DMEA Form 9
Rev. 6/57

UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration

OFFICIAL DOCKET FILE

Idm-E NO. 755

DMEA NO. 5510

Application
- [ ] Denied
- [ ] Withdrawn

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

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

Folder No. 1:

Left Side

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

12-13/56

Right Side

- [x] Project summary (final)
- [x] Work Completed analysis (final)
- All other material filed in chronological order including the following reports if checked:
- [x] Field Team Semi-Annual Report for Certified Project
- [x] Final Field Team Report (Tab)
- [x] Operator's Final Report (Tab)
- [x] Interim Field Team Reports
- [ ] Operator's monthly reports and all attachments
- [x] On-site Exam Report (Tab)
- [ ] Settlement Sheets
- [ ] Drill Logs

Additional Folders:

Left Side

Folders No. 2 : Reports
- [ ] Analysis of Semi-Annual Inspection Reports
- [ ] Project Summary (Interim) by DMEA Engineers

Right Side

- [x] Field Team Semi-Annual Report for Certified Project
- [x] Field Team Interim Reports
- [x] Operator's Monthly Reports with transmittal, narrative and maps.

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

Folders No. _____ : Settlement Sheets

Folders No. _____ : Drill Logs

Folders No. _____ : Royalty material

17963

OFFICE OF MINERALS EXPLORATION
CONTRACT ADMINISTRATION AND AUDIT DIVISION

REPORT OF ROYALTY REVIEW

I have reviewed the files of the Washington office pertaining to Contract Idm-E755, Docket DMEA-3510 (lead-zinc), dated January 6, 1955, with

Paul Gille
Cuba City, Wisconsin

for the purpose of determining the amount of royalty payable to the U. S. Government on sales of minerals from property referred to as the Dawson and Lindsay Leases located in Lafayette County, Wisconsin, during the period August 4, 1960, through November 14, 1963.

A certification of discovery or development was issued on December 13, 1956, and, in accordance with Article 8 of the contract, royalty is payable on all minerals produced from the land described in Article 2 of the contract for a period of 10 years from the date of the contract or until the total net amount contributed by the Government without interest is fully repaid, whichever occurs first. A Report of Review dated November 8, 1956, indicated accepted costs under the exploration contract amounting to $23,821.00 with the Government's contribution on a 50 percent basis being $11,910.50.

The status of the project, the scope of review, and the reasons therefor are stated on page 2.

This review found no sales subject to the Government's royalty subsequent to the period covered by a prior Report of Royalty Review which also found no sales subject to the Government's royalty through August 3, 1960. Accordingly, as of November 14, 1963, the royalty account of this project was found to be:

Total Royalty Payable	$ -0-
Total Royalty Paid	-0-
Balance of Royalty Due	$ -0-

E. D. Talbert

E. D. Talbert, OME Auditor

November 21, 1963

Idm-E755 Paul Gille DMEA-3510

STATUS OF PROJECT, SCOPE OF REVIEW
AND REASONS THEREFOR

This contract provides that the Operator, as principal if the producer or as surety if not the producer, shall pay to the Government a percentage royalty on all minerals produced from the land thereunder. The land consists of the E 3/4 of SW¼ and the E½ of sec. 20, T. 2 N., R. 1 E., 4th P.M., an aggregate of 440 acres, more or less, in Benton Township. At the time the contract was executed the Operator was in possession by virtue of June 4, 1954, leases granted by Mr. & Mrs. Thomas B. Dawson and Mr. & Mrs. Everett W. Lindsay, all of Benton, Wisconsin. In consideration of the contract the lessors executed Owner's Consents to Lien during November 1954.

Exploration work under the contract was completed June 28, 1956. Subsequent examinations of the property and inquiries by regional DMEA and OME representatives disclosed no production thereafter through September 2, 1960.

By September 10, 1962, and November 14, 1963, replies to MME Forms 63 the Operator advised that neither production nor change in property status had occurred since September 2, 1960.

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

(1) The files indicate that no production has occurred since the date of the contract; and

(2) The administrative cost to the Government of an on-site royalty audit at this time would be excessive in relation to the amount of possible royalty which might be disclosed.

225

OFFICE OF MINERALS EXPLORATION
CONTRACT ADMINISTRATION AND AUDIT DIVISION

REPORT OF ROYALTY REVIEW

I have reviewed the files of the Office of Minerals Exploration, Washington, D. C., pertaining to Contract No. Idm-8755, Docket No. DMEA-3510 (Lead-Zinc), dated January 6, 1955, with

Paul Gille
Cuba City, Wisconsin

for the purpose of determining the amount of royalty due the U. S. Government on sales of minerals from property referred to as Dawson and Lindsay Leases located in Lafayette County, Wisconsin, during the period January 6, 1955, through August 3, 1960.

A certification of discovery or development was issued on December 13, 1956, and, in accordance with Article 8 of the contract, royalty is payable on all minerals mined or produced from the land described in Article 2 of the contract for a period of 10 years from the date of the contract or until the total net amount contributed by the Government without interest is fully repaid, whichever occurs first. A Report of Review in lieu of final audit dated November 8, 1956, indicated accepted costs under the exploration contract amounting to $23,821.00 with the Government's contribution, on a 50 percent basis, being $11,910.50.

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

(1) Inspection reports by field representatives of the Government and other correspondence in the Washington office files indicate that there has not been any production of minerals from the property on which royalty would be due to the Government since the date of the exploration contract; and

(2) The administrative cost to the Government of an on-site royalty audit at this time would be excessive in relation to the amount of possible royalty which might be disclosed.

August 3, 1960

C. E. Fisher

C. E. Fisher, OME Auditor

File Copy
Surname

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

CERTIFICATION BY THE UNITED STATES OF AMERICA OF A DISCOVERY OR DEVELOPMENT UNDER AN EXPLORATION PROJECT CONTRACT

To: Mr. Paul Gille

Cuba City, Wisconsin

Pursuant to the provisions of Exploration Project Contract No. Idm-E755, dated January 6, 1955, Docket No. DMEA-3510, hereinafter called the "contract", between you and the United States of America, hereinafter called the "Government"; to establish and fix the Government's percentage royalty on production and its lien thereon and on the land described in the contract, the Government considers and therefore certifies that discovery or development from which production may be made has resulted from the exploration work.

The nature of said discovery or development is described broadly or indicated as follows: Churn drilling from the surface has shown the existence of lead-zinc ores in the Quimbys Mill (Glasarock) and the McGregor (Trenton) members of the Platteville formation.

Dated DEC 1 3 1956

THE UNITED STATES OF AMERICA

By [signature]
Administrator, Defense Minerals Exploration Administration

WRGriswold/er (11/29/56)
rewritten 12/7/56
Copy to:
Docket
Mr. C.A. Fredell, Dr. Tech.Ser.Div.
Mr. Lamb, USBM
Mr. Kiilsgaard, USGS
Mdm R File
Op. Committee
Cont. Adm & Audit Div.
Finance Office
Region V (2)
Mr. F. E. Johnson
Mr. W. R. Griswold
Mr. & Mrs. E. W. Lindsay
Mr. & Mrs. T. B. Dawson
Chron.

File Copy
Surname

Griswold

Federal Hdqs
Hoffman
Chambers

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

**CERTIFICATION BY THE UNITED STATES OF AMERICA
OF A DISCOVERY OR DEVELOPMENT UNDER
AN EXPLORATION PROJECT CONTRACT**

To: Mr. Paul Gille

Cuba City, Wisconsin

Pursuant to the provisions of Exploration Project Contract No. Idm-8755, dated January 6, 1955, Docket No. DMEA-3510, hereinafter called the "contract", between you and the United States of America, hereinafter called the "Government"; to establish and fix the Government's percentage royalty on production and its lien thereon and on the land described in the contract, the Government considers and therefore, certifies that discovery or development from which production may be made has resulted from the exploration work on the Lindsay lease.

The nature of said discovery or development is described broadly or indicated as follows: Churn drilling from the surface has shown the existence of lead-zinc ores in the Quimbys Mill (Glassrock) and the McGregor (Trenton) members of the Platteville formation. Such ores occur as limestone replacements.

Dated_____

WRGriswold/er 11/29/56

THE UNITED STATES OF AMERICA

Copy to:
Docket
Mr. C.A.Fredell, DR.,Tec.Ser.D.
Mr. Lamb, USBM
Mr. Kiilsgaard, USGS
Admr R File
Op. Committee
Base Metals
Cont.Adm &Audit Div.
Finance Office
Region V (2)
Mr.F.E. Johnson
Mr.W.R.Griswold
Chron.
Mr. & Mrs. E. W. Lindsay
Mrs. J. B. Dawson

By_____
**Administrator, Defense Minerals
Exploration Administration**

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
	Jelbridge	120
4/9	Dawson	120
"	Johnson	110
1	7 9	100
		220

APR 9 1965

Mr. Paul Gille
315 N. Main Street
Cuba City, Wisconsin

Re: [illegible]-1330 (Lead-Zinc)
Paul Gille
[illegible] & Lindsay Lease
Lafayette County, Wisconsin
Contract Ldr-2735

Dear Mr. Gille:

By the terms of the subject Exploration Project Contract and the certification of discovery or development dated December 13, 1956, all minerals mined or produced from January 6, 1955, to January 6, 1965, were subject to the Government's royalty as set forth in said contract.

As the period during which production was subject to royalty has now expired, the Government according to its present records retains no claim or lien against the property subject to the contract or any future production therefrom. We, therefore, are closing our books and records on this contract. Your attention, however, is called to the provisions of the contract which require the Operator to keep and preserve certain records for the periods indicated.

Sincerely yours,

George Fumich, Jr.

Acting Director

MMerrithew/mm (4/7/65)
cc: Director's Reading File
Region IV, Knoxville, Tenn. w/cy of incoming Form 63 dated 3/29/65
CA&A Division
Docket
Code 120M
Mr. and Mrs. Everett W. Lindsay, Benton, Wisconsin
Mr. and Mrs. Thomas B. Dawson, " "

23263

DEFENSE MINERALS EXPLORATION ADMINISTRATION
CONTRACT ADMINISTRATION AND AUDIT DIVISION

REPORT OF REVIEW

I have reviewed the Monthly Reports of:

Paul Gille

Cuba City, Wisconsin

pertaining to Exploration Project Contract No. Idm-2755, Docket No. DMEA-3510, for the months of February, 1955, to June, 1956, inclusive, covering a project for the exploration of lead and zinc on property, known as the Dawson and Lindsay Leases located in Lafayette County, Wisconsin.

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, verification of work performed by reference to Field Team reports and copies of drill logs, and a determination of the reasonableness and propriety of the costs.

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

(a) a major portion ($21,450.00) of the accepted costs were under a contract provision for payment by the Government on the basis of fixed unit costs of work actually performed;
(b) the Monthly Reports were supported by documentary proof of the costs incurred under the contract provisions for payment by the Government on the basis of actual costs; and
(c) the administrative cost to the Government of an audit would be excessive in relation to the estimated amount of possible further disallowances thereunder.

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

Total cost as billed by Contractor		$23,842.45
Exceptions:		
By DMEA Finance Officer	$21.45	
Herewith	-0-	21.45
Total Accepted Cost		$23,821.00

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

$11,910.50

is considered valid and proper, provided that the Regional Executive Officer, the Administrator, or other competent official has accepted or will accept the project as having otherwise met the terms of the contract.

E. A. Talbert, Auditor

November 8, 1956

Docket copy

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 11 1955

MF-200
(Revised June 1954)

Docket No. DMEA 3050

Commodity Lead-Zinc

Contract No. Idm-E - 755

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

EXPLORATION PROJECT CONTRACT[1]

It is agreed this 6th day of January, 1955, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and [2] Paul Gille, whose mailing address is Cuba City, Wisconsin, hereinafter called the "Operator," as follows:

ARTICLE 1. *This contract* is entered into under the authority of the Defense Production Act of 1950, as amended. It consists of this form (MF-200), the attached Exhibit "A," Annex I, and

The Operator shall not transfer or assign this contract or any right thereunder without the written consent of the Government.

ARTICLE 2. *Operator's property rights.*—(a) The land which is the subject of this contract (hereinafter called "the land") is in the State of Wisconsin, County of Lafayette, and is described in Annex I.[3]

(b) The Operator represents and undertakes that:

(1) The Operator is the [4] lessee of [5] the mineral rights in the land, in possession and entitled to possession for all of the purposes of this contract, under and by virtue of a [6] See Annex I, [7] recorded in Book , page , official records of said County; and

(2) The Operator's right, title, or interest (whether as owner, lessee, or otherwise) is subject only to the following claims, liens, or encumbrances: none

(c) The Subordination Agreement of the holder of any claim, lien, or encumbrance listed above, and (if the Operator does not hold the legal title) the Consent to Lien of any holder of the legal title

[1] If sufficient space is not provided in any blank, use an extra sheet of paper and refer to it in the blank.
[2] Insert name, and if an organization, its nature (corporation and place of incorporation, partnership with names of partners, etc.).
[3] State on a separate sheet marked "Annex I" the legal description or enough to identify the property, particularly excluding any areas from which the production is not to be subject to the Government's percentage royalty.
[4] Insert "owner," "lessee," "contract purchaser," "locator," etc.
[5] Insert "the entire interest," "the mineral rights," "an undivided one-third," etc.
[6] Insert "deed," "lease," "contract," "location notice," "patent," etc.
[7] If not recorded, so indicate by inserting "un."

of the land (lessor, seller, optionor, etc.), are attached, as follows: Owner's Consents to Lien

(d) The Operator shall preserve and maintain his right, title, and interest in the land and his right to the possession thereof for the purposes of this contract, and shall devote the land and all existing improvements, facilities, buildings, installations, and appurtenances to the purposes of this contract. Until the lapse of the time within which the Government may make a certification of discovery or development without any such certification having been made, and after any such certification has been made, the Operator shall neither transfer, convey, nor surrender the land nor any right, title, or interest therein, nor permit nor suffer any claim, lien, or encumbrance thereon, without expressly referring to and providing in the instrument of conveyance, lien, or encumbrance for the preservation of the Government's right to a percentage royalty on production and lien for the payment thereof. If the Government makes no certification of discovery or development within the time limited in Article 8, it shall thereafter have no claim against the land or any production therefrom except for any production referred to in Article 8(b)(1).

ARTICLE 3. *The exploration project.*—The project is a search for indicated or undeveloped deposits of lead and zinc. The work to be performed is described in Exhibit "A." The Operator on or before 90 days from date* shall commence the work, and on or before 18 mos. from date* (unless the Operator's obligation to prosecute the work is terminated—see Article 10) shall either have completed the work or shall have incurred allowable costs (see Article 6) in a sum not less than the estimated total allowable cost set forth in Exhibit "A." *Date means date of the contract.

ARTICLE 4. *Performance of the work.*—(a) *Operator's responsibility.*—The work shall be performed with reasonable diligence, efficiently, expertly, in a workmanlike manner, in accordance with good mining standards and State regulations for health and safety and for liability insurance covering employment; and with suitable and adequate equipment, facilities, materials, supplies, and labor, to bring it to completion within the time fixed.

(b) *Independent contracts.*—To the extent that the allowable costs are estimated in Exhibit "A" with express reference to performance by independent contractors on a unit-price basis (such as per foot of drilling, per foot of drifting, per hour of bulldozer operations), the work may be so performed; but if the reference in Exhibit "A" to any such independent contract requires the Government's approval thereof, payments under such contract will not be allowable costs unless the Government gives its written approval of the contract. Any such independent contract shall refer to some specific and identifiable part of the work, and shall be subject to all of the pertinent terms and conditions of this exploration contract; but the Government shall not be considered a party thereto, and its rights under this contract, including the right to terminate its contributions, shall not be affected thereby. Regardless of the provisions of any such independent contract and regardless of the Government's approval thereof, the Government will participate in payments to the independent contractor only on account of work performed in accordance with the provisions of this exploration project contract, and only to the extent that the Government deems the unit prices for the work under the independent contract to be reasonable.

(c) *Government may inspect.*—The Operator shall consult with and inform the Government on all phases of the work as it progresses. The Government may enter at all reasonable times to inspect the work under the contract, and also after a certification of discovery or development to inspect production operations and underground workings. The operator shall provide the Government with all reasonable means of access for such inspections.

ARTICLE 5. *Contribution by the Government.*—The estimated total allowable cost of the project, set forth in Exhibit "A," is the sum of $24,846.00. The Government shall contribute 50 percent of the allowable costs as they are incurred in a total sum not in excess of $12,423.00: *Provided,* That until the Operator has rendered to the Government his final report, and any final auditing required by the Government has been made, and a final settlement of the contract has been made, the Government may withhold from the last

voucher or vouchers such sums as it sees fit not in excess of 10 percent of the estimated total cost of the work or not in excess of the amount of the Government's contribution to the cost of property which is or may become subject to disposal as provided in Article 9(c), whichever is greater. The Government will make its contribution on the basis of the monthly vouchers referred to in Article 7(b), but all payments by the Government are provisional only, subject to audit, until the account between the Operator and the Government is finally audited and settled. "Costs incurred" mean costs that have been paid or have become due and payable, or that in the opinion of the Government have become an obligation. The Government may make payments directly to independent contractors and suppliers for the account of the Operator rather than to the Operator. See Article 13.

ARTICLE 6. *Estimated costs.*—(a) *Categories of costs.*—The allowable costs of the work to which the Government shall contribute are limited to those that are direct, reasonable, necessary, and that are estimated in Exhibit "A" by categories as specified in this article. If any category or subcategory is omitted from the estimate of costs, or if the word "none" is annexed to the listing thereof, costs under such category or subcategory are not allowable. Any excess over any estimate which is indicated as the maximum of any category, subcategory, or item, either as to requirement or related cost, and any excess over the estimated total allowable cost of the work, shall not be allowable. Any excess over the estimate of any category, subcategory, or item, either as to requirement or related cost, not indicated as a maximum shall be allowable within the limit of the estimated total allowable cost of the work. To the extent that excesses over maximums other than the estimated total allowable cost of the work may be necessary for the performance of the work, the Operator shall incur such excesses for his own account without contribution by the Government; but except for any such necessary excesses in categories, subcategories, or items thereunder the Operator is not obligated to incur more than his agreed percentage of the estimated, total allowable cost of the work.

To the extent specified in this article or in Exhibit "A" the following categories, subcategories, and elements thereof are maximums; but if not so specified either here or in Exhibit "A" they are not maximums, and may be exceeded within the limit of the estimated total allowable cost of the work:

CATEGORY (1)—INDEPENDENT CONTRACTS.—Work to be performed under independent contracts (see Article 4(b)). The estimated total amount of this category and the estimated cost of each unit of work for performance under an independent contract are maximums.

CATEGORY (2)—PERSONAL SERVICES.

Subcategory (a)—Supervision.—All elements of this subcategory (number of supervisors, periods of employment, rates of pay, and total) are maximums.

Subcategory (b)—Technical services.—All elements of this subcategory (number of technicians, periods of employment, rates of pay, and total) are maximums.

Subcategory (c)—Labor.

CATEGORY (3)—OPERATING MATERIALS AND SUPPLIES.—Includes such items as drill bits and steel, explosives, fuel, pipe, power, small tools costing less than $50 each, timber, track.

CATEGORY (4)—OPERATING EQUIPMENT.

Subcategory (a)—Rental.—The number of each object to be rented [6 mine cars, 1 truck], the rate of rental [$100 per month, $5 per hour], and the total of this subcategory are maximums.

Subcategory (b)—Purchases.—The estimated total of this subcategory is a maximum.

Subcategory (c)—Depreciation.—All elements of this subcategory (time periods, rate of depreciation, and subcategory total) are maximums.

CATEGORY (5)—INITIAL REHABILITATION AND REPAIRS.—Estimates under this category include all requirements and related costs, such as labor, materials and supplies, and supervision at a rate not higher than provided for in Category (2), and shall not be duplicated under any other category. The estimated total of this category is a maximum.

Subcategory (a)—Initial rehabilitation and repairs of existing buildings, fixtures, and installations (exclusive of mine workings).—The estimated total of this subcategory is a maximum.

Subcategory (b)—Initial rehabilitation and repairs of operating equipment.—The estimated total of this subcategory is a maximum.

CATEGORY (6)—NEW BUILDINGS, FIXTURES, AND INSTALLATIONS (EXCLUSIVE OF MINE WORKINGS).—Estimates under this category include all requirements and related costs, such as labor, materials and supplies, and supervision at a rate not higher than provided for in Category (2), and shall not be duplicated under any other category. The estimated total of this category is a maximum.

CATEGORY (7)—MISCELLANEOUS.—Repairs and maintenance (other than initial) of operating equipment, analytical work, prints and other reproductions, accounting, Operator's share of payroll taxes, liability insurance covering employment, travel, communications, and any other items of requirement or cost that do not fall within any of the first 6 categories. See Article 13.

THE ESTIMATED TOTAL ALLOWABLE COST of the work is a maximum.

(b) *Nonallowable costs.*—The following costs are not allowable for contribution by the Government:

(1) *Costs of the land,* such as rental, depreciation, depletion, or other cost of acquiring, owning, or holding possession;

(2) *Indirect costs,* such as general overhead, corporate management, interest, taxes (other than payroll and sales taxes), insurance (other than liability insurance covering employment), damages to persons, damages to property (other than necessary repairs or replacements of equipment or other property used in the work);

(3) *Previous work* performed or costs incurred before the date of this contract; and

(4) *Deferred payments.*—Any costs incurred by the Operator under any rental-purchase agreement, installment-purchase agreement, or any agreement for the purchase of goods under the provisions of which payment of the full purchase price is deferred more than 90 days from the delivery of the goods; unless the purchase agreement is approved by the Government in writing.

(c) *Reductions in costs.*—The Operator shall account for and give the Government credit for any incidental benefits, credits, or money received in the ordinary course of business in prosecuting the work (as by salvage or sale of materials or equipment, furnishing of room or board, furnishing of power or services to third persons, rebates or discounts on purchases, etc.), in the same ratio in which the Government contributes to costs; and such amounts shall be treated as a reduction in costs incurred so that they are available for use within the limit of the original estimated total cost. This provision does not apply to receipts from production which are subject to the Government's percentage royalty under the provisions of Article 9.

ARTICLE 7. *Reports, accounts, audits.*—(a) *Operator's records.*—The Operator shall keep suitable records and accounts of the work performed and of any production in which the Government may have an interest; and shall preserve those with respect to work performed for at least three years after final payment by the Government, and those with respect to production for at least three years after any obligation to pay royalties to the Government has terminated. The Government may inspect and audit said records and accounts at any time, either by itself or by a certified public accountant. If the Government elects to audit said records and accounts relating to the exploration work by certified public accountant, it may do so as a cost of the work to which the Operator shall contribute. The Comptroller General of the United States or his representative, until the expiration of said three-year periods, shall have access to and the right to examine any pertinent books, documents, papers, and records of the Operator. All of the Operator's vouchers and records and accounts relating thereto and the Government's payments thereof remain subject to adjustment until final audit by the Government. If work under this contract is carried on in conjunction with any other operations, or if labor, supervision, services, materials, supplies, equipment, facilities, or other requirements for carrying on the work are also used in connection with other operations, the costs shall be segregated and accounted for on a basis and by methods and accounts that are satisfactory to and approved by the Government.

(b) *Progress reports and vouchers.*—The Operator shall provide the Government with five copies of monthly progress reports in three sections as follows: (1) Operator's Monthly Report and Voucher showing detailed costs incurred during the reporting period; (2) Operator's Unit Cost and Progress Report showing the various types of work performed during the reporting period and costs incurred for each type of work; and (3) a Narrative Report of the work performed during the reporting period including adequate engineering-geological maps or sketches, drill hole logs and locations, and assay reports on samples taken concurrently with advance in mineralized ground. (Forms for reporting under (1) and (2) above will be provided by the Government.)

(c) *Final report.*—Upon completion of the work or termination of the Government's obligation to contribute to costs, the Operator shall furnish the Government with five copies of a final report (in addition to the final progress report and voucher). This final report shall include a geological and engineering evaluation of the results of the work performed under the contract with an estimate of the ore reserves resulting from such work, complete assay data, adequate geological and engineering maps or sketches, and a summary of the work performed and related costs incurred.

(d) *Report of sales.*—The Operator shall provide the Government with suitable accounting and documentary evidence covering all production to which the Government's percentage royalty relates, such as copies of smelter or concentrator settlement sheets, and certified accounts of production and sale or other disposition of production.

(e) *Compliance with requirements.*—If in the opinion of the Government any of the Operator's reports, records, or accounts are insufficient or incomplete, or if the Operator fails to make them, the Government may procure the making or completion of such with suitable attachments as an expense of the work to which the Operator shall contribute. The Government may withhold approval and payment of any vouchers relating to insufficient or incomplete reports, records, or accounts.

ARTICLE 8. *Repayment by Operator.*—(a) *Certification.*—If the Government considers that a discovery or development from which production may be made has resulted from the work, the Government, at any time not later than six months after a sufficient final report and final account (see Article 7) has been rendered, may so certify in writing to the Operator. Such certification shall describe broadly or indicate the nature of the discovery or development.

(b) *Royalty on production.*—The Operator, as principal if the Operator is the producer, or as surety if the Operator is not the producer, shall pay to the Government a royalty on all minerals mined or produced from the land, as follows: (1) regardless of any certification of discovery or development, from the date of the contract until the lapse of the time within which the Government may make such certification, or until the total net amount contributed by the Government without interest is fully repaid, whichever occurs first; or (2) if the Government makes a certification of discovery or development, within a period of ten years from the date of the contract, or until the total net amount contributed by the Government without interest is fully repaid, whichever occurs first.

(c) *Basis for computation.*—The Government's royalty shall be a percentage of the gross proceeds (including any bonuses, premiums, allowances, or other benefits) from the production sold, in the form sold (ore, concentrates, metal, or equivalent), at the point of delivery (the f. o. b. point); *except,* that charges of *the buyer* arising in the regular course of business, and shown as deductions on the buyer's settlement sheets, on account of the cost of treatment processes performed by *the buyer,* sampling and assaying to determine the value of the production sold, and freight paid by *the buyer* to a carrier (not the Operator), shall be allowed as deductions in arriving at the "gross proceeds" as that term is used herein. Any costs of treatment processes, sampling or assaying, or transportation, performed or paid by the Operator or by anyone other than the buyer, are not deductible in arriving at the "gross proceeds" as that term is here used. The term "treatment processes," as here used, means those processes (such as milling, concentrating, smelting, refining, or equivalent) applied to the crude ore or other production after it is extracted from the ground, to put it into a commercially marketable form; excluding fabricating or manufacturing.

(d) *Unsold production.*—If any production (ore, concentrates, metal, or equivalent), after the lapse of six months from the date the ore was extracted from the ground, remains neither sold nor used by the Operator in integrated manufacturing or fabricating operations (for instance, if it is stockpiled), the Government, at its option, as long as it so remains, may require the computation and payment of its royalty on the value of such production in the form (ore, concentrates, metal, or equivalent) it is in when the Government elects to require computation and payment. If any production is used by the Operator in integrated manufacturing or fabricating operations before the Government makes its election, the Government's royalty on such production shall be computed on the value therof in the form in which and at the time when it is so used. "Value" as here used means what is or would be gross income from mining operations for percentage depletion purposes in Federal income tax determination, or the market value, whichever is greater.

(e) *Percentages of royalty.*—The percentages of the Government's royalty shall be as follows:

One and one-half (1½) percent of amounts ("gross proceeds" or "value") not in excess of eight dollars ($8.00) per ton of production in the form in which sold, held, or used, plus one-half (½)

percent for each additional full fifty cents ($0.50) by which such amounts exceed eight dollars ($8.00) per ton, but not in excess of five (5) percent of such amounts.

(For instance: the royalty on an amount of five dollars ($5.00) per ton would be one and one-half (1½) percent; on an amount of ten dollars ($10.00) per ton, three and one-half (3½) percent.)

(f) *Time for computation and payment.*—The Government's royalty shall be computed and paid currently upon each lot sold, held, or used in integrated operations, as the case may be, as above provided in this article.

(g) *Lien for payment.*—To secure the payment of its percentage royalty, there is hereby granted to the Government a lien upon the land or the Operator's interest in the land and upon any production of minerals therefrom, until the royalty claim is extinguished by lapse of time or is fully paid.

(h) *Notice to purchasers.*—The Operator shall give notice of the Government's claim for royalty to any purchaser of the production, and shall authorize and direct such purchaser to pay the royalty directly to the Government and to furnish the Government with copies of the settlement sheets. If the records of any production and sales or other disposition of production, whether the production is by the Operator or by others, are not made available to the Government, the amount of the royalty may be estimated by the Administrator, Defense Minerals Exploration Administration, or his successor, and his estimate thereof shall be final and binding upon the Operator.

(i) *No obligation to produce.*—Nothing in this contract is to be construed as imposing any obligation on the Operator or the Operator's successor in interest to engage in any production operations.

(j) *Government not obligated to buy.*—Nothing in this contract shall be construed as imposing any obligation on the Government to purchase any minerals mined or produced from the land.

ARTICLE 9. *Interests in purchased property.*—(a) *Title and ownership.*—All costs under this contract shall be incurred by the Operator in the Operator's own name and for the Operator's own account; but any property acquired to the cost of which the Government contributes shall belong to the Operator and the Government jointly in proportion to their respective contributions, although title thereto shall be taken in the name of the Operator.

(b) *Preservation of property.*—Until the final disposal of any property in which the Government has an interest the Operator shall preserve and protect same for the best interest of the Government, any reasonable and necessary costs thereof to be treated as an allowable cost of the project. After the completion of the work or termination of the Government's obligation to contribute, or when such property is not in use for or needed for the work, the Operator shall neither use it without the written consent of the Government nor without paying a reasonable rental to be fixed by the Government for its interest.

(c) *Disposal of property.*—Upon the completion of the work or termination of the Government's obligation to contribute to costs, or when the property is no longer needed for the work, the Operator shall promptly dispose of salable or salvageable property in which the Government has an interest for the joint account of the Government and the Operator, either by return to the vendor, by sale to others, or purchase by the Operator or the Government at a price at least as high as could be obtained from others, unless the Government in writing waives its interest in any such property. Without advance approval of the sales price by the Government the Operator shall not sell at any price any item of property the cost of which was more than $500, and shall not sell at less than 25 percent of the purchase price any item of property which cost $500 or less. The Government, in lieu of approving the sales price for any such item, may itself purchase the item at the best price which the Operator is able to obtain or himself cares to give. Property remaining upon any termination of the work shall be considered in groups or categories (such as drill steel, or explosives, or pipe, or rails), and if the original cost of the remaining unexpended portion of any such group or category is less than $50, the Government waives its interest therein. If necessary to accomplish the disposal of any item the Operator shall dismantle and sever it from the land, the cost thereof to be treated as a cost of the project.

(d) *Default of the Operator re disposal.*—If within 90 days after the completion of the work or termination of the Government's obligation to contribute to costs, or after the property is no longer needed for the work, or after such further time as the Government may in writing allow, the Operator has failed to sell or otherwise liquidate or dispose of any property in which the Government has an interest, the Government, at any time prior to final settlement under the contract, may pursue one of the following two courses: (1) the Government, by written notice to the Operator, may place upon such property what in its opinion is a fair valuation thereof, not in excess of the cost less 1.66 percent per month from the

Executed in sextuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

By O. Mitterdorf

Administrator, Defense Minerals Exploration Administration

Witnessed
Fulton
Hoffman
Talbert
Selbridge
R. Johnston

PAUL GILLE
(Operator)

By Paul Gille

I, ..., certify that I am the ..... secretary of the corporation named as Operator herein; that ..... who signed this contract on behalf of the Operator, was then ..... of said corporation; that said contract was duly signed for and in behalf of said corporation by authority of its governing body, and is within the scope of its corporate powers.

.....

[CORPORATE SEAL]

U. S. GOVERNMENT PRINTING OFFICE 16—70617-1

date such property was purchased under this contract to the termination of said 90-day period; and such property shall thereupon be considered and accounted for as having been purchased by the Operator at the valuation so fixed by the Government; or (2) the Government may enter and take possession of such property wherever it may be found, and remove and dispose of it for the joint account of the parties.

ARTICLE 10. *Termination of the Government's obligations.*—(a) If in the opinion of the Government operations at any time have failed to achieve anticipated results that indicate the probability of making a worthwhile discovery, and in the opinion of the Government further operations are not justified, the Government may give the Operator written notice thereof, and thereupon: (1) the Government shall be free of all obligation to contribute to costs not then incurred other than such as may be allowable under the provisions of the contract as necessary and incidental to winding up, reporting, and accounting; and (2) the Operator shall be free of all obligation to prosecute the work other than such as may be necessary and incidental to winding up, reporting, and accounting.

(b) If in the opinion of the Government the Operator is in any manner in default under the terms of the contract, the Government may give the Operator written notice of such default with a specification of reasonable time within which the default must be cured; and if the Operator fails to cure such default as required, thereupon: (1) the Government shall be relieved of all obligation to contribute to costs not incurred when the notice was given, other than such as may be allowable by the provisions of the contract as necessary and incidental to winding up, reporting, and accounting; and (2) the Operator shall be free of all obligation to prosecute the work other than such as may be necessary and incidental to winding up, reporting, and accounting. The remedy provided for the Government in this paragraph "(b)" is in addition to any other remedy provided in this contract, and in addition to any other remedy the law may provide for breach of contract.

(c) The giving of any notice by the Government under the provisions of this Article 10 shall not affect the Government's rights as provided for in the contract with respect to a percentage royalty, and such rights shall be fully preserved.

ARTICLE 11. *Notices to be given by the Government* may be delivered to the Operator, or may be sent by registered mail addressed to the Operator at his mailing address stated in this contract. If mailed, notices are deemed to have been delivered five days after the date of mailing.

ARTICLE 12. *Officials not to benefit.*—No member of or delegate to Congress or resident commissioner shall be admitted to any share or part of this contract or to any benefit that may arise therefrom; but this provision shall not be construed to extend to this contract if made with a corporation for its general benefit.

ARTICLE 13. *Changes and added provisions.*—

To the extent that costs are set forth in Exhibit "A" as "Fixed Unit Costs," they are in lieu of the actual costs that would otherwise be allowable costs of the project as provided in Article 6(a) of the contract form.

FEB 11 1955

EXPLORATION PROJECT CONTRACT
PAUL GILLE
DOCKET NO. DMEA-3510

ANNEX I

The land referred to in Article 2 consists of two parcels of land, as follows:

Dawson Lease - East three quarter (E 3/4) (also described as the E½ of the SW¼ and the E½ of the W½ of the SW¼) of the southeast quarter (SW¼) and the south half (S½) of the southeast quarter (SE¼) of Section 20, Township 2 North, Range 1 East of the 4th P. M., Containing 200 acres, more or less.

This land is held by the Operator under an agreement dated June 4, 1954, which he entered into with Thomas B. Dawson and his wife Mary.

Lindsay Lease- Northeast quarter (NE¼) of Section 20, and the North one-half (N½) of the Southeast Quarter (SE¼) of Section 20; all in Township 2 North, Range 1 East of the 4th P. M., containing 240 acres, more or less.

This land is held by the Operator under an agreement dated June 4, 1954, which he entered into with Everett W. Lindsay and his wife Lucille.

The land is shown on a map entitled "Lindsay and Dawson Leases," attached hereto and made a part hereof.

EXPLORATION PROJECT CONTRACT
PAUL GILLE
DOCKET NO. DMEA-3510

EXHIBIT "A"

Description of the Work

The purpose of the project is to explore for lead-zinc ores, by means of churn drilling a maximum of 13,000 feet.

The location and depth of all drill holes shall be subject to prior approval of the Government.

Estimated Costs of the Project

Fixed Unit Costs

13,000 feet of churn drilling @ $1.65/ft.	$21,450.00

The Government will contribute to the costs of churn drilling on the basis of the fixed unit cost set forth above, as work is performed, in lieu of actual costs. The fixed unit cost includes all costs of the work except the costs of technical services and assaying, estimates of which appear below and to which the Government will contribute on the basis of actual costs. The churn drilling may be performed by independent contractor without regard to the provisions of Article 4(b) and Article 6(a)(1) of the contract form.

Actual Costs

Category (2) Personal Services	
Technical services - $130.00/mo.1/ for 18 months	2,340.00 1/
Category (7) Miscellaneous	
Analytical work - 1,056 determinations* @ $1.00/ea.*	1,056.00*
Estimated Total Cost of Project	$24,846.00
Government's Participation @ 50%	$12,423.00

* Indicates maximum in addition to the maxima set forth in the contract form.

1/ Monthly maximum may be exceeded in a given month, provided it not exceeded when averaged over total period for which payments are made.

Lindsay

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 11 1955

MF-203
(Revised July 1, 1954)

OWNER'S CONSENT TO LIEN

WHEREAS, the undersigned, as owner, co-owner, lessor, or seller has an interest in certain property in the State of Wisconsin, County of Lafayette, described as follows:1/

NE ¼ Section 20 and the N ½ of the SE ¼ Section 20, T 2 N, R 1 E, 4th P.M.

which is the subject of a proposed exploration project contract, hereinafter called the "contract", between the United States of America, hereinafter called the "Government", and

2/ Paul Gille

hereinafter called the "Operator"; and

WHEREAS, under the provisions of said contract the Government is entitled to a percentage royalty on production and to other rights and equities which do or may conflict with or be adverse to the rights of the undersigned:

NOW THEREFORE, the undersigned, in consideration of said contract and as an inducement to the Government to enter into same, undertakes and agrees as follows:

1. The Government's equity in and right to dismantle, sever, take possession of, and remove and dispose of facilities, buildings, fixtures, equipment, or other items as provided in the contract or any amendment thereof shall prevail over and be prior and superior to any conflicting or adverse rights of the undersigned, and the Government is authorized to enter upon the land for such purposes.

2. To secure the payment to the Government of the percentage royalty on production3/ provided for under the terms of said exploration project contract or any amendment thereof there is hereby granted to the Government a lien upon the land above referred to and upon any production of minerals therefrom until said royalty is fully paid or ten years have elapsed from the date of the contract, whichever occurs first.

1/ Either (a) insert the legal description of the land, or (b) strike out the words "as follows" and insert "in a lease [or contract, deed, or other document] dated _____, and recorded in book _____ page _____ official records of said county." If (b) is used, the book and page of recordation cannot be dispensed with. If the space provided is insufficient, use an Annex, and refer to the Annex in the space.

2/ Insert the name of the Operator as it will appear in the exploration project contract.

3/ Mining or production from the land is not required, and in the absence of production there is no obligation to repay the Government.

(OVER)

3. The undersigned shall commit no act nor assert any claim that may contravene or conflict with the lien, claim, or rights of the Government under the provisions of said contract. This agreement shall be binding upon the heirs, executors, administrators, successors, and assigns of the undersigned.

4. Changes and added provisions

NONE

Dated this 23 day of November, 1954.

Everett W. Lindsay [Seal]

Lucille Lindsay [Seal]

[Seal]

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 11 1955

MF-203
(Revised July 1, 1954)

OWNER'S CONSENT TO LIEN

WHEREAS, the undersigned, as owner, co-owner, lessor, or seller has an interest in certain property in the State of Wisconsin, County of Lafayette, described as follows:1/

S ½ of the SE ¼ and the E 3/4 of the SW ¼ Section 20, T 2 N, R 1 E, 4th P.M.

which is the subject of a proposed exploration project contract, hereinafter called the "contract", between the United States of America, hereinafter called the "Government", and

2/ PAUL GILLE

hereinafter called the "Operator"; and

WHEREAS, under the provisions of said contract the Government is entitled to a percentage royalty on production and to other rights and equities which do or may conflict with or be adverse to the rights of the undersigned:

NOW THEREFORE, the undersigned, in consideration of said contract and as an inducement to the Government to enter into same, undertakes and agrees as follows:

1. The Government's equity in and right to dismantle, sever, take possession of, and remove and dispose of facilities, buildings, fixtures, equipment, or other items as provided in the contract or any amendment thereof shall prevail over and be prior and superior to any conflicting or adverse rights of the undersigned, and the Government is authorized to enter upon the land for such purposes.

2. To secure the payment to the Government of the percentage royalty on production3/ provided for under the terms of said exploration project contract or any amendment thereof there is hereby granted to the Government a lien upon the land above referred to and upon any production of minerals therefrom until said royalty is fully paid or ten years have elapsed from the date of the contract, whichever occurs first.

1/ Either (a) insert the legal description of the land, or (b) strike out the words "as follows" and insert "in a lease [or contract, deed, or other document] dated _____, and recorded in book _____ page _____ official records of said county." If (b) is used, the book and page of recordation cannot be dispensed with. If the space provided is insufficient, use an Annex, and refer to the Annex in the space.

2/ Insert the name of the Operator as it will appear in the exploration project contract.

3/ Mining or production from the land is not required, and in the absence of production there is no obligation to repay the Government.

(OVER)

3. The undersigned shall commit no act nor assert any claim that may contravene or conflict with the lien, claim, or rights of the Government under the provisions of said contract. This agreement shall be binding upon the heirs, executors, administrators, successors, and assigns of the undersigned.

4. Changes and added provisions

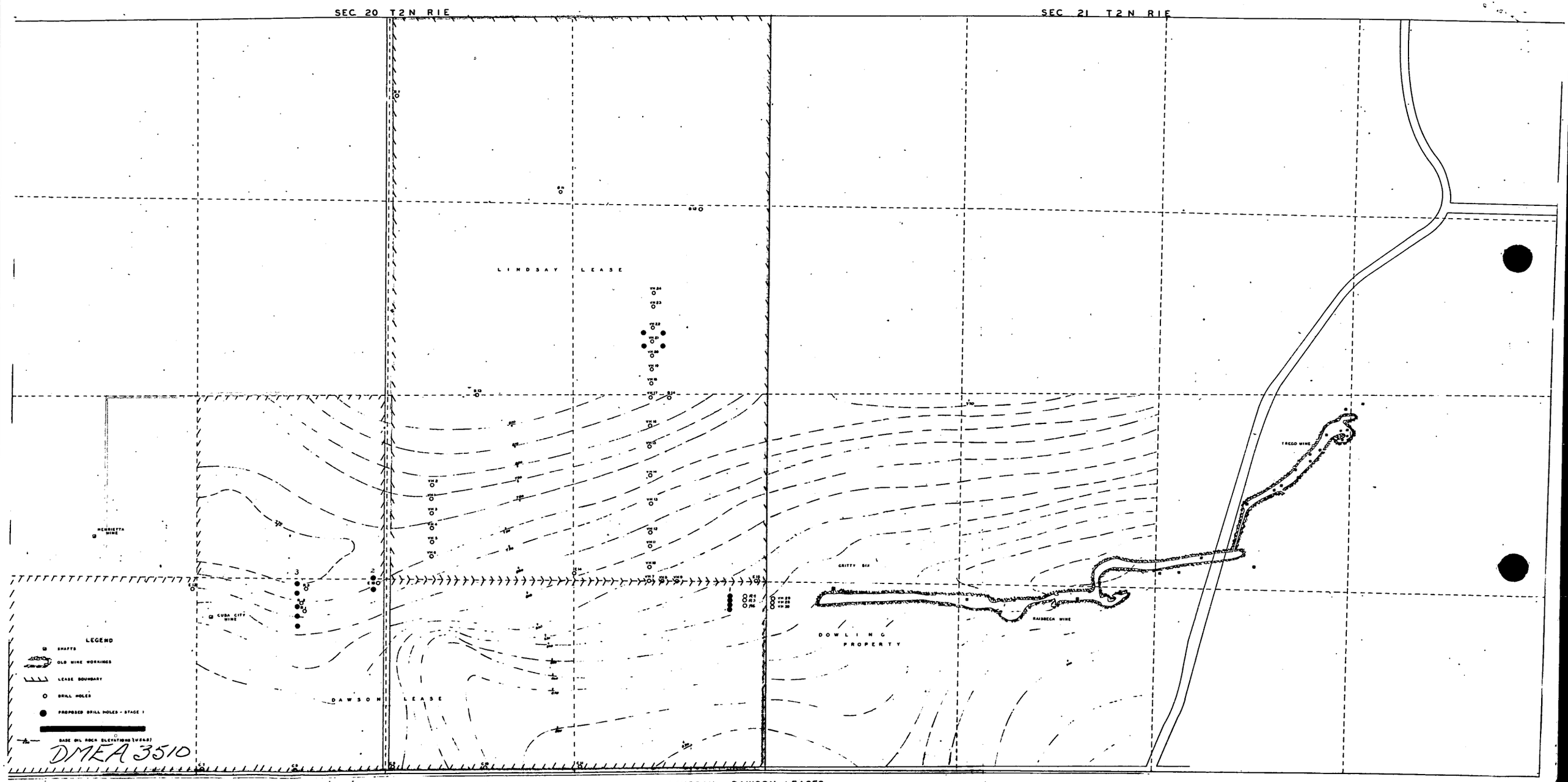
NONE

Dated this 29 day of November, 1954.

Thos B Dawson [Seal]

Mary W. Dawson [Seal]

[Seal]



LINDSAY - DAWSON LEASES.
SECTION 20, T2N, R1E, 4TH PM.
LAFAYETTE COUNTY, WIS.
SCALE 1" = 200'

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT - 1 1954

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

September 28, 1954

Memorandum

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

From: Executive Officer, Field Team, Region V

Subject: DMEA Application - Paul Gille, Cuba City, Wisconsin

Here are the original and two copies of an application for an exploratory project from Mr. Paul Gille of Cuba City, Wisconsin, who proposes to explore for lead and zinc in the Upper Mississippi lead-zinc district of Wisconsin, together with the mining leases and maps, as well as a memorandum from the Field Team representatives at Platteville, Wisconsin, recommending the application for a project.

It is felt that the memorandum from the Field Team representatives is sufficient rather than submitting a lengthy report, because Mr. Gille consulted with both Messrs. Broughton and Stehlik in filling out the application, determining the type of exploratory procedure and in estimating the costs, so that the entire application had their approval from the very beginning. The memorandum merely corroborates their recommendation. We have retained one copy of the application.

