UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration

OFFICIAL DOCKET FILE

Terminated (or cancelled) without certification. DMEA No. 1534

This is the official contract file containing all official records of the project. Duplicate material has been removed. The records contained in the files are checked and are arranged in this manner:

Left Side

Certificate of Audit (Final).

Interim Audit(s).

Report of Review.

Termination Notice or Agreement.

✓ Recision Notice.

Assignment of Contract.

✓ Contract Amendments (latest on top).

✓ Contract with all exhibits and annexes.

Owner's Consent to Lien.

✓ Subordination Agreement.

Leases and assignments of leases.

✓ Application and attachments.

Schedule of Collections.

Operator's monthly reports and all attachments (latest on top).

Right Side

Project summary.

Work completed analysis.

✓ All other material is filed in chronological order with correspondence including the following reports as checked:

Final Field Team Report. (Tab)

Operator's Final Report.

Interim Reports.

✓ On-site Exam Report(s). (Tab)

Settlement Sheets.

If additional folders are required because of volume of records, show folder numbers and contents below:

Maps in folder number _____

Operator's Monthly Reports in folder number _____

J. Z. M.
Reviewer's Initials

7973

GOVERNMENT COPY

NOTICE OF REVOCATION OF EXPLORATION PROJECT
CONTRACT

June 24, 1952

To: Waite Minerals, Inc.
An Oregon Corporation
Grants Pass, Oregon

NOTICE is hereby given that Exploration Project Contract Idm-E21[illegible], Docket No. DMA 1534X, dated November 30, 1951, shall be and is hereby rescinded, revoked, and cancelled as of April 21, 1952, before any actions have been taken or costs incurred thereunder, without any obligation whatever, one party to the other, the same as if said contract had never been entered into.

The contract is rescinded, revoked, and cancelled by your failure to start work under the contract before the deferred starting date, April 21, 1952, and the later deadline of June 15, 1952, which was given you in the Field Team letter of June 5, 1952.

A. W. Weissenborn

A. W. Weissenborn
Executive Officer, DMEA
Field Team, Region II

[illegible] 7-1952

Wash

Dma 1534X
Copper

AMENDMENT NO. 1

It is agreed this 26th day of March 1952, between the United States of America, acting through the Department of the Interior, Defense Minerals Administration and Waite Minerals, Inc., an Oregon corporation, Grants Pass, Oregon

each acting in consideration of the agreement of the other to the terms hereinafter set forth, that the Exploration Project Contract Idm-E218 of November 30 1951 between the parties hereto be modified and amended as described in Exhibit "F", attached hereto, which, with any maps or drawings attached therto, is made a part of this aggrement. The effective date of this amendment shall be November 30 1951.

This amendment is made by authority granted the Executive Office, DMA Field Team, Region II in Order No. 2653 by the Acting Secretary of the Interior.

This amendment shall not be constued to increase the estimated total cost of the project, the aggregate total amount which the Government may be obligated to pay, or the percentage of costs which the Government may be obligated to pay, under the provisions of Article 13 of the contract form.

Executed in sextuplicate the day and year first above written.

DEPARTMENT OF ... Defense Minerals ... (REGION II) APR 7 1952

WAITE MINERALS, INC.
(Operator)

By E. R. Waite

The United States of America

By A. E. Weissenborn
A. E. Weissenborn, Exec. Officer
DMEA Field Team, Region II

WAITE MINERALS, INC.
Exploration Project Contract Idm-E218

Amendment No. 1

EXHIBIT "F"

Changes and modifications

The starting of exploration project contract Idm-E218 shall be deferred from November 30, 1951, to not later than April 21, 1952.

MF-500
(June 1951)

Contracts & Audits

Docket No. DMA 1534X

Commodity Cu

Idm-E218

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

EXPLORATION PROJECT CONTRACT [1]

It is agreed this 30th day of November, 1951, between the United States of America, acting through the Department of the Interior, Defense Minerals Administration, hereinafter called the "Government," and [2] Waite Minerals, Inc., an Oregon corporation, Grants Pass, Oregon

hereinafter called the "Operator," as follows:

1. *Authority for contract.* This agreement is entered into under the authority of the Defense Production Act of 1950, pursuant to Mineral Order 5, entitled "Regulations Governing Government Aid in Defense Exploration Projects."

2. *Operator's property rights.* The exploration project shall be conducted on that certain property situated in the State of Oregon, County of Josephine described as follows: [3] deeded land described as NW 1/4 of sec. 36, T. 40 S., R. 8 W., W. M.

with respect to which the Operator represents and undertakes: [4]

(*a*) That he is the sole owner, in possession and entitled to possession, and that the property is subject only to the following claims, liens, or encumbrances as to each of which the subordination agreement of the holder is attached: Mortgage, with balance due of $20,000 held by Josephine County, Oregon

(*b*) ~~That he is a lessee, in possession and entitled to possession, and the subordination agreement of the lessor is attached.~~

3. *Exploration project.* The Operator, within 60 days from the date of this contract shall commence work on a project of exploration for [5] copper; shall prosecute the work efficiently, expertly, in a workmanlike manner, in accordance with good mining standards, with suitable and adequate equipment, materials, and labor, all properly designed to bring the project to completion within a period of [6] 8 months from the date of this contract. The exploration project and the work to be performed are more fully described on Exhibit "A" attached hereto, which, with any maps or drawings thereto attached, is made a part of this contract.

4. *Performance of the work.* The work shall be performed by the Operator, under his sole direction and control: *Provided,* That with the consent of the Government and its written approval of the contract or contracts, all or any part of the work may be performed by the Operator through contract or contracts with independent contractors. The Government shall have the right to enter and observe and inspect the work at all reasonable times, and the Operator shall provide the Government with all available means for doing so. The Government may consult with and advise the Operator on all phases of the work.

5. *Fixtures and improvements.* The Operator shall devote the land and all existing improvements, facilities, buildings, installations, and appurtenances to the purposes of the exploration project without any allowance for the use, rental value, depreciation, depletion, or other cost of acquiring, owning, or holding possession thereof. Any additional facilities, buildings, and fixtures, to be purchased, installed, or erected by the Operator, with the estimated cost of each, to which the Government will contribute currently its agreed pro rata share, are listed in Exhibit "A" attached hereto. The difference between the cost of such additional facilities, buildings, or fixtures, and the salvage value thereof at the conclusion of the work, shall be charged as a cost of the project to which the Government has contributed its pro rata share.

6. *Operating equipment.* Any operating equipment to be rented, purchased, or furnished by the Operator, with the allowable rental, purchase price, or depreciation, as the case may be, is listed under appropriate headings in Exhibit "A" attached hereto. As to equipment purchased for the project, the Government will contribute its agreed pro rata share of the cost thereof, and the difference between the cost and the salvage value at the conclusion of the work shall be charged as a cost of the project to which the Government has contributed its pro rata share.

[1] If sufficient space is not provided in any blank, use an extra sheet of paper and refer to it in the blank.
[2] State name, address, and nature of organization if any.
[3] Give legal description or enough to identify the property.
[4] Strike out the provision not applicable.
[5] Name of mineral.
[6] Not in excess of 2 years.

7. *Title to and disposition of property.* All facilities, buildings, fixtures, equipment or other items costing more than $50 each, paid for or purchased with funds contributed jointly by the Operator and the Government, shall belong to the Operator and the Government jointly, in proportion to their respective contributions, and upon the termination of the contract, if they have any salvage value, shall be disposed of for their joint account unless the Government, in writing, waives its interest in any such items. The Government may require the dismantling, severance from land, and removal of any such items in order to realize its interest in the salvage value thereof, and the cost of any such removal and of the disposal of the items shall be for the joint account of the parties in proportion to their respective interests.

8. *Labor and supervision.* An itemized schedule of labor, by numbers and classes (miners, muckers, millmen, etc.), and of supervisors, by numbers and positions, with the maximum wages or salaries that may be paid to each as an allowable cost of the project is set forth in Exhibit "A" attached hereto.

9. *Rehabilitation and repairs.* A statement of the cost of any necessary rehabilitation or repairs to put existing facilities, buildings, installations, and fixtures into useful and operable condition and which are to be allowed as costs of the project is included in Exhibit "A."

10. *Allowable costs of the project.* The costs of the project in which the Government will participate are limited to the necessary, reasonable, direct costs of performing the exploration work, including the costs of materials, supplies, engineering, power, water, analytical work, accounting, and utilities, including items of equipment costing less than $50 each; and the costs referred to in Articles 5, 6, 8, and 9, and the exhibits annexed to and referred to in this contract. Although the Government may pay part of the cost of new or additional facilities, structures, buildings, and equipment, only the depreciation on such items, computed as indicated in Articles 5 and 6, will be charged as a cost of the project. No items of general overhead, corporate management, interest, taxes, or any other indirect costs not expressly allowed by these provisions, or work performed or costs incurred before the date of this contract, shall be allowed as costs of the project in which the Government will participate.

11. *Accounts and audits.* The Operator shall keep suitable records and accounts of operations, which the Government may inspect and audit at any time. The Government may at any time require an audit of the Operator's records and accounts by a certified public accountant, the cost thereof to be treated as a cost of the project. The Operator shall keep and preserve said records and accounts for at least 3 years after the completion of the project or the termination of this contract.

12. *Progress reports.* The Operator shall provide the Government with monthly reports of work performed under the contract upon forms to be provided by the Government. Each monthly progress report shall bear the certification of the Operator and shall constitute the Operator's invoice of costs incurred on the project during the period covered by the report.

13. *Payment to the Operator.* The monthly progress report (invoice), to the extent approved by the Government, shall be processed for payment by the Government. Payment shall be made in the amount of 50 percent of the approved costs incurred; *Provided,* That the aggregate total of all sums paid by the Government under this agreement shall not exceed $15,000.00, which is 50 percent of the agreed estimated total cost of this project, $30,000.00.

14. *Final reports by Operator.* Upon completion of the project or termination of this contract, the Operator shall provide the Government with a comprehensive geologic and engineering report, including an estimate of ore reserves, to the best of his ability. Four copies of all reports shall be furnished to the Government.

15. *Repayment by Operator.* If, upon the completion of the exploration project or termination of the contract, the Government considers that a discovery or development has resulted from the work from which commercial production of ore may be made, the Government, within 6 months thereafter, shall so certify to the Operator, particularly describing and delimiting its estimate of the discovery or the development. Thereafter, if and as ore is produced as a result of such discovery or development, the Operator and his successor in interest shall be and become obligated to pay to the Government a percentage royalty on the net smelter returns or other net proceeds realized from such ore, concentrates, or metal produced within ten (10) years from the date of this contract, until the total amount contributed by the Government, without interest, is fully repaid or said 10 years have elapsed, whichever occurs first, as follows:

Of net smelter returns or other net proceeds not in excess of eight dollars ($8.00) per ton of ore: One and one-half (1½) percent.

Of net smelter returns or other net proceeds in excess of eight dollars ($8.00) per ton of ore: One and one-half (1½) percent, plus one-half (½) percent for each additional full fifty cents ($0.50) in excess of eight dollars ($8.00) per ton of ore, but not in excess of a maximum of five (5) percent.

This obligation to repay from net returns or proceeds shall be and remain a claim and lien upon the mineral deposit which is the subject of the exploration project and upon any production resulting from such discovery or development, in favor of the Government, until fully paid, or until said 10-year period has elapsed; and this claim and lien and the Government's right to repayment shall survive any termination of the contract, whether by completion of the exploration project or otherwise. This article is not to be construed as imposing any obligation on the Operator or his successor in interest to produce ore from any such discovery or development.

16. *No assignment of contract.* Without the written consent of the Government, the Operator shall not assign or otherwise transfer or hypothecate this contract or any rights thereunder.

17. *Termination and completion.* The Government may, at any time, by written notice to the Operator, terminate this contract: (*a*) If the Operator fails to provide his share of the money necessary to prosecute operations pursuant to the terms of the contract; (*b*) if the Operator, in the opinion of the Government, fails to prosecute operations pursuant to the terms of the contract; or (*c*) if in the opinion of the Government, operations up to the time of the notice have not indicated the probability of making any worthwhile discovery and in the opinion of the Government further operations are not justified. Upon the completion of the project or any termination of the contract the Operator shall render to the Government a full and final accounting of his operations under the contract and his expenditures of money; shall dispose of any unused materials, supplies, and equipment for the joint account of the Operator and the Government in the proportion of their respective interests; and shall pay to the Government its pro-rata share of any money remaining.

Executed in sextuplicate the day and year first above written.

Waite Minerals, Incorporated
(Operator)

By E. P. Waite

THE UNITED STATES OF AMERICA

By C. Mittendorf

ACTING Administrator, Defense Minerals Exploration Administration

U. S. GOVERNMENT PRINTING OFFICE 16—64066-2

WAITE MINERALS, INC.
DMA 1534X
Exploration Project Contract

Exhibit "A"

Performance of the Work

The proposed project will explore, by diamond drilling, the mineralized surface areas indicated by the Bureau of Mines soil sampling program at the south side workings of the Queen of Bronze mine. This drilling is planned to explore for lenses of massive sulfide ore available for selective mining underground. It will also explore the possibility that these mineralized areas may be suitable for mining by large scale methods if the tonnage and grade of ore are sufficiently large.

Ten diamond drill holes shall be drilled, having a total length of 2,700 feet. The area to be drilled and the approximate location of the holes are shown on the attached map. The holes shall be inclined to crosscut the ore zone with depth for the reason that the massive ore lenses are steeply dipping and could be missed if vertical holes were drilled. Both core and sludge shall be assayed when mineralized ground is encountered. Minimum size of hole shall be AX.

WAITE MINERALS, INC.
DMA 1534X

EXHIBIT "A" (Cont.)

Estimated cost of project

2,700 feet of contracted diamond drill hole @ $6/ft.	$16,200.00
Supervision - 6 months @ $500/mo.	3,000.00
Sampling - 2,700 feet @ $2/ft.	5,400.00
Assaying - 2,700 feet @ $1/ft.	2,700.00
Contingencies (reaming, cementing, and misc. expense)	2,700.00
Total	$30,000.00

Fixtures and improvements

None

Operating equipment

Does not apply to this contract

Labor and supervision

Classification	Max. wage rate
Samplers	$2.00 per hour

The salary of one supervisor at $500.00 per month for a period of 6 months shall be allowable as a cost of the project.

The cost of all other labor necessary for the project is included in the contracted unit cost of drilling.

NOTE: The choice of a supervisor to direct the operations described herein shall have prior approval by the DMA Field Team, Region II.

Rehabilitation and repairs None

WAITE MINERALS, INC.
DMA 1534X

EXHIBIT "A" (Cont.)

Inasmuch as the items 'Sampling', 'Assaying', and 'Contingencies', totaling $10,800, are not stated in terms of units of actual costs, as called for by the contract form, on which the Government's contribution will be based; and inasmuch as the item 'Labor' does not state the 'number' to be employed, as required by the contract form, it is emphasized that the Government will participate in costs arising out of these items only to the extent that it considers them to be necessary, proper and reasonable.

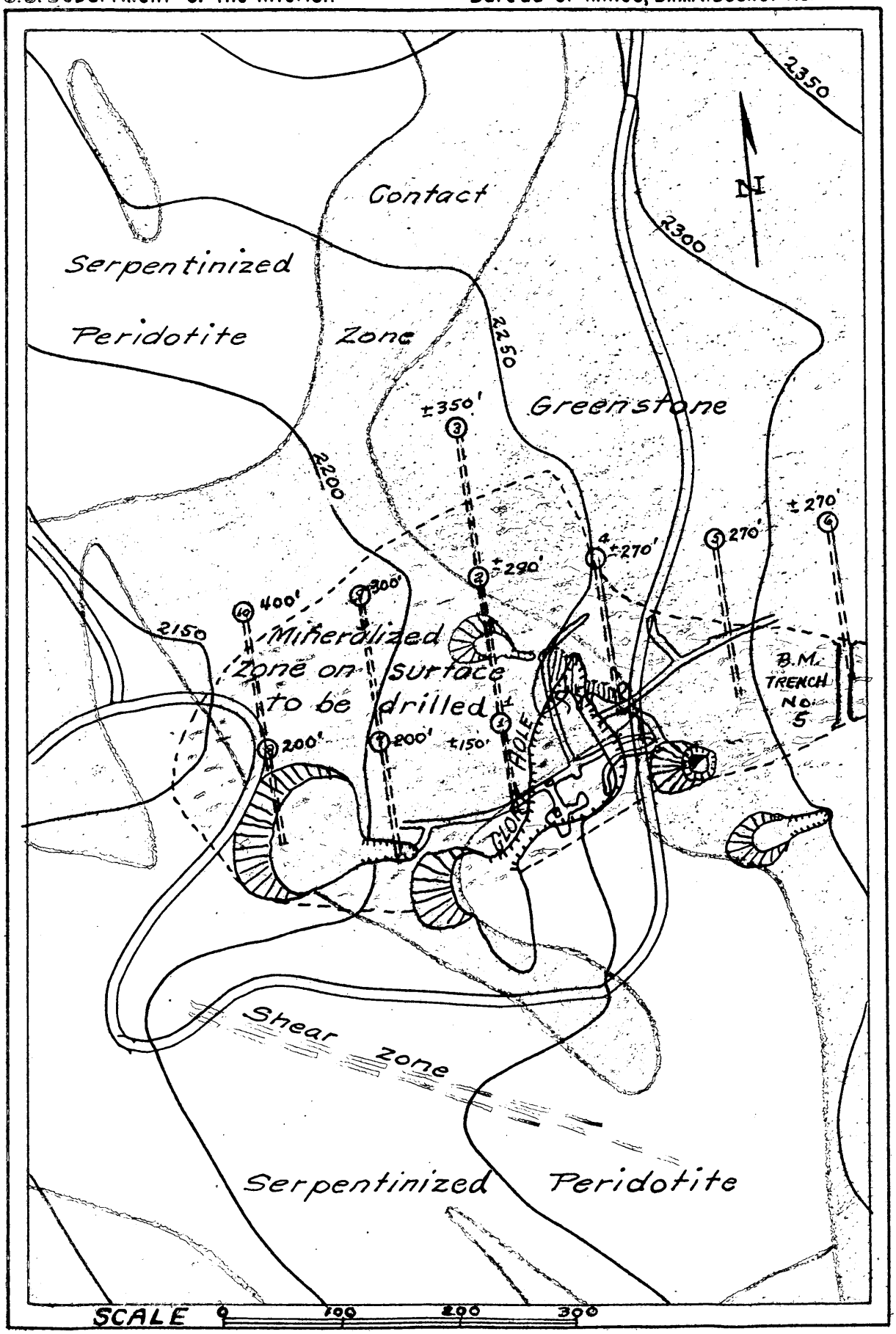


Figure 4.— Geology and workings – South Queen of Bronze mine, Josephine County, Ore.

MF-201

MORTGAGEE'S
~~MORTGAGOR'S~~ SUBORDINATION AGREEMENT

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, the ~~owner~~ undersigned is the holder of a mortgage, claim, lien, or encumbrance dated April, 1946, recorded in Books 47, 68, pages 194, 458 of the records of the county of Josephine, State of Oregon, upon that certain parcel of ground described in a certain Exploration Project Contract dated November 30, 1951, between Waite Minerals, Inc., an Oregon corporation, Grants Pass, Oregon, the owner of said property and the United States of America;

NOW, THEREFORE, the undersigned does by these presents subordinate all of his right, title, and interest in said mortgage, claim, lien, or encumbrance to the right, title, and interest of the United States of America under the provisions of said Exploration Project Contract, and agrees that the lien and claim of the United States of America under the provisions of said contract shall be prior to the undersigned's rights under the provisions of said mortgage, claim, lien, or encumbrance; and

The undersigned agrees to commit no act nor assert any right, title, or interest under said mortgage, claim, lien, or encumbrance that might contravene or conflict with the prior lien and claim of the United States of America under the provisions of said Exploration Project Contract.

This undertaking and covenant shall be binding upon the heirs, successors, and assigns of the undersigned.

Dated this 25th day of October, 1951

Josephine County Court
Raymond A Gathrop
County Judge
Fred Richards
County Comm
L M Mitchell
Co Comm

U. S. GOVERNMENT PRINTING OFFICE 9-40787

Form MF-103
(April 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R10
Approval expires 6-30-51.

APPLICATION FOR AID FOR AN EXPLORATION PROJECT PURSUANT TO MINERAL ORDER 5, UNDER DEFENSE PRODUCTION ACT OF 1950

DO NOT FILL IN THIS BLOCK

Docket No. DMA-1534X

Date received 10-29-51

Participation

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT 29 1951

Waite Minerals, Incorporated
1028 Northeast Seventh Street
Grants Pass, Oregon

Name and address of applicant

Date August 14, 1951

FILL IN THIS BLOCK

Date of application August 14, 1951

Estimated cost $106,940.00

Mineral or metal Copper

Percentage of Government participation 50%

Location of mine Takilma, Oregon

Josephine County

Date of filing MF-100 May 24, 1951

DMA Docket Number, if available 1534-X

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four signed copies of the application to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive officer thereof, with your name and address on each sheet of the application and all accompanying papers. If any question is inapplicable, or if you cannot answer it, so state on the form. Where the space provided for answer is insufficient, answer on a separate sheet, annex it to the application form, and refer to it in space for answer. If the application is approved, you will be presented with an exploration project contract on Form MF-200, for your signature.

THE APPLICANT

*1. Is applicant an individual, partnership, or corporation?
*2. If a partnership, state names and addresses of partners.
*3. If a corporation, state names and addresses of officers, directors, and five largest stockholders.
*4. Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who will manage the project.
*5. Are you the owner or the lessee of the property?
6. If owner, state what claims, liens, or encumbrances, if any, are against the property.
7. If lessee, attach a copy of the lease and state if it is in good standing.

NOTE.—It will be necessary to procure and attach to the exploration project contract agreements of claimants, lienors, encumbrances and lessors subordinating their interests in the property to the interest of the Government under the contract.

8. Furnish current financial statement, showing assets and liabilities, and a profit and loss statement.
9. How much money is applicant prepared to invest in proposed project? Is it sufficient to pay your part of the cost of the project as detailed in question 23 of this application form, in accordance with the regulations on Government participation (Section 9 of Mineral Order 5)?

*If you have already answered these questions on MF-100, you are not required to answer the questions for this application.

16—64067-1

THE PROPERTY

Give a description of the real property that will be in any way involved in the exploration project, including any existing mine or operating property.

(*b*) Give the legal description of the exact parcel, plot, or area upon which the exploration is to be conducted.

NOTE.—If both areas are the same, so state. The only obligation to repay the Government is from the net earnings from any commercial discovery made in the area specified in (*b*) above in which the exploration is to be conducted, and the expenditure of funds which may be charged as costs of the project must be limited to that area or to work necessary to perform the exploration in that area.

*11. State the present and former names of the property, if any.

*12. State, in detail, the location of the property with reference to towns, railroads, roads, shipping points, including distances and directions and kinds and conditions of roads.

*13. State source and quantity of water available for operations and its sufficiency at all seasons.
State amount of power to be used, rate per hour or other cost, and source.

*14. Describe any existing useable facilities, equipment, buildings, or structure now on the property that will be devoted to the exploration work.

15. State in detail how the ore could be shipped and how and where milled.

*16. History:

(*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for any past suspensions of operations.

(*b*) State briefly the known history and production of adjoining and neighboring properties.

(*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

*17. Production:

(*a*) If mine is in production, furnish the following information:

	Tons per day	*Grade or analysis*	*Cost per ton*	*Net value per ton*
(1) Mining				
(2) Milling				
(3) Shipped or sold				

*18. Ore or mineral reserves: (If property is or has been operating.)

(*a*) Describe the ore or mineral deposits briefly.

(*b*) Submit available maps and assay data.

(*c*) Give estimated tonnage and grade of each class of ore reserves.

19. State any conditions or circumstances regarding the property not sufficiently brought out by the foregoing questions.

THE EXPLORATION

20. For what mineral or minerals and for what types of deposits and ores will the exploration be conducted?

21. Describe briefly, but concisely, the proposed work and the estimated time required to complete it.

NOTE.—The Government will not participate in a project that will require more than 2 years to complete.

22. Furnish statement of the geological basis of the project with particular emphasis on factors leading the operator to expect the finding of commercial ore bodies. This statement should be accompanied by supporting maps such as geological maps, maps of the proposed openings and assay maps, sample lists, and other pertinent data.

THE REQUIREMENTS AND COSTS

23. Tabulate in the form of an itemized statement with a sum for each item the estimated requirements and costs of the project so that the total will give the estimated cost of the project in which the Government will participate, as follows:

(*a*) Labor, by numbers and classes (miners, muckers, millmen, etc.), with wages of each.

(*b*) Supervisors, by numbers and positions, with salaries of each.

(*c*) Cost of necessary repairs to existing facilities, structures, and buildings.

(*d*) Cost of necessary installation or construction of additional facilities, structures, and buildings.

(*e*) Cost of items of equipment, not now owned by the applicant which must be purchased for operations at a cost of $50 or more each.

(*f*) Cost of rental for equipment which the operator proposes to rent.

(*g*) Rental value of items of equipment which the operator now owns and which will be devoted to the work.

(*h*) Cost of materials and supplies, including items of equipment costing less than $50 each.

