DMEA Form 9
Rev. 6/57

UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration

OFFICIAL DOCKET FILE — Idm-E NO. 628 — DMEA NO. 2992

Application
- [ ] Denied
- [ ] Withdrawn

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

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

Folder No. 1:

Left Side

- [ ] Royalty Audits
- [x] Certification of Discovery 1-13-55
- [ ] Closing Letter
- [x] Cost Audits
- [x] Termination Notice or Agreement 10-14-54
- [ ] Recision Notice
- [ ] Assignment of Contract
- [ ] Contract Amendments
- [x] Contract with all exhibits and annexes
- [ ] Owner's Consent to Lien and Subordination Agreement
- [x] Application and attachments

Right Side

- [x] Project summary (final) 8-2-55
- [x] Work Completed analysis (final)

All other material filed in chronological order including the following reports if checked:

- [ ] Field Team Semi-Annual Report for Certified Project
- [x] Final Field Team Report (Tab) 4-13-55
- [ ] Operator's Final Report (Tab)
- [ ] Interim Field Team Reports
- [x] Operator's monthly reports and all attachments
- [x] On-site Exam Report (Tab) 9-23-53
- [x] Settlement Sheets
- [ ] Drill Logs

Additional Folders:

Left Side

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

Right Side

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

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

Folders No. 3 : Settlement Sheets.

Folders No. _____ : Drill Logs

Folders No. 3 : Royalty material left Hand Side

179

GOVERNMENT'S COPY

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

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

To: Mr. James E. Hogle, President
Consolidated Eureka Mining Co.
132 South Main Street
Salt Lake City 1, Utah

Pursuant to the provisions of Exploration Project Contract No. Idm-8628, dated October 26, 1953, Docket No. DMEA-2992, hereinafter called the "contract", between you and the United States of America, hereinafter called the "Government"; to establish and fix the Government's percentage royalty on production and its lien thereon and on the land described in the contract, the Government considers and therefore certifies that discovery or development from which production may be made has resulted from the exploration work.

The nature of said discovery or development is described broadly or indicated as follows: Work of crosscutting and drifting on the 320 foot level of the No. 1 shaft has shown the existence of lead ores occurring as replacement deposits in dolomitic rocks.

Dated: JAN 1 3 1955

WRGriswold/er (written 1/7/55)
Copy to:
Docket
Irving Gumbel, Dr., MD, EPS
Mr. Hedges, 4604
Mr. Kiilsgaard, 5224
Admr. R. File
Op. Committee
Base Metals
Cont. Adm. & Audit Div.
Finance Office
Region 3 (2)
F. E. Johnson
W. R. Griswold
Chron.

THE UNITED STATES OF AMERICA

By O P Mittendorf
Administrator, Defense Minerals
Exploration Administration

DEFENSE MINERALS EXPLORATION ADMINISTRATION
CONTRACT ADMINISTRATION AND AUDIT DIVISION

Copy
Betty

REPORT OF REVIEW

RECEIVED
JAN 26 1955

I have reviewed the Monthly Reports of:

> Consolidated Eureka Mining Company, a corporation duly organized and existing under and by virtue of the laws of the State of Utah, with office at 132 South Main Street, Salt Lake City 1, Utah

pertaining to Exploration Project Contract No. Idm-E628, Docket No. DMA-2992, for the months of November 1953 to July 1954, inclusive, covering a project for the exploration of lead, on property known as the Diamond Mine, located in Eureka County, Nevada.

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

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

> All of the costs incurred were under a contract provision for payment by the Government on the basis of agreed estimated costs of work actually performed.

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

Total cost as billed by contractor	$49,912.00
Exceptions	-0-
Total Accepted Cost	$49,912.00

The contract calls for a 50 percent participation of exploration expenses by the United States Government. Therefore, payment to the contractor by the Government in amount of Twenty Four Thousand Nine Hundred Fifty Six and 0/100 Dollars:

** $24,956.00 **

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

George Mavor
George Mavor
Auditor

January 14, 1955

Government's copy

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 31 1954

TERMINATION AGREEMENT

It is agreed this 16th day of December, 1954, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and Consolidated Eureka Mining Company, hereinafter called the "Operator," parties to that certain Exploration Project Contract Idm-E628, Docket No. DMEA-2992, dated October 26, 1953, hereinafter called the "Contract," that:

1. Effective October 14, 1954, the Contract and all obligations of the parties thereunder, except as otherwise herein expressly provided, shall be and are hereby terminated.

2. The Government shall contribute 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.

4. All rights of the Government provided for in the Contract with respect to a certification of discovery or development and a percentage royalty and lien for its payment are preserved.

5. 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. Mittendorf
Administrator, Defense
Minerals Exploration
Administration

CONSOLIDATED EUREKA MINING COMPANY

By James E. Hoyle, President

MF-200 (A)
(February 1952)

DOCKET NO. DMEA 2992

COMMODITY Lead

Government's Copy
IDM-E 628

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

EXPLORATION PROJECT CONTRACT[1]

(Short Form)

IT IS AGREED this 26th day of October, 1953, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and[2] Consolidated Eureka Mining Company, a corporation duly organized and existing under and by virtue of the laws of the State of Utah, with office at 132 South Main Street, Salt Lake City 1, Utah,

hereinafter called the "Operator," as follows: and as set forth in Annexes I and II attached hereto and made a part hereof:

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

ARTICLE 2. *Operator's property rights.*—With respect to that certain land situated in the State of Nevada, County of Eureka, described[3] in Annex I

the Operator represents and undertakes:[4]

(*a*) That the Operator is the owner, in possession and entitled to possession, and that the property is subject only to the following claims, liens, or encumbrances as to each of which the subordination agreement of the holder is attached: None

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

ARTICLE 3. *Exploration project.*—The Operator, within 30 days from the date of this contract shall commence work on a project of exploration for[5] Lead

in or upon the described land; and shall bring the project to completion within a period of 15 months from the date of this contract. The work to be performed is more fully described in Exhibit "A" attached hereto, which, with any maps or drawings thereto attached, are made a part of this contract. The Government will contribute to the cost of this work as hereafter provided. The work shall be performed by the Operator or by independent contractor or contractors efficiently, expertly, in a workmanlike manner, in accordance with good mining standards and State regulations for health and safety and for workmen's compensation and employers' liability insurance, with suitable and adequate equipment, materials, and labor, to bring the project to completion within the time fixed. The Government shall have the right to enter and observe and inspect the work at all reasonable times, and the Operator shall provide the Government with all available means for doing so. The Government may consult with and advise the Operator on all phases of the work.

ARTICLE 4. *Costs of the project.*—The agreed, estimated costs of performing the work, expressed in terms of units of work to be performed (per foot of drifting, per foot of drilling, per cubic yard of material to be moved, etc.) are set forth in Exhibit "A," attached hereto. The Government will pay 50 percent of these agreed, estimated costs, as they accrue, for units of work actually performed that conform with the description or specifications for the work set forth in this contract, in an aggregate total amount not in excess of $28,525.00, which is 50 percent of $57,050.00 the agreed, estimated total cost of the project in which the Government will participate: *Provided,* That until the Operator's final report and final accounting have been rendered to the Government and any final check or auditing required by the Government has been made, and a final settlement of the contract has been made, the Government may withhold from the last voucher or vouchers such sums as it sees fit not in excess of ten (10) percent of the maximum total which the Government might have been called upon to pay under the terms of the contract. The Government may, as it sees fit, make payments direct to the Operator's independent contractors, if any, for the account of the Operator, rather than to the Operator.

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

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

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

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

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

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

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

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

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

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

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

(*d*) This article is not to be construed as imposing any obligation on the Operator or the Operator's successor in interest to engage in any mining or production operations. See Annex II, substituted for Article 6.

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

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

ARTICLE 9. *Changes and added provisions* _____

Executed in sextuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

CONSOLIDATED EUREKA MINING COMPANY
(Operator)

By James E. Hogle, President

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

---

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

L. J. Lerwill [CORPORATE SEAL]

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

EXPLORATION PROJECT CONTRACT
CONSOLIDATED EUREKA MINING COMPANY
DOCKET NO. DMEA-2992

ANNEX I

The Operator owns the following 14 patented and 6 unpatented mining claims, all within the area shown on the map attached hereto and made a part hereof entitled "Fig. 2 (Property), Docket No. DMEA-2992, Consolidated Eureka Mining Company, Eureka County, Nevada."

Patented Mining Claims	Survey No.
Napa	320
Hibernia	311
Diamond	221
Krao	319
Star of Eureka	312
Ida	199
F. F. Scott	198
Banner	156
Dead Broke	191
New Year	193
Cloud	194
Metamoris	127
General Washington	128
Clyde	129

Unpatented Mining Claims	Book	Page
Anaconda	G	442
Leviathan	G	422
Omega No. 6	K	207
Pinion	L	73
August No. 2	J	381
August No. 1	J	3

XPLORATION PROJECT CONTR
CONSOLIDATED EUREKA MINING COMPANY
DOCKET NO. DMEA-2992
ANNEX II

Department of the Interior
Science Library Administration

The following provisions are in lieu of Article 6 :

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

b. Percentage royalty.--The Operator, or his successor in interest, shall pay to the Government a royalty on all minerals mined or produced from the land described in Article 2,--(1) regardless of any certification of discovery or development, from the date of the contract until the lapse of the time within which the Government may make such certification of discovery or development, or until the total net amount contributed by the Government, without interest, is fully repaid, whichever occurs first, unless the Government waives its right to a royalty; or (2) if the Government makes a certification of discovery or development, for a period of ten years (or other period fixed by this contract) from the date of the contract, or until the total net amount contributed by the Government, without interest, is fully repaid, whichever occurs first. Said royalty shall be a percentage of the net smelter returns, the net concentrator returns, or other net amounts realized from the sale or other disposition of any such production (including any bonuses), in whatever form disposed of, including ore, concentrates, or metal, as follows:

(a) One and one-half ($1\frac{1}{2}$) per cent of any such net amounts not in excess of eight dollars ($8.00) per ton.

(b) One and one-half ($1\frac{1}{2}$) per cent of any such net amounts, plus one-half ($\frac{1}{2}$) per cent of such net amounts for each additional full fifty cents ($0.50) by which such net amounts exceed eight dollars ($8.00) per ton, but not in excess of five (5) per cent of such net amounts.

(For instance: the percentage royalty on a net amount of five dollars ($5.00) per ton, would be one and one-half ($1\frac{1}{2}$) per cent; on a net amount of ten dollars ($10.00) per ton, three and one-half ($3\frac{1}{2}$) per cent.)

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

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

e. Notice to Purchasers.--The Operator shall notify any purchaser of the production of the Government's royalty interest, and shall authorize and direct the purchaser to pay the royalty directly to the Government and to furnish the Government with copies of the settlement sheets; but failure or refusal by the purchaser to comply shall not relieve the Operator of liability to pay any royalty falling due.

f. No Obligation to Produce.--This article is not to be construed as imposing any obligation on the Operator or the Operator's successor in interest to engage in any mining or production operations.

EXPLORATION PROJECT CONTRACT
CONSOLIDATED EUREKA MINING COMPANY
DOCKET NO. DMEA-2992

EXHIBIT "A"

Description of the Work

The work shall consist of the following:

1. Rehabilitate 320 feet of the No. 1 Shaft, shown on Fig. 2, from the Diamond tunnel down to the 3d level, erect a headframe, and install a hoist. The shaft shall consist of 2 compartments, each compartment to be 4 feet by 4 feet in the clear.

2. As indicated on the attached map entitled "Geologic Map of the Diamond Mine, 320-foot level (No. 1 Shaft), Eureka County, Nevada," rehabilitate not to exceed 850 feet of the Northwest Drift on the 3d level, and from the said rehabilitated drift, drive not to exceed 600 feet of drifts and crosscuts, in cross section 5 feet by 7 feet in the clear. The location, direction, and length of the drifts and crosscuts shall be subject to prior approval of the Government.

Agreed Unit Costs

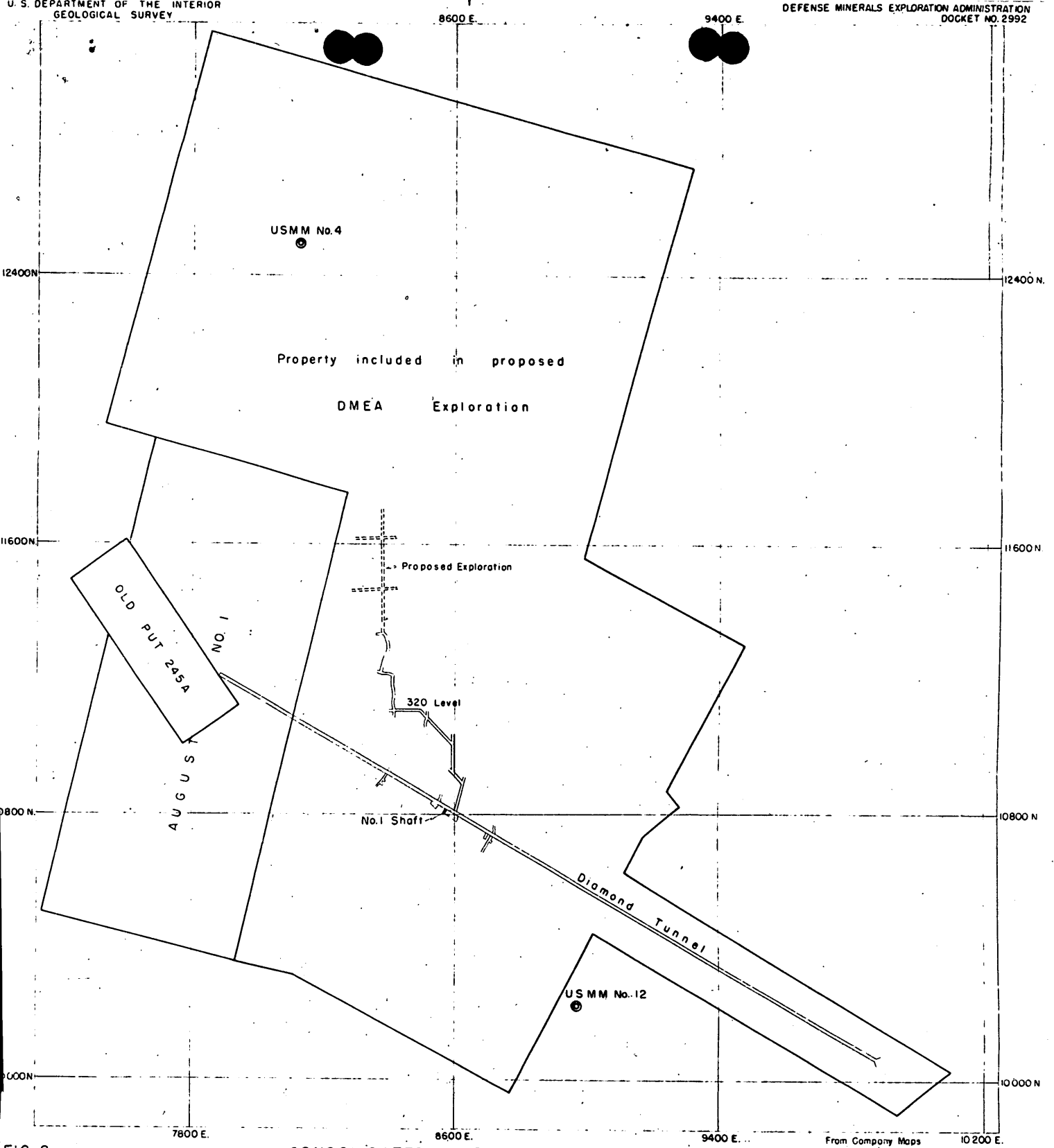
Rehabilitation No. 1 Shaft, 320 feet @ $78.00/ft. 1/	$24,960.00	
Rehabilitation Drift, 850 feet @ $7.40/ft. 2/	6,290.00	
Drifting and crosscutting, 600 feet @ $43.00/ft. 2/	25,800.00	
Total Agreed Unit Costs		$57,050.00
Government Participation at 50%		$28,525.00

1/ Including cost of headframe, moving and installing hoist, and all other costs of the work.

2/ This includes all costs of the work.

U. S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DEFENSE MINERALS EXPLORATION ADMINISTRATION
DOCKET NO. 2992



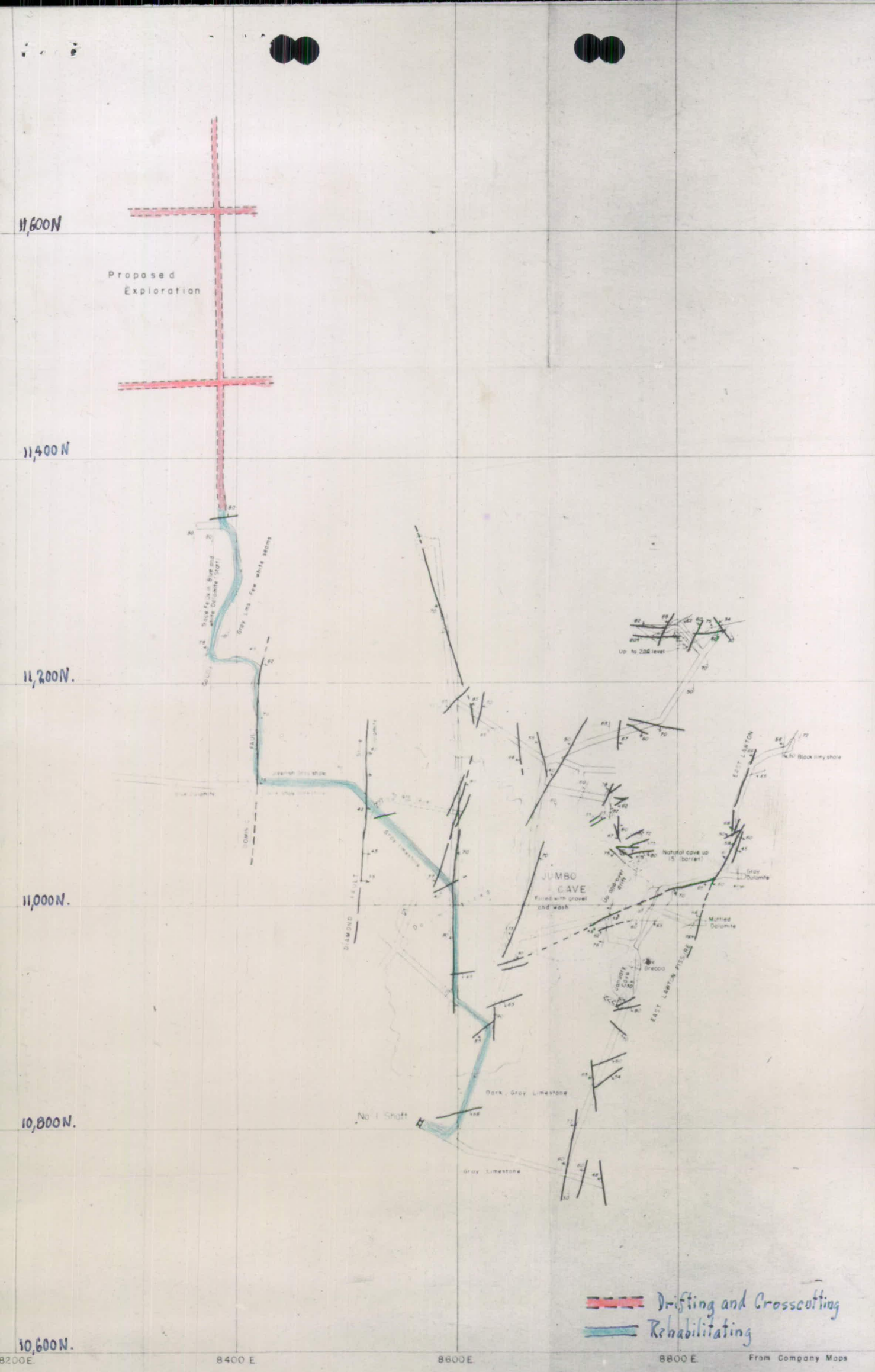
From Company Maps

FIG. 2
(Property)

CONSOLIDATED EUREKA MINING COMPANY
EUREKA COUNTY, NEVADA

Docket No. DMEA-2992

0 200 400 FEET
Scale



GEOLOGIC MAP OF THE DIAMOND MINE

320 - FOOT LEVEL (No. 1 SHAFT)

EUREKA COUNTY, NEVADA

0 50 100 150 FEET

Scale

Docket No. DMEA-2992

FIG. 7
(320 Level)

CONSOLIDATED EUREKA MINING CO.

GENERAL OFFICES 132 MAIN STREET
SALT LAKE CITY 1, UTAH

MINES AT
EUREKA, NEVADA

April 18, 1953

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
APR 20 1953

Defense Minerals Exploration Administration
Department of the Interior
Washington 25, D. C.

Gentlemen: Re: Consolidated Eureka Mining Co. Application for Aid in an Exploration Project

We are enclosing herewith our application in quadruplicate for D. M. E. A. aid in an exploration project, together with supporting data, schedules and maps for the company's property known as the Diamond Mine, located approximately one-and-a-half miles south of Eureka, Nevada. This mine has a long history and has been a substantial producer of lead and silver ores.

Recently as the result of the work of leasers new geological information was developed which indicated the possibility of mineralization in a large undeveloped area north of the Number 1 Shaft and west of the Diamond Fault. Upon completion of a preliminary examination the company commenced an exploration program consisting of diamond drilling and drifting. Indications to date are favorable and justify further exploration and development work. However, to date over half of our available capital has been expended and there are insufficient funds left to complete the project.

We are aware that this application is being submitted at a late date but we wish to advise you that the sixth and final diamond drill hole was only completed within the last week. The necessary workings are available for immediate inspection and we are prepared to assist you and your field office in every respect in order to expedite examination and field determinations.

Your early consideration of this application will be greatly appreciated.

Very truly yours,

James E Boyle

President.

Encls.

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
APR 20 1953

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. UMEA-2992
Metal or Mineral
Date Received 4-20-53
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: Consolidated Eureka Mining Co., 132 South Main Street, Salt Lake City 1, Utah. Incorporated in Utah. Officers are: James E. Hogle, Pres., J. C. Johnson, Vice Pres., L. J. Lerwill, Sec'y & Treas., 132 South Main, Salt Lake City, Utah.

(*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 Schedule 3 A.

(*b*) State any mine name by which the property is known. Diamond Mine.

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise Owner

(*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. Owner.

(*e*) If you own the land, describe any liens or encumbrances on it None

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice. See Schedule 3 A.

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.

See Schedule 4.

5. *The exploration project.*—(*a*) State the mineral or minerals for which you wish to explore .....

(*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 ...10... days and be completed within ...10... 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? We have the cash available for our portion of this project.

[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 April 18, 1953

Consolidated Eureka Mining Co
(Applicant)

By James E. Hogle, 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

SCHEDULE 3 A

Patented Mining Claims are as follows:

	Survey No.
Napa	320
Hibernia	311
Diamond	221
Krao	319
Star of Eureka	312
Ida	199
F. F. Scott	198
Banner	156
Dead Broke	191
New Year	193
Cloud	194
Metamoris	127
General Washington	128
Clyde	129

Unpatented Mining Claims are as follows:

Anaconda	Book G	Page 442
Leviathan	Book G	Page 422
Omega No. 6	Book K	Page 207
Pinion	Book L	Page 73
August No. 2	Book J	Page 381

SCHEDULE 4 A

The Diamond Mine is part of the Diamond Excelsior Group and was first in significant production during the late 1800's and early 1900's. The original discoveries were mined from their outcrops on down to the 5th level of No. 1 Shaft or over a vertical distance of approximately 1300 feet.

The main access to the mine is thru the Diamond Tunnel which, though driven in 1891, is still in excellent usable condition. The portal of this tunnel is at an elevation of 7,930 feet. The No. 1 Shaft located about 1500 feet underground from the tunnel portal, goes 535 feet vertically down from the tunnel level and has five levels off from it at approximately 100 foot intervals. There are several miles of mine workings in the tunnel and on the No. 1 Shaft levels. Nearly all of these workings are open but the timber has fallen out of the No. 1 Shaft which makes the lower levels inaccessible for examination.

At the present time the company is diamond drilling a series of holes from the Diamond Tunnel to locate the faulted extension of one of the major ore bodies. The seventh hole of this series is now being drilled, the first six having been completed. We feel that enough information can be compiled from these holes to justify the major work as outlined in this loan application. The company is also driving a crosscut off from the Diamond Tunnel to get under the Metamoras Group which pro duced some ore near the surface in the 1890's.