A. B. NEEDHAM

Attachments

[illegible]

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
Box 261
Platteville, Wisconsin

COPY

September 20, 1954

OCT - 1 1954

Memorandum

To: A. B. Needham, Chief, Mining Division, Region V

From: Charles J. Stehlik, Mining Engineer, Bureau of Mines, and
W. A. Broughton, Geologist, U. S. Geological Survey

Subject: DMEA Application, Paul Gille

Transmitted herewith is Mr. Paul Gille's application for DMEA assistance in lead-zinc prospecting in Sec. 20, T2N, R1E, Lafayette County, Wisconsin. Included are four copies of Form MF-103 and related papers, four copies of the application map, and a copy of each of the two leases.

During the formulation of this application, Mr. Gille and his consultant, Mr. Dale Dixon, visited the Bureau office often for advice and guidance. Requirements and general conduct as experienced by contracts previously administered through this office were noted to them and it is believed that many of the difficulties experienced in the past have been avoided by the conferences.

Examination of the application has been made and the following comments are offered for the field team appraisal:

(1) Leases and lease descriptions: The leases are sound and typical of mining and prospecting leases in use in this district. Description on the Lindsay lease, on the official document, is as it is recorded in the abstract office. The true meaning of E3/4 of SW1/4 is listed as the SW1/4 of the SW1/4, and the E1/2 of the SW1/4 on the application.

(2) Physical description: Information of physical features contained in the application and on the map has been obtained from the most reliable sources in the district and to our knowledge was faithfully reproduced. Permission to reproduce data from other parties was obtained.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
Box 963
Fletcherville, Minnesota

September 27, 1951

Memorandum

To: A. B. Vandam, Chief, Mining Division, Region V

From: Douglas J. Griffith, Mining Engineer, Bureau of Mines, and
R. L. Rosenblum, Geologist, U. S. Geological Survey

Subject: Data modification, Land Office

Transmitted herewith is the final draft of application for the
withdrawal in Lead-Alma prospecting in Sec. 27, T. 18S., R. 1W., Lawrence
County, Minnesota. Included are seven copies of Form 4-103 and related
papers, four copies of the application map, and a copy of each of the
five leases.

Prior to the formulation of this application, Mr. Hall and his
associates, Mr. Dale Dixon, visited the Bureau office for advice
and guidance. Questionnaires and personal contacts as supplemented by conferences
are largely responsible for the office notes to that end. It is
believed that many of the difficulties encountered in the past have been
avoided by the conference.

Consideration of the application has been made and the following
remarks are offered for the Land Office's consideration:

(1) Leases and lease descriptions: The leases are bonafide
verbal or written and prospecting has been in progress in this district.
Investigation on the Hallow lease, on the original document, is
as it is recorded in the abstract office. The lease covering
42\1/4 of 43\1/4 is listed as the 1\1/4 of the SE\1/4, and the 1\1/4
of the SW\1/4 on the application.

(2) Physical description: Information of physical features
contained in the application and on the map has been obtained
from the most reliable sources to the distribute and to more recently
was initially reproduced. Inaccuracies in reproduction may have occurred or
position was retained.

(3) Geologically Mr. Gille's plan of exploration is feasible. There is a very good possibility that the east-west structure of the Raisbeck and Gritty Six mines continues westward and is related to the structures of the Cuba City and Henrietta mines (see applicant's map). If this east-west structure does continue through the SE$\frac{1}{4}$SW$\frac{1}{4}$ and the S$\frac{1}{2}$SE$\frac{1}{4}$ Sec. 20, there is a possibility that it contains zinc and lead ore along its strike. Mr. Gille intends to test this possibility by his three (and possibly four) proposed cross sections. The proposed positions of these cross sections are controlled mainly by the reported occurrence of abundant zinc and lead minerals in the previous holes R1 to R6 and E13. The four proposed drill holes in the Lindsay lease in the vicinity of holes VH20 to VH22 are intended to further explore the slight zinc occurrence (see logs accompanying application) in the SE$\frac{1}{4}$NE$\frac{1}{4}$ Sec. 20.

(4) Estimates of Cost:

(a) Supervision and Engineering cost, listed as $.18 per foot, is in accord with practice in this district.

(b) Drilling cost, totalling $1.65, is the amount most usually quoted for such work. The $.40 per foot for the driller and a portion of $.65 use allowance is, of course, a profit to the driller. It is, however, a necessary expense to the operator, and since Mr. Gille is both, a perplexing problem may arise from this item.

(c) Assaying costs, listed as $.08 per foot, is slightly high for the district but in most cases adequate assaying is not done. This item, therefore, is not excessive if proper assaying is done.

Based on the above listed evaluations, it is recommended that this request for DMEA assistance be granted.

/s/ Charles J. Stehlik
Charles J. Stehlik, Mining Engineer
U.S. Bureau of Mines

/s/ W. A. Broughton
W. A. Broughton, Geologist
U.S. Geological Survey

CC File
Day File

(3) Geologically Mr. Gillie's plan of exploration is feasible. There is a very good possibility that the east-west structure of the Rainbow and Gritty Jix mines continues westward and is related to the structures of the Ohio City and Hawthorne mines (see applicant's map). If this east-west structure does continue through the SE¼SW¼ and the NE¼SE¼ Sec. 20, there is a possibility that it contains zinc and lead ore along its strike. Mr. Gillie intends to test this possibility by his three (and possibly four) proposed cross sections. The proposed positions of these cross sections are controlled mainly by the reported occurrence of abundant zinc and lead minerals in the previous holes M1 to M6 and M13. The four proposed drill holes in the Lindsay lease in the vicinity of holes T-20 to VM22 are intended to further explore the slight zinc occurrence (see legal accompanying application) in the SE¼SW¼ Sec. 20.

(4) Estimates of Cost:

(a) Conservation and Maintenance cost, listed as $.17 per foot, is in accord with practice in this district.

(b) Drilling cost, totalling $2.65, is the amount most recently quoted for such work. The $.40 per foot for the driller and a portion of $.65 are allowance to, of course, a profit to the driller. It is, however, a necessary expense to the operator, and since Mr. Gillie is both, a perplexing problem may arise from this item.

(c) Assaying costs, listed as $.05 per foot, is slightly high for the district but in most cases adequate assaying is not done. This item, therefore, is not excessive if proper assaying is done.

Based on the above listed evaluations, it is recommended that this request for DMEA assistance be granted.

/s/ Charles L. Stehlik
Charles L. Stehlik, Mining Engineer
U.S. Bureau of Mines

/s/ W. A. Swanston
W. A. Swanston, Geologist
U.S. Geological Survey

cc File
Day File

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Form Approved.
Budget Bureau No. 42-R1035.2.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
APR 1 1954

APPLICATION FOR AID IN AN EXPLORATION PROJECT, PURSUANT TO DMEA ORDER 1, UNDER THE DEFENSE PRODUCTION ACT OF 1950, AS AMENDED

Not to be filled in by applicant

Docket No. 3510
Metal or Mineral Lead-Zinc
Date Received
Estimated Cost $24,830
Participation (Government %)

INSTRUCTIONS

1. *Name of applicant.*—(*a*) State here your full legal name, in the form in which you will wish to contract, and your mailing address: Paul Gille
Cuba City, Wis.

(*b*) If other than an individual, add to your name above whether a corporation, partnership, etc., and the name of the State in which incorporated or otherwise organized.

(*c*) If a corporation, add to above statement, titles, names and addresses of officers.

(*d*) If a partnership, add to the above statement the names and addresses of all partners.

2. *General.*—Read DMEA Order 1, "Government Aid in Defense Exploration Projects," before completing this application. Submit this application and all accompanying papers in quadruplicate (four copies), with your name and address on each sheet of the application and on all accompanying papers. Where sufficient space is not provided on the form for all required information, state it on an accompanying paper, with a reference in each case to the instruction to which it refers by number. Comply with all applicable instructions; or, if not applicable, so state. File the application with Defense Minerals Exploration Administration, Department of the Interior, Washington 25, D. C., or with the nearest field executive officer thereof.

3. *Applicant's property rights.*—(*a*) State the legal description of the land upon which you wish to explore, including all land which you possess or control that may be benefited by the exploration, and excluding any land or interest in land which is not to be included in the exploration project contract Lindsey Lease: NE¼ Sec.20 and the N½ of the SE¼ Sec120,T2N,R1E,4th P.M. Dawson Lease: SW¼ of the SW¼, E½ of the SW¼ and the S½ of the SE¼ Sec.20,T2N,R1E,4th P.M.

(*b*) State any mine name by which the property is known. None

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise lessee

(*d*) If you are not the owner, submit with this application a copy of the lease, contract, or other document under which you control the property. See accompanying papers

(*e*) If you own the land, describe any liens or encumbrances on it --

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice. ——

4. *Physical description.*—(*a*) Describe in detail any mining or exploration operations which have been or now are being conducted upon the land, including existing mine workings and production facilities. State your interest, if any, in such operations. Also describe accessibility of mine workings for examination purposes. See accompanying papers

(*b*) State past and current production, and ore reserves, if any, giving quantities and grades. See accompanying papers

(*c*) Describe the geologic features of the property, including mineralization, type of deposit (vein, bedded, etc.), and your reasons for wishing to explore. Illustrate with maps or sketches. Send with your application (but not necessarily as a part of it) any geologic or engineering report, assay maps, or other technologic information you may have, indicating on each whether you require its return to you. See accompanying papers

(*d*) State the facts with respect to the accessibility of the project: Access roads, distances to shipping, supply and residence points. See accompanying papers

(*e*) State the availability of manpower, materials, supplies, equipment, water, and power.
See accompanying papers

5. *The exploration project.*—(*a*) State the mineral or minerals for which you [illegible] to explore Lead & Zinc

(*b*) Describe fully the proposed work, including a map or sketch of the property showing a plan (and cross sections if needed) of any present mine workings, and the location of the proposed exploration work as related to such features as contacts, veins, ore-bearing beds, etc. See accompanying papers

(*c*) The work will start within 30 days and be completed within 18 months from the date of an exploration project contract.

(*d*) State the operating experience and background of the applicant with relation to the ability to carry out such exploration project, and also that of the person or persons who will supervise the operations. See accompanying papers

6. *Estimate of costs.*—Furnish a detailed estimate of the costs of the proposed work (you will have to use a separate sheet), under the following headings. Add the totals under all headings to give the estimated total cost of the project:

(*a*) *Independent contracts.*—(Note.—If the applicant does not intend to let any of the work to contractors, write "none" after this item. To the extent that the work is to be contracted, do not repeat the cost of the contract-work in subsequent items.) State the cost of any proposed independent contracts for the performance of all or any part of the work, expressed in terms of units of work (such as per foot of drilling, per foot of drifting, per hour of bulldozer operations, per cubic yard of material moved, etc.).

(*b*) *Labor, supervision, consultants.*—Include an itemized schedule of numbers, classes and rates of wages, salaries or fees for necessary labor, supervision and engineering and geological consultants.

(*c*) *Operating materials and supplies.*—Furnish an itemized list, including items of equipment costing less than $50 each, and power, water and fuel.

(*d*) *Operating equipment.*—Furnish an itemized list of any operating equipment to be rented, purchased, or which is owned and will be furnished by the Operator, with the estimated rental, purchase price, or suggested use-allowance based on present value, as the case may be.

(*e*) *Rehabilitation and repairs.*—Furnish a detailed list showing the cost of any necessary initial rehabilitation or repairs of existing buildings, installations, fixtures, and movable operating equipment, now owned by the Operator and which will be devoted to the exploration project.

(*f*) *New buildings, improvements, installations.*—Furnish a detailed list showing the cost of any necessary buildings, fixed improvements, or installations to be purchased, installed or constructed for the benefit of the exploration project.

(*g*) *Miscellaneous.*—Furnish a detailed list showing the cost of repairs to and maintenance of operating equipment (not including initial rehabilitation or repairs of the Operator's equipment), analytical work, accounting, workmen's compensation and employers' liability insurance, and payroll taxes.

(*h*) *Contingencies.*—Give an estimate of any necessary allowances for contingencies not included in the costs stated above.

NOTE.—No items of general overhead, corporate management, interest, taxes (other than payroll and sales taxes), or any other indirect costs, or work performed or costs incurred before the date of the contract, should be included in the estimate of costs.

7. (*a*) Are you prepared to furnish your share of the cost of the proposed project in accordance with the regulations on Government participation (Sec. 7, DMEA No. 1)? Yes

(*b*) How do you propose to furnish your share of the costs?

[X] Money [X] Use of equipment owned by you [ ] Other

Explain in detail on acompanying paper.

CERTIFICATION

The undersigned, whether as an individual, corporate officer, partner, or otherwise, both in his own behalf and acting for the applicant, certifies that the information set forth in this form and accompanying papers is correct and complete, to the best of his knowledge and belief.

Dated Sept. 8, 1954

Paul Gille
(Applicant)

By

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

U. S. GOVERNMENT PRINTING OFFICE 16—66551-1

DEPARTMENT OF THE INTERIOR
Bureau Minerals Administration
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Paul Gille
Cuba City, Wis.

4(a) The Vinegar Hill Zinc Co. of Platteville, Wis. drilled 24 holes on the Lindsey Lease and 3 holes on the Dowling Property in 1946. The locations of these holes are shown on the accompanying map, and are numbered VH 1 thru 24 and VH 28 thru 30. The logs are included under 4(c)

The New Jersey Zinc Co. drilled 7 holes on the Lindsey Lease and 7 holes on the Dawson Lease in 1952. The locations of these holes are shown on the accompanying map and are numbered as follows: Lindsey Lease - B7, B11 thru B14 and E14 and 15. Dawson Lease: E12 and 13, C7 thru C11. The logs are included under 4(c). This exploration project was a wide spread grid drilling program.

Mr. Ernest Rasque drilled 6 holes on the Dawson Lease that contained lead and zinc. The locations of these holes are shown on the accompanying map and are numbered R1 thru R6. The logs of R1 thru R3 are included under 4(c). The logs of R4 thru R6 are not available but have been reported as having good lead and zinc mineralization.

There was one small mine located on the Dawson property. It was called the Cuba City Mine. This mine was worked many years ago. It is not in production now.
To the east of the Dawson property is located the Gritty Six Mine, the Raisbeck Mine and the Trego Mine. They are all interconnected and located in the S½ of Section 21 as shown on the map. These mines are not in production now and are not accessible for examination.

4(b) Past Production:
Gritty Six: Figures not available
Raisbeck Mine: 1912-1913- 6500 tons of ore yeilding a 17.5% zinc concentrate. No other figures available.
Trego Mine: Figures not available.

4(c) Geologic Report:
Raisbeck Mine: This mine was discovered in 1846 by shallow shafts for galena. It was worked continuously until 1903. It was drilled in 1911 by the Vinegar Hill Zinc Co. and reopened by them in 1912. The mine was again reopened in 1929 and 1930 and galena and barite were mined from the south part. The ore body has been mined for a length of 2000 ft. and width of 50 to 170 ft; the stopes were 60 ft. high. It is typical east trending ore body controlled by outward dipping east trending pitches, and was noted for its richness. Flats of ore up to 4 ft. in thickness are reported. Along the toe of the south pitch in the "oil rock" there is a 3-5 ft. thickness of barite. The zinc ore occurred from the cherty drab down into the glass rock and main zinc occurred in veins along the pitches and flats in the "blue" and "gray" beds.
Gritty Six Mine: It is a west extension of the Raisbeck ore body. Exploration started in 1890 and continued to 1897. The ore body was discovered Oct. 22, 1897 by shaft sinking to a depth of 110 ft. The mine was mined profitably until 1907.

I wish to explore these leases for the following reasons:

(1) The Possibility of finding an extension of the Gritty Six Mine.
(2) To check the area where some mineralization occurred on previous drilling, such as around E-13 (Dawson), R-1, 2 and 3 (Dawson) and VH 19, 20, 21 (Lindsey).

4(d) Access roads border the leases and drill locations are within 1/4 mile of these roads. Shipping distance is within 3 miles. Supply and residence is 3 miles.

4(e) Manpower, materials and supplies are plentiful. Power is within 1/2 mile of the leases. Water is very plentiful.

5(b) The purpose of the project is to explore for lead and zinc by means of churn drilling. Maximum depth of holes will be about 180'. Average depth of holes will be about 130'. All holes will be drilled with one cut into the Trenton limestone. The location of the initial drill holes are shown on the map. The drilling of these holes will be conducted as follows:

1. Cross section No. 1 consisting of 4 holes on the Dawson lease located west of the Gritty Six will be drilled. If ore is discovered in any of these holes this cross section will be extended in the North South direction until a dead hole occurs. Then the drilling will be extended in the west direction in order to follow the ore. In the event that no ore is discovered in the first 4 holes of cross section No. 1 a similar cross section will be drilled 200' west of cross section No. 1 If no ore is discovered in this cross section then cross section No. 3 consisting of 5 holes west of R 1, 2 and 3 will be drilled. If ore is discovered in any of these holes the ore will be followed out by the same procedure as on cross section #1. In event that no ore is discovered in cross section #3 cross section #2 will be drilled which is located around hole E 13 of the Dawson Lease. If ore is discovered the same drilling procedure will be conducted as on cross sections 1 and 3. If no ore is discovered 4 holes located around VH 19, 20, 21 (Lindsey Lease) will be drilled. This is the only mineralized area indicated by previous drilling.
In event no ore is discovered in the above described drilling, the Operator will have the option to terminate the program.
The total number of holes in event of a continuous program shall not exceed 100 holes or 13,000 ft. of drilling.

5(a) The applicant has had 30 years of experience as a drilling contractor for the Vinegar Hill Zinc Co., Eagle Picher Mining Co. and private contracts. In addition the applicant will employ D.C. Dixon, consultant, for supervision and technical work. Mr. Dixon is a graduate mining engineer and has had considerable experience working on other DMEA drilling projects in the Southwestern Wisconsin District.

Paul Gille
Cuba City, Wis.

6(a)	None	
6(b)	Supervision & Engineering (13000' drilling @ .18/ft.)	$2340.00
	Driller (13000' drilling @ .40/ft.)	$5200.00
	Drillers Helper (13000' drilling @ .30/ft.)	$3900.00
6(c)	Oil, grease, and gasoline (13000' drilling @ .30/ft.)	$3900.00
6(d)	The following equipment is owned by the Operator and is on a use allowance basis:	
	1 Drill Machine (22W Bucyrus Erie)	
	1 Truck (Mounted with extra transmission)	
	1 Winch truck (4 wheel drive)	
	1 Pickup truck	
	2 Sets Drill Tools (6" complete)	
	2 Sets Drill Tools (6½" complete)	
	Fishing tools, Jars, Sockets, Side Spuds	
	1 Drill House (on wheels)	
	Drill wrenches, Hand tools	
	500' Casing	
	800' Cable (3/4")	
	800' Cable (7/16")	
	4 Sizes Bailers	
	1 extra Drill Bit (8")	
	1 extra Drill Bit (10")	
	Use allowance (13000' drilling @ ,65/ft.)	$8450.00
6(e)	None	
6(f)	None	
6(g)	Assaying (13000' drilling @ .08/ft.)	$1040.00
6(h)	None	
	TOTAL (13000' drilling @ $1.91)	$24,830.00

Paul Gille
Cuba City, Wis.

7(b) I will furnish my share of the costs as follows with cash:

Supervision & Engineering	.09 /ft.	
Drillers Helper	.15 /ft.	
Oil, grease, gasoline	.15 /ft.	
Assaying	.04 /ft.	
Total		.43 /ft.

Being the driller on my own rig I will furnish my share of the following by use of the equipment and labor performed as driller:

Driller	.20 /ft.	
Use allowance (Drill rig & equipment	.32½/ft.	
Total		.52½/ft.
Total		.95½/ft.

Paul Gille
Cuba City, Wis.

4(c)

VINEGAR HILL ZINC CO. DRILL LOGS
Lindsay Lease

VH-1
Elev. 960

0-12	Soil
12-75	Yellow sandy lime
75-145	Drab lime
145-160	Gray
160-169	Blue
169-180	Oil

VH-2
Elev. 957

0-12	Soil
12-85	Sandy lime
85-145	Drab Lime
145-155	Gray
155-165	Blue
165-180	Oil

VH-3
Elev. 960

0-12	Soil
12-95	Sandy Lime
95-145	Drab "
145-155	Gray
155-165	Blue
165-178	Oil

VH-4
Elev. 958

0-15	Soil
15-100	Sandy lime
100-145	Drab
145-160	Gray
160-166	Blue
166-178	Oil

VH-5
Elev. 956

0-15	Soil
15-95	Sandy lime
95-144	Drab
144-160	Gray
160-166	Blue
166-171	Oil

VH6
Elev. 954

0-8	Soil
8-100	Yellow sandy lime
100-140	Drab
140-155	Gray
155-160	Blue
160-172	Oil

VH-7
Elev. 975

		Zn	Fe	Pb
0-20	Soil			
20-95	Sandy lime			
95-145	Drab			
145-150	Gray			
150-155	As above	tr	sh	
155-165	Blue		sh	
165-170	Oil		sh	
170-180	As above			

VH-8
Elev. 975

0-18	Soil
18-95	Sandy lime
95-140	Drab
140-155	Gray
155-166	Blue
166-178	Oil

VH-9
Elev. 974

0-17	Soil
17-120	Sandy lime
120-140	Drab
140-150	Gray
150-160	Blue
160-174	Oil

VH-10
Elev. 975

0-12	Soil
12-115	Sandy lime
115-150	Drab
150-160	Gray
160-170	Blue
170-180	Oil

VH-11
Elev. 975

0-12	Soil
12-95	Yellow lime
95-100	Drab
100-145	"
145-160	Gray
160-170	Blue
170-181	Oil

VH-12
Elev. 973

0-10	Soil
10-45	Sandy lime
45-150	Drab
150-165	Gray
165-172	Blue
172-181	Oil

Continued

Paul Gille
Cuba City, Wis.

VINEGAR HILL ZINC CO. DRILL LOGS
Lindsay Lease

VH-13
Elev. 967

0-14	Soil			
14-95	Sandy Soil			
95-135	Drab			
135-150	Gray			
150-158	Blue			
158-167	Oil			
167-170	Clay&Glass			

VH-14
Elev. 957

0-12	Soil			
12-90	Sandy lime			
90-125	Drab			
125-141	Gray			
141-147	Blue			
147-160	Oil, touch clay			

VH-15
Elev. 952

0-15	Soil			
15-95	Yellow sandy lime			
95-120	Drab			
120-135	Gray			
135-141	Blue			
141-146	Oil			

VH-16
Elev. 955

0-15	Soil			
15-100	Sandy lime			
100-125	Drab			
1250135	Gray			
135-144	Blue			
144-158	Oil			

VH-17
Elev. 955

		Zn	Fe	Pb
0-12	Soil			
12-100	Sandy lime			
100-120	Drab			
120-135	Gray			
135-144	Blue		tr	
144-156	Oil		sh	

VH-18
Elev. 952

0-12	Soil			
12-90	Sandy lime			
90-125	Drab			
125-135	Gray			
135-143	Blue			
143-155	Oil			

VH-19
Elev. 947

		Zn	Fe	Pb
0-12	Soil			
12-90	Sandy lime			
90-115	Drab			
115-120	"	sh	sh	tr
120-132	Gray	tr	tr	
132-141	Blue,hard			
141-153	Oil			

VH-20
Elev. 941

		Zn		
0-12	Soil			
12-90	Sandy lime			
90-115	Drab			
115-120	"		tr	
120-134	Gray	sh	tr	
134-143	Blue			
143-155	Oil			

VH-21
Elev. 938

0-8	Soil			
8-90	Sandy lime			
90-116	Drab			
116-119	Gray	sh	sh	
119-128	"			
128-134	Blue			
134-148	Oil			

VH-22
Elev. 936

0-6	Soil			
6-90	Sandy lime			
90-105	Drab			
105-115	Gray		tr	
115-120	"	tr	tr	
120-129	Blue			
129-132	Oil	sh	sh	
132-142	"			

VH-23
Elev. 926

0-7	Soil			
7-90	Yellow sandy lime			
90-105	Drab			
105-120	Gray			
120-128	Blue			
128-140	Oil			

VH-24
Elev. 919

0-10	Soil			
10-100	Sandy lime			
100-105	Drab			
105-120	Gray			
120-128	Blue			
128-140	Oil			

Paul Gille
Cuba City, Wis.

4(c)

NEW JERSEY ZINC CO. DRILL LOGS
Lindsay Lease

B-7
Elev. 914.94
0-9 Soil
9-89 Drab
89-95 Gray
95-102 Blue
102-110 Oil (Claybed at 110)
110-135 Glass
135-136 Trenton

B-11
Elev. 871.2
0-6 Soil
6-37 Drab
37-50 Gray
50-55½ Blue
55½-72 Oil
72-72½ Claybed
72½-85 Glass
85-90 Trenton

B-12
Elev. 868.44
0-4 Soil
4-35 Drab
35-44 Gray
44-50 Blue
50-63 Oil
63-65 Claybed
65-78 Glass
78-80 Trenton

B-13
Elev. 921.31
0-5 Soil
5-105 Drab
105-116 Gray
116-125 Blue
125-139 Oil
139-141 Claybed
141-150 Glass
150-155 Trenton

B-14
Elev. 949.18
0-6 Soil
6-25 Buff
25-124 Drab
124-135 Gray (tr calcite)
135-142 Blue (slight calcite)
142-155 Oil (medium calcite, tr marcasite)
155-155½ Claybed
155½-169 Glass
169-170 Trenton

E-14
Elev. 949.6
0-25 Soil & Clay
25-115 Drab
115-128 Gray
128-130½ Blue
130½-147 Oil
147-150 Claybed
150-160½ Glass
160½-165 Trenton

E-15
Elev. 945.87

		Zn	Pb	Fe
0-20	Soil & Clay			
20-91	Drab			
91-107	Gray (tr calcite)			
107-115	Blue			
115-120	Oil (abu calcite)	.61	.04	1.9
120-124	"	.21	.04	2.0
124-125	Claybed	as above		
125-130	Glass			
130-135	Trenton		tr	

4(c)

NEW JERSEY ZINC CO. DRILL LOGS
Dawson Lease

C-7
Elev. 974.09

0-14	Soil
14-134	Drab
134-147	Gray
147-153	Blue
153-168½	Oil
168½-169½	Claybed
169½-181	Glass
181-185	Trenton

C-8
Elev. 946.77

0-8	Soil
8-84	Drab
84-98	Gray
98-105	Blue
105-119	Oil
119-120	Claybed
120-132½	Glass
132½-137	Trenton

C-10
Elev. 989.88

0-35	Soil
35-95	Drab
95-104	Gray
104-111	Blue
111-119	Oil
119-120	Claybed
120-130	Glass
130-150	Trenton

C-9
Elev. 970.25

0-11	Soil
11-97	Drab
97-109	Gray
109-116	Blue
116-128	Oil
128-128½	Claybed
128½-139	Glass
139-143	Trenton

C-11
Elev. 997.34

0-15	Soil
15-75½	Drab
75½-87½	Gray
87½-97	Blue
97-110	Oil
110-125½	Glass
125½-131	Trenton

E-12
Elev. 942.64

		Zn	Pb	Fe
0-20	Soil			
20-40	Buff			
40-45	Drab		tr	
45-50	"		tr	
50-140	"			
140-152	Gray			
152-162	Blue			
162-175	Oil			
175-176	Claybed			
176-190	Glass			
190-195	Trenton			

E-13
Elev. 925.84

0-10	Soil			
10-19	Buff			
19-100	Drab			
100-105	"	1.10	.04	2.8
105-110	"	2.05	.04	3.4
110-115	"	.58	.04	2.9
115-118	"			
118-130	Gray			
130-133	"	.49	.04	3.0
133-135	Blue	.49	.04	3.0
135-140	"	2.55	.04	5.9
140-145	Oil	.26	.04	16.6
145-155	Glass			
155-160	Trenton			

Paul [illegible]ille
Cuba C[illegible]y, Wis.

4(c)

ERNEST RASQUE DRILL LOGS
Dawson Lease

R-1
Elev. 933.5
30-45 Good Zn & Pb
145 Top Blue
153 Top Oil

R-2
Elev. 931.5
93-98 Zn
146 Top Blue
154 Top Oil

R-3
Elev. 923.5
22-35 Pb
136 Top Blue
147 Top Oil

Paul Gille
Cuba City, Wis.

VINEGAR HILL ZINC CO. DRILL LOGS
Dowling Property

VH-28		Zn	FE	PB
Elev. 944				
0-6	Soil			
6-50	Yellow sandy lime			
50-70	Drab lime			
70-75	" " 80% tiff			
75-85	" " 50% tiff			
85-90	Gray " 50% tiff			sh
90-95	" " 50% tiff		tr	
95-100	Blue "	lt	tr	
100-104	Oil	tr	tr	
104-108	Claybed			
108-110	Glass		C	lt
110-112	"		tr	
112-114	Blue clay			lt

VH-29				
Elev. 943				
0-6	Soil			
6-90	Sandy Lime			
90-96	Blue "			
96-98	Oil			
98-100	Oil	sh	lt	tr
100-102	Oil			
102-104	Claybed	tr	lt	C
104-106	"	sh		tr
106-112	Glass			tr

VH-30				
Elev. 946				
0-6	Soil			
6-55	Sandy lime			
55-80	Drab "			
80-84	Blue "			
84-98	Oil	tr		
98-102	Claybed			
102-108	Glass			

3(d)

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
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Paul Gille
Cuba City, Wis.

3 cc

THIS AGREEMENT, made and entered into this 4th day of June, 1954, by and between Thomas B. Dawson and Mary Dawson, his wife----------

of Benton, LaFayette County, State of Wisconsin, of the first part, hereinafter referred to as Lessor, and Paul Gille of Cuba City, Grant County, Wisconsin, of the second part, hereinafter referred to as Lessee.

W I T N E S S E T H :

That Lessor, for and in consideration of the rents, covenants and conditions herein agreed to be paid, kept and performed by Lessee, has leased and let and does hereby lease and let unto Lessee for prospecting and mining purposes only, the following described premises owned by Lessor and situated in Benton Township, LaFayette County, Wisconsin, to-wit:

The east three quarter (E3/4) of the southwest quarter (SW 1/4) and the south half (S 1/2) of the southeast quarter (SE 1/4) of section twenty (20) in township two (2) north range One (1) east of the 4th P. M., containing 200 acres, more or less.
---

1. This agreement is intended to and does lease, let and demise to Lessee all and every prospecting and mining right and privilege in and upon said lands absolutely, together with the privilege of erecting and installing any and all machinery and equipment necessary or convenient in mining, processing and marketing the ore.

2. The parties mutually agree that Lessee, except as herein otherwise provided, each year during the life of this agreement beginning June 4, 1954, (hereinafter referred to as "work year") shall:

A. Perform a minimum of six hundred (600) man shifts of mining work on the premises, or

B. Drill 5 holes each 300 feet in depth (unless the ore horizon is sooner encountered), or

C. Pay the sum of $300.00 on or before the expiration of any work year during which Lessee has not performed either A or B, such payment to be considered advance royalty applicable against subsequent royalties provided for in Paragraph 6 of this lease; provided, however, that if Lessee terminates this lease prior to the expiration of any work year and has performed neither A nor B theretofore during such work year, Lessee shall pay Lessor $25.00 for each month during such work year that this lease was in force and effect.

It is understood and agreed, however, that alternatives B and C above shall only be applicable during the first four work years of this lease, i.e. up to June 4, 1958.

3. It is further agreed that Lessee will make available for Lessor's inspection, at all reasonable times during the term of this lease, information as to the location and footage of each hole drilled on said land. At the termination of this lease, Lessee will furnish to Lessor a factual record of any holes drilled on the land together with a map showing the location of such holes.

4. This lease conveys such surface land rights as are necessary for prospecting for, developing and operating any mine or

mines in said land, or operating mills on said land. Lessee shall have the right of way to and from any place where prospecting, mining or milling operations are carried on and the public highway. Lessee, however, shall use one roadway to and from any one mine or mill on said land, and shall fence off the area of its mining or milling operations and the roadway from such area to the public highway. Lessee shall cover or case all prospect holes. Lessee shall do no more damage to crops on said land than may be necessary and shall pay all damage to growing crops while prospecting. In case the parties hereto shall not be able to agree upon the amount or extent of such damage, the same shall be determined by arbitration, the Lessor to select one arbitrator, the Lessee to select one arbitrator, and the two arbitrators so selected to select a third arbitrator. The award made by said arbitrators shall be binding and conclusive on the parties hereto.

5. Should any well or surface stream now regularly used for water supply on the leased premises be drained by mining operations conducted thereon by Lessee, Lessee agrees to furnish a water supply equivalent to that being used by Lessor at time said well or stream should be interrupted.

6. Ores mined from the leased premises may be milled and prepared for market thereon or on other lands, separately or in connection with other ores, as Lessee may elect, proveded, however, that before milling such ores they shall be weighed and assayed and the net recoverable lead sulphide concentrates and zinc sulphide concentrates calculated on the basis of an 85% recovery in the case of zinc and a 75% recovery in the case of lead, and in accordance with weighing and sampling methods recognized in the Illinois, Wisconsin and Iowa district as practical and efficient at the time of receipt at the mill. Lessee agrees to pay the Lessor, as rent or royalty, the following:

> Seven and one-half (7½) percent of the market value of such recoverable lead and zinc concentrates, from ores mined from the leased premises. "Concentrates" for the purposes hereof means the salable zinc and lead sulphide

minerals recoverable, as determined above, at the mill or concentrating plant where treated. "Market value" for the purposes hereof when used with respect to lead and zinc concentrates means the price established f.o.b. cars at the mill by responsible buyers of concentrates of a similar grade and kind produced from ores mined and milled in said district and prevailing at the time the ores are delivered to the mill for treatment.

In the event that Lessee elects to remover pyrite concentrates the ore shall, before milling, be weighed and assayed and the net recoverable pyrite concentrates calculated in accordance with weighing, sampling and concentrating methods recognized in the aforesaid district as practical and efficient at the time of receipt at the mill. In such event Lessee shall pay to Lessor a royalty of seven and one-half (7½) per cent of the market value of such pyrite concentrates from ores from the demised premises. "Market value" for the purposes of this paragraph, inasmuch as there is no established market for such concentrates in said district, means the amount for which Lessee is able to sell such concentrates, f.o.b. cars at the mill.

7. Lessor shall have no interest in any subsidy, bonus, premium, or similar payment made by the United States Government or any agency thereof with respect to ores and minerals mined from the premises and no royalty shall be paid on any such payment received by Lessee.

8. Royalty payments shall be made by the Lessee on or before the last day of each calendar month for all ores delivered at the mill during the preceding calendar month. Royalty or other payments under this agreement sohll be deposited by Lessee in Cuba City State Bank of Cuba City, Wisconsin, or such other bank as Lessor may in writing designate (such bank being hereby constituted as agent of Lessor to receive such

payments, and deposits in such Bank shall be deemed to be payment to Lessor).

9. Lessee agrees to keep an accurate record of all ores mined from the leased premises and of all calculations relative to royalty payments thereunder. The said records may be inspected by Lessor at all reasonable times.

10. Lessee shall have the right to erect and install all necessary buildings, tramways, machinery and equipment on said land for the purposes of mining, milling, cleaning or otherwise preparing for market all ores mined therefrom, and Lessee shall have the right to remove the same at the expiration of this lease, or within six (6) months thereafter, Lessee agrees not to sink a shaft or erect a plant on the demised premises within three hundred (300') feet of the present main buildings on the demised premises. Lessee agrees to support all shafts and drifts when in its sole judgment it appears necessary and not to remove such supports without the written permission of Lessor. Lessee shall not be liable for damages in event of caving of said leased premises or any portion thereof by reason of failure of supports or pillars left to support the same.

It is understood and agreed that Lessee shall conduct no open pit mining the leased premises without the written consent of the Lessor. If in connection with Lessee's mining operations an incline opening on the surface of the leased premises is to be driven, Lessee shall obtain written consent of Lessor as to the location on the demised premises for the deposit of rock or waste materials to be removed through the surface opening of such incline, provided, however, that such designated location shall be ample for such purpose and shall not be further than six hundred (600') feet from the opening of such incline; and Lessee shall have the right of access to such designated area. If such designation is not made

within thirty (30) days after receipt of request therefor, Lessee may pile such rock and waste material at such location on the leased premises as it chooses. Upon termination of all of Lessee's rights and privileges hereunder, Lessee shall securely seal any shaft or incline on the surface of the leased premises.

11. Lessee shall have the privilege of raising ores from said land through shafts or inclines on other lands in the area, and the privilege of milling, cleaning or otherwise treating such ores in plants or mills located upon such lands. Lessee shall also have the privilege of raising ores mined from other lands through shafts or inclines which Lessee has sunk or driven on the leased premises for the purpose of working same, and of milling, cleaning or otherwise treating such ores in mills or plants located upon the leased premises. The privileges referred to in the last preceding sentence shall survive the termination, by expiration or otherwise, of this lease. For any period after such termination during which Lessee is (a) raising, through a shaft driven on the demised premises or through an incline opening on the surface of the demised premises, ores, exclusively from other lands in which Lessor has no interest, or (b) milling, cleaning or otherwise treating on the demised premises, ores exclusively from such other lands, or (c) doing both (a) and (b), Lessee shall pay Lessor at the rate of $60.00 per year. The right to use underground inclines or exploration openings existing in the leased premises at the termination of this lease shall also survive such termination for so long as the use of any of the same may be necessary or convenient for any mining purpose connected with this or any other property. For the exercise of such right subsequent to such termination, Lessee shall pay Lessor at the rate of One hundred ($100.00) Dollars per year, provided, however, that no such payment shall be required to be made by Lessee for any period for which Lessee makes payment to Lessor at the rate of Six hundred ($600.00) Dollars per year as heretofore in this paragraph provided.

Anything hereinbefore to the contrary notwithstanding, Lessee shall have the right to remove any of its property used in connection with the exercise of the rights and privileges referred to in the last five preceding sentences of this paragraph, within six (6) months after tendering a release of the same.

Nothing herein shall be construed so as to permit Lessee to construct and operate a central concentrating plant on lands herein described without the express written consent of Lessor.

12. Lessee shall have the right to sell any rock, tailings, or other waste material (hereinafter in this Paragraph 12 referred to as "waste material") resulting from mining or milling ore from the leased premises. Lessee shall also have the right to use, without charge, so much of such waste material as it may desire for its own purposes.

In case of sale by Lessee of such waste material, the Lessee shall pay to Lessor, at the end of each calendar month, fifty (50) per cent of the balance of the proceeds of sale of such waste material during the preceding calendar month, after deducting the costs (i.e., costs subsequent to milling the ore) of handling, stocking, preparing for market, selling, transporting, and delivering such waste material, and any taxes of any nature assessable on such waste material or measured by the proceeds of the sale of such waste material. However, if such waste material has been commingled in stockpiles at a milling plant with waste material resulting from ores from other lands, Lessee shall, in the event of a sale from such stockpiles, pay to Lessor that proportion of fifty (50) per cent of the balance of the proceeds of sale, after the deductions hereinabove referred to, as the amount of waste material resulting from ores from the leased premises in such stockpiles at the time of such sale is to the entire amount of waste material in such stockpiles at such time. When making payments as aforesaid, Lessee shall furnish Lessor with a statement setting forth

the proceeds of sale and the costs deducted.

In case Lessor desires to remove, before termination of milling, waste material stockpiled at a mill site of Lessee, it may do so upon request to Lessee, subject to the following: Lessee may impose such regulations upon such removal as it may deem necessary, i.e., such regulations as to time, place and method of removal, matter of weighing, records to be kept, and removal not to interfere with Lessee's operations. Lessee will notify Lessor as to the amount of waste material resulting from ores from the leased premises and unsold which Lessee calculates is stockpiled at the time of such request, and Lessor may remove up to fifty (50) per cent of such amount. All handling, accounting or other costs of Lessee with respect to waste material which may be so removed shall be paid to Lessee by Lessor before removal.

Upon termination of milling at a mill site at which waste material is stockpiled, Lessee shall notify Lessor of such termination and of the quantity of waste material to which Lessor is entitled. Such quantity shall be fifty (50) per cent of the amount of waste material resulting from ores from the leased premises and unsold which Lessee calculates is so stockpiled at the time of such termination. Lessor shall have a period of two (2) years after the date of such nitice in which to remove such quantity and at the expiration of such period any portion of such waste material not so removed shall be the absolute property of the owner of the premises upon which the same is stored, without further conveyandce, free and clean of all obligations of this instrument.

Lessee's judgment and decisions as to handling, stockpiling, apportioning, commingling, allocation, sale and cost account with

respect to waste material shall be final and binding. The providions of this Paragraph 12 apply to waste material from ores milled in a mill owned or operated by Lessee, Lessor to have no rights in or to waste material resulting from ores milled elsewhere.

13. It is further agreed that after the first four work years of this lease referred to in Paragraph 2 hereof, the Lessee may pay to the Lessor fifteen ($15.00) dollars an acre in lieu of required mining work (referred to in Paragraph 2A hereof) during any work year, payable at the end thereof. Said payment shall be considered advance royalty applicable against subsequent royalties provided for in Paragraph 6 of this lease.

14. It is further agreed that in the event that the East St. Louis spelter market shall at any time during the life of this lease drop below twelve (12c) cents per pound, Lessee may discontinue work of any kind or payments in lieu thereof under this lease until the said price equals or exceeds twelve (12c) cents per pound, but such cessation of work shall not exceed a period of four (4) years at any ~~the~~ time.

15. Lessor hereby warrants and agrees to defend the title to the lands leased herein up to the time that this lease or proper notice thereof is put on record, but no later than June 4, 1955, and Lessee shall at all times during the life of this lease have the right, but is not obliged, to pay taxes, mortgages or other liens which may be due and payable in the event of default of payment by Lessor, in which event Lessee shall be subrogated to all the rights of the holder thereof and Lessor also agrees, at Lessee's option, (a) to reimburse Lessee upon demand for such payments made or (b) to permit Lessee to deduct the same from any advance or earned royalties due Lessor under any of the provisions of this lease.

16. The lease hereby granted shall subsist and run so long as Lessee shall continue to prospect, operate or mine upon said leased premises, including such periods as the operating requirements

of this lease are suspended or advance royalties are paid under any of the provisions hereof, unless surrendered or terminated as hereafter provided.

17. In case of failure of Lessee to keep and perform the terms and obligations of this lease, Lessor may give thirty (30) days written notice of the breach, violation or default complained of, in which case Lessor shall specify the details of the same in order that Lessee may be fully informed with respect thereto, and if the same is not remedied or corrected within thirty (30) days after the receipt of said notice, this lease shall thereupon terminated at the option of Lessor, which shall be evidenced by notice in writing to Lessee, and which remedy shall be exclusive. No forfeiture, however, shall be asserted or based on a breach, violation or default hereunder or on a failure to remedy or correct the same, when occasioned by fire, riot or civil commotion, strikes or other labor controversies, inability to obtain labor or materials or equipment on the open market, delay of carriers, breakage of machinery or equipment, government regulation or interference, war, whether declared or not, acts of nature, or any other cause beyond the control of Lessee, whether or not of a like nature of the foregoing and whether or not the same could have been foreseen or prevented.

18. Lessee may at any time surrender this lease by executing and tendering to Lessor and if requested by Lessor, recording at Lessee's expense a written release thereof, and from and after such tender Lessee shall be released and relieved from all further obligations and liabilities hereunder, with respect to or in any way connected with the above described premises or the exercise of Lessee's rights hereunder, except to account for and make payments accrued during the life hereof and except to permit Lessor to remove tailings in accordance with the providions of Paragraph 12 hereof. Lessee may at any time, after the surrender or termination of this lease, surrender the rights and privileges referred to in Paragraph 11 hereof which survive this lease and by executing and tendering to Lessor and if requested by Lessor, recording at Lessee's expense a written release thereof, and from and after such tender Lessee shall be released and

relieved from all obligations and liabilities with respect to or in any way connected with the above described premises or such rights or privileges or the exercise of such rights or privileges, except to account for and make any payments accrued during the life of such rights and privileges for the exercise thereof. Tender of the aforesaid releases may be made by mailing same to Lessor at the address hereinafter set forth in Paragraph 19 hereof or by depositing the same with the bank, if any, at such time acting as agent for Lessor to receive payments hereunder.

19. All notices herein provided to be given in writing shall, unless otherwise provided, be mailed by registered mail to the addresses following, until some other address is designated in a notice so given:

Thomas Dawson
Benton
Wise

Paul Gille
Cuba City
Wise

20. This lease shall be binding upon and enure to the benefit of the respective parties hereto, and their personal representatives, successors and assigns.

IN WITNESS WHEREOF, the Lessor and Lessee have set their hands and seals, the day and year first above written.

Executed in duplicate
in the presence of:

Douglas L. Hilvers — Mary W.
Douglas L. Hilvers — Thos B
As to Lessor

Douglas L. Hilvers — Paul Gi
As to Lessee

STATE OF WISCONSIN)
: SS
COUNTY OF LAFAYETTE)

Personally came before me this 4th day of June, 1954, the above named _____, to me known to be the persons who executed the foregoing instrument, and acknowledged the same to be their free act and deed for the uses and purposes therein set forth.

_____
Notary Public, Grant County, Wisc.
My commission expires _____, 19__.

STATE OF WISCONSIN)
:
COUNTY OF GRANT)

Personally came before me this 4 day of June, 1954, the above named Mary W. Dawson, Thos. B. Dawson & Paul Gille, to me known to be the persons who executed the foregoing instrument, and acknowledged the same to be their free act and deed for the uses and purposes therein set forth.

Douglas L. Hilvers
Notary Public, Grant County, Wisc.
My commission expires May 8, 1955.

3(d)

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT - 1 1954

Paul Gille
Cuba City, Wis,

3 cc

THIS AGREEMENT, made and entered into this 4th day of June, 1954, by and between Everett W. Lindsay and Lucile Lindsay, his wife----------

of Benton Township, LaFayette County, State of Wisconsin, of the first part, hereinafter referred to as Lessor, and Paul Gille of Cuba City, Grant County, Wisconsin, of the second part, hereinafter referred to as Lessee.

