UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration

OFFICIAL DOCKET FILE

(Terminated) (or cancelled) without certification. DMEA No. 2054

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 _____

S. J. M.
Reviewer's Initials

7973

DEFENSE MINERALS EXPLORATION ADMINISTRATION
CONTRACT ADMINISTRATION AND AUDIT DIVISION

Griswold
Alt
Betty

REPORT OF REVIEW

I have reviewed the Monthly Reports of

Lewis B. Stark
Neihart, Montana

pertaining to Exploration Project Contract No. Idm-E197, Docket No. DMA 2054, for the months of November 1951 and March 1952, covering a project for the exploration of zinc and lead.

My review included an examination of the Monthly Reports (form MF-104) and the supporting documents attached thereto, comparison of the costs claimed with the contract and pertinent schedules, consultation with the Government representative who visited and examined the project, and a determination of the reasonableness and propriety of the costs.

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

The administrative cost to the Government of an audit would be excessive in relation to the estimated amount of possible disallowances thereunder.

The Monthly Reports were supported by documentary proof of the costs incurred under the contract.

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

Total cost as billed by contractor	$1,836.50
Exceptions during the audit (fire insurance)	22.50
Total accepted cost	$1,814.00

The contract calls for a 50 percent participation of exploration expenses by the United States Government. Therefore, payment to the contractor by the Government in the amount of Nine hundred seven and 00/100 Dollars

$907.00

is considered valid and proper.

June 23, 1953

Robert M. Hull
Robert M. Hull, Auditor

GOVERNMENT COPY

2/2/53

TERMINATION OF EXPLORATION PROJECT CONTRACT BY AGREEMENT
AFTER COMMENCEMENT BUT BEFORE COMPLETION OF THE WORK

It is agreed this 21st day of November, 1952, between the United States of America, acting through the Depatment of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and Mr. Lewis B. Stark
Neihart,
Montana,
hereinafter called the "Operator," parties to that certain Exploration Project Contract I-dm-E 197, Docket No. DMEA- 2054, dated 30th day of October 1951, that the said contract shall be and is hereby terminated as of the first date above written.

Any work prosecuted or costs incurred by the Operator after the date first above written shall be for the sole account of the Operator, except for (a) such necessary and reasonable costs and expenses as may be incurred in preserving and disposing of any facilities, buildings, fixtures, equipment, or other items, to the cost of which the Government has contributed and in which the Government has an equity, and (b) the costs of any reports, accounts, and winding-up and settlement actions provided for in the contract.

The undersigned Operator hereby releases and agrees to save harmless the Government from all claims and demands under or arising out of said Exploration Project Contract, except as herein expressly otherwise provided.

Witness the following signatures as of the day and year first above written.

UNITED STATES OF AMERICA

By M. E. Volin, Acting Executive Officer
DMEA Field Team, Region II

LEWIS B. STARK
(Operator)

By Lewis B. Stark

MF-200
(June 1951)

Docket No. DMA 2054
Commodity Zinc, Lead
Idm-E 197

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

EXPLORATION PROJECT CONTRACT [1]

It is agreed this 30th day of October, 1951, between the United States of America, acting through the Department of the Interior, Defense Minerals Administration, hereinafter called the "Government," and [2] Lewis B. Stark, Neihart, Montana

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 Montana, County of Cascade described as follows: [3] Galt patented claim, Survey No. 2226, Neihart Mining District, Sections 29 and 32, T. 14 N., R. 8 E., Montana Principal Meridian.

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: There is a mortgage of $46,500.00 against the property. A copy of the Mortgagor's Subordination Agreement is herewith appended to the contract.

(*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 Thirty (30) days from the date of this contract shall commence work on a project of exploration for [5] Zinc, Lead; 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] Two (2) years 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 $25,000.00, which is 50 percent of the agreed estimated total cost of this project, $50,000.00.

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.

Lewis B. Stark
(Operator)

By Lewis B. Stark
Owner

THE UNITED STATES OF AMERICA

By Frank E. Johnson
Acting Director, Production Expansion Division
Defense Minerals Administration

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

Docket No. DMA - 2054
Lewis B. Stark
Exploration Project Contract

EXHIBIT "A"

Exploration Project:

To explore by drifting, crosscutting and diamond-drilling for zinc and lead, the northeast extensions of the Galt Mine structures.

Proposed Exploratory Work:

1. Do a minor amount of repair work on the 124-foot winze from the Equator adit level to the Queen level and install a skip pocket at the Equator level station. This skip pocket will be necessary in that muck from the Queen level will have to be hoisted through the winze.

Extend Queen level northeast on Galt vein for 500 feet.

2. Diamond drill a total of 1,000 feet on the Queen level to explore footwall split of the Galt vein and/or the Equator vein.

3. Extend Equator level to the northeast on the Galt vein or the footwall split of the Galt vein depending upon which structure proves to be the more favorable, as determined by work on the lower Queen level.

4. Crosscutting not to exceed 300 feet on the Queen level or Equator adit level to intersect Equator vein and footwall split of the Galt vein.

The proposed drifting and crosscutting are shown on the accompanying map.

Total Estimated Cost of Project:

Drifting 1,000 feet at $30./ft.	$ 30,000.00
Crosscutting, 300 feet @ $30./ft.	9,000.00
Diamond drilling, 1,000 feet @ $7.50/ft.	7,500.00
Reconditioning winze from Queen level to Equator adit level and installing skip pocket	1,000.00
Contingency	2,500.00
Total estimated cost	$ 50,000.00

Fixtures and Improvements:

None

Operating Equipment

To be rented for project:

	Monthly Rental
1 - Diamond drill, Sullivan, air, 200 feet of drill rods, AX or EX diamond drill bits	$ 100.00

To be purchased:

None

Equipment furnished by Operator:

	Estimated Replacement Value	Monthly Allowance for use
2 - Stopers (for drifting)	$ 800.00 each	$ 27.00
1 - Mucking machine Eimco 1213	3,500.00	58.00
2 - Sullivan 75 HP electric battery set, 410 cu.ft.	5,000.00 each	167.00
1 - G.E. Trammer-1½ ton, w/charger	6,000.00	100.00
10 - Ore cars, 1-ton cap.	200.00 each	33.00
1 - Hoist, air, Sullivan A1-11	1,250.00	20.00
1 - Pickup truck	1,500.00	25.00
1 - Jackhammer, Thor	375.00	6.00
	Total	$436.00

Labor and Supervision:

Classification	Rate per 8-hour shift
Miners	$ 12.00
Muckers	11.50
Hoistman	12.00
Surface	11.00
Mechanic	12.00
Shift boss	14.00
Bookkeeper (part time)	10.00

1 - Superintendent @ $500.00 per month

Rehabilitation and Repairs:

None

The per foot cost for drifting, crosscutting and diamond drilling includes all labor, supervision, bookkeeping, assaying, sampling, engineering, supplies, utilities, repairs, pipe, rail, rental of equipment and allowance for use of equipment furnished by the Operator. To provide for possible under-estimations of these costs, an allowance for contingencies of $2500. has been included in the total estimated cost of the project.

MF-201
(June 1951)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

SUBORDINATION AGREEMENT

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, the undersigned is the holder of a mortgage, claim, lien, or encumbrance identified and described as follows*:

Dated July 17, 1951 and recorded in Book 127, page 263, of the county of Cascade, State of Montana

upon that certain parcel of ground described in a certain Exploration Project Contract dated October 30, 1951, between Lewis B. Stark

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.

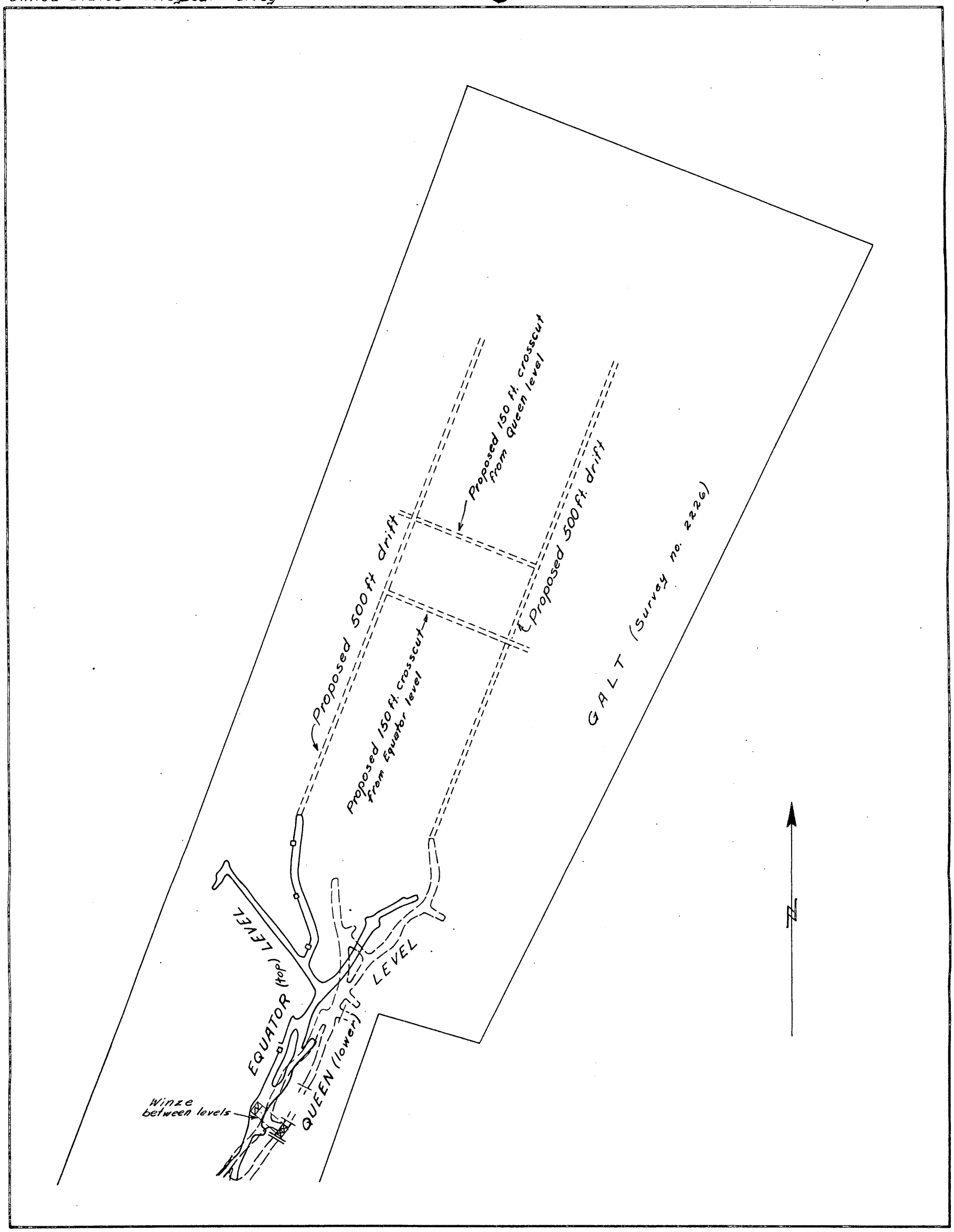
This undertaking and covenant shall be binding upon the heirs, successors, and assigns of the undersigned.

Dated this 10 day of November, 1951

Mary L. Cobb

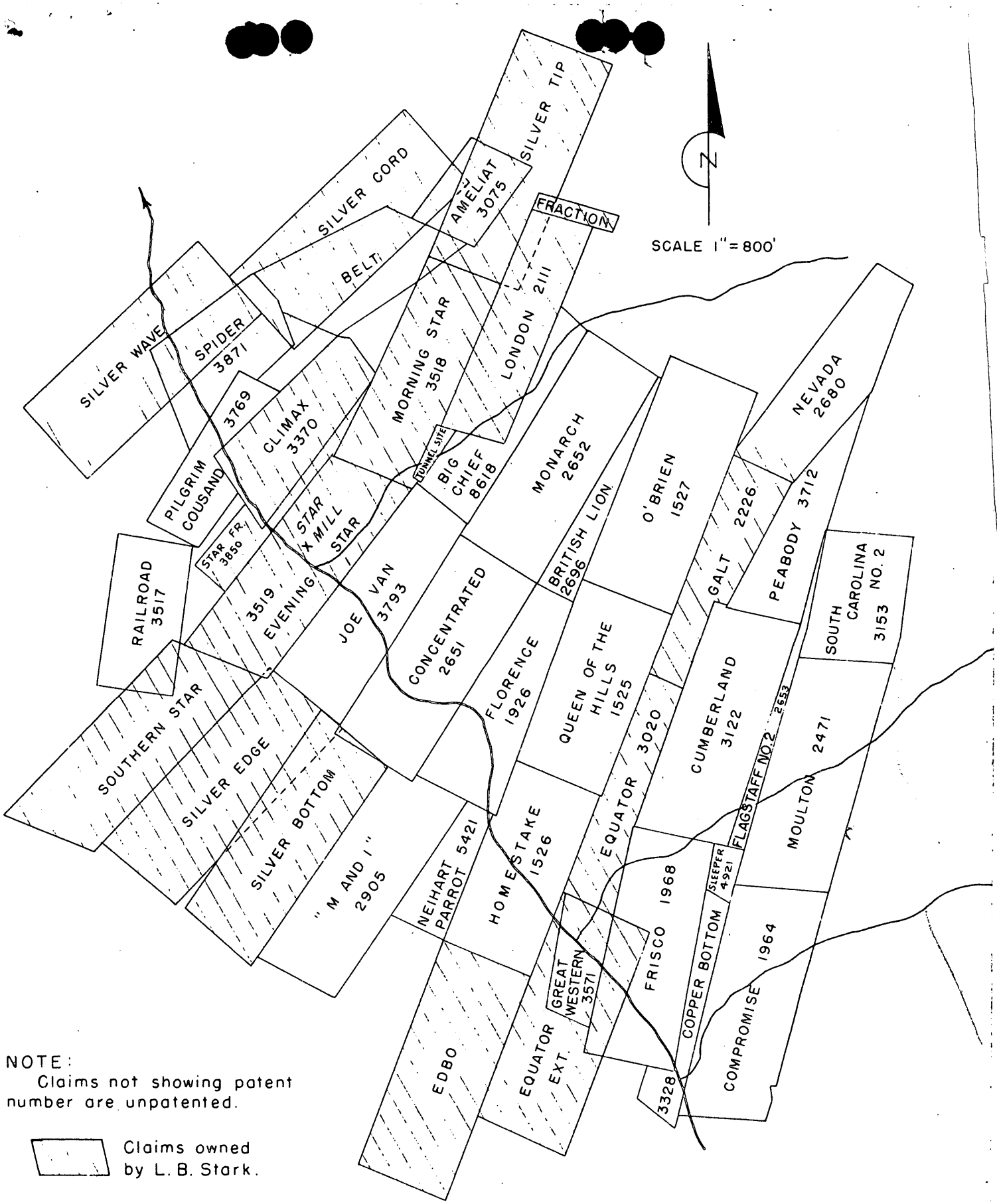
*Include date of the instrument, and if recorded, book, page, and county of record.

U. S. GOVERNMENT PRINTING OFFICE 16—64581-2



Proposed Exploration of Northeast
Extension of Galt Vein on Equator
and Queen Levels
GAULT MINE
Neihart, Mont.

0 50 100 200 Feet



NOTE:
Claims not showing patent number are unpatented.

Claims owned by L. B. Stark.

Patented claim locations from map by O. C. Mortson, May 25, 1911.

Portion of Neihart Mining District
Cascade County, Mont.

FEB. 1951

MF-201

MORTGAGOR'S SUBORDINATION AGREEMENT

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, the owner is the holder of a mortgage, claim, lien, or encumbrance dated July 17, 1951, ..., recorded in Book 127, page 263, of the records of the county of Cascade, State of Montana, upon that certain parcel of ground described in a certain Exploration Project Contract dated ....., 195..., between Lewis B. Stark .....,

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 17 day of August, 195.1

Mary L. Cobb

U. S. GOVERNMENT PRINTING OFFICE 940768

Superceded by(June 1951) MF-201
Subordination Agreement

Form MF-103
(Revised June 1951)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.1.

MF-103 Should Be Filed With General Technical Data Form MF-100

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

Not To Be Filled in by Applicant

Docket No. DMA-2054
Metal or Mineral 9-10-51
Date Received
Amount $
Participation (Government %)

DEFENSE MINERALS ADMINISTRATION WASHINGTON, D.C.
SEP 10 10 06 AM '51

Name and address of applicant

Lewis B. Stark
Neihart, Montana

Date August 21, 1951

If you have already filed MF-100, give date filed _____, type of assistance requested 2054,

DMA Docket Number (if available) _____

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four copies each, of the signed application form, General Technical Data Form MF-100, and answers to questions as specified, to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive office thereof, with your name and address on each sheet of the application and all accompanying papers. If you have previously filed MF-100, it is not necessary to file it again. However, you should indicate in space provided above the type of assistance previously applied for (loans, procurement contracts, etc.) and DMA Docket Number, if available. *When a question is inapplicable it should be so stated in the form.* Additional sheets should be attached in answering any questions or in supplying additional information. IF YOU CANNOT ANSWER A QUESTION, SO STATE.

1. (*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*) If you are not the owner of the property, submit a copy of the lease, purchase option, or other agreements under which you are authorized to operate the property with each copy of your application.

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

   NOTE: (1) 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 (*c*) 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.

   (2) If applicant is not the owner of the property or if there are any liens or encumbrances against the property, copy of agreements of claimants, lienors, encumbrances, and lessors subordinating their interests in the property to the interest of the Government under the Exploration Project Contract will be required for attachment to the Contract.

2. (*a*) What metals or minerals do you expect to find?

   (*b*) Furnish statement of the geologic features of your property, giving type of ore deposit and reasons for expecting to find commercial ore bodies. Illustrate with maps or sketches. If you have a geologic or engineering report, or assay maps showing width and grade, please send them with application, stating whether or not you wish to have them returned.

