

P Please consider the effects on the environment before printing this e-mail.

Exhibit 16

THIS AGREEMENT, entered into this 1st day of November, 1954, between MT. DIABLO QUICKSILVER COMPANY, LTD., a Nevada corporation, hereinafter referred to as "Lessor", and CONDERO MINING COMPANY, a Nevada corporation, hereinafter referred to as "Lessee",

W I T N E S S E T H:

WHEREAS, Lessor is the owner of the following described mine and mining property, together with all appurtenances:

DESCRIPTION:

The northeast quarter of the southeast quarter of Section 29 and the south half of the southwest quarter of the northeast quarter of Section 29, Township 1 North, Range 1 East, Mount Diablo Base and Meridian, containing 60 acres, more or less;

EXCEPTING THEREFROM: "That certain syphon pipe leading therefrom to a water trough on the northeast quarter of the southeast quarter of said Section Twenty-nine (29), which said water spring, trough, and pipe are excepted from this deed," as provided for in the deed from Edward A. Howard and Daisy B. Howard, his wife, to Mount Diablo Quicksilver Company, Ltd., a corporation, dated December 29, 1933, and recorded Feb. 1, 1934 (File No. 1060);

And

The northwest quarter (N.W.1/4) of the southeast quarter (S.E.1/4) of Section 29, in Township 1 North of Range 1 East, Mount Diablo Base and Meridian. Said property shall not include the following described property, to wit: that land beginning at the northwest corner of the northwest quarter of the southeast quarter of Section 29, Township 1 North, Range 1 East, Mount Diablo Base and Meridian; thence running southerly along the dividing line between the northeast quarter of the southwest quarter and the northwest quarter of the southeast quarter of said Section 29, a distance of 20 chains to the southwest corner of the northwest quarter of the southeast quarter of Section 29; thence running along the southerly line of the northwest quarter of the southeast quarter of Section 29, a distance of 2,924 chains; thence leaving said line, and running in a northerly direction, a distance of 20.23 chains to the point of beginning.

EXCEPTING from the demised premises the house known as the Blomberg house together with the right to use such water as is necessary for domestic purposes. In the event the option to purchase is exercised then this exception will be without effect and title to the Blomberg house shall pass with the other property.

IN ADDITION Lessee shall have the right to any access road over which Lessor has control.

And

WHEREAS the Lessee desires to lease and to acquire an option to purchase the whole of said mining property above described, which the Lessor is willing to grant upon the terms and subject to the conditions hereinafter set forth,

NOW, THEREFORE, in consideration of the premises and the sum of One Dollar (\$1) paid by the Lessee to the Lessor, receipt of which is hereby acknowledged, the Lessor hereby grants and leases to Lessee the above-described property for the purpose of investigating, exploring, prospecting, drilling, mining, producing, milling, and removing ores, metals, minerals, and values of every kind, and for the purpose of erecting thereon mills, plants and other structures in connection with said purposes, for the term of Ten (10) years from the date hereof with right to renew, upon a sixty (60) day prior written notice to Lessor, for an additional Ten (10) years on the same terms, including the right to apply payments made during the first Ten (10) years on the purchase price if said option to purchase is exercised during the second ten (10) years. These rights shall remain in effect during the period of the lease unless sooner terminated as hereinafter provided.

In consideration of said lease, IT IS HEREBY MUTUALLY

AGREED AS FOLLOWS:

1. RENTAL AND ROYALTY: The Lessee shall pay to the Lessor monthly, as rental for said property, a percentage of the proceeds resulting from the operation of said property by Lessee. This percentage shall be ten per cent (10%) of the money received for ores, metals, minerals, and values mined, saved and sold less freight, insurance, and brokerage, or Two Hundred Dollars (\$200) per month, whichever is greater.

Unless notified as hereafter set forth, Lessee shall sell all flasks of quicksilver produced from the premises; provided, however, that Lessor shall have the option to receive its percentage royalties in kind, i.e. in flasks of quicksilver -- upon Lessor's giving Lessee a ninety (90) day prior written notice of exercise of such option. Similarly Lessor shall have the option by such a 90-day notice to have Lessee resume the sales of all production. Delivery in kind to Lessor shall be f.o.b. the mining property. Lessee agrees to store for Lessor's account any production taken by Lessor as royalty in kind without charge -- title, however, to such flasks of quicksilver for delivery in kind shall be deemed to pass to Lessor at the time Lessor receives royalty statements therefor from Lessee (for insurance and other purposes). Lessee shall supply Lessor with full and complete supporting data with regard to deliveries in kind.

2. OPTION: The Lessor shall and does hereby give and grant unto the Lessee the sole, exclusive and irrevocable right and option to purchase and acquire the whole of the said mining

property above described, upon the payment of the option price, on or before the termination of this lease, and any renewal, and in the manner and upon the due performance of the covenants to be kept and performed by the Lessee, all as herein provided.

3. PURCHASE PRICE: The Lessee, upon the exercise of said option, shall pay the Lessor as a total purchase price for the above-described property, the sum of One Hundred Seventy Thousand Dollars (\$170,000) lawful money of the United States of America. All rental and royalty payments made to Lessor hereunder shall be credited on the purchase price. The balance of the purchase price shall be paid in full upon the exercise of said option and delivery of a good and sufficient deed as herein provided.

For the purpose of crediting royalty payments on the purchase price, in connection with deliveries in kind, the credits shall be based upon the average proceeds per flask sold by Lessee in the particular month involved; provided, however, that if no sales are made by Lessee during any such month, royalty payments as well as credits on the purchase price shall be determined by taking the average of the weekly low quotations for the particular month as set forth in the E. & M. J. Metal and Mineral Markets Magazine (less freight, insurance and brokerage); provided further, that such method shall be applied for the purpose of computing royalties or for any other purpose applicable to the provisions of this agreement.

4. MANNER OF PAYMENT: The royalty payable to Lessor hereunder, shall be payable in monthly installments commencing

on the 15th day of December, 1954, and continuing on the 15th day of each and every month thereafter until the expiration of the term hereof or the earlier termination of this lease. Royalty payments shall be based on receipts from sales of the previous month, on the basis provided for in Paragraph 1 above. Notwithstanding anything to the contrary contained herein, it is agreed that each monthly installment shall be not less than Two Hundred Dollars (\$200). The Lessee shall transmit with the royalty check a full and true statement of the production and sales receipts of the previous month. A representative of the Lessor shall at all times have the right during regular business hours to examine the underground operations and the furnace plant.

5. MINING METHODS AND CONDITIONS: Lessee shall be sole judge as to methods of mining and milling, what constitutes ore, when and if ore is extracted or milled and all other phases of operating the property. All operations conducted by the Lessee upon the property shall be performed in accordance with the laws and regulations of the United States and the State of California and in accordance with good practices in workmanship, mining and milling, particularly with regard to the safety and welfare of workers. The Lessee shall at all times during the existence of this lease maintain a watchman on the premises.

6. POSSESSION: Lessee, its agents, representatives or employees may enter in and upon and take possession of the whole or any part of the property above described, at once; and, may then and there commence any work to explore or mine the property,

in keeping with the tenor of this agreement, that it may deem advisable, and for that purpose, may use any buildings, equipment or mining facilities which may now be situated on the premises, and owned by Mt. Diablo Quicksilver Company, Ltd., with the exception of that certain house noted in the above description of the premises.

The Lessee may use, in working on the demised premises, all supplies now on the demised premises, but, in the event he should remove or dispose of said supplies otherwise than in developing the demised premises, he shall pay the Lessor the reasonable value thereof. During the term of this lease the Lessee may use all tools, machinery and equipment of the Lessor now on the demised premises for the purpose of developing the same and operating and maintaining the same, and shall have the privilege of replacing or remodeling the same, and any structures on the demised premises. An inventory enumerating such tools, machinery or equipment and structures, is attached hereto, marked Exhibit "A" and made a part hereof. Lessee shall maintain the same and replace any that are broken, damaged or worn out, normal wear and tear excepted. Such replacements shall become the property of the Lessor. At the expiration of this lease or in the event of the Lessee vacating the demised premises for any reason, Lessee may remove, as provided in Paragraph 14, any portable tools, machinery, or equipment which Lessee has placed upon the property, or any portable structures which Lessee may have placed upon the property, but Lessee may not remove any permanent structures or any repairs or

replacements to units of equipment or machinery now on the property.

7. INDUSTRIAL INSURANCE: Lessee shall comply with the laws of the State of California for the protection of employees against injury and disease and, in that connection, shall save harmless the Lessor against any damage by reason of such claims. Lessee shall provide and maintain at Lessee's expense fire insurance and other appropriate casualty insurance on all of the structures, machinery, equipment and tools covering the full appraised insurable value thereof for the maximum protection of both Lessor and Lessee, as their interests may appear, and Lessee shall furnish to Lessor certificates of such insurance if required, and the same shall be subject to the approval of Lessor for adequacy of protection.