As of this date the company has spent approximately $34,000. on the rehabilitation of the mine and equipment, the purchase of new equipment, and the prosecution of the work on these two projects since May 1952. The mine is equipped with practically all of the facilities necessary to complete the work herein outlined and proposed under this application.

SCHEDULE 4 B

The Diamond Mine has the following production of record:

Year	Net Dry Tons	Percent Lead	Oz. Silver Per Ton	Oz. Gold Per Ton
1890	2,956	26.13	29.64	0.283
1891	4,344	16.87	22.72	0.310
1892	7,914	18.50	21.99	0.340
1893	5,381	23.86	29.20	0.859
1894	4,069	19.10	21.74	0.798
1895	876	19.17	25.86	0.402
1898	320	14.90	19.92	0.273

From 1889 through 1916 the Diamond Mine shipped 33,481 dry tons of ore to the smelter which had an average settlement assay of 18.32 percent lead, 21.77 percent insol., 28.38 percent iron, 24.56 ozs. of silver per ton and 0.506 ozs. of gold per ton. Net smelter returns of $1,163,558.22 were received from this ore.

.05

$58,177.91

SCHEDULE 4 B

Continued

In the early 1890's the Excelsior group which joins the Diamond on the south was consolidated with the Diamond Group. This consolidation had a total production of 48,758 dry tons of ore between 1889 and 1916, with an average assay of 15.8 percent lead, 20.9 percent insol., 29.6 percent iron, 30.36 ozs. silver per ton and 0.815 ozs. gold per ton. Net smelter returns of $1,915,837.74 were received from this ore. The company paid out approximately $500,000.00 in dividends during this phase of the operation.

The Metamoris Group produced 1880 tons of dry ore, which gave a net smelter return of $80,079.65 prior to 1896.

On the Diamond there was production before 1889 and has been some since 1916. In addition several smaller adjoining producers have been acquired over the years. However, no records giving total production are available. The most recent shipments were made by leasers in 1950 and 1951. This 144 tons of ore averaged 12.7 percent lead, 30.0 ozs. silver per ton, and 0.27 ozs of gold per ton. At present there is no production and no ore reserve.

SCHEDULE 4 C

The Diamond Mine is in the southern half of the Eureka Mining District, Nevada. Dr. Thomas Nolan and others of the U. S. G. S. did considerable geological work in this area in the 1940's. The mine workings are in sedimentary rocks of Cambrian and Ordivician ages. Of these sediments the Hamburg Dolomite is the member from which all past ores have been mined and is the member in which this project will be undertaken.

As shown by the accompanying sketches there has been considerable folding and faulting and this in connection with fracture patterns governs the occurrences of the mineralization. In some cases secondary enrichment by circulating water has also been a factor. Most of the ore mined in the past has been from replacements in the Dolomite. However, some production has come from fissure ore.

Until 1950 no mineable ore had been found in the footwall block of the Diamond Fault in the workings of the Diamond mine. During that year and on into 1951 Stope A was mined. The finding of this ore substantiated the reasoning of Mr. R. T. Walker as set forth in his letter and sketches which are herewith submitted. It is on these geological facts that this project has been set up and carried on to its present point. These reasons plus the findings of drill holes one through six, make us feel that it should be completed as outlined in 5 B.

COPY

Robert T. Walker
Woodville, J. Walker

WALKER & WALKER

Box 917
Leadville, Colorado
November 5, 1951

Mr. Jas. A. Hogle
132 South Main St.
Salt Lake City, Utah

Dear Mr. Hogle:

Because of pressure of work, I am somewhat tardy in fulfilling my promise to send you copies of the two maps of the Diamond & Excelsior mine, near Eureka, Nevada, which I showed you at the time of my recent visit to Salt Lake City. I am enxlosing two copies of each map herewith - one for your office and one for the mine office, if and when the work herewith suggested is undertaken.

As shown on the page of diagrammatic sketches, the main orebody of the property, which consists of a group of nearly vertical pipes within a circle of about 150 ft. diameter, has been cut off between the 4th and 5th levels of the main shaft by a post-mineral fault, and the downward continuation of this orebody has been set back into the footwall a probable distance of somewhere between 500 and 600 ft. The position of drag ore along the fault plane indicates that the movement was not a straight dip-slip, but was oblique, so that the direction of movement was north-westerly, as shown.

On the basis of this evidence, I induced the United States S. R. & M. Co., some twenty years or more ago, to explore for the faulted continuation of this orebody from the 3rd level. At that time no work had been done on this level west of the fault, and the program was to drive a cruss-cut westerly from the fault to encounter the faulted block of Prospect Mountain linestone, in which the faulted continuation of the ore-body would occur. After cross-cutting some distance due westerly from the mined part of the orebody, to make sure that the fault movement had not been a straight dip-slip, the intention was then to drive northerly in the Prospect Mountain limestone until the faulted continuation of the orebody was reached.

Contrary to my wishes, Downie Muir would not let me stay at the property while this work was in progress, so that I had to delegate it to somebody else, contenting myself with occasional flying trips of inspection. Notwithstanding the awkwardness of this arrangement, the work progressed according to plan, but just as the face of the north drift was beginning to show iron stains, which I considered indicative of proximity to the ore-body, the appropriation was exhausted, and, in spite of my protests, Muir refused to let the work proceed, although in my opinion it was on the very threshhold of success, and I understand that this situation has remained unchanged to the present day.

I would suggest that the first approach to solving the problem should be to diamond drill a spray of short horizontal drill-holes from the face of the north drift on the 3rd level, to verify the existence here of the faulted continuation of the ore-pipe, as indicated in pencil. Probably none of these holds need be more than 300 ft. in length, and as the limestone country rock is not hard, only a light drill will be needed, and probably not more than a total of 1,000 to 1,500 ft. need be drilled. The ore will doubtless be oxidized and probably will not core well, but the sludge will tell when ore is encountered, and that is all that it is needed to know, at first.

R. T. W. #2 11/5/51

The ladderway from the surface tunnel down to the 3rd level, which descends through open stopes, should be rebuilt, and the airline and waterline carried down alongside it. I understand that the timbering of the main shaft is out, but if the shaft is open down to the 3rd level, it can be utilized for lowering the diamond drill by installing platforms across it on the surface tunnel level and on the 3rd level, and lowering the drill by means of a small air hoist or a hand winch. If this is not feasible, then it will be necessary to dismantle the drill and carry it in sections down the ladderway.

Should this preliminary diamond drilling program, which should cost no more than $10,000, be successful in encountering and locating the faulted continuation of the orebody, the next step would be to extend the north drift into this orebody, and to explore it *thoroughly on this level, to determine its size and the grade of the ore. Should the orebody prove to be of sufficient size and richness to justify it, then the shaft can be retimbered, the orebody opened up on other levels, and a regular mining campaign inaugurated. The total risk, including the diamond drilling, for all such preliminary work, should not exceed $25,000, if my diagnosis as to the position of the faulted continuation of the orebody is correct.

Very truly yours,

R. T. Walker (Signed)

*The muck broken in this process cannot, of course, be hoisted, and would have to be stored, in the same manner we followed, in other workings on the 3rd level.

SCHEDULE 4 D

The mine, located 2½ miles southwest of the town of Eureka, is connected to U. S. Highway 50 by an improved county road. Railroad connection can be made at Lane City out of Ely, or at Palisade. The truck haul, mostly over oiled highway to these points, is 75 miles and 90 miles, respectively. Some housing is available at the mine and there is now plenty of vacant housing in the town of Eureka.

SCHEDULE 4 E

Experienced labor can be obtained at Eureka; material, supplies and equipment are easily obtainable by motor freight from Salt Lake City, Utah, Reno, Nevada or other points of advantage. A spring near the mine furnishes ample water; power is generated at the mine by a 200 KVA diesel electric plant. Practically all equipment necessary for economical prosecution of the work is now on hand and in good, usable condition.

SCHEDULE 5 A

The minerals which are expected to be found are the oxide lead-silver minerals - cerrusite, anglesite, plumbojerosite, etc., and argentiferrous galena with some accompanying gold values.

SCHEDULE 5 B

The work as proposed consists of the rehabilitation of No. 1 Shaft down to the 3rd level along with the installation of a hoist cage, pipe lines, bell system and the other minimum facilities to make it usable, the rehabilitation of the N.W. drift on the 3rd level and then the driving of approximately 600 feet of drifts and crosscuts to get into the probable ore zone.

While the first phase of the above project is being completed, the drift to the Metamoris Group would be new. The proposed drifting is shown on the accompanying map.

SCHEDULE 5 D

The operating experience and background of the applicant with relation to the ability to carry out such exploration project, can be stated as follows: The direct management of the Company is composed of men who have successfully operated other mining properties from the development stage to the production stage. Mr. Sherman B. Hinckley, President and General Manager of Rico Argentine Mining Company, a successfully operated company at the present time and for many years previous, will supervise all operations. His background and record are outstanding, especially his ability to keep operating costs low. The persons of capital interest behind this operation are ones who have already proved in various enterprises, including mining, their ability to operate and manage successfully.

SCHEDULE 6 B

(1) Labor costs No. 1 Shaft repairs and 3rd level rehabilitation:

(a) Track to shaft collar (Est. 2 shifts to complete)
2 men @ $14.54 per day plus 7.7% overtime — $58.16

(b) Moving hoist, pouring foundation and setting up hoist (est. 12 shifts to complete job)
3 men @ $14.54 per day plus 7.7% overtime — 523.44

(c) Shaft Retimbering (est. 125 shifts to complete)

Supervision @ $600.00 per mo.	$3,000.00	
1 shaft leadman @ $16.62 per day plus 7.7% overtime	2,237.26	
2 shaftmen @ $15.62 plus 7.7% overtime	4,273.50	
1 hoistman @ $15.00 per day plus 7.7% overtime	2,020.00	
1 Timberframer @ $14.54 per day plus 7.7% overtime	1,957.50	
1 Powerhouseman @ $14.54 per day plus 7.7% overtime	1,957.50	15,445.76

(d) 3rd Level Rehabilitation (est. 20 shifts to complete):

Supervision $600.00 per month	480.00	
1 Hoistman @ $15. per day plus 7.7% overtime	323.20	
1 Powerhouseman @ $14.54 per day plus 7.7% overtime	313.20	
2 Track & Pipemen @ $14.54 per day plus 7.7% overtime	939.60	2,056.00

(2) Labor costs drifting & crosscutting 3rd Level 600 ft.:
(Est. 125 shifts to complete)

Supervision @ $600 per mo.	3,000.00	
1 Powerhouseman @ $14.54 per day plus 7.7% overtime (15.66)	1,957.50	
1 Hoistman @ $15.00 per day plus 7.7% overtime (16.16)	2,020.00	
1 Motorman @ $14.54 per day plus 7.7% overtime (15.66)	1,957.50	
3 Miners @ $14.54 per day plus 7.7% overtime (15.66)	5,872.50	14,807.50

(3) Labor costs Drifting on Tunnel Level to Metamoris Group as done with No. 1 and No. 2 above (est. 75 shifts to complete):

Supervision to be done in conjunction with No. 1 above.
Powerhouse man taken care of in estimates above.

2 Miners @ $14.54 per day plus 7.7% overtime	2,349.00	
1 Motorman @ $14.54 per day plus 7.7% overtime	1,174.50	3,523.50

Total Labor — $ 36,414.36

SCHEDULE 6 C

(1) Operating material and supplies needed; for No. 1 Shaft repair and 3rd level rehabiliation:

(a) Track to shaft collar (140 ft.)

280' of 16 lb. mine rail @ $165.00 per ton	122.93	
70 ties (4 x 6 - 30") $88. per M	30.80	
Fish plates and bolts	9.10	
Spikes	5.00	167.83

(b) Hoist Foundation

4 yds. concrete @ $20. per yd.	80.00	
Anchor bolts	10.00	
Operating platform - 300 ft. b.m. @ $88. M	26.40	
Wiring supplies	10.00	126.40

(c) Shaft Retimbering

(1) Collar down to 60' sets on 5' centers

4 - 8 x 16 - 24' bearers

+ 1024 ft. b.m. @ $108. per M 110.60 - 110.60

12 sets of:

2 - 6 x 8 - 16' ft.	128	
1 - 4 x 6 - 5' ft.	10	
6 - 6 x 8 - 5 ft.	120	
32 - 2 x 12 - 5 ft.	320	578
Plus 10% blocking		58
		636 ft.
	b.m. @ $108.	68.69

12 x 68.69 1,373.80

(2) Head frame

10 - 10 x 10 - 24	2,000'	
10 - 8 x 8 x 24	1,280'	
	3,280 ft.	
	b.m. @ 108. M	354.24

(3) 60' to 304' cribbed except at stations:

24 cribbing bearer & guide supports

2 - 4 x 6 - 5	20	
2 - 4 x 6 - 12	48	
1 - 4 x 6 - 5	10	
	78' @ $108. per M -	
	8.43 x 24	202.32

230' Cribbing

2 - 3 x 12 - 5	30	
2 - 3 x 12 - 12	72	
	102 ft. b.m. @	
	$108. per M - 11.02 x 230	2534.60

Three Station Sets

4 - 8 x 8 - 12	252	
2 - 6 x 8 - 12	96	
1 - 6 x 8 - 10	40	
24 - 2 x 12 - 12	576	
	964 ft. b.m. @	
	$108. per M -104.11 x 3	312.33

SCHEDULE 6 C

(1)	(c)	(4)	Miscellaneous supplies & equipment for shaft:	
			6 Timberman's Axes 25.00	
			4000 wedges @ 5¢ 200.00	
			3 kegs nails @ $11. 33.00	
			Lay screw & washers 32.00	
			Emergency bell cord 18.70	
			3" air line & valves 320.00	
			660 Guides (4 x 4) 300.00	
			Ladders 93.00	
			Hanging Rods 25.00	
			Pipe Hangers 35.00	
			Electric Bell System 120.00	
			Manway Landings 65.00	
			Hoist Cable 264.00	
			200' rope 40.00	1,570.70
	(d)		3rd Level Rehabilitation Shaft Station to face:	
			Track total distance 850 feet @ $1.20 per foot (determined (a) above)	1,020.00
			Pipe line with valves & fittings 850' @ 65@ per foot	552.50
			Power cost on above jobs (fuel lubricants, filters, etc.) 150 days @ $15. per day	2,250.00
(2)			For Drifting & Crosscutting 3rd Level 600 feet	
			Powder and caps - $2.75 per foot 2.75	
			Drill bits and steel .25	
			Pipe and fittings .65	
			Rail & accessories including ties 1.20	
			600 x 4.85	2,910.00
			Power @ $15.00 per day x 125	1,875.00
				4,785.00
(3)			For drift to Metamoris:	
			300' drive	
			(per foot) powder fuse and caps 2.75	
			Drill steel & bits .25	
			Pipe and fittings .65	
			Rail & accessories 1.20	
			300 x 4.85	1,455.00 ✓
			(Power included in (1) above)	

TOTALS	Labor for Project No. 1 under 6 B	18,083.36	
	Payroll taxes on above labor 18,083.36 x 11.51%	2,081.40	
	Operating materials & supplies including power of No. 1 under 6 C	10,575.32	
	Total Cost Project No. 1		30,740.08
	Labor for Project No. 2 under 6 B	14,807.50	
	Payroll taxes on above labor 14,807.50 x 11.51%	1,704.34	
	Operating materials & supplies including power of No. 2 under 6 C	4,785.00	
	Total cost of Project No. 2		21,296.84

TOTALS	Labor for Project No. 3 under 6 B	3,523.50	
	Payroll taxes on above labor 3,523.50 x 11.51%	405.55	
	Operating materials & supplies including power of No. 3 under 6 B	1,455.00	
	Total cost of Project No. 3		5,384.05
	Grand Total for this project as shown above		$ 57,420.97

TOTALS	Schedule 6 B	(1)	(a)	58.16		
			(b)	523.44		
			(c)	15,445.76		
			(d)	2,056.00	18,083.36	
	Schedule 6 C	(1)	(a)	167.83		
			(b)	126.40		
			(c) 110.60			
			1,373.80			
			354.24			
			202.32			
			2,534.60			
			312.33			
			1,570.70	6,458.59		
			(d)1,020.00			
			552.50			
			2,250.00	3,822.50	10,575.32	28,658.68

SCHEDULE 6 D

We propose to furnish the following equipment with a use allowance as shown, to be used exclusively on this project:

200 K V A power plant	- $5.00 per day
Mancha trammer with charger	- $5.00 per day
Mucking machine	10.00 per day
Drill & fittings	2.00 per day
Hoist	3.00 per day
Compressors	10.00 per day
Total per day	$35.00

Length of time of project - 250 days x $35.00 - $8,750.00

SCHEDULE 6 E

No rehabilitation repairs necessary on buildings or operating equipment.

SCHEDULE 6 F

No new buildings or improvements necessary.

SCHEDULE 6 G

SCHEDULE 6 G

A minimum amount of repairs and maintenance is expected on all operating equipment. Nothing has been included in the project for these. Assaying and analytical work should amount to $100.00 at the most. The accounting will be taken care of without any direct cost to the project.

Workmen's compensation, employer's liability and payroll taxes are included in the total cost as given above.

SCHEDULE 6 H

Contingent costs on the above estimate can be set at $479.03, making an over-all project cost of $58,000.00

SCHEDULE 7 A

We are prepared to furnish our share of the cost on the proposed project in accordance with the regulations on government participation.

SCHEDULE 7 B

Money and use of equipment as stated in 6 D.

S. Government Messenger Envelope

d Form No. 65 (Rev. 1/46)

1. Use block consecutively, one at a time.
2. Void previous block.
3. Write clearly.

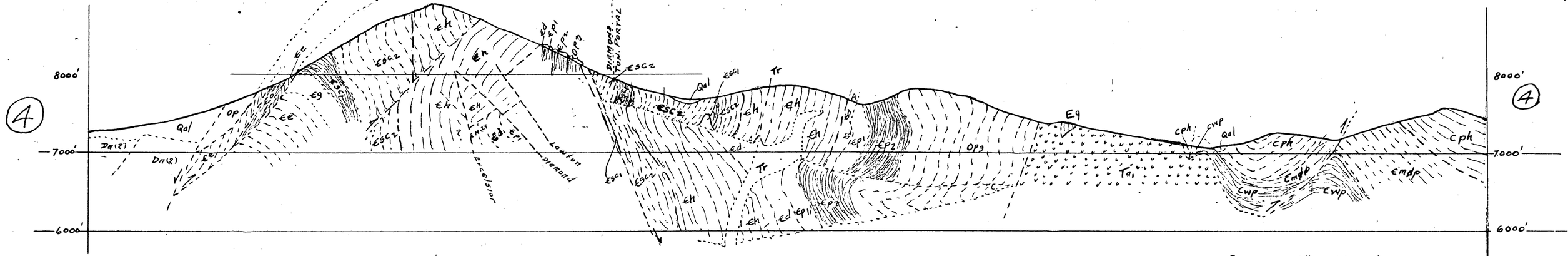
NAME OR TITLE OF PERSON, DEPARTMENT, ADDRESS, AND ROOM		NAME OR TITLE OF PERSON, DEPARTMENT, ADDRESS, AND ROOM	
	RUN / STOP		RUN / STOP
	RUN / STOP		RUN / STOP
5211	RUN / STOP		RUN / STOP
Donald 36	RUN / STOP		RUN / STOP
Dermitt 1036	RUN / STOP		RUN / STOP
Levinsky Rm 3208 GSA	RUN / STOP		RUN / STOP
Reporter	RUN / STOP		RUN / STOP
W. L. Grinwold 4058 Bldg.	RUN / STOP		RUN / STOP
	RUN / STOP		RUN / STOP
	RUN / STOP		RUN / STOP

s envelopes to
n for reissue.

Use other side

16—38949a-2

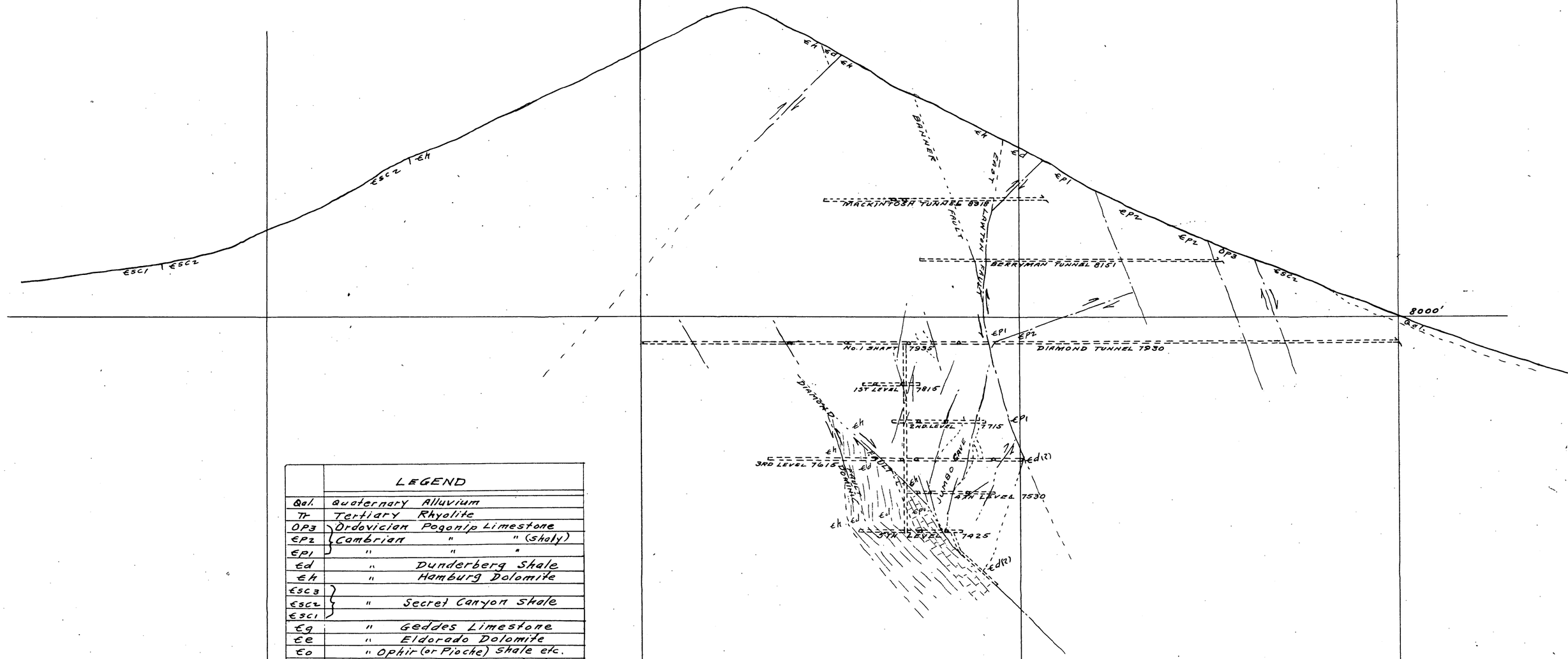
Use RUN and STOP only when messenger service between Government buildings in Washington is required.
Your mail room has RUN and STOP information.



SCALE 1" = 1000'

U.S.G.S.