W I T N E S S E T H :

That Lessor, for and in consideration of the rents, covenants and conditions herein agreed to be paid, kept and performed by Lessee, has leased and let and does hereby lease and let unto Lessee for prospecting and mining purposes only, the following described premises owned by Lessor and situated in Benton Township, LaFayette County, Wisconsin, to-wit:

The Northeast quarter (NE 1/4) of Section twenty (20) and the North one-half (N 1/2) of the Southeast Quarter (SE 1/4) of Section twenty (20); all in Town Two (2) North, Range One (1) East of the 4th. P.M., containing 240 acres, more or less.

1. This agreement is intended to and does lease, let and demise to Lessee all and every prospecting and mining right and privilege in and upon said lands absolutely, together with the privilege of erecting and installing any and all machinery and equipment necessary or convenient in mining, processing and marketing the ore.

2. The parties mutually agree that Lessee, except as herein otherwise provided, each year during the life of this agreement beginning June 4, 1954, (hereinafter referred to as "work year") shall:

A. Perform a minimum of six hundred (600) man shifts of mining work on the premises, or

B. Drill 5 holes each 300 feet in depth (unless the ore horizon is sooner encountered), or

C. Pay the sum of $300.00 on or before the expiration of any work year during which Lessee has not performed either A or B, such payment to be considered advance royalty applicable against subsequent royalties provided for in Paragraph 6 of this lease; provided, however, that if Lessee terminates this lease prior to the expiration of any work year and has performed neither A nor B theretofore during such work year, Lessee shall pay Lessor $25.00 for each month during such work year that this lease was in force and effect.

It is understood and agreed, however, that alternatives B and C above shall only be applicable during the first four work years of this lease, i.e. up to June 4, 1958.

3. It is further agreed that Lessee will make available for Lessor's inspection, at all reasonable times during the term of this lease, information as to the location and footage of each hole drilled on said land. At the termination of this lease, Lessee will furnish to Lessor a factual record of any holes drilled on the land together with a map showing the location of such holes.

4. This lease conveys such surface land rights as are necessary for prospecting for, developing and operating any mine or

mines in said land, or operating mills on said land. Lessee shall have the right of way to and from any place where prospecting, mining or milling operations are carried on and the public highway. Lessee, however, shall use one roadway to and from any one mine or mill on said land, and shall fence off the area of its mining or milling operations and the roadway from such area to the public highway. Lessee shall cover or case all prospect holes. Lessee shall do no more damage to crops on said land than may be necessary and shall pay all damage to growing crops while prospecting. In case the parties hereto shall not be able to agree upon the amount or extent of such damage, the same shall be determined by arbitration, the Lessor to select one arbitrator, the Lessee to select one arbitrator, and the two arbitrators so selected to select a third arbitrator. The award made by said arbitrators shall be binding and conclusive on the parties hereto.

5. Should any well or surface stream now regularly used for water supply on the leased premises be drained by mining operations conducted thereon by Lessee, Lessee agrees to furnish a water supply equivalent to that being used by Lessor at time said well or stream should be interrupted.

6. Ores mined from the leased premises may be milled and prepared for market thereon or on other lands, separately or in connection with other ores, as Lessee may elect, proveded, however, that before milling such ores they shall be weighed and assayed and the net recoverable lead sulphide concentrates and zinc sulphide concentrates calculated on the basis of an 85% recovery in the case of zinc and a 75% recovery in the case of lead, and in accordance with weighing and sampling methods recognized in the Illinois, Wisconsin and Iowa district as practical and efficient at the time of receipt at the mill. Lessee agrees to pay the Lessor, as rent or royalty, the following:

> Seven and one-half (7½) percent of the market value of such recoverable lead and zinc concentrates, from ores mined from the leased premises. "Concentrates" for the purposes hereof means the salable zinc and lead sulphide

minerals recoverable, as determined above, at the mill or concentrating plant where treated. "Market value" for the purposes hereof when used with respect to lead and zinc concentrates means the price established f.o.b. cars at the mill by responsible buyers of concentrates of a similar grade and kind produced from ores mined and milled in said district and prevailing at the time the ores are delivered to the mill for treatment.

In the event that Lessee elects to recover pyrite concentrates the ore shall, before milling, be weighed and assayed and the net recoverable pyrite concentrates calculated in accordance with weighing, sampling and concentrating methods recognized in the aforesaid district as practical and efficient at the time of receipt at the mill. In such event Lessee shall pay to Lessor a royalty of seven and one-half (7½) per cent of the market value of such pyrite concentrates from ores from the demised premises. "Market value" for the purposes of this paragraph, inasmuch as there is no established market for such concentrates in said district, means the amount for which Lessee is able to sell such concentrates, f.o.b. cars at the mill.

7. Lessor shall have no interest in any subsidy, bonus, premium, or similar payment made by the United States Government or any agency thereof with respect to ores and minerals mined from the premises and no royalty shall be paid on any such payment received by Lessee.

8. Royalty payments shall be made by the Lessee on or before the last day of each calendar month for all ores delivered at the mill during the preceding calendar month. Royalty or other payments under this agreement sahll be deposited by Lessee in Cuba City State Bank of Cuba City, Wisconsin, or such other bank as Lessor may in writing designate (such bank being hereby constituted as agent of Lessor to receive such

payments, and deposits in such Bank shall be deemed to be payment to Lessor).

9. Lessee agrees to keep an accurate record of all ores mined from the leased premises and of all calculations relative to royalty payments thereunder. The said records may be inspected by Lessor at all reasonable times.

10. Lessee shall have the right to erect and install all necessary buildings, tramways, machinery and equipment on said land for the purposes of mining, milling, cleaning or otherwise preparing for market all ores mined therefrom, and Lessee shall have the right to remove the same at the expiration of this lease, or within six (6) months thereafter, Lessee agrees not to sink a shaft or erect a plant on the demised premises within three hundred (300') feet of the present main buildings on the demised premises. Lessee agrees to support all shafts and drifts when in its sole judgment it appears necessary and not to remove such supports without the written permission of Lessor. Lessee shall not be liable for damages in event of caving of said leased premises or any portion thereof by reason of failure of supports or pillars left to support the same.

It is understood and agreed that Lessee shall conduct no open pit mining the leased premises without the written consent of the Lessor. If in connection with Lessee's mining operations an incline opening on the surface of the leased premises is to be driven, Lessee shall obtain written consent of Lessor as to the location on the demised premises for the deposit of rock or waste materials to be removed through the surface opening of such incline, provided, however, that such designated location shall be ample for such purpose and shll not be further than six hundred (600') feet from the opening of such incline; and Lessee shall have the right of access to such designated area. If such designation is not made

within thirty (30) days after receipt of request therefor, Lessee may pile such rock and waste material at such location on the leased premises as it chooses. Upon termination of all of Lessee's rights and privileges hereunder, Lessee shall securely seal any shaft or incline on the surface of the leased premises.

11. Lessee shall have the privilege of raising ores from said land through shafts or inclines on other lands in the area, and the privilege of milling, cleaning or otherwise treating such ores in plants or mills located upon such lands. Lessee shall also have the privilege of raising ores mined from other lands through shafts or inclines which Lessee has sunk or driven on the leased premises for the purpose of working same, and of milling, cleaning or otherwise treating such ores in mills or plants located upon the leased premises. The privileges referred to in the last preceding sentence shall survive the termination, by expiration or otherwise, of this lease. For any period after such termination during which Lessee is (a) raising, through a shaft driven on the demised premises or through an incline opening on the surface of the demised premises, ores, exclusively from other lands in which Lessor has no interest, or (b) milling, cleaning or otherwise treating on the demised premises, ores exclusively from such other lands, or (c) doing both (a) and (b), Lessee shall pay Lessor at the rate of $ 600.00 per year. The right to use underground inclines or exploration openings existing in the leased premises at the termination of this lease shall also survive such termination for so long as the use of any of the same may be necessary or convenient for any mining purpose connected with this or any other property. For the exercise of such right subsequent to such termination, Lessee shall pay Lessor at the rate of One hundred ($100.00) Dollars per year, provided, however, that no such payment shall be required to be made by Lessee for any period for which Lessee makes payment to Lessor at the rate of Six hundred ($600.00) Dollars per year as heretofore in this paragraph provided.

Anything hereinbefore to the contrary notwithstanding, Lessee shall have the right to remove any of its property used in connection with the exercise of the rights and privileges referred to in the last five preceding sentences of this paragraph, within six (6) months after tendering a release of the same.

Nothing herein shall be construed so as to permit Lessee to construct and operate a central concentrating plant on lands herein described without the express written consent of Lessor.

12. Lessee shall have the right to sell any rock, tailings, or other waste material (hereinafter in this Paragraph 12 referred to as "waste material") resulting from mining or milling ore from the leased premises. Lessee shall also have the right to use, without charge, so much of such waste material as it may desire for its own purposes.

In case of sale by Lessee of such waste material, the Lessee shall pay to Lessor, at the end of each calendar month, fifty (50) per cent of the balance of the proceeds of sale of such waste material during the preceding calendar month, after deducting the costs (i.e., costs subsequent to milling the ore) of handling, stocking, preparing for market, selling, transporting, and delivering such waste material, and any taxes of any nature assessable on such waste material or measured by the proceeds of the sale of such waste material. However, if such waste material has been commingled in stockpiles at a milling plant with waste material resulting from ores from other lands, Lessee shall, in the event of a sale from such stockpiles, pay to Lessor that proportion of fifty (50) per cent of the balance of the proceeds of sale, after the deductions hereinabove referred to, as the amount of waste material resulting from ores from the leased premises in such stockpiles at the time of such sale is to the entire amount of waste material in such stockpiles at such time. When making payments as aforesaid, Lessee shall furnish Lessor with a statement setting forth

the proceeds of sale and the costs deducted.

In case Lessor desires to remove, before termination of milling, waste material stockpiled at a mill site of Lessee, it may do so upon request to Lessee, subject to the following: Lessee may impose such regulations upon such removal as it may deem necessary, i.e., such regulations as to time, place and method of removal, matter of weighing, records to be kept, and removal not to interfere with Lessee's operations. Lessee will notify Lessor as to the amount of waste material resulting from ores from the leased premises and unsold which Lessee calculates is stockpiled at the time of such request, and Lessor may remove up to fifty (50) per cent of such amount. All handling, accounting or other costs of Lessee with respect to waste material which may be so removed shall be paid to Lessee by Lessor before removal.

Upon termination of milling at a mill site at which waste material is stockpiled, Lessee shall notify Lessor of such termination and of the quantity of waste material to which Lessor is entitled. Such quantity shall be fifty (50) per cent of the amount of waste material resulting from ores from the leased premises and unsold which Lessee calculates is so stockpiled at the time of such termination. Lessor shall have a period of two (2) years after the date of such nitice in which to remove such quantity and at the expiration of such period any portion of such waste material not so removed shall be the absolute property of the owner of the premises upon which the same is stored, without further conveyandce, free and clean of all obligations of this instrument.

Lessee's judgment and decisions as to handling, stockpiling, apportioning, commingling, allocation, sale and cost account with

respect to waste material shall be final and binding. The providions of this Paragraph 12 apply to waste material from ores milled in a mill owned or operated by Lessee, Lessor to have no rights in or to waste material resulting from ores milled elsewhere.

13. It is further agreed that after the first four work years of this lease referred to in Paragraph 2 hereof, the Lessee may pay to the Lessor fifteen ($15.00) dollars an acre in lieu of required mining work (referred to in Paragraph 2A hereof) during any work year, payable at the end thereof. Said payment shall be considered advance royalty applicable against subsequent royalties provided for in Paragraph 6 of this lease.

14. It is further agreed that in the event that the East St. Louis spelter market shall at any time during the life of this lease drop below twelve (12c) cents per pound, Lessee may discontinue work of any kind or payments in lieu thereof under this lease until the said price equals or exceeds twelve (12c) cents per pound, but such cessation of work shall not exceed a period of four (4) years at any one time.

15. Lessor hereby warrants and agrees to defend the title to the lands leased herein up to the time that this lease or proper notice thereof is put on record, but no later than June 4, 1955, and Lessee shall at all times during the life of this lease have the right, but is not obliged, to pay taxes, mortgages or other liens which may be due and payable in the event of default of payment by Lessor, in which event Lessee shall be subrogated to all the rights of the holder thereof and Lessor also agrees, at Lessee's option, (a) to reimburse Lessee upon demand for such payments made or (b) to permit Lessee to deduct the same from any advance or earned royalties due Lessor under any of the provisions of this lease.

16. The lease hereby granted shall subsist and run so long as Lessee shall continue to prospect, operate or mine upon said leased premises, including such periods as the operating requirements

of this lease are suspended or advance royalties are paid under any of the provisions hereof, unless surrendered or terminated as hereafter provided.

17. In case of failure of Lessee to keep and perform the terms and obligations of this lease, Lessor may give thirty (30) days written notice of the breach, violation or default complained of, in which case Lessor shall specify the details of the same in order that Lessee may be fully informed with respect thereto, and if the same is not remedied or corrected within thirty (30) days after the receipt of said notice, this lease shall thereupon terminated at the option of Lessor, which shall be evidenced by notice in writing to Lessee, and which remedy shall be exclusive. No forfeiture, however, shall be asserted or based on a breach, violation or default hereunder or on a failure to remedy or correct the same, when occasioned by fire, riot or civil commotion, strikes or other labor controversies, inability to obtain labor or materials or equipment on the open market, delay of carriers, breakage of machinery or equipment, government regulation or interference, war, whether declared or not, acts of nature, or any other cause beyond the control of Lessee, whether or not of a like nature of the foregoing and whether or not the same could have been foreseen or prevented.

18. Lessee may at any time surrender this lease by executing and tendering to Lessor and if requested by Lessor, recording at Lessee's expense a written release thereof, and from and after such tender Lessee shall be released and relieved from all further obligations and liabilities hereunder, with respect to or in any way connected with the above described premises or the exercise of Lessee's rights hereunder, except to account for and make payments accrued during the life hereof and except to permit Lessor to remove tailings in accordance with the provisions of Paragraph 12 hereof. Lessee may at any time, after the surrender or termination of this lease, surrender the rights and privileges referred to in Paragraph 11 hereof which survive this lease and by executing and tendering to Lessor and if requested by Lessor, recording at Lessee's expense a written release thereof, and from and after such tender Lessee shall be released and

relieved from all obligations and liabilities with respect to or in any way connected with the above described premises or such rights or privileges or the exercise of such rights or privileges, except to account for and make any payments accrued during the life of such rights and privileges for the exercise thereof. Tender of the aforesaid releases may be made by mailing same to Lessor at the address hereinafter set forth in Paragraph 19 hereof or by depositing the same with the bank, if any, at such time acting as agent for Lessor to receive payments hereunder.

19. All notices herein provided to be given in writing shall, unless otherwise provided, be mailed by registered mail to the addresses following, until some other address is designated in a notice so given:

Everett Lindsay
RFD # 2
Cuba City
Wis

Paul Gille
Cuba City
Wis

20. This lease shall be binding upon and enure to the benefit of the respective parties hereto, and their personal representatives, successors and assigns.

IN WITNESS WHEREOF, the Lessor and Lessee have set their hands and seals, the day and year first above written.

Executed in duplicate
in the presence of:

Douglas L. Hilvers — Everett W. Lindsay Seal
Douglas L. Hilvers — Lucille Lindsay Seal
As to Lessor

Douglas L. Hilvers — Paul Gille Seal
As to Lessee

STATE OF WISCONSIN)
: SS
COUNTY OF LAFAYETTE)

Personally came before me this 4th day of June, 1954, the above named _____, to me known to be the persons who executed the foregoing instrument, and acknowledged the same to be their free act and deed for the uses and purposes therein set forth.

_____
Notary Public, Grant County, Wisc.
My commission expires _____, 19__.

STATE OF WISCONSIN)
:
COUNTY OF GRANT)

Personally came before me this 4 day of June, 1954, the above named Everett W. Lindsay, Lucille Lindsay & Paul Gille, to me known to be the persons who executed the foregoing instrument, and acknowledged the same to be their free act and deed for the uses and purposes therein set forth.

Douglas L. Kilvers
Notary Public, Grant County, Wisc.
My commission expires May 8, 1955.

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

PROJECT SUMMARY REPORT

By: W. R. Griswold December 19, 1956

1. Docket No. DMEA-3510 (Lead-Zinc)
Contract No. Idm-E755
Property: Dawson and Lindsay Leases
Lafayette County, Wisconsin

Operator: Paul Gille
Cuba City, Wisconsin

Operator's Property Rights: Dawson lease dated June 4, 1954.
Lindsay lease dated June 4, 1954.

Owners Consents to Liens - Dawson dated November 29, 1954.
Lindsay dated November 23, 1954.

2. Contract dated January 6, 1955.

Work Authorized

13,000 feet churn drilling @ $1.65/ft.	$21,450.00
Technical services, 18 months @ $130.00/mo.	2,340.00
Assaying, 1056 determinations @ $1.00 each	1,056.00
Total	$24,846.00
Government's participation, 50%	$12,423.00

No Amendments to Contract

Work Completed

13,000 feet churn drilling @ $1.65/ft.	$21,450.00
208 chemical determinations	191.00
Technical services	2,180.00
Total cost of the project	$23,821.00
Government's participation, 50%	$11,910.50

Work completed in June, 1956.

3. Audit Certificate.

Report of Review dated November 8, 1956.

Operator's Final Report received October 29, 1956..
Final Field Team Report received October 31, 1956.

4. Certification of Discovery issued December 13, 1956.

Ore estimate resulting from project work.
10,000 tons - 2.8 per cent lead and 2.2 per cent zinc.

5. Comments:

The project was conducted in an efficient and economical manner; adequate reports were furnished by the Operator.

Drilling indicated zinc and lead minerals are widespread on the Dawson and Lindsay leases. Fifty-four of the 78 holes drilled cut zinc and/or lead minerals, but only 8 of these mineralized holes encountered concentrations above the lowest cut-off point used in the district (at least 7 and one-half feet of mineralized ground that averages at least 3.0 zinc or lead). These 8 holes indicate three small ore deposits, all on the Lindsay lease (fig. 1). One hole on the Dawson lease, D-18, contained 10 feet that average 3.75 per cent lead but adjacent holes did not contain ore; so no ore block is shown for D-18.

In general the project was unsuccessful, the small tonnage of ore indicated would not be worth extracting under present day conditions. No further Government expenditure would appear to be warranted on the ground covered by this contract.

W. R. Griswold

WRG/er

Copy to: Docket
Baae Metals
Chron.

DMEA Form 17
Feb. 58

DEFENSE MINERALS EXPLORATION ADMINISTRATION

WORK COMPLETED ANALYSIS

After final audit or review report is received, prepare original only and file in official docket

Operator: Paul Gille		Actual Cost	X
State: Wisconsin *		Agreed Unit Cost	X
Final Report of Audit		Commodity: Lead-Zinc	Docket No. DMEA-3510
Final Report of Review	X		Contract No. Idm-E755

Operation	Authorized by Contract and Amendments		Completed		Net cost after sale of Government Property
	Units	Cost	Units	Cost	
Drifting & Crosscutting					
Raising					
Shafts					
Winzes					
Drilling Churn (Specify) *	13,000' @ $1.65	$21,450.00	13,000'	$21,450.00	$21,450.00
Surface Excavation					
Underground Excavation					
~~Roads and Trails~~ Technical Serv.		2,340.00		2,180.00	2,180.00
Operating Equipment Purchased					
Surface Rehabilitation & Repairs					
Underground Rehabilitation					
New Building, Improvements, etc.					
Other (Specify) 1,056 Assays @ $1.00 max.		1,056.00	191	191.00	191.00
Totals		$24,846.00		$23,821.00	* $23,821.00

* Net cost total must agree with final report of audit or review.

Prepared by W. P. Klugescheid/er Date 4/2/58

31390

Lead-Zinc

E-755

Paul Hille — Wisconsin — 3510

Fixed Unit Costs

13,000' Churn Drilling @ 1.65/ft. $21,450.00

Other Costs

Technical Services @ 130.00/mo. 2,340.00

1,056 Assays @ 1.00 each 1,056.00

$24,846.00

Feb. 1955

Spend

Churn Drilling @ 1.65

191 Samples @ 1.00

Technical Services

23,821.00

Check Cards

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
	Sellardy	120
4/9	Mangery	120
"	Johnson	110
"	[illegible]	100
		220

APR 9 1965

Mr. and Mrs. Thomas R. Dawson

Benton, Wisconsin

Re: DMEA-3510 (Lead-Zinc)
Paul Gille
Dawson & Lindsay Leases
Lafayette County, Wisconsin
Contract Idm-X755

Dear Mr. and Mrs. Dawson:

Enclosed is a copy of a self-explanatory letter of today to the Operator under the subject contract.

This relates to the Owner's Consent to Lien executed by you on November 29, 1954, under the Defense Minerals Exploration Administration program.

Sincerely yours,

George Fumich, Jr.

Acting Director

Enclosure

MMerrithew/mm (4/7/65)
cc: Director's Reading File
R. A. Laurence, Knoxville, Tenn.
Docket
120M

23263

Yesterday's (6/17/65)
cc: Director's Reading File
L. A. Lawrence, Knoxville, Tenn.
Docket
12C4

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
	[illegible]	120
"	[illegible]	120
"	[illegible]	110
"	[illegible]	100
		220

APR 9 1965

Mr. and Mrs. Everett W. Lindsay

Benton, Wisconsin

Re: DMEA-3510 (Lead-Zinc)
Paul Gille
Dawson & Lindsay Leases
Lafayette County, Wisconsin
Contract Idm-2755

Dear Mr. and Mrs. Lindsay:

Enclosed is a copy of a self-explanatory letter of today to the Operator under the subject contract.

This correspondence relates to the Owner's Consent to Lien executed by you on November 23, 1954, under the Defense Minerals Exploration Administration program.

Sincerely yours,

George Fumich, Jr.

Acting Director

Enclosure

MMerrithew/mm
4/7/65
cc: Director's Reading File
R. A. Laurence, Knoxville, Tenn.
Docket
120M

23263

[illegible]

[illegible]

[illegible]

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
11/29	GCS	120
11/29		220

NOV 29 1963

Memorandum

To: Chief, Fiscal Section, Division of Administrative Services, Office of the Secretary

From: Chief, Division of Field Operations, OME

Subject: DMEA-3510 (Lead-Zinc)
Paul Gille
Dawson and Lindsay Leases
Lafayette County, Wisconsin
Contract Idm-E755

Enclosed for your files is the original of a Report of Royalty Review, dated November 21, 1963, on the subject contract.

George C. Selfridge/gla

Enclosure

GCSelfridge/gla (11-29-63)
cc to: Director's Reading File
CA&A Division
Docket
G.C.Selfridge
R. A. Laurence, USGS, Reg. IV, w/cy of Report of Royalty Review dtd 11/21/63 & Orig. cy of memo dtd 11/27/63 to Chief, Div. of Field Operations from CA&A Division.
Avery Reed, USBM, Reg. IV, w/cy of each item sent to Mr. Laurence

23263

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
11/27	GB	220

NOV 27 1963

Memorandum

To: Chief, Division of Field Operations

From: E. D. Talbert, Chief (Signed) E. D. Talbert
Contract Administration and Audit Division

Subject: DMEA-3510 (Lead-Zinc)
Paul Gille
Dawson and Lindsay Leases
Lafayette County, Wisconsin
Contract Idm-E755

Enclosed are the original and two copies of a Report of Royalty Review covering the subject Region IV contract. If you concur in the facts stated therein, please make the following distribution:

(a) Original to the Fiscal Section, Division of Management Operations, Office of the Secretary; and

(b) Two copies to Region IV files.

This report is for OME record purposes only; therefore, no copy has been provided for the Operator.

As evidence of your concurrence, a copy of your memorandum transmitting the original of the report to the Department's Fiscal Section should be furnished this Division. If for any reason you do not concur, the original and both copies should be returned to this Division with your comments.

Enclosures

EDTalbert/ama 11-27-63

cc:
Docket
Director's Reading File
CA & A Division
Fiscal Section

43683

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

October 31, 1963

Re: DMEA-3510 (Lead-Zinc)
Paul Gille
Dawson & Lindsay Leases
Lafayette County, Wisconsin
Contract Idm-E755

Mr. Paul Gille

Cuba City, Wisconsin

Dear Sir:

After the completion of the approved exploration work under the contract identified above, we asked to be informed about changes in the status of the property and production from it during the period of royalty obligation.

To assist you to furnish this information and to assure the accuracy of our records, please answer the questions on the back of this letter and return two copies to this office with copies of any pertinent documents.

Sincerely yours,

F. M. Murphy

F. M. Murphy, Acting Chief
Division of Minerals

FILE COPY
O. M. E.
NOV 18 1963
DATE | INITIALS | CODE
11/18 | | 800
11/18 | | 100
11/19 | | 110
11/20 | Murphy | 500
| | 220

MME Form 63
Revised 3-62

REQUEST FOR INFORMATION ON CERTIFIED PROJECT AND PROJECT UNDER ROYALTY AGREEMENT

1. Since September 10, 1962, has there been a change in ownership, lease, or sublease? If yes, please state details of the transaction below and provide a true or signed copy of the pertinent documents, unless they have been provided before. Yes ☐ No ☒

2. Since September 10, 1962, has there been any production from the land subject to the contract? Yes ☐ No ☒

   A. If so and it was shipped, give quantity, value, and name and address of purchaser.

	Quantity	Value

   B. If stockpiled awaiting sale, state quantity, grade, and location.

Type	Quantity	Estimated Grade	Location
Ore	Tons		
Concentrates	Tons		
Other	Tons		

3. Since , has any production been transported through workings (see of contract)? Yes ☐ No ☐

   A. If so, state quantity, value, and disposition of material.

Disposition of Material	Quantity	Value

Submitted by:

Name Paul Gille Title Owner

Address Cuba City Wis Date Nov 14 1963

4511

REQUEST FOR INFORMATION
FROM OPERATOR ON CERTIFIED PROJECT
AND PROJECT UNDER ROYALTY AGREEMENT

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

From: ACTING Field Officer, OME
Region IV
Washington 25, D. C.

Concerning:
Docket No. DMFA-3510
Property Paul Gille

Location Lafayette, Wisconsin
Contract Idm-E755

Date: August 29, 1960

Mr. Paul Gille
Cuba City
Wisconsin

With the certification of the exploration project identified above, you were asked to inform our office about changes in the status of the property and production from it.

To assist you to furnish this information and to assure the accuracy of our records, we ask that you answer the questions below and return one copy to this office with copies of any pertinent documents.

ACTING Field Officer Lawrence G. Hook

1. Since June 30, 1958, has there been a change in ownership, lease, or sublease about which the OME has not been notified? If yes, please state details of the transaction below and provide a true or signed copy of the pertinent documents. Yes ☐ No ☒

2. Since June 30, 1958, has there been any production from the property? *Yes ☐ No ☑

A. If so and it was shipped, give name and address of purchaser?

	Quantity	Value

B. If stockpiled awaiting sale, state quantity, grade, and location.

Type	Quantity		Estimated Grade	Location
Ore		Tons		
Concentrates		Tons		
Other		Tons		

Submitted by:

Name Paul Gille Title Operator

Address Cuba City Wisconsin Date Sept 2 1960

MME Form 63 8-60 * Property means land subject to the contract. 79340-60

File Copy
Surname
Samuel
Orton
Sluyer
Alyambuc
Lamb
Kiilsgaard
Lindsay
Johnson

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

DEC 13 1956

Mr. Paul Gille
Cuba City, Wisconsin

Re: Docket No. DMEA-3510 (Lead-Zinc)
Paul Gille
Dawson and Lindsay Leases
Lafayette County, Wisconsin
Contract No. Idm-E755

Dear Mr. Gille:

Transmitted herewith is a certification of discovery or development related to the Exploration Project Contract No. Idm-E755, dated January 6, 1955, on the lands described in the contract.

By the terms of the Exploration Project Contract and of the certification, all minerals mined or produced from January 6, 1955, to January 6, 1965, are subject to the Government's percentage royalty as set forth in the contract until the sum of $11,910.50 is repaid to the Government.

Payments should be made to Mr. Robert A. Laurence, Executive Officer, DMEA Field Team, Region V, Room 13, Post Office Building, Knoxville 2, Tennessee. Checks should be drawn in favor of the Defense Minerals Exploration Administration. The purchaser should be advised to deduct royalties from the amount due on each shipment and forward the checks to the Executive Officer.

Royalty payments to the Government should be accompanied by suitable evidence, such as copies of settlement sheets, showing quantity and grade of the products sold, the name of the purchaser, and the price and charges, certified to be correct by the purchaser.

You are requested to notify Mr. Laurence of any changes in ownership and production rights that might affect the Government's right to its percentage royalty. Also, if production ceases at any time for an extended period please notify Mr. Laurence at six-month intervals that such is the case.

Sincerely yours,

C. O. Mittendorf

Administrator

Enclosures

WRGriswold/er (11/[redacted]/56 and 12/7/56)
Copy to: Docket
Mr. C.A. Fredell, Dr.TSD, DMS
Mr. Lamb, USBM
Mr. Kiilsgaard, USGS
Adm F File
Op. Committee
Cont.Adm & Audit Div.
Finance Office
Base Metals
Region V (2)
Mr. Griswold
Mr. F.E. Johnson - Chron.
Mr. & Mrs. E. W. Lindsay
Mr. & Mrs. T. B. Dawson

R.G.G.

File Copy
Surname

Chamber

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

Mr. Paul Gille
Cuba City, Wisconsin

Re: Docket No. DMEA-3510 (Lead-Zinc)
Paul Gille
Dawson and Lindsay Leases
Lafayette County, Wisconsin
Contract No. Idm-8755

Dear Mr. Gille:

Transmitted herewith is a certification of discovery or development related to the Exploration Project Contract No. Idm-8755, dated January 6, 1955, on the land[redacted] described in the contract.

By the terms of the Exploration Project Contract and of the certification, all minerals mined or produced from January 6, 1955, to January 6, 1965, are subject to the Government's percentage royalty as set forth in the contract until the sum of $11,910.50 is repaid to the Government.

Payments should be made to Mr. Robert A. Laurence, Executive Officer, DMEA Field Team, Region V, Room 13, Post Office Building, Knoxville 2, Tennessee. Checks should be drawn in favor of the Defense Minerals Exploration Administration. The purchaser should be advised to deduct royalties from the amount due on each shipment and forward the checks to the Executive Officer.

Royalty payments to the Government should be accompanied by suitable evidence, such as copies of settlement sheets, showing quantity and grade of the products sold, the name of the purchaser, and the price and charges, certified to be correct by the purchaser.

You are requested to notify Mr. Laurence of any changes in ownership and production rights that might affect the Government's right to its percentage royalty. Also, if production ceases at any time for an extended period please notify Mr. Laurence at six-month intervals that such is the case.

WRGriswold/er 11/29/56

Sincerely yours,

Copy to: Docket
Mr. C.A. Fredell, Dr.TSD, DMS
Mr. Lamb, USBM
Mr. Kiilsgaard, USGS
Admr R File
Op. Committee
Cont. Adm & Audit Div.
Finance Office
W. R. Griswold
Mr. & Mrs. E. W. Lindsay

Administrator
Base Metals
Region V (2)
Mr. F. E. Johnson
Chron.

Enclosures

File Copy
Surname

Griswold
Hoffmann 11/30/56
Hoffmann
Chamberlin
Lamb
Kiilsgaard
Selfridge
Johnson

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

DEC 13 1956

Mr. Clarence A. Fredell, Acting Director
Technical Services Division
Defense Materials Services
General Services Administration
7th and D Street, S. W.
Washington 25, D. C.

Re: Docket No. DMEA-3510 (Lead-Zinc)
Paul Gille
Dawson and Lindsay Leases
Lafayette County, Wisconsin
Contract No. Idm-X755

Dear Mr. Fredell:

Enclosed is a copy of a certification of discovery or development related to Exploration Project Contract No. Idm-X755.

The contract was dated January 6, 1955, with the Government participating to the extent of 50 per cent in an exploration project estimated to cost $24,846.00. Actual expenditures were $23,821.00, with the Government's share being half of such amount, or $11,910.50.

The total amount of work provided for under the contract consisted of 13,000 feet of churn drilling. All work specified in the contract was actually completed.

The discovery consisted of lead-zinc ores occurring as replacements in limestone. Estimated ore reserves were 10,000 tons, with an average grade of 2.8 per cent lead and 2.2 per cent zinc.

Sincerely yours,

C. O. Mittendorf
(for)
Administrator

WRGriswold/er 11/29/56
Copy to: Docket
Mr. Lamb, USBM
Mr. Kiilsgaard, USGS
Admr R File
Op. Committee
Base Metals
Region V (2)
Cont. Adm & Audit Div.
Mr. Johnson
Mr. Griswold
Chron.

Enclosure

RCL

File Copy
Surname

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

Friend
Hoffland
"Appd. Sol. Off."
Chambers
Lamb
Kiilsgaard
Selfridge
Griswold

DEC 13 1956

Mr. Everett W. Lindsay
and
Mrs. Lucille Lindsay

Benton, Wisconsin

Re: Docket No. DMEA-3510 (Lead-Zinc)
Paul Gille
Dawson and Lindsay Leases
Lafayette County, Wisconsin
Contract No. Idm-8755

Dear Mr. and Mrs. Lindsay:

For your information, we are enclosing a copy of a certification of discovery or development which has been issued pursuant to the terms of the cited contract. We are also enclosing a copy of our letter of transmittal of this certification.

The above are in connection with the Consent to Lien signed by you on November 23, 1954.

Sincerely yours,

C. O. Mittendorf (for)

Administrator

WRGriswold/er 11/29/56
Copy to:
Docket
Admr R File
Op. Committee
Base Metals
Mr. Lamb, USBM
Mr. Kiilsgaard, USGS
Region V (2)
Mr. Chambers
Chron.

Enclosures 2

R.C.K.

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

DEC 13 1956

File Copy

Surname Griswold
Chambers
Lamb
Kiilsgaard
Selfridge
Fleming

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

DEC 13 1956

Mr. Thomas B. Dawson
and
Mrs. Mary W. Dawson

Benton, Wisconsin

Re: Docket No. DMEA-3510 (Lead-Zinc)
Paul Gille
Dawson and Lindsay Leases
Lafayette County, Wisconsin
Contract No. Idm-E755

Dear Mr. and Mrs. Dawson:

For your information, we are enclosing a copy of a certification of discovery or development which has been issued pursuant to the terms of the cited contract. We are also enclosing a copy of our letter of transmittal of this certification.

The above are in connection with the Consent to Lien signed by you on November 29, 1954.

Sincerely yours,

C. O. Mitterdorf (for)

Administrator

WRGriswold/er 11/29/56
rewritten 12/7/56
Copy to:
Docket
Admr & File
Op. Committee
Base Metals
Mr. Lamb, USBM
Mr. Kiilsgaard, USGS
Region V (2)
Mr. Chambers
Chron.

Enclosures 2

Talbert

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

NOV 15 1956

Mrs. Helen R. Miller
Administrative Assistant
Bureau of Mines, Region V
P. O. Box 217
Norris, Tennessee

Re: Docket No. DMEA-3510 (Lead-Zinc)
Paul Gille
Dawson and Lindsey Leases
Lafayette County, Wisconsin
Contract No. Idm-2755

Dear Mrs. Miller:

The original June 1956 MF-104 with supporting documents and the statements of accounts covering February, March and April, 1955, costs of the referenced project, all of which were forwarded with your letter of November 4, 1956, are returned herewith.

Your cooperation in submitting these documents is appreciated. It has permitted the preparation of a Report of Review, the original and two copies of which are being forwarded by a copy of this letter to the Executive Officer, DMEA Field Team, Region V, for release provided the findings have his concurrence.

For your information and future guidance the four statements of account covering technical services and assays during February, March and April, 1955, are not fully acceptable documentation inasmuch as they are neither receipted by the payees nor certified to be true copies by the Operator. However, inasmuch as the statements for all subsequent months were properly receipted or certified, and there appears to be no reason to doubt the validity or propriety of the claims, the documents are accepted in this instance.

Sincerely yours,

(Signed) E. D. Talbert

E. D. Talbert, Acting Chief
Contract Administration
and Audit Division

Enclosure

EDTalbert/wb 11-15-56

Copy to: Docket
Admr. Reading File
Mr. [illegible]
Mr. Chambers

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

RECEIVED NOV 13 1956 D.M.E.A.

November 12, 1956

Re: DMEA 3510; Idm E-755
Zinc-lead; $24,846
Paul Gille, Operator
Dawson and Lindsay Leases
Lafayette County,
Wisconsin

Memorandum

To: W. R. Griswold, DMEA

From: O. M. Bishop, Branch of Base Metals

Subject: Review of final report dated October 29, 1956, received November 2, 1956.

Under Contract Idm E-755, the applicant drilled 78 churn-drill holes totaling about 13,013 feet at a cost of $23,842.45. Eight of the holes encountered mineralization of sufficient concentration and thickness (7.5 feet of 3 percent combined lead and zinc) to constitute ore; 46 showed lesser concentrations; and 24 were blanks. On the basis of the 8 ore holes T. E. Mullens (USGS) estimates 3 small blocks of ore containing 10,000 tons of 4.9 percent zinc.

Although the tonnage is small there is a possibility that other discoveries will be made in the immediate area which will make it economic to mine the ore discovered through Contract Idm E-755. Therefore, I agree with Mr. Mullens and the field team that the discovery should be certified.

O. M. Bishop

O. M. Bishop

Copy to: Division of Minerals
Mr. Kiilsgaard
Mr. Lamb
Mr. Bishop
Files

Talbert

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

OCT 31 1956

Mr. Robert A. Laurence
Executive Officer
DMEA Field Team, Region V
Room 13, Post Office Building
Knoxville 2, Tennessee

Re: Docket No. DMEA-3510 (Zinc-Lead)
Paul Gills
Dawson and Lindsay Leases
Lafayette County, Wisconsin
Contract No. I4s-E755

Dear Mr. Laurence:

The files on the referenced project disclose that work was completed during June 1956, a request for additional work was denied, and the Operator has submitted his final narrative report. Accordingly, it appears that a final audit, or review in lieu thereof, is in order.

In order that we may take final audit action on this case, it is requested that the original June 1956, MF-104 together with any supporting invoices or receipts for technical services and assays be forwarded to this Division. Also, we would like the receipts or invoices covering technical services and assays covering the amounts claimed on the February, March and April, 1955, forms MF-104. No other documents are required because copies of receipts are attached to the Washington copies of the forms MF-104 for other months.

All documents will be returned promptly upon completion of the review.

Sincerely yours,

(Signed) J. L. Chambers

Jay L. Chambers, Chief
Contract Administration
and Audit Division

EDTalbert/wb
October 31, 1956

Copy to: Docket
Admr. Reading File
Helen Miller
Mr. Chambers
Mr. Griswold
Mr. Talbert

P.C.K.

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

OCT 21 1946

[illegible] Period: January 1, [illegible] to June 30, [illegible]

[illegible]-1263, Idm-[illegible] (lead-zinc) Piquette Mining Co., [illegible] Grant Mine, Grant County, Wisconsin.

[illegible]-1263, Idm-[illegible], Vinegar Hill Zinc Company, (lead-zinc) [illegible] & Blackstone Leases, et al, Lafayette County, Wis.

[illegible]-1315, Idm-[illegible], (lead-zinc) Merritt-Wallis-Zinfher J. E. & Lala Miller Leases, Dubuque County, Iowa

[illegible]-1560, Idm-[illegible], (lead-zinc) Dodgeville Mining Co., Weigel Lease, Iowa County, Wisconsin.

[illegible]-1561, Idm-[illegible], (lead-zinc) Dodgeville Mining Co., Powell Lease, Iowa County, Wisconsin.

[illegible]-2073, Idm-[illegible], (lead-zinc) Cuba Mining Co., Ivy Construction Co. Assignee, Iowa County, Wisconsin.

[illegible]-2184, Idm-[illegible], (lead-zinc) Mayer & Thiede Mining Co. Rowe Mine, LaFayette County, Wisconsin.

[illegible]-2399, Idm-[illegible] (lead-zinc) Eagle Picher Mining Co. Calvert & Ralph Leases, LaFayette County, Wisconsin

[illegible]-3510, Idm-[illegible], (lead-zinc) Paul Gills [illegible] & Lindsey Leases, LaFayette County, Wisconsin

Reported by Thomas R. Mulling,
U. S. Geological Survey
Platteville, Wisconsin

Official
~~EXTRA COPY~~
O. M. E
RECEIVED AUG 3 1959

DATE	INITIALS	
8/17	[illegible]	500 225

FINAL File Report

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.
ROOM 12 POST OFFICE BLDG
KNOXVILLE 2, TENN.

RECEIVED
OCT 31 1956

October 29, 1956

Memorandum

To: Operating Committee, DMEA, Washington, D. C.

From: Field Team, DMEA, Region V, Knoxville, Tennessee

Subject: Final Report, DMEA-3510, Idm-E755 (Zinc-lead)
Paul Gille, Cuba City, Wisconsin
Dawson and Lindsay Leases, Lafayette County, Wisconsin

Enclosed are the original and three copies of the final report by T. E. Mullens, geologist, on the subject exploration contract. The Operator's final report was mailed to you last week.

The Operator and Mr. Mullens are in essential agreement concerning their estimates of indicated reserves, which may be summarized thus:

	Operator	Mullens
*Block 1	4,166 tons, 5.10% Zn	3,350 tons, 5.0% Zn
Block 2	5,209 tons, 6.10% Pb	5,200 tons, 5.4% Pb
Block 3	1,823 tons, 8.04 % Zn	1,450 tons, 3.3% Zn
	11,198 tons	10,000 tons

*These are Operator's numbers, and differ from Mr. Mullens' block numbers.

Mr. Mullens points out that the differences in these estimates resulted from:

1. Operator figures 12 cubic feet per ton; Mullens used 13.
2. Operator and Mullens did not use idential intercepts of ore in drill holes in figuring outlines of ore blocks.

Reviewed by
DMEA OPERATING COMMITTEE
11/2/56
(date)

DMEA-3510 - Paul Gille

The Operator's reports and map are quite sketchy, but they appear to convey the essential factual information, and taken together with Mr. Mullens' complete report, fulfill the need of a final engineering and geologic report.

Although the amount of ore discovered, by either estimate is small, and is not likely to be mined, it is nevertheless ore discovered by the DMEA contract and, should ore eventually be discovered on neighboring properties, the Lindsay ore might be mined eventually. Therefore, we agree with Mr. Mullens's conclusion, and we recommend a certification of discovery. It should be noted that all three ore bodies are on the Lindsay lease.

Robert A. Laurence
Robert A. Laurence
Executive Officer

V. J. Lynch
V. J. Lynch
Member, Bureau of Mines

Enclosures

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FINAL GEOLOGIC REPORT

by

T. E. Mullens

DMEA 3510 (Zinc-Lead)
Contract Idm-E-755

Paul Gille
Operator

Dawson and Lindsay Leases
Lafayette County, Wis.

Reviewed by
DMEA CLEARING COMMITTEE
11/7/56
(date)

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Contract Office
Denver, Colo.

TABLE OF CONTENTS

	Page
Summary	1
Introduction	2
Contract	2
Location	3
Geology	4
Stratigraphy	4
Platteville formation	4
Quimbys Mill member	5
Decorah formation	5
Spechts Ferry member	5
Guttenberg member	6
Ion member	6
Galena formation	7
Mineral deposits	8
Results of drilling	10
Recommendations	14
Appendix	1

ILLUSTRATIONS

Figure 1 Map showing holes drilled on the Dawson and Lindsay leases, sec. 20, T. 2 N., R. 1 E., Lafayette County, Wis.

Figure 2 Index map showing location of DMEA 3510, Paul Gille, Operator, Dawson and Lindsay leases, Lafayette County, Wis.

Figure 3 Generalized stratigraphic section drilled by Contract Idm-E-755 (zinc-lead), DMEA 3510, Paul Gille, Operator, Dawson and Lindsay leases, Lafayette County, Wis.

Figure 4 Diagram showing idealized cross section of a zinc-lead deposit in southwest Wisconsin.

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SUMMARY

Paul Gille, operator of Contract Idm-E-755, DMEA Docket 3510, drilled 78 holes on the Dawson and Lindsay leases in sec. 20, T. 2 N., R. 1 E., Lafayette County, Wis. exploring for zinc and lead ore. These holes totaled 13,013 feet and cost $23,842.45. DMEA loaned one-half of the cost or $11,921.22. The contract authorized a total cost of $24,846.00 and 13,000 feet.

Three small ore bodies totalling about 10,000 tons were discovered on the Lindsay lease. No ore was discovered on the Dawson leases. The largest of the discovered ore bodies is estimated to contain 5,200 tons of 5.4 percent lead ore; the next largest contains about 3,350 tons of 5.0 percent zinc ore; and the smallest contains about 1,450 tons of 3.3 percent zinc ore.

The three ore deposits are too small and too deep to be of current economic value. However, it is recommended that DMEA certify a discovery on the Lindsay lease as the ore deposits do represent ore found by DMEA drilling.

INTRODUCTION

Contract

Paul Gille, of Cuba City, Wis. applied to DMEA (DMEA 3510, zinc-lead) for assistance in exploring for lead and zinc ore on the Dawson and Lindsay leases on August 22, 1954. A field examination of the property was made by Mr. C. J. Stehlik of the U. S. Bureau of Mines and Mr. W. A. Broughton of the U. S. Geological Survey. A joint memorandum submitted by Messrs. Stehlik and Broughton on September 20, 1954 recommended that DMEA grant assistance for exploring the Dawson and Lindsay leases.

On January 6, 1955 DMEA prepared Contract No. Idm-E-755 whereby DMEA would pay one-half the cost of drilling and associated assaying and technical services.

The cost allowed was:

For drilling 13,000 ft. at $1.65 per foot	$21,450.00
For assaying 1,056 determinations	1,056.00
For technical services	2,340.00
Total	$24,846.00
Government participation at 50 percent	12,423.00

The maximum allowable price per foot under this contract was $1.91.

