RECORDS TRANSMITTAL AND RECEIPT

Complete and send original and two copies of this form to the appropriate Federal Records Center for approval prior to shipment of records. See specific instructions on reverse.

PAGE 1 OF 1 PAGES

1. TO (Complete the address for the appropriate records center serving your area)

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As shown in FPMR 101-11.410-1

5. FROM (Enter the name and complete mailing address of the office retiring the records. The signed receipt of this form will be sent to this address)

Office of Minerals Exploration
U.S. Geological Survey
MS 922, Box 25046
Denver Federal Center
Denver, CO 80225

2. AGENCY TRANSFER AUTHORIZATION — TRANSFERRING AGENCY OFFICIAL (Signature and title): J. William Hasler, Chief, Office of Minerals Exploration — DATE: 3-16-89

3. AGENCY CONTACT — TRANSFERRING AGENCY LIAISON OFFICIAL (Name, office and telephone No.): USGS, Bldg. 25, Rm. 2204A, MS 922, Denver Federal Center (303) 236-5608 Jane Spence

4. RECORDS CENTER RECEIPT — RECORDS RECEIVED BY (Signature and title) — DATE

Fold line

6. RECORDS DATA

ACCESSION NUMBER RG (a)	FY (b)	NUMBER (c)	VOLUME (cu. ft.) (d)	AGENCY BOX NUMBERS (e)	SERIES DESCRIPTION (With inclusive dates of records) (f)	RESTRICTION (g)	DISPOSAL AUTHORITY (Schedule and item number) (h)	DISPOSAL DATE (i)	COMPLETED BY RECORDS CENTER: LOCATION (j)	SHELF PLAN (k)	CONT. TYPE (l)	AUTO. DISP. (m)
057	89	0006	1	1	MINERAL DISCOVERY LOAN CONTRACT FILES Completed case files of closed contracts from Office of Minerals Exploration. Contracts and applications were administered for mineral exploration. Case is listed by docket number for the DMEA financial assistance programs. Cut-off date 2/89 Box contains - DMEA 4681 - Contract 1102 (zinc) New Jersey Zinc Co., Williams Property Wythe Co., VA Expired 6/26/87 3 folders DMEA 4850 - Contract IDM 1174 (zinc) New Jersey Zinc Co., Little War Creek Area, Hancock Co., Tenn. Expired 2/26-89 3 folders DMEA 5008 - Contract IDM E-1204 New Jersey Zinc Co. (lead-zinc) Chaffin Tract, Wythe Co., Va. Expired 6/2/88 3 folders	R	RCS/Item 1900-01	~~8/2019~~ C/95					

135-106

Standard Form 135 (Rev. 6-7)
Prescribed by GSA
FPMR (41 CFR) 101-11.4

DMEA Form 9
Rev. 6/57

UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration

OFFICIAL DOCKET FILE | Idm-E NO. _____ | DMEA NO. 4850

Application
- [ ] Denied
- [ ] Withdrawn

Contract 26 FEB 1958 1174
- [ ] Terminated - Not Certified
- [ ] Terminated - Certified
- [ ] Cancelled
- [ ] Royalty Agreement

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

Folder No. 1:

Left Side

- [ ] Royalty Audits
- [x] Certification of Discovery
- [ ] Closing Letter
  (12-6-60)
- [x] Cost Audits 11-16-60
- [ ] Termination Notice or Agreement
- [ ] Recision Notice
- [ ] Assignment of Contract
- [ ] Contract Amendments
- [x] Contract with all exhibits and annexes
- [ ] Owner's Consent to Lien and Subordination Agreement
- [x] Application and attachments

Right Side

- [x] Project summary (final) 11-30-60
- [x] Work Completed analysis (final) 11-30-60
- All other material filed in chronological order including the following reports if checked:
- [ ] Field Team Semi-Annual Report for Certified Project
- [ ] Final Field Team Report (Tab)
- [x] Operator's Final Report (Tab) 10-10-60 (Folder 1-A)
- [ ] Interim Field Team Reports
- Operator's monthly reports and all attachments
- [x] On-site Exam Report (Tab)
- [ ] Settlement Sheets
- [ ] Drill Logs
- x Analysis of Cert. Project

Additional Folders:

Left Side

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

Right Side

- [ ] 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

Government's Copy

EXPLORATION PROJECT CONTRACT
THE NEW JERSEY ZINC COMPANY
DOCKET NO. DMEA-4850

AMENDMENT NO. 2

It is agreed this 29th day of September, 1959, between the United States of America, acting through the Department of the Interior, Office of Minerals Exploration, hereinafter called the "Government", and The New Jersey Zinc Company, hereinafter called the "Operator", that Exploration Project Contract No. Idm-E1174 (Docket No. DMEA-4850), dated February 26, 1958, as amended, hereinafter called the "Contract", is further amended, as follows:

To Exhibit "A" add item 11 as follows:

11. Inclined holes may be drilled at intervals of less than 100 feet from existing holes with prior Government approval. These holes may be drilled to intersect other holes already drilled. The actual locations, directions, inclinations, and depths of all such holes are subject to prior Government approval.

This amendment shall not be construed to increase the estimated total cost of the project, the aggregate amount which the Government may be required to contribute, the amount of any item designated as "maximum", or the fixed unit cost of any item of work.

Executed in quintuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

By Frank E. Johnson
Acting Director, Office of Minerals Exploration

THE NEW JERSEY ZINC COMPANY

By [illegible]

Title VICE PRESIDENT

FROM SOLICITOR
FOR SIGNATURE
FROM SOLICITOR
FOR SIGNATURE

Government's copy

SEP 14 1959
O.M.E.

EXPLORATION PROJECT CONTRACT
THE NEW JERSEY ZINC COMPANY
DOCKET NO. DMEA-4850

AMENDMENT NO. 1

It is agreed this 1st day of September, 1959, between the United States of America, acting through the Department of the Interior, Office of Minerals Exploration, hereinafter called the "Government," and The New Jersey Zinc Company, hereinafter called the "Operator," that Exploration Project Contract No. Idm-E1174 (Docket No. DMEA-4850), dated February 26, 1958, is amended as follows:

1. The date fixed in the Contract for completion of the work is extended from October 1, 1959, to June 1, 1960.

2. The maximum period for royalty payments provided for in Article 8(b)(2) of the Contract is increased from 30 years to 31 years from the date of the Contract.

3. It is the essence of the Contract that the work be completed before the termination of the period herein fixed for completion and if it is not so completed, in the manner required by the Contract, the following provisions shall thereupon become effective:

(a) The Contract and all obligations of the parties thereunder, except as otherwise herein provided shall be and are hereby terminated, effective June 1, 1960.

(b) The Government will contribute only to the allowable costs of any work performed prior to the relevant date as set forth under 3(a) above.

(c) The Operator shall promptly perform all winding-up and settlement actions provided for in the Contract, including the rendering of the final report and final account.

(d) The Operator, as principal if the Operator is the producer, or as surety if the Operator is not the producer (for example,

if the Operator either transfers or fails to retain its interest in the land), shall pay to the Government the royalty on production provided for in the Contract, in the same manner and amount and for the full period of time provided for in the Contract (as amended herein), as if certification of discovery or development had been made, such certification being hereby waived by the Operator. In addition, all rights of the Government provided for in the Contract, with respect to a certification of discovery or development, and all rights of the Government as to reports (including preservation of the Operator's records), audit, and recovery of any overpayment are hereby preserved.

8/27 J. Lynch
Seller 8.28
Appld. Sol. Off.
Klugescheid
Talbot

(e) The Operator hereby releases and agrees to save the Government harmless from all claims and demands under and arising out of the Contract, except as otherwise provided in this Amendment No. 1.

This amendment shall not be construed to increase the estimated total cost of the project, the aggregate amount which the Government may be required to contribute, the amount of any item designated as "maximum," or the fixed unit cost of any item of work.

Executed in quintuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

By George C. Selfridge
Acting Director, Office of
Minerals Exploration

THE NEW JERSEY ZINC COMPANY

By W F Johnson

Title VICE PRESIDENT

OFFICIAL FILE COPY
DMEA
RECEIVED MAR 11 1958

DATE	INITIALS	CODE
3/11	C	220
3/11	B	215
		500

Government's Copy

MF-200
(Revised June 1954)

Docket No. DMEA-4850

Commodity Zinc

Contract No. Idm-E 1174

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

EXPLORATION PROJECT CONTRACT[1]

It is agreed this 26 FEB 1958 day of ....., 195..., between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and [2] The New Jersey Zinc Company, a New Jersey Corporation, whose mailing address is 160 Front Street, New York 38, New York, 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~~ Annex II, and map (Figure 2).

