DOCKET

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AMENDMENT NO. 1
TO
EXPLORATION PROJECT CONTRACT IDM-E829

DATED JUNE 28, 1955
DOCKET NO. DMEA-3698
BETWEEN
THE UNITED STATES OF AMERICA
AND
HUGH M. SIMMONS

It is agreed this 7th day of August, 1956 that the contract be amended as follows:

The completion date for work under the contract shall be extended from April 1, 1956 to May 30, 1956.

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

Executed in sextuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

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

HUGH M. SIMMONS

Hugh M. Simmons
Hugh M. Simmons

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AMENDMENT NO. 1

Docket No. DMEA-3698 Mineral Mercury

Exploration Project Contract Idm-E829

Date of Contract June 28, 1955

Date of Amendment August 7, 1956

Operator Hugh M. Simmons

JUSTIFICATION

Project was delayed owing to cessation of work during the winter months on account of the inaccessibility of the property.

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

Docket copy

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JUL 15 1955

MF-200A
(Revised June 1954)

Docket No. DMEA - 3698

Commodity Mercury

Contract No. Idm-E 829

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

It is agreed this 28th day of June, 1955, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and [2] Hugh M. Simmons, whose mailing address is 301 Alhambra Boulevard, Sacramento, California, hereinafter called the "Operator," as follows:

ARTICLE 1. *This contract* is entered into under the authority of the Defense Production Act of 1950, as amended. It consists of this form (MF-200A), the attached Exhibit "A," Annex I, and 2 maps.

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

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

(b) The Operator represents and undertakes that:

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

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

(c) The Subordination Agreement of the holder of any claim, lien, or encumbrance listed above, and (if the Operator does not hold the legal title) the Consent to Lien of any holder of the legal title of the land (lessor, seller, optionor, etc.), are attached, as follows:

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

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

ARTICLE 3. *The exploration project.*—The project is a search for indicated or undeveloped deposits of Mercury. The work to be performed is described in Exhibit "A." The Operator on or before July 1, 1955 shall commence the work, and on or before April 1, 1956 (unless the Operator's obligation to complete the work is terminated—see Article 8) shall complete the work.

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

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

ARTICLE 5. *Contribution by the Government.*—A fixed cost for each unit of work to be performed (per foot of drifting, per foot of drilling, per hour of operations, etc.) is hereby agreed upon, and is set forth in Exhibit "A" in connection with the estimated total cost of the project in the sum of $17,800.00 The Government will contribute 75 percent of the fixed unit costs as work is performed, in a total sum not in excess of $13,350.00: *Provided,* That until the Operator has rendered to the Government his final report, and any final auditing required by the Government has been made, and a final settlement of the contract has been made, the Government may withhold from the last voucher or vouchers such sums as it sees fit not in excess of 10 percent of the estimated total cost of the work. The Government will make its contribution on the basis of the monthly vouchers referred to in Article 6(b), but all payments by the Government are provisional only, subject to audit, until the account between the Operator and the Government is finally audited and settled. To the extent that excesses over fixed unit costs or any excess over the estimated total cost may be necessary for the performance of the work, the Operator shall incur and pay such excesses for his own account without contribution by the Government. The Government may make payments directly to independent contractors and suppliers for the account of the Operator rather than to the Operator.

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

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

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

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

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

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

ARTICLE 7. *Repayment by Operator.*—(a) *Certification.*—If the Government considers that a discovery or development from which production may be made has resulted from the work, the Government, at any time not later than six months after a sufficient final report and final account (see Article 6) has been rendered, may so certify in writing to the Operator. Such certification shall describe broadly or indicate the nature of the discovery or development.

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

(c) *Basis for computation.*—The Government's royalty shall be a percentage of the gross proceeds (including any bonuses, premiums, allowances, or other benefits) from the production sold, in the form sold (ore, concentrates, metal, or equivalent), at the point of delivery (the f. o. b. point); *except,* that charges of *the buyer* arising in the regular course of business, and shown as deductions on the buyer's settlement sheets, on account of the cost of treatment processes performed by *the buyer,* sampling and assaying to determine the value of the production sold, and freight paid by *the buyer* to a carrier (not the Operator), shall be allowed as deductions in arriving at the "gross proceeds" as that term is used herein. Any costs of treatment processes, sampling or assaying, or transportation, performed or paid by the Operator or by anyone other than the buyer, are not deductible in arriving at the "gross proceeds" as that term is here used. The term "treatment processes," as here used, means those processes (such as milling, concentrating, smelting, refining, or equivalent) applied to the crude ore or other production after it is extracted from the ground, to put it into a commercially marketable form; excluding fabricating or manufacturing.

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

(e) *Percentages of royalty.*—The percentages of the Government's royalty shall be as follows:

One and one-half (1½) percent of amounts ("gross proceeds" or "value") not in excess of eight dollars ($8.00) per ton of production in the form in which sold, held, or used, plus one-half (½) percent for each additional full fifty cents ($0.50) by which such amounts exceed eight dollars ($8.00) per ton, but not in excess of five (5) percent of such amounts.

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

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

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

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

(i) *No obligation to produce.*—Nothing in this contract is to be construed as imposing any obligation on the Operator or the Operator's successor in interest to engage in any production operations.

(j) *Government not obligated to buy.*—Nothing in this contract shall be construed as imposing any obligation on the Government to purchase any minerals mined or produced from the land.

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

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

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

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

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

ARTICLE 11. *Changes and added provisions.*—

Executed in sextuplicate the day and year first above written.

HUGH M. SIMMONS
(Operator)

By Hugh M. Simmons

THE UNITED STATES OF AMERICA

By Administrator, Defense Minerals Exploration Administration

"Appd. Sol. Off."

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

.....

[CORPORATE SEAL]

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

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EXPLORATION PROJECT CONTRACT
HUGH M. SIMMONS
DOCKET NO. DMRA-3698

ANNEX I

The land referred to in Article 2 of the contract form is described as follows:

The southeast quarter of the southeast quarter of section 27;

The northeast quarter of the northeast quarter of section 34;

The north half of northwest quarter, and the northwest quarter of northeast quarter, of section 35.

All the land lies in T. 10 N., R. 6 W., M.D.B.&M., and is in the Mayacmas Mining District.

EXPLORATION PROJECT CONTRACT
HUGH M. SIMMONS
DOCKET NO. DMEA-3698

EXHIBIT "A"

Description of the Work

Figure 1 shows location of the property in Napa County, California.

Figure 2 shows mine workings and proposed rehabilitation and exploration work.

The work is divided into two stages. The Operator shall perform Stage I, and shall perform so much of the work set forth under Stage II as is approved in writing in advance by the Government.

Stage I

Rehabilitate 200 feet of the upper adit, as shown on Figure 2.

Any mineralized zones shall be sampled and assays made for mercury.

Stage II

Drift and crosscut 440 feet in the lower adit, as shown in Figure 2. The drift and crosscut shall have minimum dimensions of 4½ feet by 6½ feet in the clear of timber.

Any mineralized zones shall be sampled and assays made for mercury.

* * * * *

All work shall be timbered as necessary.

The location, direction, and extent of all work are subject to the approval of the Government.

Fixed Unit Costs

(The unit costs include all costs whatsoever necessary to complete the work.)

Stage I		
200 feet of rehabilitation @ $12.00/ft.	$ 2,400.00	
20 sample analyses @ $2.00/each sample	40.00	
Estimated Total Cost of Stage I		$ 2,440.00
Stage II		
440 feet of drifting and cross-cutting @ $30.00/ft.	13,200.00	
300 feet of timbering @ $7.00/ft.	2,100.00	
30 sample analyses @ $2.00/each sample	60.00	
Estimated Total Cost of Stage II		15,360.00
Estimated Total Cost of Project		$17,800.00
Government Participation @ 75%		$13,350.00

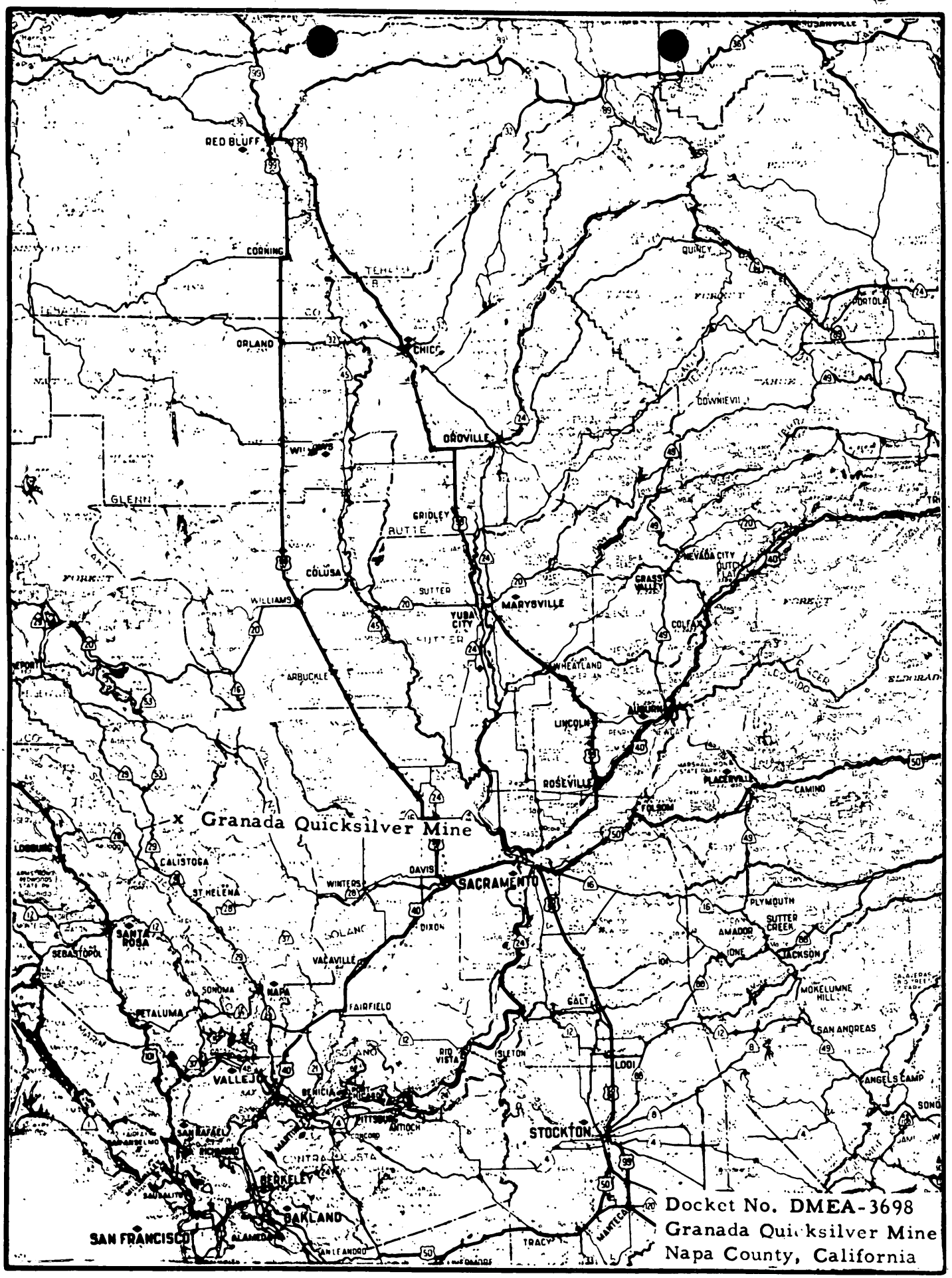
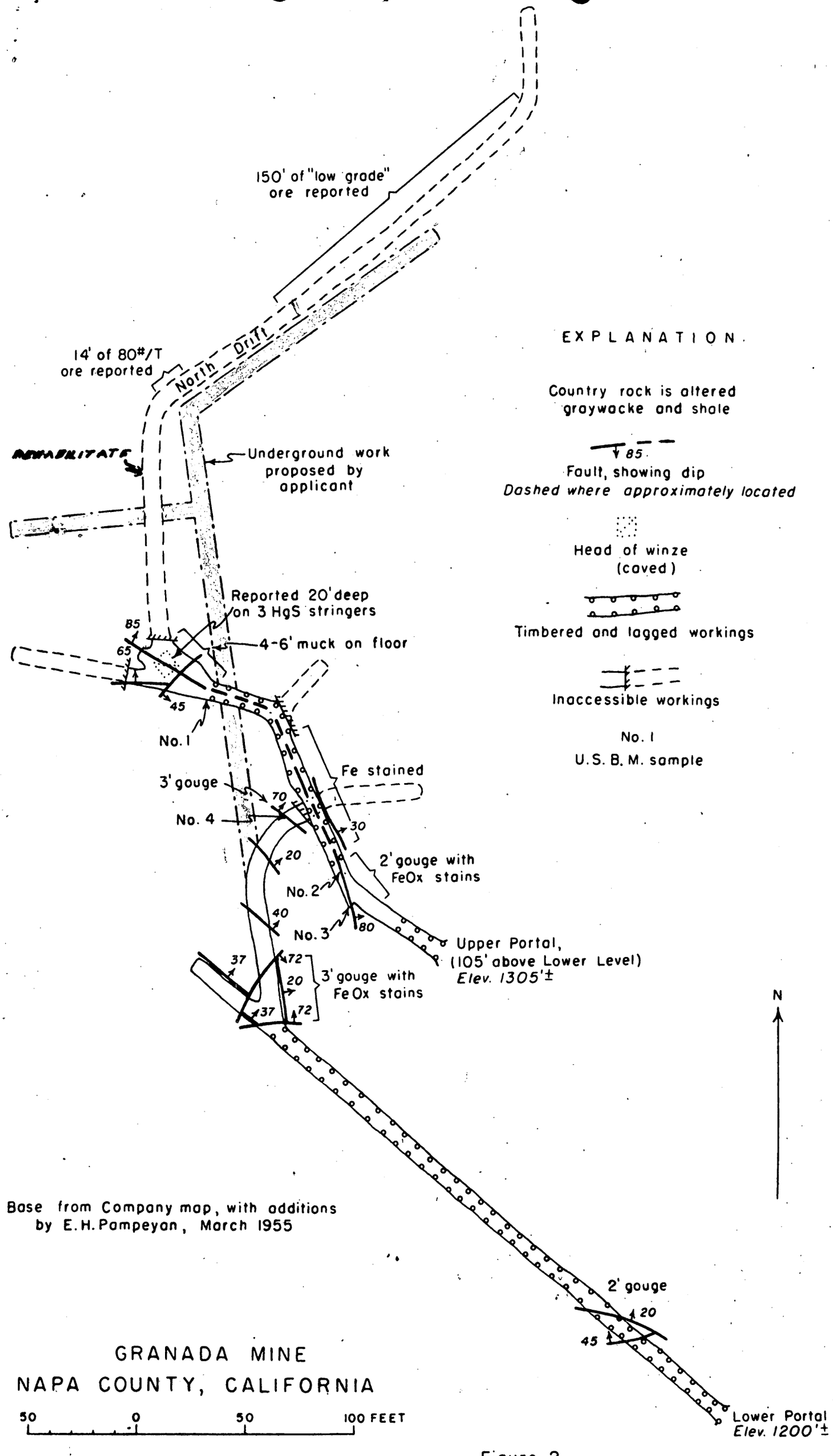


FIG. 1 LOCATION MAP

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DMEA 3698
(MERCURY)



GRANADA MINE
NAPA COUNTY, CALIFORNIA

Figure 2

DOCKET
SURNAME
Chapman
Martin
Talbyt.
Selfridge.
Johnson

400

APR 24 1957

Mr. Hugh M. Simmons
8001 Alhambra Boulevard
Sacramento, California

Re: Docket No. DMRA 3698 - Mercury
Granada Mine
Napa County, California
Contract No. Ldm-5829

Dear Mr. Simmons:

This is with reference to the subject exploration contract between you and the Government.

It is not our intention to issue a certification of discovery or development which would create a lien against the subject property. We are, therefore, closing our books with respect to this project. Your attention is called, however, to the provisions of the contract which require the operator to keep and preserve certain records for the period indicated.

We regret that the exploration work performed did not result in a discovery or development. Your participation in the exploration program, however, is sincerely appreciated.

Sincerely yours,

C. O. Mitchell

Administrator

TLChapman:fee
11/12/56
cc to: Docket
Code 400
Code 800
Admr. Read. File
FT. REG. II
Messrs. J. W. Pennington, MMSH
T. H. Killegaard, UFGS

DOCKET
SURNAME
Chapman
Martin

400

November 13, 1956

MEMORANDUM

To: Administrator, DMEA

From: Iron and Ferro-Alloys Division, DMEA

Subject: Memorandum of non-discovery
Docket No. DMEA 3698 - Mercury
Hugh M. Simmons
Granada Mine
Napa County, California
Contract No. Idm-2829

This Division hereby concludes that the work on the subject property, as described under the contract and amendments thereto, has resulted in no discovery or development from which commercial production may be made.

Operator & Owner: Hugh M. Simmons
801 Alhambra Boulevard
Sacramento, California

Property: The land referred to in Article 2 of the contract form is described as follows:

The southeast quarter of the southeast quarter, of section 27; The northeast quarter of the northeast quarter, of section 34; The north half of the northwest quarter, and the northwest quarter of the northeast quarter, of section 35, in T. 10 N., R. 6 W., M. D. B. & M. in the Mayacmas Mining District.

Contract: Dated June 28, 1955, estimated total cost $17,800.00, Government participation 75 percent, $13,350.00. The work consisted of 200 feet of adit rehabilitation, 440 feet of drifting and crosscutting, 300 feet of timbering, and assaying. One amendment was written extending the time for completion of the contract.

Work Completed: The work completed consisted of 200 feet of adit rehabilitation, 278 feet of drifting and crosscutting, and 62 feet of timbering at a cost of $11,174.00. Government participation 75% $8,380.50.

Geology: The property is in an area underlain by highly folded and faulted greywacke, shale and mudstone of probably early Cretaceous age. Andesite flows and minor intrusions of Tertiary age outcrop in the surrounding region. Shear zones occur varying from a few inches to 15 feet in thickness. Cinnabar is the only ore mineral seen and is sparsely disseminated in gouge in the shear zones.