(*i*) Cost of power, water, utilities, and any other items not provided for above.

24. Furnish a time schedule of the project, stated in terms of months after project is approved, showing progress expected to be accomplished and the money expected to be spent.

CERTIFICATION

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this form and accompanying papers is correct and complete to the best of their knowledge and belief.

WAITE MINERALS, INCORPORATED
(Name of company)

By Ethelbert R. Waite
(Signature of authorized official)

August 14, 1951
(Date)

Vice President
(Title)

Title 18, U. S. Code (Crimes), Section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

*Same as footnote on page 1.

16—64067-1 U. S. GOVERNMENT PRINTING OFFICE

Wa[illegible] Minerals, Incorporated
102[illegible] Northeast Seventh Street
Grants Pass, Oregon

1. Corporation

2. Not applicable

3. President - Chauncey Florey, Medford, Oregon
Vice President - Major E. R. Waite, Grants Pass, Oregon
Secretary - Marjorie Waite, Grants Pass, Oregon
Director - Nelson Florey, Medford, Oregon
Director - Marjorie Florey, Medford, Oregon

Capitalized for 100,000 shares, held by:

Chauncey Florey	25,000	shares
Major E. R. Waite	25,000	"
Nelson Florey	25,000	"
Marjorie Florey	25,000	"
	100,000	"

4. a. Chauncey Florey, Medford, Oregon; President, Waite Minerals, is General Manager of Ross Lumber Company, Medford, Oregon, lumber production $2 million per year, cutting 100,000 bd. ft. per day. Interested in the development and management of mines in southern Oregon.

Major E. R. Waite, Grants Pass, Oregon, has operated and developed chrome, manganese, silver and copper mines for past forty-five years.

b. Walter A. Richelsen, Consulting Mining Engineer, Seattle, Washington, will manage operation. Has thirty-seven years of mining experience in Mexico, United States, Canada and Alaska; employed by large companies including Kennecott Copper Corporation, Phelps-Dodge Corporation and United Verde Copper Company.

5. Owner

6. No liens against property. Balance due on land contract (912 acres) $20,000, payable $2,500 per year to Josephine County. Title to property guaranteed by Commonwealth Title Insurance Corporation.

7. Not applicable.

8. Waite Minerals, Incorporated, Grants Pass, Oregon

Balance Sheet as of August 12, 1951

ASSETS

Cash	none
1. Inventory Mining Supplies	
Compressor - Gardner-Denver, 210 cu.ft. per min.	$ 3,000.00
Pipes (1300', 2"), Valves, etc.	750.00
2 Mine Cars @ $250 each	500.00
Butane Tank - 1280 gal.	760.00
Electric Light Plant - 2000 w.	500.00
2 Jackhammers	400.00
Air hose, Columns, etc.	250.00
3 tons 12 lb. rail @ $150 per ton	450.00
1 Cabin	350.00
Powder, Fuse and Caps	100.00
1 Diamond Drill (Boyle Bros.), Drill rods for 500'	1000.00
5 Diamond Bits @ $57.50	287.50
Boyle Bros. Underground Air Motor	250.00
Total Inventory	$8,597.50
2. Land (912 acres) comprising Queen of Bronze Mine, Lyttle Mine, Mabel Mine, East Cowboy and Cowboy Mines Purchase price from Josephine County	$25,000.00
3. Access roads to all properties	$ 6,000.00
4. Mine Development Costs Sampling, trenching, ore tests	$11,000.00
5. Drifting at Cowboy Mine, 480' @ $15 per ft.	$ 7,200.00
6. Rehabilitation at Queen of Bronze	$ 4,000.00
Total Assets	$61,797.50

LIABILITIES

1. Capital Stock 100,000 shares issued @ $1.00 par value	$100,000.00
2. Balance on land contract	20,000.00
Total Liabilities	$120,000.00
Closing Deficit (loss)	58,202.50
	$ 61,797.50

9. none

10.a. Property consists of deeded land described as the Northwest Quarter (NW$\frac{1}{4}$) of Section Thirty-six (36), Township Forty (40) South, Range Eight (8) West, W.M. Also, the following patented mining claims located in Sections 1, 2, 11 and 12, Township Forty-one (41) South, Range Eight (8), W.M., California, Copper Queen, Cowboy, Copper King, Mabel, Kelly, Morgan, Brandt, Lyttle, Marion and Dorothy.

b. Both areas are the same.

11. Waite Minerals, Incorporated - Present Operator. Former names of property are still retained as follows:

1. Queen of Bronze Mine - north end and south end workings,
2. Lyttle Mine,
3. Mabel Mine,
4. Cowboy Mine,
5. East Cowboy Mine.

12. Property is 41 miles southwest from Grants Pass, Oregon, the nearest shipping point on the Southern Pacific Railroad. This route is over the paved Redwoods Highway for 35 miles and thence six miles southwest by graveled county road to the mine area.

13.a. Ample water for a 100-ton mill. First water rights on Waldo Dreek (12 sec. feet) and Page Creek (20 sec. feet). Both creeks run through properties.

b. No power required for exploration work, except as furnished by compressors.

14. Mining equipment on property:

1 Gardner-Denver Compressor - 210 c.f.m.
2 Mine cars - 1 yd. capacity
1 Electric light plant
1 Drifter
1 Jackhammer
300 Bits, steel
9 Carbide bits

15. Ore from exploration work will be stockpiled for milling at future date. It is proposed to construct a mill at the first opportunity when sufficient ore has been measured to warrant a production loan for this purpose.

16.a. The history of the Takilma district goes back to 1860 when copper was discovered by a man named Hawes. The claims now known as the Queen of Bronze group were located in 1862, but little development work was done until 1903 when the property was purchased by C. L. Tutt and Associates of Colorado Springs, Colorado. This company was known as the Takilma Smelting Company and they erected a semi-pyritic smelter in 1904. It had a capacity of 100 tons per day and operated more or less continuously until 1910. It was reported that more than 20,000 tons of ore were smelted, which had an average copper content of 8.50%. The mattes from the smelter contained about 40% copper. Lessees shipped a few thousand tons of ore from 1910 to 1916 when the property was sold to John Twohy, John Hampshire and associates. Operations continued until 1919 when they were discontinued because of the low price of copper.

During this 3-year period, the mine was reported to have shipped 183 cars, or 9,992 tons of ore. According to G. E. Stowell, mining engineer, the metal content varied from 5.16% to 16.33% copper and from 0.04 ounces to 0.44 ounces of gold per ton. There is no data on silver values. Leasing was intermittent from 1918 to 1928, when John Hampshire leased the property and resumed operations which continued until May, 1929. At that time, the Queen of Bronze Company was incorporated and the new company shipped a total of 1,553 tons of ore up to May, 1930, when operations were discontinued because of the low price of copper. The property attracted considerable attention during the Second World War and the dump was sampled by the Metals Reserve Board in 1942, and recommended for the resumption of operations in 1944. This never materialized and it was finally purchased by E. R. Waite in 1946.

Total production figures are not exactly complete, but the total tonnage is estimated at about 40,000 tons. This includes the estimated ores shipped by lessees and the approximate gross value is around $1,545,000.

b. See Shenon's Report, U.S.G.S. Bulletin 846, 1933.

c. Private reports by W. A. Richelsen submitted with original application, dated May 24, 1951.

17. Mine is not in production now.

18.a. The ore occurs in a series of kidneys, lenses or pods along shear zones in serpentine and greenstone. The orebodies are of irregular sizes and shapes. The tonnage available from each lens is variable, ranging from 500 to 8,000 tons of ore. It is difficult to block out ore in advance of exploration.

b. Available maps and assay data are submitted herewith. See former application dated May 24, 1951.

c. Estimated tonnage and grade of ore reserves:

Location	Tons	% Copper
Queen of Bronze Dumps	40,000	1.4
Queen of Bronze Underground	4,000	2.5
Cowboy Mine Dumps	15,000	1.5
Mabel Mine Dump	1,000	1.5
Lyttle Mine Dump	9,000	1.5

19. The Bureau of Mines has conducted an experimental soil sampling project on the copper properties owned by this company. The results of that work indicate enriched surface zones that need further exploration and development. It is the purpose of this project to explore these favorable areas.

20. The exploration work is for copper, particularly, chalcopyrite.

21. It is proposed to trench the surface indications by means of a bulldozer. If favorable ore zones are uncovered, the deposit will be drilled by means of a diamond drill. In some instances, underground workings can be extended to prospect and explore favorable looking structures.

22. These copper deposits are relatively high grade near the surface in the zone of secondary enrichment, just beneath the oxidized and leached zone, which may extend to a depth of 20 or 30 feet. By exploring the undeveloped virgin surface exposures, it is to be expected that the richest ore will be encountered where it can be easily and cheaply mined. It is not unreasonable to expect that high grade ore can be found near the surface in an oreshoot that can be minded by either cheap open pit methods or glory-hole underground methods.

The project has an excellent chance to develop commercial ore for that reason. The history of the Queen of Bronze Mine indicates

it has had a gross production of $1,545,000 from near-surface stopes developed by only 7,023 feet of workings. Stated in another way, 7,023 feet of development work resulted in a production of 40,000 tons of shipping ore, having a gross value of $1,545,000, or each foot of development resulted in 5.7 tons of shipping ore having an average gross value of $38.60 per ton.

23.a. Labor:

Number	Job Title	Wage Rate
1	Foreman	$400.00 monthly
8	Miners	1.75 hourly
1	Bulldozer operator	2.00 "
1	Core Drill Operator	2.00 "
1	Core Drill Helper	1.75 "

The above rates are for a 40-hour week, with time-and-a-half paid for 8 hours on a 48-hour week. The miners will be paid on a footage contract basis when possible.

b. The wages of the supervisor, including engineering reports, etc. is estimated not to exceed $6000.00 for the total project.

c. Rehabilitation work at Queen of Bronze Mine:

1. North end of Queen of Bronze labor and supplies:

Mucking, timbering at intermediate level	$2,000.00
"C" Tunnel - Retimbering and cleanup	2,400.00
Leach Level - Retimbering and cleanup	1,500.00
"D" Tunnel - Retimbering and cleanup	1,500.00
	$7,400.00

2. South end workings, Queen of Bronze:

Rehabilitation	$5,000.00
Condition of workings unknown, but assumed to be similar to Queen of Bronze North end workings	
Total Rehabilitation	$12,400.00

d.1. Bulldozer trenching

Time Involved	Cost
500 hours @ 12.00 per hour	$6,000.00

2. Diamond drilling - Surface and underground

Location	Footage	Price Per Ft.	Cost
North end, Queen of Bronze	1000	$8.00	$8,000
South end, Queen of Bronze	1000	8.00	8,000
Cowboy Mine	500	8.00	4,000
Total	2500		$20,000

3. Drifting and Crosscutting:

Location	Footage	Price per Ft.	Cost
North end, Queen of Bronze	400	$25.00	$10,000
South end, Queen of Bronze	400	25.00	10,000
Cowboy Mine	200	30.00	6,000
contingencies for timbering, etc.			2,000
Total	1000		$28,000

4. Sampling, Assaying and mapping:

Trench assays	$ 500.00
Diamond Drilling, sampling and assaying	500.00
Underground workings	2,500.00
Total	$3,500.00

5. Buildings and structures to be erected:

2 Ore bins @ $2,200 each	$4,400.00
1 Mine office building	3,000.00
2 Compressor houses @ $2,000 each	4,000.00
Total	$11,400.00

Summary and Total - Installation and Construction Costs
Item d.:

1. Trenching	$ 6,000.00
2. Diamond Drilling	20,000.00
3. Drifting and Crosscutting	28,000.00
4. Sampling	3,500.00
5. Buildings	11,400.00
Total - Item d.	$68,900.00

e. Cost of equipment to be purchased:

1 Mucking machine, Eimco 12B	$ 3,000.00
2 Jackhammers @ $350.00	700.00
4 Stopers @ $500.00	2,000.00
2 Drifters @ $700.00	1,400.00
500 Jackbits @ $2.00	1,000.00
8 Air hoses @ $40.00	320.00
4 Mine cars @ $200.00	800.00
1-ton drill steel @ $400.00	400.00
1 Compressor - 505 c.f.m. @ $6,000.00	6,000.00
1 Air Receiver @ $350.00	350.00
1 Jackbit grinder @ $1,000.00	1,000.00
6 tons mine rail (3000') @ $170.00	1,020.00
Rail spikes, plates, bolts and nuts	200.00
2000' 2" pipe (used) @ 50¢ per ft.	1,000.00
Fittings, reducers and valves	450.00
Total - Item e.	$19,640.00

f. Cost of rentals for equipment which operator proposes to rent:

1 Bulldozer D-8 or equivalent $12.00 per hr.

g. Rental value of equipment operator now owns and will be devoted to work

	Condition	Cost	Rental Value
1 Gardner-Denver 210 C.F.M. Air Compressor	Good	$3,000.	$50.00 per mo.
2 Mine cars, each @ $5. monthly	Good	250.	10.00 " "
2 Jackhammers, each @ $4 "	Fair	200.	8.00 " "
1 Light Plant	Fair	500.	10.00 " "
Total rent furnished by operator			$78.00 " "

h. Miscellaneous materials and supplies:
Costs of these items are included in unit costs shown above.

i. None, except as shown.

Summary and Total Cost of Project:

a.	Labor costs included in unit costs		
b.	Supervision, Engineering, etc.		$ 6,000.00
c.	Rehabilitation		12,400.00
d.	Bulldozer trenching	$ 6,000.00	
	Diamond drilling	20,000.00	
	Drifting, Crosscutting	28,000.00	
	Sampling	3,500.00	
	Buildings	11,400.00	
	Total Itemdd.		68,900.00
e.	Capital equipment required		19,640.00
f.	Charges included in unit costs, operating expenses		
g.	" " " " " " "		
h.	" " " " " " "		
	- - - - - - -		
			$106,940.00

24. Time schedule of project:

Step A.	Rehabilitation, installation of buildings and bulldozer trenching	3 months
Step B.	Diamond drilling	4 months
Step C.	Drifting, crosscutting to favorable structures, determined from Steps A, B.	8 months
	Total time to complete project	15 months

Form MF-103
(April 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.
Approval expires 6-30-51.

APPLICATION FOR AID FOR AN EXPLORATION PROJECT PURSUANT TO MINERAL ORDER 5, UNDER DEFENSE PRODUCTION ACT OF 1950

DO NOT FILL IN THIS BLOCK

Docket No. Dma-1534X

Date received 6/4/51

Participation

Waite Minerals Incorporated
822 North Seventh Street
Grants Pass, Oregon

Name and address of applicant

Date May 24, 1951

FILL IN THIS BLOCK

Date of application May 24, 1951

Estimated cost $250,000

Mineral or metal Chalcopyrite Copper

Percentage of Government participation 100%

Location of mine Takilma District
Josephine County, Oregon

Date of filing MF-100

DMA Docket Number, if available

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four signed copies of the application to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive officer thereof, with your name and address on each sheet of the application and all accompanying papers. If any question is inapplicable, or if you cannot answer it, so state on the form. Where the space provided for answer is insufficient, answer on a separate sheet, annex it to the application form, and refer to it in space for answer. If the application is approved, you will be presented with an exploration project contract on Form MF-200, for your signature.

THE APPLICANT

*1. Is applicant an individual, partnership, or corporation?
*2. If a partnership, state names and addresses of partners.
*3. If a corporation, state names and addresses of officers, directors, and five largest stockholders.
*4. Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who will manage the project.
*5. Are you the owner or the lessee of the property?
6. If owner, state what claims, liens, or encumbrances, if any, are against the property.
7. If lessee, attach a copy of the lease and state if it is in good standing.

NOTE.—It will be necessary to procure and attach to the exploration project contract agreements of claimants, lienors, encumbrances and lessors subordinating their interests in the property to the interest of the Government under the contract.

8. Furnish current financial statement, showing assets and liabilities, and a profit and loss statement.
9. How much money is applicant prepared to invest in proposed project? Is it sufficient to pay your part of the cost of the project as detailed in question 23 of this application form, in accordance with the regulations on Government participation (Section 9 of Mineral Order 5)?

*If you have already answered these questions on MF-100, you are not required to answer the questions for this application.

16—64067-1

THE PROPERTY

10. (*a*) Give a description of the real property that will be in any way involved in the exploration project, including any existing mine or operating property.
    (*b*) Give the legal description of the exact parcel, plot, or area upon which the exploration is to be conducted.

    NOTE.—If both areas are the same, so state. The only obligation to repay the Government is from the net earnings from any commercial discovery made in the area specified in (*b*) above in which the exploration is to be conducted, and the expenditure of funds which may be charged as costs of the project must be limited to that area or to work necessary to perform the exploration in that area.

*11. State the present and former names of the property, if any.
*12. State, in detail, the location of the property with reference to towns, railroads, roads, shipping points, including distances and directions and kinds and conditions of roads.
*13. State source and quantity of water available for operations and its sufficiency at all seasons.
State amount of power to be used, rate per hour or other cost, and source.
*14. Describe any existing useable facilities, equipment, buildings, or structure now on the property that will be devoted to the exploration work.
15. State in detail how the ore could be shipped and how and where milled.
*16. History:
    (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for any past suspensions of operations.
    (*b*) State briefly the known history and production of adjoining and neighboring properties.
    (*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.
*17. Production:
    (*a*) If mine is in production, furnish the following information:

	Tons per day	*Grade or analysis*	*Cost per ton*	*Net value per ton*
(1) Mining				
(2) Milling				
(3) Shipped or sold				

*18. Ore or mineral reserves: (If property is or has been operating.)
    (*a*) Describe the ore or mineral deposits briefly.
    (*b*) Submit available maps and assay data.
    (*c*) Give estimated tonnage and grade of each class of ore reserves.
19. State any conditions or circumstances regarding the property not sufficiently brought out by the foregoing questions.

THE EXPLORATION

20. For what mineral or minerals and for what types of deposits and ores will the exploration be conducted?
21. Describe briefly, but concisely, the proposed work and the estimated time required to complete it.

    NOTE.—The Government will not participate in a project that will require more than 2 years to complete.
22. Furnish statement of the geological basis of the project with particular emphasis on factors leading the operator to expect the finding of commercial ore bodies. This statement should be accompanied by supporting maps such as geological maps, maps of the proposed openings and assay maps, sample lists, and other pertinent data.

THE REQUIREMENTS AND COSTS

23. Tabulate in the form of an itemized statement with a sum for each item the estimated requirements and costs of the project so that the total will give the estimated cost of the project in which the Government will participate, as follows:
    (*a*) Labor, by numbers and classes (miners, muckers, millmen, etc.), with wages of each.
    (*b*) Supervisors, by numbers and positions, with salaries of each.
    (*c*) Cost of necessary repairs to existing facilities, structures, and buildings.
    (*d*) Cost of necessary installation or construction of additional facilities, structures, and buildings.
    (*e*) Cost of items of equipment, not now owned by the applicant which must be purchased for operations at a cost of $50 or more each.
    (*f*) Cost of rental for equipment which the operator proposes to rent.
    (*g*) Rental value of items of equipment which the operator now owns and which will be devoted to the work.
    (*h*) Cost of materials and supplies, including items of equipment costing less than $50 each.
    (*i*) Cost of power, water, utilities, and any other items not provided for above.
24. Furnish a time schedule of the project, stated in terms of months after project is approved, showing progress expected to be accomplished and the money expected to be spent.

CERTIFICATION

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this form and accompanying papers is correct and complete to the best of their knowledge and belief.

Waite Minerals Incorporated
(Name of company)

By Lawrence O. Leary
(Signature of authorized official)

May 24, 1951
(Date)

President
(Title)

Title 18, U. S. Code (Crimes), Section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

*Same as footnote on page 1.

16—64067-1 U. S. GOVERNMENT PRINTING OFFICE

Applicant

1. A corporation

2. Not applicable

3. Waite Minerals Incorporated, Grants Pass, Oregon

President	Chauncey Florey, Medford, Oregon
Vice President	Major E. R. Waite, Grants Pass, Oregon
Secretary	Marjorie Waite, Grants Pass, Oregon
Director	Nelson Florey, Medford, Oregon
Director	Majorie Florey, Medford, Oregon

Capitalized for 100,000 shares - held as follows:

Chauncey Florey	25,000 shares
Major E. R. Waite	25,000
Nelson Florey	25,000
Marjorie Florey	25,000
Total....	100,000 shares

4. Mining and Business Experience:

Chauncey Florey, of Medford, Oregon, President:
14 years' experience in lumbering. General Manager of large plants. Production $2 million per year.
4 years' underground experience.

Work to be under the direction and supervision of Walter A. Richelsen, Consulting Mining Engineer of Seattle, Washington. 37 years' experience in mine operation and examination in Mexico, United States, Canada and Alaska. With large companies including the Kennecott Copper Corporation, Phelps Dodge Corporation and United Verde Copper Company.

5. Owner of property.

6. No claims or liens against the property. Balance due on land contract: $22,500.

7. Not applicable

8. Financial Statement as follows:

Financial Statement
Waite Minerals Incorporated

ASSETS

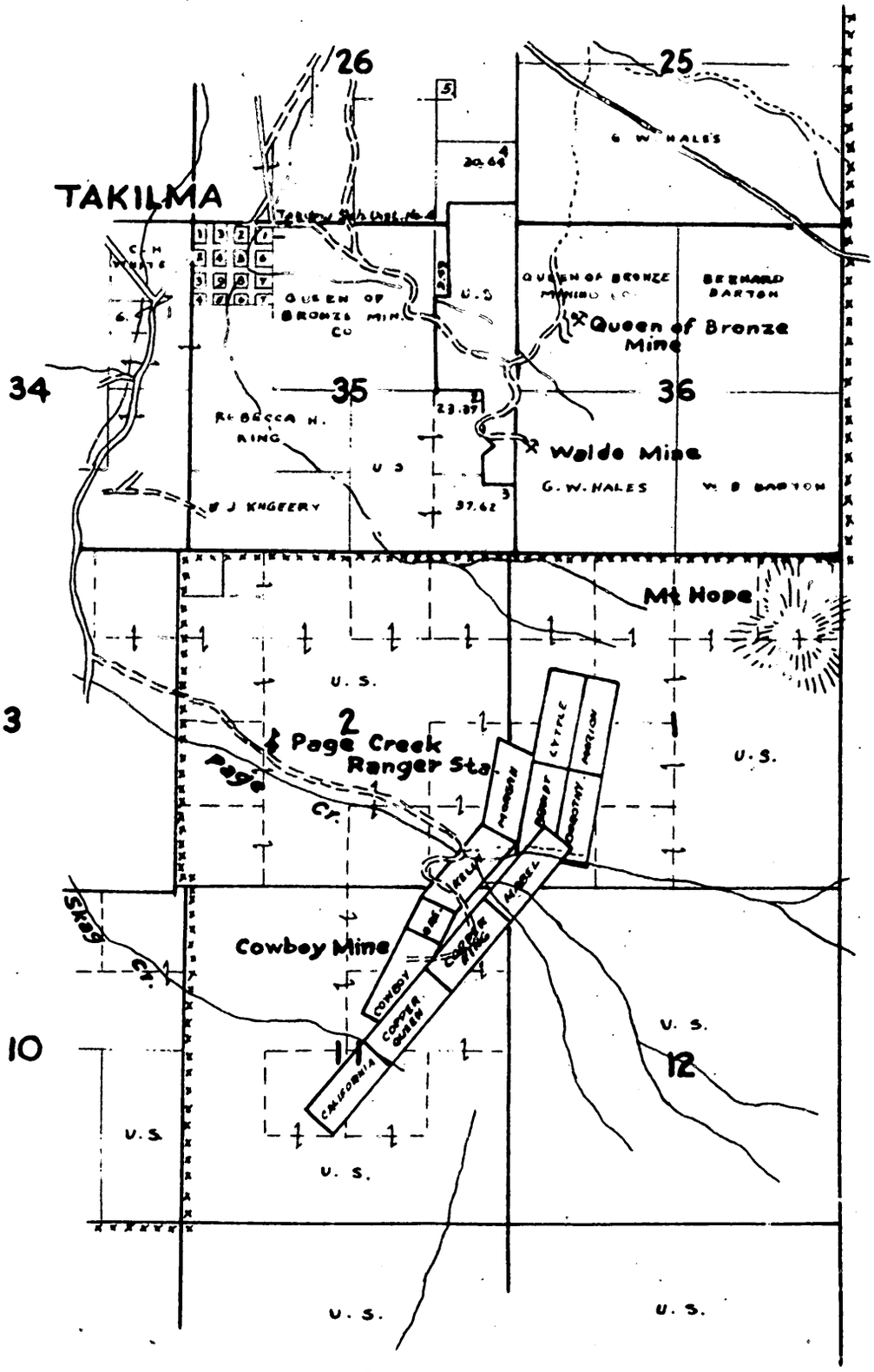
Cash		None
Note Receivable	None	
Accounts Receivable	None	
Inventories	None	
Lands	$25,000	
Buildings - (only compressor shed)	None	
Machinery - (compressor & cars)	5,000	
12# mine rail	1,110	$31,110
Other assets: Sampling and trenching		11,000
Total Assets		$42,110

LIABILITIES

Notes Payable	None	
Banks	None	
Trade creditors	None	
Officers, stockholders	None	
Other liabilities		
Delinquent taxes-Real Estate	None	
Federal	None	
Wages and Salaries	None	
Due officers	None	
Accrued interest, taxes, etc.	None	
Balance owed on land contract		$22,500
Surplus		19,610
		$42,110

9. Applicant not in a position to invest any further money on project. Have sufficient ore blocked out to repay loan.

TOWNSHIP 40 S., RANGE 8 W. W. M.
JOSEPHINE COUNTY, OREGON



TOWNSHIP 41 S., RANGE 8 W. W. M.
JOSEPHINE COUNTY, OREGON

Property

10. Property consists of 19 patented lode claims held by the Queen of Bronze property located in Sec. 36, Twp. 40 S., Rge. 8 W.W.M. and 46 additional patented lode claims held in associated groups known as the Cowboy, Mabel and Lyttle groups which are in Secs. 1, 2, 11 and 12, and the Waldo group has an additional 8 patented lode claims. All are in Josephine County, Oregon, and are described in the report by W. A. Richelsen of November 7, 1949, which is submitted as well as an additional claim map.

