UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration

OFFICIAL DOCKET FILE

Terminated (or cancelled) without certification. DMEA No. 1985X

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 _____

Reviewer's Initials

7973

DEPT[redacted]INERALS EXPLORATION ADMINISTR[redacted]
CONTRACT ADMINISTRATION AND AUDIT DIVISION

REPORT OF REVIEW

I have reviewed the Monthly Reports of:

Star Mining Company

Room 305, 122 W. Washington Avenue

Madison, Wisconsin

pertaining to Exploration Project Contract No. Idm-E171, Docket No. DMA-1985X, including Amendments Nos. 1, 2, and 3, for the period of October 17, 1951, to August 31, 1952.

My review included an examination of the Monthly Reports (Forms MF-104) and supporting documents attached thereto, comparison of the costs claimed with the contract and pertinent schedules, consultation with the Executive Officer of the Field Team, and a determination of the reasonableness and propriety of the costs.

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

(a) the administrative cost to the Government of an audit would be excessive in relation to value of the contract or the estimated amount of possible disallowances thereunder;

(b) the Monthly Reports were partially supported by documentary proof of the costs incurred under the contract; and

(c) a major portion ($2,733.75) of the costs covered bulldozing under sub-contract at hourly rates.

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

Total cost as billed by Contractor		$3,358.51
Exceptions:		
By DMEA Finance Officer	$ -0-	
Herewith	-0-	-0-
Total Accepted Cost		$3,358.51

The contract calls for a 90 per cent participation of exploration expenses by the United States Government. Therefore, payment to the contractor by the Government in the amount of Three thousand and twenty-two Dollars and 65/100

- $3,022.65 -

is considered valid and proper.

Jay K. Chamberlin
Auditor

October 3, 1952

GOVERNMENT COPY

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

It is agreed this 9th day of December, 1952, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and Star Mining Company
122 W. Washington Avenue
Madison 3, Wisconsin
, hereinafter called the "Operator," parties to that certain Exploration Project Contract I-dm-E 171, Docket No. DMEA-1985x, dated October 3, 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 C. B. Woodham
Executive Officer, DMEA Field Team, Region V

STAR MINING COMPANY
(Operator)
By F. F. Bormann
Title Secretary

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 15 1952

Government Copy
Director

AMENDMENT NO. 3

Contract Idm-E171, Docket DMEA-1985x, dated October 3, 1951, between the United States of America and Star Mining Co., is hereby amended as follows:

(1) Article 3 - Exploration Project. Completion date is extended from July 3, 1952, to September 3, 1952.

This amendment shall not be construed to increase the total cost of the project, the aggregate total amount which the Government may pay, or the percentage of the cost which the Government may pay, under the provisions of Article 13 of the Contract form.

Dated June 19, 1952.

UNITED STATES OF AMERICA

By C B Needham

STAR MINING COMPANY

By F. F. Bonnafe

AMENDMENT NO. 2

Docket DMA-1985x, Contract Idm-E171, dated October 3, 1951, between the United States of America and Star Mining Co., is hereby amended a second time as follows:

(1) Article 3, Exploration Project - Completion date is extended from April 3, 1952, to July 3, 1952.

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

Dated: March 19, 1952

UNITED STATES OF AMERICA

BY A. B. Needham

A. B. Needham
Executive Officer
Field Team, Region V

STAR MINING COMPANY

BY F. F. Bennett Jr.

Title Secretary - Treasurer

AMENDMENT

Docket DMA 1985X, Contract Idm E-171, dated October 3, 1951, between the United States of America and Star Mining Company is hereby amended as follows:

1. Article 3, Exploration Project. Completion date is extended from January 3, 1952 to April 3, 1952.

2. Stage "A" is extended to include necessary magnetometer surveying to accurately define asbestos-bearing mineralization.

3. The estimated expenditures of cost of project is revised to permit about $500.00 more or less to be expended for the magnetometer work, such to come out of unexpended balances.

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

Dated: December 20, 1951.

UNITED STATES OF AMERICA

By A. B. Needham
A. B. Needham
Executive Officer
Field Team, Region V

STAR MINING COMPANY

By Frank A. Jones

MF-200
(June 1951)

Indexed
No. Card
Card
Reviewed
12/21/51

Docket No. DMA 1985X
Commodity Asbestos

Idm-E171

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

EXPLORATION PROJECT CONTRACT [1]

It is agreed this 3rd 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] Star Mining Company, Room 305, 122 West Washington Avenue, Madison 3, Wisconsin; a corporation organized and existing under the laws of the State of Wisconsin.

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 Wisconsin, County of Marinette, described as follows: [3] the Herriman farm comprising all of the N½ SE¼ of Sec. 24, T.36N., R.21E., except the portion thereof occupied by the house and the buildings of the Lessor and a five (5) acre plot immediately surrounding said buildings. The farm is approximately 7.0 miles west of the City of Nathan, Michigan.

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, encumbrances, and exceptions: and that the subordination agreement of the lessor is attached.~~

NOV 17 1951
RECEIVED
CONTRACT SERV. SEC.

(*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] Asbestos; 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] three (3) months from the date of this contract. The exploration project and the work to be performed are more fully described on Exhibit "A" attached hereto, which, with any maps or drawings thereto attached, is made a part of this contract.

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

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

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

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

7. *Title to and disposition of property.* All facilities, buildings, fixtures, equipment, and 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 90 percent of the approved costs incurred; *Provided,* That the aggregate total of all sums paid by the Government under this agreement shall not exceed $4,500.00, which is 90 percent of the agreed estimated total cost of this project, $5,000.00.

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.

Star Mining Co.
(Operator)

By Frank A. Jones
Frank A. Jones, President

THE UNITED STATES OF AMERICA

By C. D. Mitteendorf
Director, Production Expansion Division
Defense Minerals Administration

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

The Star Mining Company Property.
Exploration Project Contract
The Merriman Farm Lease.

Exploration Project.

Time Schedule
Month

Stage "A"*

1st to 3rd

1. To remove by bulldozing the alluvium bordering a small outcrop of peridotite that is cut on its northeast side by narrow seams of chrysotile asbestos. The alluvium will be removed to bedrock in an area approximately 80 feet square as shown on the attached map. The maximum depth of excavation will be 20 feet. Work will be terminated within the selected area when it is no longer practical to continue because of the depth of overburden and the lack of reasonably close space for its storage. Additional stripping will be done around the circumference of the outcrop to a maximum width of approximately 25 feet, providing the overburden does not deepen to an extent that the work would be impractical.

   Asbestos exposures in the uncovered bedrock will be sampled where warranted by hand-tool cleaning and shallow test pitting.

   * As indicated in Section 4 of the contract, all sub-contracts are subject to approval by the Government.

The proposed work and the estimated cost thereof is as follows:

1.	Stripping by means of bulldozer. Cost includes operator, fuel, lubricants, repairs, transportation, etc., 384 hours @ $9.00/hr.	$3,456.00
	Sub-total	$3,456.00

Summary of Estimated Expenditures.

1.	Stripping, including all costs	$3,456.00
2.	Fixtures and improvements	---
3.	Operating equipment and supplies	
	Equipment to be purchased	100.00
	Supplies to be purchased	224.00
4.	Labor and supervision	1,220.00
5.	Rehabilitation and repairs	---
	Total	$5,000.00

Government participation is 90 percent or $4,500.00

Fixtures and Improvements.

1. Not applicable

Operating Equipment

Equipment to be purchased

1. The only equipment to be purchased is that necessary to do the hand work: picks, shovels, hand steel, hammers, moils, wheelburrow, etc. All equipment necessary for the operation of the bulldozer shall be provided by the bulldozer contractor. $ 100.00

Supplies to be purchased.

1. Powder, caps, fuse; handling, transportation and analyses of samples, etc., 224.00

Sub-total $ 324.00

Labor and Supervision

1. The following labor will be employed at the rates shown:

2 - Laborers @ $8.00 per day, 40 days	$ 640.00
Payroll taxes, compensation, insurance	80.00
2. Mining engineer-geologist,* @ $50.00 per day for 10 days actually spent on the project /for time	500.00
Sub-total	1,220.00

* The mining engineer-geologist shall supervise the operation and be responsible for the sampling and procurement of analyses thereof.

Rehabilitation and Repairs.

Not applicable

MF-202

LANDLORD'S SUBORDINATION AGREEMENT

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, the undersigned is the owner in fee simple of that certain parcel of ground in the county of _____, State of _____, described in a certain Exploration Project Contract dated October 3, 1951, between _____, the Lessee of said property, and the United States of America;

NOW, THEREFORE, the undersigned, as Lessor of said property under lease dated _____, _____, does by these presents subordinate all of his right, title, and interest under the provisions of said lease 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 to rentals or royalties under the terms of said lease; and

The undersigned further agrees that if said leasehold interest should be surrendered or if said lease should terminate at any time prior to the expiration of the rights of the United States of America under said Exploration Project Contract, the undersigned shall assume and does hereby assume all of the obligations of the Lessee under said Exploration Project Contract to make repayment to the United States of America according to the terms of said contract; and

The undersigned agrees to commit no act, nor assert any claim under judicial process or otherwise that may contravene or conflict with the prior lien and claim of the United States of America under the provisions of said Exploration Project Contract.

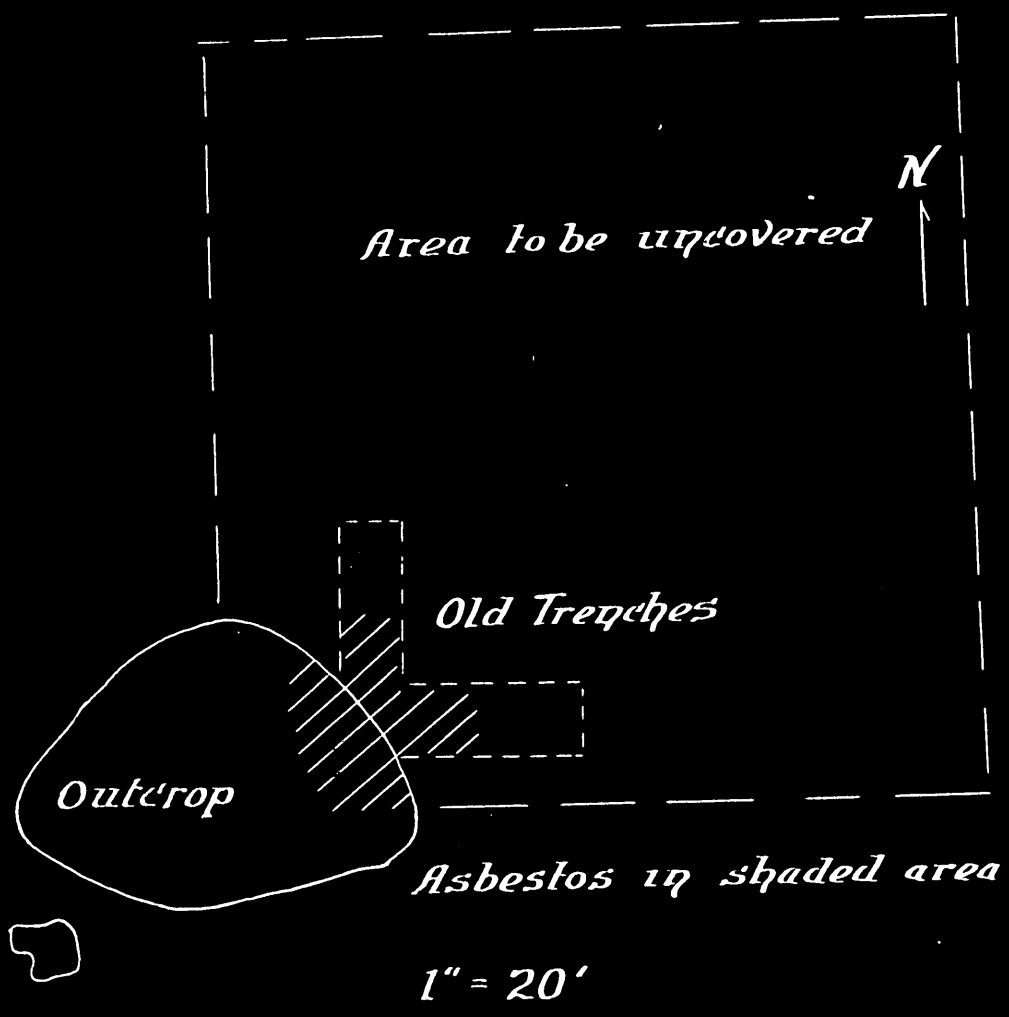
This undertaking and covenant shall be binding upon the heirs, successors, and assigns of the undersigned.

Dated this _____ day of _____, 195_

Luther A. Hoffman

U. S. GOVERNMENT PRINTING OFFICE 16—64582-1

Fig 2


N
Area to be uncovered
Old Trenches
Outcrop
Asbestos in shaded area
1" = 20'

CONTRACT DOCKET DMA-1985x, Idm-E171

Contract dated Oct 16 1951 between Star Mining Co. and Aden Potier of Pembine, Wisconsin, for carrying out certain specified work under the provisions of Exploration Project Contract Idm-E171 between the United States of America and the Star Mining Co. is hereby approved. Copy of the agreement is attached.

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

Cont. Serv Sec.
Change Order
Noted.....
Reviewed.....

Dated: October 22, 1951

UNITED STATES OF AMERICA

By A. B. Needham

A. B. Needham
Executive Officer-DMA

(COPY)

AGREEMENT

This agreement made and entered into this 16th day of October 1951 by and between STAR MINING CO., a Wisconsin corporation and ADEN POTIER of Pembine, Wisconsin;

W I T N E S S E T H :

WHEREAS, Star Mining Co. has a leasehold interest in certain property constituting a part of the Herriman farm on County Trunk Z in Marinette County, upon which there is a small outcropping of asbestos; and

WHEREAS, Potier is the owner and operator of an Allis-Chalmers HD 7 bulldozer.

NOW, THEREFORE, in consideration of the mutual promises herein contained the parties hereto do agree as follows:

1. Potier agrees that as an independent contractor he will attempt to scrape the overburden from the bedrock adjacent to said outcropping of asbestos.

2. That in scraping off such overburden, Potier agrees that he will scrape at the places and in the general directions requested by representatives of Star Mining Co.

3. Potier agrees that the aggregate charge per hour for the bulldozer and itsoperator shall be $9.00 per hour. Potier further agrees that no additional charge shall be made to Star Mining Co. for fuel, lubricants, repairs, transportation of the bulldozer to or from the Herriman farm and that said $9.00 per hour, total for both the operator's time and the use of the bulldozer, shall constitute the only charge payable by Star Mining Co.

4. Star Mining Co. agrees to pay to Potier promptly upon receipt of his weekly statements for work performed, the sum of $9.00 per hour for the use of said bulldozer and the time of the operator.

5. Star Mining Co. shall have the right to terminate the work to be performed by the bulldozer and Potier at any time by notifying him to that effect, but in any event such termination shall not take place until after at least twenty-four hours' work by said bulldozer and the operator thereof.

6. Potier shall commence said work not later than October 22, 1951 and shall continue on all working days until he is directed to discontinue the work by Star Mining Co.

IN VITNESS WHEREOF, Star Mining Co. has caused these presents to be executed by its duly authorized officers on the day and year first above written and Aden Potier has hereunto set his hand and seal as of the day and year first above written.

STAR MINING CO.

By (signed) Frank O. Jones
President

Attest:

(signed) F. F. Bowman, Jr.
Secretary

Signed
Louise J. Smith

Signed
Jane E. Garvoille

Aden Potier

Form MF-103
(April 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

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

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

DO NOT FILL IN THIS BLOCK

Docket No. DMA 198 V-

Date received 8-20-51

Participation

Star Mining Co.
Room 305, 122 West Washington Ave.
Madison 3, Wisconsin

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
AUG 20 1951

Name and address of applicant

Date August 16, 1951

FILL IN THIS BLOCK

Date of application August 16, 1951

Estimated cost $5,000 (Preliminary)

Mineral or metal Asbestos

Percentage of Government participation 90%

Location of mine Marinette County, Wisconsin

Date of filing MF-100 None filed

DMA Docket Number, if available 198 V-

INSTRUCTIONS

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

THE APPLICANT

*1. Is applicant an individual, partnership, or corporation? Corporation.
*2. If a partnership, state names and addresses of partners. Not applicable.
*3. If a corporation, state names and addresses of officers, directors, and five largest stockholders. See rider.
*4. Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who will manage the project. See rider.
*5. Are you the owner or the lessee of the property? Lessee.
6. If owner, state what claims, liens, or encumbrances, if any, are against the property. Not applicable.
7. If lessee, attach a copy of the lease and state if it is in good standing. See rider.

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

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

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

16—64067-1

THE PROPERTY

10. (*a*) Give a description of the real property that will be in any way involved in the exploration project, including any existing mine or operating property. See rider.

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

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

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

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

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

*14. Describe any existing useable facilities, equipment, buildings, or structure now on the property that will be devoted to the exploration work. None.

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

*16. History:

(*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for any past suspensions of operations. Not applicable.

(*b*) State briefly the known history and production of adjoining and neighboring properties. None.

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

*17. Production: Not applicable.

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

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

*18. Ore or mineral reserves: (If property is or has been operating.) Not applicable.

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

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

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

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

THE EXPLORATION

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

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

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

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

THE REQUIREMENTS AND COSTS

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

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

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

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

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

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

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

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

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

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

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

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.

Star Mining Co
(Name of company)

By Frank C. Jones
(Signature of authorized official)

August 16, 1951.
(Date)

President
(Title)

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

*Same as footnote on page 1.

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

Star Mining Co.
Room 305
122 West Washington Avenue
Madison 3, Wisconsin

RIDER TO QUESTION 3.

Officers: Frank A. Jones - President
506 State Street
Madison 3, Wisconsin

R. J. Pollack - Vice President
Town Line Road
Wausau, Wisconsin

F. F. Bowman, Jr. - Secretary-Treasurer
Route # 1
Waunakee, Wisconsin

Directors: Same as above, plus:

R. Conrad Emmons
801 Huron Hill
Madison 5, Wisconsin

San W. Orr
840 Butternut Road
Madison 4, Wisconsin

Joseph G. Werner
1934 Regent Street
Madison 5, Wisconsin

Stockholder, other than above:

Leon E. Isaksen
Route # 2
Madison, Wisconsin

Star Mining Co.
Room 305
122 West Washington Avenue
Madison 3, Wisconsin

RIDER TO QUESTION 4

The business will be managed by the Directors. Those having direct supervision of the technical aspect of the project will be Dr. R. Conrad Emmons and Mr. F. F. Bowman, Jr. Dr. R. Conrad Emmons received a B.A. Degree from the University of British Columbia with a major in Economics in 1919. He received his M.A. Degree from the same institution in 1920 with a major in Geology and a minor in Mining. He received his Ph.D. from the University of Wisconsin in 1924 with a major in Geology and a minor in Metallurgy. His experience includes ten field seasons on the Geological Survey of Canada, three field seasons mapping in Wisconsin and consultative work on various mining and mineral properties. He is presently Professor of Geology at the University of Wisconsin and has been employed as a resident geologist by the University of Wisconsin continuously since 1923.

F. F. Bowman, Jr. graduated in Geology from the University of Wisconsin in 1925 and received his M.A. Degree from Stanford University in Geology in 1926. He was employed as a geologist by the Union Oil Company from 1926 to 1931. He was employed as a geographer by the Wisconsin State Planning Board from 1933 to 1936. He is presently a mining consultant. He is also presently a member of the Mesabi Mineral Association, having served as the Fee Owner representative on the Mesabi Iron Range in that association since 1939.

Direction of the business affairs of the corporation will be principally in the hands of Frank A. Jones, R. J. Pollack, San W. Orr, Leon E. Isaksen & Joseph G. Werner. Frank A. Jones is engaged in the typewriter, business furniture, office supply and book business in Madison, Wisconsin. He is the president of several corporations in the abovementioned fields. He has been very successful as a businessman.

R. J. Pollack is the District Manager for the Wausau District of the Commonwealth Telephone Company. He is a graduate hydraulic engineer.

San W. Orr, Leon E. Isaksen and Joseph G. Werner are each attorneys at law, having practiced law since 1931, 1928 and 1936, respectively.

Star Mining Co.
Room 305
122 West Washington Avenue
Madison 3, Wisconsin

RIDER TO QUESTION 7

The persons who are now stockholders of Star Mining Co. entered into a lease with the owner of the property on August 3, 1951, The lease is in the process of being assigned to the Star Mining Co. A copy of the lease is attached. A copy of the Assignment, which is now being circulated for signatures, is also attached. Six copies of Form MF-202 are attached.

The property is subject to an Old Age Pension lien in favor of Marinette County. We are informed that this lien is in the magnitude of three or four thousand dollars. It is of such a character that it can be paid off at any time either before or after death of the lessor. In the event asbestos of commercial value is found, the lessor will obviously pay off the lien promptly. It would be extremely difficult because of the legal red tape involved to obtain a subordination agreement from the county, but it is submitted that in view of the relatively small amount of the lien, when compared to the potential of the property, the lien should not be a matter of any consequence in the granting of this application.

RIDER TO QUESTION 8

A balance sheet of the corporation is set forth below. No profit and loss statement is set forth for the reason that the corporation has just been formed and has not operated.

RIDER TO QUESTION 9

The applicant is prepared to invest $500.00 in the initial stage of the exploration. If the results of the initial exploration are sufficiently promising, the applicant is prepared to invest whatever sum may be necessary, so long as the prospective results are sufficient to justify such investment as an economic proposition.

Star Mining Co.
Room 305
122 West Washington Avenue
Madison3, Wisconsin

RIDER TO QUESTION 10

10 (a). The property is presently operated as a farm. There is no existing mine or operating property.

10 (b). As will subsequently appear from this application, the applicants desire to develop the property in several stages. The exact legal description of the land involved in the initial stage is the Northwesterly thirty (30) Acres of the North One-half (1/2) of the Southeast One-quarter (1/4) of Section 24, Township 36 North, Range 21 East. If the initial exploration discloses promising veins of asbestos, a subsequent application will be made to permit following out the veins insofar as they remain on the leased property.

RIDER TO QUESTION 12

The property is located approximately 15 miles (by road) southeast of the city of Penbine, Marinette County, Wisconsin. A blacktop highway (County Trunk Z) runs across the leased area. The property is approximately 11 miles east of the Chicago, Milwaukee & St. Paul Railroad. The railroad is in an area where it should not be difficult to construct a loading spur at the point where the railroad is nearest to the property. The property is approximately 7 miles west of the city of Nathan, Michigan, which is reached by County Trunk Z. Nathan is served by the Wisconsin & Michigan Railroad.

RIDER TO QUESTION 13

The property abuts on a slough of the Menomonie River. Water should be available in unlimited quantities, except when the river is frozen. It is not contemplated that in the exploration any electric power will be used. However, there is an electric power line on County Trunk Z within 100 yards of the outcropping.

RIDER TO QUESTION 15

The answer to this question depends on the size of the ore body. A milling plant could be constructed on the property. The concentrated ore would be shipped by truck to the nearest railroad.

Star Mining Co.
Room 305
122 West Washington Avenue
Madison 3, Wisconsin

RIDER TO QUESTION 16 (c)

In 1943, Dr. Emmons examined this outcropping and recommended further exploration. However, there has not been any further exploration to our knowledge. Metallurgical investigation of asbestos is not pertinent. Some years ago Mr. Herriman had specimens from this area identified by Mr. Melcher of the Platteville School of Mining. These specimens were taken from the general area, and it is not possible to determine the source of the specimens examined by Mr. Melcher. Hence, the identification by Mr. Melcher has no apparent bearing on the value of this outcropping, but we enclose it for what it is worth.

A current geological report by Dr. Emmons is attached as a rider to question 22.

RIDER TO QUESTION 19

As shown by the geological report appended to question 22 we do know that there is a small outcropping of chrysotile asbestos up to one-half inch in length on the property. In the opinion of Dr. Emmons and Mr. Bowman, there is sufficient geological probability of finding a substantial deposit to justify exploration. It is considered that the soundest economic approach is to attempt to remove the overburden in the immediate area of the outcropping. If such process does not result in the finding of deposits of commercial significance, then the project should be abandoned. If such process does result in the finding of deposits of commercial significance, then the veins should be followed through and the ore body delineated. It is estimated that the initial exploration and analysis of any ore found can be accomplished for $5,000.