History and Production: Initial discovery work and most of the upper adit development work on the property were done in 1926-27. Three shallow winzes about 20 feet in depth, with some drifting, are reported to have been completed in 1930-33. The lower adit was driven during the same period with approximately 510 feet of workings. The property was idle from 1933 until 1955 when it was acquired by Mr. Simmons. No production has been made from the property.

Comments: While a few small pods of cinnabar of ore grade might possibly be found with further exploration, there is little chance of finding an appreciable tonnage that would warrant the work.

Recommendations:

The Field Team concludes that there is little possibility of finding any appreciable tonnage of minable ore and recommends non-certification of the project. The Commodity Divisions of the Geological Survey and the Bureau of Mines, concur in the recommendations of the Field Team.

This Division concurs in the conclusions of the Field Team and a letter advising of non-certification is being written to the owner and operator.

TLChapman:foc
11/13/56
cc to: Docket
Code 400
Admr. Read. File
Oper. Comm.

W. S. Martin, Chief
Iron and Ferro-Alloys Division
DMEA

DMEA

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

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1605 Evans Avenue
Reno, Nevada

October 15, 1956

Memorandum

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

From: Executive Officer, DMEA Field Team, Region II

Subject: Docket No. DMEA-3698 (Mercury)
Hugh M. Simmons
Granada Mine
Napa County, California
Contract No. Idm-E 829

Enclosed are four copies of the Operator's Final Report on subject docket.

S. Ricker

Encls.

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OPERATOR'S FINAL REPORT

October 3, 1956

Mr. S. Ricker
Executive Officer
DMEA Field Team
U.S. Bureau of Mines
Reno, Nevada

Re: Hugh M. Simmons
Granada Quicksilver Mine
Docket No. DMEA-3698
Contract No. Idm-E 829

Dear Sir:

Exploration work in connection with the Defense Minerals Exploration Administration was begun July 15, 1955, and completed May 30, 1956.

The Government cooperated in 200 feet of rehabilitation on the upper tunnel level and 278 feet of crosscutting on the lower tunnel level. Additional rehabilitation, drifting, crosscutting, and long-hole drilling exploration work was done on the Operator's account.

Some cinnabar mineralization was encountered in the vicinity of a filled winze on the upper adit and near the terminal of the lower adit crosscut; however, insufficient quantities have been found to date to allow mining. No mercury production has been made to date. As the mine is located in the immediate vicinity of large past producing mercury mines and within similar favorable formations, further exploration work is planned by the Operator. Diamond drilling, from both the lower tunnel level and from the surface, is completed.

Efficient and full cooperation was received from DMEA engineers in connection with the exploration program.

Summary of Costs

Work accomplished under the contract and costs submitted were as follows:

Stage I - Rehabilitation of Upper Adit

Period	Quantity of Work	Cost
July-Aug. 1955	200' of rehabilitation at $12.00/ft.	$ 2,400.00

Stage II - Drifting and Crosscutting - Lower Adit

Period	Quantity of Work	Cost
Sept. - Nov. 1955	82 ft. of crosscut at $30.00	$ 2,460.00
	28 ft. of timbering at $ 7.00	196.00
Dec. 1955	90 ft. of crosscut at $30.00	2,700.00
Feb. 1956	30 ft. of timbering at $7.00	210.00
Mar. -May 1956	106 ft. of crosscut at $30.00	3,180.00
	4 ft. of timbering at $7.00	28.00
	Total cost	$11,174.00
	Gov't. participation at 75%	8,380.50

Hugh M. Simmons
801 Alhambra Boulevard
Sacramento, California

Docket

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

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OCT 15 1956

October 15, 1956

WSM

Memorandum

To: W. S. Martin, Defense Minerals Exploration Administration

From: Commodity Specialist, Branch of Base Metals

Subject: Review of Field Team final report, Docket No. DMEA 3698 (mercury), Hugh M. Simmons, Granada Mine, Napa County, California, Contract No. Idm-E 829, $17,800.00

The Field Team final report on the Granada mine exploration project, by J. D. Warne, Bureau of Mines, and D. B. Tatlock, Geological Survey, has been reviewed and found satisfactory.

According to the report, exploration for mercury mineralization consisted of 200 feet of rehabilitation of the upper adit level and 278 feet of drifting and crosscutting on the lower adit level. Total expenditures were $11,174.00.

Although the area was adequately explored by the DMEA work, no commercial-grade ore was discovered. Mercury mineralization was weak, widely spaced, and low-grade, ranging from 0.1 to 0.5 pounds of mercury per ton of material.

For these reasons, I concur with the recommendation of the Field Team that no Certificate of Discovery be issued.

J. W. Pennington

J. W. Pennington

Copy to: Division of Minerals
Branch of Base Metals (2)
Thor Kiilsgaard, U.S.G.S.
F. D. Lamb
F i l e s

DMEA
Docket

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

1605 Evans Avenue
Reno, Nevada

October 5, 1956

Memorandum

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

WSM

From: Executive Officer, DMEA Field Team, Region II

Subject: Docket No. DMEA-3698 (Mercury)
Hugh M. Simmons
Granada Mine
Napa County, California
Contract No. Idm-E829

Enclosed are four copies of our final report on subject docket by J. D. Warne, Bureau of Mines and D. B. Tatlock, Geological Survey.

Roscoe Smith and I concur in the recommendation that a certificate of discovery should not be issued.

S. Ricker

Encl.

Reviewed by
DMEA OPERATING COMMITTEE
10-12-56
(date)

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

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION II

FINAL REPORT

DMEA-3698, Contract Idm-E829 (Mercury)
Dr. Hugh M. Simmons
Granada mine, Napa County, California

by

J. D. Warne
U. S. Bureau of Mines

D. B. Tatlock
U. S. Geological Survey

October 3, 1956

Reviewed by
DMEA OPERATING COMMITTEE
10-12-56
(date)

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ILLUSTRATIONS

Figure 1 . . . . . Location map

2 . . . . . Geologic and Assay map

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OCT - 8 1956

INTRODUCTION

The Granada mine, Napa County, California, was explored by Dr. Hugh M. Simmons, 801 Alhambra Boulevard, Sacramento, California, in cooperation with the Defense Minerals Exploration Administration, docket DMEA-3698, under contract Idm-E829, dated June 28, 1955, authorizing $17,800.00, of which the Government's participation at 75 percent would have been $13,350.00. The project started July 15, 1955 and ended May 30, 1956. The program was discontinued by the Government after the total expenditure of $11,174.00 of which the Government's participation was $8,380.50. Therefore, $6,626.00 remains in contract funds; the Government's share of unused funds is $4,969.50.

A field examination of the mine was made May 30, 1956 by J. D. Warne, U. S. Bureau of Mines, and D. B. Tatlock, U. S. Geological Survey, accompanied by Hugh Simmons, Max Piaseck, and Paul Sharrock.

SUMMARY

The purpose of the project was to explore for cinnabar in hydrothermally altered graywacke in a geologic setting similar to other mines in the immediate vicinity which had a large quicksilver production. The exploration consisted of 200 feet of rehabilitation on the upper adit level and 278 feet of drifting and crosscutting on the lower adit level. Although a few discontinuous

veinlets and sparse disseminations of cinnabar were found, the mineralized zones were too low grade and too widely spaced to be commercial.

CONCLUSIONS AND RECOMMENDATIONS

The favorable area was adequately explored, but the showings of cinnabar discovered by the DMEA work are too small, too widely spaced, and too low grade to be ore. There are no indications that the altered graywacke and gouge-filled fractures in the mine area contain cinnabar of ore grade. The showings do not warrant developing, and production is not economically feasible. We recommend, therefore, that no certificate of discovery be issued.

The work thus far has not revealed indications of other exploratory possibilities. Additional work may be justified if future exploration work and mapping in the adjoining Toyon mine (DMEA-4155, contract Idm-E999) yields geologic evidence from which to infer ore on the Granada property. Unless this evidence is obtained we recommend that no further exploration be done either by the Government or by the owner.

THE DMEA PROJECT

Although the property has had no production, and only sparsely disseminated cinnabar was exposed in the accessible

workings, the project was justified by the favorable geologic setting of the mine which is in the same block of altered graywacke as the Oat Hill mine from which production exceeded 160,000 flasks.

The program authorized in the contract consisted of rehabilitating 200 feet of the upper adit (Stage I) and a total of 440 feet of drifting and crosscutting in the lower adit (Stage II). The Stage I work was completed on August 15, 1955. Cinnabar was found in only one steeply-dipping gouge-filled fracture about 2 inches wide a few feet north of the caved winze.

It was recommended that 220 feet of crosscutting on the lower adit be allowed under Stage II in order to explore for the possible downward continuation of this mineralized fracture.

Stage II was begun October 1, 1955. All of the fractures intersected were barren although traces of cinnabar were reported by the operator to have been found in long-holes drilled at his expense northeast of the existing face. The operator was allowed to continue another 58 feet on contract funds for a total distance of 278 feet on the lower adit level, but results were negative. A total of 162 feet of drifting and crosscutting under the contract was not used. The completion date was extended to May 30, 1956 by Amendment No. I.

Expenditures

The following tabulation shows the period, work performed, and total project expenditures:

Period	Description and Unit Costs	Total Cost
	Stage I (Upper Adit)	
July and August 1955	200 ft. of rehabilitation @ $12.00/ft.	$2,400.00
	Stage II (Lower Adit)	
Sept., Oct., and Nov. 1955	82 ft. of crosscutting @ $30.00/ft.	2,460.00
	28 ft. of timbering @ $7.00/ft.	196.00
Dec. 1955 Jan., and Feb. 1956	90 ft. of crosscutting @ $30.00/ft.	2,700.00
	30 ft. of timbering @ $7.00/ft.	210.00
Mar., April, and May 1956	106 ft. of crosscutting and drifting @ $30.00/ft.	3,180.00
	4 ft. of timbering @ $7.00/ft.	28.00
	Total expenditure:	$11,174.00

Total approved cost:	$17,800.00
Total expenditure:	11,174.00
Government's share of cost:	8,380.50
Unexpended amount of contract:	6,626.00
Government's share unexpended:	4,969.50

GEOLOGY

The Granada mine is at the eastern end of the Mayacmas quicksilver district in an area underlain by highly folded and faulted graywacke, shale, and mudstone of probable Early Cretaceous age. A northwest-trending body of serpentine crops out along a ridge about 1,200 feet east of the mine. Andesite flows, pyroclastics, and minor intrusives of Tertiary age crop out in the surrounding region; the flows and pyroclastics may have, at one time, covered the mine area.

Complexely folded and faulted black shale and mudstone and hydrothermally altered medium-grained graywacke are the only rocks seen underground. The altered rock is relatively soft, and white to light gray in color except where stained by iron oxides.

Faulting is common and occurs chiefly in shale and mudstone at graywacke contacts. Gouge along faults ranges from about an inch to as much as three feet in thickness. Shear zones range from a few inches to as much as 15 feet in thickness. The stronger faults strike northwesterly and in general dip steeply northeast. None of the faults can be traced on the surface owing to a cover of debris flows and slides.

ORE DEPOSITS

Cinnabar, the only ore mineral seen, is sparsely disseminated locally in gouge along fracture zones and in hydrothermally altered graywacke. Gangue minerals are calcite, quartz, and pyrite. Small amounts of extremely fine cinnabar can be panned from almost all of the altered graywacke, but the graywacke probably does not average more than 0.1 lb. Hg/ton. Within a few inches of mineralized fractures it may average about 0.5 lb. Hg/ton. Only a few of the gouge-filled fractures contain visible cinnabar. These are widely spaced and range from a fraction of an inch to as much as two inches in width.

In the upper adit about 15 feet north of the caved winze (fig. 2) three small lenses of cinnabar disseminated in gouge occur along an almost vertical northwest-trending fracture from one to two inches wide. The largest lens extends along the strike about two feet. A few veinlets of pure cinnabar up to five inches long and 1/32 inch wide occur within the lenses.

Northeast of the caved winze a highly sheared and faulted zone about 250 feet wide was cut by the DMEA work and by work done at the operator's expense but cinnabar was not seen. The zone strikes northwesterly and dips about 55° NE. A few calcite

veinlets up to 1/2 inch thick parallel the more highly sheared parts of the zone. The last 100 feet of rehabilitated adit cut thick-bedded to massive graywacke with a few thin interbeds of shale.

On the lower adit a few small crystals of cinnabar occur along a northwest-trending fracture about one inch wide on the footwall of a zone of sheared and contorted black mudstone about 20 feet from the end of the crosscut. Calcite veinlets up to 1/2 inch thick parallel the sheared mudstone.

ORE RESERVES

Although there are several hundred thousand tons of altered graywacke averaging about 0.1 lb. Hg/ton, there are no quicksilver ore reserves of any classification. A few small pods of ore grade may exist, but the cost of exploring for them would be prohibitive.

SAMPLING

Seven samples were taken from the upper adit level during the original examination and of the area rehabilitated under Stage I, and eleven additional samples were taken from the lower adit level as crosscutting work progressed under Stage II. The locations and mercury content of the samples are shown on Figure 2. The mercury content ranged from 0.1 to 0.5 lbs. per ton.

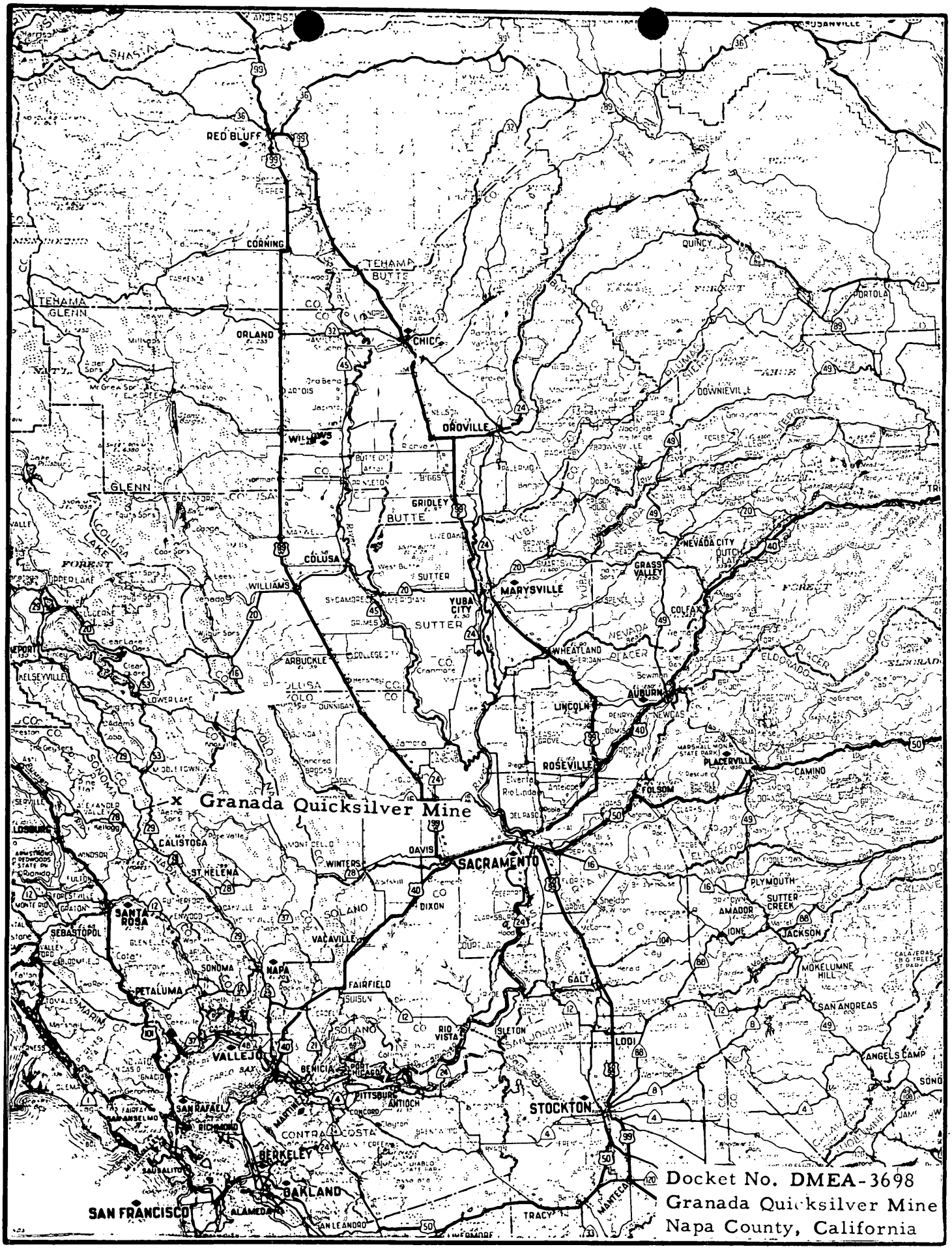
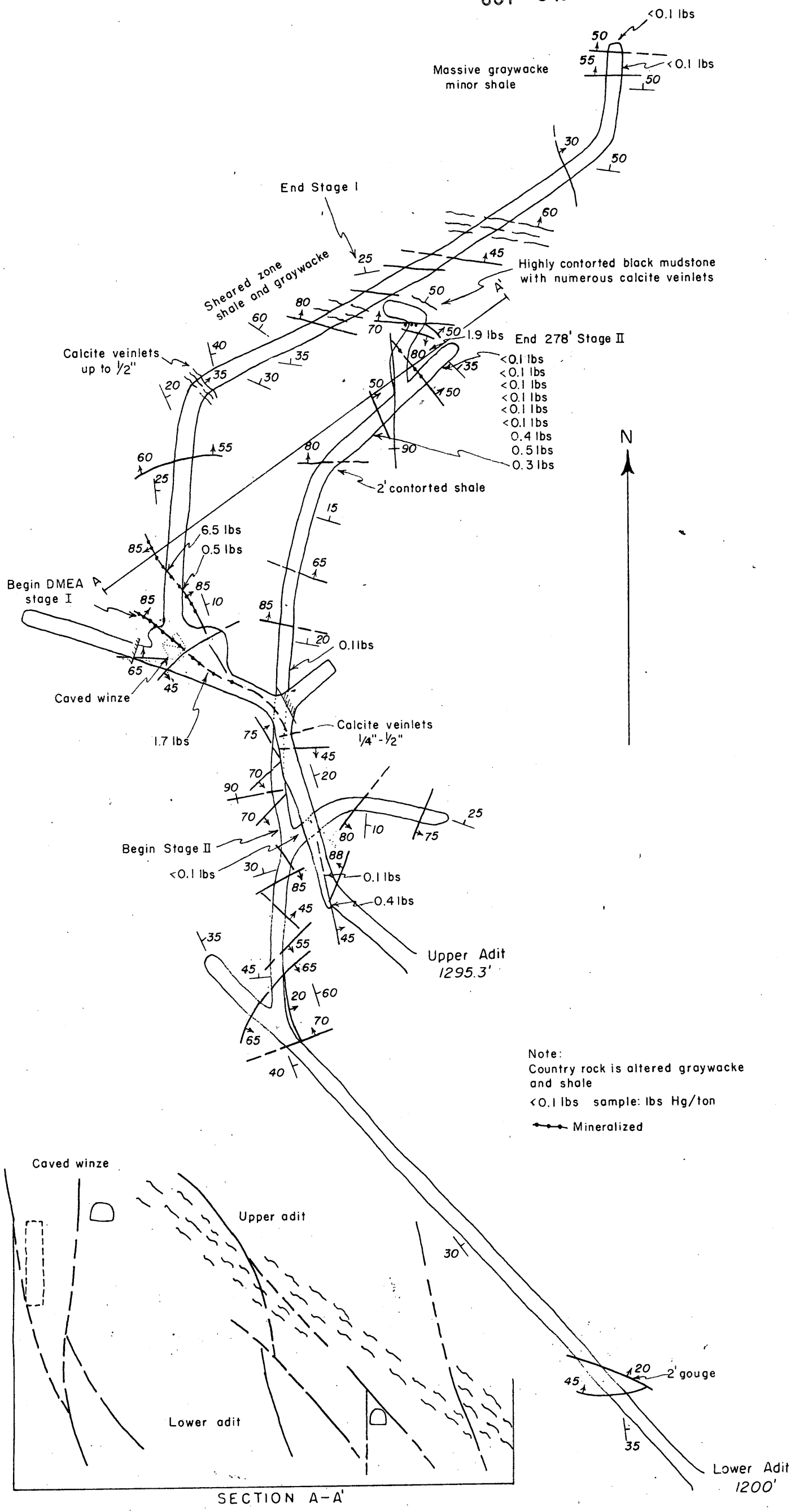