The information requested in questions 3, 4, 5, 6, 7, 8, and 9 below should be answered specifically and in detail, as this information will be attached to and incorporated as part of the Exploration Project Contract, if such contract is entered into with you by the Government.

ANSWER EACH QUESTION ON SEPARATE SHEETS OF PAPER AND SUBMIT A COPY OF EACH ANSWER FOR EACH COPY OF YOUR APPLICATION.

3. (*a*) Describe fully the proposed work and give the total cost of the project.

   (*b*) State the time required to start the project and to complete it.

4. Submit a map or sketch of the property involved showing a plan (and cross section, if needed) of the present mine workings and the *location of the proposed exploration work* as related to geologic features, such as contacts, veins, ore-bearing beds, etc.

5. Furnish an itemized list of existing facilities, buildings, installations, and fixtures with a statement of the cost of any necessary rehabilitation or repairs to put into useful and operable condition.

6. Furnish a detailed list of additional facilities, buildings, and fixtures to be purchased, installed, or erected by you, with the estimated cost of each item.

7. Furnish a detailed list of operating equipment, separated into items to be—

   (*a*) Rented

   (*b*) Purchased

   (*c*) Furnished by you

   with the rental, purchase price, or depreciation of each item, as the case may be, to be charged as a cost of the project.

8. Furnish an itemized schedule of labor, by numbers and classes (miners, muckers, etc.) and of supervisors by numbers and positions, with the maximum wages or salaries to be paid to each.

9. Furnish a detailed list with estimated cost of each item for materials, supplies, engineering, assaying, accounting, power, water, utilities, and any other items not provided for above.

10. (*a*) How much are you prepared to invest in the proposed project?

    (*b*) Is this amount sufficient to pay your part of the cost of the project, in accordance with the regulations on Government participation (Sec. 9 of MO–5)?

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

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.

(Name of company)	By Lewis B. Stark (Signature of authorized official)
August 21, 1951 (Date)	Owner (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.

U. S. GOVERNMENT PRINTING OFFICE 16—64067-2

Accompany Sheets for Exploration
Application submitted by Lewis B. Stark
on the Galt mine, Neihart, Montana

1 (a) The Galt mine is in the Neihart mining district, Cascade County, Montana, sec's. 29 and 32, T. 14 N., R. 8 E., Montana principal meridian. All proposed exploration work will be in the north end of the Galt patented claim. In addition to the Galt claim, the applicant owns a total of 11 patented and 8 unpatented claims in the Neihart district which are shown on the accompanying claim plat.

Although the exploration work will be on the Galt claim, access to the mine is through the Equator adit which portals on the Equator patented claim (Survey No. 3020), also owned by the applicant.

(b) Lewis B. Stark is sole owner of the Galt property. There is, however, a mortgage on the mine property in the amount of $46,500. One original and five photostatic copies of the Mortgagor's Subordination Agreement concerning this mortgage are appended to the accompanying exploration contract.

(c) Galt patented claim, survey No. 2226, Neihart Mining district, Cascade County, Montana.

2 (a) Lead-Zinc

(b) Reference is made to a Defense Minerals Administration Report by E. A. Magill, U. S. Bureau of Mines, and Allan B. Griggs and Thor H. Kiilsgaard, U. S. Geol. Survey, DMA Docket No. 331, dated March 7, 1951 which accompanied an application for a production loan made by the applicant at an earlier date. This report discusses in some detail the geology of the Galt mine. It is accompanied by suitable maps, both plan and section.

The mine is also discussed in Memoir No. 13, Geology and Ore Deposits of the Neihart Mining District, Cascade County, Montana, by Paul A. Schafer, dated July, 1935, and published by the State of Montana Bureau of Mines and Geology.

A map showing the proposed exploration work is included with the accompanying contracts. This map is a small scale part of a larger scaled map submitted with the aforementioned DMA Field report, submitted on behalf of DMA Docket No. 331

3 (a) The proposed exploration work involves advancing the Queen level of the Galt mine 500 feet to the northeast following the Galt vein. This heading will advance into ground unexplored either above or below the Queen level. (See plan map accompanying DMA Field Report, DMA Docket No. 331). From this 500 feet of drift, diamond drill holes will be advanced to the northwest and southeast (footwall and hanging wall) to explore for the footwall split of the Galt vein, and also for the Equator vein which overlies the Galt vein by about 100 feet. Total diamond drilling will not exceed 1000 feet, to be divided into several holes. Drill sites will depend upon structures encountered during the drifting program, and also to some extent upon targets encountered during early phases of the drilling program. If 2 or 3 holes of the diamond drilling program should encounter a favorable target, it is proposed to crosscut to whichever vein is encountered, i.e., the footwall split of the Galt vein, or the Equator vein. The total length of a crosscut to either of these veins should not exceed 150 feet.

All muck broken on the Queen level will be hoisted through Queen level winze to the Equator adit level, then trammed to the surface through the Equator adit. This means of transportation will necessitate a minor amount of repair in the 124-foot winze from the Equator to the Queen level and the installation of a skip pocket at the Equator level station before advancement of the Queen level commences.

Concurrently, or perhaps at a later date, depending upon structures encountered on the Queen level, 500 feet of drifting will be advanced to the northeast from the face of the Equator level on either the Galt vein or the footwall split of the Galt vein depending upon which structure proves to be the stronger as determined by work on the Queen level. From this advanced drift, and depending upon structures encountered during drifting on the Equator level as well as the underlying Queen level, it is proposed to crosscut 150 feet into either the footwall or hanging wall to test the Equator vein or the footwall split of the Galt vein, depending upon which vein is selected for exploration. All muck broken on the Equator adit level may be trammed directly to the portal.

The estimated Cost of the Project is as follows:

1 - Drifting, 1000 feet @ $30 per foot	$30,000
2 - Crosscutting, 300 feet @ $30 per foot	9,000
3 - Diamond drilling, 1000 feet @ $7.50 per foot.....	7,500
4 - Reconditioning winze from Queen level to Equator adit level and installing skip pocket.....	1,000
5 - Contingency.....	2,500
Total	$50,000

3 (b) Work can be commenced on the project within 30 days after signing contract, and the exploration project can be completed in two years' time.

4. A small scale map showing proposed exploration work accompanies accompanying contracts. This map is taken from a larger scale map originally submitted with DMA Field Team Report, DMA Docket No. 331, copies of which should be available to DMA examining committees in Washington, D. C.

5. No repairs or rehabilitations are needed for existing facilities, building, installations or fixtures. Any work of this type done during the life of the contract will not be charged against the exploration contract in question.

6. No additional facilities, building, and fixtures will be purchased, installed, or erected by the applicant during the life of the contract. In the event such appurtenances are installed they will not be charged against the contract; however, the need for such appurtenances is not foreseen at the present time. The mine, in its present condition, is in operating order and has all needed fixtures and installations.

7. Operating Equipment

To be rented	Monthly rental
1 - Diamond drill, Sullivan, air, 200 feet of drill rods, AX or EX Diamond drill bits *Rental of rod and bits is included in $7.50 per foot drilling cost.	$100

To be purchased

None

T	To be furnished	Estimated Replacement Value	Monthly Rental Allowance
	2 - Stopers (for drifting)	$800 ea.	$ 27
	1 - Mucking machine Eimco 1213	3,500	58
	2 - Sullivan 75 HP electric Battery set, 410 cu. ft.	5,000 ea.	167
	1 - G.E. Trammer 1½ ton w/charger	6,000	100
	10 - Ore cars, 1 ton cap.	200 ea.	33
	1 - Hoist, Air, Sullivan A1-11	1,250	20
	1 - Pickup truck	1,500	25
	1 - Jackhammer, Thor	375	6
		*Total monthly rental	$436

* Total rental for the exploration project cannot be accurately forecast inasmuch as certain items will not be used for the life of the project but for certain months only.

8. Itemized Schedule of Labor

Labor	Rate per 8 hour shift
Miners	$12.00
Muckers	11.50
Hoistman	12.00
Surface	11.00
Mechanic	12.00
Shift Boss	14.00
Bookkeeper (Part Time)	10.00

Supervision	Rate per month
Superintendent	$500

All above rates are subject to lawful union scale increases and overtime rates.

9. All materials, supplies, engineering, assaying, accounting, power, water, utilities, and other items to be used on the project have been included in the overall quoted price of $30 per foot for drifting and crosscutting, and $7.50 per foot for diamond drilling. In the event that such materials should be more than the above quoted prices per foot advanced, a contingency fund of $2,500 has been alloted in the application to compensate for such increases.

10. The applicant is prepared to invest $25,000, or 50% of the Total cost of the project.

11. The applicant originally applied for a production loan of $115,000 to mine ore in other parts of the Galt mine. As a result of this application the mine was examined by a DMA Examination Team from Region II, who submitted a report of their findings in which they recommended granting of loan. Reference to the Examination Team's report has been made in previous parts of the present application. However, the production loan was not consummated, thus the applicant is applying for an exploration loan with which he intends to explore virgin ground in the northeast part of the Galt claim.

MF-104
(August 1951)

Budget Bureau No. 42-R1036.2.
Approval Expires 6-30-52.

RECEIVED
JAN 9 1953
U. S. G. S.
SPOKANE, WASH.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Contract No. Idm-E 197

Name of Operator: Lewis B. Stark
Docket No. DMA: 2054
Total Contract Amount $: 50,000
Government Participation: 50 % Amount $ 25,000
Distribution of Expenditures for Month of: March- 1952

STRATEGIC AND CRITICAL MINERAL EXPLORATION PROGRAM
OPERATOR'S MONTHLY PROGRESS REPORT

Operators are to submit monthly reports to the designated field representative of the Defense Minerals Administration. Reports are to be submitted in quadruplicate prior to the 15th day of the month following the reporting period.

Narrative.—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered is to be furnished.

Maps.—Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

Cost Accounts.—All applicable parts of this form are to be filled in. This report will form the basis for payments of the Government's participating share of expenses. Audits of accounts may be made from time to time.

CERTIFICATION

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

Lewis B. Stark
(Name of Company)

By Lewis B. Stark
(Signature of Authorized Official)

January 2nd 1953
(Date)

Owner
(Title)

NOTE.—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.

16—64068-3

MONTHLY SUMMARY COST STATEMENT

List as Shown on Exhibits Attached to Contract

Item	Monthly Total	Totals Previously Reported	Totals to Date	For Government Use Only		
				Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
1. Fixtures and Improvements:						
(a) Facilities						
(b) Buildings						
(c) Fixtures						
2. Operating Equipment:						
(a) Purchased[1]						
(b) Rented[2]						
(c) Furnished by operator	71.60	154.00	225.60			
3. Rehabilitation and Repairs:						
(a) Facilities						
(b) Buildings						
(c) Installations						

MONTHLY SUMMARY COST STATEMENT—Continued

Item	Monthly Total	Totals Previously Reported	Totals to Date	For Government Use Only: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(d) Fixtures						
4. Labor[3]	208.75	796.64	1005.39			
5. Supervision	25.00	230.76	255.76			
6. Supplies						
(a) Timber						
(b) Explosives	28.50	58.43	86.93			
(c) Repair Parts Dell Bits	5.00	none	5.00			
(d) Other						
7. Power	30.00	80.26	110.26			
8. Transportation	4.00	12.50	16.50			
9. Insurance						
(a) Fire		22.50	22.50		22.50	-0-
(b) Public Liability						
(c) Workmen's Compensation		84.34	84.34			
O.A.I.B.		24.22	24.22			
10. Contract Work						
11. Other (specify)						
Total	372.85	1463.65	1836.50	350.35	1463.65	1814.00
Deletions						
Adjusted totals						
Totals previously reported						
Totals to date						

[1] Enter amount paid during month toward total purchase price.
[2] Payments for rental of equipment or prorated depreciation on equipment owned by contractor.
[3] Submit copy of the Social Security form filed under the Old Age Insurance system showing complete wage and salary data or furnish copy of payroll sheet giving same data.

NOTE.—Indicate that portion of supervisory, office, and engineering salaries that is chargeable to this project.

FOR GOVERNMENT USE ONLY

Checked by [signature]
Entered by
Approved by
Amount approved for payment $175.18 Final payment
Remarks
Voucher no 813

16—64068-3

EXPLORATION UNIT COST AND PROGRESS REPORT FOR MONTH OF March-1952

(Supply Data Below Applicable Only to Your Operations)

Item	Costs					Progress [4]				
	Wages [1] and salaries	Equipment [2]	Supplies	Other [3]	Total	Unit	Units this month	Units previously reported	Units to date	Units authorized by contract (Exhibit A)
Drifting	$233.75	$71.60	$33.50	$34.00	$372.85	Feet	20	20	40	1000
Crosscutting						Feet	0	0	0	300
Raising										
Shafts										
Winzes										
Drill holes						Feet	0	0	6	1000
Overburden										
Rehabilitation and preparation						$	0	$76267		1000
Geology and geophysics										
Trenching										
Sampling and assaying Contingencies Eng.										
Roads and trails Etc.						$	0	0	0	$2500
Test pits										
Other (specify)										
Totals	$233.75	$71.60	$33.50	$34.00	$372.85					

[1] Prorate supervisory, engineering, and office salaries in proportion to man-shifts of direct labor.
[2] Prorate charges for equipment that is not exclusively for one type of job (such as compressors) against authorized units of work in each category.
[3] Where entries in the "Other" column (above) are more than 25 percent of the total expenditures, a breakdown of this item should be made.
[4] Specify whether feet, cubic feet, acres, miles, etc.

16—64068-3 U. S. GOVERNMENT PRINTING OFFICE

STAR MINE & MILL

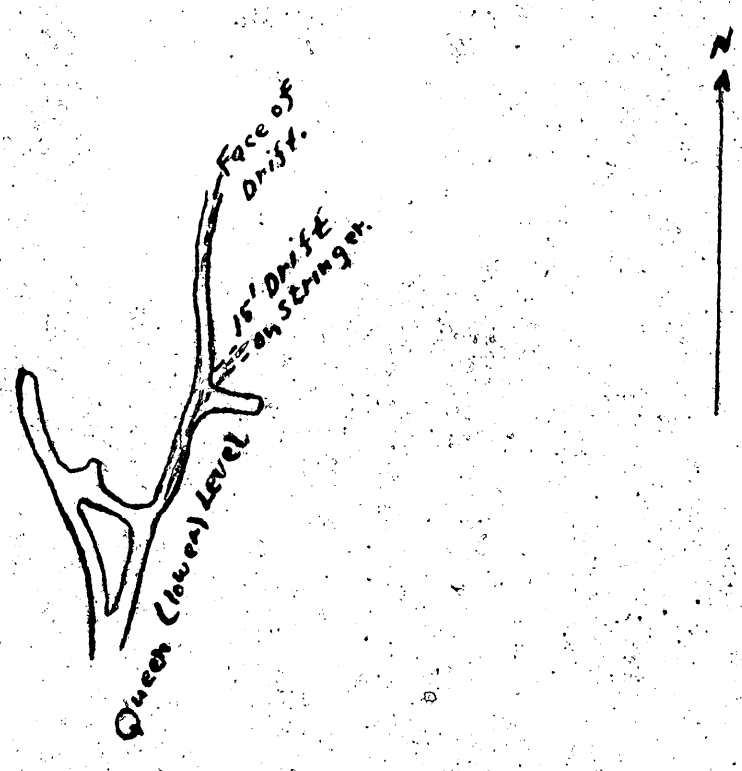
NEIHART, MONTANA

Under the contract no. Bm-1 197, between Lewis A. Stark, Operator, and the Defense Minerals Administration, made in November- 1951;

There was a little over 40 feet of drift drove, on the East vein of the Galt Mine, on the Queen level, showing a Silver, Lead, Zinc vein, that was only 6 inches wide at the start, but in 40 feet opened to 10 inches in width, with the formation changing from black mica, to an altered shist, along side of the vein.

The last round drilled in the face produced water running out of the lifters, up until this time, the drift was dry and very hard, as there is no workings above this drift to drain, the water showing should indicate, that there is a body of ore ahead, because of the fact that, when I was on that level in September of 1952 the face was still running a little water.

While working on this project, I cropped back 75 feet from the original face of the drift, and drifted on a stringer which went in the East wall, a distance of 15 feet, but as it did not show to good quit, as it could be possible to prospect that stringer, with a drill hole from the main drift.



MF-104
(August 1951)

Budget Bureau No. 42-R1036.2.
Approval Expires 6-30-52.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Contract No.
Idm-E 197

Name of Operator Lewis B. Stark
Docket No. DMA 2054
Total Contract Amount $ 50,000
Government Participation: 50 % Amount, $ 25,000
Distribution of Expenditures for Month of November--1951

STRATEGIC AND CRITICAL MINERAL EXPLORATION PROGRAM
OPERATOR'S MONTHLY PROGRESS REPORT

Operators are to submit monthly reports to the designated field representative of the Defense Minerals Administration. Reports are to be submitted in quadruplicate prior to the 15th day of the month following the reporting period.

Narrative.—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered is to be furnished.

Maps.—Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

Cost Accounts.—All applicable parts of this form are to be filled in. This report will form the basis for payments of the Government's participating share of expenses. Audits of accounts may be made from time to time.

CERTIFICATION

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

Lewis B. Stark
(Name of Company)

By Lewis B Stark
(Signature of Authorized Official)

December 20, 1951
(Date)

Owner
(Title)

NOTE.—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.

16--64068-3

MONTHLY SUMMARY COST STATEMENT

List as Shown on Exhibits Attached to Contract

Item	Monthly Total	Totals Previously Reported	Totals to Date	For Government Use Only		
				Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
1. Fixtures and Improvements:						
(a) Facilities						
(b) Buildings						
(c) Fixtures						
2. Operating Equipment:						
(a) Purchased[1]						
(b) Rented[2]						
(c) Furnished by operator	~~$159.00~~ 154 00	none	~~$159.00~~ 154 00			
3. Rehabilitation and Repairs:						
(a) Facilities						
(b) Buildings						
(c) Installations						

NEIHART, MONTANA
Dec. 20th, 1951

U.S. Bureau of Mines
1201 N. Division St.
Spokane 2, Wash.

Gentlemen:

I am enclosing the six monthly progress reports required by the DMEAon my loan .