11. See Richelsen report for history and former names of property.

12. See Richelsen report for location and accessibility of roads.

13. Ample water supply - 12 sec. feet on Queen of Bronze Creek; 20 sec. feet on Mabel, Lyttle and Cowboy properties - total about 32 sec. feet for entire year.

    Power required: See Schedule G

    191 k.w. for mill
    92 k.w. for mine
    283 k.w. Total

    Can be furnished by California-Oregon Power Company. Property 4.5 miles from Copco Power line. Poles and 2 lines installed - need 1 additional line for 3 phase, with few additional poles. Cost for power: 1.5¢ per k.w.h. See Schedule G.

14. Mining Equipment on Property:

    1 Denver-Gardner portable compressor - 210 c.f.m.
    1 Boyles diamond drill - 500 feet capacity
      500 feet of drill rods
    2 Mine cars - 1 ton
    1 Electric light plant for camp - 3 k.w.
    1 Drifter
    1 Jackhammer
    1 Lot of drill steel - mine tools, track, etc.

15. Underground ores to be mined by shrinkage or square set, depending on type of ground encountered. May be able to use top slicing method. Dump ores would be handled by mechanical loaders loading in trucks - road from mine to proposed mill site in good condition - combined ores loaded in mill bins to give a head of about 5.5 copper.

    Propose to construct 100 ton mill and ores will be milled on property. Concentrates to be shipped to Tacoma smelter who will dispose of copper. Important feature is that ores carry about 20% sulphur in addition to copper content.

16. History given in Richelsen report - disregard proposed smelter operations and relating costs, as we have switched to milling.

Adjoining properties including the Cowboy, Mabel, Lyttle and Waldo were all working about 1930 and shut down at the same time that the Queen of Bronze closed. Reason: financial situation in the 1930 and the low price of copper. Twohy Brothers of Portland went broke at that time.

Richelsen report submitted - U. S. Bureau of Mines has also done a great deal of geochemical testing during the past year and has disclosed several favorable areas.

17. Mine not in production at present as want to construct 100 ton mill and produce 4.7 tons of copper per day. See Schedule G.

18. Estimated ore reserves given in Richelson report. Detailed as follows:

19. Ores cannot be treated individually and both dump and mine ore must be combined to produce a mill head of about 5.5% copper. On this basis the probable life of the combined properties will be about 5.7 years as detailed below:

Total Tonnage - combined ores	201,000	5% copper
Yearly production at 35,000 tons:		
Life of property	5.7 years	
Estimated profit at $7.00 per ton	$1,408,000	

This does not include undeveloped ore in the Cowboy, Mabel and Lyttle groups which should have a minimum of 30,000 tons of 7% copper, or 2,100 tons copper.

Estimated Capital Charges -

Mine Rehabilitation - Queen of Bronze		$ 4,787
Mine Equipment and Supplies		16,394
Buildings and Structures		24,680
		$ 45,861
	Plus 5%	2,293
		$ 48,154
Construction of Power Line		4,000
100 Ton Concentrating Mill		150,000
		$202,154
Contingencies		47,846
		$250,000

Exploration

Propose to open up the Queen of Bronze as well as the Cowboy and this can be done while mill is under construction.

Estimated time to build ore bins and construct 100 ton mill	5 months

Property would be in production by that time producing 4.7 tons copper per day, or 122 tons per month based on a 26 day operating month.

22. See Richelsen report for geologic discussion and occurrence of ores. Also work by the U. S. Bureau of Mines. Complete set of level maps submitted in addition to those in Richelsen report.

Requirements and Costs

23. All data under this question shown on Schedule G - Estimated Production Costs.

    24 men underground - 7 men on surface - 2 men trucking - and 12 men in the mill crew -- total of 45 men with 3 for supervision, or 48 men.

    Cost of Material and Supplies shown in Schedule E on Rehabilitation of Queen of Bronze property.

24. Mine rehabilitation, purchase of additional mine equipment and construction of buildings and structures should be completed within 3 months after approval at a cost of $52,154 as shown under capital charges in Question 19.

    Mill should be completed within 5 months after approval at an additional cost of $150,000, or a total of $202,154.

Submitted by:

W. A. Richelsen

W. A. Richelsen
Registered Mining Engineer

Seattle, Washington
May 23, 1951

EXHIBIT- E

ESTIMATED REHABILITATION COSTS

Queen of Bronze Property
Takilma District
Josephine County- Oregon

At the Queen of Bronze mine the extraction of economic ores has been completed from the "E" Intermediate and "A" levels up to surface. Rehabilitation and development work would include a portion of the "E" Intermediate, but most of the work should be confined to the "C" Tunnel, Leach Intermediate and "D" Tunnel levels. This would open up the lower extension of the Stevens, McCauley and Messinger stopes, and the Cameron, Pholman, Twohy and Hampshire stopes areas and is as follows:

"E" Intermediate Level

Open the 1 E. Drift back to the raise from the Leach Intermediate level for ventilation and manways.

C Tunnel Level

Open the "C" Tunnel level back to the Rynski Raise in the 2 S. X-Cut for ventilation and manway and explore the possibilities of the Stevens stope area toward the west. Later open the 2 E. Drift back to the McCauley stope, and the 3 E. Drift back to the Cameron stope area.

Leach Intermediate

Open No. 5 Raise and 1 W. and 3 W. drifts back to raise running to 1 E. Drift on "E" Intermediate, for ventilation and manway.

Prepare 1 W. Drift for stoping operations.

"D" Tunnel Level

Open 1 E. Drift and 1 S. X-Cut back to the Twohy and Hampshire stope areas, and carry track back through 3 E. Drift and 1 N. X-Cut to No. 5 Raise for handling ore from the Cameron stope.

Open Rynski Raise up to "C" Tunnel level.

Open finger drifts in Hampshire stope area.

Estimated Costs

"E" Intermediate Level					Cost		
					Amount	Per Unit	Total
			80' Mucking & Timbering				
Mucking	8 shifts		2 men @ $16.80	$33.60	$268		
Timbering	10 "		2 " 16.80	33.60	336		
Timber	10 "		Timber $9.00				
Lagging	10 "		Lagging 4.00				
		10 @	$13.00		130		
Raises	8 "		2 men	33.60	268	$1,002	

ESTIMATED REHABILITATION COSTS

- Continued -

							Cost Amount	Cost Per Unit	Cost Total
To Amount Forward								$1,002	
"C" Tunnel Level									
			500' Mucking		200' Timbering				
Mucking	14	shifts	2 men @	$16.80		$33.60	$470		
Timbering	10	"	2 "	16.80	$18.00	34.80	348		
Timber	10	"			$ 9.00				
Lagging					4.00				
					$13.00		130		
Raises	10	"	2 " @		$16.80		336	1,284	
Leach Intermediate Level									
			200' Mucking		200' Timbering				
Mucking	8	shifts	2 men @	$16.80		$33.60	269		
Timbering	7	"	2 "	18.00		34.80	243		
Timber	7	"		$ 9.00					
Lagging				4.00					
				$13.00		13.00	91		
Raises	8	"	2 men			33.60	269	$ 872	
Track 12#	3	" 200'	2 men @			33.60	101		
Pipe 2"	2	" 200'	2 " @			33.60	67	168	
"D" Tunnel Level									
Mucking	6	shifts	2 men @			33.60	201		
Timbering	6	"	2 " @			34.80	209		
Timbering & Lagging			6 shifts @			13.00	78		
Raises	15	shifts	2 men	$16.80		33.60	503	991	
Track 12#	6	" 1300'	2 men @			33.60	201		
Pipe 2 1/2"	3	" 920'	2 " @			33.60	101		
2"	3	" 580'	2 " @			33.60	101		
2"	2	" 100'	2 " @			33.60	67	470	$4,787
Material & Supplies									
Track 12#	1500' @ 8 lbs.				12,000 lbs.				
			6 tons @ $170				$1,020		
	7 kegs track spikes @					17.50	123		
Pipe 2"	880' @ 0.32 (used pipe)						281		
2 1/2"	920' @ 0.50 (used pipe)						460		
Fitting, reducers & valves							450	$2,334	
2 Jackhammers				@		350	700		
4 Stopers				@		500	2,000		
2 Drifters				@		700	1,400		
2 tons 7/8 drill steel				@		400	800		
500 Jack bits				@		2	1,000		
4 Air Hoses				@		40	160		
6 1 Ton mine cars				@		125	750	$6,810	

ESTIMATED REHABILITATION COSTS

- Continued -

	Cost Amount	Cost Per Unit	Total
To Amount Forward	$9,144		$4,787
Material & Supplies- Cont'd			
1 Jack Bit Grinder	900		
1 Portable Compressor 505 c.f.m.	6,000		
1 Air Receiver	350	$16,394	
Building & Structures			
Ore Bins D Tunnel Level 2 @ 100 tons @ $2,200	4,400		
1 Machine Shop & Compressor House 16' x 32' 1/3 Pitch	1,950		
1 Blacksmith Shop 14' x 20'	1,080		
1 Office and Warehouse 16' x 32' 1/3 Pitch	2,250	9,680	
3 Dwellings at Takilma @ $5,000	15,000	15,000	$41,074
			$45,861
	Plus 5%		2,293
	Total		$48,154
Construction- Power Line Extension			4,000
Mill Construction 100 tons @ $1,500			$150,000
			$202,154

Submitted by:

W. A. Michelsen

EXHIBIT- G

ESTIMATED PRODUCTION COSTS

Queen of Bronze Property
Takilma District
Josephine County- Oregon

Based on production of 100 tons per day- Ore 5.50% Copper

Combined Operations				Cost Daily	Cost Per Ton	Cost Per Unit
Mining	**Underground**	**Double Shift**				
6	Miners- Mining- $2.10- 2	12 men- @	$16.80	$201.60		
1	" Development	4 " @	16.80	67.20		
1	Timberman- Track $2.10	2 " @	16.80	33.60		
2	Trammers 2.00	4 " @	16.00	64.00		
1	Shifter- Timberman ($2.25)	2 " @	18.00	36.00		
				$402.40	$ 4.02	
Surface						
1	Compressorman ($1.90)	2 " @	15.20	30.40		
2	Timber framers ($1.80)	2 " @	14.40	28.80		
1	Roustabout ($1.60)	2 " @	12.80	25.60		
1	Blacksmith ($1.90)	1 " @	15.20	15.20		
				$100.00	1.00	
Compressed Air- Supplies						
Compressor- Fuel, Oil- Repairs- 16 hrs. @ 40¢				6.40		
Powder-	3.5 Boxes @ $9.00			31.50		
Caps	3 Boxes @ 1.10			3.30		
Fuse	2 Rolls @ 1.75			3.50		
Timber-	3 Sets @ 6.50		19.50			
Lagging- estimated			5.40	24.90		
Miscellaneous				4.00		
				$ 73.60	$ 0.74	$ 5.76
Power- Mine						
Compressor	105 h.p.					
Jack Bit Grinder	5 "					
Ventilating Blower	10 "					
Lighting	3 "					
	123 h.p.	92 k.w.- 2 shifts @ 1.5¢ per k.w.h.		22.00	.22	$ 5.98
Trucking- Mine & Mill						
1	Trucker ($1.90)	1 man @	15.20	15.20		
1	Helper ($1.60)	1 " @	12.80	12.80		
Oil- Gas- Repair			3.25	3.25		
			31.25	$31.25	$ 0.31	$ 0.31

EXHIBIT- G
ESTIMATED PRODUCTION COSTS

- Continued -

					Cost Daily	Cost Per Ton	Cost Per Unit
			Amount Forward				$ 6.29
Milling- 3 Shifts							
1	Flotation operator ($1.90)	3 men	@	15.20	$45.60		
1	Filter operator ($1.90)	3 "	@	15.20	45.60		
1	Concentrate loader ($1.70)	2 "	@	13.60	27.20		
1	Repairman- electrician ($1.90)		@	15.20	15.20		
1	Roustabout- ($1.60)	3 "	@	12.80	38.40		
					$172.00	$ 1.72	
1	Mill superintendent	$450.00			15.00		
1	Assayer- Chemist	375.00			12.50		
1	Engineer- Timekeeper	375.00			12.50		
	Management	1,350.00			45.00		
					$ 85.00	$ 0.85	
Reagents- Cost per ton- estimated						0.20	
Power-Mill							
Crusher	25 h.p.						
Ball Mill	175 "						
Classifier	5 "						
Conditioner	3 "						
Flotation	15 "						
Sand Pumps	10 "						
Water Pump	10 "						
Thickner	5 "						
Filter- Vac.pump	5 "						
Lighting	3 "						
	256 h.p.	191 k.w.- 3 shifts @ 1.5¢ per k.w.h.			$68.76	$ 0.69	$ 3.46
							$ 9.75
Marketing- Refining							
Trucking- 25 tons concentrate @ $3.50 per ton					$87.50		
Freight- Grants Pass, Ore. to Tacoma, Wash. @ $6.57					164.25		
Refining- 25 tons @ $9.50					237.50		
					$489.25	$ 4.89	$ 4.89
					Total		$ 14.65

Cost Summary

1	Mining- 2 shifts- Cost per ton	$ 5.98
	Trucking 1 shift " " "	0.32
1	Milling- 3 shifts	3.46
1	Marketing & Refining	4.89
	Total Cost per Ton	$14.65

EXHIBIT- G

ESTIMATED PRODUCTION COSTS

- Continued -

			Daily	Cost Per Ton	Per Unit
Smelter Payments					
Heads- 5.5% copper- 0.04 gold- 0.04 silver					
Conc. ratio about 4:1- 95% Recovery					
25 Tons conc. at 20% Cu. Gold 0.16 Silver 0.16					
Gold	0.16 oz.	@ $31.82	$ 5.09		
Copper at 20%		Copper 24.5¢			
Paid at 19%		Paid at 21.45¢			
	380 lbs.	@ 21.45¢	81.51		
			$ 86.60		
	25 Tons	@ $86.60	$2,165.00	$ 21.65	$ 21.65
					14.65
		Profit per ton			$ 7.00

100 Tons- Profit per day $700
" " month $18,200

Submitted by:

W. A. Richelsen

W. A. Richelsen
Registered Mining Engineer

Seattle, Washington
May 23, 1951

REPORT ON THE
QUEEN OF BRONZE PROPERTY

TAKILMA DISTRICT
JOSEPHINE COUNTY- OREGON

Seattle, Washington
May 23, 1951

By: W. A. Richelsen
Registered Mining Engineer

WALTER A. RICHELSEN
CONSULTING MINING ENGINEER
806 CENTRAL BUILDING
SEATTLE 4, WASHINGTON

TELEPHONE
ELLIOTT 1855

November 7, 1949

Mr. E. R. Waite
Waite Minerals Incorporated
Grants Pass, Oregon

Re: Queen of Bronze Property
Josephine County, Oregon

Dear Sir:

I am submitting the following report on the Queen of Bronze property, based on my examination of the surface workings in May, 1949, involving about 6 days, and again on the underground workings in the early part of October, 1949, involving about 4 days. This was after the workings had been partially opened up.

CLAIMS

The Queen of Bronze property consists of a group of 17 patented lode claims and an additional 2 patented lode claims on an adjoining lime quarry toward the northeast, or a total of 19 patented lode claims. These are owned by the Waite Minerals Incorporated of Grants Pass, Oregon, and lie at an average elevation of 2300 feet. They are located in Sec. 36, T.40 S., R.8 W., in Josephine County, Oregon, and about 1 1/2 miles east of Takilma, and 41 miles southwest of Grants Pass, Oregon. The general location is shown on the attached map.

Associated properties include the Cowboy, consisting of 11 patented lode claims which lie at an elevation of 2600 feet and are about 2 1/2 miles southeast of Takilma. The Mabel property comprising 4 patented lode claims which lie at an average elevation of 2200 feet and are about 1 1/2 miles southeast of Takilma. The Waldo group consisting of 8 patented lode claims which lie at an elevation of 2400 feet and are about 1 mile southeast of Takilma, and the Lyttle group embracing 12 patented lode claims which lie at an elevation of 2600 feet and are about 1 3/4 miles southeast of Takilma. A total of 35 additional patented lode claims is involved in the associated groups.

TRANSPORTATION

Good graveled highways run direct to the Queen of Bronze and the associated properties and there is an ample water supply for all mining operations at the Queen of Bronze. There is only a scattered amount of timber in the vicinity and it probably will be cheaper to purchase mine timber locally. Electric power can be furnished by the California Oregon Power Company, and rail transportation is available at Grants Pass, Oregon, which is a station on the Southern Pacific Railway. Deep sea transportation is also available at Crescent City, Oregon, where docking facilities are held under a 10 year lease by Mr. E. R. Waite. Crescent City is approximately 51 miles southwest

of Takilma, and freight can be handled by truck over graveled roads and Highway No. 199 for the total distance of 51 miles.

HISTORY

The History of the Takilma district goes back to 1860 when copper was discovered by a man named Hawes. The claims now known as the Queen of Bronze group were located in 1862, but little development work was done until 1903 when the property was purchased by C. L. Tutt and associates of Colorado Springs, Colorado. This company was known as the Takilma Smelting Company and they erected a semi-pyritic smelter in 1904. It had a capacity of 100 tons per day and operated more or less continuously until 1910. It was reported that more than 20,000 tons of ore were smelted which had an average copper content of 3.50%. The mattes from the smelter contained about 40% copper. Lessees shipped a few thousand tons of ore from 1910 to 1916 when the property was sold to John Tvoly, John Hampshire and associates. Operations continued until 1919 when they were discontinued because of the low price of copper.

During this 3 year period, the mine was reported to have shipped 103 cars or 9992 tons of ore. According to R. M. Stowell, mining engineer, the metal content varied from 5.16% to 16.33% copper and from 0.04 ounces to 0.44 ounces of gold per ton. There is no data on silver values. Leasing was intermittent from 1918 to 1928 when John Hampshire leased the property and resumed operations which continued until May, 1929. At that time, the Queen of Bronze Company was incorporated and the new company shipped a total of 1553 tons of ore up to May, 1930, when operations were discontinued because of the low price of copper. The property attracted considerable attention during the Second World War and the dump was sampled by the Metals Reserve Board in 1942, and recommended for the resumption of operations in 1944. This never materialized and it was finally purchased by J. H. Waite in 1946.

Total production figures are not exactly complete but the total tonnage is estimated at about 40,000 tons. This includes the estimated ores shipped by lessees, and the approximate gross value is around $1,545,000.

GEOLOGY AND MINERALIZATION

The rock formation in this portion of southwestern Oregon is largely basic igneous rocks associated with andesite intrusions. The basic types include gabbro, peridotite and serpentine. In the vicinity of the Queen of Bronze the peridotite predominates. Mineralization consists of pyrite, pyrrhotite and chalcopyrite which occurs in the peridotite near the andesite contacts. Surface ores near the open pit contain malachite, azurite and possibly some chrysocolla. Some supergene chalcocite is also reported. The ore has an average copper content of about 7% with 0.10 ounces of gold and 0.20 ounces of silver per ton. It occurs in lenticular masses which are irregular in outline and may have a maximum height of 60 or 70 feet with lengths up to 120 feet.

Each occurrence will furnish from 500 to 6,000 tons of ore, however, they have no definite trend which makes exploration work difficult. The ore

zone has a width from 250 to 300 feet as shown on the attached Surface Map. The strike is irregular but will average about N.35°E. with a gentle rake of 10° towards the northeast. This applies only to the North End workings as at the South End the veins are smaller but have a higher gold content. Here the ore will run about 6% copper with a maximum gold content of 1.14 ounces per ton. No silver values are available.

UNDERGROUND WORKS

The Queen of Bronze property has 2 groups of workings known as the North and South End. The latter is the less important and lies about 1000 feet toward the southeast from the North End group. The workings are inaccessible but are reported to have a total footage of 909 feet, which includes 109 feet of shaft.

The North End workings were only partially opened up in October 1949, and the following footage was scaled and estimated from the old mine maps made by J. M. Clark in 1929. This amounted to about 7023 feet for the North End and a total for both workings of 7932 feet. This was distributed among the various levels and workings as follows:

Footage

Location	Drifts & X-Cuts	Shafts & Raises	Total
South End Workings	800	109	909
North End Workings			
D Tunnel	2250	610	2860
C Tunnel	1155	30	1185
B Intermediate	1005	93	1098
B Tunnel	160	30	190
A Tunnel	1100	70	1170
Leach Intermediate	470	50	520
Total	6140	883	7023
Grand Total	6940	992	7932

Assuming that 30% of the workings were in ore and involved in actual mining, would leave approximately 5550 feet for actual exploration. On the basis of a total production of 40,000 tons this indicates that one foot of advance in exploration has produced 7.2 tons of ore. The entire footage of 7932 feet produced about 5 tons of ore per foot advance.

Stoping operations included 10 stopes known as the Johnson, McCauley, East, Stevens, Messenger, Cameron, Tuly, Hampshire, Stacey and Smith. Most of those in the upper workings have been worked out and filled with gob which is reported to run about 4% copper. The important stopes left are the Cameron which is supposed to have at least 8,000 tons blocked out

that will run about 8% copper and the Hampshire which is reported to be back-filled with 7,000 or 8,000 tons of gob that will go about 4% copper. The Cameron was inaccessible and only a portion of the Hampshire was seen, but it appears that an attractive tonnage has been left in most of the stopes and also along the C Tunnel level and other workings. The general relation is shown on the Plan of the North Workings.

ORE RESERVES

Ore reserves are difficult to estimate because of the condition of the property. Only portions of the A, C and E tunnels could be seen, but most of the D Tunnel was opened up. Examination of the workings near the Hampshire stope showed considerable mineralization in the 4 E. and 4 W. drifts at the south end of the 1 S. X-Cut. It is quite apparent that faces of ore ready for mining were left when the property closed down in 1930 and there are probably about 1,600 tons of 7% copper ore available in that immediate area. The same holds true on the E Intermediate where there is about 500 tons of 5% copper ore for sniping. On the A Tunnel level there is probably 1,000 tons of 1.5% or 2% ore that can be taken from the Open Pit above.

A report by a reliable mining company, who are familiar with the property, indicates that the underground reserves amount to about 100,000 tons of ore averaging 8% copper. The dump was examined by the Metals Reserve Board in 1942 and was estimated to have 64,000 tons averaging 2.9% copper. This included 18,000 tons of high grade supposed to run about 10% copper. These have been cut down and the total reserves, including dump ores on other small properties in the immediate area, is estimated at 201,000 tons averaging 5.00% copper or a total of 10,018 tons of copper. This is distributed as follows:

Estimated Reserves

Location	Tons Ore	% Copper	Tons Copper
Queen of Bronze- Underground	90,000	7.0	6,300
" " " - Dump	46,000	2.9	1,334
Total	136,000	5.6	7,634
Cowboy Mine- Dump	15,000	3.5	525
Mabel Mine- Dump	1,000	3.4	34
Waldo Mine- Dump- Lease- 10% royalty	40,000	4.0	1,600
Lyttle Mine- Dump	9,000	2.5	225
Total	65,000	3.7	2,384
Grand Total	201,000	5.0	10,018
Less underground	90,000	7.0	6,300
Dump ores- Total	111,000	3.3	3,718

The above tonnages are largely based on estimates from reliable sources and have only been partially checked. This is especially true of the

underground workings at the Queen of Bronze. A rough check of the dump shows at least 49,000 tons and the metal content will probably exceed 2.9% copper. The metal content is based on bulk sampling made by .. .. Waite on ores sent in to various companies in connection with the metallurgical treatment. Values of 0.04 ounces of gold and 0.04 ounces of silver per ton have been accepted, and probably are a little low. The comparative assays on the field sampling is shown on Sheet No. 1.

METALLURGY

The metallurgical treatment of the ore presented a few difficulties because of the high sulphur content, which runs about 20%. Tests by the American Cyanamid and the Western Knapp Engineering companies of New York, only gave recoveries of 63% by the sink-float method. Flotation tests by the Federal Mining and Smelting Company showed a recovery of 78%. For this reason the ore treatment was submitted to the Hace Company of Denver, Colorado, and smelter tests indicated a recovery of 95% on commercial ore with an average metal content of 3%. The original matte had a copper content of 42%, and when rematted this was increased to 78%. In view of this the Hace smelter treatment using the rematting process is recommended.