4C

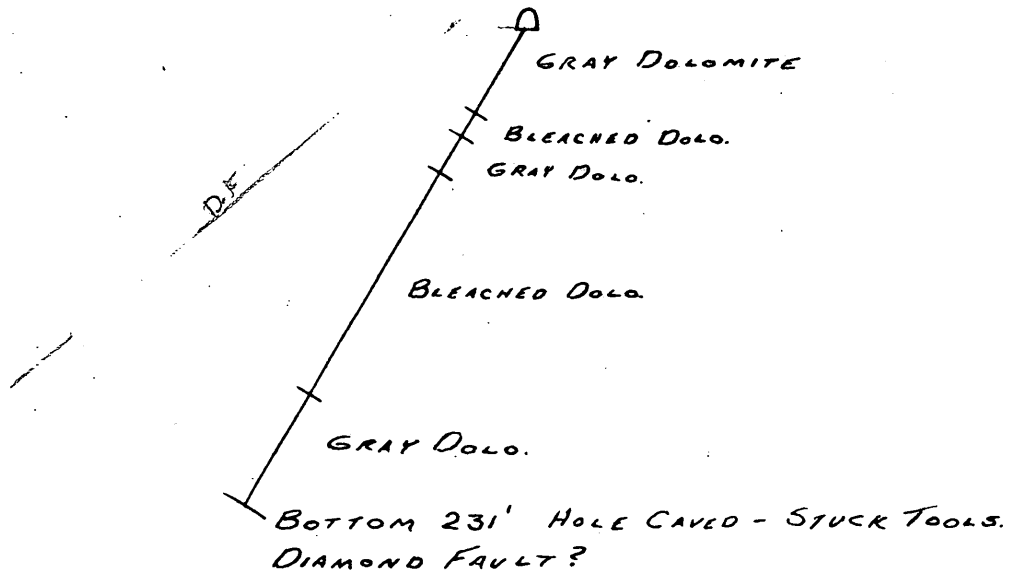


	LEGEND
Qal.	Quaternary Alluvium
Tr	Tertiary Rhyolite
OP3	Ordovician Pogonip Limestone
EP2	Cambrian " " (shaly)
EP1	" " "
Ed	" Dunderberg Shale
Eh	" Hamburg Dolomite
ESC3	" Secret Canyon Shale
ESC2	
ESC1	
Eg	" Geddes Limestone
Ee	" Eldorado Dolomite
Eo	" Ophir (or Pioche) Shale etc.
Epq	" Prospect Mtn. Quartzite

4-C

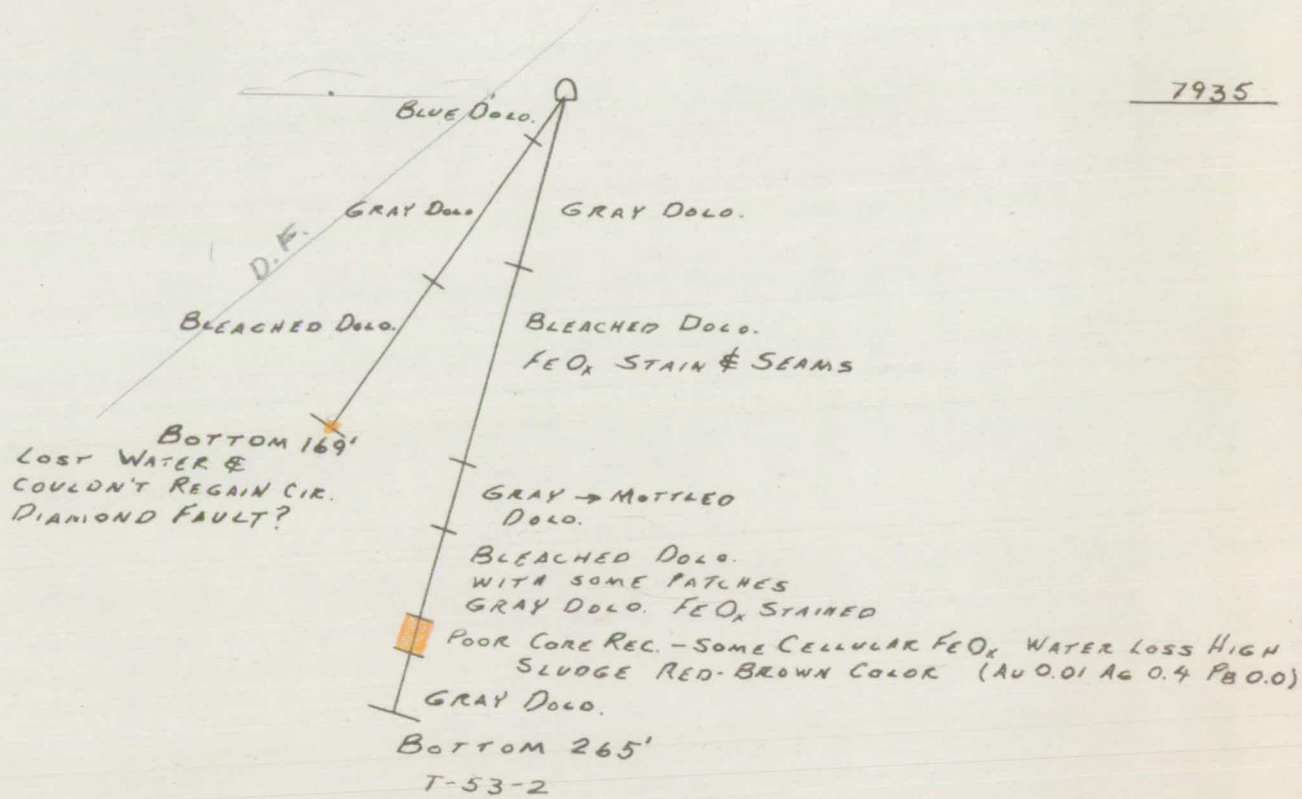
CONSOLIDATED EUREKA MNG. CO.
EAST-WEST SECTION THROUGH U.S.S.R.&M. Co CO-ORDINATE 12,000 S.
SCALE 200' = 1" — Compiled from Company Maps and maps by courtesy of U.S.G.S. AND contact corrections by W.H. Sharp. Oct. 1, 1949.

D.D.H. T-52-1
INCLINATION 60°
1" = 80'



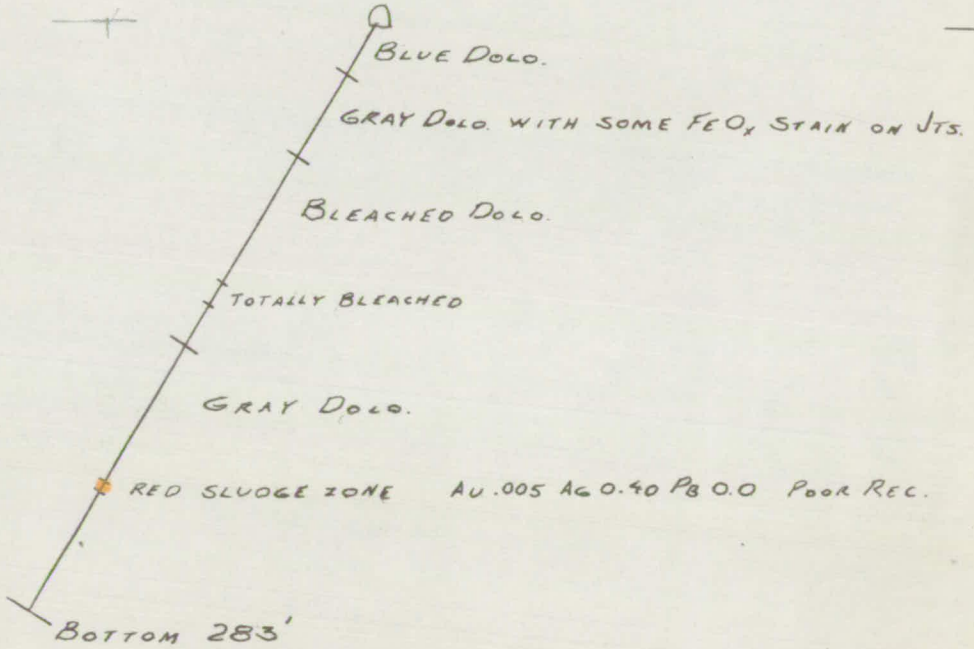
4-C

D. D. H. T-53-1 & T-53-2
INCLINATION 55° & 75°
1" = 80'



4-C

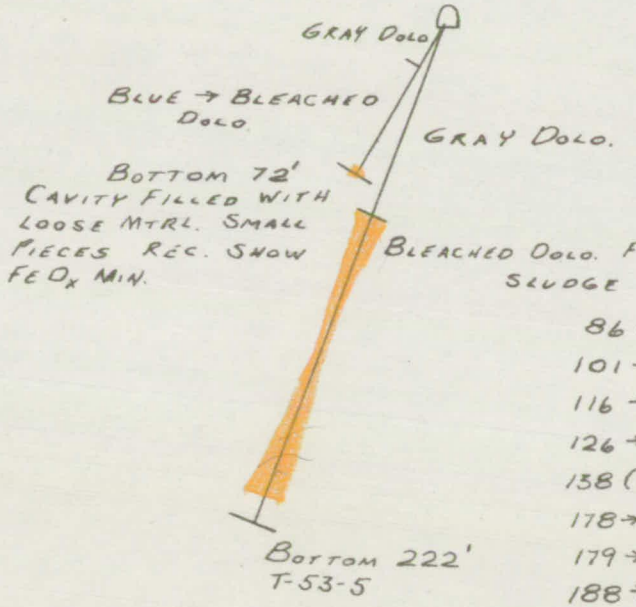
D.D.H. T-53-3
INCLINATION 60°
1" = 80'



4-C

D.D.H. T-53-4 & T-53-5
INCLINATION 60° & 70°
1" = 80'

7935



SLUDGE SAMPLES TAKEN (POOR REC.)

	86 → 101	Au 0.015	Ag 0.10	Pb	TRACE
	101 → 116	Au 0.01	Ag 0.10	Pb	0.00
	116 → 126	Au 0.01	Ag 0.30	Pb	0.15
	126 → 131	Au 0.01	Ag 0.40	Pb	TRACE
	138 (CORE)	Au 0.02	Ag 0.30	Pb	0.10
	178 → 179	Au 0.03	Ag 0.60	Pb	0.20
	179 → 181	Au 0.01	Ag 0.50	Pb	0.40
	188 → 190	Au 0.01	Ag 1.20	Pb	0.65
	201 → 211	Au 0.005	Ag 0.20	Pb	0.15
BULK (OVERFLOW)	171 → 201	Au 0.01	Ag 0.20	Pb	0.15

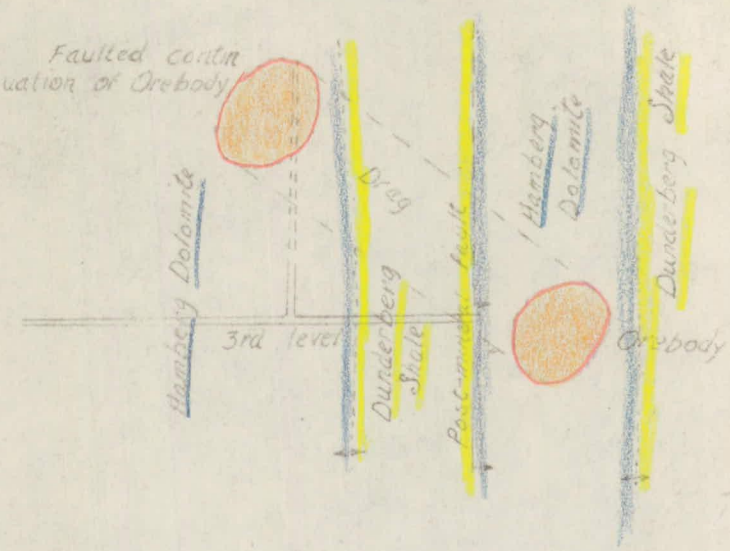
CORE SAMPLES T-53-5

113 → 114	Au 0.003	Ag 0.00	Pb 0.00
116 → 117	Au 0.01	Ag 0.30	Pb 0.00
125 → 126	Au 0.003	Ag 0.00	Pb 0.00
126 → 126.5	Au 0.005	Ag 0.20	Pb 0.00
201 → 203.5	Au 0.005	Ag 0.00	Pb 0.00

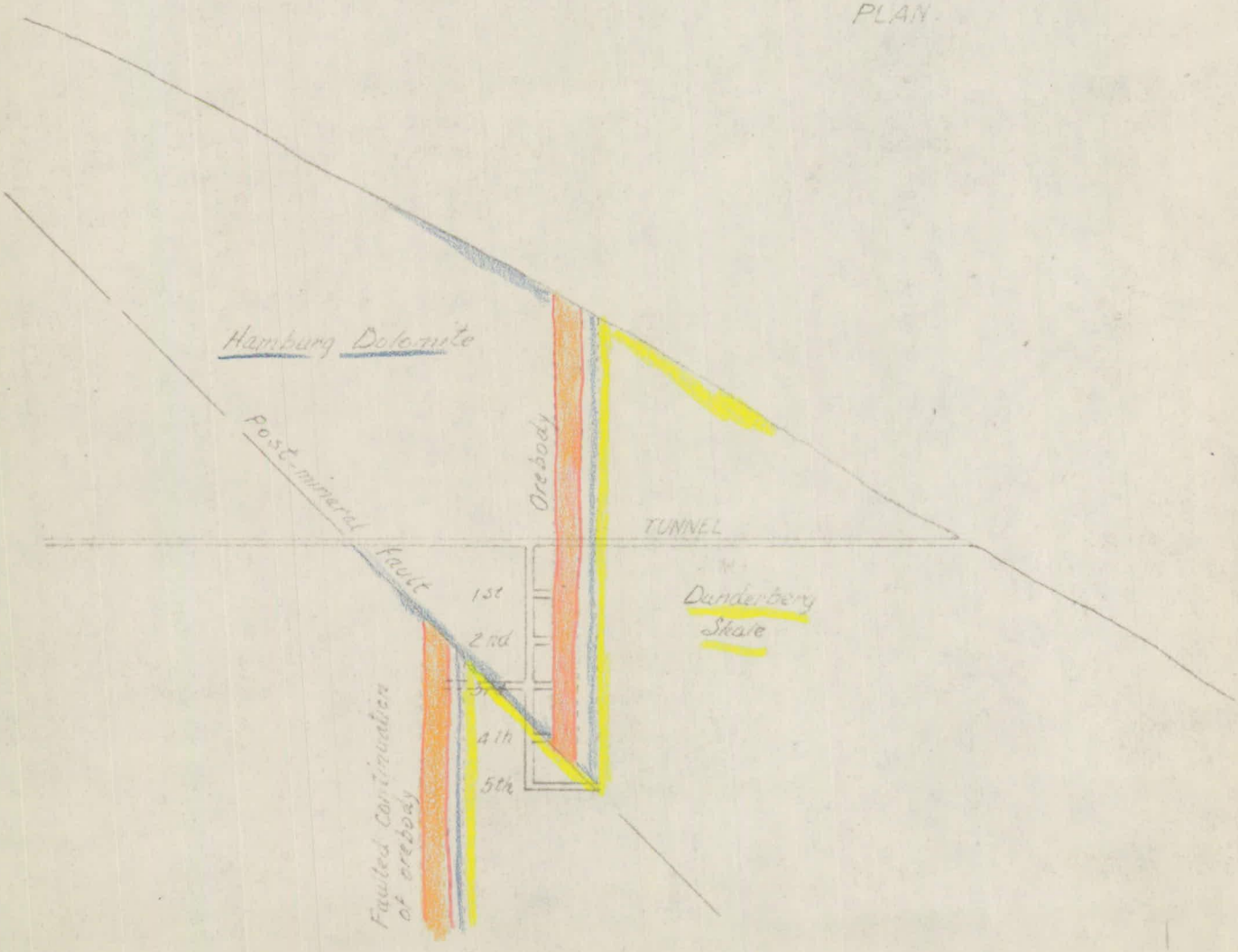
7615

4-C

DIAMOND & EXCELSIOR MINE
EUREKA, NEVADA
DIAGRAMMATIC SKETCHES



PLAN



SECTION

Hamburg Dolomite
Approximate Position of Faulted Ore Pipe
69° SC
37°
M
72°
Small fault along contact
Dunderberg Shale
S 37°
L 47°
Post-mineral fault (Diamond)
L 40°
Slight iron staining
S1
MANWAY TO FOURTH LEVEL
SHAFT
M1 80°
80°
70°
M 73°
S
62° S1
1200 W
M1 72 W
Ore Pipe
63°
S 48°
Hamburg Dolomite
55° S
Post mineral cave breccia
S 70°
S 65°
53° M
75° L1
65° M1
IRON
Shale and white limestone flattens to 35° at bottom, contact irregular.
64° L1
60° M
12 000 S
11 600 S
DIAMOND 9 EXCELSIOR MINE
EUREKA, NEVADA
THIRD LEVEL
SCALE 1"=80'

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

PROJECT SUMMARY REPORT

By: W. P. Klugescheid August 2, 1955

1. Docket No. DMEA-2992 (Lead)
Contract No. Idm-E628
Property: Diamond Mine
Eureka County, Nevada

Operator: Consolidated Eureka Mining Company
132 South Main Street
Salt Lake City, Utah

Operator's Property Rights: Owner

2. Contract dated October 26, 1953. To complete - 15 months.

Work Authorized

Agreed Unit Costs

Rehabilitation No. 1 Shaft, 320feet @ $78.00/ft.	$24,960.00
Rehabilitation of drift, 850 feet @ $7.40/ft.	6,290.00
Drifting and crosscutting, 600 feet @ $43.00/ft.	25,800.00
Total Agreed Unit Cost	$57,050.00
Government participation @ 50%	28,525.00

Amendments

None

Work Completed

Shaft rehabilitation, 320 feet @ $78.00/ft.	$24,960.00
Drift rehabilitation, 850 feet @ $7.40/ft.	6,290.00
Drifting, 434 feet @ $43.00/ft.	18,662.00
Total cost	$49,912.00
Government's participation @ 50%	$24,956.00

3. Audit - Report of Review issued January 14, 1955.

Total cost as billed by contractor	$49,912.00
Exceptions - None	
Total accepted cost	$49,912.00
Government's participation @ 50%	$24,956.00

4. Certification of Discovery - dated January 13, 1955.

Summary of Ore Reserves

Class	Tons	Ounces Au	Ounces Ag	Percent Lead
Measured				
Indicated	1,400	0.5 - 0.7	40 - 50	25 - 30
Inferred	6,960	0.4 - 0.7	30 - 50	20 - 30
Total (all classes)	8,360			

5. Comments

Discovery of a high grade ore body was made before all the funds provided in the contract were expended, and the Operator requested that the contract be terminated. The Termination Agreement was dated December 16, 1954. Work commenced November 9, 1953 and was completed on August 1, 1954. The loan was fully repaid by January 1, 1955.

The DMEA work, in discovering a new ore body on the footwall side of the Diamond fault, has demonstrated the ore potential of a large area, which in the past has been considered to be unfavorable.

Past production from the Diamond mine has come from ore bodies occuring in caves and solution cavities in the Hamburg dolomite. Oxidized lead-silver minerals line the sides and bottom of these caves which range in size from a few inches to 150 feet in diameter. Minable ore bodies have been found from the level of the Mackintosh Tunnel down to the 500 level of the Diamond mine, a vertical distance of about 1,000 feet. Most of the caves are filled or partly filled with rubble of broken dolomite and oxidized ore fragments which have been recemented by calcite and iron oxide to form a sealed breccia locally termed "wash" or "cave breccia".

The oxide ore minerals occurring in the caves are mainly cerussite and mimetite which carries gold, and some unidentified silver minerals.

No indications of the proximity to the unoxidized primary sulfides exist in any of the mine workings. Small amounts of pyrite and galena have been noted in the quartz veins which follows the north dipping joint systems and the west dipping reverse faults, but it does not seem likely that these small, weakly mineralized structures have any bearing on the localization of the larger ore bodies.

Although no igneous rocks are exposed in the 300 level of the Diamond mine, some thoroughly altered rock on the now inaccessible 400 level has been mapped by company geologists as "igneous". This would have to be proved.

W. P. Klugescheid

W. P. Klugescheid

WPK/er

Copy to: Docket
Base Metals
Chron.

☒ Audited

☒ Certified

W[illegible]K ANALYSIS SHEET - DMEA PROJEC[illegible]

Analysis as of 12/21/54.
Incl. Voucher for July 1954.

☐ Actual Cost

☒ Agreed Unit Costs

Name Consolidated Eureka Mining Corporation

Docket No. DMEA-2992

State Nevada

Commodity Lead.

Idm-E No. 628

OPERATION	AUTHORIZED Units	AUTHORIZED Cost	COMPLETED Units	COMPLETED Cost	NET COST
Drifting & Crosscutting	600'	$25,800.00	434'	$18,662.00	$18,662.00
Raising					
Shafts					
Winzes					
Drilling (Specify)					
Sur[illegible]e Excavation					
Underground Excavation					
Roads and Trails					
Operating Equipment Purchased					
Surface Rehabilitation & Repairs					
Underground Rehabilitation 1170'		31,250.00		31,250.00	31,250.00
New Building, Improvements, etc.					
Other (Specify)					
Totals		$57,050.00		$49,912.00	$49,912.00

Terminated by agreement Dec. 16, 1954.
Royalties all paid by January 14, 1955.
Final Year Reports 4/13/55.

Prepared by M. P. Hugenschmidt

Copied

X

71626

DMEA Form 7
(12-56)

2992

OFFICIAL FILE COPY

Date	Surname	Code
5/29	Mittendorf	100
6/4	C	226
		225

MAY 29 1957

Mr. Sherman B. Hinckley, Manager
Consolidated Eureka Mining Co.
217 Kearns Building
Salt Lake City 1, Utah

Dear Mr. Hinckley:

Thank you for your letter of May 14 which expresses your willingness to cooperate with Mr. Argall in his present plan to record some DMEA case histories.

Accordingly, I have passed your name on to Mr. Argall and I am of the opinion that he will contact you directly in due time.

Your expression of appreciation for our interest and assistance in your project is most appreciated. Wishing you continued success, I am

Sincerely yours,

C. O. Mittendorf (for)

Administrator

COMittendorf/esf
5/29/57
cc to: M&F
Admr. R. File
Mr. Mittendorf

8623

DMEA [illegible] 7
(12-56)

2992

OFFICIAL FILE COPY

Date	Surname	Code
5/3	Mitteadorf	100
5/7	C	220
		225

MAY - 3 1957

Mr. James E. Hogle, President
Consolidated Eureka Mining Company
132 S. Main Street
Salt Lake City 1, Utah

Dear Mr. Hogle:

I have had an exchange of correspondence recently with Mr. George O. Argall, Jr., Editor of the Mining World, who desires to publish an article in the nature of a review of some significant achievements of the DMEA program. He expresses his thoughts as follows:

> "I am thinking that a series of five or six case histories might prove exceptionally interesting to the entire geological and mining world. The examples should be carefully selected, perhaps one from each of the major regions, to illustrate how good geologic mapping or careful company analysis of structures, or an interpretation of geology on a district basis and applied to one deposit, contributed to major ore discoveries.
>
> "The purpose of this article would be to indicate that the DMEA has been worthwhile, that properly directed exploration is warranted, and that opportunity for exploration continues."

Mr. Argall hoped that my staff, together with a key engineer and key geologist in each of the regions, would cooperate with him in writing the article.

I have explained to Mr. Argall that it would be contrary to our policy to disclose any information about individual participants in the DMEA program. We do, of course, disclose the identity of a contract recipient at the time the contract is executed. After a contract is executed we conceal the percentage of committed funds actually spent, the results of the work accomplished, and whether a certification of discovery or development was issued. Likewise, we do not reveal the identity of those who have been denied DMEA assistance or of the applicants generally. I know you will readily appreciate the wisdom of this policy.

I also told Mr. Argall that we of DMEA would like to see more articles of the type he has in mind, but that they must be initiated by the publishing medium and the individual operator working in cooperation with each other. He has expressed his willingness to proceed on that basis and appears anxious to get started as soon as possible.

One approach to the project would be to have Mr. Argall send out a fairly lengthy questionnaire to all of the 1013 operators who have received DMEA contracts, requesting certain specific information. The names, as you know, have already been made public through our regular press releases issued over the years. Such an approach would entail a long and tedious screening expedition with doubtful end results.

The general idea could be more effectively implemented if I furnished the Mining World with the names of several operators who have participated with DMEA in projects which I thought might provide interesting subject matter for case histories. In this connection it occurs to me that your project, DMEA-2992, Diamond Mine, might be of special interest to the mining industry, but, of course, I would not even suggest your name without your prior approval. If granted, then I would expect the editorial staff of Mining World to assume responsibility for working up the details of the story, in cooperation with you or your representatives. I should appreciate your early reactions to this idea, and if favorable I will do no more than mention your name to Mr. Argall as one whom he might contact. If you do not approve, your reply will be kept confidential in my personal files.

Incidentally, Mr. Argall indicates to me that he will keep the name of the operator and the identity of the property confidential, by referring to case "A" or case "B", if the operator so desires.

With kindest personal regards,

Sincerely yours,

C. O. Mittendorf (fw)

Administrator

COMittendorf/fw
5/3/57
cc: Admr. Reading File
Administrator
Field Team, Reg. II

File Copy
Surname
J. Act.
Selfridge
Kipnis
Whitehead

500

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

SEP 20 1956

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

Re: Docket No. DMEA-2992 (Lead)
Consolidated Eureka Mining Company
Diamond Mine
Eureka County, Nevada
Contract No. Idm-E628

Dear Mr. Ricker:

With reference to the Semi-Annual Report of the cited Certified Project for the period January 1 - June 30, 1956, we note the statement:

"Continued active operation: 22 men currently employed."

From this statement we are not sure whether it might be convenient to give us more detail concerning this property.