FIG. 1 LOCATION MAP

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

RECEIVED
OCT - 8 1956

DMEA 3698
Idm E-829
(MERCURY)



GRANADA MINE, NAPA COUNTY, CALIFORNIA

50 0 50 100 Feet

Figure 2

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

October 4, 1956

Memorandum

To: Catherine Curtin, Statistics and Control Division

From: Hazel Berry, Operating Committee
By EJT

Subject: Amendment to Contract

Attached is the following docket copy of an amendment to a contract which has been reviewed and approved by the commodity division and the Contract Administration and Audit Division.

No clearance by Legal appears necessary.

Hugh M. Simmons, DMEA-3698, Idm-E829, Amendment No. 1.

Attachment-1

35

OPERATOR'S FINAL REPORT

RECEIVED
OCT 1 0 1956

October 3, 1956

Mr. S. Ricker
Executive Officer
DMEA Field Team
U.S. Bureau of Mines
Reno, Nevada

Re: Hugh M. Simmons
Granada Quicksilver Mine
Docket No. DMEA-3698
Contract No. Idm-E 829

Dear Sir:

Exploration work in connection with the Defense Minerals Exploration Administration was begun July 15, 1955, and completed May 30, 1956.

The Government cooperated in 200 feet of rehabilitation on the upper tunnel level and 278 feet of crosscutting on the lower tunnel level. Additional rehabilitation, drifting, crosscutting, and long-hole drilling exploration work was done on the Operator's account.

Some cinnabar mineralization was encountered in the vicinity of a filled winze on the upper adit and near the terminal of the lower adit crosscut; however, insufficient quantities have been found to date to allow mining. No mercury production has been made to date. As the mine is located in the immediate vicinity of large past producing mercury mines and within similar favorable formations, further exploration work is planned by the Operator. Diamond drilling, from both the lower tunnel level and from the surface, is completed.

Efficient and full cooperation was received from DMEA engineers in connection with the exploration program.

Summary of Costs

Work accomplished under the contract and costs submitted were as follows:

Stage I - Rehabilitation of Upper Adit

Period	Quantity of Work	Cost
July-Aug. 1955	200' of rehabilitation at $12.00/ft.	$ 2,400.00

Stage II - Drifting and Crosscutting - Lower Adit

Period	Quantity of Work	Cost
Sept. - Nov. 1955	82 ft. of crosscut at $30.00	$ 2,460.00
	28 ft. of timbering at $ 7.00	196.00
Dec. 1955	90 ft. of crosscut at $30.00	2,700.00
Feb. 1956	30 ft. of timbering at $7.00	210.00
Mar. - May 1956	106 ft. of crosscut at $30.00	3,180.00
	4 ft. of timbering at $7.00	28.00
	Total cost	$11,174.00
	Gov't. participation at 75%	8,380.50

Hugh M. Simmons
901 Alhambra Boulevard
Sacramento, California

RECEIVED
OCT 18 1956

OPERATOR'S FINAL REPORT

October 3, 1956

Mr. S. Ricker
Executive Officer
DMEA Field Team
U.S. Bureau of Mines
Reno, Nevada

Re: Hugh M. Simmons
Granada Quicksilver Mine
Docket No. DMEA-3698
Contract No. Idm-E 829

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Feb. 1956	30 ft. of timbering at $7.00	210.00
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	4 ft. of timbering at $7.00	28.00
	Total cost	$11,174.00
	Gov't. participation at 75%	8,380.50

Hugh M. Simmons W.P.

Hugh M. Simmons
801 Alhambra Boulevard
Sacramento, California

Docket

RECEIVED

xxxxxxxxxxxxxxxxxxx

1201 W. Division St.
Spokane 2, Washington
September 26, 1956

MEMORANDUM

To: DMEA Field Team, Region I, Northwest District

From: D. D. Walker, Mining Engineer, Bureau of Mines

Subject: Interim inspection, Docket No. DMEA-2499 (copper), Montana Coal and Iron Company, Black Pine Mine, Lemhi County, Idaho, Contract No. Idm-X329

The property was visited September 19. Mr. Herb St. Clair, contractor, and Vincent Hurd, millman, were present.

The contractor was engaged in preparing the compressor site at the upper tunnel. The rail and vent tube are now in place as far as the operating face. When the compressor, which is at the tunnel, is emplaced, the air and water lines will be installed and drifting resumed. Mr. St. Clair expects to be drifting by the first of October.

Mr. Hurd has the mill running and is milling oxidized surface ore. He is still in the process of getting all phases of the mill operating smoothly.

The machinery which will be used to drive the drift consists of an Timms 26 mucking machine, two Ingersoll-Rand and two Gardner Denver jackleg drills complete with jacklegs. Air will be furnished by a CP 210 compressor run by a 75 HP General Motors engine.

Following are the project units completed through January 1956, the last reporting period for DMEA work:

Contract date: March 25, 1955 (second amended contract)
Expiration date: October 15, 1956
Contract amount: $125,050.00
Amount spent: 112,537.53 (thru January 1956)

	Authorized	Completed
Stages I and II		
Drift and crosscut	2,400 ft.	Yes
Timber	500 ft.	369 ft.
Stage III		
Drift and crosscut	1,000 ft.	657.8 ft.
Timber	250 ft.	248.0 ft.

Distribution:
DMEA (4)
USGS (2) Docket
USBM (AD) Walker

D. D. Walker

RMEA

RECEIVED
AUG 15 1956

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

1605 Evans Ave.
Reno, Nevada

Aug. 10, 1956

Memorandum

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

From: Executive Officer, DMEA Field Team, Region II

Subject: Docket No. DMEA-3698 (Mercury)
Hugh M. Simmons
Granada Mine
Napa County, California
Contract No. Idm-E 829

Supplementary to my letter of July 27, 1956, I am attaching three copies of Amendment No. 1 to subject contract. The remaining copies have been distributed in the usual manner.

Mr. Simmons has presented his final MF-104 forms and Narrative reports and our final report will be made as soon as possible. It will recommend conclusion of the contract but will not recommend that the project be certified.

S. Ricker

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

RECEIVED
JUL 30 1956

1605 Evans Avenue
Reno, Nevada

July 27, 1956

Memorandum

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

From: Executive Officer, DMEA Field Team, Region II

Subject: Docket No. DMEA-3698 (Mercury)
Hugh M. Simmons
Granada Mine
Napa County, California
Contract No. Idm-E829

We have recently discussed the points brought out in your letter of July 23, 1956 in respect to subject contract.

Mr. Simmons has been away and is not expected back until sometime in August. We will then find out if he wishes to claim the footage which was allowed him and make final settlement; possibly an amendment extending completion date will then be necessary. In any case, we expect to clear up the points brought up in your letter and close out the project sometime in August.

S. Ricker

CW

Docket
Chapman
Selfridge
F.S. Peach

28 JUL 1956

23 JUL 1956

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

Re: Docket No. DMEA-3698, Mercury
Hugh M. Simmons
Granada Mine
Napa County, California
Contract No. Idm-E829

Dear Mr. Ricker:

Reference is made to your letter of April 23, 1956, in which you advised Mr. Simmons that the Government would not be justified in participating in more than 278 feet of drifting under Stage II of the contract.

Your letter of September 6, 1955, advised Mr. Simmons that the work permitted under Stage II of the contract would be limited to 220 feet of drifting and/or crosscutting.

To date we have received Forms MF-104 and MF-104A through February 1956, which showed 172 feet of drifting and 58 feet of timbering. No further forms or reports from the operator have been received in this office.

The interim report of March 19, 1956, by J. D. Warne, Bureau of Mines, advises that 210 feet of drifting had been carried out as of March 17, the date of inspection, and states that drifting should be carried on for an additional 20 feet. Apparently the operator was advised orally of this, as we do not have any copy of a letter to the operator.

The contract expired on April 1, 1956.

The interim report of April 12, 1956, by Donald B. Tatlock, Geological Survey, advises that 245 feet of drifting on Stage II had been completed as of April 4, the date of inspection.

R.C.S.

The interim report of April 18, 1956, by D. B. Tatlock and E. H. Bailey, Geological Survey, advises that 247 feet of work had been completed as of April 12, the date of inspection. No work has been received in this office as to how and when the operator was advised that he could carry work beyond the 220-foot point. It was recommended that the operator be allowed to continue for another 31 feet.

As the contract expired on April 1, 1956, any work after this date would require an amendment. It is within your authority to write an amendment extending the time for completion of the contract.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (JB)

APPROVED:

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

Thor H. Kiilsgaard (JB)
Member, Geological Survey

cc: Docket
Code 400
Code 800
Oper. Comm.
Adm. Read. File
Thor Kiilsgaard, USGS
J. W. Pennington, USBM
FT, Reg. 2

TLChapman/ls
7/20/56

Talbert

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

JUL 11 1956

Mr. George Mayer
DMEA Auditor
A20 Custom House
555 Battery Street
San Francisco 11, California

Re: Docket No. DMEA-3698 (Mercury)
Hugh M. Simmons
Granada Quicksilver Mine
Napa County, California
Contract No. Ida-3829

Dear Mr. Mayer:

This Division has been requested to complete the audit review of the referenced project as soon as possible.

I understand that this project was completed during the month of April 1956, and, since the contract is on the Short Form, it appears that a Report of Review may now be made. Please prepare and submit the report at your earliest opportunity.

Sincerely yours,

(Signed) J. L. Chambers

Jay L. Chambers, Chief
Contract Administration
and Audit Division

EDTalbert/wb
July 11, 1956

Copy to: Docket
Admr. Reading File
Mr. Martin
Mr. Chambers

dmea

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

RECEIVED
APR 25 1956

1605 Evans Avenue
Reno, Nevada

April 23, 1956

Memorandum

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

From: Executive Officer, DMEA Field Team, Region II

Subject: Docket No. DMEA-3698 (Mercury)
Hugh M. Simmons
Granada Mine
Napa County, California
Contract No. Idm-E829

Attached to our Interim Report on subject contract are two copies of our letter of April 23, 1956 advising Dr. Simmons that the Government will not further participate in Stage II of said contract.

S. Ricker

Attach.

3698

AUTHOR IN [illegible]

Date 4-25

Referred to:

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

Note comments in report regarding:

1. Note Pickers letter
2.
3.
4.

and take appropriate action.

- - - - - -

Action taken by Division:

ROBERT E. ADAMS

Initials

APR 25 9 26 AM '56

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

RECEIVED
APR 25 1956

Office of
Executive Officer
DMEA Field Team
Region II

1605 Evans Avenue
Reno, Nevada

Date 4/23/56

Memorandum

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

From: Executive Officer, DMEA Field Team, Region II

Subject: Interim Inspection Report

Attached are four copies of Interim Report on

Docket No. DMEA-3698

Contract No. Idm-E829

Commodity (Mercury)

Operator Dr. Hugh Simmons

Property Granada Mine, Napa County, Calif.

By D. B. Tatlock and E. H. Bailey, USGS

Dated 4/18/56

S. Ricker
Executive Officer
DMEA Field Team, Region II

Attachments

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

RECEIVED
APR 25 1956

APR 18 1956

INTERIM REPORT

DMEA-3698 (mercury)
Dr. Hugh Simmons
Granada mine
Napa County, California
Contract No. Idm-E829

An interim inspection of the Granada mine was made on April 12, 1956 by D. B. Tatlock and E. H. Bailey, U. S. Geological Survey.

The operator's representative reported that 254 feet of underground work under Stage II had been completed on the lower adit level. However, a compass and tape survey showed only 247 feet completed. No ore and no favorable indications of ore were encountered in the 9 feet of advance since April 4, 1956. The graywacke and mudstone appear to be less altered and bleached to the northeast.

It is recommended that the operator be allowed to continue the crosscut on the lower adit level another 31 feet on a bearing of N 20° E. If no ore is encountered in this distance, the DMEA exploration program should be discontinued.

If the operator wishes to continue exploration on his own, I would suggest that he continue crosscutting on a bearing of N 20° E for 350 feet on the lower adit level, or resume crosscutting on the upper adit level on a bearing of N 20° E for about 125 feet. These two crosscuts would intersect the

southeastward projection of a northeast-dipping fault zone which contains some cinnabar in the Toyon mine 1200 feet northwest of the Granada mine. This northwest-trending fault cannot be seen on the surface. The possibility of finding a significant ore body is slight.

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

RECEIVED
APR 25 1956

1605 Evans Avenue
Reno, Nevada

April 23, 1956

Dr. Hugh M. Simmons
801 Alhambra Blvd.
Sacramento, California

Re: Docket No. DMEA-3698 (Mercury)
Hugh M. Simmons
Granada Mine
Napa County, California
Contract No. Idm-E829

Dear Dr. Simmons:

Confirming our telephone conversation of April 20, 1955, we wish to formally advise you that the Government does not feel justified in participating in more than 278 feet of drifting and crosscutting under Stage II as set forth under Exhibit "A" of referenced contract.

This decision has been made without prejudice to your property and does not preclude the possibility of you finding some ore bodies on your property if you wish to do more exploration on your own account. However, the possibility of making a significant discovery of interest to the Government is so slight that further participation by the Government is not justified.

We regret that the project has not been successful from our viewpoint and wish to thank you for your hearty cooperation throughout the contract.

One of our engineers' will visit the property for his final report upon receipt of your notification that the 278 feet of drifting and crosscutting has been completed and a final evaluation will be made at that time.

Very truly yours,

S. Ricker
Executive Officer
DMEA Field Team, Region II

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

2 m Ea

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

RECEIVED
APR 16 1956

Office of
Executive Officer
DMEA Field Team
Region II

1605 Evans Avenue
Reno, Nevada

Date 4/12/56

Memorandum

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

From: Executive Officer, DMEA Field Team, Region II

Subject: Interim Inspection Report

Attached are four copies of Interim Report on

Docket No. DMEA-3698

Contract No. Idm-E829

Commodity Mercury

Operator Hugh Simmons

Property Granada Quicksilver Mine
Napa County, Calif.

By Donald B. Tatlock, Geologist, USGS
DMEA

Dated 4/12/56

S. Ricker
Executive Officer
DMEA Field Team, Region II

Attachments

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

3698

Date 4-16

Referred to:

1. ~~Mr. Wilmarth~~
2. ~~Mr. Johnson~~
3. ~~Mr. Shewhart~~
4. ~~Docket Control Mail and Files~~
5. ~~Chief, Core Alloy Division~~
6. Docket Control Mail and Files

Note comments in report regarding:

1. Note last paragraph
2.
3.
4.

and take appropriate action.

- - - - - -

Action taken by Division:

Noted
WSM
4/24/56 ROBERT E. ADAMS

initials

APR 16 9 33 AM '56
WASHINGTON, D.C.

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

RECEIVED
APR 16 1956

4 Homewood Place
Menlo Park, Calif.

April 12, 1956

Memorandum

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

From: Donald B. Tatlock, geologist, U. S. Geological Survey

Subject: DMEA-3698 (Mercury)
Dr. Hugh Simmons
Granada Quicksilver Mine
Napa County, California
Contract No. Idm-E829
INTERIM REPORT

An interim inspection of the Granada mine was made April 4, 1956 by Donald B. Tatlock, U. S. Geological Survey.

On the lower adit level, 245 feet of crosscutting under Stage II had been completed. About 195 feet of underground work remains in Stage II.

No ore grade rock has yet been encountered. However, five feet from the face in the north crosscut on the lower adit level, an irregular one inch seam, striking northwest and dipping steeply northeast, contains an estimated 20 lbs. Hg per ton. Long holes, drilled by the operator to the east ahead of both crosscuts on the lower adit level, have intersected medium-grained graywacke containing visible disseminated cinnabar. The trend of this mineralized zone is about N. 20° W.

It is recommended that both the north and the south crosscuts on the lower adit level be driven 40 feet N. 70° E. so as to intersect the mineralized zone penetrated by the long holes.

