Form 9
Rev. Nov. 65

UNITED STATES
DEPARTMENT OF THE INTERIOR
Geological Survey

OFFICIAL DOCKET FILE Contract No. _____ Docket No. 6709

Application
- [x] Denied
- [ ] Withdrawn

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

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

Folder No. 1:

Left Side

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

Right Side

- [ ] Project Summary (final)
- [ ] Work Completed Analysis (final)

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

- [ ] Field Team Semiannual Report for Certified Project
- [ ] Final Field Team Report (Tab)
- [ ] Operator's Final Report (Tab)
- [ ] Interim Field Team Reports
- [ ] Operator's monthly reports and all attachments
- [x] On-site Exam. Report (Tab) 6-7-68
- [ ] Settlement Sheets
- [ ] Drill Logs

Additional Folders:

Left Side

Folders No. _____: Reports

- [ ] Analysis of Semiannual Inspection Reports
- [ ] Project Summary (Interim) by MME Engineers

Right Side

- [ ] Field Team Semiannual Report for Certified Project
- [ ] Field Team Interim Reports
- [ ] Operator's Monthly Reports with Transmittal, Narrative and Maps

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

Folders No. _____: Settlement Sheets

Folders No. _____: Drill Logs

Folders No. _____: Royalty Material

72195-65

IN REPLY REFER TO

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Memorandum

April 5, 1968

OFFICIAL COPY
O. M. E.
RECEIVED
APR. 8 1968

INITIALS	CODE

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

From: Field Officer
Region II

Subject: New Application (Mercury)
Red Jacket Mines, Ltd.
Corda Mine
Marin County, California

Enclosed is an Application for Financial Assistance in mercury exploration at the Corda Mine, Marin County, California, received in the Field Office on April 5, 1968.

The application is well prepared and documented. The applicant states that a Performance Bond, in lieu of Lien and Subordination Agreements, will be furnished if a contract is approved and will furnish a letter so stating within a week.

H. K. Stager

Enclosure

MME Form 40
Jan. 65

Budget Bureau No. 42-R1506
Approval expires Dec. 31, 1968

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR FINANCIAL ASSISTANCE IN MINERALS EXPLORATION

Pursuant to Public Law 85-701 (72 Stat. 700; 30 U.S.C. 641)

OFFICIAL COPY M. E. RECEIVED APR 8 1968 INITIALS CODE

NAME OF APPLICANT *(Full legal name and mailing address as they should appear on contract if one is executed.)*

RED JACKET MINES, LTD.
1018-A Anacapa Street,
Santa Barbara, California 93101

APPLICANT DO NOT USE THIS BLOCK

DOCKET NUMBER: 6709
DATE RECEIVED: April 8, 1968
REGION: II
DIVISION CODE:

BUSINESS ORGANIZATION *(Check one)*

- INDIVIDUAL [ ]
- CORPORATION [ ]
- PARTNERSHIP [X]
- OTHER *(Specify)* [ ]

STATE IN WHICH FIRM IS ORGANIZED: Calif.

LIST CORPORATE OFFICERS OR PARTNERS HERE, IF APPLICABLE

NAME | ADDRESS | TITLE

The general partners are

Chas. R. Jacobson and John H. Green,
1018-A Anacapa Street, Santa Barbara, California 93101

MINERAL(S) FOR WHICH YOU WISH TO EXPLORE: Mercury

ESTIMATED COST OF PROJECT: $ 99,417.54

PROPERTY NAME	LOCATION COUNTY	STATE
Corda Mine	Marin,	California

GENERAL INSTRUCTIONS

Before filling out this application, please read the *OME Regulations for Obtaining Federal Assistance in Financing Explorations for Mineral Reserves* (30 CFR Chap. III). To assure prompt action, your application must provide all applicable material and information specified on the back of this application form. Avoid unnecessary correspondence and delays by submitting complete and accurate information. *Please submit two copies of this application and all accompanying papers* except as otherwise noted. Place your name and address on each sheet. Each item of information, maps, and reports required as a part of this application is described on the back of this form. Identify each attached statement by the item number to which it applies. If an item does not apply to your application, show the item number on your statement and after it write "not applicable." Maps or sketches should be used to supplement narrative descriptions of the property location and boundaries in item 2, existing mine workings and geology in item 3, and the proposed exploration work in item 5. When this information is not too complex, all of it may be shown on one map or sketch. All documents and other attachments submitted as a part of this application, except those in item 3(g) which you mark to be returned, become the property of the Government and will not be returned to the applicant. Send true copies, *not originals*, of leases, contracts, and other documents which are an essential part of your business records. *File this application with the Office of Minerals Exploration, Department of the Interior,* ~~Washington 25, D. C. or with the nearest OME Field Office.~~ Washington, D. C., 20242, or with the nearest OME Field Office.

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, and that he would not ordinarily undertake the proposed exploration under current conditions and circumstances at his sole expense.

April 4, 1968
DATED

George H. Gaul
BY *(Signature)*

Consulting Geologist
TITLE

A wilfully false statement or certification to any Department or Agency of the United States Government is a criminal offense. U. S. Code, Title 18, Sec. 1001.

INFORMATION REQUIRED WITH THIS APPLICATION

1. Financial Eligibility:

(a) Submit evidence of efforts made within 90 days preceding the filing of this application to obtain credit from your bank of account and at least one other banking institution or other private source of credit. Such evidence shall include true copies of correspondence which show: (1) date of loan request, (2) amount and terms requested, (3) proposed use of loan funds, and (4) the replies from credit sources. If the loan was offered under terms which you consider unreasonable, state why you consider them so.

(b) List names and addresses of affiliated, parent, or controlling companies or organizations and state extent and nature of their interest.

(c) State how you propose to furnish your share of the cost of the exploration work.

2. Applicant's Rights in Land:

(a) State your interest in the land and mineral rights, whether owner, lessee, purchaser under contract, or other. If you are not the owner, submit one true copy of the lease, contract, or other document (with address of owner) under which you control the property. Describe all liens, mortgages, or other encumbrances on the land and state book and page number and official place where recorded.

(b) State the legal description (section, township, and range; metes and bounds; patent number of claims) of the land upon which you wish to explore and all adjacent land which you own or control. Describe any part of the land or workings which should not be subject to Government royalty and liens. If the land consists of unpatented claims, state book and page number for each recorded location notice, including amended locations, and official place where recorded. State all the names by which you know the property.

(c) For all land or mineral rights encumbered or not owned, submit five copies of Lien and Subordination Agreements on MME Form 52. If the agreements cannot be obtained, state reasons and provide copies of letters of refusal.

3. Physical Description:

(a) Describe in detail and illustrate with maps or sketches all mining or exploration operations which you know have been or are being conducted upon the land. Include existing mine workings and all production facilities.

(b) State your interest, if any, in operations described in (a).

(c) State, if you know, the past and current production, supporting your statement with copies of settlement sheets, mine records, or published data if available.

(d) Describe known ore reserves, giving quantities and grades and sampling methods used. Support your statement with copies of assay certificates and assay maps if available.

(e) Describe by narrative and maps or sketches the geologic features of the property, including ore minerals, geologic formations if known, and type of deposit (vein, bedded, etc.).

(f) State your reasons for expecting to find ore, and if you have sampled the area you propose to explore, show where the samples were taken, describe sampling methods used, and provide copies of assay certificates.

(g) Send with your application at least *two* copies of all geologic or engineering reports, assay maps, or technologic information which you have, indicating whether you require their return.

4. Accessibility of Property:

(a) To aid the OME representative who may examine the property, state name and address of person who will meet him; give directions for reaching the property; and describe accessibility of property and of any mine workings.

(b) Name the shipping and supply points and state the distances to the property.

5. Exploration Work:

(a) Describe fully the proposed exploration work giving individual footages and sizes of openings *for each item of work.* Use narrative, maps, plans, and sections as necessary. Show location of the proposed work as related to geologic features such as veins, ore-bearing beds, contacts of rock formations, etc. Show also the relation of the proposed work to any existing mine workings and to *land boundaries* or to the closest identifiable corner.

(b) If an access road must be built, show the proposed location on the property map and state the length, type and construction methods proposed.

(c) If an OME contract is executed, state how soon thereafter work would be started and finished. State your anticipated average daily or monthly rate of progress for each type of work.

6. Experience:

State your operating experience and background to conduct this exploration work and also that of the person who will supervise the work.

7. Estimate of Costs:

Furnish detailed estimates of the necessary costs *for each item of the work proposed in 5(a)* under the headings listed below with a total for each heading and the estimated total cost of the work. Costs for any work to be performed by an independent contractor should be listed separately under category (a) below. Costs for any work that is not to be performed by an independent contractor should be listed under categories (b) through (g).

(a) Independent contracts. State the total cost of any proposed independent contract for all or any part of the work, and the number of units and the unit cost for each type of work, such as per foot of drilling, per foot of drifting, per hour of bulldozer operations, or per cubic yard of material moved. Cost estimates should be supported by bids from three contractors if possible. (*Note*—If none of the work is to be contracted, write "none" after this item.)

(b) Personal services. The cost of supervision, engineering and geological services, outside consultants, and labor should be itemized by numbers and classes of employees; rates of wages, salaries or fees; and periods of employment. State whether these services are available.

(c) Operating materials and supplies. List items of material and supplies giving quantity and cost of each. Include under this heading power, water, and fuel, and units of equipment and tools costing less than $50 each.

(d) Operating equipment. List items of equipment and tools costing $50 or more per unit. Give specifications and indicate how each item is to be acquired—i.e., rented, purchased or provided by the applicant. If rented or purchased, state the estimated rental or purchase price. If furnished by the applicant, state condition and present fair market value.

(e) Initial rehabilitation and repairs. Describe the type and the cost of *initial* rehabilitation or repair of existing buildings, fixtures, installations (exclusive of mine workings), and movable operating equipment now owned by the applicant which will be used in the exploration work.

(f) New buildings, fixtures, installations. Describe each building, fixed improvement, and installation to be purchased, constructed, or installed for the exploration work, stating specifications and cost including labor, materials, and supervision.

(g) Miscellaneous. Describe the type and estimate the cost of repairs and maintenance of the operating equipment listed in 7(d). Do not repeat initial repairs listed in 7(e). Show also the costs of analytical work, accounting, workmen's compensation and employees' liability insurance, payroll taxes, and other required costs that do not fall within the previous categories. [*Note*—The Government will not contribute to costs incurred before the date of the contract, or to costs of or incident to: (1) acquiring, using, or possessing land and any existing improvements, facilities, buildings, installations, and appurtenances, or the depreciation and depletion thereof; (2) general overhead, corporate management, interest and taxes (other than payroll and sales taxes); (3) insurance (other than employees' liability insurance); and (4) damages to persons or property (other than authorized repair to or replacement of equipment or other property used in the work).]

NT.-DUP. SEC., WASH., D.C

APPLICATION FOR MINERALS EXPLORATION LOAN FOR CORDA MERCURY MINE

MARIN COUNTY, CALIF.

For

Red Jacket Mines, Ltd. 1018-A Anacapa St., Santa Barbara, Calif.

Application for Minerals Exploration Loan for Corda Mercury Mine
Marin County, Calif.

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LIST OF MAPS

(1) Petaluma topographic quadrangle maps - Scale 1 to 24,000

(2) Enlarged topographic map showing mineral lease

(3) Enlarged topographic map, scale 1" = 200', showing areas explored, geology, OME excluded areas, proposed roads, proposed backhoe cuts, proposed drill holes.

(4) Pit # 1 map, scale 1" = 40', showing drill holes completed, OME excluded area and ore trends.

(5) Pit # 1 map, scale 1" = 40', showing magnetometer survey.

(6) Pit # 2 map, scale 1" = 40', showing OME excluded area and holes completed.

(7) Pit # 3 map, scale 1" = 40', showing drill holes completed and mineral zones.

George H. Gaul
P. O. Box 2007
San Rafael, Calif. 94902

Mr. Stager:

We did not think it advisable to approach the landowner for a lien on his land.

Mr. John Green and Mr. Chas. Jacobson, the general partners in Red Jacke t Mines are prepared to give you a financial statement if you are going to need it.

George H. Gaul

GEORGE HOWARD GAUL
CERTIFIED PROFESSIONAL GEOLOGIST
No. 1684

P. O. Box 2007
San Rafael, California 94902

Area Code 415
453-6304

Mr. Harold K. Stager
U. S. Geological Survey, OME
Menlo Park, California

Re: Application for Minerals Exploration Loan for Corda Mercury Mine, Marin Co., Calif.

Dear Sir:

The information requested on MME form 40 used for application for financial assistance in minerals exploration is hereby given in the sequence shown on form 40.

1. FINANCIAL ELIGIBILITY:
Enclosed is documented evidence of efforts made by Red Jacket Mines, Ltd. to obtain a loan for use in this exploration work.
(b) The Red Jacket Mines partnership has a full assignment of the mining lease on the Henry Corda property and is sole owner of this lease.
(c) Red Jacket Mines will furnish its share of the cost of exploration from the proceeds of mercury sales from the present mining operation.

2. APPLICANT'S RIGHTS IN LAND:
(a) Enclosed is one true copy of the mineral lease, assignment of this lease from lessee, Ferdinand Stover, to George H. Gaul, a copy of permission to assign this lease, a copy of assignment of this lease from Gaul to Red Jacket Mines, Ltd.
The address of lessor is Henry Corda, 963 San Antonio Road, Petaluma, California.
The property does not have any liens, mortages or encumbrances.
(b) This property is known as the Corda mine and a legal description is given in the lease. The enclosed topographic map shows location of the lease. The north line of the lease is approximately three and one-half miles south of Petaluma, California and extends two miles south of this point. The width of the lease will average slightly over one mile. The area is not sectionized but if it was it would lie mainly in sections 21, 28, north half of section 33, NW NW of section 34 and the SE SE of section 27, T. 4 N., R. 7 W., MDM, Marin County, California.
Enclosed is a map with a scale of 1 inch equals 200 feet, upon which has been placed the geology, OME excluded areas at pits #1 and #2, proposed drill locations, proposed roads and proposed backhoe cuts.
Excluded area:
Within this designated area for exploration are two areas to be excluded from the exploration and from government royalty and liens. These excluded areas are at pits #1 and #2 as indicated on the enclosed maps.
For pit #1, a map on the scale of 1 inch equals forty feet is enclosed upon which is indicated the excluded area. This area has been located by taking the point where drill holes C-1 and C-13 intersect, which is also the location of mining operations. From this point a square is formed by going north 200 feet and south 200 feet to the north and south lines of the excluded area. Also going east 200 feet and west 200 feet from this intersection to

(b)continued--
the east and west lines of the excluded area.

The corners of the excluded area are marked by 6 foot steel posts, painted red and set in the ground.

This area can also be located from BASE #1 (on 1"= 40' map) which is an oak tree in the southwest corner of the map. From this base go north 440 feet to the southwestern corner of the excluded area square.

If surveyed, this excluded area would probably fall in the southwest quarter of section 34, T. 4 N., R. 7 W., MDM.

At pit # 2 the area to be excluded from this contract is indicated on the enclosed map on the scale of 1 inch equals 40 feet. This area is located from drill hole C-6 which is also the location of the present open pit mining.

The excluded area is a square formed by going north 200 feet and south 200 feet from C-6 to the north and south lines of the excluded area. Also going east 200 feet and west 200 feet from C-6 to the east and west lines of the excluded area. The corners of this area are marked by 4 foot steel posts set in the ground and painted red. The northwest corner of this square can also be located by going 103 feet south 40 degrees east from a large oak tree which is marked by a wire with a red flag attached to it.

If surveyed this area would probably fall in the southwest of the northwest quarter of section 27, T. 4 N., R. 7 W., MDM.

(c) The Lien and Subordination Agreement is not provided but instead a financial statement of the two principal partners in Red Jacket Mines, Ltd., Mr. John Green and Mr. Charles Jacobson, is enclosed.

3. PHYSICAL DESCRIPTION:

(a) Mining and exploration

Pit # 1

To February 15, 1968, 155 flasks of mercury have been produced from pit # 1 since it was first mined late in 1965.

The mining consisted of an open pit which was cut to allow mining of an ore body with dimensions of approximately 20 by 20 feet. Veins from this ore body trend northwest and southeast with the most productive veins trending southwest and northeast. At the present time, February 1968, the mineable ore zone is approximately 20 by 20 feet with a constant steep southwest dip. From the surface, mining has continued to a depth of approximately 80 feet. Mining is done by bulldozer and backhoe. Dimensions of the open pit including waste areas are approximately 400 by 250 feet.

Drill Holes Pit # 1

In addition to this type of mining and exploration, a total of 12 four inch diameter drill holes were completed. The drill was a rotary and mud and water circulated the cuttings to the surface where they were settled from the mud and panned for cinnabar content. Samples of interest were sacked for future reference and assaying.

Four of these drill holes were vertical and the others were angle holes. The location of these holes is shown on an enclosed map and a summary of the results is here given:

George H. Gaul
P. O. Box 2007
San Rafael, Calif. 94902

(a) continued--

Hole C-1 was drilled 200 feet, S. 3°E. at an angle of 27 degrees below horizontal. This hole had traces of cinnabar most of the way but less than one pound per ton except between 65 and 75 feet where commercial assays showed over six pounds per ton average for the 10 feet. This ore was found 50 feet below the surface and the present pit operations has reached this depth with higher than 6 pound ore being mined.

Hole C-2 drilled 120 feet, S. 13°E. at an angle of 37 degrees. Minor amounts of cinnabar were found with the best assay being .90 pounds per ton.

Hole C-3 had a total depth of 125 feet and was drilled S. 29°E. at an angle of 32 degrees from horizontal. Only minor cinnabar traces were found.

Hole C-4 drilled to 110 feet, S. 69°E. at an angle of 24 degrees. There were shows of cinnabar between 15 and 30 feet.

Hole C-5 had a total depth of 195 feet. Minor traces of cinnabar were found between 30 and 45 feet and 115 and 120 feet. This hole was drilled S. 72°E. at an angle of 26 degrees.

Hole C-9 drilled vertical for 50 feet into quartz. An average of one pound of cinnabar per ton was found to total depth.

Hole C-10 drilled vertical for 170 feet and had less than one-half pound of cinnabar to total depth.

Hole C-11 was vertical with a total depth of 85 feet. Cinnabar averaged less than one-half pound to this depth.