The previous reporting period stated:

"In current production - 17 men working on two shift basis. An incline shaft being driven to intersect the DMEA ore body 150 feet below the discovery level."

We always appreciate receiving as much detailed and specific information as possible, such as the size and cost of sinking the shaft, any drifting or raising that may have been done from this new level, or any other costs incidental to this new work. Obviously, in a case of this sort, where the total Government contribution has already been repaid, it would not be in order to go much out of your way to obtain such information.

In any event, we would appreciate receiving anything which you might have available.

Sincerely yours,

George C. Selfridge

APPROVED:

Chairman, Operating Committee (GCS)

P. F. Yopes (PFY)
Member, Bureau of Mines

Thor H. Kiilsgaard (THK)
Member, Geological Survey

JWAlt/er 9/17/56
Copy to: Docket
Admr R File
Op. Committee
Base Metals
Mr. Bishop, USBM
Mr. Kiilsgaard, USGS
Chron.

IN REPLY REFER TO:

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

RECEIVED
OCT 27 1955

October 26, 1955

Re: DMEA 2992, Idm-E628
Consolidated Eureka Mining Co.
Diamond Mine
Eureka County, Nevada
$49,912.00 - Lead

Memorandum

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

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

Subject: Review of Field Team Final report.

The contract was approved for $57,050.00 of which $49,912.00 was expended. The work resulted in the discovery of ore and the contract was terminated at the request of the operator. The discovery was certified and royalties from production have repaid the loan.

The work proposed included shaft and level rehabilitation and level work in search for a faulted section of a good ore body in a section of the mine heretofore considered of questionable potentiality. That the geologic reasoning favoring the plan and the work plan were good is attested by the favorable results noted above.

The examiners recommended that the discovery be certified and concluded that additional exploratory work, in which DMEA participation might be justified, is warranted.

I concur with the conclusions and the recommendation.

N. E. Nelson

N. E. Nelson

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

1605 Evans Avenue
Reno, Nevada

April 15, 1955

Memorandum

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

From: Executive Officer, DMEA Field Team, Region II

Subject: Docket No. DMEA-~~3359~~ 2992 (Lead)
Consolidated Eureka Mining Co.,
Diamond Mine
Eureka County, Nevada
Contract No. Idm-E628

We are attaching four copies of our final report on above subject docket by H. W. Jones, mining engineer of the U. S. Bureau of Mines and R. W. Osterstock, geologist of the U. S. Geological Survey, dated April 13, 1955.

S. Ricker

Encls.

Reviewed by
DMEA OPERATING COMMITTEE
4-22-55
(date)

RECEIVED
APR 18 1955

Final Field Team Report

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION II

FINAL REPORT

Idm-E628

DMEA-2992, Consolidated Eureka Mining Company

Diamond Mine

Eureka County, Nevada

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

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

April 13, 1955

Reviewed by
DMEA OPERATING COMMITTEE
4-22-55
(date)

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Introduction	1
Summary and conclusions	1
Recommendations	2
Description of work completed	3
Geology	5
Ore deposits	7
Sampling	12
Ore reserves	12
Expenditures	14
Efficiency of operations	14

ILLUSTRATIONS

Fig.	Description
1	Index map of northeast Nevada.
2	Geologic map of DMEA work on the 300 level, Diamond Mine.
3	Geologic map of a part of the Eureka Dist., Diamond Mine.
4	Section along line of Diamond Tunnel, Diamond Mine.
5	Composite level map of the Diamond Mine.
6	Geologic map of the Diamond Mine - Diamond Tunnel (O) level.
7	Geologic map of the Diamond Mine - 320-foot level (No. 1 shaft).

FINAL REPORT

Docket No.: DMEA-2992 (Lead)

Name and address of operator: Consolidated Eureka Mining Co.
132 S. Main Street
Salt Lake City 1, Utah

Name and location of property: Diamond mine, 4 miles southwest of Eureka, Nev.), Eureka County, Nevada

Contract No.: Idm-E628

INTRODUCTION

The Diamond mine, Eureka County, Nevada was explored by the Consolidated Eureka Mining Co., 132 South Main Street, Salt Lake City, Utah, in cooperation with the Defense Minerals Exploration Administration under a contract dated October 26, 1953. Preliminary work on the Diamond Tunnel and inside wall frame started on November 9, 1953. Work under terms of the exploration loan started December 18, 1953, and was completed on August 1, 1954.

Discovery of a high grade ore body was made before all the funds provided in the contract were expended, and the operator requested that the contract be terminated. This was done, a certification was issued, and the loan was fully repaid by January 1, 1955.

SUMMARY AND CONCLUSIONS

The Diamond mine was successfully explored by the Consoli-

dated Eureka Mining Co., J. E. Hogle, President, under docket DMEA-2992 between October 26, 1953 and August 1, 1954. A loan of $57,050.00 was authorized for the contract of which $49,912.00 was expended. The Government participated to the extent of 50 percent of the costs or $24,956.00.

During the course of the project, the underground headframe was rehabilitated, the 2-compartment shaft timbered for 320 feet, 850 feet of the 3rd level drift was cleaned and made accessible, and 453 feet of drift extended northward from the end of the old 3rd level workings (434 feet of which was covered under terms of the contract). A high grade ore body was encountered on the 320 level. The project was terminated at the operator's request.

The DMEA work in discovering a new ore body on the footwall side of the Diamond fault has demonstrated the ore potential of a large area, which in the past had been considered to be unfavorable.

Production is economically feasible. Ore shipments from the new ore body have grossed $186,348.00 (to December 31, 1954) since its discovery in early August 1954.

RECOMMENDATIONS

It is recommended that (1) The property be certified as a discovery, and the Government be entitled to royalties (Royalty payments

were paid in full by January 1, 1955). 2. Considerable additional exploratory work is warranted and a further long range exploration program may justify DMEA assistance.

DESCRIPTION OF WORK COMPLETED

The project at the Diamond Mine was based on geological conclusions arrived at several years previously in which it was assumed mineralization extended to the west of the main Diamond fault. Five recent drill holes placed on the main haulage 'O' level and extended into the projected drift area, cut sections containing iron oxide and traces of lead-silver minerals.

Total agreed unit costs of the contract were $57,050.00 of which the Government was to participate at 50%, or $28,525.00.

Preliminary rehabilitation work started November 9, 1953 in which the main haulage adit and the shaft collar, situated in a large cave within the haulage tunnel, was cleaned of debris; collar sets, headframe bearers and the headframe were installed, a hoist and compressor foundation was poured and the electric powered hoist and compressor placed in position. Actual work under terms of the contract started December 18, 1953, during which time a double compartment shaft and timbering program was initiated. Inside measurements of the hoisting compartment and the manway were each being carried 4 feet by 4 feet in the clear with 6- by 6-inch dividers. Two inch

planking was used as lagging on all sides. Work was temporarily delayed when the shaft was found to be filled with old pipes and rotted timbers below the 200-foot level. A bulkhead, located on the 300-foot level and accessible through old stopes, was removed and the material dropped down the shaft. A total of 330 feet of shaft timbering was completed, 320 feet of which was covered under terms of the contract. A hoisting cage was rehabilitated and turn plates installed at the collar and the 3rd level, in lieu of using a bucket and bin combination.

The main 3rd level drift northward was cleaned, sharp corners rounded, air line and 16-pound rail installed to the face, and three car switches were provided. Total rehabilitation advance was 850 feet.

Drifting from the face of the old workings was started immediately in a northerly direction, roughly paralleling the Dominic fault. Drifting was carried on between April 1 and July 31, 1954. During this time, the drift was extended 453 feet. Several small mineralized cross fissures within a dolomitized limestone were noted between the 323 foot and 428 foot points. At 428 feet, high grade lead-silver-gold ore was encountered and penetrated for 25 feet before the opposite wall was reached. Additional exploratory work was completed by the operators, but inasmuch as the target had been reached, no further costs were incurred under terms of the DMEA contract.

The project was completed on August 1, 1954.

Costs incurred during the course of the project, of which the Government was to share, are as follows:

Shaft rehabilitation, 320 feet @ $78.00/ft.	$24,960.00
Drift rehabilitation, 850 feet @ $7.40/ft.	6,290.00
Drifting, 434 feet @ $43.00/ft.	18,662.00
Total	$49,912.00

GEOLOGY

The Diamond mine is located on the eastern side of Prospect Mountain, one of the commanding peaks in the Eureka Mining District.

Only sedimentary rocks are exposed on the eastern flank of Prospect Mountain, and in the area adjacent to the Diamond mine, the formations range in age from Middle Cambrian to Lower Ordovician. The stratigraphic column is as follows:

Ordovician:	Pogonip limestone (upper part). Thin bedded limestone with some chert (lower part). Thin bedded limestone (with some shaly limestone and chert). About 425 feet thick.
Upper Cambrian:	Dunderburg shale. Shale (thin bedded calcareous and argillaceous) with thin limestone beds. Fossiliferous. About 340 feet thick.

Hamburg dolomite. Thin to thick bedded with rare fossils. Mostly secondary dolomite, some limestone. About 900 feet thick.

Middle Cambrian: Secret Canyon shale. Upper half thin limestone beds with shale partings. Lower half thin argillaceous beds with thin interbedded limestone. Fossiliferous. About 1,035 feet thick.

Most of the beds in the mine area have a northerly strike and a highly variable easterly dip (see figs. 3 & 4). The extreme variability of dips is probably owing to early folding and later complex faulting. It is extremely difficult to interpret the relationship of local geologic features to the regional geologic pattern.

Ore deposits in the Diamond mine have been confined to the Hamburg dolomite. In the mine area, the Hamburg dolomite generally strikes north and dips east and has been cut by several sets of normal and reverse faults. The normal faults are in all attitudes, but three sets predominate; one set strikes north and dips about 45° east, a second set strikes northeast and dips about 60° northwest, and a third set strikes northwest and dips steeply northeast. Two sets of steep reverse faults are most prominent, one set strikes north and dips about 50° west, another set strikes north with a steep easterly dip. T. B. Nolan (1953, oral communication) suggests the possible existence of thrusting in the mine area probably at a higher elevation than the present mine workings.

The existence of thrusts, apparently from the west, is well established in the Ruby Hill mine area a few miles northwest of the Diamond mine.

Two sets of joints are also prominent in the Diamond mine, one strikes east with a steep dip to the south, the other set strikes east with a 60° north dip.

Although no igneous rocks are exposed in the 300 level of the Diamond mine, some thoroughly altered rock on the now inaccessible 400 level has been mapped by company geologists as "igneous (?)."

ORE DEPOSITS

Past production from the Diamond mine has come from ore bodies occurring in caves and solution cavities in the Hamburg dolomite. Oxidized lead-silver minerals line the sides and bottom of these caves which range in size from a few inches to 150 feet in diameter. Minable ore bodies have been found from the level of the Mackintosh Tunnel down to the 500 level of the Diamond mine, a vertical distance of about 1,000 feet.

Most of the production has come from seven major caves, the Gracchi Cave, Andy's Cave, the Big Cave, the January Cave, the Avery Cave, the Engine Cave and the Jumbo Cave. A small production has been realized from lesser caves as well as from thin irregular mineralized zones connecting the major caves. In a very general way the caves dip in a northerly direction. Individual caves are commonly made up of

gently north-dipping segments connected by smaller steep dipping segments, in a step-like arrangement. Most of the caves are filled or partly filled with a rubble of broken dolomite and oxidized ore fragments which have been recemented by calcite and iron oxide to form a sealed breccia locally termed "wash" or "cave breccia."

The oxide ore minerals occurring in the caves are mainly cerusite and mimetite which carries some gold, and some unidentified silver minerals. Small residual blocks or isolated crystals of pyrite, galena, and arsenopyrite are not infrequent in the breccia ore zone, however, in most places throughout the mined area oxidation has been essentially complete. Only rarely are there any remaining secondary zinc minerals in the ore bodies, and sphalerite is even more rare.

No indication of proximity to the unoxidized primary sulfides exists in any of the mine workings. Small amounts of pyrite and galena have been noted in the quartz veins which follow the north dipping joint systems and the west dipping reverse faults, but it does not seem likely that these small, weakly mineralized structures have any bearing on the localization of the larger ore bodies. It is reported that the ore produced from the south portion of the mine contained relatively more gold and less silver than the ore from the north portion. This obscure zonal relationship is borne out in the new DMEA stope where the silver content (50. oz. /ton) is considerably higher than the historical average

of ore previously mined. Total production (prior to the DMEA program) is reported to have been 34,000 tons which contained an average of 18 percent lead, 25 ounces silver, and 0.5 ounces gold.

The ore bodies in the Diamond mine are localized in fault intersections in the receptive Hamburg dolomite. Although all of the major fault structures have been found to contain some ore minerals, only the zones of extreme brecciation at the intersection of faults contain ore in minable amounts. It is worthy of note that no single set of fractures appears to have played any greater part in the ore localization than any other. The interconnection of the ore bearing caves has served as the guide to exploration and development. In general, following the offshoots of known ore bodies has led to new ones. An additional factor affecting the localization of the ore bodies appears to be the degree of dolomitization of the Hamburg formation. It is generally recognized that the dolomite now present in the formation is of epigenetic origin. Thus, it is possible that some of the fracture systems and the attendant brecciation are resultant from the volumetric change that accompanied dolomitization.

Prior to the filing of the DMEA application, the operators had put down five drill holes from the tunnel level into the area of proposed exploration (see fig. 5). Traces of oxidized ore minerals in leached wall rock were revealed in these holes, thus effectively demonstrating

the existence of small amounts of ore in the footwall zone of the Diamond fault. These results justified the DMEA exploration, although it was the operator's hope at the outset of the DMEA project that the exploration program would expose the faulted continuation of the Jumbo Cave (see figs. 4 & 7). However, the ore occurrence in the new DMEA stope is not characteristic of the ore in the Jumbo Cave and this possible correlation is not substantiated by available evidence.

Although no major fracture system has as yet been identified which has afforded localizing factors for the new DMEA stope on the 320 level, it is interesting to note the increase in the number of generally east trending fractures intersected in the north crosscut. (See fig. 7). These fractures also show a tendency to have a more easterly strike near the stope whereas those further south along the crosscut have a more northeasterly strike. The significance of these almost imperceptible changes is unknown.

The ore body discovered by the DMEA project has a rough northeasterly trend and a 50-60° dip to the southeast. Neither the lateral nor the vertical limits of the ore body had been reached at the time of the writer's examination of the property. Near the northeast end of the stope there is a thin, tight, north-trending, steeply east dipping fault zone which may be the Dominic fault. Although mineralization is not restricted entirely to the footwall of this structure, there is a notice-

able decrease of ore mineralization in the hanging wall (see figs. 7 & 2). Near the southwest end of the stope, the ore occurred mainly as a sealing agent around breccia fragments. The higher grade portions of the stope contain both massive and crystalline milky quartz intimately admixed with the oxide ore. The most prominent gangue mineral is limestone which is partly dolomitized and highly bleached. Oxidation of the ore body has been essentially complete although a few small "spuds" of galena remain scattered throughout the ore body. Much iron oxide is contained in the ore body, and also in fractures near the ore body. The highest grade and most persistent ore zone in the stope lies immediately above a 50° to 60° southeast dipping fault which may be cut off at the east end of the stope by an east dipping fault tentatively identified as the Dominic fault. Overlying this ore zone, the country rock shows extreme brecciation; underlying the zone in the footwall of the south dipping fault, the country rock is dark gray dolomite in which large sporadic patches are bleached and rotten.

The ore body discovered in the DMEA crosscut on the 320 level had to the end of December 1954 produced 1,194 tons of oxide ore which contained an average of 0.69 ounces Au, 50.5 ounces Ag, and 29.4 percent lead per ton. Total gross value of the ore mined during 1954 was $186,348.00. The average value of the ore mined had been $149.00

per ton after $12.00 per ton freight and $4.75 per ton treatment charges. These values are computed on the basis of 14-3/4 cent lead, 90 cent silver and $34.912 gold. Zinc in the ore averaged 1.2 percent and copper averaged .05 percent, but no attempt has been made to recover these two metals.

SAMPLING

Sample No.	Width	%, Pb	%, Zn	Ounces Au	Ounces Ag	Description
79	3 inches	1.7	4.9	0.10	1.15	Small oxidized seam at 323 feet in drift.
80	1 foot	0.7	1.3	Trace	0.30	Do; 359 feet in drift.
81	4 inches	0.5	6.1	"	0.40	Do; 372 feet in drift.
85	25 feet	49.1	0.5	0.73	144.05	Cerussite, anglesite, galena ore body between 428-453 feet.
86	3 feet	6.8	7.9	0.21	8.90	Small pipe in drift floor 408 feet in drift.

An assay made by the company of the galena boulders within the cerussite, anglesite matrix is reported to run 384 oz. Ag per ton.

ORE RESERVES

Summary of Ore Reserves

Class	Tons	Grade Ounces Au	Grade Ounces Ag	Grade Percent lead
Measured	---	---	---	---
Indicated	1,400	0.5-0.7	40-50	25-30
Inferred	6,960	0.4-0.7	30-50	20-30
Total (all classes)	8,360			

No ore reserves of any class are estimated for the Diamond mine beyond the area of the DMEA work.

It is assumed that the lateral extent of the ore body will not exceed 80 feet and the width will not exceed an average of 15 feet essentially as shown on fig. 2. In order to achieve the production of 1,194 tons of ore as noted above, the operators have moved about 30,000 cubic feet of material which, with a conversion factor of 10 cubic feet per ton, represents about 3,000 tons. Thus each 2-1/2 tons of material moved represents one ton of ore of the grade noted.

No measured reserves are estimated for the DMEA ore body. It is assumed that 15 feet of mineralized ground will lie above and below the existing stope. The two zones, each 80 by 15 by 15 feet, contain a total of 3,600 tons of material or, at the ratio of 2-1/2 tons of material per ton of ore, 1,400 tons of indicated ore of a grade similar to that already mined.

For the calculation of inferred reserves, it is assumed that the ore body will retain its dimensions of 80 by 15 feet and will have vertical persistence of 200 feet, similar to the ore bodies already mined in other parts of the mine. These dimensions represent a volume of 240,000 cubic feet, of which 30,000 cubic feet has been removed by present mining operations and 36,000 cubic feet are classed separately

as indicated ore reserves. Thus the remaining 174,000 cubic feet contain 17,400 tons of material which at the ratio of 2-1/2 tons of rock per ton of ore contain 6,960 tons similar in grade to that already mined.

EXPENDITURES

Total approved	$57,050.00
Total cost of project	49,912.00
Government's share of cost	24,956.00
Government's share unexpended	3,569.00

Value of production during operations - Gross $134,409.02
(to December 31, 1954)

Government's royalty (paid in full) $24,956.00

EFFICIENCY OF OPERATIONS

The operations were carried on in an efficient and satisfactory manner. All steps of the work were adequately planned so that there were no lapses between phases of the project.