Gille started drilling in February, 1955 and completed drilling in June, 1956. During this time he drilled 13,013 feet in 78 holes. Actual expenses incurred by Gille during the drilling were:

13,013 feet drilled at $1.65 per foot	$21,471.45
208 chemical determinations	191.00
Technical services	2,180.00
Total	$23,842.45
Government participation	11,921.42

The actual cost per foot drilled was 1.832. The lower actual cost is due to only 208 assay determinations made where 1,056 were allowed under the contract.

Location

The Dawson and Lindsay leases are in sec. 20, T. 2 N., R. 1 E., Lafayette County, Wis. (fig. 1 and 2). The Dawson lease comprises about 200 acres in the SW$\frac{1}{4}$ sec. 20 and S$\frac{1}{2}$ of the SE$\frac{1}{4}$ sec. 20; the Lindsay lease comprises about 240 acres in the NW$\frac{1}{4}$ sec. 20 and the N$\frac{1}{2}$SE$\frac{1}{4}$ sec. 20.

Cuba City, Wis., about 2 miles southwest of sec. 20, is the nearest town to the Dawson and Lindsay leases.

GEOLOGY

Stratigraphy

Rocks penetrated by the drill on the Dawson and Lindsay leases include soil, and in descending order, the Middle Ordovician Galena, Decorah, and Platteville formations. A generalized stratigraphic section is shown by figure 3, and a brief description of the rocks is given below. One detailed description of cuttings from a drill hole and skeleton logs of all the holes are included in the appendix.

Platteville formation

The Platteville formation consists of four members, which in ascending order are the Glenwood shale, the Pecatonica dolomite, the McGregor limestone, and the Quimbys Mill limestone. Of the members in the Platteville, only the Quimbys Mill is considered potentially ore-bearing. So, the common practice in this district is to drill all prospect holes through the Quimbys Mill and bottom the hole in the upper part of the McGregor limestone (known locally as the "Trenton"). In some of the holes on the Dawson and Lindsay leases, however, lead, zinc, or iron minerals were encountered at the top of the McGregor member. In these cases, the hole continued until barren rock was encountered.

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Quimbys Mill member.--The Quimbys Mill member is a dark brown dense limestone about 12 feet thick. The limestone is sub-lithographic and breaks with a conchoidal fracture. Because of the conchoidal fracture the Quimbys Mill is locally known as the "Glassrock." Near the lead and zinc deposits the limestone is altered to a dolomite limestone; and where strong mineralizing solutions have entered the limestone, most of the carbonate is dissolved leaving a dark brown shale residuum. The leaching of the carbonate thins the Quimbys Mill member and where strongly mineralized the thickness is usually 8 or 9 feet.

Decorah formation

Spechts Ferry member.--The Spechts Ferry member consists of green clay and white fossiliferous limestone. This member, known locally as the "Claybed," is about 3 feet thick at the Dawson and Lindsay leases. It is not considered an ore-bearing member.

Guttenberg member.--The Guttenberg member (known locally as "Oilrock") consists of about 12 feet of tan to light brown fossiliferous limestone and thin interbeds of dark brown carbonaceous shale. The basal bed of limestone generally contains abundant phosphatic nodules, and all the limestone contains silt-sized flecks of an unidentified red mineral. Near lead and zinc deposits the Guttenberg is altered to a dolomitic limestone, or the limestone is completely dissolved leaving a dark brown shale. The dissolving of the carbonate causes the Guttenberg to thin, and in mineralized holes on the Dawson and Lindsay leases the Guttenberg ranges from 8 to 10 feet in thickness.

Ion member.--The Ion member consists of about 20 feet of very fine grained dark gray and gray dolomite and dolomitic limestone with minor amounts of green clay along bedding planes and disseminated through the dolomite. The lower one-half of the Ion contains mainly dark gray dolomite and, in comparison with the upper part, more green clay. This division is recognized by prospectors in this district and they term the lower unit "blue" and the upper unit "gray". The Ion member is the chief ore-bearing zone in many mines in this district.

Galena formation

The Galena is a medium-grained light tan dolomite which forms the bedrock at the Dawson and Lindsay leases. This formation is generally divided into two units in southwest Wisconsin: A lower unit about 105 feet thick which contains bands of light gray chert nodules, and an upper unit 115 to 120 feet thick which does not contain chert nodules. Some prospectors in this district recognize the divisions of the Galena, and they term the cherty unit "drab" and the noncherty unit "buff." The areal contact between the cherty and noncherty units crosses near the boundary between the Dawson and Lindsay properties. Thus some of the holes drilled started in the noncherty units and the others in the cherty unit.

The lower 10 to 30 feet of the cherty unit is an important ore zone in this district.

The Dawson and Lindsay leases are on the northwest side of the Meekers Grove anticline. The main structure shown by DMEA drilling at the leases is a northwest N 10° W to N 30° W dip which drops the rocks about 90 feet from the south side to about the middle of the leases (fig. 1). A slight syncline which marks the north side of the Meekers Grove anticline trends roughly east through the middle of the leases. Gille drilled only a few holes north of this small syncline, but Vinegar Hill Zinc Company and New Jersey Zinc Company prospect holes north of the trough indicate less than 10 feet of rise on the beds within the Lindsay lease.

Mineral Deposits

Known ore deposits near the Dawson and Lindsay leases include the Gritty Six-Raisbeck and Trego deposit in S½ sec. 21; the Cuba City deposit in SW¼ sec. 20 (on the Dawson lease); and the Henrietta deposit in NW¼ sec. 20. These deposits vary greatly in size and grade of lead and zinc. The Gritty Six-Raisbeck deposit, the largest and richest near the Dawson-Lindsay area, was over 2,000 feet long, ranged from 50 to 170 feet wide, and locally had stopes as much as 60 feet high. In spite of the impressive dimensions of the Gritty Six-Raisbeck deposit, the highest estimates of ore produced from this deposit are in the 50,000 ton range. The small total production may reflect selective mining as the deposit produced ore that was higher grade than other nearby deposits. The "higher" being 8 to 10 percent zinc as compared to 5 percent zinc in nearby deposits. The zinc to lead ratio in these deposits was about 10:1.

Inclined fractures called "pitches" are associated with these ore bodies, but whether the ore body is controlled by the pitches or whether solution of rocks by mineralizing solution caused the pitches to develop is not known (fig. 4). Ideally, two sets of pitches which apex over the ore body develop, but in many ore bodies only one set is present. The pitches may be uninterupted fractures, but most commonly they are offset along bedding planes or more shaly layers.

In ore deposits the pitches are filled with sphalerite, pyrite, marcasite, calcite, and galena. At stratigraphically favorable places and where the pitches are offset horizontally, the same minerals occur and these places are known as "flats" (fig. 4).

In addition to filling pitches and flats, sphalerite, pyrite, marcasite, calcite, and galena are disseminated in the country rock. Typically these disseminated minerals cease at a geologic wall at the outside pitch and grade out to an assay wall inside the inner pitch. The disseminated-mineral ground inside the inner pitch is known as "core ground" (fig. 4).

A second type of mineral deposit also occurs with the pitch and flat deposits. In this type of deposit galena, calcite, iron sulfides, and sphalerite fill vertical fractures, which are locally called "crevices." Horizontal shoots of these minerals develop along the crevice where it cuts favorable stratigraphic zones. These favorable stratigraphic zones are called "openings." The crevice deposits may contain 10 to 40 ton pods of galena, but in general the crevice deposits are considered uneconomic as the pods of galena are difficult to find.

The description given above is greatly idealized. In many deposits, especially in deposits that are weakly mineralized and in deposits in the Quimbys Mill member, well defined pitches are absent.

Stratigraphically, the pitches generally apex in the basal part of the Galena dolomite and toe out in the Guttenberg member of the Decorah formation. Flats are best developed at the Guttenberg-Ion contact, in the basal beds of the Ion, the Ion-Galena dolomite contact, and locally at the base of the lowest chert bands in the Galena dolomite. Flats, not directly connected with pitches also develop in the Quimbys Mill member and at the Quimbys Mill-McGregor contact. The crevice deposits are in the upper 200 feet of the Galena dolomite.

Results of Drilling

Drilling indicated zinc and lead minerals are widespread on the Dawson and Lindsay leases. Fifty-four of the 78 holes drilled cut zinc and/or lead minerals, but only 8 of these mineralized holes encountered concentrations above the lowest cut-off point used in the district (at least 7 and one-half feet of mineralized ground that averages at least 3.0 zinc or lead). These 8 holes indicate three small ore deposits, all on the Lindsay lease (fig. 1). One hole on the Dawson lease, D-18, contained 10 feet that averaged 3.75 percent lead but adjacent holes did not contain ore; so no ore block is shown for D-18.

Ore block No. 1, indicated by holes L-4 and L-5, is about 100 feet long, 50 feet wide, and contains about 3,350 tons of 5.0 percent zinc ore. Barren to sub-ore grade holes surround this ore deposit and further drilling is not warranted around this ore deposit.

Ore block No. 2, indicated by holes L-25 and L-26, is assumed to be 50 feet by 50 feet and to contain about 1,450 tons of 3.3 percent zinc and 0.75 percent lead ore. This ore body is open east and west. Geologic habits of ore deposits near the Dawson and Lindsay leases indicate a good chance that the ore body would extend east under some old lead prospects. And there is a good geologic chance that the ore body would extend about 200 feet west. Thus, the ore body indicated by holes L-25 and L-26 is likely to contain about 15,000 tons of ore on the Lindsay lease.

Ore Block No. 3, indicated by holes L-17, 18, and 20 is assumed to be 250 feet long and 25 feet wide and to contain about 5,200 tons of 5.4 percent lead ore. This ore body, although indicated by three holes, is possibly more "inferred" rather than "indicated." Apparently the three holes encountered the toe of a pitch and mineralization near the toe of a pitch is erratic.

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

None of the three ore bodies described above is of current economic value as the deposits are too small and too deeply burried (160 to 180 feet). On the other hand, mining companies in this district mine isolated ore deposits such as these if they have nearby drifts. It is probable that ore blocks 2 and 3 would be mined if a large ore body were discovered just east of the Lindsay property.

Ore Calculations

Block 1, Holes L-4 and L-5

Hole	Thickness	Average assay	Assay feet
*L-4	7.5 feet (135 - 142½)	5.2 percent Zn	39.0
L-5	10.0 feet (150 - 160)	4.85 percent Zn	48.5
	Average thickness	8.7 feet	
	Average grade	5.0 percent Zn	

Area 50 x 100 = 5,000 sq. ft.

Volume 5,000 x 8.7 = 43,500 cu. ft.

Tons (13 cubic feet/ton) = 3,346

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Block 2, Holes L-25 and L-26

Hole	Thickness	Average assay	Assay feet
L-25	7.5 feet (165 - 172.5)	3.12	23.4
L-26	7.5 feet (165 - 172.5)	3.53	25.5

Average thickness 7.5 feet

Average grade 3.32 percent Zn

Area 50 x 50 = 2,500 sq. ft.

Volume 2,500 x 7.5 = 18,750 cu. ft.

Tons = 1,442

Block 3, Holes L-17, L-18, and L-20

Hole	Thickness	Average assay	Assay feet
L-17	12.5 feet (170 - 182.5)	4.88 percent Pb	61.0
L-18	12.5 feet (177.5 - 190)	5.79 percent Pb	72.3
*L-20	7.5 feet (185 - 192.5)	5.95	42.2

Average thickness 10.8 feet

Average grade 5.4 percent Pb

Area 25 x 250 = 6,250 sq. ft.

Volume 6,250 x 10.8 = 67,500 cu. ft.

Tons 5,192

*Holes L-4 and L-20 actually contain only 5 feet of mineralized ground, but a mining company would generally drift to this type of hole.

RECOMMENDATIONS

It is recommended that the small ore bodies on the Lindsay lease be certified as ore discovered under a DMEA contract. These ore bodies are of no current importance, but the east end of the mineralized trend shown by holes L-15 to L-21 may be prospected on property adjacent to the Lindsay lease. And, if a commercial mineral deposit is discovered along this trend the ore bodies on the Lindsay lease would be mined.

It is recommended that no certification of discovery be made for the Dawson lease as DMEA drilling did not discover ore or favorable trends on the Dawson lease.

Appendix

A log of Hole D-23 is given below to illustrate the general lithology of nonmineralized holes drilled on the Dawson and Lindsay leases. The thickness and lithology as shown in the log could be used for any nonmineralized hole drilled. However, where ore minerals or pyrite are present in appreciable amounts, the Ion and Guttenberg members of the Decorah formation and the Quimbys Mill member of the Platteville formation are altered. This alteration consists of thinning, dolomitization, softening, and shalification of limestone.

Hole D-23

Collar elevation: 993.6
Depth to water: 70.0 feet
Completed: July 9, 1955
Logged by: T. E. Mullens

Depth (feet)	Description of cutting
0 - 15	Soil; no cuttings saved.
15 - 20	Dolomite, light brown, medium-grained, 60 percent; chert, yellowish brown, 40 percent; trace of calcite, and about 1 percent of the cut is composed of fine- to coarse-grained specks of limonite.
20 - 25	Dolomite, as above, 90 percent; chert, as above, 10 percent.
25 - 30	Dolomite, as above, 95 percent; chert, as above, 5 percent.
30 - 35	Dolomite, as above, 85 percent, chert, yellowish brown and gray 15 percent; trace of calcite.
35 - 40	Dolomite, as above, 85 percent; chert, as above, 15 percent.
40 - 45	Dolomite, as above, 95 percent; chert, as above 5 percent; calcite, ½ percent.
45 - 50	Dolomite, as above, 99 percent; chert, as above 1 percent.
50 - 55	Dolomite, as above; trace of calcite.
55 - 60	Dolomite, as above; trace of light gray chert, trace of calcite, trace of limonite.

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60 - 65	Dolomite, as above, 80 percent; chert, yellowish brown and light gray, 20 percent; trace of calcite.
65 - 70	Dolomite, as above, 95 percent; chert, as above, 5 percent, trace of calcite.
70 - 75	Dolomite, as above; trace of calcite; trace of limonite.
75 - 80	Dolomite, as above, 20 percent; dolomite, light gray with fine green clay specks, very fine grained, 80 percent; trace of green shale, trace of pyrite; trace of calcite.
	Contact between Galena dolomite and Ion member of the Decorah formation at 76 feet.
80 - 85	Dolomite, light gray, very fine-grained; calcite, 1 percent; pyrite, 1 percent, pyrite disseminated in silt-sized particles in dolomite.
85 - 90	Dolomite, as above, 60 percent; dolomite, dark to blue-gray, very fine-grained, 35 percent; shale, green, 5 percent; trace of calcite; trace of pyrite.
	Contact between informal "gray" and "blue" divisions of Ion member at 88 feet.
90 - 100	Dolomite, dark to blue gray, very fine-grained; shale, green, 2 percent; trace of pyrite (two 5 foot cuts studied).
100 - 102.5	Dolomite and green shale, as above, 95 percent; dolomite, tan, fine-grained, 5 percent; abundant silt-sized clear quartz grains; trace of pyrite.
	Contact between Ion and Guttenberg members of the Decorah formation at 102 feet.
102.5- 105	Dolomite, tan, fine-grained, 20 percent; dolomite and dolomitic limestone, light tan to light brown, very fine-grained, 80 percent; trace of yellowish white bentonite.
105 - 107.5	Limestone and dolomitic limestone, tan, very fine-grained; trace pyrite, trace calcite.
107.5 - 112.5	Limestone, tan, lithographic except for rare very fine dolomite grains, trace calcite (two 2.5 foot cuts).
112.5- 115.0	Limestone, as above, 50 percent; limestone, very light gray, with dark brown to black phosphate nodules, 45 percent; shale, green, 5 percent; trace of calcite; trace of pyrite.
	Contact between Guttenberg and Spechts Ferry members of the Decorah formation at 114 feet.
115 - 117.5	Limestone, very light gray, very fine-grained, 70 percent; shale, green, 10 percent; limestone, brown, dense, 10 percent; shale, brown, light gray fossil fragments, 10 percent; trace of calcite.
	Contact between Spechts Ferry member of the Decorah formation and Quimbys Mill member of the Platteville formation at 117 feet.

117.5- 127.5	Limestone, brown to dark tan, dense, lithographic except for scattered very fine dolomite grains; trace pyrite; trace calcite; trace brown shale (four 2.5 foot cuts).
127.5- 130	As above, 20 percent; shale, dark brown, fissle, 2 percent; dolomitic limestone, gray, very fine-grained, 60 percent; fossil fragments, 18 percent.
	Contact between Quimbys Mill and McGregor members of the Platteville formation at 128 feet
	Hole completed at 130 feet.

Hole No.: D-1
Elevation: 960.4
Elevation of Quimbys Mill-McGregor Contact: 825.4
Drilled: 2/15/55

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Depth	Formation and Member
0 - 17	Soil
17 - 92	Galena dolomite
92 - 115	Decorah formation, Ion member
115 - 125	Decorah formation, Guttenberg member
125 - 127½	Decorah formation, Spechts Ferry member
127½ - 135	Platteville formation, Quimbys Mill member
135 - 148	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
108 - 115	tr	tr	--
132½ - 135	0.1*	1.6*	0.85*

Hole No.: D-2
Elevation: 960.0
Elevation of Quimbys Mill-McGregor Contact: 827.5
Drilled: 2/19/55

Depth	Formation and Member
0 - 15	Soil
15 - 90	Galena dolomite
90 - 111	Decorah formation, Ion member
111 - 122½	Decorah formation, Guttenberg member
122½ - 125	Decorah formation, Spechts Ferry member
125 - 132½	Platteville formation, Quimbys Mill member
132½ - 138	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
111 - 112½	--	tr	--
130 - 132½	1%	1.6*	1.9*
132½ - 135	--	tr	tr

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Hole No.: D-3
Elevation: 959.7
Elevation of Quimbys Mill-McGregor Contact: 832.2
Drilled: 2/23/55

Depth	Formation and Member
0 - 15	Soil
15 - 84	Galena dolomite
84 - 107½	Decorah formation, Ion member
107½ - 120	Decorah formation, Guttenberg member
120 - 122	Decorah formation, Spechts Ferry member
122 - 127½	Platteville formation, Quimbys Mill member
127½ - 133	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
107½ - 110	0.3*	1.8*	0.50*
120 - 122	sh	--	sh

Hole No.: D-4
Elevation: 959.3
Elevation of Quimbys Mill-McGregor Contact: 834.3
Drilled: 2/28/55

Depth	Formation and Member
0 - 15	Soil
15 - 78	Galena dolomite
78 - 102½	Decorah formation, Ion member
102½ - 112½	Decorah formation, Guttenberg member
112½ - 115	Decorah formation, Spechts Ferry member
115 - 125	Platteville formation, Quimbys Mill member
125 - 128	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
100½ - 102½	--	sh	sh
102½ - 105	sh	sh	sh

Hole No.: D-5
Elevation: 961.1
Elevation of Quimbys Mill-McGregor Contact: 821.1
Drilled: 3/4/55

Depth	Formation and Member
0 - 15	Soil
15 - 100	Galena dolomite
100 - 123	Decorah formation, Ion member
123 - 131	Decorah formation, Guttenberg member
131 - 135	Decorah formation, Spechts Ferry member
135 - 140	Platteville formation, Quimbys Mill member
140 - 145	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
120 - 122½	--	sh	--
122½ - 125	0.2*	2.1*	--
125 - 130	sh	sh	--
130 - 131	.5	1	--
131 - 132½	.5	1	--
132½ - 135	2.0	6	--
135 - 137½	1.5	5	--
137½ - 140	1.0	4	--
140 - 142½	tr	4	--

Hole No.: D-6
Elevation: 960.8
Elevation of Quimbys Mill-McGregor Contact: 820.8
Drilled: 3/11/55

Depth	Formation and Member
0 - 10	Soil
10 - 102½	Galena dolomite
102½ - 124	Decorah formation, Ion member
124 - 132½	Decorah formation, Guttenberg member
132½ - 135	Decorah formation, Spechts Ferry member
135 - 140	Platteville formation, Quimbys Mill member
140 - 145	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
125 - 130	0.8*	2.6*	--
130 - 132½	0.5*	3.1*	--
132½ - 135	tr	2.6*	0.05*
135 - 140	tr	3.0	--

Hole No.: D-7
Elevation: 960.5
Elevation of Quimbys Mill-McGregor Contact: 813.0
Drilled: 3/19/55

Depth	Formation and Member
0 - 10	Soil
10 - 100	Galena dolomite
100 - 127½	Decorah formation, Ion member
127½ - 137	Decorah formation, Guttenberg member
137 - 140	Decorah formation, Spechts Ferry member
140 - 147½	Platteville formation, Quimbys Mill member
147½ - 150	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
100 - 105	--	6	--
105 - 110	--	5	--
110 - 112½	--	3	--
112½ - 115	--	4	--
115 - 117½	--	0.9*	--
120 - 122½	--	3	--
122½ - 125	tr	4	--
125 - 127½	--	3	--
127½ - 130	0.15*	2.8*	--
130 - 132½	tr	3	--
132½ - 135	0.20*	2.0*	--
135 - 137½	0.30*	1.8*	0.05*
137½ - 140	tr	2	tr
140 - 145	tr	2	tr

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Hole No.: D-8
Elevation: 970.3
Elevation of Quimbys Mill-McGregor Contact: 792.8
Drilled: 4/15/55

Depth	Formation and Member
0 - 10	Soil
10 - 130	Galena dolomite
130 - 155	Decorah formation, Ion member
155 - 167½	Decorah formation, Guttenberg member
167½ - 171	Decorah formation, Spechts Ferry member
171 - 177½	Platteville formation, Quimbys Mill member
177½ - 182	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
10 - 15	--	--	tr
15 - 25	--	--	sh
125 - 130	--	tr	--
130 - 145	--	sh	--
147½ - 150	sh	tr	--
162½ - 165	--	1%	--
165 - 167½	sh	--	--
167½ - 171	--	tr	--

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Hole No.: D-9
Elevation: 972.5
Elevation of Quimbys Mill-McGregor Contact: 807.5
Drilled: 4/23/55

Depth	Formation and Member
0 - 18	Soil
18 - 120	Galena dolomite
120 - 142½	Decorah formation, Ion member
142½ - 155	Decorah formation, Guttenberg member
155 - 160	Decorah formation, Spechts Ferry member
160 - 165	Platteville formation, Quimbys Mill member
165 - 170	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
160 - 162½	--	3%	--
162½ - 165	2%	3%	--
165 - 167½	1.30*	2%	--

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Hole No.: D-10
Elevation: 976.3
Elevation of Quimbys Mill-McGregor Contact: 818.8
Drilled: 4/29/55

Depth	Formation and Member
0 - 25	Soil
25 - 110	Galena dolomite
110 - 132½	Decorah formation, Ion member
132½ - 145	Decorah formation, Guttenberg member
145 - 147½	Decorah formation, Spechts Ferry member
147½ - 157½	Platteville formation, Quimbys Mill member
157½ - 160	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
124 - 132½	--	sh	--
132½ - 145	--	sh	--
145 - 147½	--	sh	--

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Hole No.: D-11
Elevation: 979.0
Elevation of Quimbys Mill-McGregor Contact: 829.0
Drilled: 5/5/55

Depth	Formation and Member
0 - 25	Soil
25 - 105	Galena dolomite
105 - 122½	Decorah formation, Ion member
122½ - 135	Decorah formation, Guttenberg member
135 - 142½	Decorah formation, Spechts Ferry member
142½ - 150	Platteville formation, Quimbys Mill member
150 - 153	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
145 - 147½	--	--	320*
147½ - 150	--	--	½%
150 - 153	--	--	tr

Hole No.: D-12
Elevation: 971.2
Elevation of Quimbys Mill-McGregor Contact: 798.7
Drilled: 5/7/55

Depth	Formation and Member
0 - 25	Soil
25 - 125	Galena dolomite
125 - 149	Decorah formation, Ion member
149 - 160	Decorah formation, Guttenberg member
160 - 165	Decorah formation, Spechts Ferry member
165 - 172½	Platteville formation, Quimbys Mill member
172½ - 175	Platteville formation, McGregor member

Hole No.: D-13
Elevation: 957
Elevation of Quimbys Mill-McGregor Contact: 794.5
Drilled: 5/19/55

Depth	Formation and Member
0 - 12	Soil
12 - 115	Galena dolomite
115 - 136	Decorah formation, Ion member
136 - 150	Decorah formation, Guttenberg member
150 - 155	Decorah formation, Spechts Ferry member
155 - 162½	Platteville formation, Quimbys Mill member
162½ - 165	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
90 - 95	--	--	sh
100 -115	--	sh	--
115 -127½	--	sh	--
142½ -145	--	--	¼%
145 -150	--	--	¼%
152½ -155	--	--	1%
155 -157½	--	--	sh
157½ -160	--	6%	1.70*
160 -162½	--	4%	.20*

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Hole No.: D-14
Elevation: 960.9
Elevation of Quimbys Mill-McGregor Contact: 800.9
Drilled: 5/23/55

Depth	Formation and Member
0 - 14	Soil
14 - 110	Galena dolomite
110 - 136	Decorah formation, Ion member
136 - 147½	Decorah formation, Guttenberg member
147½ - 152½	Decorah formation, Spechts Ferry member
152½ - 160	Platteville formation, Quimbys Mill member
160 - 163	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
20 - 30	--	--	sh
30 - 60	--	--	sh

Hole No.: D-15
Elevation: 965.9
Elevation of Quimbys Mill-McGregor Contact: 804.9
Drilled: 5/31/55

Depth	Formation and Member
0 - 15	Soil
15 - 115	Galena dolomite
115 - 135	Decorah formation, Ion member
135 - 147½	Decorah formation, Guttenberg member
147½ - 152½	Decorah formation, Spechts Ferry member
152½ - 161	Platteville formation, Quimbys Mill member
161 - 165	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
127 - 135	--	tr	--
135 - 147½	--	tr	--
147½ - 150	--	tr	--
150 - 152½	--	tr	--
152½ - 160	--	tr	--
160 - 161	sh	sh	--
161 - 162½	sh	sh	--

Hole No.: D-16
Elevation: 970.3
Elevation of Quimbys Mill-McGregor Contact: 810.3
Drilled: 6/8/55

Depth	Formation and Member
0 - 22	Soil
22 - 110	Galena dolomite
110 - 134	Decorah formation, Ion member
134 - 147	Decorah formation, Guttenberg member
147 - 150	Decorah formation, Spechts Ferry member
150 - 160	Platteville formation, Quimbys Mill member
160 - 163	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
134 - 140	--	tr	--
140 - 142½	--	sh	tr
142½ - 145	--	tr	tr
147 - 150	--	tr	--
152½ - 157½	--	--	sh
157½ - 160	--	--	tr
160 - 163	--	--	tr

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Hole No.: D-17
Elevation: 975.5
Elevation of Quimbys Mill-McGregor Contact: 820.5
Drilled: 6/14/55

Depth	Formation and Member
0 - 20	Soil
20 - 105	Galena dolomite
105 - 130	Decorah formation, Ion member
130 - 142½	Decorah formation, Guttenberg member
142½ - 147½	Decorah formation, Spechts Ferry member
147½ - 155	Platteville formation, Quimbys Mill member
155 - 158	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb

Hole No.: D-18
Elevation: 979.4
Elevation of Quimbys Mill-McGregor Contact: 829.4
Drilled: 6/17/55

Depth	Formation and Member
0 - 22	Soil
22 - 102½	Galena dolomite
102½ - 124	Decorah formation, Ion member
124 - 135	Decorah formation, Guttenberg member
135 - 137½	Decorah formation, Spechts Ferry member
137½ - 150	Platteville formation, Quimbys Mill member
150 - 153	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
65 - 70	--	--	tr
70 - 75	--	5%	4.0*
75 - 80	--	5%	3.5*
80 - 82½	--	3%	1%
82½ - 95	--	tr	tr
95 - 102½	--	--	sh
102½ - 112½	--	tr	sh
137½ - 150	--	tr	--
150 - 153	--	tr	--

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Hole No.: D-19
Elevation: 982.8
Elevation of Quimbys Mill-McGregor Contact: 837.8
Drilled: 6/21/55

Depth	Formation and Member
0 - 25	Soil
25 - 95	Galena dolomite
95 - 117	Decorah formation, Ion member
117 - 132	Decorah formation, Guttenberg member
132 - 135	Decorah formation, Spechts Ferry member
135 - 145	Platteville formation, Quimbys Mill member
145 - 148	Platteville formation, McGregor member

Hole No.: D-20
Elevation: 986.00
Elevation of Quimbys Mill-McGregor Contact: 846.00
Drilled: 6/27/55

Depth	Formation and Member
0 - 25	Soil
25 - 90	Galena dolomite
90 - 115	Decorah formation, Ion member
115 - 127	Decorah formation, Guttenberg member
127 - 130	Decorah formation, Spechts Ferry member
130 - 140	Platteville formation, Quimbys Mill member
140 - 143	Platteville formation, McGregor member

Hole No.: D-21
Elevation: 988.7
Elevation of Quimbys Mill-McGregor contact: 853.7
Drilled: 6/29/55

Depth	Formation and Member
0 - 28	Soil
28 - 85	Galena dolomite
85 - 109	Decorah formation, Ion member
109 - 120	Decorah formation, Guttenberg member
120 - 125	Decorah formation, Spechts Ferry member
125 - 135	Platteville formation, Quimbys Mill member
135 - 138	Platteville formation, McGregor member

Hole No.: D-22
Elevation: 991.5
Elevation of Quimbys Mill-McGregor Contact: 861.5
Drilled: 7/5/55

Depth	Formation and Member
0 - 14	Soil
14 - 75	Galena dolomite
75 - 105	Decorah formation, Ion member
105 - 117½	Decorah formation, Guttenberg member
117½ - 122½	Decorah formation, Spechts Ferry member
122½ - 130	Platteville formation, Quimbys Mill member
130 - 133	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
75 - 80	--	sh	--

Hole No.: D-23
Elevation: 993.6
Elevation of Quimbys Mill-McGregor Contact: 866.1
Drilled: 7/9/55

Depth	Formation and Member
0 - 15	Soil
15 - 80	Galena dolomite
80 - 102½	Decorah formation, Ion member
102½ - 114	Decorah formation, Guttenberg member
114 - 117½	Decorah formation, Spechts Ferry member
117½ - 127½	Platteville formation, Quimbys Mill member
127½ - 130	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
90 - 102½	--	sh	--
102½ - 114	--	sh	--
114 - 117½	--	sh	--
117½ - 127½	--	sh	--

Hole No.: D-24
Elevation: 978.8
Elevation of Quimbys Mill-McGregor Contact: 831.3
Drilled: 7/13/55

Depth	Formation and Member
0 - 15	Soil
15 - 100	Galena dolomite
100 - 120	Decorah formation, Ion member
120 - 132½	Decorah formation, Guttenberg member
132½ - 137½	Decorah formation, Spechts Ferry member
137½ - 147½	Platteville formation, Quimbys Mill member
147½ - 150	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
30 - 40	--	--	sh
40 - 50	--	--	sh
50 - 60	--	tr	--
60 - 65	--	½%	--
65 - 70	--	3.2*	2.75*
70 - 72½	--	4%	3.10*
72½ - 77½	--	4%	2.95*
77½ - 80	--	2%	½%
120 - 132½	--	--	tr
137½ - 140	--	tr	tr
140 - 142½	--	tr	--

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Hole No.: D-25
Elevation: 977.0
Elevation of Quimbys Mill-McGregor Contact: 834.5
Drilled: 7/18/55

Depth	Formation and Member
0 - 20	Soil
20 - 94	Galena dolomite
94 - 116	Decorah formation, Ion member
116 - 129	Decorah formation, Guttenberg member
129 - 132½	Decorah formation, Spechts Ferry member
132½ - 142½	Platteville formation, Quimbys Mill member
142½ - 145	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
20 - 27	--	--	2%
27 - 45	--	--	tr
45 - 55	--	tr	--
55 - 65	--	tr	tr
65 - 70	1.3*	3.4*	--
70 - 72½	0.2*	3%	--
72½ - 75	tr*	--	--
77½ - 80	--	2%	tr
80 - 94	--	tr	--
94 - 105	--	tr	--
105 - 116	--	tr	--
116 - 129	--	tr	--
129 - 132½	--	tr	--
132½ - 142½	--	tr	--
142½ - 145	--	tr	--

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Hole No.: D-26
Elevation: 976.1
Elevation of Quimbys Mill-McGregor Contact: 838.6
Drilled: 7/21/55

Depth	Formation and Member
0 - 15	Soil
15 - 92	Galena dolomite
92 - 112½	Decorah formation, Ion member
112½ - 125	Decorah formation, Guttenberg member
125 - 130	Decorah formation, Spechts Ferry member
130 - 137½	Platteville formation, Quimbys Mill member
137½ - 140	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
15 - 60	--	--	sh
60 - 67½	sh	2%	--
67½ - 70	tr	1%	--
70 - 72½	tr	3%	--
72½ - 75	1%	4%	--
75 - 77½	tr	2%	--

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Hole No.: D-27
Elevation: 979.1
Elevation of Quimbys Mill-McGregor Contact: 839.1
Drilled: 7/25/55

Depth	Formation and Member
0 - 15	Soil
15 - 90	Galena dolomite
90 - 115	Decorah formation, Ion member
115 - 127½	Decorah formation, Guttenberg member
127½ - 130	Decorah formation, Spechts Ferry member
130 - 140	Platteville formation, Quimbys Mill member
140 - 143	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
65 - 70	--	--	½%
70 - 80	--	4%	½%
80 - 90	--	--	½%
105 - 115	--	sh	--

Hole No.: D-28
Elevation: 923.4
Elevation of Quimbys Mill-McGregor Contact: 768.4
Drilled: 8/4/55

Depth	Formation and Member
0 - 5	Soil
5 - 115	Galena dolomite
115 - 140	Decorah formation, Ion member
140 - 147½	Decorah formation, Guttenberg member
147½ - 150	Decorah formation, Spechts Ferry member
150 - 155	Platteville formation, Quimbys Mill member
155 - 163	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
15 - 20	--	--	tr
20 - 22½	--	2%	tr
22½ - 30	--	1%	sh
30 - 50	--	tr	--
50 - 85	--	1½%	--
85 - 115	--	tr	--
115 - 130	--	tr	--
130 - 135	--	4%	--
135 - 137½	--	2%	--
137½ - 140	--	8%	--
140 - 142½	2.85*	6.2*	0.05*
142½ - 145	0.9*	--	0.35*
147½ - 150	--	3%	1½%
150 - 155	--	2%	1%
155 - 160	--	3%	½%
160 - 163	--	1%	tr

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Hole No.: D-29
Elevation: 921.4
Elevation of Quimbys Mill-McGregor Contact: 763.9
Drilled: 8/15/55

Depth	Formation and Member
0 - 5	Soil
5 - 110	Galena dolomite
110 - 135	Decorah formation, Ion member
135 - 145	Decorah formation, Guttenberg member
145 - 147½	Decorah formation, Spechts Ferry member
147½ - 157½	Platteville formation, Quimbys Mill member
157½ - 160	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
5 - 110	--	sh	--
110 - 120	--	tr	--
120 - 125	sh	tr	--
125 - 127½	sh	sh	--
127½ - 132½	--	sh	--
132½ - 135	sh	tr	½%
135 - 137½	0.70*	3%	0.10*
137½ - 140	½%	5%	sh
140 - 145	--	2%	--
145 - 147½	--	sh	--
147½ - 157½	--	2%	--
157½ - 160	--	tr	--

Hole No.: D-30
Elevation: 918.3
Elevation of Quimbys Mill-McGregor Contact: 763.3
Drilled: 8/19/55

Depth	Formation and Member
0 - 5	Soil
5 - 105	Galena dolomite
105 - 130	Decorah formation, Ion member
130 - 140	Decorah formation, Guttenberg member
140 - 145	Decorah formation, Spechts Ferry member
145 - 155	Platteville formation, Quimbys Mill member
155 - 158	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
5 - 25	--	tr	tr
25 - 40	--	sh	--

Hole No.: D-31
Elevation: 926.3
Elevation of Quimbys Mill-McGregor Contact: 768.8
Drilled: 9/9/55

Depth	Formation and Member
0 - 10	Soil
10 - 115	Galena dolomite
115 - 142½	Decorah formation, Ion member
142½ - 147½	Decorah formation, Guttenberg member
147½ - 152½	Decorah formation, Spechts Ferry member
152½ - 157½	Platteville formation, Quimbys Mill member
157½ - 160	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
20 - 25	--	2%	--
25 - 30	--	1%	sh
30 - 35	--	½%	--
35 - 45	--	1%	--
45 - 65	--	2%	--
65 - 85	--	1%	--
85 - 90	--	1%	--
90 - 100	--	½%	--
100 - 105	--	tr	--
105 - 115	--	½%	--
115 - 132½	--	½%	--
132½ - 140	--	3%	--
140 - 142½	--	8%	--
142½ - 147½	--	1%	1½%
147½ - 152½	--	1%	tr
152½ - 155	--	1½%	tr
155 - 157½	sh	1½%	tr
157½ - 160	--	--	--

Hole No.: D-32
Elevation: 926.0
Elevation of Quimbys Mill-McGregor Contact: 768.5
Drilled: 9/15/55

Depth	Formation and Member
0 - 10	Soil
10 - 130	Galena dolomite
130 - 145	Decorah formation, Ion member
145 - 150	Decorah formation, Guttenberg member
150 - 155	Decorah formation, Spechts Ferry member
155 - 157½	Platteville formation, Quimbys Mill member
157½ - 163	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
20 - 80	--	1%	--
80 - 85	--	½%	½%
85 - 90	--	sh	sh
90 - 105	--	2%	tr
105 - 120	--	sh	--
120 - 125	tr	1%	--
125 - 130	sh	1%	--
130 - 132½	1%	1½%	--
132½ - 135	½%	3%	--
135 - 137½	1.25*	5%	--
137½ - 140	½%	2%	--
140 - 142½	1.40*	5%	1.80*
142½ - 145	--	4%	1%
145 - 147½	--	8%	½%
147½ - 150	--	5%	sh
150 - 152½	sh	1%	--
152½ - 155	--	--	--
155 - 157½	sh	1%	sh
157½ - 160	2.00*	½%	--
160 - 163	1%	1%	--

Hole No.: D-33
Elevation: 927.6
Elevation of Quimbys Mill-McGregor Contact: 767.6
Drilled: 9/20/55

Depth	Formation and Member
0 - 10	Soil
10 - 120	Galena dolomite
120 - 145	Decorah formation, Ion member
145 - 152½	Decorah formation, Guttenberg member
152½ - 157½	Decorah formation, Spechts Ferry member
157½ - 160	Platteville formation, Quimbys Mill member
160 - 163	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
10 - 25	--	tr	--
25 - 40	--	tr	--
40 - 80	--	1%	--
80 - 85	sh	1%	--
85 - 115	--	1%	--
115 - 120	--	tr	--
120 - 135	--	½%	--
135 - 137½	--	sh	--
137½ - 140	sh	1%	--
140 - 145	sh	4%	--
145 - 147½	tr	4%	tr
147½ - 150	tr	2%	tr
150 - 152½	--	sh	--
152½ - 157½	--	sh	--
157½ - 160	--	6%	--
160 - 163	--	tr	--

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Hole No.: D-34
Elevation: 916.5
Elevation of Quimbys Mill-McGregor Contact: 764.0
Drilled: 9/28/55

Depth	Formation and Member
0 - 10	Soil
10 - 105	Galena dolomite
105 - 129	Decorah formation, Ion member
129 - 141	Decorah formation, Guttenberg member
141 - 145	Decorah formation, Spechts Ferry member
145 - 152½	Platteville formation, Quimbys Mill member
152½ - 155	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
10 - 15	--	tr	1%
15 - 20	--	tr	tr
20 - 90	--	sh	sh
105 - 120	--	sh	--
120 - 129	--	sh	sh

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Hole No.: D-35
Elevation 921.5
Elevation of Quimbys Mill-McGregor Contact: 764.0
Drilled: 10/3/55

Depth	Formation and Member
0 - 15	Soil
15 - 110	Galena dolomite
110 - 130	Decorah formation, Ion member
130 - 144	Decorah formation, Guttenberg member
144 - 147½	Decorah formation, Spechts Ferry member
147½ - 157½	Platteville formation, Quimbys Mill member
157½ - 160	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
15 - 20	--	--	tr
20 - 25	--	sh	--
25 - 110	--	sh	--
110 - 120	--	sh	--

Hole No.: D-36
Elevation: 965.5
Elevation of Quimbys Mill-McGregor Contact: 805.5
Drilled: 12/12/55

Depth	Formation and Member
0 - 20	Soil
20 - 115	Galena dolomite
115 - 137½	Decorah formation, Ion member
137½ - 147½	Decorah formation, Guttenberg member
147½ - 150	Decorah formation, Spechts Ferry member
150 - 160	Platteville formation, Quimbys Mill member
160 - 163	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
85 - 115	--	tr	--
115 - 125	--	½%	--
125 - 137½	--	½%	--
137½ - 142½	tr	1%	--
142½ - 145	tr	1%	sh
145 - 147½	tr	1%	--
147½ - 150	tr	½%	--
150 - 152½	sh	½%	--
152½ - 155	tr	½%	tr
155 - 157½	--	½%	tr
157½ - 160	--	½%	½%
160 - 163	--	--	1%

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Hole No.: D-37
Elevation: 965.9
Elevation of Quimbys Mill-McGregor Contact: 810.9
Drilled: 12/15/55

Depth	Formation and Member
0 - 20	Soil
20 - 110	Galena dolomite
110 - 132½	Decorah formation, Ion member
132½ - 142½	Decorah formation, Guttenberg member
142½ - 145	Decorah formation, Spechts Ferry member
145 - 155	Platteville formation, Quimbys Mill member
155 - 158	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
20 - 40	--	--	sh
40 - 110	--	sh	--
110 - 125	--	tr	--
125 - 132½	--	tr	--
132½ - 140	--	tr	--
140 - 142½	tr	tr	--
142½ - 145	sh	tr	--
145 - 147½	tr	tr	½%
147½ - 150	sh	--	tr
150 - 152½	--	--	sh
152½ - 155	--	--	sh
155 - 158	--	--	sh

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Hole No.: D-38
Elevation: 952.7
Elevation of Quimbys Mill-McGregor Contact: 840.2
Drilled: 12/17/55

Depth	Formation and Member
0 - 15	Soil
15 - 65	Galena dolomite
65 - 87½	Decorah formation, Ion member
87½ - 100	Decorah formation, Guttenberg member
100 - 102½	Decorah formation, Spechts Ferry member
102½ - 112½	Platteville formation, Quimbys Mill member
112½ - 115	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
60 - 65	--	½%	--
65 - 80	--	sh	--
80 - 87½	--	1%	--
87½ - 95	sh	3%	--
95 - 97½	sh	4%	sh
97½ - 100	sh	4%	tr
100 - 102½	sh	3%	tr
102½ - 105	sh	2%	--
105 - 112½	--	1%	--
112½ - 115	--	½%	--

Hole No.: D-39
Elevation: 956.8
Elevation of Quimbys Mill-McGregor Contact: 836.8
Drilled: 12/21/55

Depth	Formation and Member
0 - 15	Soil
15 - 70	Galena dolomite
70 - 92	Decorah formation, Ion member
92 - 107½	Decorah formation, Guttenberg member
107½ - 110	Decorah formation, Spechts Ferry member
110 - 120	Platteville formation, Quimbys Mill member
120 - 122	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
70 - 85	--	sh	--
85 - 87½	--	sh	--
87½ - 92	--	sh	--
92 - 102½	--	1%	--
102½ - 107½	--	3%	--
107½ - 110	--	2%	--
110 - 120	--	1%	sh
120 - 122	--	⅕%	--

Hole No.: L-1
Elevation: 958.8
Elevation of Quimbys Mill-McGregor Contact: 808.8
Drilled: 10/31/55

Depth	Formation and Member
0 - 10	Soil
10 - 100	Galena dolomite
100 - 130	Decorah formation, Ion member
130 - 137½	Decorah formation, Guttenberg member
137½ - 142½	Decorah formation, Spechts Ferry member
142½ - 150	Platteville formation, Quimbys Mill member
150 - 153	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
100 - 120	--	tr	--
120 - 130	--	tr	--
130 - 132½	--	--	sh
132½ - 135	2.50*	--	0.65*
135 - 137½	½%	--	½%
140 - 142½	--	--	tr
142½ - 147½	--	1%	sh
147½ - 150	--	1%	--
150 - 153	--	tr	--

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Hole No.: L-2
Elevation: 955.2
Elevation of Quimbys Mill-McGregor Contact: 800.2
Drilled: 11/5/55

Depth	Formation and Member
0 - 10	Soil
10 - 115	Galena dolomite
115 - 132½	Decorah formation, Ion member
132½ - 142½	Decorah formation, Guttenberg member
142½ - 147½	Decorah formation, Spechts Ferry member
147½ - 155	Platteville formation, Quimbys Mill member
155 - 158	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
115 - 125	--	tr	--
125 - 132½	--	tr	--
132½ - 135	--	tr	--
135 - 137½	sh	tr	--
137½ - 142½	--	tr	--
142½ - 147½	--	tr	--
147½ - 150	sh	tr	--
150 - 155	sh	1%	--
155 - 158	--	1%	--

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Hole No.: L-3
Elevation: 951.0
Elevation of Quimbys Mill-McGregor Contact: 793.5
Drilled: 11/10/55

Depth	Formation and Member
0 - 15	Soil
15 - 115	Galena dolomite
115 - 135	Decorah formation, Ion member
135 - 147½	Decorah formation, Guttenberg member
147½ - 150	Decorah formation, Spechts Ferry member
150 - 157½	Platteville formation, Quimbys Mill member
157½ - 160	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
15 - 115	--	sh	--
135 - 147½	--	sh	--

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Hole No.: L-4
Elevation: 950.1
Elevation of Quimbys Mill-McGregor Contact: 795.1
Drilled: 11/14/55