Hole C-12 was vertical and had a total depth of 250 feet. The entire hole carried one-half pound or less with the depth 235 to 240 having a visible cinnabar tail when a hand full was panned. Approximately 30% pyrite from 115 to 130 feet.

Hole C-13 drilled to 78 feet, N. 68°E. at an angle of 58 degrees. There were traces of cinnabar to 65 feet. Between 65 and 78 feet the 13 feet averaged slightly over 6 pounds of mercury per ton.

Hole C-14 went to 75 feet, N. 88°E. at an angle of 51 degrees. Less than one pound per ton of cinnabar to 55 feet. Small traces from 55 to 75 feet.

C-15 had a total depth of 145 feet and was drilled S. 50°E. at an angle of 44 degrees. Circulation was lost from 135 to total depth with low recovery from 105 feet to total depth. Traces of cinnabar were found to total depth.

Pit # 2

At pit # 2 the cinnabar has been exposed by bulldozing and backhoe to a depth of approximately 20 feet. Dimensions of the open pit area including waste are approximately 200 by 200 feet with mineable ore restricted to the center of the pit in a 25 by 40 foot area.

Approximately 10 flasks of mercury have been produced from this pit.

Three widely scattered drill holes were drilled in this area, none actually testing the known ore zone.

C-6 was drilled 250 feet S. 89° E. at an angle of 30 degrees. From 0 to 55 feet, cinnabar was found with 1 to 5 pounds per ton. From 55 to total depth there was cinnabar all the way but less than one-half pound per ton. This hole started near the ore zone but as it got deeper it was below the projected ore zone because the ore zone is dipping southward.

C-7 was drilled 220 feet N. 6° W. with a dip of 26 degrees and was apparently above the ore zone. Small traces of cinnabar were found.

George H. Gaul
P. O. Box 2007
San Rafael, Calif. 94902

(a) continued-- Pit # 2 drilling

C-8 was drilled S. 45° E. with a 20 degree dip for a distance of 240 feet. A few scattered traces of cinnabar were found. This hole crossed C-6 at a higher elevation and did not reach the ore zone which was dipping south away from the hole.

Exploration Cut # 3

This cut is approximately 55 feet long and 5 to 10 feet deep. It was made by bulldozer and backhoe and exposed cinnabar dipping approximately north 20 degrees west at varying degrees. This cinnabar zone has a length of at least 55 feet, the ends not determined.

Three vertical drill holes were made north of this cut.

C-16 had a total depth of 34 feet. From one-half to 2 pounds of cinnabar per ton was indicated from the surface to 25 feet. Below that to total depth few traces were found.

C-17 was drilled to 160 feet. Good traces of cinnabar were found to total depth with the best at 90 to 110 and 120 to 125 feet.

C-18 had a small trace of cinnabar to the total depth of 50 feet.

Exploration Cut # 4

This area is located west of pit # 2 and has been explored by bulldozer and backhoe with an open cut 100 feet long with a 10 to 20 foot face exposed.

A northeast trending zone of cinnabar mineralization was exposed with local veins of highgrade cinnabar dipping steeply northwest.

Approximately 5 flasks of mercury has been produced from here.

Area Between Pits # 2 and # 4

Two shallow bulldozer cuts were made with a maximum depth of 5 feet in an attempt to determine the bedrock source of surface cinnabar. These cuts are located on line B between lines 3 and 4 on the map.

The remainder of the property has had a reconnaissance surface soil panning.

3.(b) Red Jacket Mines has a complete 100% interest in all of the operations described in (a) which have taken place on this property.

(c) Since this property was first put into production late in 1965 it has produced 180 flasks to February 15, 1968. The current production is averaging at least 15 flasks a month.

7 flasks were produced in 1965 when the operation was starting, 54 flasks were produced during 1966. During 1967, 85 flasks were produced with an increase in production starting in November of 1967 and continuing into the forseeable future.

(d) The ore reserves have not been blocked out. Some estimates can be made at pit # 1. Here 155 flasks have been produced by mining a pipe like deposit of cinnabar to a depth of approximately 80 feet from a vertical with the surface or approximately 45 feet from the nearest former surface profile.

The probability that this pipe like occurrence will continue is supported by the fact that 15 feet north of the present ore occurrence, a hole was drilled 250 feet deep and good shows of cinnabar were found all the way. If the average size of the ore zone mined is 20 by 20 feet, then for each foot of depth there will be 33 tons of ore. If this ore averages 10 pounds per ton, 330 pounds of mercury will be obtained from each foot of depth

The ore reserves at pit # 2 are also unknown. However as this deposit is stripped it increases in area and at the present time the area carrying cinnabar veins and associated penetrated strata has a dimension of 40 by 25 feet.

George H. Gaul
P. O. Box 2007
San Rafael, Calif. 94902

Ore Grade

The grade of ore mined has been indicated by what the retort has produced per ton of rock. The recovery has been between 10 and 66 pounds of mercury per ton with most averaging close to 15 pounds per ton in recent months.

Geologic Features

(e) The geologic features of the property are shown on the enclosed geologic reconnaissance map on a scale of 1 inch equals 200 feet.

The main mass of rock is Franciscan which consists largely of serpentine, silica carbonate, greywacke, chert and quartz, sands, shale and possibly some of the volcanics are in the Franciscan.

Overlying the Franciscan, mainly at the higher elevations, are late Tertiary volcanics probably correlating with the Sonoma volcanics.

The northern third of the property has volcanics overlying sands and shales which might possibly be marine and Cretaceous in age.

General regional structure is a northeast dipping monocline which has been cut by many northeast and northwest striking faults.

A main nearly east-west fault follows near the creek flowing west from near the south end of the OME excluded area for pit # 2. The westward extension of this fault probably goes near the south end of the silica carbonate rock located west of the main north-south creek and south of the hunting camp.

A large shear zone is present from the pit # 2 area westward through exploration cut # 4 . This is a very wide shear and indications at exploration cut # 4 points to a relatively horizontal shear zone related to a thrust. This same shear zone may extend north to underlie the pit # 3 area and thus be present under the intervening slopes.

This structural feature may eventually prove to be most important in discovering new cinnabar deposits. This extensive fracturing and shearing of the rock has allowed the cinnabar fluids to penetrate the area as well as forming gouge and clay zones capable of acting as good caps to stop the movement of cinnabar carrying fluids and form commercial ore bodies.

The ore in pit # 2 and cut # 4 and the area between these cuts is found within this shear zone. Vertical holes through the shear may find cinnabar trapped beneath the shear as well as in many localities within the shear.

At exploration cut # 3 the cinnabar occurs mainly near the contact of a rhyolite and an underlying dark clay shale. The basal few feet of the volcanic has been altered to a homogeneous rock resembling a grey sand. The cinnabar occurs in veins in this altered zone but is mainly in a 6 inch wide white soft rock lying directly upon the dark clay shale. The drilling will give information to determine the true dip of this mineralized zone which, where exposed, is dipping a few degrees west of north at varying degrees.

The shallow landslide south and east of the exposed cinnabar covers the eastward extension of the mineralization and holes 5, 11 and 12 should give information on its location.

The ore here is red cinnabar and the 160 foot hole drilled north of the exposed cinnabar, found hard as well as very easy drilling in what may be a greenstone but was still carrying cinnabar to total depth.

George H. Gaul
P. O. Box 2007
San Rafael, Calif. 94902

3.(e) continued--

At pit # 2 the ore is red cinnabar. On the surface there was a fractured and mineralized volcanic rhyolite dike about 10 feet thick and dipping southward 30 to 50 degrees. This dike is several hundred feet long and has intruded along a zone of weakness and in a shear zone. To the south and above this dike is a very thick dark blue clay shale similar to cut # 3. Crossing this mineralized dike are many minor fractures which contain the main cinnabar.

When this dike was stripped to a depth of 15 feet it was altered to a light grey color and contained much pyrite and white quartz grains, identical to pit # 1.

At Exploration cut # 4 a vein of highgrade cinnabar with wallrock penetration was exposed for 25 feet along the strike and dips around 60 degrees northwest. The vein was discontinuous and not quite of commercial grade but is well worth exploring.

In all directions from this area the rock is in the large shear zone, consists mainly of sands and shales, is strongly altered and strongly folded. The rock resembles that exposed in the shallow bulldozer cuts located at line B and between lines 3 and 4. The same type of rock is expected in the area which pans good cinnabar near lines D and E between lines 3 and 5. Just west of this area, along line E, the rock is altered to a dense siliceous sandstone and is probably in a fault zone.

East of the retort there are places along the creek bank that pans large cinnabar crystals not found further up the creek. This indicates a local source but not enough work has been done to pinpoint the source. A southwest trending fault cuts through here but is unprospected. It is interesting to note that the cinnabar here evidently comes from the Franciscan. It is also below the silica carbonate rock.

The Lake area also contains cinnabar in the Franciscan. A fault trends northeast just west of the dam and up the drainage seperating the silica carbonate rock from the sands and shales. If this fault is projected southwestward it passes through or near the gouge zone indicated.

On line T and in the gully, bedrock is exposed which pans large liver colored cinnabar crystals. A hundred feet north of this and just north of the main creek, cinnabar has been panned adjacent to silica carbonate rock.

Since these occurrences are on flat land it will take the drilling and trenching proposed to show rock types and the potential of the area.

At Pit # 1 the ore minerals are mainly cinnabar and metacinnabar with a deep purple mineral very abundant. Some native cinnabar was found near the surface but none is found below 40 feet.

The mineralization is found in distinct veins and fractures, which are numerous, but there is also good penetration of the adjacent rock.

All of the known mineralization in this area is in a rhyolite which is strongly fractured and has been intruded with a main quartz dike about 15 feet wide. This quartz dies out to the north and becomes thin quartz stringers. The main ore zone has a constant steep southwest dip and occurs where the quartz dike swings from a west of north strike to an east of north strike.

The main mineralized fractures trend northwest-southeast and northeast-southwest.

With depth the volcanic rock has been altered to a strongly mineralized light grey rock with an abundance of pyrite and possibly other metals. This

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3.(e) continued--
pyrite ran as high as 30% in hole C-12 at 115 to 130 feet. The bulldozing is exposing an ever increasing amount of this type of rock and it is expected that this mineralized rock will extend laterally hundreds of feet and to a great depth. One hole was drilled near the ore zone to a depth of 250 feet and was still in this grey rock with some cinnabar.

Drill holes 4 and 5 also encountered much pyrite making the sulphide mineralization at least 500 feet long.

In this general area, at the south end of the lease, there are many places where the volcanic rock has been altered until it is hard to identify as a true volcanic. Many areas are resistant to weathering where there has been an introduction of silica.

(f) Reasons to expect ore:

The reasons for expecting to find ore have been given in the discussion under (e).

Pit # 3

At pit # 3, in addition to the cinnabar showing discussed, cinnabar can be panned about 600 feet up the slope from this exposure and is coming from an unknown source.

Pit # 4 vicinity

In this area the surface pans cinnabar mainly on the south slope of the ridge which trends eastward toward pit # 2. The crest of the ridge has a thin covering of volcanic float. Cinnabar is also found west of Cut # 4 as far as the valley floor. The size and type of cinnabar crystal indicates that there is more than one source of the cinnabar.

About 400 feet northeast of exploration cut # 4, the small drainage pans a visible tail of cinnabar and the slopes which drain into this creek also pan. The source is in sands and shales beneath the volcanics which are present at higher elevations. A "Sniffer" mercury detector instrument showed up to 6,000 ppb along a profile crossing this area.

The area between pits # 2 and # 4 pans and two shallow 5 foot cuts were made by bulldozer to bedrock? and it also panned. Not enough work was done to determine the potential value of the area. A "Sniffer" mercury detector over this area gave a reading of up to 15,500 ppb of mercury.

Retort area

The information given under (e) on this area shows a local source of cinnabar without an exact location.

Lake Area

An area about 300 feet west of the lake dam pans a slight show of cinnabar. It is very near an outcrop of silican carbonate rock and a clay gouge zone. Large cinnabar crystals are panned from bedrock in the gully 100 feet west of the dam and is unexplored. Very little panning has been done in this area.

Hill 1011

At the south end of the property and along the northwest extension of hill 1011, the surface pans cinnabar. This appears to be coming from near the base of a volcanic rock where it is against Franciscan rocks. Two shallow backhoe cuts were made here without locating the source of the cinnabar.

Pit # 1

In the vicinity of pit # 1 there are many reasons for expecting to find buried deposits of cinnabar.

Near the present mining operation a 250 foot hole found cinnabar to total depth indicating we have more than a surface occurrence.

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3.(e) continued--

The pit # 1 area has only recently been eroded down to the mineralized rock and the cinnabar had not reached the adjacent drainages.

There are many fracture systems trending from the main ore body and rock alteration along them has increased with depth. These extend onto the area to be explored. On the original surface few of these had cinnabar but with depth cinnabar mineralization is being found on each of them.

The south trending main quartz vein, indicated on the enclosed map, has cinnabar mineralization associated with it. To the south, along this outcrop, there is no known cinnabar on the surface but the quartz is in an area of intense alteration and the drill holes indicate cinnabar is found near this quartz with depth.

Between drill holes C-4 and C-5 there is an area of alteration on the surface. Drill hole C-5 was drilled at an angle, had minor cinnabar shows between 30 and 45 feet, near this altered zone, and merits further exploration.

In addition to the above, a general reconnaissance magnetometer map has been made of the area near and in pit # 1 and while a lot of additional work should be done, the preliminary work indicates anomalies worth further evaluation. The rock alteration may have removed the ferro-magnesian minerals and the magnetic highs may represent areas not mineralized. Readings are lower directly in the pit mined. The magnetic map enclosed shows this relationship.

About 140 feet north of BASE # 1, a small diameter hole was drilled to a depth of 22 feet. This hole had cinnabar shows and encountered much pyrite, indicating the mineralization trends through this area and further exploration is needed.

4.(a) Accessibility of Property:

The enclosed topographic maps show the location of the property in relation to Petaluma, California and the 101 highway. It is accessible at any time.

The OME representive can be met by George H. Gaul, phone 415-453-6304 San Rafael, California or mail to P. O. Box 2007, San Rafael, California.

(b) The mercury is sold in San Francisco, a distance of approximately 40 miles. In addition to San Francisco, the main supply points are Petaluma, about 5 miles north and Santa Rosa, about 24 miles north.

5.(a) Proposed Exploratory Work:

Magnetometer Survey

Enough magnetometer work has been done on the property to show this work will be of value in future exploration.

An MF-1 fluxgate magnetometer from Sharpe Instruments of Canada has been used in semi detail at the pit # 1 general area and the general area of Pit # 2 and exploration cut # 4. This work gave information on changes of rock character, faulting and/or rock alteration where ferro-magnesian minerals have been removed.

South Area - Pit # 1 vicinity

Enough magnetometer work was done here to allow semi detailed contouring. Many additional readings are needed to complete the contouring but the present results indicates a southwest trending anomalie through the area being mined at present. Very strong anomalies are found between drill holes 4 and 5 and will be tested by the proposed holes 10, 11 and 12.

It is proposed that an additional 5 days of magnetometer work be done to enlarge and complete this survey and the results would serve to compliment the

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5.(a) continued--
drilling results and give an additional guide to exploration in stage two.

Central Area - Pits 2 and 4

In the area of pits 2 and 4 a magnetometer survey with 100 foot spacing should be done with closer spacing where anomalies are indicated. The results of this survey would be correlated with the drilling results and should lead to drilling targets for the stage two exploration.

The area recommended for the survey will be approximately 1,500 feet east-west and 1,000 feet north-south.

To complete the field work, contour and interpret the results would require about 10 days.

Lake Area

About 1½ days field work and 2 days work on the maps and contouring is recommended here for the magnetometer work.

Backhoe Trenching

Lake Area

This area is fairly flat with few outcrops and a trenching program is necessary to expose the rock to determine rock structure, mineralization and prepare for stage two of the exploration.

West of the lake two north-south cuts and one east-west cut are proposed. The east-west cut is 300 feet long and will give a cross-section of the geology through the cinnabar in the gully to the silica carbonate rock. One north-south cut is near the cinnabar in the gully, will be 200 feet long and extends northward nearly to the silica carbonate which pans near the creek. The north-south cut at the west end is 150 feet long and cuts through a gouge zone where traces of cinnabar have been noted.

A total of 650 feet of trenching is proposed and should take 7 days or 56 hours to complete if the cut averages around 6 feet in depth.

Pit 2 and Cut 4 vicinity

Backhoe trenching here would follow existing and proposed roads for this first stage of exploration.

A 50 foot cut should be made east-west by proposed holes 1 and 2 and across the known cinnabar in the gully.

Trenching is proposed along the proposed road connecting holes 14 thru 20. This would give information on geology and possibly expose ore in place. This would require 550 feet of backhoe trenching and take approximately 7 days or 56 hours to complete.

Exploration cut # 3 area

Trenching here would aid in extending the known cinnabar mineralization and determine the structure away from the slumped area.

A trench 150 feet long running north-south along line 10 and crossing the exposed cinnabar is proposed. This would require 15 hours of work and possibly more as hard volcanic rock covers part of the area.

Refilling Trenches

All trenches not exposing ore must be refilled promptly after a study is made so there is no danger to livestock. This refilling will be done with the backhoe and will increase the backhoe hours by one-fourth or 32 hours.

This gives a total of at least 159 hours of backhoe work requested for direct exploration.

In addition to this the backhoe will be used to make drilling mud pits at each drill site. 53 holes are recommended and an hour per pit makes an additional 53 hours or a grand total of 212 hours required.

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5. (a) continued--

Drilling

A drill rig capable of drilling to 400 feet with a bit size of approximately 4 inches should be used. The samples will be circulated out of the hole using mud and settling in an easily cleaned receptable for collecting and panning. Continuous catching of samples will be done and when five feet of hole has been drilled the samples will be panned for cinnabar content. Samples will be saved if they indicate one pound per ton of cinnabar or better and storage will be made in proper bags upon which the hole and depth is indicated. Samples showing possible commercial ore will be assayed by a commercial assayer.

Pit # 1 drilling

Drill locations are shown on the map with a scale of 1" equals 200 feet. These holes are on existing roads where possible and some will be angle holes in order to prevent excessive road cutting in stage one of the exploration.