Enclosed six copies of wages, six of listed rental equipment, sketch of drift, work was done on.

There wasone thing I overlooked when appling for the loan, that was to allow for putting in pipe, laying track, enlatging the old drift to get the mucking machine through to the face, consequently had to use $765.17 of the money allowed for slight repairs on winze and building skip pocket, of which $1000. was allowed, may have to use a few hundred of my $2500. contingency fund for the pocket, though I dont want to, if I can get my drift cost per foot down wont use any of it, as I want to use that for Geological work, engineering, surveying, sampling and assaying.

Owing to the weather conditions, and shortage of labor here at the present time probably wont get this project going full force until sometime next month, at which time a lot of the costs will have to be prorated as I will continue my regular operations.

The two weeks put in on this project gives a good idea of costs, and the prorating will be easly figured, the drift cost will probably be alot less next report as the vein has widened out, have hopes of getting a good grade of mill ore within the next twenty feet ahead, I remain.

Very truly yours
Lewis B. Stark
Lewis B. Stark

Time Sheet Weekly
Contract No. - Idm-E 197
Lewis B. Stark Neihart, Montana

Going wage scale in this District-

Supt. $115.38 per week
Miners, Hoistmen, Millmen. $11.00 per 8 hour day plus time and one half over 40 hours weekly, work week in this District is 6 days.
Muckers, outside help. $10.50 per 8 hpur day their pay computed on same basis according to overtime mentioned above.

Started Contract Nov. 5th, 1951

Occupation	Name	Shifts Worked 5,6,7,8,9,10.	Total	Total Wages	W.H.Tax	O.A.B.	Net Wages
Miner-	William Stark	1 1 1 1 1 1	- 6	$ 71.50	$ 10.50	$ 1.07	$ 59.93
Hoistman-	Duane McDaniel	1 1 0 1 1 1	- 5	55.00	8.30	.82	45.88
Hoistman-	Lewis Larson	1 1 1 1 1 1	- 6	71.50	3.90	1.07	66.53
Motorman-	Richard Howard	1 1 1 1 1 1	- 6	71.50	.00	1.07	70.43
Mucker-	William Martin	1 1 1 0 1 1	- 5	52.50	2.80	.79	48.91
Miner-	Herman Belgarde	1 1 1 1 1 1	- 6	71.50	6.50	1.07	63.93
Mucker-	Byrd Maki	1 1 1 1 1 1	- 6	68.25	6.10	1.02	61.13
Total for week ending Nov. 10th				$ 461.75	$ 38.10	$ 6.91	$ 416.74
Employers 1½%						6.91	
Rehabilitation, preparation, Etc. during above week.						$ 13.82	

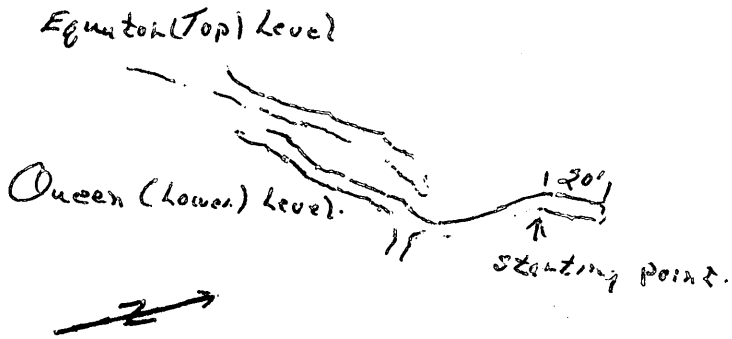
Supt. Lewis B. Stark paid @ $115.38

Week ending Nov. 17th, 1951

		12,13,14,15,16,17.									
Miner-	William Stark	1	1	1	0	1	1	-5	$ 55.00	$ 8.30	$ .82	$ 45.88
Hoistman-	Duane McDaniel	1	1	1	0	1	1	-5	55.00	8.30	.82	45.88
Hoistman-	Lewis Larson	0	1	1	0	1	1	-4	44.00	00	.66	43.34
Motorman-	Richard Howard	1	1	1	0	1	1	-5	55.00	00	.82	54.18
Mucker-	William Martin	1	1	1	0	1	1	-5	52.50	2.80	.79	48.91
Mucker-	Byrd Maki	1	1	1	0	1	1	-5	52.50	7.90	.79	43.81
Miner-	Gerald McLean	0	0	0	0	1	½	-1½	16.50	2.90	.25	13.35
Miner-	Willam Salonen	0	0	0	0	1	½	-1½	16.50	2.90	.25	13.35
Total for week ending Nov.17th									$ 347.00	$ 33.10	$ 5.20	$ 308.70
Employers 1½%											5.20	
											$ 10.40	

All of above week was time spent on drifting, drove ahead 20feet

Supt. Lewis B. Stark paid @ $115.38



RENTAL EQUIPMENT FURNISHED by LEWIS B. STARK

STAR MINE & MILL, NEIHART, MONTANA

UNDER CONTRACT No. Idm-E 197

	Monthly Allowance for use		Used ½ Month
1 Stoper (for drifting) 2 allowed under contract	$ 27.00	used 1-½ month	$ 6.75
1 Sullivan 75 H.P. 410 ft. Compressor 2 allowed undr comtract	167.00	used I-½ month	41.75 ~~40.75~~
1 Eimco mucking machine	58.00	used ½ month	29.00
1 G.E. Trammer 1½ ton with charger	100.00	used ½ Month	50.00
10 Ore cars	33.00	used ½ month	16.50
1- Hoist air Sullivan	20.00	used ½ month	10.00
1- Pickup truck	25.00	used ½ month	12.50
1- Thor jack-Hammer	6.00	notused	

Total rental allowed per month $ 436.00

Total used for ½ Month $171.50

Less pickup rental which is listed and charged under Item 8. 12.50

$ 159.00

5 00

154 00

All of above listed and billed under Item 2. line (C) with a deduction of $12,50 for pickup rental which is listed under Item 8. as transportation

U.S. BUREAU OF MINES
RECEIVED
JAN 7 1972
ARLINGTON

MONTHLY SUMMARY COST STATEMENT—Continued

Item	Monthly Total	Totals Previously Reported	Totals to Date	For Government Use Only: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(d) Fixtures						
4. Labor[3]	$ 796.64	None	$ 796.64			
5. Supervision	$ 230.76	None	$ 230.76			
6. Supplies						
(a) Timber						
(b) Explosives	$ 58.43	None	$ 58.43			
(c) Repair Parts						
(d) Other						
7. Power	$ 80.26	None	$ 80.26			
8. Transportation	$ 12.50	None	$ 12.50			
9. Insurance						
(a) Fire	$ 22.50	None	$ 22.50			
(b) Public Liability						
(c) Workmen's Compensation	$ 84.34	None	$ 84.34			
O.A.B.	$ 24.22	None	$ 24.22			
10. Contract Work						
11. Other (specify)						
Total	$1468.65					
Deletions	5.00					
Adjusted totals	1463.65					
Totals previously reported		None				
Totals to date			~~$1468.65~~ 1463.65			

[1] Enter amount paid during month toward total purchase price.
[2] Payments for rental of equipment or prorated depreciation on equipment owned by contractor.
[3] Submit copy of the Social Security form filed under the Old Age Insurance system showing complete wage and salary data or furnish copy of payroll sheet giving same data.

NOTE.—Indicate that portion of supervisory, office, and engineering salaries that is chargeable to this project.

FOR GOVERNMENT USE ONLY

Checked by
Entered by
Approved by Eric G. Erickson
Amount approved for payment
Remarks

931.53

16—64068-3

EXPLORATION UNIT COST AND PROGRESS REPORT FOR MONTH OF Nov.-1951

(Supply Data Below Applicable Only to Your Operations)

Item	Costs					Progress [4]				
	Wages [1] and salaries	Equipment [2]	Supplies	Other [3]	Total	Unit	Units this month	Units previously reported	Units to date	Units authorized by contract (Exhibit A)
Drifting	457.18	~~74.50~~ 77.00	58.43	108.37	~~703.48~~ 706.98	Feet	20	0	20	1000
Crosscutting						Feet	0	0	0	300
Raising										
Shafts										
Winzes										
Drill holes						Feet	0	0	0	1000
Overburden										
Rehabilitation and preparation	570.22	~~74.50~~ 77.00		115.45	~~765.17~~ 762.67	$	~~765.17~~ 762.67	0	~~765.17~~ 762.67	1000
Geology and geophysics										
Trenching										
Sampling and assaying Cost accounts Eng.						$	0	0	0	2500
Roads and trails Etc.										
Test pits										
Other (specify)										
Totals	1027.40	~~154.00~~ 154.00	58.43	223.82	~~1463.65~~ 1463.65					

[1] Prorate supervisory, engineering, and office salaries in proportion to man-shifts of direct labor.
[2] Prorate charges for equipment that is not exclusively for one type of job (such as compressors) against authorized units of work in each category.
[3] Where entries in the "Other" column (above) are more than 25 percent of the total expenditures, a breakdown of this item should be made.
[4] Specify whether feet, cubic feet, acres, miles, etc.

16—64068-3 U. S. GOVERNMENT PRINTING OFFICE

U. S. BUREAU OF MINES
RECEIVED
JAN 7 1952
ALBANY, OREGON

OFFICIAL FILE COPY
O. M. E
RECEIVED APR 18 1961

DATE		
4/18	gad	VVO
		1VO
4/18	nas	800
		500
		220

No. 157 Howard Street
Spokane 4, Washington
April 13, 1961

Mr. Lewis B. Stark

Neihart, Montana

Re: DMA-2054 (Zinc-Lead)
Galt Mine
Cascade County, Montana
Contract Idm-E197

Dear Mr. Stark:

Your letter of April 6, 1961, addressed to A. E. Weissenborn has been referred to me for reply. The Office of Minerals Exploration is the successor of the Defense Minerals Exploration Administration.

All our records and reports are for Government use only and we are not permitted to make them available to non-Government personnel. However, when Alfred E. Hugent called at the office today, we discussed with him the geologic features of the Galt property.

Sincerely yours,

D. R. Maclaren
Acting Field Officer, OME
Region I

cc: OME(2) w/cys incoming
Reading copies to:
Nolan
Hobbs
Guild

No discovery made

OFFICIAL FILE COPY

RECEIVED APR 18 1961

Neihart Montana
April 8th, 1961

Mr. A. L. Weissenborn, exec. Officer
U.S. Geological Survey
Department of the Interior
South 157 Howard St.
Spokane 4, Washington

Dear Mr. Weissenborn:

No doubt you will be surprised to hear from me as a good many years has gone by since our last meeting, I still have the Star and Galt Group of Mining claims, sometimes it has been a struggle to keep the taxes up and do the assessment work on the unpatented claims, some interest is now being shown in mining in this district, I have had four different groups in here during the past six weeks, of course they are all stalling to see if the President is going to help the mining industry, I beleive that he will.

The last party here was Alfred E. Nugent, exploration Geologist for The Bunker Hill Co. of Kellogg, Idaho, perhaps you know him, as my Star adit tunnel is caved also the Equator tunnel that I drove to get into the Galt Vein, he asked me if I would write you giving you my permission to let him go over the report on the Galt property your team made in March of 1951, at the time I applied for the [illegible] loan, that is if this meets with your approval, during the past ten years I have put out over $6,000.00 in taxes on these properties, decided that I don't want to go back into the mining business, I am getting to old to be mucking in these stages, in 1956 I turned down a $1000.00 a month and expenses job that [illegible] offered me by the Patrick Harrison Mining Co. LTD, Noranda, Quebec, had thirty years mining most of it underground, but the only way I ever will get out completely is to sell out, I would like very much to see the Bunker Hill get in this district, as there is a chance just now of obtaining other good properties, with with the Star and Galt group, they have the money to go ahead if the properties were to be obtained and managed right a long term operation could be expected, it is a shame to see this property laying ideal so any help your office can give me will be greatly appreciated.

In writing Mr. Nugent a letter of introduction to you today, he no doubt will contact you in the near future, as he plans on coming back here within the next two weeks, but have an idea he will want to see some of the reports before he goes, with best wishes to you.

Very truly yours

Lewis B. Stark

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

April 1, 1954

PROJECT SUMMARY REPORT

By: J. W. Alt

1. Docket No. DMEA-2054 (Zinc-Lead)
Contract No. Idm-E197
Property: Galt Mine
Location: Cascade County, Montana

Operator: Lewis B. Stark
Neihart, Montana

Operator's Property Rights: Owner, There is a mortgage of $46,500 against the property.
Mortgagor's Subordination Agreement - dated November 10, 1951.

2. Contract dated October 30, 1951, To complete - 2 years

Work Authorized

1. Repair work on the 124-foot winze from the Equator adit level to the Queen level and install a skip pocket at the Equator level station. Extend Queen level northwest on Galt vein for 500 feet.

2. Diamond drill to a total of 1,000 feet on the Queen level.

3. Extend Equator level to the northwest on the Galt vein or the footwall split of the Galt vein.

4. Crosscutting not to exceed 300 feet on the Queen level or Equator adit level.

Total estimate cost of project:

Drifting 1,000 feet at $30/ft.	$ 30,000.00
Crosscutting 300 feet @ $30/ft.	9,000.00
Diamond drilling, 1,000 feet @ $7.50/ft.	7,500.00
Reconditioning winze and installing skip pocket	1,000.00
Contingency	2,500.00
Total estimated cost	$ 50,000.00

Amendments

None

Work Completed

Rehabilitation and preparation of the winze	$ 762.67
40 feet of drifting	1,073.83
Total cost billed by Operator	$1,836.50

Actual cost of drifting $26.85

Contract terminated November 21, 1952

3. Audit Certificate - Report of Review dated June 23, 1953

Total cost as billed by Contractor	$1,836.50
Exceptions during the audit (fire insurance)	22.50
Total accepted cost	$1,814.00
Government participation	$ 907.00

4. Certification date: No certification made as no ore had been discovered.

5. The contract was terminated because the Operator was unable to finance the project after a cave at the Equator adit level winze station. This cave forved suspension of all mining operations and made the exploration headings inaccessible or virtually so. The limited amount of work completed did not add appreciably to existing knowledge of the property.

J. W. Alt

J. W. Alt

☒ Audited

WO[redacted]ALYSIS SHEET - [redacted] [redacted]X Actual Cost

☐ Certified

Analysis as of 12/8/54.
Incl. Voucher for March 1953.

☐ Agreed Unit Costs

Name Lewis B. Stark

Docket No. DMEA-2054

State Montana

Commodity Lead-Zinc

Idn-E No. 197

OPERATION	AUTHORIZED Units	AUTHORIZED Costs	COMPLETED Units	COMPLETED Costs	NET COST
Drifting & Crosscutting	1300'	$39,000.00	40'	$1,062.33	$1,062.33
Raising					
Shafts					
Winzes ~~Rehabilitation~~		~~1,000.00~~		~~751.67~~	~~751.67~~
Drilling (Specify) Diamond (core)	1,000'	7,500.00			
Surface Excavation					
Underground Excavation					
Roads and Trails					
Operating Equipment Purchased					
Surface Rehabilitation & Repairs					
Underground Rehabilitation		1000		751.67	751.67
New Building, Improvements, etc,					
Other (Specify) Contingencies		2,500.00			
Totals		$50,000.00		$1,814.00	$1,814.00

Prepared by O. P. Klazeschaidt

FILE COPY
SURNAME:

500

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

JUL 9 1953

J.W. Alt
Chambers
Rubin

Mr. Lewis B. Stark
Neihart, Montana

Re: Docket No. DMA-2054 (Zinc-Lead)
Lewis B. Stark
Galt Mine
Cascade County, Montana
Contract No. Idm-E197

Dear Mr. Stark:

This is with reference to the subject Exploration Project Contract between you and the Government.

The final audit of the contract expenditures of the Operator and the Field Team have been received and accepted by this Administration. Of the total amount of $50,000.00 approved under the contract, $1,814.00 was expended, 50 per cent of which, or $907.00, represents the Government share. There was no equipment used on the project in which the Government had an interest or an equity. The work done on the project was completed in a satisfactory manner.

Because the results of the exploration were unfavorable, it is not our intention to make a certification of discovery or development which would create a lien against the subject property. We are, therefore, closing our books and records with respect to this project. Your attention is called, however, to Article 11 of the contract which requires the Operator to "Keep and preserve said records and accounts for at least 3 years after the completion of the project or the termination of this contract."

Your interest in the Exploration Program of the Defense Minerals Exploration Administration and your willingness to participate therein are appreciated.

Sincerely yours,

C. O. Mittendorf

Administrator

JWAlt/bjl (7/7/53)

Copy to: Docket
Admr. R. File
Op. Committee
Base Metals
Mr. Chambers
Region II (2)
Mr. Bishop
Mr. Kinkel Chron.

P.C.G.
7-9-53

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
~~WASHINGTON 25, D. C.~~
No. 157 Howard Street
Spokane 4, Washington

July 1, 1953

Mr. R. J. Hindman
Certifying Officer, Region II
1201 North Division
Spokane, Washington

Re: Docket No. DMEA-2054 (Lead-Zinc)
Lewis E. Stark (Galt Mine)
Cascade County, Montana
Contract No. Ida-8197

Dear Mr. Hindman:

This is to inform you that work under the subject contract has been completed to the satisfaction of the Government and that a full and final accounting of operations, as presented by the operator, is considered acceptable by this office. Because of the limited amount of work completed under the project, the operator's final report is to be waived.

Inasmuch as contract work has been completed, it is requested that the operator's final invoice be accepted for vouchering and payment.

Sincerely yours

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

cc: USBM (2)
DMEA (2)
Cont. Adm. & Aud. Div., Wash., D. C.
Quinlan
N. Hull, Auditor

FILE COPY
SURNAME:
800

Talbert
Chambers

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

JUN 26 1953

Mr. Robert L. Hull
DMEA Auditor
1201 North Division Street
Spokane 2, Washington

Re: Ida-1197, DMA-2054
Louis V. Stark

Dear Mr. Hull:

The corrected Report of Review for the referenced project, as submitted by your explanatory letter of June 23, 1953, has been accepted and normal distribution of the copies may be effected.