A joint estimate made with Mr. C. H. Hace as outlined on Sheet Nos. 2 and 2-A, shows that a capital investment of $74,422 is necessary for smelter construction and preparation. This is distributed as follows:

Smelter installation, including sintering plant and bunkers	$59,622
Rehabilitation of mine workings	5,000
Extension of power line	3,800
Surface jig-back slope tramming to smelter	6,000
Total	$74,422

PLANT

There is no surface plant on the Queen of Bronze property other than an old blacksmith shop and compressor house and an adjoining storage shed which is on the dump of the D Tunnel. The old smelter site lies at an elevation of about 1790 feet and 1600 feet northwest of the upper workings. This was inspected by Mr. C. H. Hace in October, 1949, and it can be prepared for the proposed smelter at a cost of less than $1,000. Some of the old smelter units can be sold for scrap which would help defray the cost of preparation.

There is no need for bunk-house or mess-house construction as most of the employees would prefer living at Tahlina, which is only 1/2 mile distant from the smelter site.

The small portable compressor unit which is over at the Cowboy

property could be moved to the Queen of Bronze and used temporarily on development work.

ORE PRODUCTION

Ore production and general operating should present no difficulties from a mining standpoint. The old workings indicate that the ground stands well and timbering is only required in some of the stronger shear zones. The D, C, E Intermediate and A tunnels are all in fair shape and the small cave-ins have been due to failure of rotten timber rather than ground pressure.

The Ore Production Analysis given on Sheet Nos. 3 and 3-A shows that the estimated life of the combined dump ores is 3.2 years, and the net returns, excluding taxes, amounts to $440,000. On the Queen of Bronze dump the estimated life is 1.3 years with a net return, excluding taxes, of $182,000. It also shows that before deducting for taxes that the original investment could probably be returned in 6.5 months of operation.

The underground ore at the Queen of Bronze shows an estimated life of 2.6 years and the net return, excluding taxes, will probably amount to $1,129,000. The combined ores show a life of 5.8 years with a net return, excluding taxes, of about $1,518,000. The cut-off on copper content on the underground ores varies from 2.9% to 3.3% on copper prices ranging from 18 1/2¢ to 16 1/2¢ per pound.

Apparently the ratio between the price of copper and wages was about the same when the property closed down in 1930 as at the present time. This explains why the gob in the stopes and the dump ores have a copper content around 3%. The present dump ores can be mined at a profit because of the low mining cost and under proper control, the combined ores would show a profit with smelter heads at 5% copper at the present price of 18 1/2¢ per pound.

TAX ANALYSIS

The Tax Analysis as given on Sheet No. 4 shows that the total net profit on the dump ores after deducting taxes and royalties amounts to $209,321 as compared to the original net of $440,000. The net profit on underground ores after taxes amounts to $677,400 as compared to the original net of $1,129,000 and the total net profit on the combined ores after deducting taxes amounts to $886,721 as compared to the original net of $1,518,000.

If a corporation is formed it makes no difference if the profits are held between $25,000 and $50,000 or allowed to go over $50,000 per year as the deduction for Normal Tax and Surtax amounts to a total of 38%. Even with smelter heads at 4% copper and the price of copper at 18 1/2¢ per pound, there would be a net profit of $87,000 per year before deducting taxes. For

this reason a Limited Partnership is recommended, so as to distribute the net profit.

PROPOSED OPERATION

The proposed operation is to construct a new Mace smelter having a capacity of 100 tons per day. This would be erected at the old smelter site which lies at an elevation of 1790 feet. The necessary ores would include the dump and underground ores at the Queen of Bronze property and also the dump ores at the associated properties with some additional underground ore.

RECOMMENDATIONS

In presenting the Queen of Bronze property it must be remembered that it is strictly a development project. Underground tonnages as shown in the Estimated Reserves on Page 4 have been checked as well as conditions permit, and the dump tonnages are as close as possible. Before beginning smelter construction the following recommendations are made.

1. Reopen the C Tunnel level so as to further examine the workings and also the ore exposed in the Cameron stope.

2. The copper content on the Queen of Bronze dump is accepted but it seems advisable to do further check sampling in the Cowboy, Mabel, Waldo and Lyttle dumps. This should consist of a series of trenches carried in to the face of the dump, and should be at contour intervals of 25 or 30 feet. An alternate method would be to side-swipe the face of the dumps with a bull-dozer and take samples at regular intervals.

3. Decide upon the mining method for handling the dumps, especially the Queen of Bronze. It appears that an underhand method of side-swiping the dumps would be the most practical. The work would start at the upper workings in the vicinity of the A Tunnel level and then be carried down the slope toward the D Tunnel level. It must be handled so as not to interfere with underground operations as the underground ores must be developed so as to furnish a low partial tonnage during dump operations and be able to furnish the full production when the dump ores are depleted. This method would also apply to the associated properties.

The Queen of Bronze property is attractive from a development standpoint and should make a good small mine. When considered with the associated properties it offers possibilities of opening up a small district which appears to have been overlooked. The capital risk is small and it is evident that the investment can be returned within a period of 1 year by mining the dump alone. When the associated properties are considered it seems certain that additional ore will be developed, and the underground

tonnage will undoubtedly exceed the 90,000 tons estimated in the Queen of Bronze.

From all indications the proposed operation should be profitable and can be recommended.

Respectfully submitted,

W. A. Michelsen

W. A. Michelsen
Registered Mining Engineer

Seattle, Washington
November 7, 1949

WAM:lg

ASSAY RETURNS

Queen of Bronze Property
Takilma District
Josephine County- Oregon

Sample No.	Ounces per Ton Au.	Ag.	% Cu.	Remarks
	Samples in May, 1949			
49-17	Tr.	Nil	1.28	Open Cut- North of pit, chalcopyrite and carbonates.
49-19	Tr.	Nil	0.51	Open Pit- North End- altered andesite and ga.- pyrite with some chp.
49-20	0.27	Nil	1.10	Open Pit- Opposite Sta. 10 andesite- some chp. and cb.
49-21	Tr.	Nil	1.48	Surface showing- Sta. 9, mostly carbonate copper.
49-22	0.08	Nil	6.54	D Tunnel- Dump, chalcopyrite and pyrrhotite- pile on dump.
49-23	0.10	0.22	6.78	C Tunnel- Dump- hi-grade, pyrite with chalcopyrite.
49-24	0.08	Nil	4.13	C Tunnel- Dump- between portal and ore chute- oxidized pyrr. and chp.
49-25	0.04	0.12	2.14	Big Dump- Above D Tunnel- grab sample- 20 feet along cat trail pyrrhotite and chalcopyrite.
	Samples in October, 1949			
				D Tunnel
49-58	0.08	Nil	5.17	4 E. Drift- Hampshire stope chp. with pyrr.
49-59	0.08	0.56	8.34	4 E. Dr.- Incline raise- Hampshire stope, 3' ore- chp. pyr.
49-60	0.06	0.14	5.58	4 W. Dr.- Hampshire stope- 1' ore- chp. and pyrr.
49-61	Tr.	Nil	2.28	3 E. Drift- No. 6 raise- ore in back- about 2'
				C Tunnel
49-62	Tr.	Nil	0.32	Back of small stope- Stevens X-Cut apparently pinched out.
				A Tunnel
49-63	Tr.	Nil	1.61	1 E. Drift- 3rd one in- grab sample from muck in foot- oxidized- chp. and malachite.
49-64	0.04	Nil	4.24	1 N. X-Cut at turn- 2" stringer in foot- chp. and pyrr.
49-65	Tr.	Nil	1.41	1 N. X-Cut- grab sample- ore from caved chute- oxidized- from Open Pit above.

ESTIMATED SMELTER COSTS

Queen of Bronze Property
Takilma District
Josephine County- Oregon

Smelter Construction	Weight	Amount
Proposal of July 23, 1949- Equipment f.o.b. Denver	87,000	$86,000
Proposal of October 5, 1949- Equipment f.o.b. Denver	10,300	5,800
Total Pounds	97,300	
Truck freight- Denver to Takilma, Oregon at $2.90 per cwt.		2,822
Total Cost f.o.b. Takilma		$93,622

Additional Equipment- Supervision	
2 Double Snyder samplers- $250 each- 1 trommel at $1,000	$ 1,500
Sample Grinder- $250, Wet Laboratory at $1,000	1,350
Steel smelter building erected	3,500
Installation of machinery- 50 tons at $60 per ton	3,000
Foundations- 2 furnaces, blowers and sintering hearth	1,000
Electrical wiring and water piping	2,000
Flues and 60 foot stack, 5' diameter	2,000
Concrete dust chamber, 10'x12'x70'- at $20 per cu. yd.	1,860
Water Tank- 15,000 gallons	2,420
Reconditioned crusher, $750- 20 H.P. Motor and starter, $450	1,200
Supervision- Superintendent 3 months at $750 per month	2,250
Bunkers- 100 ton capacity at mine dump and 500 ton capacity at smelter. Straight line bins with partitions Fir lumber at $20 per M, at site	2,000
Total	$24,000

Miscellaneous	
Rehabilitation of underground workings	$ 5,000
Power line extension- California Oregon Power Company	3,000
Surface jig-back slope tramway- dump to smelter bins 1,600 feet at $3.75 per foot	6,000
Total	$14,800
Grand total	$74,422

Estimated Daily Operating Costs

Treating 100 tons of ore daily, may include 90 tons dump ore and 10 tons mine ore.

One shift daily, delivering ore with Cat or Drag line into grizzly, trommel screen and crusher, then to storage bins. Then by 1,600 foot surface jig-back tram to smelter.

ESTIMATED OPERATING COSTS

Queen of Bronze Property
Takilma District
Josephine County- Oregon

Estimated Daily Operating Costs- Continued

			Cost	
		Daily	Per Ton	Per Unit
Ore Handling				
Labor				
1 Cat operator and fuel		$20.00		
1 Tram man- one shift		12.00		
		$32.00	$0.32	0.32
Smelting and Matting				
Labor and Supervision:				
2 feeder men	per shift- 6 men at $10.00 each	$ 60.00		
1 furnaceman	" " 3 men at $1.75 per hr.	42.00		
1 " Helper	" " 3 men at $10.00 each	30.00		
1 utility man	" " 3 men at $10.00 each	30.00		
1 mech- electrician	" " 1 man at $1.65 per hr.	13.00		
1 sinter man	" " 3 men at $10.00	30.00		
		$205.00	$2.05	
Smelter Superintendent at $500 per month- per day		17.00		
Assayer and chemist at $300 per month- " "		10.00		
		$ 27.00	$0.27	
Coke:				
Needs- 20% sulphur- 5% coke				
5 1/2 tons at $25.00 per ton per charge		$138.00		
Matting furnace at 3/4 ton at $25.00 per ton		19.00		
		$157.00	$1.57	
Limestone:				
10 tons at $2.50 per ton		25.00	0.25	
Power:				
Sinter Fan	10 h.p.			
Turbo Blower	40 h.p.			
Connersville Blower	10 h.p.			
Crusher	7 h.p.			
Electric Hoist	4 h.p.			
Lighting	3 h.p.			
Tramal	10 h.p.			
1 pump				
	84 h.p. 63 k.w. 3 shifts at 1.5¢ per k.w.h.	$ 23.00	$0.23	$4.37
Marketing				
Takilma- Grants Pass, Oregon				
Trucking 3 1/2 tons matte- at $3.50 per ton		12.25		
Freight- Grants Pass, Ore. to Tacoma, Wash. at $6.57		23.63		
Refining- $9.00 per ton		31.50		
		$67.38	0.67	.67
By- C. H. Mace- Oct. 7, 1949	Total Cost		$5.36	$5.36

ORE PRODUCTION ANALYSIS

Queen of Bronze Property
Takilma District
Josephine County- Oregon

Production at 100 tons per day, with smelter heads maintained at 3% copper. May be entirely dump ores or combined underground and dump ores. Following costs based on price of copper paid for by smelter on 18 1/2¢ copper less smelter deduction of 2 1/2¢ or 16¢ net per pound. Gold at $35.00 per ounce, silver at 90.5¢ per ounce. Recovery at 95%. Taxes are not included.

Dump Ores

100 tons ore at 3% copper, 0.04 ounces of gold, and 0.04 ounces of silver.

		Copper	$ 912
		Gold	133
		Silver	3
		Total Gross Return- per day	$1,048
Less operating expense-			
Ore transportation, smelting and marketing- per ton	$5.36		
Mining- dump ores	1.15		
Cost per ton	$6.51		
Cost per 100 tons- per day			$ 651
Net returns per day			397
Net returns per month			$11,910
Net returns per ton			$3.97
Estimated yearly production- less delays			35,000 tons
Net returns per year at 35,000 tons			$138,900
Tonnage- dumps alone			111,000 tons
Estimated life of dumps- combined			3.2 years
Net returns- dump ores- total			$440,000
Tonnage- Queen of Bronze dump			46,000 tons
Estimated life of dump at 35,000 tons per year			1.3 years
Net returns- Queen of Bronze dump			$172,000
Capital investment- plus 7 months interest			$ 77,024
Net returns per month			11,910
Months to retire capital investment and interest			6.5 months

ORE PRODUCTION ANALYSIS

Queen of Bronze Property
Takilma District
Josephine County- Oregon

Underground Ores

100 tons of ore at 7% copper with 0.04 ounces of gold and 0.04 ounces of silver per ton. Net price of copper 16¢ with recovery at 95%. Taxes not included.

Copper		$2,125
Gold		133
Silver		3
Total Gross Return- per day		$2,261
Less operating expenses-		
Ore transportation, smelting and marketing- per ton	$ 5.36	
Mining costs per ton	4.70	
	$10.06	
Cost per 100 tons- per day		$1,006
Net returns per day		1,255
Net returns per month		$37,650
Net returns per ton		$12.55
Estimated yearly production- less delays		35,000 tons
Net returns per year at 35,000 tons		439,000
Tonnage underground- Queen of Bronze		90,000 tons
Estimated life- underground ore		2.6
Net return- underground ores- total		$1,129,000
Cost per ton- less gold and silver values		$ 8.70
Minimum or cut-off copper content- underground ores		
at 18 1/2¢ copper		2.9%
at 17 1/2¢ "		3.1%
at 16 1/2¢ "		3.3%

Combined Ores: Dump and Underground

Estimated yearly production less delays	35,000 tons
Total tonnage- combined ores	201,000
Estimated life- combined ores	5.8 years
Net returns- combined ores	$1,518,000

Net returns on the combined ores is based on the combined profits in each individual operation. It is not considered on the basis of a 5% copper content as shown in the estimated reservoc.

TAX ANALYSIS

Queen of Bronze Property
Takilma District
Josephine County- Oregon

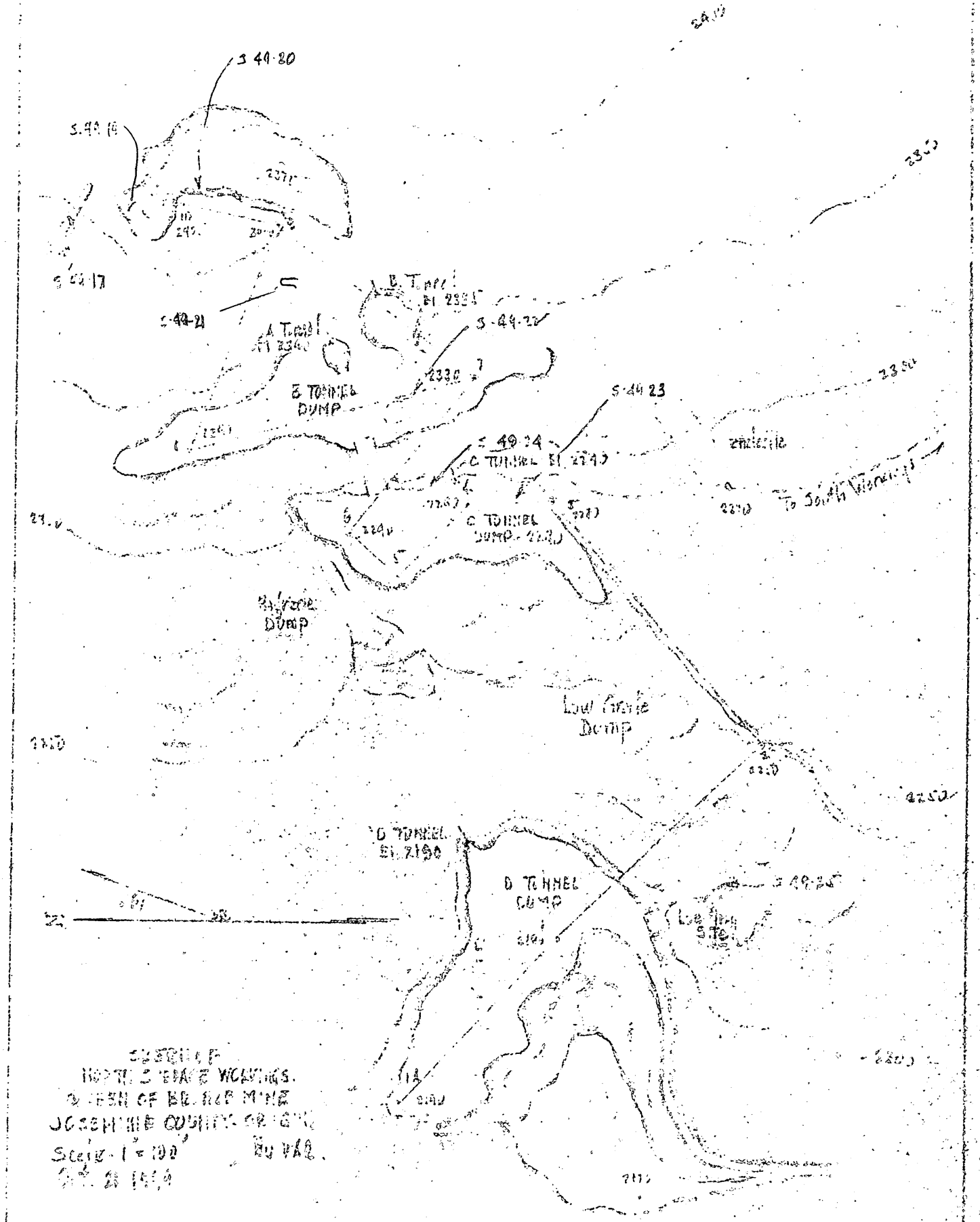
The following tax analysis is based on the Corporation Income Tax which includes both the Normal and Surtax. It shows the inadequacy of our present tax laws for encouraging venture capital to invest in mining properties. It compares unfavorably to the Canadian Tax Laws which impose no tax for a period of 3 years on mining properties in the stage of development. This allows the company to build up a small surplus to meet exploration risks.

Tax Analysis

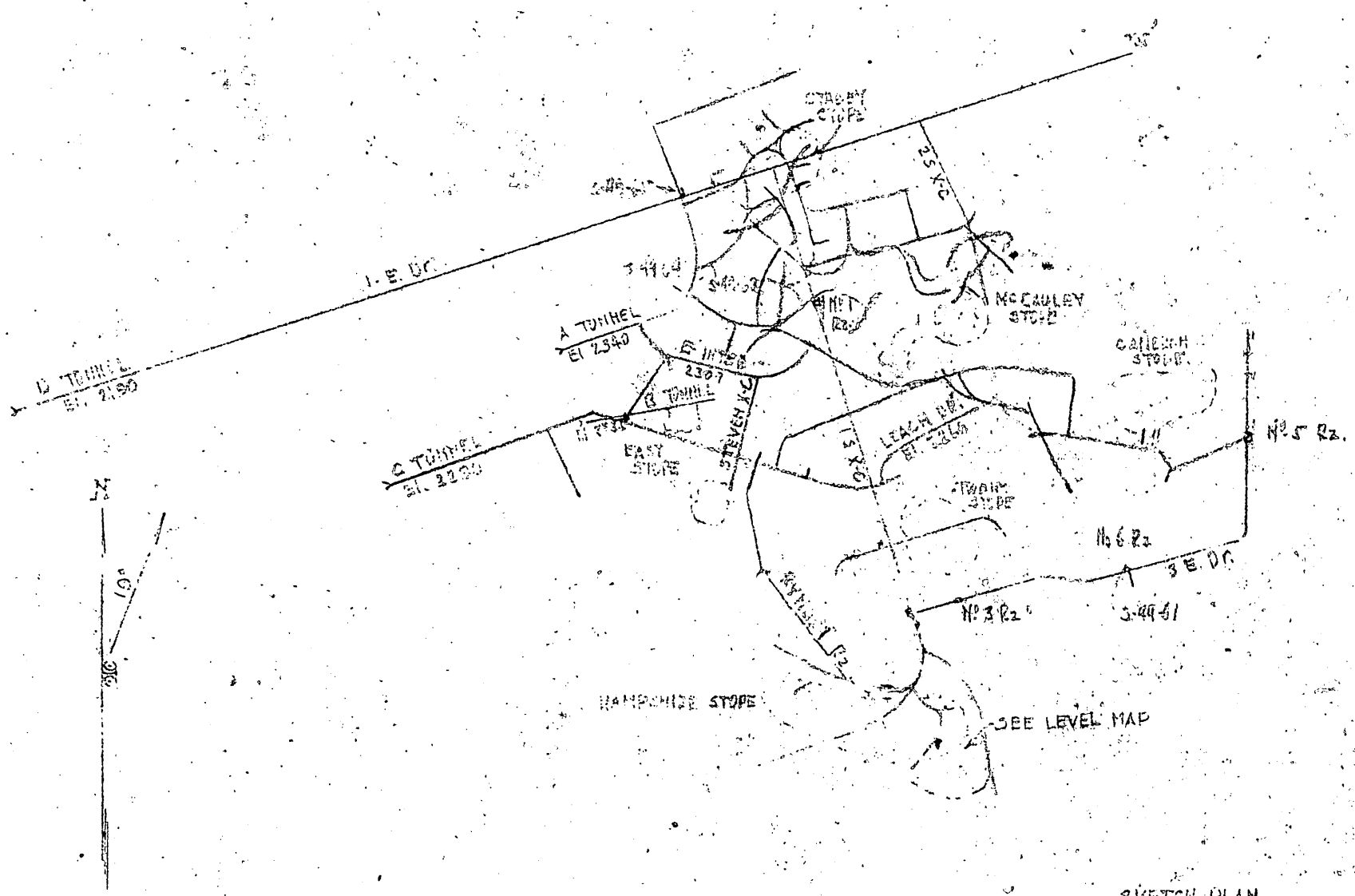
Capital investment- to retire in 1 year		$74,422
Plus- Interest at 6% for 1 year		4,460
Total capital charge		$78,882
Net returns per year- dump ores		$136,900
Less- total capital charge		78,882
Net return- for first year- dump ores Over $50,000 and taxable for total of 38% and this will apply on total net profit		$60,018
Total net profit- dump ores		$440,000
Less total capital charge	$78,882	
" 2.78% proportionate royalty- Waldo ore	12,250	
	$91,132	91,132
Total net returns- dump ores		$348,868
Less 40% tax- 38% Federal- 2% State		139,547
Total Net Profit- after taxes- dump ores		$209,321
Net return- underground ores- Queen of Bronze		$1,129,000
Less 40% tax- 38% Federal- 2% State		451,600
Net profit- underground ores- after taxes		$ 677,400
Total net profit- combined ores- after taxes		$ 886,721

Taxes such as Social Security and Employment Security and Workman's Compensation, Pension and Insurance benefits have not been considered as this depends on the personnel involved in the operation.

A 15% depletion charge is recommended in the first year of operation. A Limited Partnership is also recommended rather than a corporation.