The remaining 115 feet of exploration work under Stage II in the Granada mine should await mapping which will tie in both the adjoining Toyon and the Granada properties. This mapping will be completed by April 16, 1956.

The operator has been urged to assay his samples regularly. So far none of the samples taken by the Bureau of Mines has assayed more than 0.5 lbs. Hg/ton.

An examination of the Toyon mine, (DMEA-4155) was also made on April 4 and it will be recommended that the Toyon application be approved. The exploration programs in the two mines should be tied together as closely as possible because favorable structures in one may carry through to the other.

DMEA

RECEIVED
MAR 23 1956

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Office of
Executive Officer
DMEA Field Team
Region II

1605 Evans Avenue
Reno, Nevada

Date 3/21/56

Memorandum

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

From: Executive Officer, DMEA Field Team, Region II

Subject: Interim Inspection Report

Attached are four copies of Interim Report on

Docket No. DMEA-3698

Contract No. Idm-E829

Commodity Mercury

Operator Hugh M. Simmons

Property Granada Quicksilver Mine,
Napa County, California

By J. D. Warne

Dated 3/19/56

S. Ricker
Executive Officer
DMEA Field Team, Region II

Attachments

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

INTERIM REPORT

RECEIVED
MAR 23 1956

Docket No.: DMEA-3698 (Mercury) March 19, 1956

Name and address of operator: Hugh M. Simmons
801 Alhambra Blvd.
Sacramento, Calif.

Name and location of property: Granada Quicksilver Mine
Napa County, California

Contract No.: Idm-E829

This project was inspected on March 17, 1956. A total of 210 feet of drifting on the lower adit level under Stage II has been completed.

Slight cinnabar mineralization along this drift, and in long holes drilled from the drift by the operator, have been sufficiently encouraging to warrant continuation of the drift beyond the footage planned at the beginning of Stage II.

Unless more cinnabar mineralization is encountered within about 20 feet beyond the present face, it is recommended that drifting work be discontinued; and crosscutting work be done to explore for downward extension of the most favorable mineralized zones shown in the upper adit. An early inspection of this project by a geologist and engineer should be made for the purpose of mapping and planning final work to be performed in connection with this project.

Work completed:

A total of 210 feet of drifting in a northerly direction from the lower adit level and 28 feet of timbering has been completed to date under the contract. Total work completed and costs are outlined below:

Stage I:	
Rehabilitation - 200 feet @ $12.00/ft.	$2,400.00
Stage II:	
Drifting - 210 feet @ $30.00/ft.	6,300.00
Timbering - 28 feet @ $7.00/ft.	196.00
Total to date	$8,896.00
Government participation @ 75%	$6,672.00

Comments:

Recent long hole drilling in advance of the present drift face has indicated some cinnabar mineralization. Therefore, the drift should be continued to about 230 feet and crosscutting should then be performed to explore for downward extension of the most favorable mineralized zone shown after rehabilitating the upper adit.

Heavy rains and floods in the vicinity of the Granada mine have hampered work progress and made access to the mine almost impossible since late December 1955.

Four samples of material derived from drifting along the interval 194 to 210 feet were taken for future analysis. Results of previous samples taken during a previous inspection were as follows:

Sample No.	Lbs. of Hg/Ton	Description
12	0.1	Grab sample from lower drift round muck at 82 foot point.
13	0.1	Grab sample of dump from initial 82 feet of drifting along lower level.

J. D. Warne
Mining Engineer

dmea

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

RECEIVED
DEC 12 1955

Office of
Executive Officer
DMEA Field Team
Region II

1605 Evans Avenue
Reno, Nevada

Date 12/8/55

Memorandum

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

From: Executive Officer, DMEA Field Team, Region II

Subject: Interim Inspection Report

Attached are four copies of Interim Report on -
Docket DMEA 3698

Contract Idm-E 829

Commodity Mercury

Operator - Hugh M. Simmons

Property - Granada Quicksilver Mine, Napa County, Calif.

By John D. Warne

Dated Mining Engineer - 12/8/55

S. Ricker
Executive Officer
DMEA Field Team, Region II

Attachments

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

RECEIVED
DEC 12 1955

INTERIM REPORT

Docket No.: DMEA-3698 (Mercury) December 8, 1955

Operator: Hugh M. Simmons
801 Alhambra Blvd.
Sacramento, California

Property: Granada Quicksilver Mine
Napa County, California

Contract No.: Idm-E829

This project was inspected on December 2, 1955 by J. D. Warne of U.S. Bureau of Mines and H. K. Stager of the U. S. Geological Survey.

The operator had completed 82 feet of drifting and 28 feet of timbering on the lower adit level under Stage II of the contract. Work is being performed in a satisfactory manner.

It was recommended to the operator that he obtain a representative muck pile sample from each drift round for possible later analysis.

Work completed:

A total of 82 feet of drifting in a northerly direction from the lower adit level, and 28 feet of timbering has been completed to date under Stage II of the contract. Total work completed and costs to date are as follows:

Stage I:	
Rehabilitation - 200 feet @ $12.00/ft.	$2,400.00
Stage II:	
Drifting - 82 feet @ $30.00/ft.	2,460.00
Timbering - 28 feet @ $7.00/ft.	196.00
Total to date	$5,056.00
Gov't. participation @ 75%	$3,792.00

Two samples were taken during this inspection. Analysis will be included in the next interim report.

John D. Warne
Mining Engineer

RECEIVED
SEP - 1 1955

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Office of
Executive Officer
DMEA Field Team
Region II

1605 Evans Avenue
Reno, Nevada

8/30/55

Memorandum

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

From: Executive Officer, DMEA Field Team, Region II

Subject: Interim Inspection Report

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

Docket No. DMEA- 3698

Contract No. Idm-E 829

Commodity Mercury

Operator Hugh M. Simmons

Property Granada Quicksilver Mine
Napa County, California

By John D. Warne

Dated 8/30/55

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

Attachments 4

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

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

INTERIM REPORT

RECEIVED
SEP - 1 1955

Docket No.: DMEA-3698 (Mercury) August 30, 1955

Name and address of operator: Hugh M. Simmons
801 Alhambra Blvd.
Sacramento, Calif.

Name and location of property: Granada Quicksilver Mine
Napa County, California

Contract No.: Idm-E829

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This project was inspected on August 15, 1955 by John D. Warne of the U. S. Bureau of Mines and E. H. Pampeyan of the U. S. Geological Survey. The operator has completed rehabilitation work under Stage I of the contract.

Some cinnabar mineralization was encountered in the north drift, northwest of the caved winze located about 180 feet from the portal of the upper adit, indicating a mineralized zone or vein trending approximately N. 20° W. on the upper adit level. Other slight cinnabar showings were located by panning and sampling in the rehabilitated area.

The following work under Stage II is recommended:

Drift and crosscut 220 feet in the lower adit as illustrated on the attached map. Work now recommended includes only one half of the work in the lower adit included in the contract; however, this amount of work should adequately explore the downward extension of the most favorable mineralized zone shown after rehabilitating the upper adit. This

work will also explore for the continuation of mineralization reported in the 200 foot inaccessible winze below the upper adit level.

WORK COMPLETED

Work outlined under Stage I of the contract was completed by August 15, 1955. This work consisted of rehabilitating 200 feet of the upper adit and sampling of the most mineralized zones (as indicated on the attached map). The operator reopened on his own account the balance of the north drift (about 180 feet) for inspection and sampling.

Total cost of the work to date is: 200 feet of rehabilitation at $12.00 per foot - $2,400.00. The Government's share of the cost for work completed to date is $1,800.00.

SAMPLING AND ANALYSIS

Seven samples from reopened portions of the upper adit (as shown on attached map) were taken and analized by the Bureau of Mines:

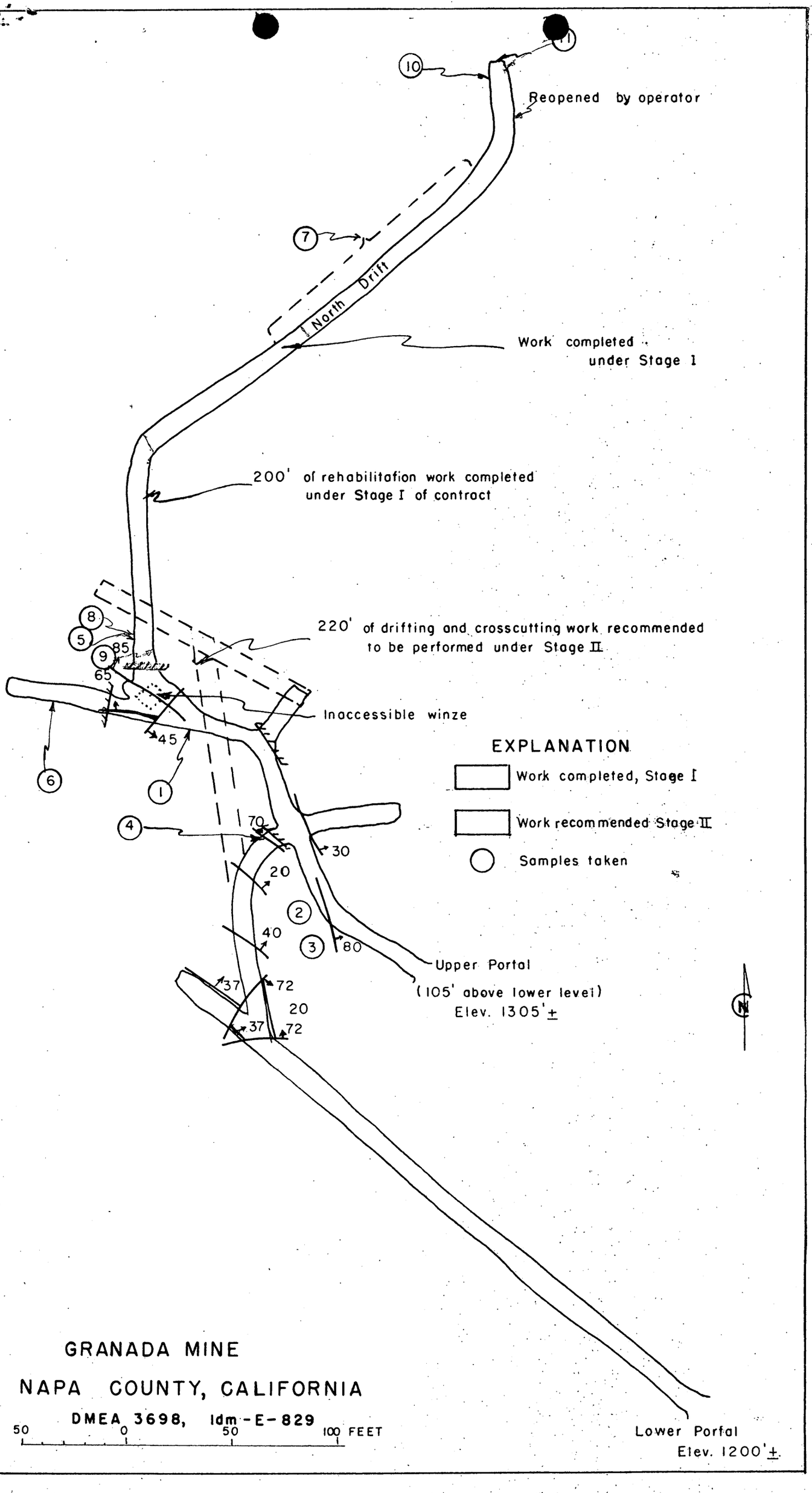
Sample No.	Lbs. Hg/T.	Description
5*	138.0	Specimen sample of mineralized shale about 0.2 feet thick from caved zone 10 feet above north drift.
6*	0.5	Specimen chip sample of mineralized sandstone from west drift.
7*	0.2	Chip sample along 100 feet of north drift.
8*	6.5	Chip sample across 0.4 feet of mineralized shale from caved zone 10 feet above north drift.
9	0.5	2.7 foot channel sample across sandstone in footwall of mineralized shale in north drift.

Sample No.	Lbs. Hg/T.	Description
10	-0.1	Specimen chip sample adjacent to spring 10 feet from face of north drift.
11	-0.1	Chip specimen sample of shale in face of north drift.

*Samples taken by operator.

Note:- Four previous samples were taken at the time of examination.

John D. Warne
Mining Engineer


Reopened by operator
North Drift
Work completed under Stage I
200' of rehabilitation work completed under Stage I of contract
220' of drifting and crosscutting work recommended to be performed under Stage II
Inaccessible winze
EXPLANATION
Work completed, Stage I
Work recommended Stage II
Samples taken
Upper Portal
(105' above lower level)
Elev. 1305'±
Lower Portal
Elev. 1200'±
GRANADA MINE
NAPA COUNTY, CALIFORNIA
DMEA 3698, Idm-E-829
50 0 50 100 FEET

a' DMEA

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

RECEIVED
JUL 15 1955

1605 Evans Avenue
Reno, Nevada

July 13, 1955

Memorandum

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

From: Executive Officer, DMEA Field Team, Region II

Subject: Docket No. DMEA-3698 - (Mercury)
Hugh M. Simmons
Granada Mine
Napa County, California
Contract No. Idm-E829

In accordance with your letter of June 28, 1955, the above subject contract has been approved and executed by the applicant.

Attached are the original and two copies. The remaining copies have been properly distributed.

S. Ricker

Attach.

BUREAU OF MINES
WASHINGTON, D. C.
JUL 15 9 20 AM '55

DOCKET
Surname:
Chapman
Rutledge
Talbert
Selfridge
Martin
Hyman

JUN 28 1955

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

Re: Docket No. DMEA 3698 - Mercury
Hugh M. Simmons
Granada Mine
Napa County, California

Dear Mr. Ricker:

Enclosed are the original and five copies of a proposed contract for an exploration program by the above-referenced applicant, signed by the Administrator for the Government, together with Exhibit "A" (2 pages), Annex I (1 page), and two maps.

If any part of the proposed contract does not have your approval, or that of the applicant, and cannot be altered within your delegated authority, the original and all copies are to be returned to this office, together with the proposed changes for consideration.

Under Article 3, the starting date has been left blank and is to be filled in when the contract is signed by the operator.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (GHB)

Enclosures

APPROVED:

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

Thor H. Kiilsgaard (GHB)
Member, Geological Survey

cc: Docket
FT, Reg. 3
Code 400
Oper. Comm.
Adm. Read. File
Thor Kiilsgaard, USGS
H. M. Meyer, USBM

TLChapman/ls
6/23/55

R.G.S.

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

JUN 20 1955

Memorandum

WSM

To: The Administrator, DMEA
Attention: Mr. W. S. Martin

From: Acting Assistant Solicitor, Defense Minerals

Subject: Docket No. DMEA-3698, Mercury (Hugh M. Simmons)

Pursuant to Mr. Martin's memorandum of June 10, we have prepared the attached contract covering the subject project, in satisfactory legal form for execution subject to the attachment of the two maps referred to in the contract.

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

Attachments

Docket

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

June 16, 1955

Memorandum

WSM

To: W. S. Martin

Copy retained 400

From: Helena M. Meyer

Subject: DMEA Docket 3698, Hugh H. Simmons, Granada Mine, Napa County, Calif., $18,000 - Mercury - Field Team Report

I have reviewed the subject report and concur in the recommendations as to the proposed exploration project in two separate stages. Stage I is to include rehabilitating 200 feet of north and northeasterly trending drift on the upper adit level from a beginning point near a reported winze about 200 feet from the portal. Stage II proposes to drift and crosscut a total distance of 400 feet on the lower adit level to explore further, at a lower horizen, favorable mineralized structures exposed by the rehabilitation work done under the initial stage. Stage I is to cost only $2,000 and Stage II is to be dependent upon the success of Stage I and undertaken only with the approval of the Government.

Bureau of Mines records show that altogether there has been only a small output from the Granada mine, in 1933 and 1935, but nearby there have been several productive properties, notably the Oat Hill, only 1 mile away, which produced more than 160,000 flasks from the same geologic setting. By conducting the exploration on the basis indicated there are possibilities of locating occurrences of mercury without undue expenditure of funds.

Helena M. Meyer

Helena M. Meyer

Copy to: Division of Minerals
Branch of Base Metals
H. M. Meyer
F i l e s

June 16, 1955

Memorandum

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Helena M. Meyer

Helena M. Meyer

HMMeyer/vr
Copy to: Division of Minerals
Branch of Base Metals
H. M. Meyer
F i l e s

June 16, 1955

Memorandum

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From: Helena M. Meyer

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Helena M. Meyer

Helena M. Meyer

HMMeyer/vr
Copy to: Division of Minerals
Branch of Base Metals
H. M. Meyer
F i l e s

IN REPLY REFER TO:

Hackel

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

RECEIVED
JUN - 6 1955

June 6, 1955

Re: DMEA-3698
Hugh H. Simmons
Granada Mine
Napa Co., Calif.
$18,000 - Mercury

Memorandum

To: W. S. Martin, Defense Minerals Exploration Administration

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

Subject: Review of Field Team report

WSM

Apparently the examiners are impressed by the report of high grade (80#/T.) material in the upper adit. The overall history casts doubt on the authenticity of the report, but in case there is a chance the work at that level is probably warranted.

I concur with the recommendation of a two stage program.

N. E. Nelson

N. E. Nelson

Copy retained 400

IN REPLY REFER TO:

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

RECEIVED
JUN - 6 1955

June 6, 1955

Re: DMEA-3698
Hugh K. Simmons
Granada Mine
Napa Co., Calif.
$18,000 - Mercury

Memorandum

To: W. S. Martin, Defense Minerals Exploration Administration

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

Subject: Review of Field Team report

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H. E. Nelson

H. E. Nelson

HENelson:hlm
G-6/6/55

Copy to: Director's reading, 4212
Branch reading, 4212
DMEA (3)
Docket file
H. M. Meyer, 2623 Interior

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

Docket

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY 27 1955

1605 Evans Avenue
Reno, Nevada

May 25, 1955

Memorandum

WSM

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

From: Executive Officer, DMEA Field Team, Region II

Subject: Docket No. DMEA-3698 (Mercury)
Hugh H. Simmons
Granada Quicksilver Mine
Napa County, California

In accordance with your letter of March 9, 1955 I am attaching four copies of a report on above subject by J. D. Warne, U. S. Bureau of Mines and E. H. Pampeyan, U. S. Geological Survey, dated May 24, 1955.