RIDER TO QUESTION 21

See the answer to question 19 above. If approval is given to this application promptly, we hope to complete the initial exploratioh before November 1. If approval is delayed until after snow or freezing, then the exploration could not be completed until next summer. It is estimated that if we can get started by September 1, the initial exploration should be completed within two months.

Star Mining Co.
Room 305
122 West Washington Avenue
Madison 3, Wisconsin

RIDER TO QUESTION 22

See the geological report of Dr. Emmons hereunto annexed.

RIDER TO QUESTION 23

(a) Common labor--two men at $8.00 per day for forty days . . . . . $ 640.00

(b) One supervisor (either Dr. Emmons or Mr. Bowman)--ten days at $50.00 per day 500.00

(c) None

(d) None

(e) None

(f) Bulldozer and operater at $9.00 per hour for 384 hours 3,456.00
(NOTE: The only bulldozer in the area is owned by a man named Aden Potier of Penbine, Wisconsin, and it is his machine that we contemplate renting. He is a stranger to all of the parties connected with this company.)

(g) None

(h) Miscellaneous equipment 100.00

(i) None

Contingencies 304.00

TOTAL, ... $ 5,000.00

RIDER TO QUESTION 24

It is difficult to answer this question. If the bulldozer makes rapid progress, we may have enough information to cause us to abandon the project in two or three weeks. If the project runs for the scheduled sixty days, it may be assumed that the money will be spent ratably over the period.

Refer to Q. 8

Star Mining Co.
Room 305
122 West Washington Avenue
Madison 3, Wisconsin

August 17, 1951

Balance Sheet

Assets

Cash		$ 1005.--
Contract for Geological and Legal Services		495.--
TOTAL		$ 1500.--

Liabilities

Accounts payable (est.)		200.--
Capital Stock	$1,500.--	
Deficit	200.--	1300.--
TOTAL		$ 1500.--

WISCONSIN MINING SCHOOL

PLATTEVILLE

H. B. Morrow, Director

Refer to Q. 16 e.

John Callahan
State Superintendent
Madison

September 16, 1939

Mr. L. A. Herriman

Pembine, Wisconsin

County Highway 2

Dear Mr. Herriman:

The box of samples received yesterday. Our mineralogist looked them over this morning and the results are enclosed.

You had all of the samples correctly labeled except #5 which Mr. Melcher corrected.

A decision of any kind cannot be arrived at hurriedly. The asbestos is all that has any value and it is only $\frac{3}{8}$ of an inch thick; our small sample showed what apparently was two sheets, one as stated and another about $\frac{1}{4}$ of an inch thick. You will hear from me at a later date.

Very truly yours,

H. B. Morrow

HBM:AM

Marinette County Material. Mr. Herriman - Pembine, Wis.

1-Granite gneiss (metamorphosed granite) no value.

2-Surfacial rock of altered (metamorphosed) gabbro (fine)

3-Gabbro rock somewhat porphyritic Xls of Oligoclase-no value

4-Similar to #2 & 5.

5-Metamorphosed igneous rock probably a gabbro or basalt. Green mineral is serpentine-some asbestos.

6-Quartz with chlorite schist

7-Metamorphic rock chiefly quartz and chlorite schist like #6

8-Highly weathered rock having some short fibers of asbestos-All is limonite coated.

9-Same as #5 except there is more asbestos and less unaltered other material.

10-Slaty material having serpentine as chief mineral with kaolin minerals.

11-Grainy altered gabbro-much evidence of solution of more soluble minerals like olivine, etc.

12-As stated, pieces of asbestos.

These specimens are really well labeled on the slips which accompany them. This man doubtless wishes to know if he has a deposit of asbestos and perhaps how he can dispose of it.

I would suggest that except for the making of ground asbestos, for insulation purposes, shingle stock or perhaps paper stock (value up to $23.00 per ton) that it has no great value. Perhaps it would be best to contact users of asbestos products.(I cannot furnish names)

September 16, 1939 Milton A. Melcher.

DMA 1985

Asbestos on the Herriman farm - Sec. 24, Town of Beecher, Marinette County

This occurrence is confined to one outcrop in a large area of terraced river deposit now being farmed. The sand and gravel has been rodded in several spots to eleven feet without meeting bed rock. The outcrop is roughly 20' x 40' and is composed partly of fresh coarse peridotite and partly of weathered peridotite. The veins of asbestos are confined to the weathered peridotite which occurs on the north east side of the outcrop. The nearest outcropping of other bed rock is one-fourth mile to the east.

Bed rock outcroppings are numerous to the east at $\frac{1}{4}$ mile and to the west at $\frac{1}{2}$ mile. The general area is one of greenstone, highly metamorphosed and intruded by granitic apophyses. To the east and north, greenstone occurs abundantly, to the west and south granite is extensive. The location is a gradational contact zone between these major occurrences. Structurally there is reason to believe that the greenstone is a roof rock over a sizable granite. The general contact dips gently to the north-east.

The greenstone is metamorphosed variously to rock types which include diorite, gabbro, hornblendite, and a hornfels carrying $\frac{1}{4}$" to $\frac{1}{2}$" porphyroblasts of hornblende. The patchy distribution of these rock types indicates that exploration should be done from the isolated outcrop outward to establish continuity of the serpentine host. The general structure of the region is north-easterly - hence the first uncovering should be done on the north-east side of the outcrop where asbestos is found.

The asbestos is in veins ranging in size up to $\frac{1}{2}$ inch. It is chrysotile with refractive indices, .02 below those expected suggesting that the surface material is somewhat weathered. Its physical characteristics also suggest slight weathering. The color is pale green. Most is cross-fiber; some is slip fiber.

Star Mining Co.
PM 305 - 122 West Washington ave.
Madison 3, Wis.

I suggest that exploration be done in three stages.

First - uncover the bed rock outward from the outcrop but first to the north east as shown in Figure 2.

Second - sample below the weathered surface for quality of asbestos and have a reliable laboratory report obtained.

Third - drill for depth if the results on one and two are favorable, ~~as~~ on a pattern to be determined after exposure of bed rock.

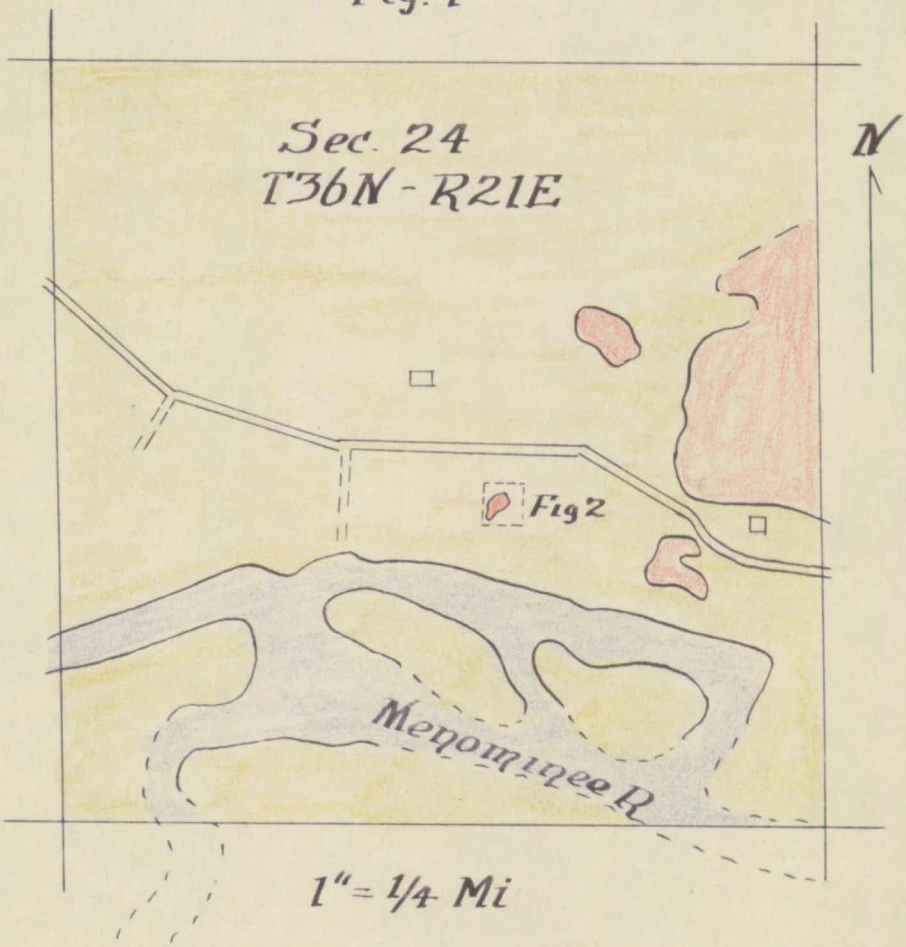
Two diagrams are appended - one to show the setting on a scale of $\frac{1}{4}$ mile to 1" (Fig. 1), the other to show the outcrop area on a scale of 20' to 1" (Fig. 2).

R. P. Simmons

8/15/51.

Star Mining Co.
Rm 305 - 122 West Washington ave
Madison 3, Wis.

Fig. 1

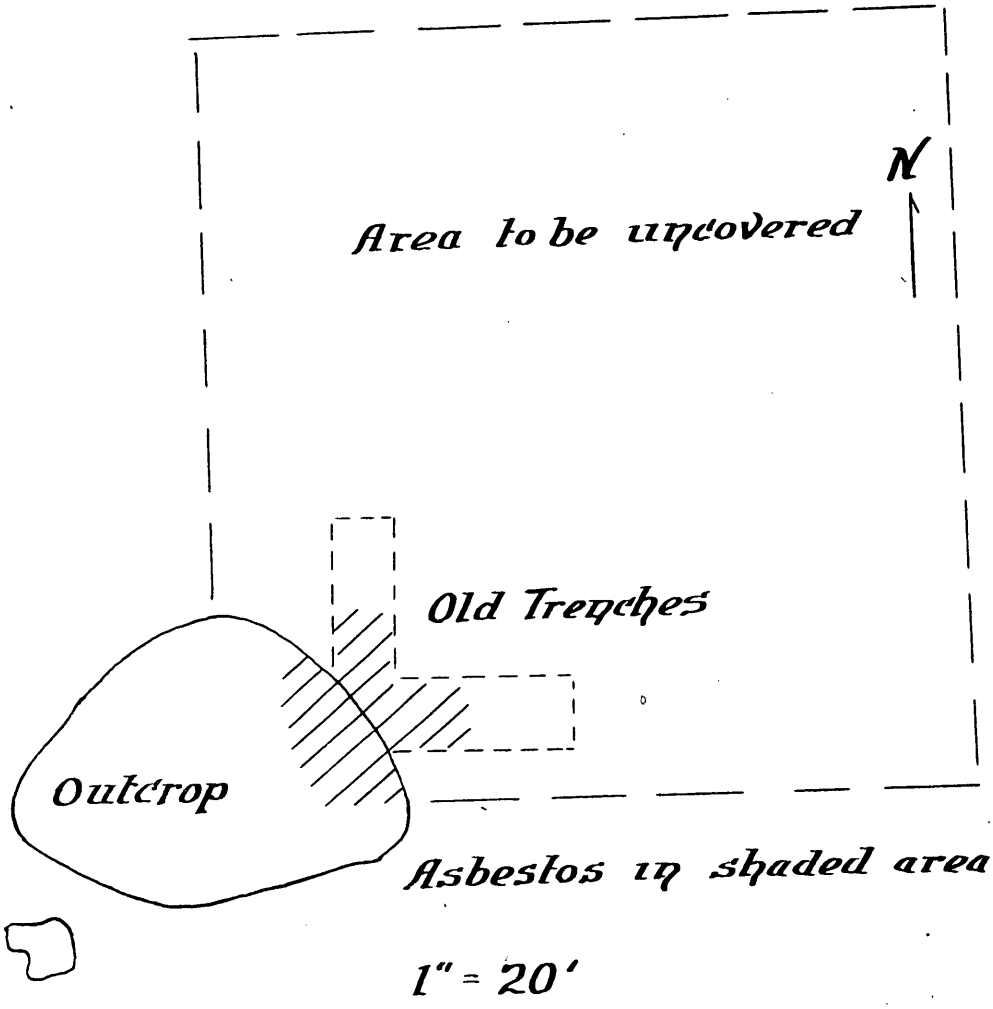


Porphyroblastic Hornfels and Peridotite

Alluvium

R.C. Emmons

Fig 2


N
Area to be uncovered
Old Trenches
Outcrop
Asbestos in shaded area
1" = 20'

MINING LEASE

copy

This agreement made and entered into this 3rd day of August, 1951, by and between LOTHER A. HERRIMAN, a single man, of the County of Marinette, State of Wisconsin, hereinafter referred to as the "Lessor" and R. J. POLLOCK of Wausau, Wisconsin, FRANK A. JONES, FRANK F. BOYSEN, JR., R. CONRAD EMMONS, DAN V. ORR, LEON M. [illegible] and JOSEPH A. [illegible], all of Dane County, Wisconsin, hereinafter referred to as "Lessees".

W I T N E S S E T H :

WHEREAS, the Lessor represents himself to be the owner in fee simple, subject to an old-age pension lien, of the title to the following described property, situated in Marinette County, Wisconsin, to-wit:

> The North 1/2 of the Southeast 1/4 of Section 24 in Township 36 North, Range 21 East.

WHEREAS, there is a small outcropping of rock on the westerly portion of the above described land, which outcropping contains asbestos; and

WHEREAS, the land owned by the Lessor may contain other minerals or deposits of value; and

WHEREAS, the existence of said asbestos has been known for many years by the Lessor and he has without success attempted to induce various persons to become interested in exploring and developing said real est to for its mineral value; and

WHEREAS, the exploration of said land for the purpose of ascertaining whether there is located thereon, asbestos, minerals or other deposits of commercial value will involve an outlay of capital exceeding, in the opinion of the parties to this action, the sum of Four Hundred ($400) Dollars; and

WHEREAS, the Lessor is desirous of having said land explored for the purpose of determining whether it contains asbestos, other mineral or other deposits of commercial value, and if so said Lessor is desirous of having such asbestos, other mineral or other deposits developed and marketed; and

WHEREAS, the Lessees are willing to spend some money in exploring said lands, and depending on the result of such exploration the Lessees may be interested in developing and marketing the asbestos, other mineral or other deposits found upon said land; and

WHEREAS, the exploration for said minerals may result in completely wrecking the demised premises.

Sno.
RJP.
JH
PEE
JDW.
JEL.
FFB Jr.
JAJ

NOW, THEREFORE, in consideration of the sum of ~~Ten Dollars ($10)~~ Twenty-five dollars ($25) to him in hand paid, receipt whereof is hereby acknowledged by the said Lessor and in consideration of the mutual covenants and agreements herein contained the parties hereto do agree as follows:

1. The Lessor does hereby let, lease and demise unto the Lessees, their heirs, personal representatives, sublessees or assigns for the term commencing with the date

hereof and ending fifty (50) years subsequent to said date, the following described land situated in the County of Menominee, State of Wisconsin, to-wit:

> All of the North 1/2 of the Southeast 1/4 of Section 36 in Township 36 North, Range 21 East, except the portion thereof occupied by the house and the buildings of the Lessor and a five (5) acre plot immediately surrounding said buildings.

2. Said lands are hereby leased by the Lessor to the Lessees for the purpose of exploring for, mining, taking out and removing therefrom asbestos and any other mineral, or other deposit of commercial value, which is, or may hereafter be found on, in or under said lands, and for the purpose of carrying on on said lands mining operations generally. Said Lessees shall have the right to strip and cave the surface, to remove all overburden from its present location to any other location either on or off the demised premises, and to make all excavations, openings, ditches, trenches, pits, drifts or tunnels which they or their assigns deem desirable. The Lessees shall have the right to construct all buildings, and install all equipment, and to construct such railroads, paths, wagon or motor vehicle roads upon said premises as they or their assigns deem desirable.

3. The Lessees shall have the right to explore the premises for the purpose of ascertaining whether any asbestos or other mineral or deposits in commercial quantities and of commercial quality are located in, at on or under said demised premises and in making such exploration the Lessees may utilize any method which they deem to be desirable, including stripping the overburden from the demised premises

by hydraulic means. The Lessees shall be under no obligation to replace any overburden displaced by them in making such exploration, nor shall the Lessees be or become in any way liable to the Lessor for any damage caused to the westerly sixty (60) acres of the demised premises, or to any vegetation growing thereon or to the Lessor's interest in the demised premises by reason of any work done or activity carried on by the Lessees under the authority of this lease. The Lessees shall be liable to the Lessor for any damage caused to the easterly fifteen (15) acres of the demised premises by reason of exploratory work performed by the Lessees, but in no event shall the damages owing to the Lessor by the Lessees for injury to the easterly fifteen (15) acres exceed the sum of Fifty Dollars ($50) per acre. The Lessees shall not be liable for damages to any portion of the demised premises caused by activity in developing and marketing any deposits found on any portion of the demised premises.

4. The Lessees covenant that during the first year of this lease they will spend or cause to be spent not less than Five Hundred Dollars ($500) in exploring the demised premises for the purpose of discovering deposits of commercial value. The determination of the questions of where to explore, how to explore, how much to explore, and when to explore during such first year shall rest solely in the discretion of the Lessees.

5. The Lessees agree that the Lessor shall not be required to contribute any cash toward the expense

involved in carrying on the explorations or any subsequent development and marketing of deposits found in, on or under said demised premises. The Lessees further agree that they will protect and save the Lessor harmless from any lien claim accruing by reason of any work or operation conducted on the demised premises by the Lessees.

6. Rent and Royalties. The Lessees shall not be required to pay any rent for the demised premises during the first year of the term of this lease. After the termination of the first year of the term of this lease the Lessees promise and agree to pay to the Lessor an annual minimum rent of ~~Three~~ Five Hundred Dollars ~~($300)~~ ($500) per year so long as this lease shall remain in effect, the first annual rent to be due and payable on or before the 20th day of August, 1953. Such minimum rent shall not be in addition to the royalties hereinafter provided for and the Lessor shall credit on such minimum rent all royalties received during the preceding lease year. Such minimum rent is an annual rent only and no liability shall accrue unless the lease shall have been in effect for the entire preceding year. That is to say, that in the event during any lease year the lease is canceled or terminates for any reason prior to the 1st day of August in such lease year then the Lessees shall not be liable for a minimum rent during such lease year. This provision is inserted because it is contemplated that if the explorations fail to reveal deposits of commercial value the lease will be terminated by the Lessees immediately following the end of the first lease year and it is not intended that the Lessees shall become liable for any minimum rent for the second lease year or subsequent years under those circumstances.

Dwo
PJP
JAH
RCE
JOW
EEL
JJBJr
JaJ.

For the purposes of this royalty agreement a "ton" is defined as 2,240 pounds. The Lessees shall keep an accurate record of all asbestos, minerals or other materials taken from the demised premises and sold. The Lessees, on or before the 20th day of the 4th month following the commencement of marketing of materials recovered from the demised premises, shall pay to the Lessor as a royalty for any material recovered from the demised premises and sold during the preceding quarter, a sum equal to five percent (5%) of the price received by the Lessees at the mine for any material sold by them in the form in which it comes from the ground. Thereafter, such payments shall be made to the Lessor on or before the 20th day of any month following the close of any quarter.

The Lessor shall at all times have the right to inspect all records kept by the Lessees for the purpose of checking upon the quantities and sales price of any materials removed from the mine and sold.

It is understood and agreed that the Lessees shall have the right to own in whole or in part, a company which shall operate upon or near to the demised premises, for the purpose of beneficiating, concentrating or otherwise treating or processing the material taken from the mine and in such event such operating company shall be required to pay for any material taken from the mine the same price for such material as the material could be sold for, at the mine, on the open market.

7. In the event the Lessees shall fail to pay to the Lessor said minimum rent as above provided, or royalties exceeding the amount of said minimum rent, in any year, then this lease shall thereupon terminate, and the Lessor shall have the right to enter and retake possession of the demised premises.

In the event the Lessees shall fail to pay royalties as above specified then the Lessees shall be notified of such failure by the Lessor and given a ten (10) day period within which to cure such breach. In the event the Lessees fail to cure such breach within said ten (10) day period then this lease shall thereupon terminate, provided, however, that in the event of a disagreement between the Lessor and Lessees as to the proper amount of royalties due and payable the question shall be determined by a court having jurisdiction of the controversy and such determination shall be without prejudice to the rights of the Lessees to continue to operate under this lease.

8. After the termination of the first year of the lease period the Lessees shall pay all real estate taxes thereafter lawfully assessed against the demised premises so long as this lease shall remain in force and unterminated. At any time during which the Lessees are obligated to pay such taxes, they shall have the right to contest in the name of the Lessor or otherwise the validity of any assessment.

9. Title to any material located on the demised premises shall pass to the Lessees or their designate as soon as said material is dislodged from its place in the earth by the Lessees or by any person dislodging said material under authority from the Lessees.

10. After the end of the first year of this lease the Lessees shall have the right at any time to terminate this lease upon thirty (30) days' written notice sent to the Lessor by registered mail addressed to his last known address. Upon such termination the Lessees shall have no further liability to the Lessor under any provision of this lease.

11. In the event of the termination of this lease for any reason whatsoever the Lessees shall have the right to remove any structures or equipment placed by them upon the demised premises.

12. Under no circumstances shall the Lessees become liable to the Lessor for any damages of any nature whatsoever caused to the demised premises or to the land and buildings reserved by the Lessor by reason of any activities carried on upon the demised premises by the Lessees.

13. The Lessees shall have the right to use free of charge any water found upon or adjacent to the demised premises and to discharge the same across the demised premises.

14. The Lessees shall have the right to assign this lease in whole or in part to any person, persons, or corporation of their own choosing and/or to sublease the demised premises in whole or in part to any person, persons, or corporation of their own choosing. The term "Lessees", wherever applicable shall apply to any assignee or sublessee of the Lessees.

15. This lease shall inure to the benefit of and be binding upon the heirs, personal representatives

or assigns of any of the parties hereto.

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

In Presence of:

Lloyd K. Morris
Eleanor Orr
Lloyd K. Morris
Eleanor Orr

Luther A. Herriman (SEAL)
Luther A. Herriman, Lessor

R. J. Pollock (SEAL)
R. J. Pollock, Lessee

Frank A. Jones (SEAL)
Frank A. Jones, Lessee

Frank F. Bowman Jr. (SEAL)
Frank F. Bowman, Jr., Lessee

Louise J. Smith
Louise J. Smith

R. Conrad Emmons (SEAL)
R. Conrad Emmons, Lessee

T. L. Lathrop
T. L. LATHROP

San W. Orr (SEAL)
San W. Orr, Lessee

Leon E. Isakson (SEAL)
Leon E. Isakson, Lessee

Joseph G. Werner (SEAL)
Joseph G. Werner, Lessee

STATE OF WISCONSIN }
COUNTY OF MARINETTE } SS

Personally came before me this 3 day of August, 1951, the above-named Luther A. Herriman, to me known to be the person who executed the foregoing instrument and acknowledged the same.

Lloyd K. Morris
Notary Public, Marinette County, Wisc.
My commission expires July 4, 1954

Seal

STATE OF WISCONSIN }
COUNTY OF ~~MARATHON~~ Marinette } SS

Personally came before me this 13 day of August, 1951, the above-named R. J. Pollock, to me known to be the person who executed the foregoing instrument and acknowledged the same.

Seal.

Lloyd K. Morris
Notary Public, ~~Marathon~~ Marinette County, Wis.
My commission expires July 4, 1954

STATE OF WISCONSIN }
COUNTY OF DANE } SS

Personally came before me this 14 day of August, 1951, the above-named Frank A. Jones, Frank F. Bowman, Jr., R. Conrad Emmons, San W. Orr, Leon E. Isaksen and Joseph G. Werner, to me known to be the persons who executed the foregoing instrument and acknowledged the same.

