIALS

500'	3/c #4 Neoprene Electric Cable	$ 900
	Electrical hardware, tape, etc.	100
1300'	1" Pipe, water line	325
	Pipe Hangers	50
	Total	$1,375

LABOR

Clean 1200 Station and prepare area for compressor 4 Shifts @ $18.59	$ 74.36
Installation Compressor on 1200 Station 10 Shifts @$18.59	185.90
" Electric Cable 800 to 1200 6 " @18.59	111.54
" 1" Water Line 10 Shifts @ $18.59	185.90
" Charging equipment and locomotive 4 @$18.59	74.36
Hoistman 17 Shifts @$18.59	316.03
1/2 Month power	40.00
Timekeeping & Accounting	25.00
Shaft Maintenance 1/2 Month	125.00
Total	$ 1,138.09

Materials	$ 1,375.00
Labor	1,138.09
Contingencies	251.31
Total	$ 2,764.40
Cost Per foot (1800' Drifting &Crosscutting)	$ 1.54

1200 Level Drift Rehabilitation

2605' @ $5.89 $ 15,343

MATERIALS

2500'	Rail (520' track to lay plus repair and replacement of portions of old track	@ 70¢	$1,750
1000	4" x 6" Ties	@ 80¢	800
	Track Bolts		140
	Track Spikes		100
2100'	2" Pipe and fittings	@ 50¢	1,050
	2" Pipe Fittings		100
200'	Drift Timber	@$4.59	918
1	Switch Complete		50
2605'	1" Pipe	@ 25¢	651
	Contingencies 10%		556
	Total Materials		$6,115

LABOR

Install Switch 4 man shifts @ $18.59	$ 74.36
Muck up 300' mud and silt, 20 days 2 men per day, 40 shifts @ $18.59	743.60
Install 520' track - 14 shifts @ $18.59	260.26
Repair, clean track, replace decayed ties 60 Shifts @ $18.59	1,115.40
Install 40 sets timber - 80 Shifts @ $18.59	1,487.20
Install 2605' each 2" and 1" pipe - 26 shifts @ $18.59	483.34
Contingencies 10%	416.42
Total Labor	$ 4,680.58

OTHER

Hoistman 112 Shifts @ $18.59	$ 2,082.08
Power - 4.3 Months @ $80	344.00
Rental - Mancha Locomotive and Charger 4.3 Months @$100	430.00
Rental - 6 Mine Cars @ $7.00 each - $42.00x 4.3 Months	180.60
Shaft Maintenance - 4.3 Months $250	675.00
Hoist and Hoisting rope maintenance 4.3 Months @$50	215.00
Timekeeping and accounting 4.3 Months @ $50	215.00
Contingenceis 10%	414.17
Total Other	$ 4,555.85

Materials	$ 6,115.00	
Labor	4,680.58	
Other	4,555.85	
Total	$15,351.43	Per Foot $5.89

YUBA DIKE MINES, INCORPORATED
PIOCHE, NEVADA

Crosscutting and Drifting

Cost Per Foot	$38.37	Untimbered
" " "	44.96	Timbered

Estimated Monthly Cost for Drifting and Crosscutting

Miners, 78 Shifts @ $18.59, includes 2 miners per day and one additional man per day to act as motorman and cager.	$1,450.02
Hoistman, 26 Shifts @ $18.59	483.34
Compressor Rental	66.00
Compressor, upkeep	5.00
Rock Drill Rental	10.00
Rock Drill, Maintenance	10.00
Rock Bits and Steel	100.00
Wancha Locomotive and Charging Station Rental	100.00
Mucking Machine Rental	60.00
Mine Car Rental and upkeep 6 cars @ $7.00,	42.00
Shaft Maintenance	250.00
Hoist and Hoisting Rope Maintenance	50.00
Timekeeping and Accounting	50.00
Power	80.00
Sampling and Assaying	30.00
Engineering	60.00
Total Estimated Monthly Cost	$ 2,846.36

Estimated Progress per Month - 90 feet

Estimated Cost per Foot		$ 31.63
" " " "	Track, rail only	1.40
" " " "	Ties	.40
Do Do	Bolts & Spikes	.10
" "	Pipe & Fittings	.80
" "	Explosives	2.50
" "	Preparatory	1.54
Estimated Cost Per Foot, Untimbered		$ 38.37
Cost and installation of timber per foot		6.59
Estimated Cost Per Foot, Timbered		$ 44.96

(Detail of preparatory cost on next sheet)

APPLICATION FOR AID IN AN
EXPLORATION PROJECT, PURSUANT TO
DMEA ORDER 1, UNDER THE DEFENSE
PRODUCTION ACT OF 1950, AS AMENDED

1. NAME OF APPLICANT. -

(a) Yuba Dike Mines, Incorporated, Pioche, Nevada

(b) Incorporation - Incorporated under the laws of the State of Nevada

(c) Officers:

John A. Hedman, President and Director
Pioche, Nevada

Allan Gustafson, Vice President
1630 East 70th Street, Chicago 49, Illinois

F. L. Heidenreich, Secretary and Director
Pioche, Nevada

Alexander Lloyd, Treasurer and Director
Pioche, Nevada

Charles V. Rice, Director
1633 E. 79th Street, Chicago 49, Illinois

John H. Southman, Director
2459 East 75th Street, Chicago 49, Illinois

Main Office - Pioche, Nevada

(d) Not Applicable.

3. APPLICANT'S PROPERTY RIGHTS. -

(a) All the following patented Mining Claims, Ely Mining District, Lincoln County State of Nevada:

Pioche or Meadow Valley, (U.S. Lot 40); Bullion, (U.S. Lot 54) Meridian, (U.S. Lot 56); Cache, (U.S. Lot 54); Silex, (U.S. Lot 54); Silex, (U.S. Lot54); Queen, (U.S. Lot 53); King, (U.S. Lot 53); Silver, (U.S. Lot 38); Greenback Currency, (U.S. Survey #2725); Yuba, (U.S. Lot 42); (U.S. Survey #3342); Alpha, (U. S. Lot 52); Richmond, U. S. Lot 52); Juno, (U.S. Lot 55); Vesta,(U. S. Lot 55); Bedrock, (U.S. Lot 55); Treasure,(U.S. Lot 55); Burk Washington, (U.S. Lot 41); Mazzepa, (U.S. Survey #3888); Alberta and Alberta #2; Susan Duster, (U.S. Lot #2714); Zero, (U.S. Lot 49); Scipio, (U.S. Lot 50); Deerfoot, (U.S. Lot 52); Index, (U.S. Lot 52); Williams & Goodspeed, (U.S. Survey #3343).

Unpatented Mining Claims are as Follows:

Enyard, recorded in book "Z" pages 28 & 29 Records of Lincoln County									
Nappias	"	"	"	"	page 29		"	"	"
West	"	"	"	"N"	Pages	262&3	"	"	"
Lookout	"	"	"	"E"	"	441 & 2,	Amended Book "N"		
					"	257-8-9,	Records of Lincoln County		
Winter	"	"	"	"G"	"	230-1	Amended Book "N"		
					"	255-6-7	Records of Lincoln County		
Monarch	"	"	"	"L"	"	446	Amended Book "N"		
					"	264-5	Records of Lincoln County		
South	"	"	"	"H"	"	264	Amended Book "N"		
					"	259-262	Records of Lincoln County		
Eagle	"	"	"	"P"	"	10-12	"	"	"
Bee	"	"	"	"Z"	"	29-30	"	"	"
Wedge	"	"	"	"Y"	"	226	"	"	"
Triangle Fraction, recorded in Book "Y" pages 225-6, Records of Lincoln County									

(b) Yuba Dike Mines, Incorporated, formerly, "Amalgamated Pioche Mines and Smelter Corporation".

(c) Lessee.

(d) Copies of Leases enclosed with application.

(e) Do not own the land - - - None.

(f) Included in 3 - (a)

4. PHYSICAL DESCRIPTION. -

(a) On September 1, 1953, Yuba Dike Mines Incorporated started operations under certain granted leases.

The initial work consisted of repairs on the #1 Shaft from the surface down to the 1200 pocket, or 1300 feet.

Due to the heavy acid conditions of the water in the shaft, all lag bolts had to be replaced as well as defective guides. New ladders and water boxes were installed.

On the 600' Level, the shaft had shifted, causing a weak and dangerous condition. Four months time was required to timber and repair the shaft for safe operation. Periodic inspection and adjustment work is part of our program to maintain the shaft.

On the 800' Level we have installed a new 230 Ft. Gardner-Denver electric compressor and electric power cables from the surface. We have laid 495 feet of track (35 lb. rail) and 495 feet of 2 inch airline, also, one 20 HP double drum slusher has been installed and a distance of 80 feet has been cleaned out.

At a distance of 475 feet from the 800' Station, we have excavated, constructed a ramp and moved the 20 HP slusher to this point. We started crosscutting in the quartzite and at this date have drifted more than 220 feet. We have installed a 5 HP slusher and are continuing this drift. Our objective being to intersecta projection of a faulted segment of the old Raymond Ely vein, which produced approximately $20,000,000 in the 1870's. During this time, a raise was driven from the 800' Level at a point of 385' from #1 Station to connect with the 800' Level of the #3 Mine. This connection was not made, probably due to an error in the old maps. We plan to explore for this connection at a later date.

In addition to the above, considerable work was done on the surface. The change-room was cleaned and repaired. Hot water and heating equipment was installed. The hoist and hoist building were cleaned and repaired.

This covers some of the work done by the Yuba Dike Mines Incorporated. The mines have been worked since 1870 to the present time. Several thousand feet of shaft, drifts and crosscuts have been worked, producing a very large tonnage of ore. The accompanying maps and figures show this work.

The Yuba Dike Mines Incorporated have a 30 year lease on the entire property, which is described in copies of said leases, which accompany this report. Portions of the mine are not accessible for examination. The purpose of the exploration project is to make them accessible and continue exploration in the most favorable areas.

The #1 Shaft is equipped with a 200 HP electric, double drum hoist with a counter balance and skip. Capacity of the skip is 1 3/4 tons. The ore and waste bins have a capacity of 25 tons each, and the storage bin has a capacity of 300 tons. A sub-station with 440 and 2300 volt, Hoover Dam Power, is 100 feet from the collar of #1 Shaft. The hoist capacity is 13,000 tons per month. The change room will accomodate 125 men. A blacksmith shop, warehouse, first aid building, and a shift boss office with showers comprise the remainder of the surface building.

4 (b) PAST PRODUCTION

The following production records are taken from Nevada State Bureau of Mines Geology and Mining Series No. 38, "Nevada's Metals and Mineral Production" (1859-1940 Inclusive), which is taken from the Net Proceeds:

TAX REPORTS.

Amalgamated Pioche Mining	38,216	Tons	$ 557,757
Raymond & Ely Mining Company	148,755	"	10,293,127
Meadow Valley Mining Company	88,574	"	5,759,912
Newark Silver Mining Company	6,252	"	289,523
Yuba Shaft	15,916	"	362,754
Washington & Creole	1,625	"	117,983
Mazeppa Silver Mining Company	2,689	"	128,906
Chapman Mining & Smelting	296	"	26,233
Hermes Silver Mining Company	570	"	40,000
Huhn & Hunt	755	"	23,262
Independence	85	"	5,733
Magnet			381,722
Nevada Mining Company	4,091	"	41,145
Nevada Utah Mining & Smelting	28,865	"	187,193
Phoenix Reduction Company			39,862
Pioche Consolidated Mining Company	20,174	"	524,609
Pioche Mines	15,386	"	110,753
Totals	372,249	Tons	$18,926,474

4. (c) (By F. L. Heidenreich)

The following paragraph was copied from page 49, Geology and Ore Deposits of the Pioche District, Nevada, Geological Survey Professional Paper 171, By Lewis G. Westgate and Adolph Knopf.

"In general the dike is shattered, and at intervals it contains thin lenses of ore lying in its plane and bounded by well-defined walls. The quartzite along the contact of the dike is shattered, and in places "quartzite fissures" extend out into the quartzite from the dike at angles of roughly 45 degrees with its course. Genetically it is clear that the Yuba dike was shattered after it had solidified and that it then served as a channelway along which hot solutions ascended. These solutions deposited galena, sphalerite, pyrite, and a silver-bearing mineral in the dike and altered all its feldspar and biotite to white silky mica (sericite)."

The Yuba Dike, a granite porphyry, has been exposed from the Alps mine southeast of Pioche to a point northwest of the Caselton Shaft of the Combined Metals Reduction Company. This is a distance of about3 miles. From the No. 1 Shaft eastwardly for about 9,000 feet the Yuba Dike traverses the Prospect Mountain Quartzite. Easterly-westerly fissuring (Raymond-Ely & Meadow Valley) lying parallel to and about 300 to 400 feet north of the dike, which is connected with the dike with northeast fissures, and the dike has produced over $25,000,000 of lead-silver ore. From the No. 1 Shaft westwardly for about 10,000 feet the Combined Metals Reduction Company has mined over 2,000,000 tons of lead-zinc sulphide ore from the Combined Metals Bed assaying approximately 0.04 ounces gold, 5.528 ounces silver, 5.538 per cent lead, and 13.71 per cent zinc. This bedded ore body paralleled and layed just northof the Yuba Dike. Northeast fissuring from the Dike to the easterly-westerly fissuring which fed the CM beds played an important role in the size and value of the bedded ore deposits. The northeasters also played an important part in the ore shoots along the east-westers in the quartzite. This had led several eminent geologists to express their belief that the Yuba Dike was the pathway of the ascending ore solutions, and in their upward journey they branched out into the quartzite and CM beds to form important ore bodies.

The area around the Yuba Shaft yielded 15,916 tons of silver-lead ore for a value of $362,754 from fissures in the Yuba Dike 1872 to 1894. The Yuba Shaft caved about 1894. Zinc ore was encountered during this period and was called "black ore" (see accompanying section map of Yuba). This "black ore" was avoided as they were unable to mill or smelt zinc ore at that time. The Yuba Shaft is 1300 feet deep. This proposed exploration project from the 1200 Level of the No. 1 Shaft will prospect for the downward extension of lead-zinc ore 200 feet below the bottom of the Yuba Shaft.

The Yuba, Mazeppa, Newark, and Black Ledge ore shoots in the Yuba Dike were formed in the dike at the intersections of northeast fissures. Between the Newark and Black Ledge shoots, a distance of approximately 1,000 feet, the Dike has not been explored. Part of this exploration project will prospect this area. Several northeast fissures have been exposed in our work on the 800 Level which project into this area.

The Yuba Dike has an average width of about 40 feet. At Times the ore shoots are on the footwall, in the middle or on the hangingwall and sometimes in all three positions. Short diamond drill holes spotted in mineralized or fractured areas would expose the ore shoots.

The Yuba Dike and the easterly-westerly fissures are converging on their respective dips. Due to the fadt that the northeasters which intersect the Yuba Dike and the easterly-westerly fissures form zinc and lead ore shoots at their intersection with the Yuba Dike it may be that when the easterly-westerly fissures intersect the dike on dip that lead-zinc ore shoots may be formed, or that the dike may be impregnated with lead and zinc where fracturing has occurred. A diamond drill hole down the dip of the dike to this projected intersection would be important.

The sedimentary formations on thisproperty are all of Cambrian age. The lowermost member is the Prospect Mountain Quartzite which has an exposed thickness of approximately 2,000 feet. Production from fissures in the Prospect Mountain Quartzite has been about $18,368,717 upon this property. Mostof the production was from easterly-westerly fissures with some from northeasters. Approximately $1,100,000 of this amount came from the Yuba Dike. Silver and lead with some gold were the principal metals. However, zinc values were found in the Yuba Dike and in the lower parts of some of the fissures.

Lying conformably upon the quartzite is about 870 feet of Pioche Shale. Eight recognizable limestone beds are in the Pioche Shale. The lowest limestone bed, the Combined Metals Bed (CM bed) of limestone, is 50 feet thick and is about 250 feet above the base of the formation. This has been the most productive horizon in the district. Over 2,000,000 tons of ore assaying about 0.04 ounces gold, 5.528 ounces silver, 5.538 per cent lead, and 13.71 per cent zinc have been produced from it. The production from the CM beds on this property is listed from Net Proceeds Tax Reports as 38,216 tons for a total value of $557,757. This does not include all ore produced as some of it was mined by the Combined Metals Reduction Company on ground leased to them.

One hundred feet above the CM beds lies the 15 foot Susan Duster lime bed. There has been a small production from this bed.

Six limestone beds from 2 to 30 feet thick have been found in the upper part of the Pioche Shale. Manganese oxide assaying from 10 to 20% is showing on the surface near No. 1 Shaft and on the 250 foot level. As this type of ore had no commercial value there has been little prospecting or exploration work done in these beds. When these ores can be treated a large territory will warrant exploration and development on this property and lead-zinc sulphides may also be found as well as the manganese oxide.

The Prince (also known as the Lyndon) Limestone, about 350 feet in thickness, rests conformably upon the Pioche Shale. Silver-lead-zinc-manganese ore has been found at its base at the Prince Mine. Little has been done in this member on this property but the mineralization showing justifies further exploration.

The Chisholm Shale varies in thickness in this area from 70 to 137 feet thick and lies conformably upon the Prince Limestone. Gold, silver and lead have been found in contact with a limestone member within the formation. No appreciable amount of work has been done on this property in this formation, however, mineralization is present.

About 150 feet of limestone known as the Davidson Blue (also called Peasley or Highland Peak A) Limestone is just above the Chisholm Shale. At the Prince Mine there is silver-lead-manganese-zinc mineralization in it.

The Davidson Gray Dolomite, 250 feet thick, (Burrows or Highland Peak B) lies unconformably upon the Davidson Blue Limestone.

This property has been a producer most of the time from the 1870's to date. All the production, except approximately 5,000 tons mined from the Black Ledge ore shoot, has been from above the water level which is now a short distance below the 1200 Level. The water level was formerly at the 1200 Level. The assays show good ore on the 1400 Level of the Black Ledge ore shoot.

The accompanying, proposed exploration project is just a start toward the exploration warranted, but it may be the key to opening a large area for further exploration. There has been a large production from above the water level. The relatively small amount of work done below the water level has developed good ore.

REFERENCES

RAYMOND, R. W. Statistics of mines and mining in the States and territories west of the Rocky Mountains for 1871 to 1875.

WESTGATE, L. G. and KNOPF, A. 1932 Geology and ore deposits of the Pioche district, Nevada. U. S. Geol. Survey Prof. Paper 171.

WHEELER, H. E. and LEMMON, D. M. 1939 Cambrian formations of the Eureka and Pioche districts, Nevada, Univ. Nevada Bulletin, Vol. 33

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COUCH, B. F. 1943 Nevada's Metal and Mineral Production (1859-1940 Inclusive) Univ. Nevada Bull. No. 38

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YOUNG, Earl B. 1948 The Pioche District, Reprinted from International Geological Congress "Report of the Eighteenth Session, Great Britian, 1948," Part VII

4 (d)

With respect to the accessibility of the project, The Nevada State Highway No. 93 is adjacent to the property, oil roads to the rail road shipping point, a distance of 1 1/2 miles. Salt Lake Smelters are three hundred and fifty miles, and Kennecott Smelter at McGill, Nevada is a distance of 125 miles on highway No. 93. Combined Metals Reduction Company's mill is located 11 miles from the shipping point of the property, and oiled highway to the mill. Stores and living quarters are within the town of Pioche, Nevada, and are sufficient to take care of employee's needs. The business and residence districts are within walking distance of the property.

(e)

Ample manpower is available. Materials, supplies and equipment can be purchased locally or from Salt Lake City, Utah, or Los Angeles, California. Electric power and water is abundant at all times.

5. THE EXPLORATION PROJECT.

(a) - Zinc - Lead

(b) - See description and maps attached.

(c) - Work is now under progress.

(d) - Alexander Lloyd, Treasurer and Director of Yuba Dike Mines, Incorporated, is a mine owner and has operated mines for over 30 years, in the capacity of General Manager of Virginia Louise Mining Company, Pioche, Nevada; Superintendent of Pioche Mines, Consolidated, Pioche, Nevada; Lessee of the Mendha Nevada Mining Company& Mascot Silver Mines Company, Pioche, Nevada Also, self employed in his own mining properties in the State of Utah and Nevada.

John A. Hedman, President and Director of Yuba Dike Mines Incorporated and is owner and operator of Hedman Mines Company, Ely Springs, Lincoln County, Nevada, which property he has been operating continuously since 1950.

F. L. Heidenreich, Secretary, Director and General Manager of Yuba Dike Mines Company, and was employed and worked continuously for the Combined Metals Reduction Company from the years 1933 to 1953, as mucker, miner, timberman, warehouse clerk, Assistant Chief Clerk, Secretary to the Superintendent, Assistant to Superintendent, Shift Boss and Mine Foreman, when Combine Metals Reduction Company was producing from 15,000 to 20,000 tons of ore per month. During his employment, he contributed his services to geology, exploration, and development planning.

EXTENSION OF LEASE

This AGREEMENT, made at New York, the 30th day of December Nineteen hundred fifty three, by and between AMALGAMATED PIOCHE MINES & SMELTERS CORPORATION, hereinafter known as the Lessor and Yuba Dike Mines Incorporated, a Nevada Corporation, hereinafter referred to as the Lessee,

WITNESSETH:

WHEREAS ALEXANDER LLOYD, JOHN A. HEDMAN and F. L. HEIDENREICH of Pioche, Nevada, were granted a lease, dated August 6, 1953 and expiring August 6, 1968, on certain territory belonging to the Lessor, and fully described on pages #1, #2, and #10 of said lease, also including any additional leases, options, and agreements,

AND WHEREAS said ALEXANDER LLOYD, JOHN A HEDMAN and F. L. HEIDENREICH did assign, by and with the consent of said Lessor, the above-mentioned lease on August 6, 1953 to aforesaid YUBA DIKE MINES INCORPORATED,

AND WHEREAS the Lessee is now desirous of having the lease extended to August 6, 1983,

NOW Therefore the parties hereto do hereby covenant and agree as follows:

The extension of the lease for fifteen years, from August 6, 1968 to August 6, 1983, is hereby granted to the Lessee on the payment to the Lessor the sum of Five Hundred dollars as rent, payment to be made on the execution of this agreement. Non-payment of said five hundred dollars shall constitute a forfeiture of this agreement without further notice to the Lessee.

This agreement is made a part of and is subject to all the conditions, royalties, stipulations, etc., provided for in the lease dated August 6, 1953 from the lessor to the lessee.

In witness whereof the said lessor has cuased its name and seal to be hereto affixed by its President, duly authorized by its Board of Directors and said Lessee hereto set its hand and seal, the day and year above written.

AMALGAMATED PIOCHE MINES & SMELTERS CORP.

By Wm. F. Roberts
President

Attest:

V. D. Wallder
Secretary

S E A L

YUBA DIKE MINES INCORPORATED

By John A. Hedman
President

Attest:

F. L. Heidenreich
Secretary

S E A L

YUBA DIKE MINES, INCORPORATED
PIOCHE, NEVADA

CONSENT TO ASSIGN LEASE

WHEREAS, The Amalgamated Pioche Mines and Smelters Corporation has entered into lease agreement dated August 6th, 1953 with Alexander Lloyd, John A. Hedman and F. L. Heidenreich, Lessees.

NOW THEREFORE, the Amalgamated Pioche Mines and Smelters Corporation does hereby consent that said Lease may be assigned to Yuba Dike Mines Incorporated, a Nevada Corporation, its successors and assigns.

Dated this 6th day of August, 1953.

AMALGAMATED PIOCHE MINES AND SMELTERS CORPORATION

By Wm. F. Roberts
President

S E A L

ATTEST:

V. B. Wallder
Secretary

YUBA DIKE MINES, INCORPORATED
PIOCHE, NEVADA

CONSENT TO ASSIGN SUBLEASE

WHEREAS, the Combined Metals Reduction Company is in possession of certain mining property in Ely Mining District, Lincoln County, Nevada, as Lessee of Amalgamated Pioche Mines and Smelters Corporation, as Lessor, under a lease agreement dated March 1, 1932, and a supplemental agreement dated December 17, 1942, and

WHEREAS, Combined Metals Reduction Company has subleased to Alexander Lloyd, John A. Hedman and F. L. Heidenreich a certain portion of said premises

NOW THEREFORE, Amalgamated Pioche Mines and Smelters Corporation does hereby consent that said sublease may be assigned to Yuba Dike Mines Incorporated, a Nevada Corporation, its successors and assigns.

Dated this 6th day of August, 1953.

AMALGAMATED PIOCHE MINES AND SMELTERS CORPORATION

S E A L

By Wm. F. Roberts
President

ATTEST:

V. B. Wallder
Secretary

YUBA DIKE MINES, INCORPORATED
PIOCHE, NEVADA

For and in consideration of One Thousand shares of fully paid Yuba Dike Mines Incorporated stock to be issued to John A. Hedman, One Thousand shares fully paid stock to be issued to Alexander Lloyd, and One Thousand shares fully paid stock to be issued to F. L. Heidenreich, the above named to hereby assign and transfer all their interest and rights in and to that certain lease dated July 2, 1953 between the above named and Combined Metals Reduction Company and all their rights and interest in and to that certain lease between Amalgamated Pioche Mines and Smelters Corporation and the above named parties.

Dated at Pioche,
Nevada this
1st day of
September, 1953

John A. Hedman

Alexander Lloyd

F. L. Heidenreich

STATE OF NEVADA)
)
County of Lincoln)

SEAL

On this 1st day of September, 1953, personally appeared before me, a Notary Public, in and for Lincoln County, State of Nevada, John A. Hedman, Alexander Lloyd, and F. L. Heidenreich known to me to be the persons whose names are subscribed to the foregoing paper and who acknowledged to me that they executed the same freely and voluntarily and for the uses and purposes therein mentioned.

WITNESS my hand and seal the day and year in this paper first above written.