Main drilling objectives are extensions of mineralized fracture zones, vertical holes near the cinnabar shows in angle holes C-4 and C-5, magnetic anomalies between holes C-4 and C-5 and to check at depth along the main quartz dike.

Hole number 10 should be drilled N. 80° E. at an angle until the quartz dike is reached. This will take a hole at least 300 feet unless the quartz dip flattens to the west.

It is believed that the quartz has a steep west dip so in order to check the east side of this quartz, hole 4 should be drilled westward at an angle.

The other holes can be drilled vertical for the stage one drilling . Total depth of each hole will be determined by cinnabar shows, loss of circulation, hardness of drilling and type of rock encountered.

A total of 15 holes are proposed with an average depth of 250 feet for a total footage of 3,750 feet.

Pit #2 and Cut # 4 drilling

In this area a total of 22 holes are proposed with an average depth of 250 feet for a total of 5,500 feet.

This depth is justified partly because cinnabar is found in cut # 4 which is 200 feet lower than the cinnabar in Cut # 2.

To prevent excessive road cutting and to cross near vertical veins, holes 4, 6 and 9 are to be drilled generally northward. The other holes will be drilled vertical.

Cut # 3 drilling

In this area 11 holes are proposed with an average depth of 250 feet and a total footage of 2,750 feet.

One hole drilled here went to 160 feet and had cinnabar shows to total depth and deeper drilling is indicated.

The strike and dip of the exposed cinnabar zone probably has been changed by the shallow landslide. Consequently the proposed holes are placed surrounding the cinnabar in order to locate it at depth and determine the structure.

Lake Area drilling

Five vertical holes are proposed here with an average depth of 200 feet for a total of 1,000 feet.

Drilling West End of Hill 1011

1,700 feet west of pit # 1 and along the road, five holes are proposed. Three of them would be vertical with a depth of 200 feet. At the location of holes 2 and 3, angle holes should be drilled approximately N. 55° E. in order to penetrate beneath the area that pans. These holes must be 300 long.

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5.(a) continued--

This gives a total of 1,200 feet for this area.

In summary, on the drilling we have 58 holes proposed for a total of 14,200 feet.

5. (b) Access Roads

In order to preserve the land, a minimum of cutting is proposed for the first stage of exploration.

The temporary access roads needed for drilling near pit # 1 have a total length of 2,400 feet. Most of this will require very little cutting with 2½ days required to complete the work or a total of 20 hours.

From the west side of the OME excluded area a road would be made across a nearly flat bulldozed area northward to a turnaround. From that point one road would go southwest to location #1 and southeast to locations # 3 and 15.

From proposed hole # 7 a 100 foot road is needed to hole # 6.

At the south end, near BASE # 1, it is proposed to follow an existing jeep track and ascend to the top of the hill. This may be too steep to allow moving the drilling equipment without switchbacks. From the top of the hill a road must be cut to locations 4 and 5 which are on a slope. A turnaround must be made at location # 5.

In the area of pit # 2 a minimum total of 1,330 feet of access roads are proposed and approximately 20 hours of bulldozing would do the job.

From drill location #3 about 250 feet of road is required to reach drill locations 2 and 1 and make a turnaround. To reach drill location # 22, 280 feet of road is needed with little cutting required. To reach drill locations 14 thru 20, approximately 800 feet of road is needed plus a turnaround.

In exploration cut # 3 area no major road cutting is required and 8 hours of bulldozing would complete access to all proposed drill sites. The proposed roads are not shown as the location should be flexible to prevent excess damage to pasture.

The Lake area access is from the existing road near the dam southwestward across the creeks. This will require 200 feet of cutting and 3 hours of bulldozing. The main road will be for the backhoe work.

Refilling road cuts must be done after completion of the exploration except for those required for the second stage of exploration. It is estimated that 10 hours total will recontour the surface.

This gives a total of 61 hours of bulldozing requested including the recontouring where required.

5. (c) Time requirements

If an OME contract is executed, the drilling would start within 30 days of the contract date provided the drillers are still available. The contract would be completed within 18 months of contract date, extra time being given to allow for wet weather.

The magnetometer work would be completed within 60 days of the contract date.

The trenching would be done while the drilling is in progress.

The drilling rate may average 100 feet a day but this would vary according to type of rock encountered, lost circulation problems, drill site preparation and possible needed repairs of equipment.

It is estimated that with a five day week the drilling would average 400 feet a week or 1,600 feet a month. At this rate it would take 9 months to complete the contract.

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6. EXPERIENCE:

This exploration work will be done by men with several years experience in mercury mining and production.

Red Jacket Mines, Ltd. has two general partners, Mr. Charles Jacobson and Mr. John Green. Mr. Jacobson is part owner and supervisor of the Sunbird (Gibraltar) mercury mine, located about 15 miles north of Santa Barbara. This mine started production in 1860 and is now producing under the direction of Mr. Jacobson.

Mr. Green has been owner of the Keystone mercury mine in San Luis Obispo County, California and has supervised the operation of the Corda mine since August of 1966.

At the Corda mine, Mr. Green will continue to be the main owner-supervisor with Mr. Jacobson acting as consultant.

Mr. George Gaul will make a geologic interpretation of the drill results, supervise the drilling, make drill locations, map them and obtain elevations, check direction and angle of each hole, study the backhoe trenches and check cinnabar zones in each hole and cut. Mr. Gauls experience with mercury mining covers 6 years when he acted as owner-superintendent directing all phases of the operating including many thousand feet of exploration drilling.

In addition, Joe Lansdowne is resident superintendent of the Corda mine and he has had many years of experience in all phases of exploration and mining for mercury.

7. ESTIMATE OF COSTS:

(a) Independent contracts.

Drilling Enclosed are copies of letters sent out January 4, 1968 to four drilling contractors and a copy of their answers.

Weeks drilling company submitted a bid of $5.00 a foot for the drilling of exploration holes.

Les Peterson Drilling company submitted a price of $3.00 a foot.

George F. Casey company answered they were unable to do the work.

J. N. Pitcher company called and said they would make an appointment to see the area to be drilled. When they had not done so by late in February I wrote to Anderson Drilling and they made a bid of $3.00 a foot for the work.

A total of 14,200 feet of drilling is requested for stage one of the exploration. Figuring $3.00 a foot this makes a total cost of $42,600.00.

For stage two of the drilling an estimate of 6,000 feet of drilling is given. Figuring $3.00 a foot would give a total of $18,000.00.

The total for both stages of drilling is $60,600.00.

Magnetometer survey A total of $1,500.00 is recommended for this.

Bulldozing A total of 61 hours of bulldozing is requested for access roads to drill sites, making of drill sites and refilling cuts where required. For stage two of the exploration it is estimated that 30 hours of bulldozing will be required. This will include new roads and recontouring where necessary.

This makes a total of 91 hours of bulldozing requested. Past history has shown that we can get a D-8 bulldozer for this work on a contract basis of $22.00 an hour for a total cost of $2,002.00.

There is a moving in and out charge of $50.00 for each move of the bulldozer. Since all cuts cannot be made at once, it is estimated six moves will be required. At $100.00 for the move in and out each time it makes a total of $600.00.

This gives a cost estimate of $2,602.00 for bulldozing.

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7. (b) Personal Services

The eigineering and geological services will be done by George H. Gaul on a per day basis of $100.00 plus direct out-of pocket expenses and a charge of 10¢ per mile for use of his vehicle from his San Rafael office. It is estimated that his services, as listed in 6. EXPERIENCE, will be required approximately 3 days out of each week the exploration is actively in progress.

This would total about $1,200 a month for the fee and possibly an additional $100.00 a month for car and incidental expenses. For an estimated 9 month period of actual exploration, this makes a total of $11,700.00.

Mr. Green will be at the mine approximately 3 days of each week and act in making final decisions on all phases of the exploration and matters concerning the performance of the exploration contract.

He will be acting as an outside consultant and his charge will be $150.00 a month while the contract is actively being performed. The charges for expenses.

Mr. Jacobson will come from Santa Barbara once each month to consult and advise on the operation. It is estimated that his expenses for this will amount to $100.00 a month.

Joe Lansdowne, the resident superintendent of the Corda mine is being paid $800.00 a month. It is estimated that troubleshooting, supervision of roads and drilling pads and digging of sumps for each well location will take one hour of each day or one-eighth of his monthly salary for a total of $100.00 a month. Estimating 9 months gives a total of $900.00.

One man will be employed at $500.00 a month to catch, pan and sack the drill samples. This totals $4,500.00 for the 9 month period.

7. (c) Operating materials and supplies.

$40.00	for drill mud settling trough. This trough will be made of metal, be approximately 14 inches wide (wide enough to allow a shovel within the trough) 5 feet long with sides and one end 6 inches high. Within the trough will be two removable baffles four inches high.
$41.00	82 wooden plugs, 5 inches in diameter and three feet long.
$20.00	drill sample bags and marker pens.
$25.00	surveyors wooden stakes to mark drill sites, magnetometer stations and road locations.
$250.00	assaying samples for mercury content at a commercial assayer.
$250.00	transport samples to assayer, one trip a week, 80 miles round trip.
$ 5.00	for shovel to use in cleaning sample settling trough.
$ 5.00	for note books to record drilling results and geology of backhoe trenches.

7. (d) Operating equipment.

The applicant will provide one Case 530 backhoe owned by Red Jacket Mines. The purchase price was $5,000.00 and it is in good condition. It was purchased recently and the cost represents a fair market value.

Rental of a comparable backhoe with operator is $13.00 an hour.

The backhoe work recommended on page 9 makes a total of 212 hours of work. At $13.00 an hour this makes a total cost of $2,756.00.

7. (e) Initial rehabilitation and repairs.

No costs apply here.

7. (f) New buildings, fixtures and installations.

No costs apply here.

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7. (g) Miscellaneous.

One man full time with the drilling (last paragraph under 7. (b)) at $500.00 a month.

The accounting will cost $100.00 a month.

This makes a total of $600.00 a month and the following costs apply:

$26.40	Social Security.
21.00	State U. I.
45.18	Liability Insurance.
$92.58	Total for each month. Estimate of 9 months gives a total of $833.22.

Summary of costs given under 7. for exploration stage one.

$ 42,600.00	Drilling
1,500.00	Magnetometer survey.
2,002.00	Bulldozing roads, drill sites and recontouring land.
600.00	Six round trip moves of bulldozer to property.
10,800.00	Geological and engineering services.
900.00	Car use and incidental expenses by George Gaul.
1,350.00	Expenses for John Green, supervision of performance of contract.
900.00	Expenses for Chas. Jacobson, consultation from Santa Barbara.
900.00	Joe Lansdowne resident superintendent, one hour a day for 9 months.
4,500.00	Man to catch, pan and sack drill samples for 9 months.
40.00	Drilling mud settling trough.
41.00	Drill hole wooden plugs.
20.00	Drill sample bags and marker pens.
25.00	Surveyor stakes for drill sites, roads and magnetometer stations.
250.00	Assaying.
250.00	Transport samples to assayer, one trip a week.
5.00	Shovel to clean settling trough.
5.00	Note books for drill records and geology of trenches.
2,756.00	Backhoe use for 212 hours.
833.22	Social Security, State U. I., Liability Insurance.
900.00	Bookkeeping for 9 months
$ 71,177.22	Total of costs for stage one of the exploration contract.

Summary of costs for exploration stage two for four months.

$ 18,000.00	Drilling 6,000 feet.
312.00	Backhoe for 24 drill sites, mud pits, etc. - 24 hours at $13.00.
1,500.00	Bulldozing roads, drill sites and recontouring land.
300.00	Bulldozer, 3 round trips moving to property.
4,200.00	Geological and engineering services.
350.00	Car use and incidental expenses by George Gaul.
400.00	Joe Lansdowne resident superintendent.
2,000.00	Sample man on drilling.
18.00	Drill hole plugs.
10.00	Sample bags and marker pens.

6,950.9

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7. (g) continued. Stage two summary of costs.

$	200.00	Assaying.
	5.00	Survey stakes.
	175.00	Transporting samples to assayer once a week.
	370.32	Social Security, State U. I., Liability insurance for 4 months.
	400.00	Bookkeeping.
$	28, 240.32	Total costs for stage two.
	71, 177.22	Total costs for stage one.
$	99, 417.54	Total requested for the exploration contract.

San Rafael, California
April 1, 1968

Signed: George H. Gaul
George H. Gaul

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47407

MINING LEASE

THIS AGREEMENT AND LEASE made and entered into this 23rd day of January, 1965, by and between HENRY C. CORDA and EDNA T. CORDA, hereinafter called the Lessors, and FERDINAND STOVER, hereinafter called the Lessee, both parties of Marin County, California.

WITNESSETH: That the Lessors for and in consideration of the covenants, agreements and royalties hereinafter set forth does hereby demise and lease unto Lessee all the mining rights on and in the following described ranch known as the Henry Corda Ranch, and located in the County of Marin, State of California, particularly described as follows:

Part of the Rancho Olompali, beginning at a Oak Tree marked "O.P.83" on a high peak of the ridge, which marks the commencement of the 78th course in the description of the Rancho Olompali as surveyed by the United States and as patented to Camilio Ynitia by a Patent from the United States, which said Patent was recorded in the office of the Recorder of Marin County, California, on the 16th day of March 1868 in Liber "A" of Patents at page 111; running thence along the Southerly boundary line of said Rancho Olompali, North 53° 15' West 2415.6 feet; thence South 87° West 75 feet to the fence on the Easterly boundary line of the lands formerly owned by the Estate of A. Ward; running thence in a general Northerly direction along said fence about 12,000 feet to a point in the center of the Arroyo San Antonio, said Arroyo being the Northerly boundary line of the Rancho Olompali aforesaid; running thence in a general Easterly direction along the center line of said Arroyo about 6400 feet to the mouth of an Arroyo which comes in from the South; thence ascending along the center line of said last mentioned Arroyo in a Southerly direction about 2000 feet; thence leaving said Arroyo and running South 71° 30' East 580 feet to the center of a private roadway; thence along the center of same North 52° 30' East 113 feet and North 87° 30' East 293 feet to an iron spike from which a buckeye tree 12 inches in diameter is North 40° East 15 feet; thence leaving said private roadway and ascending a spur of a ridge South 21° 30' East 522.6 feet; thence along a fence South 19° 45' East 133.1 feet, South 17° 54' East 382.9 feet, South 8° 49' East 165.2 feet, South 6° 24' East 528.1 feet, South 4° 21' East 223.7 feet, South 1° 07' West 90.3 feet, South 7° 54' West 382.1 feet, South 4° 52' West 296.7 feet, South 8° 02' East 139.2 feet, South 14° 45' East 423.5 feet, South 19° 32' East 551.6 feet, South 8° 57' East 390.4 feet, South 24° 13' East 293 feet, South 22° 38' East 351.2 feet, South 19° 40' East 296.8 feet, South 53° 23' East 116.4 feet, South 29° 15' East 205.3 feet, South 51° 05' East 122.6 feet, South 74° 40' East 299.3 feet, South 39° 22' East 312.7 feet, South 10° 41' East 210.6 feet, South 9° 54' East 326.5 feet, South 2° 01' West 806.1 feet, South 29° 54' West 418 feet, South 30° 36' West about 90 feet to the Southerly boundary line of the Rancho Olompali aforesaid; running thence Westerly along the patented line of said Rancho about 6600 feet to the point of beginning. Containing about 1473 acres of land.

hill 1269'

THE term of this lease shall be five (5) years commencing February 1, 1965 and with an option to renew for consecutive

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terms of five years as long as Lessees are complying with the terms of the lease, provided notice in writing of intent to exercise the option shall be given by Lessee to Lessors at least six months prior to termination of this lease.

THAT LESSEE shall have the right to enter into the above described property, build plants, roads, buildings, explore, prospect, and sell the mercury or any other minerals that may be found, and do anything that is reasonable and necessary to carry on mining operations and to pay Lessors eight (8) percent of the gross proceeds of the minerals mined and sold.

IT IS AGREED that all equipment, tools, machinery and improvements shall not become a fixture, but shall remain the property of the Lessee and may be removed at any time.

IT IS FURTHER AGREED Lessee shall have the right to use any surplus water that may exist after the necessary and usual needs of Lessors are fulfilled and may install means of drawing off such surplus water. Water developed during mining operations may be all used by the Lessee.

IT IS AGREED Lessee or his assigns will furnish an account or statement on request of all minerals mined and also of all minerals sold, also the name and address of purchaser or purchasers and shall pay the herein-before stated eight (8) percent royalty not later than thirty days after sale of said minerals.

THE LESSORS shall have the right to inspect all parts of the mine, or installations at any time.

THE LESSORS shall pay all taxes assessed or levied upon said leased premises, except Lessee shall pay all taxes incurred or attributable to mining operations conducted thereon by Lessee.

THE LESSEE agrees to keep all gates closed or open as directed by Lessors and if it becomes necessary to cut a fence or fences the Lessee will construct a suitable gate or gates or cattle guard, also if it becomes necessary a gate or gates for live stock.

IT IS FURTHER AGREED Lessee will conduct mining operations so water used by Lessors will not become contaminated and will use no more land than is necessary to carry on prospecting and mining operations. This lease shall carry no other rights than to mine and sell the minerals located on the leased premises, and what is reasonably necessary to do same.

IT IS AGREED mining or prospecting shall not be carried on close to houses or barns or in any other place that will damage improvements without written permission of Lessors. Lessee agrees that he will not do any mining or prospecting within a distance of 1,000 feet in any direction from any improvement or building on the leased premises, and agrees further that he will not do any surface mining on any flat areas in the leased premises.

LESSEE shall pay all costs and expenses of their operations hereunder and agree to assume all responsibility, and save Lessors harmless from any and all accidents which may occur in connection with the operation of this lease and at all times keep posted at main workings and gates a conspicuous notice in the name of and on behalf of the Lessors stating that the Lessors will not be liable for labor, materials furnished or damage on account of accidents.

George H. Gaul
P. O. Box 2007
San Rafael, Calif. 94902

IN THE EVENT the Lessee or assigns do not find quicksilver or other minerals which they consider in commercial quantities, during the term of this lease, or any extension thereof may elect to cancel this lease without further liability upon giving notice of intentions to quit and issue a quit claim statement, and also deliver to Lessors this lease and all records pertaining to leased premises.