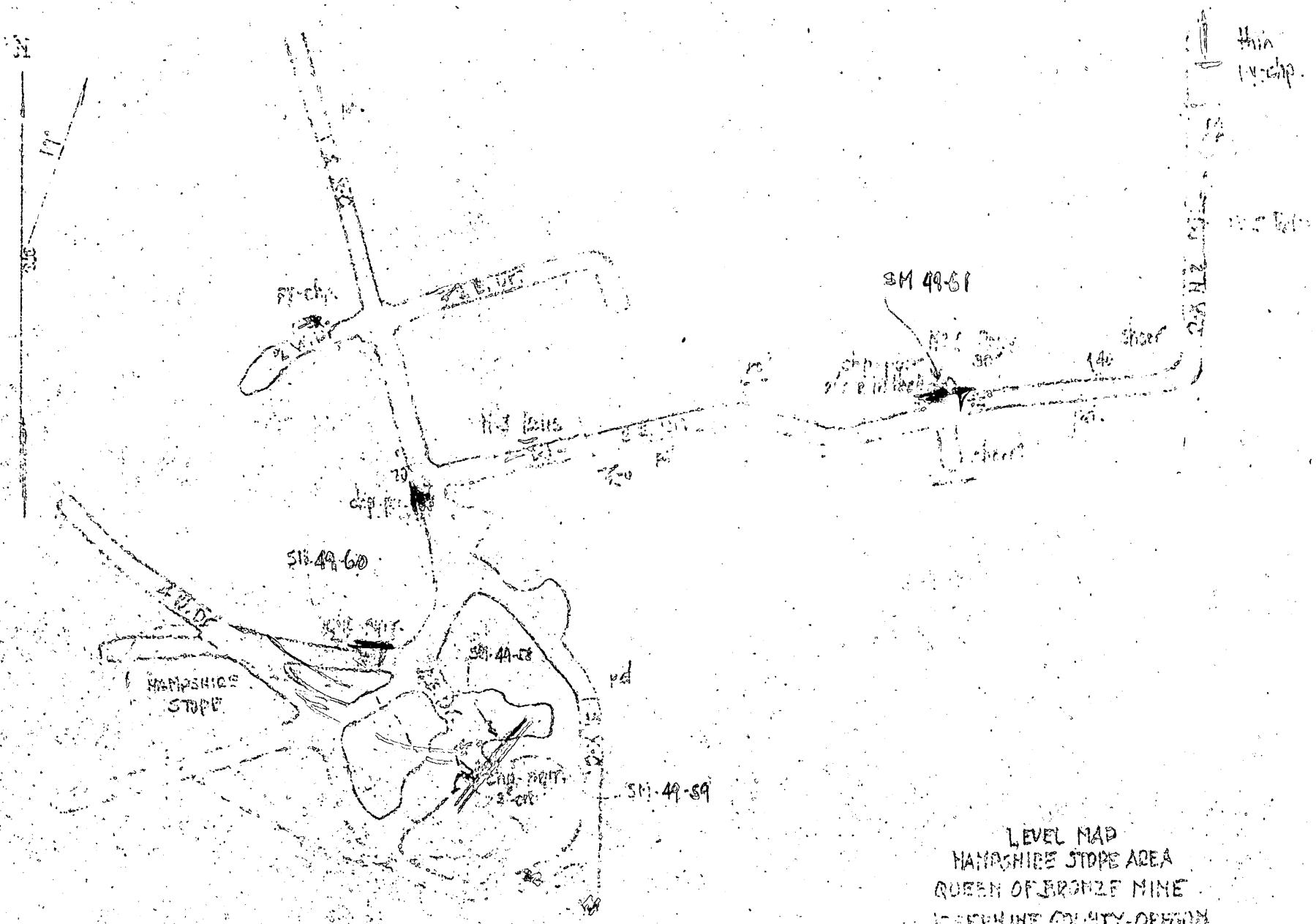


SKETCH
NORTH BRANCH WORKINGS.
DIVISION OF BEAR MINE
JOSEPHINE COUNTY, OREGON
Scale 1" = 100'
Oct. 28 1949
By VAQ.



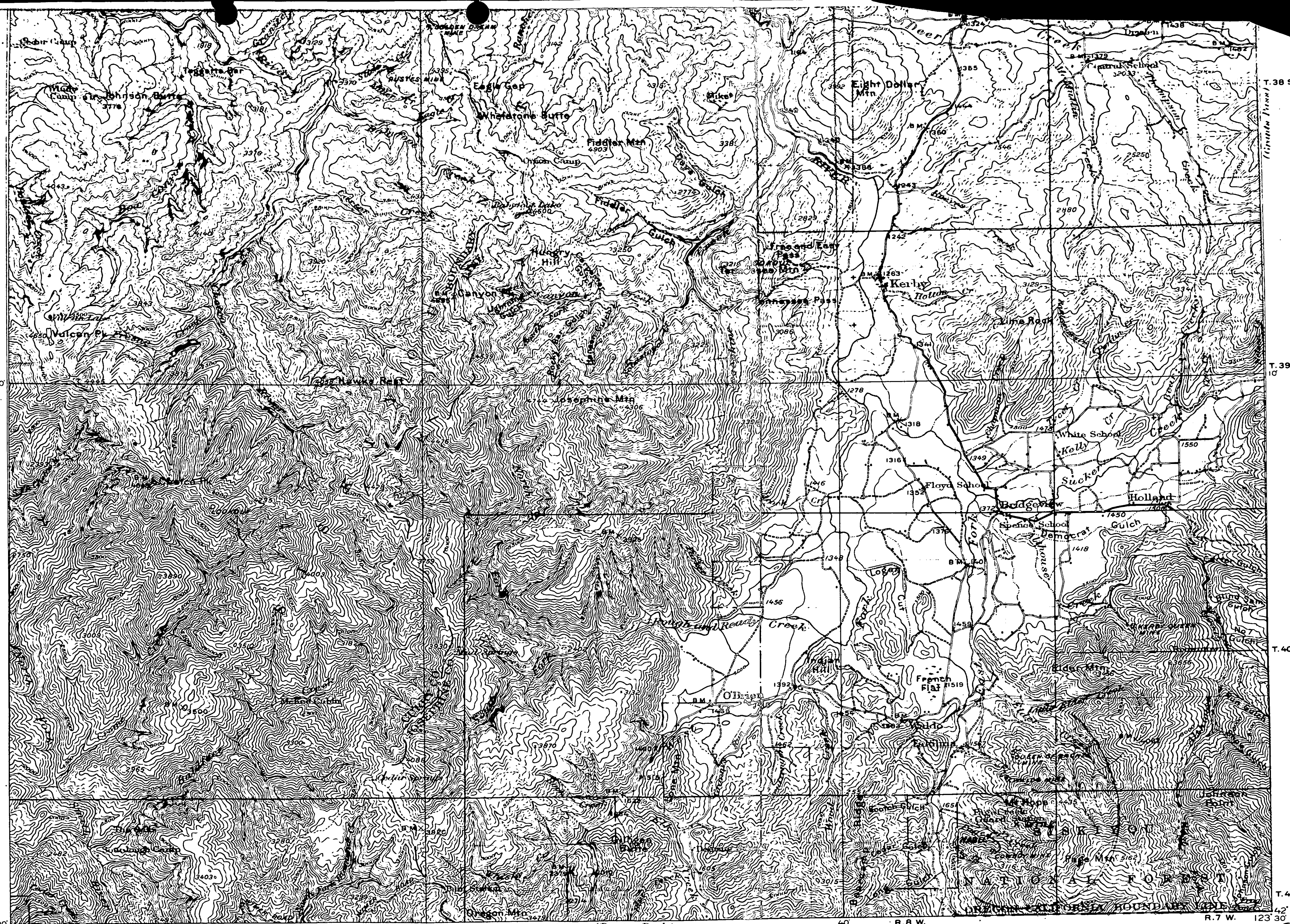
SKETCH PLAN
OF NORTH WORKINGS
QUEEN OF BRONZE MINE
JOSEPHINE COUNTY OREGON
Scale 1" = 100' By W.A.C.
Oct. 21, 1949

From Map by E.R. Clarke - Nov. 1, 1929



LEVEL MAP
HAMPSHIRE STOPE AREA
QUEEN OF BRONZE MINE
JOSEPHINE COUNTY-OREGON
Scale-1"=40' By: W.A.R.
Nov. 7. 1949

From Map by R.H. Clarke - Nov. 1. 1929.



R. B. Marshall, Chief Geographer.
T. G. Gerdine, Geographer in charge.
Topography by J. G. Staack, A. O. Burkland, C. P. McKinley, and R. M. Wilson.
Control by U.S. Coast and Geodetic Survey, W. T. Griswold, A. I. Oliver, L. F. Biggs, and E. M. Fry.
Surveyed in 1915.

Scale $\frac{1}{125000}$

1 ½ 0 1 2 3 4 5 Miles

1 ½ 0 1 2 3 4 5 Kilometers

Contour interval 100 feet.

Datum is mean sea level.

Edition of 1917 reprinted 1942

Polyconic projection. North American datum

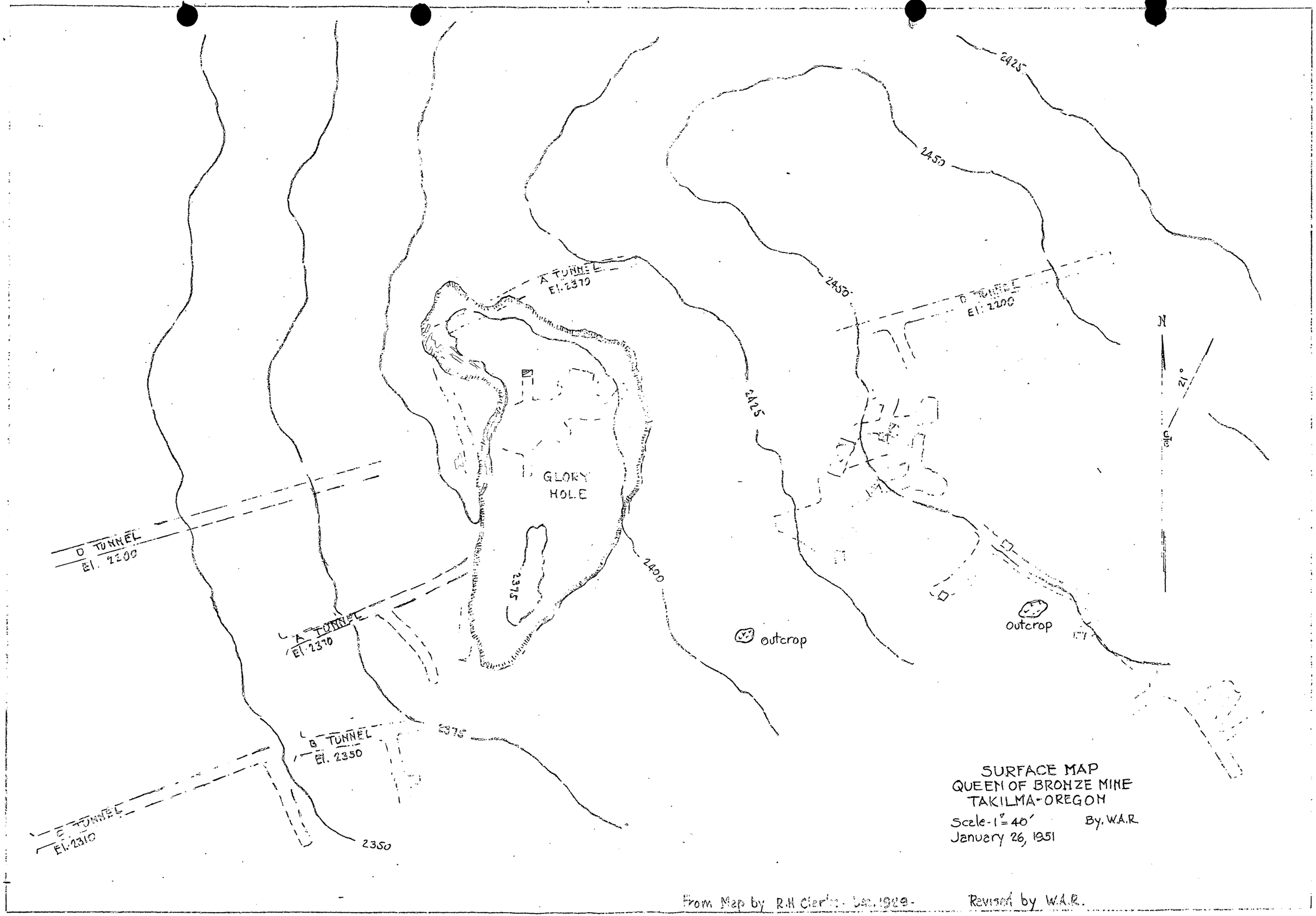
KERBY ORE.

SURFACE AND LEVEL MAPS

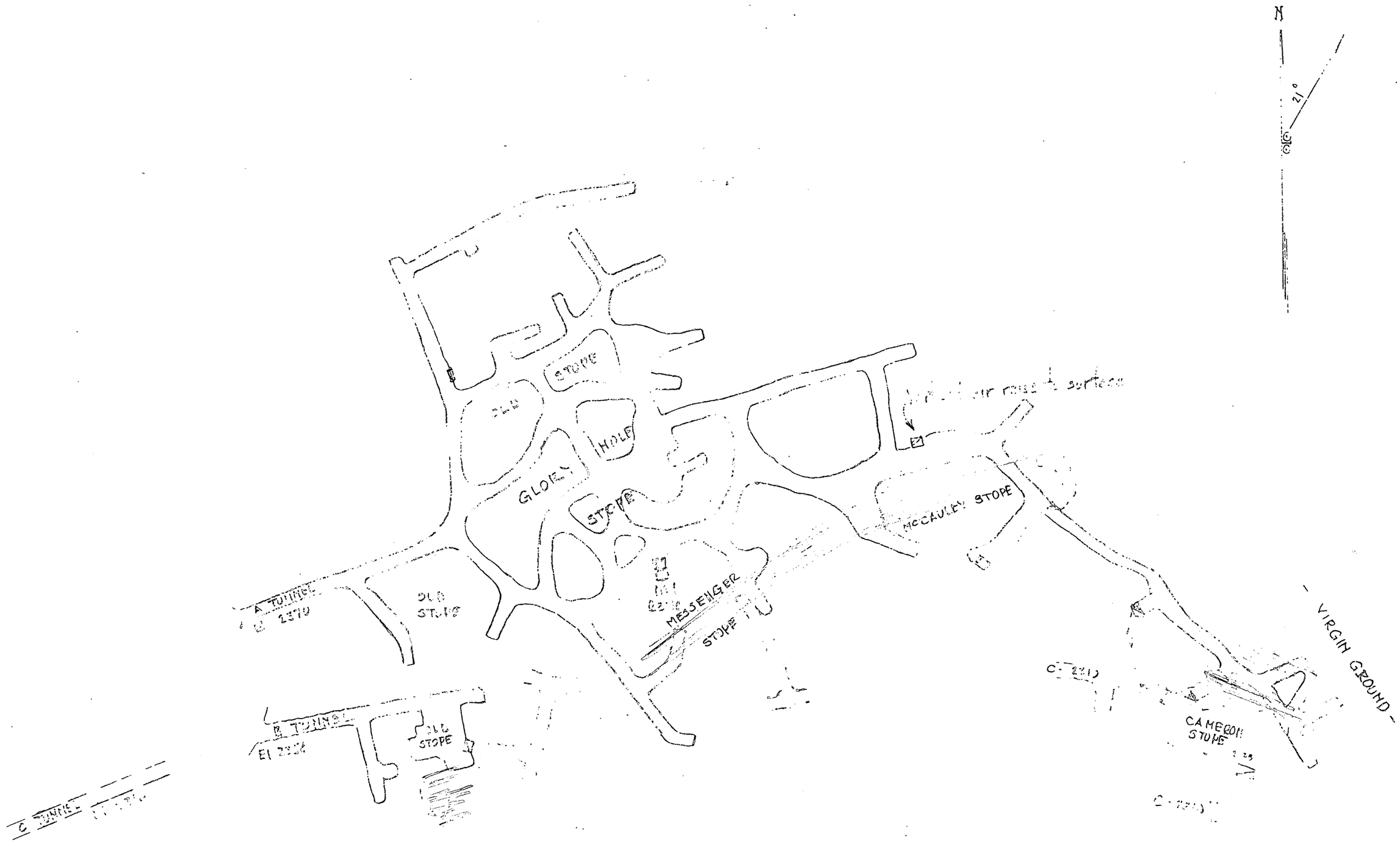
QUEEN OF BRONZE PROPERTY
TAKILMA DISTRICT
JOSEPHINE COUNTY- OREGON

Seattle, Washington
May 23, 1951

By: W. A. Richelsen
Registered Mining Engineer



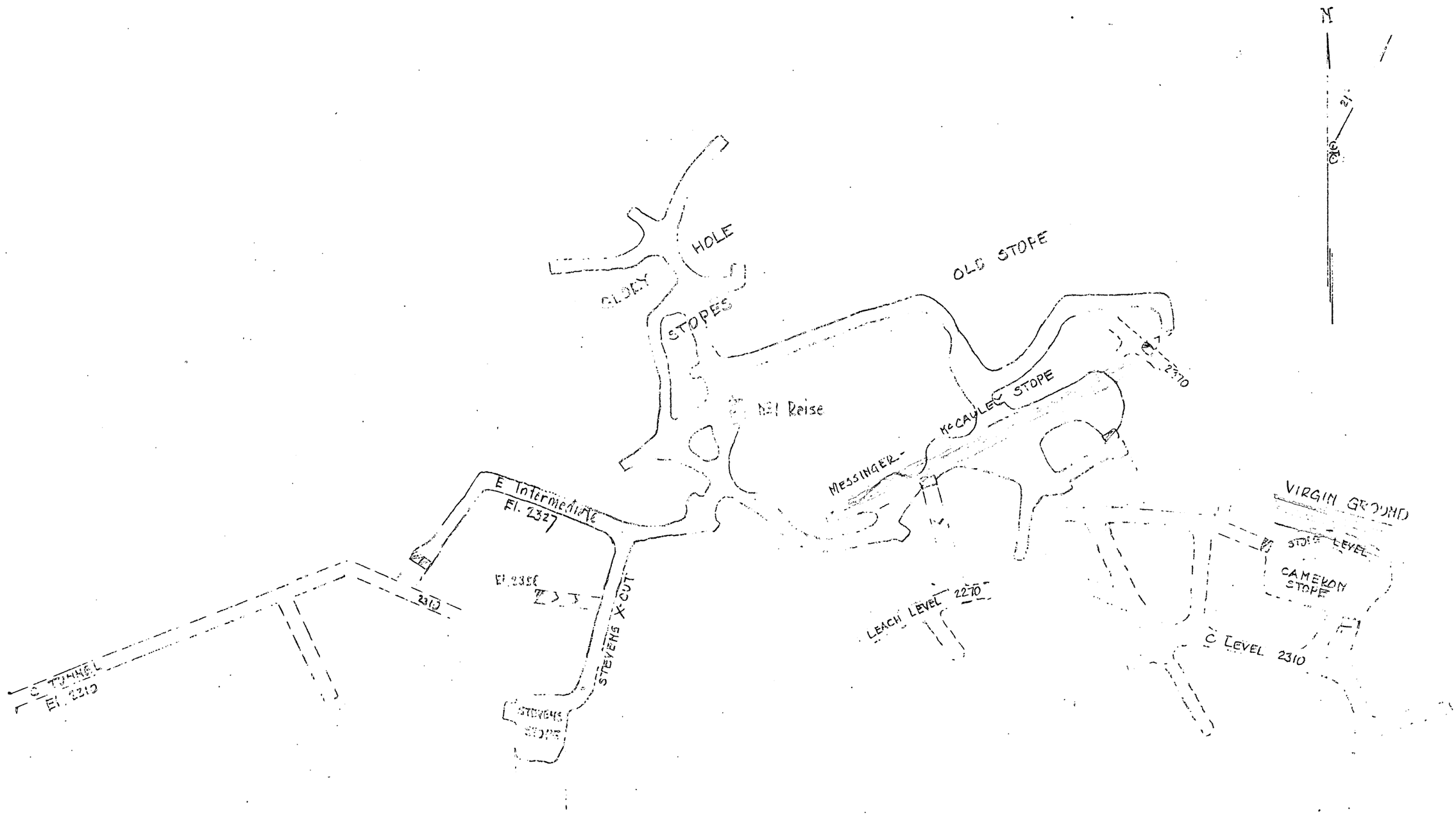
From Map by R.H. Clarke - Dec. 1929 - Revised by W.A.R.



'A' TUNNEL LEVEL
QUEEN OF BRONZE MINE
TAKILMA—OREGON
1" = 40 FT. BY. WAK
Jan. 3, 1951

From Map by R.H. Clarke - Dec. 1929

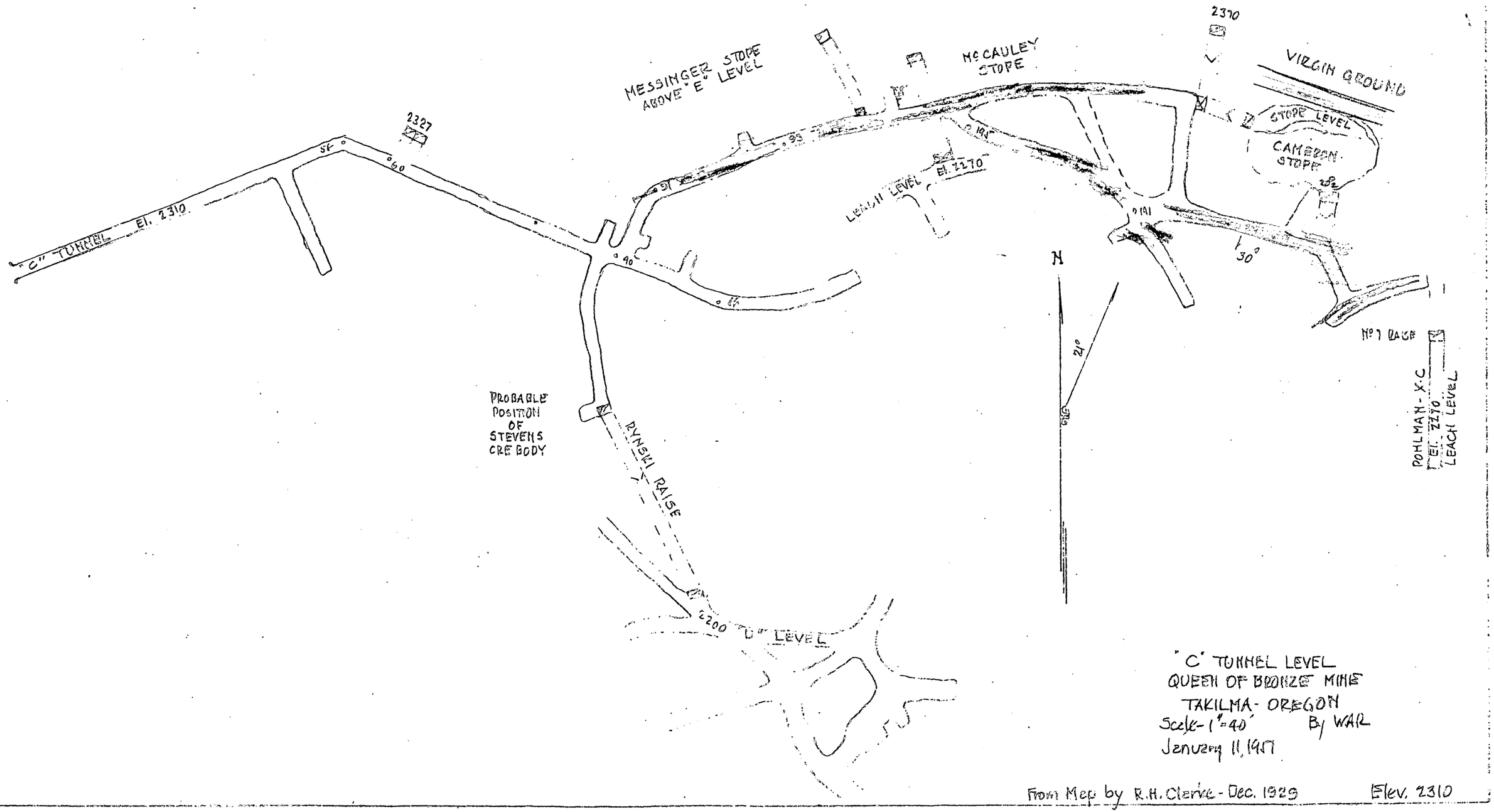
Elev. 2370



E INTERMEDIATE LEVEL
QUEEN OF BRONZE MINE
TAKILMA - OREGON
Scale - 1" = 40'
Jan. 4, 1951
By W.A.R.