The report recommends an exploration project in two stages totalling a maximum of $18,000.00. This is an increase to the amount of $17,162.00 requested by the applicant but is accounted for by a definite maximum amount allowance for timbering, although much use of timber is not anticipated.

Roscoe Smith and I concur with the recommendations as set forth in the report.

S. Ricker

Attach.

Reviewed by
DMEA OPERATING COMMITTEE
6-3-55
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY 27 1955

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION II

APPLICATION REPORT

DMEA-3698 (Mercury)
Hugh M. Simmons
Granada Quicksilver
Napa County, California

John D. Warne
Mining Engineer
U. S. Bureau of Mines

Earl H. Pampeyan
Geologist
U. S. Geological Survey

May 24, 1955

Reviewed by
DMEA OPERATING COMMITTEE
6-3-55
(date)

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY 27 1955

Docket No.: DMEA-3698 - Mercury

Name and address of applicant: Hugh M. Simmons
801 Alhambra Boulevard
Sacramento, California

Name and location of property: Granada Quicksilver
Napa County, California

INTRODUCTION

The Granada Quicksilver mine was examined on March 29, 1955 by John D. Warne, U. S. Bureau of Mines and Earl H. Pampeyan, U. S. Geological Survey. This examination was made pursuant to an application for an exploration loan under the Defense Minerals Exploration Administration, docket No. 3698, by Dr. Hugh M. Simmons, 801 Alhambra Boulevard, Sacramento, Calif. Dr. Simmons and Frank Adams, a former operator of the property, were present during the field examination.

The proposed work consists of rehabilitating 200 feet of the Upper level North drift and 500 feet of drifting and crosscutting on the Lower level at an estimated cost of $17,162.00. An additional amount of $10.00 per foot was requested to timber, if necessary, any portion of the drifts and crosscuts driven on the lower level.

CONCLUSIONS AND RECOMMENDATIONS

Although only slight cinnabar mineralization is exposed in mine workings now accessible and the property has no production record, the geologic setting of the mine is favorable. A large cinnabar production has come from other mines in the immediate vicinity. It is recommended that a two stage exploration program consisting of (I) 200 feet of rehabilitation in the Upper level and (II) 400 feet of drifting and crosscutting from the lower level, be approved because of the good possibility of finding ore in the altered graywacke, where production has come from adjacent mines with the same geologic conditions. Stage II should be undertaken only if sufficiently mineralized formations are encountered by work under Stage I. The maximum cost of this approved exploration project would be $18,000.00.

LOCATION, ACCESSIBILITY, LOCAL RESOURCES

The Granada Quicksilver mine is in Secs. 27, 34, and 35, T. 10 N., R. 6 W., M.D.B.&M., within the Mayacmas mining district, in Napa County, Calif. It is reached by a fairly steep and poorly maintained mountain road which leads westerly a distance of 3.7 miles from Aetna Springs, Calif.

Experienced mine labor is not available in the area, however, the applicant has recently been able to recruit several men to perform underground rehabilitation work. Water can be obtained from springs which flow from several points on the hillside near the Granada mine or from James Creek, several thousand feet distant. Timber and mine supplies can be secured from local sources or from San Francisco. Electric power could be supplied to the mine by installing about one mile of transmission facilities.

COMPETENCY OF APPLICANT

The applicant, Dr. Hugh M. Simmons, has had little or no previous mining experience. Some preliminary rehabilitation work performed in the Granada mine by the applicant has been satisfactorily done. The application for exploration assistance by the Government has been directed by Bert C. Austin, mining engineer, of San Francisco, Calif. Proposed exploration work would be directly supervised by a Mr. Charles Ayers under the direction of Mr. Austin. Under this arrangement, it is believed that the project work will be properly executed.

The applicant stated that he is able to supply his share of the cost of the proposed project in cash.

APPLICANT'S PROPERTY RIGHTS

The Granada Quicksilver mine property is owned by the applicant, Hugh M. Simmons. The location and extent of this property is described as follows: The southeast quarter of the southeast quarter of sec. 27, the northeast quarter of the northeast quarter of sec. 34, the north half of the northwest quarter, and the northwest quarter of the northeast quarter of sec. 35; T. 10 N.; R. 6 W., M.D.B.&M., (containing 200 acres of land more or less) Napa County, Calif.

DESCRIPTION OF PROPERTY

Surface facilities consist of a single cabin, about 15 by 20 feet in size, located near the lower tunnel portal.

The existing mine development (see fig. 2) consists of an upper adit with about 670 feet of drifts and crosscuts; and three shallow winzes were reported to have been located along the initial 180 feet from the portal. Some drifts were reported to have been driven from the winzes; however, none of the winzes are now accessible. The north drift which leads both north and northeasterly from the winze located 180 feet from the portal is badly caved and inaccessible. The most favorable formations and reported cinnabar occurrences were exposed by this drift.

A lower adit level, with its portal located about 290 feet southeast and 105 feet lower in elevation than the upper adit, has approximately 510 feet of mine workings. The north and northeasterly trending branch of about 150 feet in length is badly caved and only partially accessible.

A caved shallow discovery test pit exists at the surface above the upper adit.

Mining equipment consists of a small amount of rail placed near the portals of each adit, two mine cars, and a few hand tools.

GEOLOGY

The Granada mine is in the eastern end of the Mayacmas quicksilver district in an area underlain by sedimentary rocks of the Franciscan group. Serpentine crops out along a ridge about 1200 feet to the east and quartz-bearing basalt dikes cut the sedimentary rocks a short distance to the north and south of the mine. Complexly folded and faulted shale and hydrothermally altered graywacke are the only rocks seen underground. The altered rock is soft, white to light gray in color except where stained by iron oxides, and adjacent to faults locally contains small amounts of cinnabar. Faulting is common underground, producing gouge ranging in thickness from a few inches to three feet, but none of these faults and shears can be traced on the surface.

ORE DEPOSITS

Cinnabar is the only quicksilver mineral seen on the property. It occurs locally disseminated through sheared altered graywacke along faults. Previous work by the Geological Survey in this district has shown that the many seams and veinlets of iron oxides which cut and stain the altered graywacke commonly indicate the presence of quicksilver minerals. Many such iron stains were seen in the Granada mine but little cinnabar could be seen in the accessible workings.

A good showing of mineralized graywacke is reported to exist at the head of the winze in the Upper level. Other high and low grade zones were reported cut in the North drift (see fig. 2). None of these localities are accessible for inspection, however, and the nature and extent of this ore is not known.

No production has been recorded from this property. About 25 tons of rock was run over tables when the Upper level was being driven but little or no cinnabar was recovered; the cinnabar not being amenable to gravity concentration because of the high clay content of the rock. The Oat Hill mine, about one mile west of the Granada, has produced more than 160,000 flasks of mercury from the same geologic setting, and there are several other productive mines nearby.

ORE RESERVES

There are no measured or indicated reserves. Inferred reserves containing a few hundred flasks of quicksilver may exist in the altered graywacke in the area to be explored and there is a good chance that the proposed exploration program will uncover these reserves.

SAMPLING

The following samples taken from accessible areas in the mine are shown in figure 2:

Sample No.	Lbs. Hg/T	Description
1	1.7	10-inch chip sample from south wall of Upper adit adjacent to reported winze at 175 feet from portal.
2	0.1	4-inch chip sample from mineralized vein followed by upper adit at 70 feet from portal.
3	0.4	18-inch channel sample taken across mineralized vein reported to have been explored by winze at 55 feet from portal of upper adit.
4	0.1*	36-inch chip sample of mineralized steep shale bed intersected by northern branch of lower adit about 420 feet from adit.

*Less than.

PAST OPERATION

Initial discovery work and most of the Upper adit development work in the Granada mine was done by a Mr. George Anderson during 1926-27. Three shallow winzes, about 20 feet in depth, with some exploration drifting is reported to have been done from 1930 to 1933 below the first 175 feet of the Upper adit. This work was done by Frank Adams of Oakville, Calif., who drove the Lower adit during the same period. The mine was idle from 1933 until 1955 when H. M. Simmons, the applicant, acquired ownership of the mine property; he performed some rehabilitation work in both the upper and lower adits.

PROPOSED EXPLORATION

The exploration program proposed by the applicant consists of rehabilitating 200 feet of the north drift in the upper adit; and 500 feet of drifting and crosscutting on the lower adit.

Estimated costs and quantities of work as proposed by him are summarized as follows:

Drifting and crosscutting in lower adit:

Labor	$ 7,425.00
Equipment	2,238.80
Materials and supplies	3,196.96
Transportation	800.00
Supervision and accounting	750.00
Engineering and consultants	750.00
Total cost for 500 feet of drifting	$15,161.00
Total estimated cost per foot	$ 30.32*

*An additional amount of $10.00 per foot for drifting and crosscutting is estimated where timbering is required.

Rehabilitation work in upper adit:

Rehabilitate 200 feet of north drift @ $10.00/ft.	$2,000.00
Total estimated cost	$17,161.61

EXPLORATION PROJECT

The applicant states that he can begin work within 30 days from the date of the contract. His estimated time required to complete the entire program is 125 days or about five months; however, a time period of six months should be allowed.

The type of exploration project recommended for approval would consist of two separate stages as shown in figure 2. Stage I would include rehabilitating 200 feet of north and northeasterly trending drift on the upper adit level from a beginning point near a reported winze about 200 feet from the portal. Stage II would include drifting and crosscutting a total distance of 400 feet on the lower adit level to further explore, at a lower horizon, favorable mineralized structures exposed by the rehabilitation work done under the initial stage. Stage II should be undertaken only with the approval of the Government depending upon the success of Stage I. The locations and directions of drifts and crosscuts to be driven under this second stage should also be subject to the approval of the Government.

ESTIMATED COST OF PROJECT

Stage I

Rehabilitate the North drift in upper adit - 200 feet @ $10.00/ft.	$ 2,000.00

Stage II

Drifting and crosscutting on lower adit level - 400 feet @ 3.2 feet per shift, 125 shifts, or 5 months

Labor and supervision:

Mine labor, 3 men, 5 months, 375 man-shifts @ $16.00	$ 6,000.00
Overtime, 252 hrs. @ $2.00	504.00
Supervision and accounting	750.00
Engineering and consultants	750.00
	$ 8,004.00

Operating materials and supplies - to be purchased

2 tons 12 lb. rail @ $186.00/ton	372.00
200 ties @ $0.36/ea.	72.00
Bolts, splicers, etc.	52.50
7,000 feet of 2-inch air pipe @ $0.45/ft.	450.00
1,000 feet of 3/4-inch water line @ $0.15	150.00
Valves and fittings	75.00
Diesel fuel @ $4.00/day	500.00
Oil and grease	75.00
3200 lbs. dynamite @ $20.60/cwt.	659.20
9,000 feet fuse @ $11.60/M	104.40
1,500 #6, blasting caps	37.50
2 - 4x8 feet steel slick sheets @ $40/ea.	80.00
6 shovels @ $3.70/ea.	22.20
6 miners picks @ $4.15/ea.	24.90
Sales tax etc.	105.00
	$ 2,779.70

Operating equipment - to be supplied by operator on rental basis @ $150.00/month, 5 months	$ 750.00
Miscellaneous	
Transportation and hauling @ $100.00/month, 5 months	500.00
Total cost 400 feet drifting and crosscutting	$12,033.70
Cost per foot - (use $30.00/ft.)	$ 30.08
Timbering, as required, 400 feet @ $10.00/ft.	$ 4,000.00

SUMMARY

Stage I - Rehabilitate 200 feet @ $10.00/ft. of North drift	$ 2,000.00
Stage II - (a) 400 feet of drifting and crosscutting on lower adit level @ $30.00/ft.	12,000.00
(b) 400 feet of timbering of drifts and cross-cuts on lower adit level, as required @ $10.00/ft.	4,000.00
Total estimated cost of project	$18,000.00

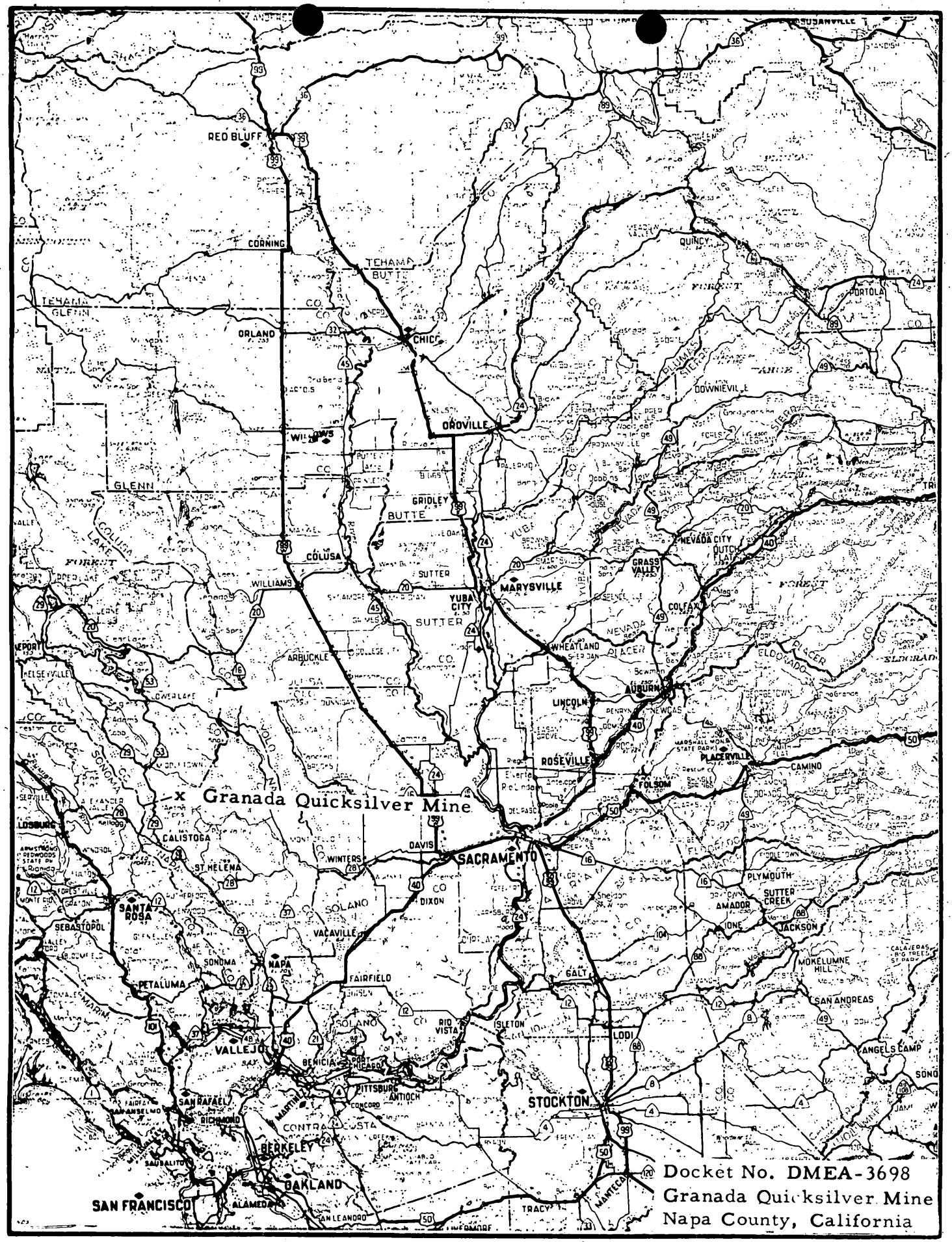

FIG. 1 LOCATION MAP

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY 27 1955

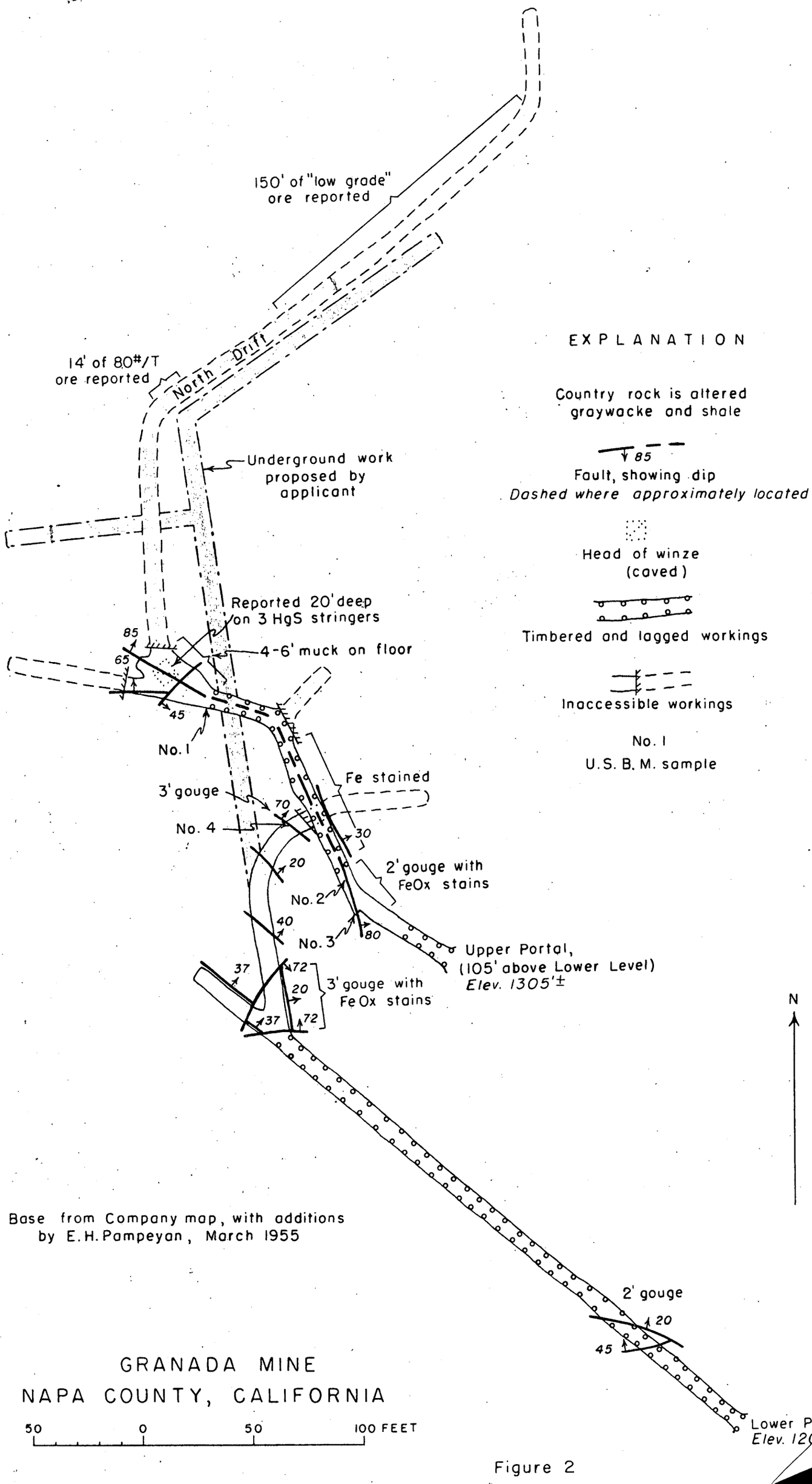
150' of "low grade" ore reported
North Drift
14' of 80#/T ore reported
Underground work proposed by applicant
Reported 20' deep on 3 HgS stringers
4-6' muck on floor
85
65
45
No. 1
3' gouge
70
No. 4
Fe stained
30
20
2' gouge with FeOx stains
No. 2
40
No. 3
80
Upper Portal, (105' above Lower Level) Elev. 1305'±
37
72
20
3' gouge with FeOx stains
37
72
2' gouge
20
45
Lower Portal Elev. 120
EXPLANATION
Country rock is altered graywacke and shale
85
Fault, showing dip
Dashed where approximately located
Head of winze (caved)
Timbered and lagged workings
Inaccessible workings
No. 1
U.S.B.M. sample
N
Base from Company map, with additions by E.H. Pampeyan, March 1955
GRANADA MINE
NAPA COUNTY, CALIFORNIA
50 0 50 100 FEET