LESSEE AND ASSIGNS agree they will not, nor shall they allow their employees or agents to do any hunting or fishing of any kind on the leased premises during the term of this lease, unless written consent of Lessors is obtained.

LESSEE agrees that this lease cannot be assigned by Lessee unless the consent in writing of Lessors is first obtained. Lessors agree, however, that they will not unreasonably withhold their consent to an assignment to a responsible person. In the event of an assignment with[redacted] written consent of Lessors, the Lessee herein shall be relieved from all responsibility hereunder, and all royalties shall be collected directly from the Assignee or Assignees.

IF THIS LEASE is extended or renegotiated, or a new lease entered into, Lessors agree to do so in the name of Lessee, and preserve Lessee's rights hereunder.

LESSEE AGREES to fence off those portions of the leased premises which may be under operations by Lessee or Assigns if it becomes necessary to do so to protect the live stock of Lessors, or tenants of Lessors when requested by Lessors.

THIS LEASE and agreement shall be binding upon the heirs, executors, administrators, successors and assigns of the respective parties hereto.

IF AN ACTION shall be brought by Lessors for the recovery of any royalties due under the provisions of this lease or for the breach or enforcement of any of the conditions, covenants or agreements herein set forth on the part of the Lessee to be kept and performed, or for the recovery of said premises and Lessors shall prevail in any such action, Lessee[redacted] agrees to pay to Lessors on demand such reasonable attorney's fees as may be fixed by the Court, and further agree that said attorney's fee shall be and become a part of Lessors judgment in any such action.

UPON TERMINATION of this lease, should Lessors require contouring of the excavations so as to remove any hazard created in the course of prospecting and mining operations by Lessee , Lessee agrees to contour said excavations, if reasonably possible to do so, and upon termination of this lease a period of forty (40) days is given by Lessors to Lessee[redacted] in which to do such contouring.

LESSEE AGREES to pay a minimum or base rental or royalty of $100.00 per month payable monthly on the first (1st) day of each month, commencing on the first (1st) day of February, 1965, for and during the full term of this lease or any extension thereof.

LESSEE AGREES to take out and keep in force during the term of this lease and while mining operations are being conducted on the leased premises, at Lessee's expense, public liability insurance in companies approved by Lessors to protect Lessors against any liability by reason of the use of or resulting from any accident occurring in or about said premises pursuant to this lease, the liability under such insurance to be not less than $100,000.00 for any one person injured, or $300,000.00 for any one accident, [redacted] AND

OFFICIAL RECORDS COUNTY OF MARIN

George H. Gaul
P. O. Box 2007
San Rafael, Calif. 94902

$25,000.00 for property damage. Such insurance policy or policies shall insure the contingent liability of Lessors and are to be placed with Lessors, and Lessee is to obtain a written obligation on the part of the insurance carrier to notify Lessors in writing prior to any cancelation thereof, and Lessee agrees that if Lessee does not keep such insurance in full force and effect, the Lessors may take out the necessary insurance and pay the premium and the re-payment thereof shall be deemed to be additional rent and payment as such to be made on the next day upon which rent becomes due.

IT IS FURTHER AGREED and understood time is of the essence of this agreement, and should the Lessee fail, neglect or refuse to carry out any of the terms, covenants and conditions herein set forth, continuing for thirty (30) days after demand for performance is made upon Lessees by Lessors, Lessors may treat this lease as terminated and may retake possession of the leased premises.

IN WITNESS WHEREOF, the parties hereto have hereunto set their hands and seals the day and year first above written.

47407 BOOK 2012 PAGE 47

Henry G. Corda

Edna H. Corda

LESSORS

RECORDED AT REQUEST OF
Ferdinand Stover
AT 45 MIN. PAST 3 P M
DEC 28 1965
Official Records of Marin County, Calif.
N. J. Giacomini
FEE $ 4.40 RECORDER

Ferdinand Stover

LESSEE

135 Monte Vista Ave
Mill Valley, 94941

STATE OF CALIFORNIA
County of SONOMA } ss.
On this 23rd day of January in the year one thousand nine hundred and sixty-five before me, HENRY J. SOLDATI, a Notary Public of the State of California with principal office in the County of Sonoma duly commissioned and sworn, personally appeared Henry G. Corda and Edna J. Corda and Ferdinand Stover

known to me to be the person S whose name S are subscribed to the within instrument, and acknowledged to me that they executed the same.

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

HENRY J SOLDATI
NOTARY PUBLIC-CALIFORNIA
PRINCIPAL OFFICE IN
SONOMA COUNTY

Henry J. Soldati

Notary Public HENRY J. SOLDATI of the State of California with principal office in the County of Sonoma.
My Commission Expires Dec. 19, 1968

BOOK 2012 PAGE 50

25051

ASSIGNMENT OF LEASE

THIS AGREEMENT and ASSIGNMENT of mining lease made and entered into this 10th day of August, 1966, by and between GORDON W. OBERG and GEORGE H. GAUL, hereinafter referred to as the assignors, and RED JACKET MINES, LTD., a Limited Partnership, of which CHARLES R. JACOBSON and JOHN H. GREEN are the General Partners, hereinafter referred to as the assignee.

WHEREAS, on January 23, 1965, a certain mining lease was entered into wherein Henry C. Corda & Edna L. Corda are lessors and Ferdinand Stover, lessee, relative to mining rights on the Henry C. Corda ranch, containing 1473 acres, more or less, and located approximately 4 miles south of Petaluma, California, on a branch of the San Antonio Creek.

WHEREAS, on January 23, 1965, Ferdinand Stover assigned the above mentioned mining lease to George H. Gaul and said assignment is recorded in the County of Marin.

WHEREAS, on March 7, 1966, written permission was granted to George H. Gaul to assign an interest in this lease to Gordon W. Oberg.

WHEREAS, on July 23, 1966, a letter Agreement stipulating certain cash payments and royalties and subject to certain conditions was entered into by and between George H. Gaul and Gordon W. Oberg, assignors and Charles R. Jacobson and John H. Green, the General Partners of and acting on behalf of Red Jacket Mines, Ltd., a Limited Partnership assignee, whereby Red Jacket Mines, Ltd., agrees to purchase Oberg's and Gaul's interest in the aforementioned mining lease.

NOW THEREFORE in consideration of the foregoing, assignors hereby assign, transfer and set over to Assignee the mining lease hereinabove described.

THE ASSIGNEE, Red Jacket Mines, Ltd., agrees to accept the assignment of said lease and comply with all terms, covenants and conditions as stated in the aforementioned mining lease and the assignment of this from Ferdinand Stover to George H. Gaul.

Copies of the mining lease, the assignment from Stover to Gaul and approval of assignments are hereby attached.

Acknowledgement of receipt of these documents and acceptance of this agreement and all of the terms and conditions therein is made by the following signatures of Charles R. Jacobson and John H. Green, acting on behalf of Red Jacket Mines, Ltd., of which they are the General Partners.

DATED: August 10, 1966.

George H. Gaul
Assignor: George H. Gaul

Gordon W. Oberg
Assignor: Gordon W. Oberg

Assignee: Red Jacket Mines, Ltd.

By: John H. Green

By: Charles R. Jacobson

25051 BOOK 2073 PAGE 99

RECORDED AT REQUEST OF
John H. Green
AT 50 MIN. PAST 3 P. M.
AUG 18 1966
Official Records of Marin County, Calif.
N. T. Giacomini
FEE $ 4.40 RECORDER

STATE OF CALIFORNIA)
(ss:
County of Santa Barbara)

On this 10th day of August, 1966, before me, a Notary Public in and for the County of Santa Barbara, State of California, residing therein, duly commissioned and sworn, personally appeared George H. Gaul known to me to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my Official Seal, the day and year in this certificate first above written.

PAULINE SUMNERS
NOTARY PUBLIC — CALIFORNIA
PRINCIPAL OFFICE IN
SANTA BARBARA COUNTY

Pauline Sumners
Notary Public in and for said
County and State
NOTARY PUBLIC
My Commission Expires Nov. 12, 1967

STATE OF CALIFORNIA)
(ss:
County of Santa Barbara)

On this 10th day of August, 1966, before me, a Notary Public in and for the County of Santa Barbara, State of California, residing therein, duly commissioned and sworn, personally appeared John H. Green known to me to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my Official Seal, the day and year in this certificate first above written.

PAULINE SUMNERS
NOTARY PUBLIC — CALIFORNIA
PRINCIPAL OFFICE IN
SANTA BARBARA COUNTY

Pauline Sumners
Notary Public in and for said
County and State
NOTARY PUBLIC
My Commission Expires Nov. 12, 1967

STATE OF CALIFORNIA)
(ss:
County of Santa Barbara)

On this 10th day of August, 1966, before me, a Notary Public in and for the County of Santa Barbara, State of California, residing therein, duly commissioned and sworn, personally appeared Charles R. Jacobson known to me to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my Official Seal, the day and year in this certificate first above written.

PAULINE SUMNERS
NOTARY PUBLIC — CALIFORNIA
PRINCIPAL OFFICE IN
SANTA BARBARA COUNTY

Pauline Sumners
Notary Public in and for said
County and State
NOTARY PUBLIC
My Commission Expires Nov. 12, 1967

STATE OF CALIFORNIA)
(ss:
County of Santa Barbara)

On this 10th day of August, 1966, before me, a Notary Public in and for the County of Santa Barbara, State of California, residing therein, duly commissioned and sworn, personally appeared _____ known to me to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my Official Seal, the day and year in this certificate first above written.

_____
Notary Public in and for said
County and State

STATE OF CALIFORNIA)
COUNTY OF MARIN)

On this 15 day of August 1966 before me, A. Lerch, a Notary Public in and for County of Marin, State of California, appeared Gordon W. Oberg whose name is/~~are~~ subscribed to this instrument.

A. Lerch

A. LERCH, Notary Public
My commission expires Sept. 30, 1967

George H. Gaul
P. O. Box 2007
San Rafael, Calif. 94902

OFFICIAL
CHECK
No. 2
RECEIVED
APR 8
INITIALS CODE

TO 447C
(Individual)

TI

STATE OF CALIFORNIA
COUNTY OF Marin } SS.

On 26th January before me, the undersigned, a Notary Public in and for said State, personally appeared Ferdinand Stover and George H. Gaul.

, known to me to be the person S whose name S are subscribed to the within instrument and acknowledged that they executed the same.

WITNESS my hand and official seal.

(Seal)
Signature Jacques J. Nadler

JACQUES J. NADLER
Name (Typed or Printed)

Notary Public in and for said State

STAPLE HERE

ASSIGNMENT OF LEASE

THIS AGREEMENT and assignment of mining lease made and entered into this twenty third day of January, 1965, by and between Ferdinand Stover, hereinafter refered to as the assignor, and George H. Gaul, hereinafter refered to as the assignee.

WHEREAS on January 23, 1965 a certain lease was entered into wherein Henry C. Corda and Edna I. Corda are lessors and Ferdinand Stover, lessee, relative to mining rights on the Henry Corda ranch containing 1473 acres and located approximately four miles south of Petaluma on a branch of the San Antonio Creek. The attached copy of the mining lease gives a full description of the area under lease.

WHEREAS THE ASSIGNOR, the lessee named in said lease, now desires to assign, transfer and set over to the assignee, all the right, title and interest he may have, without warranty in and to said lease upon the conditions more particularly hereinafter set forth.

THE ASSIGNEE agrees to accept the assignment of said lease and to carry out punctually all terms, covenants and conditions on the part of the lessee therein to be performed.

THE ASSIGNMENT is on condition that assignee shall pay to assignor, Ferdinand Stover, a royalty of four and one-half (4½%) percent of the gross value of all minerals mined and sold from said leased premises, or any extension or enlargement of the assigned lease.

THE ROYALTY payable to assignor, in no event shall be less than a minimum of fifty dollars ($50.00) per month. All settlements are to be made on or before the fifteenth (15th) day of each month.

IT IS FURTHER AGREED that the assignee, their successors or assigns will not revise, extend or make a new lease when this lease runs out, except in the name of the assignor, and assignor shall have the same rights thereunder as in the lease hereby assigned. The assignee agrees to renew said lease and will give notice in writing of intentions to renew to Henry C. Corda and Edna I. Corda or successors at least seven (7) months before any and all five (5) year terms expire; also will send assignor a copy of said renewal and notice 7 months before any and all terms expire. Assignee will keep assignor informed concerning mining and the discovery of ores.

IT IS FURTHER AGREED that the assignee, his successors or assigns will not acquire or lease mineral rights on adjacent property or properties, revise, extend or make a new lease when this lease runs out, except in the name of the assignor, and assignor shall have the same rights thereunder as in the lease hereby assigned.

THE ASSIGNEE agrees to pay all taxes which may be incurred under the assigned lease or any extension or enlargement of said lease. The assignee agrees to save assignor from all obligations arising under said lease. All ppepartibas of assignee shall be at his sole cost and expense. The assignee will at all times keep posted at the main workings and main gate a conspicous notice in the name of and on behalf of the assignor stating that the assignor will not be liable for labor, materials furnished or damage on account of accident or accidents.

THE ASSIGNOR or his agents reserve the right to enter the leased premises, or the premises of any extension or enlargement of said lease, examine, prospect, inspect, survey or take samples at all times.

THIS ASSIGNMENT and agreement shall be binding upon the heirs, executors, administrators, successors and assigns of the respective parties hereto.

IT IS FURTHER AGREED assignee will furnish an account or statement on request of all minerals mined and all minerals sold, also the names and addresses of purchasers and shall pay the hereinbefore stated 4½% royalty no later than thirty days after sale of said minerals.

IT IS UNDERSTOOD time is of the essence of this agreement, and should assignee or their successors or assigns, fail, neglect or refuse to carry out any of the terms, agreements and conditions herein set forth to be kept and performed, after thirty days (30) demand for performance is made, then this assignment is to become null and void and of no further force or effect and all royalty and payments made hereunder shall be retained as liquidation damages and the assignee will deliver up to the assignor this agreement and issue a quit claim statement, also all records and reports pertaining to said lease and or assignment. (A copy of same)

IN WITNESS whereof the parties hereto have hereunto, and one duplicate hereof, set their hands this

JACQUES J. NAD[illegible]
NOTARY PUBLIC - CALIF[illegible]
MARIN COUNTY

Ferdinand Stover
Assignor Ferdinand Stover

George H. Gaul
Assignee George H. Gaul

My Commission Expires February 14, 1968

PERMISSION TO ASSIGN INTEREST IN MINING LEASE

We, Henry C. Corda and Edna I. Corda, hereby consent to an assignment assignment of the mining lease dated January 23, 1965, on the Henry Corda ranch, by George H. Gaul and Gordon W. Oberg to Red Jacket Mines Ltd., of which Charles R. Jacobson and John H. Green are the General Partners, as required by the terms of said lease, subject to all provisions of said lease and the payment of the rental provided in said lease.

Henry C. Corda
Henry C. Corda

Date: 7/30/66

Edna I. Corda
Edna I. Corda

Approval of this assignment is contingent upon Charles R. Jacobson and John H. Green, acting for and on behalf of Red Jacket Mines Ltd., placing in Escrow the cash sum of Two Thousand, Five Hundred ($2,500) only dollars to be used for and insuring that, if and, when the Lessees should choose to quit said lease and should Quit Claim said lease back to Lessors that the proper contouring of all excavations caused by mining operations and the re-seeding of all areas so disturbed shall be done.

Henry C. Corda
Henry C. Corda

Edna I. Corda
Edna I. Corda

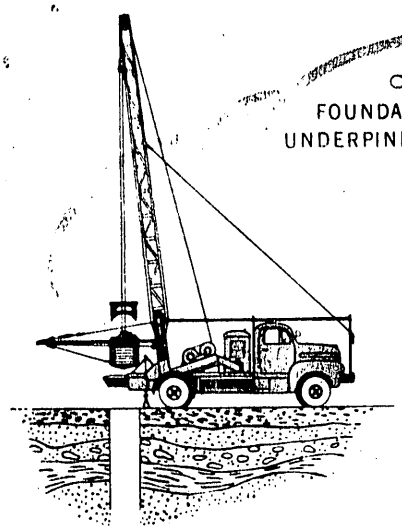
Agreed to this day:
August 2, 1966

Charles R. Jacobson
Charles R. Jacobson

John H. Green
John H. Green

OFFICIAL
COPY
O. M. E.
RECEIVED
APR 8 1968
INITIALS CODE

George H. Gaul
P. O. Box 2007
San Rafael, Calif. 94902



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Since 1920
FOUNDATIONS · DRILLING
UNDERPINNING · PILE DRIVING

GEORGE F.
Casey
CO.

1337 SECOND ST.
BERKELEY, CALIFORNIA 94710

Jan. 9, 1968

George Howard Gaul
P.O. Box 2007
San Rafael, Calif 94902

Dear Sir:

This will acknowledge receipt of your letter dated January 4th in which you inquired as to our cost per foot for drilling 4" explor ation holes south of Petaluma, Calif.

Unfortunately we are not equipped to submit a proposal or quote prices on this type of work.

We are limited, by the type of drilling equipment we have, to drilling holes of larger diameter, a maximum of 200 feet in depth. We do not have any rotary type rigs.

Although we are unable to propose, in this particular instance, to do the work required, we are grateful for the receipt of your inquiry.

We look forward to receiving future requests which might be more in line with our type of work.

Yours truly,
GEORGE F. CASEY CO.

Clifford H. White

Clifford H. White
Branch Mgr.

DSW:CHW:JD

Les Petersen Well Drilling and Pump Company

WATER SYSTEM SPECIALISTS

5434 Old Redwood Hwy. SWift 5-4801 LIberty 5-0246

SANTA ROSA, CALIFORNIA

January 15, 1968

George Howard Gaul
P. O. Box 2007
San Rafael, California 94902

Re: Exploration Drilling

Dear Mr. Gaul:

In reply to your letter addressed to Crislip Drilling Co., who we bought out some time ago.

We would drill the vertical test holes for the price of $3.00 per foot.

We do not have equipment for the drilling of horizontal holes.

The sites should be level and accessable for our rig.

Please feel free to call us should you need any futher information.

Very truly yours,

LES PETERSEN WELL DRILLING & PUMP CO.