E. L. Nores
NOTARY PUBLIC

My Commission Expires July 29, 1954

YUBA DIKE MINES, INCORPORATED
PIOCHE, NEVADA

L E A S E

This Indenture made at New York City, New York, this 6th day of August, 1953, by and between:

AMALGAMATED PIOCHE MINES AND SMELTERS CORPORATION, a corporation, of the State of Maine, hereinafter referred to as the Lessor, and ALEXANDER LLOYD, JOHN A. HEDMAN AND F. L. HEIDENREICH, of Pioche, Nevada, hereinafter referred to as the LESSEES:

WITNESSETH:

That the Lessor, for and in consideration of the sum of $2,500.00 by the Lessees to the Lessor paid, the receipt whereof is hereby acknowledged, and of the rents, royalties, covenants and agreements hereinafter contained by the Lessees to be paid, kept and performed, the said Lessor does hereby demise, and let unto the said Lessees, the following described mining claims and properties situated in Ely Mining District, Lincoln County, Nevada, to-wit:

All the following patented mining claims:

Pioche or Meadow Valley, (US. Lot 40); Bullion, (U.S. Lot 54); Meridian, (U.S. Lot 56); Cache, (U. S. Lot 54); Silex, (U. S. Lot 54); Queen, (U.S. Lot 53); King, (U.S. Lot 53); Silver, (U.S. Lot 38); Greenback Currency, (U.S. #2725); Yuba, (U.S. Lot 42 Lot 42); (U.S. Survey #3342); Alpha, (U. S. Lot52); Richmond, (U.S. Lot 52); Juno, (U.S. Lot 55); Vesta, (U. S. Lot 55); Bedrock, (U.S. Lot 55); Treasure, (U. S. Lot 55); Burk Washington, (U.S. Lot 41); Mazzepa, (U.S. Survey #3888); and such portion of the Panaca, (U.S. Lot 39); that lies east of a vertical plane through a north south line located 100 feet east of the center of the working compartment of the No. 1 Shaft.

Also such portions of the Deerfoot, (U.S. Lot 52); the Index, (U.S. Lot 52) and the Williams & Goodspeed (U.S. Survey 3343) that lie east of the east side line of the Susan Duster (U.S. Survey 2714).

Also all of the following unpatented lode mining claims, to-wit:

Enyard,	recorded in	book	"Z",	pages 28 & 29 Records of Lincoln County
Nappias	"	" "	"Z"	page 29, Records of Lincoln County
West	"	" "	"N"	pages 262-3, Records of Lincoln County
Lookout	"	" "	"E"	Pages 257-8-9, Records of Lincoln County

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Winter, recorded in Book "G" pages 230-1, amended Book "N" pages 255-6-7, Records of Lincoln County

Monarch " " " "L" pages 446 Amended Book "N" pages 264-5 Records of Lincoln County

South " " " "H" page 264, amended Book "N" pages 259-262, Records of Lincoln County

Eagle " " " "P" pages 10-12, Records of Lincoln County

Bee " " " "Z" pages 29-30, Records of Lincoln County

Wedge " " " "Y" page 226, Records of Lincoln County

Triangle Fraction, recorded in Book "Y", pages 225-6 Records of Lincoln County

The above description is intended to cover the property known as "Treasure Hill" and to include all property owned by the Lessor in that vicinity not included in the lease dated March 1, 1932, between the Amalgamated Pioche Mines and Smelters Corporation and Combined Metals Reduction Company, recorded in Miscellaneous Book "E", pages 274-284, inclusive, in the office of the Recorder of Lincoln County, Nevada and the Supplemental Agreement thereto dated December 17, 1942, recorded in Miscellaneous Book "M" at pages 182-5, inclusive, in said office.

Together with the appurtenances and the right to enter upon and in said property for the purpose of prospecting and developing the same by surface drilling, underground drilling, drifting, cross cutting, shaft sinking or otherwise carrying on mining operations therein, and the right to construct upon said lands such mills, buildings, power plants and structures and to install therein or thereon such pumps, machinery, equipment and apparatus as may be necessary to effectively mine and mill the ores to be mined therefrom and the exclusive right to mine, remove and sell the ores and mill products resulting from such operation, excepting however, from this lease all ores and minerals with respect of which the right to mine by virtue of extralateral rights under the mining laws are vested in owners other than the Lessee.

TO HAVE AND TO HOLD the same unto the Lessees for a term of fifteen (15) years from and after the date hereof unless sooner terminated as hereinafter provided or forfeited because of a default in the observance or performance of any covenant or agreement herein contained to be observed or performed by the Lessees as hereinafter provided.

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In consideration of said demise the Lessees comenant and agree with Lessor as follows:

ARTICLE 1,

1. To pay to the Lessor as rental, advanced royalty and as compensation for the privilege of occupying said premises and extracting, removing and selling ores and the mill products therefrom:

(a) Two Thousand Five Hundred ($2,500.00) Dollars upon the execution and delivery of this Lease, the receipt of which is hereby acknowledged by the Lessor, and Two Thousand Five Hundred ($2,500.00) Dollars on the first day of the sixth month after the date hereof, all of said payments of $2,500.00 shall be advanced royalties and autited on account of the royalties payable on ores and/or concentrates mined and sold during the succeeding six month period as hereinafter provided; the excess, if any of said payment over the royalties upon ores and/or concentrates actually mined or sold during such perios computed as hereinafter provided, plus the payments in lieu of work as hereinafter provided, shall be retained by the Lessor as rental for the use and occupation of said premises during said six month period.

(b) Five (5) percent of the net returns of all ores and/or concentrates yielding a net return of ten ($10.00) Dollars or less per ton of 2,000 pounds.

Ten (10) percent of the net returns from all ores and/or concentrates yielding a net return of over $10.00 per ton and not over $20.00 per ton of 2,000 pounds.

Fifteen (15) percent of the net returns from all ores and/or concentrates yielding a net return of over $20.00 per ton of 2,000 pounds.

Net returns as used herein shall mean the gross mill and smelter returns less transportation, treatment, assaying and sampling charges.

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(c) No royalties or other payments made to the Lessor shall be returned to Lessees in the event of the termination of this lease for any cause.

2. To enter upon said premises on or before the 15th day of September, 1953 and to perform not less than 90 man shifts of eight hours of labor in each and every calendar month during the term of this lease; provided, however, that should the Lessees fail in any calendar month to perform the said minimum number of shifts of work required hereby, the Lessee shall pay to the Lessor in lieu of work the sum of $2.50 for each man shift required but not performed during said calendar month but not exceeding $225.00 for any one month, each such payment to be made within 20 days after the end of the calendar month during which such work should have been performed.

All work in or upon said premises shall be performed in good and minerlike fashion with due regard to the safety, development and preservation for mining purposes of said and adjoining premises and workings and all shafts, tunnels, drifts and other workings shall be well and sufficiently timbered where necessary to preserve the property as a workable mine. In the event the existing shafts be deepened, the extension thereof shall be of the same dimension, and all tunnels and drifts shall not be less than six and one-half ($6\frac{1}{2}$) feet high by four (4) feet wide in the clear. All waste shall be removed from the workings as the work progresses, however, waste may be used as stope fill when it is advisable to do so to follow good and established mining methods for efficient ore extraction.

3. To keep at all times the ores mined from the leased premises segregated from ore from other premises to the end that none of the ores thereof extracted from the leased premises shall be co-mingled, confused or diluted with ore extracted from other properties.

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All ores extracted from the leased premises by the Lessees may be consigned to such mill or smelter for treatment or sale whose charges or prices shall be determined to yield the highest net return.

Should Lessees mill the ore from the premises leased herein all concentrates will be kept separate from concentrates milled from ores of other properties.

4. To preserve and protect said leased property and the interest, right or title of the Lessor therein or thereto, and to do and perform all acts required or permitted by the mining laws of the United States or by acts of Congress to maintain the rights of the Lessor in and to the unpatented mining claims and locations included in this lease.

5. To procure at their own expense and carry Workmen's Compensation Insurance and Occupational Disease Disability Insurance covering all their employees, their contractors and sub-lessees and their employees, or otherwise comply with all requirements of law to save harmless the Lessor from liability or on account for the payment of compensation or other charges for injuries, disability or death from accident or diseases to such persons arising out of or in course of the operations of the Lessees hereunder, Lessees further agree to pay any and all taxes under the National Security Act, the Nevada Employment Security Act and Federal Insurance Contributions Act for which they may become obligated and to comply with all laws, rules and regulations of any governmental authority affecting Lessees' operations in said leased premises and to furnish the Lessor with evidence of such compliance when requested.

6. To pay for all labor, materials, tools, machinery, supplies and materials furnished for the equipment or operation of said property and to keep said property and premises free and clear of all liens, claims of lien, and encumbrances made, filed

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or incurred during the existence of this lease, for or on account of such labor or other property so furnished.

7. To forthwith post and thereafter keep posted during the life of this lease, at conspicuous places upon said property; notices in substance as follows:

NOTICE

Notice is hereby given to all persons performing labor or furnishing skill, materials, machinery, fixtures or supplies of any kind to or upon this property, that the undersigned Amalgamated Pioche Mines and Smelters Corporation, the owner of the property upon which the notice is posted, will not be responsible for any labor performed, or any skill, materials machinery, equipment, fixtures or supplies of any kind furnished to said property; nor shall the interest of said owner be subject to any lien for the same, and all persons are hereby notified that the premises and property have been leased to Alexander Lloyd, John A. Hedman and F. L. Heidenreich.

Dated_____

AMALGAMATED PIOCHE MINES & SMELTERS CORPORATION

8. To pay before delinquency all taxes and assessments levied and assessed against the leased properties and every part thereof during the term of this lease, and to pay and discharge all occupation, excise, severance, net proceeds or other taxes that may accrue for or on account of or based upon the production from said properties or the value thereof except such portion of such taxes, etc. which may be measured by or based upon the royalties payable to the Lessor hereunder.

9. To hold the Lessor harmless and fully indemnify it against all claims of every kind which may be made upon it or against said leased premises for or on account of any debt or expense contracted or incurred by the Lessees as well as from and against all acts, transactions or ommissions by them, their agents, and servants, including claims or demands on account of injuries or damages to persons or property claimed to have been caused or occasioned by any unsafe or dangerous condition of any part of the leased premises or the workings therein, and to defend the Lessor at their own expense from any such liability or asserted liability.

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10. To permit the agents or representatives of the Lessor to inspect said premises and all parts of the workings therein at all reasonable times and to examine and audit all records of Lessees relating to the production and shipment of ores from said premises and Lessees further agree to furnish to Lessor upon demand copies of all assays of samples of ores taken from said property and to allow Lessor to take samples from said property.

ARTICLE 11

And the parties hereto do further agree that:

1. The Lessees shall have the right to construct and install buildings machinery and equipment on and in said property at their expense and may remove such property so installed by them within four (4) months after the expiration of other termination of this lease; provided, however, that all track, timbering and all fixed improvements below the surface shall become part of the real estate and remain therewith as the property of the Lessor. All property not removed within said four months period shall become and be the property of the Lessor.

2. Time is of the essence of this agreement andif the Lessees shall fail to keep and perform any of the covenants and agreements in this lease to be kept and performed by them, the Lessor may at its option give to the Lessees written notice specifying the particulars with respect to which the Lessees are in default and demanding that the same be remedied within 30 days from the date of such notice or demand, and if at the end of said 30 day period the Lessees shall have failed to remedy each such default, or shall not then be actually and diligently engaged in good faith in remedying any default other than the failure to pay rent or royalties due, then this lease and all rights of the Lessees in and to said property (save and except the right to remove certain property installed by them as aforesaid, shall forthwith terminate and Lessor may immediately re-enter said property and take possession thereof; provided, however, that

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in such event the Lessees shall not be relieved of their obligation to pay all royalties or rentals, or payments in lieu of work which have accrued at the date of termination.

The failure of the Lessor to exercise its right to terminate the lease for any default upon the part of the Lessees shall not be deemed to be a waiver of its rights hereunder for or on account of any subsequent default.

3. Should Lessees be prevented by acts of God, Governmental interference or regulation, strikes, riots, fires, destruction of the plant in whole or in part or the unavailability of labor, or materials, water supply or other cause beyond the control of the Lessees, from performing any of the terms and conditions of this lease, to be performed by them, the obligation of the Lessees hereunder shall be suspended so long as performance by the Lessees is so prevented; provided, however, that no suspension of performance hereunder, shall relieve the Lessees of the obligation to make the rental payments of $2,500.00 as provided herein, nor shall the term of this lease be extended by reason of any such suspension.

4. The Lessees shall have the right to surrender this lease and abandon the said properties upon giving the Lessor thirty 930) days prior notice in writing of its intention so to do; provided, however, that such surrender shall not relieve the Lessees of their obligation to pay all rentals, royalties and payments in lieu of work which shall have accrued prior to the date of the termination of the lease by such surrender.

5. Upon expiration or other termination of this lease the Lessees shall surrender and deliver up possession of the buildings and workings upon or in said premises unto the Lessor, its successors or assigns, in as good condition as when entered upon, ordinary wear and tear and damage by the elements excepted.

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ARTICLE 111

To facilitate the operations of the Lessees upon said premises, the Lessor hereby grants to the Lessees, subject to the terms and conditions expressed in the agreement dated March 1, 1932, between the Lessor herein and Combined Metals Reduction Company, recorded in Miscellaneous Book "K" at page 274 to 284, included, in the office of the Recorder of Lincoln County, Nevada, and agreements amendatory or supplementary thereto, the right to the use of Shaft No. 1 and appurtenant facilities including power plant, compressors and other machinery reserved to the Lessor under said agreements, together with joint use with said Combined Metals Reduction Company of such drifts, cross cuts and levels through the premises now under lease to said Combined Metals Reduction Company to such extent as the joint use of such workings through such territory may have been retained by the Lessor under said agreement of March 1, 1932, and supplementary agreements aforesaid.

Likewise to facilitate the mining operations of the Lessees under the lease, the Lessor hereby authorizes the Lessees to use and occupy the two dwellings now owned by the Lessor and situate upon the leased premises during such time as the Lessees may have the right to use and occupy the mining premises under the terms of this lease; provided, however, they are to be returned in as good as condition as received ordinary wear and tear excepted.

ARTICLE 1V.

Whereas, the Combined Metals Reduction Company by virtue of lease agreement dated March 1, 1932 and Supplemental Agreement dated December 17, 1942 and consent to sublease dated May 5, 1953 has subleased to Messrs. Lloyd, Hedman and Heidenreich such portions of Amalgamated Pioche Mines and Smelters Corporation's property as described in above said sublease and should for any

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reason the aforesaid lease and supplemental agreement between Amalgamated Pioche Mines and Smelters Corporation and Combined Metals Reduction Company be cancelled, forfeited, or in any way be discontinued, all that property leased to Combined Metals Reduction Company in lease agreement dated March 1, 1932 and supplemental agreement dated December 17, 1942, to-wit:

> All the Panaca (U.S. Lot39) claim, excepting that portion of the East end of the Panaca claim lying East of a vertical plane through a north-south line located 100 feet east of the center of working compartment of No. 1 shaft.
> All the Alberta (U.S. Lot 2712), Alberta No. 2 (U.S. Lot 2714), Susan Duster (U.S. Lot 2714), Zero (U.S. Lot 49), and Scipio (U.S. Lot 50) lode mining claims and such portions of the Deerfoot (U.S. Lot 52), Index (U.S. Lot 52) and Williams and Goodspeed claims as lie West of the East side line of the Zero claim.

will automatically be included in and made a part of this lease dated August 6, 1953, between Amalgamated Pioche Mines and Smelters Corporation, Lessor and Messrs. Lloyd, Hedman and Heidenreich, Lessees, under all conditions and terms agreed upon herein.

It is further agreed and understood that should the lease agreement dated March 1, 1932 and supplemental agreement dated December 17, 1942 between Amalgamated Pioche Mines and Smelters Corporation and Combined Metals Reduction Company not be extended, renewed, or a new lease agreed upon between the above parties that the property covered in said lease and described above be included in this lease dated August 6, 1953 between Amalgamated Pioche Mines and Smelters Corporation and Messrs. Lloyd, Hedman and Heidenreich under all conditions and terms agreed upon herein.

ARTICLE V.

1. The Lessees may not assign this lease or sublet the premises included therein or any portion without prior written consent of the Lessor.

2. This lease shall inure to the benefit of and be binding upon the parties hereto, and their heirs, successors and assigns.

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3. It is agreed that the mailing of any written notice or demand, enclosed in a sealed post paid envelope addressed and registered to the Lessees, or any one of them at Pioche, Nevada, by depositing it at any post office station, shall be sufficient service of such notice or demand upon the Lessees in any case arising under this Lease, and written notice similarly deposited at the post office, postage prepaid, addressed and registered to the Lessor at 420 Lexington Avenue, New York City 17, N. Y., shall be sufficient notice to the Lessor.

IN WITNESS WHEREOF, the Lessor has caused this lease to be executed by its proper officers and its corporate seal affixed thereunto duly authorized, and the Lessees have hereunto set their hands and seals as of the day and year first above written.

AMALGAMATED PIOCHE MINES AND SMELTERS CORPORATION

By Wm. F. Roberts
President
LESSOR

S E A L

Attest:

V. B. Wallder
Secretary

Alexander Lloyd

John A. Hedman

F. L. Heidenreich

LESSEES

YUBA DIKE MINES, INCORPORATED
PIOCHE, NEVADA

LEASE AGREEMENT

THIS AGREEMENT made in duplicate this 2nd day of July, 1953, between Combined Metals Reduction Company, a corporation under the laws of Utah, qualified to do business in Nevada, first party (hereinafter referred to as "Combined"), and F. L. Heidenreich, John A. Hedman, and Alexander Lloyd, all of Pioche, Nevada, second parties (hereinafter referred to as lessee) -

WITNESSETH:

WHEREAS, Combined is in possession of certain properties in the Ely Mining District in Lincoln County, Nevada under lease agreement dated March 1, 1932 and Supplemental Agreement dated December 17, 1942, between Amalgamated Pioche Mines and Smelters Corporation, Lessor, and Combined Metals Reduction Company, Lessee, and Lessee above named desires to obtain from Combined a sublease describing a part of the property so held by Combined, and Amalgamated Pioche Mines and Smelters Corporation has granted Combined "Consent to Sublease and to Joint Use of Shaft and Appurtenant Facilities" dated May 5, 1953.

NOW THEREFORE, in consideration of the sum of Ten Dollars paid by lessee to Combined, receipt whereof is hereby acknowledged, and of the terms and conditions herein stated to be kept and performed by the parties respectively, it is agreed -

1. Combined does hereby demise, lease and let to lessee for a term commencing on the date hereof and ending on April 30, 1962, the following described properties in the Ely Mining District, Lincoln County, Nevada, to-wit:

All the Alberta, Alberta No. 2 and Susan Duster Claims (U. S. Lot #2714); the Zero (U.S. Lot #49); the Scipio (U.S. Lot #50); such portion of the Panaca (U.S. Lot #39); as lies west of a vertical plane through a north-south line located 100.0 feet east of the center of the working compartment of the No. 1 Shaft; such portions and Goodspeed Claims (U.S. Lot #52) and the Williams and Goodspeed Claims as lie west of a vertical plane through the east side line of the Zero Claim; and limited to ground lying below the following described horizontal and inclined planes:

West of coordinate 13,500 East a horizontal plane at elevation 5,100
Between Coordinates 13,500 East and 13,900 East a horizontal plane at elevation 5,300
Between coordinates 13,900 East and 14,250 East a horizontal plane at elevation 5,500
Between coordinates 14,250 East and 14,500 East a horizontal plane at elevation 5,600
Between coordinates 14,500 East and 14,750 East a horizontal plane at elevation 5,700
Between coordinates 14,750 East and 15,500 East a horizontal plane at elevation 5,800
East of coordinate 15,500 East a horizontal plane at elevation 5,900
North and east of the No. 1 Shaft, and within the leased portion of the Panaca Claim, horizontal plane at elevation 6,100 and an inclined plane striking N 45°W, dipping 65° S. W. and intersecting the No. 1 Shaft at elevation 5,810.

The coordinates referred to above are those of the Combined Metals Reduction Company grid system based on 15,000 East at the center of the No. 1 Shaft.

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The elevations referred to are feet above mean sea level as established on government bench marks in the area.

2. Lessee will go into possession of sid property and, commencing not later than September 15th, 1953, will do and perform each month a minimum of 100 shifts of labor of eight hours each therein; all work to be done in good miner-like fashion, properly securing the ground wherever necessary, and with a view to the preservation of said property for future mining operations.

3. This agreement contemplates the joint use by Combined and the lessee of certain of the workings and facilities owned by Combined, and in reference thereto it is agreed:

(A) That Combined shall operate, control and maintain the No. 1 Shaft and the presently existing main haulage levels connecting with the No. 1 Shaft. Lessee shall have the right to the use of 50% of the capacity thereof, not exceeding, however, the handling of 6,500 tons of rock per month through the No. 1 Shaft, and such right of use shall be limited to work performed on property owned by Combined or by the Amalgamated Pioche Mines and Smelters Corporation.

(B) That lessee shall pay to Combined a proportionate share of the cost of operating the No. 1 Shaft, including but not limited to, the cost of hoisting, shaft and equipment maintenance, shaft rental, and level maintenance for the portion of the mine included in this lease; such cost to be pro-rated on the basis of rock tons handled by the parties respectively.

(C) Lessee shall furnish at his own expense compressed air and power for his operations.

(D) That Lessee shall pay to Combined a proportionate share of the cost of maintaining surface facilities at the No. 1 Shaft, including but not limited to the change room, transfer pocket, surface ore bins, surface trackage, waste dumps and roads; such cost to be pro-rated on the basis of rock tons handled by the parties respectively.

(E) Water encountered by lessee in his operations will be handled by Combined through its 1302 or 1410 raises in quantities not to exceed 1,000 G.P.M., provided that lessee shall furnish and install all facilities required to deliver water to the raise designated; and provided further, that in the event the experience of Combined shows that this water has an adverse effect on Combined's mill flotation and/or pump installations then lessee shall dispose of his water through No. 1 Shaft, at his own expense; when water is handled by Combined, lessee shall pay a portion of the expense of handling all water from the mine, arrived at by prorating on the basis of the quantity handled for each of the parties. The rate of flow of lessee's water shall be measured at the point of delivery to the 1302 or 1410 raises and the total water pumped by Combined shall be measured at the point of discharge at the collar of the Caselton Shaft.

(F) Lessee shall pay to lessor on or before the 20th of each calendar month all costs accrued under this paragraph 3, during the previous calendar month.

(G) Combined reserves the right to stop or to suspend its operations at its sole discretion and in this event lessee agrees to pay Combined the entire cost of pumping, hoisting and maintenance services furnished for the convenience of lessee.

YUBA DIKE MINES, INCORPORATED
PIOCHE, NEVADA

4, All ores mined under the agreement, and all other ores mined by lessee that are taken out through No. 1 Shaft, may at the option of Combined be taken and treated in its own reduction plant; provided that the terms of purchase by Combined of such ores shall return an amount at least equal to the best competitive bid therefor obtained by lessee; all ores not taken by Combined shall be shipped and sold by lessee on the best terms obtained by either party; time periods, terms and conditions shall be considered in determining the best of respective offers.

5. Lessee will pay to Combined royalty on ores produced from the demised premises, as follows:

(a) For the account of Amalgamated Pioche Mines and Smelters Corporation the royalty provided for in its lease to Combined of March 1, 1932, as modified by Supplemental Agreement of December 17, 1942, copy of which provisions is annexed hereto and made part hereof; and

(b) Five percent of the net mill or smelter returns on all ores and minerals produced and marketed by lessee from the demised premises; net returns as used herein shall mean the gross returns less transportation, treatment, assaying and sampling sharges.

6. Lessee shall be solely responsible for all labor, materials, supplies and equipment furnished for his operation, and shall keep the demised premises free and clear of incumbrances and mechanic's liens.

7. Lessee will indemnify and save harmless Combined of and from all liability, cost and expense that may arise out of damage or injury to persons or property occuring in the operations of lessee under this agreement, but lessor shall be notified of the commencement of any suit and shall have the right to defend same.

8. Lessee will comply with the laws of Nevada in regard to posting notices and recording affidavits as to non-liability on the part of Combined and will also comply with the laws of Nevada as to industrial compensation insurance, and with all applicable laws of Nevada and of the United States affecting his operations.

9. During the life of this agreement lessee will pay all property taxes and all taxes based on production laid upon the leased property.

10. Combined or its agent may at all reasonable times enter upon and into the demised premises for the purpose of inspecting, surveying and sampling.

11. Upon termination of this agreement in any manner lessee shall have the right of removal of all equipment, machinery, tools and supplies placed on the demised premises by him, such right of removal to be exercised within ninety days after such termination, but no track or timbering shall be removed.

12. Time is of the essence of this agreement and if lessee fails to keep and perform the conditions herein stated to be by him kept and performed, then at the option of Combined this agreement may terminate provided that Combined shall first serve upon lessee a thirty day writ notice setting forth the default or omission complained of, and if such default or omission is not remedied or is not in the process of being remedied within said period, then this agreement shall become null and void; and in such event Combined shall retain as liguidated damages all monies therefore paid by lessee; provided, however, that lessee shall be relieved of its obligation to pay Combined any royalties, rents or accounts due for services which shall have accrued and become due at the date of termination.

13. This lease applies only to ore bodies, veins, or ledges within the vertical boundaries of the leased premises; and in no event or circumstances shall Combined be held liable if lessee mines and extracts ores which apex outside said boundaries.

14. Lessee may relinquish his rights under this agreement by serving

YUBA DIKE MINES, INCORPORATED
PIOCHE, NEVADA

upon Combined a thirty day written notice of his intention so to do and returning the demised premises to Combined and paying Combined all accrued obligations for royalty, rents and accounts due for services. Thereafter, lessee shall have no further liability under this contract.

15. Nonperformance of this contract by either party is excused sofar as caused by acts of God, war, accident, fire unavailability of labor or materials, failure of water supply or transportation, shutdown of treatment and refining plants, or acts of public authorities.

16. This agreement is made subject to the approval of Amalgamated Pioche Mines and Smelters Corporation and Combined grants no rights not included in the agreement dated March 1, 1932 and the Supplemental Agreement dated December 17, 1942.

17. This agreement shall in all things be binding upon and inure to the benefit of the parties hereto and their respective successors, heirs, assigns and personal representatives.

IN WITNESS WHEREOF the said parties hereto have caused this instrument to be duly executed this day and year above written.