Depth	Formation and Member
0 - 20	Soil
20 - 115	Galena dolomite
115 - 132½	Decorah formation, Ion member
132½ - 142½	Decorah formation, Guttenberg member
142½ - 147½	Decorah formation, Spechts Ferry member
147½ - 155	Platteville formation, Quimbys Mill member
155 - 160	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
80 - 115	--	sh	--
125 - 130	--	sh	--
130 - 132½	sh	sh	--
135 - 137½	14.20*	--	--
137½ - 140	1.40*	1%	--
140 - 142½	--	½%	--
147½ - 150	tr	6%	--
150 - 152½	tr	4%	--
152½ - 155	4.10*	4%	--
155 - 157½	tr	2%	--
157½ - 160	--	1%	--

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Hole No.: L-5
Elevation: 958.4
Elevation of Quimbys Mill-McGregor Contact: 800.9
Drilled: 11/18/55

Depth	Formation and Member
0 - 20	Soil
20 - 115	Galena dolomite
115 - 135	Decorah formation, Ion member
135 - 147½	Decorah formation, Guttenberg member
147½ - 150	Decorah formation, Spechts Ferry member
150 - 157½	Platteville formation, Quimbys Mill member
157½ - 163	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
20 - 115	--	tr	--
115 - 125	--	sh	--
125 - 130	--	tr	--
130 - 132½	½%	tr	--
132½ - 135	sh	1%	--
135 - 137½	½%	1%	--
137½ - 140	1%	--	--
140 - 142½	½%	1%	--
142½ - 145	1.6*	--	--
145 - 147½	tr	--	--
147½ - 150	--	--	--
150 - 152½	2.4*	2%	--
152½ - 155	2.8*	1%	--
155 - 157½	11.15*	1%	--
157½ - 160	3.05*	½%	--
160 - 163	tr	--	--

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Hole No.: L-6
Elevation: 958.1
Elevation of Quimbys Mill-McGregor Contact: 800.6
Drilled: 11/24/55

Depth	Formation and Member
0 - 15	Soil
15 - 115	Galena dolomite
115 - 135	Decorah formation, Ion member
135 - 147½	Decorah formation, Guttenberg member
147½ - 150	Decorah formation, Spechts Ferry member
150 - 157½	Platteville formation, Quimbys Mill member
157½ - 160	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
15 - 115	--	sh	--
125 - 135	--	tr	--
135 - 140	tr	tr	--
140 - 147½	--	tr	sh
147½ - 150	--	--	sh
150 - 155	½%	1%	sh
155 - 157½	8.60*	--	--
157½ - 160	½%	--	--

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Hole No.: L-7
Elevation: 954.6
Elevation of Quimbys Mill-McGregor Contact: 792.1
Drilled: 11/29/55

Depth	Formation and Member
0 - 20	Soil
20 - 120	Galena dolomite
120 - 137½	Decorah formation, Ion member
137½ - 150	Decorah formation, Guttenberg member
150 - 152½	Decorah formation, Spechts Ferry member
152½ - 162½	Platteville formation, Quimbys Mill member
162½ - 165	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
147½ - 150	--	--	sh
157½ - 160	sh	--	--

Hole No.: L-8
Elevation: 959.2
Elevation of Quimbys Mill-McGregor Contact: 801.7
Drilled: 12/3/55

Depth	Formation and Member
0 - 20	Soil
20 - 110	Galena dolomite
110 - 136	Decorah formation, Ion member
136 - 147½	Decorah formation, Guttenberg member
147½ - 150	Decorah formation, Specht's Ferry member
150 - 157½	Platteville formation, Quimbys Mill member
157½ - 163	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
60 - 110	--	sh	--
110 - 125	--	tr	--
125 - 136	--	sh	--
136 - 137½	½%	sh	--
137½ - 140	1%	--	--
140 - 142½	tr	sh	--
142½ - 147½	sh	--	--
147½ - 150	--	--	sh
150 - 152½	1%	--	sh
152½ - 155	½%	--	--
155 - 157½	1%	--	sh
157½ - 160	½%	--	--

Hole No.: L-9
Elevation: 959.5
Elevation of Quimbys Mill-McGregor Contact: 799.5
Drilled: 12/8/55

Depth	Formation and Member
0 - 15	Soil
15 - 115	Galena dolomite
115 - 135	Decorah formation, Ion member
135 - 147½	Decorah formation, Guttenberg member
147½ - 150	Decorah formation, Spechts Ferry member
150 - 160	Platteville formation, Quimbys Mill member
160 - 163	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
15 - 115	--	sh	--
115 - 125	--	tr	--
125 - 135	--	tr	--
135 - 137½	--	tr	--
137½ - 140	--	tr	tr
140 - 147½	--	tr	--
147½ - 150	--	tr	--
150 - 155	--	tr	--
155 - 157½	tr	--	--
157½ - 160	sh	--	--
160 - 163	--	sh	--

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Hole No.: L-10
Elevation: 952.5
Elevation of Quimbys Mill-McGregor Contact: 775.0
Drilled: 12/26/55

Depth	Formation and Member
0 - 20	Soil
20 - 130	Galena dolomite
130 - 155	Decorah formation, Ion member
155 - 165	Decorah formation, Guttenberg member
165 - 167½	Decorah formation, Spechts Ferry member
167½ - 177½	Platteville formation, Quimbys Mill member
177½ - 180	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
20 - 55	--	sh	--
55 - 70	--	½%	--
70 - 90	--	tr	--
90 - 105	--	sh	--
105 - 130	--	½%	--
130 - 145	--	tr	--
145 - 155	--	tr	--
155 - 165	--	½%	--
165 - 167½	--	tr	--
167½ - 175	--	sh	--
175 - 177½	--	2%	--
177½ - 180	--	3%	--

Hole No.: L-11
Elevation: 962.25
Elevation of Quimbys Mill-McGregor Contact: 779.75
Drilled: 12/30/55

Depth	Formation and Member
0 - 20	Soil
20 - 140	Galena dolomite
140 - 162½	Decorah formation, Ion member
162½ - 167½	Decorah formation, Guttenberg member
167½ - 170	Decorah formation, Spechts Ferry member
170 - 182½	Platteville formation, Quimbys Mill member
182½ - 185	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
20 - 40	--	sh	--
40 - 45	--	tr	sh
45 - 50	--	tr	tr
50 - 85	--	½%	--
85 - 140	--	tr	--
140 - 150	--	tr	--
150 - 155	--	tr	--
155 - 157½	sh	tr	--
157½ - 160	--	tr	--
160 - 162½	--	4%	1%
162½ - 165	0.50*	18.5*	0.60*
165 - 167½	1.70*	16.0*	--
167½ - 170	0.98*	14.3*	--
172½ - 175	0.65*	--	--
175 - 177½	0.20*	19.6*	0.60*
177½ - 180	0.20*	20.0*	0.45*
180 - 182½	sh	4%	sh
182½ - 185	--	3%	--

Hole No.: L-12
Elevation: 962.5
Elevation of Quimbys Mill-McGregor Contact: 780.0
Drilled: 1/4/56

Depth	Formation and Member
0 - 20	Soil
20 - 140	Galena dolomite
140 - 162½	Decorah formation, Ion member
162½ - 170	Decorah formation, Guttenberg member
170 - 175	Decorah formation, Spechts Ferry member
175 - 182½	Platteville formation, Quimbys Mill member
182½ - 185	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
20 - 30	--	sh	sh
30 - 40	--	sh	--
40 - 45	--	sh	tr
45 - 55	--	tr	--
55 - 75	--	½%	--
75 - 120	--	¼%	--
120 - 140	--	1%	--
140 - 157½	--	½%	--
157½ - 160	--	½%	--
160 - 162½	sh	2%	--
162½ - 165	1½%	17.1*	1.25*
165 - 167½	1.75*	--	--
167½ - 170	0.25*	--	--
170 - 172½	1.50*	8%	--
172½ - 175	0.25*	4%	--
175 - 177½	0.25*	--	--
177½ - 180	1.50*	--	--
180 - 182½	0.90*	--	--
182½ - 185	tr	2%	--

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Hole No.: L-13
Elevation: 965.1
Elevation of Quimbys Mill-McGregor Contact: 782.6
Drilled: 1/9/56

Depth	Formation and Member
0 - 20	Soil
20 - 145	Galena dolomite
145 - 162½	Decorah formation, Ion member
162½ - 175	Decorah formation, Guttenberg member
175 - 177½	Decorah formation, Spechts Ferry member
177½ - 182½	Platteville formation, Quimbys Mill member
182½ - 193	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
*Indicates Assay Value

Depth	Zn	Fe	Pb
20 - 45	--	sh	--
45 - 50	--	½%	--
50 - 60	--	1%	sh
60 - 70	--	tr	--
70 - 85	--	½%	--
85 - 120	--	tr	--
120 - 140	--	½%	--
140 - 145	--	3%	--
145 - 157½	--	2%	--
157½ - 160	--	2%	sh
160 - 162½	--	3%	tr
162½ - 165	--	20%	1%
165 - 167½	0.50*	28.4*	3.90*
167½ - 170	sh	35%	tr
170 - 172½	sh	30%	tr
172½ - 175	tr	20%	sh
175 - 177½	--	15%	--
177½ - 180	--	15%	--
180 - 182½	1.65*	13.53*	--
182½ - 185	0.80*	8.80*	--
185 - 187½	0.50*	7.50*	--
187½ - 190	0.30*	8.93*	--
190 - 193	0.30*	6.38*	--

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Hole No.: L-14
Elevation: 960.15
Elevation of Quimbys Mill-McGregor Contact: 777.65
Drilled: 1/24/56

Depth	Formation and Member
0 - 20	Soil
20 - 140	Galena dolomite
140 - 162½	Decorah formation, Ion member
162½ - 172½	Decorah formation, Guttenberg member
172½ - 175	Decorah formation, Spechts Ferry member
175 - 182½	Platteville formation, Quimbys Mill member
182½ - 190	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

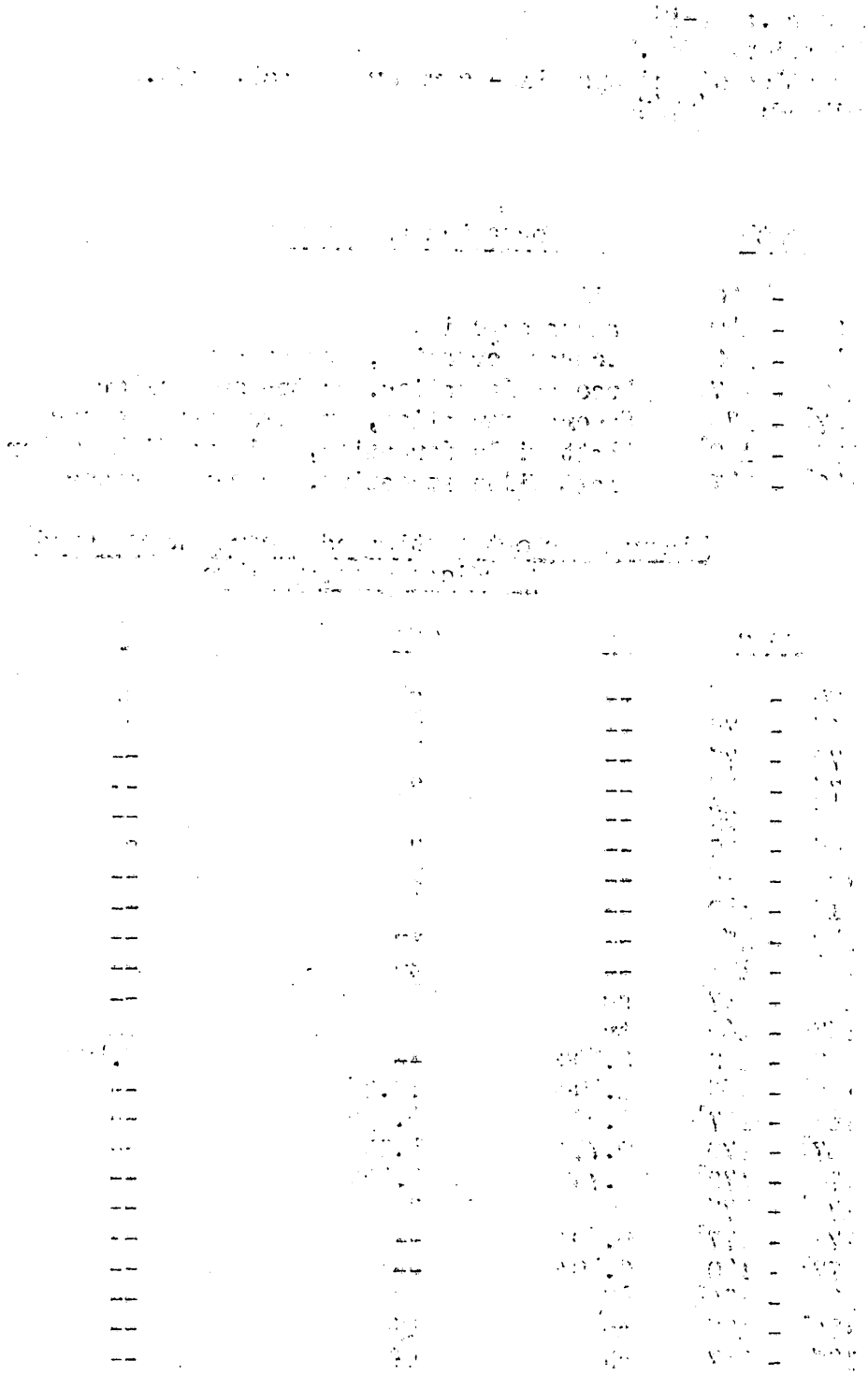
Depth	Zn	Fe	Pb
20 - 45	--	tr	sh
45 - 60	--	tr	tr
60 - 70	--	tr	--
70 - 80	--	½%	--
80 - 95	--	tr	--
95 - 140	--	½%	--
140 - 155	--	½%	--
155 - 162½	--	½%	--
162½ - 165	--	15%	½%
165 - 167½	1.25*	8.50*	--
167½ - 170	0.28*	4.15*	--
170 - 172½	0.38*	2.50*	--
172½ - 175	1.25*	3.28*	--
175 - 177½	½%	25%	--
177½ - 180	1%	4%	tr
180 - 182½	½%	2%	sh
182½ - 185	tr	3%	½%
185 - 190	tr	2%	½%

Hole No.: L-15
Elevation: 959.2
Elevation of Quimbys Mill-McGregor Contact: 776.7
Drilled: 1/27/56

Depth	Formation and Member
0 - 20	Soil
20 - 140	Galena dolomite
140 - 160	Decorah formation, Ion member
160 - 167½	Decorah formation, Guttenberg member
167½ - 170	Decorah formation, Spechts Ferry member
170 - 182½	Platteville formation, Quimbys Mill member
182½ - 187	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
20 - 65	--	sh	sh
65 - 70	--	½%	sh
70 - 75	--	½%	--
75 - 85	--	2%	--
85 - 95	--	4%	--
95 - 100	--	2%	sh
100 - 115	--	1%	--
115 - 140	--	½%	--
140 - 150	--	tr	--
150 - 155	--	tr	--
155 - 157½	sh	½%	--
157½ - 160	tr	½%	sh
160 - 162½	0.50*	1%	0.40*
162½ - 165	1.40*	12.35*	--
165 - 167½	1.00*	6.05*	--
167½ - 170	0.75*	4.00*	--
170 - 172½	0.75*	3.40*	--
172½ - 175	1%	3%	--
175 - 177½	0.60*	--	--
177½ - 180	0.40*	30%	--
180 - 182½	½%	15%	--
182½ - 185	tr	15%	--
185 - 187	sh	15%	--



Hole No.: L-16
Elevation: 967.4
Elevation of Quimbys Mill-McGregor Contact: 779.9
Drilled: 1/31/56

Depth	Formation and Member
0 - 20	Soil
20 - 145	Galena dolomite
145 - 167½	Decorah formation, Ion member
167½ - 177½	Decorah formation, Guttenberg member
177½ - 180	Decorah formation, Spechts Ferry member
180 - 187½	Platteville formation, Quimbys Mill member
187½ - 193	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
*Indicates Assay Value

Depth	Zn	Fe	Pb
20 - 130	--	sh	--
130 - 145	--	tr	--
145 - 150	--	tr	--
150 - 155	--	7%	--
155 - 160	--	4%	sh
160 - 165	--	20%	--
165 - 167½	--	35%	--
167½ - 175	--	40%	--
175 - 177½	½%	10%	--
177½ - 180	1%	10%	--
180 - 182½	1%	12%	--
182½ - 185	tr	20%	sh
185 - 187½	--	15%	1½%
187½ - 190	sh	15%	sh
190 - 193	½%	10%	sh

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Hole No.: L-17
Elevation: 969.05
Elevation of Quimbys Mill-McGregor Contact: 784.05
Drilled: 2/6/56

Depth	Formation and Member
0 - 20	Soil
20 - 150	Galena dolomite
150 - 167½	Decorah formation, Ion member
167½ - 175	Decorah formation, Guttenberg member
175 - 180	Decorah formation, Spechts Ferry member
180 - 185	Platteville formation, Quimbys Mill member
185 - 200	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
20 - 75	--	sh	--
75 - 105	--	tr	--
105 - 130	--	1%	--
130 - 145	--	½%	--
145 - 150	--	4%	--
150 - 160	--	7%	--
160 - 167½	--	15%	--
167½ - 170	tr	5%	sh
170 - 172½	2.08*	11.38*	1.00*
172½ - 175	1.95*	5.78*	0.40*
175 - 177½	1.95*	4.00*	11.30*
177½ - 180	1.48*	3.28*	8.40*
180 - 182½	1.03*	5.98*	3.30*
182½ - 185	½%	3%	½%
185 - 187½	1%	4%	1%
187½ - 190	1%	5%	½%
190 - 192½	½%	6%	½%
192½ - 195	½%	8%	2%
195 - 197½	½%	8%	2%
197½ - 200	1%	3%	2½%

Hole No.: L-18
Elevation: 971.45
Elevation of Quimbys Mill-McGregor Contact: 778.95
Drilled: 2/14/56

Depth	Formation and Member
0 - 20	Soil
20 - 155	Galena dolomite
155 - 172½	Decorah formation, Ion member
172½ - 182½	Decorah formation, Guttenberg member
182½ - 185	Decorah formation, Spechts Ferry member
185 - 192½	Platteville formation, Quimbys Mill member
192½ - 205	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
20 - 50	--	--	sh
50 - 120	--	sh	--
120 - 155	--	tr	--
155 - 165	--	½%	--
165 - 172½	--	tr	--
172½ - 175	1.50*	7.73*	tr
175 - 177½	0.45*	5.30*	--
177½ - 180	0.50*	4.38*	1.35*
180 - 182½	2.00*	4.45*	2.60*
182½ - 185	1.53*	6.70*	17.75*
185 - 187½	0.60*	12.75*	4.85*
187½ - 190	0.60*	12.75*	2.40*
190 - 192½	1%	5%	tr
192½ - 195	½%	6%	2%
195 - 197½	tr	4%	3%
197½ - 200	sh	4%	1%
200 - 202½	tr	5%	½%
202½ - 205	sh	3%	1%

Hole No.: L-19
Elevation: 973.25
Elevation of Quimbys Mill-McGregor Contact: 780.75
Drilled: 2/18/56

Depth	Formation and Member
0 - 20	Soil
20 - 145	Galena dolomite
145 - 172½	Decorah formation, Ion member
172½ - 185	Decorah formation, Guttenberg member
185 - 187½	Decorah formation, Spechts Ferry member
187½ - 192½	Platteville formation, Quimbys Mill member
192½ - 195	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
20 - 110	--	sh	--
110 - 145	--	1½%	--
145 - 160	--	½%	--
160 - 165	sh	½%	sh
165 - 167½	sh	½%	--
167½ - 172½	--	½%	--
172½ - 185	--	tr	--
185 - 187½	1.75*	2.55*	1.90*
187½ - 190	0.63*	4.88*	4.90*
190 - 192½	--	tr	1%
192½ - 195	sh	tr	½%

Hole No.: L-20
Elevation: 972.55
Elevation of Quimbys Mill-McGregor Contact: 780.05
Drilled: 2/22/56

Depth	Formation and Member
0 - 20	Soil
20 - 152½	Galena dolomite
152½ - 172½	Decorah formation, Ion member
172½ - 185	Decorah formation, Guttenberg member
185 - 187½	Decorah formation, Spechts Ferry member
187½ - 192½	Platteville formation, Quimbys Mill member
192½ - 198	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
20 - 45	--	sh	--
45 - 50	--	--	sh
50 - 55	--	sh	--
55 - 135	--	sh	--
135 - 145	--	2%	--
145 - 150	--	4%	--
150 - 152½	--	5%	--
152½ - 165	--	3%	--
165 - 172½	--	2½%	--
172½ - 175	0.80*	12.30*	--
175 - 177½	0.70*	19.40*	--
177½ - 180	0.42*	4.80*	--
180 - 182½	1%	6%	--
182½ - 185	2.25*	5%	sh
185 - 187½	0.95*	3%	tr
187½ - 190	1.00*	2%	13.7*
190 - 192½	0.70*	1%	4.15*
192½ - 195	2%	2%	2%
195 - 198	½%	4%	1%

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Hole No.: L-21
Elevation: 972.65
Elevation of Quimbys Mill-McGregor Contact: 780.15
Drilled: 2/25/56

Depth	Formation and Member
0 - 20	Soil
20 - 150	Galena dolomite
150 - 172½	Decorah formation, Ion member
172½ - 182½	Decorah formation, Guttenberg member
182½ - 185	Decorah formation, Spechts Ferry member
185 - 192½	Platteville formation, Quimbys Mill member
192½ - 195	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
20 - 55	--	sh	--
55 - 100	--	sh	--
100 - 135	--	sh	--
135 - 150	--	2%	--
150 - 162½	--	1%	--
162½ - 165	--	½%	--
165 - 167½	--	tr	½%
167½ - 170	--	½%	tr
170 - 172½	½%	1%	--
172½ - 175	1.45*	4.35*	0.30*
175 - 177½	1.05*	3.75*	--
177½ - 180	0.53*	2.98*	--
180 - 182½	1%	1%	--
182½ - 185	½%	1½%	--
185 - 190	tr	2%	--
190 - 192½	½%	1½%	--
192½ - 195	sh	½%	--

Hole No.: L-22
Elevation: 972.55
Elevation of Quimbys Mill-McGregor Contact: 780.05
Drilled: 2/29/56

Depth	Formation and Member
0 - 20	Soil
20 - 145	Galena dolomite
145 - 172½	Decorah formation, Ion member
172½ - 185	Decorah formation, Guttenberg member
185 - 187½	Decorah formation, Spechts Ferry member
187½ - 192½	Platteville formation, Quimbys Mill member
192½ - 198	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
20 - 60	--	sh	--
60 - 65	--	sh	sh
65 - 95	--	sh	--
95 - 120	--	sh	--
120 - 145	--	2%	--
145 - 165	--	1%	--
165 - 172½	--	½%	--
172½ - 185	--	tr	--
185 - 187½	--	tr	--
187½ - 190	--	tr	--
190 - 192½	tr	15%	--
192½ - 195	tr	5%	tr
195 - 198	--	2%	--

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Hole No.: L-23
Elevation: 964.2
Elevation of Quimbys Mill-McGregor Contact: 781.7
Drilled: 3/3/56

Depth	Formation and Member
0 - 20	Soil
20 - 140	Galena dolomite
140 - 167½	Decorah formation, Ion member
167½ - 172½	Decorah formation, Guttenberg member
172½ - 175	Decorah formation, Spechts Ferry member
175 - 182½	Platteville formation, Quimbys Mill member
182½ - 185	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
0 - 20	--	sh	--
20 - 25	--	sh	--
25 - 30	sh	sh	--
30 - 60	--	½%	--
60 - 90	--	½%	--
90 - 140	--	1%	--
140 - 155	--	½%	--
155 - 165	--	5%	--
165 - 167½	--	5%	--
167½ - 170	sh	15%	--
170 - 172½	1.25*	15%	--
172½ - 175	0.55*	10%	--
175 - 177½	½%	10%	--
177½ - 180	sh	17%	--
180 - 182½	sh	16%	--
182½ - 185	sh	16%	--

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Hole No.: L-24
Elevation: 963.3
Elevation of Quimbys Mill-McGregor Contact: 778.8
Drilled: 3/13/56

Depth	Formation and Member
0 - 20	Soil
20 - 140	Galena dolomite
140 - 165	Decorah formation, Ion member
165 - 172½	Decorah formation, Guttenberg member
172½ - 175	Decorah formation, Spechts Ferry member
175 - 184½	Platteville formation, Quimbys Mill member
184½ - 185	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
20 - 70	--	tr	--
70 - 95	--	1%	--
95 - 125	--	tr	--
125 - 140	--	½%	--
140 - 155	--	sh	--
155 - 165	--	½%	--
165 - 167½	--	6%	--
167½ - 170	--	15%	--
170 - 172½	--	10%	--
172½ - 175	--	10%	--
175 - 177½	--	4%	--
177½ - 180	--	6%	--
180 - 182½	--	4%	--
182½ - 184½	--	5%	--
184½ - 185	--	5%	--

Hole No.: L-25
Elevation: 965.6
Elevation of Quimbys Mill-McGregor Contact: 783.1
Drilled: 3/16/56

Depth	Formation and Member
0 - 20	Soil
20 - 140	Galena dolomite
140 - 164	Decorah formation, Ion member
164 - 172	Decorah formation, Guttenberg member
172 - 172½	Decorah formation, Spechts Ferry member
172½ - 182½	Platteville formation, Quimbys Mill member
182½ - 190	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
70 - 80	--	sh	tr
80 - 95	--	sh	--
95 - 140	--	½%	--
140 - 155	--	tr	--
155 - 160	--	1%	--
160 - 165	1.25*	2%	--
165 - 167½	4.43*	1%	--
167½ - 170	3.18*	5%	--
170 - 172½	1.80*	5%	--
172½ - 175	½%	20%	--
175 - 177½	½%	17%	½%
177½ - 180	sh	20%	--
180 - 182½	½%	7%	--
182½ - 185	½%	4%	--
185 - 187½	tr	3%	--
187½ - 190	½%	3%	sh

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Hole No.: L-26
Elevation: 966.5
Elevation of Quimbys Mill-McGregor Contact: 786.5
Drilled: 3/23/56

Depth	Formation and Member
0 - 30	Soil
30 - 145	Galena dolomite
145 - 165	Decorah formation, Ion member
165 - 172½	Decorah formation, Guttenberg member
172½ - 175	Decorah formation, Spechts Ferry member
175 - 180	Platteville formation, Quimbys Mill member
180 - 190	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
30 - 35	--	--	tr
35 - 55	--	tr	--
55 - 65	--	1%	tr
65 - 90	--	sh	sh
90 - 140	--	sh	sh
140 - 145	--	1%	½%
145 - 155	--	1%	sh
155 - 160	--	1%	--
160 - 165	--	2%	½%
165 - 167½	4.35*	3%	4.50*
167½ - 170	3.18*	1%	1%
170 - 172½	3.08*	1%	1%
172½ - 175	1.33*	1%	½%
175 - 177½	½%	1%	tr
177½ - 180	tr	15%	sh
180 - 182½	tr	10%	sh
182½ - 185	0.53*	10%	½%
185 - 187½	½%	5%	½%
187½ - 190	tr	5%	½%

Hole No.: L-27
Elevation: 967.3
Elevation of Quimbys Mill-McGregor Contact: 784.8
Drilled: 3/27/56

Depth	Formation and Member
0 - 20	Soil
20 - 145	Galena dolomite
145 - 165	Decorah formation, Ion member
165 - 172½	Decorah formation, Guttenberg member
172½ - 175	Decorah formation, Spechts Ferry member
175 - 182½	Platteville formation, Quimbys Mill member
182½ - 185	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
20 - 45	--	sh	sh
65 - 145	--	sh	--
145 - 155	--	sh	--
155 - 165	--	sh	--
165 - 167½	tr	tr	tr
167½ - 170	3.18*	sh	1.10*
170 - 172½	0.80*	sh	2%
172½ - 175	½%	sh	1%
175 - 177½	1.50*	1%	1%
177½ - 180	½%	4%	tr
180 - 182½	tr	2%	tr
182½ - 185	tr	1%	sh

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Hole No.: L-28
Elevation: 967.8
Elevation of Quimbys Mill-McGregor Contact: 782.8
Drilled: 3/31/56

Depth	Formation and Member
0 - 20	Soil
20 - 145	Galena dolomite
145 - 165	Decorah formation, Ion member
165 - 172½	Decorah formation, Guttenberg member
172½ - 175	Decorah formation, Spechts Ferry member
175 - 185	Platteville formation, Quimbys Mill member
185 - 188	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
20 - 80	--	sh	--
80 - 145	--	sh	--
145 - 155	--	½%	--
155 - 165	--	2%	tr
165 - 167½	1.90*	tr	--
167½ - 170	2.03*	tr	--
170 - 172½	½%	tr	--
172½ - 175	½%	tr	--
175 - 177½	1%	3%	--
177½ - 180	sh	8%	--
180 - 182½	sh	14%	--
182½ - 185	sh	10%	--
185 - 188	sh	5%	--

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Hole No.: L-29
Elevation: 967.8
Elevation of Quimbys Mill-McGregor Contact: 782.8
Drilled: 4/6/56

Depth	Formation and Member
0 - 20	Soil
20 - 140	Galena dolomite
140 - 165	Decorah formation, Ion member
165 - 177½	Decorah formation, Guttenberg member
177½ - 180	Decorah formation, Spechts Ferry member
180 - 185	Platteville formation, Quimbys Mill member
185 - 188	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
# Indicates Assay Value

Depth	Zn	Fe	Pb
20 - 50	--	sh	--
50 - 70	--	sh	--
70 - 130	--	sh	--
130 - 140	--	tr	--
140 - 155	--	tr	--
155 - 160	--	tr	--
160 - 162½	--	tr	sh
162½ - 165	--	1%	--
165 - 177½	--	sh	--
177½ - 180	--	tr	--
180 - 182½	--	40%	--
182½ - 185	sh	20%	--
185 - 188	sh	5%	--

Hole No.: L-30
Elevation: 973.0
Elevation of Quimbys Mill-McGregor Contact: 780.5
Drilled: 4/14/56

Depth	Formation and Member
0 - 25	Soil
25 - 160	Galena dolomite
160 - 170	Decorah formation, Ion member
170 - 182½	Decorah formation, Guttenberg member
182½ - 185	Decorah formation, Spechts Ferry member
185 - 192½	Platteville formation, Quimbys Mill member
192½ - 195	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
25 - 75	--	sh	--
95 - 115	--	sh	--
115 - 125	--	sh	--
125 - 155	--	tr	--
155 - 160	--	1%	--
160 - 165	sh	1%	--
165 - 167½	sh	1%	--
176½ - 170	sh	6%	--
170 - 172½	½%	8%	--
172½ - 175	1½%	8%	--
175 - 177½	sh	10%	--
177½ - 182½	½%	5%	½%
182½ - 185	sh	2%	1/4%
185 - 187½	sh	2%	4%
187½ - 190	--	1%	1½%
190 - 192½	sh	2%	1½%
192½ - 195	--	3%	½%

Hole No.: L-31
Elevation: 972.7
Elevation of Quimbys Mill-McGregor Contact: 777.7
Drilled: 4/24/56

Depth	Formation and Member
0 - 20	Soil
20 - 155	Galena dolomite
155 - 175	Decorah formation, Ion member
175 - 187½	Decorah formation, Guttenberg member
187½ - 190	Decorah formation, Spechts Ferry member
190 - 195	Platteville formation, Quimbys Mill member
195 - 198	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
20 - 50	--	sh	--
65 - 100	--	sh	--
100 - 125	--	tr	--
125 - 155	--	2%	--
155 - 170	--	2%	--
170 - 175	--	2%	--
175 - 177½	½%	1%	--
177½ - 180	tr	1%	--
180 - 182½	sh	1%	--
182½ - 185	--	1%	--
185 - 187½	½%	1%	--
187½ - 190	½%	½%	1%
190 - 192½	½%	½%	2%
192½ - 195	½%	½%	1½%
195 - 198	--	½%	½%

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Hole No.: L-32
Elevation: 972.04
Elevation of Quimbys Mill-McGregor Contact: 779.54
Drilled: 4/30/56

Depth	Formation and Member
0 - 25	Soil
25 - 150	Galena dolomite
150 - 175	Decorah formation, Ion member
175 - 182½	Decorah formation, Guttenberg member
182½ - 187½	Decorah formation, Spechts Ferry member
187½ - 192½	Platteville formation, Quimbys Mill member
192½ - 195	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
25 - 50	--	sh	--
50 - 150	--	sh	--
150 - 172½	--	sh	--
172½ - 175	1%	sh	--
175 - 177½	1%	2%	--
177½ - 180	½%	2%	--
180 - 182½	sh	1%	--
182½ - 185	--	2%	--
185 - 187½	--	1%	--
187½ - 190	sh	1%	--
190 - 192½	--	1%	--
192½ - 195	sh	1%	--

Hole No.: L-33
Elevation: 966.4
Elevation of Quimbys Mill-McGregor Contact: 783.9
Drilled: 5/7/56

Depth	Formation and Member
0 - 20	Soil
20 - 150	Galena dolomite
150 - 167½	Decorah formation, Ion member
167½ - 175	Decorah formation, Guttenberg member
175 - 177½	Decorah formation, Spechts Ferry member
177½ - 182½	Platteville formation, Quimbys Mill member
182½ - 185	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
150 - 160	--	tr	--
160 - 165	--	1%	--
165 - 167½	--	5%	--
167½ - 170	½%	15%	--
170 - 172½	½%	15%	--
172½ - 175	½%	15%	--
175 - 177½	tr	15%	--
177½ - 180	sh	15%	tr
180 - 182½	tr	10%	--
182½ - 185	tr	10%	--

Hole No.: L-34
Elevation: 957.25
Elevation of Quimbys Mill-McGregor Contact: 779.75
Drilled: 5/14/56

Depth	Formation and Member
0 - 20	Soil
20 - 130	Galena dolomite
130 - 155	Decorah formation, Ion member
155 - 167½	Decorah formation, Guttenberg member
167½ - 170	Decorah formation, Spechts Ferry member
170 - 177½	Platteville formation, Quimbys Mill member
177½ - 180	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
20 - 130	--	sh	--
130 - 145	--	sh	--
145 - 155	--	tr	--
155 - 167½	--	sh	--
167½ - 170	--	sh	--
170 - 177½	--	sh	--
177½ - 180	--	sh	--

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Hole No.: L-35
Elevation: 956.4
Elevation of Quimbys Mill-McGregor Contact: 778.9
Drilled: 5/18/56

Depth	Formation and Member
0 - 20	Soil
20 - 130	Galena dolomite
130 - 152½	Decorah formation, Ion member
152½ - 165	Decorah formation, Guttenberg member
165 - 167½	Decorah formation, Spechts Ferry member
167½ - 177½	Platteville formation, Quimbys Mill member
177½ - 180	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
95 - 130	--	tr	--
130 - 140	--	tr	--
140 - 145	sh	tr	--
145 - 152½	--	sh	--
152½ - 165	--	sh	--
165 - 167½	--	sh	--
167½ - 177½	--	sh	--
177½ - 180	--	sh	--

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Hole No.: L-36
Elevation: 958.3
Elevation of Quimbys Mill-McGregor Contact: 780.8
Drilled: 5/23/56

Depth	Formation and Member
0 - 20	Soil
20 - 130	Galena dolomite
130 - 151	Decorah formation, Ion member
151 - 165	Decorah formation, Guttenberg member
165 - 170	Decorah formation, Spechts Ferry member
170 - 177½	Platteville formation, Quimbys Mill member
177½ - 180	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
55 - 60	--	tr	--
110 - 130	--	tr	--
130 - 145	--	½%	--
145 - 151	--	½%	--
151 - 165	--	tr	--
165 - 170	--	tr	--
170 - 177½	--	sh	--
177½ - 180	--	sh	--

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

Hole No.: L-37
Elevation: 957.5
Elevation of Quimbys Mill-McGregor Contact: 777.5
Drilled: 5/31/56

Depth	Formation and Member
0 - 20	Soil
20 - 130	Galena dolomite
130 - 152½	Decorah formation, Ion member
152½ - 165	Decorah formation, Guttenberg member
165 - 170	Decorah formation, Spechts Ferry member
170 - 180	Platteville formation, Quimbys Mill member
180 - 183	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
105 - 130	--	tr	--
130 - 145	--	sh	--
145 - 152½	--	sh	--

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[illegible]	[illegible]
[illegible]	[illegible]
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[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	--	--
[illegible]	[illegible]	--	--
[illegible]	[illegible]	--	--

Hole No.: E-38
Elevation: 953.4
Elevation of Quimbys Mill-McGregor Contact: 783.4
Drilled: 6/8/56

Depth	Formation and Member
0 - 20	Soil
20 - 125	Galena dolomite
125 - 145	Decorah formation, Ion member
145 - 157½	Decorah formation, Guttenberg member
157½ - 162½	Decorah formation, Spechts Ferry member
162½ - 170	Platteville formation, Quimbys Mill member
170 - 173	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
105 - 125	--	tr	--
125 - 135	--	tr	--
135 - 145	--	sh	--
145 - 157½	--	sh	--

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Hole No.: L-39
Elevation: 957.25
Elevation of Quimbys Mill-McGregor Contact: 779.75
Drilled: 6/28/56

Depth	Formation and Member
0 - 20	Soil
20 - 125	Galena dolomite
125 - 150	Decorah formation, Ion member
150 - 162½	Decorah formation, Guttenberg member
162½ - 165	Decorah formation, Spechts Ferry member
165 - 177½	Platteville formation, Quimbys Mill member
177½ - 180	Platteville formation, McGregor member

Mineral Content (Estimated Except Where Noted)
* Indicates Assay Value

Depth	Zn	Fe	Pb
140 - 150	--	sh	--
150 - 162½	--	sh	--

Table -- Assay Data on Samples from Holes on Dawson and Lindsay Leases Drilled Under Contract E-755, DMEA Docket 3510

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D - Hole drilled on Dawson property
L - Hole drilled on Lindsay property

Hole No.	Footage	Zn	Fe	Pb
D-1	132½ - 135	0.1	1.6	0.85
D-2	130 - 132½	---	1.6	1.90
D-3	107½ - 110	0.3	1.8	0.50
D-5	122½ - 125	0.2	2.1	----
D-6	125 - 130	0.8	2.6	----
"	130 - 132½	0.5	3.1	----
"	132½ - 135	---	2.6	0.05
D-7	115 - 117½	---	0.9	----
"	127½ - 130	0.15	2.8	----
"	132½ - 135	0.20	2.0	----
"	135 - 137½	0.30	1.8	0.05
D-9	165 - 167½	1.30	---	----
D-11	145 - 147½	---	---	0.20
D-13	157½ - 160	---	---	1.70
D-13	160 - 162½	---	---	0.20
D-18	70 - 75	---	---	4.00
"	75 - 80	---	---	3.50
D-24	65 - 70	---	3.2	2.75
"	70 - 72½	---	---	3.10
"	72½ - 77½	---	---	2.95
D-25	65 - 70	1.3	3.4	----
"	70 - 72½	0.2	---	----
"	72½ - 75	Tr	---	----
D-28	140 - 142½	2.85	6.2	0.05
"	142½ - 145	0.90	---	0.35
D-29	135 - 137½	0.70	---	0.10
D-32	135 - 137½	1.25	---	----
"	140 - 142½	1.40	---	1.80
"	157½ - 160	2.00	---	----
"	135 - 147½	0.75	---	0.15
L-1	132½ - 135	2.50	---	0.65
L-4	135 - 137½	14.20	---	----
"	137½ - 140	1.40	---	----
"	152½ - 155	4.10	---	----
L-5	142½ - 145	1.6	---	----
"	150 - 152½	2.4	---	----
"	152½ - 155	2.8	---	----
"	155 - 157½	11.15	---	----
"	157½ - 160	3.05	---	----
L-6	155 - 157½	8.60	---	----
L-11	162½ - 165	0.50	18.5	0.60

Table -- Continued

Hole No.	Footage	Zn	Fe	Pb
L-11	165 - 167½	1.70	16.0	----
"	167½ - 170	0.98	14.3	----
"	172½ - 175	0.65	---	----
"	175 - 177½	0.20	19.6	0.60
"	177½ - 180	0.20	20.0	0.45
"	180 - 182½	----	---	----
L-12	162½ - 165	----	17.1	1.25
"	165 - 167½	1.75	---	----
"	167½ - 170	0.25	---	----
"	170 - 172½	1.50	---	----
"	172½ - 175	0.25	---	----
"	175 - 177½	0.25	---	----
"	177½ - 180	1.50	---	----
"	180 - 182½	0.90	---	----
L-13	165 - 167½	0.50	28.4	3.90
"	180 - 182½	1.65	13.53	----
"	182½ - 185	0.80	8.80	----
"	185 - 187½	0.50	7.50	----
"	187½ - 190	0.30	8.93	----
"	190 - 193	0.30	6.38	----
L-14	165 - 167½	1.25	8.50	----
"	167½ - 170	0.28	4.15	----
"	170 - 172½	0.38	2.50	----
"	172½ - 175	1.25	3.28	----
L-15	160 - 162½	0.50	---	0.40
"	162½ - 165	1.40	12.35	----
"	165 - 167½	1.00	6.05	----
"	167½ - 170	0.75	4.00	----
"	170 - 172½	0.75	3.40	----
"	175 - 177½	0.60	---	----
"	177½ - 180	0.40	---	----
L-17	170 - 172½	2.08	11.38	1.00
"	172½ - 175	1.95	5.78	0.40
"	175 - 177½	1.95	4.00	11.30
"	177½ - 180	1.48	3.28	8.40
"	180 - 182½	1.03	5.98	3.30
L-18	172½ - 175	1.50	7.73	----
"	175 - 177½	0.45	5.30	----
"	177½ - 180	0.50	4.38	1.35
"	180 - 182½	2.00	4.45	2.60
"	182½ - 185	1.53	6.70	17.75
"	185 - 187½	0.60	12.75	4.85
"	187½ - 190	0.60	12.75	2.40
L-19	185 - 187½	1.75	2.55	1.90
"	187½ - 190	0.63	4.88	4.90
L-20	172½ - 175	0.80	12.30	----

| | | |

Table -- Continued

Hole No.	Footage	Zn	Fe	Pb
L-20	175 - 177½	0.70	9.40	----
"	177½ - 180	0.42	4.80	----
"	182½ - 185	2.25	---	----
"	185 - 187½	0.95	---	----
"	187½ - 190	1.00	---	13.7
"	190 - 192½	0.70	---	4.15
L-21	172½ - 175	1.45	4.35	0.30
"	175 - 177½	1.05	3.75	----
"	177½ - 180	0.53	2.98	----
L-23	170 - 172½	1.25	---	----
"	172½ - 175	0.55	---	----
L-25	160 - 165	1.25	---	----
"	165 - 167½	4.43	---	----
"	167½ - 170	3.18	---	----
"	170 - 172½	1.80	---	----
L-26	165 - 167½	4.35	---	4.50
"	167½ - 170	3.18	---	----
"	170 - 172½	3.08	---	----
"	172½ - 175	1.33	---	----
"	182½ - 185	0.53	---	----
L-27	167½ - 170	3.18	---	1.10
"	170 - 172½	0.80	---	----
"	175 - 177½	1.50	---	----
L-28	165 - 167½	1.90	---	----
"	167½ - 170	2.03	---	----

| | | |

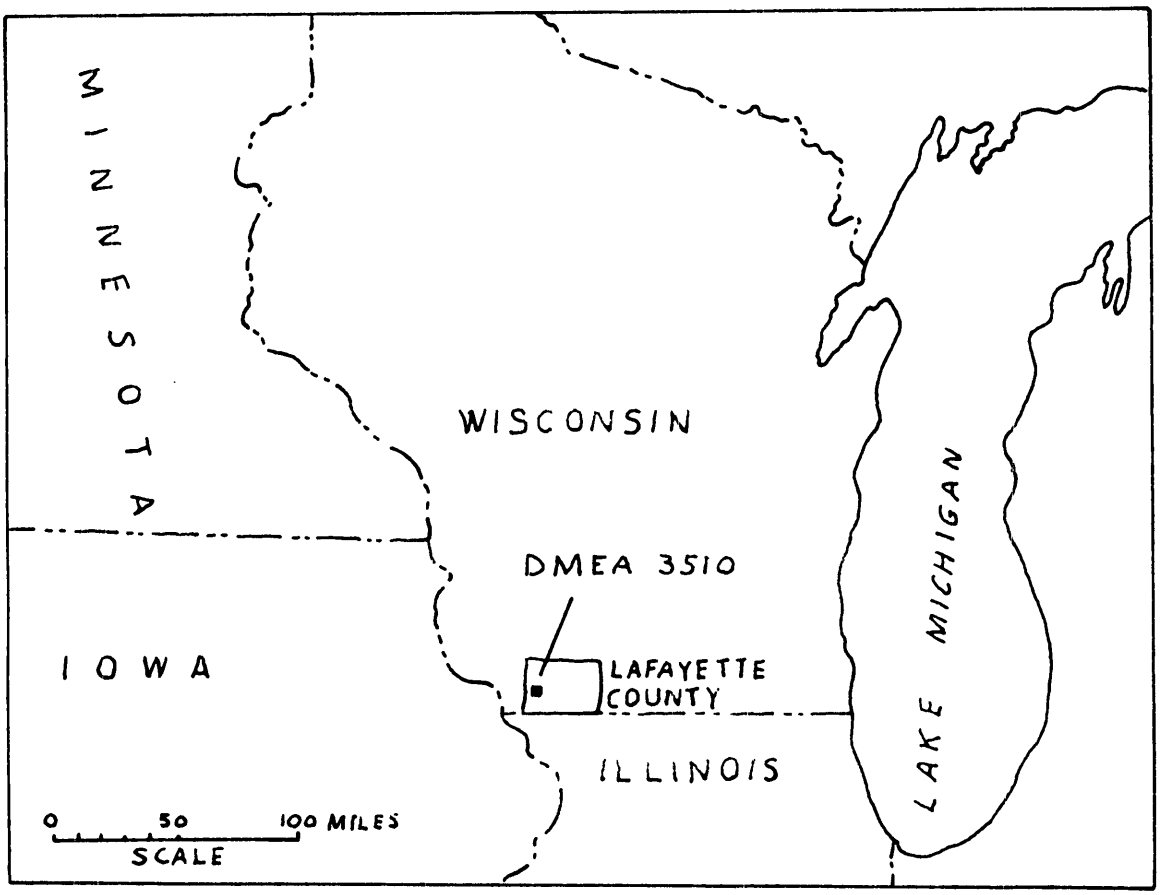

Figure 2. Index map showing location of DMEA 3510, Paul Gille, Operator, Dawson and Lindsay leases, Lafayette County, Wisconsin.