Lester H. Petersen

Lester H. Petersen
Owner

LHP/vms

RED JACKET
FLUID SYSTEM PRODUCTS

GEORGE HOWARD GAUL
CERTIFIED PROFESSIONAL GEOLOGIST
No. 1684

P. O. Box 2007
San Rafael, California 94902

Area Code 415
453-6304

January 4, 1968

Crislip Drilling Company
5434 Old Redwood Highway,
Santa Rosa, California

Re:Exploration drilling

Dear Sir:

I am inquiring for Red Jacket Mines, Ltd. of Santa Barbara for your cost per foot for drilling exploration holes for mercury.

This would be located about five miles south of Petaluma, California where the Franciscan formation is the bedrock with some volcanic rocks overlying the Franciscan in some areas to be drilled.

Required would be a drilling rig capable of going at least to a depth of 350 feet, making approximately a four inch hole, drilling vertical as well as angle holes and using mud to circulate out the well cuttings. A trough or five gallon buckets would be used to catch the drilling fluid to settle out the cuttings. At every five feet the sample would be collected and in some cases possibly a 2½ foot sample would be taken and sacked.

A government minerals exploration loan for this work is being applied for and if granted, the work would probably start sometime in March of 1968.

A cost figure per foot should be given for a total of 10,000, 15,000 and 20,000 feet of drilling.

Very truly yours,

George H. Gaul

George H. Gaul

Horizontal Drains
Jacking

7620 Two Rock Road
Phone 762-2053

ANDERSEN DRILLING CO., INC.

ERIC A. ANDERSEN, President

PETALUMA, CALIFORNIA

March 4, 1968

Mr. George H. Gaul
P. O. Box 2007
San Rafael, California

Dear Mr. Gaul:

In reply to your letter of February 28th concerning exploration drilling on the Henry Corda mine in Marin County.

We will, if the drilling totals 10,000 feet, do this at a cost of $3.00 per foot using our vertical driller.

Very truly yours,

E. A. Andersen

E. A. Andersen
President

EAA/as

February 28, 1968

Anderson Drilling Co., Inc.
7620 Two Rock Road,
Petaluma, California

Dear Sir:

I am inquiring for Red Jacket Mines, Ltd. of Santa Barbara for your cost per foot for drilling exploration holes for mercury.

This would be located about five miles south of Petaluma, California where the Franciscan formation is the bedrock with some volcanic rocks overlying the Franciscan in some areas to be drilled.

Needed would be a drilling rig capable of going at least to a depth of 350 feet, making approximately a four inch hole, drilling vertical and/or at an angle if possible, using mud as a circulating medium to obtain the well cuttings. A trough or five gallon buckets would be used to catch the drilling fluid to settle out the cuttings. At every five feet the sample would be collected and in some cases possibly a 2½ foot sample would be taken.

A government minerals exploration loan for this work is being applied for and if granted, the work would start at that time, possibly by June 1968.

A cost figure should be given for a total of 10,000 and 15,000 feet of drilling.

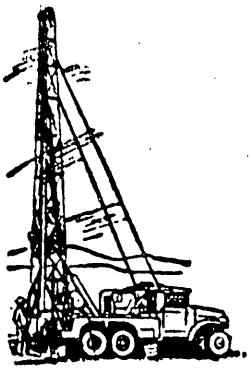
Very truly yours,

George H. Gaul

George H. Gaul

George H. Gaul
P. O. Box 2007
San Rafael, Calif. 94902

WELL DRILLING | WATER CONDITIONING | SPRINKLER IRRIGATION | PUMP SALES & SERVICE



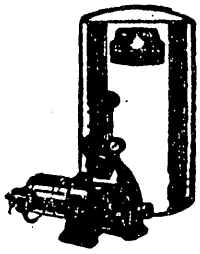
WEEKS DRILLING & PUMP CO.

WHEN YOU THINK OF WATER THINK OF WEEKS

6100 Sebastopol Road Phones: VA 3-3184, VA 3-4238 or LI 2-3272

For Night Service Phone VA 3-3184

SEBASTOPOL, CALIF. 95472



February 21, 1968

George H. Gaul
P. O. Box 2007
San Rafael, California 94902

Dear Mr. Gaul,

Having gone over some of the potential drill sites on the Henry Corda Ranch, off of San Antonio Road, Petaluma, and you stating that you or Red Jacket Mines, Ltd., of Santa Barbara, will make the drill site pads and sumps if necessary, and have a "cat" capable of helping us move onto the "tough" sites, we wish to quote $5.00 per ft. for the drilling of the exploritory holes for mercury.

The quote includes a Failing 1000 or 1500 Drilling Rig, Water Truck, Drilling Fluids, Bits, and Drill Stem for your anticipated depths. Extra hard rock, and other underground hazards (such as, heavy circulation losses, heaving formations etc.) are not included in quoted footage price, where they slow us down considerably on our footage of drilling per day.

Hoping to be of service to you on this project, and best personal regards, I remain,

Sincerely,

Wayne Thompson

Wayne Thompson
Vice President

WT/ap

GEORGE HOWARD GAUL
CERTIFIED PROFESSIONAL GEOLOGIST
No. 1684

P. O. Box 2007
SAN RAFAEL, CALIFORNIA 94902

AREA CODE 415
453-6304

January 4, 1967

Weeks Drilling and Pump Co.,
6100 Sebastopol Road,
Sebastopol, California

Re: Exploration drilling

Dear Sir:

I am inquiring for Red Jacket Mines, Ltd. of Santa Barbara for your cost per foot for drilling exploration holes for mercury.

This would be located about five miles south of Petaluma, California where the Franciscan formation is the bedrock with some volcanic rocks overlying the Franciscan in some areas to be drilled.

Required would be a drilling rig capable of going at least to a depth of 350 feet, making approximately a four inch hole, drilling vertical as well as angle holes and using mud to circulate out the well cuttings. A trough or five gallon buckets would be used to catch the drilling fluid to settle out the cuttings. At every five feet the sample would be collected and in some cases possibly a 2½ foot sample would be taken and sacked.

A government minerals exploration loan for this work is being applied for and if granted, the work would probably start sometime in March of 1968.

A cost figure per foot should be given for a total of 10,000, 15,000 and 20,000 feet of drilling.

Very truly yours,

George H. Gaul

George H. Gaul

George H. Gaul
P. O. Box 2007
San Rafael, Calif. 94902

GEORGE HOWARD GAUL
CERTIFIED PROFESSIONAL GEOLOGIST
No. 1684

P. O. Box 2007
San Rafael, California 94902

Area Code 415
453-6304

January 4, 1968

J. N. Pitcher Co.,
6825 Mission
Daly City, California

Re:Exploration drilling

Dear Sir:

I am inquiring for Red Jacket Mines, Ltd. of Santa Barbara for your cost per foot for drilling exploration holes for mercury.

This would be located about five miles south of Petaluma, California where the Franciscan formation is the bedrock with some volcanic rocks overlying the Franciscan in some areas to be drilled.

Needed would be a drilling rig capable of going at least to a depth of 350 feet, making approximately a four inch hole, drilling vertical as well as angle holes and using mud to circulate out the well cuttings. A trough or five gallon buckets would be used to catch the drilling fluid to settle out the cuttings. At every five feet the sample would be collected and in some cases possibly a 2½ foot sample would be taken and sacked.

A government minerals exploration loan for this work is being applied for and if granted, the work would probably start by sometime in March of this year.

A cost figure should be given for a total of 10,000, 15,000 and 20,000 feet of drilling.

George H. Gaul
P. O. Box 2007
San Rafael, Calif. 94902

Very truly yours,

George H. Gaul

George H. Gaul

January 23, 1968

J. N. Pitcher Co.,
6825 Mission
Daly City, California

Re: Exploration drilling

Dear Sir:

On January 4, 1968 I wrote to you for Red Jacket Mines, Ltd. of Santa Barbara, California for costs per foot for drilling for mercury in an area about 5 miles south of Petaluma.

I asked for vertical as well as angle holes to go as deep as 350 feet. Since writing that letter I realized few companies had drill rigs capable of drilling angle holes and I find the drilling program will call for few angle holes. Consequently I would appreciate a cost per foot figure for vertical holes only if you would care to give it.

Also since January 4th I have had to scale the drilling program down with possibly up to 10,000 feet of drilling in the first phase and if ore is found some additional drilling is probable.

If you do not have my letter of January 4th to refer to I will send you the information again.

Very truly yours,

George H. Gaul

George H. Gaul

Called me Jan 24th - didn't get first letter.
will call & go to property.

George H. Gaul
P. O. Box 2007
San Rafael, Calif. 94902

Assay–Chemical Division

ABBOT A. HANKS

ESTABLISHED 1866

1300 SANSOME STREET • SAN FRANCISCO, CALIFORNIA 94111 • TELEPHONE (415) 434-0166

Assayers
Chemists
Spectrographers
Mining Consultation
Representatives
Inspectors
Samplers

Sept. 21, 1966 **LABORATORY REPORT**

Deposited by: Red Jacket Mines, Ltd.
1018 Anacapa Street
Santa Barbara, Calif. 93101
Attn: Mr. John Green

Sample of Ore

Henry Carda mine

Labty. No.	Mark	MERCURY Percentage	MERCURY lb/ton
3597-1	C-1, 35-40	0.002	0.40
2	C-1, 65-70	0.175	3.50
3	C-1, 70-75	0.42	8.40
4	C-1, 75-80	0.035	0.70
5	C-1, 80-85	0.025	0.50
6	C-1, 95-100	0.055	1.10
7	C-1, 140-145	0.03	0.60
8	C-2, 80-85	0.045	0.90
9	C-6, 180-185	0.005	0.10
10	C-10, 165-170	0.015	0.30
11	C-13, 65-70	0.37	7.40
12	C-13, 70-75	0.25	5.00
13	C-13, 75-80	0.02	0.40

ASSAY - CHEMICAL DIVISION
ABBOT A. HANKS

By Charles J. Taylor

CA-105

METALLURGICAL LABORATORIES, INC. CHEMISTS • ASSAYERS • SPECTROGRAPHERS

1142 HOWARD STREET • SAN FRANCISCO, CALIFORNIA 94103 • AREA CODE 415 863-8575

REPORT OF ANALYSIS

Submitted by Mr. George Gaul
Box 2341
Santa Rosa, California

Date August 11, 1965

cordas

P. O. No.

Sample of Ore

LABORATORY NUMBER	MARK	PERCENTAGES	
		Mercury %	Lbs. per Ton
4065	Up-Grade #1	0.91	18.20
	Hi-Grade #1	2.40	48.00

stockpile at quartz dike
250 tons +

George H. Gaul
P. O. Box 2007
San Rafael, Calif. 94902

METALLURGICAL LABORATORIES, INC.

By [signature]

Assay–Chemical Division

ABBOT A. HANKS

ESTABLISHED 1866

P.O. Box 77265 San Francisco, Calif. 94107

Assayers
Chemists
Spectrographers
Mining Consultation
Representatives
Inspectors
Samplers

LABORATORY REPORT

November 10, 1967

Deposited by: Red Jacket Mines
1018 A Anacape Street
Santa Barbara, Calif. 93101

Sample of

Labty. No.	Mark	Corda mine	
		MERCURY, Hg	
		%	lb/ton
6186		1.99	39.80

cc: Box 77, Petaluma, Calif.

mc

ASSAY - CHEMICAL DIVISION
ABBOT A. HANKS

Charles J. Taylor

CA-105

METALLURGICAL LABORATORIES INC. CHEMISTS • ASSAYERS • SPECTROGRAPHERS

1142 HOWARD STREET • SAN FRANCISCO, CALIFORNIA
UNDERHILL 3-8575

REPORT OF ASSAY

Submitted by Mr. John F. Proclmau
Asbestos Corporation, Ltd.
c/o Golden Hinde Motel
Inverness, California

Date March 24, 1965

Sample of Ore

LABORATORY NO. 3235

MARK	GOLD, PER TON OF 2,000 LBS. TROY OUNCES	GOLD, PER TON OF 2,000 LBS. VALUE AT $35.00 OZ.	SILVER, PER TON OF 2,000 LBS. TROY OUNCES	SILVER, PER TON OF 2,000 LBS. VALUE	Mercury %	%	%
#1	Trace				1.42		
					or 28.4 lbs. per ton		

22 feet trench - @ N end quartz just west

Henry Cordes - quartz area

George H. Gaul
P. O. Box 2007
San Rafael, Calif. 94902

METALLURGICAL LABORATORIES INC.

By [signature]

METALLURGICAL LABORATORIES, INC. CHEMISTS • ASSAYERS • SPECTROGRAPHERS

1142 HOWARD STREET • SAN FRANCISCO, CALIFORNIA 94103 • AREA CODE 415 863-8575

REPORT OF ANALYSIS

Submitted by Red Jacket Mine
1018 A Anacapa Street
Santa Barbara, California

Date February 26, 1968

Sample of Ore Products

P. O. No.

Lab. No. 1422

SAMPLE MARK	PERCENTAGES	
	Corda mine	
	Mercury %	lbs per ton
Conc. #1	29.35	587.00
Mid #2	2.19	43.80
Oversize #3	0.171	3.42

Ⓟs

CC: Red Jacket Mine
P. O. Box 77
Petaluma, California

METALLURGICAL LABORATORIES, INC.

By [signature]

MET LAB FORM 13

METALLURGICAL LABORATORIES, INC. CHEMISTS • ASSAYERS • SPECTROGRAPHERS

1142 HOWARD STREET • SAN FRANCISCO, CALIFORNIA 94103 • AREA CODE 415 863-8575

REPORT OF ANALYSIS

Submitted by Mr. George Gaul
Box 2341
Santa Rose, California

Date June 1, 1965

P. O. No.

Sample of Ore

LABORATORY NUMBER	MARK	PERCENTAGES	
		Mercury %	Lbs. per Ton
3616	1 Piece	9.61	192.20

Quartz zone - piece on surface

Henry Carda mine

George H. Gaul
P. O. Box 2007
San Rafael, Calif. 94902

METALLURGICAL LABORATORIES, INC.

By [signature]

February 21, 1968

Mr. Daniel B. Turner
Vice President and Cashier
Santa Barbara Nat'l Bank
P. O. Drawer JJ
Santa Barbara, California

Dear Mr. Turner:

We have discussed with you the mining property we hold in Marin County, California. In order to determine anticipated production from this property it is necessary that we spend a total of $60,000.00 for exploration work.

We would like to borrow this money from your bank and hope you will give this request your favorable approval.

Very truly yours,

RED JACKET MINES, LTD.

By: Chas. R. Jacobson
Chas. R. Jacobson
General Partner

CRJ/bf

George H. Gaul
P. O. Box 2007
San Rafael, Calif. 94902

SANTA BARBARA NATIONAL BANK

SANTA BARBARA, CALIFORNIA

February 23, 1968

POST OFFICE DRAWER J J
20 EAST CARRILLO STREET
TELEPHONE 805 966-2246

DANIEL B. TURNER,
Vice-President and Cashier

Red Jacket Mines, Ltd.
1018-A Anacapa Street
Santa Barbara, California 93101

Gentlemen:

We have reviewed your application for $60,000.00 to be used for the exploration and drilling on the leased ground you have on the Henry Corda Ranch in Marin County.

We are sorry that we cannot grant your request as it is not the policy of the Bank to loan for this purpose.

Very truly yours,

Daniel B. Turner
Vice President & Cashier

DBT:aps

CROCKER-CITIZENS NATIONAL BANK
CHARTERED 1870
TIBURON-BELVEDERE OFFICE
ON THE BOARDWALK · TIBURON, CALIFORNIA 94920

A. P. GIBSON
ASSISTANT VICE PRESIDENT AND MANAGER

April 4, 1968

Charles R. Jacobson
General Partner
Red Jacket Mines, Ltd.
Anacapa Building
1018A Anacapa St.
Santa Barbara, Calif. 93101

Dear Mr. Jacobson:

In answer to your letter of February 21, 1968 with regard to a loan for the purpose of exploration work on mining property in Marin County, we wish to inform you that this request has been declined. The reason for the declination is because of the purpose and the element of risk involved.

We wish to take this opportunity to thank you for favoring us with this request.

Sincerely,

A. P. Gibson
Assistant Vice President
and Manager

APG:ks

cc: George H. Gaul
P.O. Box 2007
San Rafael, Calif. 94902

February 21, 1968

Mr. Allan Gibson, Manager
Crocker-Citizens National Bank
Tiburon, California

Dear Mr. Gibson:

Mr. John Green has discussed with you the mining properties we hold in Marin County, California.

We have indications of excellent mercury production from this property but in order to determine this it is necessary that we spend a total of $60,000.00, for exploration work.

We would like to borrow the amount needed from your bank and hope you can arrange favorable approval for this request.