COMBINED METALS REDUCTION COMPANY

By E. H. Snyder
President

Attest:

C. H. Christensen
Secretary

F. L. Heidenreich
Lessee

John A. Hedman
Lessee

S E A L

Alexander Lloyd
Lessee

YUBA DIKE MINES, INCORPORATED
PIOCHE, NEVADA

RECEIVED
OCT 29 1954

ROYALTY PROVISIONS IN THE LEASE OF AMALGAMATED PIOCHE MINES AND SMELTERS CORPORATION to Combined Metals Reduction Company, dated March 1, 1932, as MODIFIED BY SUPPLEMENTAL AGREEMENT OF DECEMBER 17, 1942, ARE AS FOLLOWS:

Article Xlll

1. Royalty shall be paid by the Lessee to the Lessor as follows -

For the purpose of computing the royalty, the ore shall be divided into two classes - "Smelting Ore" and "Milling Ore".

2. "Smelting Ore" is that grade and character of ore which coming from the zinc as a sorted or selected crude ore, is, in the opinion of the Lessee and Lessor adapted to smelting than to milling or any other treatment and which the Lessee desires to be smelted. Such ores may be consigned by the Lessee to whatever smelter the Lessee or Lessor may find to be the most advantageous purchaser.

3. "Milling Ore" typically represented by the mine run of ore now developed in the Greenwood Ore Bodies, is that class of ore which is sent to any kind of reduction or ore dressing works which subjects the ore to any kind of treatment other than the usual blast or reverberatory furnace direct smelting method, and includes all ores other than smelting ore as above defined.

4. Rate on "Smelting Ore".

The royalty on Smelting Ore shall be ten (10%) percent of the net smelter return on ores yielding a net smelter return of Ten ($10) dollars per ton or less. Such royalty shall increase at the rate of one-half (½) percent for each increase of One ($1) Dollar per ton in the net smelter return on ores yielding a net smelter return over Ten ($10) Dollars per ton and up to Forty ($40) Dollars per ton. Fractions in proportion. On ores yielding a net smelter value of Forty ($40) Dollars per ton or over the royalty shall be twenty-five (25%) percent flat.

The minimum royalty on Smelting Ore shall be fifty (50¢) cents per ton of 2,000 pounds, on each shipment of ore of not more than three car loads.

5. "Net Smelter Return" is defined as the amount the smelter pays for the ore less freight from Pioche Station to the smelter and sampling and assaying

5. "Rate on "Milling Ore".

On a calculated heads valuation of $7.50	10%
On a calculated heads valuation $7.50 to $12.50	15%
On a calculated heads valuation $12.50 to $20.00	20%
On a calculated heads valuation over $20.00	25%

7. "Calculated Heads Valuation" is defined as being the value of a ton of crude ore arrived at as follows:

The assay of the ore as the ore is taken from the property shall be determined by the customary methods of sampling and comparison of assays, and the metals indicated valuated as follows:

Gold: 90% of the assay, at $19.00 per ounce

Silver: 85% of the assay, at 95% of the quotation in the Engineering & Mining Journal (Metal and Mineral Markets) bearing the date hereinafter specified.

Lead: 80% of the assay, at 90% of the quotation in the said issue of the Engineering & Mining Journal (Metal & Mineral Markets) for at St. Louis less one and one-quarter (1¼) cents per pound. Lead to be determined wet on ore.

YUBA DIKE MINES, INCORPORATED
PIOCHE, NEVADA

Copper: If 1% or more contained 80% of the assay, at quotation in the said issue of the Engineering & Mining Journal (Metal and Mineral Markets) for electrolytic copper less four and one-half ($4\frac{1}{2}$) cents.

Zinc: The assay termed "H" shall be inserted in the formula.

$$R = \frac{100\ C}{H\ E}$$

Wherein R = Ration of concentration
C = 43% assumed
E = 82% Assumed

the value of R thus obtained will then be divided into the "net smelter return" value of a ton of zinc concentration carrying 43% zinc and no precious metals calculated for delivery to a gas belt smelter upon the quotation in the said issue of the Engineering and Mining Journal (Metal and Mineral Markets) for zinc at St. Louis and upon the following schedule -

BASE

Assay: 40% zinc
Price: $20.50 @ $5. quotation

VARIATION

Assay: $1.00 per unit, up and down
Quotation: From $5. to $6. add 5¢ to the base price for each one cent increase per hundred pounds of spelter
From $6. to $7. add 4¢ to the base price for each one cent increase per hundred pounds of spelter
From $7. to $8. add 3¢ to the base price for each one cent increase per hundred pounds of spelter
No increase for quotations in excess of $8.
No decrease for quotations under $5.
Freight: $8. per ton

The value of a ton of concentrates thus obtained is, as above stated, to be divided by "R" as above calculated and the figure thus obtained is the value of the zinc to be used in the "Calculated heads Valuation" above set forth.

Having obtained the value for gold, silver, copper, lead and zinc there are to be deducted from their sumned value two items -

First: Treatment on lead concentrate.

Assuming ratio of concentration to be three to one, the concentrates approximate an analysis which allowing for iron insoluble, and sulphur, call for a total deduction of $4. per ton of concentrates. The freight on such a ton of concentration is approximately $4.50, total charges $8.50 equal to $2.83 per ton of crude ore.

Second: Milling, per ton of crude ore $2.

Thus, after making deduction of these two items (total $4.83) from the sumned value of the metals contained in the ore the "calculated heads valuation" has been obtained and is the figure upon which the foregoing royalties are to be applied.

AS AN EXAMPLE, assume an ore assaying -

Gold	Silver	Lead	Copper	Zinc
0.05	8.0	9.0	1.0	18.0

Assume quotations of

Silver: 50¢ per ounce

Lead: $4.50 per hundred pounds

Copper: $17\frac{1}{2}$ per pound

Zinc: $7.50 per hundred pounds

YUBA DIKE MINES, INCORPORATED
RIOCHE, NEVADA

Gold:	90% of 0.05 oz @ $19.	$0.85
Silver:	85% of 8.0 oz. @ 95% of $0.50	3.23
Lead:	80% of 9.0% ($4.50 less $1.25)	4.21
Copper:	80% of 1.0% @ ½¢ less 4½¢	2.08

Zinc: $\frac{R = 100C}{H\ E} = \frac{100 \times 43}{18 \times 82} = 2.97$

Value of a ton of 43% concentrates @ $5. quotation equals $20.50 plus $3	$23.50
Additional for quotation $5 to $6	5.00
" " " $6. to $7.	4.00
" " " $7. to $7.50	1.50
	$34.00
Freight	8.00
	$26.00
$26. divided by $2.97	8.75
	$19.12

Treatment and freight on lead concentrates		
$8.50 divided by 3 equals	$2.83	
Milling per ton crude ore	2.00	4.83
		$14.29

The quotation used in determining the royalty shall be that of the Engineering & Mining Journal (Metal and Mineral Markets) of the same date as the bill-of-lading.

8.(a) The royalty on milling ore, arrived at by the foregoing calculations, shall then be subject to a deduction of twenty-five (25%) percent thereof on all ores of a calculated heads valuation of Eleven and 25/100 ($11.25) Dollars and over per ton, and a deduction of thirty-five (35%) percent on all ores of a calculated heads valuation of less than Eleven and 25/100 ($11.25) Dollars per ton, provided that the minimum royalty on all milling ores containing ten (10%) percent combined lead and zinc or more shall be thirty-five (35¢) cents per ton of 2000 pounds.) As Amended by Supplemental Agreement Dated Dec. 17, 1942

8.(b) On ores extracted and shipped from the ground below a horizontal plane at an elevation of 5100 feet above sea level within the vertical boundaries of the Alberta (U.S. Lot #2714), Alberta No. 2 (U.S. Lot #2714), Susan Duster (U.S. Lot #2714), Zero (U.S. Lot #49), and Scipio (U.S. Lot 350), lode mining claims and within such portions of the Deerfoot (U.S. Lot #52), Index (U. S. Lot #42), and Williams and Goodspeed claims as lie west of a vertical plane through the east side of the Zero claim, Lessee shall pay to Lessor in addition to the earned royalties calculated in conformity with paragraphs 1, 2, 3, 4, 5, 6, and 7, of agreement of March 1, 1932 and 8 (a) as written above, amounts (considered as additional earned royalty) equivalent to ten percent of any premiums or bonuses paid to the Lessee by any Government agency on account of metal contained in the ores produced from said ground. No additional royalty shall be payable on account of premiums or bonuses paid to the Lessee by any Government agency on account of metal contained in ores produced from any portion of the leased ground other than that specifically described above.

9. No royalties or other payments hereunder paid by Lessee shall be returned in event of termination of this lease for any cause or in any other event, unless otherwise provided for by mutual agreement.

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
SEP 13 1954

420 Custom House
555 Battery Street
San Francisco 11, Calif.

September 7, 1954

Docket

Memorandum

To: Defense Minerals Exploration Administration
Interior Building, Washington 25, D. C.

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket No. DMEA-3396 (Lead-Zinc)
Yuba Dike Mines, Inc.
Yuba Dike Mining Claims
Lincoln County, Nevada

Relative to above subject we are enclosing three copies of a letter dated August 26, 1954, from Mr. John A. Hedman, President, Yuba Dike Mines, Incorporated, to A. C. Johnson, requesting that their application for Government assistance be held in abeyance.

We are therefore holding up any further action on this property until we receive further advice from Mr. Hedman.

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

Attachment

Copy to: Roscoe Smith, USGS
A. C. Johnson, Reno

Bureau of the Mint
Bureau Mines Administration
RECEIVED
SEP 13 1954

August 26, 1954

Mr. A. C. Johnson
Chief Mining Division, Region 3
1520 Evans Avenue
Reno, Nevada

DMSA 3396 Application Yuba
Dike Mines Incorporated,
Pioche, Nevada $127,556
Government Assistance
Exploration Program

Dear Mr. Johnson:-

The Yuba Dike Mines Incorporated respectfully requests that their application for Government Assistance dated June 16, 1954 be held in abeyance as it is understood that the rehabilitation of the No. 1 Shaft would probably come under the heading of mine development rather than exploration.

We now propose to, at our own expense, to provide all the necessary equipment, labor, supplies and rehabilitate the No. 1 Shaft from the 1200 Level to the 14th Level, a distance of approximately 202 feet. Upon completion of this work and subject to further geological study the Yuba Dike Mines Incorporated propose to request Government consideration of a revised exploration program for the purpose of exploration of the downward continuation of the Black Lodge Vein below the 14th Level)appwxximately 1502 feet below the collar) at approximately station No. 24 as shown on "Plan of the 12th and 14th Levels of no. 1 Mine".

It is therefore requested that our present application dated June 16, 1954 be retained in the active file until the revised exploration program can be presented for further consideration.

Yours very truly,

John A. Redman
President

Department of the INTERIOR
Defense Minerals Administration
RECEIVED
SEP 13 1954

August 26, 1954

Mr. A. C. Johnson
Chief Mining Division, Region 3
1620 Evans Avenue
Reno, Nevada

DMEA 3396 Application Yuba Dike Mines Incorporated, Pioche, Nevada $127,556 Government Assistance Exploration Program

Dear Mr. Johnson:-

The Yuba Dike Mines Incorporated respectfully requests that their application for Government Assistance dated June 16, 1954 be held in abeyance as it is understood that the rehabilitation of the No. 1 Shaft would probably come under the heading of mine development rather than exploration.

We now propose to, at our own expense, to provide all the necessary equipment, labor, supplies and rehabilitate the No. 1 Shaft from the 1200 Level to the 14th Level, a distance of approximately 202 feet. Upon completion of this work and subject to further geological study the Yuba Dike Mines Incorporated propose to request Government consideration of a revised exploration program for the purpose of exploration of the downward continuation of the Black Ledge Vein below the 14th Level)approximately 1502 feet below the collar) at approximately station No. 24 as shown on "Plan of the 12th and 14th Levels of No. 1 Mine".

It is therefore requested that our present application dated June 16, 1954 be retained in the active file until the revised exploration program can be presented for further consideration.

Yours very truly.

John A. Hedman
President

File Copy
Surname
J.W. All
Swinnerd
Selfridge
Y. Johnson

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

JUL 22 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-3396 (Lead-Zinc)
Yuba Dike Mines, Incorporated
Yuba Dike Mining Claims
Lincoln County, Nevada

Dear Mr. Miller:

A review of the cited application, of which you have retained a copy, indicates that an examination of the property is necessary. Will you please have such an examination made and submit your report and recommendations to us.

The costs of the proposed work by the Applicant are excessively high and could not possibly be considered.

It appears to be a poorly planned exploration program and from the information obtained from the application, it seems that the Applicant is seeking assistance to develop his property. Very little of the proposed work is for exploration purposes.

We have only attempted to point out some of the items that we consider essential and realize that the usual Field Team examination is necessary.

Enclosed are copies of memoranda from the commodity members, E. L. Newcomb, USGS, dated July 12, 1954, and O. L. Bishop, USBM, dated July 13, 1954, giving their recommendations and comments regarding the application.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (GCS)

Enclosure 2

JWALT/er 7/16/54

APPROVED:

J. H. Hedges

Member, Bureau of Mines (JHH)

T. P. Thayer

Member, Geological Survey (TPT)

Copy to: Docket
Admr. R. File
Op. Committee
Base Metals
Mr. Gildersleeve
Mr. Bishop
Chron.

R.C.G.

File Copy
Surname
J. W. All
Hedges
Thorp
Selfridge
J. Johnson

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

JUL 22 1954

Yuba Dike Mines, Incorporated

Pioche, Nevada

Re: Docket No. DMEA-3396 (Lead-Zinc)
Yuba Dike Mines, Incorporated
Yuba Dike Mining Claims
Lincoln County, Nevada

Gentlemen:

Your application for Government assistance to explore the cited property has been reviewed by the Base Metals Division of the Defense Minerals Exploration Administration, and has been referred for a field examination to:

Mr. H. C. Miller, Executive Officer
DMEA Field Team, Region III
420 Custom House
555 Battery Street
San Francisco 11, California

The Regional Office will contact you at an early date as to when the examination is to be made. Any assistance that you may give the members of the Field Team during the examination will be appreciated.

Sincerely yours,

C. O. Mittendorf (for)

Administrator

JWAlt:er 7/16/54

Copy to: Docket
Admr. R. File
Op. Committee
Base Metals
Mr. Gildersleeve
Mr. Bishop
Region III (2)
Chron.

R.C.G.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
WASHINGTON 25, D. C.

July 13, 1954

Memorandum

To: W. R. Griswold, DMEA

From: O. M. Bishop, USBM

Subject: Docket No. DMEA-3396 - Application of Yuba Dike Mines, Inc., Pioche, Nevada for $127,556 Government-Assisted Exploration Program

The application in its present form and the information supplied are inadequate to permit an evaluation of the merit of the proposed exploration, as there is little information to indicate the likelihood of cutting an intersection of the Yuba Dike with mineralized fractures to the west on the 1,400-foot level.

In addition to this defect the application fails to give information on the nature of the vein or the economics involved. Certainly the rehabilitation work as outlined is far too costly and in any case looks much like development.

Before further work of review is undertaken I recommend that DMEA or its field representatives inform the applicant of the inadequacies of the application. If the field team believes the property has a worthwhile exploration potential, it may find it worthwhile to help in the planning of a suitable program.

O. M. Bishop

O. M. Bishop

Copy to: Edward L. Newcomb
Minerals Division
O. M. Bishop
Files

IN REPLY REFER TO:

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

July 12, 1954

Memorandum

Re: DMEA-3396
Yuba Dike Mines, Inc.
Ely District
Lincoln County, Nevada
$127,586
Lead-zinc

To: Mr. W. R. Griswold, DMEA

From: E. L. Newcomb, USGS

Subject: Recommendation for field referral

The applicant's proposal, involving extensive rehabilitation in preparation for 250 feet of drifting and winzing on the 1400 level, cannot be considered a feasible project for DMEA assistance.

Though the proposed project should be denied, the property appears to have some merit and may justify some other type of exploration assistance. Instead of requesting a revised application or a more sutiable project from the applicant, I recommend this application be referred to the field team with instructions to contact the applicant and to make an examination if they deem it advisable after discussing the application with the applicant.

E. L. Newcomb
E. L. Newcomb
Geologist

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

June 22, 1954

Memorandum

To: Executive Officer, DMEA Field Team, Region III

From: Chief, Operation's Control and Statistics Division

Subject: Assignment of Docket Number

There is listed below the assigned docket number to an application recently received from Region III.

DMEA - 3396 Yuba Dike Mines Inc.

Robert E. Adams,
Chief, Operation's Control
and Statistics Division

June 22, 1954

Yuba Dike Mines Inc.
Pioche
Nevada

Subject: DMEA-3396
Re: Exploration Assistance

Gentlemen:

The receipt of your application dated June 16, 1954 for exploration assistance under the Defense Production Act of 1950, as amended, is hereby acknowledged.

Your application has been assigned Docket Number DMEA-3396 and referred to the Base Metals Division.

Kindly refer to in any future correspondence relating to your application.

Sincerely yours,

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

420 Custom House
555 Battery Street
San Francisco 11, California

June 18, 1954

Memorandum

To: Defense Minerals Exploration Administration, Interior Building, Washington 25, D. C.

From: Executive Officer, DMEA Field Team, Region III

Subject: Application for loan - Lead and Zinc
Yuba Dike Mining Claims
Yuba Dike Mines, Incorporated
Lincoln County, Nevada

Attached are three of the four copies of an application for exploration loan received in this office today.

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

Attachment

Copy to: R. M. Smith (USGS)

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

420 Custom House
555 Battery Street
San Francisco 11, California

June 18, 1954

Memorandum

To: Defense Minerals Exploration Administration, Interior Building, Washington 25, D. C.

From: Executive Officer, DMEA Field Team, Region III

Subject: Application for loan - Lead and Zinc
Yuba Dike Mining Claims
Yuba Dike Mines, Incorporated
Lincoln County, Nevada

Attached are three of the four copies of an application for exploration loan received in this office today.

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

Attachment

Copy to: R. M. Smith (USGS)

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Form Approved.
Budget Bureau No. 42-R1035.2.

APPLICATION FOR AID IN AN EXPLORATION PROJECT, PURSUANT TO DMEA ORDER 1, UNDER THE DEFENSE PRODUCTION ACT OF 1950, AS AMENDED

Not to be filled in by applicant

Docket No. 3396
Metal or Mineral Lead & Zinc
Date Received
Estimated Cost $127,556
Participation (Government %)

INSTRUCTIONS

1. *Name of applicant.*—(*a*) State here your full legal name, in the form in which you will wish to contract, and your mailing address:

YUBA DIKE MINES INCORPORATED
PIOCHE
LINCOLN COUNTY, NEVADA

(*b*) If other than an individual, add to your name above whether a corporation, partnership, etc., and the name of the State in which incorporated or otherwise organized.

(*c*) If a corporation, add to above statement, titles, names and addresses of officers.

(*d*) If a partnership, add to the above statement the names and addresses of all partners.

2. *General.*—Read DMEA Order 1, "Government Aid in Defense Exploration Projects," before completing this application. Submit this application and all accompanying papers in quadruplicate (four copies), with your name and address on each sheet of the application and on all accompanying papers. Where sufficient space is not provided on the form for all required information, state it on an accompanying paper, with a reference in each case to the instruction to which it refers by number. Comply with all applicable instructions; or, if not applicable, so state. File the application with Defense Minerals Exploration Administration, Department of the Interior, Washington 25, D. C., or with the nearest field executive officer thereof.

3. *Applicant's property rights.*—(*a*) State the legal description of the land upon which you wish to explore, including all land which you possess or control that may be benefited by the exploration, and excluding any land or interest in land which is not to be included in the exploration project contract Legal description of land is attached hereto.

(*b*) State any mine name by which the property is known. Yuba Dike Mines Inc. or formerly known as Amalgamated Pioche Mines Company.

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise Lessee

(*d*) If you are not the owner, submit with this application a copy of the lease, contract, or other document under which you control the property. Copy of Leeses Attached.

(*e*) If you own the land, describe any liens or encumbrances on it Do not own

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice. Attached statement.

4. *Physical description.*—(*a*) Describe in detail any mining or exploration operations which have been or now are being conducted upon the land, including existing mine workings and production facilities. State your interest, if any, in such operations. Also describe accessibility of mine workings for examination purposes. Statement attached

(*b*) State past and current production, and ore reserves, if any, giving quantities and grades. " "

(*c*) Describe the geologic features of the property, including mineralization, type of deposit (vein, bedded, etc.), and your reasons for wishing to explore. Illustrate with maps or sketches. Send with your application (but not necessarily as a part of it) any geologic or engineering report, assay maps, or other technologic information you may have, indicating on each whether you require its return to you. Statement attached.

(*d*) State the facts with respect to the accessibility of the project: Access roads, distances to shipping, supply and residence points. Statement attached.

(*e*) State the availability of manpower, materials, supplies, equipment, water, and power.

Statement attached.

5. *The exploration project.*—(*a*) State the mineral or minerals for which you wish to explore Lead & Zinc

(*b*) Describe fully the proposed work, including a map or sketch of the property showing a plan (and cross sections if needed) of any present mine workings, and the location of the proposed exploration work as related to such features as contacts, veins, ore-bearing beds, etc.

Statement & Maps attached.

(*c*) The work will start within ..... days and be completed within ..... months from the date of an exploration project contract.

Work under progress

(*d*) State the operating experience and background of the applicant with relation to the ability to carry out such exploration project, and also that of the person or persons who will supervise the operations.

6. *Estimate of costs.*—Furnish a detailed estimate of the costs of the proposed work (you will have to use a separate sheet), under the following headings. Add the totals under all headings to give the estimated total cost of the project:

(*a*) *Independent contracts.*—(Note.—If the applicant does not intend to let any of the work to contractors, write "none" after this item. To the extent that the work is to be contracted, do not repeat the cost of the contract-work in subsequent items.) State the cost of any proposed independent contracts for the performance of all or any part of the work, expressed in terms of units of work (such as per foot of drilling, per foot of drifting, per hour of bulldozer operations, per cubic yard of material moved, etc.).

Statement attached

(*b*) *Labor, supervision, consultants.*—Include an itemized schedule of numbers, classes and rates of wages, salaries or fees for necessary labor, supervision and engineering and geological consultants.

Statement attached

(*c*) *Operating materials and supplies.*—Furnish an itemized list, including items of equipment costing less than $50 each, and power, water and fuel.

Statement attached.

(*d*) *Operating equipment.*—Furnish an itemized list of any operating equipment to be rented, purchased, or which is owned and will be furnished by the Operator, with the estimated rental, purchase price, or suggested use-allowance based on present value, as the case may be.

Statement attached

(*e*) *Rehabilitation and repairs.*—Furnish a detailed list showing the cost of any necessary initial rehabilitation or repairs of existing buildings, installations, fixtures, and movable operating equipment, now owned by the Operator and which will be devoted to the exploration project.

None

(*f*) *New buildings, improvements, installations.*—Furnish a detailed list showing the cost of any necessary buildings, fixed improvements, or installations to be purchased, installed or constructed for the benefit of the exploration project.

None

(*g*) *Miscellaneous.*—Furnish a detailed list showing the cost of 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.

Statement attached

(*h*) *Contingencies.*—Give an estimate of any necessary allowances for contingencies not included in the costs stated above.

NOTE.—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 the contract, should be included in the estimate of costs.

7. (*a*) Are you prepared to furnish your share of the cost of the proposed project in accordance with the regulations on Government participation (Sec. 7, DMEA No. 1)?

Yes

(*b*) How do you propose to furnish your share of the costs?

[X] Money [X] Use of equipment owned by you [ ] Other

Explain in detail on acompanying paper.

CERTIFICATION

The undersigned, whether as an individual, corporate officer, partner, or otherwise, both in his own behalf and acting for the applicant, certifies that the information set forth in this form and accompanying papers is correct and complete, to the best of his knowledge and belief.

Dated June 16, 1954.

YUBA DIKE MINES INCORPORATED (Applicant)

By [signature] Pres.

Alexander Lloyd—Treasurer

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—66551-1

APPLICATION FOR AID IN AN
EXPLORATION PROJECT, PURSUANT TO
DMEA ORDER 1, UNDER THE DEFENSE
PRODUCTION ACT OF 1950, AS AMENDED

1. NAME OF APPLICANT.-

(a) Yuba Dike Mines Incorporated, Pioche, Nevada.

(b) Incorporation-Incorporated under laws of the State of Nevada.

(c) Officers: John A. Hedman, President & Director, Pioche, Nevada. Allan Gustafson, Vice President, 1630-East 70th Street, Chicago, Illinois, F. L. Heidenreich, Secretary and Director, Pioche, Nevada, Alexander Lloyd, Treasurer & Director, Pioche, Nevada, Charles V. Rice, Director, 1633-East 79th Street, Chicago, Illinois, John H. Southman, Director, 2459 East 75th Street, Chicago, Illinois. Main Office, Pioche, Nevada.

(d) Not Applicable.

3. APPLICANT'S PROPERTY RIGHTS.-

(a) All the following patented Mining Claims: Ely Mining District, Lincoln County, State of Nevada. Pioche or Meadow Valley, (U.S. Lot 40); Bullion, (U.S. Lot 54); Meridian, (U.S. Lot 56); Cache, (U.S. Lot 54); Silex, (U.S. Lot 54); Queen, (U.S. Lot 53); King, (U.S. Lot 53); Silver, (U.S. Lot 38); Greenback Currency, (U.S. Survey #2725); Yuba, (U.S. Lot 42); (U.S. Survey 3342); Alpha, (U.S. Lot 52); Richmond, (U.S. Lot 52); Juno, (U.S. Lot 55); Vesta, (U.S. Lot 55); Bedrock, (U.S. Lot 55); Treasure, (U.S. Lot 55); Burk Washington, (U.S. Lot 41); Mazzepa, (U.S.Survey#3888); Alberta, Alberta No.2 and Susan Duster, (U.S. Lot #2714); Zero, (U.S. Lot 49); Scipio, (U.S. Lot 50); Deerfoot, (U.S. Lot 52); Index, (U.S. Lot 52); Williams & Goodspeed, (U.S. Survey #3343).