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Series	Formation	Member	Rock Type	Local Name	Description	Thickness (feet)
Recent				Surface	Soil, loess, and residual pebbles	10-20
Middle Ordovician	Galena	Noncherty unit		Buff	Dolomite, light tan, medium- to coarse-grained, granular, argillaceous	0-25
		Cherty unit		Drab	abundant bands of light gray chert nodules sparse bands of chert nodules Dolomite, light tan, medium- to coarse-grained, granular, argillaceous sparse bands of chert nodules abundant bands of chert nodules no chert in lower 10 feet	105
	Decorah	Ion		Gray Blue	Limestone and dolomitic limestone, light gray in upper part, blue-gray in lower part, some green clay, scattered quartz grains near base	20
		Guttenberg		Oil rock	Limestone and dolomite, dark brown, interbedded dark brown clay	12-14
		Spechts Ferry		Clay bed	Clay, green, and light gray limestone, phosphatic nodules	1-3
	Platteville	Quimbys Mill		Glass rock	Limestone and dolomite, dense, brown, dark brown shale at base	10-12
		McGregor		Trenton	Limestone, gray, fine-grained. Most holes bottomed about 3 feet below top of McGregor member	

Figure 3. Generalized stratigraphic section drilled by Contract Idm-E-755 (zinc-lead), DMEA-3510, Paul Gille, Operator, Dawson and Lindsay leases, Lafayette County, Wisconsin

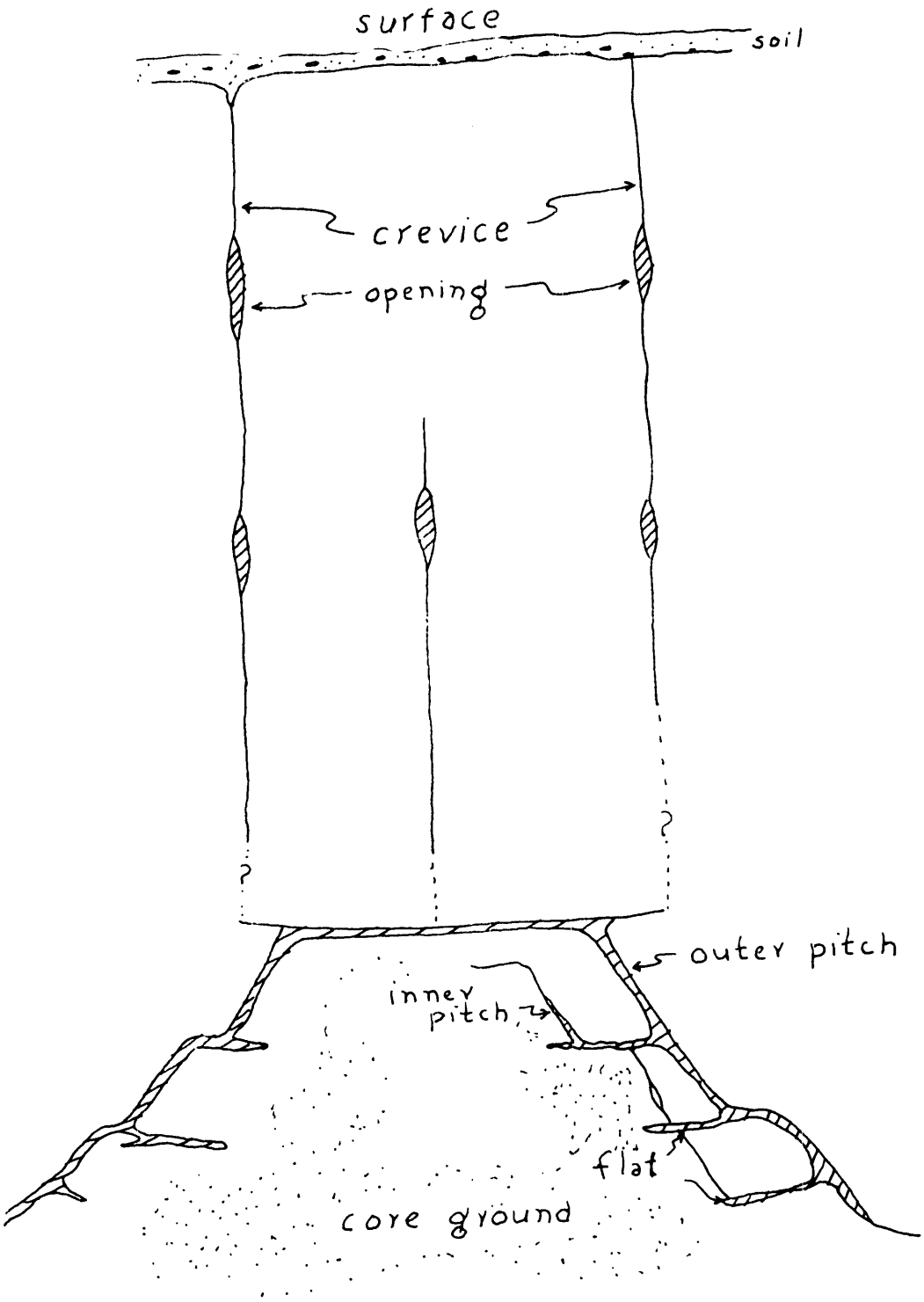

Figure 4. Diagram showing idealized cross section of a zinc-lead mineral deposit in southwest Wisconsin.

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

ROOM 15 POST OFFICE BLDG
KNOXVILLE 2, TENN.

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OCT 29 1956

October 26, 1956

Memorandum

To: Operating Committee, DMEA, Washington, D. C.

From: Executive Officer, DMEA Field Team, Region V

Subject: Operator's Final Report, DMEA-3510 (Zinc-lead)
Paul Gille, Cuba City, Wisconsin
Dawson and Lindsay Leases, Lafayette County, Wisconsin
Contract No. Idm-E755

Enclosed are the original and two copies of the Operator's final report on the subject exploration contract, received here today. We are keeping the fourth copy for our file. I am writing to the Operator today to request a fifth copy, as required by the contract.

We have just received the geologist's final report from Mr. T. E. Mullens, and will forward it next week when the maps have been reproduced and will, at that time, send the Field Team's recommendations concerning the project.

Robert A. Laurence

Robert A. Laurence

Enclosures 3

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Operations Final Rept.

FINAL REPORT
DMEA 3510
Conract E-755

Location: Lindsey Lease: NE¼ and the N½ of the SE¼, Sec. 20, T2N, R1E, 4th P.M. Lafayette County, Wis.
Dawson Lease: SW¼ of the SW¼ and the E½ of the SW¼ and the S½ of the SE¼, Sec. 20, T2N, R1E, 4th P.M. Lafayette County, Wis.

Original Amount of Contract: $24,846

Date Drilling Started: 2/9/55

Total Footage: 13,013

Number & Cost of Assays: 208 assays - $191.00

Technical Service Cost: $2,180.00

Total Cost of Contract: $23,842.45

Total Cost Per Foot: $1.83

General Stratigraphy:

Soil: Thickness- 20', chert, no mineralization
Buff & Drab: Thickness - 60 to 90', lead and zinc mineralization, cherts, crevasse clay and limonite
Gray: thickness - 10 to 20', some oxidation, very light lead and zinc mineralization
Blue: Thickness - 7 to 10', very light zinc mineralization, light to heavy iron sulfide
Oilrock: Thickness - 7 to 14', heavy barite in some holes, fair zinc mineralization, medium iron sulfides, light lead mineralization, zinc occurred when the thickness of this formation was 8'.
Claybed: Thickness - 2½ to 5', light lead, light to heavy iron sulfide, the best lead zone was in this formation.
Glassrock: Thickness - 6½ to 12½', this formation was the best zinc producer, heavy iron sulfide in some holes, fair lead
Trenton: Holes were drilled with at least one cut in this formation, light iron and zinc mineralization.

Ore Discovered:
Location: Holes L-4, L-5, L-17, L-18, L-20, L-25, L-26

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U.S. Geological Survey
Geologic Notebook
Knoxville, Tenn.

DURANGO MINING CO.
1896 Delhi Street
DUBUQUE, IOWA

ORE CALCULATIONS:

Block 1 - L4 & L5

Ave. Assay L-4 $7\frac{1}{2}'$ - 6.6% Zn
L-5 $12\frac{1}{2}'$ - 4.2% Zn

Asssy Feet L-4 $7\frac{1}{2} \times 6.6 = 49.5$
L-5 $12\frac{1}{2} \times 4.2 = 52.5$

Grade of Ore $\frac{49.5 + 52.5}{20} = 5.1\%$ Zn

Area $50 \times 100 = 5000$ sq. ft.

Length in ore $\frac{7\frac{1}{2} + 12\frac{1}{2}}{2} = 10'$

Vol. of ore $5000 \times 10 = 50{,}000$ cu. ft.

Tons of ore $\frac{50{,}000}{12} = 4166$ tons of Zn Ore

Block 2 - L17, L18 & L20

Ave Asssy L-17 $12\frac{1}{2}'$ - 4.88% Pb
L-18 $12\frac{1}{2}'$ - 5.79% Pb
L-20 $5'$ - 8.92% Pb

Assay feet L-17 $12\frac{1}{2} \times 4.88 = 61.0$
L-18 $12\frac{1}{2} \times 5.79 = 72.38$
L-20 $5 \times 8.92 = 44.6$

Grade of Ore $\frac{61 + 72.38 + 44.6}{29} = 6.1$ % Pb

Area $250 \times 25 = 6250$ sq. ft.

Length in ore $\frac{12\frac{1}{2} + 12\frac{1}{2} + 5}{3} = 10'$

Vol. of ore $6250 \times 10 = 62{,}500$ cu ft.
Tons of ore $\frac{62{,}500}{12} = 5209$ tons Pb ore

Block 3 - L25 & L26

Ave Assay L-25 $7\frac{1}{2}'$ - 3.13% Zn
L-26 $10'$ - 2.97% Zn

Assay feet L-25 $7\frac{1}{2} \times 3.13 = 23.5$
L-26 $10 \times 2.97 = 29.7$

Grade of ore $\frac{23.5 + 29.7}{17.5} = 3.04\%$ Zn

Area $50 \times 50 = 2500$ Sq.ft.

Length in ore $\frac{7\frac{1}{2} + 10}{2} = 8.75$

Vol of ore $2500 \times 8.75 = 21{,}875$ cu. ft.

Tons of ore $\frac{21875}{12} = 1823$ tons Zn ore

Table -- Assay Data on Samples from Holes on Dawson and Lindsey Leases Drilled Under Contract E-755, DMEA Docket 3510

D - Hole drilled on Dawson property
L - Hole Drilled On Lindsey Property

Hole No.	Footage	Zn	Fe	Pb
D-1	132½-135	0.1	1.6	0.85
D-2	130-132½	---	1.6	1.90
D-3	107½-110	0.3	1.8	0.50
D-5	122½-125	0.2	2.1	----
D-6	125-130	0.8	2.6	----
"	130-132½	0.5	3.1	----
"	132½-135	---	2.6	0.05
D-7	115-117½	---	0.9	----
"	127½-130	0.15	2.8	----
"	132½-135	0.20	2.0	----
"	135½-137½	0.30	1.8	0.05
D-9	165-167½	1.30	---	----
D-11	145-147½	---	---	0.20
D-13	157½-160	---	---	1.70
"	160-162½	---	---	0.20
D-18	70-75	---	---	4.00
"	75-80	---	---	3.50
D-24	65-70	---	3.2	2.75
"	70-72½	---	---	3.10
"	72½-77½	---	---	2.95
D-25	65-70	1.30	3.4	----
"	70-72½	0.20	---	----
"	72½-75	tr	---	----
D-28	140-142½	2.85	6.2	0.05
"	142½-145	0.90	---	0.35
D-29	135-137½	0.70	---	0.10
D-32	135-137½	1.25	---	----
"	140-142½	1.40	---	1.80
"	157½-160	2.00	---	----
"	135-147½	0.75	---	0.15
L-1	132½-135	2.50	---	0.65
L-4	135-137½	14.50	---	----
"	137½-140	1.40	---	----
L-4	152½-155	4.10	---	----
L-5	142½-145	1.60	---	----
"	150-152½	2.40	---	----
"	152½-155	2.80	---	----
"	155-157½	11.15	---	----
"	157½-160	3.05	---	----
L-6	155-157½	8.60	---	----

Hole No.	Footage	Zn	Fe	Pb
L-11	165-167½	1.70	16.0	-
"	167½-170	0.98	14.3	-
"	172½-175	0.65	-	-
"	175-177½	0.20	19.6	0.60
"	177½-180	0.20	20.0	0.45
"	180-182½	*	-	-
L-12	162½-165	-	17.1	1.25
"	165-167½	1.75	-	-
"	167½-170	0.25	-	-
"	170-172½	1.50	-	-
"	172½-175	0.25	-	-
"	175-177½	0.25	-	-
"	177½-180	1.50	-	-
"	180-182½	0.90	-	-
L-13	165-167½	0.50	28.4	3.90
"	180-182½	1.65	13.53	-
"	182½-185	0.80	8.80	-
"	185-187½	0.50	7.50	-
"	187½-190	0.30	8.93	-
"	190-193	0.30	6.38	-
L-14	165-167½	1.25	8.50	-
"	167½-170	0.28	4.15	-
"	170-172½	0.38	2.50	-
"	172½-175	1.25	3.28	-
L-15	160-162½	0.50	-	0.40
"	162½-165	1.40	12.35	-
"	165-167½	1.00	6.05	-
"	167½-170	0.75	4.00	-
"	170-172½	0.75	3.40	-
"	175-177½	0.60	-	-
"	177½-180	0.40	-	-
L-17	170-172½	2.08	11.38	1.00
"	172½-175	1.95	5.78	0.40
"	175.177½	1.95	4.00	11.30
"	177½-180	1.48	3.28	8.40
"	180-182½	1.03	5.98	3.30
L-18	172½-175	1.50	7.73	-
"	175-177½	0.45	5.30	-
"	177½-180	0.50	4.38	1.35
"	180-182½	2.00	4.45	2.60
"	182½-185	1.53	6.70	17.75
"	185-187½	0.60	12.75	4.85
"	187½-190	0.60	12.75	2.40
L-19	185-187½	1.75	2.55	1.90
"	187½-190	0.63	4.88	4.90
L-20	172½-175	0.80	12.30	-
"	175-177½	0.70	9.40	-
"	177½-180	0.42	4.80	-
"	182½-185	2.25	*	-
"	185-187½	0.95	-	-
"	187½-190	1.00	-	13.70
"	190-192½	0.70	-	4.15

Hole No.	Footage	Zn	Fe	Pb
L-21	172½-175	1.45	4.35	0.30
"	175-177½	1.05	3.75	-
"	177½-180	0.53	2.98	-
L-23	170-172½	1.25	-	-
"	172½-175	0.55	-	-
L-25	160-165	1.25	-	-
"	165-167½	4.43	-	-
"	167½-170	3.18	-	-
"	170-172½	1.80	-	-
L-26	165-167½	4.35	-	4.50
"	167½-170	3.18	-	-
"	170-172½	3.08	-	-
"	172½-175	1.33	-	-
"	182½-185	0.53	-	-
L-27	167½-170	3.18	-	1.10
"	170-172½	0.80	-	-
"	175-177½	1.50	-	-
L-28	165-167½	1.90	-	-
"	167½-170	2.03	-	-

Hole No. D-1
Location; 250' W & 100'S NE corner SE¼, SE¼, Sec. 20, T2N, R1E
Started: 2/9/55
Finished 2/15/55
Collar Elev: 960.4

		ASSAYS		
0-17	Soil			
17-92	Yellow sandy lime			
92-108	Gray			
108-115	Blue, tr Zn, tr Fe			
115-125	Oilrock			
125-127½	Claybed			
127½-132½	Glassrock sh Pb			
132½-135	" ----------	.1 Zn	1.6 Fe	.85 Pb
135-142½	Trenton, heavy calcite			
142½-148	"			

Hole No. D-2
Location: 25' S D-1
Started: 2/15/55
Finished: 2/19/55
Collar Elev: 960.0

0-15	Soil			
15-90	Yellow sandy lime			
90-102½	Gray			
102½-111	Blue			
111-112½	Oilrock, barite, tr Fe			
112½-122½	"			
122½-125	Claybed			
125-130	Glassrock			
130-132½	" ----------		1.6 Fe	1.9 Pb
132½-135	Trenton, heavy calcite			
135-138	"			

Hole No. D-3
Location: 25' S D-2
Started: 2/21/55
Finished: 2/23/55
Collar Elev: 959.7

0-15	Soil			
15-55	Yellow sandy lime			
55-60	" " ", limonite			
60-84	" " "			
84-99	Gray			
99-107½	Blue			
107½-110	Oilrock, barite	.3 Zn	1.8 Fe	.05Pb
110-112½	"			
112½-120	"			
120-122	Claybed, sh Pb & Zn			
122-127½	Glassrock			
127½-130	Trenton			
130-132	Trenton, oxidized			

DURANGO MINING CO.
1896 Delhi Street
DUBUQUE, IOWA

Hole No. D-4
Location; 25' S D-3
Started: 2/24/55
Finished: 2/28/55
Collar Elev: 959.3

0-15	Soil			
15-60	Yellow sandy lime			
60-65	Drab lime			
65-70	Oxidized lime			
70-78	Drab lime			
78-95	Gray			
95-102½	Blue			
102½-105	Oilrock, sh Pb, sh Fe			
105-112½	"			
112½-115	Claybed			
115-122½	Glassrock			
122½-125	"			
125-128	Trenton			

Hole No. D-5
Location: 25' N D-1
Started: 3/1/55
Finished: 3/4/55
Collar Elev: 961.15

0-15	Soil			
15-100	Yellow sandy lime			
100-112½	Gray			
112½-120	Blue			
120-122½	", sh Fe			
122½-125	Oilrock	.2 Zn	2.1 Fe	
125-130	" , sh Fe, sh Zn			
130-131	" , ½% Zn, sh Fe			
131-132½	Claybed, ½% Zn, sh Fe			
132½-135	" ½% Zn, sh Fe			
135-137½	Glassrock 1% Zn, 6% Fe			
137½-140	" 1.5% Zn, 6% Fe			
140-142½	Trenton, 1% Zn, 4% Fe			
142½-145	"			

Hole No. D-6
Location: 25' N D-5
Started 3/8/55
Finished #/11/55
Collar Elev: 960.8

0-10	Soil			
10-90	Yellow sandy lime			
90-102½	Drab			
102½-115	Gray			
115-124	Blue			
124-125	Oilrock, calcite			
125-130	" "	.8 Zn	2.6 Fe	
130-132½	" "	.5 Zn	3.1 Fe	
132½-135	" & Claybed		2.66 Fe	.05 Pb
135-140	Glassrock, tr Zn, 3%Fe			
140-142½	Trenton , calcite, barite			
142½-145	"			

DURANGO MINING CO.
1896 Delhi Street
DUBUQUE, IOWA

Hole No. D-7
Location of Hole 25' N of D-6, 13' S of fence
Started 3/14/55
Finished 3/19/55
Elevation 960.5

Depth		Estimated Zn.	Fe.	Pb.	Description of Ground, Etc.
0	10	-	-	-	Soil
10	30	-	-	-	Yellow sandy lime (oxidized)
30	65	-	-	-	Buff lime, very light, hard
65	95	-	-	-	" " " " "
95	100	-	-	-	Drab lime
100	105	-	6	-	Gray lime
105	110	-	5	-	" "
110	112½	-	3	-	" "
112½	120	-	4	-	" " , manganese
120	122½	-	3	-	Blue, manganese
122½	125	tr	4	-	" "
125	127½	-	3	-	" "
127½	132½	tr	3	-	Oilrock, 20% calcite
132½	137	tr	4	tr	" , barite
137	140	tr	2	-	Claybed, "
140	145	tr	2	tr	Glassrock, barite, Mangenese
145	147½	-	-	-	"
147½	150	-	-	-	Trenton

Hole No. D-8
Location of Hole 550' W of D-7
Started 4/9/55
Finished 4/15/55
Elevation 970.3

0	10	-	-	-	Soil
10	15	-	-	Tr	Yellow sandy lime, chert, calcite
15	25	-	-	Sh	" " "
25	125	-	-	-	" " "
125	130	-	Tr	-	Drab lime
130	145	-	Sh	-	Gray
145	147½	-	-	-	Blue
147½	150	sh	Tr	-	"
150	155	-	-	-	"
155	162½	-	-	-	Oilrock
162½	165	-	1%	-	"
165	167½	Sh	-	-	"
167½	171	-	Tr	-	Claybed
171	177½	-	-	-	Glassrock, Trace barite
177½	182	-	-	-	Trenton

DURANGO MINING CO.
1896 Delhi Street
DUBUQUE, IOWA

Hole No. D-9
Location: 100' S of D-9
Started: 4/20/55
Finished: 4/23/55
Collar Elev: 972.5

Depth	Estimated		Description
0-18			Soil
18-120			Yellow sandy lime
120-133			Gray
133-142½			Blue
142½-155			Oilrock
155-160			Claybed
160-162½		3%Fe	Glassrock
162½-165	2%Zn	3%Fe	"
165½-167½	1%Zn	2%Fe	Trenton, oxidized
167½-170			"

Hole No. D-10
Location: 100' S of D-9
Started: 4/25/55
Finished: 4/29/55
Collar Elev: 976.3

Depth	Zn	Fe	Pb	Description
0-25				Soil
25-110				Yellow sandy lime
110-124				Gray
124-132½		sh		Blue
132½-145		sh		Oilrock
145-147½		sh		Claybed
147½-157½				Glassrock
157½-160				Trenton

Hole No. D-11
Location: 100' S of D-10
Started 4/30/55
Finished 5/3/55
Elevation ~~955.5~~ 979.0

0-25			Soil
25-105			Sandy lime
105-115			Gray "
115-122½			Blue
122½-135			Oilrock
135-142½			Claybed
142½-145			Glassrock
145-147½		3% pb.	" (heavy barite)
147½-150		½%	" " "
150-153			Trenton lime

DURANGO MINING CO.
1896 Delhi Street
DUBUQUE, IOWA

Hole No. D-12
Location: 50' S of D-8
Started 5/4/55
Finished 5/7/55
Elevation: 971.2

Depth	Estimated Zn.	Fe.	Pb.	Description
0-25	-	-	-	Soil
25-125	-	-	-	Yellow sandy lime
125-140	-	-	-	Gray lime
140-147½	-	-	-	Blue (hard)
147½-149	-	-	-	" "
149-160	-	-	-	Oilrock (hard)
160-165	-	-	-	Claybed
165-172½	-	-	-	Glassrock
172½-175	-	-	-	Trenton lime

Hole No. D-13
Location: 30' W & 65' S of NE corner of SW¼, SE¼ Sec. 20, T2N, R1E.
Started 5/17/55
Finished 5/19/55
Elevation 957

0-12	-	-	-	Soil
12-90	-	-	-	Yellow sandy lime, flint, limonite
90-95	-	-	sh	Drab lime, flint, limonite
95-100	-	-	-	" " "
100-115	-	sh	-	" "
115-127½	-	sh	-	Gray lime
127½-136	-	-	-	Blue lime
136-142½	-	-	-	Oilrock
142½-145	-	-	¼%	Oilrock, soft brown
145-150	-	-	½%	"
150-152½	-	-	-	Claybed soft
152½-155	-	-	1%	" "
155-157½	-	-	sh	Glassrock
157½-160	-	6%	3%	"
160-162½	-	4%	2%	"
162½-165	-	-	-	Trenton lime

Hole No. D-14
Location: 100' S of D-13
Started 5/20/55
Finished 5/23/55
Elevation 960.9

0-14	-	-	-	Soil
14-20	-	-	-	Yellow sandy lime
20-30	-	-	sh	" " "
30-60	-	-	sh	" " "
60-100	-	-	-	" " "
100-110	-	-	-	Drab lime
110-125	-	-	-	Gray lime, hard
125-136	-	-	-	Blue " "
136-147½	-	-	-	Oilrock
147½-150	-	-	-	Claybed, hard
150-152½	-	-	-	" , soft
152½-160	-	-	-	Glassrock
160-163	-	-	-	Trenton lime

DURANGO MINING CO.
1896 Delhi Street
DUBUQUE, IOWA

Hole No. D-15
Location: 100' S of D-14
Started: 5/27/55
Finished: 5/31/55
Elev: 965.9

Depth	Estimated Zn	Estimated Fe	Estimated Pb	Description
0-15				Soil
15-60				Yellow sandy lime
60-80				" " "
80-115				Drab lime
115-127				Gray "
127-135		tr		Blue "
135-147½		tr		Oilrock
147½-150		tr		Claybed
150-152½		tr		"
152½-160		tr		Glassrock
160-161	sh	sh		"
161-162½	sh	sh		Trenton
162½-165				"

Hole No. D-16
Location: 100' S of D-15
Started: 6/1/55
Finished: 6/8/55
Elev: 970.3

Depth	Estimated Zn	Estimated Fe	Estimated Pb	Description
0-22				Soil
22-110				Yellow sandy lime
110-125				Gray lime
125-134				Blue "
134-140		tr		Oilrock
140-142½		sh	tr	"
142½-145		tr	tr	"
145-147				"
147-150		tr		Claybed
150-152½				Glassrock
152½-157½			sh	" , calcite
157½-160			tr	" "
160-163			tr	Trenton lime

Hole No. D-17
Location: 100' S of D-16
Started: 6/9/55
Finished: 6/14/55
Elev: 975.5

Depth	Estimated Zn	Estimated Fe	Estimated Pb	Description
0-20				Soil
20-85				Yellow sandy lime
85-95				Drab lime
95-105				" " , oxidized
105-122½				Gray lime
122½-130				Blue "
130-142½				Oilrock
142½-147½				Claybed
147½-155				Glassrock
155-158				Trenton lime

Hole No. D-18
Location: 100' S of D-17
Started: 6/14/55
Finished: 6/17/55
Elev: 979.4

Depth	Estimated Zn	Estimated Fe	Estimated Pb	Description
0-22				Soil
22-65				Yellow sandy lime
65-70			tr	" " "
70-75		5%	4%	Drab lime
75-80		5%	3%	" "
80-82½		3%	1%	" "
82½-95		tr	tr	" "
95-102½			sh	" "
102½-112½		tr	sh	Gray lime
112½-124				Blue "
124-135				Oilrock
135-137½				Claybed
137½-150		tr		Glassrock
150-153		tr		Trenton

Hole No. D-19
Location: 100' S of D-18
Started: 6/17/55
Finished: 6/21/55
Elev: 982.8

Depth	Description
0-25	Soil
25-30	Sandy soil
30-95	" lime
95-110	Gray lime
110-117	Blue "
117-132	Oilrock
132-135	Claybed
135-145	Glassrock
145-148	Trenton lime

Hole No. D-20
Location:100' S of D-19
Started: 6/22/55
Finished: 6/27/55
Elev: 986.0

Depth	Estimated Zn	Estimated Fe	Estimated Pb	Description
0-25				Soil
25-55				Yellow sandy lime
55-60			sh	" " "
60-70			tr	" " "
70-75			½%	" " "
75-90			sh	" " "
90-105				Gray lime
105-115				Blue "
115-127				Oilrock
127-130				Claybed
130-140				Glassrock
140-143				Trenton

Hole No. D-21
Location: 100' S of D-20
Started: 6/27/55
Finished: 6/29/55
Elev: 988.7

Depth	Estimated Zn	Estimated FE	Estimated Pb	Description
0-28				Soil
28-70				Yellow sandy lime
70-85				" " "
85-100				Gray lime
100-109				Blue
109-120				Oilrock
120-125				Claybed
125-135				Glassrock
135-138				Trenton

Hole No. D-22
Location: 100' S of D-21
Started: 7/2/55
Finished: 7/6/55
Elev. 991.5

Depth	Estimated Zn	Estimated FE	Estimated Pb	Description
0-14				Soil
14-75				Yellow sandy lime
75-80		sh		Gray lime
80-95				" "
95-105				Blue "
105-117½				Oilrock
117½-122½				Claybed
122½-130				Glassrock
130-133				Trenton lime

Hole No. D-23
Location: 100' S of D-22
Started: 7/7/55
Finished: 7/9/55

Depth	Estimated Zn	Estimated FE	Estimated Pb	Description
0-15				Soil
15-80				Yellow sandy lime
80-90				Gray lime
90-102½		sh		Blue "
102½-114		sh		Oilrock
114-117½		sh		Claybed
117½-127½		sh		Glassrock
127½-130				Trenton

Hole No. D-24
Location: 50' E of D-18
Started: 7/11/55
Finished: 7/13/55
Collar Elev: 978.8

Depth	Estimate Zn	Fe	Pb	Description
0-15				Soil
15-20				Yellow sandy lime
20-30				" " " , Calcite
30-40			sh	" " "
40-50			sh	Drab lime
50-60		tr		" "
60-65		½%		" "
65-70		5%	4%	" "
70-72½		4%	3½%	" "
72½-75		4%	3%	" "
75-77½		5%	2%	" "
77½-80		2%	½%	" "
80-100				" "
100-110				Gray
110-120				Blue
120-132½			tr	Oilrock
132½-137½				Claybed
137½-140		tr	tr	Glassrock
140-142½		tr		"
142½-147½				"
147½-150				Trenton

Hole No. D-25
Location: 100' E of D-18
Started: 7/14/55
Finished: 7/18/55
Collar Elev: 977.0

Depth	Estimate Zn	Fe	Pb	Description
0-20				Soil
20-27			2%	Yellow sandy lime
27-45			tr	" " "
45-55		tr		" " "
55-65		tr	tr	Drab lime
65-70	3%	4%		" "
70-72½	1%	3%		" "
72½-77½	tr	2%		" "
77½-80		2%	tr	" "
80-94		tr		" "
94-105		tr		Gray
105-115		tr		Blue
115-129		tr		Oilrock
129-132½		tr		Claybed
132½-142½		tr		Glassrock
142½-145		tr		Trenton

DURANGO MINING CO.
1896 Delhi Street
DUBUQUE, IOWA

Hole No. D-26
Location: 50' E of D-25
Started: 7/18/55
Finished: 7/21/55
Collar Elev: 976.1

Depth	Zn	Estimated Fe	Pb	Description
0-15				Soil
15-60			sh	Yellow sandy lime
60-67½	sh	2%		Drab
67½-70	tr	1%		"
70-72½	tr	3%		"
72½-75	1%	4%		"
75-77½	tr	2%		"
77½-92				"
92-102½				Gray
102½112½				Blue
112½-125				Oilrock
125-130				Claybed
130-137½				Glassrock
137½-140				Trenton

Hole No. D-27
Location:50' E of D-26
Started: 7/21/55
Finished: 7/ 25/55
Collar Elev: 979.1

0-15				Soil
15-65				Yellow sandy lime
65-70			½%	" " "
70-80		4%	1½%	" " "
80-90			½%	" " "
90-105				Gray
105-115				Blue
115-127½				Oilrock
127½-130				~~XXXXXXXX~~ Claybed
130-140				Glassrock
140-143				Trenton

Hole No. D-28
Location:22' S & 100'W NW corner SE¼, SW¼
Sec. T2N, R1E, 4th P.M.
Started: 8/1/55
Finished: 8/4/55
Collar Elev: 923.4

0-5				Soil
5-15				Yellow sandy lime
15-20			tr	" " "
20-22½		2%	tr	" " "
22½-30		1%	sh	" " "
30-50		tr		Drab lime
50-85		1½%		" "
85-115		tr		" "
115-130		tr		Gray
130-135		4%		Blue
135-137½		2%		" , calcite
137½-140		8%		" , heavy calcite
140-142½		7%	tr	Oilrock
142½-147½		6%	1%	"
147½-150		3%	1½%	Claybed
150-155		2%	1%	Glassrock
155-160		3%	½%	Trenton

Hole No. D-29
Location: 15' S, 50' W of D-28
Started: 8/11/55
Finished: 8/15/55
Elevation: 921.4

Depth		Estimated Zn.	Fe.	Pb.	Description
0	20	-	-	-	Soil
20	110	-	sh	-	Yellow sandy lime
110	120	-	Tr	-	Gray lime
120	125	sh	tr	-	" "
125	127½	sh	sh	-	Blue lime
127½	132½	-	sh	-	" "
132½	135	sh	tr	½%	" " , calcite
135	137½	1¼%	3%	sh	Oilrock
137½	140	¼%	3%	sh	"
140	145	-	2%		"
145	147½	-	sh	-	Claybed, calcite
147½	157½	-	2%	-	Glassrock
157½	160	-	tr	-	Trenton lime

Hole No. D-30
Location: 15' S and 50' W of D-29
Started: 8/15/55
Finished: 8/19/55
Elevation: 918.3

0	5	-	-	-	Soil
5	25	-	tr	tr	Yellow sandy lime
25	40	-	sh	-	" " "
40	105	-	-	-	" " "
105	120	-	-	-	Gray Lime
120	130	-	-	-	Blue Lime
130	140	-	-	-	Oilrock
140	145	-	-	-	Claybed
145	155	-	-	-	Glassrock
155	158	-	-	-	Trenton

Hole No. D-31
Location: 25' S of E-13
Started: 9/6/55
Finished: 9/9/55
Elevation: 926.3

Depth		Estimated Zn.	Fe.	Pb.	Description
0	10	-	-	-	Soil
10	20	-	-	-	Yellow lime
20	25	-	2%	-	" "
25	30	-	1	sh	" "
30	35	-	½	-	" "
35	45	-	1	-	Drab "
45	65	-	2	-	" "
65	85	-	1	-	" "
85	90	-	1	-	" " , calcite
90	100	-	½	-	" "
100	105	-	tr	-	" " "
105	115	-	½	-	" "
115	132½	-	½	-	Gray "
132½	140	-	3	-	Blue " , calcite
140	142½	-	8	-	" " , heavy calcite
142½	147½	-	1	1½	Oilrock
147½	152½	-	1	tr	Claybed
152½	155	-	1½	tr	Glassrock
155	157½	sh	1½	tr	"
157½	160	-	-	-	Trenton

Hole No. D-32
Location: 25' S of E -13
Started: 9/10/55
Finished: 9/15/55
Elevation: 926.0

0	10	-	-	-	Soil
10	20	-	-	-	Yellow lime
20	80	-	1%	-	Drab "
80	85	-	½	½%	" "
85	90	-	sh	sh	" "
90	105	-	2	tr	" "
106	120	-	sh	-	" "
120	125	tr	1	-	" "
125	130	sh	1	-	" "
130	132½	1%	1½	-	Gray "
132½	135	½	3	-	" "
135	137½	1	5	-	" "
137½	140	½	2	-	" "
140	142½	2	3	½	Blue "
142½	145	-	4	1	" "
145	147½	-	3	½	Oilrock
147½	150	-	5	sh	"
150	152½	sh	1	-	Claybed
152½	155	-	-	-	"
155	157½	sh	1	sh	Glassrock
157½	160	2	½	-	Trenton lime
160	163	1	1	-	" "

Hole No. D-33
Location: 25' N of D-3[illegible]
Started: 9/15/55
Finished: 9/20/55
Elevation: 927.6

Depth		Estimated Zn.	Fe.	Pb.	Description
0	10	-	-	-	Soil
10	25	-	tr	-	Yellow lime
25	40	-	tr	-	Drab "
40	80	-	1%	-	" "
80	85	sh	1	-	" "
85	115	-	1	-	" "
115	120	-	tr	-	" "
120	135	-	½	-	Gray "
135	137½	-	sh	-	Blue "
137½	140	sh	1	-	" "
140	145	sh	4	-	" "
145	147½	tr	4	tr	Oilrock
147½	150	tr	2	tr	"
150	152½	-	sh	-	"
152½	157½	-	sh	-	Claybed
157½	160	-	6	-	Glassrock
160	163	-	tr	-	Trenton lime

Hole No. D-34
Location: 50' N & 10' W of D-30
Started: 9/21/55
Finished: 9/22/55
Elevation: 916.5

0	10	-	-	-	Soil
10	15	-	tr	1%	Dol. lime
15	20	-	tr	tr	" "
20	90	-	sh	sh	" "
90	105	-	-	-	" "
105	120	-	sh	-	Gray Lime
120	129	-	sh	sh	Blue "
129	141	-	-	-	Oilrock
141	145	-	-	-	~~Glassrock~~ Claybed
145	152½	-	-	-	Glassrock
152½	155	-	-	-	Trenton lime

Hole No. D-35
Location: 50' S of D-29
Started 9/28/55
Finished: 10/3/55
Collar Elev: 921.5

Depth	Estimate Zn	Estimate Fe	Estimate Pb	Description
0-15				Soil
15-20			tr	Yellow sandy lime
20-25		sh		" " "
25-110		sh		" " "
110-120		sh		Gray lime
120-130				Blue
130-144				Oilrock
144-147½				Claybed
147½-157½				Glassrock
175½-160				Trenton

Hole No. D-36
Location: 224' W of D-7
Started: 12/9/55
Finished: 12/12/55
Collar Elev. 965.5

Depth	Zn	Fe	Pb	Description
0-20				Soil
20-85				Yellow sandy lime
85-115		tr		" " "
115-125		½%		Gray lime
125-137½		½%		Blue
137½-142½	tr	1%		Oilrock, calcite, barite
142½-145	tr	1%	sh	"
145-147½	tr	1%		"
147½-150	tr	½%		Claybed
150-152½	sh	½%		Glassrock
152½-155	tr	½%	tr	"
155-157½		½%	tr	"
157½-160		½%	tr	"
160-163			1%	Trenton

Hole No. D-37
Location: 40' S of D-36
Started: 12/12/55
Finished: 12/15/55
Elevation: 968.9

Depth	Zn	Fe	Pb	Description
0-20				Soil
20-40			sh	Yellow sandy lime
40-110		sh		" " "
110-125		tr		Gray lime
125-132½		tr		Blue "
132½-140		tr		Oilrock
140-142½	tr	tr		"
142½-145	sh	tr		Claybed
145-147½	tr	tr	½%	Glassrock
147½-150	sh		tr	" , calcite
150-152½			sh	" "
152½-155			sh	"
155-159			sh	Trenton

Hole No. D-38
Location: 205' S and 150' W of Dowling fence
Started: 12/16/55
Finished: 12/17/55
Elevation: 952.7

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Depth	Zn.	Fe.	Pb.	Description
	Estimated			
0-15				Soil
15-60				Yellow sandy lime
60-65		½%		" " "
65-80		sh		Gray lime
80-87½		1%		Blue lime, barite, calcite
87½-95	sh	3%		Oilrock, calcite
95-97½	sh	3%	sh	"
97½-100	sh	4%	tr	"
100-102½	sh	3%	tr	Claybed, calcite
102½-105	sh	2%		Glassrock
105-112½		1%		"
112½-115		½%		Trenton lime

Hole No. D-39
Location: 50'W of D-38
Started: 12/19/55
Finished: 12/21/55
Elevation: 956.8

0-15			Soil
15-70			Yellow sandy lime
70-85		sh	Gray lime
85-87½		sh	Blue lime
87½-92		sh	" "
92-102½		1%	Oilrock, very heavily omidized
102½-107½		3%	" " " " mud, clay, calcite
107½-110		2%	Claybed, heavy calcite, mudand clay
110-120		1%	sh Glassrock, medium calcite, mud, green clay
120-122		½%	Trenton lime, calcite, mud

Hole No. L-1
Started: 10/28/55
Finished: 10/31/55
Location: 25' S of D-7
Elevation: 958.8

0-10				Soil
10-100				Yellow lime
100-120		tr		Gray lime
120-130		tr		Blue lime
130-132½			sh	Oilrock
132½-135	3%		1%	"
135-137½	½%		½%	" , medium barite
137½-140				Claybed
140-142½			tr	"
142½-147½		1%	sh	Glassrock
147½-150		1%		"
150-153		tr		Trenton lime

Hole No. L-2
Location: 50' N of L
Started: 11/1/55
Finished: 11/5/55
Elevation: 955.2

Depth	Estimated Zn.	Fe.	Pb.	Description
0-10				Soil
10-115				Yellow lime
115-125		tr		Gray "
125-132½		tr		Blue "
132½-135		tr		Oilrock
135-137½	sh	tr		"
137½-142½		tr		"
142½-147½		tr		Claybed
147½-150	sh	tr		Glassrock
150-155	sh	1%		"
155-158		1%		Trenton lime

Hole No. L-3
Location: 50' N of L-2
Started: 11/7/55
Finished: 11/10/55
Elevation: 951.0

Depth	Zn.	Fe.	Pb.	Description
0-15				Soil
15-115		sh		Yellow lime
115-125				Gray "
125-135				Blue "
135-147½		sh		Oilrock
147½-150				Claybed
150-157½				Glassrock
157½-160				Trenton

Hole No. L-4
Location: 50' W & 52' N of D-7
Started: 11/10/55
Finished: 11/14/55
Elevation: 952.1

Depth	Zn.	Fe.	Pb.	Description
0-20				Soil
20-80				Yellow lime
80-115		sh		" "
115-125				Gray lime
125-130		sh		Blue "
130-132½	sh	sh		" "
132½-135				Oilrock
135-137½	4.5%			"
137½-140	½%	1%		"
140-142½		½%		"
142½-147½				Claybed
147½-150	tr	6%		Glassrock
150-152½	tr	4%		"
152½-155	3%	4%		"
155-157½	tr	2%		Trenton lime
157½-160		1%		" "

Hole No. L-5
Location: 50' W of L
Started: 11/15/55
Finished: 11/18/55
Elevation: 958.4

Depth	Estimated Zn.	Estimated Fe.	Estimated Pb.	Description
0-20				Soil
20-115		tr		Yellow lime
115-125		sh		Gray "
125-130		tr		Blue "
130-132½	½%	tr		" "
132½-135	sh	1%		" "
135-137½	½%	1%		Oilrock
137½-140	1%			"
140-142½	½%	1%		"
142½-145	2%			" , medium barite
145-147½	tr			" , barite
147½-150				Claybed
150-152½	2%	2%		Glassrock
152½-155	2.5%	1%		"
155-157½	4%	1%		"
157½-160	1.5%	½%		Trenton
160-163	tr			"

Hole No.L-6
Location: 50' W of L-5
Started: 11/21/55
Finished: 11/24/55
Elevation: 958.1

Depth	Estimated Zn.	Estimated Fe.	Estimated Pb.	Description
0-15				Soil
15-115		sh		Yellow lime
115-125				Gray "
125-135		tr		Blue "
135-140	tr	tr		Oilrock
140-147½		tr	sh	"
147½-150			sh	Claybed
150-155	½%	1%	sh	Glassrock
155-157½	3%			" , barite
157½-160	½%			Trenton lime

Hole No. L-7
Location: 50' N of L-6
Started: 11/25/55
Finished: 11/29/55
Elevation: 954.6

Depth	Estimated Zn.	Estimated Fe.	Estimated Pb.	Description
0-20				Soil
20-120				Yellow lime
120-130				Gray "
130-137½				Blue "
137½-147½				Oilrock
147½-150			sh	"
150-152½				Claybed
152½-157½				Glassrock
157½-160	sh			"
160-162½				"
162½-165				Trenton lime

Hole No. L-8
Location: 35' N of L-6
Started: 11/30/55
Finished: 12/3/55
Elevation: 959.2

Depth	Estimated Zn.	Estimated Fe.	Estimated Pb.	Description
0-20				Soil
20-60				Yellow sandy lime
60-110		sh		" " "
110-125		tr		Gray lime
125-136		sh		Blue "
136-137½	½%	sh		Oilrock
137½-140	1%			"
140-142½	tr	sh		"
142½-147½	sh			"
147½-150			sh	Claybed, barite
150-152½	1%		sh	Glassrock, barite
152½-155	½%			"
155-157½	1%		sh	"
157½-160	½%			Trenton
160-163				" , oxidized

Hole No. L-9
Location: 50' W of L-8
Started: 12/3/55
Finished: 12/8/55
Elevation: 959.5

Depth	Estimated Zn.	Estimated Fe.	Estimated Pb.	Description
0-15				Soil
15-115		sh		Yellow sandy lime
115-125		tr		Gray lime
125-135		tr		Blue "
135-137½		tr		Oilrock
137½-140		tr	tr	"
140-147½		tr		"
147½-150		tr		Claybed
150-155		tr		Glassrock
155-157½	tr			" , barite
157½-160	sh			"
160-163		sh		Trenton lime, oxidized

Hole No. L-10
Location: 200' W of L-3
Started: 12/22/55
Finished: 12/26/55
Elevation: 952.5

Depth	Estimated Zn.	Estimated Fe.	Estimated Pb.	Description
0-20				Soil
20-55		sh		Yellow sandy lime
55-70		½%		" " "
70-90		tr		" " "
90-105		sh		" " "
105-130		½%		Drab lime
130-145		tr		Gray lime
145-155		tr		Blue "
155-165		½%		Oilrock
165-167½		tr		Claybed
167½-175		sh		Glassrock
175-177½		2%		"
177½-180		3%		Trenton lime

Hole No. L-11
Location: 200' N of L-10
Started: 12/27/55
Finished: 12/30/55
Elevation: 962.25

Depth	Estimated Zn.	Estimated Fe.	Pb.	Description
0-20				Soil
20-40		sh		Yellow sandy lime
40-45		tr	sh	" " "
45-50		tr	tr	Drab lime
50-85		½%		" "
85-140		tr		" "
140-150		tr		Gray lime
150-155		tr		Blue lime
155-157½	sh	tr		" "
157½-160		tr		" "
160-162½		4%	1%	" "
162½-165	sh	10%	sh	Oilrock, barite, calcite
165-167½	tr	7%		" , calcite
167½-170	1%	7%		Claybed
170-177½		15%		Glassrock
177½-180	½%	15%	tr	"
180-182½	sh	4%	sh	"
182½-185		3%		Trenton lime