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 Tennessee, County of Hancock, and is described in Annex I.[3]

(b) The Operator represents and undertakes that:

(1) The Operator is the [4] See Annex I of [5] See Annex I 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: Interests of owners of tracts listed in Annex I

(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."

16—70017-1

of the land (lessor, seller, optionor, etc.), are attached, as follows: Consents to Lien of owners of optioned tracts are waived.

(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 Zinc. The work to be performed is described in Exhibit "A." The Operator on or before April 1, 1958 shall commence the work, and on or before October 1, 1959 (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 8) in a sum not less than the estimated total allowable costs set forth in Exhibit "A."~~ See Annex II

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 $106,780.00. The Government shall contribute 50 percent of the allowable costs as they are incurred in a total sum not in excess of $53,390.00: *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.

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; [redacted] **See Annex II**

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. **See Annex II**

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.

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 8. **See Annex II**

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~~ 30 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. **See Annex II**

(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. **See Annex II**

(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

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.*—

See Annex II attached hereto as a part hereof.

Rufus
Kluegscheid
Talbert
Swinnerd
Johnson
Selfridge

Executed in sextuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

By C. Mittendorf
Administrator, Defense Minerals
Exploration Administration

THE NEW JERSEY ZINC COMPANY
(Operator)

By S. S. Goodwin

Title VICE PRESIDENT

I, Samuel Riker, Jr., certify that I am the ---------- secretary of the corporation named as Operator herein; that S. S. Goodwin who signed this contract on behalf of the Operator, was then Vice President 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

EXPLORATION PROJECT CONTRACT
THE NEW JERSEY ZINC COMPANY
DOCKET NO. DMEA-4850

ANNEX I

The land referred to in Article 2 of the contract consists of various tracts of land, totaling approximately 1,069 acres, held by the Operator pursuant to "Contracts and Agreements," which permit it to engage in mineral exploration with the option to purchase all minerals and mining rights in and upon such tracts. Said land is shown outlined in blue color on the map (Fig. 2) entitled "The New Jersey Zinc Company, Copper Ridge Belt, Little War Creek, File No. AX-Tenn B-1309," attached to and made a part of this contract.

The various tracts of land are described in the agreements listed below. Copies of these agreements are contained in Docket No. DMEA-4850 and the descriptions contained in said agreements and the references therein are incorporated herein by reference.

All references to Deeds, Plats, and Will Books are to the official records of Hancock County, Tennessee.

1. Approximately 103 acres described in Contract and Agreement, dated May 11, 1956, between Easter V. Wolfe Collins and husband, Willie Collins, and The New Jersey Zinc Company, the term of which expires May 11, 1959.

2. Approximately 96 acres described in Contract and Agreement, dated March 22, 1956, between James Brewer and wife, Dolly Brewer, and The New Jersey Zinc Company, the term of which expires March 22, 1959. (This agreement also grants the right to purchase 30 acres of surface area.)

3. Approximately 100 acres described in Contract and Agreement, dated March 28, 1956, between H. C. Livesay and wife, Stella Livesay, and The New Jersey Zinc Company, the term of which expires March 28, 1959.

4. Approximately 135 acres described in Contract and Agreement, dated September 12, 1956, between Henry C. Bowlin and wife, Myrtle T. Bowlin, and The New Jersey Zinc Company, the term of which expires September 12, 1959. (This agreement also grants the right to purchase 10 acres of surface area together with a 50-foot right-of-way to the Clinch Valley Road.)

5. Approximately 100 acres described in Contract and Agreement, dated August 31, 1956, between W. M. Brewer and wife, Tener Brewer, and The New Jersey Zinc Company, the term of which expires August 31, 1959.

6. Approximately 92 acres in two tracts described in Contract and Agreement, dated April 10, 1957, between Dudley Dalton and wife, Lola Dalton, and The New Jersey Zinc Company, the term of which expires April 10, 1962.

7. Approximately 240 acres described in Contract and Agreement, dated April 10, 1957, between John Barnard (widower) and The New Jersey Zinc Company, the term of which expires April 10, 1962.

8. Approximately 20 acres described in Contract and Agreement, dated July 18, 1957, between Mack Tunmire et al., and The New Jersey Zinc Company, the term of which expires July 18, 1960. For title reference see Deed Book "CC," pages 481-482.

9. Approximately 30 acres in two tracts, described in Contract and Agreement, dated August 12, 1957, between Mack Tunmire et al., and The New Jersey Zinc Company, the term of which expires August 12, 1960. (This agreement also grants the right to purchase the surface area of 20 acres.)

10. Approximately 17 acres described in Contract and Agreement, dated August 21, 1957, between Willis Tunmire and wife, Pearl Tunmire, and The New Jersey Zinc Company, the term of which expires August 21, 1960.

11. Approximately 136 acres in two tracts described in Contract and Agreement, dated September 30, 1957, between Lewis Tunmire and wife, Maggie Tunmire, and The New Jersey Zinc Company, the term of which expires September 30, 1959.

SPECIAL AGREEMENT CONCERNING LAND

1. In the event the Operator or any subsidiary thereof (whether wholly owned or otherwise), at any time during the period expiring ten years from the date of this contract acquires any interest, title, or equity (exclusive of agreements granting ~~only~~ the rights to explore, purchase, or acquire leases) in or with respect to any land, including minerals therein, situate within 1500 feet of the land described in this contract, at the contract date and the right to make such acquisition postdates this contract, it is agreed that such land shall thereupon become subject to the provisions of this contract, and the

parties hereto shall promptly execute amendments to this contract listing such land as land included in this contract.

2. It is further agreed that the Operator may, at any time prior to furnishing the Government with the final report, request the Government to delete from this contract such land listed in this Annex I, or in any amendments thereto, as has no known value for mineral production. The Government will, if it concurs that the land has no known value for mineral production, promptly prepare amendments removing the specified land from the contract, which amendments shall provide that the Operator:

(a) certifies the land has no known value for mineral production; and

(b) agrees that if the Operator or any subsidiary thereof (whether wholly owned or otherwise) acquires or reacquires any interest, title, or equity (exclusive of agreements granting ~~only~~ rights to explore, purchase, or acquire leases) in such land or any minerals produced therefrom or derives any benefit therefrom, before the expiration of thirty years from the date of this contract, such land shall be deemed subject to this contract and any certification until the expiration of thirty years from the date of this contract, or until the total net amount contributed by the Government without interest is fully repaid, whichever occurs first.

Com.

EXPLORATION PROJECT CONTRACT
THE NEW JERSEY ZINC COMPANY
DOCKET NO. DMEA-4850

ANNEX II

Article 13. Changes and Added Provisions--

1. In Article 3, the words following the reference to Article 10 are deleted, and the following words are substituted: "shall have completed the work."

2. In Article 6(a), that part of the last sentence in the first paragraph beginning after the semicolon is deleted.

3. Categories (2) through (6) of Article 6(a) are deleted.

4. In Article 6(c), the words "Article 9" are changed to "Article 8."

5. In Article 8(b): (1) the word "minerals" includes limestone and dolomite products produced in processing ore; and (2) the words "ten years" are changed to "thirty years."

6. The following clause is added to Article 8(c):

> Provided, however, That so long as the Operator operates smelting facilities as an integrated part of its business, the settlement made by the Operator's smelter to its mine or mill on the ore or concentrates subject to the Government's royalty shall be, for the purpose of calculating the royalty payable to the Government under this contract, on the same settlement basis that the said smelter makes to its independent suppliers under the schedule most favorable to any independent supplier, or should gross income from mining operations for percentage depletion purposes in Federal income tax determination show a greater value for ore or concentrate sales than that value which would result from applying the smelter schedule most favorable to an independent supplier, the greater value will be used as the basis for calculating royalty payable to the Government.

7. In addition to the costs of work estimated in Exhibit "A" by categories of actual costs, the costs of work requirements specified in Exhibit "A" as "Fixed Unit Costs" are allowable costs of the project. The Government will contribute to the fixed unit costs as work units are performed. A "Fixed Unit Cost" is an agreed price for each unit of work to be performed regardless of costs incurred by the Operator. Costs set forth in Exhibit "A" include all allowable costs of the work to be performed under the contract.