UNPATENTED MINING CLAIMS AS FOLLOWS:

Enyard,	recorded	in	book,	"Z",	pages 28 & 29 Records of Lincoln County.
Nappias	"	"	"	"	, Page 29, " " "
West	"	"	"	"N"	, pages 262-3, " " "
Lookout	"	"	"	"E"	, pages 441-2, Amended Book "N", pages 257-8-9, Records of Lincoln County.
Winter,	"	"	"	"G"	, pages 230-1, amended book "N" pages 255-6-7, Records of Lincoln County.
Monarch,	"	"	"	"L"	, pages 446 amended book "N" pages 264-5 Records of Lincoln County.
South	"	"	"	"H"	, page 264, amended book,"N" pages 259-262, Records of Lincoln County.
Eagle	"	"	"	"P",	pages 10-12, Records of Lincoln County
Bee	"	"	"	"Z",	pages 29-30 Records of Lincoln County.
Wedge	"	"	"	"Y",	page 226, Records of Lincoln County.

YUBA DIKE MINES, INCORPORATED
PIOCHE, NEVADA

Triangle Fraction, recorded in Book,"Y", pages 225-6 Records of Lincoln County.

(b)- Yuba Dike Mines, Incorporated, formerly,"Amalgamated Pioche Mines and Smelter Corporation".

(c)- Lessee.

(d)- Copies of Leases enclosed with Application.

(e)- Do not own the land----None.

(f)- Included in 3-(a)

4. PHYSICAL DESCRIPTION. -

(a) On September 1, 1953, Yuba Dike Mines Incorporated, started operations under certain granted leases.

The initial work consisted of repairs on the #1 Shaft from the surface down to the 1200 pocket, or 1300 feet.

Due to the heavy acid conditions of the water in the shaft, all lag bolts had to be replaced as well as defective guides. New ladders and water boxes were installed.

On the 600' Level, the shaft had shifted, causing a weak and dangerous condition. Four months time was required to timber and repair the shaft for safe operation. Periodic inspection and adjustment work is part of our program to maintain the shaft.

On the 800' Level we have installed a new 230'Ft. Gardner Denver electric compressor and electric power cables from the surface. We have laid 495 feet of track (35lb. rail) and 495 feet of 2 inch airline, also, one 20 HP double drum slusher has been installed and a distance of 80 feet has been cleaned out.

At a distance of 475 feet from the 800' Station, we have excavated, constructed a ramp and moved the 20HP slusher to this point. We started crosscutting in the quartzite, and at this date have drifted more than 220 feet. We have installed a 5 HP slusher and are continuing this drift. Our objective being to intersect a projection of a faulted segment of the old Raymond Ely Vein, which produced approximately $20,000,000 in the 1870's. During this time a raise was driven from the 800' Level at a point of 385' from #1 Station to connect with the 800' Level of the #3 Mine. This connection was not made, probably, due to an error in the old maps. We plan to explore for this connection at a later date.

Work is now in progress to rehabilitate an old, gobbed and caved drift on the 1200' Level to pull fills, mine pillars and explore in the vicinity of the top of the Black Ledge Winze. Our exploration project will open the vein 230 feet below this point.

In addition to the above, considerable work was done on the surface. The change-room was cleaned and repaired. Hot water and heating equipment was installed. The hoist and hoist building were cleaned and repaired.

This covers some of the work performed by Yuba Dike Mines Incorporated. The mines have been worked since 1870 to the

present time. Several thousand feet of shaft, drifts and cross-cuts have been worked, producing a very large tonnage of ore. The accompanying maps and figures show this work.

The Yuba Dike Mines Incorporated have a lease on the entire property, which is described in copies of said leases, which accompany this report.

Portions of the mine are not accessible for examination. The purpose of the exploration project is to make them accessible and continue exploration in the most favorable areas.

The #1 Shaft is equipped with a 200 HP electric, double drum hoist with a counter balance and skip. Capacity of the skip is 1 3/4 tons. The ore and waste bins have a capacity of 25 tons each, and the storage bin has a capacity of 300 tons.

A sub-station with 440 and 2300 volt, Hoover Dam power, is 100 feet from the collar of #1 Shaft.

The hoist capacity is 13,000 tons per month.

The change room will accomodate 125 men. A blacksmith shop, warehouse, first aid building, and a shift-boss office with showers comprise the remainder of the surface buildings.

(4. PHYSICAL DESCRIPTION)

YUBA DIKE MINES, INCORPORATED
PIOCHE, NEVADA

4 (b) Past Production

The following production records are taken from Nevada State Bureau of Mines Geology and Mining Series No.38,"Nevada's Metals and Mineral Production (1859-1940 Inclusive) which is taken from the Net proceeds:

TAX REPORTS.

Amalgamated Pioche Mining	38,216	Tons	$ 557,757
Raymond & Ely Mining Company	148,755	"	10,293,127
Meadow Valley Mining Company	88,574	"	5,795,912
Newark Silver Mining Company	6,252	"	289,523
Yuba Shaft	15,916	"	362,754
Washington & Creole	1,625	"	117,983
Mazeppa Silver Mining Company	2,689	"	128,906
Chapman Mining & Smelting	296	"	26,233
Hermes Silver Mining Company	570	"	40,000
Huhn & Hunt	755	"	23,262
Independence	85	"	5,733
Magnet			381,722
Nevada Mining Company	4,091	"	41,145
Nevada Utah Mining & Smelting	28,865	"	187,193
Phoenix Reduction Company			39,862
Pioche Consolidated Mining Company	20,174	"	524,609
Pioche Mines	15,386	"	110,753
Total	372,249	"	Total $18,926,474

4 (c) (by F. L. Heidenreich)

The sedimentary formations on this property are all of Cambrian age. The lowermost member is the Prospect Mountain Quartzite which has an exposed thickness of approximately 2,000 feet. Production from fissures in the Prospect Mountain Quartzite has been about $18,368,717 upon this property. Most of the production was from easterly-westerly fissures with some from northeasters. Approximately $1,100,000 of this amount came from the Yuba Dike. Silver and lead with some gold were the principal metals. However, zinc values were found in the Yuba Dike and in the lower parts of some of the fissures. Zinc was not sought for in the earlier periods of mining.

Lying conformably upon the quartzite is about 870 feet of Pioche Shale. Eight recognizable limestone beds are in the Pioche Shale. The lowest limestone bed, the Combined Metals Bed (CM bed) of limestone, is 50 feet thick and is about 250 feet above the base of the formation. This has been the most productive horizon in the district. Over 2,000,000 tons of ore assaying about 0.04 ounces gold, 5.528 ounces silver, 5.538 per cent lead, and 13.71 per cent zinc have been produced from it. The production from the CM beds on this property is listed from Net Proceeds Tax Reports as 38,216 tons for a total value of $557,757. This does not include all ore produced as some of it was mined by the Combined Metals Reduction Company on ground leased to them.

One hundred feet above the CM beds lies the 15 foot Susan Duster lime bed. There has been a small production from this bed.

Six limestone beds from 2 to 30 feet thick have been found in the upper part of the Pioche Shale. Manganese oxide assaying from 10 to 20% is showing on the surface near No. 1 Shaft and on the 250 foot level. As this type of ore had no commercial value there has been little prospecting or exploration work done in these beds. When these ores can be treated a large territory will warrant exploration and development on this property and lead-zinc sulphides may also be found as well as the manganese oxide.

The Prince (also known as the Lyndon) Limestone, about 350 feet in thickness, rests conformably upon the Pioche Shale. Silver-lead-zinc-manganese ore has been found at its base at the Prince Mine. Little has been done in this member on this property but the mineralization showing justifies further exploration.

The Chisholm Shale varies in thickness in this area from 70 to 137 feet thick and lies conformably upon the Prince Limestone. Gold, Silver and lead have been found in contact with a limestone member within the formation. No appreciable amount of work has been done on this property in this formation, however, mineralization is present.

About 150 feet of limestone known as the Davidson Blue (also called Peasley or Highland Peak A) Limestone is just above the Chisholm Shale. At the Prince Mine there is silver-lead-manganese-zinc mineralization in it.

The Davidson Gray Dolomite, 250 feet thick, (Burrows or Highland Peak B) lies unconformably upon the Davidson Blue Limestone.

Several eminent geologists have made reports on the property, but to date we have been unable to find one to include in this report. R. W. Raymond predicted a greater production below the water level than above. John Hays Hammond also inspected the property and mentions the visit in his auto biography.

This property has been a producer most of the time from the 1870's to date. All the production, except approximately 5,000 tons mined from the Black Ledge ore shoot, has been from above the water level which is now a short distance below the 1200 Level. The water level was formally at the 1200 Level.

The assays on the accompanying map show good ore on the 1400 Level. Except for two 30 or 40 foot winzes, this is the only work done below the 1200 Level on this property. The Greenwood Fissure, which strikes about N 75 W, is largely responsible for the large ore deposit in the CM Beds to the west of No. 1 Shaft. About 1,000,000 tons of lead-zinc sulphide ore has been mined along it. The Meadow Valley and Raymond Ely Fissures, striking about N 80 E, produced approximately $16,089,039. It appears that these two fissures may intersect at greater depth on strike and dip with the Yuba Dike in the Black Ledge area. This exploration project would be a small start toward developing this area. The good lead and zinc ore with fair silver which was mined from this area around 1915 lends support to this idea (see section map and 12th and 14th level maps). They were unable to separate the lead and zinc sulphides efficiently at this time as flotation was developed later. Water was also an almost unsurmountable obstacle in the days of steam pumps.

The fissures and bedded replacement deposits appear to have a definite relationship to the Yuba Dike. For a distance of 3 miles from the Alps mine to a point northwest of Caselton Shaft, they are parallel and lie just north of the dike. The northeasters, which lie between the ore deposits and the dike, play an important part in the grade and thickness of the bedded ore deposits of the Combined Metals. The northeasters also enrich the east-westers in the quartzite and where they intersect the Yuba Dike ore deposits are formed in the Dike, i.e. Yuba, Mazeppa, Newark ore shoots. This suggests the ore solutions found their way up the Yuba, after it cooled, until they branched off into the quartzite. The east-west zone of fissuring and the Yuba Dike will come together at greater depth on their respective dips. The ore shoots in the Yuba at the junction of the northeasters and the enrichment of the bedded deposits and the east-west fissuring at the junction of the northeasters, suggest, as several eminent geologists have

previously suggested, that the Yuba Dike is the pathway of the mineralizers. The dissemination of zinc sulphides into the Yuba Dike porphyry further suggests that below the junction of the east-west fissuring and the Yuba, the dike itself may be mineralized to the extent of commercial ore, especially with the help of intersecting northeasters.

The accompanying, proposed exploration project is just a small start toward the exploration warranted, but it may be the key to opening a large area for further exploration.

There has been a large production from above the water level. The relatively small amount of work done below the water level has developed good ore. About 5,000 tons was mined with about 12,000 tons left in pillars between the 1200 and 1400 levels in the small area explored. Mr. Raymond's prediction may be prove to be close.

REFERENCES

RAYMOND, R. W. , Statistics of mines and mining in the States and Territories west of the Rocky Mountains for 1871 to 1875.

WESTGATE, L. G. and KNOPF, A. 1932 Geology and ore deposits of the Pioche district, Nevada. U. S. Geol. Survey Prof. Paper 171.

WHEELER, H. E. and LEMMON, D. M. 1939 Cambrian formations of the Eureka and Pioche districts, Nevada. Univ. Nevada Bulletin, Vol. 33

WHEELER, H. E. 1940 Revisions in the Cambrian Stratigraphy of the Pioche district, Nevada. Univ. Nevada Bull. vol. 34.

COUCH, B. F. 1943 Nevada's Metal and Mineral Production (1859-1940 Inclusive) Univ. Nevada Bull. No. 38

WHEELER, H. E. 1944 Lower and Middle Cambrian Stratigraphy in the Great Basin Area. Univ. Nevada Bull. No. 39

YOUNG, Earl B. 1948 The Pioche District, Reprinted from International Geological Congress "Report of the Eighteenth Session, Great Britian, 1948," Part VII

4 (d)

With respect to the accessibility of the project, The Nevada State Highway No.93 is adjacent to the property, oil roads to the rail road shipping point a distance of One and One half miles. Salt Lake Smelters are three hundred fifty miles, and Kennecott Smelter at McGill, Nevada, is a distance of One hundred twenty-five miles on highway No.93. Combined Metals Reduction Company's Mill is located eleven miles from the shipping point of the property, oil road to the mill. Stores and living quarters within the town of Pioche, Nevada, are sufficient to take care of employees's needs, and within walking distance to the property.

(e)

Ample manpower is available. Materials, supplies, and equipment can be purchased locally or from Salt Lake City, Utah or Los Angeles, California. There is ample electric power and water at all times.

5. THE EXPLORATION PROJECT.

(a)-Zinc-Lead

(b)-See description and maps attached.

(c)-Work is now under progress.

(d)-Alexander Lloyd, Treasurer and Director of Yuba Dike Mines, Incorporated, is a Mine owner and has operated mines for over thirty years, in the capacity of General Manager of Virginia Louise Mining Company, Pioche, Nevada, Superintendent of Pioche Mines Consolidated, Pioche, Nevada, Lessee of the Mendha Nevada Mining Company. Mascot Silver Mines Company, Pioche, Nevada, also self-employed in his own mining properties in the State of Utah and Nevada.

John A. Hedman, President and Director of Yuba Dike Mines Company, is owner and operator of the Hedman Mines Company, located at Ely Springs, Lincoln County, Nevada, he has been operating said property continuously since 1950.

F.L. Heidenreich, Secretary, Director, and General Manager, of Yuba Dike Mines Company, was employed and worked continuously for the Combined Metals Reduction Company, Pioche, Nevada in the capacity of mucker, miner, timberman, warehouse clerk, Assistant Chief Clerk, Secretary to the Superintendent, Assistant to Superintendent, Shift Boss and Mine Foreman from the year 1933 to 1953. 1946 to 1951 was Mine Foreman when Combined Metals Reduction Company was producing from 15,000 to 20,000 tons of ore per month and several thousand tons of waste. He contributed his services to geology, exploration, and development planning during his employment.

SUMMARY

Equipment	$17,930.00
Electric Power Installation	6,356.59
Pumping Equipment	7,703.04
Total	$31,989.63

* * * * * * *

Pumping, Timbering, Mucking No. 1 Shaft 1200 Pocket to 1400 - 202 feet - 6 Months	$30,316.34
Pro rata share of equipment, power & pumping equipment 32.1%	10,268.67
Total	$40,585.01
Engineering, geological, electrical, pumping consultants, - accounting, analytical work, warehouse, timekeeping. 10%	4,058.50
Total	$44,643.51
Cost per foot - Pumping, Timbering, Mucking No. 1 Shaft 1200 Pocket to 1400	$ 221.00

* * * * * * *

1400 Drift Rehabilitation 880 Feet, 6 Months	$46,559.21
Pro rata share of equipment, power & pumping equipment 32.1%	10,268.67
Total	$56,827.88
Engineering, geological, electrical, pumping consultants, - accounting, analytical work, warehouse, timekeeping 10%	5,682.79
Total	$62,510.67
Cost per foot - 1400 Drift Rehabilitation	$ 71.03

SUMMARY (Page No. 2)

Extension 1400 Drift 150 feet, 2 Months	$10,874.06
Pro rata share of equipment, power & pumping equipment 10.7%	3,422.89
Total	$14,296.94
Engineering, geological, electrical, pumping consultants, - accounting, analytical work, warehouse, timekeeping 10%	1,429.69
Total	$15,726.63
Cost per foot - Extension 1400 Drift	$ 104.84

* * * * * * * *

Winze on 1400 - 100 feet - 4.7 Months	$25,746.87
Pro rata share of equipment, power & pumping equipment 25.1%	8,029.40
Total	$33,776.27
Engineering, geological, electrical, pumping consultants, - accounting, analytical work, warehouse, timekeeping 10%	3,377.63
Total	$37,153.90
Cost per foot - Winze on 1400	$ 371.54

EQUIPMENT

Electric Compressor, complete with receiver, electric starter, piping, pop-off valve	$ 4,500
Vancha locomotive complete with battery, motor-generator set, panel and accessory charging equipment	6,000
EIMCO 12B mucking machine delivered at Pioche	3,200
6 Mine Cars @ $300	1,800
Small Tools (Picks, shovels, axes, steel, etc.)	800
Total	$16,300
Contingencies 10%	1,630
Total	$17,930

TOTAL ESTIMATES

Installation of Electric Power to 1200 #1 Shaft (1273' from surface to 12th level)	$ 6,356.59
Pumping - Timbering - Mucking 1200 Pocket to 1400 - 202 Ft.	30,316.34
Pumping Equipment	7,703.04
1400 Drift Rehabilitation - 880 Ft.	46,559.21
Extension 1400 Drift - 150 Ft.	10,374.05
Winze On 1400 Level - 100 Ft.	25,746.87
	$127,556.10

INSTALLATION OF ELECTRIC POWER TO 1200 #1 SHAFT
(1273' from surface to 12th level)

1500' 3/C #4 Neoprene Jacket Electric Cable Insulated for 5000 Volts	$2,787.00
2 Sets Cut-Outs @ $30.00	60.00
24 Wooden Clamps for bolting cable to wall plates @ $1.00	24.00
48 - 1/2" x 6" Lag Bolts @ 10¢	4.80
48 - 1/2" Cut Washers @ 1/2¢	.24
3 - 75 or 100 KVA Transformers 2300 to 440 @$655.44	1,966.32
6 Rolls Rubber Splicing Tape @ 44¢	2.64
3 Rolls Friction Tape @ 50¢	1.50
Electrical Hardware, Compound to protect splices	100.00

LABOR

Installing Surface Cut-Outs, Connecting Cable, Hanging Cable from Transformers to Collar of Shaft 3 man-shifts @ $18.59	55.77
Hanging Cable in Shaft and Securing to Wall Plates 10 man-shifts @ $18.59	185.90
Cleaning up 1200 Station to Prepare Space for Transformers, 4 man-shifts @ $18.59	74.36
Installing Panel for Electrical Equipment 2 man-shifts @ $18.59	37.18
Lowering and Installing Transformers to 1200 Station 10 man-shifts @ $18.59	185.90
Connecting Transformers 2 man-shifts @ $18.59	37.18
Supervision 8 man-shifts @ $21.56	172.48
Trucking Transformers and Cable	30.00

LUMBER

1 Bundle Wedges	1.00
6 pieces, 3 x 12 x 16' @ $3.52	21.12
4 pieces, 8 x 8 x 12' for installing panels for Electrical Cut-Outs, Switches and Controls @ $7.83	31.32
Contingencies 10%	577.88
	$6,356.59

YUBA DIKE MINES, INCORPORATED
PIOCHE, NEVADA

PUMPING - TIMBERING - MUCKING

1200 POCKET TO 1400 - 202 FT.

202' Timber @ $1828	$3,692.56
808' Guides @ 55¢	444.40
150 Lag Bolts @ .143	21.45
150 Cut Washers @ .01	1.50
202' Water Boxes @ 28¢	56.56
2 - 2300' Hoisting Ropes to Reach 1400, 1503Ft. below collar (Allowance for Cutting)	2,000.00
Electric Bell System	800.00

LABOR

Preparatory Work at 1200 Pocket	
Shaftman - 12 man-shifts @ $1959	235.08
Hoistman - 4 man-shifts @ $18.59	74.36
Removing and Replacing Old Timber Where Necessary	
360 - man-shifts @ $19.59	7,052.40
Hoistman - 120 man-shifts $18.59	2,230.80
Mucking Up Spill - 1000 tons - 60 Days	
120 man-shifts @ $19.59	2,350.80
Hoistman - 60 man-shifts @ $18.59	1,115.40
Topman - 60 man-shifts @ $13.70	822.00
Supervision - 6 months @ $560.50	3,363.00
Maintenance #1 Hoist - 6 months @ $50.00	300.00
Maintenance #1 Shaft - 6 months @ $250.00	1,500.00
Electric Power - 6 months @ $250.00	1,500.00
Contingencies 10%	2,756.03
	$ 30,316.34

YUBA DIKE MINES, INCORPORAT
RIOCHE, NEVADA

PUMPING EQUIPMENT

2 RVH 40 Pumps with Fittings @ $1,050.00	$2,100.00
2 15' Suction Hose with Nigger Heads and Fittings @ $85.00	170.00
2 25' Discharge Hose with Fittings @ $60.00	120.00
2 4" Valves @ $54.08	108.16
1 Cross Head for Lowering Pumps	200.00
2 40 HP Starting Switches with Hardware @ $100.00	200.00
450' Electric Cable for Pumps @ $1.50	675.00
450' 4" Pipe @ $1.40	630.00
24 4" Victaulic Couplings @ $3.50	84.00
1000' 4" Pipe for Repairing Above Line @ $1.40	1,400.00
50 4" Victaulic Couplings @ $3.50	175.00
2 Cylingers Oxygen @ $6.60	13.20
1 Cylinder Acetylene	12.00

LABOR

REPAIRING DISCHARGE LINE -
From 1200 #1 Station to 1302 SE
Raise Disposal 3,825 feet

60 man-shifts @ $18.59	1,115.40
Contingencies 10%	700.28
	$7,703.04

1400 DRIFT REHABILITATION- 880 FEET

684' Drift Timber @ $4.59	$ 3,139.56
1760' Rail @ 70¢	1,232.00
440' Ties 4x6 @ 80¢	352.00
1760 Track Spikes	35.00
704 Track Bolts	70.40
1160' 4" Pipe - 1200 Station to Face @$1.40	1,624.00
116 4" Victaulic Couplings @ $3.50	406.00
Pipe Fittings & Valves	400.00
8 4" Pipe Hangers @ $3.00	24.00
1160 2" Pipe @ 50¢	580.00
2" Pipe Fittings	100.00

LABOR

Mucking, Placing Ties, Track and Pipe	
880' @ $20.00 per foot	17,600.00
(Note: Due to silt and water running into the area through Black Ledge Winze for over 25 years, the muck would be sticky mud and silt, which will be difficult to muck and handle from face to waste dump.)	
Installing Timber	
256 man-shifts @ $19.09	4,887.04
Installing Air Line 1200 to 1400	
6 man-shifts @ $19.59	117.54
Installing 2" Water Line 1200 to 1400	
3 man-shifts @$19.59	58.77
Maintenance #1 Shaft - 6 months @ $250.00	1,500.00
Maintenance #1 Hoist - 6 months @ $50.00	300.00
Topman - 6 months @ $356.20	2,137.20
Hoistman - 6 months @ $483.34	2,900.04
Supervision - 6 months @ $560.50	3,363.00
Electric Power - 6 months @ $250.00	1,500.00
Contingencies 10%	4,232.66
	46,559.21

EXTENSION 1400 DRIFT - 150 FEET

150 ' Drifting @ $41.00 per foot	6,150.00
Hoistman - 50 man-shifts @ $18.59	929.50
Topman - 50 man-shifts @ $13.70	685.00
Supervision - 2 months $560.50	1,121.00
Maintenance #1 Shaft - 2 months @ $250.00	500.00
Electric Power - 2 months @ $250.00	500.00
Contengencies 10%	988.50
	10,874.05

WINZE ON 1400 LEVEL - 100 Feet

Excavate and Timber Station at Top of Winze	
Labor and Materials	$1,760.00
1 15 HP Electric Hoist	2,000.00
150' 5/8 Hoist Rope	30.00
1160' Electric Cable @ $1.50	1,740.00
2 50 HP Switches and Accessories @ $60.00	120.00
1 Sheave Wheel	125.00
Installing Muck Slide and Dump	200.00
Skip or Bucket	150.00
100' Timber @ $18.28	1,828.00
200' Guides @ 55¢	111.00
42 5/8 x 8 Lag Bolts @ .143	6.00
42 Cut Washers @ 1¢	.42

LABOR

Blast, Muck and Timber 100 Ft. @ $65.00 per Ft.	6,500.00
Hoistman - 112 man-shifts @ $18.59	2,082.08
Topman - 112 man-shifts @ $13.70	1,534.40
Supervision - 4.7 months @ $560.00	2,634.35
Electric Power - 4.7 months @ $250.00	1,175.00
Maintenance #1 Shaft @ $250.00	1,175.00
Maintenance #1 Hoist - 4.7 months @ 50.00	235.00
Contongencies 10%	2,340.82
	$25,746.87

L E A S E

This Indenture made at New York City, New York, this 6th day of August, 1953, by and between:

AMALGAMATED PIOCHE MINES AND SMELTERS CORPORATION, a corporation, of the State of Maine, hereinafter referred to as the Lessor, and ALEXANDER LLOYD, JOHN A. HEDMAN and F. L. HEIDENREICH, of Pioche, Nevada, hereinafter referred to as the Lessees:

WITNESSETH:

That the Lessor, for and in consideration of the sum of $2,500.00 by the Lessees to the Lessor paid, the receipt whereof is hereby acknowledged, and of the rents, royalties, covenants and agreements hereinafter contained by the Lessees to be paid, kept and performed, the said Lessor does hereby demise, and let unto the said Lessees, the following described mining claims and properties situate in Ely Mining District, Lincoln County, Nevada, to-wit:

All the following patented mining claims:

Pioche or Meadow Valley, (U.S. Lot 40); Bullion, (U.S.Lot 54); Meridian, (U.S.Lot 56); Cache, (U.S.Lot 54); Silex, (US. Lot 54); Queen, U.S. Lot 53); King, (U.S. Lot 53); Silver, (U.S. Lot 38); Greenback Currency, (U.S. Survey #2725); Yuba, (U.S. Lot 42); (U.S. Survey 3342); Alpha, (U.S. Lot 52); Richmond, (U.S. Lot 52); Juno, (U.S. Lot 55); Vesta, (U S. Lot 55); Bedrock, (U.S Lot 55); Treasure, (U.S. Lot 55); Burk Washington, (U.S. Lot 41); Mazzepa, (U. S. Survey 3888); and such portion of the Panaca, (U.S. Lot 39) that lies east of a vertical plane through a north south line located 100 feet east of the center of the working compartment of No. 1 Shaft.