However, before making distribution please insert after the words "Exceptions during the audit" the following "(fire insurance)". We have changed the Washington copies accordingly.

In future instances where exceptions are taken on a Report of Review a schedule explaining the exceptions should be attached. This requirement is indicated by Exhibit "B" of Supplement No. 3 to DMA Circular 19.

Sincerely yours,

(Signed) J. L. Chambers

Jay L. Chambers, Chief
Contract Administration
and Audit Division

EDTalbert/wb
June 26, 1953

Copy to: Docket
Admr. Reading File
Mr. Chambers

P.H.
6-26-53

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

June 23, 1953
N. 1201 Division Street
Spokane, Washington

Mr. Jay L. Chambers, Chief
Contract Administration & Audit Division
Defense Minerals Exploration Administration
Department of the Interior
Washington 25, D.C.

Dear Mr. Chambers:

Referende is made to your letter of June 19, 1953. There is returned the three copies of the Report of Review on E-197, DMA-2054, Lewis B. Stark.

The records in this office show that the Operator did not distribute his costs correctly but I have not found any evidence of an overcharge of $12.11 in F.I.C.A. Taxes.

Total wages as indicated by payroll-Nov.'51	$808.75
Amount shown on Form MF-104, Nov. 1951	$796.64
Difference	$ 12.11

The $12.11 represents the employees' share of the F.I.C.A. tax. The $.02 difference is caused by taking the 1.5% tax on the individual salaries rather than on the entire amount of the payroll at one time.

The Operator included this sum of $12.01 and his share of $12.11 under item 9 . The distribution was corrected in this office to show item 4 Labor as $808.75 and item 4 Insurance, F.I.C.A. taxes as $12.11

The item of Fire Insurance had been allowed to stand as the Operator had been advised informally that he might claim it. It has been deleted.

The March, 1952 MF-104, which is the final one submitted by the Operator, has not been sent to you as it has not been paid. The Certifying Officer does not take any action, where a final payment is involved, until such time as the Contract Administration & Audit Division advises that normal distribution may be effected, that is that I may give him his copy(original) of either the audit report or report of review.

The Operator did not claim payroll taxes on the Wages on the March 1952 MF-104.

Sincerely yours,

Robert M. Hull

Robert M. Hull

Enclosure

FILE COPY
SURNAME:
800

Talbert
Chambers

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

JUN 19 1953

Mr. Robert M. Hull
DMEA Auditor
1201 North Division Street
Spokane 2, Washington

Dear Mr. Hull:

Receipt is acknowledged of your letter of June 16, 1953, transmitting Reports of Review for Idm-E197, DMA-2054, Lewis B. Stark and Idm-E246, DMEA-2260, January Mine and a final Audit Report for Idm-E177, DMEA-652, South Mountain Mining Company.

The Report of Review on E197 is returned herewith for further review and justification of the accepted costs, or revision if required, for the reason that you have taken no exceptions although the November, 1951, MF-104 (the only one received by this office) indicates:

(1) Inclusion of both the employees' and employer's share of F.I.C.A. taxes under item 9, even though the employees' share has been included also under item 4, an indicated overcharge of $12.11, and

(2) Under item 9(a) a charge of $22.50 for fire insurance, which ordinarily is not allowable (See Question and Answer 15, Operating Committee Memorandum No. 8 and Questions and Answers Nos. 1 and 4, Supplement 1, DMEA Circular 19).

The Audit Report covering E177 and the Report of Review covering E246 are acceptable and normal distribution may be effected.

Sincerely yours,

(Signed) J. L. Chambers

Jay L. Chambers, Chief
Contract Administration
and Audit Division

S.H.
6-19-53

Enclosure

BL

EDTalbert/wb
June 19, 1953

cc: Mails & Files
Admr. Reading File
Mr. Chambers

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

~~WASHINGTON 25, D.C.~~
So. 157 Howard Street
Spokane 4, Washington

MAY 18 1953

May 15, 1953

Mr. George C. Selfridge, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

Re: Docket No. DMEA-2054 (Lead-Zinc)
Lewis B. Stark (Galt Mine)
Cascade County, Montana
Contract Idm-E197

Dear Mr. Selfridge:

Enclosed are four copies of the Field Team's Final Report on the subject property, prepared by J. J. Quinlan, Geologist, Geological Survey, and E. W. Buel, Mining Engineer, Bureau of Mines.

It is recommended by field engineers that no certification of discovery be made. The Field Team concurs with this recommendation.

By DMEA Field Team, Region II

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

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

Enclosure
cc: USBM (2)
Quinlan

Reviewed by
DMEA OPERATING COMMITTEE
5-22-53
(date)

DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration
MAY 18 1953

DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

FIELD TEAM, REGION II

FINAL REPORT

Contract Idm-E197

by

E. W. Buel
Mining Engineer
U. S. Bureau of Mines

J. J. Quinlan
Geologist
U. S. Geological Survey

LEWIS B. STARK
Neihart, Montana

Docket No.:	DMEA 2054
Commodity:	Lead-zinc
Date of Contract:	October 30, 1951
Termination date:	November 21, 1952

FINAL F.T. REPORT

GALT MINE
Neihart Mining District
Cascade County, Montana

Reviewed by
DMEA OPERATING COMMITTEE
5-22-53
(date)

Spokane, Washington

March 26, 1953

FINAL REPORT

LEWIS B. STARK
GALT MINE
Neihart Mining District
Cascade County, Montana

Contract Idm-E197

* * * *

INTRODUCTION

Authorship

The section on geology was prepared by J. J. Quinlan, Geologist, U. S. Geological Survey. The sections comprising location, physical features and climate, exploitation possibilities, summary of factual data, and annex were written by E. W. Buel, Mining Engineer, U. S. Bureau of Mines. The remainder of the sections were prepared jointly.

Summary

The Galt patented claim, Survey No. 2226, is a part of the Galt mine, owned by Lewis B. Stark of Neihart, Montana. The Galt claim is in secs. 29 and 32, T. 14 N., R. 8 W., M.P.M., Neihart Mining District, Cascade County, Montana.

Mr. Stark and the Government entered into exploration project contract no. Idm-E197, October 30, 1951, for the purpose of exploring the Queen-Galt vein system and related structures northeast of the principal Galt mine workings. The proposed exploration program entailed 1,000 feet of drifting, 300 feet of crosscutting, and 1,000 feet of diamond drilling. Only 40 feet of drifting had been completed when the contract was terminated on November 21, 1952, by mutual consent of the Operator and the Government. The contract was terminated because the Operator was unable to finance the project after a cave at the Equator adit level winze station. This cave forced suspension of all mining operations and made the exploration headings inaccessible or virtually so.

The estimated cost of the proposed exploration program was $50,000 of which the Government agreed to pay 50 percent or $25,000. Pending the results of a final audit, funds expended under the contract amounted to $1,836.50 of which the Government's share was $918.25.

Recommendations

It is recommended that no certification of discovery be made.

The Government might consider a new contract along the lines of the terminated contract if a new application is made; however, the

Operator should present a reasonable program to gain access to the exploration headings and furnish evidence that he is financially capable of undertaking such a program.

LOCATION AND ACCESSIBILITY

The Neihart mining district is on the northeast slope of the Little Belt Mountains, Cascade County, Montana. The only town in the district is Neihart, which is along U. S. Highway 89.

The Galt mine is situated about 1/2 mile north of Neihart and adjoins the Queen of the Hills mine on the north. The property is accessible from Neihart by the Rock Creek road for a distance of about 1/4 mile, thence 1/4 mile from the Rock Creek road.

The main highway is kept open throughout the year.

Physical Features and Climate

The Galt mine is on the east bank of Belt Creek at an approximate altitude of 6,000 feet. The mine is situated in a narrow and comparatively steep-sided part of the Belt Creek valley. Hill slopes are heavily timbered which provide an adequate supply of timber for mining purposes. Belt Creek and its tributaries provide an abundance of water for milling purposes.

The winters are severe with snow covering the ground from November to June. Summers are cool and dry.

PROPERTY

Mr. Lewis B. Stark is the owner of the Galt patented claim, Survey No. 2226, Neihart Mining District, secs. 29 and 32, T. 14 N., R. 8 E., M.P.M. The exploration project contract, dated October 30, 1951, shows a mortgage of $46,500 against the property which includes the Galt and other claims.

The Galt mine was first located about 1886. The mine was most actively exploited between 1893 and 1897, and it is probably during this period that the greater part of production was made. Since that time the property has been worked by various operators.

The Galt mine has been one of the principal producers in the Neihart district. Total production is not recorded, but is estimated to be approximately $1,000,000. Production records prior to 1901 are not available. Production from 1901 to 1950, inclusive, is reported to have been 31,485 tons of ore from which was recovered 2,239,292 pounds of copper, 525,712 ounces of silver, and 257 ounces of gold.

The property was originally developed by the Galt No. 1 and No. 2 tunnels (see accompanying longitudinal section, fig. 2, and access to the lower workings was through the Queen tunnel. These workings and most of the others, are now largely inaccessible.

The Galt mine is presently accessible from the Equator adit level. Extensive stoping operations have been carried on from this level resulting in the removal of most of the ore above the Equator adit. Some crosscutting into the Galt vein footwall was undertaken from the Equator adit and although some favorable structures were found no appreciable quantity of ore was discovered.

A 124-foot winze was sunk by Mr. Stark from the Equator adit level to the Queen tunnel in order to mine the block of ore between these levels. Mining on the Queen level is hampered by an uphill tram to the winze and the fact that the Queen level is badly caved. Workings below the Queen level are inaccessible because they are caved and flooded.

THE PROJECT

The DMEA exploration program was undertaken to explore the Queen-Galt vein system and related structures northeast of the principal mine workings.

The program provided for the following:

1. A minor amount of repair work on the 124-foot winze connecting the Equator adit and the Queen level, and installation of a skip pocket at the Equator level winze station.

2. Extension of the Queen level northeast on the Galt vein for 500 feet.

3. Diamond drilling a total of 1,000 feet on the Queen level to explore footwall split of the Galt vein, and/or the Equator vein.

4. Extension of the Equator level to the northeast on the Galt vein or the footwall split of the Galt vein, depending upon which structure proves to be the most favorable as determined by work on the lower Queen level.

5. Crosscutting not to exceed 300 feet on the Queen level or Equator adit level to intersect Equator vein and footwall split of the Galt vein.

Work was started on November 5, 1952 and recessed about December 1, 1952, after preparatory work and 30 feet of drift had been completed on the Queen level. This recess was necessary because of inclement weather and a shortage of labor.

Work was resumed about April 7, 1952, and the drift was advanced an additional 10 feet. Work was again recessed April 21, 1952, when ground conditions became so critical at the Equator level winze station that it was necessary to suspend use of the winze and utilize the crew in an attempt to save it.

The Operator was not able to do further work from the winze. He presented a proposal to drive a new adit drift. This proposal was turned down by the Field Team, Region II, because the indicated ore reserves amounting to 6,700 tons to be made accessible were not commensurate with the cost of the proposed work.

Geology

The Neihart mining district is in the central part of the Little Belt Mountains. Rocks exposed in the district form the core of the range which structurally is for the most part a broad flat-topped anticline or elongated dome. The core consists of pre-Beltian gneisses and schists which are believed to be of Archean age. The pre-Beltian gneisses and schists are overlain unconformably by the Neihart quartzite of the Belt Series (pre-Cambrian). Elsewhere within the range the sedimentry cover includes formations ranging in age from pre-Cambrian to Quarternary. Dikes, mostly of acidic varieties, cut the pre-Beltian and Beltian rocks. These dikes are similar in composition and texture to igneous bodies which cut Paleozoic strata elsewhere in the range.

The major ore deposits of the Neihart district occur in the areas of gneisses and schists, which are divided into two groups. The older group includes red feldspar gneiss, gray feldspar gneiss, sericite schist, and chlorite schist. The younger group, which is believed to have been intruded into the older gneisses and schists, includes a spotted porphyritic diorite and a dense black amphibolite which is considered to be a border facies of the porphyritic diorite. This younger group is named the Pinto diorite, a very descriptive name for the spotted porphyritic diorite. The older red gneiss is considered the most favorable host rock in the district because its massive and brittle nature tends to develop strong and persistent vein structures. However, the gray gneiss and Pinto diorite do contain ore deposits.

The major portion of the metal production from the Neihart district has come from vein deposits. The veins generally follow two sets of fractures or fissures belonging to the same system. One set strikes about N. 10° E. and the other set strikes N. 30° E. to N. 50° E. The veins of each set generally merge into each other as splits, or individual veins merely change course from one set of fractures to the other.

The period of mineralization is assumed to be much later than pre-Beltian time even though most of the vein deposits occur in pre-Beltian rocks. The basis for this assumption is that the igneous dikes exposed in the district are similar in composition and texture to the other igneous bodies in the Little Belt Mountains which cut Paleozoic strata. The veins in the Neihart district cut these dikes and in many places the dikes contain disseminated ore minerals.

One of the principal producers of the Neihart district has been the Galt mine upon which a Defense Minerals Exploration administration exploration program was undertaken.

The local geology of the Galt mine is ably described by E. A. Magill, A. B. Griggs, and T. H. Kilsgaard in the original DMEA examination report on the Star Mine and Mill, dated March 7, 1951.

"The country rock enclosing the Galt-vein ore bodies is chiefly a massive, pink, feldspathic, pre-Cambrian gneiss, which is locally intruded by dikes of dark green, pre-Cambrian amphibolite. Near the veins, particularly in the vein hanging wall, the gneissic rocks are highly altered with much of the feldspar having been converted to various clay minerals. In some areas near the Galt vein, the rocks are so altered that the only identifiable minerals remaining are quartz phenocrysts in a clay-bound matrix.

"The Galt vein, a northeast continuation of the Queen vein, is essentially a sheeted shear zone that strikes from N. 30° to 40° E., and dips steeply to the SE. Within the shear zone are discontinuous blebs and stringers of silver, lead, and zinc ore, which together with included gangue minerals, locally aggregate widths ranging from one to seven feet, and which in some instances constitute minable ore bodies. All ore bodies examined have well-defined walls.

"The Galt vein, though a continuous and persistent structure, has many splits, which, for the most part, strike closer to the north than does the Galt vein. At the intersection with the splits, the width of the vein usually increases and commonly forms appreciable ore bodies. One split near the north end of the Equator level has been stoped upward for 220 feet and gives every indication of continuing to and beyond the lower Queen level. Near the present winze from the Equator to the Queen level, the Galt vein is split into well-defined footwall and hanging wall veins with a 3- to 5-foot horse of altered rock between the splits. Both the hanging and footwall veins have been stoped above and below the Equator level.

"The ore consists principally of galena, sphalerite, pyrite, and subordinate chalcopyrite in a gangue of quartz, pink carbonate--possibly ankerite, and barite. In the Galt No. 1 and No. 2 tunnel levels, where the ore was oxidized, a number of silver minerals, including wire silver, are reported to have been found. Quartz incrusted vugs are common throughout the vein.

"The limited field examination by the DMA field party did not allow time for a study of the possible structural control of the ore bodies. There is evidence that the vein widens in those areas of steeper dip, and at the intersection of the main vein and the footwall splits. There is no indication that the ore has been bottomed, but rather it is believed that ore will continue well below the lowest mine level, the 300-foot level.

The persistent character of the Galt vein on the Equator and Queen levels suggests that it will continue well to the northeast into the Nevada claim. Continued drifting to the northeast may open up appreciable ore bodies. In addition, other exploration that might yield favorable results would be to crosscut to the Equator vein from the Queen level east of the Queen level winze, and to crosscut the various footwall splits from the Queen and 300-foot levels."

At the time the original DMA examination was made the workings north of the operating winze on the Queen level were inaccessible. The contract states that the Queen level is to be extended 500 feet northeast on the Galt vein, and the map accompanying the contract shows that the north drift face is to be extended 500 feet. Geologic mapping indicates that the north drift heading is on a north-striking, west-dipping split of the Galt vein, and that the main Galt vein goes into the east wall of the drift 65 feet south of the north drift face at the start of work. This relationship was brought to the Operator's attention on March 28, 1952. Since both structures appeared to warrant exploration, the Operator was advised to continue the north drift heading a few more rounds and, also, drift on the main vein. This he did, extending the north drift heading an additional 20 feet, and completing 15 feet of drift on the main structure with his own funds. The Operator reports that the work in north drift proved encouraging and work on the main structure disappointing.

Geologic mapping of the north portion of the Queen level indicates that the north drift may have entered the main body of Pinto diorite which outcrops north of the principal Galt workings. It should be pointed out that the Pinto diorite is not considered to be as favorable a host rock as red feldspathic gneiss. However, as ore deposits are known to occur in the Pinto diorite it is believed that further work in the Pinto diorite is justified.

Exploitation Possibilities 1/

The accessible mine workings do not delineate any ore bodies sufficiently to support an estimate of ore reserves in the classification of measured ore. A total of 38,000 tons of indicated ore is computed for ore lying above the 300-foot level. The mean assay of this ore is 6.86 ounces silver per ton, 2.48 per cent lead, and 3.98 per cent zinc. There is inferred 20,000 tons of ore below the 300-foot level and in the northern end of the block lying between the Queen and 300-foot levels. This gives a total of 58,000 tons of indicated and inferred ore with an average grade of 6.79 ounces silver per ton, 2.07 per cent lead, and 3.34 per cent zinc.

The mining method employed by Mr. Stark is overhand cut and fill. Mining costs are variable because of the pinching and swelling nature of the Galt vein, both vertically and horizontally. It is estimated that mining costs, including development and exploration, amounted to $7.00 per ton for ore delivered to the mill. A production increase to 75 tons per day probably would reduce the cost by 50 to 75 cents per ton.

1/ Data obtained from report by E. A. Magill, A. B. Griggs and T. H. Kiilsgaard, Star Mine and Mill, DMA Docket No. 331, Mar. 7, 1951.