8. Notwithstanding any other provisions of the contract, the allowable unit cost per foot of a drilling item is the average unit cost per foot computed on the basis of all the actual unit costs of said drilling item incurred by the Operator: Provided, That the Government will not contribute to any portion of an average unit cost of a drilling item that exceeds the estimated unit cost of said item set forth in the contract.

Government's copy

EXPLORATION PROJECT CONTRACT
THE NEW JERSEY ZINC COMPANY
DOCKET NO. DMEA-4850

EXHIBIT "A"

Description of the Work

1. The purpose of the project is to explore for ores of zinc by diamond drilling (and such churn drilling of overburden as may be required). Zinc ores in the Copper Ridge Belt occur in the Kingsport dolomites and limestones of the Knox group. In the area in which the project work is to be performed, the only known outcropping of zinc mineralization is exposed along the southwest side of Little War Creek where it cuts the Kingsport formation in the gap through Copper Ridge. The dip of the Kingsport in this area ranges from 35° to 40° to the southeast. The zinc ore zones are commonly elongated at a small angle to the regional strike, however, ore bodies have been found with the long axis of the ore zone at a high angle or even normal to the strike.

2. A series of widely spaced dip and strike fences shall be drilled, with holes spaced at between 100-and 300-foot intervals on the fences.

3. The space intervals between the various fences shall not be less than 400 feet, except with prior approval of the Government.

4. Drilling shall not be done at locations closer than 200 feet from property lines.

5. It is estimated that approximately 47 holes will be required, having an average depth of between 700 and 800 feet, with a maximum depth for any hole of approximately 1,500 feet. Not more than 35,000 feet of drilling shall be performed.

6. The tentative locations of the initial holes are shown on the attached map, but the actual locations, directions, inclinations, and depths of all holes are subject to prior Government approval.

7. All diamond drilling shall be with AX, or larger, size coring bits, except that when it is not feasible to complete a hole with AX size, with Government approval, the hole may be reduced with EX casing and completed with EX size bits. Drill holes shall be reamed and cased or cemented and redrilled as necessary.

The Government will not contribute to the cost of drilling any hole which is not completed.

8. All drill holes shall be logged and all drill core shall be made available to the Government for examination. All significantly mineralized core shall be split and one half thereof shall be properly sampled and the samples assayed for zinc. The remaining half of all significantly mineralized core samples shall be furnished to the Government upon request.

9. All assays shall be reported monthly to the Government, together with the logs of the drill holes and proper plan maps and sections showing the progress of the work and the sample locations.

10. All work of drilling and sample preparation shall be properly supervised by competent engineers and geologists.

Estimated Cost of the Project

Actual Costs

Category (1) Independent Contracts (See Annex II.)

Overburden drilling and diamond drilling to 1,000-foot depth		
BX size, 1,000 feet @ $3.05/ft.	$ 3,050.00	
AX size, 29,000 feet @ $2.75/ft.	79,750.00	
EX size, @ $2.50/ft.	- - - -	
Diamond drilling in excess of 1,000-foot depth		
AX size, 5,000 feet @ $3.00/ft.	15,000.00	
EX size, @ $2.75/ft.	- - - -	$97,800.00

The above rates include charges for reaming, cementing, water supply, casing, changing of locations, and all other charges by the diamond drill contractor.

Neither the cost nor the value of the casing left in drill holes at the option of the Operator will be accepted as a charge to the contract.

Categories (2) through (6) None

Category (7) Miscellaneous None except:		
200 samples assayed @ $1.00*/each sample	$ 200.00	
Core boxes - 600 @ $1.80*/each box	1,080.00	$ 1,280.00
Fixed Unit Costs (See Annex II.)		
Incidental allowance 1/ for each foot of drilling completed, 35,000 feet @ $0.22/ft.		7,700.00
Estimated Total Cost of the Project		$106,780.00
Government Participation @ 50%		$ 53,390.00

*In addition to the maximum fixed in the contract form, an asterisk indicates maximum.

1/ Includes all costs that might be allowable costs of the project under categories (1) through (7) of Article 6(a) except as otherwise scheduled in Exhibit "A".

LEWIS DRINNON
H. MILLS
F. MILLS
TOM BOWLIN
HALL-ROAT
LEWIS TURNMIRE
136 A
JOHN BARNARD
DUDLEY DALTON
W.M. BREWER
H.C. BOWLIN
H.C. LIVESAY
J. BREWER
WILLIS TURNMIRE
Tract I
20A
Tract II
FASTER COLLINS
MALTER VAUGHN
DEWEY JOHNSON
WILLIAM BREWER
W.L.A. BREWER
DUDLEY LIVESAY
HIRT LIVESAY
HUGH LIVESAY
W. WOLFE
KYLE JOHNS
CLINCH VALLEY ROAD
Indian Creek
N/Z previous drill
N/Z DMER proposed drilling
THE NEW JERSEY ZINC COMPANY
JEFFERSON CITY, TENNESSEE
DRAWN R.E.L.
DATE 9-28-57
TRACED
SCALE 1"=400'
COPPER RIDGE BELT
SECTOR II
LITTLE WAR CREEK
AREA
FILE NO.
AX-TENN 8-1310
The New Jersey Zinc Company
Surface Exploration
Figure 2

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-81174, Docket DMEA-4850 (zinc), dated February 26, 1958, with

The New Jersey Zinc Company
160 Front Street
New York 38, New York
and
Jefferson City, Tennessee

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 Little War Creek Area of the Copper Ridge Belt located in Hancock County, Tennessee, during the period February 26, 1958, through October 10, 1960.

A certification of discovery or development was issued on December 6, 1960, and, in accordance with Article 8, Annexes I and II, and Amendment No. 1 of the contract, royalty is payable on all minerals produced from the land described in Article 2 of the contract for a period of 31 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 16, 1960, indicated accepted costs under the exploration contract amounting to $105,505.50 with the Government's contribution on a 50 percent basis being $52,752.75.

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

This review established no sales subject to the Government's royalty for the period. Accordingly, as of October 10, 1960, the royalty account of this project was found to be:

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

June 8, 1962

E. D. Talbert, OME Auditor

Idm-E1174 The New Jersey Zinc Company OMEA-4350

STATUS OF PROJECT, SCOPE OF REVIEW
AND REASONS THEREFOR

The 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 for a maximum of 31 years from (1) the lands thereunder and (2) any lands within 1500 feet of such land, if the Operator or any subsidiary acquires an interest therein before February 26, 1968. The term "minerals" includes limestone and dolomite products derived from processing ores.

At the time this contract was executed, the land thereunder consisted of 14 tracts aggregating about 1,069 acres held by the Operator under options to purchase the minerals and mining rights from private owners. Consents to Lien were waived.

Exploration work under the contract was completed during May 1960. No minerals were produced from the property during the exploration period. Examinations of the property and conferences with the Operator's officials have disclosed no production during the period covered by this review.

The Operator's final report dated October 10, 1960, indicates that 660 acres of the subordinated land were still under option, 20 acres were owned in fee, and mining and mineral rights had been purchased in the balance of the acreage.

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 disclose no evidence of production from the lands under the contract during the period covered by this review; 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.

Docket copy

Murphy
Kirkemo
Fallon
McGillivray
Talbyt
Selfridge

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

R

INTERIOR DEPT.
DEC 2 - 1960
SOLICITOR

To: The New Jersey Zinc Company
160 Front Street
New York 38, New York

Pursuant to the provisions of Exploration Project Contract No. Idm-E1174, dated February 26, 1958, (Docket No. DMEA-4850), hereinafter called the "contract," between The New Jersey Zinc Company, a New Jersey corporation, and the United States of America, hereinafter called the "Government"; to establish and fix the Government's percentage royalty on production and its lien therefor 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:

Exploratory core drilling from the surface indicated the presence of significant deposits of ore-grade zinc-bearing dolomite breccias in the Ordovician Kingsport formation underlying the project area.