Hole No. L-12
Location: 40'W & 10' S of L-11
Started: 12/30/55
Finished: 1/4/56
Elevation: 962.5

0-20				Soil
20-30		sh	sh	Yellow sandy lime
30-40		sh		" " "
40-45		sh	tr	" " "
45-55		tr		" " "
55-75		½%		" " "
75-120		½%		Drab lime
120-140		1%		" "
140-157½		½%		Gray "
157½-160		½%		Blue "
160-162½	sh	2%		" "
162½-165	1½%	6%	1%	Oilrock, barite
165-170	1%	10%		" " , calcite
170-172½	2%	8%		Claybed
172½-175	tr	4%		"
175-182½	1%	4%		Glassrock
182½-185	tr	2%		Trenton lime

Hole No. L-13
Location: 80' W and 1[illegible] N of L-11
Started: 1/4/56
Finished: 1/9/56
Elevation: 965.1

Depth	Estimated Zn.	Estimated Fe.	Pb.	Description
0-20				Soil
20-45		sh		Yellow sandy lime
45-50		½%		Drab lime
50-60		1%	sh	" "
60-70		tr		" "
70-85		½%		" "
85-120		tr		" "
120-140		½%		" "
140-145		3%		" "
145-157½		2%		Gray lime
157½-160		2%	sh	Blue "
160-162½		3%	tr	" "
162½-165		20%	1%	Oilrock, calcite
165-167½	sh	30%	2%	" "
167½-170	sh	35%	tr	" "
170-172½	sh	30%	tr	" "
172½-175	tr	20%	sh	" "
175-177½		15%		Claybed, barite
177½-180		15%		Glassrock
180-182½	3%	10%		"
182½-185	3%	8%		Trenton
185-190	½%	5%		"
190-193	1%	5%		

Hole No. L-14
Location: 40' E & 20' S of L-11
Started: 1/16/56
Finished: 1/24/56
Elevation: 960.15

Depth	Estimated Zn.	Estimated Fe.	Pb.	Description
0-20				Soil
20-45		tr	sh	Yellow sandy lime
45-60		tr	tr	" " "
60-70		tr		" " "
70-80		½%		" " "
80-95		tr		Drab lime
95-140		½%		" "
140-155		½%		Gray "
155-162½		½%		Blue "
162½-165		15%	½%	Oilrock
165-167½	1%	10%	tr	" , barite
167½-170	1½%	3%		" "
170-172½	2½%	1%		" "
172½-175	1%	½%	sh	Claybed
175-177½	½%	25%		Glassrock
177½-180	1%	4%	tr	"
180-182½	½%	2%	sh	"
182½-185	tr	3%	½%	Trenton lime
185-190	tr	2%	½%	" "

Depth	Zn.	Estimated Fe.
0-20		
20-65		sh
65-70		½%
70-75		½%
75-85		2%
85-95		4%
95-100		2%
100-115		1%
115-140		½%
140-150		tr
150-155		tr
155-157½	sh	½%
157½-160	tr	½%
160-162½	½%	1%
162½-165	1½%	20%
165-167½	1½%	10%
167½-170	3%	4%
170-172½	4%	4%
172½-175	1%	3%
175-177½	½%	35%
177½-180	½%	30%
180-182½	½%	15%
182½-185	tr	15%
185-187	sh	15%

Depth	Zn.	Estimated Fe.
0-20		
20-130		sh
130-145		tr
145-150		tr
150-155		7%
155-160		4%
160-165		20%
165-167½		35%
167½-175		40%
175-177½	½%	10%
177½-180	1%	10%
180-182½	1%	12%
182½-185	tr	20%
185-187½		15%
187½-190	sh	15%
190-193	½%	10%

Hole No. L-15
Location: 40' E & 1[illegible] N of L-14
Started: 1/24/56
Finished: 1/27/56
Elevation: 959.2

Pb.	Description
	Soil
sh	Yellow sandy lime
sh	Drab lime
	" "
	" "
	" "
sh	" "
	" "
	" "
	Gray lime
	Blue "
	" "
sh	" "
tr	Oilrock, calcite
	" , barite
	" "
	Claybed "
	Glassrock "
	" "
	" "
	" "
	" "
	Trenton "
	" "

Hole No. L-16
Location: 100' W & 10' S of L-13
Started: 1/28/56
Finished: 1/31/56
Elevation: 967.4

Pb.	Description
	Soil
	Yellow sandy lime
	" " " , limonite
	Gray lime, limonite
	" " "
sh	" " "
	Blue lime
	" "
	Oilrock
	"
	Claybed
	Glassrock
sh	"
1½%	"
sh	Trenton lime
sh	" "

Hole No. L-17
Location: 100' W & 20' [illegible] of L-16
Started: 2/1/56
Finished: 2/6/56
Elevation: 969.05

Depth	Estimated Zn.	Fe.	Pb.	Description
0-20				Soil
20-75		sh		Yellow sandy lime
75-105		tr		" " "
105-130		1%		Drab lime
130-145		½%		" " , heavy limonite
145-150		4%		" " " "
150-160		7%		Gray lime, med. limonite
160-167½		15%		Blue " , lt. limonite
167½-170	tr	5%	sh	Oilrock
170-172½	2%	4%	½%	"
172½-175	4%	3%	½%	"
175-177½	3%	2%	3%	Claybed
177½-180	4%	tr	4%	"
180-182½	2½%	3%	3%	Glassrock
182½-185	½%	3%	½%	"
185-187½	1%	4%	1%	Trenton
187½-190	1%	5%	½%	"
190-192½	½%	6%	½%	"
192½-195	½%	8%	2%	"
195-197½	½%	8%	2%	"
197½-200	1%	3%	2½%	"

Hole No. L-18
Location: 100' W & 20' S of L-17
Started: 2/6/56
Finished: 2/14/56
Elevation: 971.45

0-20				Soil
20-50			sh	Yellow sandy lime
50-120		sh		" " "
120-155		tr		Drab lime
155-165		½%		Gray lime
165-172½		tr		Blue "
172½-175	3%	15%	tr	Oilrock
175-177½	½%	2%		"
177½-180	1%	5%	2%	"
180-182½	4%	2%	3%	"
182½-185	3%	2%	5%	Claybed
185-187½	½%	6%	3%	Glassrock
187½-190	1½%	6%	2%	"
190-192½	1%	5%	tr	"
192½-195	½%	6%	2%	Trenton
195-197½	tr	4%	3%	"
197½-200	sh	4%	1%	"
200-202½	tr	5%	½%	"
202½-205	sh	3%	1%	"

Hole No. L-19
Location: 100' W & [illegible] N of L-18
Started: 2/14/56
Finished: 2/18/56
Elevation: 973.25

Depth	Zn.	Estimated Fe.	Pb.	Description
0-20				Soil
20-110		sh		Yellow sandy lime, lt. limonite
110-145		1½%		Drab lime
145-160		½%		Gray lime
160-165	sh	½%	sh	Blue "
165-167½	sh	½%		" "
167½-172½		½%		" "
172½-185		tr		Oilrock
185-187½		tr	1%	Claybed
187½-190	sh	½%	3%	Glassrock, barite
190-192½		tr	1%	"
192½-195	sh	tr	½%	Trenton lime

Hole No. L-20
Location: 50' S of L-19
Started: 2/18/56
Finished: 2/22/56
Elevation: 972.55

0-20				Soil
20-45		sh		Yellow sandy lime
45-50			sh	Drab lime
50-55		sh		" "
55-135		sh		Yellow sandy lime, limonite
135-145		2%		" " "
145-150		4%		" " "
150-152½		5%		" " "
152½-165		3%		Gray lime
165-172½		2%		Blue "
172½-175	3%	4%		Oilrock
175-177½	4%	5%		"
177½-180	5%	6%	tr	"
180-182½	1%	6%		"
182½-185	7%	5%	sh	"
185½-187½	6%	3%	tr	Claybed
187½-190	4%	2%	8%	Glassrock
190-192½	1%	4%	6%	"
192½-195	2%	2%	2%	Trenton lime
195-198	½%	4%	1%	" "

Hole No. L-21
Location: 100' W & 50' S of L-20
Started: 2/22/56
Finished: 2/25/56
Elevation: 972.65

Depth	Estimated Zn.	Estimated Fe.	Estimated Pb.	Description
0-20				Soil
20-55		sh		Yellow sandy lime
55-100		sh		" " " , med. limonite
100-135		sh		" " " , lt. "
135-150		2%		" " "
150-162½		1%		Gray lime
162½-165		½%		Blue "
165-167½		tr	½%	" "
167½-170		½%	tr	" "
170-172½	½%	1%		" "
172½-175	2½%	3%		Oilrock, calcite
175-177½	2%	3%		"
177½-180	1%	1%		"
180-182½	1%	1%		"
182½-185	½%	1½%		Claybed
185-190	tr	2%		Glassrock
190-192½	½%	1½%		"
192½-195	sh	½%		Trenton lime

Hole No. L-22
Location: 50' W of L-21
Started: 2/27/56
Finished: 2/29/56
Elevation: 972.55

Depth	Estimated Zn.	Estimated Fe.	Estimated Pb.	Description
0-20				Soil
20-60		sh		Yellow sandy lime
60-65		sh	sh	" " " , ocher
65-95		sh		" " " " , limonite
95-120		sh		" " " "
120-145		2%		" " "
145-165		1%		Gray lime
165-172½		½%		Blue "
172½-185		tr		Oilrock
185-187½		tr		Claybed
187½-190		tr		Glassrock
190-192½	tr	15%		"
192½-195	tr	5%	tr	Trenton
195-198		2%		"

Hole No. L-23
Location: 25' S of L-13
Started: 3/1/56
Finished: 3/3/56
Elevation: 964.2

Depth	Estimated Zn.	Estimated Fe.	Estimated Pb.	Description
0-20		sh		Soil
20-25		sh		Yellow sandy lime
25-30	sh	sh		" " "
30-60		½%		" " "
60-90		½%		Drab lime
90-140		1%		" "
140-155		½%		Gray lime
155-165		5%		Blue "
165-167½		5%		" " , heavy calcite
167½-170	sh	15%		Oilrock
170-172½	2%	13%		"
172½-175	1½%	10%		Claybed
175-177½	½%	10%		Glassrock
177½-180	sh	17%		"
180-182½	sh	16%		"
182½-185	sh	16%		Trenton

Hole No. L-24
Location: 25' S of L-23
Started: 3/8/56
Finished: 3/13/56
Elevation: 963.3

Depth	Estimated Zn.	Estimated Fe.	Estimated Pb.	Description
0-20				Soil
20-70		tr		Yellow sandy lime
70-95		1%		Drab lime
95-125		tr		" "
125-140		½%		" "
140-155		sh		Gray lime
155-165		½%		Blue "
165-167½		6%		Oilrock, barite
167½-170		15%		" " , calcite
170-172½		10%		" "
172½-175		10%		Claybed
175-177½		4%		Glassrock
177½-180		6%		"
180-182½		4%		"
182½-184½		5%		"
184½-185		5%		Trenton

Hole No. L-25
Location: 25' N of L-13
Started: 3/13/56
Finished: 3/16/56
Elevation: 965.6

Depth	Estimated Zn.	Estimated Fe.	Estimated Pb.	Description
0-20				Soil
20-70				Yellow sandy lime
70-80		sh	tr	Drab lime
80-95		sh		" "
95-140		½%		" "
140-155		tr		Gray lime
155-160		1%		Blue "
160-164	1½%	2%		" "
164-165	1½%	2%		Oilrock
165-167½	3%	1%		"
167½-170	3%	5%		"
170-172	2½%	5%		"
172-172½	2½%	5%		Claybed
172½-175	½%	20%		Glassrock
175-177½	½%	17%	½%	"
177½-180	sh	20%		"
180-182½	½%	7%		"
182½-185	½%	4%		Trenton
185-187½	tr	3%		"
187½-190	½%	3%	sh	"

Hole No. L-26
Location: 25' N of L-25
Started: 3/16/56
Finished: 3/23/56
Elevation: 966.5

Depth	Estimated Zn.	Estimated Fe.	Estimated Pb.	Description
0-30				Soil
30-35			tr	Yellow sandy lime
35-55		tr		" " "
55-65		1%	tr	" " "
65-90		sh	sh	" " "
90-140		sh	sh	Drab lime
140-145		1%	½%	" "
145-155		1%	sh	Gray "
155-160		1%		Blue "
160-165		2%	½%	" "
165-167½	5%	3%	3%	Oilrock
167½-170	2½%	1%	1%	"
170-172½	1½%	1%	1%	"
172½-175	1%	1%	½%	Claybed
175-177½	½%	1%	tr	Glassrock
177½-180	tr	15%	sh	"
180-182½	tr	10%	sh	Trenton lime
182½-185	1%	10%	½%	" "
185-187½	½%	5%	½%	" "
187½-190	tr	5%	½%	" "

Hole No. L-27
Location: 25' N of L-26
Started: 3/23/56
Finished: 3/27/56
Elevation: 967.3

Depth	Estimated Zn.	Estimated Fe.	Estimated Pb.	Description
0-20				Soil
20-45		sh	sh	Yellow sandy lime
45-65				" " ", limonite
65-145		sh		Drab lime
145-155		sh		Gray lime, oxidized
155-165		sh		Blue lime
165-167½	tr	sh	tr	Oilrock
167½-170	4%	sh	4%	Oilrock
170-172½	1%	sh	2%	"
172½-175	½%	sh	1%	Claybed
175-177½	2%	1%	1%	Glassrock
177½-180	½%	4%	tr	"
180-182½	tr	2%	tr	"
182½-185	tr	1%	sh	Trenton lime

Hole No. L-28
Location: 25' N of L-27
Started: 3/27/56
Finished: 3/31/56
Elevation: 967.8

0-20				Soil
20-80		sh		Yellow sandy lime
80-145		sh		Drab lime
145-155		½%		Gray lime
155-165		2%	tr	Blue lime
165-167½	2%	tr		Oilrock, heavy barite
167½-170	3%	tr		" " "
170-172½	½%	tr		" medium barite
172½-175	½%	tr		Claybed
175-177½	1%	3%		Glassrock
177½-180	sh	8%		"
180-182½	sh	14%		"
182½-185	sh	10%		"
185-188	sh	5%		Trenton lime

Hole No. L-29
Location: 25' N of L-28
Started: 4/2/56
Finished? 4/6/56
Elevation: 967.8

Depth	Estimated Zn.	Fe.	Pb.	Description
0-20				Soil
20-50		sh		Yellow sandy lime
50-70		sh		" " "
70-130		sh		" " "
130-140		tr		Drab lime
140-155		tr		Gray "
155-160		tr		Blue "
160-162½		tr	sh	" "
162½-165		1%		" "
165-177½		sh		Cilrock
177½-180		tr		Claybed
180-182½		40%		Glassrock
182½-185	sh	20%		"
185-188	sh	5%		Trenton lime

Hole No. L-30
Location: 25' S of L-19
Started: 4/11/56
Finished: 4/14/56
Elevation: 973.0

0-25				Soil
25-75		sh		Yellow sandy lime
75-95				" " "
95-115		sh		" " " , limonite, ocher
115-125		sh		" " "
125-155		tr		" " "
155-160		1%		Gray lime
160-165	sh	1%		" "
165-167½	sh	1%		Blue "
167½-170	sh	6%		~~Oilrock~~ Blue lime
170-172½	½%	8%		Oilrock
172½-175	1½%	8%		"
175-177½	sh	10%		"
177½-182½	½%	5%	½%	"
182½-185	sh	2%	¼%	Claybed
185-187½	sh	2%	4%	Glassrock
187½-190		1%	1½%	"
190-192½	sh	2%	1½%	"
192½-195		3%	½%	Trenton lime

Hole No. L-31
Location: 40' N of L-21
Started: 4/20/56
Finished: 4/24/56
Elevation: 972.7

Depth	Estimated Zn.	Fe.	Pb.	Description
0-20				Soil
20-50		sh		Yellow sandy lime
50-65				" " " , limonite, ocher
65-100		sh		" " "
100-105		tr		Drab lime
105-155		2%		" "
155-170		2%		Gray "
170-175		2%		Blue lime
175-177½	½%	1%		Oilrock
177½-180	tr	1%		"
180-182½	sh	1%		"
182½-185		1%		"
185-187½	½%	1%		" , barite
187½-190	½%	½%	1%	Claybed
190-192½	½%	½%	2%	Glassrock
192½-195	½%	½%	1½%	"
195-198		½%	½%	Trenton lime

Hole No. L-32
Location: 50' S of L-20
Started: 4/26/56
Finished: 4/30/56
Elevation: 972.04

0-25				Soil
25-50		sh		Yellow sandy lime
50-150		sh		" " " , limonite
150-172½		sh		Gray lime, limonite
172½-175	1%	sh		Blue " "
~~175-177~~				
175-177½	1%	2%		Oilrock
177½-180	½%	2%		"
180-182½	sh	1%		" , calcite
182½-185		2%		Claybed "
185-187½		1%		"
187½-190	sh	1%		Glassrock
190-192½		1%		"
192½-195	sh	1%		Trenton lime

Hole No. L-33
Location: 300' N of L[illegible]9
Started: 5/2/56
Finished: 5/7/56
Elevation: 966.4

Depth	Estimated Zn.	Estimated Fe.	Estimated Pb.	Description
0-20				Soil
20-95				Yellow sandy lime
95-140				" " " , limonite
140-150				" " "
150-160		tr		Gray lime
160-165		1%		Blue "
165-167½		5%		" "
167½-170	½%	15%		Oilrock
170-172½	½%	15%		"
172½-175	½%	15%		" , calcite
175½-177½	tr	15%		Claybed
177½-180	sh	15%	tr	Glassrock
180-182½	tr	10%		"
182½-185	tr	10%		Trenton

Hole No. L-34
Location: 325' W of L-33
Started: 5/7/56
Finished: 5/14/56
Elevation: 957.25

Depth	Estimated Zn.	Estimated Fe.	Estimated Pb.	Description
0-20				Soil
20-130		sh		Yellow sandy lime
130-145		sh		Gray lime
145-155		tr		Blue "
155-167½		sh		Oilrock
167½-170		sh		Claybed
170-177½		sh		Glassrock
177½-180		sh		" & Trenton lime

Hole No. L-35
Location: 100' N of L-34
Started: 5/14/56
Finished: 5/18/56
Elevation: 956.4

Depth	Estimated Zn.	Estimated Fe.	Estimated Pb.	Description
0-20				Soil
20-80				Yellow sandy lime
80-95				" " " , limonite
95-130		tr		" " "
130-140		tr		Gray lime
140-145	sh	tr		Blue "
145-152½		sh		" "
152½-165		sh		Oilrock
165-167½		sh		Claybed
167½-177½		sh		Glassrock
177½-180		sh		Trenton lime

Hole No. L-36
Location: 100' S of L-34
Started: 5/18/56
Finished: 5/23/56
Elevation: 958.3

Depth	Estimated Zn.	Estimated Fe.	Estimated Pb.	Description
0-20				Soil
20-55				Yellow sandy lime
55-60		tr		" " "
60-95				" " "
95-110				" " " , limonite
110-130		tr		Drab lime "
130-145		½%		Gray lime "
145-151		½%		Blue " "
151-165		tr		Oilrock
165-170		tr		Claybed
170-177½		sh		Glassrock
177½-180		sh		Trenton

Hole No. L-37
Location: 100' N of L-35
Started: 5/23/56
Finished: 5/31/56
Elevation: 957.5

Depth	Estimated Zn.	Estimated Fe.	Estimated Pb.	Description
0-20				Soil
20-105				Yellow sandy lime
105-130		tr		" " "
130-145		sh		Gray lime
145-152½		sh		Blue "
152½-155				Oilrock
155-170				Claybed
170-180				Glassrock
180-183				Trenton lime

Hole No. L-38
Location: 240' S of L-36
Started: 6/5/56
Finished: 6/8/56
Elevation: 955.4

Depth	Estimated Zn.	Estimated Fe.	Estimated Pb.	Description
0-20				Soil
20-60				Yellow sandy lime
60-85				" " "
85-105				Drab lime
102-125		tr		" "
125-135		tr		Gray "
135-145		sh		Blue "
145-157½		sh		Oilrock
157½-162½				Claybed
162½-170				Glassrock
170-173				Trenton

Hole No. L-39
Location: 120' S of L-36
Started: 6/25/56
Finished: 6/28/56
Elevation: 957.25

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Depth	Estimated Zn.	Estimated Fe.	Estimated Pb.	Description
0-20				Soil
20-125				Yellow sandy lime
125-140				Gray lime
140-150		sh		Blue "
150-162½		sh		Oilrock
162½-165				Claybed
165-177½				Glassrock
177½-180				Trenton lime

File Copy
Surname

Griswold
Nelson
Lamb
Selfridge
Hyman

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

AUG 24 1956

Mr. Paul Gille

Cuba City, Wisconsin

Re: Docket No. MEA-3510 (Lead-Zinc)
Paul Gille
Dawson and Lindsay Leases
Lafayette County, Wisconsin
Contract No. Idm-8755

Dear Mr. Gille:

This is with reference to your letter requesting an amendment to provide additional aid on the cited exploration project.

Projects or project additions approved by the Defense Minerals Exploration Administration must, in its judgment, show definite promise of yielding materials of acceptable grade in quantities that will significantly improve the mineral supply position for the National Defense Program.

Careful study of the results achieved to date by the work under this contract, although noting the occurrence of some lead-zinc ore on your leases, indicates to us that the probability of disclosing significant ore reserves by your proposed program is not sufficiently promising to justify further Government participation. We regret to advise you, under these circumstances, that your application for additional exploration assistance is denied.

Sincerely yours,

C. O. Mittendorf

Administrator

WRGriswold/er 8/21 & 22/56
Copy to: Docket
Admr & File
Op. Committee
Base Metals
Mr. Bishop, USBM
Mr. Nielsgaard, USGS
Region V (2)
Chron.

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

File Copy
Surname
Griswold

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

Mr. Paul Gille

Cuba City, Wisconsin

Re: Docket No. DMEA-3510 (Lead-Zinc)
Paul Gille
Dawson and Lindsay Leases
Lafayette County, Wisconsin
Contract No. Idm-2755

Dear Mr. Gille:

Your application for additional aid for an exploration project and other reports available to us in Washington concerning your application have been reviewed.

Projects approved by the Defense Minerals Exploration Administration must, in its judgment, show definite promise of yielding materials of acceptable grade in quantities that will significantly improve the mineral supply position for the National Defense Program.

Careful study of all our information, although noting some lead-zinc mineralization on your leases, indicates to us that the probability of disclosing significant ore reserves by your proposed program is not sufficiently promising to justify Government participation. We regret to advise you, under these circumstances, that your application for exploration assistance is denied.

We wish to thank you for your interest in the Defense Minerals Program and for bringing your property to our attention.

Sincerely yours,

Administrator

WRGriswold/er 8/21/56
Copy to: Docket
Admr R File
Op. Committee
Base Metals
Mr. Bishop, USBM
Mr. Aiilsgaard, USGS
Region V (2)
Chron.

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

File Copy

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

August 21, 1956

Memorandum

To: The Administrator

From: Chief, Base Metals Division

Subject: Denial of Additional Aid for exploration work on Docket No. DMEA-3510, Paul Gille, Dawson and Lindsay leases, Lafayette County, Wisconsin, Contract No. Idm-E755, Lead-Zinc.

The cited property was covered by DMEA-3510. The contract provided for 13,000 feet of churn drilling at a cost of $24,846.00, most of which is complete. A few small ore pods were found, maybe 7,000 tons in all, at a generous estimate. The Operator now wants to spend another $19,000.00 for 10,000 feet of additional drilling. We agree with the reviewers that no real expectancy exists for finding anything of importance.

W. R. Griswold

W. R. Griswold

WRG/er

Copy to: Docket
Base Metals
Chron.

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

August 21, 1956

Memorandum

To: The Administrator

From: Chief, Base Metals Division

Subject: Denial of Additional Aid for exploration work on Docket No. DMEA-3510, Paul Gille, Dawson and Lindsay leases, Lafayette County, Wisconsin, Contract No. Idm-E755, Lead-Zinc.

The cited property was covered by DMEA-3510. The contract provided for 13,000 feet of churn drilling at a cost of $24,846.00, most of which is complete. A few small ore pods were found, maybe 7,000 tons in all, at a generous estimate. The Operator now wants to spend another $19,000.00 for 10,000 feet of additional drilling. We agree with the reviewers that no real expectancy exists for finding anything of importance.

W R Griswold

W. R. Griswold

IN REPLY REFER TO:

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

Griswold
Betty

August 14, 1956

Re: DMEA 3510, Idm-5755
Paul Gille
Duncan and Lindsay Leases
Lafayette Co., Wisconsin
Zinc-Lead

Memorandum

To: W. R. Griswold, Defense Minerals Exploration Administration

From: N. E. Nelson, U. S. Geological Survey

Subject: Review of Field Team report on request for amendment.

The applicant requested an amendment to the referenced contract authorizing the drilling of an additional 10,000 feet of non-core drill hole at an estimated cost of $19,000.

The contract approved the drilling of 13,000 feet at an estimated cost of $24,846.00, and the work has been about completed. Less than 10,000 tons of material in 3 blocks has been indicated as:-- *

Block 1 2,600 tons at 5% zinc ±

Block 2 1,400 tons at 3.20% Zn and 0.75% Pb ±

Block 3 4,400 tons at 6.00% Pb ±

* Geologist examiner, Mullens

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The examiner concludes, "None of the three blocks is of current economic value as the deposits are too deep (about 180 feet) and too small." He concludes, "I recommend that DMEA deny the request for an amendment because I do not believe the additional drilling would find any significant ore deposits."

The engineer examiner "would not make any definite recommendations without seeing the detailed proposal for future work." He does say, " . . . . I believe Mr. Mullens (geologist) and I were pretty much in agreement about the prospects of future work on this contract."

The Field Team on the basis of the implied (?) and expressed unfavorable conclusions of the examiners recommends denial of the application for an amendment. I concur with the Field Team's recommendation.

N. E. Nelson

N. E. Nelson

cc: Director's reading, 4212
Branch reading, 4212
DMEA (3)
Docket file
O. M. Bishop, 3617

NENelson:iml
G-8/14/56

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

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August 13, 1956

Re: DMEA-3510, Idm E-755;
Lead-Zinc
Paul Gille
Dawson & Lindsay Lease
Lafayette County, Wisc.

Memorandum

To: W. R. Griswold, DMEA

From: O. M. Bishop, Branch of Base Metals-Mines

Subject: Review of field team memo on operators request for additional drilling of date August 2, 1956, received August 8, 1956.

I have reviewed the memos by Wesley Grosh and the Region V Field Team and concur that there is small liklihood of a significant discovery in the target area obtained.

Very truly yours,

O. M. Bishop

O. M. Bishop
Commodity Specialist
Branch of Base Metals

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
ROOM 1015 POST OFFICE BLDG.
KNOXVILLE 2, TENN.

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August 6, 1956

Memorandum

To: Operating Committee, DMEA - Washington

From: DMEA Field Team, Region V - Knoxville, Tenn.

Subject: DMEA-3510, Idm-E755 (lead-zinc) Paul Gille, Cuba City, Wisc.
Dawson & Lindsay Leases, Lafayette County, Wis.

Enclosed are four copies of a memo from W. A. Grosh, commenting on the Operator's request for an additional $19,000 worth of drilling.

It does not appear to us that additional drilling is likely to discover a significant amount of ore. Therefore, we do not recommend approval of the Operator's request for an amendment.

Robert A. Laurence

Robert A. Laurence, Executive Officer
DMEA Field Team, Region V

V. J. Lynch

V. J. Lynch, Member,
Bureau of Mines

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
REGION V

NORTH CENTRAL EXPERIMENT STATION

2908 COLFAX AVENUE, SOUTH
MINNEAPOLIS 8, MINNESOTA

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August 2, 1956

Memorandum

To: Robert A. Laurence, Executive Officer, DMEA Field Team, Region V, Knoxville, Tenn.

From: Supervising Mine Examination and Exploration Engineer, North Central Experiment Station

Subject: DMEA Docket 3510, Contract Idm-E755 (Zinc-Lead), Paul Gille, Cuba City, Wisconsin - Amendment and Extension of Contract

During my recent visit to Platteville, I discussed the proposed extension of the subject contract with T. E. Mullens and Paul Gille. Mr. Gille did not have a copy of the proposal setting forth exactly his plan of procedure in continuing the exploration program. Therefore, I am reluctant to make any definite recommendation on extending the contract. Since my return to Minneapolis, Mr. Mullens has sent me a map showing location of holes drilled and drill logs covering the work performed on the contract to date.

After discussing the proposed extension, I believe Mr. Mullens and I were pretty much in agreement about the prospects of future work on this contract. The exploration work to date has not met with much success and probably some footage was wasted drilling close to holes with sub-marginal ore. The prospects of finding a substantial ore body appear poor. There is, however, a possibility of finding a small ore body in the general area of the contract. However, most of the favorable indications uncovered to date have been investigated. There is always a chance that the spacing and location of the holes was such that ore was missed, but as additional holes are drilled without finding ore, the prospects become less favorable. There seems to be little reason for drilling the six holes between L34 and L39 mentioned in your memorandum, other than there is room for a narrow band of ore between the present holes.

In general, I feel any future drilling in the area should be designed towards developing new leads and very little drilling should be done around known ore indications which have already been investigated. The work to date has been confined to drilling around a few indications of ore, and there are still large areas where more drilling may be warranted.

I would not make any definite recommendations without seeing the detailed proposal for future work. Also, any such proposal should be quite definite as to the hole locations for the first stage of drilling. The first stage should be completed before detailed or closely spaced drilling is undertaken.

Wesley A. Kent

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D.C. POST OFFICE BLDG.
KNOXVILLE 2, TENN.

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August 3, 1956

Memorandum

To: Operating Committee - DMEA - Washington, D. C.

From: Field Team - DMEA - Region V - Knoxville, Tennessee

Subject: DMEA-3510, Idm-E755 (Zinc-Lead)
Paul Gille, Cuba City, Wisconsin
Dawson and Lindsay Leases, Lafayette County, Wisconsin

Enclosed are four copies of a memorandum from Thomas E. Mullens, USGS, recommending denial of the proposed amendment to the subject contract. We will forward the opinion of the Bureau of Mines representative, when received.

Mr. Mullens reports that the current contract price for drilling in the Wisconsion district is about $1.45 per foot. If 10% for assaying, technical services, etc. is added, this would give $1.60 per foot instead of the $1.90 requested by the Applicant.

Robert A. Laurence
Robert A. Laurence
Executive Officer

V. J. Lynch
V. J. Lynch, Member
Bureau of Mines

Enclosures 4

IN REPLY REFER TO:

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UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
P. O. Box 165
Platteville, Wisconsin

July 30, 1956

Memorandum

To: Robert A. Laurence, Executive Officer
DMEA Field Team, Region V

From: Thomas E. Mullens, Geologist, Platteville, Wisconsin

Subject: Recommendation that the requested amendment to Contract Idm-E755, DMEA-3510 (zinc-lead), Paul Gille, Operator Dawson and Lindsay leases, Lafayette County, Wisconsin be denied.

Paul Gille, operator of Contract Idm-E755, DMEA-3510, has requested an amendment to allow an additional 10,000 feet of drilling. The additional 10,000 feet would be used to drill 55 more holes on the Dawson and Lindsay leases, and the cost of the additional drilling would be $19,000.00. DMEA is requested to loan one-half of the cost.

The original terms of Contract Idm-E755 allowed 13,000 feet to be drilled on the Dawson and Lindsay leases at a cost not to exceed $24,846.00. To date, Gille has drilled about 13,000 feet at a total cost of about $24,300.00.

I recommend that DMEA deny the request for an amendment because I do not believe the additional drilling would find any significant ore deposits.

To the present time Gille has drilled about 13,000 feet in 78 holes, and has discovered three small ore deposits. The total tonnage in the three deposits is less than 10,000. Ore block No. 1, indicated by holes L-4 and 5 (figure 1), contains about 2600 tons of ore that will average about 5.0 percent zinc; ore block No. 2, indicated by holes L-25 and 26, contains about 1,400 tons of ore averaging about 3.20 percent zinc and about 0.75 percent lead; and ore block No. 3, indicated by holes L-17, 18 and 20, contains about 4,400 tons of ore averaging about 6.0 percent lead.

Ore block No. 1 is fairly well blocked out and more drilling in this area is not warranted. Ore block No. 2 is open both east and west and more drilling would probably indicate 5,000 to 10,000 tons of ore for this block. Ore block No. 3 is based on 3 holes in nearly a straight line, and the ore in this block is more "inferred" than "indicated." The erratic nature of lead ore deposits in this district makes it unwise to drill more holes to further delineate ore in this block.

None of the three blocks is of current economic value as the deposits are too deep (about 180 feet) and too small. On the other hand, it should be noted that mining companies in this district mine deposits this size if they have nearby drifts; and ore block No. 3 would be mined if it were less than 50 feet from the surface.

The above indicates what has been found by drilling under Contract Idm-E755; below I will indicate why I think the additional drilling requested by Gille is not warranted.

The lead-zinc deposits adjacent to the Dawson and Lindsay leases are linear and narrow. The Gritty Six-Raisbeck deposit just southeast of hole D-4 was over 2,000 feet long and ranged from 25 to 170 feet wide. Total production from this mine is not known, but it was the largest deposit in the vicinity of the Dawson and Lindsay leases and I estimate less than 50,000 tons of ore was removed. Heyl (unpublished report) reports the ore was of higher grade than adjacent deposits, and I Interpret Heyl's remarks to mean that the ore averaged 8 to 10 percent zinc.

The deposits in the Dawson-Lindsay area do not show a close relationship with the local structure; however, a good method of prospecting is to explore areas where the rocks dip instead of areas where the rocks are flat-lying.

Halos of iron, zinc, and lead minerals and altered rock occur with many of the ore deposits in this district. However, such halos are of little use on the Dawson and Lindsay leases as sub ore grade concentrations of lead and zinc minerals are common. (See figure 1)

Structurally and trend-wise the line of holes from D-4 to L-3 tested the best area. The rocks dip slightly from D-4 to L-3 and this line of holes should have cut any westward extension of the Gritty Six-Raisbeck ore body. The line of holes indicates the Gritty Six-Raisbeck deposit spread and the ore minerals are not concentrated enough to make an ore deposit.

The best area discovered by Gille trends slightly south of west from L-15 to L-21. Gille proposes to drill three more holes to test this area. I believe the holes proposed by Gille would show that ore block No. 3 is really a 5,000 to 10,000 ton deposit. This size deposit, however, is of no economic value at the present time. I limit the size of the deposit because I believe the favorable trend does not extend west to the line of holes drilled by Vinegar Hill Zinc Company.

Gille proposes to drill four north-south lines of holes in the south-west part of the Lindsay lease. Some of these holes fill in spaces in the line L-37 to 38. These holes are not needed as the first line of holes indicated this area is not favorable for ore deposits. The other holes in the Lindsay lease must be considered prospect holes as no known ore trend or favorable structure extends into this part of the Lindsay lease. In fact, a north-south line of holes 300 feet east of the west line of the Lindsay lease indicates the structure is not favorable for ore deposits. This line of holes was drilled by Vinegar Hill Zinc Company and the collar elevations given by Vinegar Hill are not accurate, but I believe the holes do show the general structure. No mention of iron, zinc, or lead minerals is made in the logs of these holes.

The line of proposed holes about 600 feet west of D-18 is planned to intercept the west trending favorable zone indicated by D-18 and nearby holes. However, the trend of structure contours controlled by holes D-4, L-3, L-38, D-18, and D-31 indicates the area west of D-18 is not favorable for zinc ore deposits.

The line of proposed holes west of the road on the Dawson lease is planned to intercept a favorable zone trending east through the Cuba City mine. Little is known about the Cuba City mine, but Heyl (unpublished report) indicates it was small and produced low grade ore. The three Rasque Mining Company holes for which I have logs show the Cuba City deposit did not extend far eastward. The projection of structure contours into this area indicate the area is unfavorable for zinc deposits.

In summary:

I would say none of the north-south lines of holes proposed by Gille are warranted. I believe holes drilled on the Lindsay lease (Gille, Vinegar Hill, and New Jersey Zinc) give enough information to indicate no ore body of economic importance will be found in the area Gille proposes to test. The two lines of holes on the Dawson lease will apparently test an area with unfavorable structure. The three holes proposed to test the area west of L-25 and 25 are needed, but Gille could not drill them until fall because of crop damage. And the largest ore body he could find in this area would be of no economic value at the present time and probably not within ten years.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
~~WASHINGTON 25, D.C.~~
ROOM POST OFFICE BLDG.
KNOXVILLE 2, TENN.

July 11, 1956

Memorandum

To: Operating Committee, DMEA - Washington

From: DMEA Field Team, Region V - Knoxville, Tenn.

Subject: DMEA-3510, Idm-E755(zinc-lead) Paul Gille, Cuba City, Wis.
Dawson & Lindsay Leases, Lafayette County, Wisconsin

Enclosed is one copy of a request for an amendment to the subject contract, received from the Operator today. Mr. Gille sent only two copies, and we are keeping the other copy for our use.

We have written to Mr. Mullens, Geologist at Platteville, Wis., asking for comments and recommendations on this proposal.

Robert A. Laurence
Robert A. Laurence
Executive Officer, DMEA
Region V

V. J. Lynch
V. J. Lynch, Member
Bureau of Mines

RECEIVED
JUL 13 1956

July 11, 1956

Mr. Paul Gille

Cuba City, Wisconsin

Re: DMEA-3510, Idm-8755 (zinc-Lead)
Dawson & Lindsey Leases
Lafayette County, Wisconsin

Dear Mr. Gille:

This will acknowledge receipt of your letter requesting an amendment to the subject contract, and 2 copies of a map showing location of 41 proposed drill holes.

Data in your request are insufficient to form a basis for approval. As we have referred your request to Mr. Thomas E. Mullins of the U. S. Geological Survey at Platteville, please contact him, and provide any additional information which he may request.

Sincerely yours,

Robert A. Laurence,
Executive Officer, DMEA
Region V

RECEIVED
JUL 18 1956

RAL/sm
cc:
Opr. Com.-3
Mullins
Needham
Lynch
Files

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
ROOM 13 POST OFFICE BLDG.
KNOXVILLE 2, TENN.

July 11, 1956

Air Mail

Mr. Thomas E. Mullens
U. S. Geological Survey
P. O. Box 165
Platteville, Wisconsin

Re: DMEA-3510, Idm-E755 (Zinc-Lead)
Paul Gille, Cuba City, Wisconsin
Lindsay and Dawson leases
Lafayette County, Wisconsin

Dear Tom:

This morning I received a letter, and two copies of a map, from Paul Gille, requesting an amendment to his exploration contract to provide for 55 additional holes, total footage 10,000, at $1.91 per foot. Total amount requested for the amendment is $19,000.00 (although 10,000 ft @ $1.91 would be $19,100). Forty-one holes are spotted on the map; seventeen of these are on the Dawson lease and twenty-four are on the Lindsay lease. Six of these are on the line between the NW¼ SW¼ and NE¼ SW¼, Sec. 20, at locations halfway between holes L34 to L39 which were drilled under the original contract.

I presume that Mr. Gille has submitted a copy of this map to you; if not I suggest that you get one from him. Please let me have your comments and recommendation for or against approval of the requested amendment. As Mr. Grosh will be with you next week, you could submit a joint memorandum with him.

Can you send me the mailing addresses of Thos. B. and Mary W. Dawson and Everett W. and Lucille Lindsay, owners of the Dawson and Lindsay leases?

Sincerely,

Robert A. Laurence
Executive Officer
DMEA Field Team, Region V

RECEIVED
JUL 13 1956

RAL/mg
cc - Operating Committee (2)
Mr. A. B. Needham
Mr. Thor H. Kiilsgaard
Mr. V. J. Lynch
Files

C
O
P
Y

From: Paul Gille
Cuba City, Wis.

Subject: Request for an amendment to DMEA-3510, Contract E-755

1. Additional Footage requested under amendment:
55 additional holes, average depth 180' or
10,000 feet of additional footage

2. Cost:
Same unit price as on present contract ($1.91 per ft.
or a total of $19,000).

3. Proposed Drilling Program:
A grid type of drilling. 41 holes are shown on enclosed map. The remaining 14 of the 55 holes requested would be used to further develope areas in which ore is found as a result of the grid drilling.

Sincerely,

/s Paul Gille

Copied by zm.
cc:
Opr. Com.
Lynch

RECEIVED
JUL 13 1953

3 cc

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.
ROOM 13 POST OFFICE BLDG
KNOXVILLE 2, TENN.

June 7, 1956

Mr. Thomas E. Mullens
U. S. Geological Survey
P. O. Box 165
Platteville, Wisconsin

Re: DMEA-3510, Idm-E755 (Zinc-Lead)
Paul Gille, Cuba City, Wisc.
Dawson & Lindsay leases,
Lafayette County, Wisconsin

Dear Tom:

As I interpret the Gille contract, it would be possible to amend it so that an additional 500 feet could be drilled, using money which was not spent for assays to pay for the additional drilling.

But both Mr. Lynch and I doubt that it is advisable to do so, unless Mr. Gille is willing to drill the three holes at the sites you recommend now instead of waiting until after the fall harvest to avoid payment for crop damages.

To date, nearly 13,000 feet of drilling has apparently located three small ore bodies totalling less than 10,000 tons of about 4% grade. The three additional holes, even if successful, are not likely to make much difference in the overall picture, and it hardly seems worth a delay of four or five months in completing the project. We agree with your conclusion that the holes should not be drilled on the Dawson lease, west of D-18 as suggested by Mr. Gille.

If Mr. Gille wants to drill the three holes at your locations, immediately after completion of L-37 and L-38, let me know and I will prepare the amendment. It will also be necessary to amend the contract if work (including technical services) is not completed or costs of same incurred by July 6, 1956, regardless of whether or not the additional drilling is approved. Therefore, please give me an estimate of the amount of time required to complete the job, with or without the additional drilling. Preparation of a time extension amendment is more or less routine and presents no difficulties, except that we can't extend it beyond January 6, 1957.

As it is again nearly time for the semi-annual inspection of certified projects, you will soon be visited by a Bureau of Mines engineer, probably Wes Grosh. It is not expected that you will have to spend much time on that chore or to accompany the engineer on his inspections, but any assistance you can give him without interference to your regular project work will be appreciated.

Sincerely,

Robert A. Laurence
Executive Officer
DMEA Field Team, Region V

RAL/mg
cc - Operating Committee (2)
Mr. V. J. Lynch
Mr. Carl E. Dutton
Files

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
ROOM 25 POST OFFICE BLDG.
KNOXVILLE 2, TENN.

RECEIVED
APR 2 1955

March 30, 1955

AIRMAIL

Mr. Charles J. Stehlik
U. S. Bureau of Mines
P.O. Box 261
Platteville, Wisconsin

Re: DMEA-3510, Idm-5755 (lead-zinc)
Paul Gille
Dawson & Lindsay Leases
LaFayette County, Wis.

Dear Mr. Stehlik:

Please have Mr. Gille submit with his next monthly voucher a sub-voucher or receipt for any technical services and analytical work which is included, and also a similar sub-voucher for the $98.46 for technical services on his February voucher. These items are on the contract under the actual cost classification and therefore they must be supported by the proper documents. We approved payment of the $98.46 because it was within the allotted figure and because it obviously was based on a per-foot cost for actual inspection of the drilling. However, we will have to suspend payment of that amount, plus any charges to these items on the March voucher, if not supported by proper documents.

Also, please instruct Mr. Gille not to fill in the columns marked "For Government Use Only." These are to be completed here, when the voucher is finally approved and forwarded to the Finance Office for payment.

I am tentatively planning to visit the Wisconsin and Michigan projects in May, and hope to be able at that time to discuss with you and Mr. Needham the handling of DMEA contracts in your area after the Platteville office is closed.

Very truly yours,

Robert A. Lawrence, Executive Officer
DMEA Field Team, Region V.

RAL/sm
cc:
Opr. Con.-2
Needham
Miller, Helen
Allsman
Agnew
Lynch
Files

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
ROOM 25 POST OFFICE BLDG.
KNOXVILLE 2, TENN.

March 17, 1955

Mr. Charles J Stehlik
U. S. Bureau of Mines
P.O. Box 261
Platteville, Wisconsin

Re: DMEA-3510, Idm-E755 (lead-zinc)
Paul Gille

Dear Mr. Stehlik:

The monthly report and voucher for the subject contract have been received and forwarded to the Finance Office for payment. Your copy is returned herewith. It is not necessary to send us the fifth copy of the drill logs, narrative and map, so on future reports, I suggest you send 5 copies of only the MF-104 and MF-104A.

Under separate cover, I am sending you 50 copies each of forms MF-104 and 104A. We do not have the "Work Progress Report" forms here, as we have not been using that form. I wonder if these were produced at the Minneapolis office? Probably you can get a supply there.

It appears that the Operator filled out the three columns at the right-hand side of the voucher, marked "for Government use only." Please instruct him to leave these blank. Entries in these columns should be made only by your office or this office, preferably at this office when final approval is given to the voucher.

Very truly yours,

Robert A. Laurence
EXECUTIVE OFFICER
DMEA REGION V

RAL/zm
cc:
Lynch
Opr. Com.
Files

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
ROOM 25 POST OFFICE BLDG.
KNOXVILLE 2, TENN.

February 9, 1955

Memorandum

To: Operating Committee, DMEA - Washington

From: Executive Officer, DMEA - Region V - Knoxville, Tenn.

Subject: Signed Contract - DMEA-3510, Idn-E755, Paul Gille (Zinc-Lead)
Cuba City, Wisconsin

Transmitted are three copies of the subject contract signed by Mr. Paul Gille.

The usual distribution of the other copies has been made by this office.

Robert A. Laurence

Robert A. Laurence

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
ROOM 1 POST OFFICE BLDG.
KNOXVILLE 2, TENN.