Figure 2

700

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

Surname copy

Murphy
Ellis
Hedges
Kilsgaard
Selfridge
Johnson

MAR 9 - 1955

Hugh M. Simmons, M. D.
801 Alhambra Boulevard
Sacramento, California

Re: Docket No. DMEA-3698 (Mercury)
Granada Quicksilver Mine
Napa County, California

Dear Dr. Simmons:

The application for assistance in exploring your property, under the captioned docket number, has been reviewed by the Rare and Miscellaneous Metals Division of the Defense Minerals Exploration Administration. It has been referred for a field examination to the Executive Officer of Region II at the following address:

Mr. Spangler Ricker
Executive Officer, Region II
DMEA Field Team
Bureau of Mines
Rare and Precious Metals
Experiment Station
1605 Evans Avenue
Reno, Nevada

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

Sincerely yours,

C. O. Mittendorf (fw)

Administrator

EMMurphy/gla
3-8-55
cc to: Admr.'s Reading File
Docket
Code 700
Mr. Murphy
DMEA Field Team, Region II (2)

RCh

700

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

Surname copy
FMurphy
Selfridge
RJPierson

MAR 9 - 1955

Mr. Spangler Ricker
Executive Officer
DMEA Field Team, Region II
U. S. Bureau of Mines
Rare and Precious Metals Experiment Station
1605 Evans Avenue
Reno, Nevada

Re: Docket No. DMEA-3698 (Mercury)
Hugh M. Simmons,
Granada Quicksilver Mine
Napa County, California

Dear Mr. Ricker:

The captioned application is referred to Region II Field Team for investigation, a field examination, and recommendations. A copy of the application was retained by your office.

Enclosed are copies of memoranda from J. H. Hedges, dated March 3, and E. L. Newcomb, dated March 2, 1955, members of the Mercury Commodity Committee.

We note that part of the lower tunnel and all of the upper tunnel, mentioned in the application, have been recently rehabilitated at a cost of approximately $3,000. This preliminary work done by the Operator should facilitate an examination of the subject property.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee

Enclosures

APPROVED:

J. H. Hedges

Member, Bureau of Mines

Thor H. Kiilsgaard

Member, Geological Survey

FMMurphy/gla
3-8-55
cc to: Admr.'s Reading File
Operating Committee
Docket
Messrs. J. E. Crawford, Rm. 3641
T. H. Kiilsgaard, Rm. 5224
J. O. Hosted, Rm. 3210, GSA
Code 700
Mr. Murphy

R.C.S.

3/4/55 gla

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

March 3, 1955

Memorandum

To: Ernest W. Ellis, Chief, Rare and Miscellaneous Metals Division

From: J. H. Hedges

Subject: DMEA-3698 (Mercury) Hugh M. Simmons
Granada Mine, Napa County, California

Reports accompanying this application claim widespread mercury mineralization in east-west fractures and northwest trending fracture zones. However, for the most part descriptions are vague, maps inadequate, and samples listed by Reeves with one exception are barren or low grade.

There is no information on this property in Bureau files. The proposal may have merit, but a field examination is needed to determine whether the proposed program or some part of it is justified.

I recommend the application be referred to the Field Team for examination.

J. H. Hedges

J. H. Hedges

Copy to: H. M. Meyer
Division of Minerals
J. H. Hedges

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

March 3, 1955

Memorandum

To: Ernest W. Ellis, Chief, Rare and Miscellaneous Metals Division

From: J. H. Hedges

Subject: DMLA-3698 (Mercury) Hugh M. Simmons
Granada Mine, Napa County, California

Reports accompanying this application claim widespread mercury mineralization in east-west fractures and northwest trending fracture zones. However, for the most part descriptions are vague, maps inadequate, and samples listed by Reeves with one exception are barren or low grade.

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J. H. Hedges

J. H. Hedges

Copy to: H. H. Meyer
Division of Minerals
J. H. Hedges

3/4/55 gfa

IN REPLY REFER TO:

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

March 2, 1955

Re: DMEA-3698
Hugh M. Simmons
(Granada Mine)
Napa County, Calif.
$17,161.61 - Mercury

Memorandum

To: E. W. Ellis, Defense Minerals Exploration Administration

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

Subject: Review of applicant's exploration proposal

The proposed exploration work is not clearly outlined in the application. Apparently the operator plans to rehabilitate 200 feet of the upper tunnel and to drift 500 feet on the lower tunnel beneath a mineralized structure.

According to the Reeves report which is attached to the application, 1-2 inches of mineralization is present at a point 55 feet from the upper tunnel portal and at 112 feet the width of ore has increased. Samples along the upper tunnel vein range from .08 to .35 percent mercury, but the widths of the samples (the vein widths) are only 1 to 6 inches. Although the center part of the upper tunnel is caved, the reported occurrences of cinnabar at 55 and 112 feet should be accessible for examination.

The Austin report states that winzes were sunk at 55 feet from the portal of the upper tunnel and at the face of this tunnel, but they are not shown on the maps which accompanied the application. Also, a sub-level is reported at the bottom of the '55' winze which is not shown on the maps.

The California Division of Mines Report XLII (1946), Quicksilver Deposits of Eastern Mayacmas District, Lake and Napa Counties, California by R. G. Yates and L. S. Hilpert briefly mentions the Granada workings in a description of the Toyon Mine. The Toyon Mine consists of the Granada and Toyon workings; however, at the time the writers were investigating the Toyon Mine the Granada was inaccessible.

The Toyon Mine was opened in 1929, but the first production was not recorded until 1933. Since 1933 the property has had only a small and intermittent production.

The rocks in the area are sandstones and shales of the Franciscan formation. Quicksilver mineralization occurs in a northwesterly-trending zone of fracturing and faulting. Cinnabar occurs as disseminated crystals in hydrothermally altered sandstone and

along fractures. Further exploration of the Toyon property was suggested in this report; however, it is possible that the Granada does not merit DMEA assistance.

I recommend this application be referred to the Field Team for their review and recommendations.

E. L. Newcomb

E. L. Newcomb

IN REPLY REFER TO:

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

March 2, 1955

Re: DMEA-3698
Hugh M. Simmons
(Granada Mine)
Napa County, Calif.
$17,161.61 - Mercury

Memorandum

To: E. W. Ellis, Defense Minerals Exploration Administration

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

Subject: Review of applicant's exploration proposal

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along fractures. Further exploration of the Toyon property was suggested in this report; however, it is possible that the Granada does not merit DMEA assistance.

I recommend this application be referred to the Field Team for their review and recommendations.

E. L. Newcomb

ELNewcomb:hlm
G-3/2/55

Copy to: Director's reading, 4212
Branch reading, 4212
DMEA (3)
Docket file
H. M. Meyer, 2623 Interior

February 25, 1955
Subject: DMEA 3698
Re: Exploration Assistance
Granada Quicksilver Mine

Dr. Hugh M. Simmons
801 Alhambra Boulevard
Sacramento, California

Dear Dr. Simmons:

The receipt of your application dated February 17, 1955 for exploration assistance under the Defense Production Act of 1950, as amended, is hereby acknowledged.

Your application has been assigned Docket Number DMEA 3698 and referred to the Rare and Miscellaneous Metals Division.

Kindly identify all future correspondence relating to your application by this docket number.

Sincerely yours,

Robert E. Adams, Chief
Operations Control and
Statistics Division

60932

February 25, 1955

Memorandum

To: Executive Officer, DMEA Field Team, Region II

From: Chief, Operation's Control and Statistics Division

Subject: Assignment of Docket Number

There is listed below the assigned docket number to an application recently received from Region II.

DMEA - 3698 Dr. Hugh M. Simmons

Robert E. Adams,
Chief, Operation's Control
and Statistics Division

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

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

February 21, 1955

Memorandum

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

From: Executive Officer, DMEA Field Team, Region II

Subject: Application for DMEA Exploration Aid - Mercury
Granada Quicksilver Mine
Napa County, California

Attached are three copies of Application for Aid Forms MF-103 relating to above subject property.

One copy of the application is being retained in our files.

S. Ricker
Executive Officer
DMEA Field Team, Region II

Attachment

Copy to: R. M. Smith, USGS

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

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

February 21, 1955

Memorandum

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

From: Executive Officer, DMEA Field Team, Region II

Subject: Application for DMEA Exploration Aid - Mercury
Granada Quicksilver Mine
Napa County, California

Attached are three copies of Application for Aid Forms MF-103 relating to above subject property.

One copy of the application is being retained in our files.

S. RICKER

S. Ricker
Executive Officer
DMEA Field Team, Region II

Attachment

Copy to: R. M. Smith, USGS

GRANADA MINE

Estimated cost for 500 feet of drift based on 125 eight hour working days and six day weeks.

LABOR	2 men underground - Rate $2.00 per hr. 125 shifts	$ 4,000.00	
	1 man surface - Rate $2.00 per hr. 125 shifts	2,000.00	
	Industrial Insurance	720.00	
	Extra for overtime over 40 hour week	504.00	
	Social Security & Unemployment Ins.	201.60	
		$ 7,425.60	$ 7,425.60
EQUIPMENT	1 - 210 cfm. portable diesel air compressor. Rental purchase basis $300 per month	$ 1,200.00	
	1 - Jackhammer with jackleg. Rental $50 per month.	250.00	
	Extra parts for Jackhammer	85.00	
	1 - 50 ft. air hose	55.00	
	1 - 50 ft. water hose	40.00	
	6 sets carbide tipped Jackhammer steels	208.80	
	2 - 20 cu. ft. end dump ore cars	400.00	
		$ 2,138.80	$ 2,238.80
MATERIALS & SUPPLIES	2 tons 12 lb. mine rails @ $186.00 per ton	$ 372.00	
	200 - 4'x4'x30" ties for mine track @ 36¢	72.00	
	Bolts, splicers and track spikes	52.50	
	1000 ft. 2" black pipe for compressed airline @ 45¢	450.00	
	1000 ft. 3/4 pipe for water line	150.00	
	Valves and fittings	75.00	
	Fuel for compressor estimated at 25 gal. per 8 hour shift. Diesel oil @ 18¢ per gal.	562.50	
	Oils and greases	75.00	
	3500 lbs. powder. Estimated consumption 8 lbs. per foot of drift. $20.60 per cwt. 40%	824.00	
	3 - 3000 ft. rolls fuse @ $11.60 per M	104.40	
	1500 #6 Blasting caps	37.50	
	2 - 4 x 8 ft. steel slick sheets	80.00	
	6 Shovels	22.20	
	6 Miners picks	24.90	
	Hammers, wrenches & other hand tools	60.00	
	Miscellaneous	125.00	
	Sales Tax	109.96	
		$ 3,196.96	$ 3,196.96
			$ 12,861.36

Amount carried forward		$ 12,861.61
Transportation and Hauling supplies	$ 800.00	
Supervision and Accounting	750.00	
Engineering and Consultants	750.00	
	$ 2,300.00	2,300.00
Total for 500 feet of development		$ 15,161.61
Cost per Foot	$ 30.32	

It is assumed that the ground in the exploration work will stand without timber. If caving ground is encountered the additional cost is estimated to be $10.00 per foot.

Estimated amount for rehabilitation of 200 feet of drift in upper tunnel (labor only). Applicant to furnish cost of timber and other supplies over and above labor estimate	2,000.00
Total amount of estimated expenditures	$ 17,161.61

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

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

Not to be filled in by applicant

Docket No. 3698
Metal or Mineral Mercury
Date Received FEB 21 1955 2-25-55
Estimated Cost $17,161.61
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: HUGH M. SIMMONS
801 Alhambra Boulevard
Sacramento, California

(*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. None

(*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. None

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 Owner. The Southeast quarter of the Southeast quarter of Section 27, the Northeast quarter of the Northeast quarter of Section 34 the North half of the Northwest quarter and the Northwest quarter of the Northeast quarter of Section 35, all in Township 10 North Range 6 West, Mount Diablo Base and Meridian. Containing 200 acres of land, more or less.

(*b*) State any mine name by which the property is known. Granada Quicksilver 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.

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

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

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

(*b*) State past and current production, and ore reserves, if any, giving quantities and grades. None recorded

(*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. See report by Reeves.

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

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

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

(*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. See reports by Reeves.

(*c*) The work will start within 30 days and be completed within 6 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. B. C. Austin, Mining Engineer

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: $17,161.61

(*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.). M None

(*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. See estimate

(*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. See estimate

(*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. Included in estimate

(*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. See estimate.

(*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? Cash

[✓] Money [ ] Use of equipment owned by you [ ] Other

Explain in detail on acompanying paper.

CERTIFICATION

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

Dated February 17, 1955

Hugh M. Simmons, M.D.
(Applicant)

By

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

BERT C. AUSTIN
MINING ENGINEER
MILLS BUILDING
SAN FRANCISCO, 4

TELEPHONE DOUGLAS 2-7180
CABLE ADDRESS
AUSTIN, SAN FRANCISCO
USUAL CODES

February 17, 1955

The Defense Minerals Exploration Administration
420 Custom House
555 Battery Street
San Francisco, California

Gentlemen:

Herewith is submitted an application for a DMEA loan on the Granada Quicksilver property which is owned by Hugh M. Simmons, M.D., 801 Alhambra Boulevard, Sacramento, California.

The Granada Quicksilver property is located in Napa County, California, near the town of St. Helena. There is a paved road to Aetna Springs and from there the mine is about four miles over a country road. Within a radius of fifty miles there are several populated areas and there should be no difficulty in obtaining labor and supplies for mining operations.

The principal mine workings consist of two tunnels, the lower tunnel consists of approximately 480 feet of development and the upper tunnel, which is 105 feet higher in elevation, consists of, according to old maps, approximately 650 feet of drifting and cross-cutting, with three shallow winzes.

Recent workings conducted by Dr. Simmons consist of rehabilitating all of the lower tunnel and approximately 150 feet of the upper tunnel at a total cost of approximately $3,000.00.

It is to be noted that the lower tunnel was not driven far enough to be under the ore mentioned in the Reeves and Adams report, and that the upper tunnel work has not been far enough to reach the ore described.

Attached is a copy of a report by Thomas Reeves, statement by Frank Adams and a preliminary report by the writer, together with cost estimates of proposed development with maps and cross-sections. Further information will be furnished, if requested.

Yours very truly,

B. C. Austin

BCA/sm

BERT C. AUSTIN
MINING ENGINEER
MILLS BUILDING
SAN FRANCISCO, 4

TELEPHONE DOUGLAS 2-7180
CABLE ADDRESS
AUSTIN, SAN FRANCISCO
USUAL CODES

September 7, 1954

Dr. Hugh M. Simmons
801 Alhambra Boulevard
Sacramento, California

Re: Granada Quicksilver Property
Napa County, California

Dear Sir:

As per telephonic arrangements August 3, 1954, accompanied by you an examination was made of the Granada Quicksilver Property on September 1, 1954.

The Toyon property, adjacent to the Granada property, was examined by me in August 1937, but at that time the underground workings in the Granada property were caved at the portal and inaccessible. You have my report on the Toyon property dated August 16, 1937. A report on the Granada property by Thomas Reeves, a mining engineer, dated April 26, 1929, was made available to me and I was also given considerable data on the Granada by Mr. Frank Adams, who now resides at Oakville, Napa County, California. Mr. Adams operated the Toyon property at the time of my visit in 1937 and drove the upper and lower levels on the Granada property.

According to the report by Mr. Reeves dated April 26, 1929, the Granada property consisted of about 800 acres located in Napa County, California. It is believed that as of this date (September 1, 1954) the property consists of only 240 acres, more

or less, and is described in the Reeves report, page 1, paragraphs 3 and 4.

From the Granada map which I am mailing you, you will note that the upper Granada tunnel is about 260 feet in length and the lower Granada tunnel is about 480 feet in length, as stated in my report. You will also note that the lower tunnel was driven far enough to cut the downward extension of the ore reported to have been found in the upper tunnel winze, about 55 feet from the portal. According to Mr. Adams, however, no ore was found in the lower tunnel which was driven some time between the time of Mr. Reeves' report and my examination of 1937.