Dated: DEC 6 1960

FMMurphy/gla
11-30-60
cc to: Operator
Clarence A. Fredell, Director
TRDD, DMA, GSA
Contract Adm. & Audit Division
Fiscal Section
Region IV
Director's Reading File
Frank E. Johnson
Review Committee
Harold Kirkemo, USGS
Code 500
Docket
Chron

THE UNITED STATES OF AMERICA

By Frank E. Johnson
Acting Director, Office of
Minerals Exploration

RECEIVED
DEC 2 1960
ASSOC. SOLICITOR
MINERAL RESOURCES

MME FORM 6 REFERENCE SLIP

REV. 2-59 OFFICE OF MINERALS EXPLORATION

TO:	DATE	INITIALS
1. Mr. Johnson	11/14	[illegible]
2. ~~Mr.~~ Selfridge		
3. Mr. Griswold Murphy		
4.		
5.		
FROM: E. D. Talbert	11/16	

FOR: Check items for action desired

____ Action ____ Reply for signature of ____

____ Approval ____ Investigate ____ Surname

____ Comment ____ Recommendations ____ Signature

____ Conference ____ Rewrite ____ File

____ Instructions ____ Your information

REMARKS:

OFFICE OF MINERALS EXPLORATION
CONTRACT ADMINISTRATION AND AUDIT DIVISION

REPORT OF REVIEW

I have reviewed the Monthly Reports of:

The New Jersey Zinc Company
Jefferson City, Tennessee

pertaining to Exploration Project Contract Idm-E1174, DMEA-4850, including Amendments Nos. 1 and 2, for April 1958 to May 1960, inclusive, covering a zinc project in the Little War Creek Area of the Copper Ridge Belt, Hancock County, Tennessee.

My review included an examination of the Monthly Reports (Forms MF-104) and supporting documents, comparison of the claimed costs with the contract and pertinent schedules, verification of work performed by reference to Field Office reports and correspondence, 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 reasons given in the attached schedule.

The findings of this review are stated in the following summary and the attached schedule:

Total cost billed by Operator		$106,652.60
Exceptions:		
Prior to this review	$ .80	
Herewith	1,146.30	1,147.10
Total acceptable cost		$105,505.50

The contract calls for a 50 percent contribution of the allowable costs by the Government. Therefore, if the project is otherwise accepted as having met the terms of the contract, payments as follows are valid and proper:

Payable on audited claim	$ 52,752.75
Paid to date	51,348.49
Balance due Operator	$ 1,404.26

E. D. Talbert

E. D. Talbert, OME Auditor

November 16, 1960

Reasons for Report of Review in lieu of a final audit:

(a) the Monthly Reports were supported by documentary proof of that portion ($96,778.50) of the acceptable costs covering work performed at unit rates under independent contract, as well as the costs ($1,027.00) of assays and core boxes;
(b) the balance ($7,700.00) of the acceptable costs was under a contract provision for payment by the Government at fixed unit costs for work performed; and
(c) the administrative cost to the Government of an audit would be excessive in relation to the estimated amount of possible further disallowances.

Exceptions prior to this review:

Overburden and AX drilling claimed in February 1960 MF-104 as 1,024' @ $2.75 being $2,816.80, whereas correct computation is $2,816.00; difference	$ .80

Exceptions by this review:

Category (1), Independent Contract drilling -		
Total costs claimed	$97,775.60	
Less: Exceptions (above)	.80	$ 97,774.80
Acceptable costs (below)		96,778.50
Difference		$ 996.30
Category (7), Core boxes -		
Claimed costs @ $1.80/ea.	$ 1,080.00	
Invoiced costs @ $1.55/ea.	930.00	150.00
Total		$ 1,146.30

Acceptable costs:

Category (1), Independent Contract drilling -			
5,071'	Overburden, NX, & BX	@ $2.85 (Avg.)	$ 14,452.50
29,788'	AX	@ 2.75 (Max.)	81,917.00
28'	EX	@ 2.50 (Max.)	70.00
113'	AX (over 1,000')	@ 3.00 (Max.)	339.00
35,000'			96,778.50*

Category (7), Miscellaneous -			
97	Samples assayed	@ $ 1.00	$ 97.00
600	Core boxes	@ 1.55	930.00
Fixed Unit Costs -			
35,000'	Incidental allowance	@ $ .22	7,700.00
Total			$105,505.50

* Actual costs invoiced by E. J. Longyear Company:

3,476'	Overburden	@ $ 2.75	$ 9,559.00
232'	"	@ 3.10	719.20
51'	NX	@ 3.05	155.55
1,263'	BX	@ 3.05	3,852.15
49'	"	@ 3.40	166.60
27,228'	AX	@ 2.75	74,877.00
2,933'	"	@ 3.10	9,092.30
28'	EX	@ 2.65	74.20
115'	AX (over 1,000')	@ 3.00	339.00
35,373'			98,855.00
98 hrs.	Hauling core	@ 3.25	318.50
53 hrs.	Capping hole	@ 3.25	172.25
11 hrs.	Hole survey	@ 5.00	55.00
8 hrs.	Tro-Pari survey	@ 12.50	100.00
Total			$ 99,480.75

Government's Copy

EXPLORATION PROJECT CONTRACT
THE NEW JERSEY ZINC COMPANY
DOCKET NO. DMEA-4850

AMENDMENT NO. 2

J. Lynch
Hoffman
Seller
Appr. Sol. Off.
Kluczechert
Talbot
Selfridge

It is agreed this 29th day of September, 1959, between the United States of America, acting through the Department of the Interior, Office of Minerals Exploration, hereinafter called the "Government", and The New Jersey Zinc Company, hereinafter called the "Operator", that Exploration Project Contract No. Idm-E1174 (Docket No. DMEA-4850), dated February 26, 1958, as amended, hereinafter called the "Contract", is further amended, as follows:

To Exhibit "A" add item 11 as follows:

11. Inclined holes may be drilled at intervals of less than 100 feet from existing holes with prior Government approval. These holes may be drilled to intersect other holes already drilled. The actual locations, directions, inclinations, and depths of all such holes are subject to prior Government approval.

This amendment shall not be construed to increase the estimated total cost of the project, the aggregate amount which the Government may be required to contribute, the amount of any item designated as "maximum", or the fixed unit cost of any item of work.

Executed in quintuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

By Frank E. Johnson
Acting Director, Office of
Minerals Exploration

THE NEW JERSEY ZINC COMPANY

By [signature]

Title VICE PRESIDENT

FROM SOLICITOR
FOR SIGNATURE
FROM SOLICITOR
FOR SIGNATURE

Government's copy

SEP 14 1959
O.M.E.

EXPLORATION PROJECT CONTRACT
THE NEW JERSEY ZINC COMPANY
DOCKET NO. DMEA-4850

AMENDMENT NO. 1

It is agreed this 1st day of September, 1959, between the United States of America, acting through the Department of the Interior, Office of Minerals Exploration, hereinafter called the "Government," and The New Jersey Zinc Company, hereinafter called the "Operator," that Exploration Project Contract No. Idm-E1174 (Docket No. DMEA-4850), dated February 26, 1958, is amended as follows:

1. The date fixed in the Contract for completion of the work is extended from October 1, 1959, to June 1, 1960.

2. The maximum period for royalty payments provided for in Article 8(b)(2) of the Contract is increased from 30 years to 31 years from the date of the Contract.

3. It is the essence of the Contract that the work be completed before the termination of the period herein fixed for completion and if it is not so completed, in the manner required by the Contract, the following provisions shall thereupon become effective:

(a) The Contract and all obligations of the parties thereunder, except as otherwise herein provided shall be and are hereby terminated, effective June 1, 1960.

(b) The Government will contribute only to the allowable costs of any work performed prior to the relevant date as set forth under 3(a) above.

(c) The Operator shall promptly perform all winding-up and settlement actions provided for in the Contract, including the rendering of the final report and final account.

(d) The Operator, as principal if the Operator is the producer, or as surety if the Operator is not the producer (for example,

if the Operator either transfers or fails to retain its interest in the land), shall pay to the Government the royalty on production provided for in the Contract, in the same manner and amount and for the full period of time provided for in the Contract (as amended herein), as if certification of discovery or development had been made, such certification being hereby waived by the Operator. In addition, all rights of the Government provided for in the Contract, with respect to a certification of discovery or development, and all rights of the Government as to reports (including preservation of the Operator's records), audit, and recovery of any overpayment are hereby preserved.

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(e) The Operator hereby releases and agrees to save the Government harmless from all claims and demands under and arising out of the Contract, except as otherwise provided in this Amendment No. 1.

This amendment shall not be construed to increase the estimated total cost of the project, the aggregate amount which the Government may be required to contribute, the amount of any item designated as "maximum," or the fixed unit cost of any item of work.

Executed in quintuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

By George C. Selfridge
Acting Director, Office of
Minerals Exploration

THE NEW JERSEY ZINC COMPANY

By H F Johnson

VICE PRESIDENT

Title

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.

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 8. **See Annex II**

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.)

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.

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~~ **See Annex II**

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. **See Annex II**

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.

of the land (lessor, seller, optionor, etc.), are attached, as follows: Consents to Lien of owners of optioned tracts are waived.