T. L. Lathrop
T. L. LATHROP
Notary Public, Dane County, Wis.
My commission expires 3/9/52

MR. JAMES A. BARR, SR., CHIEF INDUSTRIAL MINERALS BRANCH

INTER OFFICE MEMO FORM NO. 1

THIS FORM MUST REMAIN IN THIS FILE JACKET AT ALL TIMES

DMA-1985X
TA-

CHARGED TO		DATE	RET'D	SENDER'S INITIALS	REMARKS
ARUNDALE					
BANNERMAN					
BARR					
BOYD, ADMIN.					
BACON					
BOWLES, DR.					
BOURRET					
BRYSON					
CADEM					
CHANDLER					
CRIM					
FIELD TEAM					
GUNNSALLUS					
JOSEPHSON					
KEMP					
LYON					
MCGANN					
FLURY					
MITTENDORF					
MARSH					
MOON					
MOSIER					
NORTON					
PARSONS					
STROBEL					
VAN ALSTINE					
WASKEY	X	8/21/51			
WEBER					

NAME OF APPLICANT: Star Mining Co., Frank A. Jones, President
BUSINESS ADDRESS: 122 West Washington Ave., Room 305, Madison, 3, Wisc.
PLANT SITE: ~~XXXXXXXXXXXXXXXX~~ Herriman Farm, 15 mi. S.E. of Penbine, Marinette Co. Wisc.
TYPE OF LOAN: $5,000 - Exploration
TA: —
DMA 1985X
AMOUNT: $5,000 - 90%
COMMODITY & QUANTITY OR PURPOSE: Asbestos

FINAL ACTION: Let to K Jean 8-27
" " applicant 8-29

ASSIGNMENT OF LEASE

KNOW ALL MEN BY THESE PRESENTS that we, R. J. POLLACK and LEONE POLLACK, his wife, both of Wausau, Wisconsin, FRANK A. JONES and MYRTLE A. JONES, his wife, FRANK F. BOWMAN, JR. and VIRGINIA BOWMAN, his wife, R. CONRAD EMMONS and PEARL EMMONS, his wife, SAN W. ORR and ELEANOR A. ORR, his wife, LEON E. ISAKSEN and EDITH K. ISAKSEN, his wife, and JOSEPH C. WERNER and ELIZABETH T. WERNER, his wife, all of Dane County, Wisconsin, for and in consideration of Twenty-five and no/100 Dollars ($25.00) paid to San W. Orr, and other valuable considerations, have sold, and do hereby assign, transfer and set over unto STAR MINING CO., a Wisconsin Corporation, a certain lease dated the 3rd day of August, 1951, made by Luther A. Herriman of Marinette County, Wisconsin, to all of the male persons signing this paper, of the following described property situated in Marinette County, Wisconsin, to-wit:

> All of the North 1/2 of the Southeast 1/4 of Section 24 in Township 36 North, Range 21 East, except the portion thereof occupied by the house and the buildings of the Lessor and a five (5) acre plot immediately surrounding said buildings.

and recorded in the Office of the Register of Deeds for Marinette County on the day of August, 1951, in page with all and singular the premises therein mentioned and described, together with the appurtenances and all rights contained in said lease.

TO HAVE AND TO HOLD the same unto said Star Mining Co. and its assigns from the date hereof

during all the rest and remainder of the term provided in said lease, subject to the rents, covenants and conditions contained in said lease.

IN WITNESS WHEREOF, each of the undersigned has hereunto set his or her hand and seal as of the 15th day of August, 1951.

In the presence of:

R. J. Pollack

Leone Pollack

Frank A. Jones

Myrtle A. Jones

Frank F. Bowman, Jr.

Virginia Bowman

R. Conrad Emmons

Pearl Emmons

San W. Orr

Eleanor A. Orr

Leon E. Isaksen

Edith K. Isaksen

Joseph G. Werner

Elizabeth T. Werner

STATE OF WISCONSIN)
) SS
COUNTY OF MARATHON)

Personally came before me this ____ day of

_____, 1951, the above-named R. J. Pollack and Leone Pollack, to me known to be two of the persons who executed the foregoing instrument and acknowledged the same.

Notary Public, Marathon County, Wis.
My commission expires:

STATE OF WISCONSIN)
) SS
COUNTY OF DANE)

Personally came before me this ___ day of August, 1951, the above-named Frank A. Jones, Myrtle A. Jones, Frank F. Bowman, Jr., Virginia Bowman, R. Conrad Emmons, Pearl Emmons, Sam W. Orr, Eleanor A. Orr, Leon E. Isaksen, Edith K. Isaksen, Joseph O. Werner and Elizabeth F. Werner, to me known to be some of the persons who executed the foregoing instrument and acknowledged the same.

Notary Public, Dane County, Wis.
My commission expires:

MF-104
(April 1951)

Budget Bureau No. 42-R1036.
Approval expires 6-30-51.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

June 1985.

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.

Audit Oct 3 51
3,358
3,022 65
90%
3004 Dorsey

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 will be made from time to time.

RECEIVED
MAR 11 1952
BUREAU OF MINES
REGION V
MINING DIVISION

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.

Star Mining Company
(Name of Company)

By F. F. Brownfield
(Signature of Authorized Official)

March 12, 1952
(Date)

Secretary
(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—64068-1

MONTHLY SUMMARY COST STATEMENT

Name of operator Star Mining Company
Project No. DMA Idg - E 171
Total contract amount 5,000
Government participation percent 70%

Distribution of Expenditures for Month of February, 1952

Item	Monthly Total	Totals Previously Reported	Totals to Date	For Government Use Only: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals to Date
Wages and salaries	50.00	466.14	516.14	50.00	466.14	516.14
Equipment purchase [1]						
Equipment rental [2]						
Buildings						
Explosives						
Repair parts						
Other supplies		25.90	25.90		25.90	25.90
Power						
Transportation						
Withholding taxes		4.32	4.32		4.32	4.32
Compensation insurance		56.00	56.00		56.00	56.00
Other insurance		22.40	22.40		22.40	22.40
Contract work	398.25	2,263.50 / 2335.50	1,681.75 / 2733.75	398.25	2335.50	1681.75
Other (specify)						
Total	448.25	2,910.21	3,358.51	448.25	2910.21	3358.51
Totals previously reported						
Totals to date		2,910.21	3,358.51		2910.21	3358.51

FOR GOVERNMENT USE ONLY

Checked by O B Needham
Entered by
Approved by O B Needham
Amount approved for payment 903.42
Remarks

[1] Enter total purchase price in month purchase is made.
[2] Payments for rental of equipment or prorated depreciation on equipment owned by contractor.

16—64068-1

C O P Y

STAR MINING CO.

303 Power & Light Building
Madison 3, Wisconsin

Telephone 6-3164

Narrative

During the week of February 4-9, 1952, a detailed magnetometer survey of the Herriman Property was conducted. The results are submitted in the attached reports. It appears that the asbestos bearing plug is approximately 150' by 300' in areal extent. Its depth is not known.

An analysis of the chrysotile asbestos present shows;

No. 2 Crude Fibre	25.2%
6D Grade Fibre	29.9%
5D Grade Fibre	44.9%

The above information has been submitted to two asbestos producers who have expressed the desire to visit the property in the spring.

/s/ F. F. Bowman, Jr.

Secretary
Star Mining Company

DISTRIBUTION OF WAGES AND SALARIES FOR MONTH OF February, 1952

Name of operator Star Mining Company
Project No. DMA Idm-E 171
Total contract amount $5,000
Government participation percent 90%

Type	Number	Man-Shifts	Rate	Total
Miners			$	$
Muckers				
Trammers				
Timbermen				
Pumpmen				
Hoistmen				
Surface				
Samplers				
Assayers				
Shift bosses				
Mechanics				
Electricians				
Blacksmiths				
Carpenters				
Drill runners				
Drill helpers				
Teamsters				
Manager				
Superintendent				
Engineers				
Geologists	1	1	50.00	50.00
Bookkeeper				
Foreman				
Clerks				
Stenographers				
Other				
Total	1	1	50.00	50.00

Note.—Show only that portion of supervisory, office, and engineering salaries that is chargeable to this project.

FOR GOVERNMENT USE ONLY

Checked by
Entered by
Approved by
Remarks

16—64068-1

EXPLORATION UNIT COST AND PROGRESS REPORT FOR MONTH OF February, 1952

Name of operator Star Mining Company
Project No. DMA Idm E 171
Total contract amount $500.00
Government participation, percent 90%

Item	Costs					Progress				
	Wages [1] and salaries	Equipment [2]	Supplies	Other [3] Contract	Total	Unit	Units this month	Units previously reported	Units to date	Units authorized by contract
Drifting										
Crosscutting										
Raising										
Shafts										
Winzes										
Drill holes										
Overburden										
Rehabilitation and preparation										
Geology and geophysics	50.00			398.25	448.25		448.25	—	448.25	500.00
Trenching										
Sampling and assaying										
Roads and trails										
Test pits										
Other (specify)										
Totals	50.00			398.25	448.25		448.25	—	448.25	500.00

[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.

16—64068-1 U. S. GOVERNMENT PRINTING OFFICE

FOR GOVERNMENT USE ONLY

Checked by
Entered by
Approved by
Remarks

MF-104
(April 1951)

Budget Bureau No. 42-R1036.
Approval expires 6-30-51.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

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

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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 will 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.

Star Mining Co
(Name of Company)

By F. F. Bonnyfix
(Signature of Authorized Official)

January 4, 1952
(Date)

Secretary
(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—64068-1

MONTHLY SUMMARY COST STATEMENT

Name of operator: Star Mining Co
Project No. DMA: Idm # E171
Total contract amount: $5,000
Government participation percent: 90%

Distribution of Expenditures for Month of December

Item	Monthly Total	Totals Previously Reported	Totals to Date	For Government Use Only: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals to Date
Wages and salaries	100.00	366.14	466.14	100.00	366.14	466.14
Equipment purchase [1]						
Equipment rental [2]						
Buildings						
Explosives						
Repair parts						
Other supplies		25.90	25.90		25.90	25.90
Power						
Transportation						
Withholding taxes		4.32	4.32		4.32	4.32
Compensation insurance		56.00	56.00		56.00	56.00
Other insurance		22.40	22.40		22.40	22.40
Contract work	144.00	2,191.50	2,263.50	144.00	2191.50	2335.50
Other (specify)			2335.50			
Total	244.00	2,666.26	2,910.26	244.00	2666.26	2910.26
Totals previously reported						
Totals to date	244.00	2,666.26	2,910.26	244.00	2666.26	2910.26

FOR GOVERNMENT USE ONLY

Checked by: A.B. Meeahan
Entered by: A.B. Meeahan
Approved by: A.B. Meeahan
Amount approved for payment: 219.60
Remarks:

[1] Enter total purchase price in month purchase is made.
[2] Payments for rental of equipment or prorated depreciation on equipment owned by contractor.

16—64068-1

December Progress Report

Four hundred and fifteen yards of overburden were removed in December before stripping ceased on December 3 due to snow and cold weather. This brings the amount of material removed to date to an estimated 6,217 yards. The area immediately surrounding the original outcrop has been stripped plus an area some 200' by 150' to the northeast. In one pocket the depth is in excess of 20'.

On December 13 and 14 two days were spent in conducting a dip needle survey in an attempt to outline the approximate boundary of the serpentinized area. A significant difference in the needle readings indicated that this area trends a bit northwest of the original outcrop and to a large degree southeast of the outcrop. To more accurately define the region a magnatometer study will be made prior to April 3,1952.

Ore samples were taken and submitted to the regional office of Defense Minerals at Minneapolis, The Johns-Manville Company and The United States Gypsum Company. Reports from the latter two laboratories are now awaited.

Pending warmer weather no further work will be carried out.

F.F. Borsnaft

Secretary

DISTRIBUTION OF WAGES AND SALARIES FOR MONTH OF December

Name of operator Star Mining Co
Project No. DMA Idm E 171
Total contract amount $5,000
Government participation percent 90%

Type	Number	Man-Shifts	Rate	Total
Miners			$	$
Muckers				
Trammers				
Timbermen				
Pumpmen				
Hoistmen				
Surface				
Samplers				
Assayers				
Shift bosses				
Mechanics				
Electricians				
Blacksmiths				
Carpenters				
Drill runners				
Drill helpers				
Teamsters				
Manager				
Superintendent				
Engineers				
Geologists	2	1 da	50.00	100.00
Bookkeeper				
Foreman				
Clerks				
Stenographers				
Other				
Total	2	1 da	50.00	100.00

Note.—Show only that portion of supervisory, office, and engineering salaries that is chargeable to this project.

FOR GOVERNMENT USE ONLY

Checked by O.B. Needham
Entered by
Approved by O.B. Needham
Remarks

16—64068-1

EXPLORATION UNIT COST AND PROGRESS REPORT FOR MONTH OF December

Name of operator Star Mining Co
Project No. DMA Idm E171
Total contract amount 5000.00
Government participation, percent 90%

Item	Costs					Progress				
	Wages [1] and salaries	Equipment [2]	Supplies	Other [3]	Total	Unit	Units this month Est.	Units previously reported	Units to date	Units authorized by contract
Drifting										
Crosscutting										
Raising										
Shafts										
Winzes										
Drill holes										
Overburden										
Rehabilitation and preparation										
Geology and geophysics	100.00			144.00	244.00	Cu Yds	415	5802	6217	
Trenching										
Sampling and assaying										
Roads and trails										
Test pits										
Other (specify)										
Totals	100.00			144.00	244.00	"	415	5802	6217	

[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.

16—64068-1 U. S. GOVERNMENT PRINTING OFFICE

FOR GOVERNMENT USE ONLY

Checked by A.B. Meeahan
Entered by A.B. Meeahan
Approved by A.B. Meeahan
Remarks

MF-104
(April 1951)

Budget Bureau No. 42-R1036.
Approval expires 6-30-51.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Department of the Interior
Defense Minerals Administration
RECEIVED
JAN 2 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 will 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.

Star Mining Co.
(Name of Company)

By F. F. Brown Jr.
(Signature of Authorized Official)

December 10 1951
(Date)

Sec'y - Treasurer
(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—64068-1

MONTHLY SUMMARY COST STATEMENT

Name of operator: Star Mining Co
Project No. DMA: Idm-E 171
Total contract amount: 5000.00
Government participation percent: 90

Distribution of Expenditures for Month of November, 1951

Item	Monthly Total	Totals Previously Reported	Totals to Date	For Government Use Only: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals to Date
Wages and salaries	266.14	100.00	366.14	266.14	100.00	366.14
Equipment purchase [1]						
Equipment rental [2]						
Buildings						
Explosives						
Repair parts						
Other supplies	8.40	17.50	25.90	8.40	17.50	25.90
Power						
Transportation						
Withholding taxes	4.32	–	4.32	4.32	–	4.32
Compensation insurance	56.00	–	56.00	56.00	–	56.00
Other insurance	22.40	–	22.40	22.40	–	22.40
Contract work	1,561.50	630.00	2,191.50	1,561.50	630.00	2,191.50
Other (specify)						
Total	1,918.76	747.50	2,666.26	1,918.76	747.50	2,666.26
Totals previously reported						
Totals to date	1,918.76	747.50	2,666.26	1,918.76	747.50	2,666.26

FOR GOVERNMENT USE ONLY

Checked by: E. J. Martin
Entered by:
Approved by: E. J. Martin
Amount approved for payment: 1726.88
Remarks:

[1] Enter total purchase price in month purchase is made.
[2] Payments for rental of equipment or prorated depreciation on equipment owned by contractor.

16—64008-1

Star Mining Co.,
Project DMA---Idm E171

Narrative as of December 10,1951, conclusion of Fall work.

Stripping of glacial alluvium north and east of the peridotite, chrysotile bearing outcrop began on October 27,as outlined in our November report,and was carried on until December 3 when further operations ceased because of frost in the ground. A through trench was also stripped around the outcrop. As of December 3 approximately 6,200 cubic yards of material had been removed from the underlying bed rock, in one location to a depth of twenty-five feet.

A statement of the geological results of the above stripping by Professor R.C.Emmons, geologist for Star Mining Co and of the Geology Department, University of Wisconsin is attached together with a map of the area uncovered on the Herriman Property.

In as much as this report is for the month of November, 1951 a final 1951 report will be rendered in January for the first two days work in December.

F.F. Brown Jr

Secretary-Treasurer
Star Mining Co

Statement by R. C. Emmons, Geologist, University of Wisconsin.

In Northeastern Wisconsin, along the Menominee River, a few miles from Iron Mountain, Michigan, the largest town, is an outcropping carrying asbestos. This outcropping measured approximately twenty feet in diameter and was surrounded on all sides by alluvium. The alluvium extends without interruption a quarter mile East, North and West from the outcropping and considerably farther to the South. Rocks in the surrounding areas consist largely of greenstone of various degrees of metamorphism intruded by apophyses of granite and similar co-magmatic dykes. The outcrop is almost wholly serpentinized peridotite, the serpentinization being quite complete. We have, by bulldozing, stripped an area roughly triangular in shape with a sixty foot base and a one hundred sixty foot altitude. The surface of this stripped area consists of deeply glacially grooved peridotite sloping downward to the East. Considerably more asbestos veining has been uncovered, especially in local spots, of apparent hydrothermal alteration. It appears that the quality and amount of asbestos is increasing as we uncover lower exposed areas. Since the main occurrence of gravel is to the South, we feel that the area Southward has promise since its susceptibility to erosion may be the reason that the river is there and that rock which is most deeply altered and therefore vulnerable to erosion is also near the best mineralization. At the present time, we have removed gravel to a maximum depth of twenty-five feet.

The veins are largely cross-fiber with very little slip-fiber and range in thickness up to one inch. Many veins are between a quarter and a half inch. The color is excellent and the tensile strength seems to be good. All is chrysotile.

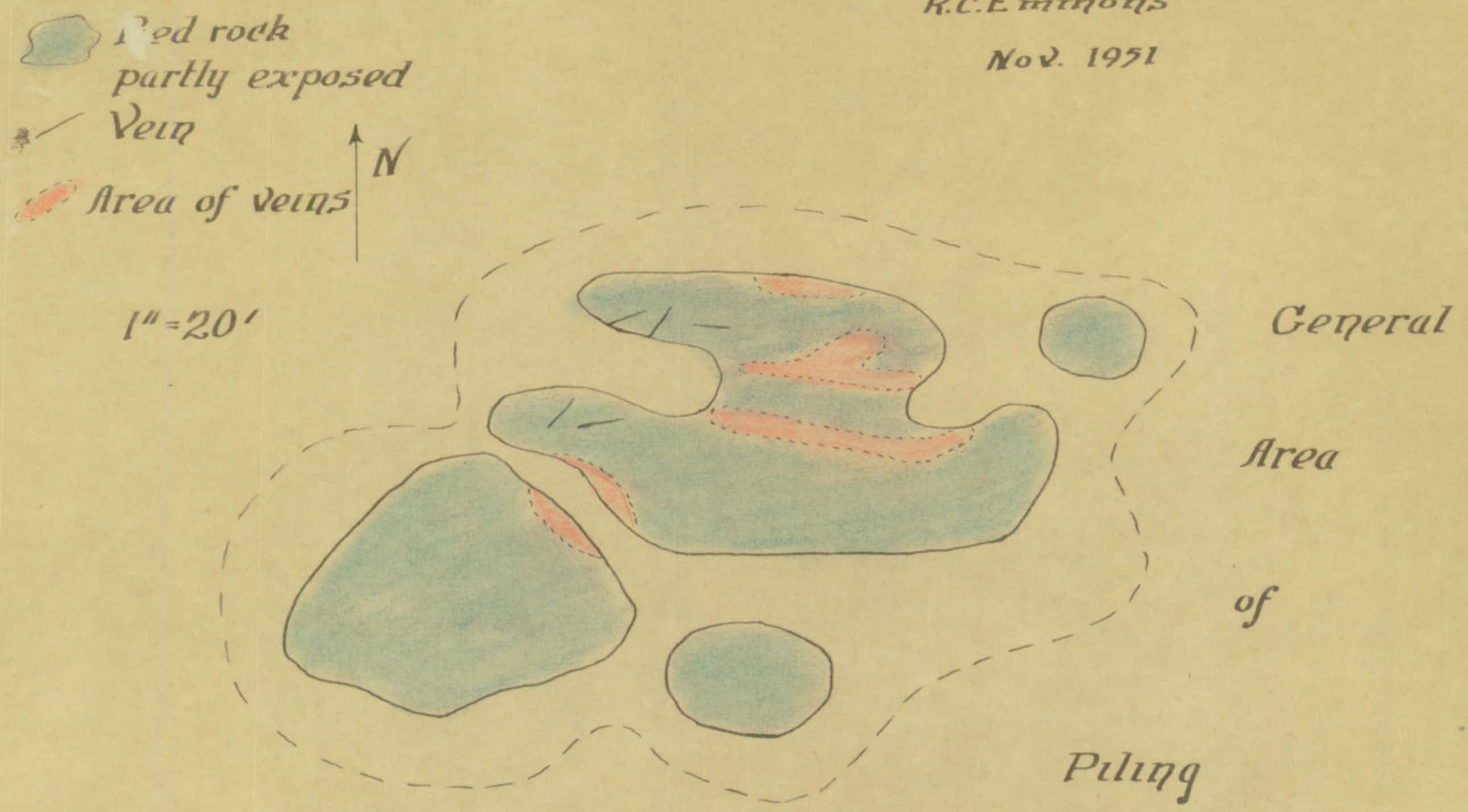
Inasmuch as work was not started until October of this year, it has not been possible to delineate the extent of the ore body.

The attached sketch map summarizes the essential features of the occurrence and the work which has been done as of November 25, 1951. We are informed by the bulldozer operator that he has extended the diggings sixty feet East from the area shown on the map. The map also reflects the glacial grooving. The depth of gravel at the Eastern end of the diggings is greatest. It is probable that the depth increases South-Ward.

E

Herriman Property

R.C. Emmons
Nov. 1951



DISTRIBUTION OF WAGES AND SALARIES FOR MONTH OF November, 1951

Name of operator Star Mining Co
Project No. DMA Idm E 171
Total contract amount 5000.00
Government participation percent 90

Type	Number	Man-Shifts	Rate	Total
Miners			$	$
Muckers	2	app. 26 1/3	1.00 per hr	170.46
Trammers				
Timbermen				
Pumpmen				
Hoistmen				
Surface				
Samplers				
A[illegible]ers				
Sh[illegible] bosses				
Mechanics				
Electricians				
Blacksmiths				
Carpenters				
Drill runners				
Drill helpers				
Teamsters				
Manager				
Superintendent				
Engineers				
Geologists	1	2	50.00 per day	100.00
Bookkeeper				
Foreman				
Clerks				
Stenographers				
C[illegible]				
Total	3	13		270.46

Note.—Show only that portion of supervisory, office, and engineering salaries that is chargeable to this project.

FOR GOVERNMENT USE ONLY

Checked by E. J. Martin
Entered by
Approved by E. J. Martin
Remarks

16—64068-1

EXPLORATION UNIT COST AND PROGRESS REPORT FOR MONTH OF November, 1951

Name of operator: Star Mining Co
Project No. DMA: Idm-E171
Total contract amount: $000.00
Government participation, percent: 90

Item	Costs					Progress				
	Wages [1] and salaries	Equipment [2]	Supplies	Other [3]	Total	Unit	Units this month	Units previously reported	Units to date	Units authorized by contract
Drifting										
Crosscutting										
Raising										
Shafts										
Winzes										
Drill holes										
Overburden	266.14	8.40		1,644.22	1,918.76	yds	4002	1800	5802	
Rehabilitation and preparation										
Geology and geophysics										
Trenching										
Sampling and assaying										
Roads and trails										
Test pits										
Other (specify)										
Totals	266.14	8.40		1,644.22	1,918.76		4002	1800	5802	

[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.