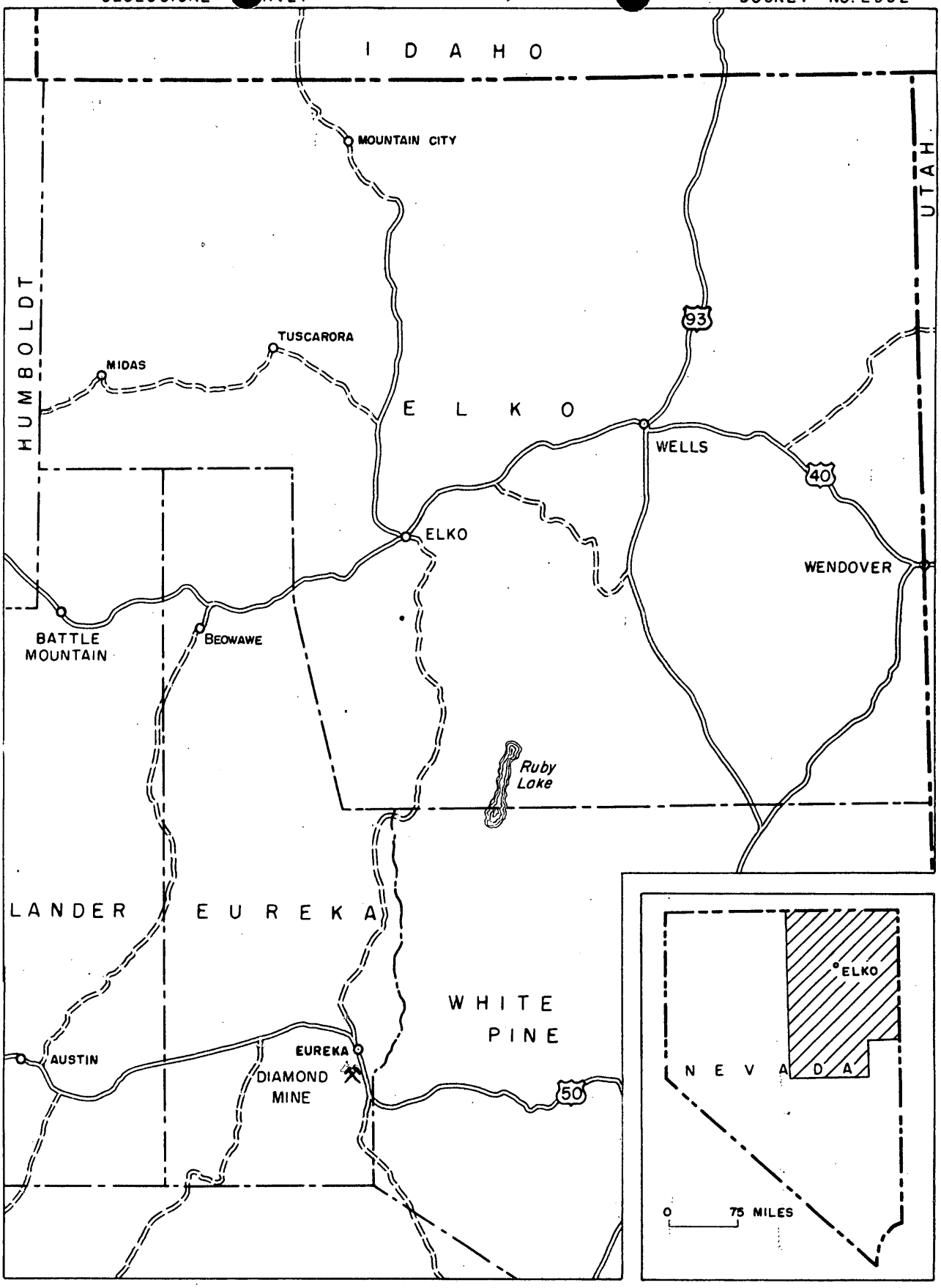


FIG. 1 INDEX MAP OF NORTH EAST NEVADA

10 0 10 20 MILES

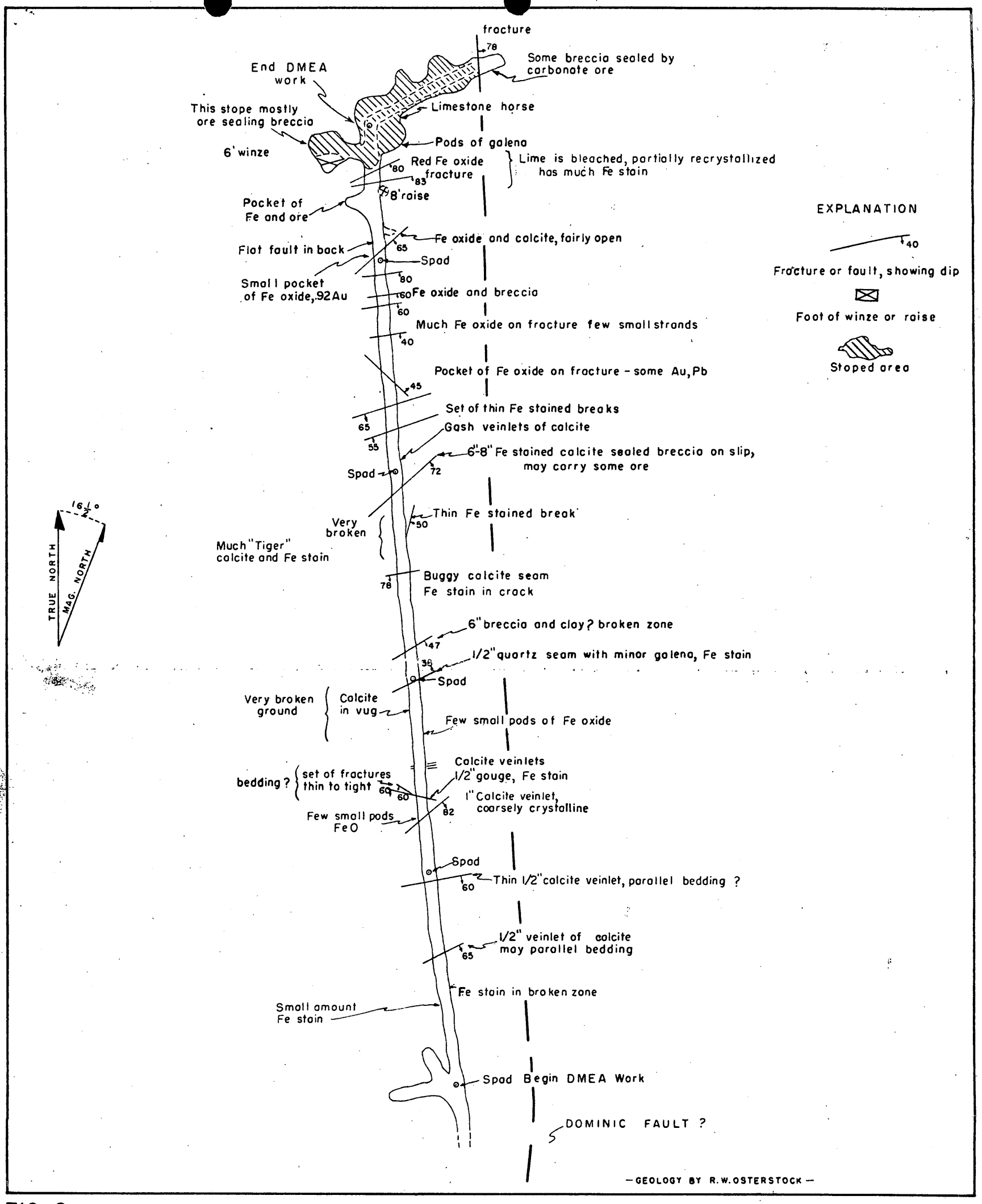
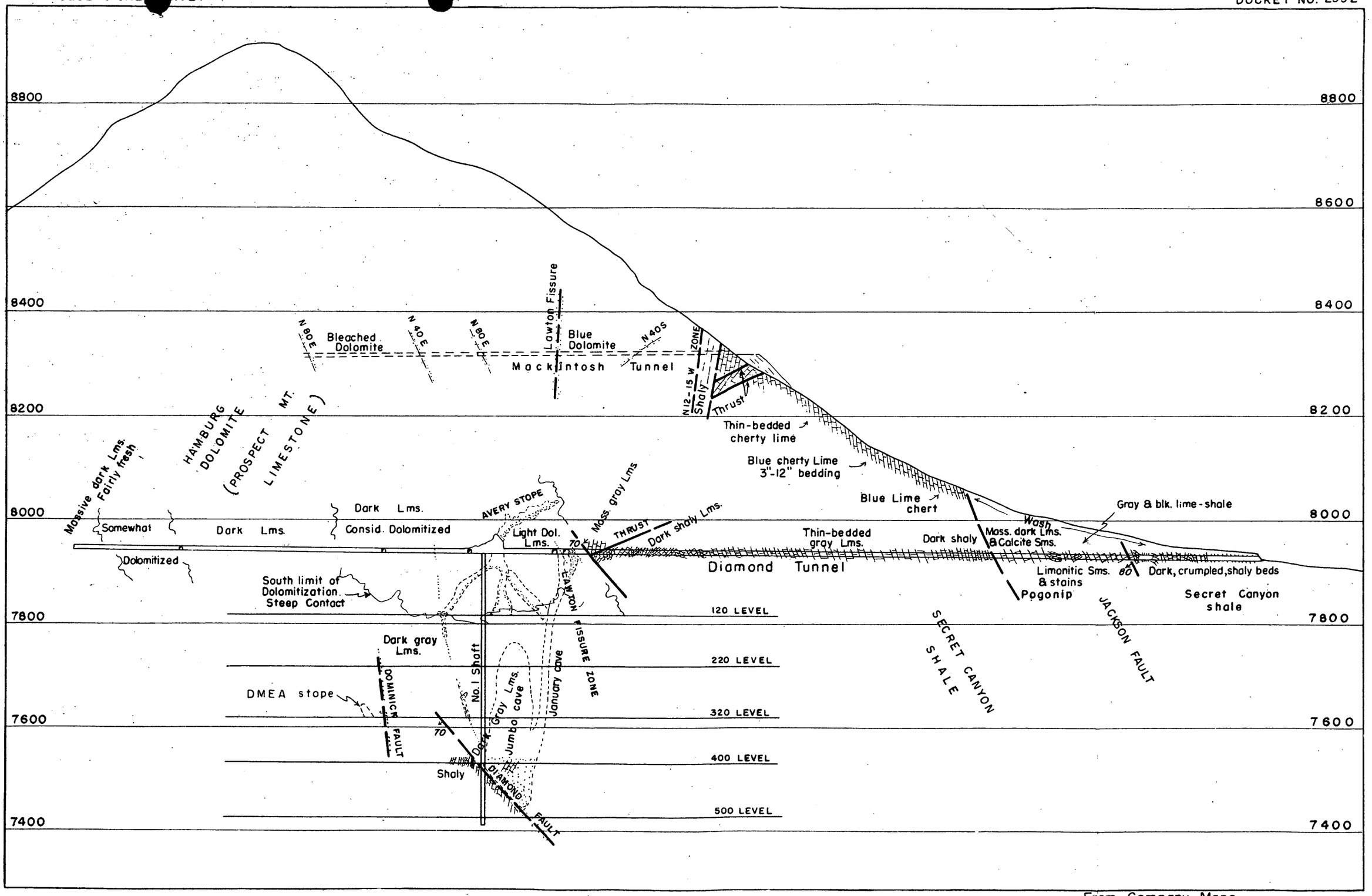


FIG. 2

GEOLOGIC MAP OF DMEA WORK ON THE 300 LEVEL OF THE DIAMOND MINE
EUREKA COUNTY, NEVADA

0 50 100 Feet
Scale



From Company Maps

FIG. 4
(Section)

SECTION ALONG LINE OF DIAMOND TUNNEL
DIAMOND MINE, EUREKA COUNTY, NEVADA

0 200 400 FEET
Scale

DOCKET

Chambers
Selfridge
JEJohnson
Mitchell

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

FEB 14 1955

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

Re: Docket No. DMEA-2992 (Lead)
Consolidated Eureka Mining Co.
Diamond Mine
Eureka County, Nevada
Contract No. Idm-E628

Dear Mr. Ricker:

This office has just received a letter from James E. Hogle, President of the Consolidated Eureka Mining Company, Salt Lake City, Utah, thanking DMEA for the privilege of cooperating with the Government in an exploration project.

Two copies of this letter are furnished for your files.

Sincerely yours,

George C. Selfridge
Chairman, Operating Committee

APPROVED:

J. H. Hedges
Member, Bureau of Mines

Thor H. Kiilsgaard
Member, Geological Survey

Enclosure

JLChambers/wb
February 10, 1955

cc: Docket
Admr. Reading File
Operating Committee
T. H. Kiilsgaard, USGS
O. M. Bishop, USBM
W. R. Griswold
J. L. Chambers

R.C.4

CONSOLIDATED EUREKA MINING CO.
GENERAL OFFICES 132 MAIN STREET
SALT LAKE CITY 1, UTAH

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB - 9 1955
MINES AT
EUREKA, NEVADA

February 7, 1955

Mr. C. O. Mittendorf, Administrator
Defense Minerals Exploration Administration
U. S. Department of the Interior
Washington 25, D. C.

Dear Mr. Mittendorf:

Thank you for your good letter of February 4th regarding the operation of the Consolidated Eureka Mining Company. We greatly appreciate your comments; however, it is we who should have first expressed appreciation for the joint financing of this project. As you are aware, we were getting pretty short of funds and are grateful to the Defense Minerals Exploration Administration for their assistance which made this project possible.

It has been our sincere endeavor to select the most worth while projects when approaching the DMEA for joint participation and we would want to feel more than reasonably assured of our ability to make good before applying, such as the present nickel project south of Eureka known as the Gibellini ground operated by Hogle Bros. We have held up accepting Government funds until we know more of the mineralization on the 300 foot level of the incline, which information should be available soon.

We wish to express our sincere appreciation to you and the members of your staff, both in Washington and in the field, for the splendid cooperation you have given us at all times, and with best wishes,

Sincerely yours,

James E Hogle

Docket
Surname:
Chambers
J.W. All
Griswold
K Johnson

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

FEB 4 1955

Mr. James E. Hogle, President
Consolidated Eureka Mining Co.
132 South Main Street
Salt Lake City 1, Utah

Re: Docket No. DMA-2992 (Lead)
Consolidated Eureka Mining Co.
Diamond Mine
Eureka County, Nevada
Contract No. Ida-E628

Dear Mr. Hogle:

Under the contract cited above the Government allotted a total of $57,050 for exploration of lead and agreed to share 50 percent of the cost as approved and accepted by this Administration. The Contract Administration and Audit Division of this Administration in its final audit report of January 14, 1955, determined the total allowable cost of the project to be $49,912, and the Government's share at 50 percent participation to be $24,956.

If the exploration work resulted in a discovery, the Company was to pay to the Government a royalty at a rate stipulated in the contract for a period of 10 years or until the amount advanced by the Government was liquidated, whichever occurred first. You started to pay royalty in September 1954 and have consistently paid royalty until January 14, 1955, at which time you liquidated the amount advanced by the Government.

I wish to congratulate you for a successful exploration and to thank you for the payment of your account under the contract. It has been a pleasure to participate with you in this very fine undertaking.

Sincerely yours,

G. O. Mittendorf

Administrator

JIChambers/wb 2-3-55

Copy to: Docket
Admr. Reading File
Region II Field Team
Administrator
Mr. Johnson
Mr. Kiilsgaard
Mr. Bishop
Mr. Griswold
Mr. Chambers

R.C.J.

File Copy
Surname

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

JAN 13 1955

INTERIOR DEPT.
JAN 10 1955
SOLICITOR

Mr. James E. Hogle, President
Consolidated Eureka Mining Co.
132 South Main Street
Salt Lake City 1, Utah

Re: Docket No. DMEA-2992 (Lead)
Consolidated Eureka Mining Co.
Diamond Mine
Eureka County, Nevada
Contract No. Idm-E628

Dear Mr. Hogle:

Transmitted herewith is a certification of discovery or development related to the Exploration Project Contract No. Idm-E628 dated October 26, 1953, on the lands described in the contract.

By the terms of the Exploration Project Contract and of the Certification, all production from the land described in the contract after October 26, 1953, the date of the contract, is subject to the Government's percentage royalty as set forth in the said contract until the sum which the Government has advanced as its participating interest is repaid, or until October 26, 1963, whichever occurs first.

It is our understanding that the funds advanced by the Government on this contract have already approximately been repaid. However, the certification is being forwarded to you as a matter of record.

Sincerely yours,

C. O. Mittendorf

Administrator

Enclosure

WRGriswold/er (1/7/55)
Copy to: Docket
Mr. Gumbel, Dr.,MD,EPS
Mr. Hedges, 4604
Mr. Kiilsgaard, 5224
~~Mr. Kiilsgaard, 5224~~
Admr. R. File
Op. Committee
Cont.Adm.&Audit Div.
Finance Office
Region III (2)
F. E. Johnsen
W. R. Griswold
Base Metals
Chron.

File Copy
Surname

J. A. Griswold
Talbert
Kiilsgaard
Hedges
Del Hedge
F. E. Johnson

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

JAN 13 1955

Mr. Irving Gumbel, Acting Director
Materials Division
Emergency Procurement Service
General Services Administration
Washington 25, D. C.

INTERIOR DEPT.
JAN 10 1955
SOLICITOR

Re: Docket No. DMEA-2992 (Lead)
Consolidated Eureka Mining Co.
Diamond Mine
Eureka County, Nevada
Contract No. Idm-E628

Dear Mr. Gumbel:

Enclosed is a copy of a certification of discovery or development related to Exploration Project Contract No. Idm-E628.

The contract was dated October 26, 1953, with the Government participating to the extent of 50 percent in an exploration project estimated to cost $57,050.00. Actual expenditures to date (subject to final audit) have totalled $49,912.00, with the Government's share being half of such amount, or $24,956.00.

The total amount of work provided for under the contract consisted of shaft rehabilitation, tunnel rehabilitation and 600 feet of crosscutting and drifting. Work actually done consisted of the outlined rehabilitation and 453 feet of crosscutting and drifting.

The discovery consisted of lead ores occurring as replacement deposits in dolomitic rocks. The ore grade is unusually high, ranging from 25 to 50 per cent lead, a half ounce to an ounce in gold, and from 35 to 75 ounces in silver. It is yet too early to estimate potential tonnages but the funds advanced by the Government have already been approximately repaid. There is every reason to believe that the discovery is of significant nature.

Sincerely yours,

C. O. Mittendorf (for)
Administrator

WRGriswold/er 1/7/55
Copy to: Docket
Cont. Adm.&Audit
Region III (2)
Base Metals
Admr R. File
Op. Committee
Mr. Hedges, 4604
Mr. Kiilsgaard
F. E. Johnson
W. R. Griswold
Chron.

Enclosure

R.G.D.

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

55482

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

January 13, 1955

Consolidated Eureka Mining Company
132 Main Street
Salt Lake City 1, Utah

Re: Docket No. DMEA-2992 - Lead
Consolidated Eureka Mining Co.
Diamond Mine
Eureka County, Nevada
Contract No. Idm-E628

Gentlemen:

We have been advised by our Washington office that they have received your checks No. 2668 and No. 2670 totaling $19,096.38.

The status of your account according to our records is as follows:

Government participation through July 1954 MF-104			$24,956.00
Repayments:	CD-12	$ 2,213.30	
	CD-15	591.82	
	CD-23	1,637.63	
	CD-27	1,316.87	
	Check No. 2668	2,542.90	
	Check No. 2670	16,553.48	$24,856.00
			$ 100.00

The balance due the Government, therefore, is $100.00.

This contract has been very satisfactory and we thank you for your thorough cooperation.

Sincerely yours,

S. RICKER

S. Ricker
Executive Officer
DMEA Field Team, Region II

Copy to: DMEA, Washington, D. C.
Roscoe Smith, USGS

CONSOLIDATED EUREKA MINING CO.

GENERAL OFFICES 132 MAIN STREET
SALT LAKE CITY 1, UTAH

MINES AT
EUREKA, NEVADA

Department of the Interior
Defense Minerals Administration
RECEIVED
DEC 31 1954

December 29, 1954

United States Department of Interior
Defense Minerals Exploration
Washington 25, D. C.

Re: Docket DMEA-2992 (Lead)
Consolidated Eureka Mining Co.
Diamond Mine
Eureka County, Nevada
Contract No. IDM-E 628

Gentlemen:

In answer to the request in your letter dated December 21, 1954 we are enclosing the original and four copies of the Termination Agreement between our company and the United States Government.

Very truly yours

R W Bengtzen

R. W. Bengtzen

RWB/f
enc. 5

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

DEC 27 1954

420 Custom House
555 Battery Street
San Francisco 11, California

December 21, 1954

Consolidated Eureka Mining Company
132 Main Street
Salt Lake City 1, Utah

Re: Docket No. DMEA-2992 (Lead)
Consolidated Eureka Mining Company
Diamond Mine
Eureka County, Nevada
Contract No. Idm-1625

Gentlemen:

In accordance with your request in previous discussions, the Washington office of DMEA has prepared a Termination Agreement on the above subject DMEA contract.

We are therefore enclosing the original and five copies of this Termination Agreement, signed by the Administrator, Defense Minerals Exploration Administration, for the Government. All copies of this Agreement should be signed by your company and the original and four copies should be returned to this office after being executed. The copy marked "Operator's Copy" is for your files.

When the Washington office has received the executed copies of this Agreement a Certification of Discovery will be issued.

Sincerely yours,

S. RICKER

S. Ricker
Executive Officer
DMEA Field Team, Region III

Enclosure

Copy to: DMEA, Washington, D.C.
R. M. Smith, USGS
A. C. Johnson, Reno, Nevada

File Copy
Surname
J. Alt
Swisher
Chamberlin
Selfridge
H. Johnson

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

DEC 1 6 1954

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

Re: Docket No. DMEA-2992 (Lead)
Consolidated Eureka Mining Co.
Diamond Mine
Eureka County, Nevada
Contract No. Idm-E628

Dear Mr. Ricker:

We are enclosing the original and five copies of a Termination Agreement to the cited contract, signed by this office for the Government.

Please present the termination agreement to the Operator for approval and signature and, when completed, distribute the copies in the usual manner.

Upon the receipt of our executed copy of the termination agreement, we will prepare the certificate of discovery for this property.

We would appreciate receiving the final Field Team report at your earliest convenience.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (JHB)

JWAlt/er 12/15/54

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

Enclosure

APPROVED:
C. H. JOHNSON
Member, Bureau of Mines (JHB)

Thor H. Kiilsgaard
Member, Geological Survey (JHB)

File Copy
Surname
J. Alt

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

December 15, 1954

Memorandum

To: Administrator

From: Chief, Base Metals Division

Subject: Mutual termination agreement, Docket No. DMEA-2992, Contract No. Idm-B628, Consolidated Eureka Mining Co., Diamond Mine, Eureka County, Nevada, Lead

The Field Team recommends that the cited contract be terminated for the reason that the objective of the work was successfully accomplished. We concur in this recommendation.

The amount of the contract is $57,050.00 and is on a short form contract. All work was done on a unit cost basis. Work under the terms of the contract was suspended in August 1954. The last MF-104 in our files is for the month of July 1954, and shows that $49,912.00 was expended for the work done to date.

Certification of this project will be made when the Operator signs the termination agreement and it is returned to this Division.

W. R. Griswold

JWAlt/er 12/15/54

Copy to: Docket
Base Metals
Chron.

File Copy
Surname
J.W.Alt.

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

December 3, 1954

Memorandum

To: Acting Assistant Solicitor, DMEA

From: Chief, Base Metals Division

Subject: Mutual Termination Agreement for Contract No. Idm-E628, Docket No. DMEA-2992, Consolidated Eureka Mining Co., Eureka County, Nevada (Lead)

Will you please prepare a Mutual Termination Agreement for the cited contract. This agreement is to be prepared for the signature of the Executive Officer of Region III.

Certification of the project will be made when the Operator signs the Termination Agreement and it is returned to this Division.

Please refer to the memorandum from the Executive Officer, dated November 26, 1954.

W. R. Griswold

W. R. Griswold

JWAlt/er 12/3/54

Copy to: Docket
Base Metals
Chron.

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
NOV 30 1954

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

November 26, 1954

Alt
Betty

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. [illegible]-7992 - Lead
Consolidated Eureka Mining Company
Diamond Mine
Eureka County, Nevada
Contract No. Id-[illegible]628

Reference is made to your letter of November 15, 1954, on above subject docket, requesting our recommendations and information regarding the termination and certification of this project.

I have discussed this project with Roscoe Smith and we are in agreement that the project should be terminated for the reason that the objective of the work was successfully accomplished. Royalties to the amount of $2,[illegible]05.12 had been paid as of October 14, 1954.

We also recommend that a Certificate of Discovery be issued based on the fact that an ore body consisting of high-grade lead-silver-gold ore 25 feet thick was discovered. More than 600 tons of ore ranging from 24 to around 50 per cent lead content and carrying appreciable amounts of gold and silver had been produced as of November 5, 1954. The extent of the ore body is not yet determined. Ore was intersected by the drift on the 3rd level at a distance of 428 feet from contract starting point and continued in ore for 25 feet to opposite wall.

S. RICKER

S. Ricker
Executive Officer
DMEA Field Team, Region III

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

File Copy
Surname

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

NOV 15 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-2992 (Lead)
Consolidated Eureka Mining Co.
Diamond Mine
Eureka County, Nevada
Contract No. Idm-E628

Dear Mr. Ricker:

Will you please advise us regarding the cited contract. Apparently from your memorandum of September 8, 1954 and the interim reports by Henry Jones, dated August 27 and October 27, 1954, this project should be terminated and certified. Before terminating and certifying this project we will need your recommendations and information.

Will you please send us at your earliest convenience your recommendations and information regarding the termination and certification of this project.

Sincerely yours,

George C. Selfridge by ESJ
Chairman, Operating Committee

JWAlt/er 11/12/54
Copy to: Docket
Admr R File
Op. Committee
Base Metals
Mr. Bishop, USBM
Mr. Kiilsgaard, USGS
Chron.

APPROVED:

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

E. L. Newcomb by ESJ
Member, Geological Survey

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 8, 1954

Memorandum

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

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket No. DMEA-2992 - Lead
Consolidated Eureka Mining Co.
Diamond Mine
Eureka County, Nevada

Relative to above docket, you have Interim Report by H. W. Jones, dated August 27, 1954, in which he suggests that a discovery be certified. In the meantime we are requesting that a final joint report be made by the field team.

Mr. Hinckley, of the Salt Lake City Office of the subject operator, has asked for information as to how to negotiate a termination of contract. He was advised on August 26 to submit a letter outlining his wishes and to give reasons why he wished to terminate the contract. To date we have received no reply but will keep you informed of any new developments.

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

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

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

Betty

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

August 26, 1954

Memorandum

To: A. S. Johnson, Bureau of Mines, Reno, Nevada

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket No. DMEA-2992 - Lead
Consolidated Eureka Mining Co.
Diamond Mine
Eureka County, Nevada

For your information, Mr. Hinckley, of the Salt Lake City office of the subject operator, phoned on August 26 to ask me how to go about terminating a DMEA contract. He stated that Consolidated Eureka has made what they consider a discovery and are shipping ore therefrom.

I told him to send us a letter outlining his wishes and reasons thereof so we could take the matter up with the Washington Office and get that office to issue a termination notice.

I also told him to send us royalty checks made payable to the Treasurer of the United States along with settlement sheets.

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

Copy to: Roscoe Smith, USGS
DMEA, Washington, D. C.

11-20

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

1012 Flood Building
870 Market Street
San Francisco 2, Calif.

November 13, 1953

Memorandum

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

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA-2992 (Lead)
Consolidated Eureka Mining Co.
Diamond Mine, Eureka County, Nevada
Contract Idm-E628

Reference is made to Mr. George C. Selfridge's letter of October 26, transmitting to this office the original and five copies of subject contract.

The contract has been executed on the part of the Operator and one copy retained by him. Proper distribution has been made of the Field Team's and Finance Officer's copies, and the original and two remaining copies are returned herewith.

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

Attachment

Copy to: A. C. Johnson, Reno (with copy of contract
Finance Officer, Region III (with copy of contract)
E. H. Bailey, USGS
George Mavor

FILE COPY
SURNAME: 900

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

OCT 26 1953

J. W. Alle
Chambers
Selfridge
Hedges

Mr. H. C. Miller, Executive Officer
DMEA Field Team, Region III
1012 Flood Building
870 Market Street
San Francisco 2, California

Re: Docket No. DMEA-2992 (Lead)
Consolidated Eureka Mining Co.
Diamond Mine
Eureka County, Nevada

Dear Mr. Miller:

We are enclosing the original and five copies of the above contract, signed by this office for the Government, together with Annexes I and II, Exhibit "A" (1 page), and two maps.

If the contract meets with your approval, kindly present it to the Applicant for approval and signature, and when completed distribute in the usual manner. In the event that the contract is not satisfactory, and cannot be amended within your delegated authority, return all copies with your recommendation concerning any modification.

It will be necessary to insert in the contract, in the space provided under Article 3, the number of days from the date of the contract in which work shall commence.

Sincerely yours,

10-26

George C. Selfridge

(SHB)

Chairman, Operating Committee

Enclosures-6
APPROVED:

J. H. Hedges

Member, Bureau of Mines (SHB)

T. P. Thayer

Member, Geological Survey (SHB)

UWAlt/hmj (10-21/53)
CC to: Docket
Adm. R. File
Op. Committee
Base Metals Division
Mr. Kinkel
Mr. Bishop
Chron.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
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GENERAL SERVICES ADMIN.
PUBLIC BLDGS. SERVICE
BMD - COMMUNICATIONS

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GEORGE C SEFXXX SELFRIDGE, CHAIRMAN,

OPERATING COMMITTEE, DEFENSE MINERALS EXPLORATION ADMINISTRATION,

INTERIOR BUILDING, WA

DOCKET 2992 /LEAD/ CONSOLIDATED EUREKA MINING COMPANY. RE PHONE CALL OCTOBER 14. NO 1 SHAFT HAS TWO COMPARTMENTS EACH 4 BY 4 FEET IN CLEAR. DRIFTS AND CROSSCUTS 5 BY 7 FEET IN CLEAR. AUGUST NO. 1 CLAIMS IS UNPATENTED AND RECORDED IN BOOK J, PAGE 3.