(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 Zinc. The work to be performed is described in Exhibit "A." The Operator on or before April 1, 1958 shall commence the work, and on or before October 1, 1959 (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 8) in a sum not less than the estimated total allowable cost set forth in Exhibit "A"~~ See Annex II

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 $106,780.00. The Government shall contribute 50 percent of the allowable costs as they are incurred in a total sum not in excess of $53,390.00: *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

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(Revised June 1954)

Docket No. DMEA-4850

Commodity Zinc

Contract No. Idm-E 1174

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

EXPLORATION PROJECT CONTRACT[1]

It is agreed this 26 FEB 1958 day of ....., 195..., between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and [2] The New Jersey Zinc Company, a New Jersey Corporation, whose mailing address is 160 Front Street, New York 38, New York, 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~~ Annex II, and map (Figure 2).

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 Tennessee, County of Hancock, and is described in Annex I.[3]

(b) The Operator represents and undertakes that:

(1) The Operator is the [4] See Annex I of [5] See Annex I 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: Interests of owners of tracts listed in Annex I

(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."

(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~~ 30 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. **See Annex II**

(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. **See Annex II**

(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

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Kluegeschert
Talbot
Swinwood
Lemmon
Selfridge

Executed in sextuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

By C. Mittendorf
Administrator, Defense Minerals
Exploration Administration

THE NEW JERSEY ZINC COMPANY
(Operator)

By S. S. Goodwin

Title VICE PRESIDENT

I, Samuel Riker, Jr., certify that I am the ---------- secretary of the corporation named as Operator herein; that S. S. Goodwin who signed this contract on behalf of the Operator, was then Vice President 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.

Samuel Riker Jr.

[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.*—

See Annex II attached hereto as a part hereof.

EXPLORATION PROJECT CONTRACT
THE NEW JERSEY ZINC COMPANY
DOCKET NO. DMEA-4850

ANNEX I

The land referred to in Article 2 of the contract consists of various tracts of land, totaling approximately 1,069 acres, held by the Operator pursuant to "Contracts and Agreements," which permit it to engage in mineral exploration with the option to purchase all minerals and mining rights in and upon such tracts. Said land is shown outlined in blue color on the map (Fig. 2) entitled "The New Jersey Zinc Company, Copper Ridge Belt, Little War Creek, File No. AX-Tenn B-1309," attached to and made a part of this contract.

The various tracts of land are described in the agreements listed below. Copies of these agreements are contained in Docket No. DMEA-4850 and the descriptions contained in said agreements and the references therein are incorporated herein by reference.

All references to Deeds, Plats, and Will Books are to the official records of Hancock County, Tennessee.

1. Approximately 103 acres described in Contract and Agreement, dated May 11, 1956, between Easter V. Wolfe Collins and husband, Willie Collins, and The New Jersey Zinc Company, the term of which expires May 11, 1959.

2. Approximately 96 acres described in Contract and Agreement, dated March 22, 1956, between James Brewer and wife, Dolly Brewer, and The New Jersey Zinc Company, the term of which expires March 22, 1959. (This agreement also grants the right to purchase 30 acres of surface area.)

3. Approximately 100 acres described in Contract and Agreement, dated March 28, 1956, between H. C. Livesay and wife, Stella Livesay, and The New Jersey Zinc Company, the term of which expires March 28, 1959.

4. Approximately 135 acres described in Contract and Agreement, dated September 12, 1956, between Henry C. Bowlin and wife, Myrtle T. Bowlin, and The New Jersey Zinc Company, the term of which expires September 12, 1959. (This agreement also grants the right to purchase 10 acres of surface area together with a 50-foot right-of-way to the Clinch Valley Road.)

5. Approximately 100 acres described in Contract and Agreement, dated August 31, 1956, between W. M. Brewer and wife, Tener Brewer, and The New Jersey Zinc Company, the term of which expires August 31, 1959.

6. Approximately 92 acres in two tracts described in Contract and Agreement, dated April 10, 1957, between Dudley Dalton and wife, Lola Dalton, and The New Jersey Zinc Company, the term of which expires April 10, 1962.

7. Approximately 240 acres described in Contract and Agreement, dated April 10, 1957, between John Barnard (widower) and The New Jersey Zinc Company, the term of which expires April 10, 1962.

8. Approximately 20 acres described in Contract and Agreement, dated July 18, 1957, between Mack Tunmire et al., and The New Jersey Zinc Company, the term of which expires July 18, 1960. For title reference see Deed Book "CC," pages 481-482.

9. Approximately 30 acres in two tracts, described in Contract and Agreement, dated August 12, 1957, between Mack Tunmire et al., and The New Jersey Zinc Company, the term of which expires August 12, 1960. (This agreement also grants the right to purchase the surface area of 20 acres.)

10. Approximately 17 acres described in Contract and Agreement, dated August 21, 1957, between Willis Tunmire and wife, Pearl Tunmire, and The New Jersey Zinc Company, the term of which expires August 21, 1960.

11. Approximately 136 acres in two tracts described in Contract and Agreement, dated September 30, 1957, between Lewis Tunmire and wife, Maggie Tunmire, and The New Jersey Zinc Company, the term of which expires September 30, 1959.

SPECIAL AGREEMENT CONCERNING LAND

1. In the event the Operator or any subsidiary thereof (whether wholly owned or otherwise), at any time during the period expiring ten years from the date of this contract acquires any interest, title, or equity (exclusive of agreements granting ~~only~~ the rights to explore, purchase, or acquire leases) in or with respect to any land, including minerals therein, situate within 1500 feet of the land described in this contract, at the contract date and the right to make such acquisition postdates this contract, it is agreed that such land shall thereupon become subject to the provisions of this contract, and the

parties hereto shall promptly execute amendments to this contract listing such land as land included in this contract.

2. It is further agreed that the Operator may, at any time prior to furnishing the Government with the final report, request the Government to delete from this contract such land listed in this Annex I, or in any amendments thereto, as has no known value for mineral production. The Government will, if it concurs that the land has no known value for mineral production, promptly prepare amendments removing the specified land from the contract, which amendments shall provide that the Operator:

(a) certifies the land has no known value for mineral production; and

(b) agrees that if the Operator or any subsidiary thereof (whether wholly owned or otherwise) acquires or reacquires any interest, title, or equity (exclusive of agreements granting ~~only~~ rights to explore, purchase, or acquire leases) in such land or any minerals produced therefrom or derives any benefit therefrom, before the expiration of thirty years from the date of this contract, such land shall be deemed subject to this contract and any certification until the expiration of thirty years from the date of this contract, or until the total net amount contributed by the Government without interest is fully repaid, whichever occurs first.

EXPLORATION PROJECT CONTRACT
THE NEW JERSEY ZINC COMPANY
DOCKET NO. DMEA-4850

ANNEX II

Article 13. Changes and Added Provisions--

1. In Article 3, the words following the reference to Article 10 are deleted, and the following words are substituted: "shall have completed the work."

2. In Article 6(a), that part of the last sentence in the first paragraph beginning after the semicolon is deleted.

3. Categories (2) through (6) of Article 6(a) are deleted.

4. In Article 6(c), the words "Article 9" are changed to "Article 8."

5. In Article 8(b): (1) the word "minerals" includes limestone and dolomite products produced in processing ore; and (2) the words "ten years" are changed to "thirty years."

6. The following clause is added to Article 8(c):

> Provided, however, That so long as the Operator operates smelting facilities as an integrated part of its business, the settlement made by the Operator's smelter to its mine or mill on the ore or concentrates subject to the Government's royalty shall be, for the purpose of calculating the royalty payable to the Government under this contract, on the same settlement basis that the said smelter makes to its independent suppliers under the schedule most favorable to any independent supplier, or should gross income from mining operations for percentage depletion purposes in Federal income tax determination show a greater value for ore or concentrate sales than that value which would result from applying the smelter schedule most favorable to an independent supplier, the greater value will be used as the basis for calculating royalty payable to the Government.

7. In addition to the costs of work estimated in Exhibit "A" by categories of actual costs, the costs of work requirements specified in Exhibit "A" as "Fixed Unit Costs" are allowable costs of the project. The Government will contribute to the fixed unit costs as work units are performed. A "Fixed Unit Cost" is an agreed price for each unit of work to be performed regardless of costs incurred by the Operator. Costs set forth in Exhibit "A" include all allowable costs of the work to be performed under the contract.