Also such portions of the Deerfoot, (U.S. Lot 52); the Index (U.S. Lot 52) and the Williams & Goodspeed (U.S. Survey 3343), that lie east of the east side line of the Susan Duster (U.S. Survey 2714).

Also all of the following unpatented lode mining claims, to wit:

Enyard,	recorded	in	book	" Z",	pages 28&29 Records of Lincoln County
Nappias	"	"	"	"Z",	page 29, Records of Lincoln County
West	"	"	"	"N"	pages 262-3, Records of Lincoln County
Lookout	"	"	"	"E"	pages 441-2, amended Book "N", pages 257-8-9, Records of Lincoln County

YUGA DIKE MINES, INCORPORATED
PIOCHE NEVADA

Winter, recorded in Book "G", pages 230-1, amended Book "N" pages 255-6-7 , Records of Lincoln County
Monarch " " " "L", pages 446 amended Book "N" pages 264-5 Records of Lincoln County
South " " " "H", page 264, amended Book "N" pages 259-262 Records of Lincoln County
Eagle " " " "P", pages 10-12, Records of Lincoln County
Bee " " " "Z", pages 29-30 Records of Lincoln County
Wedge " " " "Y", page 226 Records of Lincoln County
Triangle Fraction, recorded in Book "Y" , pages 225-6 Records of Lincoln County

The above description is intended to cover the property known as "Treasure Hill" and to include all property owned by the Lessor in that vicinity not included in the lease dated March 1, 1932, between the Amalgamated Pioche Mines and Smelters Corporation and Combined Metals Reduction Company, recorded in Miscellaneous Book " K", pages 274-284, inclusive, in the office of the Recorder of Lincoln County, Nevada and the Supplemental Agreement thereto dated December 17, 1942 recorded in Miscellaneous Book "M" at page 182-5 inclusive in said office.

Together with the appurtenances and the right to enter upon and in said property for the purpose of prospecting and developing the same by surface drilling, underground drilling, drifting, cross cutting, shaft sinking or otherwise carrying on mining operations therein, and the right to construct upon said lands such mills, buildings, power plants and structures and to install therein or thereon such pumps, machinery, equipment and apparatus as may be necessary to effectively mine and mill the ores to be mined therefrom and the exclusive right to mine, remove and sell the ores and mill products resulting from such operation, excepting however, from this lease all ores and minerals with respect of which the right to mine by virtue of extralateral rights under the mining laws are vested in owners other than the Lessee.

TO HAVE AND TO HOLD the same unto the Lessees for a term of fifteen (15) years from and after the date hereof unless sooner terminated as hereinafter provided or forfeited because of a default in the observance or performance of any covenant or agreement herein contained to be observed or performed by the Lessees as hereinafter provided.

YUBA DIKE MINES, INCORPORATED
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In consideration of said demise the Lessees convenant and agree with Lessor as follows:

ARTICLE 1.

1. To pay to the Lessor as rental, advanced royalty and as compensation for the privilege of occupying said premises and extracting, removing and selling ores and the mill products therefrom:

(a) Two Thousand Five Hundred ($2,500.00) Dollars upon the execution and delivery of this Lease, the receipt of which is hereby acknowledged by the Lessor, and Two Thousand Five Hundred ($2,500.00) Dollars on the first day of the sixth month after the date hereof, all of said payments of $2,500.00 shall be advanced royalties and audited on account of the royalties payable on ores and/or concentrates mined and sold during the succeeding six month period as hereinafter provided; the excess, if any of said payment over the royalties upon ores and/or concentrates actually mined or sold during such period computed as hereinafter provided, plus the payments in lieu of work as hereinafter provided, shall be retained by the Lessor as rental for the use and occupation of said premises during said six month period.

(b) Five (5) percent of the net returns of all ores and/or concentrates yielding a net return of ten ($10.00) Dollars or less per ton of 2,000 pounds.

Ten (10) percent of the net returns from all ores and/or concentrates yielding a net return of over $10.00 per ton and not over $20.00 per ton of 2,000 pounds.

Fifteen (15) percent of the net returns from all ores and/or concentrates yielding a net return of over $20.00 per ton of 2,000 pounds.

Net returns as used herein shall mean the gross mill and smelter returns less transportation, treatment, assaying and sampling charges.

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PIOCHE, NEVADA

(c) No royalties or other payments made to the Lessor shall be returned to Lessees in the event of the termination of this lease for any cause.

2. To enter upon said premises on or before the 15th day of September, 1953 and to perform not less than 90 man shifts of eight hours of labor in each and every calendar month during the term of this lease; provided, however, that should the Lessees fail in any calendar month to perform the said minimum number of shifts of work required hereby, the Lessees shall pay to the Lessor in lieu of work the sum of $2.50 for each man shift required but not performed during said calendar month but not exceeding $225.00 for any one month, each such payment to be made within 20 days after the end of the calendar month during which such work should have been performed.

All work in or upon said premises shall be performed in good and minerlike fashion with due regard to the safety, development and preservation for mining purposes of said and adjoining premises and workings and all shafts, tunnels, drifts and other workings shall be well and sufficiently timbered where necessary to preserve the property as a workable mine. In the event the existing shafts be deepened, the extension thereof shall be of the same dimension, and all tunnels and drifts shall not be less than six and one-half ($6\frac{1}{2}$) feet high by four (4) feet wide in the clear. All waste shall be removed from the workings as the work progresses, however, waste may be used as stope fill when it is advisable to do so to follow good and established mining methods for efficient ore extraction.

3. To keep at all times the ores mined from the leased premises segregated from ore from other premises to the end that none of the ores thereof extracted from the leased premises shall be co-mingled, confused or diluted with ore extracted from other properties.

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All ores extracted from the leased premises by the Lessees may be consigned to such mill or smelter for treatment or sale whose charges or prices shall be determined to yield the highest net return.

Should Lessees mill the ore from the premises leased herein all concentrates will be kept separate from concentrates milled from ores of other properties.

4. To preserve and protect said leased property and the interest, right or title of the Lessor therein or thereto, and to do and perform all acts required or permitted by the mining laws of the United States or by acts of Congress to maintain the rights of the Lessor in and to the unpatented mining claims and locations included in this lease.

5. To procure at their own expense and carry Workmen's Compensation Insurance and Occupational Disease Disability Insurance covering all their employees, their contractors and sub-lessees and their employees, or otherwise comply with all requirements of law to save harmless the Lessor from liability or on account for the payment of compensation or other charges for injuries, disability or death from accident or disease to such persons arising out of or in course of the operations of the Lessees hereunder. Lessees further agree to pay any and all taxes under the National Security Act, the Nevada Employment Security Act and Federal Insurance Contributions Act for which they may become obligated and to comply with all laws, rules and regulations of any governmental authority affecting Lessees' operations in said leased premises and to furnish the Lessor with evidence of such compliance when reguested.

6. To pay for all labor, materials, tools, machinery, supplies and materials furnished for the equipment or operation of said property and to keep said property and premises free and clear of all liens, claims of lien, and encumbrances made, filed

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or incurred during the existence of this lease, for or on account of such labor or other property so furnished.

7. To forthwith post and thereafter keep posted during the life of this lease, at conspicuous places upon said property; notices in substance as follows:

NOTICE

Notice is hereby given to all persons performing labor or furnishing skill, materials, machinery, fixtures or supplies of any kind to or upon this property, that the undersigned Amalgamated Pioche Mines and Smelters Corporation, the owner of the property upon which the notice is posted, will not be responsible for any labor performed, or any skill, materials, machinery, equipment, fixtures or supplies of any kind furnished to said property; nor shall the interest of said owner be subject to any lien for the same, and all persons are hereby notified that the premises and property have been leased to Alexander Lloyd, John A. Hedman and F. L. Heidenreich.

Dated_____

AMALGAMATED PIOCHE MINES & SMELTERS CORPORATION

8. To pay before delinquency all taxes and assessments levied and assessed against the leased properties and every part thereof during the term of this lease, and to pay and discharge all occupation, excise, severance, net proceeds or other taxes that may accrue for or on account of or based upon the production from said properties or the value thereof except such portion of such taxes, etc. which may be measured by or based upon the royalties payable to the Lessor hereunder.

9. To hold the Lessor harmless and fully indemnify it against all claims of every kind which may be made upon it or against said leased premises for or on account of any debt or expense contracted or incurred by the Lessees as well as from and against all acts, transactions or ommissions by them, their agents, and servants, including claims or demands on account of injuries or damages to persons or property claimed to have been caused or occasioned by any unsafe or dangerous condition of any part of the leased premises or the workings therein, and to defend the Lessor at their own expense from any such liability or asserted liability.

YUBA DIKE MINES, INCORPORATED
PIOCHE, NEVADA

10. To permit the agents or representatives of the Lessor to inspect said premises and all parts of the workings therein at all reasonable times and to examine and audit all records of Lessees relating to the production and shipment of ores from said premises and Lessees further agree to furnish to Lessor upon demand copies of all assays of samples of ores taken from said property and to allow Lessor to take samples from said property.

ARTICLE 11.

And the parties hereto do further agree that:

1. The Lessees shall have the right to construct and install buildings machinery and equipment on and in said property at their expense and may remove such property so installed by them within four (4) months after the expiration of other termination of this lease; provided,, however, that all track, timbering and all fixed improvements below the surface shall become part of the real estate and remain therewith as the property of the Lessor. All property not removed within said four months period shall become and be the property of the Lessor.

2. Time is of the essence of this agreement and if the Lessees shall fail to keep and perform any of the covenants and agreements in this lease to be kept and performed by them, the Lessor may at its option give to the Lessees written notice specifying the particulars with respect to which the Lessees are in default and demanding that the same be remedied within 30 days from the date of such notice or demand, and if at the end of said 30 day period the Lessees shall have failed to remedy each such default, or shall not then be actually and diligently engaged in good faith in remedying any default other than the failure to pay rent or royalties due, then this lease and all rights of the Lessees in and to said property (save and except the right to remove certain property installed by them as aforesaid,) shall forthwith terminate and Lessor may immediately re-enter said property and take possession thereof; provided, however, that

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in such event the Lessees shall not be relieved of their obligation to pay all royalties or rentals, or payments in lieu of work which have accrued at the date of termination.

The failure of the Lessor to exercise its right to terminate the lease for any default upon the part of the Lessees shall not be deemed to be a waiver of its rights hereunder for or on account of any subsequent default.

3. S hould Lessees be prevented by acts of God, Governmental interference or regulation, strikes, riots, fires, destruction of the plant in whole or in part or the unavailability of labor, or materilas, water supply or other cause beyond the control of the Lessees, from performing any of the terms and conditions of this lease to be performed by them, the obligation of the Lessees hereunder shall be suspended so long as performance by the Lessees is so prevented; provided, however, that no suspension of performance hereunder, shall relieve the Lessees of the obligation to make the rental payments of $2,500.00 as provided herein, nor shall the term of this lease be extended by reason of any such suspension.

4. The Lessees shall have the right to surrender this lease and abandon the said properties upon giving the Lessor thirty (30) days prior notice in writing of its intention so to do; provided, however, that such surrender shall not relieve the Lessees of their obligation to pay all rentals, royalties and payments in lieu of work which shall have accrued prior to the date of the termination of the lease by such surrender.

5. Upon expiration or other termination of this lease the Lessees shall surrender and deliver up possession of the buildings and workings upon or in said premises unto the Lessor, its successors or assigns, in as good condition as when entered upon, ordinary wear and tear and damage by the elements excepted.

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ARTICLE 111.

To facilitate the operations of the Lessees upon said premises, the Lessor hereby grants to the Lessees, subject to the terms and conditions expressed in the agreement dated March 1, 1932, between the Lessor herein and Combined Metals Reduction Company, recorded in Miscellaneous Book "K" at pages 274 to 284, included, in the office of the Recorder of Lincoln County, Nevada, and agreements amendatory or supplementary thereto, the right to the use of Shaft No. 1 and appurtenant facilities including power plant, compressors and other machinery reserved to the Lessor under said agreements, together with joint use with said Combined Metals Reduction Company of such drifts, cross cuts and levels through the premises now under lease to said Combined Metals Reduction Company to such extent as the joint use of such workings through such territory may have been retained by the Lessor under said agreement of March 1, 1932, and supplementary agreements aforesaid.

Likewise to facilitate the mining operations of the Lessees under this lease, the Lessor hereby authorizes the Lessees to use and occupy the two dwellings now owned by the Lessor and situate upon the leased premises during such time as the Lessees may have the right to use and occupy the mining premises under the terms of this lease; provided, however, they are to be meturned in as good as condition as received ordinary wear and tear excepted.

ARTICLE 1V.

Whereas,,the Combined Metals Reduction Company be virtue of lease agreement dated March 1, 1932 and Supplemental Agreement dated December 17, 1942 and consent to sublease dated May 5, 1953 has subleased to Messrs. Lloyd, Hedman and Heidenreich such portions of Amalgamated Pioche Mines and Smelters Corporations property as described in above said sublease and should for any

YUBA DIKE MINES, INCORPORATED
PIOCHE, NEVADA

reason the aforesaid lease and supplemental agreement between Amalgamated Pioche Mines and Smelters Corporation and Combined Metals Reduction Company be cancelled, forfeited, or in any way be discontinued, all that property leased to Combined Metals Reduction Company in lease agreement dated March 1, 1932 and supplemental agreement dated December 17, 1942, to-wit:

> All the Panaca (U.S. Lot 39) claim, excepting that portion of the East end of the Panaca claim lying East of a vertical plane through a north-south line located 100 feet east of the center of working compartment of No. 1 shaft.
> All the Alberta (U.S. Lot 2712), Alberta No. 2 (U.S. Lot 2714), Susan Duster (U.S. Lot 2714), Zero (U.S. Lot 49), and Scipio (U.S. Lot 50) lode mining claims and such portions of the Deerroot (U.S. Lot 52), Index (U.S. Lot 52) and Williams and Goodspeed claims as lie West of the East side line of the Zero claim.

will automatically be included in and made a part of this lease dated August 6, 1953, between Amalgamated Pioche Mines and Smelters Corporation, Lessor and Messrs. Lloyd, Hedman and Heidenreich, Lessees, under all conditions and terms agreed upon herein.

It is further agreed and understood that should the lease agreement dated March 1, 1932 and supplemental agreement dated December 17, 1942 between Amalgamated Pioche Mines and Smelters Corporation and Combined Metals Reduction Company not be extended, renewed, or a new lease agreed upon between the above parties that the property covered in said lease and described above be included in this Lease dated August 6, 1953 between Amalgamated Pioche Mines and Smelters Corporation and Messrs. Lloyd, Hedman and Heidenreich under all conditions and terms agreed upon herein.

ARTICLE V.

1. The Lessees may not assign this lease or sublet the premises included therein or any portion without prior written consent of the Lessor.

2. This lease shall inure to the benefit of and be binding upon the parties hereto, and their heirs, successors and assigns.

YUBA DIKE MINES, INCORPORATED
PIOCHE, NEVADA

3. It is agreed that the mailing of any written notice or demand, enclosed in a sealed post paid envelope addressed and registered to the Lessees, or any one of them at Pioche, Nevada, by depositing it at any post office station, shall be sufficient service of such notice or demand upon the Lessees in any case arising under this Lease, and written notice similarly deposited at the post office, postage prepaid, addressed and registered to the Lessor at 420 Lexington Avenue, New York City 17, N. Y., shall be sufficient notice to the Lessor.

IN WITNESS WHEREOF, the Lessor has caused this lease to be executed by its proper officers and its corporate seal affixed thereunto duly authorized, and the Lessees have hereunto set their hands and seals as of the day and year first above written.

AMALGAMATED PIOCHE MINES AND SMELTERS CORPORATION

By Wm. F. Roberts
President
LESSOR

S E A L

Attest:

V. B. Wallder
Secretary

Alexander Lloyd

John A. Hedman

F. L. Heidenreich
LESSEES.

YUBA DIKE MINES, INCORPORATED
PIOCHE, NEVADA

EXTENSION OF LEASE

This AGREEMENT, made at New York, the 30th day of December Nineteen hundred fifty three, by and between AMALGAMATED PIOCHE MINES & SMELTERS CORPORATION, hereinafter known as the Lessor and YUBA DIKE MINES INCORPORATED, a Nevada Corporation, hereinafter referred to as the Lessee,

WITNESSETH:

WHEREAS ALEXANDER LLOYD, JOHN A. HEDMAN and F. L. HEIDENREICH of Pioche, Nevada, were granted a lease, dated August 6, 1953 and expiring August 6, 1968, on certain territory belonging to the Lessor, and fully described on pages #1, #2, and #10 of said lease, also including any additional leases, options, and agreements,

AND WHEREAS said ALEXANDER LLOYD, JOHN A. HEDMAN and F. L. HEIDENREICH did assign, by and with the consent of said Lessor, the above-mentioned lease on August 6, 1953 to aforesaid YUBA DIKE MINES INCORPORATED,

AND WHEREAS the Lessee is now desirous of having the lease extended to August 6, 1983,

NOW Therefore the parties hereto do hereby covenant and agree as follows:

The extension of the lease for fifteen years, from August 6, 1968 to August 6, 1983, is hereby granted to the Lessee on the payment to the Lessor the sum of Five Hundred dollars as rent, payment to be made on the execution of this agreement. Non-payment

In witness whereof the said lessor has caused its name and seal to be hereto affixed by it President, duly authorized by its Board of Directors and said Lessee hereto set its hand and seal, the day and year above written.

AMALGAMATED PIOCHE MINES & SMELTERS CORPORATION

By Wm. F. Roberts
President

Attest:

S E A L

V. B. Wallder
Secretary

YUBA DIKE MINES INCORPORATED

By John A. Hedman
President

Attest:

S E A L

F. L. Heidenreich
Secretary

PIOCHE NEVADA
YUBA DIKE MINES INCORPORATED

EXTENSION OF LEASE

This AGREEMENT, made at New York, the 30th day of December Nineteen hundred fifty three, by and between AMALGAMATED PIOCHE MINES & SMELTERS CORPORATION, hereinafter known as the Lessor and YUBA DIKE MINES INCORPORATED, a Nevada Corporation, hereinafter referred to as the Lessee,

WITNESSETH:

WHEREAS ALEXANDER LLOYD, JOHN A. HEDMAN and F. L. HEIDENREICH of Pioche, Nevada, were granted a lease, dated August 6, 1953 and expiring August 6, 1968, on certain territory belonging to the Lessor, and fully described on pages #1, #2, and #10 of said lease, also including any additional leases, options, and agreements,

AND WHEREAS said ALEXANDER LLOYD, JOHN A. HEDMAN and F. L. HEIDENREICH did assign, by and with the consent of said Lessor, the above-mentioned lease on August 6, 1953 to aforesaid YUBA DIKE MINES INCORPORATED,

AND WHEREAS the Lessee is now desirous of having the lease extended to August 6, 1983,

NOW Therefore the parties hereto do hereby covenant and agree as follows:

The extension of the lease for fifteen years, from August 6, 1968 to August 6, 1983, is hereby granted to the Lessee on the payment to the Lessor the sum of Five Hundred dollars as rent, payment to be made on the execution of this agreement. Non-payment of said five hundred dollars shall constitute a forfeiture of this agreement without further notice to the Lessee.

This agreement is made a part of and is subject to all the conditions, royalties, stipulations, etc., provided for in the lease dated August 6, 1953 from the lessor to the lessee.

YUBA DIKE MINES, INCORPORATED
PIOCHE, NEVADA

In witness whereof the said lessor has caused its name and seal to be hereto affixed by it President, duly authorized by its Board of Directors and said Lessee hereto set its hand and seal, the day and year above written.

AMALGAMATED PIOCHE MINES & SMELTERS CORPORATION

By Wm. F. Roberts
President

Attest:

S E A L

V. B. Wallder
Secretary

YUBA DIKE MINES INCORPORATED

By John A. Hedman
President

Attest:

S E A L

F. L. Heidenreich
Secretary

LEASE AGREEMENT

THIS AGREEMENT made in duplicate this 2nd day of July, 1953, between Combined Metals Reduction Company, a corporation under the laws of Utah, qualified to do business in Nevada, first party (hereinafter referred to as "Combined"), and F. L. Heidenreich, John A. Hedman, and Alexander Lloyd, all of Pioche, Nevada, second parties (hereinafter referred to as lessee) -

WITNESSETH:

WHEREAS, Combined is in possession of certain properties in the Ely Mining District in Lincoln County, Nevada under lease agreement dated March 1, 1932 and Supplemental Agreement dated December 17, 1942, between Amalgamated Pioche Mines and Smelters Corporation, Lessor, and Combined Metals Reduction Company, Lessee, and Lessee above named desires to obtain from Combined a sublease describing a part of the property so held by Combined, and Amalgamated Pioche Mines and Smelters Corporation has granted Combined "Consent to Sublease and to Joint Use of Shaft and Appurtenant Facilities" dated May 5, 1953,

NOW THEREFORE, in consideration of the sum of Ten Dollars paid by lessee to Combined, receipt whereof is hereby acknowledged, and of the terms and conditions herein stated to be kept and performed by the parties respectively, it is agreed -

1. Combined does hereby demise, lease and let to lessee for a term commencing on the date hereof and ending on April 30, 1962, the following described properties in the Ely Mining District, Lincoln County, Nevada, to-wit:

All the Alberta, Alberta No. 2 and Susan Duster Claims (U.S. Lot #2714); the Zero (U.S. Lot #49); the Scipio (U.S. Lot #50); such portion of the Panaca (U.S. Lot #39); as lies west of a vertical plane through a north-south line located 100.0 feet east of the center of the working compartment of the No. 1 Shaft; such portions of the Deerfoot and Index Claims (U.S. Lot #52) and the Williams and Goodspeed Claims as lie west of a vertical plane through the east side line of the Zero Claim; and limited to ground lying below the following described horizontal and inclined planes:

West of coordinate 13,500 East a horizontal plane at elevation 5,100
Between Coordinates 13,500 East and 13,900 East a horizontal plane at elevation 5,300
Between coordinates 13,900 East and 14,250 East a horizontal plane at elevation 5,500
Between coordinates 14,250 East and 14,500 East a horizontal plane at elevation 5,600
Between coordinates 14,500 East and 14,750 East a horizontal plane at elevation 5,700
Between coordinates 14,750 East and 15,500 East a horizontal plane at elevation 5,800

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East of coordinate 15,500 East a horizontal plane at elevation 5,900
North and east of the No. 1 Shaft, and within the leased portion of the Panaca Claim, a horizontal plane at elevation 6,100 and an inclined plane striking N 45'W, dipping 65' SW and intersecting the No.1 Shaft at elevation 5,810.

The coordinates referred to above are those of the Combined Metals Reduction Company grid system based on 15,000 East at the center of the No. 1 Shaft.

The elevations referred to are feet above mean sea level as established on government bench marks in the area.

2. Lessee will go into possession of said property and, commencing not later than September 15th, 1953, will do and perform each month a minimum of 100 shifts of labor of eight hours each therein; all work to be done in good miner-like fashion, properly securing the ground wherever necessary, and with a view to the preservation of said property for future mining operations.

3. This agreement contemplates the joint use by Combined and the lessee of certain of the workings and facilities owned by Combined, and in reference thereto it is agreed:

(a) That Combined shall operate, control and maintain the No. 1 Shaft and the presently existing main haulage levels connecting with the No. 1 Shaft. Lessee shall have the right to the use of 50% of the capacity thereof, not exceeding, however, the handling of 6,500 tons of rock per month through the No. 1 Shaft, and such right of use shall be limited to work performed on property owned by Combined or by the Amalgamated Pioche Mines and Smelters Corporation.

(b) That lessee shall pay to Combined a proportionate share of the cost of operating the No. 1 Shaft, including but not limited to, the cost of hoisting, shaft and equipment maintenance, shaft rental, and level maintenance for the portion of the mine included in this lease; such cost to be pro-rated on the basis of rock tons handled by the parties respectively.

(c) Lessee shall furnish at his own expense compressed air and power for his operations.

(d) That lessee shall pay to Combined a proportionate share of the cost of maintaining surface facilities at the No. 1 Shaft, including but not limited to the change room, transfer pocket, surface ore bins, surface trackage, waste dumps and roads; such cost to be pro-rated on the basis of rock tons handled by the parties respectively.

(e) Water encountered by lessee in his operations will be handled by Combined through its 1302 or 1410 raises in quantities not to exceed 1,000 G.p.m., provided that lessee shall furnish and install all facilities required to deliver water to the raise designated; and provided

further, that in the event the experience of Combined shows that this water has an adverse effect on Combined's mill flotation and/or pump installations then lessee shall dispose of his water through No. 1 Shaft, at his own expense; when water is handled by Combined, lessee shall pay a portion of the expense of handling all water from the mine, arrived at by prorating on the basis of the quantity handled for each of the parties. The rate of flow of lessee's water shall be measured at the point of delivery to the 1302 or 1410 raises and the total water pumped by Combined shall be measured at the point of discharge at the collar of the Caselton Shaft.

(f) Lessee shall pay to lessor on or before the 20th day of each calendar month all costs accrued under this paragraph 3, during the previous calendar month.

(g) Combined reserves the right to stop or to suspend its operations at its sole discretion and in this event lessee agrees to pay to Combined the entire cost of pumping, hoisting and maintenance services furnished for the convenience of lessee.

4. All ores mined under the agreement, and all other ores mined by lessee that are taken out through No. 1 Shaft, may at the option of Combined be taken and treated in its own reduction plant; provided that the terms of purchase by Combined of such ores shall return an amount at least equal to the best competitive bid therefor obtained by lessee; all ores not taken by Combined shall be shipped and sold by lessee on the best terms obtained by either party; time periods, terms and conditions shall be considered in determining the best of respective offers.

5. Lessee will pay to Combined royalty on ores produced from the demised premises, as follows:

(a) For the account of Amalgamated Pioche Mines and Smelters Corporation the royalty provided for in its lease to Combined of March 1, 1932, as modified by Supplemental Agreement of December 17 1942, copy of which provisions is annexed hereto and made part hereof; and

(b) Five percent of the net mill or smelter returns on all ores and minerals produced and marketed by lessee from the demised premises; net returns as used herein shall mean the gross returns less transportation, treatment, assaying and sampling charges.