H C MILLER EXECUTIVE OFFICER, DMEA FIELD TEAM REGION III

2992 14 1 4 4 5 7 1 3

LM 3XX 229PM

OCT 19 10 58 AM '53

BUREAU OF MINES
MAIL ROOM
WASHINGTON D.C.

FILE COPY
SURNAME: 500

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

October 14, 1953

Memorandum for the Files

Subject: Docket No. DMEA 2992, Consolidated Eureka Mining Co.
Eureka County, Nevada

On October 14, 1953 I telephoned Mr. H. C. Miller, Executive Officer, Region II, San Francisco, California, and informed him that before a contract could be drawn up for the above application, additional information would be needed. The information requested is:

1. Size of shaft in the clear, and also the number of compartments. This is the No. 1 shaft which is to be rehabilitated at $78.00 per foot.

2. The size of the drifts and crosscuts in the clear.

3. The Field Team has recommended that the August No. 1 claim be included in the property rights of the Applicant, and will check with Applicant to see if he owns this claim. If it is to be included in the contract, it will be necessary to supply the Survey number, if it is a patented claim, and if it is an unpatented claim, we will need the book and page number.

Mr. Miller was informed that as soon as this information was received the contract could be drawn up, and to teletype this information to us.

JWAlt/hmj (10-15-53
CC to: Docket
Op. Committee
Mdm. Reading File
Chron.

Jacob W. Alt

IN REPLY REFER TO:

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

October 8, 1953

Memorandum

Re: DMEA-2992
Consolidated Eureka Mining Company
Diamond Mine
Eureka County, Nevada
$58,000
Lead-silver-gold

To: Mr. W. R. Griswold

From: E. L. Newcomb, USGS
O. M. Bishop, USBM

Subject: Concurrence with Field Team's recommendation for approval

The applicant's proposed work was recommended for partial approval by E. J. Lyons, USGS, and O. M. Bishop, USBM, in their May 18, 1953 memorandum to the Base Metals Branch, DMEA. Rehabilitation of the No. 1 shaft and the 3rd level, and 600 feet of crosscutting and drifting on the 3rd level were included in their recommendation of work to be approved.

The field team's examination report recommends this same program for approval.

Though the past production from this property was not very large, it was high grade in terms of total value. There are no reserves on the property at present, but the proposed exploration can reasonably be expected to find ore bodies comparable in size and grade to those previously mined.

We concur with the field team's recommendation for approval.

E. L. Newcomb
E. L. Newcomb
Geologist

O. M. Bishop
O. M. Bishop
Base Metals Branch

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

1012 Flood Building
870 Market Street
San Francisco 2, Calif.

September 23, 1953

Memorandum

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

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA-2992 (Lead)
Consolidated Eureka Mining Company
Diamond Mine, Eureka County, Nevada

Reviewed by
DMEA OPERATING COMMITTEE
10-2-53
(date)

Reference is made to your letter dated June 5, 1953, requesting us to have the usual field examination made of the subject docket and submit a report and our recommendations to you.

Enclosed are four copies of a report entitled "DMEA-2992, Consolidated Eureka Mining Co., Diamond Mine, Eureka County, Nevada, (Lead-silver-gold)," by R. M. Smith, Geologist, U. S. Geological Survey, and Frank J. Wiebelt, Mining Engineer, U. S. Bureau of Mines, dated September 16, 1953.

The applicant has proposed an exploration program to explore on the 300-foot level for the faulted continuation of the Jumbo ore body in the footwall of the Diamond fault. The work will consist of rehabilitating the shaft to the third level and also rehabilitating the third level; and from this level, after rehabilitation work has been completed, to drive approximately 600 feet of crosscutting and drifts to penetrate the ore zone. From a geologic standpoint, the project has merit and it is recommended that it be given favorable consideration.

In giving favorable consideration to the subject application, Mr. Bailey and I agree with the examining geologist and engineer that the August No. 1 claim should be included because there is a possibility that ore found in the exploration work may extend into that claim.

In the cost statement on page 11 of the report, we note that in items (a) and (b) the extended total cost of performing the indicated work does not include the 7.7 per cent over-time factor. Neglecting to

Copies in folder in back

add the over-time, however, will not materially affect the over-all estimated cost of the project.

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

Attachments

Copy to: E. H. Bailey

ON-SITE Report

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

10/23/53

DMEA-2992, Consolidated Eureka Mining Co.

Diamond Mine

Eureka County, Nev.

(Lead-silver-gold)

R. M. Smith, Geologist
U. S. Geological Survey

Frank J. Wiebelt, Mining Engineer
U. S. Bureau of Mines

September 16, 1953

Reviewed by
DMEA OPERATING COMMITTEE
10-2-53
(date)

Docket No.: DMEA-2992 (Lead-silver-gold)

Name and address of applicant: Consolidated Eureka Mining Co.,
132 South Main Street
Salt Lake City 1, Utah

Name and location of property: Diamond Mine, Eureka County, Nev.

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The Consolidated Eureka Mining Company, docket DMEA-2992 (Lead), applied on April 18, 1953 to the Defense Minerals Exploration Administration for government assistance in a $66,170.97 program to explore on the tunnel and third levels of the Diamond Mine, Eureka County, Nev.

A field examination was requested by the Field Team of Region III to determine what part of the large proposed program is justified. Accordingly, an examination was made on June 30 and July 1, 1953 by R. M. Smith, geologist, U. S. Geological Survey.

The applicant proposed (1) to install a hoist on the tunnel level, re-timber the No. 1 shaft 320 feet, rehabilitate the third level about 850 feet; (2) to drift and crosscut on the third level 600 feet; and, (3) to drift on the tunnel level to the Metamoras mine 300 feet. He estimated that the program required about ten months to complete and would cost $66,170.97.

The exploration program was discussed with the applicant and the third stage of the program was deleted from the application.

The remaining two stages is estimated to require about twelve months to complete and to cost $57,426.60. The Government's share of the cost would be $28,713.30. The field team representatives conclude that there is a fair chance of discovering additional ore bodies and recommend that the Government enter into a contract with the applicant to do the work proposed in stages 1 and 2, and that participation be provided on a unit basis.

TIME SPENT ON PROPERTY

The examiner, R. M. Smith, geologist, U. S. Geological Survey visited the property on June 30 and July 1, 1953.

NAME AND LOCATION OF THE PROPERTY

The Diamond mine is 4 miles southwasterly from Eureka in Eureka County, Nev. From Eureka, the mine is reached by proceeding south over U. S. Highway 50 for 0.5 mile, then westerly over a dirt road, up New York Canyon between McCoy Ridge and Gorman Hill, 3.5 miles to the mine. The property is situated in the Eureka Mining District.

CONDITION AND SEASONAL ACCESSIBILITY OF ROAD TO PROPERTY

The dirt section of the road is in good condition in the summer months. As the altitude of the mine is high, winter snows at times cause road difficulties and for daily use, snow removal equipment is required.

COMPETENCY OF APPLICANT AND OPERATING PERSONNEL

The direct management of the company and its operating personnel appear to be quite capable of carrying out the proposed exploration project in a capable and efficient manner.

APPLICANT'S PROPERTY RIGHTS

The applicant's property rights as included in his application consists of the following claims:

1. Patented mining claims:	Survey No.
Napa	320
Hibernia	311
Diamond	221
Krao	319
Star of Eureka	312
Ida	199
F. F. Scott	198
Banner (?)	156
Deak Broke	191
New Year	193
Cloud	194
Metamoris	127
General Washington	128
Clyde	129
August No. 1	

2. Unpatented mining claims:	Book	Page
Anaconda	G	442
Leviathan	G	422
Omega No. 6	K	207
Pinion	L	73
August No. 2	J	381

A plan of the property included in the proposed DMEA exploration is shown in figure 2. The proposed exploration work, as shown, will lie within the boundary of the above mentioned claims but there is a possibility that the actual exploration should extend beyond the boundary into the August No. 1 claim, which is also shown in figure 2. Because there is a possibility that ore found in the exploration work may extend into the August No. 1 claim, it is recommended that this claim be included in the DMEA contract if the exploration loan is granted.

DESCRIPTION OF PROPERTY

The main access to the mine is through the Diamond Tunnel, 1300 feet in length and is in excellent usuable condition. The No. 1 shaft, located about 1500 feet underground from the tunnel portal, extends 535 feet vertically below the tunnel level and has five levels driven off from it at approximately 100-foot intervals. A 200- to 250-foot winze is collared on the fifth or bottom shaft level. Drifts on the adit level extend for about 1200 feet north from the adit and shaft; and the levels driven northerly from this shaft vary from 340 to 1000 feet in length. There are several miles of mine workings in the tunnel and on the No. 1 shaft levels. A composite level plan of the Diamond Mine is shown in figure 5.

Surface mining equipment includes the following:

- 2 Ingersoll-Rand Diesel compressors, 300-cu. ft. per min.
- 1 Fairbanks Morse, 240-horsepower Diesel engine, directly connected to one 200-K.V.A., 3-phase, 60-cycle, 2400-volt generator with exciter.
- 1 Ingersoll-Rand drill sharpener and usual blacksmith shop equipment.

Underground mining equipment includes the following:

- 1 Mucking machine
- 1 Drill and fittings
- 1 Hoist
- 1 Mancha trammer

GEOLOGY

The eastern side of Prospect Mountain consists of sedimentary rocks of Ordovician and Cambrian age that are gently tilted and cut by faults in several systems.

The sedimentary rocks in the mine area (fig. 3) have been subdivided into four units; listed in order of youngest to oldest, they are Pogonip limestone, Dunderberg shale, Hamburg dolomite, Secret Canyon shale. The ore deposits of the Diamond mine are in the Hamburg dolomite which strikes north and dips east throughout most of the mine area.

The Hamburg dolomite is cut by both normal and reverse or thrust faults. The reverse faults are in two sets: One set strikes north and dips about 50 degrees west; the other set strikes north and dips steeply east. The normal faults occur in all attitudes but three sets are most prominant; one set strikes north and dips 45 degrees east, a second set strikes northeast and dips about 60 degrees northwest, and a third set strikes northwest and dips steeply northeast. The rocks are also cut by two sets of joints; one set strikes east and dips steeply south, the other strikes east and dips about 60 degrees north. Quartz stringers, as much as one inch wide, occupy some of the second set of joints.

No igneous rocks were seen in the mine but on the fourth level (inaccessible) there is some highly altered rock which has been mapped as "igneous (?)".

ORE DEPOSITS

The ore bodies of the Diamond mine are in caves and solution cavities in the Hamburg dolomite. Oxidized lead-silver minerals line the sides and bottom of these caves which range in size from a few inches to about 150 feet in diameter and have been mined from the

surface to a vertical depth of about 1000 feet.

Ore bodies have been mined from six major caves and from many lesser ones. In general, the caves dip down to the north or northwest although some dip flatly south. Most caves consist of segments which dip gently north, connected by steep or vertical segments. Most of the caves occur in an area about 250 to 500 feet (fig. 5) and in general are all interconnected. They are filled or partly filled with a rubble of broken dolomite and oxidized ore fragments which have been cemented by calcite and iron oxide to form a breccia called "wash" and "cave-breccia". Not all caves contain ore; the one that contained the largest quantity is the Jumbo cave (figs. 4 and 5).

The ore minerals are principally cerussite and mimetite containing gold and some unidentified silver minerals. A few residual crystals of pyrite, galena, arsenopyrite and sphalerite have also been found. Pyrite and galena were observed in the quartz veins and also in fractures which strike north and dip west. Total production has been about 34,000 tons averaging about 18 percent lead, 25 ounces silver, and 0.5 ounces gold per ton. Ore produced from the south end of the mine is reported to contain higher amounts of gold whereas ore from the north end of the mine contains a higher percentage of silver.

The ore bodies have been found accidently or by following the ore downward from the surface. All of the many faults locally contain small amounts of ore and the intersections of these faults probably localized the ore shoots and the caves. The best ore bodies developed along intersections which were most brecciated, but no single set of

fractures is seen to be more responsible than any other set. The general attitude of the caves has been the best guide to ore.

On the 5th level the Diamond fault cuts the ore-bearing zone and no ore has been found below or in the footwall of the Diamond fault except in one small stope (Stope A) mined near the north end of the North drift.

Mr. R. T. Walker[1/] considers that the Diamond fault is post mineral and that the faulted continuation of the ore bearing zone will also contain ore. He has calculated the location of the faulted continuation to be in the area of proposed exploration on the 3rd level. His calculation of the amount of displacement is based on his interpretation that the shale on the 3rd level (fig. 7) between the Dominic and Diamond faults is part of the same unit as the shale exposed in the most easterly workings on this level. As all levels below the 120-foot level are now inaccessible, this interpretation cannot be checked. It is unlikely, however, that the Diamond fault is entirely post mineral, although considerable post mineral movement has occurred.

Thomas Nolan[2/] considers that the locallization of the ore bodies is controlled by fractures formed between the Diamond fault and an overlying thrust fault. Additional ore bodies beneath the Diamond fault would be controlled by fractures not directly related to those above the fault.

1/ Walker, R. T. 1951, letter to Mr. Jas. A. Hogle included in DMEA application.

2/ Nolan, T. B., 1953, oral communication.

Diamond drilling from the Tunnel level into the area of proposed exploration resulted in five holes that cut sections which contain iron oxide and traces of lead-silver minerals.

In the area of proposed exploration, a favorable host rock (Hamburg dolomite) contains traces of oxidized ore minerals in leached wall rock revealed by drilling. Exploration of these showings by drifting appears to be warranted.

ORE RESERVES

There are no ore reserves of any class in the Diamond mine. Although no tonnage figure can be estimated, it is inferred that any ore bodies discovered in block to be explored would be about the same size and grade as the ore bodies that were mined.

PAST OPERATION

Total past production has been about 34,000 tons averaging about 18 percent lead, 25 ounces silver, and 0.5 ounces gold per ton.

AVAILABILITY OF MANPOWER, MATERIALS, ETC.

Experienced labor can be obtained at Eureka. Materials, supplies and equipment are readily obtainable by motor freight from Salt Lake City, Utah, Reno, Nevada or other points of advantage. A spring near the mine furnishes ample water. No transmitted power is available at the mine, but power is provided by Diesel-electric equipment using Diesel oil hauled from Eureka. Telephone service can be obtained in Eureka where connection is made with the main lines of Bell Telephone Company of Nevada. The Diamond mine has no telephone service. Mail is delivered in Eureka daily, except Sundays.

PROPOSED EXPLORATION

The applicant has proposed two exploration programs: The first, to explore on the 300-foot level for the faulted continuation of the Jumbo ore body in the footwall of the Diamond fault; and, the second, to explore on the Tunnel level for new ore bodies near the Metamoras mine near the northern end of the property.

The first program consists of two stages: (1) To install a hoist on the Tunnel level, retimber the No. 1 shaft to the 320-foot level, and rehabilitate the third level 850 feet; and (2) to drift and crosscut on the third level 600 feet to the projected position of the faulted ore bodies. He estimated that the first stage will cost $30,740.08 and that the second stage will cost $21,296.84 and that the two stages will require about ten months to complete.

The second program (part three of the application) consists of 300 feet of drifting on the Tunnel level to the Metamoras mine to explore for new ore bodies and also to connect with workings of the Metamoras mine for ventilation of the north drift. As he is currently driving this drift and expects to complete it before the exploration contract can be approved, he requests that it be deleted from the application.

OPERATOR'S PROPERTY RIGHTS

The property to be included in the project is shown in fig. 2. It will be noticed that the August No. 1 claim was not included by the applicant in his application. This omission should be remedied by the applicant so as to include the August No. 1 claim in the pro-

posed DMEA exploration.

EXPLORATION PROJECT

The applicant states that work could be started within ten days and be completed within ten months from the date of the approval of an exploration contract.

DESCRIPTION OF PROJECT

The work consists of the rehabilitation of 320 feet of the No. 1 shaft down to the 3rd level along with the installation of a hoist cage, pipe lines, bell system and the other minimum facilities to make it usable, the rehabilitation of approximately 850 feet of the northwest drift of the 3rd level and then the driving of approximately 600 feet of drifts and crosscuts to get into the probable ore zone.

ALLOWABLE COSTS OF PROJECT

The examiners have checked over the applicant's cost estimates and found some errors which have been corrected in the following cost data. To simplify bookkeeping and payments for work accomplished, it is recommended by the examiners that participation be provided on a unit basis. The following costs of the exploration have been reduced to a footage basis.

Labor and Supervision		Rehabilitation Shaft #1	3rd level Rehabilitation	Drifting and Crosscutting
(a) Track to shaft collar (Estimate 2 shifts to complete) 2 men @ $14.54/day plus 7.7% overtime		$ 58.16 = 14.54 x 4		
(b) Moving hoist, pouring foundation and setting up hoist (estimate 12 shifts to complete job) 3 men @ $14.54/day plus 7.7% overtime		523.44 = 14.54 x 36		
(c) Shaft re-timbering (estimate 125 shifts to complete)				
Supervision @ $600/month - 5 months	$3,000.00			
1 Shaft leadman @ $16.62/day plus 7.7% overtime	2,237.50	= 16.62 x 125 + (7.7% x 16.62 x 125)		
2 Shaftmen @ $15.62/day plus 7.7% overtime	4,205.00			
1 Hoistman @ $15.00/day plus 7.7% overtime	2,020.00			
1 Timber framer @ $14.54/day plus 7.7% overtime	1,957.50			
1 Powerhouse man @ $14.54/day plus 7.7% overtime	1,957.50	15,377.50		
(d) 3rd level rehabilitation (estimate 20 shifts to complete)				
Supervision $600/month	480.00			
1 Hoistman @ $15/day, plus 7.7% overtime	323.20			
1 Powerhouse man @ $14.54/day plus 7.7% overtime	313.20			
2 Track and 1 pipeman @ $14.54/day plus 7.7% overtime	939.60		$ 2,056.00	

		Shaft #1 Rehabilitation	3rd level Rehabilitation	Drifting and Crosscutting
Drifting and crosscutting 3rd level				
600 feet (estimate 125 shifts to complete)				
Supervision @ $600/month -				
5 months	$3,000.00			
1 Powerhouse man @ $14.54/day				
plus 7.7% overtime	1,957.50			
1 Hoistman @ $15.00/day				
plus 7.7% overtime	2,020.00			
1 Motor man @ $14.54/day				
plus 7.7% overtime	1,957.50			
3 Miners @ $14.54/day				
plus 7.7% overtime	5,872.50			$ 14,807.50

Operating Material & Supplies

1. For No. 1 Shaft repair:

(a) Track to shaft collar (140 feet)			
280 feet of 16-lb. mine rail			
at $165.00/ton	123.20		
70 ties (4 x 6 - 30") $88.00 per M	30.80		
Fish plates and bolts	9.10		
Spikes	5.00	$ 168.10	
(b) Hoist foundation			
4 yds. concrete @ $20.00/yd.	80.00		
Anchor bolts	10.00		
Operating platform - 300 ft.			
b.m. @ $88.00 per M	26.40		
Wiring supplies	10.00	126.40	

	Shaft #1 Rehabilitation	3rd level Rehabilitation	Drifting and Crosscutting
(c) Shaft retimbering			
Collar down to 60 feet; sets on 5' centers			
4 - 8x16 - 28' bearers 1024 ft. b.m. @ $108 per M.	$ 110.60		
12 sets of:			
2 - 6x8 - 16 ft - 128 ft. bm.			
1 - 4x6 - 5 " - 10 " "			
6 - 6x8 - 5 " - 120 " "			
32 - 2x12 5 " - 320 " "			
578 " "			
Plus 10% blocking 58 " "			
636 " " @ $108 = $68.69/set			
12 sets @ $68.69/set	824.28		
Head Frame:			
10 - 10x10 - 24 ft. 2,000 ft. b.m.			
10 - 8x8 - 24 " 1,280 " "			
3,280 " " @ $108/M	354.24		
60' to 304' cribbed except at stations:			
24 cribbing bearer and guide supports			
2 - 4x6 - 5 ft. 20 ft. bm			
2 - 4x6 - 12 " 48 " "			
1 - 4x6 - 5 " 10 " "			
78 " " @ $108/M = $8.42			
24 x $8.42	202.08		

		Shaft #1 Rehabilitation	3rd level Rehabilitation	Drifting and crosscutting
230 feet cribbing				
2 - 3x12 - 5 ft.	30 ft. b.m.			
2 - 3x12 - 12 "	72 " "			
	102 " "			
230 x 102 ft. b.m. @ $108/M		$ 2,534.60		
Three Station Sets				
4 - 8x8 - 12 ft.	256 ft. b.m.			
2 - 6x8 - 12 "	96 " "			
1 - 6x8 - 10 "	40 " "			
24 - 2x12 12 "	576 " "			
	968 " " @ $108/M = $104.54			
3 sets @ $104.54/set		313.62		
Miscellaneous supplies & equipment for shaft:				
6 Timberman's axes	25.00			
4000 wedges @ 5¢	200.00			
3 kegs nails @ $11.00	33.00			
Lay screws & washers	32.00			
Emergency bell cord	18.70			
3" air line & valves	320.00			
660' Guides (4x4)	300.00			
Ladders	93.00			
Hanging rods	25.00			
Pipe hangers	35.00			
Electric bell system	120.00			
Manway landings	65.00			
Hoist cable	264.00			
200 feet of rope	40.00	1,570.70		

			Shaft #1 Rehabilitation	3rd level Rehabilitation	Drifting and Crosscutting
(d) 3rd Level Rehabilitation Shaft Station to face					
Track - total distance 850 feet					
at $1.20/ft. (as determined under 1(a)	$1,020.00				
Pipe line with valves & fittings					
850 ft. @ $0.65/ft.		552.50			
Power costs on above jobs (fuel, lubricants, filters, etc.)					
150 days @ $15/day		2,250.00		$ 3,822.50	
For Drifting & Crosscutting 3rd level - 600 feet					
Powder and caps	$2.75/ft.				
Drill bits & steel	.25/ft.				
Pipe & fittings	.65/ft.				
Rail & accessories including ties	1.20/ft.				
600 feet @	$4.85/ft.	2,910.00			
Power 125 days @ $15.00/day		1,875.00			$ 4,785.00
Payroll taxes on labor:					
(a) Shaft Labor - includes items a, b and c under Labor and Supervision Payroll $15,959.10 x 11.51% tax			$ 1,836.89		
(b) 3rd Level Rehabilitation Payroll $2,056.00 x 11.51% tax				236.65	
(c) Drifting and Crosscutting (600 ft.) Payroll $14,807.50 x 11.51% tax					1,704.34
Subtotals			$24,000.61	$ 6,115.15	$21,296.84
* Depreciation on company equipment used on project			1,000.00	160.00	4,375.00
Contingencies			205.00	51.00	223.00
Grand Totals			$25,205.61	$ 6,326.15	$25,894.84

Total estimated cost per foot of shaft (cost of headframe, cost of moving and installing hoist and all shaft costs included . . . . . $25,205.61 ÷ 320 ft. = $78.77

Total estimated cost per foot of 3rd level rehabilitation . . . . . $ 6,326.15 ÷ 850 ft. = $ 7.44

Total estimated cost per foot of drifting and crosscutting . . . . . $25,894.84 ÷ 600 ft. = $43.16

TOTAL COST $57,426.60

*Distribution of rental on company equipment

Company Equipment	Rate	Shaft #1	3rd Level	Drifting & Crosscutting
200 KVA power plant	$ 5.00/day	125 days @ $5.00 = $625.00	20 days @ $5.00 = $100.00	125 days @ $5 = $625.
Mancha trammer with charger	$ 5.00/day			125 " @ $5 = 625.
Mucking machine	$10.00/day			125 " @ $10 = 1250.
Drill & fittings	$ 2.00/day			125 " @ $2 = 250.
Hoist	$ 3.00/day	125 days @ $3.00 = $375.00	20 days @ $3.00 = $ 60.00	125 " @ $3 = 375.
Compressors	$10.00/day			125 " @ $10 = 1250.
	Totals	$1000.00	$160.00	$4375.

Total cost of project: $57,426.60
Government's participation (50%): $28,713.30

Participation by the Government should be provided on a unit basis of $78.77 per foot for shaft rehabilitation; $7.44 per foot for 3rd level rehabilitation; and $43.16 per foot for the drifting and crosscutting on the 3rd level.

Also, the applicant should be requested to include the August No. 1 claim in the property to be included in the contract.