8. Notwithstanding any other provisions of the contract, the allowable unit cost per foot of a drilling item is the average unit cost per foot computed on the basis of all the actual unit costs of said drilling item incurred by the Operator: Provided, That the Government will not contribute to any portion of an average unit cost of a drilling item that exceeds the estimated unit cost of said item set forth in the contract.

Government's copy

EXPLORATION PROJECT CONTRACT
THE NEW JERSEY ZINC COMPANY
DOCKET NO. DMEA-4850

EXHIBIT "A"

Description of the Work

1. The purpose of the project is to explore for ores of zinc by diamond drilling (and such churn drilling of overburden as may be required). Zinc ores in the Copper Ridge Belt occur in the Kingsport dolomites and limestones of the Knox group. In the area in which the project work is to be performed, the only known outcropping of zinc mineralization is exposed along the southwest side of Little War Creek where it cuts the Kingsport formation in the gap through Copper Ridge. The dip of the Kingsport in this area ranges from 35° to 40° to the southeast. The zinc ore zones are commonly elongated at a small angle to the regional strike, however, ore bodies have been found with the long axis of the ore zone at a high angle or even normal to the strike.

2. A series of widely spaced dip and strike fences shall be drilled, with holes spaced at between 100-and 300-foot intervals on the fences.

3. The space intervals between the various fences shall not be less than 400 feet, except with prior approval of the Government.

4. Drilling shall not be done at locations closer than 200 feet from property lines.

5. It is estimated that approximately 47 holes will be required, having an average depth of between 700 and 800 feet, with a maximum depth for any hole of approximately 1,500 feet. Not more than 35,000 feet of drilling shall be performed.

6. The tentative locations of the initial holes are shown on the attached map, but the actual locations, directions, inclinations, and depths of all holes are subject to prior Government approval.

7. All diamond drilling shall be with AX, or larger, size coring bits, except that when it is not feasible to complete a hole with AX size, with Government approval, the hole may be reduced with EX casing and completed with EX size bits. Drill holes shall be reamed and cased or cemented and redrilled as necessary.

The Government will not contribute to the cost of drilling any hole which is not completed.

8. All drill holes shall be logged and all drill core shall be made available to the Government for examination. All significantly mineralized core shall be split and one half thereof shall be properly sampled and the samples assayed for zinc. The remaining half of all significantly mineralized core samples shall be furnished to the Government upon request.

9. All assays shall be reported monthly to the Government, together with the logs of the drill holes and proper plan maps and sections showing the progress of the work and the sample locations.

10. All work of drilling and sample preparation shall be properly supervised by competent engineers and geologists.

Estimated Cost of the Project

Actual Costs

Category (1) Independent Contracts (See Annex II.)

Overburden drilling and diamond drilling to 1,000-foot depth		
BX size, 1,000 feet @ $3.05/ft.	$ 3,050.00	
AX size, 29,000 feet @ $2.75/ft.	79,750.00	
EX size, @ $2.50/ft.	- - - -	
Diamond drilling in excess of 1,000-foot depth		
AX size, 5,000 feet @ $3.00/ft.	15,000.00	
EX size, @ $2.75/ft.	- - - -	$97,800.00

The above rates include charges for reaming, cementing, water supply, casing, changing of locations, and all other charges by the diamond drill contractor.

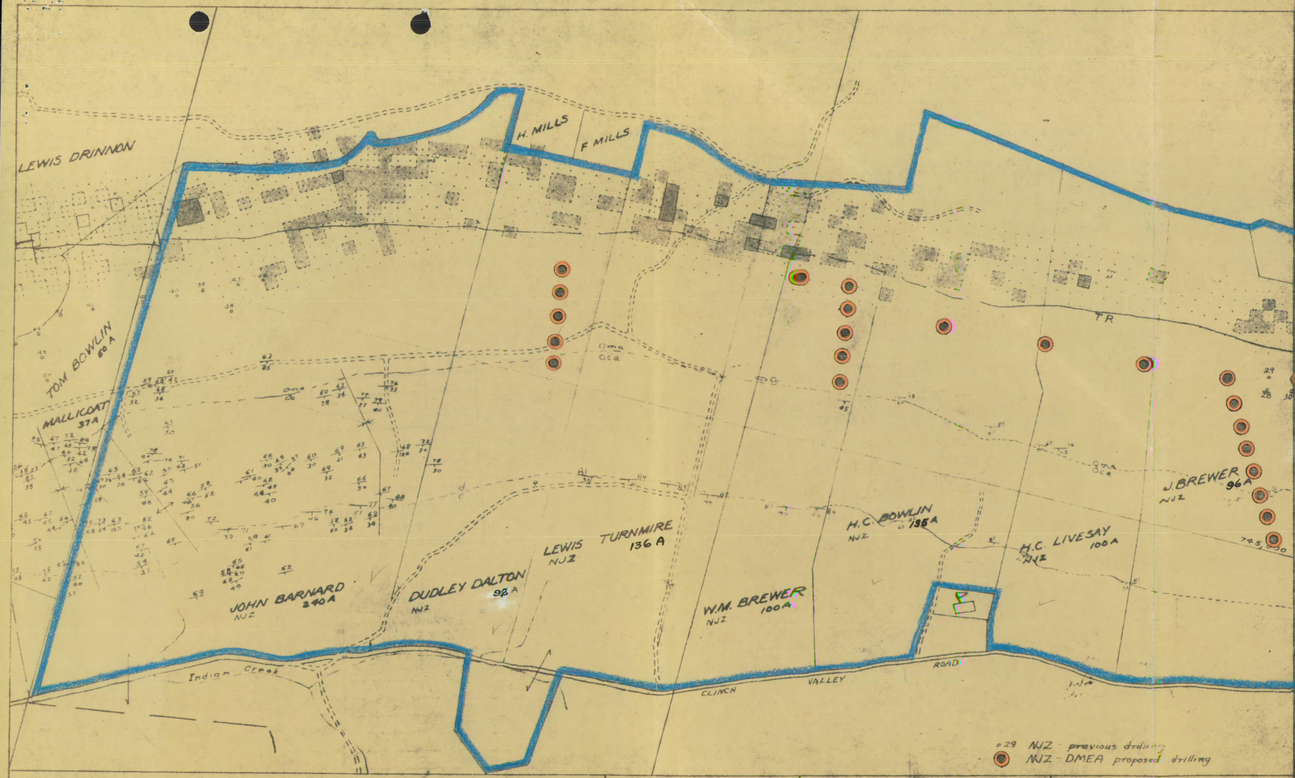
Neither the cost nor the value of the casing left in drill holes at the option of the Operator will be accepted as a charge to the contract.

Categories (2) through (6) None

Category (7) Miscellaneous None except:		
200 samples assayed @ $1.00*/each sample	$ 200.00	
Core boxes - 600 @ $1.80*/each box	1,080.00	$ 1,280.00
Fixed Unit Costs (See Annex II.)		
Incidental allowance 1/ for each foot of drilling completed, 35,000 feet @ $0.22/ft.		7,700.00
Estimated Total Cost of the Project		$106,780.00
Government Participation @ 50%		$ 53,390.00