16—64068-1 U. S. GOVERNMENT PRINTING OFFICE

FOR GOVERNMENT USE ONLY

Checked by: E. J. Martin
Entered by:
Approved by: E. J. Martin
Remarks:

MF-104
(April 1951)

Budget Bureau No. 42-R1036.
Approval expires 6-30-51.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN 21 1952

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

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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 will 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.

Star Mining Co
(Name of Company)

By F. F. Bowman Jr.
(Signature of Authorized Official)

November 2, 1951
(Date)

Secretary-Treasurer
(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—64068-1

MONTHLY SUMMARY COST STATEMENT

Name of operator
Project No. DMA Star Mining Co.
Total contract amount Idm 171
Government participation p $5,000.00

Distribution of Expenditures for Month of October, 1951

Item	Monthly Total	Totals Previously Reported	Totals to Date	For Government Use Only: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals to Date
Wages and salaries	100.00	---	100.00	100.00	---	100.00
Equipment purchase [1]						
Equipment rental [2]						
Buildings						
Explosives						
Repair parts						
Other supplies	17.50	---	17.50	17.50	---	17.50
Power						
Transportation						
Withholding taxes						
Compensation insurance						
Other insurance						
Contract work	630.00	---	630.00	630.00	---	630.00
Other (specify)						
Total	747.50	---	747.50	747.50	---	747.50
Totals previously reported	---	---	---	---	---	---
Totals to date	747.50	---	747.50	747.50	---	747.50

FOR GOVERNMENT USE ONLY

Checked by E. J. Martin
Entered by
Approved by E. J. Martin
Amount approved for payment 672.75
Remarks

[1] Enter total purchase price in month purchase is made.
[2] Payments for rental of equipment or prorated depreciation on equipment owned by contractor.

16—64068-1

Star Mining CO.,
Project DMA---Idm E171

Narrative as of the week ending October 27,1951

Stripping of the glacial alluvium north and east of the peridtite, chrysotile bearing outcrop began on October 17,1951. Easily removed loess, sands and fine gravel were encountered and as of the above date an area of 6400 square feet had been uncovered to a depth of from 1 to 15 feet with an average depth of 7½ feet. An estimated 1,800 cubic yards of alluvium had been removed and some 3,000 square feet of bed rock laid bare. The bedrock consists of two east-west trending hogbacks of peridotite. Veins of chrysotile in a minor concentartion were uncovered on the north flank of the south, east-west hogback and samples taken. The veins are from ¼ to 5/8 inches in thickness.

Stripping is now going forward in an easterly direction parallel to the chrysotile veins by bulldozer while hand shoveling is being employed to clear the narrow valley between the two peridotite hogbacks as it is here that the greatest amount of hydrothermal alteration appears to have taken place. Stripping is also being undertaken on the entire circumference of the original outcrop to ascertain if chrysotile veins are trending in other directions.

An areal map will be submitted with the November report.

F.F. Bonnaffe
Secretary-Treasurer
Star Mining Co.

DISTRIBUTION OF WAGES AND SALARIES FOR MONTH OF October, 1951

Name of operator Star Mining Co
Project No. DMA Idm E 171
Total contract amount $50.00
Government participation percent 90%

Type	Number	Man-Shifts	Rate	Total
Miners			$	$
Muckers				
Trammers				
Timbermen				
Pumpmen				
Hoistmen				
Surface				
Samplers				
Assayers				
[illegible] bosses				
Mechanics				
Electricians				
Blacksmiths				
Carpenters				
Drill runners				
Drill helpers				
Teamsters				
Manager				
Superintendent				
Engineers				
Geologists	1	2	$50.00	$100.00
Bookkeeper				
Foreman				
Clerks				
Stenographers				
[illegible]er				
Total	1	2	$50.00	$100.00

Note.—Show only that portion of supervisory, office, and engineering salaries that is chargeable to this project.

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Checked by E J Martin
Entered by
Approved by E J Martin
Remarks

16—64068-1

EXPLORATION UNIT COST AND PROGRESS REPORT FOR MONTH OF October, 1951

Name of operator Star Mining Co
Project No. DMA Idm E 171
Total contract amount $5000
Government participation, percent 90 %

Item	Costs					Progress				
	Wages [1] and salaries	Equipment [2]	Supplies	Other [3] Contract	Total	Unit	Units this month	Units previously reported	Units to date	Units authorized by contract
Drifting										
Crosscutting										
Raising										
Shafts										
Winzes										
Drill holes										
Overburden	100.00			630.00	730.00	cu.yd.	1800	-	1800	(est.)
Rehabilitation and preparation										
Geology and geophysics										
Trenching										
Sampling and assaying			17.50		17.50					
Roads and trails										
Test pits										
Other (specify)										
Totals	100.00		17.50	630.00	747.50		1800	-	1800	

[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.

16—64068-1 U. S. GOVERNMENT PRINTING OFFICE

FOR GOVERNMENT USE ONLY

Checked by E. J. Martin
Entered by
Approved by E. J. Martin
Remarks

FILE COPY
SURNAME:

Robertson
Stark

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C. 600

January 29, 1953

Memorandum

To: Mr. C. O. Mittendorf, Administrator

From: J. T. Robertson, Nonmetallic Minerals Division

Subject: A closing review of Contract No. Idm-E171

Docket No. DMA-1985X
Asbestos
Star Mining Company
Marinette, Wisconsin
Contract No. Idm-E171

Date of Contract: October 3, 1951
Terminated by agreement December 9, 1952
(No certification of Discovery)
Operator: Star Mining Company
Room 305, 122 West Washington Avenue
Madison, Wisconsin
Property: Herriman Farm - Asbestos Prospect
N½ SE¼ of Sec.24, T36N., R21E.
Marinette County, Wisconsin

Total Amount of Contract:	$5,000.00
Total Accepted Cost:	$3,358.51
Government's Share of Cost (90%)	$3,022.65

3/20/51 Received application dated August 16, 1951.
8/27/51 Referred to Field Team, Region V
10/3/51 Date of Contract - Amount $5,000.00
Surface stripping project.
12/12/51 Amendment No. 1 to permit use of some of funds for a magnetometer survey, approximately $450 used for this purpose.
3/3/52 Amendment No. 2 an extension of time for completion.
4/3/52 Memorandum to Operating Committee from Region V. Status of projects in regard to discoveries or developments. Contract No. Idm-E171 is a borderline case. Certification considered doubtful at this date.
6/19/52 Amendment No. 3 further extends completion date to September 3, 1952.
8/29/52 Memorandum from Region V project work completed August 29, 1952.
12/24/52 Received Operator's Final Report. (A comprehensive report written by F. F. Bowman, Jr., Geologist, Star Mining Company. Also separate magnetometer survey and maps.)
12/24/52 Received Field Team's Final Reports
(1) A report by Carl E. Dutton, Regional Geologist, USGS, and
(2) A report by Emmett J. Martin, Mining Engineer, USBM.
Field Team recommends no discovery certification.

l Audit Review: Final audit review by J. L. Chambers, Auditor, ted October 3, 1952. The review disclosed the following facts gard to the amount paid or to be paid the contractor.

Total cost as billed by Contractor		$3,358.51
Exceptions:		
By DMEA Finance Office	$-0-	-0-
Total Accepted Cost		$3,358.51

"The contract calls for a 90 per cent participation of exploration expenses by the United States Government. Therefore, payment to the contractor by the Government in the amount of $3,022.65 is considered valid and proper". (Quote from audit)

esume of Project Work:

A small outcrop of peridotite rock on the Herriman Farm showed small amounts of fair quality chrysotile in narrow seams, and, while it was not in commercial amounts, it seemed sufficient to warrant stripping some 10 to 20 feet of overburden which covered m most of the prospect area. First, a magnetometer survey was made to determine the extent of the peridotite rock. This work indicated that there is a plug-like mass of peridotite of oval cross-section about 300 feet long by 150 to 200 feet wide.

The peridotite area was then stripped, uncovering about 5,000 square feet; some 6,200 cubic yards of glacial overburden was removed. The best chrysotile showings were exposed in a zone about 6 feet wide by 50 feet long striking NE-SW through the west center of the plug. This zone contains less than 1% asbestos, and although most of it falls in Group 8 grade, there is some small amounts of good quality chrysotile in narrow seams.

The grade of ore - less than 1% is too low grade to be economically extracted. The Field Team and Operator concur in this and consider that no significant discovery has been made.

Project Unit Costs:

The money spent on the project is $448.25 for the magnetometer survey and the balance spent in removing overburden. Some 6,200 cubic yards of earth was removed at a unit cost of $0.47 per cubic yard.

Closing of docket:

A closing letter signed by the Administrator was transmitted to the Contractor_____, 1953 advising him that the Government did not intend to make a certification of discovery and that our books and records would be closed with respect to this project.

JTRobertson:gad 1/29/53
Copy to: Admr. R. File
Docket File
Mr. Houk

Jasper T. Robertson
Nonmetallic Minerals Division

P.P. 10-3-52

M[redacted]ALYSIS SHEET - DMEA PROJECT [redacted] ☑ Actual Cost

☐ Agreed Unit Costs

ed

Analysis as of 12-3-54
Incl. Voucher for Feb. 1952

Mining Company

Docket No. 1985

sc.

Commodity Asbestos

Idn-E No. 171

RATION	AUTHORIZED Units	AUTHORIZED Cost	COMPLETED Units	COMPLETED Cost	NET COST
Crosscutting					
Excavation	✓	$4400		2910.26	✓ 2910.26
ound Excavation					
nd Trails					
ng Equipment Purchased	✓	100		0	0
Rehabilitation & Repairs					
round Rehabilitation					
lding, Improvements, etc.					
(Specify) Magnetometer	✓	$500		448.25	✓ 448.25
Totals		5000		3358.51	3358.51

Prepared by L G H

OFFICIAL FILE COPY

Date	Surname	Code
6/3/68		120
		120
		220

Mr. Carl E. Dutton
U. S. Geological Survey
222 Science Hall
Madison, Wisconsin 53706

JUN 4 1968

Dear Carl:

The property you inquired about when you were in Washington recently was the following:

Herriman farm - Asbestos Prospect
N-½ SE-¼ Sec. 24, T. 36 N., R. 21 E.
Marinette County, Wisconsin

This prospect was the object of DMA Contract Idm-E-171 (Docket DMA 1985 X) with the Star Mining Company, Room 305, 122 West Washington Avenue, Madison Wisconsin. Contract date was October 3, 1951, and termination date was December 9, 1952. No certification of discovery was issued.

Total amount of contract	$5,000.00
Total accepted cost	3,358.51
Government's share of cost (90%)	3,022.65

Hope this information is what you wanted, and that it is not too late to serve your needs.

Sincerely yours,

Harold Kirkemo, Assistant Chief
Office of Minerals Exploration

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

HKirkemo/bsl 6/3/68

FILE COPY
SURNAME:

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C. 600

FEB 4 1953 BW.

Robertson
Isaacs
Gottschalk
Hoffman
Chamberlin
Johnson

Star Mining Company
Room 305
122 West Washington Avenue
Madison, Wisconsin

Subject: Docket No. DMA-19851 - Asbestos
Star Mining Company
Marinette County, Wisconsin
Contract No. DMe-8171

Attention: Mr. F. F. Brasser, Jr.

Gentlemen:

This is with reference to the subject exploration project contract between the Star Mining Company and the Government.

The final audit of the contract expenditures and the final reports of the Operator and the Field Team have been received and accepted by this Administration. Of the total amount of $5,000 approved under the contract, the amount of $3,358.51 was expended and the Government's share of 90% or $3,022.65 was disbursed. There were no unused materials, supplies or equipment to be disposed of for the joint account of the Operator and the Government.

Although the results of the exploration project were unfavorable, the work was completed in a satisfactory manner. Under the circumstances it is not our intention to make any certification of discovery or development which will create a lien against the project property, and 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 his records and accounts for a period of three years after the completion or termination of this contract.

Your interest in the Exploration Program of the Defense Minerals Exploration Administration is appreciated. If you should wish to undertake exploration on other structures or chrysotile showings in this district, we shall be pleased to receive an application from you.

Sincerely yours,

C. O. Mittendorf (for)
Administrator

F.F. 2.4.53

JTRobertson:gad 1/30/53
Copy to: Admr. R. File
Docket File
Field Team, Region V
Dr. Boules, 3516
Mr. Norton, G-232 GSA Bldg.
Mr. Beck

1985

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

Region V
2908 Colfax Avenue South
Minneapolis 8, Minnesota

December 24, 1952

Memorandum

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

From: Executive Officer, Field Team, Region V

Subject: DOCKET DMEA 1985x, Contract Idm E-171 [Asbestos] Star Mining Co. - Final Reports

Here are the original and three copies each of the Government Field Team and operator's final report on the subject project.

Although there are minor discrepancies in the interpretation of grades and the economics of mining, if such were conceivably undertaken, the final conclusion is that no certification is evident.

Final accounting has already been transmitted to you.

A. B. Needham
Executive Officer
Field Team, Region V

Attachments

Three copies of operator's final report received in M&F. and retained - 12/30/52- for distribution. bl

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 30 1952

Reviewed by
DMEA OPERATING COMMITTEE
1-2-53
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 2 0 1952

Final Report by Field Team
Region V

FINAL
F.T. REP.

Docket DMEA-1985x - Star Mining Company
Room 305
112 W. Washington Avenue
Madison, Wisconsin

Commodity - Asbestos

Carl E. Dutton, Regional Geologist, USGS
Emmett J. Martin, Mining Engineer, USBM

December 1952

Reviewed by
DMEA OPERATING COMMITTEE
1-2-53
(date)

Geological report on exploration of asbestos prospect on Herriman property, Marinette County, Wisconsin

Carl E. Dutton

U. S. Geological Survey

Docket no. DMEA 1985X
Contract no. Idm-E171
Commodity: Asbestos

Excavation at the asbestos prospect on the Herriman property (N½SE¼ sec. 24, T. 36 N., R. 21 E.) has neither discovered nor prepared for development any deposits of marketable asbestos or other mineral commodity.

Removal of 10 to 20 feet of alluvium further exposed several bedrock knobs that are part of the irregular upper surface of a peridotite mass (fig. 1). The asbestos is in narrow veins and groups of veins in the altered parts of the peridotite. The asbestos is the cross fiber type and appears to be of good quality, but thus far the information about the total amount of asbestos and its distribution is not especially encouraging. The average over-all sample from the rock would probably contain approximately 1 percent asbestos, and although the amount might be increased to about 4 percent by selective mining, the cost would probably be prohibitive because of the thinness of the veins (1/4 to 1 inch but mostly less than 3/8 inch) and group of veins.

A magnetometer survey of the prospect area indicated that the peridotite is probably a plug-like mass of oval cross-section that is a little more than 300 feet long and about 150 to 200 feet wide.

The personnel of the Star Mining Company realize that considerable further exploration is necessary to appraise this prospect adequately and tried unsuccessfully to interest a number of producers and consumers of asbestos in drilling or other testing at this site.

Inasmuch as work thus far has not revealed or indicated a deposit of marketable asbestos or other mineral commodity and because much additional exploration will be required to warrant any possibility of favorable appraisal of this prospect, the project is not recommended for certification in accordance with item 15 of the Exploration Contract Form MF-200 (June 1951) for Docket No. DMA 1985X and Idm-E171.

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

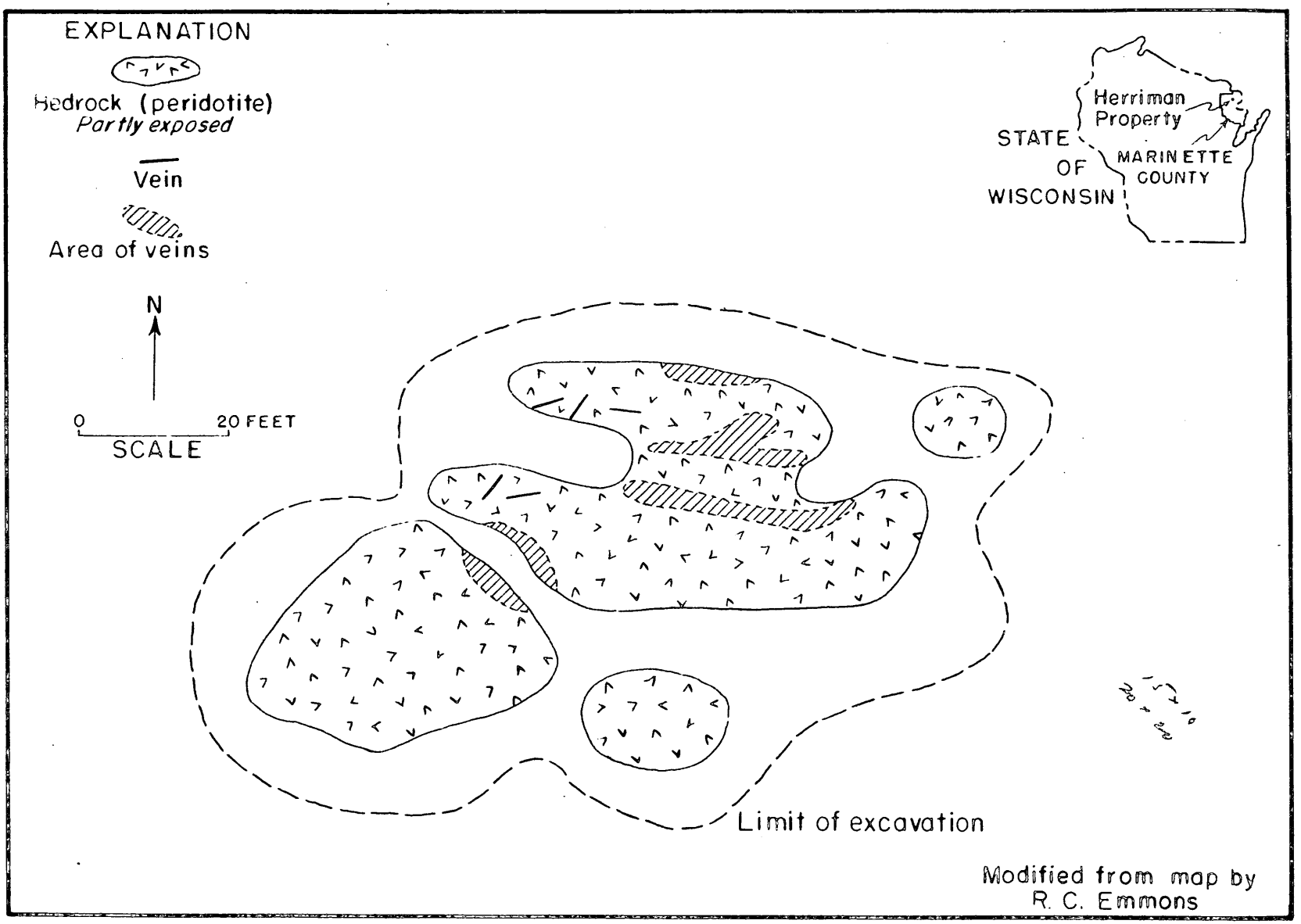


Figure 1. Generalized geologic map of asbestos prospect on Herriman property, Marinette County, Wisconsin

Mining report on the exploration of an asbestos occurrence on Herriman farm in Marinette County, Wisconsin.

Emmett J. Martin
U. S. Bureau of Mines

Docket DMEA-1985x
Contract Idm-E171
Commodity - Asbestos

SUMMARY AND CONCLUSIONS

The Star Mining Co. has exposed by stripping an occurrence of asbestos on the Herriman farm in Marinette County, Wis. The asbestos occurs in widely scattered veinlets in an altered peridotite plug.

The occurrence is too low in grade and small in tonnage to be of economic or strategic interest; therefore, it is recommended that no certification of discovery or development be made.

PROPERTY AND LOCATION

The property is in Marinette, Wis., and is comprised of all of the N1/2 of SE1/4, sec. 24, T. 31 N., R. 21 E., except the portion occupied by the houses and buildings and a plot of 5 acres immediately surrounding the said buildings. The farm is approximately 20 miles west of Nathan, Mich., and is reached from the west by traveling about 2 miles south on U. S. Highway 141 from its intersection with U. S. Highway 8 near Pembine, Wis., to the intersection at Dixon school, of County Trunk Highway Z, an oiled road, then traveling about 9 miles east on Highway Z to the Herriman farm. The excavation is on the south side of the road.

MINERAL OCCURRENCE

The exposed outcrops in the immediate vicinity of this project are peridotite. The overburden, which is sandy, varies in thickness from

1 to 20 feet. Stripping has exposed some altered peridotite in which asbestos occurs as chrysotile in small veinlets. These veinlets have very little extension, either longitudinal or vertical, and for the most part are of knifeblade thickness and are from 5 to 20 feet apart. There appeared to be only 3 or 4 veinlets that contained asbestos of good quality. These varied in width from 3/8 inch to 3/4 inch, a maximum of 10 feet in length, and apparently very little vertical extension.

A magnetometer survey by the operators has indicated that the peridotite occurs as a plug about 200 feet by 300 feet in cross section. Roughly, about 5,000 square feet of the plug has been exposed and most of it is visually barren of asbestos. The best showing is in a zone about 6 feet wide and 50 feet long striking about northeast and southwest through the west center of the plug. This zone would run far under 1 percent and the asbestos would average poor quality, probably falling in Group 8. The deposit has not been sampled. Some specimens which indicated the occurrence of a good grade asbestos were taken. The low grade and small tonnage makes it uninteresting economically or strategically.

THE PROJECT

The actual operations of the project were well carried out; 6,217 cubic yards of overburden were stripped for a total cost of $2,901.16, or $0.47 per cubic yard. The depth of overburden varied from 0 feet to more than 20 feet. Forty-six acres were surveyed by magnetometer; 159 stations were set, the interval being 50 feet in the area of maximum intensity and 100 feet in the area of lesser intensity. The total cost of this was $448.25.

Star Mining Co.
Omega 1985

FINAL REPORT

Exploration Contract I-dm-E 171
Dated October 3, 1951

Project location: Exploration for asbestos was carried on in the North one-half of the Southeast one-quarter of Section 24, Township 36 North, Range 21 East, Marinette County, Wisconsin. More specifically the location is on County Trunk Highway Z, eleven miles east of Pembine, Wisconsin and twelve miles west of Carney, Michigan. Pembine is served by the Chicago, Milwaukee and St. Paul Railroad; Carney is served by the Chicago and North Western Railroad.

Geology: The original outcrop consists of an asbestos bearing, serpentinzed, peridotite, exposed in a flat, loess covered, alluvium bend, north of the Menominee River. The peridotite belt runs in a northwest-southeast direction and is underlain by a northward dipping basic front of granite. The granite is exposed a mile or more to the south, but the whole area is well glaciated and much of the basic geology must be interpreted from such outcrops as are exposed in the surrounding surface of glacial debris.

Work performed: Starting in October of 1951 some 6,200 cubic yards of glacial over-burden were stripped from around the outcrop of asbestos bearing peridotite. A pit approximately 200 feet by 300 feet in size was developed some 15 feet deep at the center. This exposed the worn, glaciated surface of the peridotite and made possible some study of the number and size of the chrysotile veins. (See map attached) While areas of vein concentration were uncovered it appears that not over one percent of the rock mass as a whole is asbestos. The veins vary in size from microscopic to three-fourths of an inch in width with the

wide veins tending to be widely separated. In length the veins extend up to twenty feet. In February of 1952 a magnetometer study was conducted to delineate the probable areal extent of the peridotite plug. This survey indicates an areal extent of some 150 feet by 300 feet.