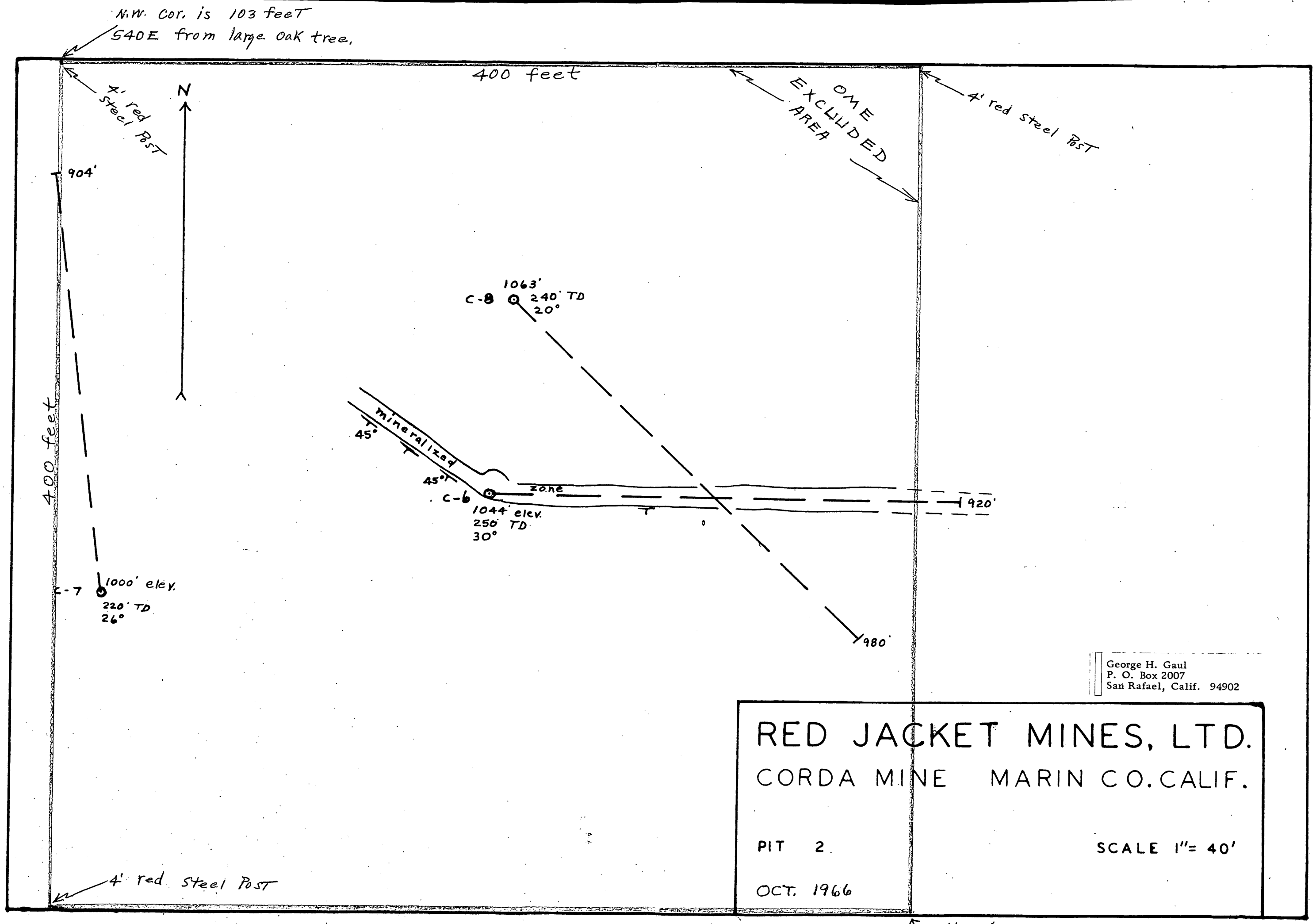
Very truly yours,

RED JACKET MINES, LTD.

By: Chas. R. Jacobson
General Partner

CRJ/bf

George H. Gaul
P. O. Box 2007
San Rafael, Calif. 94902



George H. Gaul
P. O. Box 2007
San Rafael, Calif. 94902

RED JACKET MINES, LTD.

CORDA MINE MARIN CO. CALIF.

PIT 2

SCALE 1" = 40'

OCT. 1966

(6)

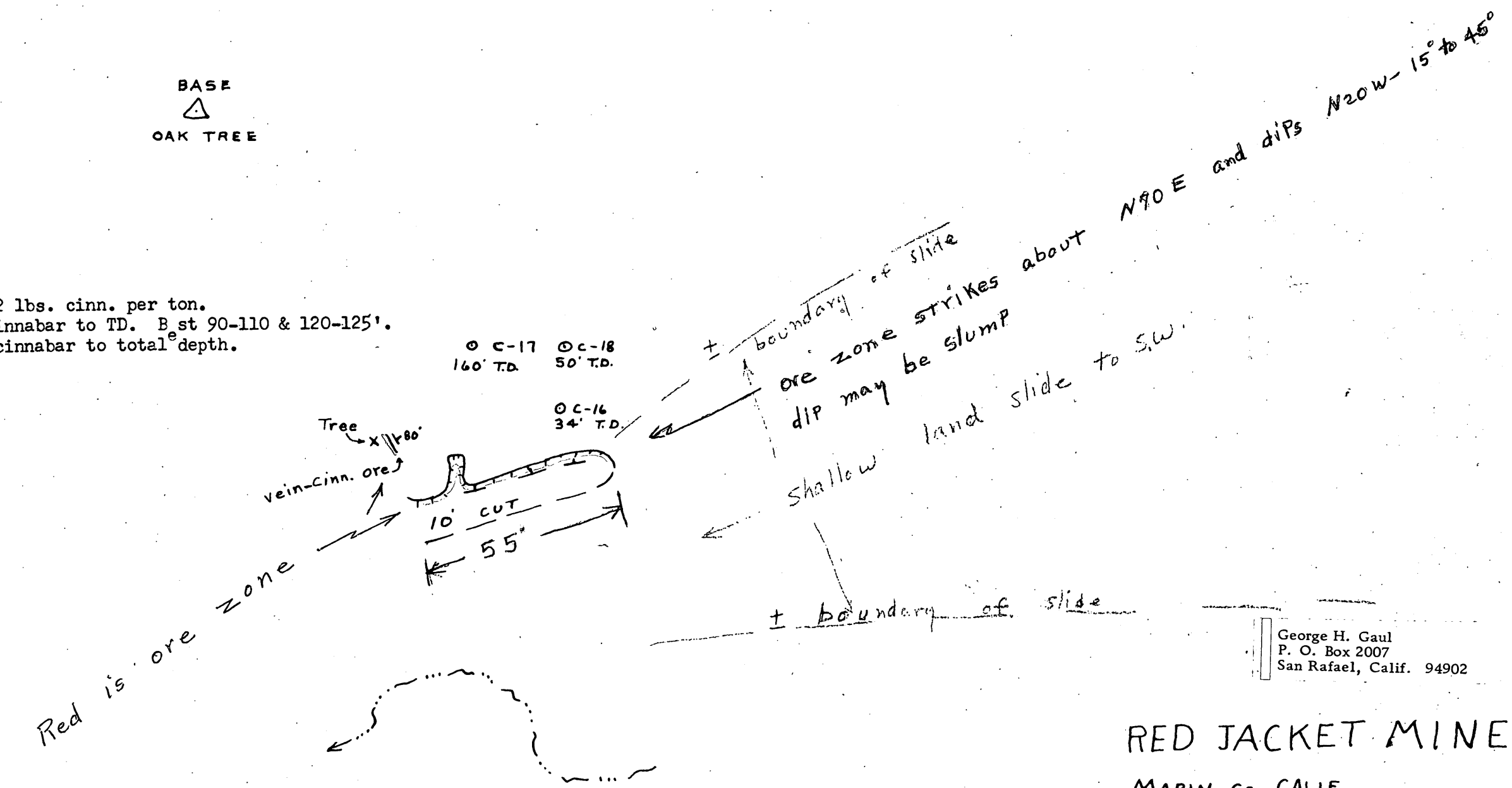
OFFICIAL
COPY
O. M. E.
RECEIVED
APR 8 1968
INITIALS | CODE

N

BASE
OAK TREE

Drill holes

C-16 TD. 34 feet. 0-25 feet, ½ to 2 lbs. cinn. per ton.
C-17 TD. 160 feet. Good traces of cinnabar to TD. Best 90-110 & 120-125'.
C-18 TD. 50 feet. Minor traces of cinnabar to total depth.



George H. Gaul
P. O. Box 2007
San Rafael, Calif. 94902

RED JACKET MINES

MARIN Co., CALIF.

CORDA PIT No. 3

Drill holes and cut

scale 1" = 40'

Dec. 1967

7

OFFICIAL
COPY
O. M. E.
RF
APR 2
INITIALS

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
6/11/68	Peterson	120
		120
6/12	Johnson	110
6/14	Kulzgard	
6/18	[illegible]	
		110
		220

JUN 17 1968

AIRMAIL

Red Jacket Mines, Ltd.
1018-A Anacapa Street
Santa Barbara, California 93101

Re: OME-6709 (Mercury)
Red Jacket Mines, Ltd.
Corda Mine
Marin County, California

Gentlemen:

A careful review of your application for financial assistance to explore the subject property and of other information available to us indicates that not enough geologic information has been furnished to identify with reasonable certainty specific exploration targets. Therefore, we must conclude that the probability of disclosing significant ore reserves on the property is not sufficiently promising to justify Government participation in the proposed work. Accordingly, we regret to inform you that your application for assistance is denied.

We wish to thank you for your interest in the minerals exploration program and for bringing your property to our attention.

Sincerely yours,

FRANK E. JOHNSON

Frank E. Johnson
Chief, Office of
Minerals Exploration

cc: Director's Reading File
Economic Geology File
OME Docket
OME Reading File
Region II
130
Mr. Peterson

ECPeterson/bsl 6/11/68

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
6/11/68		120
		120
6/12	Johnson	110
		220

June 11, 1968

Memorandum

To: The File

From: Edward C. Peterson

Subject: OME-6709 (Mercury)
Red Jacket Mines, Ltd.
Corda Mine
Marin County, California

Justification for Denial of Application

The report of the field examination of the property indicates that there is little possibility of discovering any significant ore reserves by the proposed work. Although mercury-bearing ore shoots are presently being mined within the excluded areas of open pits No's. 1 and 2, no exposures of mineralized material were observed by the examiner in the proposed project areas. Indications are that in these areas, mercury occurs as widely disseminated grains and crystals in alluvial and landslide material with little economic potential.

In addition, the lack of geologic evidence to identify with reasonable certainty specific exploration targets indicates that the proposed work is prospecting rather than exploration and is not eligible for OME assistance.

I concur with the Field Officer and recommend that the application for assistance be denied.

Edward C. Peterson

Edward C. Peterson

cc: Director's Reading File
Economic Geology File
OME Docket
OME Reading File
Mr. Peterson

ECPeterson/bsl 6/11/68

UNITED STATES
DEPARTMENT OF THE INTERIOR

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

June 7, 1968

OFFICIAL COPY
O. M. E.
RECEIVED
JUN 10 1968

INITIALS	CODE
gla	130
Gef	120 M
RJ	110

Memorandum

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

From: Field Officer
Region II

Subject: OME-6709 (Mercury)
Red Jacket Mines, Ltd.
Corda Mine
Marin County, California

Enclosed is an Application Report on the subject property recommending that the application be denied on the basis that the geologic probability of discovering minable ore bodies as a result of the proposed work is too small to justify Government participation. The proposed work is essentially prospecting in nature. The only worthwhile exploration targets, at the present time, are the downward continuations of the ore shoots that have been mined in open pits Nos. 1 and 2 and these targets are inside the areas the applicant wishes excluded from OME exploration and royalty rights.

H. K. Stager

Enclosure

UNITED STATES

DEPARTMENT OF THE INTERIOR

STEWART L. UDALL, SECRETARY

GEOLOGICAL SURVEY

OFFICE OF MINERALS EXPLORATION

REPORT OF EXAMINATION

REGION II

Report of Exam.

APPLICATION REPORT

OME-6709 (Mercury)
Red Jacket Mines, Ltd.
Corda Mine
Marin County, California

By

H. K. Stager
Field Officer
OME, Region II

June 7, 1968

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ILLUSTRATIONS

Figure 1. Index map of Marin County, California

INTRODUCTION

Red Jacket Mines, Ltd., 1018-A Anacapa Street, Santa Barbara, California 93101, applied to the Office of Minerals Exploration for Government assistance in an exploration project, Docket OME-6709, to explore for mercury at the Corda Mine, Marin County, California. The applicant infers the presence of minable mercury ore bodies in sandstones, mudstones, and volcanic rocks on the property and wishes to explore for these ore bodies by rotary drilling from surface sites and trenching.

A review and field examination was requested by the Office of Minerals Exploration and was made by H. K. Stager, Field Officer, on May 23, 1968, accompanied by Mr. George H. Gaul, consulting geologist for the applicant, and Mr. Ferdinand Stover, discoverer of the deposit. The applicant's maps and other data were examined and compared with exposures on the property.

SUMMARY

The Corda Mine property contains several small mercury-bearing ore bodies and widespread disseminated cinnabar crystals in alluvium and slope wash material. The applicant proposed to explore the mine area by a two-stage program of magnetometer surveying, backhoe and bulldozer trenching, and rotary drilling. Estimated total cost of the project was $99,417.54. The program lacks a specific target and is largely prospecting in nature. The only potentially worthwhile exploration targets are in areas withheld from the proposed project area and will probably be explored by the applicant at its own expense.

RECOMMENDATIONS

It is recommended that the application be denied on the basis that the geologic probability of discovering minable ore bodies as a result of the proposed work is too small to justify Government participation.

LOCATION, ACCESSIBILITY, AND LOCAL FACILITIES

The Corda Mine is in the SW¼ of T. 4 N., R. 7 W., MDM, Marin County, California (Fig. 1), on the northwest side of Burdell Mountain at an altitude of about 600 feet.

To reach the property, that is about 4 miles south of Petaluma (the closest major town), drive south on Highway 101 about 4 miles, turn west on San Antonio Road and drive about 1½ miles, turn south on an unpaved road about 1 mile to the property. The road is passable to ordinary passenger cars and the drive from Petaluma requires about 15 minutes.

All necessary services, supplies, equipment, and labor are available in nearby towns, or in San Francisco (40 miles). Ample water is available from springs and streams on the property. Assay service, at a cost of $4-$5 per sample for mercury, is available in San Francisco.

PROPERTY

History and Production

Mercury-bearing material was discovered on the property by Mr. Ferdinand Stover in about 1960, but no mining was undertaken until 1965 when the owners of the property consented to a mining lease. The lease was assigned to Mr. George H. Gaul, in 1965, who assigned a part interest to Mr. Gordon W. Oberg in 1966. Red Jacket Mines, Ltd., purchased the lease from Gaul and Oberg on July 23, 1966.

Most of the production to date has been from Pit No. 1 at the south end of the property. A total of 155 flasks of mercury was produced from this pit and ore is presently exposed in the pit bottom. About 10 flasks of mercury have been produced from Pit No. 2. Total production from the property is about 180 flasks.

Ownership

The property consists of the Henry C. Corda ranch, containing about 1,473 acres, on a branch of San Antonio Creek about 4 miles south of Petaluma, California. The applicant holds a mining lease on the property. A copy of the lease, and assignments, was attached to the application.

The owner of the property refused to execute a Lien and Subordination Agreements and the applicant stated that a Performance Bond would be furnished if a contract was approved.

Financial Eligibility

The applicant furnished copies of letters to two banks requesting loans for the proposed work and also copies of letters from the banks denying the loans. The applicant proposed to furnish its share of the exploration costs in cash to be derived from the sale of mercury from present mining operations.

Development

The property is developed by two open pits, several shallow prospect trenches, and an inclined shaft. At the time of the examination work was being concentrated on the sinking of the shaft that was about 35 feet in depth on an incline of about 50°.

Surface facilities consist of a small ore bin, crusher, trommel, and gas-fired retort with a capacity of about 1 ton of ore per day. A house trailer provides living quarters for 2 or 3 miners.

GEOLOGY

Geologic Setting

The mine is in an area of low rolling topography and the rocks are covered by alluvium, slope wash, and numerous landslides and slump areas. Except for

the open pits and trenches, there are few rock exposures. The area appears to be underlain chiefly by rocks of the Franciscan Formation of Jurassic or Cretaceous age. These rocks include mudstone, sandstone, graywacke, and chert that, in general, strike north and dip moderately to steeply east. Intruding the Franciscan rocks in the western part of the area is a large mass of serpentine and within the mine area are several small masses of hydrothermally altered serpentine and silica-carbonate rock. Also intruding the sedimentary rocks are dikes of basaltic and rhyolitic composition that are probably Tertiary in age and may be correlative with the Sonoma Volcanics that overlie the Franciscan rocks to the north and east of the mine area.

Ore Deposits

The mercury-bearing ore shoots that have been mined at the Corda Mine consist of small pipe-like bodies localized along faults and dike-filled fractures in volcanic and sedimentary rocks. The largest body mined to date, at the No. 1 open pit, occurs in a pipe about 20 feet in diameter that has been mined to a depth of about 80 feet below the outcrop down a steep southwest dip. The ore consists of cinnabar, metacinnabar, and some native mercury in a gangue of quartz and hydrothermally altered volcanic rocks. This ore shoot has yielded a total of 155 flasks of mercury and ore is still exposed in the pit bottom. The downward extent of the body is not known. A similar ore shoot has been mined at the No. 2 open pit where the ore shoot is about 25 feet by 40 feet in cross section and is localized along the trough formed by a sharp fold or bend in a highly fractured and hydrothermally altered rhyolite dike that intrudes mudstone and sandstone. This shoot has been mined to a depth of about 20 feet and has yielded about 10 flasks of mercury.

A small, high grade, shoot of ore 2 to 3 feet in diameter is presently being mined by an inclined shaft. This shoot has been mined down a dip of about 50° and is localized in a fault zone between sandstone and mudstone. The fault zone contains heavy gouge and rounded boulders of serpentine. About 15 flasks of mercury have been recovered from this ore shoot.

Sampling

There were no samples taken during the field examination. The only exposures of cinnabar-bearing material are within the excluded areas of open pits Nos. 1 and 2. Outside of these excluded areas the cinnabar occurs as widely disseminated grains and crystals in alluvial and landslide material. The ore that has been mined from the open pits is reported to have yielded from 10 to 66 pounds of mercury per ton and averaged about 15 pounds per ton.

Ore Reserves

There are no reserves of measured ore. Some reserves are indicated, and additional material can be inferred, in the downward continuation of the mercury-bearing ore shoots that have been mined in the open pits. About 1,000 tons of ore that averages 10 pounds of mercury per ton is indicated at Pit No. 1 and an additional 1,000 tons of the same grade is inferred. At Pit No. 2 indicated and inferred reserves of about the same average grade are estimated to total about 1,000 tons. A few tons of mercury-bearing material can be inferred at Pit No. 3 and in the inclined shaft but this ore is thin and spotty, requiring the mining of a large volume of rock for a little ore.

EXPLORATION

Applicant's Proposal

The applicant proposed to explore the property by a two-stage project consisting of magnetometer surveying, backhoe and bulldozer trenching, and rotary drilling. Total cost estimated for the project was $99,417.54. The purpose of the proposed work was to find the source of cinnabar crystals found by panning of the soil in numerous places on the property. Previous work, of the type proposed, has not been successful in finding minable ore shoots. Specific targets are lacking and the proposed work is largely prospecting in nature. Possible worthwhile targets exist in the downward continuation of the ore shoots mined from open pits Nos. 1 and 2, but these areas are excluded from the proposed project and the applicant plans to explore these targets at its own expense. Geophysical surveying has not been demonstrated to be a useful tool in exploration of the type of deposit being mined at the Corda property and its use would be experimental.