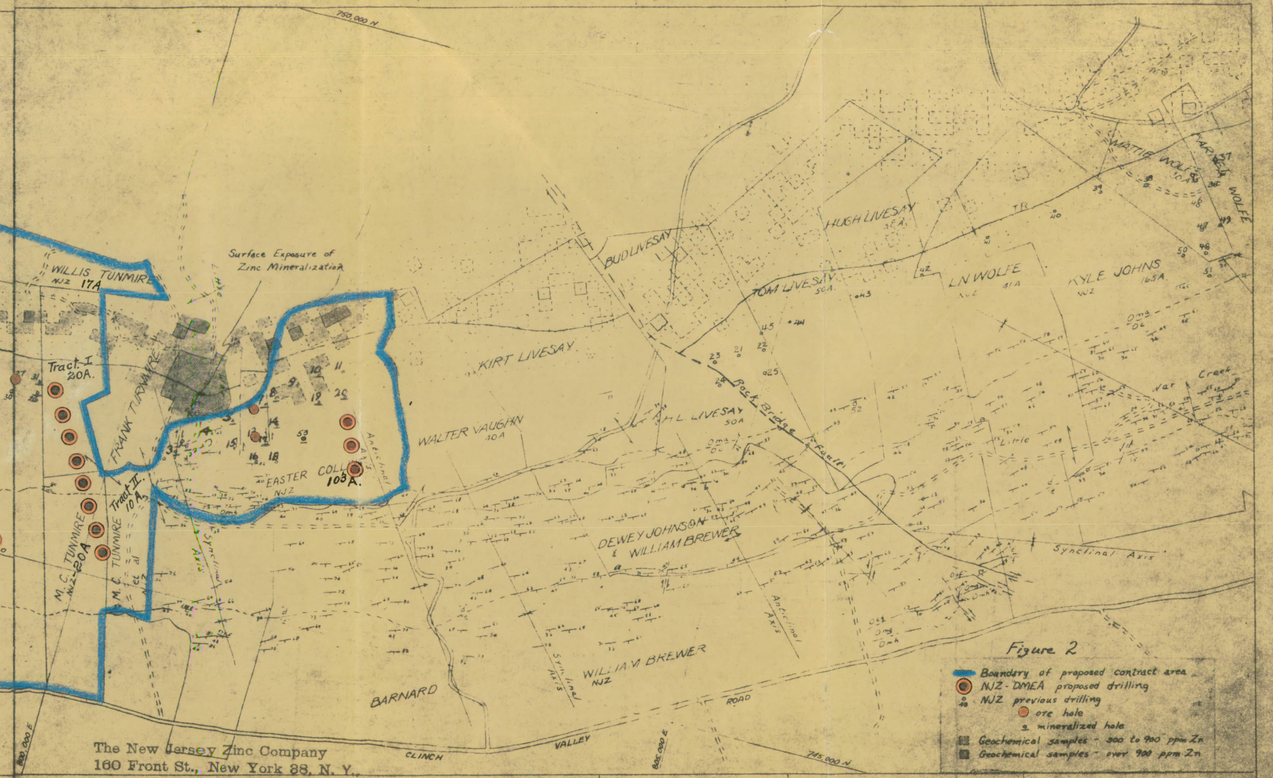
*In addition to the maximum fixed in the contract form, an asterisk indicates maximum.

1/ Includes all costs that might be allowable costs of the project under categories (1) through (7) of Article 6(a) except as otherwise scheduled in Exhibit "A".



THE NEW JERSEY ZINC COMPANY
JEFFERSON CITY, TENNESSEE

DRAWN R.E.F.	DATE 9-23-57	COPPER RIDGE BELT	LITTLE WAR CREEK
TRACED	SCALE 1"=660'	SECTOR II AREA F	FILE NO. AX-TENN B-1310



The New Jersey Zinc Company
160 Front St., New York 38, N. Y.

Figure 2
- Boundary of proposed contract area
- NJZ-DMEA proposed drilling
- 2 NJZ previous drilling
- ore hole
- 2 mineralized hole
- Geochemical samples - 300 to 900 ppm Zn
- Geochemical samples - over 900 ppm Zn

THE NEW JERSEY ZINC COMPANY
JEFFERSON CITY, TENNESSEE

DRAWN R.E.F.	DATE 9-23-57	COPPER RIDGE BELT	LITTLE WAR CREEK
TRACED	SCALE 1"=660'	SECTOR II AREA F	FILE NO. AX-TENN B-1309

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THE NEW JERSEY ZINC COMPANY

(ESTABLISHED 1848)

HORSE HEAD PRODUCTS ®

OFFICE OF THE
VICE PRESIDENT

160 FRONT STREET

NEW YORK 38, N.Y.

October 11, 1957

U. S. Department of the Interior
Defense Minerals Exploration
Administration
Washington 25, D. C.

Little War Creek Area - Sector II
Copper Ridge Belt, Tennessee
D.M.E.A. Exploration Project
The New Jersey Zinc Company

Dear Sirs:

Submitted herewith in behalf of The New Jersey Zinc Company is our application for aid in an exploration project pursuant to D.M.E.A. Order I, under the Defense Production Act of 1950, as amended, and prepared in accordance with Form MF-103 in quadruplicate.

Pending your acceptance and approval of this application, we are ready to proceed with the project as per Paragraph 5-c on Form MF-103.

Very truly yours,

S. S. Goodwin
Vice President

SSG/JBC:ei

For attachments see following page.

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ATTACHMENTS

Form MF-103

Sheet #1 - Corporation Officers

Sheet #2 - Applicant's Property Rights

Fig. 1 - Map Location of Project Area

Sheet #3 - Physical Description

Fig. 2 - Map AX-TENN B-1309 - Map showing Geology and Property, Copper Ridge Belt, Little War Creek Area, Sector II

Fig. 3 - Map AX-TENN 709 - Vertical Section

Sheet #4 - Description of the Exploration Project

Sheet #5 - Estimated Costs

ENCLOSURES

Exhibit A - Contract Agreements with Property Owners

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

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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. DMEA-4850
Metal or Mineral Zinc
Date Received 10/16/57
Estimated Cost $113,940.00
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: The New Jersey Zinc Company
160 Front Street
New York 38, New York

(*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. A New Jersey Corporation

(*c*) If a corporation, add to above statement, titles, names and addresses of officers. See Sheet # 1, attached

(*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 See Sheet # 2, attached

(*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 Property is held under option, see sheet # 2, attached

(*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 Sheet # 2 and Exhibit A

(*e*) If you own the land, describe any liens or encumbrances on it None

(*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 Sheet # 3

(*b*) State past and current production, and ore reserves, if any, giving quantities and grades. See Sheet # 3

(*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 Sheet # 3

(*d*) State the facts with respect to the accessibility of the project: Access roads, distances to shipping, supply and residence points. See Sheet # 3

(*e*) State the availability of manpower, materials, supplies, equipment, water, and power. See Sheet # 3

5. *The exploration project.*—(*a*) State the mineral or minerals for which you wish to explore Zinc Minerals

(*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 Sheet # 4, attached

(*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 Sheet # 4, attached

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.). See Sheet # 5, attached

(*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. See Sheet # 5

(*c*) *Operating materials and supplies.*—Furnish an itemized list, including items of equipment costing less than $50 each, and power, water and fuel. Sheet # 5

(*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. Sheet # 5

(*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. None

(*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. None

(*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. Sheet # 5

(*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 [ ] 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 October 11, 1957

The New Jersey Zinc Company
160 Front St., New York 38, N. Y.

(Applicant)

By [signature]

VICE PRESIDENT

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

Sheet No. 1

1 (c) of Instructions

Names, Titles, and Addresses of Officers

Mr. R. L. McCann	160 Front St., New York
Mr. C. Howard George, Executive Vice President	ditto
Mr. S. S. Goodwin, Vice President	ditto
Mr. E. E. Schwegler, Vice President & Comptroller	ditto
Mr. R. G. Kenly, Vice President	ditto
Mr. L. F. Johnson, Vice President	ditto
Mr. P. M. Ginder, Vice President	ditto
Mr. Samuel Riker, Secretary & Treasurer	ditto
Mr. R. A. Oberfell, Assistant Secretary	ditto
Mr. W. W. Gamwell, Assistant Treasurer	ditto
Mr. R. J. Kiechlin, Assistant Comptroller	ditto

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The New Jersey Zinc Company
160 Front Street
New York 38, New York

Sheet No. 2
Number 3 of Instructions
Applicants Property Rights

(a) The properties proposed for exploration are shown on the accompanying map, figure 2. The legal description of each tract is included in the legal instruments which comprise Exhibit "A" of this application.

(c) Properties in the project area (see figure 2) consist of approximately 957 acres and are controlled by The New Jersey Zinc Company by option agreements providing for full prospecting privileges and the right to purchase mineral and mining rights with, in certain instances, the right to purchase surface areas as specified in the instruments presented in Exhibit "A".

Listed below are the properties included in the project area:

Option To Run	Property Owner	Approximate Acreage	Legal Instrument	Expiration Date
Tract Back to Page, 18 acres +	Easter Collins + husband Willie Collins	103	Option Contract	May 11, 59
17 acres —	James Brewer + wife Dolly Brewster	96	ditto	march 28, 59
17 acres.	H. C. Livesay + wife Stella Livesay	100	ditto	march 28, 59
22 acres.	H. C. Bowlin + wife Myrtle Bowlin	135	ditto	Sept 12, 59
22 acres.	W. M. Brewer + wife Teress Brewer	100	ditto	aug. 31, 59
48 + acres.	Dudley Dalton + wife Lola Dalton	96 ≠ 32 acres.	ditto	april 10, 62
48 acres +	John Barnard, widower	240	ditto	april 10, 62
32 acres +	Mack Tunmire et al	20	ditto	July 18, 60
33 acres +	Mack Tunmire et al	30	ditto	august 12, 60
34 acres +	Willis Tunmire + wife Pearl Tunmire	17	ditto	august 21, 60
21 acres	Lewis Tunmire and wife Maggie Tunmire	136	"	Sept 30, 59
	Total Approximate Acreage	937 136 1073 OK		

Sheet No. 3

Number 4 of Instructions - Physical Description

(a) There have been no mining operations in the project area. The only known outcropping of zinc mineralization within the area is exposed along the southwest side of Little War Creek where it cuts the Kingsport formation in the gap through Copper Ridge (see map, figure 2). This occurrence is described by Secrist under the heading of, C. S. Davis prospect (Secrist, Marc H., Zinc Deposits of East Tennessee, Bull. 31, Tennessee Division of Geology, 1924, Page 91).