It is reported 2/ that the crude ore mill heads from the Galt mine averaged 6.6 per cent zinc, 4.0 per cent lead, and 10 to 20 ounces silver per ton. Zinc flotation concentrates ran about 50 per cent zinc, 2.5 per cent lead, and approximately 20 ounces of silver per ton. Lead flotation concentrates assayed plus 50 per cent lead, 9.0 per cent zinc, and 80 ounces silver per ton. A small amount of scavenger table concentrate from the flotation tailings contained about 1 per cent zinc, 24 per cent lead, and 16 ounces silver per ton. Mr. Bardill believed that the metallurgical recovery was satisfactory.

Assay data of the Galt mine are shown on the accompanying longitudinal section map, figure 2.

Summary of Factual Data

Work

Under the terms of the DMEA contract, the Operator completed 40 feet of drifting. A total of 1,000 feet of drifting was allowed under the contract at an approximate cost of $30.00 per foot. Actual cost of drifting amounted to $26.85 per foot. 3/

A minor amount of repair work on the 124-foot winze from the Equator adit level to the Queen level and installation of a skip pocket at the Equator level station were allowed in the contract. Total costs for the rehabilitation and installation work amounted to $762.67.

No further work was completed under the terms of the contract.

Two invoices were submitted for the amounts of $1,468.65 and $372.85. The Government paid $731.82 on one invoice, making a $5.00 deletion. Payment on the other invoice has been withheld pending a final audit.

The Government has no equity in any equipment or supplies used during the project.

Total contract amount approved was $50,000 of which $1,836.50 3/ was spent. The Government's share of cost was 50 per cent or an expenditure of $918.25. 3/

2/ Bardill, J. D., Appraisal of Star Mining Co., Neihart, Montana Milling Plant Relative to Government Loan, DMA Docket 331: Memorandum Report, Feb. 28, 1951, p. 1.

3/ Subject to final audit.

Discussion of Conclusions

Bad ground conditions around the winze and winze hoisting station forced the Operator to "pull" his equipment and abandon the exploration work. The limited amount of work completed did not add appreciably to existing knowledge of the property and should not constitute basis for certifying a discovery.

Mr. Stark has had considerable mining experience and is considered to be a competent operator. It is not believed that the difficulties he encountered were due to negligence or incompetence on his part.

Because of the limited amount of work completed under the project it is believed that the Operator's final report should be waived.

ANNEX

Cost Analysis

Winze

Labor, supervision	$570.22
Equipment	77.00
Supplies	----
Other	115.45
Total	$762.67

40 man shifts at a cost of $14.41 per man shift

Drift

Labor, supervision	$690.93
Equipment	148.60
Supplies	91.93
Other	142.37
Total	$1073.83 3/

40 feet of drifting at a cost of $26.85 per foot.

37 man shifts at a cost of $29.02 per man shift.

3/ Subject to final audit.

Enclosures

Distribution:
DMEA (4)
USBM (5)
USGS (SRO)
Docket
Quinlan

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

[redacted]
So. 157 Howard Street
Spokane 4, Washington

January 19, 1953

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN 23 1953

Mr. George C. Selfridge, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

Re: Docket DMEA-2054 (Zinc-Lead)
Lewis B. Stark
Cascade County, Montana
Contract Idm-E197

Dear Mr. Selfridge:

Enclosed are the original and two signed copies of a Termination of Exploration Project Contract by Agreement after Commencement but before Completion of the Work agreement form between the United States of America and the subject Operator, Lewis B. Stark.

Copies of the agreement have been retained by the Operator and the Field Team. By carbon copy of this letter we are distributing the Finance Officer's copy.

Sincerely yours,

A. E. Weissenborn

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

RECEIVED
JAN 30 1953
GENERAL COUNSEL
DEFENSE MINERALS
ADMINISTRATION

Enclosure

cc: Finance Officer w/encl.
USBM (2)
Klepper

cae 1-23-53

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS ADMINISTRATION
XXXXXXXXXXXXXXXX
WASHINGTON 25, D. C.
So. 157 Howard Street
Spokane 4, Washington

Cott
Keating
Betty

December 24, 1952

Mr. Lewis B. Stark
Neihart, Montana

Re: Report DMEA 2-58 (lead-zinc)
Salt Mine, Cascade County, Montana
Contract [illegible]

Dear Mr. Stark:

This is in reply to your letter of December 11, 1952 to Mr. Thor H. Hillsgaard.

Review of your case indicates that it would be best to terminate your present Exploration Project Contract and negotiate a new Contract when you are prepared to resume work. This office is prepared to consider a new Contract along the lines of the present contract if you will sign the termination agreement forwarded to you on November 24, 1952.

It is necessary to terminate your present Contract in order to release funds for other DMEA projects. Termination of a contract by mutual agreement is to the best interests of the operator and the Government as it does not levy charges against either party for failure to adhere to the terms of the Contract.

Before work could be resumed under the present contract, the Contract would have to be amended to allow additional time to complete work as well as provide funds to gain access to the exploration headings. It would be best to handle these matters by negotiating a new Contract when you are prepared to resume work.

Sincerely,

[illegible] Quinlan
Robert [illegible] Glasscock
Executive Officer, [illegible]
Field Team, [illegible]

cc: DMEA (2)
USBM (2)
Quinlan

~~1249~~ 2054

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 2 1952

November 25, 1952

No reply necessary

Mr. Frank E. Johnson, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

Re: Docket DMEA 2054 (Lead-Zinc)
Lewis B. Stark
Cascade County, Montana
Contract Idm-E197

Dear Mr. Johnson:

Reference is made to your letter received at this office on November 24, 1952, in which you inquire as to the status of the subject contract.

We have for some time been awaiting word from Mr. Stark as to his proposed changes in the exploration work; however, this information has not been received. We have more recently been advised that Stark had ceased all exploration work on the subject property. Consequently, on November 21 we filled out a Termination of the Contract by Mutual Agreement form and sent it to Stark for his signature. If this form is not returned in the immediate future we shall forward Stark a termination notice signed by the Executive Officer, Region II, which will be based on the fact that the Operator has failed to prosecute operations pursuant to terms of the contract.

We shall advise you immediately of any future change in the status of this contract.

Sincerely yours,

Thor H. Kiilsgaard

Thor H. Kiilsgaard
Acting Executive Officer
DMEA Field Team, Region II

cc: USBM (2)
Klepper

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

[redacted]
So. 157 Howard Street
Spokane 4, Washington

November 24, 1952

Mr. Lewis B. Stark
Neihart,
Montana

Re: Docket DMEA 2[illegible]4 (lead-zinc)
Galt Mine, Cascade County, Montana
Contract Idm-E1[illegible]

Dear Mr. Stark:

Recently, in checking our files, we found where your DMEA contract, although inactive for several months, had not been officially terminated. We are therefore enclosing several copies of a termination notice terminating the contract by mutual agreement which has been signed by a representative of the Government and which now must have your signature before becoming effective. Termination of the contract by this type of an agreement is to the best interests of both parties involved, in that it does not levy charges against either party for failure to adhere to terms of the contract. After signing the agreement, please keep one copy for your files and return the original and other copies to this office.

Your attention is directed to the final report, specified in the contract, and to your submittal of the invoice covering all costs for which you have not been paid. This information will be necessary before a final settlement may be made with you. Inasmuch as not too much contract work was done on your property, your final report need not be too long, but it should describe what was accomplished by contract work.

If further information is desired of this office, please advise and we will do what we can to assist you in making a final settlement on your contract.

Sincerely,

Thor H. Kilsgaard
For: M. E. Volin
Acting Executive Officer
DMEA Field Team, Region II

cc: DMEA (2)
USBM (2)
Klepper

Enclosure

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

500

Mr. A. E. Weissenborn
Executive Officer, Region II
DMEA Field Team
South 157 Howard Street
Spokane 4, Washington

NOV 19 1952

Re: Docket No. DMA-2054 (Zinc-Lead)
Contract No. Idm-5197
Lewis B. Stark
Cascade County, Montana

Dear Mr. Weissenborn:

The only Progress Report (Form PF-104) in our file of the above-referenced docket and contract is for the month of November 1951. The last inspection report that we have received is by E. G. Erickson, Mining Engineer, Bureau of Mines, July 10, 1952, in which he states:

> "Mr. Stark was contacted July 2, 1952, by M. R. Klepper of the U. S. Geological Survey and myself, and his proposal (driving a new adit level) was discussed. He claims that ore was produced from the present adit that assayed about 10% combination lead-zinc. Maps and records made available to us did not give this information; therefore, it was thought new adit would develop very little ore. Mr. Stark was requested to furnish any available proof (sample records, maps, etc.) that would strengthen his proposal.
>
> "Vein exposed at proposed adit site and in road cut was sampled. No further action will be taken until Mr. Stark submits further evidence on his proposal. No work is being performed under the contract."

Will you please advise us regarding the status of this contract. The contract is dated October 30, 1951, and to date very little work has been done on this project.

Sincerely yours,

(signed) FRANK E. JOHNSON
Chairman, Operating Committee

JWAlt/bw
(written 11/18/52)
Copy to:
Docket
Adm R. File
Op. Comm
HFKeller (2)
JWAlt
Mr. Bishop
Mr. McKnight
Chron.

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

W. H. Hedges
Member Bureau of Mines

M. E. Volin, Member, DMEA Field Team, Reg. II July 10, 1952

E. G. Erickson, Mining Engineer, Bureau of Mines

Lewis B. Stark's exploration project, Contract Idm-E197, Galt Mine, Cascade County, Mont., Docket No. DMEA 2054X (lead-zinc)

Mr. Stark was contacted July 2, 1952, by M. R. Klepper of the U. S. Geological Survey and myself, and his proposal (driving a new adit level) was discussed. He claims that ore was produced from the present adit that assayed about 10% combination lead-zinc. Maps and records made available to us did not give this information; therefore, it was thought new adit would develop very little ore. Mr. Stark was requested to furnish any available proof (sample records, maps, etc.) that would strengthen his proposal.

Vein exposed at proposed adit site and in road cut was sampled. No further action will be taken until Mr. Stark submits further evidence on his proposal. No work is being performed under the contract.

E. G. Erickson

Orig. to files
cc: USGS (2)
Wash (2) ✓
EGE

Date of Contract Oct 30, 1951
Bring to completion - 30 yrs. mainly 100 ft [illegible]
300 ft [illegible]
100 ft [illegible]
Total [illegible] Oct 30, [illegible]
Only work was in the [illegible] - [illegible]
20 ft of [illegible] 700

5D

M. E. Volin, Member, DMEA Field Team, Reg. II June 11, 1952

E. G. Erickson, Mining Engineer, Bureau of Mines

Routine inspection of Lewis B. Stark's exploration project, Contract Idm-E197, Docket No. DMEA 2054X (lead-zinc), Galt Mine, Cascade County, Mont.

Mr. Stark was contacted May 16, 1952, in Neihart, Mont. He was unable to resume work under the contract because of bad ground conditions around his winze and winze hoisting station. He was unable to cope with the condition and was forced to pull his equipment and abandon the winze. This turn of events will make it impossible to continue his exploration project contract without revision of it.

Mr. Stark presented a proposal to drive a new adit drift. This plan was similar to his original proposal. It was again reviewed and could not be given favorable consideration (see my memo to Glenn C. Reed dated 5/28/52). Mr. Stark was informed of the decision by a Field Team letter dated June 3, 1952, which also expressed the Field Team's desire to consider any further proposals he wished to make.

The total amount of the contract is $50,000 with the Government's participation 50%. To date $1463.65 has been expended which leaves a balance of $48,536.35 remaining in the contract.

E. G. Erickson

Orig. to files
cc: USGS (2)
Wash. (2)
EGE

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

[illegible] 137 [illegible]
[illegible], [illegible]

[illegible] 2, [illegible]

[illegible]

[illegible]: [illegible] Silverborn, [illegible], [illegible],
[illegible]

[illegible]: [illegible] Singer, [illegible], [illegible].

Subject: [illegible] Inspection, [illegible] Project [illegible], [illegible] Project [illegible] 137, [illegible], [illegible], Lassen County, [illegible].

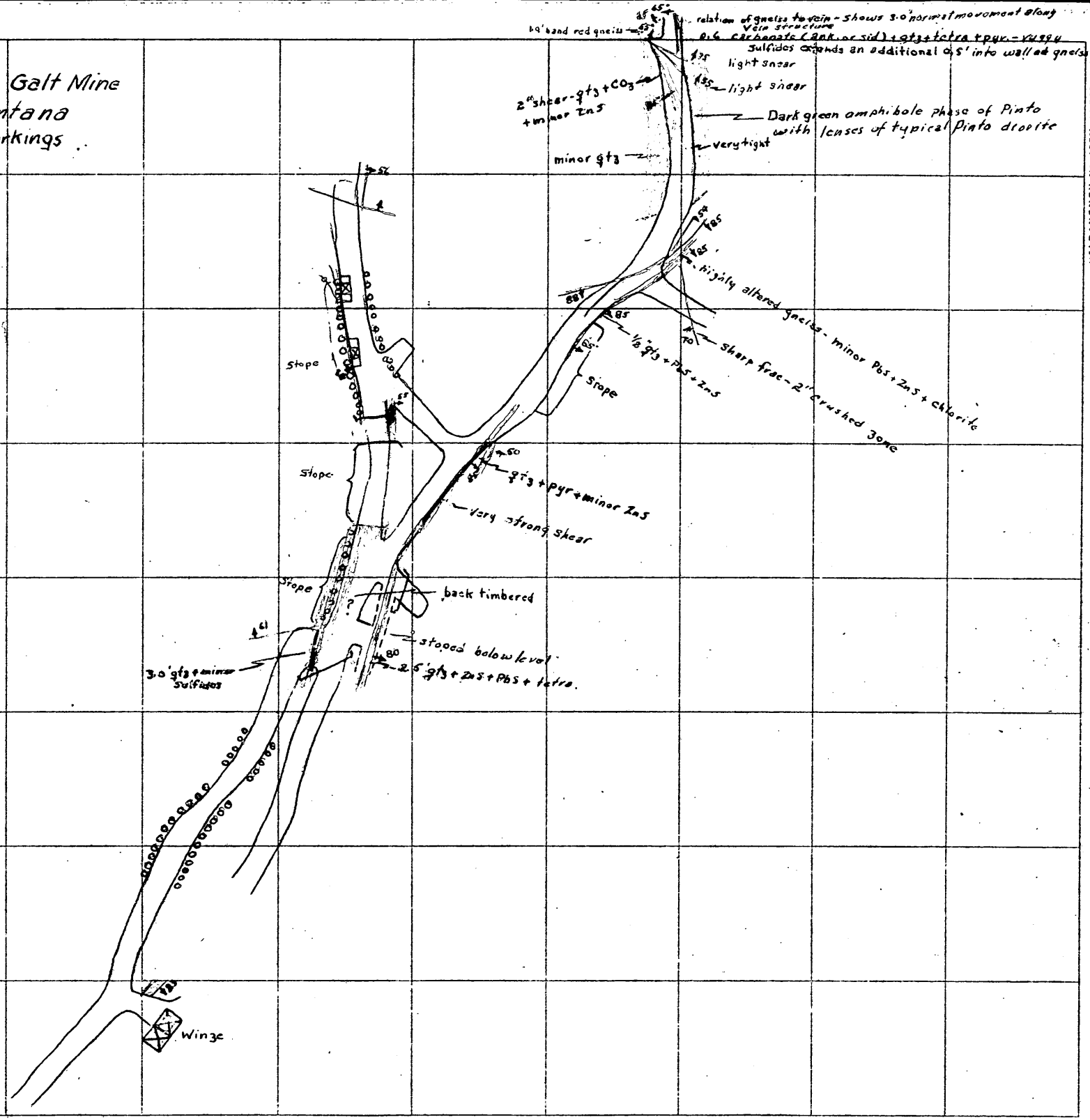
[illegible] inspection of [illegible] project [illegible] 137, [illegible], [illegible], Lassen County, [illegible], [illegible], [illegible], [illegible].

[illegible] the contract has [illegible] [illegible] [illegible]

The last 60 feet of the north drift exposes Pinto diorite with a 1.9 foot band of red gneiss at the face. It is difficult to determine if the workings have entered the main Pinto stock or if this body of Pinto is a dike similar to others exposed in the mine. The Pinto diorite is not nearly as favorable a host rock as the gneiss. This is well illustrated where the 1.9 foot gneiss band cuts the vein at the north drift face. At this point, the vein is 0.6 foot wide in the Pinto diorite; when the vein enters the gneissic band, sulfides are disseminated an additional 0.5 foot into the wall. It would be wise to advance this face a few more rounds, because if more red gneiss is encountered, it is quite likely that an ore shoot could be found along this structure.

cc: USBM
DNGA
Spokane Regional Office (USGS)

DMA Docket No. 2054 Galt Mine
Cascade County, Montana
North Queen Level Workings
1" = 40'



"ALBANENE" NO. 196M K&E CO., N.Y. REG. U.S. PAT. OFF.

M. E. Volin, Member, DMEA Field Team, Reg. II March 4, 1952

E. G. Erickson, mining engineer, Bureau of Mines

Inspection, Contract Idm-K197, Lewis B. Stark (Galt mine), Cascade County, Mont.

The property was visited February 12, 1952, and Mr. Lewis B. Stark was contacted. He had not resumed work on the contract because of bad weather and shortage of labor. He has a small crew mining ore. He feels he can absorb the time lost getting to work during bad weather for a small crew but does not wish to lose the time for a large crew. He hopes to get started again on the exploration as soon as the weather moderates.

The operator was advised to notify the Field Team when he resumed work under the contract.

E. G. Erickson

Orig. to files
cc: USGS (with 2 cys for Wash.)
EGE

2054

MONTANA

CASCADE COUNTY

February 1, 1952

Lewis B. Stark, Idm-El97, Pb-Zn

50-50 of $50,000.00

Two years

The objective of this contract is to explore the northeastward extensions of the Galt and Equator veins. The work includes drifting 500 feet along the Galt vein on the Queen level, extending the Equator level 500 feet on the Galt vein, 300 feet of crosscutting on the Queen of Equator levels to intersect the Equator vein and 1000 feet of diamond drilling from the Galt adit level.

Progress to date has been largely rehabilitation work which has been done in a satisfactory manner.