6. Lessee shall be solely responsible for all labor, materials, supplies and equipment furnished for his operation, and shall keep the demised premises free and clear of incumbrances and mechanic's liens.

7. Lessee will indemnify and save harmless Combined of and from all liability, cost and expense that may arise out of damage or injury to persons or property occuring in the operations of lessee under this agreement, but lessor shall be notified of the commencement of any suit and shall have the right to defend same.

COPA DIKE MINES, INCORPORATED
PIOCHE, NEVADA

8. Lessee will comply with the laws of Nevada in regard to posting notices and recording affidavits as to non-liability on the part of Combined and will also comply with the laws of Nevada as to industrial compensation insurance, and with all applicable laws of Nevada and of the United States affecting his operations.

9. During the life of this agreement lessee will pay all property taxes and all taxes based on production laid upon the leased property.

10. Combined or its agent may at all reasonable times enter upon and into the demised premises for the purpose of inspecting, surveying and sampling.

11. Upon termination of this agreement in any manner lessee shall have the right of removal of all equipment, machinery, tools and supplies placed on the demised premises by him, such right of removal to be exercised within ninety days after such termination, but no track or timbering shall be removed.

12. Time is of the essence of this agreement and if lessee fails to keep and perform the conditions herein stated to be by him kept and performed, then at the option of Combined this agreement may be terminated, provided that Combined shall first serve upon lessee a thirty day written notice setting forth the default or omission complained of, and if such default or omission is not remedied or is not in the process of being remedied within said period, then this agreement shall become null and void; and in such event Combined shall retain as liquidated damages all monies therefore paid by lessee; provided, however, that lessee shall not be relieved of its obligation to pay Combined any royalties, rents or accounts due for services which shall have accrued and become due at the date of termination.

13. This lease applies only to ore bodies, veins, or ledges within the vertical boundaries of the leased premises; and in no event or circumstances shall Combined be held liable if lessee mines and extracts ores which apex outside said boundaries.

14. Lessee may relinquish his rights under this agreement by serving upon Combined a thirty day written notice of his intention so to do and returning the demised premises to Combined and paying Combined all accrued obligations for royalty, rents and accounts due for services. Thereafter lessee shall have no further liability under this contract.

15. Nonperformance of this contract by either party is excused so far as caused by acts of God, war, accident, fire unavailability of labor or materials, failure of water supply or transportation, shutdown of treatment and refining plants, or acts of public authorities.

16. This agreement is made subject to the approval of Amalgamated Pioche Mines and Smelters Corporation and Combined grants no rights not included in the agreement dated March 1, 1932 and the Supplemental Agreement dated December 17, 1942.

YUCA DIKE MINES, INCORPORATED
PIOCHE, NEVADA

17. This agreement shall in all things be binding upon and inure to the benefit of the parties hereto and their respective successors, heirs, assigns and personal representatives.

IN WITNESS WHEREOF the said parties hereto have caused this instrument to be duly executed this day and year first above written.

COMBINED METALS REDUCTION COMPANY

By E.H. Snyder
President

Attest:

C. M. Christensen
Secretary

F. L. Heidenreich
Lessee

S E A L

John A. Hedman
Lessee

Alexander Lloyd
Lessee

YUBA DIKE MINES, INCORPORATED
PIOCHE, NEVADA

ROYALTY PROVISIONS IN THE LEASE OF AMALGAMATED PIOCHE MINES AND SMELTERS CORPORATION TO COMBINED METALS REDUCTION COMPANY, DATED MARCH 1, 1932, AS MODIFIED BY SUPPLEMENTAL AGREEMENT OF DECEMBER 17, 1942, ARE AS FOLLOWS:

Article X111

1. Royalty shall be paid by the Lessee to the Lessor as follows -

For the purpose of computing the royalty, the ore shall be divided into two classes - "Smelting Ore" and "Milling Ore"..

2. "Smelting Ore" is that grade and character of ore which coming from the mine as a sorted or selected crude ore, is, in the opinion of the Lessee and Lessor adapted to smelting than to milling or any other treatment and which the Lessee desires to be smelted. Such ores may be consigned by the Lessee to whatever smelter the Lessee or Lessor may find to be the most advantageous purchaser.

3. " Milling ore" typically represented by the mine run of ore now developed in the Greenwood Ore Bodies, is that class of ore which is sent to any kind of reduction or ore dressing works which subjects the ore to any kind of treatment other than the usual blast or reverberatory furnace direct smelting method, and includes all ores other than smelting ore as above defined.

4. Rate on "Smelting Ore".

The royalty on Smelting Ore shall be ten (10%) percent of the net smelter return on ores yielding a net smelter return of Ten ($10) dollars per ton or less. Such royalty shall increase at the rate of one-half (1/2) percent for each increase of One ($1) Dollar per ton in the net smelter return on ores yielding a net smelter return over Ten ($10) Dollars per ton and up to Forty ($40) Dollars per ton. Fractions in proportion. On ores yielding a net smelter value of Forty ($40) Dollars per ton or over the royalty shall be twenty-five (25%) percent flat.

The minimum royalty on Smelting Ore shall be fifty (50¢) cents per ton of 2,000 pounds, on each shipment of ore of not more than three car loads.

5. "Net Smelter Return" is defined as the amount the smelter pays for the ore less freight from Pioche Station to the smelter and sampling and assaying.

6. Rate on "Milling Ore".

On a calculated heads valuation of $7.50	10%
On a calculated heads valuation $7.50 to $12.50	15%
On a calculated heads valuation $12.50 to $20.00	20%
On a calculated heads valuation over $20.00	25%

7. "Calculated Heads Valuation" is defined as being the value of a ton of crude ore arrived at as follows:

The assay of the ore as the ore is taken from the property shall be determined by the customary methods of sampling and comparison of assays, and the metals indicated valuated as follows:

Gold: 90% of the assay, at $19.00 per ounce

Silver: 85% of the assay, at 95% of the quotation in the Engineering & Mining journal (Metal and Mineral Markets) bearing the date hereinafter specified.

Lead: 80% of the assay, at 90% of the quotation in the said issue of the Engineering &Mining Journal (Metal & Mineral Markets) for lead at St. Louis less one and one-quarter (1¼¢) cents per pound. Lead to be determined wet on ore.

Copper: If 1% or more contained 80% of the assay, at quotation in the said issue of the Engineering & Mining Journal (Metal and Mineral Markets) for electrolytic copper less four and one-half (4 ½¢) cents.

Zinc: The assay termed "H" shall be inserted in the formula.

$$R = \frac{100\ C}{H\ E}$$

Wherein R = Ratio of concentration
C = 43% assumed
E = 82% assumed

the value of R thus obtained will then be divided into the "net smelter return" value of a ton of zinc concentration carrying 43% zinc and no precious metals calculated for delivery to a gas belt smelter upon the quotation in the said issue of the Engineering and Mining Journal (Metal and Mineral Markets) for zinc at St. Louis and upon the following schedule -

BASE

Assay : 40% zinc
Price : $20.50 @ $5. quotation

VARIATION

Assay : $1.00 per unit, up and down
Quotation: From $5. to $6. add 5¢ to the base price for each one cent increase per hundred pounds of spelter
From $6. to $7. add 4¢ to the base price for each one cent increase per hundred pounds of spelter
From $7. to $8. add 3¢ to the base price for each one cent increase per hundred pounds of spelter
No increase for quotations in excess of $8.
No decrease for quotations under $5.
Freight : $8. per ton

The value of a ton of concentrates thus obtained is, as above stated, to be divided by " R " as above calculated and the figure thus obtained is the value of the zinc to be used in the "Calculated heads Valuation" above set forth.

Having obtained the value for gold, silver, copper, lead and zinc there are to be deducted from their sumned value two items -

First: Treatment on lead concentrates.

Assuming ratio of concentration to be three to one, the concentrates approximate an analysis which, allowing for iron insoluble, and sulphur, call for a total deduction of $4. per ton of concentrates. The freight on such a ton of concentration is approximately $4.50, total charges $8.50 equal to $2.83 per ton of crude ore.

Second: Milling, per ton of crude ore $2.

Thus, after making deduction of these two items (total $4.83) from the sumned value of the metals contained in the ore the "calculated heads valuetion" has been obtained and is the figure upon which the foregoing royalties are to be applied.

AS AN EXAMPLE, assume an ore assaying -

Gold	Silver	Lead	Copper	Zinc
0.05	8.0	9.0	1.0	18.0

Assume quotations of

Silver: 50¢ per ounce
Lead: $4.50 per hundred pounds

Copper: 17 ½¢ per pound

Zinc: $7.50 per hundred pounds

Gold: 90% of 0.05 oz @ $19 . . . . . $0.85

Silver: 85% of 8.0 oz. @ 95% of $0.50 . . . . . 3.23

Lead: 80% of 9.0% @ 90% ($4.50 less $1.25) 4.21

Copper: 80% of 1.0% @ 17 ½¢ less 4 ½¢ 2.08

Zinc: $\frac{R - 100\ C}{H\ E} = \frac{100 \times 43 - 2.97}{18 \times 82}$

Value of a ton of 43% concentrates @ $5. quotation
egaals $20.50 plus $3. . . . . 23.50
Additional for quotation $5. to $6 . . . . 5.00
" " " $6. to $7. . . . 4.00
" " " $7. to $7.50 . . 1.50
34.00
Freight 8.00
26.00
$26. divided by $2.97 . . . 8.75
19.12

YUBA DIKE MINES, INCORPORATED
PIOCHE, NEVADA

Forward 19.12

Treatment and freight on lead concentrates		
$8.50 divided by 3 equals	2.83	
Milling per ton crude ore	2.00	4.83
		14.29

Royalty on $14.29 ore is 20% 2.86

The quotation used in determining the royalty shall be that of the Engineering & Mining Journal (Metal and Mineral Markets) of the same date as the bill-of-lading.

8.(a) The royalty on milling ore, arrived at by the foregoing calculations, shall then be subject to a deduction of twenty-five (25%) percent thereof on all ores of a calculated heads valuation of Eleven and 25/100 ($11.25) Dollars and over per ton, and a deduction of thirty-five (35%) percent on all ores of a calculated heads valuation of less than Eleven and 25/100 ($11.25) Dollars per ton, provided that the minimum royalty on all milling ores containing ten (10%) percent combined lead and zinc or more shall be thirty-five (35¢) cents per ton of 2000 pounds.

8.(b) On ores extracted and shipped from the ground below a horizontal plane at an elevation of 5100 feet above sea level within the vertical boundaries of the Alberta (U.S. Lot #2714), Alberta No. 2 (U.S. Lot #2714), Susan Duster (U.S. Lot #2714), Zero (U.S. Lot #49), and Scipio (U.S.Lot #50), lode mining claims and within such portions of the Deerfoot (U.S.Lot #52), Index (U.S. Lot #42), and Williams and Goodspeed claims as lie west of a vertical plane through the east side of the Zero claim, Lessee shall pay to Lessor in addition to the earned royalties calculated in conformity with paragraphs 1, 2, 3, 4, 5, 6, and 7, of agreement of March 1, 1932 and 8 (a) as written above, amounts (considered as additional earned royalty) equivalent to ten percent of any premiums or bonuses paid to the Lessee by any Government agency on account of metal contained in the ores produced from said ground. No additional royalty shall be payable on account of premiums or bonuses paid to the Lessee by any Government agency on account of metal contained in ores produced from any portion of the leased ground other than that specifically described above.

(As Amended by Supplemental Agreement Dated Dec. 17, 1942)

9. No royalties or other payments hereunder paid by Lessee shall be returned in event of termination of this lease for any cause or in any other event, unless otherwise provided for by mutual agreement.

For and in consideration of One Thousand shares of fully paid Yuba Dike Mines Incorporated stock to be issued to John A. Hedman, One Thousand shares fully paid stock to be issued to Alexander Lloyd, and One Thousand shares fully paid stock to be issued to F. L. Heidenreich, the above named do hereby assign and transfer all their interest and rights in and to that certain lease dated July 2, 1953 between the above named and Combined Metals Reduction Company and all their rights and interest in and to that certain lease between Amalgamated Pioche Mines and Smelters Corporation and the above named parties.

Dated at Pioche,
Nevada this
1st day of
September, 1953

John A. Hedman

Alexander Lloyd

F. L. Heidenreich

STATE OF NEVADA)
)
County of Lincoln)

S E A L

On this 1st day of September, 1953, personally appeared before me, a Notary Public, in and for Lincoln County, State of Nevada, John A. Hedman, Alexander Lloyd, and F. L. Heidenreich known to me to be the persons whose names are subscribed to the foregoing paper and who acknowledged to me that they executed the same freely and voluntarily and for the uses and purposes therein mentioned.

WITNESS my hand and seal the day and year in this paper first above written.

E. L. Nores
NOTARY PUBLIC

My Commission Expires July 29,1954

YUBA DIKE MINES, INCORPORATED
PIOCHE, NEVADA

CONSENT TO ASSIGN SUBLEASE

WHEREAS, the Combined Metals Reduction Company is in possession of certain mining property in Ely Mining District, Lincoln County, Nevada, as Lessee of Amalgamated Pioche Mines and Smelters Corporation, as Lessor, under a lease agreement dated March 1, 1932, and a supplemental agreement dated December 17, 1942, and

WHEREAS, Combined Metals Reduction Company has subleased to Alexander Lloyd, John A. Hedman and F. L. Heidenreich a certain portion of said premises

NOW THEREFORE, Amalgamated Pioche Mines and Smelters Corporation does hereby consent that said sublease may be assigned to Yuba Dike Mines Incorporated, a Nevada Corporation, its successors and assigns.

Dated this 6th day of August, 1953.

AMALGAMATED PIOCHE MINES AND SMELTERS CORPORATION

SEAL

By Wm. F. Roberts
President

ATTEST:

V.B. Wallder
Secretary

AMALGAMATED MINES, INC. CORPORATION
PIOCHE, NEVADA

CONSENT TO ASSIGN LEASE

WHEREAS, the Amalgamated Pioche Mines and Smelters has entered into lease agreement dated August 6th, 1953 1953 with Alexander Lloyd, John A. Hedman and F. L. Heidenreich, Lessees,

NOW THEREFORE, the Amalgamated Pioche Mines and Smelters Corporation does hereby consent that said Lease may be assigned to Yuba Dike Mines Incorporated, a Nevada Corporation, its successors and assigns.

Dated this 6th day of August, 1953.

AMALGAMATED PIOCHE MINES AND SMELTERS CORPORATION

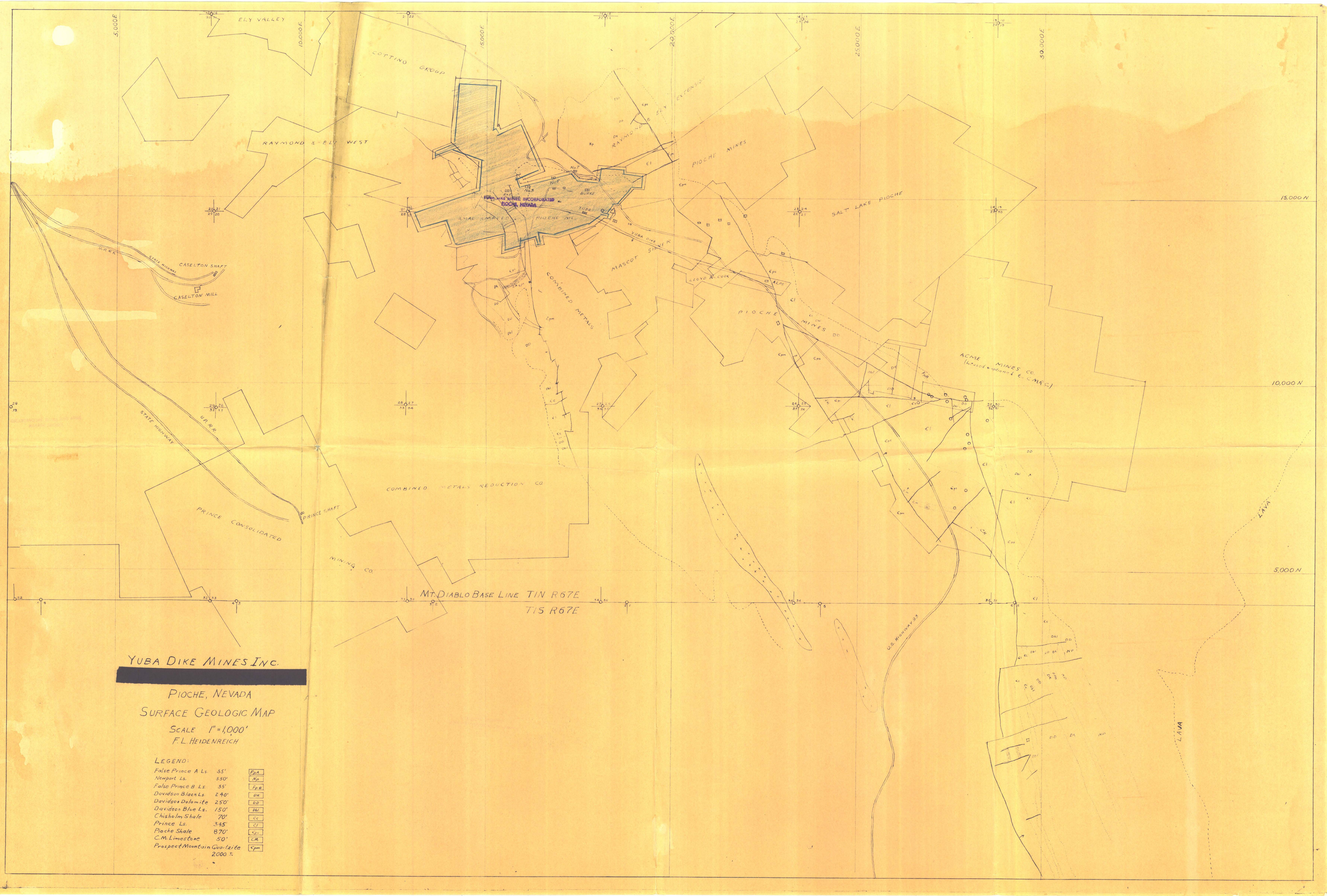
By Wm. F. Roberts
President

S E A L

ATTEST:

V.B.Wallder
Secretary

YUBA DIKE MINES INC.
LOVELOCK, NEVADA



YUBA DIKE MINES INC.

[redacted]

PIOCHE, NEVADA

SURFACE GEOLOGIC MAP

SCALE 1" = 1,000'

F. L. HEIDENREICH

LEGEND:

False Prince A Ls.	35'	FpA
Newport Ls.	550'	Np
False Prince B Ls.	35'	FpB
Davidson Black Ls.	240'	DK
Davidson Dolomite	250'	DD
Davidson Blue Ls.	150'	DBl
Chisholm Shale	70'	Cc
Prince Ls.	345'	Cl
Pioche Shale	870'	Ep
C.M. Limestone	50'	CM
Prospect Mountain Quartzite	2000 ±	Epm

PLAN OF THE 12TH AND 14TH LEVELS
NO. ONE MINE

AMALGAMATED PIOCHE MINES & SMELTERS CORP.
PIOCHE, NEV.

Scale 1" = 20'

June, 194

N

Assumed North

12th & 14th Levels

Black Ledge Winze on 12th Level

Black Ledge Winze on 13th Level

13th Level

SHAFT NO. ONE

BULKHEAD

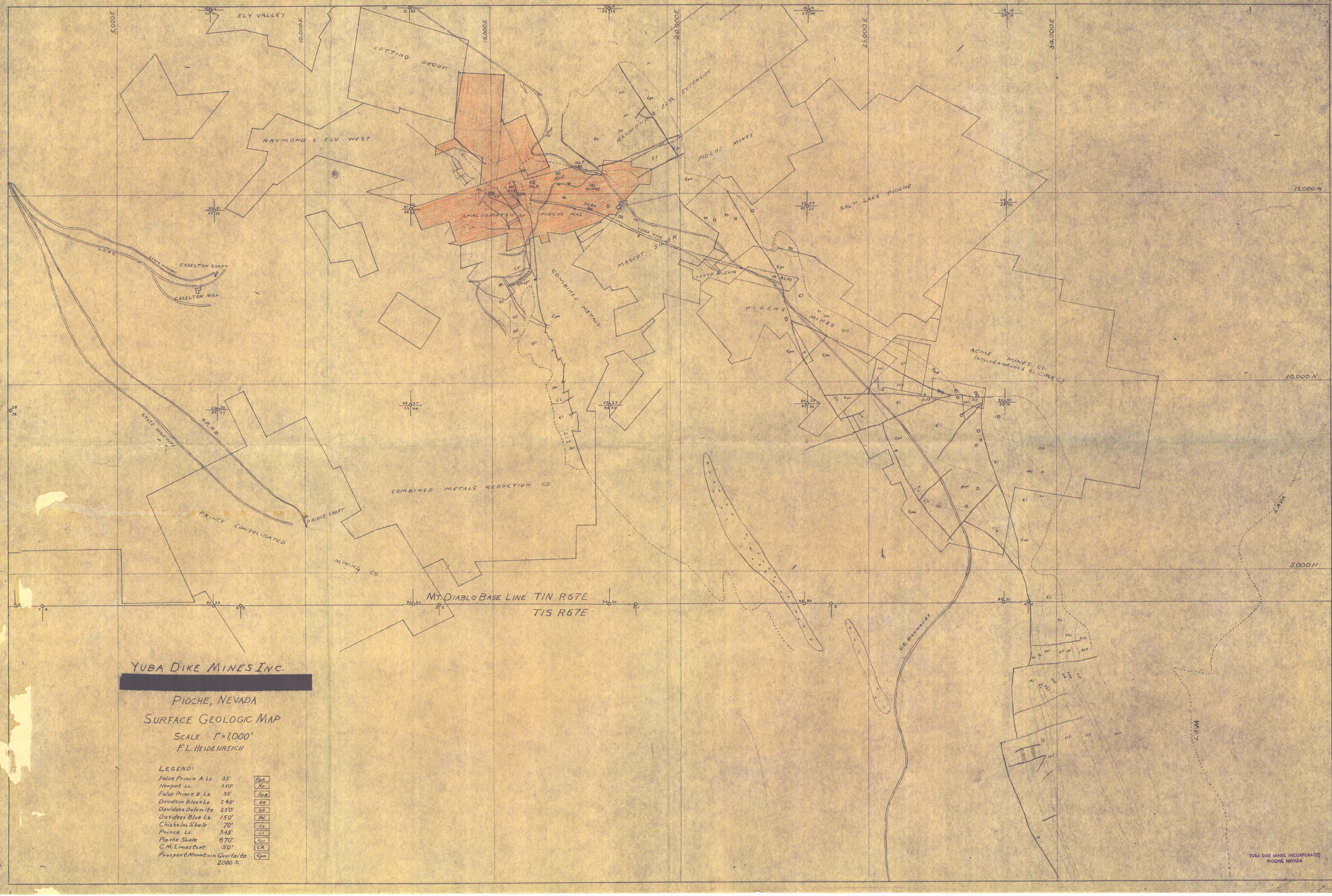
12TH LEVEL WEST

14TH LEVEL WEST

14TH LEVEL WEST 1ST NORTH

14TH LEVEL WEST 1ST SOUTH

YUBA DIKE MINES, INCORPORATED
PIOCHE, NEVADA



YUBA DIKE MINES INC.