8. PUBLIC LIABILITY: Lessee shall save Lessor harmless from any liability for property damage, personal injury or death arising from the work, mining or acts performed by Lessee and its employees in connection with the lease and option.

9. LIENS: Lessee shall save Lessor harmless from all liens upon the property made or suffered by Lessee, and in that connection shall post the property in accordance with law, noticing owner's (Lessor's) non-responsibility, before commencing any work.

10. TAXES: Lessee agrees to pay, prior to delinquency, all taxes and assessments, including personal property taxes and

net proceeds of mine taxes, to State, County or School District, or any other government subdivision, with the exception of taxes on royalties paid to Lessor. Taxes shall be prorated as of the date hereof.

11. DEFAULT: Time shall be of the essence of this agreement. In the event of default of any of the payments or covenants herein contained, by Lessee, this lease shall terminate, at the option of the Lessor. If Lessor elects to terminate this agreement by reason of Lessee's default, Lessor shall serve notice of his intention by registered mail, or personal service upon Lessee or its duly authorized agent for service of process. Upon service of notice, Lessee shall have sixty (60) days in which to cure said default. If within said sixty (60) day period the default has not been cured, Lessor may terminate this agreement by giving Lessee notice of such termination, and at that time this agreement and all of the rights of Lessee hereunder shall terminate.

12. PURPOSE: This agreement is a lease and option only, and the Lessee shall have the right to surrender this contract and to discontinue any and all work and payments hereunder at any time, without liability therefor, upon giving Lessor thirty (30) days' prior written notice of intention to so terminate, except that Lessee shall be liable for royalties and amounts due and payable at the date of such termination. Upon demand after surrender, Lessee shall execute and deliver to Lessor a good and sufficient surrender and release of all rights hereunder.

Lessee shall control the discharge of water from the

mine properties in such manner as not to pollute any of the wells on any of the adjoining property or the waters of Marsh Creek or Dunn Creek. Lessee is advised of that certain decision and order of the Water Pollution Control Board of the State of California, dated December 14, 1953, and Lessee agrees to comply in all respects with said order, as the same may be modified, amended or altered from time to time, and with any and all other orders, rules and regulations of any governmental authority in respect of discharge of water from the mine properties.

13. INSPECTION: The owner (Lessor) or his duly authorized agents or representatives shall have the right at all reasonable times to enter upon the said property and inspect the work conducted by the Lessee thereon, or records of the production of the mine.

14. REMOVAL OF EQUIPMENT: In the event of termination of this contract, by surrender or default as provided, the Lessee may, within a period of ninety (90) days thereafter, remove any and all machinery, power plant, equipment, building, track, tools, and supplies placed thereon by Lessee except as provided in Paragraph 6 above. In the event of termination Lessee shall provide Lessor with copies of any mine maps of this property which it may have.

15. ASSIGNMENT: Lessee shall not assign this lease or any interest therein and shall not sublease or underlet the premises, or any part thereof, or any right or privilege appurtenant thereto without the written consent of the Lessor -- and such consent shall not be unreasonably withheld. Notices required

hereunder shall be deemed to be completed when made in writing, deposited in the United States mail, registered, postpaid, addressed to

Lessor: MT. DIABLO QUICKSILVER COMPANY, LTD.
Clayton, California

Lessee: CORDERO MINING COMPANY
131 University Avenue
Palo Alto, California

16. On the exercise of the option herein granted to Lessee to purchase certain property, and the payment of the further purchase price therefor, as hereinabove provided, Lessor shall convey said property to Lessee by grant deed. There has been exhibited to Lessee, and Lessee is fully advised of, that certain preliminary title report of California Pacific Title Insurance Company on said property dated October 28, 1954 (Order No. 190821). It is understood and agreed that at any time after the expiration of three (3) years from the date hereof, or upon payment by Lessee to Lessor of one-half (1/2) of the said purchase price -- whichever event is earlier -- on demand by Lessee to Lessor, Lessor shall take such steps and commence such legal proceedings as it may be advised necessary to clear the title of said land of the exceptions appearing on said title report, and Lessor shall thereafter prosecute said proceedings with all reasonable diligence.

IN WITNESS WHEREOF, Lessor and Lessee have caused these presents to be executed by their officers thereunto

duly authorized, the day and year first above written.

MT. DIABLO QUICKSILVER COMPANY, LTD.

By Vic Blomberg
Vic Blomberg
President

By Harold Blomberg
Harold Blomberg
Secretary

(Corporate Seal)

LESSOR

CORDERO MINING COMPANY

By S. H. Williston
S. H. Williston
Vice President

(Corporate Seal)

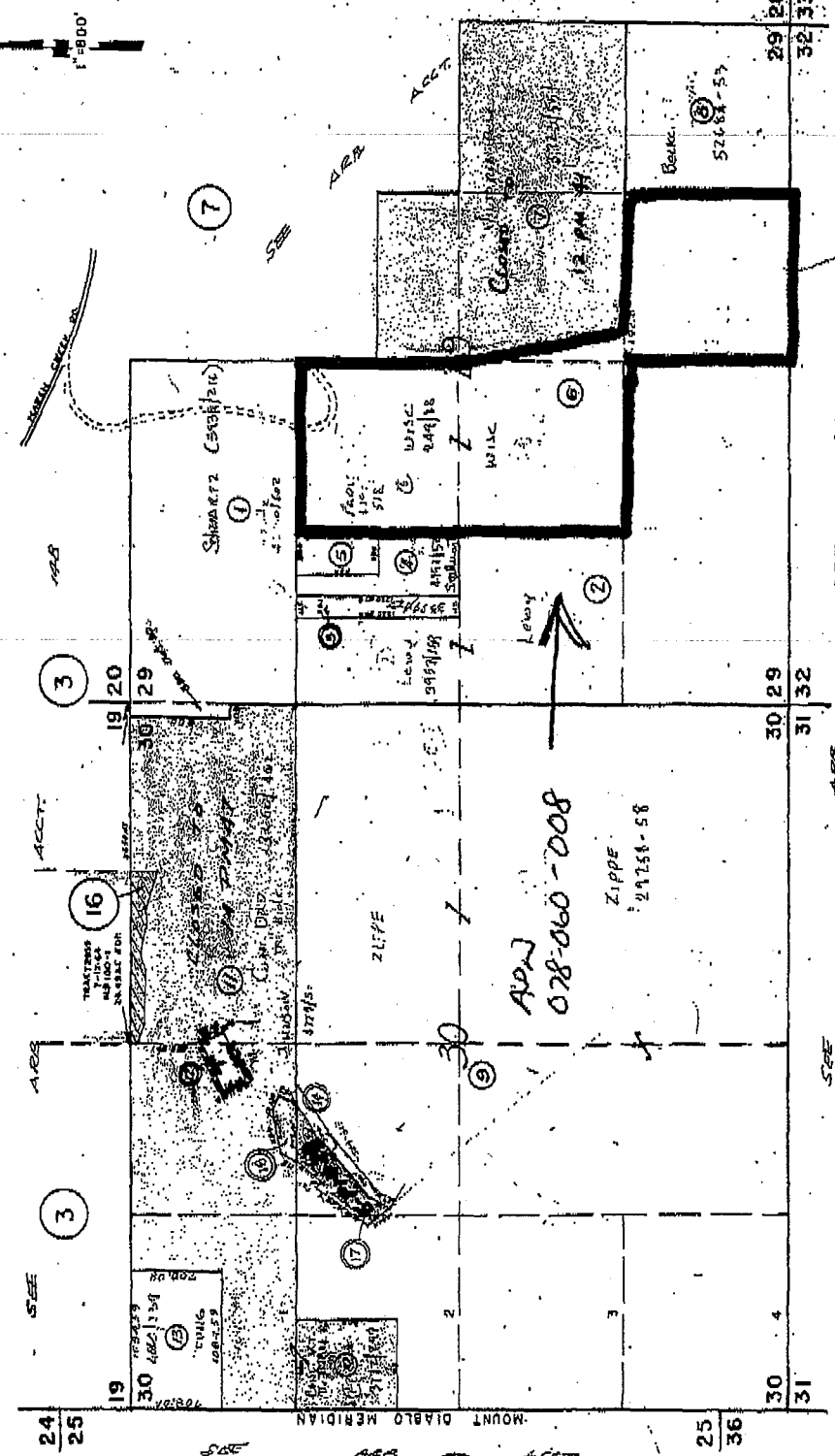
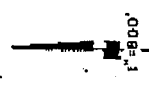
Paul Williston
Asst. Secretary

LESSEE

Exhibit 17

TAX COME AREA

SEC 30 8 POR SEC 29 TIN RIE MDBM



ASSESSOR'S MAP
BOOK 78 PAGE 06
CONTRA COSTA COUNTY CALIF.