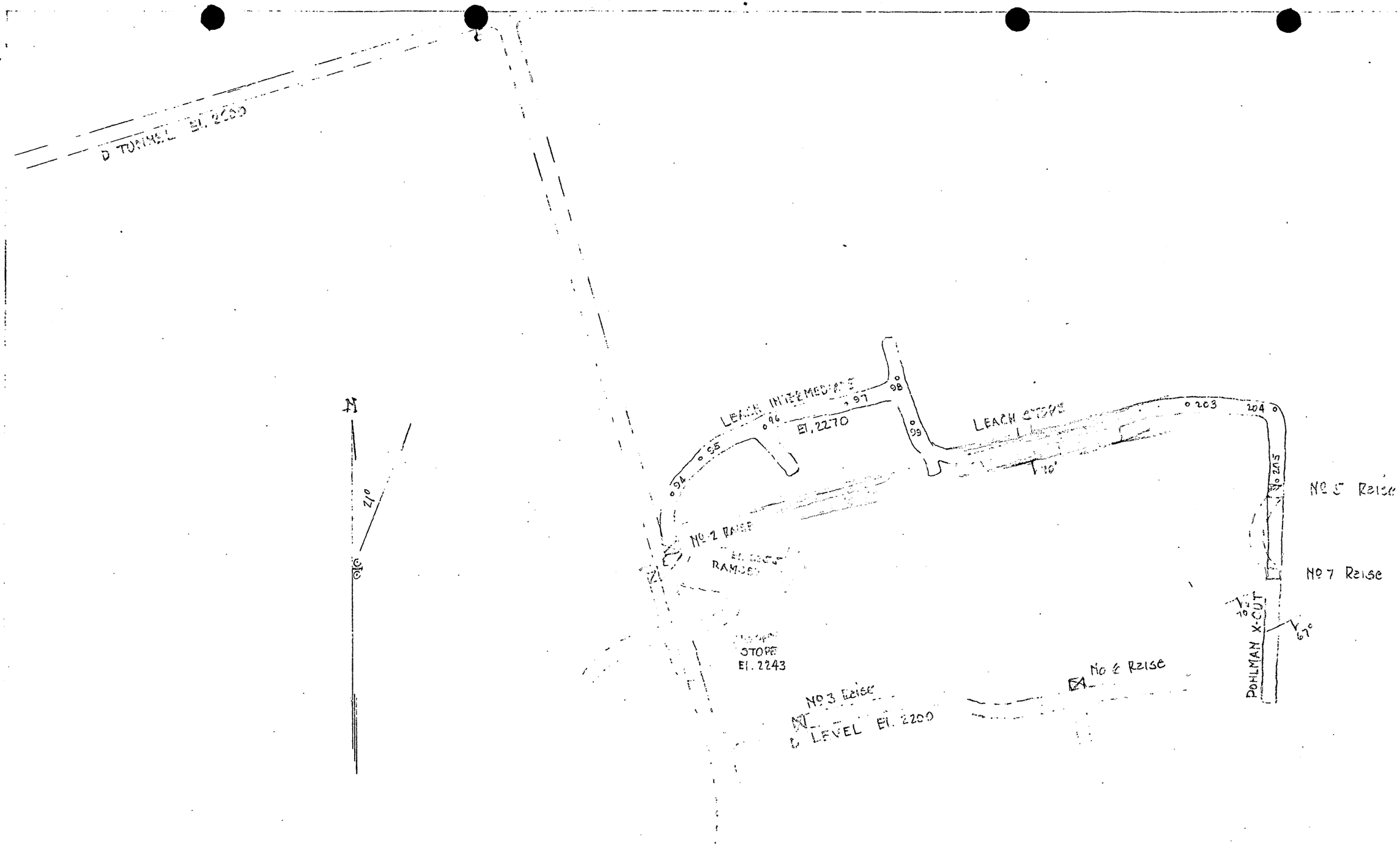
From Map by R.H. Clarke - Dec. 1929

Elev - 2327



"C" TUNNEL LEVEL
QUEEN OF BRONZE MINE
TAKILMA - OREGON
Scale - 1" = 40' By WAR
January 11, 1957

From Map by R.H. Clarke - Dec. 1929 Elev. 2310



LEACH INTERMEDIATE LEVEL
QUEEN OF BRONZE MINE
TAKILMA - OREGON
Scale - 1" = 40'
By: W.A.R.
Jan 10, 1951

From Map by R.H. Clarke - Dec. 1929

El. 2270

700

Surname copy

Ellis

File: DMEA-1534 (Copper)
Waite Minerals, Inc.

MAR 1 8 1955

Hon. James E. Murray
United States Senate
Washington 25, D. C.

My dear Senator Murray:

This refers to your letter of March 3 to Mr. J. J. Forbes, Director of the Bureau of Mines, and his reply under date of March 16, 1955. Copies of said correspondence were forwarded to this office for consideration.

It is noted in your letter of March 3 you refer to a file of correspondence relating to the Queen of Bronze Mine in Oregon. The correspondence evidently deals with an asserted belief that the owners of the property have not been treated fairly by the Bureau of Mines.

This Agency has no knowledge of such a situation. On November 30, 1951, the Defense Minerals Exploration Administration entered into an exploration contract (Docket No. DMA-1534X) with Waite Minerals, Inc., then owners of the Queen of Bronze Mine. The purpose of the contract was to explore by diamond drilling a mineralized zone on the property. The contract amount was $30,000, with Government participation of 50 per cent, or $15,000. The work was not commenced within the 60-day beginning period and two extensions of the starting date were granted. The first extension was to April 21, and the final date set was June 15, 1952. The work was not started, so by letter to the Company on June 24, 1952, the contract was rescinded. Our Washington file reveals no correspondence with the Company's representative since June, 1951.

Therefore, in the light of our dealings with the Company and no knowledge of what the complaint covers, we are at a loss to be of any assistance in the matter referred to in your letter.

Sincerely yours,

C. O. Mittendorf

Administrator By EEF

Copy to: Mr. J. J. Forbes,
Director, Bureau of Mines

EWEllis/gla
3-18-55
cc to: Admr.'s Reading File
Docket
Code 700

OFFICE OF THE DIRECTOR

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

March 16, 1953

Hon. James E. Murray
United States Senate

My dear Senator Murray:

Your letter of March 3, referring to a file of correspondence about the Queen of Bronze mine in Oregon, and dealing with an asserted belief that the owners had not been treated fairly by the Bureau of Mines, has been received.

Inasmuch as the Waite Minerals, Inc. applied for and received a Defense Minerals Exploration Administration loan on the Queen of Bronze mine in 1951, it is possible the complaint has some connection with the DMEA project (No. DMA 153-X). Your letter is being referred to the DMEA for further consideration. You may expect to hear direct from that agency.

Under the Bureau exploration program some work was done on the Queen of Bronze mine in 1954. I am asking Stephen M. Shelton, Regional Director, Region I, Albany, Oregon, for any information he may have ready to submit on the recent work and will write you further if there is any information to pass along to you for your constituent.

If the Bureau of Mines can be of further service to you please do not hesitate to call on me.

Sincerely yours,

J.J. FORBES

Director

HMMeyer/vr
Copy to: Division of Minerals
Branch of Base Metals
H. M. Meyer
Director's Reading File
Regional Director, Region I - Oregon
Defense Minerals Exploration Admin.
Files

C O P Y

UNITED STATES SENATE

Committee on Interior and Insular Affairs

March 3, 1955

Mr. J. J. Forbes, Director
Bureau of Mines
Department of Interior
Washington 25, D. C.

Dear Sir:

Recently there has been referred to our attention a file of correspondence relating to the Queen of Bronze Mine properties located in the State of Oregon and dealing with an asserted belief that the owners have not been treated fairly by the Bureau of Mines.

It will be appreciated if you will furnish this Committee with an abstract report of any surveys, if any, that the Bureau has made on this property, the results thereof, and any other pertinent data.

Very truly yours,

/s/ James E. Murray
JAMES E. MURRAY
Chairman

C O P Y

April 15, 1953

Memorandum to the file

Mr. Ellis received a telephone call from a Mr. Osias of ODM regarding this project. The facts of the case were given to him. He volunteered the information that applicant had some 90,000 tons of 7% (??!!) ore blocked out in the mine and some 120,000 tons of 3.6% (??!!) ore in dumps and was trying to get permission from ODM to ship copper concentrate to Japan. He also volunteered the information that no concentrate could be shipped out of the country because no permission to ship said concentrate could be given, especially when we had to pay 36-1/2¢ a pound for Chilean copper.

Mr. Osias stated that he told the inquirer that there was plenty of market for his copper in this country.

Ernest Wm. Ellis

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.
So. 157 Howard Street
Spokane 4, Washington

July 2, 1952

RECEIVED
JUL 14 1952
GENERAL COUNSEL
DEFENSE MINERALS
ADMINISTRATION

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

Re: DMEA-1534X, Copper
Contract Idm-E218
Waite Minerals, Inc.

Dear Sir:

Enclosed are three copies of a rescission of the subject contract. Copies have been sent to the Operator and to the Fiscal Officer.

Sincerely yours,

K H Gray
Kathryn Gray
For: A. E. Weissenborn
Executive Officer, DMEA
Field Team, Region II

Enclosures

cc: USBM, Albany

JUL 7 - 1952

SDS
7-9-52

C
O
P
Y

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION
WASHINGTON 25, D. C.
1201 N. Division St.
Spokane 2, Wash.
June 5, 1952

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 10 1952

DMA-1534

Major E. R. Waite
Waite Minerals, Inc.
P. O. Box 2
Grants Pass, Oregon

Subject: Revocation of Contract Idm-E218

Dear Major Waite:

Your attention is called to the fact that the deferred starting date, April 21, 1952, for the captioned contract has expired.

In the absence of any communication from you regarding reasons for delay in starting work under the terms of the exploration project contract, the Field Team is obliged to give you this notification that immediate revocation of the contract must be recommended unless assurance is given that work is to be started not later than June 15, 1952.

By Field Team, Region II

A. E. Weissenborn, Exec. Officer

M. E. Volin, Member

cc: USGS, Spokane

Hostile with Bureau

part of cooperate prog-

Broadgate - Calif Oregon Power Company

signed agmt & started drilling

in 1953

resident Eng at Grants Pass -

1953 = asked - B of M - at Albany -

did not drill as agmt pts outside our zone -

trying to develop one body -

Not rely on reports here! no final report? Soil sampling

C.S.A. - S.B.A.

dated March 1 - 1957

Power pur up Jones - Hunthausen

1534

OREGON

JOSEPHINE COUNTY

February 1, 1952

Waite Minerals, Inc., Idm-E218, Cu

50-50 of $30,000.00

8 months

The work involves 2,700 feet of diamond drilling to explore some low-grade copper-bearing lenses.

Work on the contract has not commenced as of this date.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DEPARTMENT OF THE INTERIOR
Defense Mineral Exploration
RECEIVED
JAN 21 1952

No. 1[illegible] Forrest Street
Spokane 1, Washington

January 1[illegible], 1952

BN

[illegible], Operations Office
Defense Mineral Exploration Administration
Department of Interior
Washington [illegible], D. C.

Gentlemen:

Enclosed are the original and appropriate copies of exploration project contracts that have been signed by the operators.

1534/x

These contracts are: (1) [illegible] Minerals, Inc., Josephine County, Oregon, exploration project contract DMEA-[illegible]. (2) [illegible] Gibson, (An individual), [illegible], Oregon, exploration project contract DMEA-[illegible].

[illegible] copies of these contracts are being retained by the author, [illegible] and [illegible] Inc.

[illegible]
[illegible]
[illegible]
[illegible]

400

FILE COPY
SURNAME:

Ellis
Mittendorf

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

DEC 4 1951

AIR MAIL

Mr. A. E. Weissenborn
Executive Officer
DMEA Field Team, Region II
South 157 Howard Street
Spokane 8, Washington

Re: Docket No. DMA-1534X (Copper)
Waite Minerals, Incorporated
1028 Northeast Seventh Street
Grants Pass, Oregon

Dear Mr. Weissenborn:

Enclosed find (7) copies of the above captioned exploration contract. One copy is your "Field Work Copy."

I have signed this contract for the Government which has given the project number Idm-5218.

Kindly have six copies executed by an authorized official of the company. Please return the original and three copies to this office. The Washington Finance Division will forward a copy to the Regional Finance Officer for your area.

Before completing the contract and in accordance with Par. 4 thereof, be sure to require a copy of any sub-contracts for your written approval.

Furthermore, Applicant must submit 6 copies of the Mortgagor's Subordination Agreement which in this case, is to be executed by Josephine County, Oregon.

Sincerely yours,

C. O. Mittendorf (for) J.N. 12-4

Acting Administrator
Defense Minerals Exploration Administration

Enclosures 7

EWEllis/jem 11/30/51

cc to: Adm. Reading File
Reports & Records
Docket
Field Team, Reg. II
Messrs. Mittendorf
Johnson, C. H.
Nelson, Ned
Moon
Thayer
Ellis

APPROVED:

Chairman, Operating Committee

Member, Bureau of Mines

Member, Geological Survey

FILE COPY
SURNAME:

Guthrie

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

R.R.

not stripped in

November 28, 1951

Memorandum

To: Director, Production Expansion Division

From: General Counsel

Subject: Waite Minerals, Inc. exploration contract — Docket No. DMA-1534X

The draft of a proposed Exploration Project Contract, submitted to this office on November 26, is approved as to legal form and sufficiency subject to:

1. The addition to Exhibit "A" of a page 3 with the following paragraph written thereon:

"Inasmuch as the items 'Sampling', 'Assaying', and 'Contingencies', totaling $10,800, are not stated in terms of units of actual costs, as called for by the contract form, on which the Government's contribution will be based; and inasmuch as the item 'Labor' does not state the 'number' to be employed, as required by the contract form, it is emphasized that the Government will participate in costs arising out of these items only to the extent that it considers them to be necessary, proper and reasonable."

2. Approval in writing by the Government of all subcontracts, particularly the subcontract for diamond drilling.

3. The subordination agreement of Josephine County.

4. Proper signature and dating of the contract.

Your file in this case is returned.

J. L. Hofflund

J. L. Hofflund
General Counsel

Copy to: Repts. & Records
J. L. Hofflund
R. R. Guthrie
Chron.

Attachment

JLHofflund/bjl

BL

P.E.D. Fm

DMA-1534

DEPARTMENT OF THE INTERIOR
RECEIVED
NOV 26 1951
Defense Minerals Administration,
Production Expansion Division.

To: Director, Production Expansion Division

From: Director, Supply Division

Subject: Application for Exploration Aid of Waite Minerals, Inc., DMA-1534X, Commodity-Copper, Government Participation-$15,000

Transmitted herewith are six copies of a contract with exhibits attached, one Field Team Report Region II, 2 Forms MF-103, with answer sheets attached and two copies of memo from the field team to Chief of the Copper Branch.

This project is recommended for approval by the DMA Field Team Region II. The Supply Division concurs in the recommendation provided that the exploration contract be directed by a cooperative management satisfactory to DMA.

Tom Lyon, Director
Supply Division

Region II

To: D RED
From: D SD

Subject: Application for Exploration Aid of Water Financial Assn, DMA 15340 Community Copper, Government Participation $15,000

Transmitted herewith are 6 copies of contract with exhibits attached, one Field Team Report Region II, 2 Forms MF103 with amount sheets attached and 2 copies of memo from the Field Team Chief of the copper branch.

This project is recommended for approval by the DMA Field Team Region II. The Assistant Director concurs in the recommendation provided that the exploration contract be directed by a corporation management satisfactory to DMA.

Respectfully

MF-500

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

REFERENCE SLIP

DATE JAN 1 1952

REFERRED TO:

1. Mr Mettendorf
2.
3. Rm 4640
4.

FOR:

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

REMARKS: 11-30-51

Ans by phone. advise Mr Ellis 12-52

Check (X) before the items needing attention.

R Adams
Initials of sender.

cc

GPO 16—63815-1

To: Mr. Mittendorf

From: Mr. Adams

Subject: Replies to Correspondence overdue

In accordance with circular letter No. 6 dated 8-6-51, inquiries from members of the Congress, high Government officials and FRS letters must be answered or acknowledged within 24 hours after their receipt in DMA. The following correspondence was forwarded to you and according to our records there has been no reply. Please advise immediately the date of reply if this correspondence has been answered.

Date Fwd	From	Subject	Date ltr.
11-26-51	Cong. G. Gordan	Waite Minerals, Inc.	11-23-51

REPORTS AND RECORDS

KENNETH MCKELLAR, TENN., C[redacted]
CARL HAYDEN, ARIZ.
RICHARD B. RUSSELL, GA.
PAT MCCARRAN, NEV.
JOSEPH C. O'MAHONEY, WYO.
DENNIS CHAVEZ, N. MEX.
BURNET R. MAYBANK, S. C.
ALLEN J. ELLENDER, LA.
LISTER HILL, ALA.
HARLEY M. KILGORE, W. VA.
JOHN L. MCCLELLAN, ARK.
A. WILLIS ROBERTSON, VA.
STYLES B[redacted]S, N. H.
HOMER FERGUSON, MICH.
KENNETH S. WHERRY, NEBR.
GUY CORDON, OREG.
LEVERETT SALTONSTALL, MASS.
MILTON R. YOUNG, N. DAK.
WILLIAM F. KNOWLAND, CALIF.
EDWARD J. THYE, MINN.
ZALES N. ECTON, MONT.

EVERARD H. SMITH, CLERK
CECIL H. TOLBERT, ASST. CLERK

United States Senate

COMMITTEE ON APPROPRIATIONS

DEFENSE MINERALS ADMINISTRATION
WASHINGTON, D. C.
NOV 23 11 06 AM '51

November 21, 1951

DEPARTMENT OF THE INTERIOR
RECEIVED
NOV 26 1951
Defense Minerals Administration,
Production Expansion Division.

Mr. C. O. Mittendorf
Administrator
Defense Minerals Exploration Adm.
Department of the Interior
Washington, D. C.

Dear Mr. Mittendorf:

It is my understanding ~~that~~ the field report covering loan application DMA 1534-X filed by the Waite Minerals, Inc., of Grants Pass, Oregon, was received in Washington the latter part of October. I shall be indebted if you will let me have report giving status of the application and such other information as may be proper at the present time.

Sincerely,

Guy Cordon

GC:J

Nov. ~~24~~ 30 -1951

This letter just rec'd. today by Ellis. Called up the Senator's office & told them the status. Said Office was satisfied & no letter of reply is necessary.

EWR

Field Referrals - Contract

DMA-153bX Copper Region II	WAITE MINERALS, INCORPORATED, GRANTS PASS, OREGON. Queen of Bronze property, Cowboy, Mabel, Lyttle groups; Waldo group, Josephine County, Oregon. Contract referred to Field for completion.

UNITED STATES
DEPARTMENT OF THE INTERIOR

BUREAU OF MINES
1201 N. Division St.
Spokane 2, Wash.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT 2 9 1951

October 25, 1951

MEMORANDUM

To: Chief, Copper Branch, Defense Minerals Administration, Washington 25, D. C.

From: DMA Field Team, Region II

Subject: Waite Minerals, Inc., Josephine County, Oregon
DMA Docket 1534X, Copper

Transmitted herewith are the following in connection with the subject docket:

Form MF-103, Application for Exploration Project (4 copies)
Form MF-200, Exploration Project Contract (6 copies)
Report by R. J. Hundhausen (USBM) (5 copies)

The application for an exploration project was prepared by Major E. R. Waite with the help of R. J. Hundhausen and presented to the Field Team on August 14, 1951. The Field Team considered the proposal too extravagent and partly of a development nature. The Executive Officer decided to send Mr. James J. Quinlan of the Geological Survey to examine the property on September 5 and following days. Mr. Quinlan confirmed that the ore possibilities as based on present knowledge do not warrant the costly program proposed by Major Waite.

Considerable discussion by the Field Team, Mr. Hundhausen, and Mr. Quinlan, resulted in agreement on a more modest program of diamond drilling estimated to cost $30,000. This was presented to Major Waite by letter dated October 1, 1951, as a logical plan of exploring his properties and more in keeping with their possibilities. His caustic reply of October 5 criticized the Field Team in general, as well as the modified program; he asked for additional information but did not give a decision as to his willingness to proceed on such a program.

Additional information was furnished Major Waite in letters, both dated October 10, 1951, from M. E. Volin and R. J. Hundhausen, Bureau of Mines. A mortgagee's subordination agreement was transmitted on October 19. To date Major Waite has not seen fit to reply to these

later letters or otherwise signify his willingness to undertake the modified proposal, but it has been learned indirectly that he has contacted diamond drilling firms for quotations, and it is thus concluded that he may be giving the proposition his consideration.

Mr. Hundhausen's report summarizes presently available data on the properties. Briefly, the ore bodies that have been mined in the past were characteristically small, irregular, and without continuous controlling structures that might guide the search for them. Mr. Hundhausen's work in conducting the Bureau of Mines soil sampling and trenching project in this area during 1950-51 led him to a somewhat different idea of the mineral occurrences than has previously been held. He believes these occurrences are irregular pipes of low-grade mineralization in which small bodies of massive ore averaging 4 to 7 percent copper are distributed sporadically, and recognizes a distinctive type of contact rock in association with them. He sees a possibility of mining the pipes from the surface by lowest open pit and shallow glory hole methods.

As a logical step following the soil sampling and trenching investigations, the Bureau of Mines planned to diamond drill at least one of the more promising areas in which copper mineralization was found localized, thus proving or disproving Mr. Hundhausen's theories. This work was not undertaken because of recession of the drilling project program in favor of the DMA form of aid.

The Field Team recommends the diamond drilling program presented to Major Waite as the logical one to be pursued at this stage in the definition of these deposits. Encouraging results can then lead to an application for an expanded program perhaps of the type proposed by the Major. Without his decision in the matter, it seems advisable to forward the original proposal, contract for the modified program, and supporting data to your office for further appropriate action.

By Field Team, Region II

A. E. Weissenborn

A. E. Weissenborn, Exec. Officer
(U. S. Geological Survey)

M. E. Volin

M. E. Volin, Member
(U. S. Bureau of Mines)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
So. 157 Howard Street
Spokane 4, Washington

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT 2 9 1951

October, 24, 1951

Mr. Tom Lyon, Chairman
Coordinating Committee
Defense Minerals Administration
Department of Interior
Washington 25, D. C.

Re: Waite Minerals, Inc.
DMA Docket 1534X

Dear Mr. Lyon:

In regard to your letter of October 19 Waite Minerals, Inc., originally submitted an application for a production loan, which the Field Team did not approve inasmuch as the subject property did not contain sufficient measurable ore reserves. At a later date, the applicant submitted an application for an exploration loan, which the Field Team considered to be too high in view of the amount of exploration work the program would accomplish. After some discussion with the applicant, the Field Team proposed a somewhat modified exploration application which was presented to the applicant, but which has not been approved by the applicant at the present time. A considerable amount of time has been spent in discussion and correspondence with the applicant on this matter, which could have been shortened had the applicant accepted the modified program.

The Field Team report on the subject property, together with the application for the larger exploration loan and the Field Team's version of a smaller sized contract is currently being assembled. It should be in the mail by Monday, and should contain sufficient information to enable DMA to render a decision.

Yours very truly,

Thor H. Kiilsgaard

Thor H. Kiilsgaard
For: A. E. Weissenborn
Executive Officer, DMA
Field Team, Region II

FILE COPY
SURNAME:

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

a.e.e.

Thayer

OCT 19 1951

Memorandum

To: A. E. Weissenborn, Executive Officer, Field Team, Region II

From: Coordinating Committee

Subject: Waite Minerals, Inc., DMA-1534A

DMA-1534A, Waite Minerals, Inc. was transmitted to you on Jul. 3 for a field examination. We have received a telephone call from Senator Wayne Morse's office asking that we expedite the Field Team report on the subject application. Any consideration you can give to this request will be greatly appreciated.

10/19

Boris Weisz
Chairman, Coordinating Committee

APPROVED:

Ed Clair
For Bureau of Mines

Thayer
For Geological Survey

10/18/51:jh
cc: Reports & Records
Copper Br. Rm. 2612
Coordinating Committee
Field Team, Region II

310

FILE COPY
SURNAME:

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

not stripped in RR

OCT 12 1951

G. E. C.

Memorandum

To: Chairman, Coordinating Committee

From: Chief, Copper Branch

Subject: Waite Minerals, Inc., DMA-1534X

Senator Morse's office has requested by telephone that we ask the Field Team Region II if they can expedite the Field Team reports on the subject application.

J. B. Gowen

J. B. Gowen, Chief
Copper Branch

JBGowen:rw
10-12-51

Copy to: Administrator's Reading File
Executive Officer, DMA Field Team II
Copper Branch
Files-DMA Docket

UNITED STATES
DEPARTMENT OF INTERIOR
OSCAR L. CHAPMAN-SECRETARY

DEFENSE MINERALS ADMINISTRATION

Report by Examination Team
Region II

DMA No.-1534X-Waite Minerals Incorporated

Josephine County, Ore.

R. J. Hundhausen
U. S. Bureau of Mines

October 8, 1951

WAITE MINERALS INCORPORATED
Josephine County, Oregon

DMA Docket No. 1534X

By R. J. Hundhausen (U.S.B.M.)

RECOMMENDATIONS

1. It is recommended that the applicant be granted an exploration contract for $30,000.00 for diamond drilling the surface indication of copper ore at the South Side Queen of Bronze mine.

2. It is further recommended that the exploration contract be directed by a cooperative management satisfactory to DMA.

APPLICANT

The applicant is Waite Minerals, Inc., an Oregon corporation capitalized for 100,000 shares, par value $1.00. The company president is Chauncy Florey, of Medford, Oregon, who is general manager of the Ross Lumber Co. The vice-president is Major E. R. Waite, Grants Pass, Oregon, a mine operator and promoter. Other officers are as follows:

Secretary	Marjorie Waite	Grants Pass, Ore.
Director	Nelson Florey	Medford, Ore.
Director	Marjorie Florey	Medford, Ore.

The stock has all been issued and is held by:

Chauncey Florey	25,000 shares
Major E. R. Waite	25,000 shares
Nelson Florey	25,000 shares
Marjorie Florey	25,000 shares

LOCATION OF DEPOSIT

The property is 41 miles southwest from Grants Pass, Oregon, the nearest shipping point on the Southern Pacific Railroad. Most mining supplies can be obtained in Grants Pass. The route to the mine is over the paved

Redwoods highway for a distance of 35 miles to O'Brien, Oregon, thence 6 miles easterly by graveled county road to the mine area, one mile east of Takilma, Oregon.

The property consists of deeded land described as the NW 1/4 of sec. 36, T. 40 S., R. 8 W., W.M.; also the following patented mining claims situated in secs. 1, 2, 11 and 12, T. 41 S., R. 8 W., W.M.: Lyttle, Marion, Morgan, Brandt, Dorothy, Kelly, Two Spot, Mable, Oregon, One Spot, Copper King, Cowboy, Copper Queen and California. The claims are in the Waldo unorganized mining district.