Department of the Interior
Defense Minerals Administration
RECEIVED
FEB 3 1955

February 2, 1955

Mr. Charles J. Stehlik
U. S. Bureau of Mines
P.O. Box 261
Platteville, Wisconsin

Re: DMEA-3510 (lead-zinc)
Paul Gille - Cuba City, Wis.

Dear Mr. Stehlik:

I enclose herewith seven copies of the subject exploration contract. We have reviewed it here and it seems to be in order; however, I suggest that you check it over and if there are any items which do not have your approval, please notify me. If it does meet with your approval, please present six copies to Mr. Gille for his signature, and then return to me all except the Operator's copy, and the one marked "Field Engineer" which is for your use.

I assume that you have copies of the map which accompanies the contract. If not, I suggest you have one of them copies for your use before returning the contract to me.

As 27 days have already elapsed since January 6, I suggest that you and Mr. Gille agree on a reasonable amount of time for starting, subsitute that number of days for "60" in Article 3, have Mr. Gille initial it on each copy and I will initial it when returned here (unless, of course, Mr. Gille thinks he can begin work by March 7).

If you have a supply of forms MF-104 and MF-104A, please give Mr. Gille some. If you don't have them, notify me and we will send some. Please advise Mr. Gille that the contract, when executed, is a firm committment to complete the work described at the unit cost set forth in the contract. Mr. Gille should be advised to send his monthly voucher and reports to you for approval after which you can forward them here for my signature.

Mr. W. A. Broughton will be the Geological Survey field representative in the administration of this contract.

Very truly yours,

Robert A. Laurence

RAL/sm
cc:
Ellsman
Goodman
Spr. Com.
Lynch - Broughton-Files
Broughton

File Copy
Surname

Griswold
Talbot
Selfridge
Johnson
Wattendorf

500

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

JAN 31 1955

Mr. Robert A. Laurence
Executive Officer
DMEA Field Team, Region V
Room 13, Post Office Building
Knoxville 2, Tennessee

Re: Docket No. DMEA-3510 (Lead-Zinc)
Paul Gille
Dawson and Lindsay Leases
Lafayette County, Wisconsin

Dear Mr. Laurence:

In previous correspondence with Mr. A. B. Needham, we have dealt with the cited application. We are now enclosing the original and five copies of the contract which has been rewritten in accordance with Mr. Needham's letter of January 18.

If you are in accord with the contract provisions, will you please see that it is presented to the Applicant for signature and distribute the copies in the usual manner. Otherwise, all copies should be returned to us with your recommendations.

Essentially, the contract provides that churn drilling is allotted a fixed unit price of $1.65 per foot, whereas the items under actual cost classification (technical services and analytical work) are acceptable only upon presentation of proper vouchers covering such expenditures. Since the cost of technical services obviously may vary widely from one month to another, footnote 1 at the bottom of Exhibit "A" of the contract permits of such costs being averaged. In case the footnote wording "provided it not exceeded" may cause confusion, the intent is to permit of such averaging.

Sincerely yours,

George C. Selfridge WRGriswold/bjl (1/27/55)
(JHB) Chairman, Operating Committee

Enclosures 6

APPROVED:

J. H. Hedges (JHB)
Member, Bureau of Mines

E. L. Newcomb (JHB)
Member, Geological Survey

Copy to: Docket
Admr. R. File
Op. Committee
Base Metals
Mr. Bishop
Mr. Kiilsgaard (2)
Chron.

R.G.K.

(Also described as the E½ of the SW ¼ and the E½ of the W½ of the SW ¼).

Note: insert the parenthetical description.

EXPLORATION PROJECT CONTRACT
PAUL GILLE
DOCKET NO. DMEA-3510

ANNEX I

The land referred to in Article 2 consists of two parcels of land, as follows:

Dawson Lease - East three quarter (E 3/4)* of the southwest quarter (SW 1/4) and the south half (S 1/2) of the southeast quarter (SE 1/4) of Section 20, Township 2 North, Range 1 East of the 4th P. M., Containing 200 acres, more or less.

This land is held by the Operator under an agreement dated June 4, 1954, which he entered into with Thomas B. Dawson and his wife Mary.

Lindsay Lease- Northeast quarter (NE 1/4) of Section 20, and the North one-half (N 1/2) of the Southeast Quarter (SE 1/4) of Section 20; all in Township 2 North, Range 1 East of the 4th. P. M., containing 240 acres, more or less.

This land is held by the Operator under an agreement dated June 4, 1954, which he entered into with Everett W. Lindsay and his wife Lucille.

The land is shown on a map entitled "Lindsay and Dawson Leases," attached hereto and made a part hereof.

---

*It is understood that in the mining district in which the land described in the Dawson lease is located the description "E 3/4 of the SW 1/4" means "the East 1/2 and the SW 1/4 of the SW 1/4."

[illegible]

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF THE SOLICITOR
WASHINGTON 25, D. C.

Rubin
Hofflund

JAN 25 1955

Memorandum

To: The Administrator, DMEA
Attention: Mr. W. T. Griswold

From: Acting Assistant Solicitor, Defense Minerals

Subject: Docket No. DMEA-3510, Paul Gille (Lead-Zinc)

Pursuant to the request in Mr. Griswold's memorandum dated January 21, we have changed Annex I and added a footnote to the sums estimated for technical services, in connection with the contract previously drafted for the above-identified project.

J. L. Hofflund

J. L. Hofflund
Acting Assistant Solicitor
Defense Minerals

Attachments

HCRubin/emd
Copy to: DMEA Docket
Solicitor's Docket
W. R. Griswold
J. L. Hofflund
H. C. Rubin
chron.

File Copy
Surname

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

January 21, 1955

Memorandum

To: Acting Assistance Solicitor, Defense Minerals

From: Chief, Base Metals Division

Subject: Docket No. DMEA-3510, Paul Gille, Dawson and Lindsay Leases, Lafayette County, Wisconsin

When the cited application came in we were erroneously advised by the Field as to the land concerned. They have now (letter January 18) corrected the error and I have changed the maps accordingly.

Will you please rewrite Annex I as appears necessary.

Referring to the last paragraph on the first page of the Field Team letter, we are advised by the Contract and Audit Division that the flexibility of payment can be achieved, regarding the $130.00 monthly for technical services, if you will insert a notation at the bottom of Exhibit "A" stating something to the effect that the $130.00 could overrun or underrun in individual months, assuming that total payments did not exceed such an average.

W. R. Griswold

W. R. Griswold

WRG/er 1/21/55

Copy to: Docket
Base Metals
Chron.

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
JAN 20 1955

January 18, 1955

Memorandum

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

From: Superintendent, North Central Experiment Station

Subject: Docket 3510, Paul Gille, Dawson and Lindsay Leases, Lafayette County, Wisconsin

Reference is made to your letter of January 6, enclosing a memorandum from Mr. Hofflund regarding clarification of the phraseology of the land in question pertinent to the contract. The original and five copies of the contract were submitted to our Field Team for correction of this phraseology before submitting to the operator for his signature.

The Dawson land was found to be described as it is on the contract and the Owner's Consent to Lien, but no evidence could be found to indicate that it meant "the E1/2 and the SW1/4 of the SW1/4", as indicated in the footnote of Annex I. Therefore, our Field Team visited Mr. Dawson and, according to him, and also a sketch of the property which he had, the interpretation of that phraseology as indicated on the application map and in the September 20 memorandum was in error. As a matter of fact, the description, E3/4 of the SW1/4 is actually correct, and may be more closely defined as the E1/2 of the SW1/4 and the E1/2 of the W1/2 of the SW1/4, totaling 120 acres more or less. Our Field Team questioned Messrs. Gille and Dixon before submitting the September 20 memorandum and they were assured that the description was identical to the abstract, and that their interpretation was correct. However, it was not correct. Therefore, it is necessary now to strike out the footnote on Annex I and to correct the application description and map. If the application and map corrections cannot be made by you in Washington, please have them returned and it will be done in the field.

One other provision of the contract, we believe, needs clarification, and that is the reference to Article 6, Category (2)--Personal Services. In Article 6, Category (2)--Personal Services, Subcategory (a) it states that all elements of this subcategory (and reference to technical services) are maximums. Can this mean then that the $130 per month provided for in Exhibit A is the total amount that can be claimed on the monthly operator's unit cost and progress report each month, or can the

charge be variable, sometimes exceeding $130 per month, but providing that the maximum of $2340 is not exceeded. We assume also that Mr. Dixson could claim technical services for work done on the final report following completion of drilling if such amount still remains in the contract. Please clarify this when you return the contract for signature.

You will also note that the operator is to start work on the contract within 60 days. If much time is to be consumed in redrafting the contract, provision will have to be made to either change the starting date or provide for an extension by way of an amendment.

A. B. NEEDHAM

Attachments

File Copy
Surname

Griswold
Selfridge
Fitzsimmons

500

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

JAN - 6 1955

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

Re: Docket No. 1Mem-3510 (Lead-Zinc)
Paul Gille
Ramson and Lindsey Leases
Lafayette County, Wisconsin

Dear Mr. Needham:

Enclosed are the original and five copies of a contract covering the cited project. We are also enclosing two copies of a memorandum from the Acting Assistant Solicitor, dated December 28, in which he stipulates that we require verification that the phraseology "East 3/4 of the SW 1/4" actually covers the areas it is purported to cover on the map.

When this is cleared up you may present the contract to the Applicant for signature and make distribution of the copies in the usual manner. However, in case you are not in accord with any of the contract terms, all copies should be returned to this office with your recommendations.

Sincerely yours,

George C. Selfridge
Chairman, Operating Committee (JHB)

WRGriswold/er 12/30/54

Enclosures

APPROVED:

J. H. Hedges
Member, Bureau of Mines (JHB)

Thor H. Kiilsgaard
Member, Geological Survey (JHB)

Copy to: Docket
Adar R File
Op. Committee
Base Metals
Mr. Bishop, USBM
Mr. Kiilsgaard, USGS
Chron.

RCK

Rubin

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF THE SOLICITOR
WASHINGTON 25, D. C.

DEC 28 1954

Memorandum

To: The Administrator, DMEA
Attention: Mr. W. R. Griswold

From: Acting Assistant Solicitor, Defense Minerals

Subject: Docket No. DMEA-3510, Paul Gille, Lead-Zinc

As requested in a memorandum dated December 13 from Mr. Griswold, we have prepared the draft of contract attached for the subject project.

The application states that one of the leases covers, in part, the "SW¼ of the SW¼, E½ of the SW¼," of a specified section, etc., and a map submitted with the application delineates this area. However, the lease recites that it covers, in part, the "East three quarter (E 3/4) of the southwest quarter (SW¼)" and the Owner's Consent to Lien describes this part of the land in the same language as the lease.

A memorandum dated September 20, 1954, from Stehlik and Broughton to Needham states that: "The leases are sound and typical of mining and prospecting leases in use in this district." Annex I has been drawn in the language of the lease with an explanatory note, based upon the memorandum cited, for the purpose of drafting the contract. However, as the land in question originally was regularly subdivided public land and as there is no satisfactory explanation for the deviation in description, we require a verification of the land description in question under the Dawson lease prior to execution of the contract.

J. L. Hofflund

J. L. Hofflund
Acting Assistant Solicitor
Defense Minerals

Attachments 8

HCRubin/emd
Copy to: DMEA Docket
Solicitor's Docket
W. R. Griswold (3)
J. L. Hofflund

H. C. Rubin
chron.

File Copy
Surname

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

December 13, 1954

Memorandum

To: Acting Assistant Solicitor

From: Chief, Base Metals Division

Subject: Preparation of Contract for Docket No. DMEA-3510, Paul Gille, Lafayette County, Wisconsin

Will you kindly prepare a long form contract along the outlines of the attached rough draft.

W. R. Griswold

Attachments

WRGriswold/er

Copy to: Docket
Base Metals
Chron.

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

December 6, 1954

Memorandum for the files

From: Chief, Base Metals Division

Subject: Docket No. DMEA-3510, Paul Gille

On this date, the undersigned phoned Mr. A. B. Needham regarding the cited application. It was explained to him that we did not like to see professional services included into the unit cost of a contract since often the funds were received by the Operator, who then neglected to have proper engineering work done.

Mr. Needham was in accord that professional services be carried in the contract as a separate item.

W. R. Griswold

WRGriswold/bjl

Copy to : Docket
Base Metals
Chron.

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 2 1954

November 30, 1954

Memorandum

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

From: Executive Officer, Field Team, Region V

Subject: Docket 3510, Paul Gille

Here are six copies each of Owner's Consent to Lien for the Lindsay and Dawson leases required by the subject application, and which we indicated in previous correspondence would be obtained and forwarded to you.

Property descriptions were checked and they are the same as contained in the leases.

A. B. NEEDHAM

Attachments

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

Defense Minerals Administration
RECEIVED
NOV 12 1954

November 10, 1954

Memorandum

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

From: Executive Officer, Field Team, Region V

Subject: Docket 3510 - Paul Gille, Lafayette County, Wisconsin

This is in reference to your letter of October 25, which was passed on to our field representatives at Platteville, Wisconsin. Here are the original and one copy of their reply.

Relative to the last paragraph having to do with the owner's consent to lien forms, please be advised that we are as of today sending to our Platteville office these forms, with the request that they obtain execution from Mr. Gille. As soon as we receive them, we will forward them immediately to you in time for any processing of a contract if such is approved.

A. B. NEEDHAM

Attachments

WASH

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
Box 261
Platteville, Wisconsin

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
NOV 12 1954

ON-SITE REPORT

November 4, 1954

Memorandum

To: A. B. Needham, Chief, Mining Division, Region V

From: Charles J. Stehlik, Mining Engineer, U. S. Bureau of Mines, and W. A. Broughton, Geologist, U. S. Geological Survey

Subject: Docket ~~3501~~ 3510 - Paul Gille, Lafayette County, Wisconsin

Your letter of October 28, 1954 requested comments and data to support our approval of the subject proposal. We, therefore, submit the following information:

In order to keep the entire proposal on a unit price-short form contract, the total cost of assaying was calculated and then transposed to a cost-per-foot item. Cost of assaying at the Vinegar Hill laboratory where Mr. Gille plans to have the work done is $1.00 per determination. Here is our breakdown:

> Assuming a single-pitch type ore body 60 feet high and 110 feet wide, a cross section of the ore body may require: (with 2½-foot intervals) one hole with 24 samples (60 feet), one hole with 16 samples (40 feet), and one with 8 samples (20 feet), or an average of 16 samples per ore hole. Assuming 60% of 100 holes in ore, 960 samples would be required. If each has a zinc assay and each tenth a lead assay in addition to the zinc, 1056 determinations are required at a cost of $1056 or $.081 per foot.

If, as Mr. Selfridge suggested, sampling costs are reimbursed by actual cost, the contract wording should be on cost per determination rather than sample because not all samples require lead assays.

Truly, the logs presented in the application are not by themselves a strong argument for DMEA exploration assistance. Summarizing the situation, however, we find that out of three prospecting parties, one could not drill the property, one had insufficient knowledge of proper prospecting methods, and one had interest only in a regional view. Mr. Gille knew of these deficiencies and has now proposed a reasonable and proper plan of attack which has very good possibilities. The following explanation is to clarify the above statements:

The Vinegar Hill Zinc Company recognized the possibility of an extension of the Gritty Six mine but because of differences with the land owner, they could not obtain the lease. Their drilling, therefore, was around but not on the Dawson lease.

Their drilling on the Dowling property is reported by Mr. Gille (drilling was by his father's rig) to be in good mineralization. Why the logs do not indicate this is subject to conjecture. Disinterest and indifference on the part of a logger has caused many a log to be misleading. Zinc estimates in symbols such as "considerable", "little", "shine", and "trace" are often commensurate to a quality required at the time of the logging rather than a fixed value. Or assays were not considered because of marginal ore grade. New Jersey Zinc Company hole No. E-15 (possibly an edge hole) demonstrates the existence of encouraging mineralization which conceivably may be disregarded by another operator.

It is very unfortunate that the Rasque drilling (the best located) was by an organization which hoped to "remember" location, content, and quality, etc. of holes. The three holes R1, R2, and R3, have only brief logs assembled from bits of information gleaned by Mr. Gille from the driller. Mr. Gille states that zinc mineralization was discovered in both cross sections.

The New Jersey Zinc Company drilling is part of an initial stage in their very extensive program covering thousands of acres. It is part of a 660' grid for structure purposes. No attempt was made to spot holes for ore; their chief aim was a favorable structure pattern covering more than three townships. Disregard of mineralization in holes E-13 and E-15 is probably due to their close proximity to old workings and hence (for them) no real discovery.

As it stands then, the picture is one of a very possible trend of mineralization with much drilling unsuitably located or poorly managed. The prospective operator must, therefore, prospect as though no drilling was done using what little information he has to direct him. Surely, some reported mineralization is a better start than none at all. It is in a sense check drilling and also the beginning of a good plan of attack. In this district, where mineralized trends may run for several miles with weakening and strengthening in mineralization, it is wise to not be discouraged by a poor showing in one section. Another section some distance along the trend is often advisable until, of course, the possibility of an economic sized ore body has been disproven.

The known facts have been presented by the applicant and by the field team's field representatives' letter of transmittal of September 20, 1954 and in the above paragraphs. A formal field report on the subject will not change the data nor increase the possibility of finding ore. The exploration proposals set forth within the application are in accord with common exploration practice as followed in this southwestern Wisconsin zinc-lead district.

Our files do not contain the revised Owner's Consent To Lien forms as noted in the Minutes of the Operating Committee, June 25, 1954, No. 384. Mr. Gille has obtained the MF-203 (Revised July 1, 1953) form with which he will explain the provisions to the land owners but would like to have the new forms for the official documents. Please send a supply of them as early as possible.

Charles J. Stehlik

Charles J. Stehlik, Mining Engineer
U. S. Bureau of Mines

W. A. Broughton

W. A. Broughton, Geologist
U. S. Geological Survey

CC File
Day File

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1954 NOV 9 AM 8 31

MINING DIVISION
MINNEAPOLIS, MINN.

Adams
Selfridge
Matteuloy

NOV 4 - 1954

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

Dear Mr. Needham:

This will acknowledge your memorandum dated October 28, 1954, in which you request the correct docket number of the application filed by Paul Gille.

Please be advised that the designation of DMEA-3501 was inadvertently made by a transposition of figures and the correct docket number is DMEA-3510.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (JB)

APPROVED:

J. H. Hedges (JB)
Member, Bureau of Mines

Thor H. Kiilsgaard (JB)
Member, Geological Survey

REAdams/la/11-2-54

Copy to: Operating Committee
Mails and Files
Adm. Reading File

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
NOV 1 - 1954

October 28, 1954

DMEA - 3510 Docket

Memorandum

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

From: Executive Officer, Field Team, Region V

Subject: Docket number - Paul Gille

We have advice, dated October 4, 1954, from Robert E. Adams, Chief, Operation's Control and Statistics Division, that the Paul Gille application was assigned docket number DMEA 3501.

Correspondence from the Chairman, Operating Committee, on October 25, together with copies from the Mines and Survey commodity specialists refer to the Paul Gille application as docket DMEA 3510. Please advise if either is a transposition of figures and what is the correct docket number.

A. B. Needham

A. B. NEEDHAM

File Copy
Surname

Sirsurel
Chandler
Selfridge
Jackson
Mitchendorf

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

OCT 25 1954

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

Re: Docket No. DMEA-3510 (Lead-Zinc)
Paul Gille
Dawson and Lindsay Leases
Lafayette County, Wisconsin

Dear Mr. Needham:

We have your letter of September 28 with the cited application and the memorandum of Messrs. Charles J. Stehlik and W. A. Brought. We are in accord with these gentlemen in their statement "... in most cases adequate assaying is not done."

However, instead of allocating a certain amount per foot of drilling to provide for assaying, we prefer to allow for it in a separate item, as, for example:

650 samples at $1.60 $1,040.00

In this manner the Operator is only reimbursed for samples actually sent for assay. Since we do not know the prevailing assay rates in the district in question, please advise us as to the number and cost of assays required.

Also, since no Owner's Consent to Liens were forwarded us, they should be obtained.

Sincerely yours,

George C. Selfridge
Chairman, Operating Committee (GCS)
WRGRISWOLD/er 10/19/54

APPROVED:

J. H. Hedges (JHB)
Member, Bureau of Mines

Thor H. Kiilsgaard (JHB)
Member, Geological Survey

Copy to: Docket
Admr R File
Op. Committee
Base Metals
Mr. Bishop, USBM
Mr. Kiilsgaard, USGS
Chron.

P. S. Will you kindly comment upon the enclosed memorandums by Mr. O. M. Bishop, USBM, dated October 8 and by Mr. E. L. Newcomb USGS, dated October 11.

Enclosures 2

R.C.J.

IN REPLY REFER TO:

Defense Minerals Administration
RECEIVED
OCT 12 1954

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

October 11, 1954

Re: DMEA-3510
Paul Gille
(Lindsay & Dawson Leases)
Lafayette County, Wis.
$24,830 - Lead-Zinc

Memorandum

To: W. R. Griswold, Defense Minerals Exploration Administration

From: E. L. Newcomb, U. S. Geological Survey

Subject: Review of application

The applicant proposes to drill 13,000 feet of churn drill holes on several sections west of the Gritty Six mine.

The Field Team memorandum of September 20, 1954, recommends the applicant's program be approved. However, they do not adequately support their recommendation in their memorandum. I do not believe their brief comments are acceptable in lieu of a field examination report.

The logs presented in the application do not represent by themselves a very strong argument for DMEA exploration assistance. Most of the initial drilling is in the form of check drilling, which would seem to indicate the reported mineralization in a number of the VH, R and E holes may not be regarded as reliable by the operator. Although Holes R-1 thru R-6 are reported to have had good or abundant mineralization, Holes VH 28 thru 30 contained very limited mineralization. These VH holes should be indicative of the postulated westward extension of the Gritty Six-Raisbeck mines. However, they do not have a grade of mineralization which suggests a strong zone of mineralization between R4-6 and R1-3. Several holes have already been drilled along the northern edge of the westward trend of the Gritty Six mine without significant results. If the Cuba City and Henrietta mines are related structurally with the Gritty Six and Raisbeck mines, then a few broadly spaced holes may be justified between R2 and R5 as a preliminary stage to establish continuity of mineralization. If these holes give favorable results, then a second stage of more closely spaced holes could be planned.

I recommend the application be referred to the Field Team for a report which justifies their recommendation.

E. L. Newcomb

E. L. Newcomb

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

October 8, 1954

Memorandum

To: W. R. Griswold, DMEA

From: O. M. Bishop, USBM

Subject: Docket No. DMEA-3510 - Application for $24,830 exploration project by Paul Gille on Lindsey and Dawson Leases, Lafayette County, Wisconsin

I have reviewed the subject application and the field team report by Messrs. Stehlik (Mines) and Broughton (Survey), and note they recommend the application be approved.

In summary the applicant proposes to churn drill a row of 4 holes on the Dawson lease about 500 feet west of the old Gritty Six mine in the vicinity of Vinegar Hill Zinc Company drill holes 28, 29, 30, seeking a westward projection of the ore formerly mined in the Raisbeck and Gritty Six mines. If he finds no ore he proposes a second series of holes 200 feet west. If ore is found it will be cross sectioned at intervals, but if none is found in the second series of holes the applicant proposes to drill 5 holes in a north-south line about 500 feet east of the old Cuba City mine. If ore is discovered, it will be followed to discover extent but, if not, 2 holes will be drilled on the Dawson lease near hole E 13 which contained two 5-foot runs of better than 2 percent zinc ore. As before if ore is discovered it will be blocked out, but if not, a series of holes will be drilled near holes H 20, 21, and 22 on the Lindsay lease. These 3 holes were logged as containing "shines and traces" of zinc.

In reviewing the evidence favoring mineralization on the Dawson lease I conclude that the more than 1,000,000 tons of ore mined in the Raisbeck and Gritty Six mines may well have an extension westward onto the Dawson property, which can best be checked by a series of drill holes. It was hoped the sub-surface contours at the base of the "oil rock" would be of help, but as usual the structural deformation, as portrayed by the contours, fades away just beyond the ore faces with no indication of whether the fadeout is actual or merely because lack of data did not permit its portrayal on the maps. I consider all of the proposed drilling on the Dawson lease well founded, but would recommend that all hole locations be subject to relocation as knowledge of mineralization and structure cut in preceding holes gives a new basis for judgement.

The projected holes on the Lindsay lease in the vicinity of the "trace and shine" mineralization reported in the Vinegar Hill holes is somewhat less well founded, but still sound exploration practice in this district where a drill hole costs but about $250, and relatively small orebodies normally can be profitably mined.

The costs of $1.91 per foot for drilling, supervision and assays seems a fair estimate and is divided as follows: Drilling $1.65; supervision and engineering $0.18; and assaying $0.08. Mr. Gille is thoroughly competent to supervise and carry out the drilling, but engineering and assaying will be a purchased service covered by invoices and vouchers.

I believe the project essentially sound and recommend it for approval.

O. M. Bishop

O. M. Bishop

Copy to: Minerals Division
Mr. Kiilsgaard, Room 5227
O. M. Bishop
Files

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

October 4, 1954

Memorandum

To: Executive Officer, DMEA Field Team, Region V

From: Chief, Operation's Control and Statistics Division

Subject: Assignment of Docket Number

There is listed below the assigned docket number to an application recently received from Region V.

DMEA - 3501 Paul Gillo

Robert E. Adams,
Chief, Operation's Control
and Statistics Division

October 4, 1954

Mr. Paul Gille
Cuba City
Wisconsin

Subject: DMEA-3510
Re: Exploration Assistance

Dear Sir:

The receipt of your application dated September 8, 1954 for exploration assistance under the Defense Production Act of 1950, as amended, is hereby acknowledged.

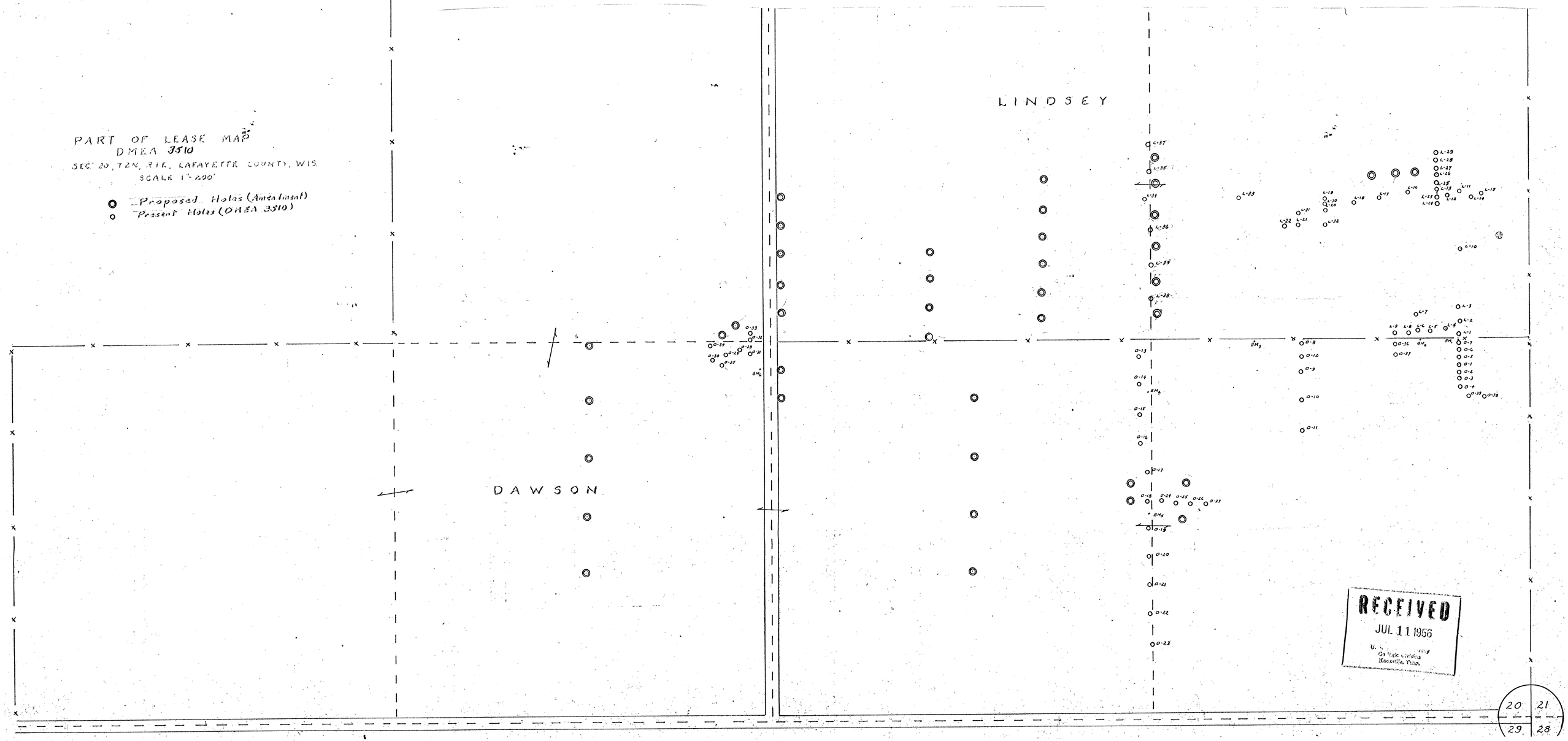
Your application has been assigned Docket Number DMEA-3510 and referred to the Base Metals Division.

Kindly refer to DMEA-3510 in any future correspondence relating to your application.

Sincerely yours,

PART OF LEASE MAP
DMEA 3510
SEC 20, T2N, R1E, LAFAYETTE COUNTY, WIS.
SCALE 1"=200'

Proposed Holes (Amendment)
Present Holes (DMEA 3510)



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U. S. Geological Survey
Gas Field Branch
Roseville, Minn.

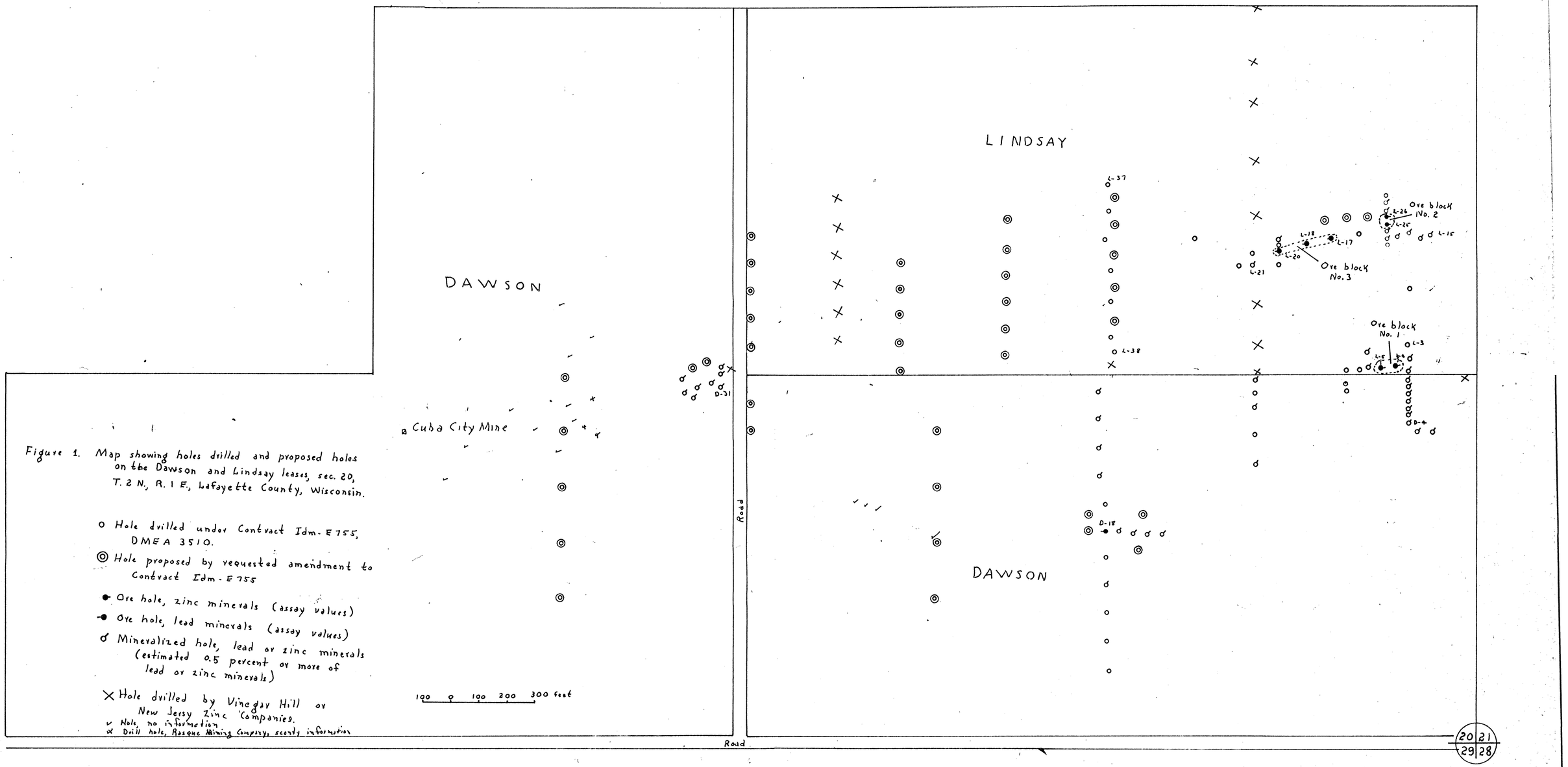


Figure 1. Map showing holes drilled and proposed holes on the Dawson and Lindsay leases, sec. 20, T. 2 N., R. 1 E., Lafayette County, Wisconsin.

o Hole drilled under Contract Idm-E 755, DMEA 3510.

◎ Hole proposed by requested amendment to Contract Idm-E 755

● Ore hole, zinc minerals (assay values)

● Ore hole, lead minerals (assay values)

σ Mineralized hole, lead or zinc minerals (estimated 0.5 percent or more of lead or zinc minerals)

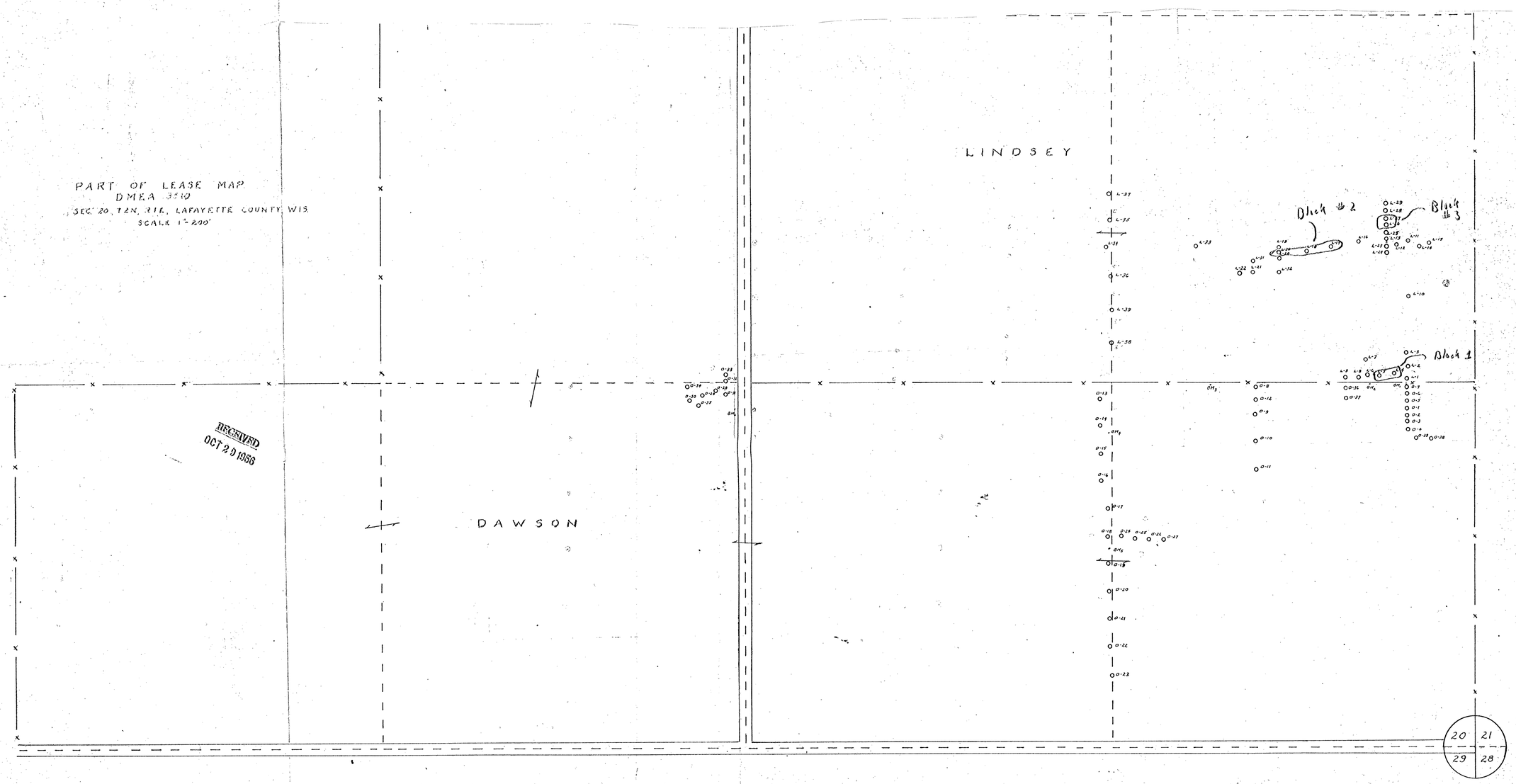
X Hole drilled by Vinegar Hill or New Jersy Zinc Companies.

v Hole, no information

x Drill hole, Rosque Mining Company, scanty information

PART OF LEASE MAP
DMEA 3510
SEC. 20, T2N, R1E, LAFAYETTE COUNTY, WIS.
SCALE 1" = 200'

RECEIVED
OCT 29 1956



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U.S. GEOLOGICAL SURVEY

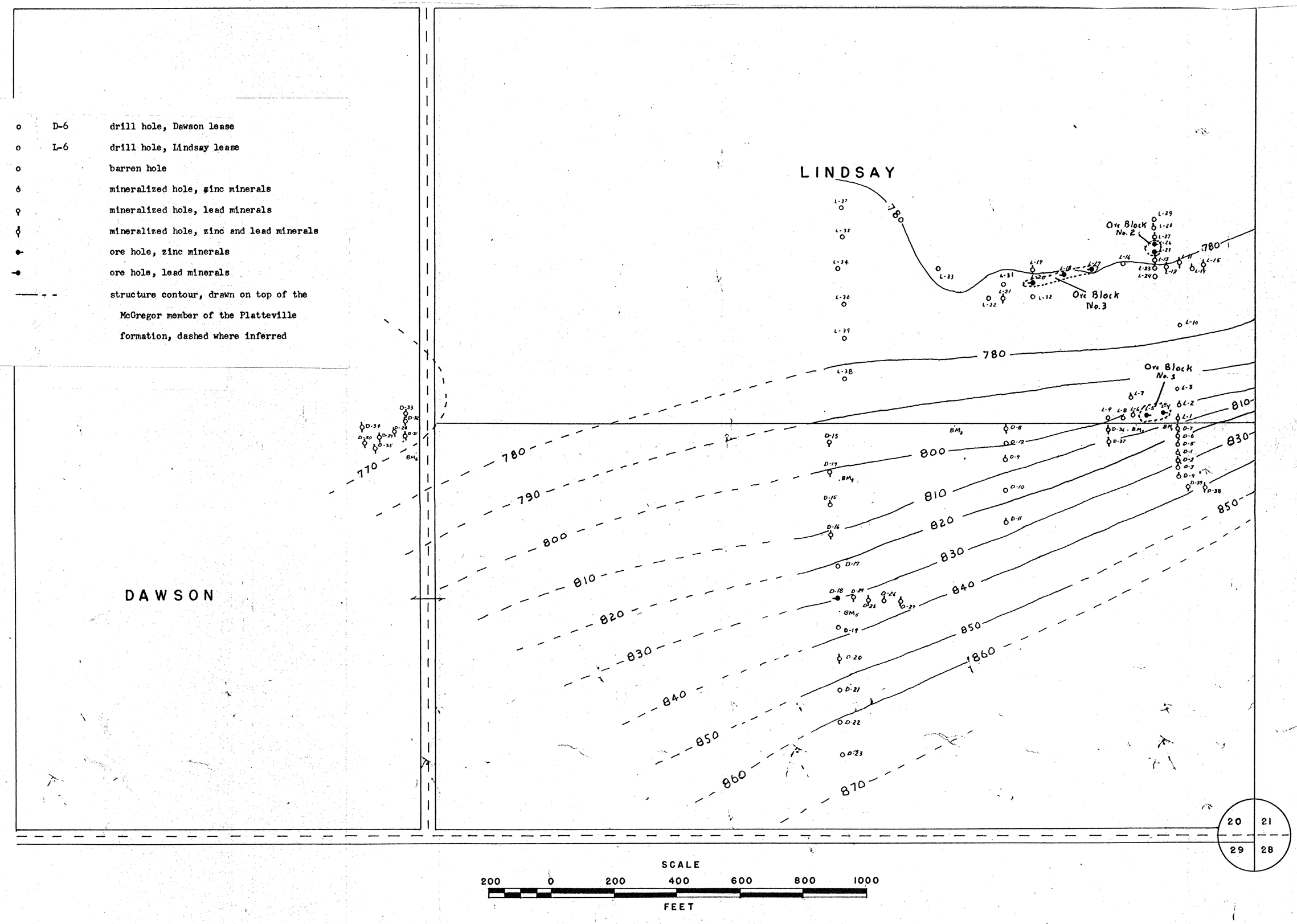
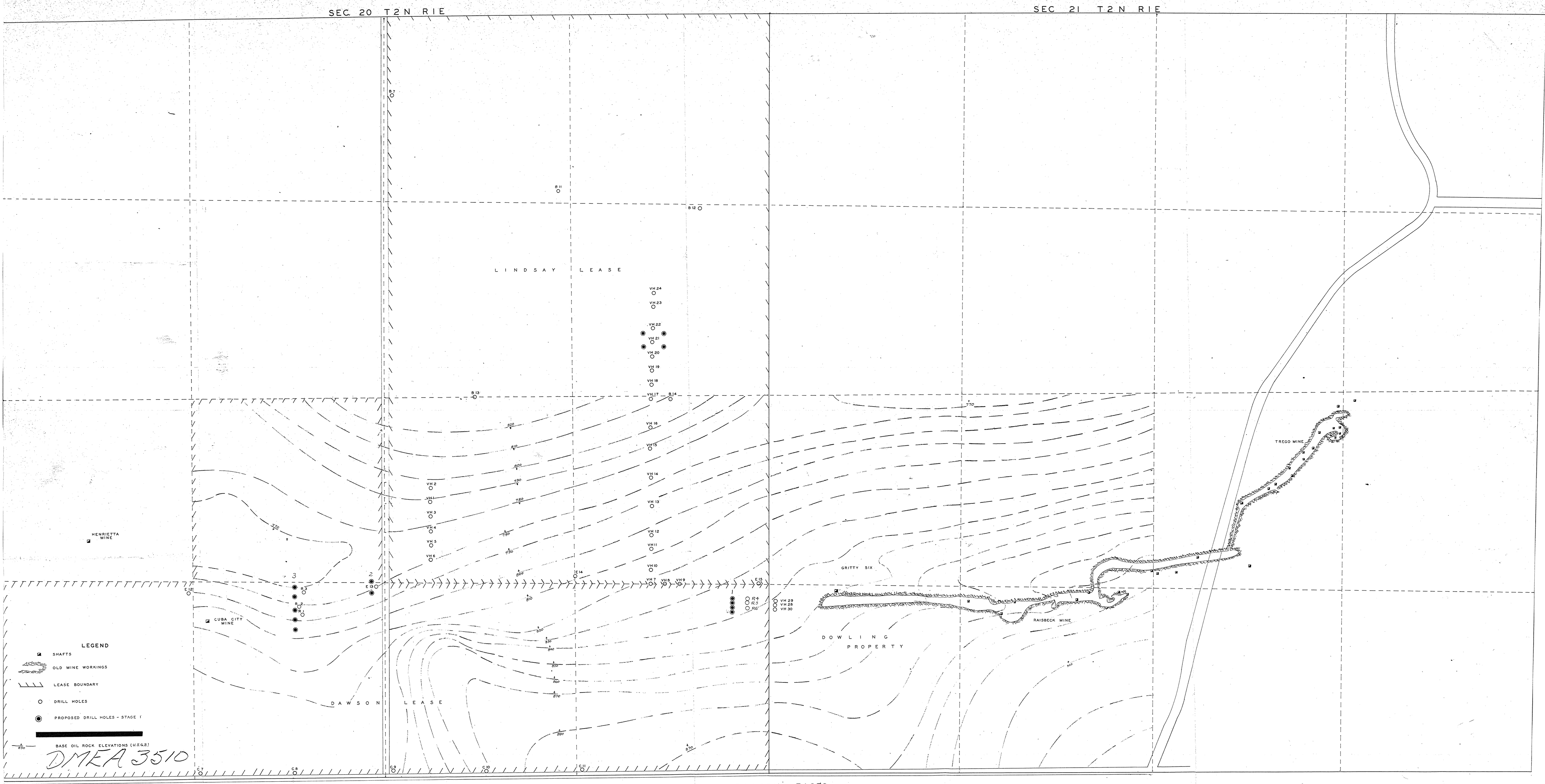


FIGURE-1 - MAP SHOWING HOLES DRILLED ON THE DAWSON AND LINDSAY LEASES

SECTION 20, T. 2 N, R. 1 E.

LAFAYETTE COUNTY, WISCONSIN



LINDSAY - DAWSON LEASES

SECTION 20, T2N, R1E, 4TH P.M.

LAFAYETTE COUNTY, WIS.

SCALE 1" = 200'