ARB ACT 15A

PB 122

127

Exhibit 18

INTERIM REPORT

Docket No. : DMEA-2448 (Mercury)

March 6, 1956

RECEIVED

MAR 12 1956

Name and address of operator: John L. Jonas and John E. Johnson,
co-partners, Assignees for Ronnie B. Smith
166 Los Robles Drive
Burlingame, California

Name and location of property: Mt. Diablo Quicksilver Mine
Contra Costa County, California

Contract No. : Idm-E544

INTRODUCTION

Pursuant to the Operating Committee's, DMEA, request of February 13, 1956, for information regarding equipment and supplies and for information regarding exploration work conducted by Cordero Mining Company, the property was inspected February 28, 1956 by B. H. Sheahan and Walter Bank of the Bureau of Mines. Recent exploration operations were discussed with Mr. H. A. Peterson, who was foreman for Cordero Mining Company and with Mr. Vic Blomberg, a resident stockholder at the Mt. Diablo Quicksilver mine.

A conference was held with Mr. Roscoe M. Smith of the Geological Survey, who had interviewed both Messrs. S. H. Williston, president and J. Eldon Gilbert, manager of Cordero Mining Co.

The property was idle when inspected. Water from intense rain storms during December 1955 increased the flow of underground water which flooded the mine to the 130-foot level. No work was done

after this period, and negotiations are now being made by the owners to interest either Sonoma Quicksilver Mining Company or Nevada Scheelite Corporation in the mine.

STATEMENT OF OPERATIONS

Cordero Mining Company expended over \$60,000 on their exploration operation. The main shaft was dewatered and reconditioned, and 1,017 feet of drifts and crosscuts were driven on the 300-foot level. A connection with old workings was made by raising about 15 feet to an old incline winze. The existing furnace plant was repaired, and a trestle was constructed from the shaft to the ore bin. Most of the drifts were timbered.

Sample S-430, taken from the dump and believed to represent the approximate grade of the material, contained 2.6 lbs. mercury per ton. Sample S-431, taken from the last few tons deposited on the end of the dump, contained 3.5 lbs. mercury per ton.

Water from the 300 level was pumped to the surface and conveyed through two transite pipe lines to land northwest of the mine. Both the water line and ventilation tube are disconnected at this time. New equipment installed by the Cordero Mining Company included a 330 cfm air compressor, a ventilation blower, a pump, pipe lines, two mine cars and an air receiver. Mine timber was the main supply item at the property and was more than equivalent to the amount when the property was previously inspected April 4, 1955.

The Cordero Mining Company reached the objective and target of the work; originally planned by contract Idm-E544.

CONCLUSIONS

There is now sufficient information compiled to prepare a final report on the property. The ore body discovered by Cordero Mining Company in the target area was not large enough to encourage them to continue operations. It is not known when the mine will be reopened, but it will require at least three months time to dewater the mine and reopen workings.

Mr. Roscoe Smith had interviewed S. H. Williston and J. Eldon Gilbert, Cordero Mining Company on February 27, 1956 and makes the following comments:

"Cordero explored the target area without DMEA participation. A few small showings of cinnabar and a few tons of ore averaging 3 to 10 pounds per ton were discovered.

"The accompanying map was prepared by Wisser and Cox, consulting geologists, 55 New Montgomery Street, San Francisco, for Cordero. Reserves were not calculated in tons but the map reveals that the ore bodies are too small to interest Cordero. The mine is now closed and has filled with water.

"Judging from the ore occurrences shown on the map, a few hundred tons of ore containing from 3 to 10 pounds of quicksilver per ton is indicated above the 360-foot level in the winze area. Wisser

and Cox recommended additional exploration to the west and also to the east along the main shear zone. Edgar Bailey recommends exploration along the hanging wall contact to the east in the area where a 40° dip is shown. Cordero Mining Co. has no plans to continue exploration at the property or to mine the ore showings that were found. They report that Sonoma Quicksilver Mining Co. and Nevada Scheelite Corp. are both interested in obtaining a lease on the property and are now negotiating for it. *from whom?*

"Mr. Williston reported that the Cordero Mining Co. did not use materials or supplies that were the property of Jonas and Johnson. All materials and supplies that were on the property at the time Cordero entered the premises are still there, although some may have disappeared earlier. According to Williston, the lease that Jonas and Johnson had with the Mt. Diablo Mining Co. provided that Jonas and Johnson had 90 days in which to remove all of their equipment and supplies from the property after work had been stopped. After the 90-day period had expired, and after the Government had been asked to remove the equipment but failed to do so, Cordero repaired and used the hoist. Jonas and Johnson locked the hoist house sometime during the course of Cordero's work. Cordero removed the locks.

"Prior to entering the premises, Cordero Mining Co. employed an independent machinery company to appraise the equipment

owned jointly by the Government, Jonas and Johnson, and Ronnie B. Smith. The total appraisal was \$2,600.

"The work done under the DMEA contract (see map) did not discover any ore nor did it reach the target area. The work done by Cordero Mining Co. explored the target area with a number of crosscuts and with several test holes drilled from the crosscuts, and significant ore bodies were not discovered. Inasmuch as a lien against this property would discourage any operator from additional exploration and because the work with Government funds did not find any ore, I recommend that no certification be issued. Edgar Bailey concurs in this recommendation.

"A major contribution to the value of the property was the discovery by Cordero Mining Co. of a means for disposing of acid mine waters to the satisfaction of the State Water Pollution Board."



Benjamin H. Sheahan
Mining Engineer

Exhibit 19

DMEA



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

OFFICIAL FILE COPY
D M E A

RECEIVED FEB 5 1957

DATE	INITIALS	CODE
2-5 2/6	C [initials]	220 130
2-11 12	C [initials]	220 100
Memorandum		
To:	Operating Committee, DMEA, Interior Building Washington 25, D. C.	

1605 Evans Avenue
Reno, Nevada

February 4, 1957

From: Executive Officer, DMEA Field Team, Region II

Subject: Docket No. DMEA-2448 (Mercury)
Jonas and Johnson
Mt. Diablo Quicksilver Mine
Contra Costa County, California
Contract No. Idm-E 544

Enclosed are four copies of our final report by E. H. Pampeyan, Geological Survey, and B. H. Sheahan, Bureau of Mines, on subject project.

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

[Signature]
S. Ricker

Encls. ✓

Reviewed by
DMEA OPERATING COMMITTEE
2-8-57
(date)

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

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION II

FINAL REPORT

OFFICIAL FILE COPY D M E A		
RECEIVED FEB 5 1957		
DATE	INITIALS	CODE
		130216
		220

DMEA-2448, Idm-E544 (Mercury)
Ronnie B. Smith and partners
John L. Jonas and John E. Johnson, assignee
Mt. Diablo Quicksilver mine
Contra Costa County, California

by

B. H. Sheahan
U. S. Bureau of Mines

E. H. Pampeyan
U. S. Geological Survey

January 30, 1957

Reviewed by
DMEA OPERATING COMMITTEE

2-8-57

(date)

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ILLUSTRATIONS

Figure 1	Index map
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4	Composite map of Mill workings

INTRODUCTION

The Mt. Diablo Quicksilver mine, Contra Costa County, California, was partly explored by Ronnie B. Smith, 2106 Tower Petroleum Building, Dallas 1, Texas, and partners, Jane Harper and James F. Dunnigan, Chicago, Illinois, in cooperation with the Defense Minerals Exploration Administration. The work was done under provisions of contract Idm-E544, docket DMEA-2448 (Mercury), dated June 5, 1953.

The contract was assigned January 19, 1954 to John L. Jonas, 166 Los Robles Drive, Burlingame, California, and co-partner, John E. Johnson, 520 South Van Ness Avenue, San Francisco, California. These operators were unable to complete the project owing to financial and operating difficulties. In November 1954 Cordero Mining Company leased the mine and completed most of the proposed crosscutting and drifting without DMEA assistance. The contract was terminated as of March 31, 1954 by an agreement dated November 30, 1956. This termination agreement has not yet been signed by the operators. *Executed copies sent to HQ. Feb 1 - 1957*

SUMMARY

The purpose of the project was to explore the downward continuation of the ore zone exposed in the Mill workings of the Mt. Diablo Quicksilver mine. The project was justified by a total

past production of more than 12,000 flasks, inferred reserves of about 5,000 flasks, and a favorable geologic setting. A 330-foot vertical shaft was sunk and 910 feet of crosscuts and drifts were driven 300 feet below the collar on the 360-foot level 87 feet below the lowest (270) level of the Mill workings. Only the shaft and the first 120 feet of crosscutting was done with DMEA participation. Metacinnabar and cinnabar were found locally disseminated through the ore zone but the mineralized rock was too low grade to be commercial. The total accepted cost of the project was \$44,340.04 as determined by audit dated May 18, 1956.