FILE COPY
SURNAME:

410

Mittendorf (for)

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

November 23, 1951

Memorandum

To: Reports and Records Section
Administrator

From: Defense Minerals Exploration
Administration

Subject: Docket No. DMA 2054
Lewis B. Stark
Exploration Project Contract Idm-E197

Enclosed is an original of a letter dated November 15, 1951, from the Executive Officer, Region II, transmitting a copy of the above-subject contract, which is also enclosed for recording and filing in your office.

12/5

C. O. Mittendorf (for)

Enclosures

JWAlt/meb

cc to: Adm. Reading File
Reports & Records
JWAlt
Docket

Contract Service Section
General Accounting Office
4th Floor - New GAO Building
Washington 25, D. C.

Re: Docket No. DMA 2054
Lewis B. Stark
Exploration Project Contract IdC-1197

Gentlemen:

Enclosed for recording in your office is the original, signed copy of an Exploration Project Contract executed between the Operator named in the above reference and the Government of the United States.

Sincerely yours,

C. O. Mittendorf

Administrator
Defense Minerals Exploration
Administration

Enclosure

JWAlt/meb
11/23/51

cc to: Adm.Reading Files
Reports & Records
Field Team,Reg.II(2)
JWAlt
Docket

OFFICE OF THE ADMINISTRATOR

DEFENSE MINERALS ADMINISTRATION WASHINGTON D. C. '51 NOV

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS ADMINISTRATION

WASHINGTON 25, D. C.

So. 157 Howard Street
Spokane 4, Washington

DEPARTMENT OF THE INTERIOR
RECEIVED
NOV 20 1951
Defense Minerals Administration,
Production Expansion Division.

November 15, 1951

Re: DMA Docket 2054
Contract no. Idm-E197

Mr. C. O. Mittendorf, Director
Production Expansion Division
Defense Minerals Administration
U. S. Department of the Interior
Washington 25, D. C.

Dear Mr. Mittendorf:

Enclosed are the original and three signed copies of subject contract. One copy of the contract has been retained by the applicant and one by this office.

Also enclosed are copies of Landlord's Subordination Agreement signed by Mary L. Cobb, as per your instructions in letter of November 6.

Sincerely,

Thor H. Kiilsgaard

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

Enclosures as indicated.

cc: USBM, Spokane

FILE COPY
SURNAME:

410

Kathern
J G Johnson

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

NOV 6 1951

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

Re: Docket No. DMA -2054
Lewis B. Stark
Exploration Project Contract Idm-E197

Dear Mr. Weissenborn:

We are enclosing the original and five copies of the above-subject contract, signed by this office for the Government, together with the attached Exhibit "A" (3 pages), a Subordination Agreement, and two maps.

If the terms and conditions of this contract meet with the approval of the Operator, all six copies should be signed by a duly-authorized official of the company, one copy should be given to the Operator, one copy retained by your office, and the original and three copies returned to this office. If any part of this contract does not meet with the approval of the Operator, the original and all copies of the contract are to be returned to this office together with the proposed changes for consideration.

Before this contract can be signed by the Operator, it will be necessary for Mr. Lewis B. Stark to obtain the signature of Mary L. Cobb for the Subordination Agreement attached to this contract.

Sincerely yours,

(signed) FRANK E. JOHNSON (fw)

Acting Director
Production Expansion Division

F.J. 11-6

Enclosures

APPROVED:

Chairman, Coordinating Committee

Member, Geological Survey

Member, Bureau of Mines

JWAlt/meb
10/30/51
cc to: Admr's Reading Files
Reports and Records
Messrs. Mittendorf/Clund
Gunnard Johnson
Note McKnight
Alt Docket Moon

FILE COPY
SURNAME:
140
DMA-2054

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

October 31, 1951

Memorandum

To: Director, Production Expansion Division

From: General Counsel

Subject: Lewis B. Stark exploration project contract -- Docket No. DMA-2054

The proposed exploration contract in this case, as resubmitted to us on October 30, 1951, together with your proposal to obtain the subordination of the mortgage holder on the revised form, meet the objections raised in our memo of October 29, 1951. The contract is therefore approved as to legal form and sufficiency for signature on behalf of the Government and delivery to the applicant, subject to:

1. Proper signature by the applicant.

2. The obtaining of the revised subordination agreement as proposed.

Your file is returned herewith.

J. L. Hofflund

J. L. Hofflund
General Counsel

not stripped in R.R.

Attachment

RRGuthrie/ema

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

A.L.C.

Mr. Cell

140
DMA-2054

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

October 29, 1951

Memorandum

To: Director, Production Expansion Division

From: General Counsel

Subject: Lewis B. Stark exploration project contract -- Docket No. DMA-2054

It will be necessary to make the following corrections in the draft of the subject contract, received in this office on October 25, before it can be cleared as to legal form and content:

1. The subordination agreement has been written upon an early, defective form entitled "Mortgagor's Subordination Agreement," which was long ago replaced by a more perfect form entitled "Subordination Agreement." It would be preferable to secure a new subordination agreement on the new form, but if this seems difficult, the existing form can be corrected by making the following changes:

Change the title to read "Mortgagee's Subordination Agreement"; and change the opening clause which reads "Whereas, the owner is the holder . . . " to read "Whereas, the undersigned is the holder . . .".

Inasmuch as the changes would have to be initialed by Mary L. Cobb, who signed the defective form, it would seem to be just as easy to procure the signature of Mary L. Cobb on the proper form.

2. The last sentence of Exhibit A is confusing because of mis-use of terms. It should be rewritten to read: "To provide for possible under-estimations of these costs, an allowance for contingencies of $2500 has been included in the total estimated cost of the project."

Congressman D'Ewart's office called this day, October 29, to inquire about this contract. I told him that the application was received here on September 10, and that the contract would be returned to the field probably today or tomorrow to be presented to the Operator for signature.

J. L. Hofflund
J. L. Hofflund
General Counsel

10/30/51 - Corrections have been made - J. W. Act.

Attachment

McKnight

6/5/51

Billings Bratt

OCT 1 7 1951

Defense Minerals Administration

Review of Application for Exploration Assistance

To: Production Expansion Division

Docket No. 2054

Commodity Lead, zinc

From: Director, Supply Division

Total Amount $50,000

Govt. Participation 50% ($25,000)

1. Name and Address of Applicant Lewis B. Stark, Neihart, Montana

2. Location of Property Galt Mine, secs. 29 and 32, T. 14 N., R 8 E., Cascade County, Montana, Galt patented claim

3. Mineral or metal Lead-zinc Is it listed in Section 9 of MO-5? Yes

If not, application will be rejected.

4. Geologic probability of discovery—based on data in application (question #16, 17, 18, 20 and 22)*

Mines or Survey reports, etc., do you rate chances:

a) Good See memorandum of Sept. 4 from field team and field team's report on Docket DNA-331, attached.

b) Poor

c) None

d) Don't know—needs field examination

e) Is there an alternative and favorable project? No
(If so, attach an explanation)

5. Is the applicant's right to the property clearly stated? Yes
(question 5, 6, 7)*

6. If applicant is a lessee, is a copy of the lease attached? Does not apply

Does the lease have sufficient time to run to cover a future productive period? Does not apply

*question numbers are those of MF-103

7. Are subordination agreements necessary? Yes

a) MF-201? Attached to contract

b) MF-202 No

8. From the data presented, does the proposed project appear feasible from the point of view of:

a) Available manpower Yes

b) Equipment and supplies Yes
(Question 14 plus general knowledge of availability)*

c) Accessibility (question 12)* Yes

d) Water (question 13)* Yes

e) Power (question 13)* Yes

Is a field check needed on any of these points? Has been checked

9. Does the experience of the applicant appear to be adequate to assure that he can properly conduct the proposed project? (question 4)* Yes

Is a field check needed on this point? Has been checked

10. Exhibit A. (questions 21 and 22)*

a) Is the project adequately described? Yes, see attached contract

If not, are there sufficient data given so that you can describe the project? _____ If so, attach a draft.

b) Is there an adequate map or sketch of the proposed work? Yes, See attached contract.

c) Is the proposed work "exploration" under the definition of Section 8, MO-5? _____

If not, what part of it is? _____

Is this part a worthwhile exploration project?_____

d) Are the cost estimates detailed? Yes

Can they be summarized, as on page 2 of Procedural Instruction 5-A, from the available data?_____ If so, attach a draft. See attached contract.

e) Are the cost estimates reasonable? Yes

f) Should more information be requested from applicant? No

g) Is a field examination necessary to complete Exhibit A? Has been examined

11. Exhibit B (question 23-d)*

a) Is it applicable? No

b) If so, are sufficient data furnished?_____ If so, attach a draft.

c) Is a field check needed? Has been checked

12. Exhibit C (question 23-e, f and g)*

a) Is it applicable? Yes

b) Sufficient data? Yes If so, attach a draft. See attached contract

c) Are rents and charges reasonable? Yes

d) Is a field check needed? Has been checked

13. Exhibit D (question 23-a, b)*

a) Are there sufficient data? Yes

b) Is the schedule adequate for the work proposed? Yes

c) Is the schedule excessive for the work proposed? No

d) Are the proposed wages and salaries reasonable? Yes

e) Is a field check needed? Has been checked

14. Exhibit E (question 23-c)*

a) Is it applicable? No

b) Sufficient data? _____

c) Reasonable? _____

d) Field check needed? Has been checked

15. In your judgment, can the proposed work be done in the proposed time? Yes

(All exploration must be completed within two years)

16. If field examination is not needed, attach your recommendation.
Concur with recommendation of field team.

17. If field examination is needed, do you have any special instructions for the field team not indicated by your answers to the foregoing question? _____

The following material is attached:

4 copies of Form MF-103
6 " " MF-200
2 " memoranda of Sept. 4, 1951 from field team to T. P. Billings
1 copy field team report relating to Docket DMA-331

Reviewed by: Erwin J. Lyons GS

Date 10-15-51

Approved
Tom Lyon

INT.-DUP. SEC., WASH., D.C. 99009

Mr. Johnson

DEFENSE MINERALS ADMINISTRATION WASHINGTON, D. C.

OCT 8 8 31 AM '51

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

DEPARTMENT OF THE INTERIOR
RECEIVED
OCT 8 1951
Defense Minerals Administration,
Production Expansion Division.

October 2, 1951

Memorandum

To: T. P. Billings, Chief, Lead-Zinc Branch

From: Field Team, Region II

Subject: DMA Field Team Report on Star Mine and Mill--DMA Docket ~~881~~ 2054, together with accompanying maps.

Mr. Art Campbell upon his recent return to this office advised that DMA in Washington wished to procure four copies of a Field Team report on the Star Mine and Mill prepared by E. A. Magill, U. S. Bureau of Mines, and Allan B. Griggs and Thor H. Kiilsgaard, U. S. Geological Survey, and six copies of the accompanying maps. The four copies of the report are enclosed herewith and the accompanying maps will be forwarded under separate cover.

Mr. Campbell did not specify which office requested the information, however, we assume that it was yours. In the event another office requested the information would you please forward the subject data to them.

Field Team, Region II

M. E. Volin

M. E. Volin, Acting Exec. Officer
(U. S. Bureau of Mines)

Thor H. Kiilsgaard

Thor H. Kiilsgaard
For: A. E. Weissenborn
(U. S. Geological Survey)

Enclosures

cc: U.S.B.M.

OCT 9 1951

4

C
O
P
Y

DEFENSE MINERALS
ADMINISTRATION
WASHINGTON, D. C.

OCT 8 8 32 AM '51

[illegible]

REPORT

DMA DOCKET No. 331

STRAWBERRY MILL

Helmart, Cascade County, Montana

By

[illegible]

L. N. Cagill

For

U. S. [illegible]

And

Allan D. Griggs
Thor L. Hillsgard

For

U. S. [illegible]

March 7, 1951

filed by ~~[illegible]~~ date of
Memo Oct. 2, 1951

ON-SITE REPORT

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STAR MINE AND MILL
Neihart, Cascade County, Montana
(DMA Docket No. 331)

By W. A. Magill, U.S.B.M.
& Allan D. Griggs and Thor H. Kiilsgaard, U.S.G.S.

RECOMMENDATIONS

It is recommended that Mr. Lewis B. Stark be granted a DMA purchase contract for zinc, and also a "V" loan on the Salt mine, Neihart, Montana. However, it is not recommended that he be given a loan for driving a new haulage adit as he originally proposed. Instead, it is proposed that Alternative proposal No. 1, (to rehabilitate the Queen shaft and 300-foot level) be given first consideration. In the event that a working agreement cannot be reached with Mr. Campbell, principal owner of the Queen mine, it is recommended that Alternative No. 2 be considered.

Purchase Contract

It is recommended that Mr. Lewis B. Stark be given a purchase contract for 3,000,000 pounds of zinc, the contract to extend over a minimum period of three years.

"V" Loan

It is recommended that Mr. Stark be loaned $85,000, if plan in Alternative No. 1 is adopted.

It is recommended that Mr. Stark be loaned $115,000, if plan in Alternative No. 2 is adopted.

Repayment

It is proposed to repay the loan by a payment of 10 percent of the net smelter returns from mill concentrate.

APPLICANT

Mr. Lewis B. Stark of Neihart, Montana, has submitted a DMA application for a production loan, which, under the present setup, should probably be viewed as an application for a purchase contract and "V" loan for the Star Mine & Mill property, Cascade County, Neihart, Montana. Mr. Stark is the sole owner of the property.

LOCATION OF DEPOSIT

The mine is in the Neihart mining district, Cascade, County, Montana, secs. 29 and 32, T. 14 N., R. 8 W., Montana principal meridian. The present work is being carried out on two claims, the Equator and the Salt, with the mill being located on the Evening Star claim (see attached map).

Ownership

Mr. L. B. Stark owns a total of 11 patented and 8 unpatented claims in the district. He apparently is the sole owner of the property and equipment. However, there is a loan of $30,000 outstanding against the property.

History and Past Production

The Galt claim first was located on January 1, 1886. The mine was operated intermittently for many years by the Galt Mining Co. In 1895 an agreement was made with the Queen Mining & Milling Company, which gave the Galt Mining Company the right to extend the main Queen adit for a distance of 400 feet and to use this adit for development of the Galt vein. A charge of $0.50 per ton was made for all ore or waste moved through the Queen adit.

The mine was idle from 1897 to 1899. It was operated during 1900 and 1901, but was again idle in 1902-05. Considerable ore was mined from 1906 to 1908. The mine was closed from 1908 to 1910. From 1910 until 1920, it was again in continuous operation. It was worked intermittently by various operators from 1920 until 1945, when it was purchased by Stark and Rives, who have operated it steadily since that date. Since 1948, Mrs. Rives, Stark's partner, has died, and Stark is now sole owner of the property.

It is known that a large production was made before 1901, but no records are available. Production from 1901 to 1950, inclusive, is reported to have been 31,485 tons of ore, from which was recovered 257.30 ounces of gold, 525,712 ounces of silver, 5,010 pounds copper, 2,239,292 pounds lead, and 1,100,574 pounds zinc.

DESCRIPTION OF PROPOSAL

Mr. Lewis B. Stark is applying for a loan of $150,000.00, the money to be spent in approximately the following manner:

Additional milling equipment	$7,500
" mining equipment	7,500
Payment of loan	30,000
Driving 1,500 ft. haulage adit	45,000
Sinking 300-foot winze	37,500
Working capital	22,500

The $30,000 loan was incurred when Mr. Stark had to purchase the interest of his deceased partner. This loan is due in October of this year.

The present Equator adit, the main haulage adit for the Galt mine, is inadequate for the handling of any tonnage. Therefore, Stark proposes to drive a new adit which would come in at the main Queen level, or 130 feet below the Equator haulage adit. This proposed adit would not develop any additional ore, but would only facilitate the handling of ore to be produced in the future.

Mr. Stark proposes to sink a 300-foot winze from near the face of the proposed adit to reach the new inaccessible 300-foot Queen level. This would open for mining an estimated 27,700 tons of ore, which should average 6.80 oz. Ag, 2.48 percent Pb, and 3.98 percent Zn.

TECHNICAL FEASIBILITY

Geological Setting of the Deposit

The country rock enclosing the Galt-vein ore bodies is chiefly a massive, pink, feldspathic, pre-Cambrian gneiss, which is locally intruded by dikes of dark green, pre-Cambrian amphibolite. Near the veins, particularly in the vein hanging wall, the gneissic rocks are highly altered with much of the feldspar having been converted to various clay minerals. In some areas near the Galt vein, the rocks are so altered that the only identifiable minerals remaining are quartz phenocrysts in a clay-bound matrix.

The Galt vein, a northeast continuation of the Queen vein, is essentially a sheeted shear zone that strikes from N. 30° to 40°E., and dips steeply to the SE. Within the shear zone are discontinuous blebs and stringers of silver, lead, and zinc ore, which together with included gangue minerals, locally aggregate widths ranging from one to seven feet, and which in some instances constitute minable ore bodies. All ore bodies examined have well-defined walls.

The Galt vein, though a continuous and persistent structure, has many splits, which, for the most part, strike closer to the north than does the Galt vein. At the intersection with the splits, the width of the vein usually increases and commonly forms appreciable ore bodies. One split near the north end of the Equator level has been stoped upward for 200 feet and gives every indication of continuing to and beyond the lower Queen level. Near the present winze from the Equator to the Queen level, the Galt vein is split into well-defined footwall and hanging wall veins with a 3-to 5-foot horse of altered rock between the splits. Both the hanging and footwall veins have been stoped above and below the Equator level.

Geological Setting of the Deposit (Cont'd)

The ore consists principally of galena, sphalerite, pyrite, and subordinate chalcopyrite in a gangue of quartz, pink carbonate--possibly ankerite, and barite. In the Galt No. 1 and No. 2 tunnel levels, where the ore was oxidized, a number of silver minerals, including wire silver, are reported to have been found. Quartz incrusted vugs are common throughout the vein.

The limited field examination by the DMA field party did not allow time for a study of the possible structural control of the ore bodies. There is evidence that the vein widens in those areas of steeper dip, and at the intersection of the main vein and the footwall splits. There is no indication that the ore has been bottomed, but rather it is believed that ore will continue well below the lowest mine level, the 300-foot level.