U.S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DEFENSE MINERALS EXPLORATION ADMINISTRATION
NO. 2992

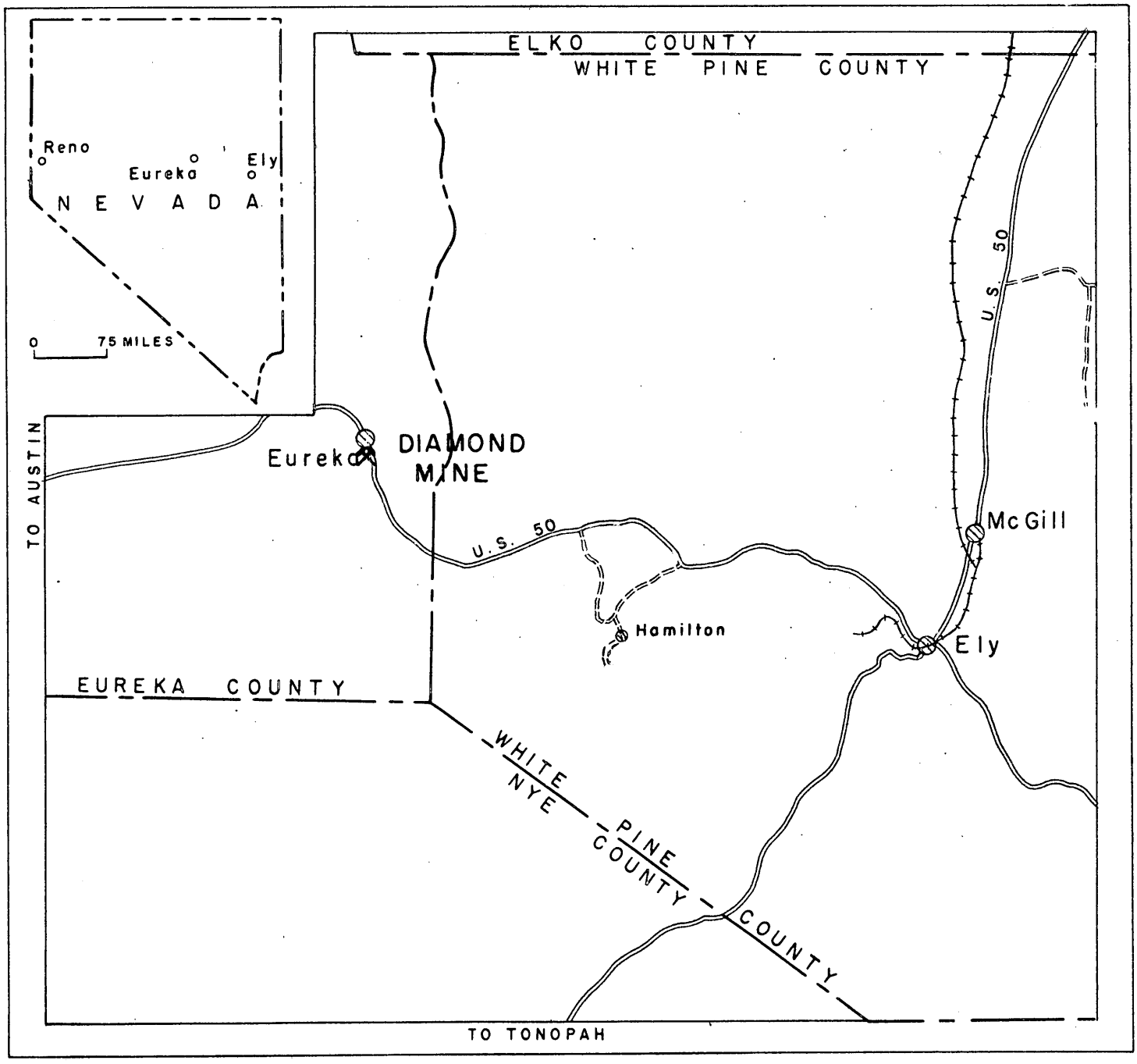
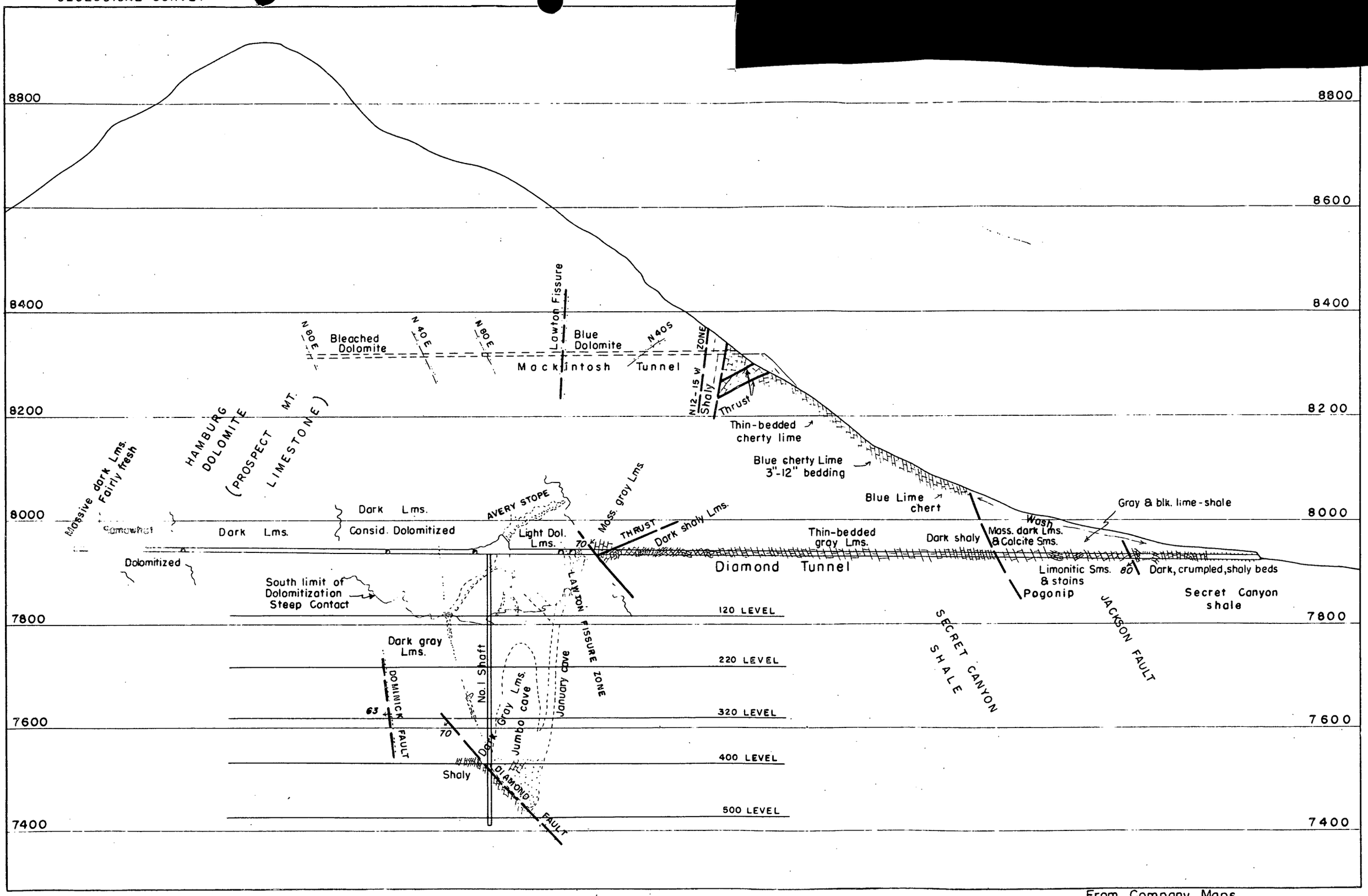


FIG. 1 - INDEX MAP OF NEVADA

0 10 20 30 MILES

(maps with L.F. Rept. 9/23/53

U.S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



From Company Maps

FIG. 4
(Section)

SECTION ALONG LINE OF DIAMOND TUNNEL
DIAMOND MINE, EUREKA COUNTY, NEVADA

0 200 400 FEET
Scale

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
SEP 9 - 1953

GENERAL SERVICES ADMIN.
PUBLIC BLDGS. SERVICE
BMD - COMMUNICATIONS
SEP 8 4 40 PM '53
RECEIVED

Hunsaker
Betty

Porter

72 WA SFS/I -BOM/

SAN FRANCISCO CALIF 9-8-53 106P

ERNEST W. ELLIS, OPERATING COMMITTEE

DEFENSE MINERALS EXPLORATION ADM., INTERIOR BLDG., WA

REURTT SEPT. 2. EXPECT TO HAVE FIELD REPORT ON DMEA-2992 /LEAD/ CONSOLIDATED EUREKA MINING COMPANY WITHIN NEXT FEW DAYS. REPORT EXPECTED TO RECOMMEND REHABILITATION NO. 1 SHAFT TO 300 FOOT LE VEL AND SOME DRIFTING AND CROSSCUTTING UNDER EXPLORATION PROGRAM. BAILERY AND I WILL REVIEW RECOMMENDATIONS IMMEDIATELY UPON RECEIPT OF REPORT AND FORWARD OUR VIEWS ALONG WITH REPORT BY AIR MAIL.

S. RICKER FOR H. C. MILLER EXECUTIVE OFFICER, DMEA FIELD TEAM, REGION III

2 DMEA-2992 1 300

ES 109P

SEP 9 8 39 AM '53
BUREAU OF MINES
MAIL ROOM
WASHINGTON D.C.

MF-500

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

REFERENCE SLIP

DATE 9/9/53

REFERRED TO:

1. Code 500 Room 4058
2.
3.
4.

FOR:

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

REMARKS: .....

Check (X) before the items needing attention.

ROBERT E. ADAMS

Initials of sender.

GPO 16—63815-1

FILE COPY
SURNAME:

J.W. Alt
Trimmel
Ellis
Clark
Pachel
Selfridge

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

DMEA

JWAlt/bjl

3669 4058

14X3923.970 Working Fund, Interior, DMEA
September 2, 1953

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

Please teletype status re application Consolidated Eureka Mining Company, Diamond Mine, Eureka County, Nevada, Docket DMEA-2992. On June 5, 1953, we requested field examination followed by your report and recommendation.

Ernest Wm. Ellis
857
ACTING Chairman, Operating Committee

Copy to: Docket
Admr. R. File
Op. Committee
Base Metals
Audits
Mr. Bishop (USBM)
Mr. Kinkel (USGS)
Chron.

R.C.G.
9-2-53

FILE COPY 500
SURNAME:

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

JUN 5 1953

Mr. James E. Hogle, President
Consolidated Eureka Mining Co.
132 South Main Street
Salt Lake City 1, Utah

Re: Docket No. DMEA 2992 (Lead-Zinc)
Consolidated Eureka Mining Co.
Diamond Mine
Eureka County, Nevada

Dear Mr. Hogle:

Your application 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
1012 Flood Building
870 Market Street
San Francisco 2, California

The Regional Office will contact you at the earliest opportunity in regard to your project.

Sincerely yours,

C. O. Mittendorf

Administrator

JWAlt/hmj
(6/3/53)
CC to: Docket
Adm. R. File
Op. Committee
Base Metals Div.
Region III (2)
Mr. Kinkel
Mr. Bishop
Chron.

6-5-53

500
FILE COPY
SURNAME:

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

JUN 5 1953

Mr. H. C. Miller, Executive Officer
DMEA Field Team, Region III
1012 Flood Building
870 Market Street
San Francisco 2, California

Re: Docket No. DMEA-2992 (Lead)
Consolidated Eureka Mining Co.
Diamond Mine
Eureka County, Nevada

Dear Mr. Miller:

Will you please have the usual field examination made of the above docket and submit your report and recommendations to us.

For your information we are enclosing a copy of the application, together with copies of maps submitted by the Applicant. We are also enclosing a copy of the memorandum of the commodity specialists of the U. S. Bureau of Mines and the U. S. Geological Survey.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee

Enclosures

APPROVED:

J. H. Hedges
Member, Bureau of Mines

A. R. Kinkel, Jr.
Member, Geological Survey

JWAlt/hmj (6/3/53)
CC to: Docket
Adm. R. File
Op. Committee
Base Metals Division
Mr. Kinkel
Mr. Bishop
Chron.

FILE COPY
SURNAME:

Griswold

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

WRGriswold
ext 3669

Department of the Interior

Defense Minerals Exploration
Administration
14X3923 - 970 Working Fund
Interior

June 2, 1953

DAY LETTER

Mr. James E. Hogle, President
Consolidated Eureka Mining Co.
132 South Main Street
Salt Lake City, Utah

Reurtel June 2 Docket number DMEA 2992. This office is referring your application to H. C. Miller, Executive Officer, San Francisco Office for field examination. Letter follows.

C. O. Mittendorf (for

C. O. Mittendorf, Administrator
Defense Minerals Exploration Administration

WRGriswold/hmj
(6/3/53)
CC to: Docket
Adm. R. File
Op. Committee
Base Metals Div.
Region III (2)
Mr. Kinkel
Mr. Bishop
Chron.

J.H.
6-3-53

CLASS OF SERVICE

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

WESTERN UNION

W. P. MARSHALL, PRESIDENT

FX-1201

Alt Greenwood
Betty

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

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

PA006 LB437 1953 JUN 2 PM 7 24

L SLA692 NL PD=WUX SALTLAKECITY UTAH 2=

C O MITTENDORF ADMINISTRATOR DEFENSE MINERALS EXPLORATION ADMINISTRATION DEPARTMENT OF INTERIOR WASHDC=

RE YOUR TELEGRAM JUNE 23 WE DESIRE OUR APPLICATION DOCKET NUMBER DMEA 2992 TO BE REACTIVATED. COPIES OF APPLICATION HAVE BEEN SENT TO A C JOHNSON BUREAU OF MINES RENO. PLEASE ADVISE COLLECT WIRE IF WE ARE TO CONTINUE WITH JOHNSON OR WITH EXECUTIVE OFFICER DENVER OR BOTH. ALSO NAME EXECUTIVE OFFICER DENVER=

CONSOLIDATED EUREKA MINING CO JAMES E HOGLE=

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

FILE COPY
SURNAME:

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

W.Griswold
ext. 3669

Department of the Interior

Defense Minerals Exploration
Administration
14X 3923 - 970 Working Fund
Interior

June 2, 1953

DAY LETTER

MR. JAMES E. HOGLE, PRESIDENT
CONSOLIDATED EUREKA MINING CO.
132 MAIN STREET
SALT LAKE CITY, UTAH

REXURTEL MAY 15 DENYING YOUR APPLICATION DOCKET NUMBER [illegible] 2992, LEAD-ZINC,

THIS IS TO ADVISE YOU THAT RESTRICTED PROGRAM DIRECTIVE DATED APRIL 15 MODIFIED

ON JUNE 1 GIVING [illegible] AUTHORITY TO CONTINUE PROCESSING YOUR APPLICATION WHICH

WAS PENDING [illegible]. KINDLY ADVISE THE [illegible] DIRECTIVE

OFFICER AT DENVER WHETHER OR NOT YOU DESIRE SUBJECT APPLICATION TO BE

REACTIVATED.

C. O. Mitterdorf (fw) p.H. 6-2-53

C. O. MITTERDORF, ADMINISTRATOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

WMGriswold/hmj (6/2/53)
CC to: Docket
Adm. R. File
Op. Committee
Base Metals Division
Region IV (2)
Mr. Kinkel
Mr. Bishop
Chron.

FILE COPY
SURNAME:

Finnell

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

BL

W. R. Griswold
ext. 3669

Department of the Interior

Defense Minerals Exploration
Administration
IAX3923-970 Working Fund
Interior

May 18, 1953

MR. JAMES E. HOGLE, PRESIDENT
CONSOLIDATED EUREKA MINING CO.
132 MAIN STREET
SALT LAKE CITY, UTAH

RE YOUR EXPLORATION APPLICATION DOCKET NUMBER 2992, LEAD-ZINC WHICH WAS RECEIVED APRIL 21. THIS IS TO ADVISE YOU THAT EFFECTIVE APRIL 15, 1953 EXPLORATION FUNDS RESTRICTED TO ASSISTANCE ONLY FOR SPECIFIED MINERALS STILL IN SHORT SUPPLY. LEAD-ZINC NO LONGER INCLUDED. UNFORTUNATELY WE DO NOT HAVE AUTHORITY OR FUNDS TO EXECUTE CONTRACT FOR EXPLORATION PROJECT ON YOUR PROPERTY AND YOUR APPLICATION THEREFORE IS DENIED. THIS IS WITHOUT PREJUDICE TO THE MERITS OF YOUR PROPOSED PROJECT. WE REGRET THE NECESSITY OF THIS ACTION AND EXPRESS APPRECIATION FOR YOUR INTEREST IN THE EXPLORATION PROGRAM AND COOPERATION DURING PERIOD YOUR APPLICATION UNDER CONSIDERATION.

WRGriswold/hmj (5/18/53)
CC to: Docket
Adm. R. File
Op. Com.
Base Metals
Reg. IV (2)
Mr. Kinkel Mr. Bishop Chron.

C. O. Mittendorf (for)

5-18-53

C. O. MITTENDORF, ADMINISTRATOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

IN REPLY REFER TO:

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY 20 1953

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

May 18, 1953

Memorandum

Docket DMEA-2992
Consolidated Eureka Mining Company
Diamond mine, Eureka County Nevada
Total Cost: $58,000
Lead-silver-gold

To: Mr. W. R. Griswold

From: Erwin J. Lyons, USGS
O. M. Bishop, USBM

Subject: Recommendation for partial approval.

The Consolidated Eureka Mining Company has applied for Government assistance to explore the Diamond mine, Eureka County, Nevada. The proposed project consists of 600 ft. of drifting and crosscutting on the 3rd level and drifting on the Tunnel level to the Metamoris group which is to the northwest. Work on the 3rd level would have to be preceded by rehabilitation of the No. 1 shaft from the Tunnel level to the 3rd level and of the 3rd level itself.

Production from the Diamond mine has been from oxidized lead-silver ore which carried some gold. According to the applicant 33,481 tons of ore, averaging 18.32% Pb, 24.56 oz. Ag, and 0.506 oz. Au per ton, were mined from 1889 through 1916. In 1950 and 1951 lessors produced 144 tons of ore averaging 12.7% Pb, 30.0 oz. Ag, and 0.27 oz. Au per ton. Undoubtedly, there was production other than during the periods noted, but records are not available.

The ores were deposited in the Hamburg dolomite. Subsequently, surface waters oxidized the deposits and the country rock was in part dissolved by the acid solutions so that the ore bodies are now in cave-like openings.

R. T. Walker, in a report accompanying the application, pictures the Jumbo ore shoot of the Diamond mine as a pipe-like body which was cut off by the Diamond fault and the lower part moved, relatively, 500 or 600 feet to the northwest. Thomas Nolan of the U. S. Geological Survey believes that the ore deposits are controlled by a structural trough formed by the Diamond fault on the west and a thrust fault on the east. Within this trough the ore shoots are perhaps more pod-like or in runs rather than in the form of pipes and are bottomed by the faults.

The operator, in accordance with the geologic picture presented by R. T. Walker has drilled 6 holes from the Tunnel level to explore for

the faulted part of the Jumbo ore shoot. In 5 of these holes there were sections from which the recovery was poor and which contained iron oxide and low values. While this might seem to verify Walker's theory, it is possible that this is a separate mineralized area different than the Jumbo ore shoot.

Because of the nature of the deposits, diamond drilling is not too satisfactory a method for exploration. Indications such as the operator obtained in the holes drilled might or might not indicate a minable ore shoot. To thoroughly explore the area, drifting will be necessary. The present reviewers recommend that this phase of the project be approved.

Regarding the drifting on the Tunnel level to the Metamoris ore body, there is not sufficient data available to make a decision. It is suggested that the applicant be requested to furnish more information to justify the applicant's proposal.

Erwin J. Lyons
Geologist

O. M. Bishop
Base Metals Branch

April 21, 1953

Mr. James E. Hogle, President
Consolidated Eureka Mining Company
132 Main Street
Salt Lake City 1, Utah

Subject: DMEA-2992
Re: Exploration Assistance
Diamond Mine

My dear Mr. Hogle:

The receipt of your application dated April 18, 1953 for exploration assistance under the Defense Production Act of 1950, as amended, is hereby acknowledged.

Your application has been assigned Docket Number DMEA-2992 and referred to the Base Metals Division.

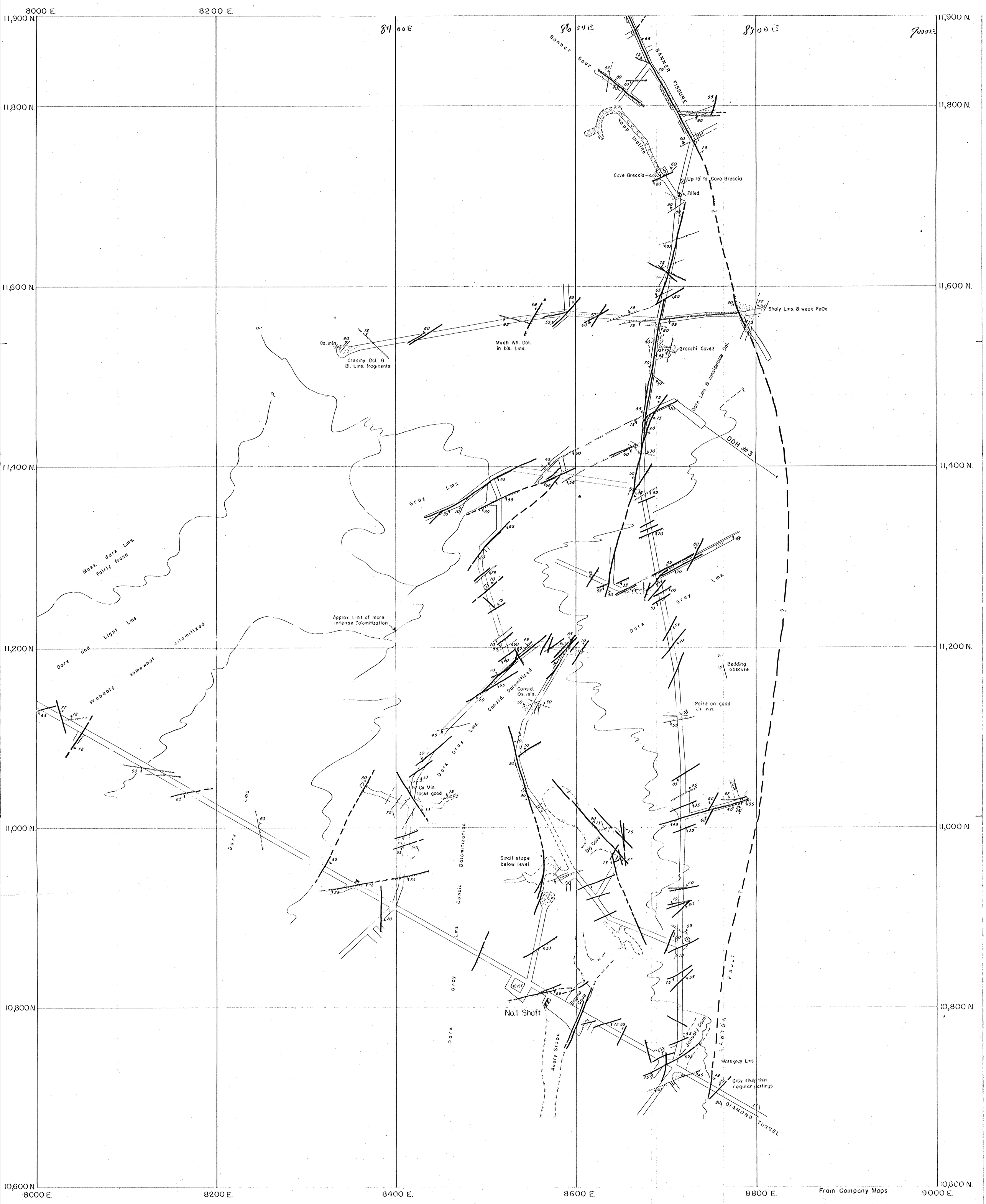
Kindly refer to DMEA-2992 in any future correspondence relating to your application.