CONCLUSIONS AND RECOMMENDATIONS ✓

Exploration work completed under the contract did not reach the objective of the project and consequently a discovery of ore was not made, nor was production made from the DMEA workings. No certification of discovery is warranted and it would be an encumbrance that would discourage future exploration of the property. The operators have been notified that DMEA does not intend to certify.

Although the ore zone was later explored, the work did not follow exactly the requirements of the contract. A few hundred tons of low grade ore was mined and only indicated reserves of marginal ore were delimited in the Mill workings. Favorable ground, however,

still exists on the new 360 level to the southeast and northwest of the explored area along the main shear zone and under the hanging wall contact east of the 360 crosscut. Additional favorable ground also exists at depth beneath the 360 level.

If in the future a sound exploration program is proposed by a responsible applicant, the Government should give the application favorable consideration.

LOCATION, ACCESSIBILITY, AND LOCAL FACILITIES

The Mt. Diablo Quicksilver mine is in sec. 29, T. 1 N., R. 1 E., M.D.B.&M., Contra Costa County, California, on the northeast slope of Mt. Diablo at altitudes from 800 to 1,200 feet. The mine is 46 miles by paved road from San Francisco and is easily accessible by automobile. It is reached by traveling 4-1/2 miles southeast from Clayton on the Marsh Creek road, then turning right on the Livermore road for 1/4 mile to Mine Way, which is the entrance to the property. Water and transmitted electric power are available at the mine. A furnace plant (capacity 40 t.p.d.), machine shop, and several dwellings are on the land.

Mr. Vic Blomberg, president of Mt. Diablo Quicksilver Co., Ltd., has a residence near the property.

PROPERTY

The property includes the N 1/2 of the SE 1/4 and the S 1/2 of the SW 1/4 of the NE 1/4 of sec. 29, T. 1 N., R. 1 E., M.D.B.&M., recorded February 1, 1934 (file No. 1060), except for the area described as follows: Beginning at the NW corner of the NW 1/4 of the SE 1/4 of sec. 29, T. 1 N., R. 1 E., M.D.B.&M., thence running southerly along the dividing line between the NE 1/4 of the SW 1/4 and the NW 1/4 of the SE 1/4 of said section 29, a distance of 20 chains to the SW corner of the NW 1/4 of the SE 1/4 of section 29; thence running along the southerly line of the NW 1/4 of the SE 1/4 of section 29, a distance of 2,924 chains; thence leaving said line and running in a northerly direction a distance of 20.23 chains; thence westerly to the point of beginning.

THE DMEA PROJECT

The project was designed to explore the silica-carbonate zone about 100 feet below the lowest (270-foot) level of the Mill workings by 625 feet of crosscutting and drifting. A second stage to follow the successful completion of the first, was to explore the ground under the old Ryne mine area at depth by a 1,300-foot drift from the Mill workings.

The contract was dated June 3, 1953, work was started August 15, 1953, and terminated as of March 31, 1954. Owing to numerous complications only part of the first stage was completed;

a two-compartment vertical shaft was sunk 330 feet and a crosscut was driven 120 feet on the 360 level, 300 feet below the collar of the shaft (figure 2). The shaft work was started August 15, 1953 and was completed about January 15, 1954. The crosscut encountered water and gas at 120 feet and the new workings were flooded February 18, 1954. The operator was unable to complete the project or to reach the objective as he was not prepared to handle the water and gas or to provide his share of the money to complete the project. He abandoned the project after several futile attempts to unwater the mine. An overpayment of \$515.98 was finally repaid by the operator October 30, 1956.

Amendment No. 1 dated July 14, 1953 extended the starting date from July 20 to August 15, 1953.

Amendment No. 2, dated April 22, 1954, authorized use of funds originally intended for crosscutting and drifting to be used for pumping and water treatment.

Amendment No. 3, dated November 19, 1954, was made to correct the effective date of Amendment No. 2. Exploratory workings were flooded February 18, 1954 and the effective date of Amendment No. 2 was changed to February 18, 1954.

The total exploratory footage is summarized as follows:

<u>Type</u>	<u>Lin. ft.</u>	<u>Tons ore</u>	<u>Grade of ore</u>
Shafts	330		
Crosscuts	120		
Drifts and Cross-			
cuts (non-DMEA)	790	100-200	3-10 lbs. Hg/ton

Expenditures

Total amount of contract	\$73,571.00
Government's participation at 75 percent	55,178.25
Total cost of project	44,340.04
Government's share of cost	33,255.03
Government's share unexpended	21,923.22
Value of production during operations	None
Royalty	None

Units of work completed

Shaft sinking, 2-compartment, size clear of timber, 4.5 ft. by 8.5 ft.	330 feet
Crosscutting, untimbered, 5 ft. by 7 ft.	120 feet

Equipment

Equipment purchased under the contract included the following items:

- ✓ 1 50 h.p. Hoist, Motor and Starter.
- 1 60-inch Sheave wheel.
- 750 feet of 5/8-inch Hoisting cable.

This equipment and miscellaneous supplies were acquired by the operator under provisions of the termination agreement.

Mr. Ronnie B. Smith obtained the professional services of Mr. C. N. Schuette, consulting engineer. Labor was performed by an independent contract crew of five men led by Mr. Guy Castle and Mr. Melvin Bruner who conducted the shaft sinking and crosscutting efficiently. Mr. John L. Jonas and John E. Johnson were inexperienced, and their competency was poor.

Subsequent to the DMEA project the Cordero Mining Company, 131 University Avenue, Palo Alto, California, leased the mine in November 1954. The DMEA shaft was unwatered and a new crosscut was driven from the shaft as the DMEA crosscut had caved beyond salvaging. Workings on the 360 level driven by Cordero totaled 790 feet and were connected with the Main winze (figure 4) of the old Mill workings by a 15-foot raise. A geologic map (figure 3) of this work was made by Wisser and Cox, consulting geologists. Intense rain storms during December 1955 increased the normal flow of mine water from about one hundred to several hundred gallons per minute and the workings were reflooded. The mine was idle all of 1956.

A location for seepage ponds for disposing of acid mine water, heretofore a severe problem, was discovered by Cordero and met the requirements of the State Water Pollution Board.

SAMPLING

The following samples of water were taken by the inspecting engineer:

<u>Sample No.</u>	<u>Water from</u>	<u>Percent solids</u>
S-240	165-foot level adit	2.30
S-241	Evaporation pond	4.80

Spectrographic examination of residues from evaporation of water samples S-240 and S-241 detected the presence of Al, Fe, Ca, Mg, Na, and K. Si was not detected in either sample. Examination of residues with ultraviolet light and fluorescent screen detected Hg in sample S-240 only.

Two check samples were taken of low grade ore stockpiled by Cordero Mining Company.

<u>Sample No.</u>	<u>Type</u>	<u>Lbs. Hg/ton</u>	<u>Remarks</u>
S-430	grab	2.6	Dump.
S-431	grab	3.5	Last few tons on dump.

GEOLOGY

Mt. Diablo is a circular, intrusive plug composed of metasedimentary rocks of the Jurassic (?) Franciscan group and igneous and metamorphosed igneous rocks. The plug has intruded Jurassic and younger sedimentary rocks in a way comparable to the intrusion of a salt dome. The mine is on the northeast flank of Mt. Diablo just southwest and inside of the boundary fault which

separates the plug from the intruded rocks. In the vicinity of the mine the Franciscan rocks consist of massive poorly bedded silicified sandstone and graywacke with lesser amounts of sheared shale and thin-bedded chert which are cut by a few lenticular bodies of serpentine (fig. 2). North and east of the mine, just outside the boundary fault, northeast-dipping lower Cretaceous to Pliocene sediments underlie low rolling hills. These sedimentary rocks are intruded by Tertiary biotite andesite plugs east and southeast of the mine.

Silica-carbonate rock, a hydrothermally altered serpentine, appears throughout most of the mapped area (fig. 2). It is similar to silica-carbonate rock of other Coast Range quicksilver deposits consisting largely of chalcedony and quartz, with some dolomite and other carbonates and small amounts of marcasite, pyrite, and opal. Usually massive and porous, the silica-carbonate rock is locally laminated in white and black layers which are, in some places, parallel with the foliation of the serpentine and probably represent relic textures. The serpentine probably was emplaced contemporaneously with the intrusion of the plug in post-Pliocene time and alteration to silica-carbonate rock closely followed the period of intrusion.

The silica-carbonate body exposed in the Mill workings area has a blunt tabular shape and is 100-150 feet thick, more than 350 feet long, strikes NW, and dips 35° - 80° NE. The upper, or hanging-wall contact, apparently dips more steeply than the lower, or foot-wall contact. The NW end of this body is probably truncated by a northeast-striking fault. Minor amounts of sheared sedimentary rocks and unaltered serpentine occur within this silica-carbonate body.