Ore analysis: Hand cobbed samples of the ore gave the following laboratory analysis:

Number 2 Crude	2.8%
6 D Fibre	3.3
5 D Fibre	5.0
Gauge	88.9
	100.0%

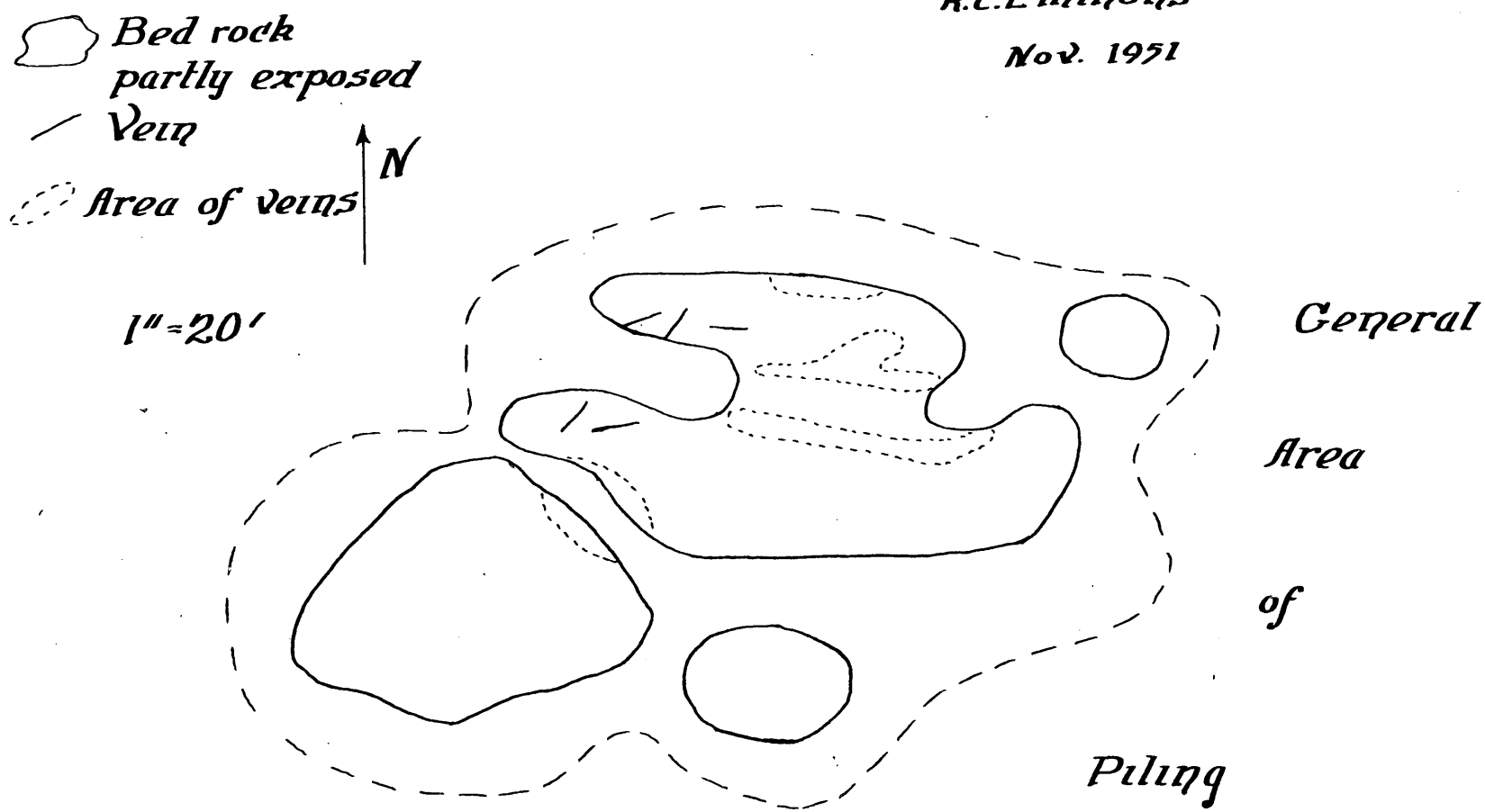
Based on prices quoted as of the date of this report such asbestos, extracted, F.O.B., Quebec is worth $245.00 a ton.

Estimated ore: No drilling was conducted and the depth of the peridotite plug is, therefore, unknown. But even assuming a depth of 300 feet and a possible 1,000,000 tons of rock and asbestos, a concentration of only one percent chrysotile makes the deposit unworkable at present costs. The ore is far from sufficient to warrant the cost of extraction by present methods at the site and it is too far distant from the Arizona and Vermont extraction plants to warrant shipment. Without drilling for depth no estimate of the ore available can be made.

F. F. Bowman, Jr., Geologist
Star Mining Company
December 17, 1952

Herriman Property

R.C. Emmons
Nov. 1951



REPORT ON THE MAGNETOMETER SURVEY OF THE HERRIMAN PROPERTY, MARINETTE COUNTY, WISCONSIN

General Satement

The purpose of the investigation was to determine if a study of the magnetic field associated with an outcropping peridotite body located on the Herriman property (Sec. 24, T.36N., R.21E.), Marinette County, Wis. could be utilized (1) to delimit the body where covered by glacial till, and (2) to infer the existence or absence of similar additional bodies in the adjacent area from a study of the magnetic anomaly pattern.

The field work was conducted during the period February 4 to February 9 by Mr. Edward Thiel and Mr. William A. Black, graduate students in the Department of Geology of the University of Wisconsin.

The instrument employed was a vertical component Askania magnetometer with a sensitivity of 34.6 gammas per scale division. One-hundred-fifty-nine stations were occupied, covering an area of approximately 46 acres. In the regions where the magnetic variation was observed to be small, the station interval was 100 feet. In the region of the exposed peridotite body, where a large anomaly was evident, stations were established on a fifty foot grid. The magnetic map, station locations, magnetic profiles, and field data are attached as an appendix to this report.

Instrumentation and Calibration

The Askania magnetometer employed in this investigation measures the intensity of the vertical component of the earth's magnetic field. The magnetic system within the instrument consists of two magnets mounted on the sides at a non-magnetic block with a mirror on the upper surface. The system is suspended on a quartz knife edge oriented at right angles to the magnetic meridian. The center of gravity of the moving system is displaced both horizontally and vertically from the knife-edges. Thus the moving system is acted upon by two torques: (1) A magnetic torque resulting from the reaction of the vertical component of the earth's field on the poles of the magnets, and (2) an opposing gravitational torque acting at the center of gravity of the system. The magnitude of the vertical component will determine the amount of deflection of the magnets from a position of horizontality. This is measured with a telescope and scale arrangement, and expressed in scale divisions.

To convert from scale divisions to standard physical units (gammas) requires calibration of the instrument. This is accomplished by placing a Helmholtz coil about the instrument. The magnetic field at the center of the coil can be calculated accurately from the dimensions and the measured electric current through the coil.

Two such calibrations were undertaken in the field -- one preceding the survey, and one at its conclusion. The average calibration obtained was 34.6 gammas per scale division.

Location of Stations

Magnetometer stations were located by pacing. Bearings with a Brunton compass were utilized to some extent; for these a system of "back-sighting" was devised so as to correct for anomalous declinations.

Station spacing was determined by the magnitude of magnetic variation encountered, and varied from 50 foot intervals to intervals exceeding 100 feet. After the establishment of a primary network, areas where more control was necessary could be re-entered.

A map giving the location and number of each station accompanies this report.

Method of Survey and Reduction of Data

When an attempt is made to map features giving rise to small magnetic anomalies, it is necessary to correct the magnetic readings for the effects of (1) diurnal variation of the earth's magnetic field, (2) temperature changes, and (3) the normal variation of magnetic intensity over the surface of the earth. The survey was conducted so that each of these factors could be evaluated and the magnitude of the effects compared with the anomalies observed to see if the time and expense involved in making the corrections would be justified.

The greatest difference in reoccupation of a station throughout the survey amounted to 3.6 scale divisions or 125 gammas. The maximum diurnal variation for any one day was 118 gammas, and the average difference on reoccupation of base stations, which was done at about 2½ hour intervals for diurnal control, was 61 gammas.

The temperature coefficient for the instrument is -3.14 gammas/degree Centigrade. The maximum variation in instrument temperature during the week of the survey was 20.8° C., giving a maximum effect of 66 gammas, and a maximum correction of about 35 gammas (since the average instrument temperature was taken as a standard.)

The normal variation in intensity of the vertical component for the area of the survey is about 8 gammas per mile as determined from U. S. Coast & Geodetic Survey maps. The maximum effect of regional variation is therefore 3 gammas.

Because of the very large anomalies observed in connection with the peridotite, and because the final magnetic map has a contour interval of 500 gammas, the above corrections are insignificant in their effect on the magnetic contours. Therefore, no correction for the above three effects was made in reducing the data of this survey. The data for these corrections are however available, should it ever become desirable to apply them.

The data for all stations is given in Appendix I.

Theory of Magnetic Anomalies*

The distortion of the earth's magnetic field by a magnetizable body is illustrated in Figure 1. A concentration of the lines of induction occurs within the body, and a rarefaction immediately outside the body. The concentration is the resultant of the original field plus the field due to the magnetized body. The rarefaction is the resultant of the original field minus the field due to the polarized body, for the lines of force due to the polarized body have a direction opposite to those of the original field in this region. Therefore, if a body is magnetized for any reason, it has a field around it that causes a distortion or anomaly in the normal field in its vicinity.

The polarization or magnetization (magnetic moment per unit volume) is the physical property with which we are concerned in magnetic prospecting.

Figure 1. -- Distortion of magnetic field by a magnetizable body.

It assumes the same importance as does density in gravitational prospecting. Just as the gravitational effect of a homogeneous body at a distance depends on its size, shape, and density, so the magnetic effect of a homogeneously magnetized body depends on its size, shape and the intensity and direction of its magnetization.

Figure 2 illustrates qualitatively the vertical magnetic effect of a polarized sphere for a region with a magnetic field inclined 45 degrees with the vertical. The solid upper line of (a) represents the contribution of the negative upper hemisphere, and the lower solid line the contribution of the positive lower hemisphere. The dotted line is the net effect. The resulting contour map is indicated in (b). The existence of a weak negative to the north of the high is evident.

*Partly after Nettleton, Geophysical Prospecting for Oil, McGraw-Hill, 1940.

Figure 2. -- Qualitative picture of vertical magnetic effect of a sphere polarized at angle of 45 degrees with the vertical: (a) Profile; (b) Contour map.

The interpretation of a given magnetic anomaly is never unique in the absence of control other than magnetics. An infinite number of mass distributions with different polarizations may be fitted to a single anomaly pattern. Where other control is available, through drilling or postulated on the basis of geological considerations, it may be possible to obtain unique quantitative answers.

Results of Investigation

The results of the investigation are embodied in the accompanying magnetic contour map. The values on the map are relative; that is, the survey has not been tied to a station whose absolute vertical intensity is known. To convert to approximate absolute values, 57,125 gammas should be added to every station value, giving an average vertical component intensity for the area of about 57,625 gammas to agree with the value as interpolated from regional Coast and Geodetic Survey maps.

The very strong local anomaly, exceeding 5500 gammas, is immediately evident. It has a limited areal extent, with maximum extension in a ENE-WSW direction. The pattern appears to indicate an intrusive plug.

It will be noted that the anomaly is displaced to the south of the exposed peridotite area. This is perhaps to be expected in that the magnetic lines of force are inclined to the surface of the earth, and the effect of a buried magnetic pole in the northern hemisphere will be detected to the south of the mass (see figure 2).

A weak negative magnetic anomaly can be observed to the north of the high anomaly area. This negative is evident in the appearance of values of 500 gammas and below, and in the northward bending of the 1000 foot contour. As indicated in the previous section, such a negative anomaly area is to be expected as a result of a positively induced pole at depth.

The highest values obtained lie to the southwest of the exposed peridotite (station 125). No sizable anomalies occur other than the one associated with the exposed peridotite body.

Two sections, at right angles, have been drawn through the anomaly in the direction of its maximum and minimum extent. Both sections show an extremely sharp rise in intensity, similar to the effects encountered over buried casing in producing oil fields. The very sharp local high is caused by the proximity of a magnetic pole to the surface. Although the magnetic body is exposed at the surface, the pole will be buried beneath the surface. The situation is analogous to a bar magnet whose poles are located at some distance from the ends of the magnet.

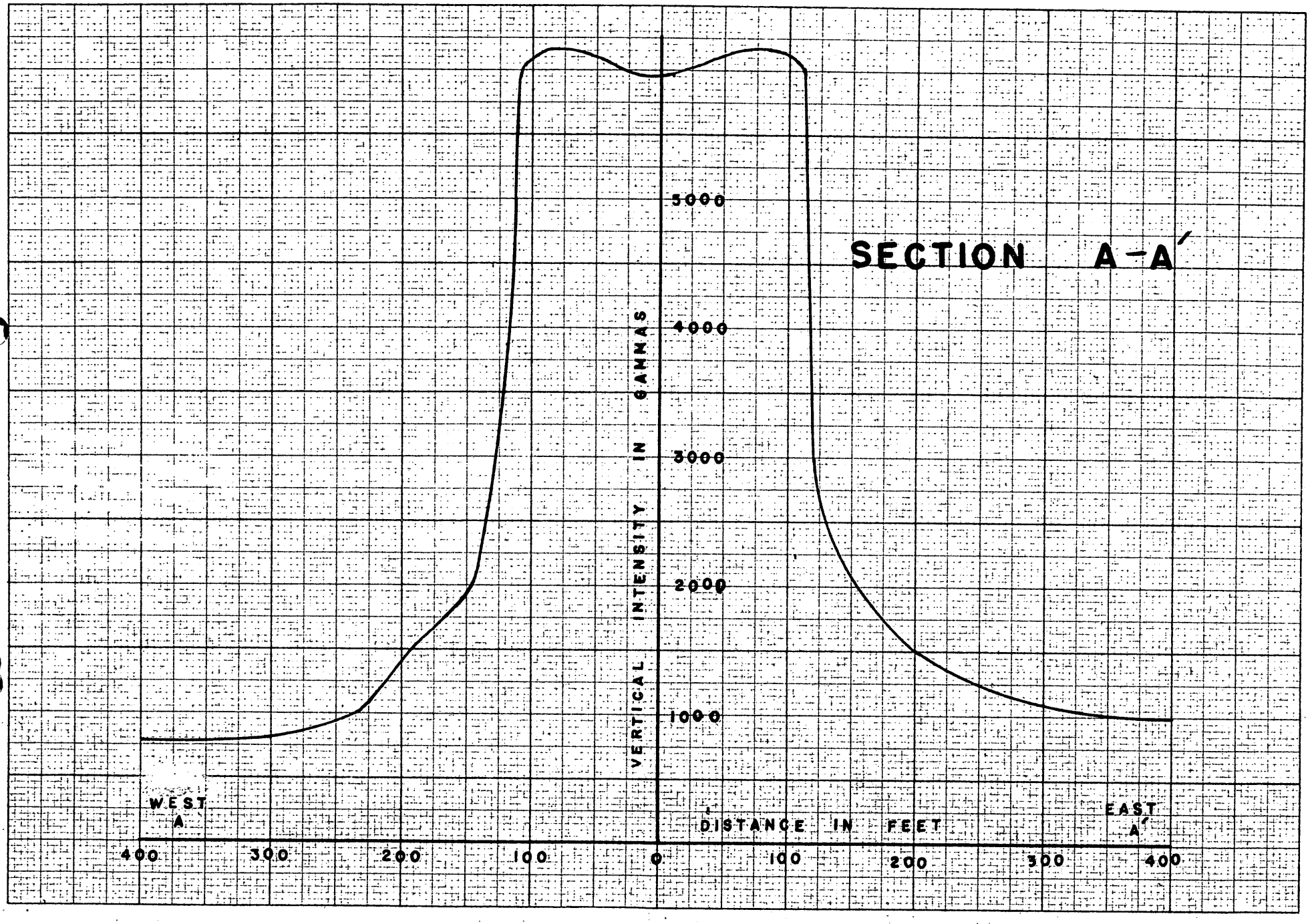
Conclusions:

1. A sharp local anomaly exceeding 5500 gammas is associated with the peridotite body. The form of the anomaly suggests a peridotite plug of oval cross section whose major axis lies in a ENE-WSW direction.

2. The anomaly is displaced to the south with respect to the exposed area, and exhibits a weak negative to the north which is consistent with the physical theory for the effect of a vertical magnetic body in these latitudes.

3. The highest anomalous values obtained lie to the southwest of the present exposure.

4. There is no indication, in the area covered by this survey, of magnetized peridotite in addition to that associated with the single sharp anomaly.



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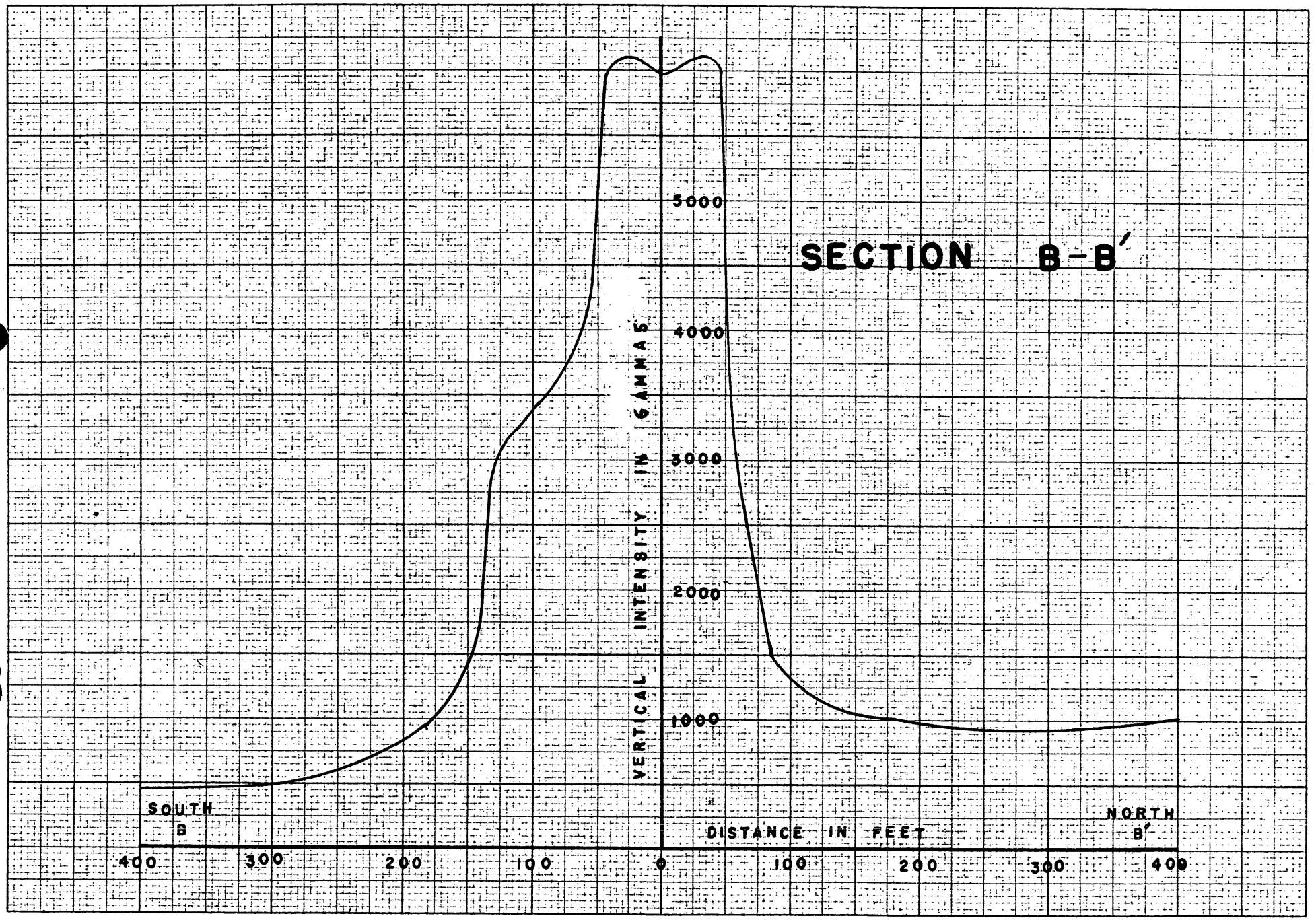

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APPENDIX I -- Data for Magnetometer Stations

Z is vertical intensity in scale divisions. To convert to gammas, multiply by 34.6.

The accompanying contour map has a contour interval of 14.5 scale divisions or 500 gammas. In drawing the map the zero contour was chosen so as to pass through the point Z = 34 scale divisions.

To convert to approximate absolute values, add the constant factor of 57,125 gammas to all station values.

February 4, 1952

Station	1	2	3	4	5	6	7	8	9
Time	14:30	14:45	15:00	15:15	15:25	15:40	15:50	16:05	16:30
Temp.	0.0		0.0		0.0	0.0	0.0	+1.0	
West	27.4	16.4	12.1	17.9	16.6	7.7	5.4	47.1	46.9
East	28.8	19.1	13.6	17.9	18.9	10.5	8.1	49.4	48.5
Average	28.1	17.8	12.8	17.9	17.8	9.1	6.8	48.2	47.7
Magnet	43.3	43.3	43.3	43.3	43.3	43.3	43.3	0	-.6
D.V.									
5+6+7	71.4	61.1	56.1	61.2	61.1	52.4	50.1	48.2	47.1
K.A.									
.T									
Reg.									
B.C.									

February 5, 1952

Station	1			1	10	11	12	13	14
Time	17:10			7:40	8:05	8:15	8:25	8:35	8:45
Temp.				+2.5	+2.5	+ 3.0	+ 2.5	+2.0	+2.0
West	27.4			29.3	46.1	48.5	51.8	55.7	53.3
East	30.0			32.0	48.0	50.4	54.1	58.1	55.4
Average	28.7			30.6	47.0	49.4	53.0	57.9	54.4
C.F.	43.3			43.3	0	0	0	0	0
D.V.									
5+6+7	72.0			73.9	47.0	49.4	53.0	57.9	54.4
K.A.									
.T									
Reg.									
B.C.									

Station	15	16	17	18	19	20	1	21	22
Time	8:55	9:05	9:20	9:30	9:40	9:50	10:00	10:40	10:50
Temp.	+2.0	+2.0	+2.0	+2.0	+2.0		+2.0	+1.0	+1.0
West	60.0	66.8	64.7	61.5	62.1	66.2	27.6	39.2	44.6
East	62.0	69.3	66.5	63.5	65.3	68.2	30.4	41.6	46.3
Average	61.0	68.0	65.3	62.5	63.7	67.2	29.0	40.4	45.4
C.F.	0	0	0	0	0	0	43.3	0	0
D.V.									
5+6+7	61.0	68.0	65.3	62.5	63.7	67.2	72.3	40.4	45.4
K.A.									
.T									
Reg.									
B.C.									

Station	23	24	25	26	10	27	28	29	30
Time	11:00	11:15	11:25	11:35	11:45	12:00	12:10	12:20	12:30
Temp.	0.0	0.0	0.0	0.0	+1.0	+ 0.5	+ 0.5	0.0	+0.5
West	45.0	42.6	39.4	41.3	44.3	43.7	48.5	55.8	51.8
East	48.6	44.4	42.5	44.2	46.2	46.8	51.0	58.4	54.3
Average	46.8	43.5	41.0	42.8	45.2	45.2	49.8	57.1	53.0
C.F.	0	0	0	0	0	0	0	0	0
DV.									
5+6+7	46.8	43.5	41.0	42.8	45.2	45.2	49.8	57.1	53.0
K.A.									
.T									
Reg.									
B.C.									

Station	31	32	33	16	34	35	36	37	38
Time	12:40	13:15	13:45	14:00	14:25	14:55	15:20	15:30	15:50
Temp.	0.0	+ 0.5		+ 1.0	-0.5	+ 1.0	+ 2.0	+ 2.0	+ 2.0
West	58.5	76.8	78.6	20.7	20.2	29.5	53.5	35.2	52.3
East	63.0	79.6	79.6	22.4	21.7	31.2	54.8	43.0	54.5
Average	60.8	78.2	79.1	21.6	21.0	30.4	54.2	39.1	53.4
C.F.	0	0	43.3	43.3	183.6	183.6	0	0	0
D.V.									
5+6+7	60.8	78.2	122.4	64.9	204.6	214.0	54.2	39.1	53.4
K.A.									
.T									
Reg.									
B.C.									