PIOCHE, NEVADA

SURFACE GEOLOGIC MAP

SCALE 1" = 1,000'

F.L. HEIDENREICH

LEGEND:

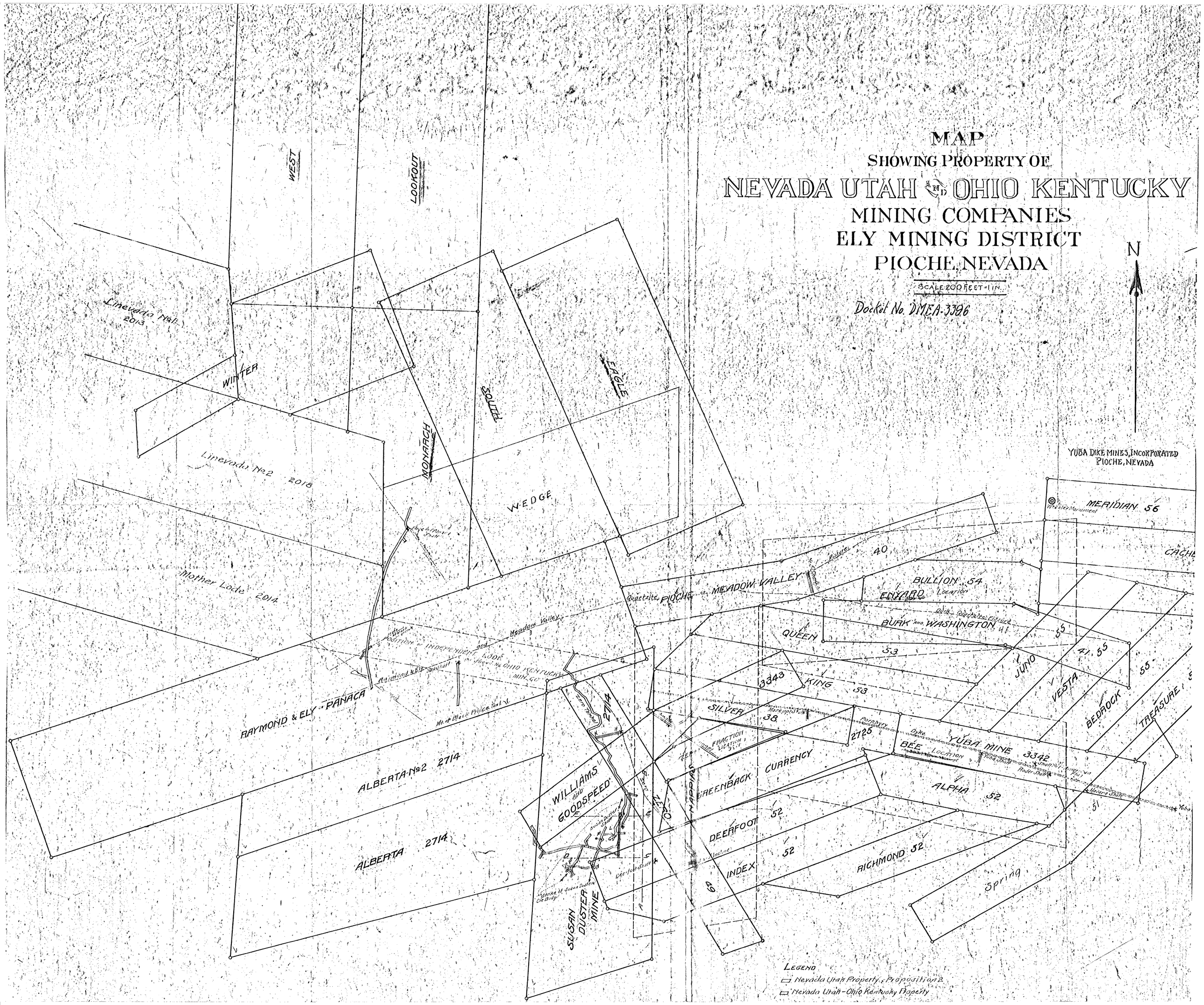
False Prince A Ls.	35'	FpA
Newport Ls.	550'	Np
False Prince B Ls.	35'	FpB
Davidson Black Ls.	240'	DK
Davidson Dolomite	250'	DD
Davidson Blue Ls.	150'	Dbl
Chisholm Shale	70'	Cc
Prince Ls.	345'	Cl
Pioche Shale	870'	Cpc
C.M. Limestone	50'	CM
Prospect Mountain Quartzite	2000 ±	Cpm

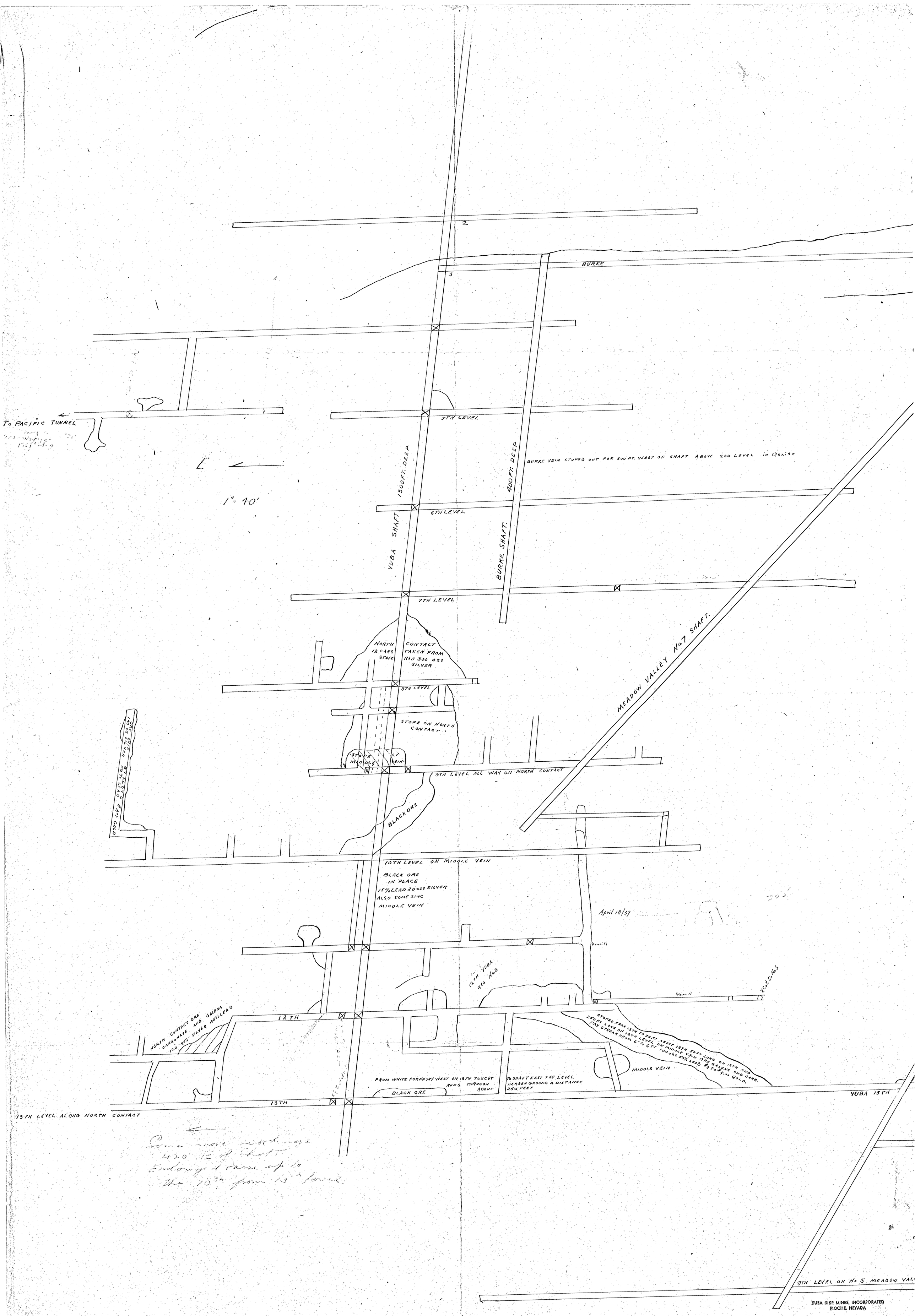
YUBA DIKE MINES, INCORPORATED
PIOCHE, NEVADA

MAP
SHOWING PROPERTY OF
NEVADA UTAH & OHIO KENTUCKY
MINING COMPANIES
ELY MINING DISTRICT
PIOCHE, NEVADA

SCALE 200 FEET - 1 IN.

Docket No. DMEA-3396





YUBA DIKE MINES, INCORPORATED
PIOCHE, NEVADA

Stope Map
the 12th - 13th or 14th Levels
No 1 - Mine
Amalgamated Pioche Mines and Smelters Corp.
July 14th 1915
scale 1" = 20'

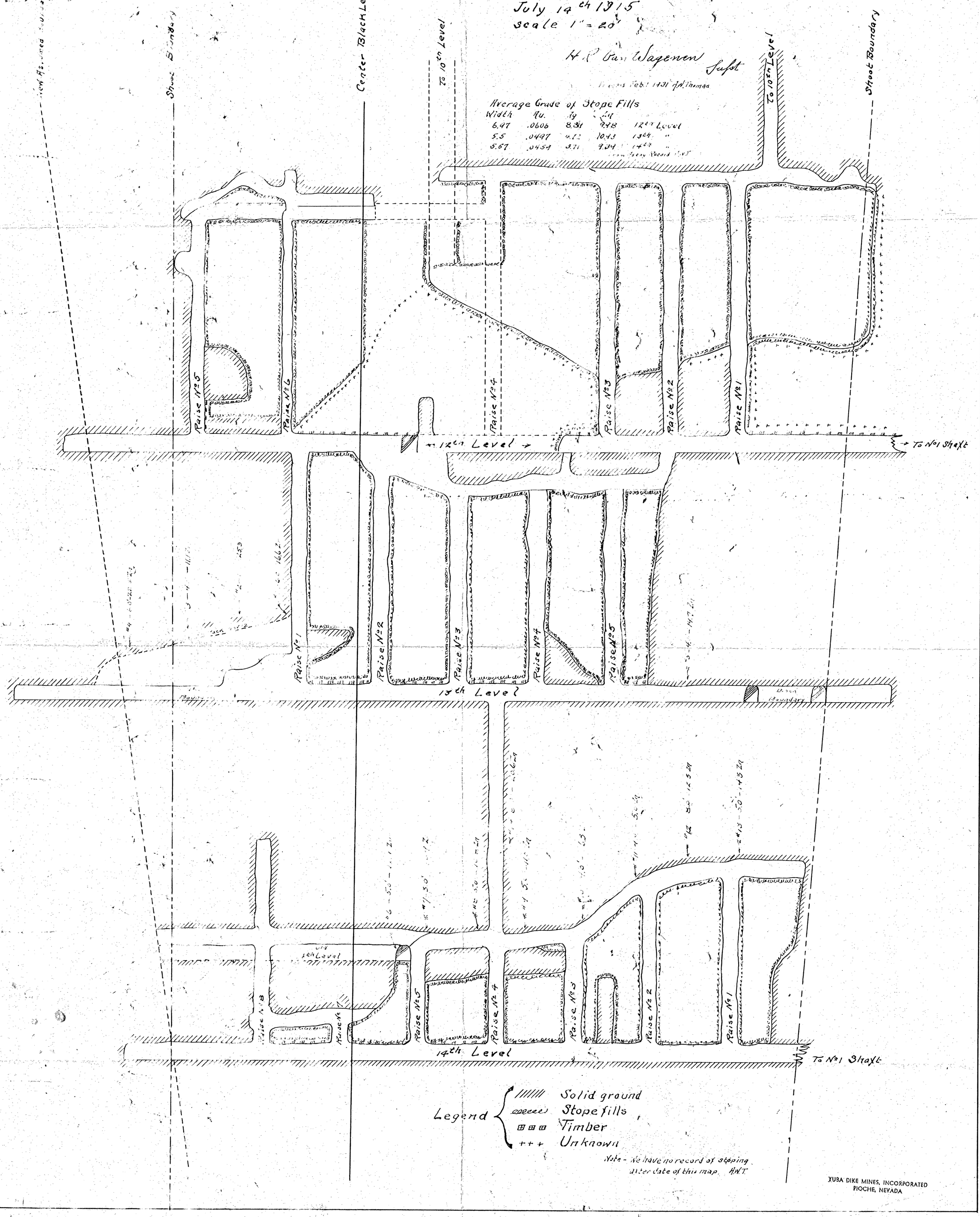
H. P. Van Wagenen Supt

Traced Feb. 1931 A.W. Thomas

Average Grade of Stope Fills

Width	Au.	Ag	Zn	
6.97	.0606	8.31	9.48	12th Level
5.5	.0497	4.12	10.43	13th "
5.67	.0454	3.71	9.34	14th "

From Assay Record 1917

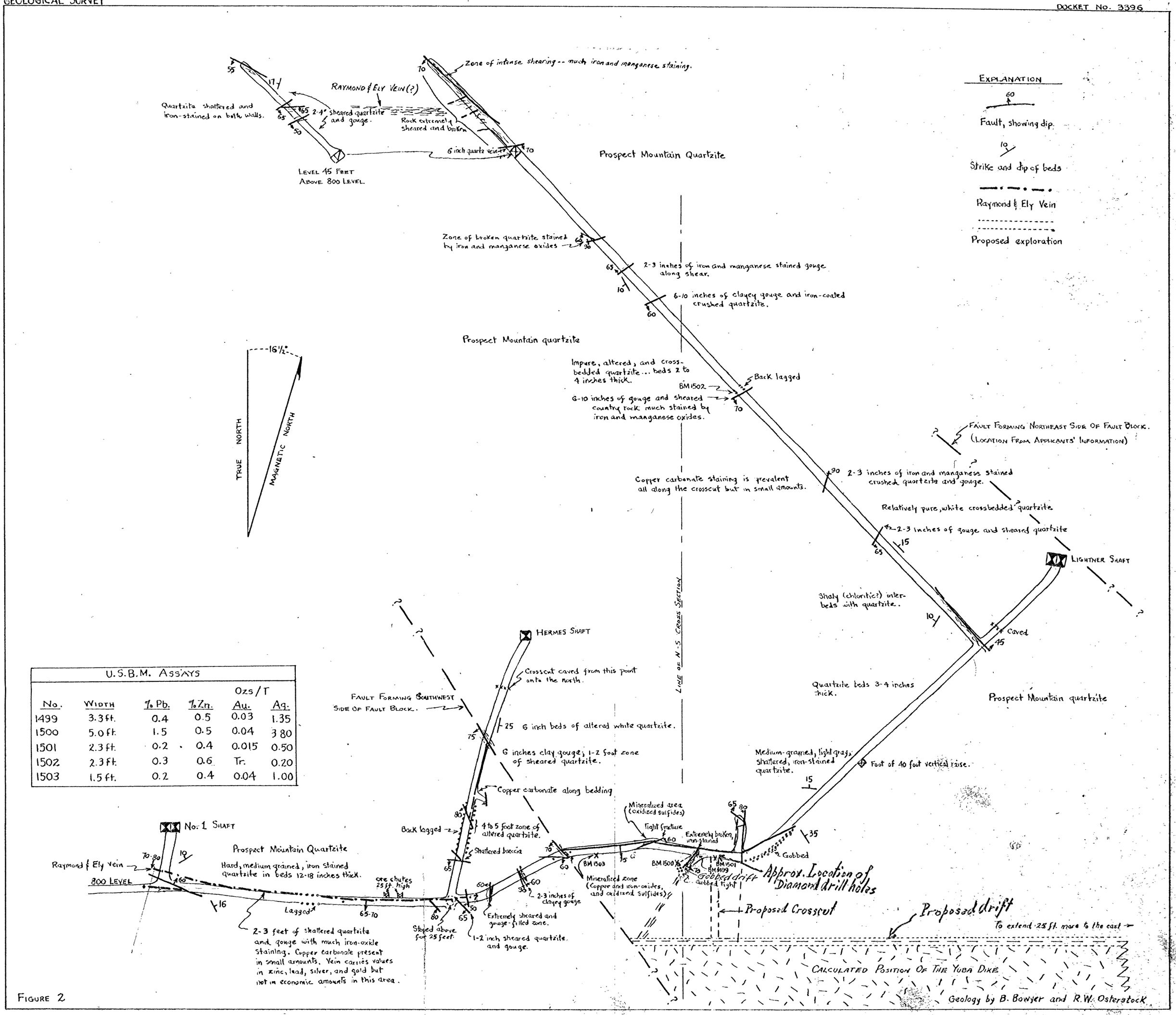


Legend
- Solid ground
- Stope fills
- Timber
- Unknown

Note - We have no record of stoping after date of this map. H.W.T.

YUBA DIKE MINES, INCORPORATED
PIOCHE, NEVADA

LINEVADA NO. 3
MOTHER LODE NO. 2
LINEVADA NO. 2
MOTHER LODE
MOTHER LODE NO. 2
DORIS NO. 11
MOTHER LODE NO. 2
MOTHER LODE
MOTHER LODE
MOTHER LODE NO. 1.
MOTHER LODE
PANACA
WEDGE
PANACA
GREENWOOD SHAFT
NO. ONE SHAFT
Collar Elev. 6341
DORIS NO. 11
MOTHER LODE NO. 1.
DORIS NO. 2
MOTHER LODE NO. 1
MOTHER LODE NO. 1
1200 LEVEL
STOPES
LEVEL
DORIS NO. 2
DORIS NO. 4
PANACA
DORIS NO. 4
DORIS
PANACA
ALBERTA NO. 2
ALBERTA NO. 2
ALBERTA
LEVEL ELEVATIONS
AT
No. 1 SHAFT
350 LEVEL 5990
420 " 5924
540 " 5808
650 " 5696
700 " 5526
800 " 5073
1200 " 5073
16000 N
15500 N
15000 N
14500 N
14000 N
12000 E
12500 E
13000 E
13500 E
14000 E
14500 E
15000 E
YUBA DIKE MINES, INCORPORATED
PIOCHE, NEVADA
DRAWN
TRACED
CHECKED
APPROVED
COMBINED METALS REDUCTION CO.
PIOCHE, NEVADA
COMPOSITE MAP
NO. ONE MINE
SCALE 1" = 100'
D-1036



U.S.B.M. ASSAYS

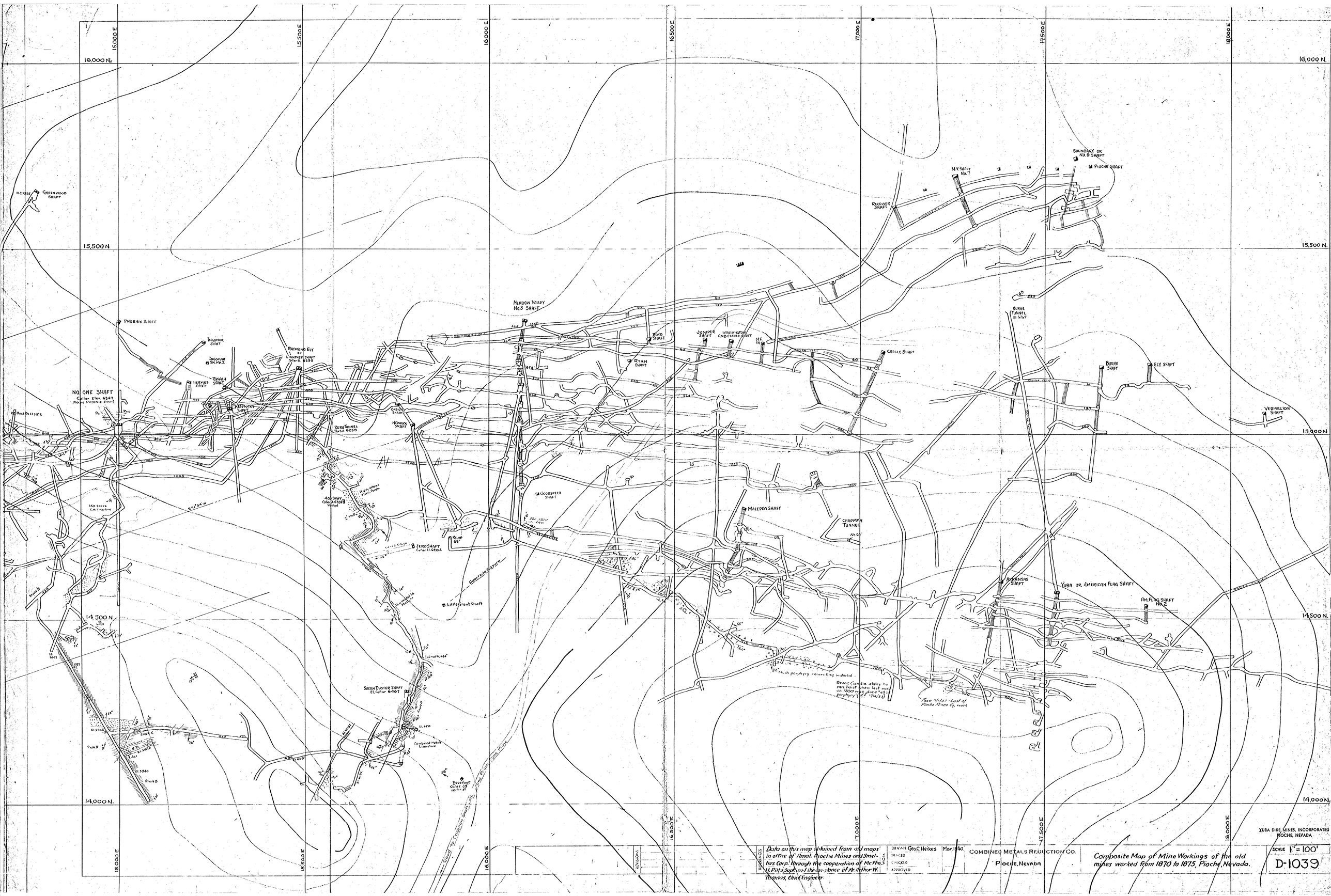
No.	Width	% Pb.	% Zn.	Ozs/T Au.	Ozs/T Ag.
1499	3.3 ft.	0.4	0.5	0.03	1.35
1500	5.0 ft.	1.5	0.5	0.04	3.80
1501	2.3 ft.	0.2	0.4	0.015	0.50
1502	2.3 ft.	0.3	0.6	Tr.	0.20
1503	1.5 ft.	0.2	0.4	0.04	1.00

FIGURE 2

PLAN AND GEOLOGIC MAP OF PART OF THE 800 LEVEL, YUBA DIKE MINES, INC.

LINCOLN COUNTY, NEVADA

Docket No. DMEA-3396



Data on this map obtained from old maps in office of Nevada Pioche Mines and Smelters Corp. through the cooperation of Mr. Wm. H. Pitts, Supt. and the assistance of Mr. Arthur W. Thomas, Chief Engineer.

DRAWN	Geo. C. Heikes	Mar. 1940
TRACED		
CHECKED		
APPROVED		

COMBINED METALS REDUCTION CO.
Pioche, Nevada

Composite Map of Mine Workings of the old mines worked from 1870 to 1875, Pioche, Nevada.

YUBA DIKE MINES, INCORPORATED
HOCHE, NEVADA

SCALE 1" = 100'

D-1039

MAP

SHOWING PROPERTY OF

NEVADA UTAH AND OHIO KENTUCKY

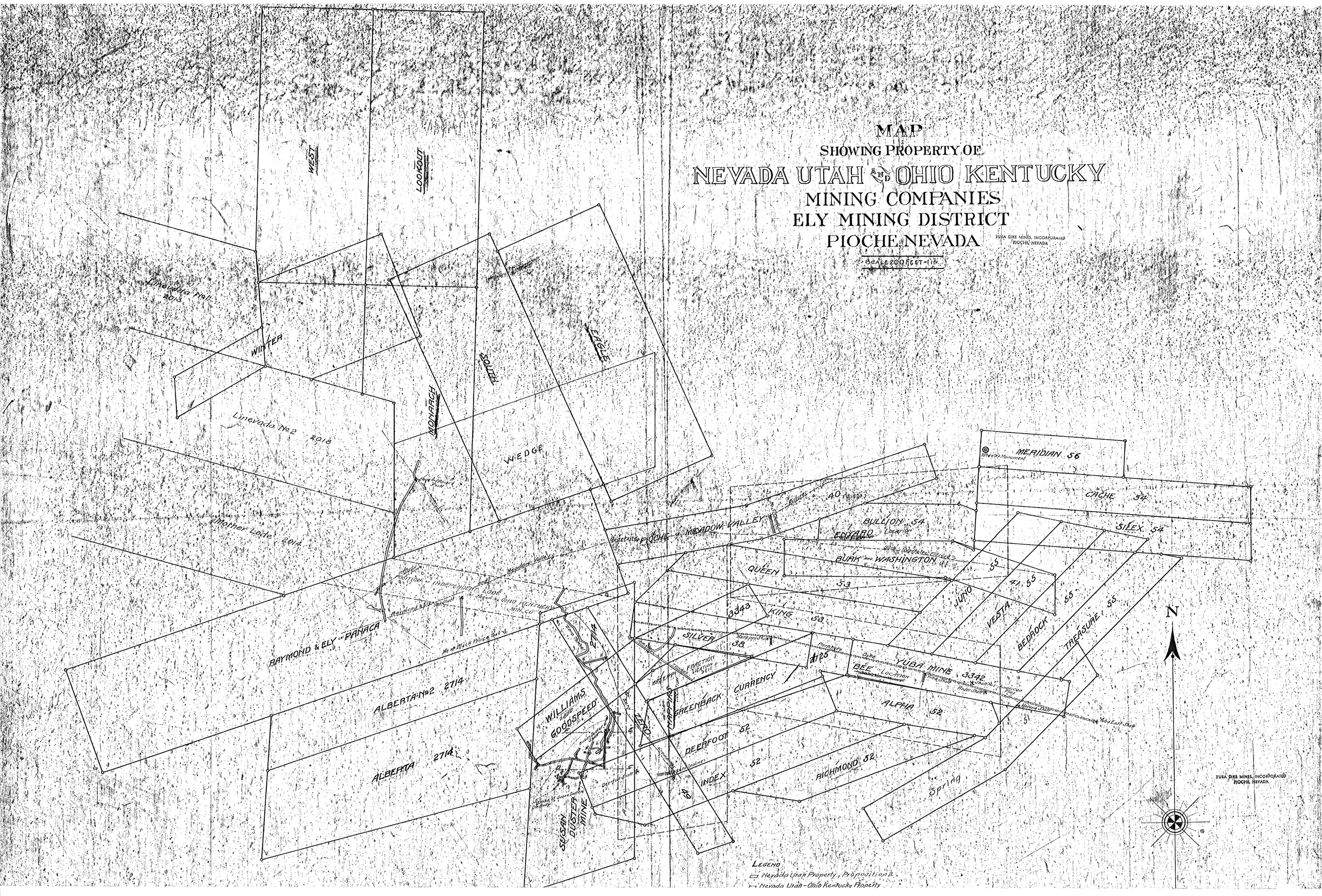
MINING COMPANIES

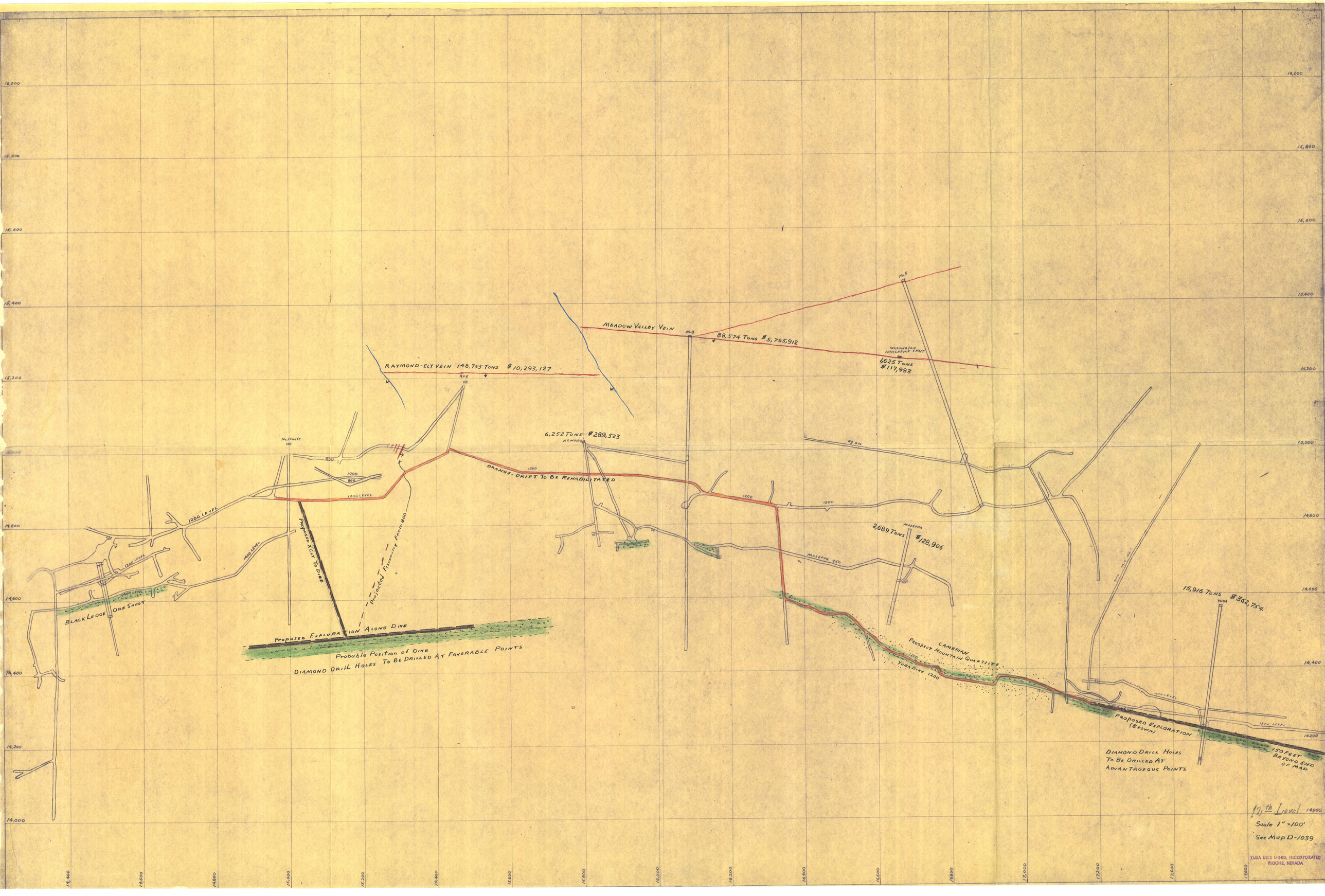
ELY MINING DISTRICT

PIOCHE, NEVADA

YUBA DIKE MINES, INCORPORATED
PIOCHE, NEVADA

SCALE 200 FEET - 1 IN.