ORE DEPOSITS

Metacinnabar and cinnabar occur as fracture fillings in the silica-carbonate rock and also are locally disseminated through silica-carbonate rock and serpentine. Shale beds and clay gouge apparently confined the ore-bearing solutions to the fractured silica-carbonate rock and serpentine as the enclosing sedimentary rocks are barren.

Metacinnabar and minor amounts of cinnabar are the ore minerals in the Mill workings whereas cinnabar and minor metacinnabar are the ore minerals in the Ryne mine area. Gangue minerals are massive marcasite and pyrite. Stibnite also occurs locally in fractures in silica-carbonate rock but not in sufficient quantity to impair milling processes. Iron sulphate minerals, derived from the iron sulphides, are common.

In the Mill workings the best ore was in a shear zone along the footwall of the silica-carbonate body. Two tabular ore shoots

were mined, one between the 80 and 165 levels which raked about 45° northeast, the other between the Adit and 165 levels which raked 50° north (fig. 4). The northeast-raking shoot averaged 80 feet long, 6 feet thick, and about 120 feet down the dip. The north-raking shoot averaged 130 feet long, 6 feet thick, and 200 feet down the dip. Ore mined from these shoots from 1936 to 1947 averaged 10 lbs. Hg/ton and yielded more than 10,000 flasks of quicksilver, at the same time reserves of low grade ore were found below the 165 level in the north-raking ore body. In a 55-day period from November 1950 to January 1951, 125 flasks of quicksilver were produced from open cut operations in silica-carbonate rock which cut away the Adit level and almost reached the 80 level.

No mineralized ground was found in the DMEA workings; however, the crosscut did just reach the ore zone when it intersected an open fracture and was flooded. Subsequent work by the Cordero Mining Company did explore the foot-wall ore zone on the 360 level and exposed a few hundred tons of ore from 3 to 10 lbs. Hg/ton near the Main winze. Similar marginal to low grade ore probably is continuous down to this level in the north-raking ore body. Exploration of the northeast-raking ore shoot on this level encountered only traces of metacinnabar and cinnabar.

A cross section through the Mill workings (fig. 2) shows that the foot-wall contact flattens slightly between the old 80- and 165-foot levels. This may have been one of the principal structural controls as much of the good ore was between these levels. Between the 165- and 360-foot levels the footwall steepens and is a less favorable structure which could explain the paucity of ore in this zone. The structure probably flattens and steepens again below the 360 level forming other favorable targets, but the vertical depth to the next target is not known.

Some good ore is exposed in the north face of No. 6 Bench near coordinates 3580 E and 4530 N, not far from the hanging-wall contact. This area should be favorable for ore deposition but has not been explored.

No work was done in the Ryne mine area. The geology and ore deposits are similar to the Mill workings with the exception that cinnabar was the chief ore mineral and metacinnabar was present only in small amounts.

ORE RESERVES

The DMEA project did not expose any mineralized ground or block out any ore reserves. Exploratory work on the 360 level by the Cordero Mining Company did expose a few hundred tons of ore containing 3 to 10 lbs. Hg/ton near the Main winze.

The reserves for the entire mine are summarized as follows:

<u>Class</u>	<u>Tons</u>	<u>Lbs. Hg/ton</u>	<u>Flasks</u>
Indicated	7,562	4.5	451
Inferred (Mill workings)	5,000	2-6	130-390
(Ryne workings)	5,000	2-6	130-390

There are no measured reserves in the Mt. Diablo Quicksilver mine. Indicated reserves along the foot-wall contact in the Mill workings exist as a continuation of the north-raking ore shoot and are divided into four blocks. Block 1 is beneath the 80-W stope and west of the 165A raise, averages 17 feet long, 40 feet high, and 6 feet thick, and contains about 350 tons of silica-carbonate rock averaging 5 lbs. Hg/ton, or about 23 flasks of quicksilver. Block 2 is bounded by the 165 and 270 levels, the 274 raise, and the Main shaft, and averages 70 feet long, 100 feet high, and 6 feet thick. It contains 3,500 tons of silica-carbonate rock averaging 4 lbs. Hg/ton, or about 184 flasks of quicksilver. Block 3 is bounded by the 270 and 360 levels and the extensions of the 272 and 274 raises. It averages 70 feet long, 90 feet high, and 6 feet thick, and contains 3,150 tons of silica-carbonate rock averaging 5 lbs. Hg/ton, or 207 flasks of quicksilver. Block 4 below the mineralized zone on the 360 level averages 27 feet long, 50 feet high, and 6 feet thick and contains 562 tons of silica-carbonate rock averaging 5 lbs. Hg/ton,

or about 37 flasks of quicksilver.

Inferred reserves of several thousand tons of sub-marginal to low grade ore exist elsewhere in the Mill workings but cannot be computed without more data.

Inferred reserves were not computed for the Ryne mine area but it is believed that several thousand tons of low grade ore exist in and around the old workings.

Reserve data were compiled from company maps and conservative estimates were used in figuring size and grade of reserves. A factor of 12 cubic feet per ton of rock was used for the volumetric equivalent of silica-carbonate rock in place.

Targets warranting further exploration on the 360 level are beneath the Franciscan hanging wall east of the 360 crosscut, and both east and west along the foot-wall shear zone. Favorable targets probably exist below the 360 level in the silica-carbonate rock but cannot be predicted without additional structural data.