February 6, 1952

Station	39	40	20			40	41	42	43
Time	15:55	16:05	16:20			7:55	8:10	8:20	8:35
Temp.	+ 2.0	+ 2.5							
West	50.2	46.7	67.5			53.7	49.0	50.9	65.6
East	52.9	48.8	69.2			53.7	51.9	54.1	66.4
Average	51.6	47.8	68.4			53.7	50.4	52.5	66.0
C.F.	0	0	0			0	0	0	0
D.V.									
5+6+7	51.6	47.8	68.4			53.7	50.4	52.5	66.0
K.A.									
.T									
Reg.									
B.C.									

Station	60	61	62	63	64	65	66	67	68
Time	12:20	12:25	12:30	12:35	12:40	12:45	12:50	12:55	13:00
Temp.	- 0.2	- 0.4	- 0.5	- 0.8	- 0.7	+ 0.5	+ 0.6	+ 0.8	+ 0.7
West	45.3	40.4	37.6	38.3	51.0	55.0	55.0	57.9	65.5
East	46.1	43.0	39.6	40.4	52.9	57.0	57.0	59.6	67.5
Average	45.7	41.7	38.6	39.4	52.0	56.0	56.0	58.8	66.5
C.F.	0	0	0	0	0	0	0	0	0
D.V.									
5+6+7	45.7	41.7	38.6	39.4	52.0	56.0	56.0	58.8	66.5
K.A.									
.T									
Reg.									
B.C.									

Station	68	41	69	70	71	72	73	74	75
Time	14:05	14:15	15:00	15:05	15:10	15:20	15:25	15:30	15:35
Temp.	+ 5.0	+ 4.3	+ 4.9	+ 5.5	+ 5.2	+ 4.5	+ 4.1	+ 4.8	+ 5.0
West	63.9	46.0	61.0	56.5	58.2	39.1	38.8	35.7	42.1
East	65.9	48.0	63.0	57.8	60.2	42.6	35.6	37.4	44.5
Average	64.9	47.0	62.0	57.2	59.2	40.4	37.2	36.6	43.3
C.F.	0	0	0	0	0	0	0	0	0
D.V.									
5+6+7	64.9	47.0	62.0	57.2	59.2	40.4	37.2	36.6	43.3
K.A.									
.T									
Reg.									
B.C.									

Station	76	77	58	79	80	81	82	83	84
Time	15:40	15:50	16:00	16:10	16:25	16:30	16:35	16:40	16:45
Temp.	+ 4.9	+ 4.4	+ 4.1	+ 3.8	+ 2.9	+ 2.4	+ 1.8	+ 1.0	+ 0.8
West	40.1	39.5	44.9	41.1	41.9	46.9	47.5	46.5	52.1
East	42.0	41.5	46.0	43.5	43.6	49.0	49.5	48.0	55.7
Average	41.0	40.5	45.5	42.3	42.8	48.0	48.5	47.2	53.9
C.F.	0	0	0	0	0	0	0	0	0
D.V.									
5+6+7	41.0	40.5	45.5	42.3	42.8	48.0	48.5	47.2	53.9
K.A.									
.T									
Reg.									
B.C.									

February 7, 1952

Station	85	86	87	41			87	88	89
Time	16:50	16:55	17:00	17:05			8:40	8:50	8:55
Temp.	+ 0.1	0.0	-0.9	-0.9			-6.8	-7.6	-8.3
West	42.1	70.1	56.5	48.0			61.2	45.9	36.7
East	43.5	72.1	58.5	50.5			63.2	47.9	38.7
Average	42.8	71.1	57.5	49.0			62.2	46.9	37.7
C.F.	0	0	0	0			0	0	0
D.V.									
5+6+7	42.8	71.1	57.5	49.0			62.2	46.9	37.7
K.A.									
.T									
Reg.									
B.C.									

Station	90	91	92	93	94	95	96	58	97
Time	9:00	9:05	9:15	9:30	9:45	9:50	10:05	10:20	10:30
Temp.	-9.2	-9.0	-10.8	-9.0	-8.9	-9.3	-9.7	-8.0	-7.7
West	33.2	32.1	35.7	44.7	39.7	34.1	34.1	43.9	42.7
East	35.2	33.4	37.7	46.5	41.5	35.5	35.9	45.9	44.9
Average	34.2	32.8	36.7	45.6	40.6	34.8	35.0	44.9	43.8
C.F.	0	0	0	0	0	0	0	0	0
D.V.									
5+6+7	34.2	32.8	36.7	45.6	40.6	34.8	35.0	44.9	43.8
K.A.									
.T									
Reg.									
B.C.									

Station	98	99	100	101	102	103	104	105	106
Time	10:40	10:50	11:00	11:10	11:30	11:35	11:40	11:50	11:55
Temp.	-7.1	-6.8	-6.1	-6.0	-5.4	-5.1	-4.9	-4.8	-4.5
West	40.4	49.0	39.8	38.0	57.2	50.5	52.7	48.2	54.9
East	42.4	50.4	41.7	38.6	58.4	51.5	54.9	50.6	56.3
Average	41.4	49.7	40.8	38.3	57.8	51.0	53.8	49.4	55.6
C.F.	0	0	0	0	0	0	0	0	0
D.V.									
5+6+7	41.4	49.7	40.8	38.3	57.8	51.0	53.8	49.4	55.6
K.A.									
.T									
Reg.									
B.C.									

Station	41	107	108	109	110	111	112	41		
Time	12:30	14:25	14:50	14:55	15:15	15:20	15:25	15:35		
Temp.	-3.1	+3.5	+1.5	+0.5	0.0	0.0	0.0	0.0		
West	48.9	13.3	22.7	29.7	21.9	3.1	43.5	46.6		
East	49.5	15.2	24.3	32.2	22.6	5.4	43.8	47.1		
Average	49.2	14.2	23.5	31.0	22.2	4.8	43.6	46.8		
C.F.	0	102.9	183.6	183.6	43.3	43.3	0	0		
D.V.										
5+6+7	49.2	117.1	207.1	214.6	65.5	58.1	43.6	46.8		
K.A.										
.T										
Reg.										
B.C.										

February 8, 1952

Station	34	113	114	115	116	117	118
Time	8:20	8:30	8:45	8:50	9:05	9:15	9:30
Temp.	+2.0	-3.0	-3.0	-3.0	-3.0	-3.0	
West	19.5	8.4	35.9	5.0	31.9	47.6	19.4
East	23.4	10.0	30.9	8.2	33.2	48.3	19.7
Average	21.4	9.2	33.4	6.6	32.6	48.0	19.6
C.F.	183.6	102.9	121.1	121.1	43.3	43.3	183.6
D.V.							
5+6+7	205.0	112.1	154.5	127.7	75.9	91.3	203.2
K.A.							
.T							
Reg.							
B.C.							

Station	119	120	121	122	123	34	124	125	126
Time	9:40	9:55	10:00	10:05	10:20	10:35	10:50	11:00	11:10
Temp.	-3.0	-3.0		-2.0	-1.0	-1.0	-1.0	-1.0	-1.0
West	59.0	47.7	47.0	20.4	17.0	23.7	40.3	76.2	3.2
East	60.5	49.0	47.8	20.5	18.1	25.3	41.5	76.7	6.3
Average	59.8	48.4	47.4	20.4	17.5	24.5	40.9	76.4	4.8
C.F.	43.3	0	0	43.3	183.6	183.6	183.6	183.6	121.1
D.V.									
5+6+7	103.1	48.4	47.4	63.7	201.1	208.1	224.5	260.0	125.9
K.A.									
.T									
Reg.									
B.C.									

Station	127	128	129	130	20	131	132	133
Time	11:15	11:25	11:45	11:55	12:10	13:45	13:55	14:05
Temp.	-1.0	-1.0	-1.0		-0.7	+2.9	+2.4	+1.9
West	33.0	49.7	25.0	11.6	68.0	58.8	57.9	65.5
East	34.0	51.4	27.5	14.8	68.8	56.8	58.8	66.5
Average	33.5	50.6	26.2	13.2	68.4	57.8	58.4	66.0
C.F.	43.3	43.3	43.3	43.3	0	0	0	0
D.V.								
5+6+7	76.8	93.9	69.4	56.5	68.4	57.8	58.4	66.0
K.A.								
.T								
Reg.								
B.C.								

Station	134	135	136	137	138	139	140	141	142
Time	14:10	14:15	14:25	14:35	14:40	14:45	14:50	14:55	15:05
Temp.	+1.8	+1.3	0.0	-0.1	-0.2	-0.2	-0.2	+0.2	+0.5
West	76.5	54.6	68.8	70.3	36.1	10.0	54.7	48.0	47.9
East	76.9	55.4	70.1	72.6	38.6	11.5	56.7	50.0	49.3
Average	76.7	55.0	69.4	71.4	37.4	10.8	55.7	49.0	48.6
C.F.	0	43.3	183.6	43.3	43.3	43.3	0	0	0
D.V.									
5+6+7	76.7	98.3	253.0	114.7	80.7	54.1	55.7	49.0	48.6
K.A.									
.T									
Reg.									
B.C.									

Station	57	143	144	145	146	147	148	149	150
Time	15:15	15:20	15:30	15:40	15:45	15:50	15:55	16:00	16:05
Temp.	+0.2	+0.5	+0.6	+1.1	+1.4	+1.2	+1.1	+1.1	+0.7
West	44.5	42.3	43.5	44.5	40.0	39.1	47.4	55.2	69.2
East	46.3	44.5	44.5	46.5	42.0	40.4	49.4	55.2	71.1
Average	45.4	43.4	44.0	45.5	41.0	39.8	48.4	55.2	70.2
C.F.	0	0	0	0	0	0	0	0	0
D.V.									
5+6+7	45.4	43.4	44.0	45.5	41.0	39.8	48.4	55.2	70.2
K.A.									
.T									
Reg.									
B.C.									

February 9, 1952

Station	44	20	151	152	153	154	155
Time	16:15	9:15	9:25	9:30	9:35	9:38	9:42
Temp.	+0.7	-1.0	-0.5	+0.1	0.0	+0.3	+0.3
West	64.1	70.5	60.5	64.1	67.5	74.4	36.2
East	66.3	72.6	62.5	65.5	68.2	75.6	38.5
Average	65.2	71.6	61.5	64.8	67.8	75.1	37.4
C.F.	0	5.0	0	0	0	0	43.3
D.V.							
5+6+7	65.2	66.6	61.5	64.8	67.8	75.1	80.7
K.A.							
.T							
Reg.							
B.C.							

Station	156	157	158	159	160	20
Time	9:45	9:48	9:50	9:53	9:56	10:01
Temp.	+0.3		+0.5		+0.4	+0.4
West	40.8	37.2	19.6	22.2	18.1	22.5
East	42.2	38.2	21.6	24.2	19.9	23.9
Average	41.5	37.7	20.6	23.2	19.0	23.2
C.F.	43.3	43.3	43.3	43.3	43.3	43.3
D.V.						
5+6+7	84.8	81.0	63.9	66.5	62.3	66.5
K.A.						
.T						
Reg.						
B.C.						

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

~~WASHINGTON 25, D.C.~~
Region V
2908 Colfax Avenue South
Minneapolis 8, Minnesota

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 15 1952

Mr. Hearne

December 12, 1952

Memorandum

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

From: Executive Officer, Field Team, Region V

Subject: Docket DMEA-1985x, Contract Idm-E171
Star Mining Company

Here are the original and two copies of notice of mutual termination of the project.

Both the Government Field Team report and Operator's fin al geological and engineering report are yet to be received here and transmitted to you.

Final accounting is as follows:

Total amount of contract	$5,000.00
Government's share (90%)	4,500.00
Total amount spent	3,358.51
Government's share (90%)	3,022.65
Amount available to General Fund	1,477.35

A copy of the termination has been transmitted to regional fiscal section and a copy retained by the operator and this office.

A. B. Needham
Executive Officer
Field Team, Region V

Attachment

ABNeedham:dg
cc Dutton
Hill
Region V
files
df

cal 12/15

FILE COPY
SURNAME:

Houk

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C. 600

NOV 24 1952

Mr. A. B. Needham
Executive Officer, DMEA
Field Team, Region V
2908 Colfax Ave., South
Minneapolis 8, Minnesota

Subject: Docket No. DMA-1935X - Asbestos
Star Mining Company
Marinette County, Wisconsin
Contract No. Idm-X171

Dear Mr. Needham:

Reference is made to Docket No. DMA-1935X, Star Mining Company, Marinette County, Wisconsin, Contract No. Idm-X171.

We note from your memorandum of August 29, 1952 that the work was completed on this project August 29, 1952, but we have not received any indication that the formal termination of the contract has been made to the applicant, nor do we have a final field team or final operator's report.

Sincerely yours,

(signed) FRANK E. JOHNSON

Chairman, Operating Committee

11-24-52

Approved:

J. H. Hedges

Member, Bureau of Mines

G. R. Finkel, Jr.

Member, Geological Survey

LGHouk:gad 11/21/52

Copy to: Admr. R. File
Docket File
Operating Committee (2)
Dr. Bowles, 3516
Mr. Norton, G-232 GSA Bldg.
Mr. Houk

C
O
P
Y

Region V
2908 Colfax Avenue South
Minneaplis 8, Minnesota

August 29, 1952

Memorandum

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

From: Executive Officer, Field Team, Region V

Subject: Completed exploration projects

For your information, the following projects have been completed as to field work. Operator's final engineering and geological reports and the Government's final report have not been received on them; therefore, final official notice on termination and balance of funds available have not been made to you.

Docket	Contract	Operator	Date completed
812a	E-99	Black Hills Keystone	8/3/52
1145	E-11	Dodgeville - Jones	5/17/52
1227	E-50	Vinegar Hill - Hancock	5/1/52
1315	E-178	J. E. & L. M. Miller	8/20/52
1560	E-42	Dodgeville - Weigle	3/31/52
1562	E-168	Dodgeville - Pearson	6/3/52
1985	~~E-171~~	Star Mining Co.	8/29/52
2078	E-263	L. D. Pitts	8/29/52
2392	E-352	Mineral Mills - Glenwood	7/16/52

As operator's reports, Government reports, and audit reports are made available to us, we will complete the projects officially and transmit notice with balance of funds available to you.

This serves only to keep you abreast of field activities.

(signed) A. B. Needham

A. B. Needham
Executive Officer
Field Team, Region V

OFFICE OF THE ADMINISTRATOR

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS ADMINISTRATION

~~WASHINGTON 25, D. C.~~

Region V
2908 Colfax Avenue South
Minneapolis 8, Minnesota

June 25, 1952

Memorandum

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

From: Executive Officer, Field Team, Region V

Subject: Amendment No. 3 - Contract Idm-E171, Docket DMEA-1985x Star Mining Company

Here are the original and two copies of the above amendment, extending the completion date to September 3, 1952.

As indicated in my memorandum of March 24, 1952, transmitting Amendment No. 2 for an extention to July 3, the company was to have two prominent asbestos producers inspect the property for possible acquisition and production. To date, the Star Mining Co. has not yet completed their negotiations and expect the U. S. Gypsum Co. representatives to visit the property in June. They will need a little more time beyond July 3 to work with U. S. Gypsum on the proposition; consequently, the extension. Further exploration to complete the contract might be necessary in view of negotiations.

One copy of the amendment has been retained by the operator, one by this office, and a copy has been transmitted to the Regional fiscal section.

A. B. Needham
Executive Officer
Field Team, Region V

Attachments 3
ABNeedham:dt
cc Dutton
Hill
Region V
files
df

DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration
JUN 27 1952

SES 7-9-52

April 8, 1952

RMBL - 1985

Mr. F. F. Bowman
Secretary
Star Mining Company
303 Power & Light Building
Madison 3, Wisconsin

Dear Mr. Bowman:

Reference is made to your letter of March 28 on asbestos. Answers to your questions are as follows:

1. The only mill in Eastern United States now processing chrysotile asbestos is that of Vermont Asbestos Mines near Eden, Vermont. There are 3 mills at Globe, Arizona, and 7 other mills at mines within a radius of 50 or 60 miles from Globe, Arizona. Obviously, all of these mills are too remote from your deposit to justify ore shipment.

2. A mill that would effectively separate, fiberize and classify fiber even on a small scale would probably cost much more than $25,000.

3. There is a good market for chrysotile asbestos of good quality in fiber lengths of one-eighth inch or more.

I understand that DMEA has granted your company a small exploratory loan to determine the extent and character of your deposit. I would suggest that no steps be taken to arrive at a solution of the milling problem until the exploratory work is completed. You may then be in a position to evaluate the extent of reserves, and to determine whether they are large enough to justify building a mill.

Sincerely yours,

Oliver Bowles, Commodity Specialist
Construction and Chemical Materials Branch

OBowles:pa

Copy to: Files
Const. & Chem. Mat. Br.
Dr. Bowles
Mr. Lawrence Houk

Taken from Memo. 4/3/52 from Executive Officer, Region V to Operating Committee; Status of projects in re. to discoveries.

Docket DMA-1985X, Contract Idm-E171, Star Mining Co. This is a borderline case. Representatives of two companies are due to appraise the find in April or May. It will be interesting to learn their reaction before resuming further work. This could or could not be certified. For the present, we should say doubtful.

The foregoing is the status of all projects to April 1, 1952.

COPY

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

IN REPLY REFER TO: 1935

File Dwear Star Mining Co. contract

April 1, 1952

Geol Magnetometer

Office Memorandum

To: J. J. Norton, through O. N. Rove

From: Carl E. Dutton

Subject: Asbestos project in northeastern Wisconsin

In reply to your recent inquiry, stripping prior to winter removed an overburden that ranged from 0 to 25 feet and exposed a serpentine mass about 200 feet long and 40 feet wide. A magnetometer survey indicated that most of the serpentine mass has been uncovered.

The average over-all sample from the rock would probably contain 1½ to 4 percent asbestos, according to the methods of selective mining that might be used. A selected sample was tested by Johns-Mansville with the following results:

Grade of Asbestos	Percent of Asbestos in Total sample	Percent per grade of asbestos content
2	2.8	25.2
6 D	3.3	29.9
5 D	5.0	45.4
	11.1	100.5

Further activity on this deposit seems unlikely, but inquiries as to possible facilities for treatment in Milwaukee and Chicago areas are being made.

CED

cc: Shride
Chidester
Cady
Houk

OFFICE OF THE ADMINISTRATOR

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION
~~WASHINGTON 25, D.C.~~
Region V
2908 Colfax Avenue South
Minneapolis 8, Minnesota

March 24, 1952

Memorandum

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

From: Executive Officer, Field Team, Region V

Subject: Amendment No. 2 - Docket DMA-1985x, Contract Idm-E171 Star Mining Company

Here are the original and three copies of the subject amendment extending the completion date of the project because (1) the company proposes to have two prominent asbestos producers look at the property for probably exploitation in April or early May, and (2) the snow is so deep further excavation is not possible.

One copy of this amendment has been retained by the operator and by this office. A copy is also being transmitted to our Regional fiscal section.

A. B. Needham
Executive Officer
Field Team, Region V

Attachments 4

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 26 1952

OFFICE OF THE ADMINISTRATOR

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION
~~WASHINGTON 25, D.C.~~
Region V
2908 Colfax Avenue South
Minneapolis 8, Minnesota

March 20, 1952

Memorandum

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

From: Executive Officer, Field Team, Region V

Subject: Operator's Monthly Progress Report for February 1952
Docket DMA-1985x, Contract Idm-E171
Star Mining Company

Here are two copies of the subject Operator's Monthly Progress Report as processed for payment for your files.

R. B. Needham
Executive Officer
Field Team, Region V

Attachments 2

DEFENSE MINERALS ADMINISTRATION WASHINGTON, D.C.
MAR 24 8 25 AM '52

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION
~~WASHINGTON 25, D.C.~~
Region V
2908 Colfax Avenue South
Minneapolis 8, Minnesota

February 28, 1952

Star Mining Company
122 W. Washington Avenue
Madison, Wisconsin

Gentlemen:

This is to advise that the completion date of your DMEA contract Idm-E171, dated October 3, 1951, and amended December 20, 1951, is April 3, 1952.

We trust you propose to complete the proposed work by that time.

Very truly yours,

A. B. Needham
Executive Officer
Field Team, Region V

ABNeedham:dt

cc Dutton
DMEA (Wash) 2
Region V
files
df

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 3 - 1952

A.a.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

~~WASHINGTON, D.C.~~
Region V
2908 Colfax Avenue South
Minneapolis 8, Minnesota

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN 25 1952

January 23, 1952

Memorandum

To: Frank E. Johnson, Chairman, Operating Committee, DMEA, Interior Building, Washington 25, D. C.

From: Executive Officer, DMEA Field Team, Region V

Subject: Operator's Monthly Progress Report for Docket DMA-1985x, Contract Idm-E171
Star Mining Company
122 W. Washington Avenue
Madison, Wisconsin

Here are two copies each of monthly reports for October, November, and December 1951 for the subject docket and contract.

This project is just recessed because of weather. It is expected operations will get underway again about April or May 1952.

A. B. Needham
Executive Officer
DMEA Field Team, Region V

Attachments 6

OFFICE OF THE ADMINISTRATOR

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION
~~WASHINGTON 25, D.C.~~
Region V
2908 Colfax Avenue South
Minneapolis 8, Minnesota

January 3, 1952

Memorandum

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

From: Executive Officer, DMEA Field Team, Region V

Subject: Amendment to Docket DMA-1985x, Contract Idm-E171
Star Mining Company
Madison, Wisconsin

Here are the original and three copies of an amendment to the subject contract, extending the completion date because of inclement weather and including some necessary magnetometer surveying.

Copies have been retained by the company and by this office.

A. B. Needham
Executive Officer
DMEA Field Team, Region V

Attachments 4

400
FILE COPY
SURNAME:

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

Selfridge
F.E. Johnson

Contract Service Section
General Accounting Office
Washington 25, D. C.

Re: Docket DMA 1985X
Star Mining Company
Exploration Project Contract
Idm-E171
Amended: October 22, 1951

Gentlemen:

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

Sincerely yours,

(signed) FRANK E. JOHNSON (for)

Acting Director,
Production Expansion Division

Enclosure - 1

GCSelfridge/hmj
Typed: 10-30-51

cc to: Reports and Records
Adm. Reading File
Mr. Mittendorf/Olund
Mr. Selfridge
Docket

FILE COPY
SURNAME:

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

600
F E Johnson

Memorandum October 30, 1951

TO: Chief, Finance Section

FROM: F. E. Johnson
Acting Director
Production Expansion Division

SUBJECT: Docket DMA-1985X, Contract Idm-E171
Star Mining Company
Amendment, Oct. 22, 1951

Please forward to the Regional Finance Office the attached copy of an Amendment to the subject contract.

(signed) FRANK E. JOHNSON (fw)

N.S
R+R

FEJohnson/fw

cc: Reports & Records
PED
Docket
Mr. Selfridge

FILE COPY
SURNAME:
400

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

OCT 26 1951

Johnson

A.E.E.

Contract Service Section
General Accounting Office
Washington 25, D. C.

Re: Docket DMA 1985-X
Exploration Project Contract
Idm-E-171
Star Mining Company
Madison, Wisconsin

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,

(signed) FRANK E. JOHNSON (for)

Acting Director,
Production Expansion Division

ENCLOSURE-1
GCSelfridge/hmj
Typed: 10-22-51

8 + 10/26

cc to: Reports and Records
Adm. Reading File
Messrs. Mittendorf, Olund
Mr. Selfridge
Docket

Mr. Lo Effinger

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION
~~WASHINGTON 25, D.C.~~
Region V
2908 Colfax Avenue South
Minneapolis 8, Minnesota

DEPARTMENT OF THE INTERIOR
RECEIVED
OCT 29 1951
Defense Minerals Administration,
Production Expansion Division.

October 25, 1951

Memorandum

To: Frank E. Johnson, Acting Director, Production Expansion Division, Defense Minerals Administration, Washington 25, D. C.

From: Executive Officer, DMA Field Team, Region V

Subject: Docket DMA-1985x, Idm-E171, Star Mining Company, Madison, Wisconsin

Here are the original and three copies of an amendment to the subject contract, which you will please attach to your file copies of the contract.

One copy of the amendment has been sent to the Star Mining Company and a copy retained in this office.