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

OME-6709
(Mercury)

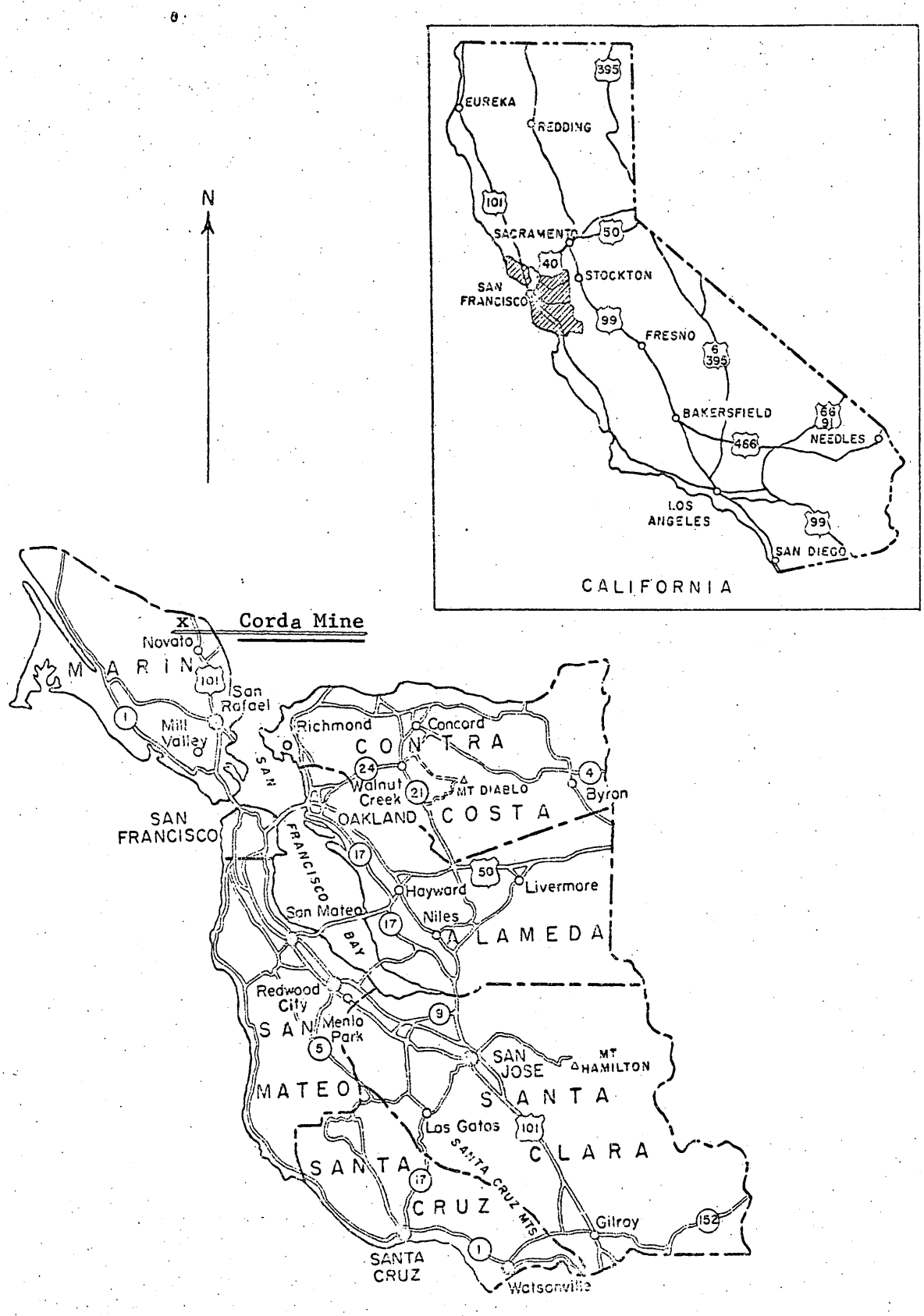


Figure 1. INDEX MAP OF ALAMEDA, CONTRA COSTA, MARIN, SAN FRANCISCO, SAN MATEO, SANTA CLARA, AND SANTA CRUZ COUNTIES, CALIFORNIA

0 20 40 60 Miles

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
4/15/68	Peters	120
4/16/68	Kirkham	120
"	On leave	110
		220
		120M

APR 16 1968

AIRMAIL

Memorandum

To: Field Officer, Region II

From: Chief, Office of Minerals Exploration

Subject: OME-6709 (Mercury)
Red Jacket Mines, Ltd.
Corda Mine
Marin County, California

The subject application is referred to you for further consideration, a field examination if warranted, and recommendations.

Although the application is complete and well prepared we believe that the proposed program of drilling, trenching, and magnetometer surveying may be overly ambitious in relation to the size and grade of the potential deposit. In particular, we question the justification for drilling 58 holes totalling 14,200 feet, with many holes spaced on 25 foot or less intervals.

If exploration is warranted, it seems that the initial work should be limited to the more promising targets. Should favorable results be obtained, the project could be expanded to include other target areas, however, at considerable less drill footage than presently proposed.

We note that many of the proposed drill holes are located on or very near to the outer boundaries of areas that the Applicant wishes to exclude from Government liens. If a contract is recommended the holes should be relocated a reasonable distance away from the boundary lines.

A review of the Applicant's cost estimate indicates that allowances for personal services, mobilization, and accounting are high, and would necessarily need trimming if a contract is recommended.

Harold Kirkham

For:
Frank E. Johnson

cc: Director's Reading File
Division File
Economic Geology File
OME File
OME Reading File
Mr. Peterson
130

ECPeterson/bsl 4/15/68

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
4/15/68	Peterson	120
4/16/68		120
"	On leave	110
		220
		120M

APR 16 1968

Red Jacket Mines, Ltd.
1018-A Anacapa Street
Santa Barbara, California 93101

Re: OME-6709 (Mercury)
Red Jacket Mines, Ltd.
Corda Mine
Marin County, California

Gentlemen:

Your application for exploration assistance has been reviewed in our Washington Office and referred to Mr. Harold K. Stager, Field Officer, Region II, Office of Minerals Exploration, U. S. Geological Survey, 345 Middlefield Road, Menlo Park, California 94025.

Mr. Stager will notify you if he requires additional information, and to arrange for an on-site examination of the property, if necessary.

Sincerely yours,

Harold Kirkman

For: Frank E. Johnson
Chief, Office of
Minerals Exploration

cc: Director's Reading File
Division File
Economic Geology File
OME File
OME Reading File
Mr. Peterson
Region II

ECPeterson/bsl 4/15/68

GEORGE HOWARD GAUL
CERTIFIED PROFESSIONAL GEOLOGIST
No. 1684

P. O. Box 2007
SAN RAFAEL, CALIFORNIA 94902

AREA CODE 415
453-6304

April 9, 1968

6709

Mr. Harold K. Stager
Office of Minerals Exploration
345 Middlefield Road,
Menlo Park, California

Re: OME exploration loan
for Red Jacket Mines
Corda Mine, Marin Co.,Cal.

Dear Mr. Stager:

On April 5, 1968 I brought to your office an application for an exploration loan on the Corda Mine in Marin County, California.

If this loan is approved, Red Jacket Mines, Ltd. will provide a performance bond (using Standard Form 25) executed by an approved corporate surety or two responsible individual sureties. This will be in lieu of the lien agreement from the land owner.

Very truly yours,

George H. Gaul

George H. Gaul
consultant for Red Jacket Mines

OFFICIAL
COPY
O. M. E.
RECEIVED
APR 12 1968

INITIALS	CODE
	~~130~~
Gof	120 m
FEJ	~~110~~
CO	120 P

RECEIVED
APR 10 1968
OFFICE OF MINERALS EXPLORATION
U.S. GEOLOGICAL SURVEY
MENLO PARK, CALIF.

April 8, 1968

Red Jacket Mines, Ltd
1018-A Anacapa Street
Santa Barbara, California 93101

Subject: OME-6709

Gentlemen:

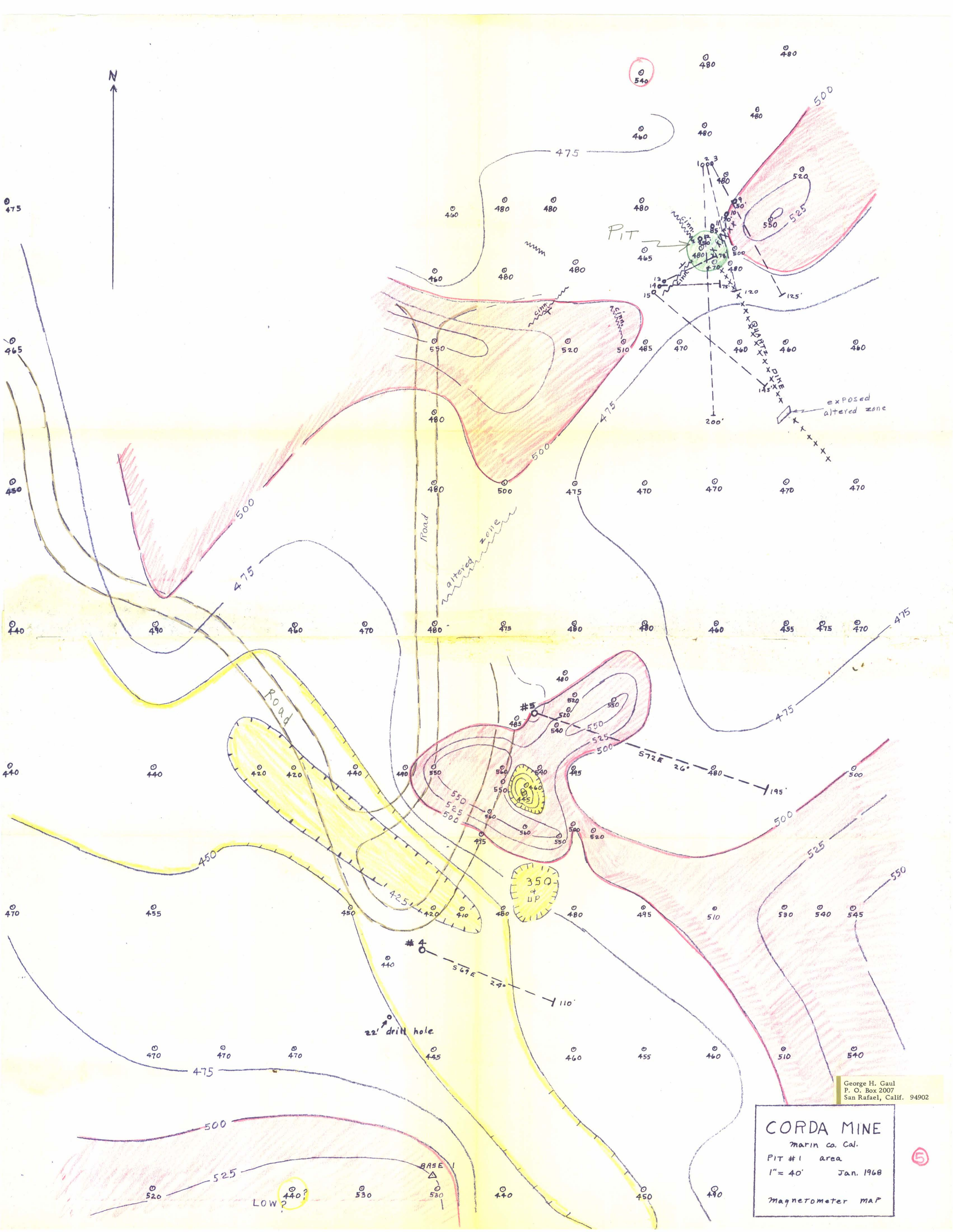
Your application for exploration assistance, dated April 4, 1968, submitted to our office at Menlo Park, California, has been assigned Docket No. OME-6709.

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

Sincerely yours,

Frank E. Johnson
Chief, Office of
Minerals Exploration

Copy to Region II


N
PIT
QUARTZ DIKE
exposed altered zone
altered zone
Road
Road
#5
572E 26° 195'
#4
569E 24° 110'
350 & UP
22' drill hole
BASE 1
LOW?
CORDA MINE
Marin Co. Cal.
PIT #1 area
1" = 40'
Jan. 1968
Magnetometer MAP
George H. Gaul
P. O. Box 2007
San Rafael, Calif. 94902
5

George H. Gaul
P. O. Box 2007
San Rafael, Calif. 94902

4

DRILL HOLES

C-1 Had cinnabar most of the way and visible native mercury before the main ore zone was reached between 65-75 feet. This ore averaged over 6 pounds per ton. Much pyrite was in last 2/3s of hole.

C-2 Had minor amounts of cinnabar with the zone 80 to 90 having 1 lb/ton.

C-3 Had minor amounts of cinnabar with best 55 to 60 feet where the pyrite became abundant to total depth.

C-4 Had good dhow of cinnabar to 30 feet.

C-5 Trace of cinnabar 30 to 45 feet.

C-9 Had from ½ to 2 pounds cinnabar to TD. Best 25 to 35 feet.

C-10 Had less than 1 pound per ton to TD.

C-11 Had less than 1 pound per ton to TD.

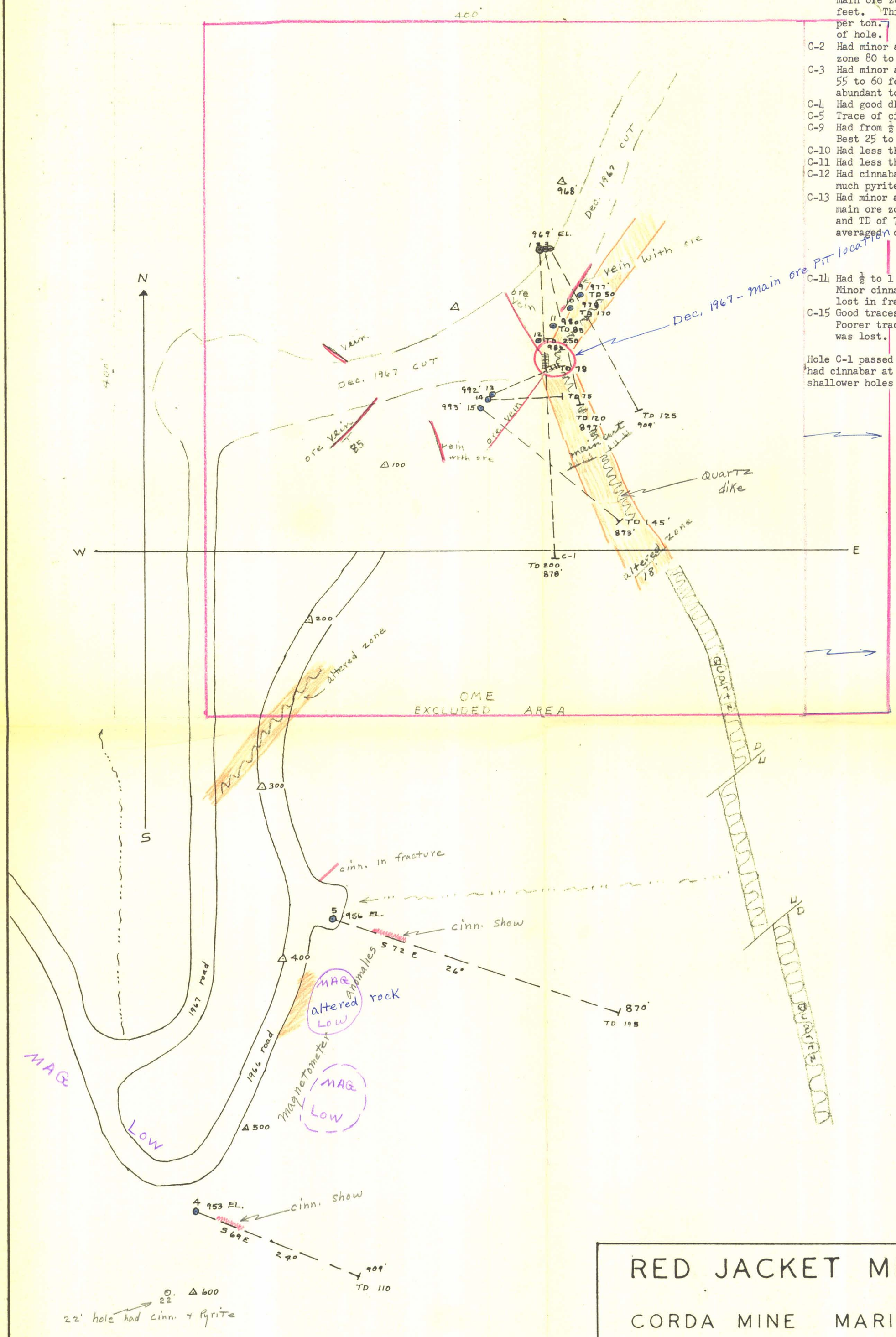
C-12 Had cinnabar to TD of 250 feet. Also much pyrite.

C-13 Had minor amounts of cinnabar until the main ore zone was reached between 65 and TD of 78' in quartz. The 13' averaged over 6 pounds per ton.

C-14 Had ½ to 1 pound from surface to 50'. Minor cinnabar below that. Circulation lost in fracture at TD.

C-15 Good traces of cinnabar to 50 feet. Poorer traces to TD where circulation was lost.

Hole C-1 passed below holes 14 and 15 and had cinnabar at the intersections while the shallower holes did not.



BASE 1 △ TOP STAKE BASE TREE
1000 feet assumed elevation

RED JACKET MINES, LTD.

CORDA MINE MARIN CO. CAL.