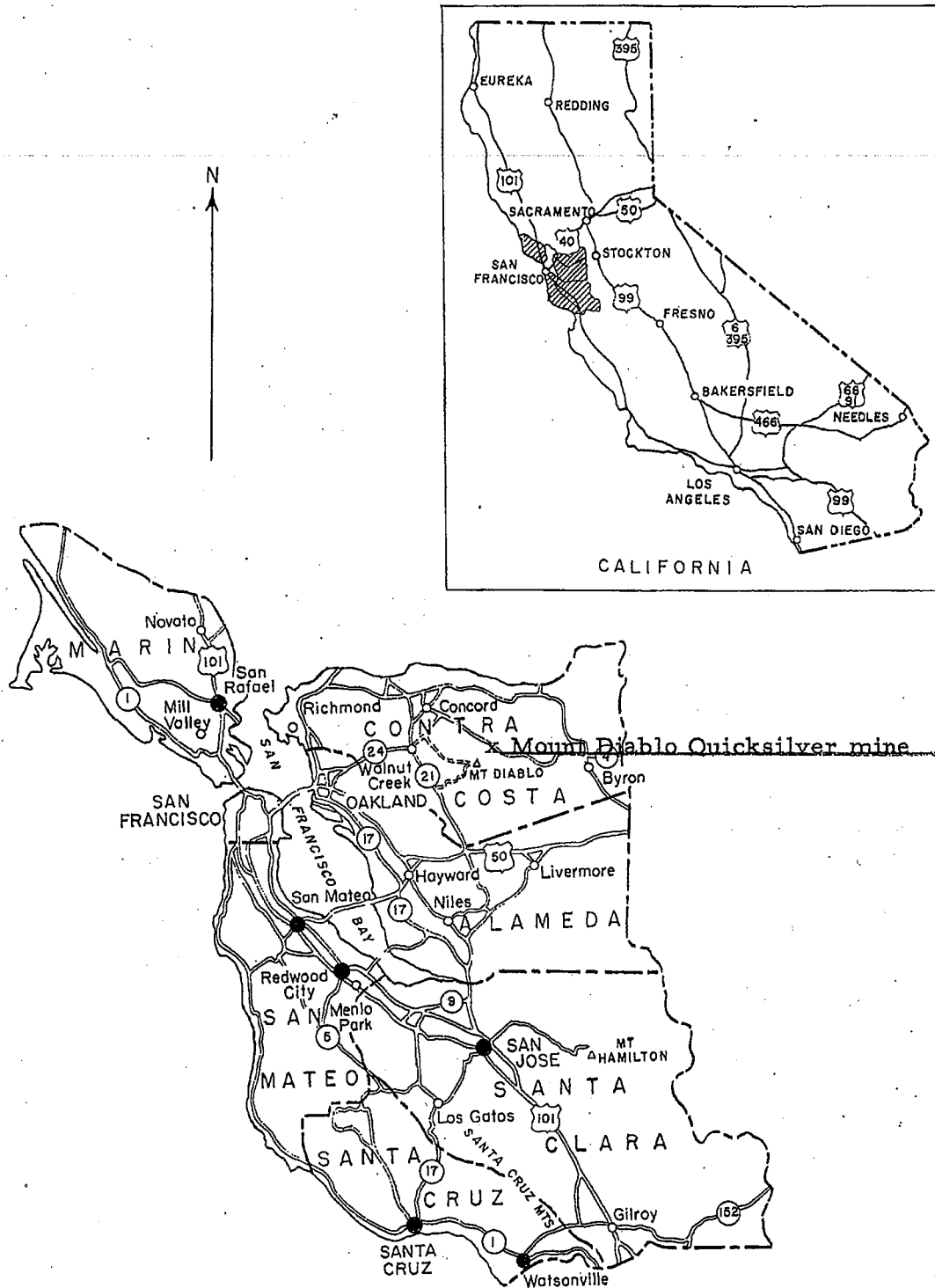
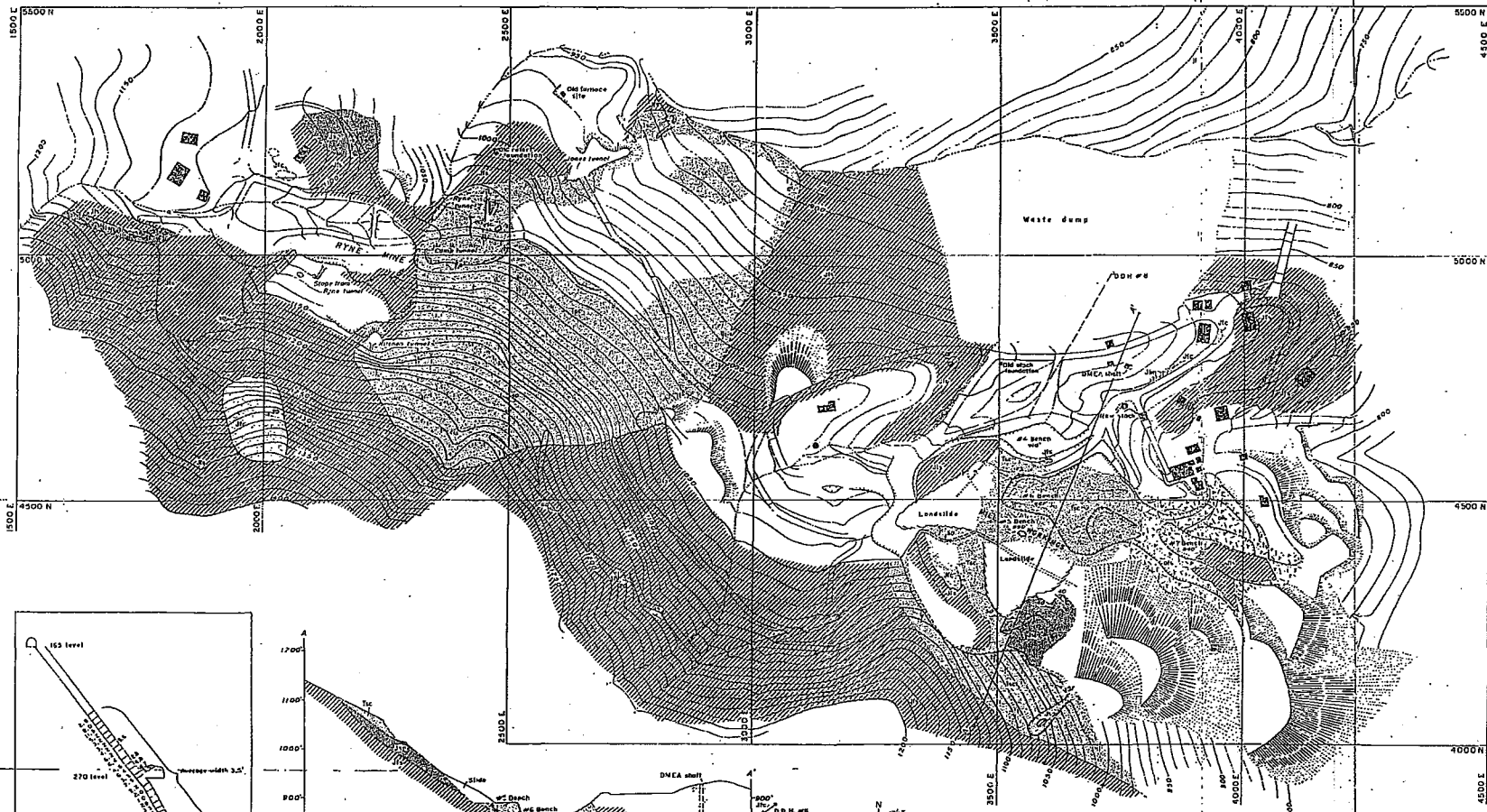


Figure 1. INDEX MAP OF ALAMEDA, CONTRA COSTA, MARIN, SAN FRANCISCO, SAN MATEO, SANTA CLARA, AND SANTA CRUZ COUNTIES, CALIFORNIA

0 20 40 60 Miles

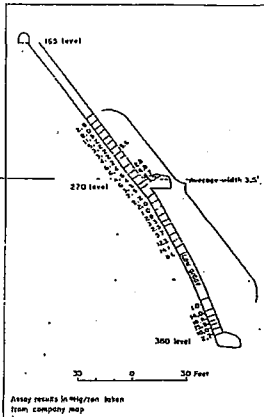
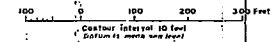
EXPLANATION

- Soil cover, waste and overburden (geology unknown)
- Old landslide material: blocky, poorly cemented, and slightly siliceous
- Siliceo-carbonate rock: shallowly weathered and also laminated
- Sheared argillite
- Metamorphic rock, including actinolite schist, amphibolite, and quartzite
- Thin-bedded red siltstone
- Siliceous graywacke, with some calcite nodules, and shaly black shales with inclusions of argillite, siltstone, and chert (locally argillite)
- Contact, shown where approximately located
- Gradational contact
- Fault, showing dip (shown where approximately located)
- Strike and dip of beds
- Strike and dip of foliation
- Partial of outcrop
- Partial of covered outcrop
- Top of cut
- Bottom of cut
- Snow

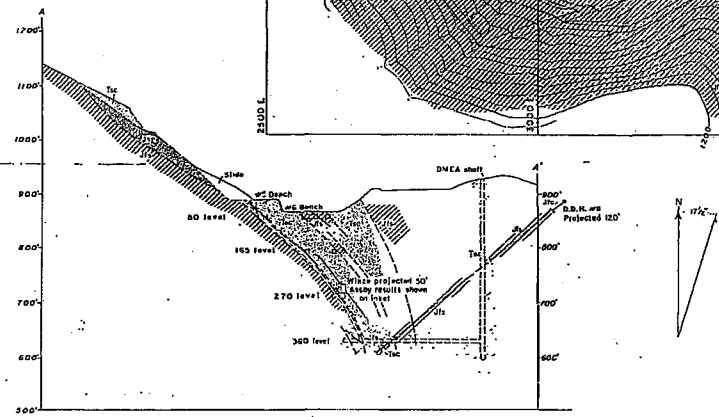


Geology and topography by C. H. Pongracz, J. F. Robertson, and D. B. Talbot, January 1933
with revisions by E. H. Peterson, December, 1936