A. B. Needham
Executive Officer
DMA Field Team, Region V

Attachments

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT 29 1951

400
FILE COPY
SURNAME:

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

AIR MAIL

OCT 19 1951

Selfridge
Johnson

a.r.e.

Mr. San W. Orr
Thomas, Orr, Isaksen & Werner
Room 305
122 West Washington Avenue
Madison 3, Wisconsin

Re: DMA-1985X, Asbestos
Approval of sub-contract

Dear Mr. Orr:

This is to acknowledge your letter of October 16, 1951 enclosing a copy of the Agreement between the Star Mining Company and Mr. Aden Potier, a sub-contractor who will be employed to do the surface stripping authorized in the subject contract.

We are forwarding your letter and the copy of the Agreement to Mr. A. B. Needham, Executive Officer, Region V, Defense Minerals Administration, 2908 Colfax Avenue, South Minneapolis 8, Minn., for approval of the Agreement.

Sincerely yours,

(signed) FRANK E. JOHNSON

Acting Director
Production Expansion Division

GCSelfridge/jem
10-18-51

JF 10/19

cc to: Adm. Reading File
Reports & Records
Messrs. Mittendorf, Olund
Mr. Selfridge
Field Team, Region V
Docket

DOC COPY
SURNAME:

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

OCT 18 1951

AIR MAIL

Selfridge
Jordan

A.E.C.

Mr. A. B. Needham
Executive Officer, Region V
Defense Minerals Administration
2908 Colfax Avenue, South
Minneapolis 8, Minnesota

Re: DMA-1985X, Asbestos
Approval of sub-contract

Dear Mr. Needham:

Forwarded herewith is a letter from the Star Mining Company dated October 16, 1951, with a copy of an agreement for a sub-contract.

The Company seeks approval of the agreement in accordance with Section 4 of the Project Contract. Will you please execute the necessary approval in the manner suggested in Circular Letter No. 8, dated August 13, 1951 and forward the original and three copies to this office for attachment to the copies of the Project Contract previously sent here.

Sincerely yours,

(signed) FRANK E. JOHNSON (for)

Acting Director
Production Expansion Division

J 7/10/19

Enclosure

GCSelfridge/jem
10-18-51

cc to: Adm. Reading File
Reports & Records
Messrs. Mittendorf, Clund
Mr. Selfridge
Field Team, Region V
Docket

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
2908 Colfax Avenue South
Minneapolis 8, Minnesota
Region V

OF THE INTERIOR
RECEIVED
OCT 19 1951
Defense Minerals Administration,
Production Expansion Division.

DEFENSE MINERALS ADMINISTRATION WASHINGTON, D. C.
OCT 19 1 38 PM '51

DEFENSE MIN
ADMINISTR
WASHINGTO
OCT 19 1 3

October 17, 1951

Memorandum

To: C. O. Mittendorf, Director, Production Expansion Division, Defense Minerals Administration, Interior Building, Washington 25, D. C.

From: Executive Officer - DMA Field Team, Region V

Subject: Star Mining Company - DMA Docket 1985-X
Contract No. Idm-E-171
Exploration Contract - Asbestos

Enclosed herewith are the original and three copies of the subject exploration contract which have been signed by the applicant, together with Exhibit "A" (2 pages), copies of the Landlord's Subordination Agreement, and a map.

One signed completed copy of the contract has been retained for our files.

E. J. Martin

E. J. Martin for
A. B. Needham
Executive Officer - DMA Field Team,
Region V

Enclosures:

OFFICIAL FILE COPY

To	Init.	Date

400

FILE COPY
SURNAME:

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

Selfridge
Mittendorf
A.B. Parsons

AIR MAIL

Mr. A. B. Needham
Executive Officer, Region V
2908 Colfax Avenue
South Minneapolis 8, Minnesota

OCT 1 1951 A. E. C.

Re: Docket No. DMA-1985X, Asbestos
The Star Mining Company
The Herriman farm
Exploration Project Contract
Idm-E171

Dear Mr. Needham:

Enclosed herewith are the original and five copies of the subject Exploration Contract, which I have signed for the Government, together with Exhibit "A" (2 pages), a copy of the Landlord's Subordination Agreement and one map.

These are to be presented to the Company for signature by a duly authorized official thereof. If the terms and conditions of this contract meet with the approval of the Company, one copy is to be given to him and one copy retained for your files. Please return the original and three copies to this office for distribution.

If any part of this contract does not have the approval of the Company, the original and all copies of the contract are to be returned to this office together with the proposed changes for consideration.

Sincerely yours,

C. O. Mittendorf (J. H.) 10/11

C. O. Mittendorf, Director
Production Expansion Division

Enclosures:

APPROVED:

Parsons
for Chairman, Coordinating Committee

Member, Bureau of Mines

Member, Geological Survey

GCSelfridge/jem
10-3-51

cc to: Adm. Reading File
Reports & Records
Docket
Messrs. Mittendorf, Olund
Mr. Moon
Mr. Selfridge
Field Team, Reg. V

FILE COPY
SURNAME:

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

AIR MAIL

OCT 4 1951

Mr. Sam W. Orr
Thomas, Orr, Isaksen & Werner
Room 305
122 West Washington Avenue
Madison 3, Wisconsin

Re: DMA-1985, Asbestos
The Star Mining Company

Dear Mr. Orr:

This is to acknowledge receipt of your letter of September 27, 1951 regarding the status of the above matter.

The application has been delayed temporarily because of the lack of a subordination on the Old Age Pension Lien. However, this matter has been decided satisfactorily and we are pleased to inform you that final decision concerning the application will be made this week.

Sincerely yours,

C. O. Mittendorf

C. O. Mittendorf, Director
Production Expansion Division

GCSelfridge/jem
10-3-51

cc to: Adm. Reading File
Reports & Records
Docket
Messrs. Mittendorf, Olund
Mr. Selfridge
Field Team, Reg. V

Mr. Selfridge CODE 400

LAW OFFICES
OF
THOMAS, ORR, ISAKSEN & WERNER
ROOM 305
122 WEST WASHINGTON AVENUE
MADISON 3, WISCONSIN

HERBERT H. THOMAS
SAN W. ORR
LEON E. ISAKSEN
JOSEPH G. WERNER
TRAYTON L. LATHROP

PHONE 6-3164

DEFENSE MINERALS ADMINISTRATION WASHINGTON, D.C.

OCT 2 10 51 AM '51

October 1, 1951

DEPARTMENT OF THE INTERIOR
RECEIVED
OCT 3 1951
Defense Minerals Administration,
Production Expansion Division.

United States Department
Of the Interior
Defense Minerals Administration
Washington 25, D. C.

Attention Mr. C. O. Mittendorf, Director
Production Expansion Division

In re: DMA-1985X,
Asbestos

Gentlemen:

Your letter of September 28 addressed to Mr. Frank A. Jones, President of the Star Mining Company, has been referred to me for reply.

If you insist on this subordination agreement, we will endeavor to get it. However, assuming that we can cut the legal red tape involved and find authority somewhere for the county to execute Form MF-201, that result cannot be accomplished before October 30 at the earliest, since the county board does not meet until that date. Obviously, with that much delay involved, the exploration cannot be made this fall.

I respectfully suggest, for your consideration, that because of the nature of the lien it has no bearing on the granting of this application. If asbestos is found in commercial quantity, quite obviously the lien will be paid immediately. If it is not found, the United States Government will not have a claim anyway. In either event, the Old Age lien of the county would not be a factor of any importance.

If you see your way clear to waive this requirement, please let us know and we will try to complete the exploration before the freeze-up. If not, so advise us and we will see what can be done during the winter to obtain the subordination agreement which you request.

Very truly yours,

THOMAS, ORR, ISAKSEN & WERNER

By Sam W. Orr

SWO:df

AIR MAIL
SPECIAL DELIVERY

FILE COPY
SURNAME:

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

AIR MAIL

Selfridge
Mittendorf

SEP 28 1951

Mr. Frank A. Jones, President
Star Mining Company
Room 305
122 West Washington Avenue
Madison 3, Wisconsin

Re: Docket No. DMA-19851, Asbestos

Dear Mr. Jones:

Before final approval can be given to your exploration contract it will be necessary that you secure, and forward to us, a mortgagee's subordination agreement from Marinette County covering the old age pension lien.

Enclosed herewith are seven copies of the subordination form MF-201. Please return six of the completed copies to us.

Sincerely yours,

C. O. Mittendorf (J. K.) 9-28

C. O. Mittendorf, Director
Production Expansion Division

Enclosures
7 copies of MF-201

GCSelfridge/jem
9/25/51

cc to: Adm. Reading File
Reports & Records
Messrs. Mittendorf, Olund
Field Team, Reg. V
Mr. Selfridge
Docket

ERALS
ATION
N, D. C.
09 PM '51

Fr. Delfridge

DEFENSE MINERALS
ADMINISTRATION
WASHINGTON, D. C.

LAW OFFICES
OF

THOMAS, ORR, ISAKSEN & WERNER

SEP 28 2 09 PM '51

HERBERT H. THOMAS
SAN W. ORR
LEON E. ISAKSEN
JOSEPH G. WERNER
TRAYTON L. LATHROP

ROOM 305
122 WEST WASHINGTON AVENUE
MADISON 3, WISCONSIN

PHONE 6-3164

DEPARTMENT OF THE INTERIOR
RECEIVED
SEP 28 195
Defense Minerals Administration,
Production Expansion Division.

September 27, 1951

OFFICIAL FILE COPY

To	Init.	Date
Foo	O.E.C.	9-28
210		

United States Department
of the Interior
Defense Minerals Administration
Washington 25, D. C.

Attention Mr. James A. Barr, Sr.

Re: DMA--1985
Asbestos
Star Mining Co.

Gentlemen;

Today's radio reported two inches of snow in Northern Michigan last night.

Please advise me of the status of the above-captioned matter, as we are very anxious to complete this project this fall, if possible.

Very truly yours,

THOMAS, ORR, ISAKSEN & WERNER

By San W. Orr.

SWO:df

AIR MAIL

Mr. de Lefridge

140

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

September 24, 1951

DEPARTMENT OF THE INTERIOR
RECEIVED
SEP 24 1951
Defense Minerals Administration,
Production Expansion Division.

Memorandum

To: Director, Production Expansion Division

From: General Counsel

Subject: Star Mining Company exploration contract -- Docket No. DMA-1985X

I am unable to approve the proposed exploration contract in this case until the following is accomplished:

1. The changing of the description of the land given in paragraph 2 to that set forth in the lease and the assignment which are attached to the file.

2. The securing of a mortgagee's subordination agreement from Marinette County covering the old age pension lien.

Your file is returned herewith.

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

Attachment

Item 2 was reconsidered and cancelled in keeping with decision and memorandum of Oct. 2, 1951 concerning leases and subordinations

G. Selfridge.

SEP 1 3 1951

Memorandum:

To: Director, Production Expansion Division
Defense Minerals Administration

From: Director, Supply Division
Defense Minerals Administration

Subject: Recommendation for Contract Approval

Name of Applicant: Star Mining Co.
Room 305, 122 West Washington Ave.,
Madison 3, Wisc.

DMA No. 1985X

Commodity: Asbestos

Amount Requested: $5,000.00

Amount Approved: $5,000.00

Government Participation: 90 % $ 4,500.00

Tom Lyon

Tom Lyon

FILE COPY
SURNAME:

Washburn
Burns

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

370

9-12-51

Memorandum

To: Chief, Industrial Minerals Branch, DMA

From: Chief, Programming and Planning, DMA

Subject: DMA-1985X, Star Mining Company
Harriman Farm, ~~Lafayette County~~, Wisconsin
Commodity: Asbestos
Amount approved: $5,000

The prospective available supply of asbestos is far short of meeting defense requirements. Consequently, it is highly desirable that exploration for new domestic deposits be stimulated by any reasonable Government assistance to private interests. Any exploration project that holds promise of finding significant new reserves, merits consideration by Defense Minerals Administration.

A. B. Parsons

RWASKEY:mp
9-11-51
cc: Mr. Mittendorf
Mr. Barr
Mr. Norton
Mr. Parsons
DMA Docket Files

IN REPLY REFER TO:

G-MD-JJN

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

September 11, 1951

Memorandum

To: Robert Waskey, Defense Minerals Administration

From: J. J. Norton, U. S. Geological Survey

Subject: Application DMA-1985, from the Star Mining Company for asbestos exploration in northeastern Wisconsin.

The recent letters from Carl Dutton to me and from the Star Mining Company to Mr. Barr provide sufficient information to warrant making a contract to spend $5,000 exploring the asbestos prospect leased by the Star Mining Company in northeastern Wisconsin. No field examination is necessary or desirable because it seems quite certain that the field team would see nothing but a small outcrop of serpentine from which most or all of the asbestos has long since been removed.

Mr. Dutton's letter points out that Mr. E. J. Lyons was one of the persons who examined this property for the Wisconsin Geological Survey in 1943. You may wish to talk with him at Extension 2443. Mr. Lyons agrees that a small exploration contract can be written for this prospect without first making a field examination.

J J Norton

J. J. Norton

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
~~WASHINGTON XXXXXX~~
Room 213, Science Hall
Madison 6, Wisconsin

c
o
p
y

September 7, 1951

Mr. J. J. Norton
U. S. Geological Survey
General Services Building
Washington 25, D. C.

Dear Jim:

In reply to your letter of September 4 concerning Exploration Project DMA-1985 in Marinette County, Wisconsin, and in accordance with our telephone conversation of September 7, the following information is intended as a supplement to the letter from Frank Bowman of the Star Mining Company to James A. Barr, Sr., copy of which you will also receive.

It is very doubtful if sufficient additional information would be obtained by a field examination of the subject area to warrant the expenditure of time and travel that would be required.

USGS x2443

The area was examined in the summer of 1943 by R. C. Emmons and E. J. Lyons for the Wisconsin Geological Survey, and they report that veins of chrysotile asbestos less than one-half inch thick were present in the margin of one small outcrop of serpentine rock about 40 feet in diameter. Very little representative material in place is now observable at the outcrop, but the present resident on the property has specimens that were obtained from the margin by former explorations that were 6 to 8 feet deep. The outcrop is located in a cultivated field on an alluvial plain of the Menominee River, which is one-fourth mile away. Inasmuch as the alluvial overburden is extensive--and probing has indicated that its thickness away from the immediate vicinity of the outcrop is in excess of 11 feet--the difficulties of readily obtaining further pertinent information are apparent.

The presence of asbestos veins in this outcrop is well established, but initial appraisal of the occurrence will require a removal of sufficient overburden to determine if possible, first, the depth to the deposit and, second, the area of the deposit. This stage of exploration can probably be done best by bulldozing operations, and it is believed that the applicant would plan and execute these operations as expeditiously as possible. A further statement concerning the intended operations is contained in Mr. Bowman's letter.

Sincerely,

(sgd.) Carl

Carl E. Dutton
Regional Geologist.

122 West Washington Avenue
Madison, Wisconsin
September 7, 1951

AIR MAIL

Department of Interior
Defense Minerals Administration
Washington 25, D. C.

DEFENSE MINERALS ADMINISTRATION WASHINGTON, D.C.
SEP 10 10 49 AM '51

ATTENTION: Mr. James A. Barr, Sr.
Chief Industrial Minerals Branch

Gentlemen:

Re: DMA--1985

We have your letter of August 30. In addition Dr. Carl E. Dutton has talked to us about a letter which he received dated September 4 from Mr. J. J. Norton. We will endeavor to answer the questions raised in both letters in this one reply, a carbon copy of which will be sent to Mr. Norton. In order that you may better understand our problems, we wish to state at the outset that a plan of prospecting granting us some latitude for deviation is required. All that we know at the present time is that there is an outcropping of asbestos in the middle of an alluvial plain. All attempts to rod (probe with steel rods) the area have given only uncertain information because of the presence of boulders in the subsoil. We do know, as a result of the rodding, that the overburden is more than 11 feet in depth. Our financial situation is not such that we would care to assume the risks of this exploration without Government assistance. Consequently, we want to be sure that the Government portion of the expense will be forthcoming and do not wish to jeopardize the receipt of Government funds on the ground that we have deviated from a specific plan. You will appreciate that the ordinary concept of a trench is an excavation with perpendicular sides. You will also appreciate that depending upon the depth of the overburden, trenching with a bulldozer may require that the top width of the trench be 30 feet in order to have a bottom width of 6 feet. It is for that reason that we hesitate to submit a prospecting plan calling for trenches.

With the foregoing in mind, you are advised that our prospecting plan is to work the bulldozer in a general Southeasterly and Northwesterly direction along the Northerly and Northeasterly sides of the outcropping. The first excavation shall be made as close to the outcropping as possible. The width of that excavation will depend on the depth of the overburden. Since we have no way of knowing at this time whether the overburden is 12 feet or several hundred feet in depth, we cannot even be sure of the top width of the first trench. We feel that the Government's protection lies in the fact that we are contributing to the cost and certainly do not intend to spend money recklessly. If the first excavation is encouraging, we will widen the bottom of the excavation for the purpose of attempting to determine how far the deposit extends from the original outcropping. It will thus be seen that whether we remove the overburden from the entire 80 feet by 80 feet area shown on Figure 2 attached to our original application will depend (1) On the depth of the overburden immediately adjacent to the outcropping and (2) On the results obtained from the first excavation. Likewise, it is entirely possible that the result of the initial exploration may disclose sufficient information to Dr. Emmons as to result in circling the entire outcropping with an exploratory trench. We would like to be free to do so, if, in his judgment, such a course was deemed desirable.

Your next inquiry as to our basis for estimating a need of 384 hours of bulldozer time. This estimate was based on the assumption that all work desired could be completed in 60 days. We, accordingly, estimated 48 eight-hour days of bulldozer time. Of necessity, the estimate is more or less arbitrary because we do not know the depth of the overburden.

You inquire what work will be done in addition to bulldozing. We anticipate using common labor at approximately $1 per hour for the purpose of cleaning off the bed rock with hand tools. The other work that will be done will be drilling and blasting in the event we find an asbestos deposit in the bed rock. The purpose of the blasting will be to obtain samples of asbestos that has not been exposed to weathering in order that they may be analyzed and their characteristics determined.

In accordance with your request, we are this day sending you under separate cover samples of the asbestos taken from the outcropping. This portion of our letter completes the answers to your letter of August 30. In my telephone conversation with you on September 6, you stated the need for sufficient information to enable you to arrive at a unit cost for removing

the overburden. It is our recollection that the particular bulldozer which is available for the work has an eight-foot blade. Possibly it may be a seven-foot blade but we believe we were informed that it was an eight-foot blade. Local inquiry from Madison contractors has established that in the kind of sand and boulders to be encountered on the Herriman farm we could expect a bulldozer of this size to move approximately 10 cubic yards per hour a distance of 100 to 150 feet. It will thus be seen that our unit cost will be approximately 90 cents per cubic yard.

We regret that we cannot be more specific in our prospecting plan and we appreciate that the general nature of our plan may well give rise to difficulties in drafting the contract. We respectfully suggest that for the job at hand the contract might well provide an appropriation of $5,000 to be used in excavating in the area of the outcropping for the purpose of ascertaining whether more asbestos is to be found under the overburden.

We now turn to the questions raised in the letter of Mr. Norton.

I believe the first question asking in substance for a prospecting plan is answered by the information set forth above.

The second question asks for an estimate of the depth of the overburden recognizing that the estimate must be in part an "expert" guess. Dr. Emmons is of the opinion that the overburden varies in thickness from 200 feet on the South to 15 feet North of the outcropping. It should be stressed however, that the only known fact is that the overburden is in excess of 11 feet on the East, North and West.

In question 3 Mr. Norton suggests a letter amending the original application to follow the plan of prospecting for stage 2. The original thought was that if we found asbestos in the bed rock adjacent to the outcropping that we would follow out the veins until we ran out of asbestos or ran off of the leased property. Following out the veins was to be stage 2 of our plan. The cost of doing so, however, will obviously depend (1) On the depth of the overburden at which the asbestos is encountered and (2) On the number of directions in which we have to follow the veins. Accordingly, we are not in a position to give a specific plan for stage 2.

In question 4 Mr. Norton requests information relating to the bulldozer on the ground that the $9 hourly rate is low. We concede that the rate is low but believe that there is a legitimate explanation. In the neighborhood of Pembine where the bulldozer operator lives there would

appear to be relatively small demand for bulldozer services and accordingly the price is adjusted to the demand. The $9 figure is an actual quotation for the work made by the bulldozer owner after the nature of the work and its location had been explained to him. The size of the bulldozer is indicated above. The make of the machine is unknown to us but if material can be ascertained and the information supplied. It is suggested by question 5 that our $1 per hour rate for common labor is low. Again, because Marinette County is sparsely settled and not industrialized, we believe that labor can be obtained for approximately that figure, more or less.

We believe that two laborers will be adequate for our purposes.

In question 6, Mr. Norton questions the $50 per day consultant's fee and requests information as to the duties of the consultants. The amount of the fee is obviously in line with the training and experience of both Dr. Emmons and Mr. Bowman. Mr. Bowman is a mining consultant and ordinarily charges a per diem of $50 or more. Dr. Emmons per diem varies with the kind of work involved, but $50 per day is a minimum.

The duties of the consultants will be as follows:

1. To direct the work of the bulldozer operator and the commor labor employed.

2. To determine from information uncovered by the bulldozer the next steps to be taken.

3. To determine where new blasting should occur.

4. To interpret the geology, based upon any information disclosed.

5. To appraise the quality of any asbestos discovered.

We trust that this information fully answers your inquiries and will sincerely appreciate anything that you can do to expedite approval of the project as we would like to get the work started not only before Professor Emmons has to start teaching on September 18, but also before inclement weather makes it necessary to postpone the project.

Very truly yours,

STAR MINING COMPANY

By Francis F Bowman Jr.
Secretary

cc to J. J. Norton
Dept. of Interior
Geological Survey
Washington 25, D. C. G-MD-LIN

FILE COPY
SURNAME:

Western Barr

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

370

AUG 30 1951

Star Mining Company
Room 305
122 West Washington Avenue
Madison 3, Wisconsin

Re: DMA-1985
Asbestos

Gentlemen:

Regarding your application for aid for an Exploration Project on Asbestos deposit in Marinette County, Wisconsin, docketed as DMA-1985, additional information is needed to enable processing.

Please furnish a definite prospecting plan supported by a sketch map showing location, direction and extent of trenches or other bulldozer work that is proposed. In connection with this please show the basis for estimating need for 384 hours bulldozer time. If work other than bulldozing is proposed, please supply details.

It would be desirable to furnish samples of asbestos from deposits.

Sincerely yours,

SIGNED 8/30

James A. Barr, Sr., Chief
Industrial Minerals Branch

RWASKEY:mp
8/29/51
cc: 210
Mr. Barr
DMA Files

6/5/51

Defense Minerals Administration

Review of Application for Exploration Assistance

Docket No. DMA 1985

Commodity Asbestos (Spinning grade)

Total Amount $5000

Govt. Participation 90%

1. Name and Address of Applicant Star Mining Co.
Room 305, 122 West Washington Ave., Madison, Wisc.

2. Location of Property Sec. 24 T36N R21E
Marinette Co., Wisc.

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

If not, application will be rejected. Spinning Grade Only

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

b) Poor

c) None

d) Don't know—needs field examination ✓

e) Is there an alternative and favorable project?
(If so, attach an explanation)

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

6. If applicant is a lessee, is a copy of the lease attached? Yes

Does the lease have sufficient time to run to cover a future productive period? Yes

*question numbers are those of MF-103

7. Are subordination agreements necessary? Yes, 202

a) MF-201? Probably Not Necessary

b) MF-202 Furnished

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? Yes a) b)

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? NO

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

a) Is the project adequately described? NO- Too general

If not, are there sufficient data given so that you can describe the project? NO If so, attach a draft.

b) Is there an adequate map or sketch of the proposed work? Not of the proposed work

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

If not, what part of it is? Field Team should assist Applicant in laying out a definite program of trenching if that is what is proposed & submit a sketch which may be attached to contract

Is this part a worthwhile exploration project? Field Team Decide

d) Are the cost estimates detailed? Fairly well

Can they be summarized, as on page 2 of Procedural Instruction 5-A, from the available data? Not on any footage basis If so, attach a draft.

e) Are the cost estimates reasonable? Yes

f) Should more information be requested from applicant? By Field Team

g) Is a field examination necessary to complete Exhibit A? Yes

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? NO

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

a) Is it applicable? Yes

b) Sufficient data? NO If so, attach a draft.

c) Are rents and charges reasonable? Check suitability of this

d) Is a field check needed? Also, hours needed and rate - $9 per hour is rather low for a good machine

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? See below

e) Is a field check needed? Can labor be had at $[illegible] day?