MEADOW VALLEY VEIN
No. 3
88,574 TONS $5,795,912
No. 5
WASHINGTON AND CAPITOL SHAFT
6625 TONS
$117,983
RAYMOND-ELY VEIN 148,755 TONS $10,293,127
R+E
6,252 TONS $289,523
NEWARK
No. 5 SHAFT
ORANGE-DRIFT TO BE REHABILITATED
1200 LEVEL
1000
800
1200
Proposed X-CUT TO DIKE
Projected Fissuring from 800
1200 LEVEL
1800 LEVEL
1400 LEVEL
BLACK LEDGE ORE SHOOT
MAZEPPA
2689 TONS
$128,906
MAZEPPA 750
15,916 TONS
$363,754
YUBA
CAMBRIAN
Prospect Mountain Quartzite
YUBA DIKE 1200
Proposed Exploration Along Dike
Probable Position of Dike
Diamond Drill Holes To Be Drilled At Favorable Points
Proposed Exploration (Brown)
Diamond Drill Holes To Be Drilled At Advantageous Points
150 Feet Beyond End of Map
15th Level
Scale 1" = 100'
See Map D-1039
YUBA DIKE MINES, INCORPORATED
PIOCHE, NEVADA

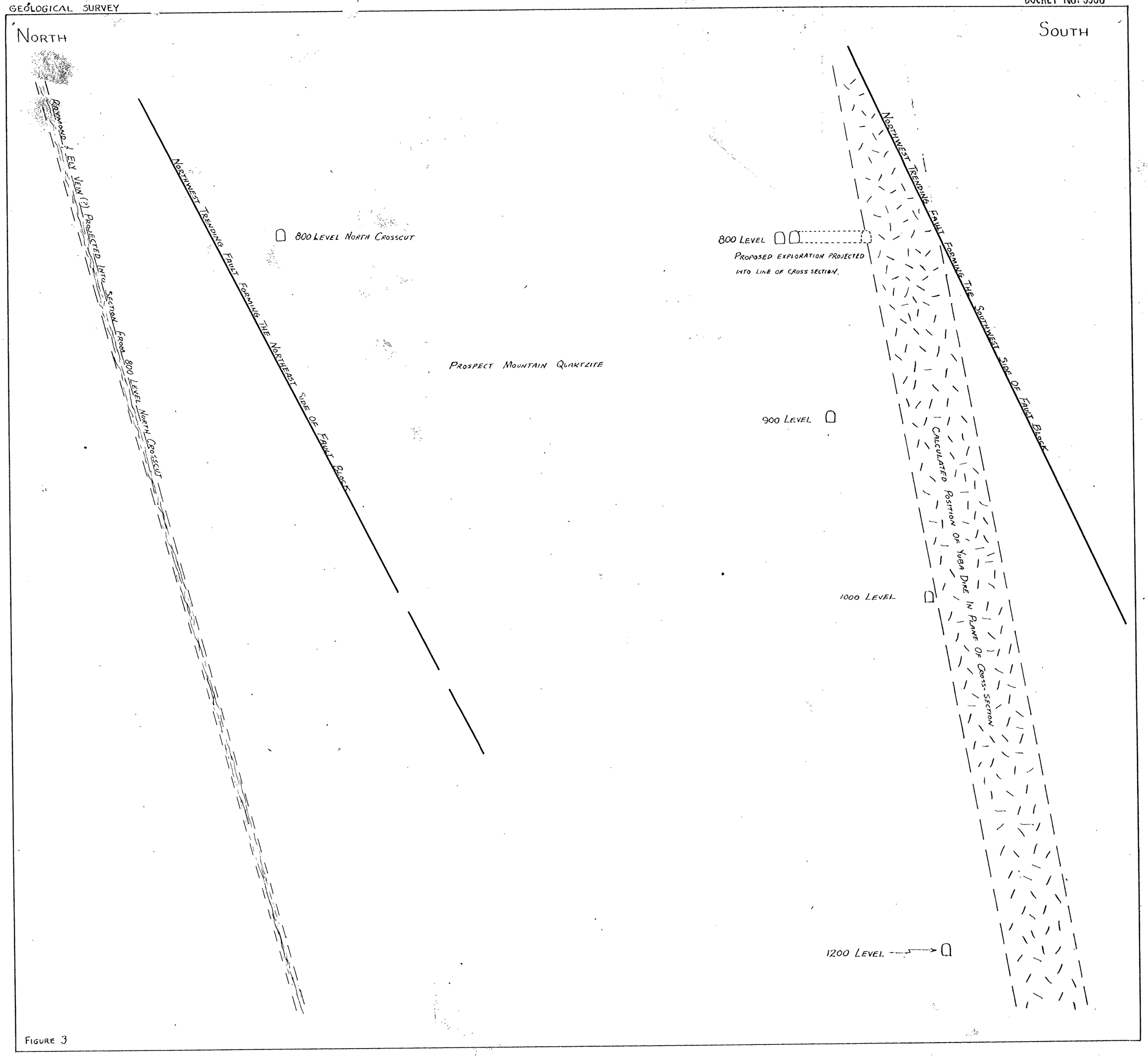
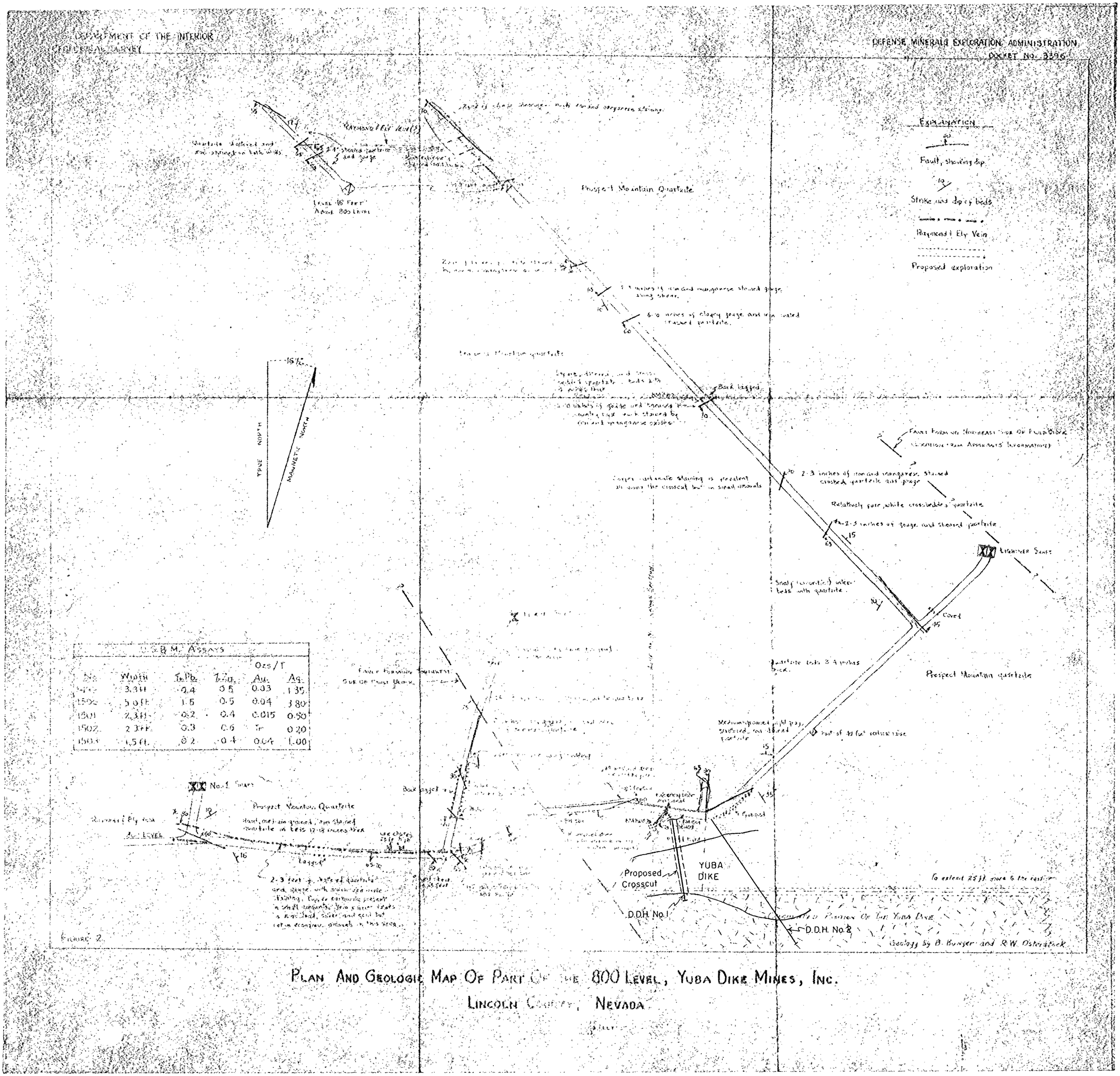


FIGURE 3

NORTH-SOUTH CROSS SECTION THROUGH LOWER LEVELS OF YUBA DIKE MINES, INC., 280 FEET EAST OF NO. 1 SHAFT

LINCOLN COUNTY, NEVADA

0 20 40 FEET



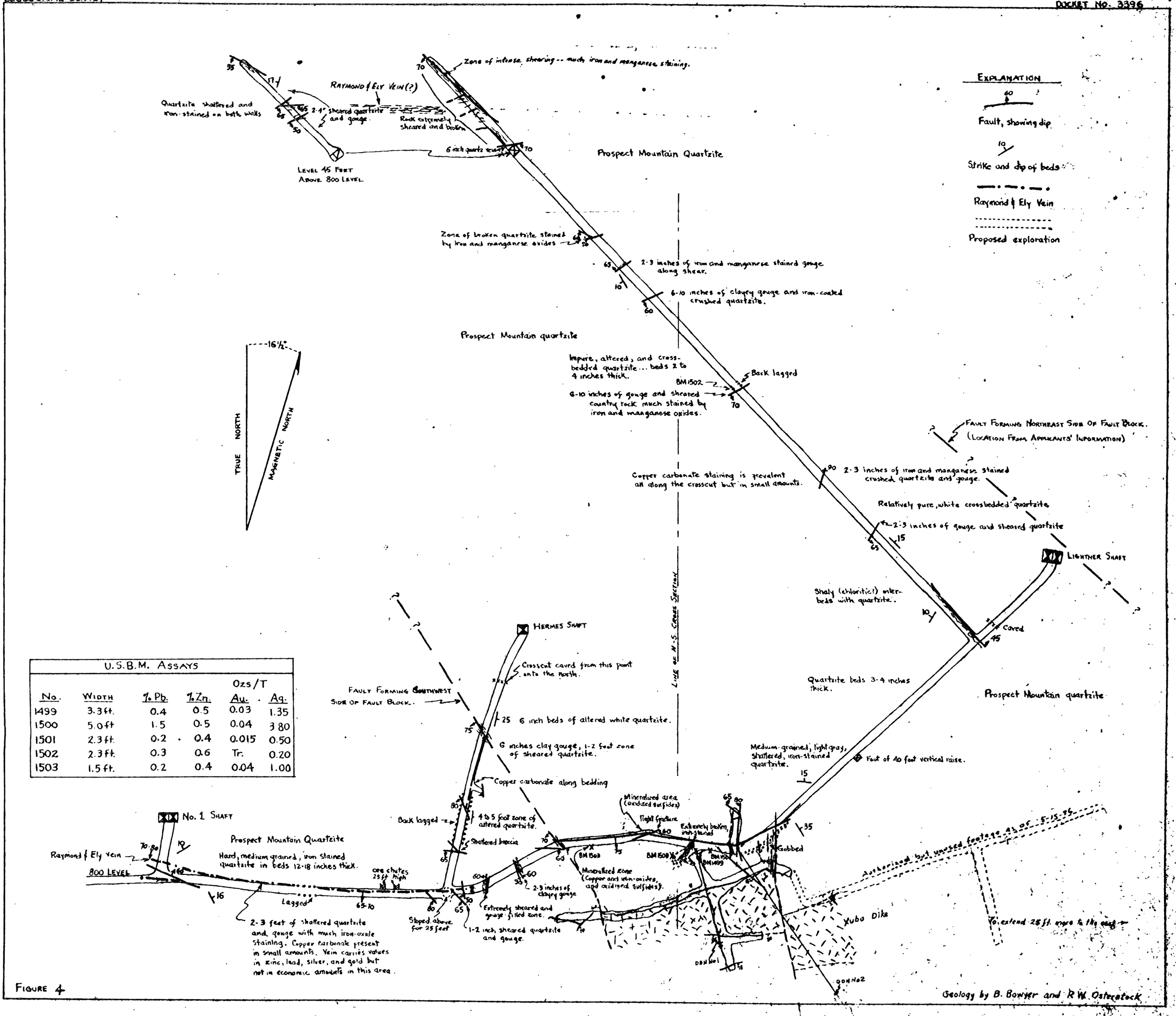
U.S.B.M. Assays

No.	Width	% Pb.	% Zn.	Ozs/T Au.	Ag.
1502	3.3 ft	0.4	0.5	0.03	1.35
1502	5.0 ft	1.5	0.5	0.04	3.80
1501	2.3 ft	0.2	0.4	0.015	0.50
1502	2.3 ft	0.3	0.6	Tr	0.20
1503	1.5 ft	0.2	0.4	0.04	1.00

FIGURE 2.

PLAN AND GEOLOGIC MAP OF PART OF THE 800 LEVEL, YUBA DIKE MINES, INC.

LINCOLN COUNTY, NEVADA



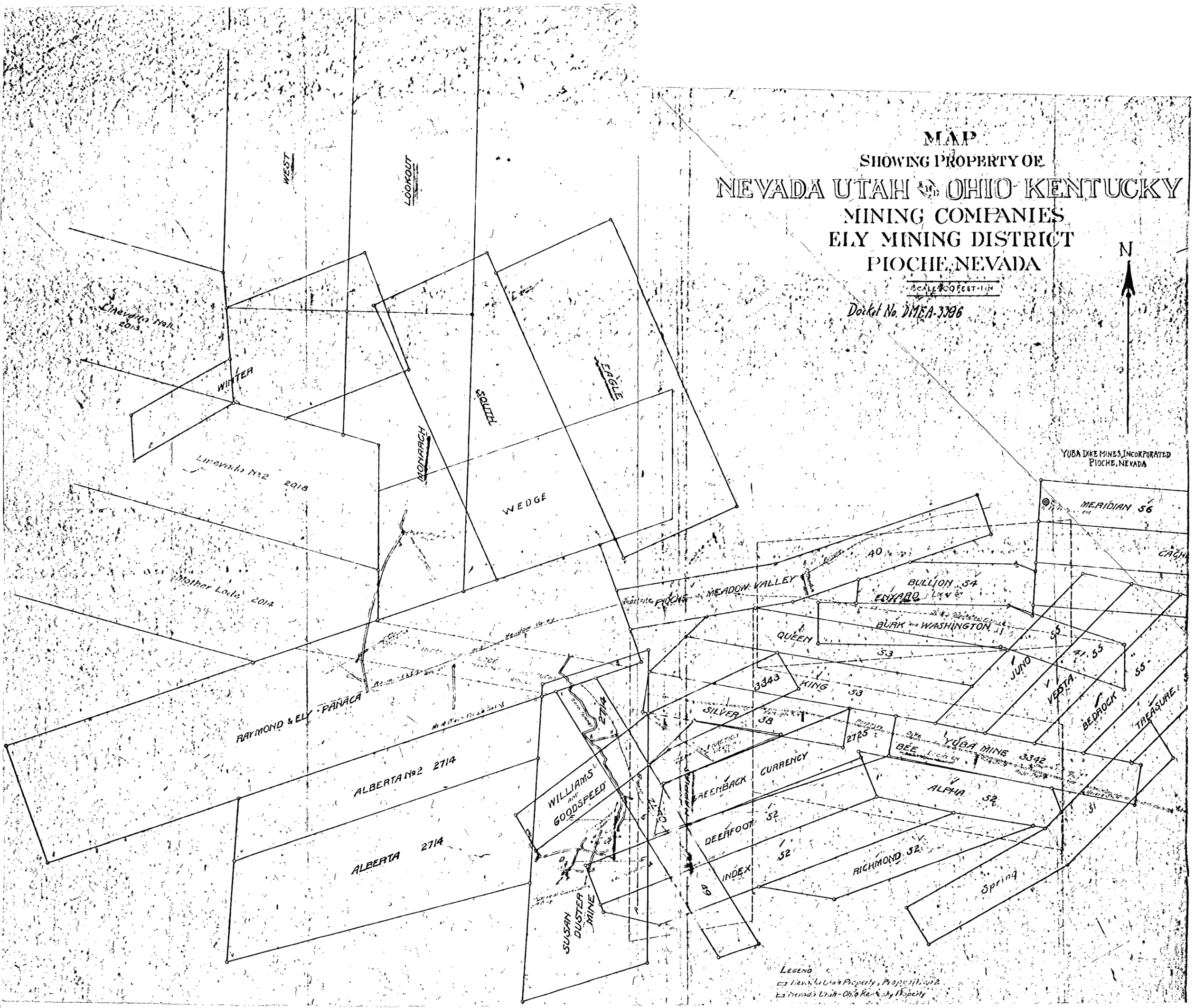
U.S.B.M. ASSAYS					
				Ozs/T	
No.	Width	% Pb.	% Zn.	Au.	Ag.
1499	3.3 ft.	0.4	0.5	0.03	1.35
1500	5.0 ft	1.5	0.5	0.04	3.80
1501	2.3 ft.	0.2	0.4	0.015	0.50
1502	2.3 ft.	0.3	0.6	Tr.	0.20
1503	1.5 ft.	0.2	0.4	0.04	1.00

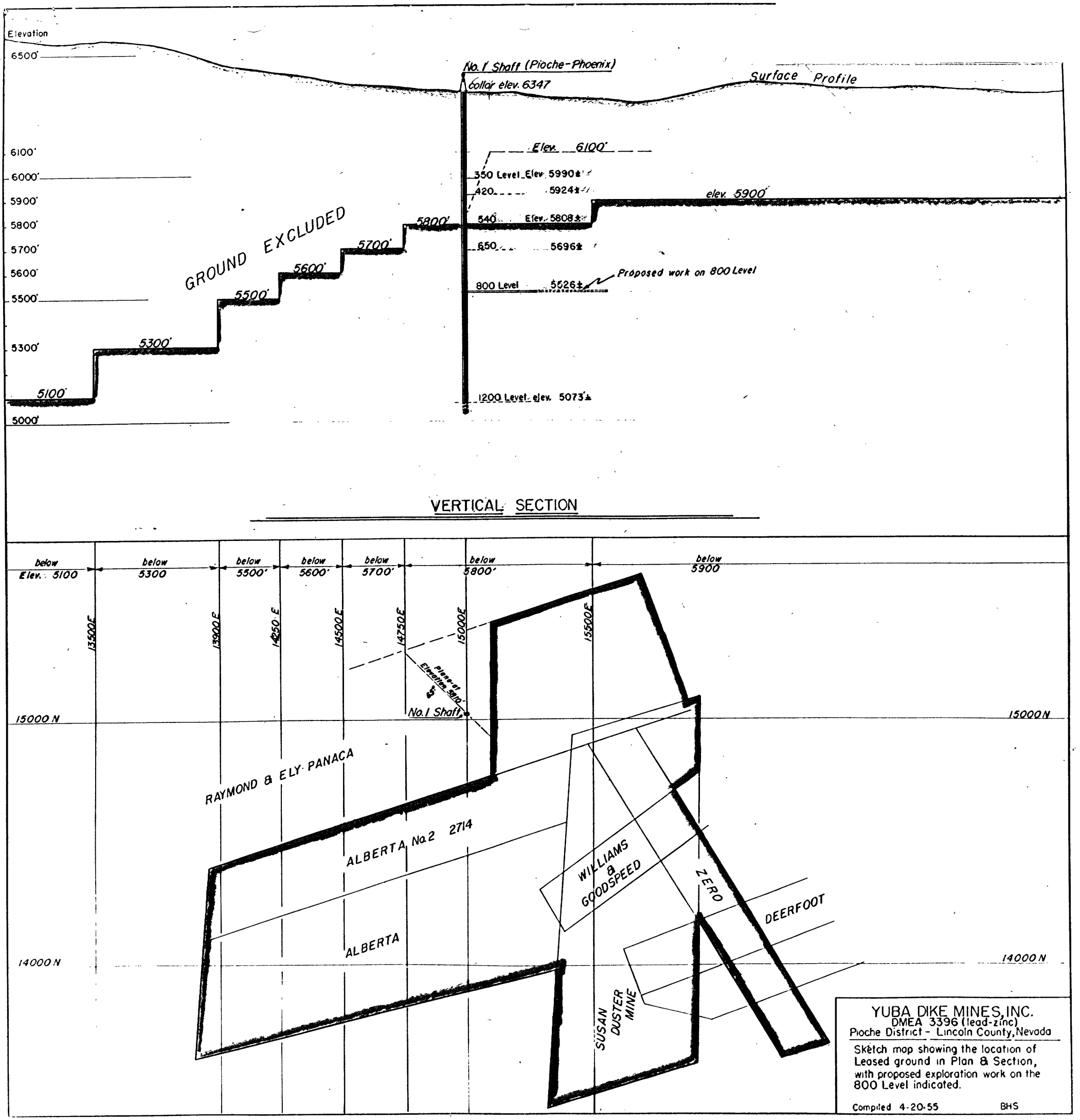
FIGURE 4

PLAN AND GEOLOGIC MAP OF PART OF THE 800 LEVEL, YUBA DIKE MINES, INC.

LINCOLN COUNTY, NEVADA

0 20 40 FEET


MAP
SHOWING PROPERTY OF
NEVADA UTAH & OHIO KENTUCKY
MINING COMPANIES
ELY MINING DISTRICT
PIOCHE, NEVADA
SCALE 200 FEET - 1 IN
Docket No. DMEA-3396
N
YUBA DIKE MINES, INCORPORATED
PIOCHE, NEVADA
WEST
LOOKOUT
WINTER
MONARCH
SOUTH
EAGLE
WEDGE
Linevada No. 2013
Linevada No 2 2018
Mother Lode 2014
MERIDIAN 56
CACH
40
BULLION 54
EDWARD
PIOCHE MEADOW VALLEY
BURK AND WASHINGTON
QUEEN
53
55
JUNO
41, 55
VESTA
55
BEDROCK
TREASURE
3343
KING 53
SILVER 38
2725
YUBA MINE 3342
BEE
RAYMOND & ELY PANACA
ALBERTA No 2 2714
ALBERTA 2714
WILLIAMS AND GOODSPEED
2714
GREENBACK CURRENCY
ALPHA 52
DEERFOOT 52
INDEX 52
RICHMOND 52
Spring
49
51
SUSAN DUSTER MINE
LEGEND
Nevada Utah Property, Proposition 2
Nevada Utah-Ohio Kentucky Property


Elevation
6500'
6100'
6000'
5900'
5800'
5700'
5600'
5500'
5300'
5100'
5000'
No. 1 Shaft (Pioche-Phoenix)
Collar elev. 6347
Surface Profile
Elev. 6100'
350 Level Elev. 5990±
420 5924±
elev. 5900'
540 Elev. 5808±
650 5696±
800 Level 5526±
Proposed work on 800 Level
1200 Level elev. 5073'±
GROUND EXCLUDED
5100'
5300'
5500'
5600'
5700'
5800'
VERTICAL SECTION
below Elev. 5100
below 5300
below 5500'
below 5600'
below 5700'
below 5800'
below 5900
13500E
13900E
14250E
14500E
14750E
15000E
15500E
Plane at Elevation 5810'
No. 1 Shaft
15000 N
14000 N
RAYMOND & ELY PANACA
ALBERTA No. 2 2714
ALBERTA
WILLIAMS & GOODSPEED
ZERO
DEERFOOT
SUSAN DUSTER MINE
YUBA DIKE MINES, INC.
DMEA 3396 (lead-zinc)
Pioche District - Lincoln County, Nevada
Sketch map showing the location of Leased ground in Plan & Section, with proposed exploration work on the 800 Level indicated.
Compiled 4-20-55
BHS