Mr. Reeves' report states that a small stringer of cinnabar ore was found in the upper tunnel about 55 feet from the portal, and this stringer was followed for about 100 feet before cutting another stringer of ore near the present face. The second stringer or small vein was followed for about 80 feet in a northwesterly direction and it was probably from this northwest drift that the 25 tons of ore was recovered, as mentioned in his report on page 4. He makes no mention of any winzes or of the lower tunnel. Some time after my report was made, according to Mr. Adams a winze was sunk about 20 feet deep at a point 55 feet from the portal of the upper tunnel, and some drifting was done from the bottom of this winze. A winze was also sunk, probably 40 feet in depth, at or near the face of the upper tunnel, and Mr. Adams states that these winzes indicated commercial ore and justified the driving of the lower tunnel.

Since my report made in 1937 covers the description of the district and pertinent facts of operation, it is unnecessary to repeat this data. In addition, Mr. Reeves' report covers a description of the Granada property and in particular the geology of the upper Granada tunnel.

It might be well to call your attention to the fact that the price of quicksilver is now $300 per flask of 76 pounds, and a guaranty has been given by the United States Government for a $225 per flask price for three years. It must, however, be noted that costs have advanced since 1937 from two and one-half to three times what they were at that time.

I would recommend that a 60-day option be obtained by you at a price not to exceed $5,000 and, as you suggest, give the owners in addition 5% of the net profits. During this 60-day option period I would recommend that a title search be made and that the upper tunnel be reopened sufficiently to inspect the underground work, in order to check on the report of Mr. Reeves and the statements made by Mr. Adams as to the vein structure and ore values. It is rather difficult to estimate the cost of opening up a caved tunnel but it is believed that this work can be done for about $1,000 as it is assumed there will be very little caving except at the portal and near the first winze.

I am mailing you, under separate cover, my map made in 1937 but I have been unable to find the maps referred to in Mr. Reeves' report. I would ask that at your convenience you return the map I am mailing you as it is the only copy I have.

Yours very truly,

Bert C. Austin

BCA:bg

C
O
P
Y

April 26, 1929.

No. 98578

MR. RUTHERFORD ANDERSON,
721 McDonald Avenue,
Santa Rosa, California

REPORT

In accordance with instructions, on April 18th and 19th, 1929, an examination was made of the Granada Quicksilver Mines Company property. The description, furnished by the owners, outlines the property as:

"All that certain real property situate, lying and being in the County of Napa, State of California, known and described as follows, to-wit:

"Lots numbered 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 77, and 78, containing Five Hundred and Sixty (560) acres of land, as same are laid down and delineated upon a certain Map entitled 'Map showing Aetna Springs Subdivision of Ink Ranch, Pope Valley, Napa County, California,' etc., filed August 19th, 1912, in the Recorder's Office of the said Napa County.

"Also, the Southwest Quarter of the Southwest Quarter of Section 26 and the East half of the Southeast Quarter of Section 27, in Township Ten (10) North, Range Six (6) West, Mount Diablo Meridian, containing One Hundred and Twenty (120) acres.

"And also the North half of the Northwest quarter and the Northwest Quarter of the Northeast Quarter of Section 35, Township Ten (10) North, Range Six (6) West, containing One Hundred and Twenty (120) acres".

STATE OF CALIFORNIA,
City and County of SAN FRANCISCO } ss.

I, EVELYN M. WIGGINS a Notary Public in and for the City and County of San Francisco, State of California, residing therein, duly commissioned and sworn, do certify that on this 15th day of February, 1955, I carefully compared the annexed copy of REPORT NO. 98578, dated April 26, 1929, to Mr. Rutherford Anderson by Thos. Reeves, Engineers-Chemists, consisting of five (5) pages with the original thereof, now in the possession of B. C. Austin of San Francisco, State of California, and that the same is a full, true, and exact copy of said original Report No. 98578

IN WITNESS WHEREOF I have hereunto set my hand and affixed my official seal in the City and County of San Francisco the day and year in this certificate first above written.

Evelyn M. Wiggins

Notary Public in and for the City and County of San Francisco
State of California
My commission expires February 15, 1955

Cowdery's Form No. 26—Certificate of Notary to Copy of Document (C. C. P. Sec. 1923.)

side, marking the North bank of James Creek, at a point about Six Hundred (600) feet from the Western boundary of the Granada Quicksilver Mines property. The elevation of this tunnel above sea level is about 1900 feet.

Mountain dirt roads, which are passable except in wet weather, come to within one and one-half miles of this tunnel and could easily be extended to reach this point.

Electric power is available at any of the surrounding mines. It would require the construction of a mile of pole line to make this power available at the camp.

Water can be secured from springs which flow from several points on the hillside near the mine or from James Creek.

The surrounding country will furnish wood for camp purposes, and it is possible that a local supply of mine timbers may be arranged for.

GEOLOGY:

The development work being carried on at this time is entirely within a sedimentary area marking the slope of the hills on the North bank of James Creek. These sediments are chiefly of sandstone stratas interbedded with thin seams of clay shale. These sediments date back to a time prior to the upheaval of the Coast Range.

At the time of this upheaval there were interjected into the area of sediments certain igneous intrusions which now appear as masses of serpentine. The stresses in the sedimentary stratas resulting from the igneous intrusions produced systems of fractures outlining the intruded masses. These fractures later became channels for the circulation of mineral bearing solutions which deposited the cinnabar now being developed.

The ore occurs along fracture planes in the sandstones and shales, the width of ore depending on the extent of the shattered material lining the fracture planes. Where the fracture is marked by a sharp clean break the width of ore is limited to a thin seam. There apparently is no impregnation of the solid wall rock. Where the fracture has been marked by a width of crushed material the whole contains more or less cinnabar.

In the area surrounding the mine tunnel this system of fractures has a general strike about North 30 West and a dip around eighty degrees to the East. The occurrence of cinnabar along this system of fractures is more general and the percentage of mercury present is greater than on any of the other fractures observed.

There are subsequent systems of fracture, with attendant displacements,

into which the cinnabar from the original ore channels has been carried as "drag" or along which circulating waters have caused a secondary concentration of cinnabar. These latter fractures may be productive of ore but they will always be of minor importance.

The work of the old shaft and the present tunnel outline one of the North 30 West fractures along which there has been considerable deposition of cinnabar. This is one of an extensive series of roughly parallel fractures in evidence in the area immediately surrounding the mine. There is no regularity to the spacing of these fractures. Over a part of the area they are so close together that the sandstone has been metamorphosed into a schist. More generally a main fracture is found with a number of lesser fractures paralleling it on either side.

The work of the Granada Mine tunnel has been done on a lesser fracture lying about thirty (30) feet west of the main fracture with which it is associated. A gully has been formed by the erosion along this main fracture. There are several other parallel main fractures, indicated by surface contours and deformations in the rock stratas. The occurrence of mineralization along these fractures has been demonstrated by surface prospecting. The distribution of mineralization over so wide an area and the nature of the deposits as disclosed in the shaft and tunnel furnish sufficient evidence to warrant further development work on this property.

We have prepared a sketch showing a plan of the shaft and tunnel, together with a section thru the same long the line A-A, and have indicated on this sketch the fractures encountered and the location of the ore bodies encountered. A consideration of the location of the samples along certain fracture systems, as marked on this sketch, together with their determined mercury content, will form a groundwork on which to plan future development work.

For the first fifty-five feet from its mouth, the tunnel is not on the vein, and the material excavated has no mercury content. At the fifty-five foot point a narrow seam of ore (from one to two inches in width) was encountered and the tunnel was turned to follow this seam. Pan tests on the material of this seam show good values in cinnabar.

At a point one hundred and twelve feet from the tunnel entrance the width of ore had increased to such an extent that samples were taken and determinations were made of the mercury content. We have marked on the accompanying sketch the location of these samples together with the width of the sample taken and the determined mercury content.

It is probable that the second sample, which shows only 0.08% mercury, would have a higher mercury content if it were possible to sample the part of the deposit which lies to the East of the tunnel and which was not included in the tunnel opening.

The drifts branching East and West from the end of the tunnel are driven along a disturbed area marked by fracture planes extending in a general East and West direction. The movement which formed these planes was post mineral and the drifts do not encounter ore except at their ends where they have passed thru the disturbed are a and are beginning to meet ore again.

The East drift, at its face, (May 16, 1929) showed a seam of good ore.

An assay taken from the end of the West drift showed one and thirty-five one hundredths percent mercury. This sample was taken from a six inch width of ore.

There are on the dump, segregated as ore, some twenty-five tons of material taken from the tunnel and from the end of the West drift.

Samples were taken from the disturbed area within the mine where the movements have been designated as post mineral, to determine for a certainty that there was no mercury content. A record of these samples is not included here.

A careful study of the apparent mineralization along only certain lines of fracture should be made, as this condition may be universal over the area being developed. If all work is confined as nearly as possible to mineralized fractures, the opening up of productive ore bodies can be accomplished at a minimum of cost.

A record of the samples taken on ore bodies is contained on the accompanying blue print, which also shows the strike and dip of the fracture planes encountered in the several workings.

Respectfully submitted,

Thos. Reeves

Engineers - Chemists

COPY

No. 98578 REPORT April 26, 1929

		Val.-% Mercury
SAMPLE #1 Lab.#98764	-(See sketch for location of sample) Taken at point where fracture seam N.30°W. shows in north wall of drift. 3' samples....	0.00%
SAMPLE #2 Lab. #98765	(See sketch for location of sample) Taken at point where fracture S.80° W. intersects fracture N. 30° W. 3' samples....	0.00%
SAMPLE #3 Lab. #98766	(See sketch for location of sample) Taken from a point where fracture seam S.50° E. shows-15" sampled.....	0.00%
SAMPLE #4 Lab#98767	(See sketch for location of sample) Taken across fracture N.30° W. 3' sampled...	0.07%
SAMPLE #5 Lab. #98768	(See sketch for location of sample) Taken from a point where fracture N.30°W. shows. 3' sampled.....	0.75%
SAMPLE #6 Lab#98769	(See sketch for location of sample) Taken across fracture N.30°W. 4' sampled....	0.08%
SAMPLE #7 Lab #98770	(See sketch for location of sample) Same location as Sample #6-Sandstone in West wall of deposit - 12" sampled	0.00%
SAMPLE #8 Lab. #98771	Same location as Sample #2 (See sketch for location of sample (Sample across fracture S.80°W. 2' sampled.....	0.00%
SAMPLE #9 Lab. #98772	Same location as Sample #3 (See sketch for location of sample) across fracture S.80° W. 18" sampled.....	0.00%
SAMPLE 10 Lab. #98773	(See sketch for location of sample)Sampled across fracture N.30°W. Sampled silicified gouge with cinnabar showing 13" sampled	0.22%

The accompanying blue print shows the trend of formations and location of samples outlining the strike upon which value occur.

Respectfully submitted,

THOS. REEVES.
Engineers - Chemists.

12 February 1955

TO WHOM IT MAY CONCERN:

At the request of Hugh M. Simmons, owner of the Property known as the Granada Mine, I wish to give this information.

I was the mining engineer for the Granada Mine during the years 1930 and 1931. The work done in the upper tunnel and the results found due to this work made me feel justified to go below and drive the lower tunnel.

A shaft was sunk at the cross drift about 200 feet from the portal of the upper tunnel for a distants of about 30 ft. Good ore was found and was still going down. This shaft was 10' x 12' and as stated went down about 30 feet. I also found the seam of ore on the face of the East drift and also the West drift as stated in Reeves report dated April 1929.

Another wentz was sunk about 60 feet from the portal and this also went down on ore. This seam of ore was followed down about 30 feet and then in a north westerly direction for a distance of about 100 feet. A third shaft was sunk mid-way between the one near the portal and the one at the cross drift (about 200 feet from portal) and this also went down on ore.

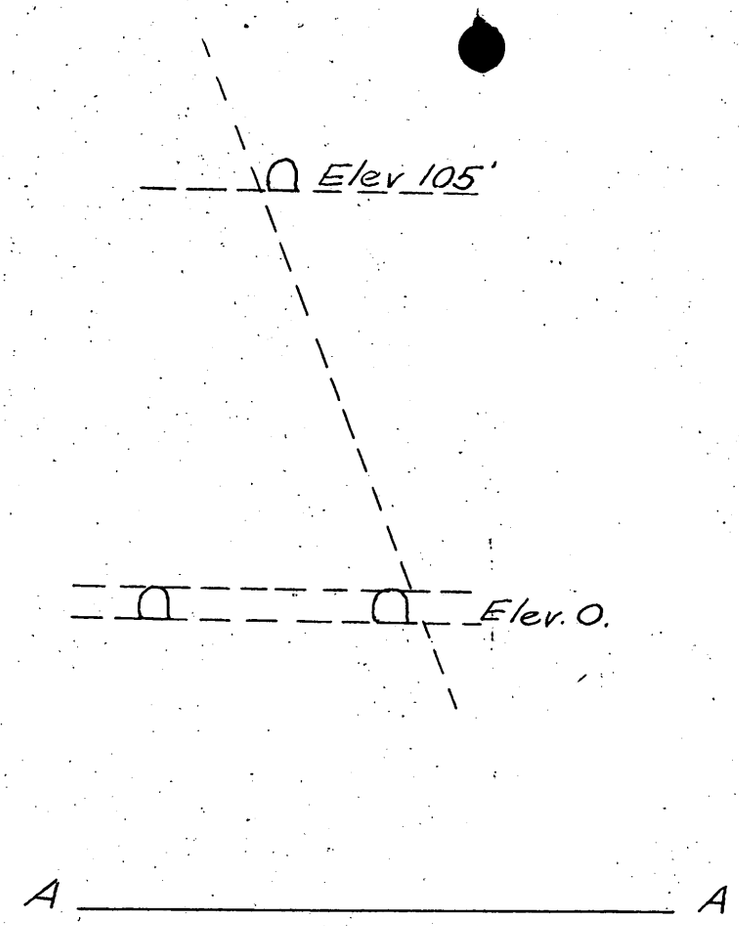
As I have stated the ore found in the upper tunnel gave me information that made it manditory to go below and drive the lower tunnel. Due to the fact that litigation started I had to quit work on the lower tunnel and never went to the ore shoot as shown in the tracing of my original map. This litigation lasted for over eighteen years and there has been no chance to complete this work until now.

It is my honest opinion that this property offers one of the best prospects to find a productive body of good mercury ore.

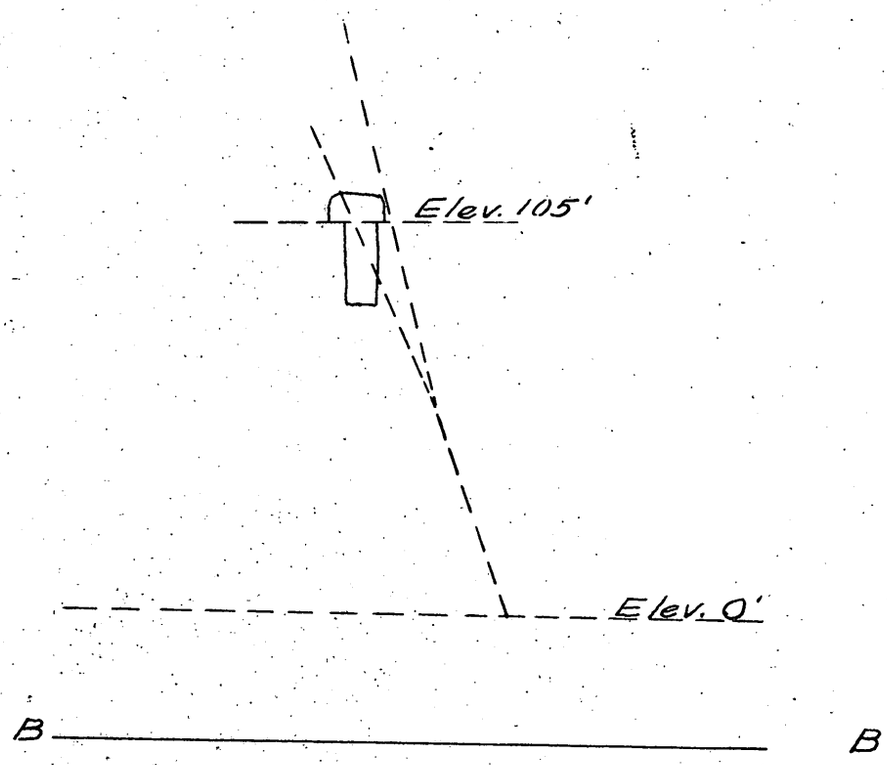
Frank Adams

Frank Adams

Colorado School of Mines 1901
Army Engineers 1916



Cross Section
Scale 1" = 50'



Cross Section
Scale 1" = 50'

GRANADA

~~S. Bureau of Mines~~
~~012 Flood Building~~
~~70 Market Street~~
~~an Francisco 2, Calif.~~