MOUNT DIABLO MINE, CONTRA COSTA COUNTY, CALIFORNIA



ENLARGED SECTION OF WINZE BELOW 165 LEVEL



SECTION A-A

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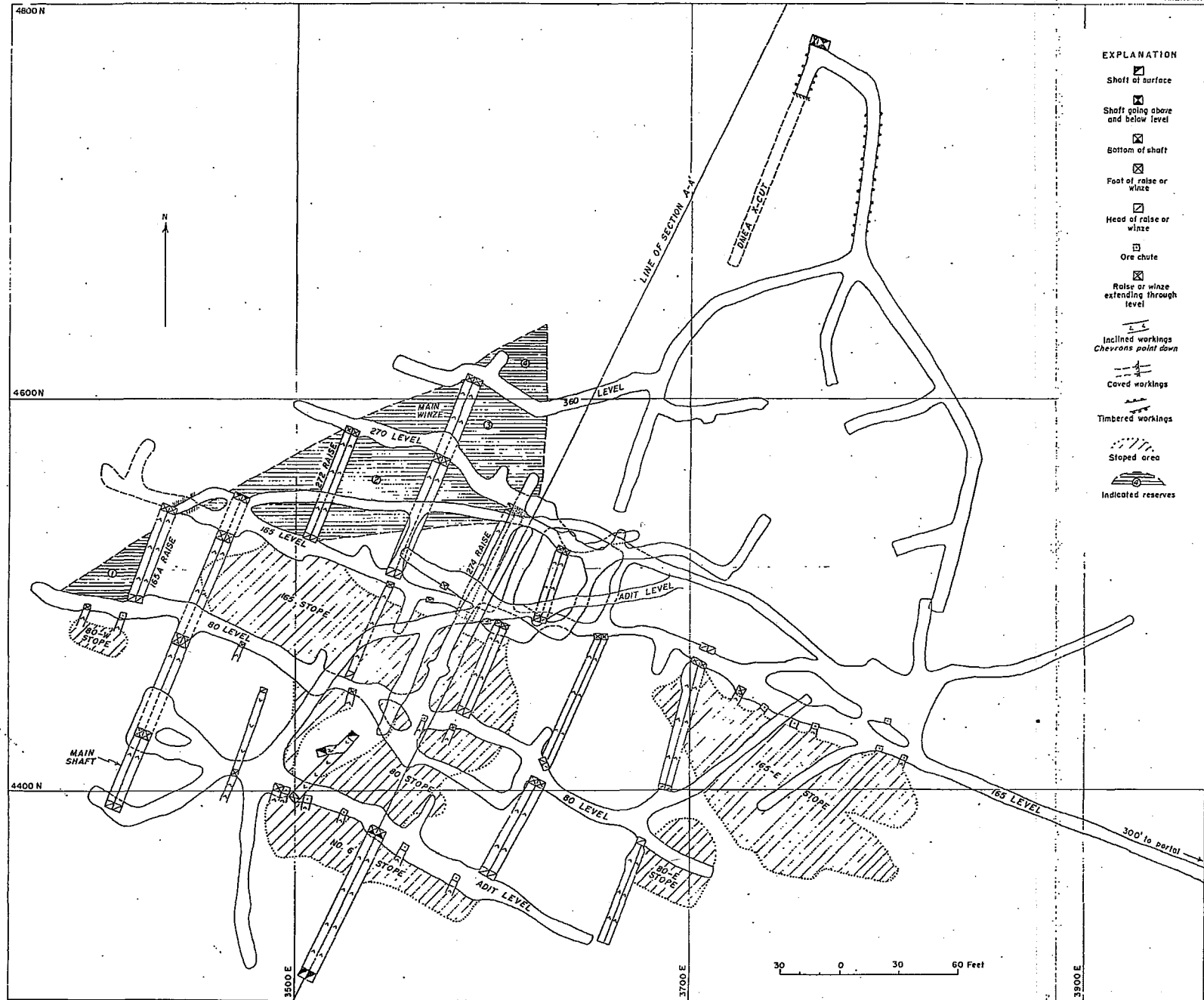


Figure 4. COMPOSITE MAP OF MILL WORKINGS, MT DIABLO MINE
CONTRA COSTA COUNTY, CALIFORNIA

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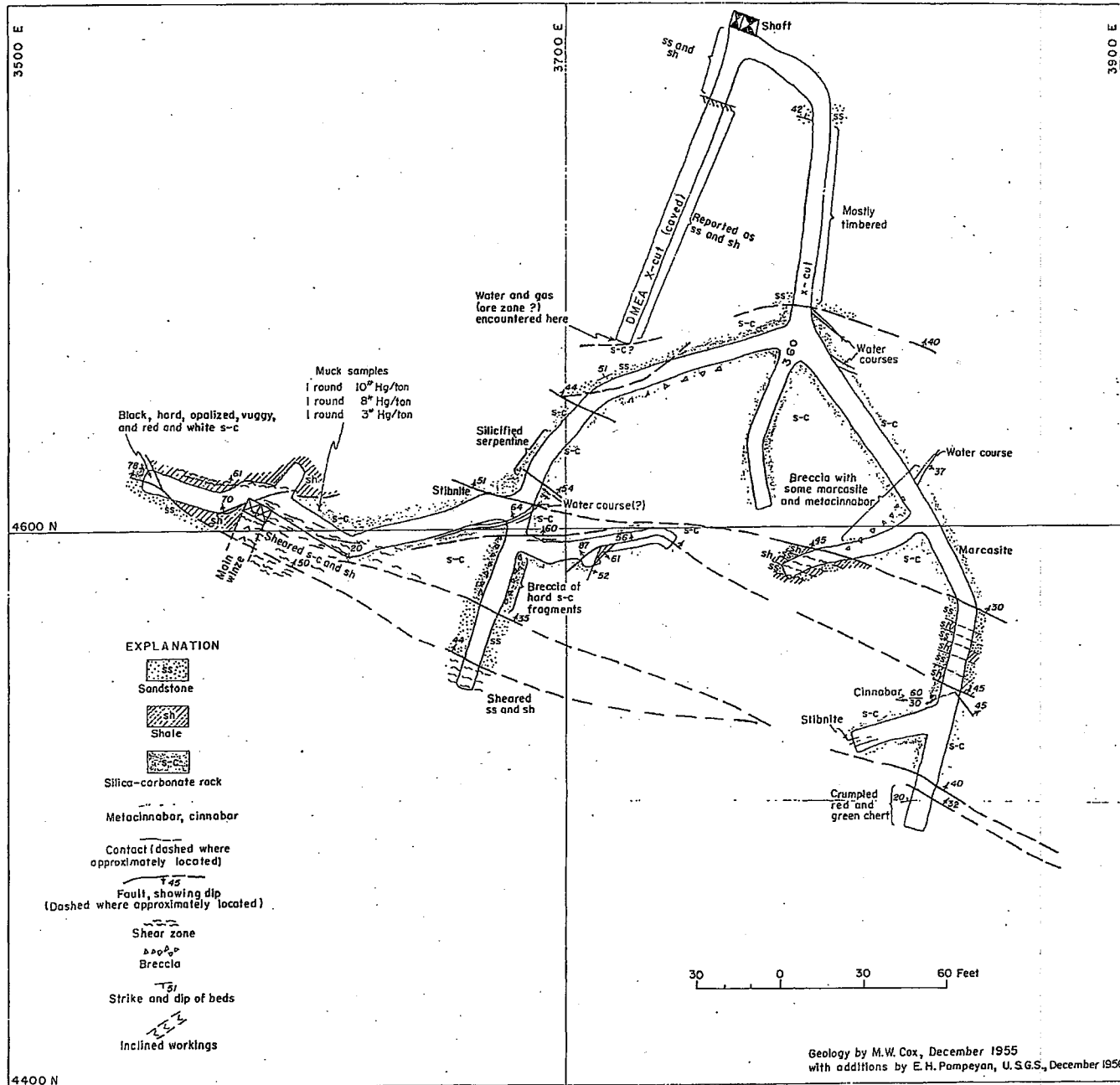


Figure 3. GEOLOGIC PLAN OF 360 LEVEL, MT DIABLO QUICKSILVER MINE
CONTRA COSTA COUNTY, CALIFORNIA

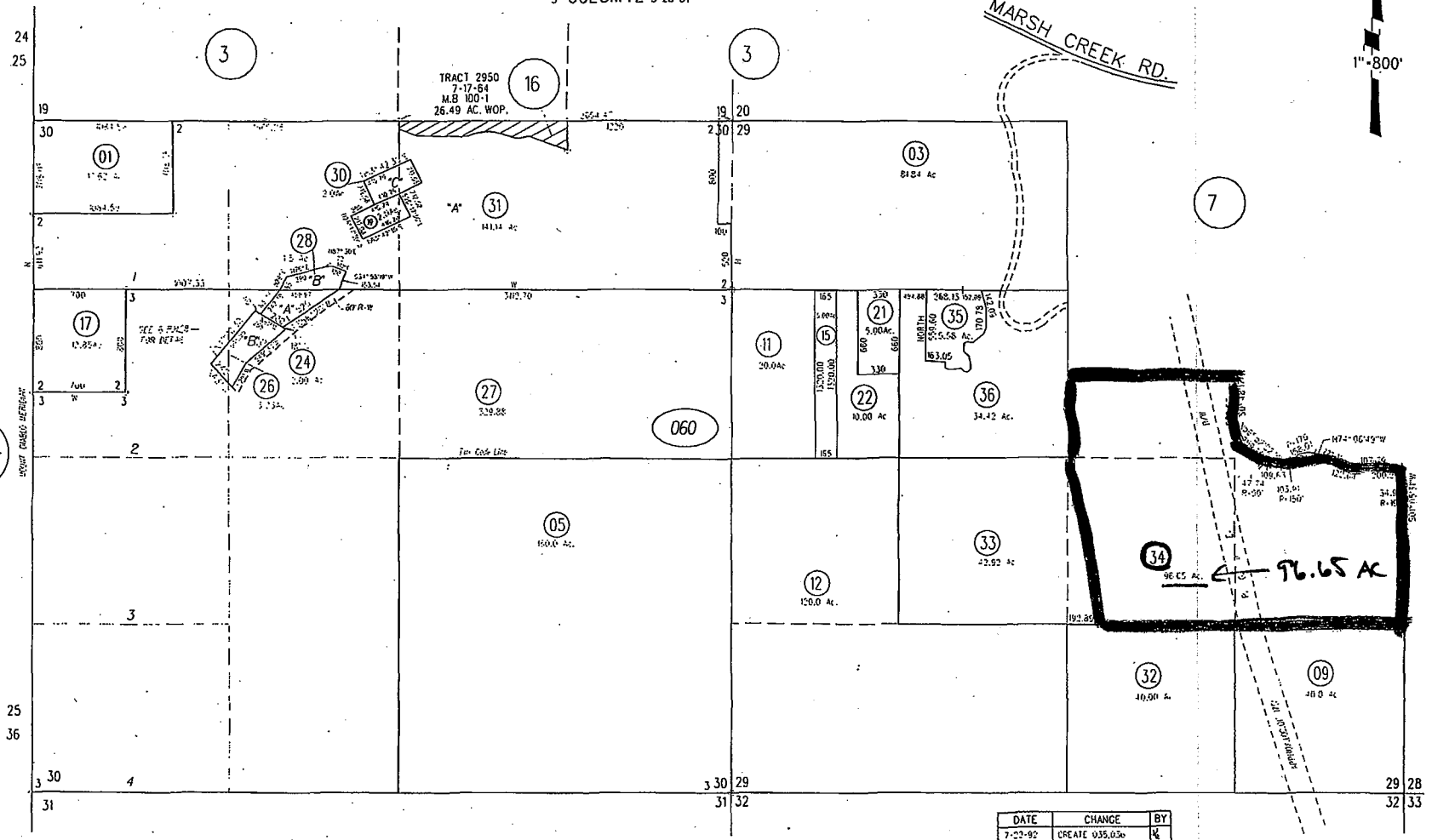
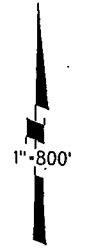
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Exhibit 20