OWNERSHIP

The ownership of the property is vested in the Waite Minerals,Inc. The company owes $20,000 on the land contract to Josephine County. Payments are $2,500.00 per year for a period of 10 years. A good title is guaranteed by the Commonwealth Title Insurance Corporation.

HISTORY AND PAST PRODUCTION

The Waldo mining district was discovered in 1860. Little development was undertaken until 1903 when C. L. Tutt and Associates, Colorado Springs, Colo., organized the Takilma Smelting Co. This company erected a 100-ton semi-pyritic smelter which operated for 5 years, handling 20,000 tons of 8-percent copper ore from the Queen of Bronze and other nearby mines.

From1910 to 1916, lessors shipped a few thousand tons of ore to the Tacoma smelter. In 1916, Judge Twohy, Spokane, Wash., sent Roy Clarke to Colorado Springs to negotiate for the property. It is reported the purchase price was $150,000, of which $30,000 was cash. Roy Clarke was

placed in charge, and under his management the property reportedly was paid for, the Judge reimbursed, and profits made for all concerned. For this period from 1916 to 1918, 9,992.3 tons of ore were produced from the Queen of Bronze. This ore had a net smelter value of $432,440.88, an average of $43.27 per ton. In addition, 1,842.16 tons were produced from the Cowboy mine, having a net smelter value of $73,562.91. The ore ran from 5.16 percent to 16.33 percent copper and .04 to .44 ounces of gold per ton. This was hand-sorted ore, one ton of shipping ore coming from 3 to 5 tons of run-of-mine ore.

From 1918 to 1929, lessors made intermittent shipments from the property. In 1929 the Pohlman Brothers, Spokane, Wash., organized the Queen of Bronze Mining Co., took the various owners in on a share basis, and started a financing campaign characteristic of the time. This company shipped a total of 1,553 tons of ore up to May, 1930, when operations were discontinued because of the low copper price. The company was left with some debts.

Since May 1930 the mine has been idle. Title to the property reverted to Josephine County for taxes. After Major Waite acquired the property from the county in 1946, he drove 480 feet of exploration tunnel at the Cowboy mine in an unsuccessful effort to tap the east Cowboy ore shoot at depth.

Shenon reports that "the total production of the Queen of Bronze mine is estimated at about 35,000 tons of ore with a gross value of

approximately $1,350,000.00" Production from the Cowboy mine is estimated to be 5,000 tons valued at $300,000.00.

GEOLOGIC SETTING

The geology of the Takilma-Waldo copper deposits has been described in detail by P. J. Shenon in U.S.G.S. Bulletin 846-B, 1933. The Bureau of Mines recently conducted an experimental soil sampling project on the copper properties along this belt, (see fig. I). The following data on geology is taken from Shenon's report supplemented by observation made during the Bureau sampling program. The Bureau work offers encouragement for further exploration and development.

The copper mineralization occurs as stringers in the brecciated wall rocks, as disconnected lenses, kidneys, and pods in contact zones between serpentine and greenstone, and as low grade disseminations in the wall rocks. At the surface the mineralization is confined to local areas, roughly elliptical but irregular in outline. The deposits are associated with a distinctive type greenstone contact-rock that has been carbonated and silicated, and is harder and more coarsely crystalline than the normal greenstone; its occurrence is similar to a tactite found usually along the contact between the serpentinized peridotite and the normal greenstone. Boundaries with the greenstone are gradational. In places it is possible to trace this contact zone on the surface from one copper deposit to another. For example, the North Queen of Bronze mine and the South Queen of Bronze mine are found adjacent to the same contact zone (see figs. 2 and 4). The copper mineralization, at the surface, however, cannot be traced from one deposit to another.

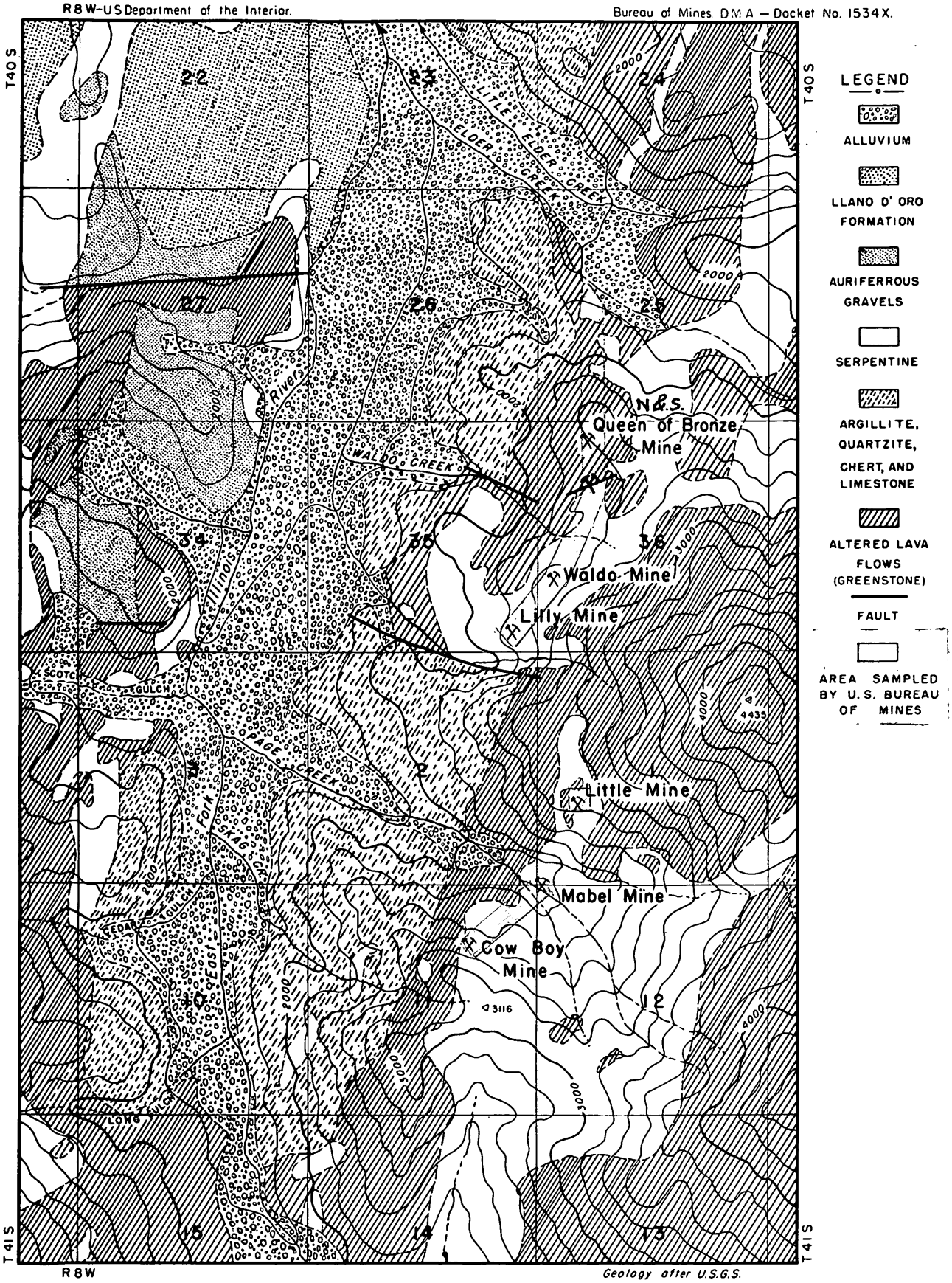


Figure 1.-Geologic map of Takilma-Waldo Copper Belt, Josephine County, Oregon

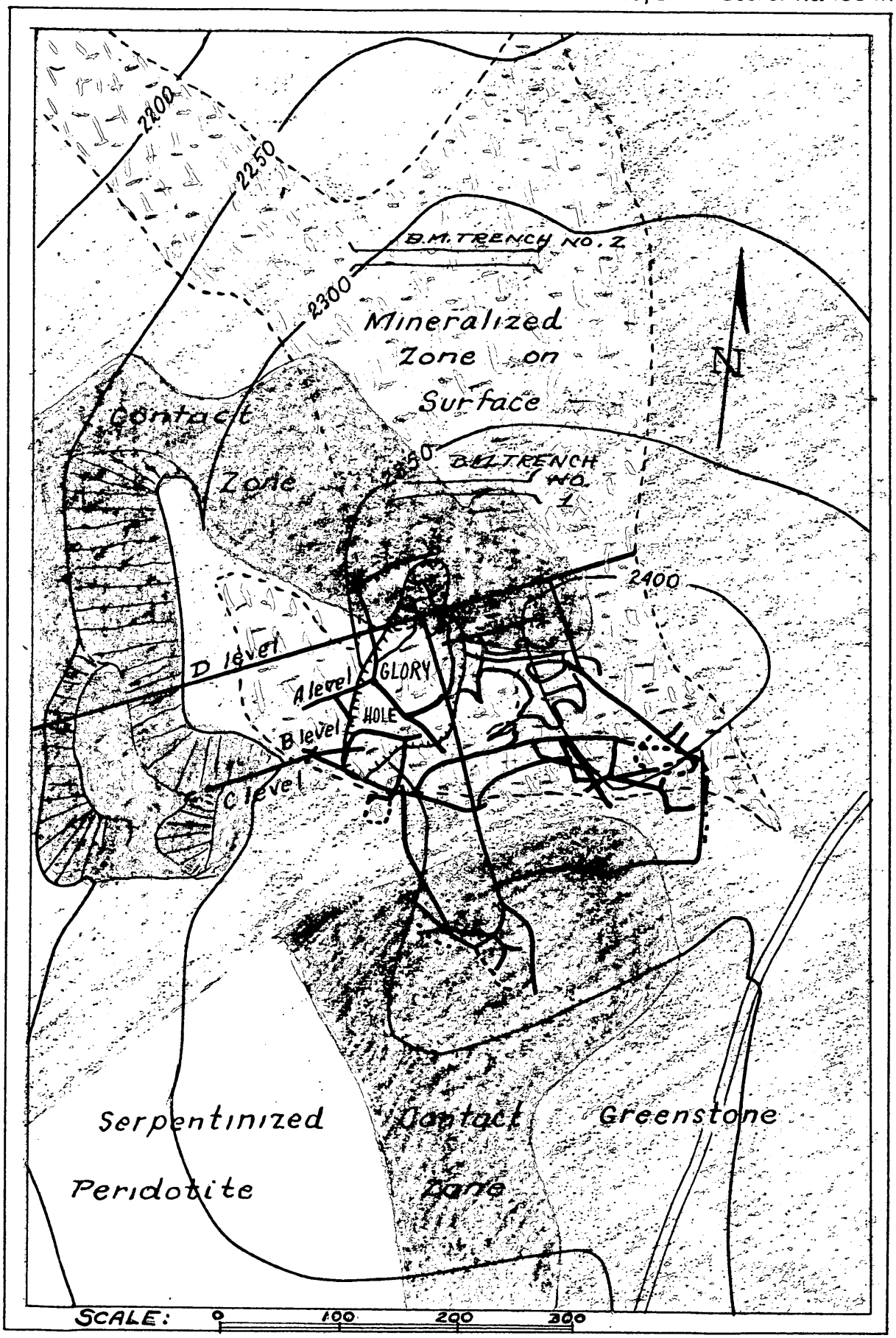


Figure 2. — Geology and workings North Queen of Bronze mine, Josephine County, Oregon.

Individual ore bodies are irregular in size and shape. The largest is not more than 70 feet in vertical height and 120 feet in length. The massive ore has been badly faulted and sheared. Because of these conditions, it is not economic to try to develop large lenses of massive high grade ore in advance of mining. Selective mining methods as practiced in the past require a large amount of exploration.

The Bureau of Mines soil sampling work indicates, however, that practically all of the important copper mineralization is confined to local areas. In this respect the massive ore deposits, as well as the disseminated low grade ores, are believed to be in irregular chimney-like areas.

It is considered that the soil sampling results accurately portray the outlines of the mineralized areas. It is noteworthy that the mineralized areas become progressively smaller in size from north to south, i.e., the Queen of Bronze area is the most extensive and the Cowboy mine area the least extensive. These observations lead to the conclusion that migration of copper due to weathering has not been of much importance away from the primary zones of mineralization.

It is further observed that the contact rocks usually form resistant topographic ridges, whereas, the ore bodies are found in shallow depressions or dished-out areas along the ridges. It seems evident also that the outlines of the copper mineralization as determined by Bureau soil samples are in no way related to the slopes or drainage lines of the present topography.

These data indicate the possibility that these deposits may be adaptable to large scale mining methods. If the massive ores only are

considered, the deposits must be mined selectively and costs of exploration and development will be high. Because the massive ore lenses are small and scattered, reserves are difficult to prove. To mine the massive ore deposits selectively thus is not an attractive venture. On the other hand, there are not enough data to determine the overall tonnage and grade of ore available for large scale, open-pit or glory hole mining methods.

To arrive at a tentative estimate of overall grade available, the production records of the Queen of Bronze mine may be used. This property produced 35,000 tons of high grade hand-sorted ore averaging 8 percent copper. In addition, about 35,000 tons of low grade ore were produced by the exploration and development work and as rejects from the hand-sorting methods. This material, now on the dumps, averages 0.9 percent copper. In combination, the material would aggregate 70,000 tons of 4.44 percent copper ore. Naturally, this material is much higher grade than would be obtained if all portions of the mineralized areas were mined collectively.

The mineralized zone at the surface of the Queen of Bronze mine has an area of 210,000 square feet, or very nearly 5 acres. The zone is approximately 600 feet long and 350 feet wide. The underground workings of this mine have developed and explored a nearly circular area 500 feet in diameter. The deepest level is about 200 feet below the surface.

Within the ground so far explored it is estimated there are 4 million tons.

$$\left(\frac{200{,}000 \text{ sq. ft.} \times 200 \text{ ft.}}{10} = 4{,}000{,}000 \text{ tons}\right)$$

Of this 4,000,000 tons, 70,000 tons have been mined which averaged 4.4 percent copper. Judging by the grade of the dump material, and the few underground assays available, the remainder left unmined may average from 0.1 percent copper to 0.9 percent copper and should also contain massive sulfide lenses. It may be possible by mining this entire area, to obtain shipping ore, milling ore, and low grade leaching ore.

To properly sample these mineralized areas requires detailed, accurate, and costly exploration and assay work. Apparently, the assay walls of the mineralized areas are irregular and are controlled partly by shear zones. It is believed the mineralized areas are localized at the intersections of complex shear zones. The best ores are found as discontinuous lenses along these shear zones and the low grade mineralization occurs in the walls of the shear zones. Some of these shear zones have flat dips; consequently, the mineralized zones may terminate or become impoverished at relatively shallow depths.

The Bureau's work has also determined that some of the greenstone bodies are completely surrounded by serpentinized peridotite at the surface. These bodies have the general appearance of roof pendants, although depth relations are not disclosed. The contact zone surrounding the greenstone has been metamorphosed and copper mineralization may be found at the contact. The structural relations are such that copper deposits may be found underlying some of these roof pendants. None of the deposits has been explored for this possibility.

Each of the copper deposits along the belt has been exploited at the surface by glory-hole mining methods. Leached ores are found to a depth of 10 to 20 feet. Beneath this leached zone, however, the secondary copper ores occur with the primary sulfides adding to the richness and value of the ore. Enrichment may persist to a depth of 50 or 100 feet. The undeveloped surface zones found by soil sampling should therefore yield some enriched ores near the surface where it can be easily and cheaply mined.

DESCRIPTION OF THE MINE WORKINGS

Fig. 3 shows the North Queen of Bronze mine workings. The ore body is developed by 6,200 feet of drifts and crosscuts and 900 feet of raises making a total of 7,100 feet; in addition a glory hole has been made at the surface. The deepest level (No. D) is 225 feet below the open pit.

The mine workings are caved where the timbers are rotted, especially in fault zones. Very little if any serviceable track is left in the mine. Pipe and water lines have to be replaced in all workings that are to be rehabilitated.

It is interesting to note that all exploration and development work has been south of the glory hole and yet the Bureau's soil sampling indicates possibilities to the north of the glory hole. It therefore seems reasonable that some ore will be found north of the present workings.

Fig. 4 shows the workings of the South Side Queen of Bronze mine lying 1,100 feet south of the north workings.

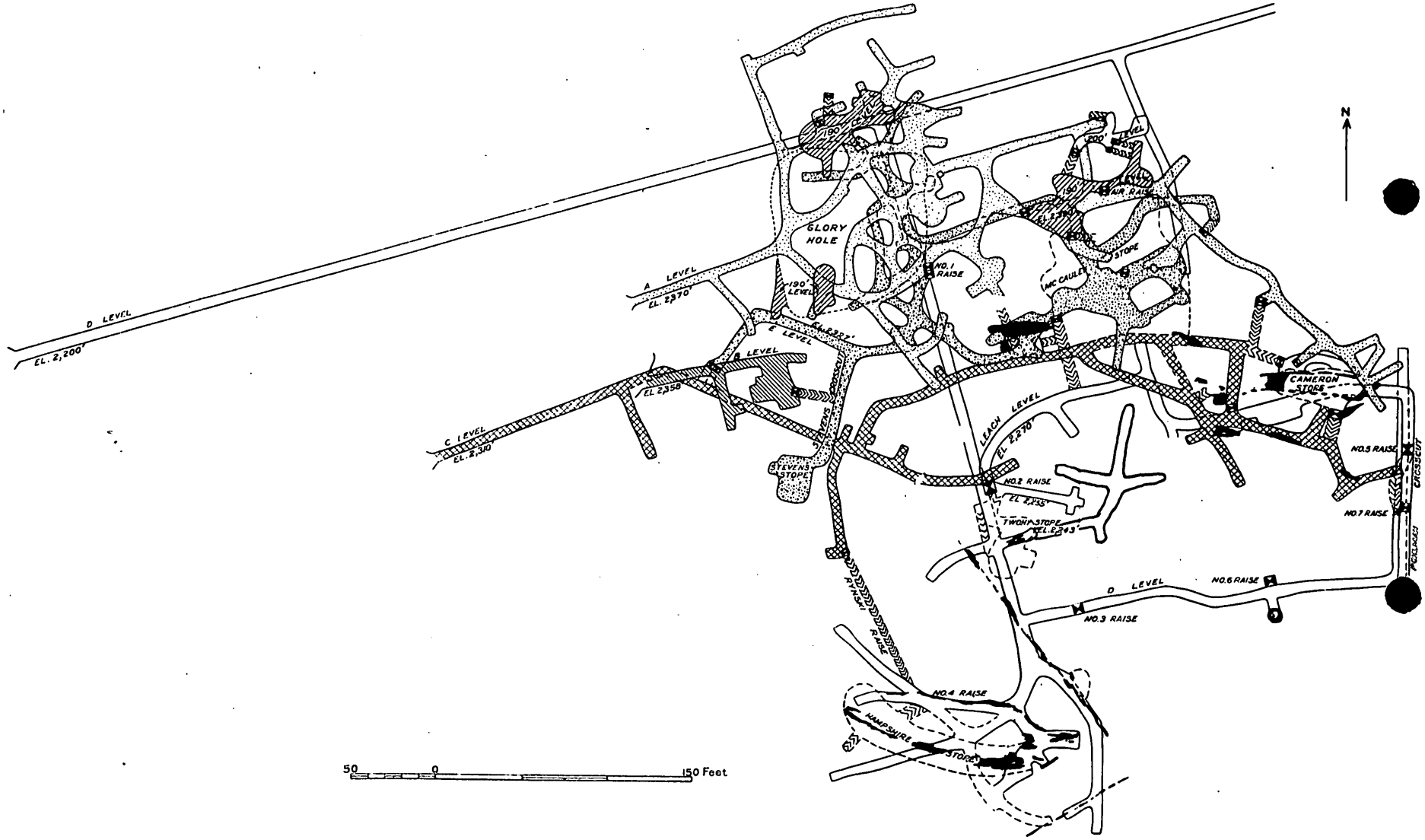


Figure 3. —— PLAN OF NORTH-END WORKINGS OF QUEEN OF BRONZE MINE.

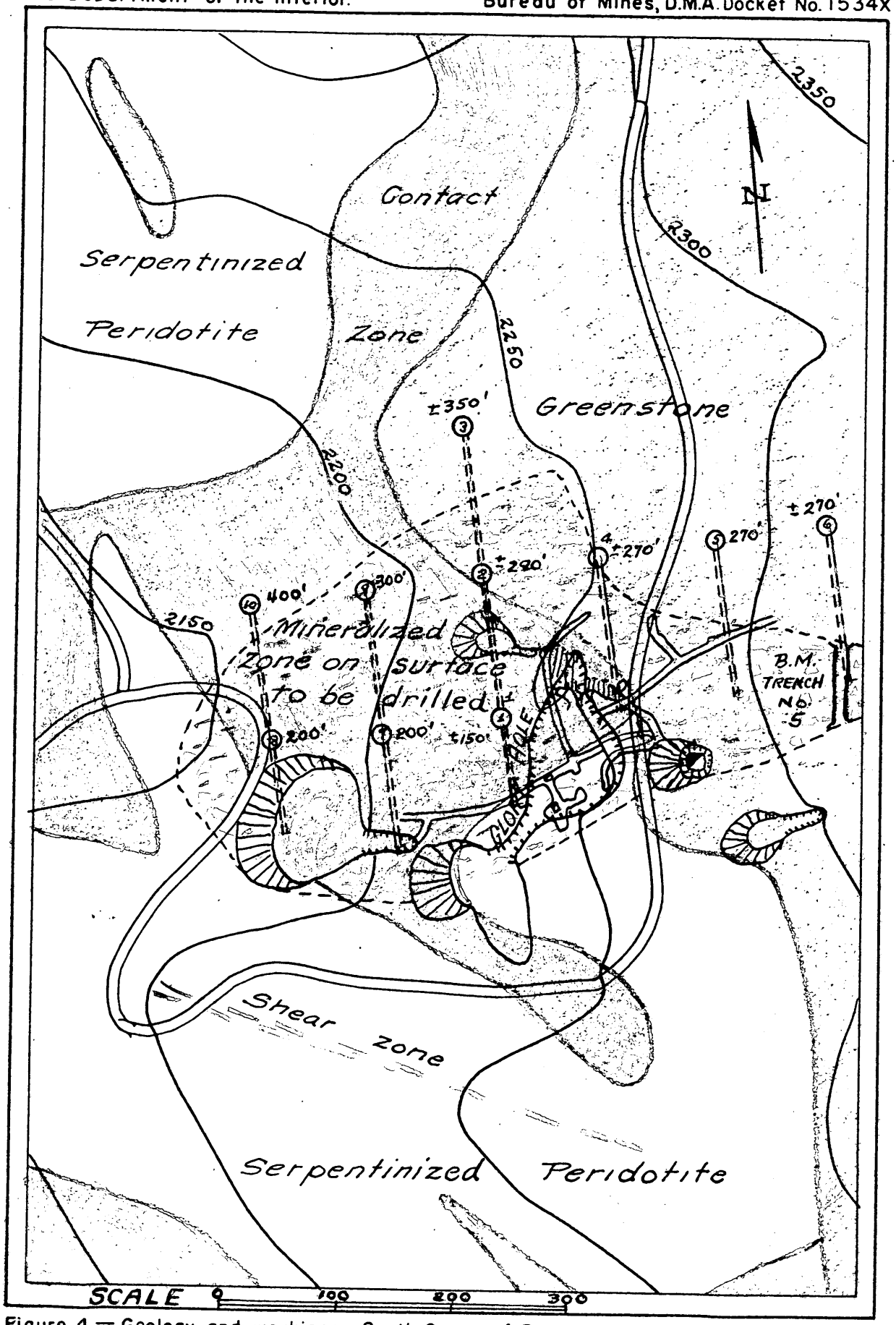


Figure 4.— Geology and workings – South Queen of Bronze mine, Josephine County, Ore.

About 800 feet of drifts and crosscuts and a 109-foot shaft represent the workings of this mine. These now are entirely inaccessible and have never been sampled. The Bureau's soil sampling indicate possibilities adjacent to these workings.

The workings of the Cowboy mine are shown in fig. 5. The lower workings of this mine are accessible, but no ore has been found yet at the lowest tunnel level.

ORE RESERVES

The Bureau of Mines sampled the waste dump at the Queen of Bronze mine by means of 3-foot drill holes spaced on 25-foot centers. The results showed the dump contains approximately 35,000 tons averaging 0.9 percent copper. It should be noted that this dump is complex, so the tonnage and grade may not be exact. There is, for example, one portion of the dump consisting of 6,400 tons averaging 1.5 percent copper.

At the Cowboy mine there are from 5,000 to 10,000 tons of dumps averaging from 0.9 percent to 1.2 percent copper.