PIT 1

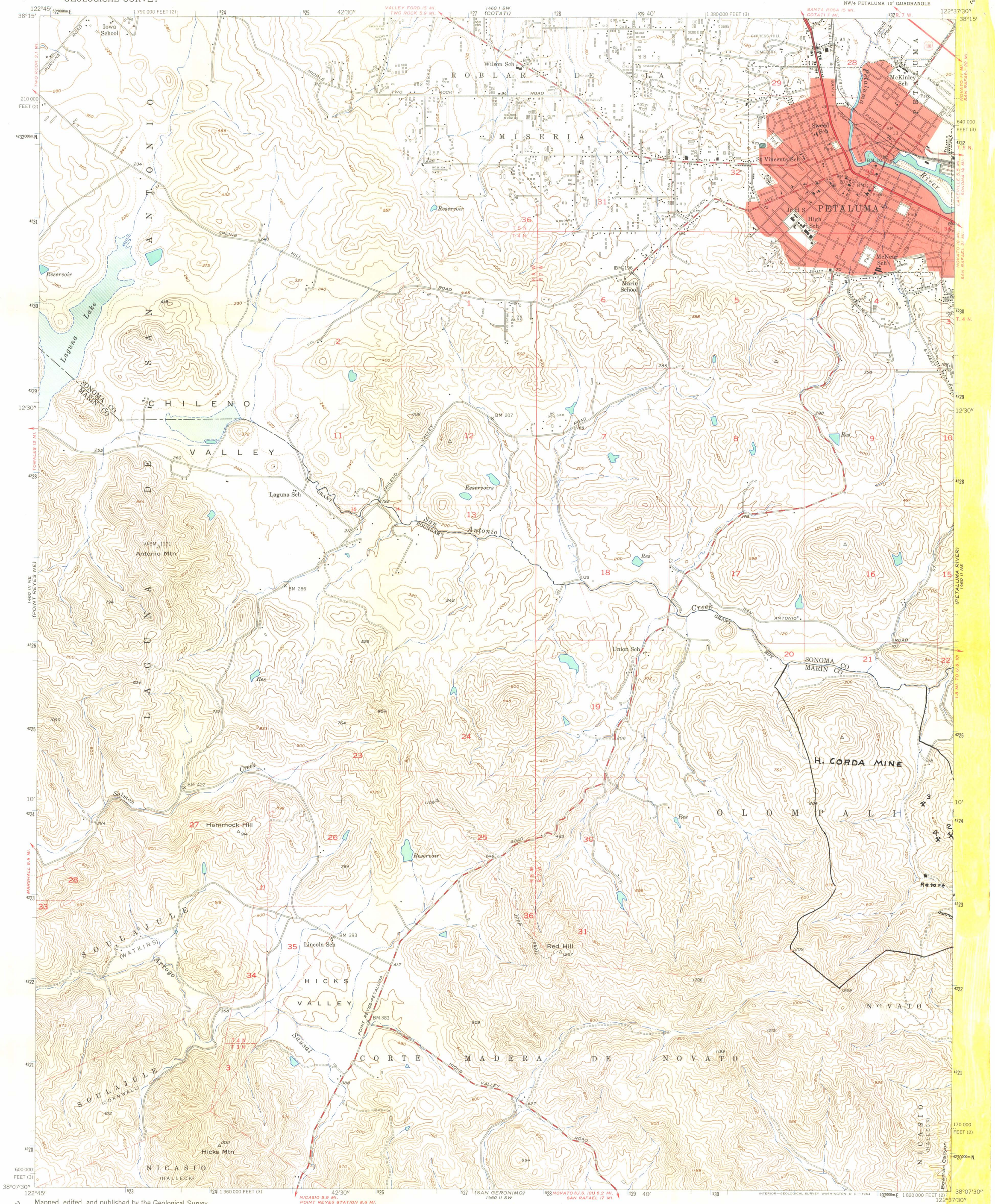
SCALE 1" = 40'

OCT. 1966
DEC. 1967

24X36 PRINTED ON NO. 1000H CLEARPRINT

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

PETALUMA QUADRANGLE
CALIFORNIA
7.5 MINUTE SERIES (TOPOGRAPHIC)
NW/4 PETALUMA 15' QUADRANGLE



Mapped, edited, and published by the Geological Survey

Control by USGS and USC&GS

Topography from aerial photographs by multiplex methods and by plane-table surveys 1953. Aerial photographs taken 1952

Polyconic projection. 1927 North American datum
10,000-foot grids based on California coordinate system, zones 2 and 3

Red tint indicates areas in which only landmark buildings are shown

Dashed land lines indicate approximate locations

Unchecked elevations are shown in brown

1000-meter Universal Transverse Mercator grid ticks, zone 10, shown in blue

GN MN 0°12' 4 MILS 18° 320 MILS

UTM GRID AND 1953 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

SCALE 1:24 000

1 ½ 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

CONTOUR INTERVAL 40 FEET
DASHED LINES REPRESENT 10 FOOT CONTOURS
DATUM IS MEAN SEA LEVEL

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER 25, COLORADO OR WASHINGTON 25, D. C.
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

CALIF

QUADRANGLE LOCATION

ROAD CLASSIFICATION

Heavy-duty — Light-duty
Medium-duty — Unimproved dirt
U. S. Route

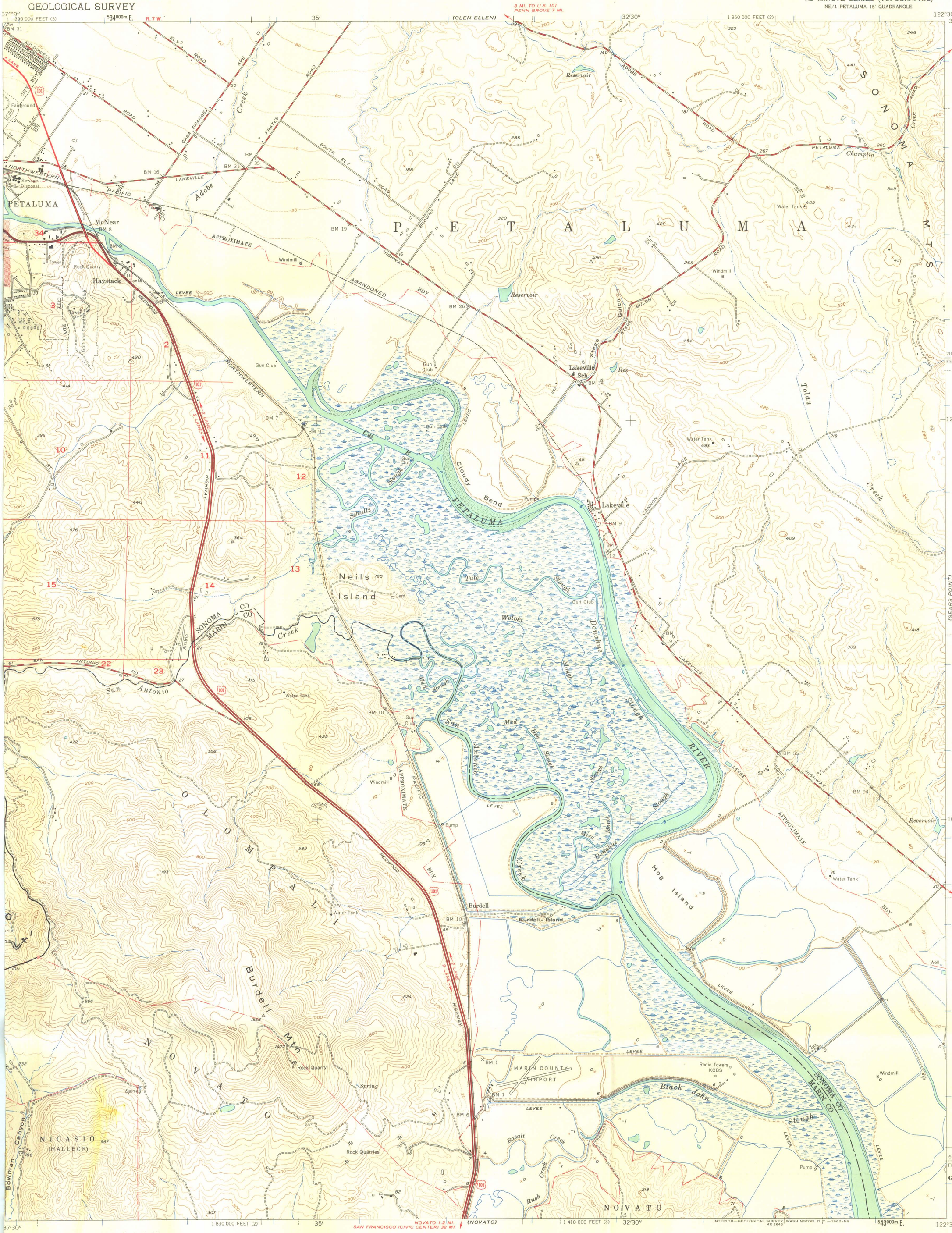
PETALUMA, CALIF.
NW/4 PETALUMA 15' QUADRANGLE
N 3807.5—W 12237.5/7.5

1953

AMS 1460 II NW—SERIES V895

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

PETALUMA RIVER QUADRANGLE
CALIFORNIA
7.5 MINUTE SERIES (TOPOGRAPHIC)
NE/4 PETALUMA 15' QUADRANGLE



Mapped, edited, and published by the Geological Survey

Control by USGS, USC&GS, and USCE

Topography from aerial photographs by multiplex methods and by plane-table surveys 1954. Aerial photographs taken 1952

Hydrography compiled from USC&GS Chart 5533

Polyconic projection. 1927 North American datum
10,000-foot grids based on California coordinate system, zones 2 and 3

Red tint indicates areas in which only landmark buildings are shown

1000-meter Universal Transverse Mercator grid ticks, zone 10, shown in blue

TRUE NORTH
MAGNETIC NORTH
18°
APPROXIMATE MEAN DECLINATION, 1954

SCALE 1:24000

1 ½ 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

CONTOUR INTERVAL 40 FEET
DOTTED LINES REPRESENT 10 FOOT CONTOURS
DATUM IS MEAN SEA LEVEL
DEPTH CURVES IN FEET—DATUM IS MEAN LOWER LOW WATER
SHORELINE SHOWN REPRESENTS THE APPROXIMATE LINE OF MEAN HIGH WATER
THE AVERAGE RANGE OF TIDE IS APPROXIMATELY 5 FEET

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
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CALIF
QUADRANGLE LOCATION

ROAD CLASSIFICATION

Heavy-duty — Light-duty
Medium-duty — Unimproved dirt
U. S. Route

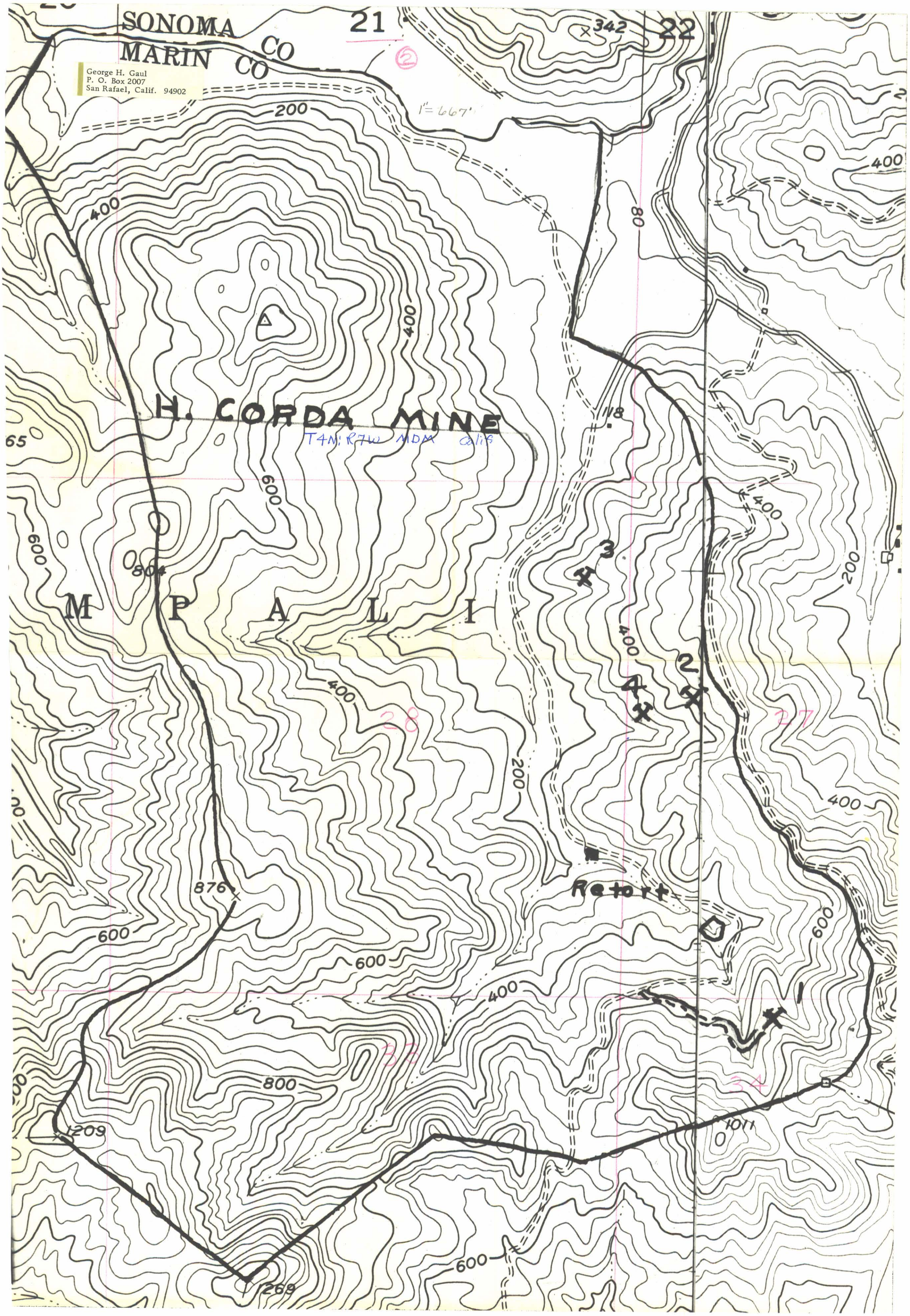
INTERIOR—GEOLOGICAL SURVEY, WASHINGTON, D. C.—1962-NS
MR 2643

PETALUMA RIVER, CALIF.
NE/4 PETALUMA 15' QUADRANGLE
N3807.5—W12230/7.5

1954

George H. Gaul
P. O. Box 2007
San Rafael, Calif. 94902

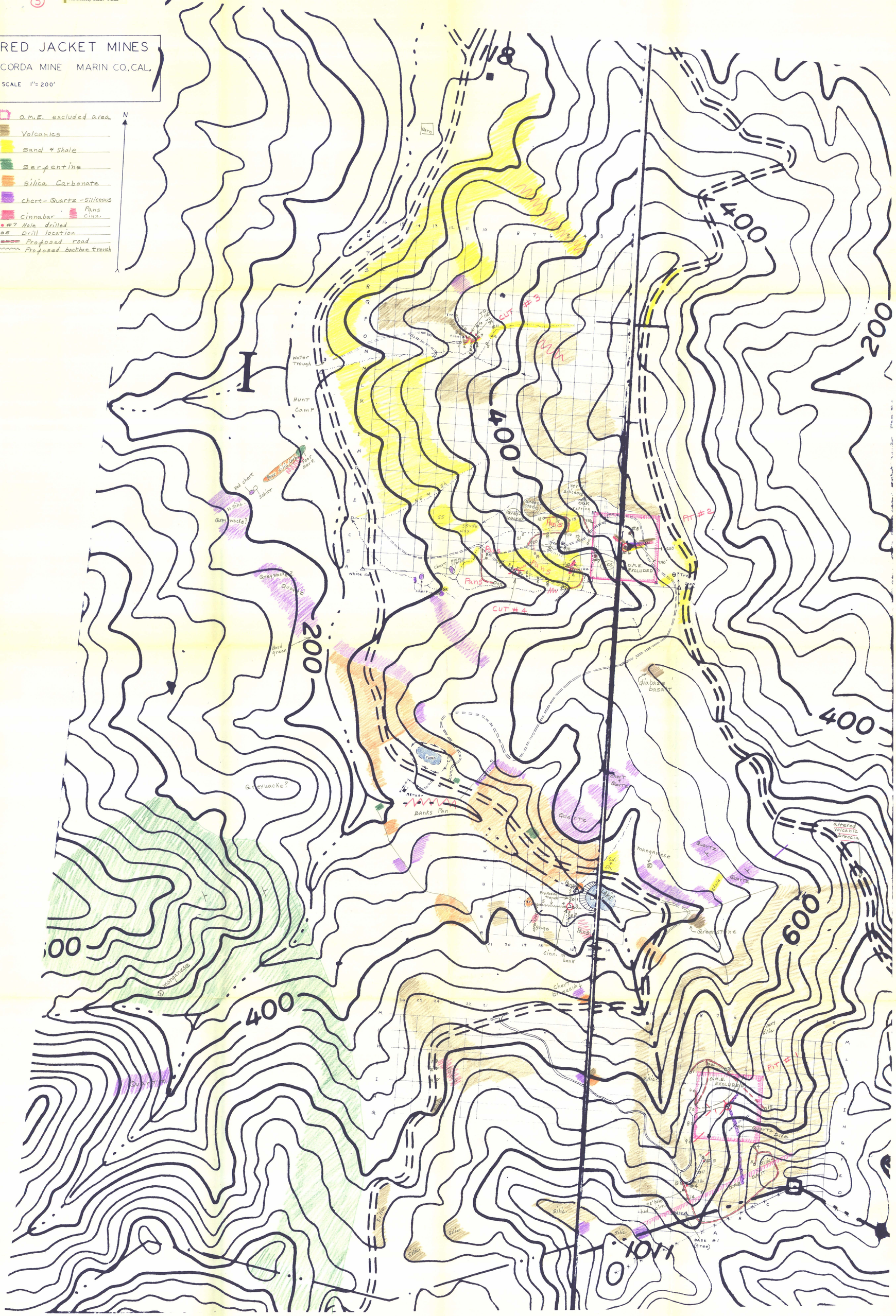
1


SONOMA CO
MARIN CO
21
22
342
George H. Gaul
P. O. Box 2007
San Rafael, Calif. 94902
1" = 667'
200
400
80
H. CORDA MINE
T4N; R7W MDM Calif
600
804
M P A L I
3
4
2
1
Retort
876
1209
1011
269
800

RED JACKET MINES

CORDA MINE MARIN CO., CAL.

SCALE 1" = 200'

- O.M.E. excluded area
- Volcanics
- Sand & Shale
- Serpentine
- Silica Carbonate
- Chert - Quartz - Siliceous
- Cinnabar / Pans Cinn.
- #7 Hole drilled
- 08 Drill location
- Proposed road
- Proposed backhoe trench

N