The persistent character of the Galt vein on the Equator and Queen levels suggests that it will continue well to the northeast into the Nevada claim. Continued drifting to the northeast may open up appreciable ore bodies. In addition, other exploration that might yield favorable results would be to crosscut to the Equator vein from the Queen level east of the Queen level winze, and to crosscut the various footwall splits from the Queen and 300-foot levels.

Mine Workings

The Galt mine was originally worked through the Galt No. 1 and No. 2 tunnels (see accompanying longitudinal section). These tunnels have not been worked in recent years and are now largely inaccessible, although certain parts of the No. 2 tunnel workings are open.

At a later date, the lower workings of the Galt property were worked through the Queen level, and also through the Queen 300-foot level and Queen shaft. Working arrangements with the owners of the Queen claim called for a payment of 50 cents per car for all cars trammed through Queen workings. This arrangement was not satisfactory with the Galt owners, and did much to hinder development and production of the Galt mine.

The Galt mine is currently entered through the Equator adit, which portals 130 feet above and 540 feet northeast of the Queen portal, and which drifts on the Equator vein. About 675 feet from the portal, the Equator adit crosses the Galt claim end line from where it crosscuts northeast to the Galt vein and drifts on that vein. Stopes have been put up from the Equator level on the Galt vein and its footwall splits, and most of the ore above that level has nowbeen mined. Some crosscuts were driven into the Galt-vein footwall and some favorable structures were found and drifted on, but did not reveal any appreciable amount of ore.

Mine Workings (Cont'd)

In 1950, Mr. Stark sunk a winze from the Equator adit level to the Queen level. It was Stark's intention to open the Queen level north of the winze and mine the block of ore between the Queen and Equator levels. Upon reaching the Queen level, Stark found the north Queen drift caved and thus he turned to the south where the Queen level was open for about 430 feet. At the present time, Stark is mining from two stopes in that vicinity (see longitudinal section).

Mining on the Queen level is hampered by an up-hill tram to the newly completed winze and by the absence of a winze skip pocket on the Queen level. The Queen level is badly caved between the portal and the present working stopes, and it is believed that it would be impracticable to try and reopen it even though a working agreement might be reached with the Queen owners.

Any future mining below the Queen level will require either the continued sinking of the present winze or the rehabilitation of the Queen shaft and Queen 300-foot level, both of which are now flooded and inaccessible. From conversation with a miner, who worked in the 300-foot level in 1942, it is believed that it would not be too difficult to reopen that level. The first 5 sets of the Queen shaft are badly in need of replacement; however, it is not believed that the rest of the shaft would be too difficult to dewater and rehabilitate.

Reserves

In calculating ore reserves, primary consideration was given to the Colt vein. The only footwall-split vein considered was the footwall vein near the northern end of the Equator adit level, which has been stoped up 220 feet, and which continues downward to and possibly below the Queen level. Other footwall splits, such as the footwall vein near the top of the winze to the Queen level, were not considered, inasmuch as they are discontinuous and unreliable.

In the area north of the winze between the Queen and Equator levels, and in the areas below the Queen level, the writers have leaned heavily on the longitudinal section and its accompanying assay data, which was kindly furnished by the Anaconda Copper Mining Company.

Measured

No ore reserve has been classified as measured, inasmuch as accessible mine workings do not disclose ore bodies that can be measured.

Indicated

By using a tonnage factor of 12 cubic feet per ton, and a mean width of the ore as reported in the assays and by measurement, the following tonnages were computed:

3,000	tons	(approximate) in the No. 2 Salt tunnel dump.
3,000	"	to be taken by open cut mining from the Salt outcrop above the No. 1 Salt tunnel.
4,800	"	from a block above the northern stopes above the Equator level. This tonnage will be difficult to mine and will have substantially higher mining costs.
6,700	"	from blocks between the Queen and Equator levels.
21,000	"	between the Queen and the underlying 300-foot level.
Total 38,000	Tons	

A longitudinal section in U. S. Bureau of Mines Information Circular 7589: Mines and Mineral Deposits of Cascade County, Montana, by Almon F. Robertson, indicates that a block of ground has been mined in the area between the Queen and 300-foot level. Mr. Stark does not know of any mining that has been done in this area, and also stoped areas do not show on the A.C.M. longitudinal section. However, if mining has been done in this area there are probably about 15,000 tons remaining instead of 21,000 tons as was calculated.

By using a mean assay of 6.86 ozs. Ag., 2.46 percent Pb, and 3.98 percent Zn., and by assuming a 80 percent recovery for Ag, Pb, and Zn, under the present metal prices the total indicated ore reserve has a value of $620,000.00, after smelter and shipment charges.

The indicated ore below the Equator adit level, which totals 27,700 tons, has a value of $452,000.00. If the aforementioned stoping has been done between the Queen and 300-foot level, there will be approximately 15,000 tons of ore remaining instead of 21,000 which will have a value of $244,800.

Inferred

There is an inferred 20,000 tons existing below the 300-foot level and in the northern end of the Block between the Queen and 300-foot levels.

This gives a total for indicated and inferred ore of 53,000 tons, which, with a grade of 6.79 ozs. Ag, 2.07 percent Pb, and 3.34 percent Zn, would

have a net value of $785,320 after smelter charges and metallurgical losses.

Mining Methods & Costs

The present mining method is overhand cut and fill. The vein first is shot out and slushed to the chutes, then the walls are slashed.

Costs are variable, inasmuch as the vein pinches and swells both vertically and horizontally. The operator has kept no accurate records of mining costs; consequently, only and estimate may be made.

Under the present setup using the Equator tunnel and hoisting through the present winze, the owner estimates his mining costs to be a little over $2.00 per ton. However, this figure undoubtedly is low and costs will more closely approach $3.50 per ton. To this figure would have to be added a cost of at least $3.00 for the development and exploration, and a 50 cent charge for overhead, making a total cost of around $7.00 per ton for ore delivered to the mill. A production increase to 75 tons per day may lower these costs 50 to 75 cents per ton.

Milling Methods - Costs

The Star Mill (see U.S.B.M. R.I. 4474) is a selective flotation plant. It produces a zinc concentrate and lead concentrate. During 1950, it was capable of producing at a rate of approximately 40 tons per day (on a three-shift basis).

With the aid of an additional crusher, vibrating screen, several additional flotation cells and doubling the filter capacity, it is estimated that the capacity of the mill could be increased to 75 tons per day.

No accurate records are kept on milling costs. Present costs are estimated at (40 tons per day) at $2.75 per ton. By increasing the capacity to 75 tons per day, mill costs should be lowered to about $2.25 per ton.

Operating Profit

The tabulation below gives a cost breakdown and the operating profit.

ORE VALUE per ton after:

Smelter Charges and metallurgical losses		$13.54
OPERATING COSTS per ton:		
Direct Mining Costs	$3.50	
Exploration & Development	3.00	
Overhead	.50	
Milling Costs	2.75	
15 Percent DMA	2.03	
TOTAL OPERATING COSTS		11.78
OPERATING PROFIT PER TON BEFORE PAYMENT OF LOAN:		$ 1.76

Rate of Production

The mine produced lead and zinc concentrates during 1950 from 11,000 tons of ore at a rate of 299,202 pounds of zinc, 283,086 pounds of lead, and 34,411 ounces of silver per year. By increasing millheads as indicated by ore reserves, and by increasing the mill capacity to 75 tons per day, approximately 1,000,000 pounds of zinc, 700,000 pounds of lead, and 120,000 ounces of silver should be produced per year.

Time Schedule

The proposed increase of production to 75 tons per day can be reached within 3 months from the time of receiving the loan, by use of present workings.

Marketing

The zinc concentrate is shipped to the smelter of the Anaconda Copper Mining Company at Great Falls, Montana.

The lead concentrate is shipped to the American Smelting and Refining Company at East Helena, Montana.

EQUIPMENT AND FACILITIES

At present there is a 40-ton selective flotation mill (Star mill) in operation. This mill is located about one-half mile from the Salt mine. The mine is equipped with all necessary mining tools to produce up to 40 tons per day.

To increase the production to 75 tons a day as proposed, the following additional equipment is necessary:

For mill--

	Pounds net	Cost
Secondary crusher 22" Symons cone,	7,160	$5,855
25-hp, motor for crusher	1,110	600
Vibrating screen 3' by 6' Denver with 3-hp, motor	1,540	1,371
2 each flotation cells, used	3,000	1,850
Filter 4' diameter by 4 disc. Denver	1,500	1,800

For mine--

Air trammer	3,500	1,500
1500 feet-4 inch pipe	16,000	2,250
10 20-cu. ft. mine cars	10,000	2,250
75-ton ore bin		1,500
Compressor shed		500
Shop		750
Dry and change room		1,500
200 g.p.m. pump with electric motor 450' head, including wiring and discharge line	6,000	2,500

This would give a cost of approximately $12,000 for additional mill equipment and approximately $13,000 for additional mine equipment. This cost may be reduced up to as much as 50 percent by the purchase of used equipment. Installation and transportation costs are considered absorbed in the above figures.

LABOR SUPPLY

Local manpower is ample at present for the size operation (75 tons per day) which is contemplated. This is assuming that the armed forces will not take any of the miners which already are employed. Currently, there are 12 men employed, including 8 miners, 3 millmen, and a truck driver. At present the wage scale is $10.04 per 8-hour shift for all employees; they are working 6 days a week with time and one-half for Saturdays. This wage

scale undoubtedly will have to be raised to about $12.00 per shift to correspond with the prevailing wage scale in other Montana mining districts.

POWER

All surface equipment at the mine and mill is driven by electric power. Underground equipment is driven by compressed air excepting the battery trammer. Three trucks, used for transporting ore and men, are gasoline driven.

Electric power is furnished at both the mine and mill at 23,000 volts by the Montana Power and Light Co. Apparently, there is ample electrical power to meet any present or any future demand.

At present there is 150 hp. connected at the mine and 250 hp. at the mill. The electric power bills in 1950 varied between $433 and $585 per month.

TRANSPORTATION

Present transportation facilities are adequate for all phases of the operation. The lead concentrate is trucked to the American Smelting and Refining Company smelter at East Helena, Montana, a distance of 118 miles, at a cost of $6.00 per ton. The zinc concentrate is trucked to the Great Northern Railroad Company, railhead at Armington, Montana, and there loaded into gondolas for shipment by rail to the Anaconda smelter at Great Falls, Montana, The trucking charges to Armington are $2.50 per ton and rail charges from Armington to Great Falls are $4.50 per ton.

No additional road construction is necessary.

ADEQUACY OF REQUESTED FUNDS

The requested funds are adequate for proposal.

COMPETENCE OF APPLICANT

Mr. Lewis E. Stark has profitably operated mining properties in the Neihart district for the past 12 years. He is not a technically trained man, but is locally considered a very competent operator. The DMA field team was impressed with Stark's sincerity and ability, and believe that he is capable of carrying out any proposed program.

DISCUSSION OF PROPOSAL AND SUGGESTED ALTERNATIVES

The DMA field team believes that the ore reserves do not warrant driving the proposed 1,500 foot haulage adit, inasmuch as there is only 6,700 tons of indicated ore which could be mined from above the proposed new adit level. The total ore reserves are not great enough to warrant such an expenditure.

The proposed Alternatives are:

1. To formulate a working agreement with Mr. George Campbell, principal owner of the Queen claims, whereby Mr. Stark could rehabilitate the Queen shaft and the Queen 300 haulage level. This would immediately make available 27,700 tons of indicated ore above the 300-foot level. Such a working agreement could also make available an unknown tonnage of stope fill in the old Queen workings, as well as possible additional ore bodies on Queen ground. It is estimated that this proposal, including rehabiliatation of Queen shaft and 300 level, installations in the Star Mill, and repayment of $30,000 loan would be approximately $85,000.

2. To enlarge and straighten out certain sections of the Equator adit in order to facilitate haulage, and to sink the present winze to the 300 level. This Alternative could cost an estimated $115,000.

APPENDIX

APPRAISAL OF STAR MINING CO., NEIHART, MONT., MILLING PLANT
RELATIVE TO GOVERNMENT LOAN - DMA DOCKET 31

By John D. Bardill 1/

On February 24, 1951, I visited the flotation mill of the Star Mining Co. at Neihart, Mont., accompanied by Mr. Lewis B. Stark, owner and operator of the plant, to appraise it and its operation in connection with a proposed DMA loan of $150,000. An estimated $7,500 of this amount was proposed to be expended to increase the present mill capacity from 45 tons to 75 tons per 24 hours by expanding the crushing, zinc flotation, and filter departments.

Past production from the Galt mine indicated crude ore mill heads averaging about 6.6 percent zinc, 4.0 percent lead, and 10 to 20 ounces silver per ton. Zinc flotation concentrates averaged about 50 percent zinc, 2.5 percent lead, and about 20 ounces of silver per ton, and the lead flotation concentrates assayed approximately plus 50 percent lead, 9 percent zinc, and 80 ounces silver. A small amount of scavenger table concentrate from the flotation tailings contain about 1 percent zinc, 24 percent lead, and 16 ounces silver. The lead was probably badly oxidized and was lost during flotation but recovered on the scavenger shaking table. Crude ore weights to the mill are estimated and, since the final mill tailings are not sampled and assayed, an accurate determination of mineral recovery cannot be made. Operation control of the mill is based on frequent panning of the tailings. Several years ago the Bureau made beneficiation tests on a sample of their lead concentrate to decrease the zinc content. No appreciable improvement in grade was accomplished so I am inclined to think their metallurgy is satisfactory.

Your mine samples should indicate the approximate tenor of ore being currently milled which I understand is being mined from another ore-shoot where the minerals are entirely sulfides compared to the other ore shoot which is a mixture of sulfides and oxides. The present mill plant equipment consists of a 200-ton coarse ore bin, a 9-inch by 16-inch Blake type crusher, 200-ton fine ore bin, feeder, 4-1/2 foot by 40-inch Union Iron Works ball mill, 1 UIW 15-1/2 foot by 32-inch Simplex classifier, six 24-inch by 24-inch UIW and two 36-inch by 36-inch Special Denver Sub A lead cells, conditioner, five 32-inch by 32-inch Denver Sub A lead cells and a No. 5 Wilfley scavenger table treating flotation tailings. A 5-foot American type 2-leaf filter, one leaf for lead and the other for zinc, dewaters the concentrates. The present jaw crusher discharge product has rock as large as 3 inches which is fed directly to the ball mill, thereby greatly reducing the capacity of the mill.

1/ Metallurgist, Bureau of Mines, Region II, Albany, Oreg.

Mr. Stark proposes replacing the present jaw crusher with a 7-inch by 10-inch Smith jaw crusher which he states will produce a discharge of about one-half inch. This statement is based on actual experience at the adjoining Florence mill where such a crusher is installed. Reportedly, the crusher easily crushes in excess of 100 tons per 24-hour day at minus 1/2-inch. He also proposes installing a vibrating screen between the coarse ore bin and crusher to remove fines. Another vibrating screen on the crusher discharge may be necessary with oversize return to the crusher. Two more 36-inch by 36-inch Denver Sub A flotation cells are planned to be added to the zinc circuit or as an alternate one bank of 36-inch by 36-inch cells to replace the present bank of five 32-inch by 32-inch cells. A 4-leaf American type filter is planned to replace the present 2-leaf filter to increase capacity. The classifier will be rebuilt and widened 1 foot. These equipment additions should increase the mill capacity to about 75 tons per 24 hours.

Mr. Stark, as you have probably observed, is a thrifty operator and quite likely a good trader, so that if he shops around and purchases good used equipment, the $7,500 should suffice. I understand he has a $20,000 item for miscellaneous plant equipment, part of which could be used if new equipment must be purchased.

Mr. Sewis D. Stark
Neihart, Montana

Subject: DMA-2054
Re: Exploration Loan
Galt Claim

My dear Mr. Stark:

This will acknowledge receipt of your application dated August 21, 1951 for a loan under the Defense Production Act of 1950.

Your application was assigned Docket Number DMA-2054 and referred to the Lead-Zinc Branch.

Kindly refer to DMA-2054 in any future correspondence relating to your application.

Sincerely yours,

Robert E. Adams

Robert E. Adams, Chief
Reports and Records Unit

2463

SEP 11 1951

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

So. 157 Howard Street
Spokane 4, Washington

September 4, 1951

Through: Landon F. Strobel

DMA-2054

Memorandum

To: T. P. Billings, Chief, Lead-Zinc Branch, DMA.

From: Field Team, Region II

Subject: Application for Exploration Contract submitted by Lewis B. Stark, Neihart, Montana.

Enclosed are four (4) copies of an application for an exploration contract submitted by Lewis B. Stark, Neihart, Montana, and six (6) copies of an Exploration Project Contract and appended exhibits drawn up by the Field Team, and assisted by Mr. Stark. The applications and the Exploration Project Contract concern the Galt mine owned by Mr. Stark, and located at Neihart, Montana.

The DMA has had considerable correspondence with Mr. Stark concerning the Galt mine. During the early part of the current year Mr. Stark applied for a DMA loan on the mine in question, and as a result a DMA examining team visited and mapped accessible parts of the mine early in February. On the basis of their examination the team calculated an ore reserve of 38,000 tons of indicated ore and 20,000 tons of inferred ore in or near present mine workings. In calculating a dollar value for these reserves, a mean assay of 6.86 ozs. Ag., 2.48 percent Pb., and 3.98 percent Zn was used for indicated ore, and a mean assay of 6.79 ozs. Ag., 2.07 percent Pb., and 3.34 percent Zn. was used for inferred ore. Based on these assay values, it was estimated by the examining team that the indicated and inferred ore reserve would have a net value of $785,320 after smelter charges and metallurgical losses.

As a result of the Galt mine examination, the Field Team recommended two alternative production loans; one for $85,000, and the other for $115,000. However, Mr. Stark advised that he was unable to secure certain obligations required by these loans, and also that he could not financially stand certain commitments of either of the alternative loans. Furthermore, he stated that after extended negotiations with DMA, he withdrew his application for a production loan.