SEC 30 & POR SEC 29 T1N R1E MDBM

TAX CODE AREA

- 1-1969- 6P.M.28 -12-12-68
- 2- 14P.M.47 11-27-70
- 3- 66LSM42 3-28-81



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Attorneys for Petitioner
SUNOCO, INC.

STATE WATER RESOURCES CONTROL BOARD
STATE OF CALIFORNIA

In the Matter of
SUNOCO, INC.,

Petitioner,

For Review of Order To Submit
Investigative Reports Pursuant To Water
Code Section 13267, Mount Diablo
Mercury Mine, Contra Costa County,
dated December 30, 2009

PETITION NO.

**DECLARATION OF PAUL D.
HORTON IN SUPPORT OF
SUNOCO, INC.'S PETITION FOR
REVIEW AND RESCISSION OF
REVISED TECHNICAL
REPORTING ORDER NO. R5-
2009-0869 AND SUNOCO, INC.'S
PETITION FOR STAY OF
REVISED TECHNICAL
REPORTING ORDER NO. R5-
2009-0869**

I, the undersigned Paul D. Horton, declare as follows:

1. I am a professional geologist registered with the State of California. I am the Secretary & Vice President of The Source Group, Inc., ("SGI") an environmental consulting firm that has been retained by Sunoco, Inc. ("Sunoco") to provide technical consulting services related to the historical mining operations of Cordero Mining Company ("Cordero") at the Mount Diablo Mercury Mine Site ("Site"). I have over 23 years of professional experience in both the technical and management aspects of environmental projects. As an expert hydrogeologist, I have over 20 years of experience in the application of numerical and analytical groundwater flow and contaminant transport model, the design, implementation, and analysis of aquifer tests, and the general evaluation of site-specific

hydrogeologic conditions. I frequently provide evaluations of complex hydrogeologic systems, and the effectiveness and efficacy of remedial action programs. I have personal knowledge of the facts set forth herein or am familiar with such facts from my visits to the Site and review of historical records related to the Site. Attached as **Exhibit A** is a true and correct copy of my current curriculum vitae.

2. This declaration is in support of Sunoco, Inc.'s Petition for Review and Rescission of the Revised Technical Reporting Order R5-2009-0869, ("Rev. Order"), adopted by the California Regional Water Quality Control Board, Central Valley Region ("CVRWQCB") on December 30, 2009, which is directed, in part, to Sunoco. This declaration is also being filed in support of Sunoco, Inc.'s Petition for Stay of Revised Technical Reporting Order R5-2009-0869, being filed concurrently by Sunoco, Inc. "

3. Based on my review of Site records and my Site visits, Cordero had limited involvement at the Site in terms of time, geographical extent of operations, and environmental impact.

4. SGI, in conjunction with Sunoco's outside counsel Edgcomb Law Group ("ELG"), prepared and submitted to the CVRWQCB on July 31, 2009, a Divisibility Position Paper ("Divisibility Report") which outlined the history and technical data, along with legal analysis prepared by ELG, supporting the divisibility of Cordero's operations from those of other Potentially Responsible Parties ("PRPs") at the Mount Diablo Mercury Mine Site. Attached hereto as **Exhibit B** is a true and correct copy of the Divisibility Report. Based on the evidence set forth in the Divisibility Report, in my opinion the historical record indicates that Bradley Mining Company ("Bradley") and Cordero had geographically distinct mercury mining operations at the Mount Diablo Mercury Mine Site, both in terms of underground workings as well as above-ground waste

rock and tailings piles. In particular, the large tailings piles on the eastern slope of the Site resulted from Bradley's operations, with possible smaller contributions from other former operators, but not Cordero. Those tailings piles are indicated in blue coloring on Exhibit 4-1 to the Divisibility Report.

I am aware of no evidence indicating that Cordero processed any of the ore it mined on the Site. Nor is there any evidence that Cordero contributed any tailings to the onsite tailings piles. My review of site documents indicates that Cordero did not contribute any waste to the pre-existing Bradley tailings piles during Cordero's approximately one-year of mining activity at the Site.

5. On November 1, 1954, Cordero acquired a lease for a portion of the Site from Mt. Diablo Quicksilver. Thereafter, Cordero conducted exploratory tunneling. Cordero is reported to have extracted approximately 1,228 cubic yards of waste rock from underground workings (Pampeyan and Sheahan, 1957), which accounts for approximately 1.2% of the total volume of waste rock historically mined from the entire Site. Cordero's waste rock, which consisted mainly of shale and sandstone with some low-grade unprocessed ore, would not likely make any significant contribution to the acid mine drainage from the Site. I am aware of no evidence indicating that any Cordero waste rock was discharged to the onsite tailings piles highlighted in blue on Exhibit 4-1 to the Divisibility Report.

6. Based on my review of historical documents concerning Cordero's operations at the Site, the area Cordero used for water disposal was located 1,500 to the north of the DMEA shaft and water pumped there either evaporated or would have drained into the My Creek drainage in the manner reflected in Fig. 4-1 to the Divisibility Report.

7. In 2008, I inspected the Site and observed that the waste rock pile originally depicted by Pampeyan adjacent to the DMEA shaft was no longer present. Mr. Jack Wessman, who was present, told me that he used the waste rock formerly

adjacent to the DMEA shaft to re-fill that shaft. Mr. Wessman's representation is consistent with my observation that the DMEA shaft has been filled.

8. Additional rock extracted from the DMEA Shaft, if any, was likely dumped on the north facing slope ("Northern Dump") in the Dunn Creek watershed, using the dump tracks that Mr. Ronnie B. Smith constructed from the DMEA shaft, according to historical records that I have reviewed and that are cited in the Divisibility Report. During a 2009 Site visit, I observed waste material on the Northern Dump typical of the mining waste that could have been transported from the DMEA shaft via Mr. Smith's short rail line.

9. I am aware of no evidence that Cordero's connection to the Main Winze in 1955 exists today, or that it existed for any duration post-1955, since such mine shafts are prone to collapse without periodic rehabilitation. Similarly, I am aware of no evidence that water in the 360 foot level Cordero tunnels was contaminated with significant amounts of mercury, or that it has ever traveled 200 feet upwards through the Main Winze and then several hundred feet horizontally out of the drainage portal adit at 165 foot level adit. Records I have reviewed, however, do indicate that water emanated from the 165 foot level adit before Cordero operated on the Site.

10. The Rev. Order states that the Site is comprised of approximately 109 acres, but based on conservative estimates I have made, Cordero appears to have operated on less than 10% of that area.

I declare under penalty of perjury under the laws of the State of California and the United States of America that the foregoing is true and correct.
Executed this 28th day of January, 2010 in Concord, California.

By: _____

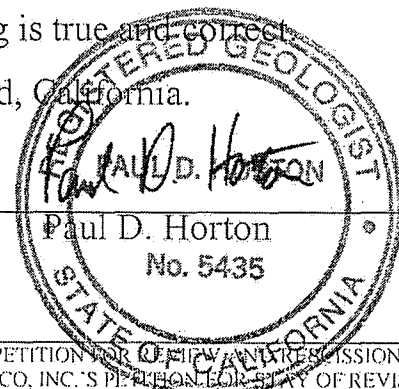


EXHIBIT A