Sincerely yours,

ROBERT E. ADAMS

Robert E. Adams, Chief
Operations Control and
Statistics Division

U.S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



From Company Maps

FIG. 6
(Tunnel level)

GEOLOGIC MAP OF THE DIAMOND MINE

DIAMOND TUNNEL (0) LEVEL

EUREKA COUNTY, NEVADA

0 50 100 150 FEET
Scale

U. S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

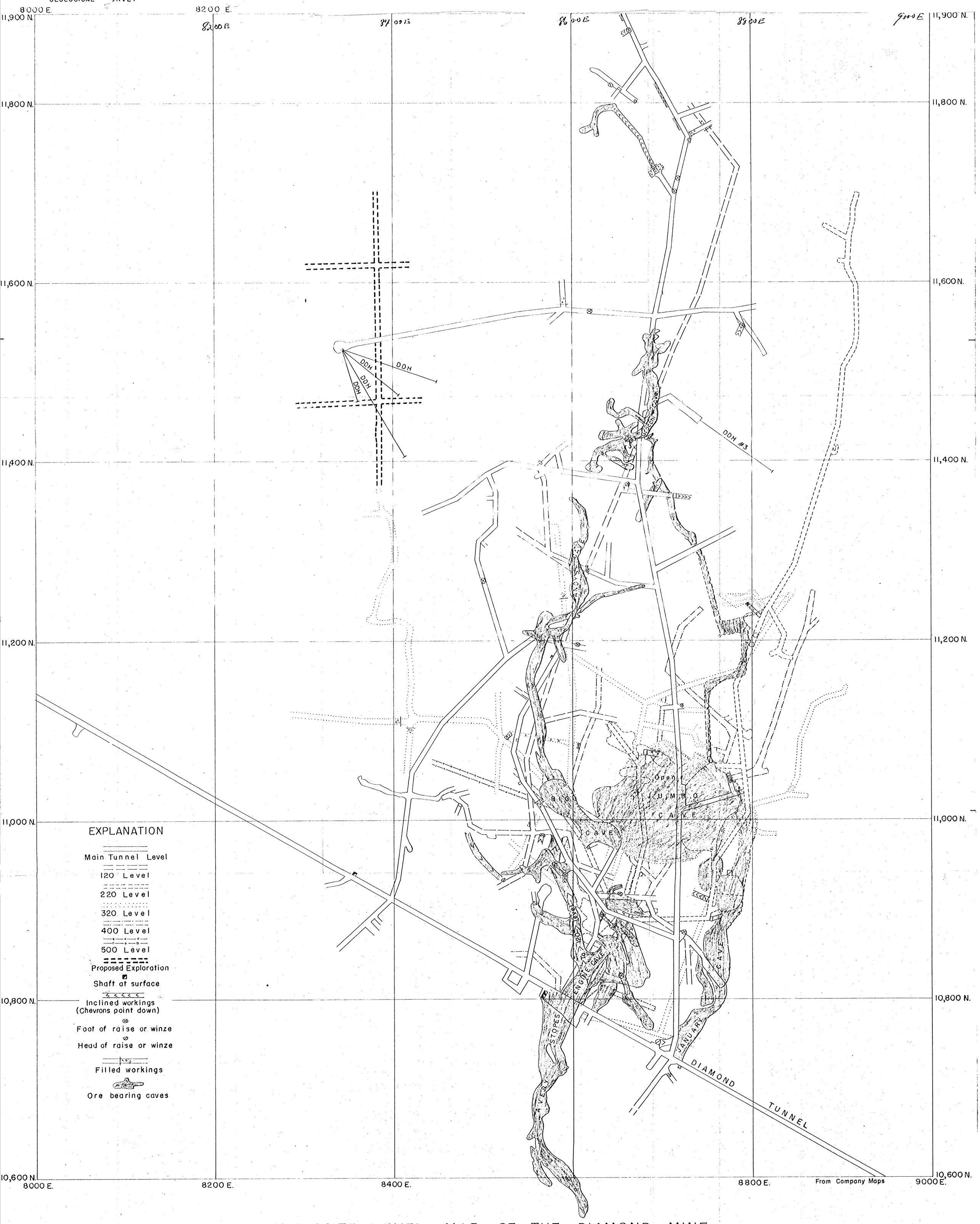


FIG. 5
(Composit)

COMPOSITE LEVEL MAP OF THE DIAMOND MINE
EUREKA COUNTY, NEVADA

0 50 100 150 FEET
Scale

U.S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

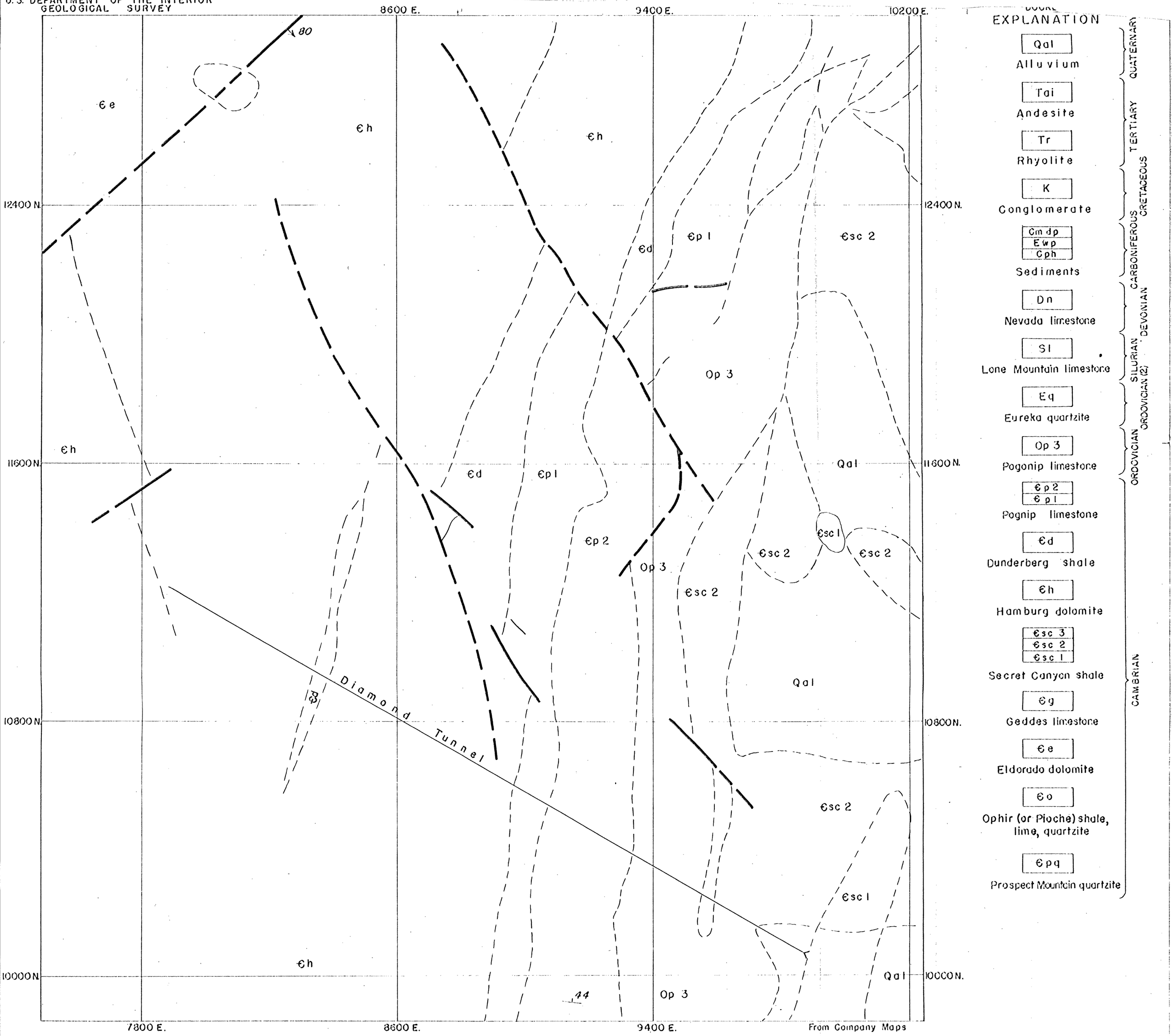
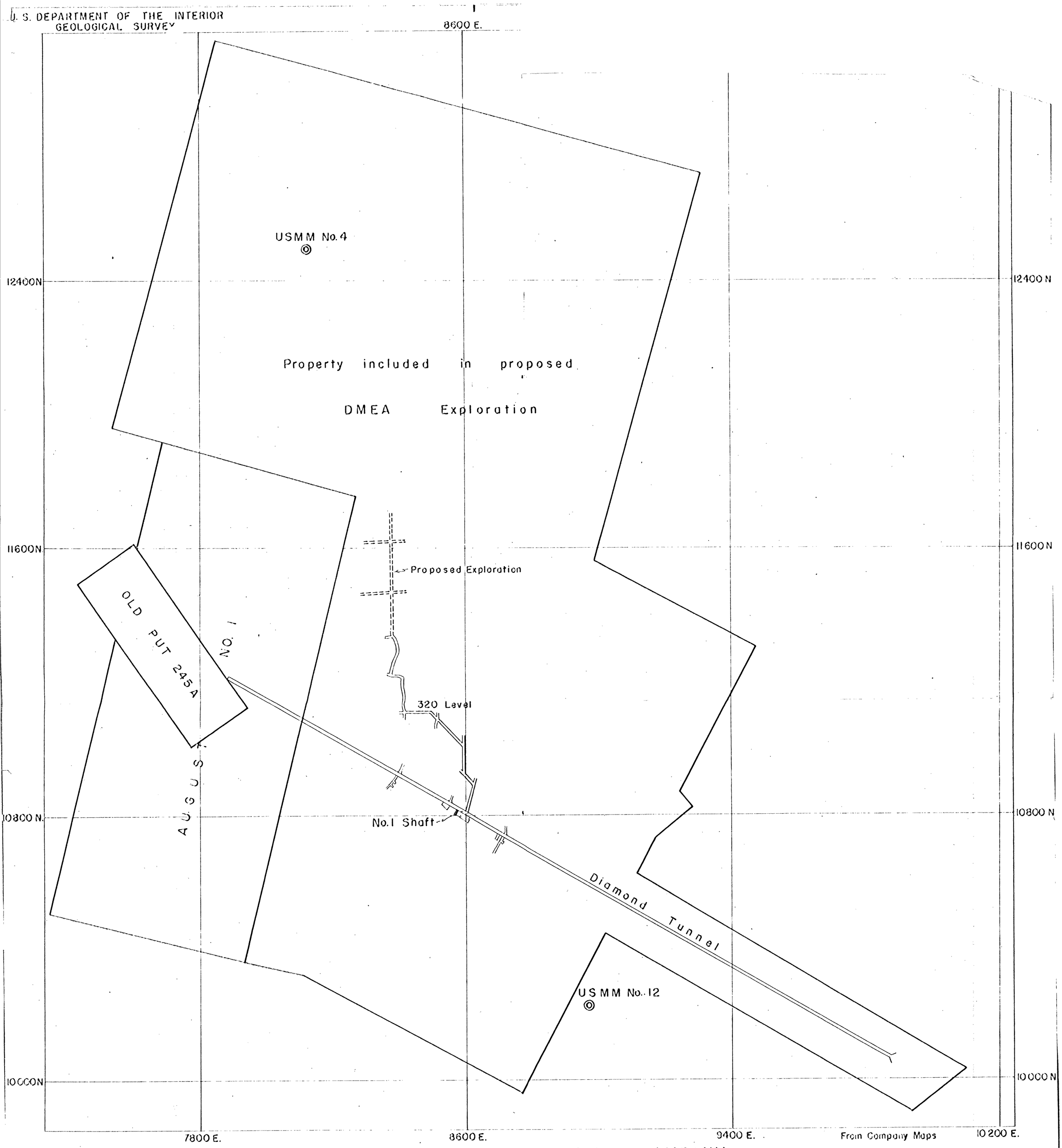


FIG. 3
(Surface Geology)

GEOLOGIC MAP OF A PART OF THE EUREKA DISTRICT
DIAMOND MINE, EUREKA COUNTY, NEVADA

0 200 400 FEET
Scale

U. S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



From Company Maps

FIG. 2
(Property)

CONSOLIDATED EUREKA MINING COMPANY
EUREKA COUNTY, NEVADA

Docket No. DMEA-2992

0 200 400 FEET
Scale

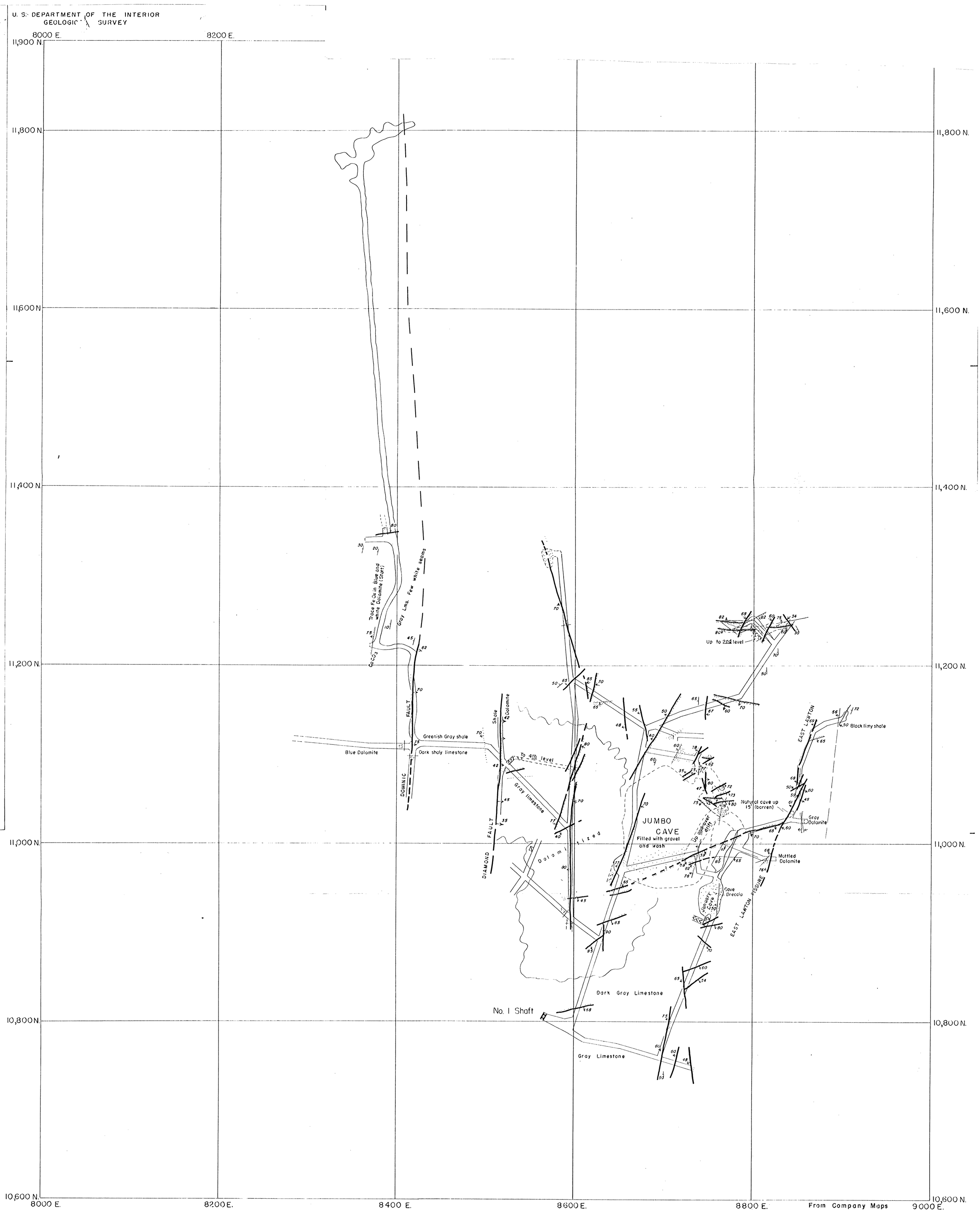


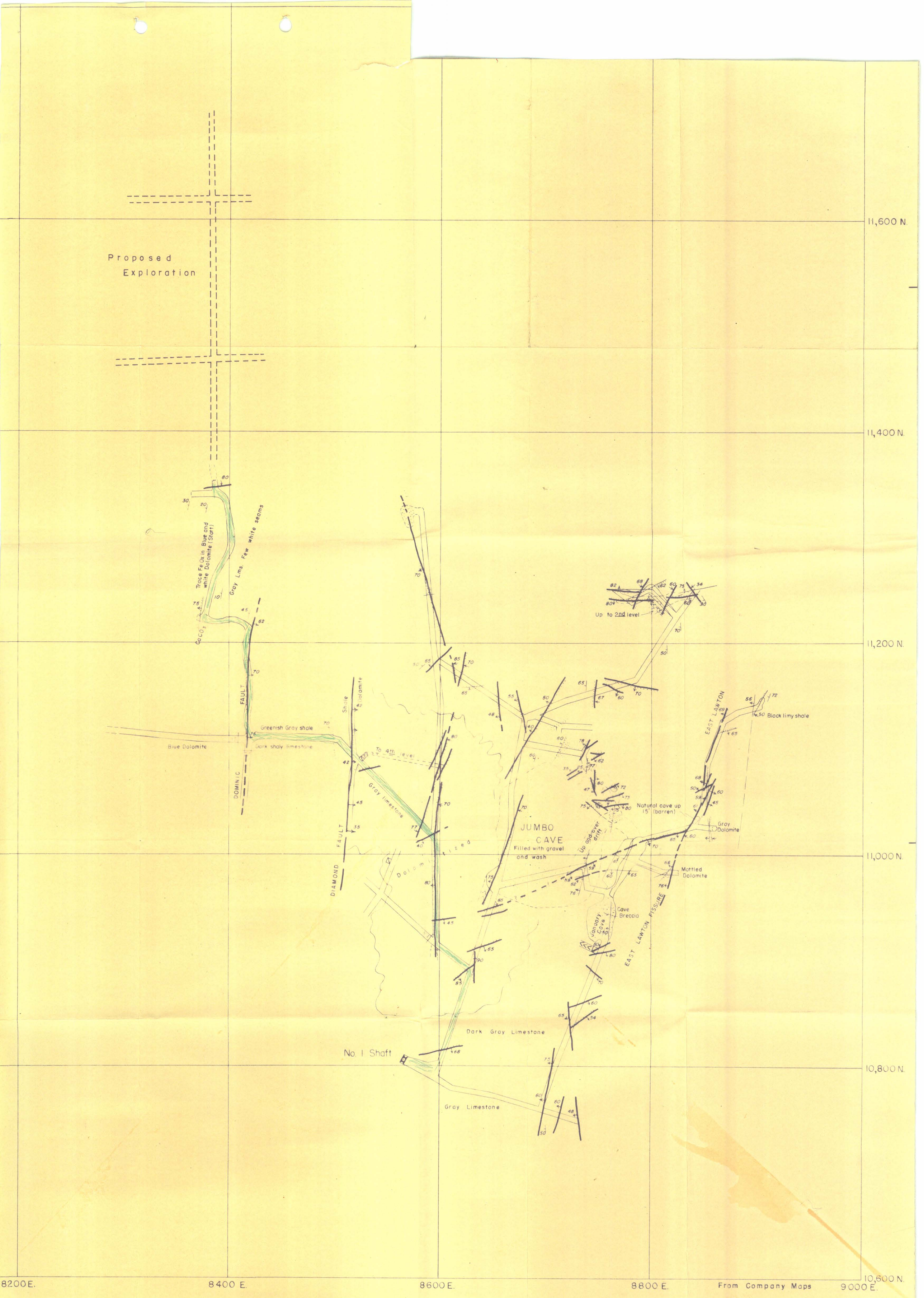
FIG. 7
(320 Level)

GEOLOGIC MAP OF THE DIAMOND MINE

320 - FOOT LEVEL (No. 1 SHAFT)

EUREKA COUNTY, NEVADA

0 50 100 150 FEET
Scale



GEOLOGIC MAP OF THE DIAMOND MINE

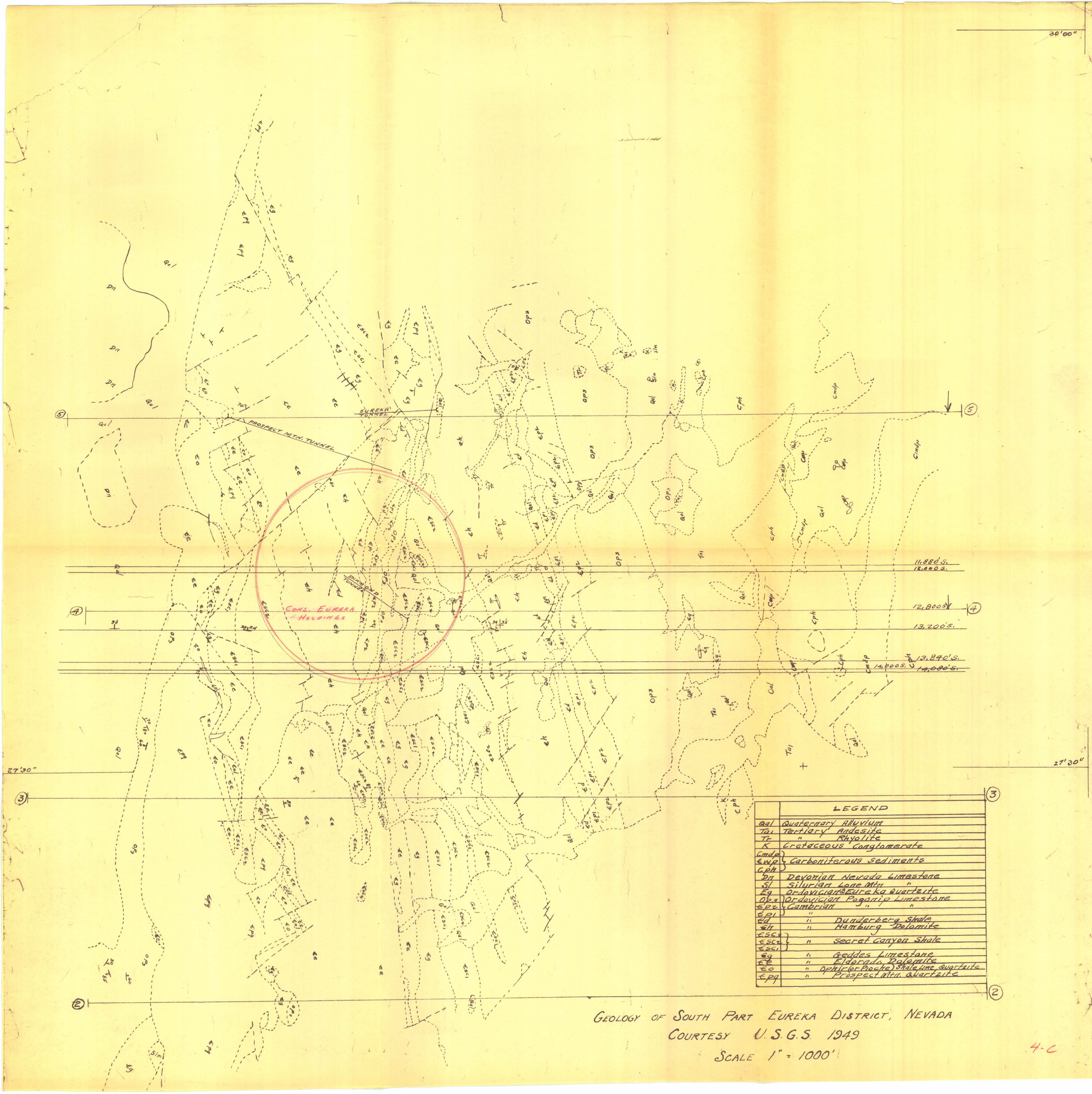
Docket No. DMI-A-2992

320 - FOOT LEVEL (No. 1 SHAFT)

EUREKA COUNTY, NEVADA

FIG. 7
(320 Level)

0 50 100 150 FEET
Scale



GEOLOGY OF SOUTH PART EUREKA DISTRICT, NEVADA

COURTESY U.S.G.S. 1949

SCALE 1" = 1000'

4-C

2000 W
1800 W
1200 W
800 W
400 W
0
10400 S
10800 S
11200 S
11600 S
12000 S
12400 S
12800 S
Now Drilling Down From Here
Proposed Drifting 3rd Level Position Cross Cuts To Be Determined While Drifting
Diamond Fault
Diamond Fault 3rd Level
Lower Stope 3rd Level
3rd Level
Elevation 7613'
No. 1 Shaft
Diamond Tunnel
Elevation 7330' to 7350'
DIAMOND MINE
EUREKA, NEVADA
TUNNEL & 3rd LEVELS
SCALE 1" = 80' APRIL '53
5-B
(4-c)