SEP 10 8 51 AM '51
DEFENSE MINERALS
ADMINISTRATION
WASHINGTON, D.C.

The present exploration program advocated by Mr. Stark involves testing the Galt vein, and/or the footwall split of the Galt vein, and possibly the overlying Equator vein in the unexplored northern part of the Galt patented claim. The Galt vein is traceable at the outcrop well to the northeast of the northern end line of the Galt claim. Stark reasons that inasmuch as the vein widened into commercial ore bodies on the Queen of the Hills claim, and again on the Galt claim, that it could contain ore bodies on to the northeast. In the northeast headings of the Galt mine, both the Galt vein and the footwall split of the Galt vein are persistent structures, but too narrow and lean to warrant mining. However, it is geologically possible that these veins might widen into ore bodies further to the northeast.

On the basis of the previous DMA examination on the Galt mine, the Field Team recommends that Mr. Stark's proposal to explore the northeast extensions of the Galt mine structures is logical, and that it be favorably considered.

By Field Team, Region II

A. E. Weissenborn

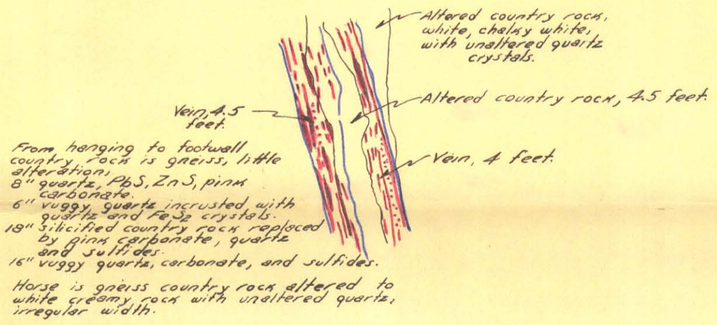
A. E. Weissenborn, Executive Officer
(U. S. Geological Survey)

M. E. Volin

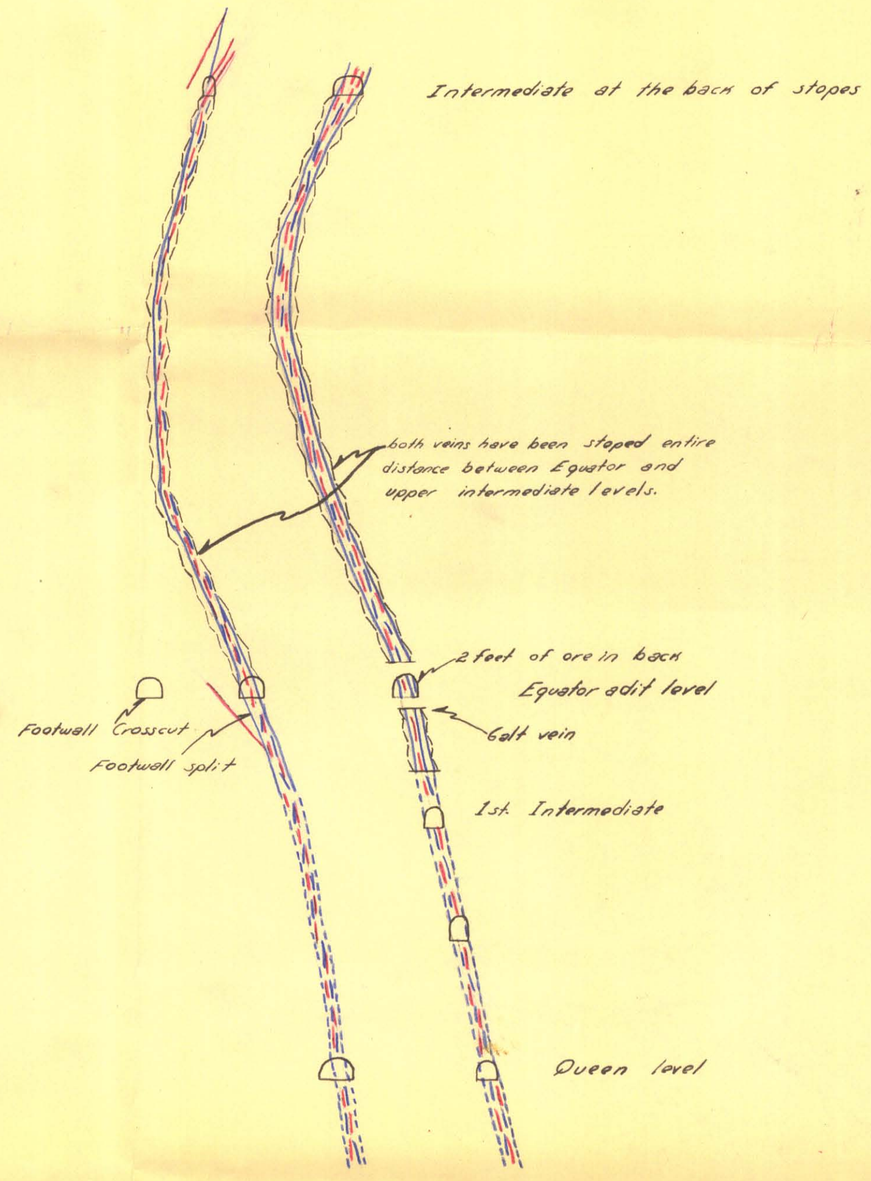
M. E. Volin, Member
(U. S. Bureau of Mines)

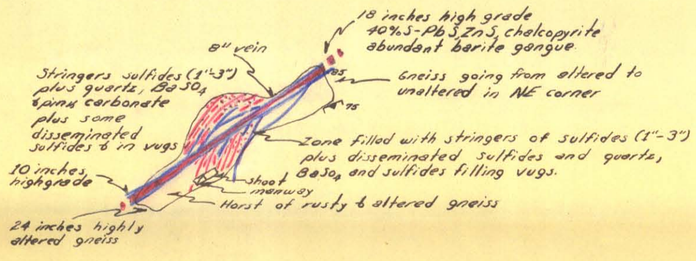
Enclosures

cc: L. F. Strobel
U.S.B.M. Spokane
U.S.B.M. Albany



Cross Section B-B'
taken from North Winze wall
30 feet above Queen level
Scale 1" = 20'

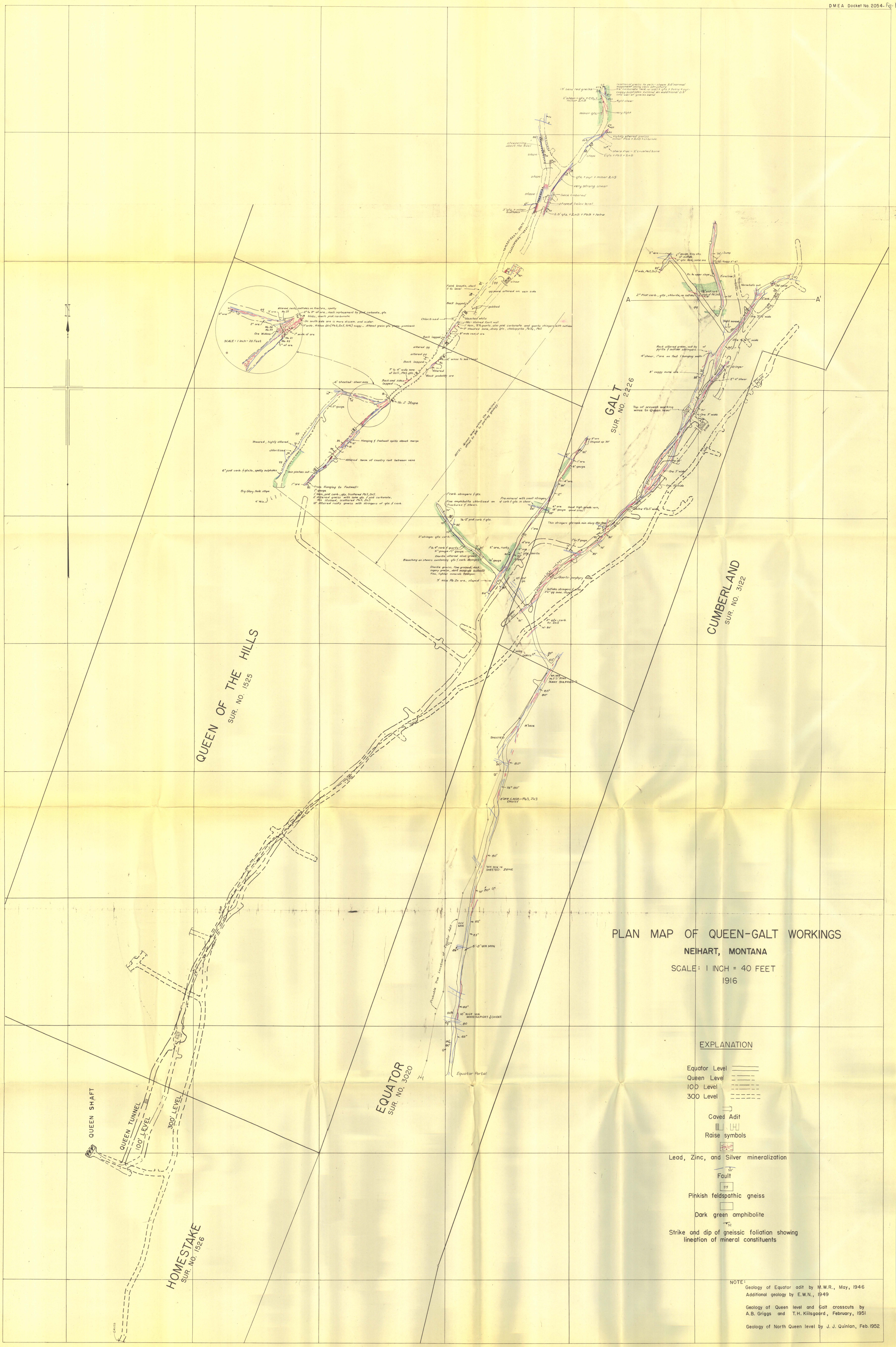


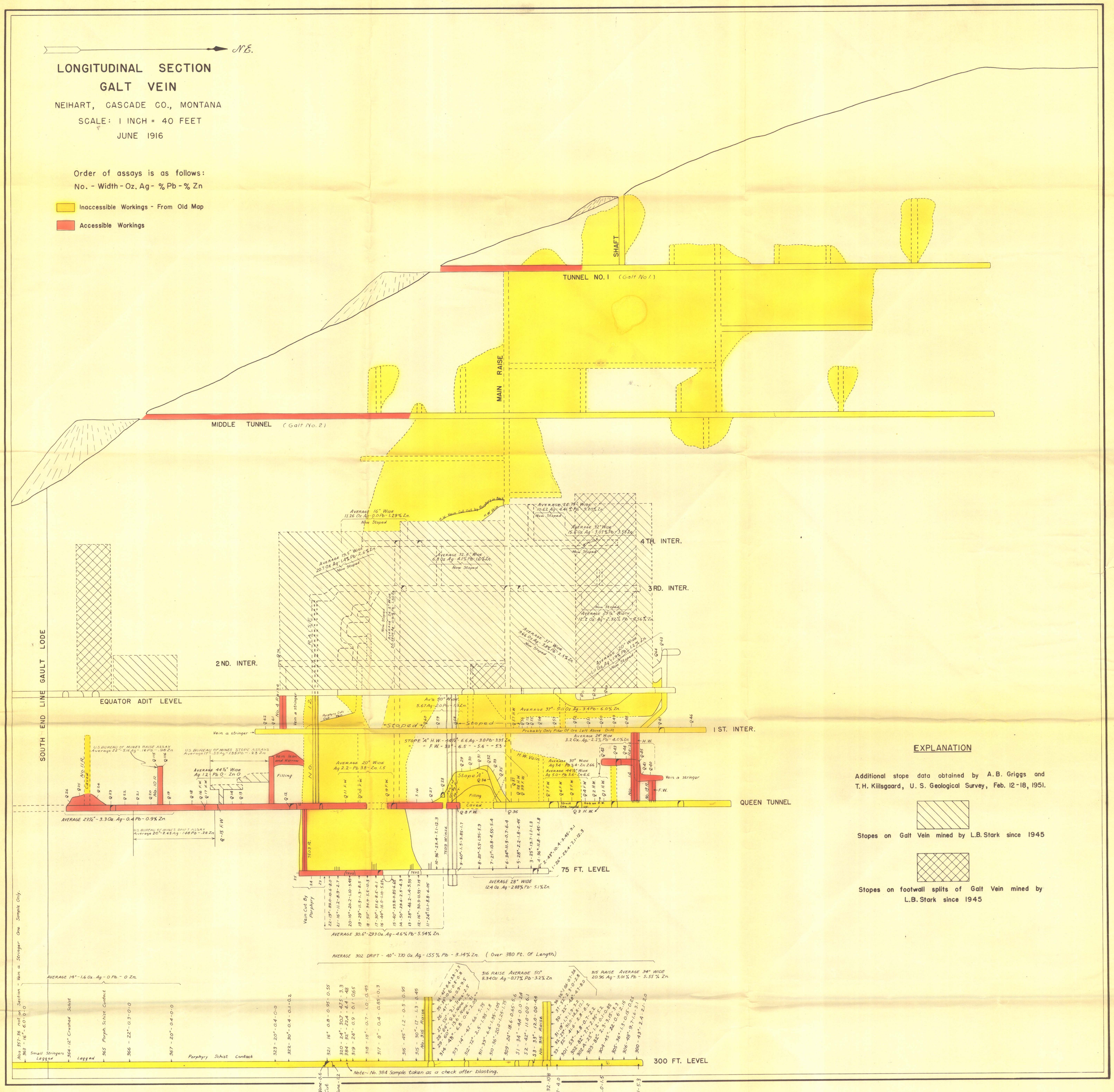


Stope Map of No. 2 Stope
taken 24 feet above Queen level
Scale 1" = 20'

Cross Section A-A'
Scale 1" = 40'

Cross Sections and Stope Map
Galt Vein
Neihart, Cascade County, Montana
Feb. 1951


PLAN MAP OF QUEEN-GALT WORKINGS
NEIHART, MONTANA
SCALE: 1 INCH = 40 FEET
1916
EXPLANATION
Equator Level
Queen Level
100 Level
300 Level
Caved Adit
Raise symbols
Lead, Zinc, and Silver mineralization
Fault
Pinkish feldspathic gneiss
Dark green amphibolite
Strike and dip of gneissic foliation showing lineation of mineral constituents
NOTE:
Geology of Equator adit by M.W.R., May, 1946
Additional geology by E.W.N., 1949
Geology of Queen level and Galt crosscuts by A.B. Griggs and T.H. Kiilsgaard, February, 1951
Geology of North Queen level by J. J. Quinlan, Feb. 1952
QUEEN OF THE HILLS
SUR. NO. 1525
GALT
SUR. NO. 2226
CUMBERLAND
SUR. NO. 3122
EQUATOR
SUR. NO. 3020
HOMESTAKE
SUR. NO. 1526
QUEEN SHAFT
QUEEN TUNNEL
100' LEVEL
300' LEVEL
SCALE: 1 Inch = 20 Feet
No. 2 Stope
Equator Portal
Probable True Location of Equator Adit
Big Glory hole stope
Hanging & Footwall splits almost merge
Altered horse of country rock between veins
From Hanging to Footwall:
Top of present working winze to Queen level
Stopped below level
Back timbered
Very strong shear
Tight shear
Very tight
Sump
Old raise
Hornetails out
Rock altered green, cut by pyrite & sulfide stringers
4' shear, 1' ore on foot & hanging walls
8" vuggy zone ore
Ore 3' wide
Ore 5' wide
Ore 4' to 5' wide
Ore 2' to 4' wide
Ore 1' wide
Ore 8" wide
Ore 4' to 5' wide
Ore 2' wide
Ore 2' to 4' wide
Ore 1' wide
Ore 3' wide
Stopped up 30'
Good high-grade vein, good zinc
Thin stringers qtz-carb. min. along the sides
Quartz-porphyry dike
Sulfides stringers & veins
Diorite gneiss, fine grained, dark, sugary gneiss, dark minerals biotite(?) fine, lighter minerals feldspar.
3' nice Pb Zn ore, stopped
Diorite altered olive-green
Bleaching on shears containing qtz & carb. stringers
Pre-mineral with small stringers of carb. & qtz. in shear.
Fine amphibolite chloritized on fractures & shears.
Altered rusty sulfides on fracture, spotty
On south side ore is more dissem. and wider.
3' wide, Ribbon Qtz (PbS, ZnS, 50%) vuggy — Altered gneiss-qtz. veins prominent
Back lagged
Chloritized
Bleached white
Mn-stained fault wall
Back probably ore
Back and sides lagged
Altered
Sheared, highly altered
chloritized
Vein pinches out
Vein
Slight mineral
Equator Level
Queen Level
100 Level
300 Level
Caved Adit
Raise symbols
Lead, Zinc, and Silver mineralization
Fault
Pinkish feldspathic gneiss
Dark green amphibolite
Strike and dip of gneissic foliation showing lineation of mineral constituents


N.E.
LONGITUDINAL SECTION
GALT VEIN
NEIHART, CASCADE CO., MONTANA
SCALE: 1 INCH = 40 FEET
JUNE 1916
Order of assays is as follows:
No. - Width - Oz. Ag - % Pb - % Zn
Inaccessible Workings - From Old Map
Accessible Workings
SHAFT
TUNNEL NO. 1 (Galt No 1)
MAIN RAISE
MIDDLE TUNNEL (Galt No. 2)
4TH. INTER.
3RD. INTER.
2ND. INTER.
1ST. INTER.
QUEEN TUNNEL
75 FT. LEVEL
300 FT. LEVEL
EQUATOR ADIT LEVEL
SOUTH END LINE GAULT LODE
EXPLANATION
Additional stope data obtained by A. B. Griggs and T. H. Kiilsgaard, U. S. Geological Survey, Feb. 12-18, 1951.
Stopes on Galt Vein mined by L.B. Stark since 1945
Stopes on footwall splits of Galt Vein mined by L.B. Stark since 1945