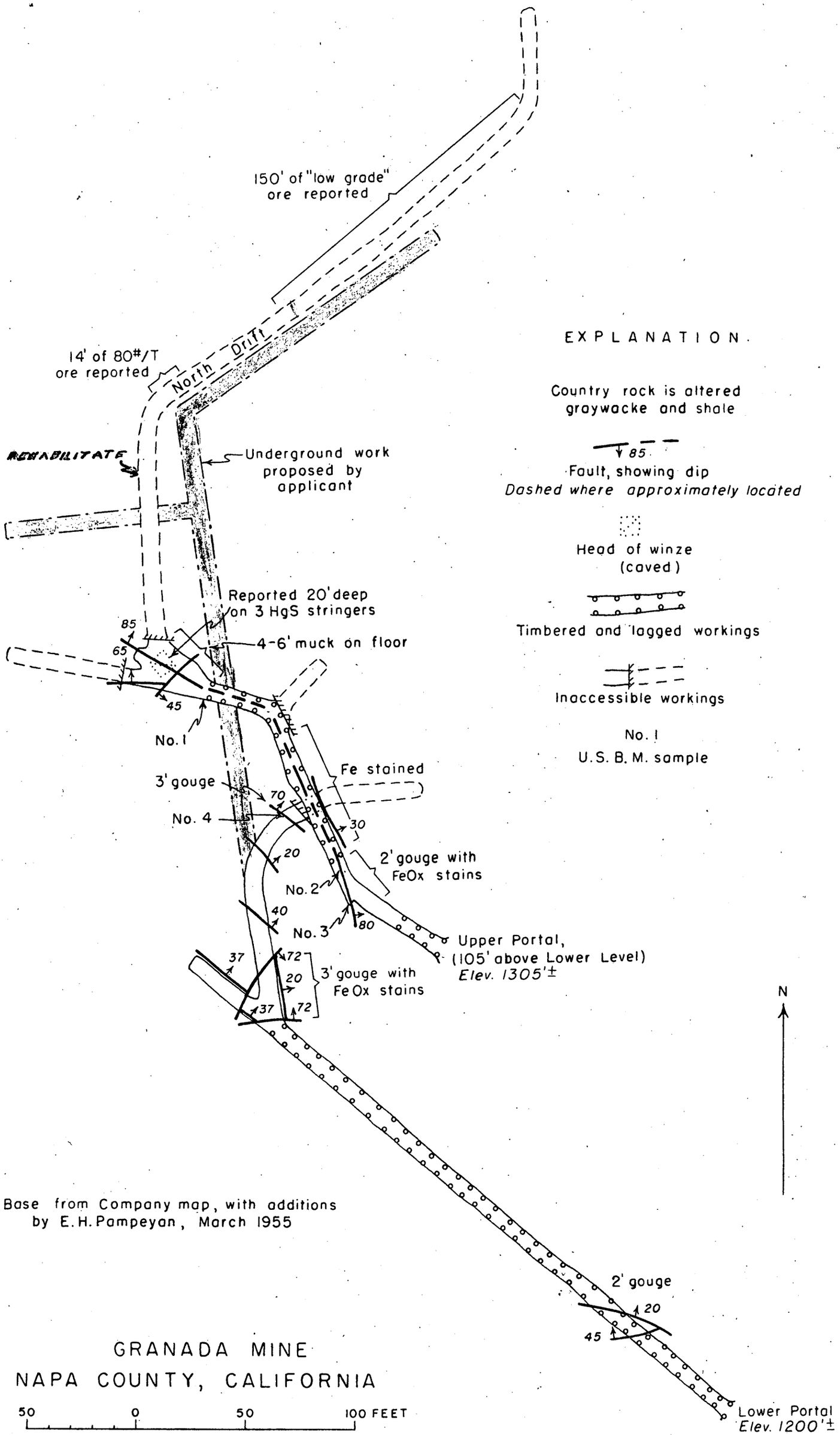
SAN FRANCISCO CALIF.
OCT 8 PM
1955
RINCON ANNEX

Map

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

FIRST CLASS

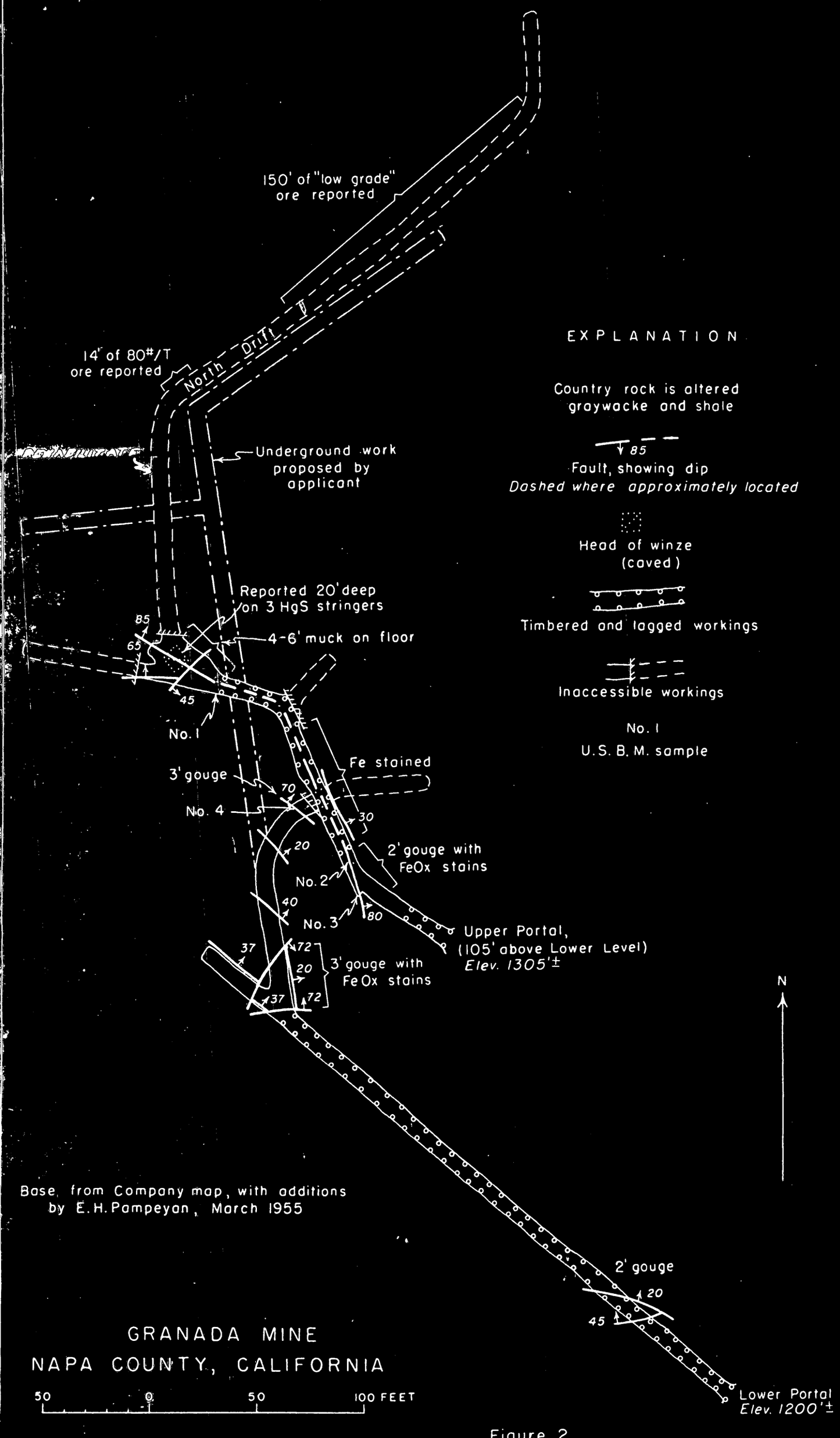
map



Base from Company map, with additions by E.H. Pampeyan, March 1955

GRANADA MINE
NAPA COUNTY, CALIFORNIA

Figure 2



GRANADA MINE
NAPA COUNTY, CALIFORNIA

Figure 2

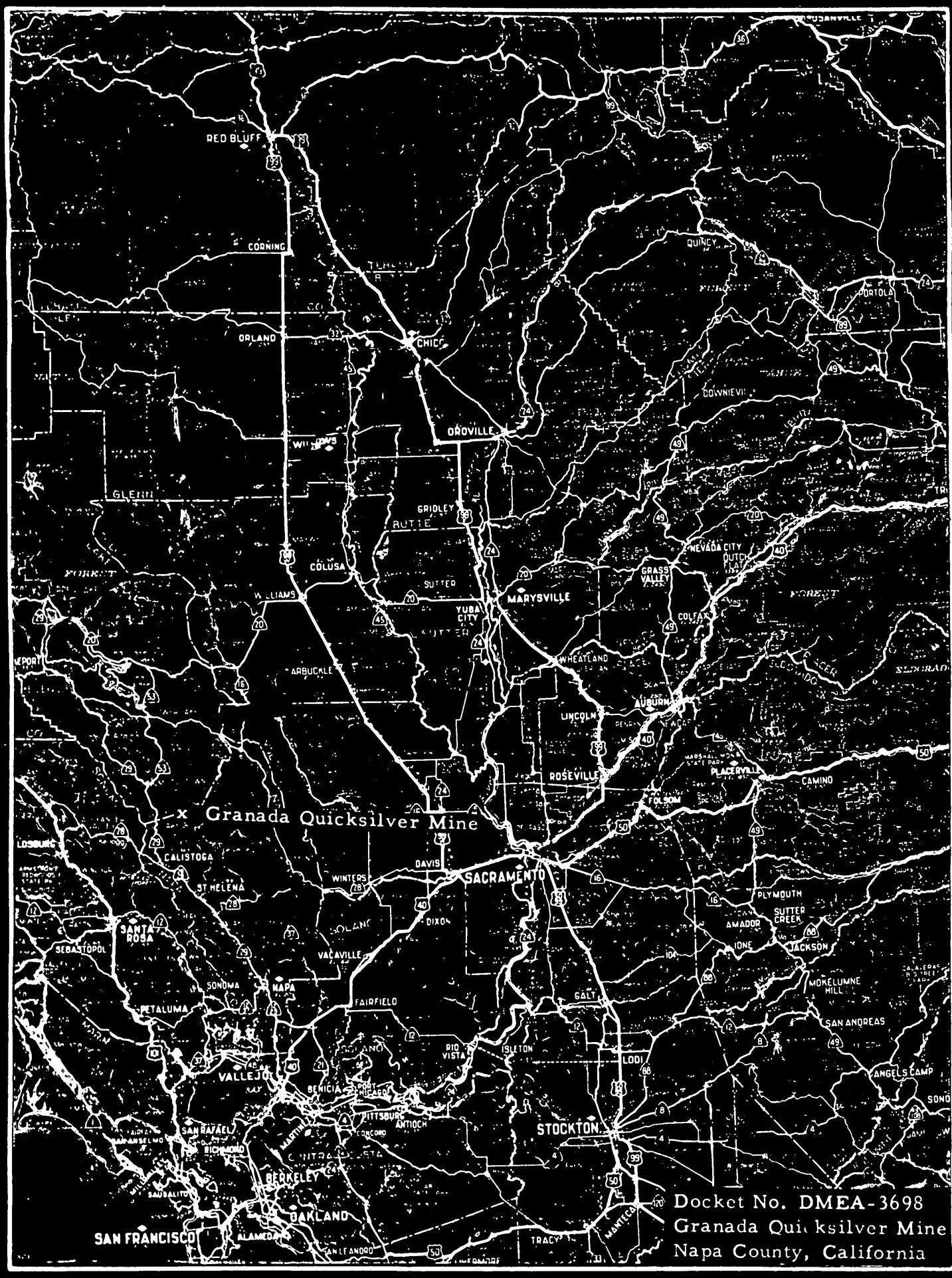


FIG. 1 LOCATION MAP

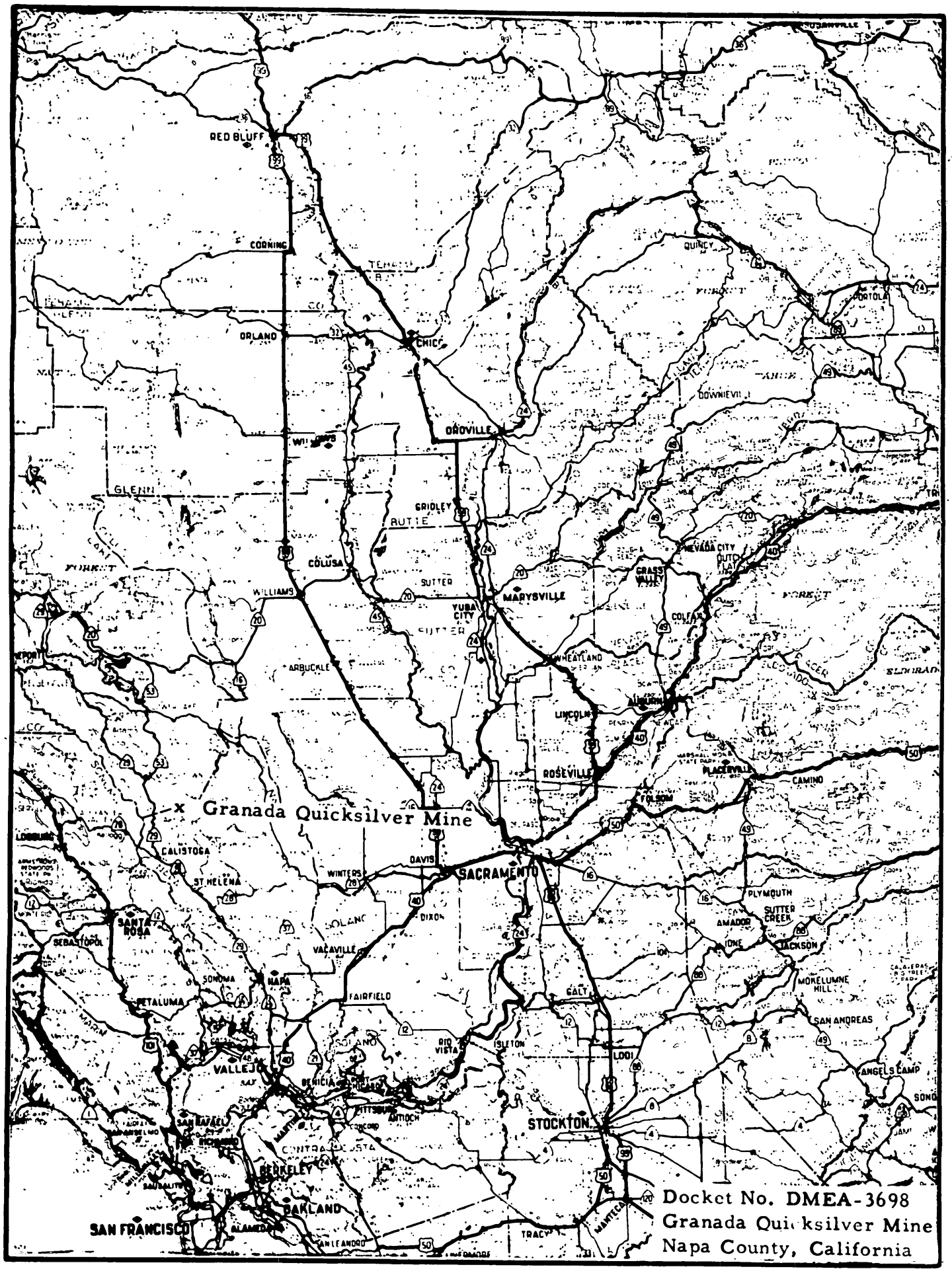
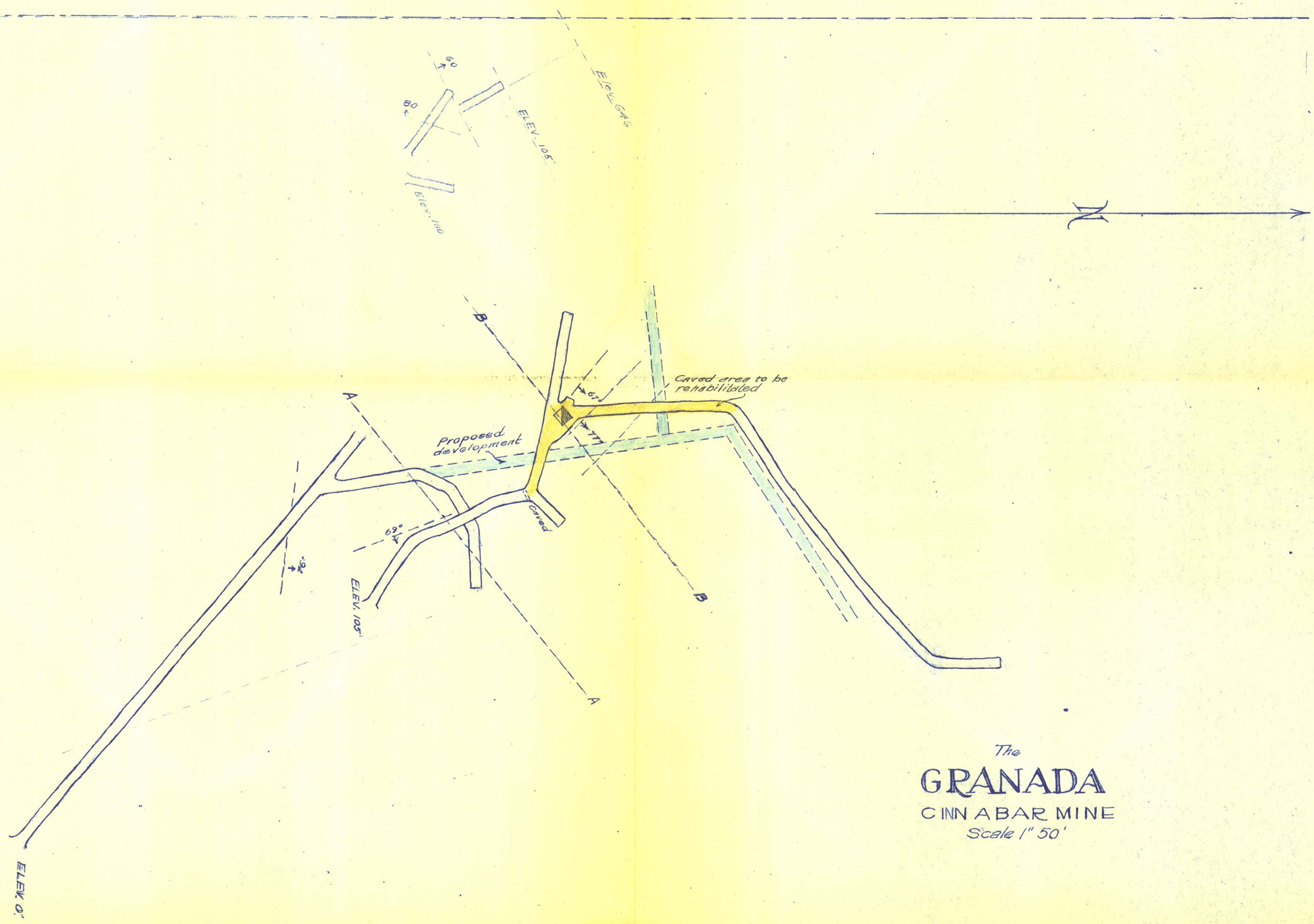


FIG. 1 LOCATION MAP



The
GRANADA
CINNABAR MINE
Scale 1" 50'