The underground ore can only be inferred because of the irregular manner of ore occurrence. The principal exposures that can be seen in the Queen of Bronze mine are shown in fig. 3. Good widths of sulfide ore can be seen in the Hampshire stope, the Cameron stope, and the McCauley stope, but it is unsafe to project this ore for any distance in any direction. The following samples taken in the Cameron stope indicate the variation in width and grade that can be expected:

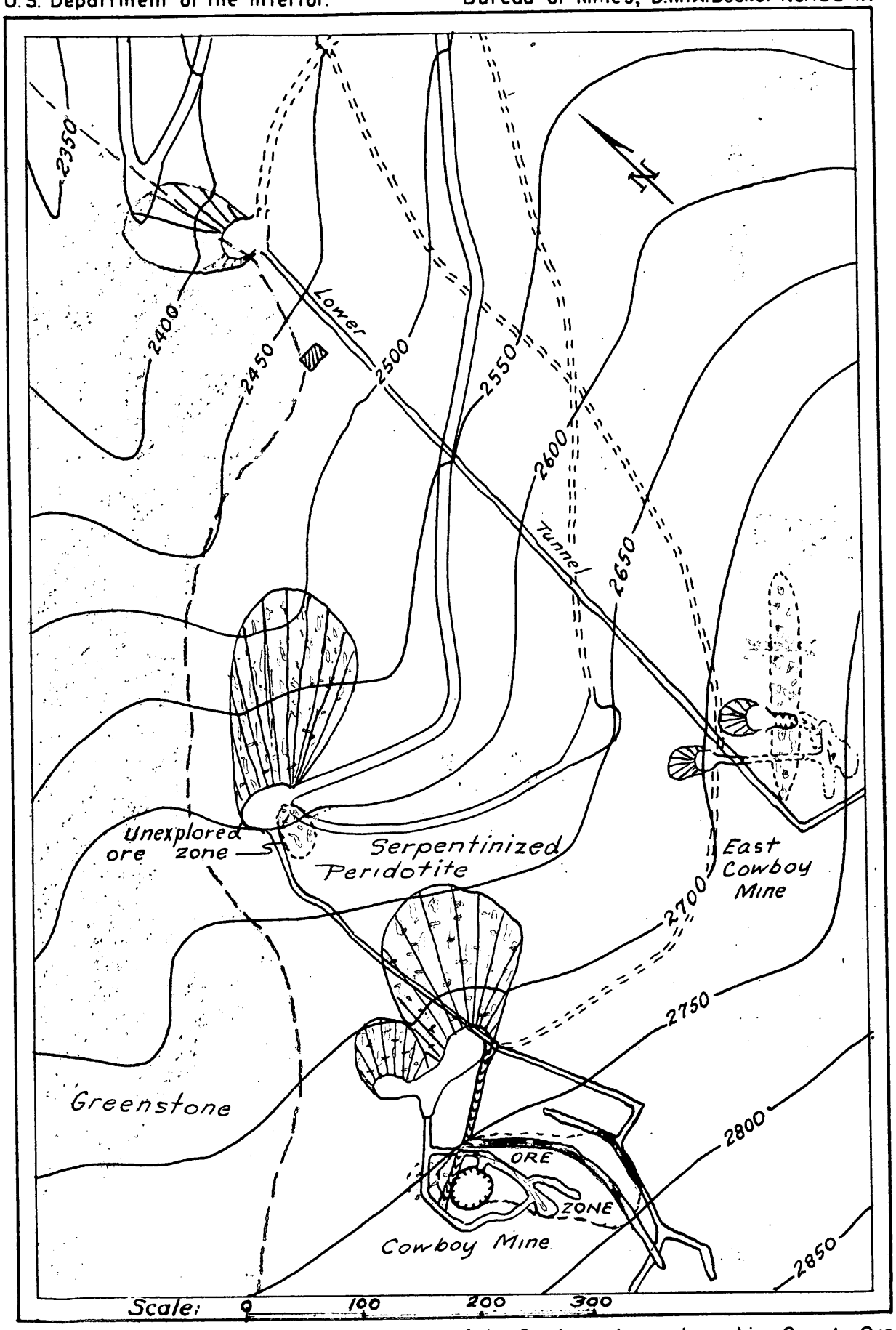


Figure 5.— Areal geology and workings of the Cowboy mine, Josephine County, Ore.

Sample No.	Width	Percent Copper
66-8	8.0	5.99
66-7	5.0	1.24
66-3	4.5	1.05
66-2	5.0	3.93
66-4	17.0	1.16
66-5	6.0	0.78
66-6	6.0	4.66
Average	7.3 feet	2.54 percent

Probably 500 tons of this ore may be estimated in the Cameron stope. There may be equal amounts left in the Hampshire and the McCauley stopes.

The Hampshire stope may extend below the lowest "D" level but no work has been done to follow this ore shoot down. This shoot is 120 feet long and averages about 3 feet in width; if it extends 50 feet below the "D" level, about 1,800 tons of ore can be inferred.

Under present conditions, any attempt to mine the massive lenses selectively is not an attractive venture. Moreover, the ore lenses are difficult to find.

The Bureau's work, however, indicates some basis for believing that most of the ore lenses are local to mineralized pipe-like zones of unknown but low overall grade. The mineralized surface areas have been delimited at each of the deposits with a reasonable degree of accuracy. For purposes of this report only, the following table shows the surface extent of each of the mineralized areas. The tonnage of material available to a depth of 200 feet also is calculated.

Mine	Area	Tonnage Available to 200' Depth
Queen of Bronze	600x350 = 210,000 sq.ft.	± 4,000,000
South Side Queen of Bronze	600x200 = 120,000 sq.ft.	± 2,000,000
Waldo Mine	300x100 = 30,000 sq.ft.	± 600,000
Lilly Mine	450x150 = 67,500 sq.ft.	± 1,300,000
East Cowboy Mine	50x50 = 2,500 sq.ft.	+ 50,000
	Total	± 7,950,000

These figures are merely for comparison and represent only the roughest estimates. Two hundred feet is believed to approximate the depth that these deposits can be worked by open pit methods. The outlines of the mineralized pipes at depth are, of course, as yet unknown. No information is available as to the overall grade.

DESCRIPTION OF PROPOSAL

The applicant proposes to rehabilitate the workings of several mines, to trench the mineralized surface areas with a bulldozer, to drill the most favorable structure, and to drift out or crosscut to the ore deposits found by diamond drilling. The applicant's cost estimate of the work proposed is as follows:

Supervision	$ 6,000
Rehabilitation	12,400
Bulldozer trenching	6,000
Diamond drilling	20,000
Drifting and crosscutting	28,000
Sampling and assaying	3,500
Building construction	11,400
Capital equipment	19,640
Total	$106,940

DISCUSSION OF PROPOSAL

It seems advisable to modify the applicant's proposal. Only a limited exploration project can be recommended at this time. The proposed project will have two objectives. First, it will further explore by diamond drilling the mineralized surface areas indicated by the Bureau's soil sampling program at the South Side workings of the Queen of Bronze mine. This drilling should locate several lenses of massive ore available for selective mining underground. Secondly, it will explore the possibility that these mineralized surface areas persist in depth as mineralized pipes. The work will indicate the overall tonnage and grade of ore within the mineralized pipe with the hope that the grade will be high enough to warrant mining the entire area by large scale, open-pit or glory hole methods. It seems most likely that the copper ores occur in mineralized pipelike areas; it simply remains to determine the overall tonnage and grade available. For these two reasons, then, the proposed exploration project seems worth recommending.

Figure 4 represents a plan of the area to be drilled. Ten diamond drill holes are proposed. These holes will be inclined to crosscut the ore zone with depth for the reason that the massive ore lenses are steeply dipping and could be missed if vertical holes were drilled. It is planned to assay both core and sludge in the mineralized zones.

The estimated cost of the work is as follows:

Supervision	$ 3,000.00
Diamond drill contract 2700' at $6.00	16,200.00
Sampling 2700' at $2.00	5,400.00
Assaying 2700' at $1.00	2,700.00
Contingencies	2,700.00
Total	$30,000.00

MINING METHODS

In the past, selective mining methods have been used to mine the high grade ore lenses. The larger stopes were mined by square-setting and partial filling. The smaller stopes were stulled and one ore body was mined by shrinkage stoping. There are no data available for accurately estimating mining costs, but if exploration and development costs are excluded, the mining costs alone probably have ranged from $6.00 to $10.00 per ton; they would be higher now.

If the deposits are adaptable for open-pit or glory hole mining methods, these costs can be reduced.

MILLING METHODS AND COSTS

If sufficient commercial ore can be disclosed it will be necessary to construct a flotation mill to concentrate the ores. Water for a large mill is available on the property. Ore for the mill would probably be mined from a number of deposits along the ore zone and transported to the mill over short roads.

Ore tests have been conducted on the dump ores only. Results of these tests show that fine grinding is necessary to unlock intimate sulfide mixtures. The pyrite is cupriferous as well as gold-bearing.

Because of this it probably will be necessary to produce a rougher concentrate only, otherwise too much copper and gold will be lost with the pyrite in the tails. No factual data on milling costs are available. Actual costs will depend on the scale of operations conducted.

EQUIPMENT AND FACILITIES

The application lists equipment valued at $8,597. The principal items of value are a 210 cfm compressor, 1,300 feet 2-inch pipe line, 2 mine cars, a butane tank, 2 jackhammers, and a light plant. A small diamond drill is in a caved heading at the Cowboy mine, but its condition is unknown and it is considered worthless for the drilling work proposed herein.

LABOR SUPPLY

Labor availability in this area is good, particularly during the winter months when it is too wet to work in the woods. Living accommodations are available in the vicinity of Takilma. Most of the miners would live there and travel to and from the mines in privately-owned cars.

Wages, on the other hand, are high. Miners' wages would have to be on a competitive scale with the lumberjacks. A rate from $1.75 to $2.25 per hour would attract most men needed.

POWER

The proposed exploration will not require electric power. Later, when milling is in progress, it will be necessary to construct a power line at an estimated cost of $10,000.

MARKETING AND TRANSPORTATION

Ore from this mine will be concentrated and shipped to the copper smelter at Tacoma, Wash.

The trucking rate on concentrates from the mill to Grants Pass, Oregon, a distance of 41 miles, is estimated to be $3.50 per ton. The freight from Grants Pass, Oregon, to the smelter at Tacoma, Wash., is now $6.57 per ton.

For the proposed exploration work no access road construction will be required. When a mill is constructed on the property it will probably be desirable to build additional roads.

RATE OF PRODUCTION

The mine is not in production now. The scale of operations will depend on the results of the proposed exploration.

TIME SCHEDULE TO ATTAIN OBJECTIVES

The diamond drilling program involved in this report will be completed within a period of 8 months.

ADEQUACY OF REQUESTED FUNDS

The exploration project will furnish data on the nature of the ore deposits at the South Side of Queen of Bronze mine. This information will determine whether the deposits are valuable for selective mining or for open-pit mining. In either case, the data will not be complete but the success of this initial program will determine in a large measure whether or not the deposits justify additional exploration.

COMPETENCE OF APPLICANT

The results of this project will depend upon the competence of the management directing this work. Neither Major Waite nor Chauncey Florey is competent to supervise the work, and it is accordingly recommended that the project be directed by a cooperative management satisfactory to DMA Field Team of Region II.

FILE COPY
SURNAME:

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

Requires Johnson Cochran

JUL 30 1951

Mr. A. E. Weissenborn
Executive Officer, DMA Field Team II
South 157 Howard Street
Spokane, Washington

Re: Docket DMA-1534X
Waite Minerals Inc.
Copper
Loan $250,000

Dear Mr. Weissenborn:

Will you please arrange for a Field Team to visit and report on the Queen of Bronze Property, Takilma District, Josephine County, Oregon. Waite Minerals Incorporated, 822 North Seventh Street, Grants Pass, Oregon, as owners, have submitted a loan application for $250,000 Docket No. DMA-1534X, for the purpose of rehabilitating the mine and constructing a 100 ton mill, the following points should receive paricular consideration.

Applicant has requested quote: "An Exploration Loan under Form MF-103 for $250,000 covering the development and operation of the Queen of Bronze and associated properties in the Takilma District, Josephine County, Oregon."

As mentioned in your letter dated May 27, 1951 and addressed to Mr. L. F. Strobel, "the applicant has obviously confused the purpose of the exploration program and has mixed exploration, mine development and mill construction all in one application."

Would you please arrange to have a field team examine the property, and confer with Major Waite to determine:

1. The type of assistance requested, noting that the repayment of government loans is on the basis of profits from production, and must be secured while the repayment of Exploration Aid is based on royalities from ore extracted from the area involved in the exploration project. This requires a definite repayment program on the part of the applicant.

2. Check of positive and probable ore reserves. W. A. Richelson estimates 90,000 tons @ 7% in the mine
107,000 tons @ 3.3% in the dumps
R. J. Hundhousen, in his letter to you of May 28, gives his estimate, which he emphasizes is not based on factual data, as: 10,000 tons @ 6 to 8% inferred
50,000 tons @ 2% on the dumps.

Can a reserve sufficiently assured, as to tonnage and grade to pay off a loan of $250,000, be verified?

3. Check of applicants milling tests, and report on feasibility of his proposed milling practice, cost of mill construction and operation. No data other than cost estimate of $3.46 per ton has been submitted with application.

4. Are applicants estimated mining cost of $4.02 per ton (underground) and $1.00 per ton (surface) for labor, and combined for a total mining cost of $5.98 reasonable?

5. Are applicants estimate of 3 months for mine rehabilitation and 5 months for mill construction reasonable?

We are enclosing the file on Docket No. DMA-1534I for your convenience, and request that it be returned with the report of the Field Team.

Yours very truly,

Tom Lyon

Tom Lyon, Chairman
Coordinating Committee

Enclosures

Lowell B. Moon
For the Bureau of Mines

Olaf N. Rove
For the Geological Survey

DMacLaren:pk

Copy to: Field Team, Region II
Reports and Records Branch
Adm. Reading File
Coordinating Committee
J. B. Gowen, 2612
C. J. Johnson
D. R. Maclaren 4202 GSA
Files

FILE COPY
SURNAME:
310

Gowen
Johnson
Lyon
Lyon

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

JUL 30 1951
Cu

Waite Minerals Incorporated
822 North Seventh Street
Grants Pass, Oregon

Re: Docket No. DMA-1534X

Gentlemen:

The Copper Branch, Defense Minerals Administration, after a careful study of your application, has requested that a Field Team examination be made.

You may expect to hear very soon from Mr. A. E. Wiessenborn, Executive Officer, DMA Field Team, Region II to arrange for the examination.

Very truly yours,

Tom Lyon, Director
Supply Division

cc: Field Team, Region II
Administrator's Reading File
Reports and Records Branch
Coordinating Committee
Mr. J. B. Gowen, Room 2612
Mr. Charles J. Johnson, Room 3425
Mr. D. R. MacLaren, Room 4203, GSA
Files

DRMacLaren:rw

Mr. Dower

TELEPHONE
GRANTS PASS 5723

Dmc 15340

MAJOR E. R. WAITE
MINING
POST OFFICE BOX 2
GRANTS PASS, OREGON

June 13, 1951

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 1 8 1951
LANDON F. STROBEL
Executive Secretary

Mr. Tom Lyon, Director
Supply Division
Defense Minerals Administration
Washington, 25, D. C.

Dear Mr. Lyon:

Thanks very much for your letter of June 6th, received this morning, with enclosures of the Defense Minerals Administration setup.

My company, Waite Minerals Inc., have an application in Washington at the present time for a $250,000.00 loan for the Queen of Bronze Mine, which we own at Takilma, Oregon. We sent this application in May to the Regional Office in Spokane to the attention of Mr. Weisenborn and as yet, of course, it is a little early to hear what has been done regarding this loan.

Mr. Weisenborn informed us, however, that he doubted if we could obtain this loan as in this loan we had applied for funds for development and also the building of a mill to treat the ores which we already have mined; i.e., computed by the Bureau of Mines and also by W. A. Richelson, late of Kennecott, to be in excess of 50,000 tons on the dump, which runs around 2.9 copper; 2 oz. silver; .04 in gold. The only way in God's world that we can do anything with this tonnage is by concentration.

In the mine we have back filled in stopes from 60 to 80,000 tons of this same class of ore.

We also have in sight, estimated by A.S.&.R. also Richelson and the Bureau of Mines, an estimated 100,000 tons of known ores. To me, this certainly should be enough ore, mined and developed, to warrant the building of a mill to concentrate same.

Our difficulty is transportation and freight rates to Tacoma. It is out of the question to ship crude ore, no matter how high it is, and we have lots of 8, 9, and 10% copper ore that it will not pay us to ship, owing to the exhorbitant trucking and freight rates; and then, on top of that, a smelter charge of $7.50 a ton off the top. Our only out is the mill.

Regarding the copper zinc property: Just as I wrote Jim Douglas, I have a purchase contract on this property and this has nothing to do with Waite Minerals, Inc.

This property is gigantic. The ore body is 118 ft. in width and can be traced on the surface for approximately a mile. It is not all high grade, as you might well know, but we have some very high grade shoots in same. I have Anaconda coming in to look it over on the 19th of June. There is a possibility that they may take same over. It will take some large outfit to handle the deal.

I would appreciate your checking up on Waite Minerals' application for the loan on the Queen of Bronze property. It seems to me that we little fellows haven't got much chance of getting anything out of Washington unless we have someone there following it through.

Thanks again for your letter and I'm sorry that I didn't hear from Jim, himself.

Very truly yours,

E. R. Waite
Major E. R. Waite

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
So. 157 Howard Street
Spokane, Washington

DMA-1534X

June 4, 1951

Mr. L. F. Strobel
Executive Secretary
Defense Minerals Administration
Department of Interior
Washington 25, D. C.

Dear Mr. Strobel:

In our letter to you of May 29, 1951, transmitting three copies of an application submitted by Waite Minerals, Inc. for a loan on the Queen of Bronze and Associated Properties in the Takilma district, Josephine County, ~~Washington~~ Oregon?, it was stated that a memo from Mr. Robert J. Hundhousen of the U. S. Bureau of Mines was attached. This memo, however, was inadvertently omitted and you will find it enclosed. Will you please see that it becomes a part of the application.

Thank you.

Very truly yours,

A. E. Weissenborn

A. E. Weissenborn
Executive Officer, DMA
Field Team, Region II

Enclosure

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 7 - 1951
LANDON F. STROBEL
Executive Secretary

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

So. 157 Howard Street
Spokane 8, Washington

May 28, 1951

Memorandum

To: A. E. Weissenborn, Executive Officer, DMA, Field Team, Region II

From: Robert Humdhousen, U. S. Bureau of Mines

Subject: Application of Waite Minerals Co.

My opinion is that the Queen of Bronze requires a mill to profitably handle the ore available. Whether or not the mine has enough ore at present to justify the construction of a mill on a lean basis is another question.

The Bureau of Mines has not made any estimates on ore reserves at this property. The geochemical work performed on the property discovered surface indications of undeveloped and unexplored ore bodies similar to those mined, but their ultimate value is at present undisclosed.

The Geological Survey prepared a comprehensive report on this copper belt. No mining has been done since the report was made by P. J. Shenon.

If Richelsen's ore reserve data can be substantiated and his cost analysis is correct, the property should be capable of repaying a loan of $250,000, although very little collateral seems to be available. If the loan can be guaranteed in some way, I am of the opinion a profitable operation could be established at this property.

From what I have seen of the dumps, the tonnage of ore available should be in the neighborhood of 50,000 tons and the grade of ore probably about 2 percent copper. These dumps are, however, quite complex and the above figures are not based on any factual data. Some ore is visible in the mine but this ore cannot be considered measured ore due to the irregular manner of occurrence. It may be inferred that 10,000 tons of 6 to 8 percent copper ore are available.

Robert Humdhousen

cc: L.F. Strebel

attached to above memo.

Dma - 1534X

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
So. 157 Howard Street
Spokane 8, Washington

May 29, 1951

Mr. L. F. Strobel
Executive Secretary
Defense Minerals Administration
Department of the Interior
Washington 25, D. C.

Dear Mr. Strobel:

I am enclosing three copies of an application submitted by Waite Minerals, Inc. for a loan on the Queen of Bronze and Associated Properties in the Takilma district, Josephine County, Washington. The applicant has obviously confused the purpose of the exploration program and has mixed exploration, mine development and mill construction all in one application, and were it not for the deadline I would not submit the application. I am suggesting that this be broken down into separate applications and am enclosing a copy of the letter which I wrote the applicant. I would appreciate it if the Copper Branch would also write the applicant confirming my suggestions.

Three copies of the application are forwarded. One is retained here in case we have further communication with the applicant.

A memo from Mr. Robert J. Hundhousen of the U. S. Bureau of Mines, who is familiar with the property, is included for your information.

Sincerely yours,

A. E. Weissenborn

A. E. Weissenborn
Executive Officer, DMA
Field Team, Region II

Enclosures

cc: U.S.B.M., Volin
U.S.B.M., Shelton

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

So. 157 Howard Street
Spokane 8, Washington

May 29, 1951

Mr. Chauncey Flerry
Waite Minerals Co.
Grants Pass, Oregon

Dear Mr. Flerry:

Your application for a loan of $250,000 on the Queen of Bronze and Associated Properties in the Takilma district, Josephine County, Oregon, has been received.

Although your application gives every evidence that it has been prepared with exceptional care and competence, I am afraid that it cannot be acted upon in its present form for the following reasons:

1. The application includes the construction of a mill and other items which cannot be considered as exploration, and under the DMA exploration program we are prohibited from including anything in the contract which does not pertain strictly to exploration. Furthermore, you state in your application that you are not in the position to invest any further money on the project. All exploration projects are made on a matching fund basis.

2. I doubt if your application can be considered for a production loan because from the information that you submit and the accompanying report by Mr. Richelsen, it appears that your estimate of mine ore reserves is based in part on old and incomplete records and cannot be substantiated without opening up the workings. The Washington office of the Defense Minerals Administration has been rather strict in requiring definite information on ore reserves before considering a production loan.

It appears to me that the problem might be solved in the following manner. You show following item 19 of your application estimated capital charges amounting to a total of $250,000. Of this, the $150,000 for the concentrating mill would be ruled out,

and it is probable that for an exploration project a power line amounting to $4,000 would not be required. Furthermore, the $24,600 allowed for building and structures, which doubtless would be required for an operating mine might not be required in its entirety for exploration purposes. Allowing $4,797 for mine rehabilitation and $16,394 for mine equipment and supplies, and allowing something extra for buildings, it appears that the Queen of Bronze mine could be opened for examination and for exploration purposes as proposed in your application as an exploratory program not to exceed $25,000 and possibly much less. This, if successful, would establish sufficient ore reserves so that a production loan could be more favorably considered; another alternative would be as follows: if the ore reserves in your dumps and the ore that can be measured in the mine support a somewhat smaller loan, this could be considered as a direct production loan, which would not require matching funds and this might get you into production.

Inasmuch as the deadline for the submission of exploration applications is the 31st of May, I am forwarding your application to the Defense Minerals Administration in Washington with the thought that if you find yourself able to undertake the exploration suggested on a matching fund basis as suggested above, the details can be worked out later. Please let me know your thoughts on this matter.

Sincerely yours,

A. E. Weissenborn
Executive Officer, DMA
Field Team, Region II

cc: U.S.B.M., Spokane, Wn.
U.S.B.M., Albany, Ore.
Executive Secretary, DMA

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 4 - 1951
LANDON F. STROBEL
Executive Secretary

Mr. Richelsons Ore Reserves

Personally checked

1 S X Cut	1600 tons	7% Cu
E 2nd	500 "	5%
A tunnel	10000 "	1.5-2%
Dump	50000	2.9%

Accepts from others

Cameron Stope —	8000 tons	8% Cu
New Hampshire	7000-8000 "	4% Cu
~~From~~ reliable mining Co	16000 "	7%
Underground reserves	100000 tons	8%
Metals Reserve	64000 tons	2.9
	(incl 18000)	10%

Check 64000 x 2.9 = lb 185600 ✓

18000 x 10 = 180000

46000 0.12 5600

a section of this dump might be mined separately at a much more handsome profit.

2 continued:

a. Breakdown of W. A. Richelson's report on the project is as follows:

Mr. Richelson personally checked:

1 S x cut	1600 tons	7% Cu
E Intermediate	500 "	5% "
A Tunnel	1000	1.5-2% "
Dumps	50 000	2.9% "
Total	53000 - 3%	

Mr. Richelson's report mentions from other sources:

Cameron Stope, ore remaining	8000 tons	8% Cu
New Hampshire Stope	7000 - 8000 "	4% Cu
From reliable mining company, name not mentioned, underground reserves	100000	8%
Metals Reserve, investigation of dumps -	64000 tons	2.9%

(Including 18000 tons 10%
means 46000 tons @ 0.12% Cu
Dumps might be selectively mined
Total checked)

Waite Minerals Incorporated
Grants Pass, Oregon

Medford, Oregon
May 26, 1951

Mr. A. E. Weissenborn
Executive Officer
Defense Minerals Administration
So. 517 Howard Street
Spokane 8, Washington

Dear Mr. Weissenborn:

Today, we are sending you 4 copies of our application for an Exploration Loan under Form MF-103 for $250,000 covering the development and operation of the Queen of Bronze and associated properties in the Takilma District, Josephine County, Oregon.

The U.S. Bureau of Mines has done considerable work on the various properties in the group and we suggest that when you receive our application that you contact Mr. R. F. Hundhausen at the Bureau Office on Division Street there in Spokane, Phone Broadway 1522. He will be able to give you a great deal of additional information.

Yours very truly,

Waite Minerals Incorporated

Lemuel Clary
President

CF:war

cc: Mr. R. J. Hundhausen