Is there an actual need for a geologist at $50.00 per day or is this set up to meet applicant's 100% requirement?

14. Exhibit E (question 23-c)*

a) Is it applicable? NO

b) Sufficient data?

c) Reasonable?

d) Field check needed?

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.

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? Determine whether geological probability of discovering strategic asbestos is sufficiently great to warrant exploration. IF SO Lay out a definite program and submit sufficient data for all contract Exhibits including sketch map showing work to be done - PLEASE SEND IN TO WASHINGTON SAMPLES OF ASBESTOS FROM THE DEPOSIT -

Reviewed by: J J Mat

8/27

Date August 23, 1951

97692

August 20, 1951

Mr. Frank A. Jones, President
Star Mining Company
Room 305
122 West Washington Avenue
Madison 3, Wisconsin

Subject: Herriman Farm
Re: Exploration Loan

My dear Mr. Jones:

This will acknowledge receipt of your application dated August 20, 1951 for a loan under the Defense Production Act of 1950.

Your application was assigned Docket Number DMA-1985 and referred to the Industrial Minerals Branch.

Kindly refer to DMA-1985 in any future correspondence relating to your application.

Sincerely yours,

Robert E. Adams

Robert E. Adams, Chief
Reports and Records Unit

MEMORANDUM:

TO: Director, Production Expansion Division
Defense Minerals Administration

FROM: Director, Supply Division
Defense Minerals Administration

SUBJECT: Recommendation for Contract Approval

Name of Applicant: Star Mining Co.
Room 305, 122 West Washington Ave.
Madison 3, Wisconsin

DMA No. 1965

Commodity: Asbestos

Amount Requested: $ 5000

Amount Approved: $ 5000

Government Participation: 90 % $ 4500

Tom Lyon

Recommendations

1) That an Exploration Project Contract be granted in the amount of $5000, government participation 90%, in accordance with Exhibit "A" attached.

2) That applicants allowed 30 days from contract date in which to begin work on the project.

Exhibit "A"

Description of Project

As indicated on the attached maps seams of chrysotile asbestos occur in a small serpentine outcrop; the area surrounding the outcrop is covered with alluvial material thought to be underlain by serpentine bedrock. Depth of the alluvium is unknown but estimated by Dr. Emmons, Professor of Geology at the University of Maine and Mr. Bowman, who is a Geologist and Mining Consultant, as varying from 15' north of the outcrop to possibly 200' in the vicinity of the Meroxine River south of the outcrop.

Work will consist of removing overburden from the bedrock in an area approximately 80' square as shown on attached map. Maximum depth of

excavation will be approximately 20'. Provided the overburden does not deepen south of the outcrop to an extent making the work impractical additional stripping will be carried around the circumference of the outcropping to an average width of approximately 25'.

Exposures of asbestos in the bedrock exposed by bulldozing will be sampled by hand tool cleaning and shallow test pitting. Blasting with protocols be necessary and drilling therefore will be done with hand tools. Sampling and testing will be done by operator supervision.

Total allowable cost of the project $1000, time limit 3 months.

Facilities & Improvements

Not applicable

Operating Equipment

1- Bulldozer complete with operator, fuel, lubricants, repairs, etc 3.84 hours @ 9.00 $ 3456

Miscellaneous - picks, shovels, hand drill steel, hammers, mails, wheelbarrows, etc 100

Supplies, sample handling and analysis, transportation,

and Miscellaneous

224

Labor and Supervision

2 - Laborers @ 8.00 day 40 days 640

1 - Supervisor - geologist - Sampler 10 days @ 50.00 500

Payroll taxes and insurance 80

1220

Rehabilitation & Repairs

not applicable

LAW OFFICES
OF
THOMAS, ORR, ISAKSEN & WERNER
ROOM 305
122 WEST WASHINGTON AVENUE
MADISON 3, WISCONSIN
PHONE 6-3164

HERBERT H. THOMAS
SAN W. ORR
LEON E. ISAKSEN
JOSEPH G. WERNER
TRAYTON L. LATHROP

August 17, 1951

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
AUG 20 1951

DMA 1985

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

Gentlemen:

I enclose herewith an application for aid for an exploration project pursuant to Mineral Order 5 on Form MF-103. I was advised by your Minneapolis Regional Office to send four copies. I, accordingly, am sending four copies of MF-103 but am not sending four copies of all of the exhibits. If you want additional copies of the exhibits, please so advise and I will arrange to have copies made.

As supplementary documents to the application I enclose a Mining Lease dated August 3, 1951; an Assignment of Lease which is now being circulated for signatures; six copies of MF-202; and a copy of a geological report as a rider to question 22.

As appears from the application, we are very desirous of starting work by September 1 in order that the work may be completed before we are stopped by snow or freezing weather. Under these circumstances, we will appreciate your expediting the application as much as possible.

Very truly yours,

THOMAS, ORR, ISAKSEN & WERNER

By San W. Orr

SWO:jg

Enclosures

AIR MAIL

RECOMMENDATIONS

1. That an Exploration Project Contract be granted in the amount of $5,000, Government participation 90%, in accordance with Exhibit "A" attached.

2. That applicant be allowed 30 days from contract date in which to begin work on the project.

EXHIBIT "A"

Description of Project

As indicated on the attached maps, seams of chrysotile asbestos occur in a small serpentine outcrop; the area surrounding the outcrop are covered with alluvial material, thought to be underlain by serpentine bedrock. Depth of the alluvium unknown but estimated by Dr. Emmons, Professor of Geology at the University of Wisconsin and Mr. Bowman, who is a Geologist and Mining Consultant, as varying from 15' north of the outcrop to possibly 200' in the vicinity of the Menomonie River, south of the outcrop. direction

Work shall consist of removing overburden from the bedrock in an area approximately 80' square, as shown on attached map. Maximum depth of excavation will be approximately 20'. Providing the overburden does not deepen south of the outcrop to an extent making the work impractical, additional stripping will be carried around the circumference of the outcropping to an average width of approximately 25'.

Exposures of asbestos in the bedrock exposed by bulldozing will be sampled by hand tool cleaning and shallow test pitting. Blasting will probably be necessary and drilling therefore will be done with hand tools. Sampling and testing will be done by operator's Supervisor.

Total allowable cost of the project $5,000, time limit - 3 months.

Fixtures and Improvements

Not applicable.

Operating Equipment

1 - Bulldozer, complete with operator, fuel, lubricants, repairs, etc. , 384 hrs. @ $9.00	$3,456.00
Hand Tools, Picks, Shovels, hand drill steel, hammers, moils, wheelbarrows, etc.	100.00
Supplies, sample handling and analysis, transportation, and miscellaneous	224.00
	$3,780.00

Labor and Supervision

2 - Laborers, @ $8.00 per day, 40 days	$ 640.00
1 - Supervisor, Geologist-Sampler, 10 days @ $50.00	500.00
Payroll Taxes and Insurance	80.00
	$1,220.00

Rehabilitation and Repairs

Not applicable.

Dates
Contract: Oct. 3, 1951
Completion: Sept. 3, 1952
Amendments: #1, 2, 3

Contract # Iam-L 171
D.M.E.A. # 1933 X
Name: Star Mining Co
Form: Old

CONTRACT ALLOWANCE	ITEM	OCTOBER AMOUNT	PER YD.	NOVEMBER AMOUNT	PER YD.	DECEMBER AMOUNT	PER YD.	FEBRUARY AMOUNT	PER YD.
$ 3,456.00	Stripping	630.00	35	2191.50	38	2335.50	30	2335.50	
100.00	Equipment Purchased								
224.00	Supplies Purchased	1750	01	2590	—	2590	—	2590	
1,220.00	Labor & Supervision	10000	06	3364.14	06	4364.14	07	4364.14	
$ 500.00	Magnetometer Survey							4425	
$ 5,000.00									
	Taxes & Insurance			8272	02	8272	03	8272	
		14750	42	26426	46	29026	47	33825	

1,800 yd.

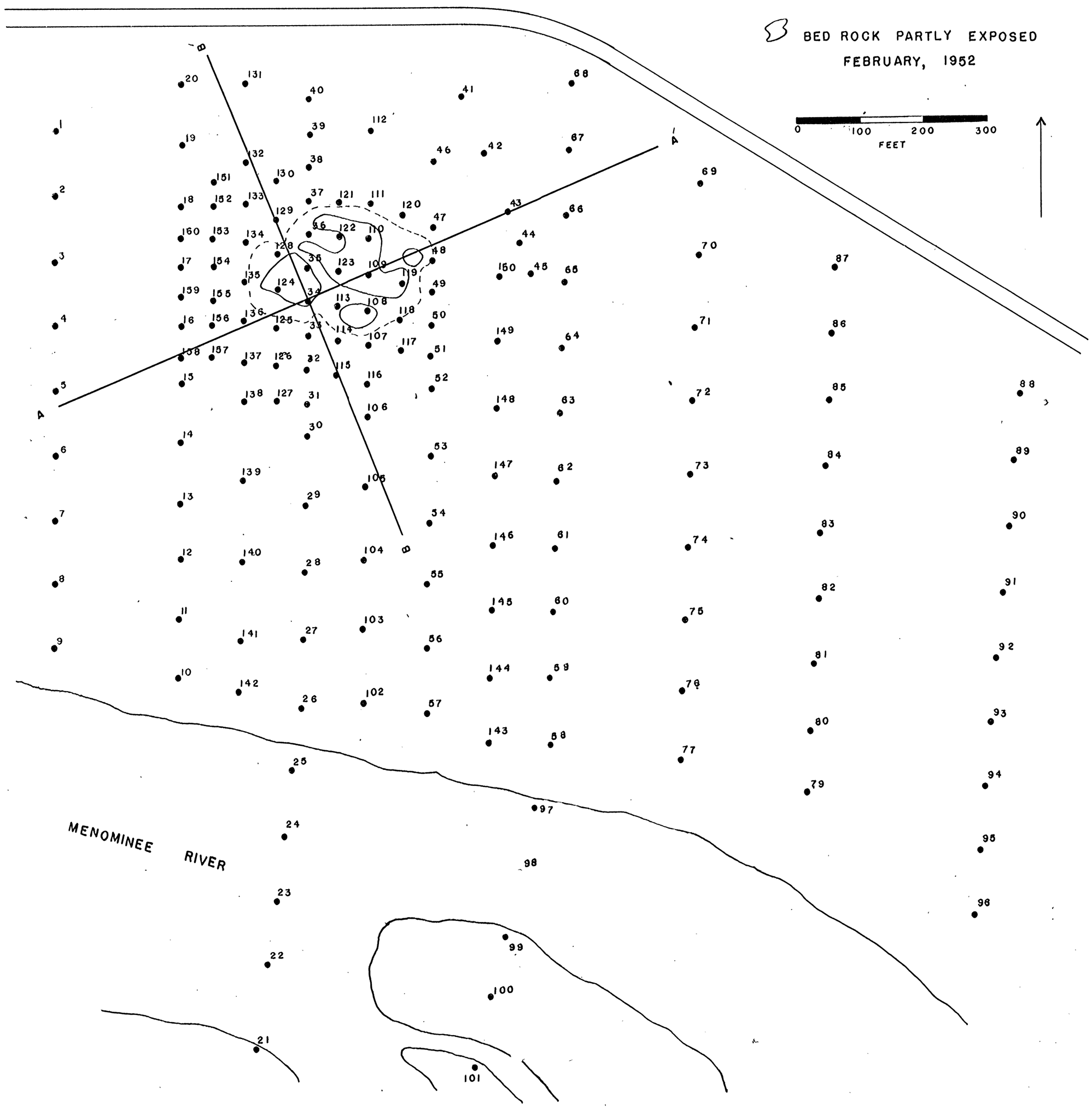
5,802 yd.

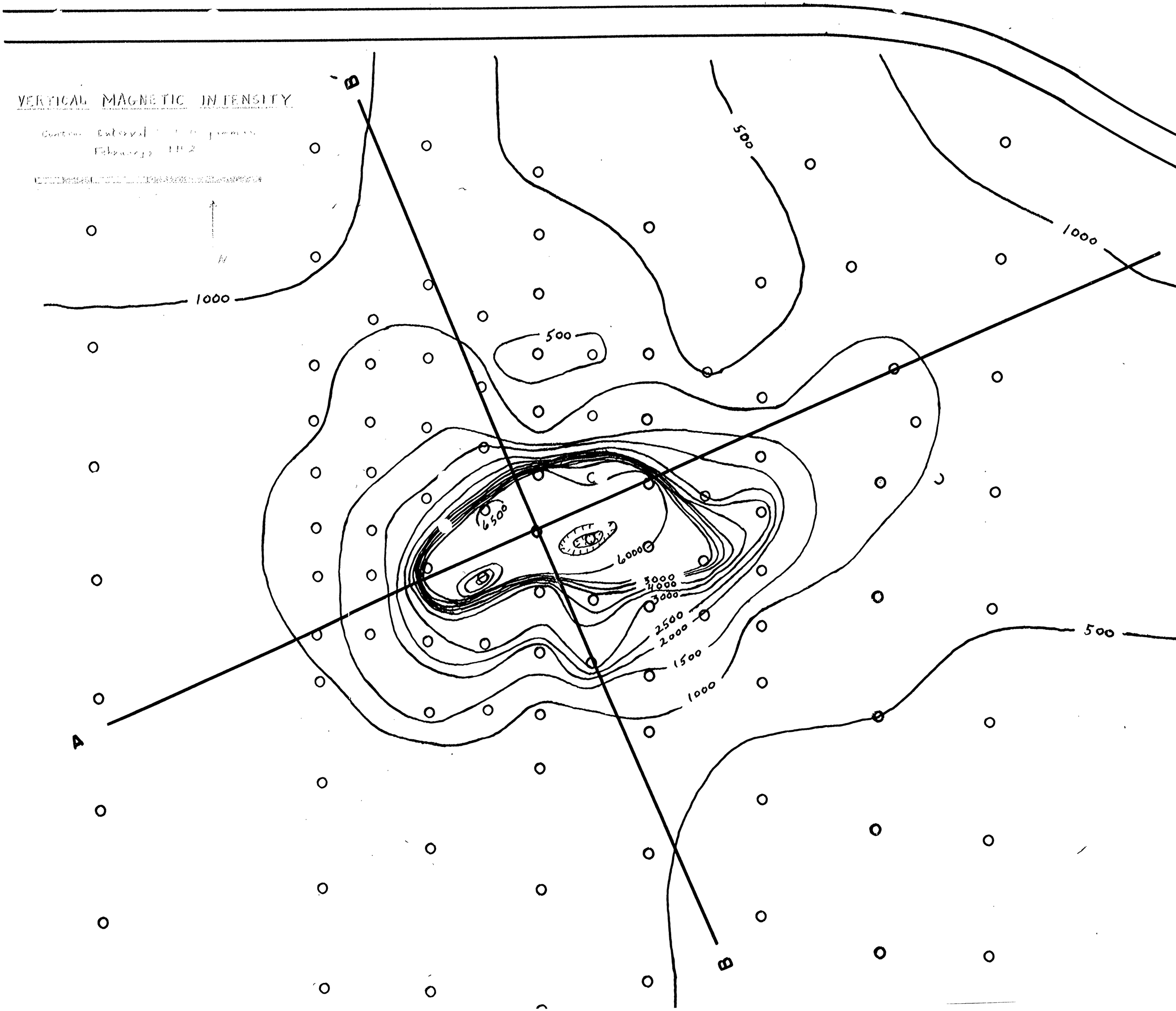
6,217 yd.

None

MAGNETIC STATIONS, HERRIMAN PROPERTY

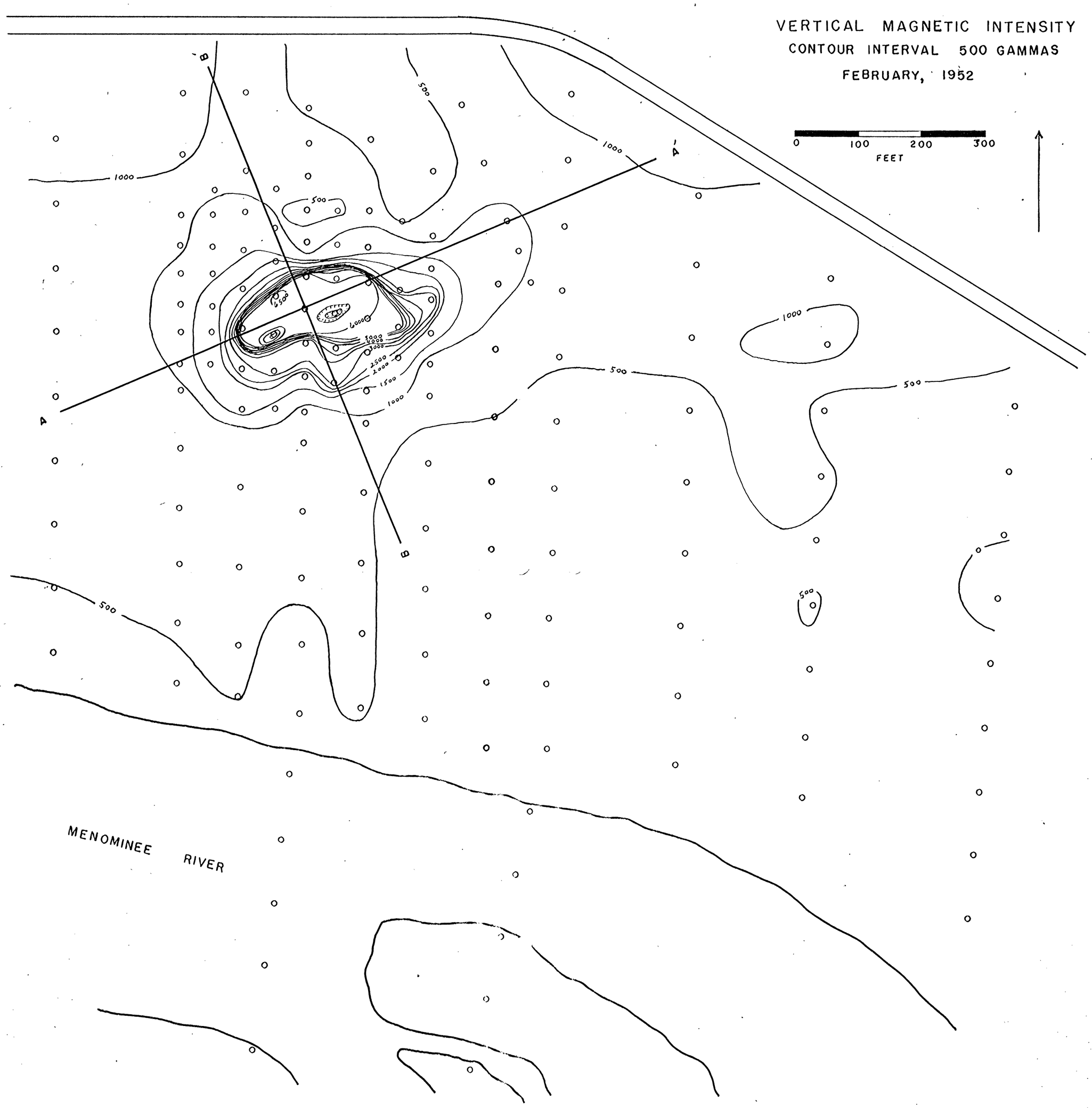
MARINETTE COUNTY, WISCONSIN




VERTICAL MAGNETIC INTENSITY
N
A
B
B
C
1000
500
500
1000
500
6500
6000
5000
4000
3000
2500
2000
1500
1000

MAGNETIC SURVEY OF HERRIMAN PROPERTY

MARINETTE COUNTY, WISCONSIN



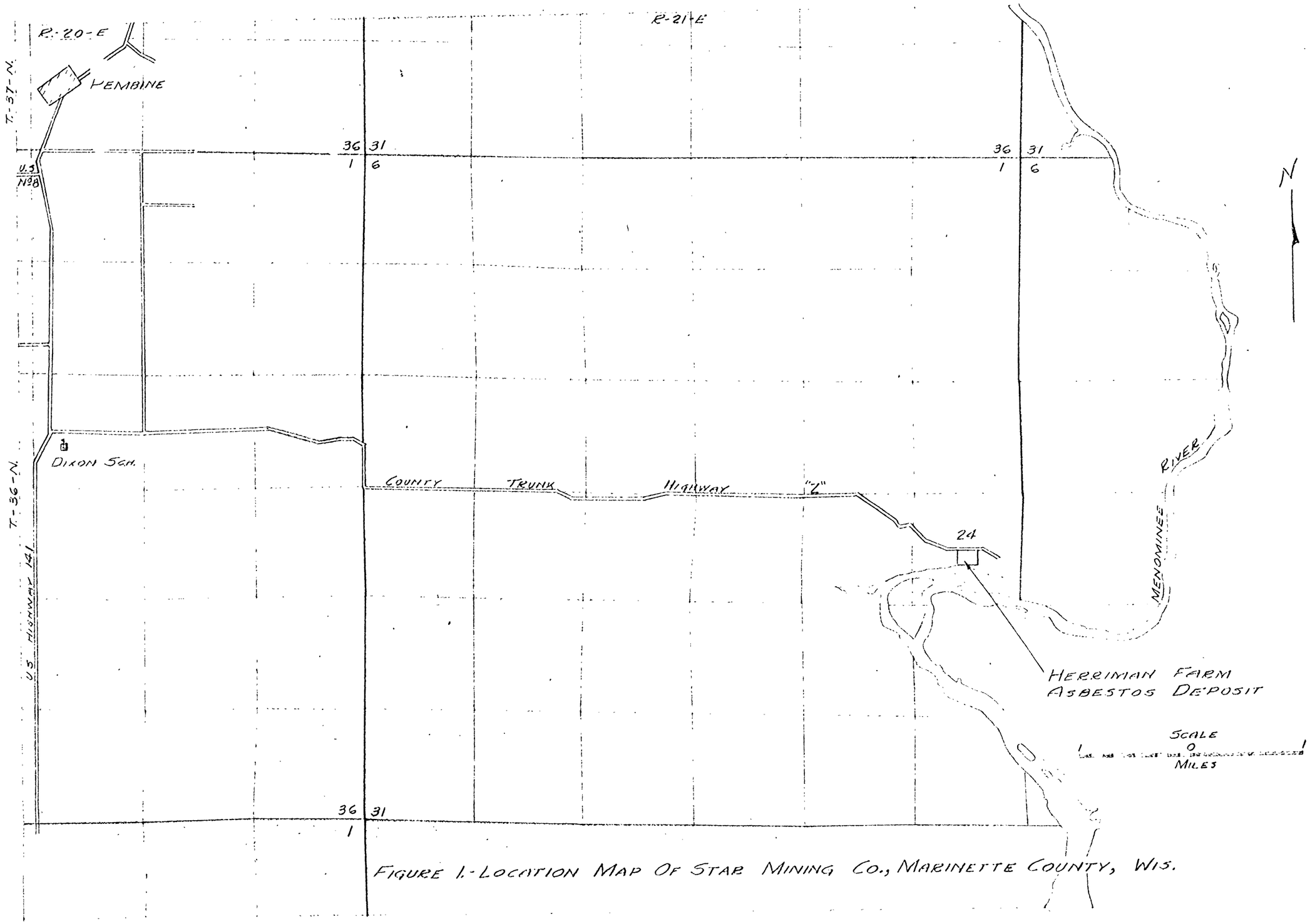


FIGURE 1.- LOCATION MAP OF STAR MINING CO., MARINETTE COUNTY, WIS.