Except for the exposures along Little War Creek, the favorable Kingsport formation is covered with a thick mantle of clay. Geochemical sampling has shown strongly mineralized soils in several places within the project area, the most intense of which lies about the exposed mineralization. From 1952 to 1954, The New Jersey Zinc Company drilled 33 diamond drill holes totalling 15,421 feet. Three of these holes found zinc mineralization of ore thickness and grade (LW-6, 19' of 4.8% Zn, LW-13, 19' of 3.2% Zn and LW-27, 44' of 4.0% Zn). The area is accessible by county road about 9 miles northeast of Thorn Hill, Tennessee.

(b) There has been no production from the area. The drill hole data are too sparse to provide a basis for estimating a reserve of indicated ore.

(c) The project area lies in the Copper Ridge Belt in Hancock County, Tennessee (see index map, figure 1). It is approximately three miles southwest along strike from the Flat Gap Mine, currently being developed for production by The New Jersey Zinc Company. The favorable horizon is the Kingsport formation of the Knox group having a thickness of about 300 feet of dolomite and limestone. Except in the narrow valley of Little War Creek, the Kingsport formation within the area is covered by a thick mantle of clay.

A pronounced change in strike takes place at about the locus of Little War Creek. To the northeast, the strike is approximately N 60° E while to the southwest, the strike is approximately N 80° E. The Rock Bridge fault, immediately northeast of the project area, (see map, figure 2) may be one expression of the structural disturbance related to this bend in strike. The dip of the Kingsport in the project area ranges from 35° to 45° to the southeast.

Zinc mineralization of ore grade and size has been found in holes LW-6, LW-13, and LW-27. (See map, figure 2). The section (figure 3) through holes LW-6 and LW-13 shows the character of this mineralization the dip of the beds, and the stratigraphic position of the ore.

Number 4 of Instructions-Physical Description

The project area has the same structural and stratigraphic characteristics as the ore bearing area of the Flat Gap Mine three miles to the northeast where large zinc orebodies have been found to be related to geochemical anomalies.

Zinc ore zones in the Copper Ridge Belt are commonly elongated at a small angle to the regional strike, although the long axis of the ore zone may be at any angle from parallel to strike to parallel to dip. Although probabilities favor a strike elongation of ore trend, exploration should not be predicated exclusively on the concept of strike ore zones.

The zinc ores occur as replacement deposits in dolomitized limestone horizons of the lower Kingsport and as filling in breccia zones associated with white gangue dolomite in the fine grained dolomites of the upper Kingsport. There are, of course, all gradations between these two types.

The purpose of the proposed exploration is to discover zinc orebodies, and to determine the gross ore potential of the project area.

(d) The area is about 3 miles southwest of the settlement of Treadway, Tennessee. The road distance from Morristown is about 25 miles. Morristown is served by the Southern Railway and a network of state and federal highways.

(e) Ample manpower and facilities are readily available for use in the exploration of the area. Local manpower and water supply is adequate for mining. Materials, supplies and equipment would have to be brought to the operation from Morristown, and electric power may be obtained by the construction of a 3 mile line from Treadway.

The New Jersey Zinc Company
160 Front Street
New York 38, New York

Sheet No. 4

Number 5 of Instructions - The Exploration Project

(b) It is proposed to explore the project area by means of diamond drilling. A series of widely spaced dip sections is planned with holes spaced on the sections between 100 feet and 300 feet apart. The dip sections may be as close as 400 feet apart but will be spaced generally at greater distances. The closer spacing will be followed where the chances of finding ore are regarded as most favorable. (see map, figure 2).

@ ≠750' depth would give ≠ 4 holes

The entire program anticipates 35,000 feet of drilling of which about 20,000 feet will be drilled on the initial widely spaced sections. The maximum depth presently contemplated for the drilling is 1200 to 1400 feet, and the holes are expected to average between 700 and 800 feet in depth.

(d) The New Jersey Zinc Company has had wide experience in large-scale exploration programs in East Tennessee as well as many other mining districts in the U. S. This project will be under the supervision of Mr. Johnson Crawford, Superintendent for Tennessee, who has been active in Tennessee mining and exploration for over 25 years.

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The New Jersey Zinc Company
160 Front Street
New York 38, New York

Sheet No. 5

Number 6 of Instructions - Estimate of Costs

(a) Independent Contracts

The following estimate is based on prices contracted with the E. J. Longyear Company for drilling in the project area. The rates shown below are the lowest obtained for the project area by competition bidding.

Diamond drilling

0-1000' - - -	AX Size	- - - $2.75	per foot
	BX "	- - - $3.05	" "
1000-1500' - - -	AX "	- - - $3.00	" "

The contract cost of drilling is estimated as follows:

30,000'

depth of 0-1000

	AX	29,000 x $2.75	$79,750.00
Adj. 20%	BX*	1,000 x 3.05	3,050.00

5,000'

depth of 1000'-1500'

	AX	5,000 x 3.00	15,000.00
			$97,800.00

* BX drilling is done in collaring holes into rock. Each hole drilled has an amount of BX hole ranging from a few feet to as much as 100 feet to provide for setting casing in sound rock.

(b) Labor, Supervision, Consultants

Supervision

1 geologist: full-time 18 months - $9,000.00

Technical Service

2 surveyors - 20% time -18 months)- 3,500.00
1 draftsman - 20% time -18 months)

(c) Operating Materials and Supplies

Core boxes, etc. - - - - - - - - - - - - - 1,050.00

Number 5 of Instructions - Estimate of Costs

(d) Operating Equipment

Automobile Expense 15,000 mi. @ 8¢ - - -$ 1,200.00

(e) Rehabilitation and Repairs

None

(f) New Buildings, Improvements

None

(g) Miscellaneous

Chemical Assays, 200 @ $1.00 - - - - - -	200.00
Accounting and Secretarial Charges $30.00 per month x 18 - - - - - - - - - -	540.00
Workman's Compensation 1% x $12,500.00 - - - - - - - - - - - - - -	125.00
Insurance, Payroll Taxes 5% x $12,500.00 - - - - - - - - - - - - - -	725.00
	$113,940.00

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EXHIBIT "A"

The New Jersey Zinc Company
160 Front St., New York 38, N. Y.

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CONTRACT AND AGREEMENT

THIS CONTRACT AND AGREEMENT made and entered into on this 30th day of September, 1957, by and between LEWIS TUNMIRE and wife, MAGGIE TUNMIRE, of Hancock County, Tennessee, hereinafter called the Owners, parties of the first part, and THE NEW JERSEY ZINC COMPANY, a New Jersey Corporation, authorized to do business in the State of Tennessee, party of the second part, hereinafter called the Zinc Company:

W I T N E S S E T H

That for and in consideration of the sum of ONE ($1.00) DOLLAR and other good and valuable considerations in hand paid, the receipt of which is hereby acknowledged, the parties of the first part grant unto the party of the second part for a period of one year from the date hereof, with the privilege of extension for a further period of one additional year, not to extend beyond September 30, 1959, upon payment of sums of money agreed upon, the exclusive right and option to purchase all minerals, metals, ores, ore-bearing materials, and rocks of any kind, including limestone, in, under or on the following described premises:

SITUATE in the First Civil District of Hancock County, Tennessee, and being two certain tracts of real estate, described as follows:

TRACT ONE: Bounded as follows:

> On the North by the lands of Lewis Tunmire and D. D. Dalton;
> On the East by the public road;
> On the South by the lands of John Barnard; and
> On the West by the lands of Dudley Dalton and Earl McCoy,
> containing 41 acres, more or less.

Owners acquired title to the above described premises by Deed of Mary Stanley, et vir., dated November 16, 1949, and of record in the Register's Office for Hancock County, Tennessee, in Deed Book 16, Pages 314-15.

TRACT TWO: Bounded as follows:

BEGINNING on a stone corner on top of Copper Ridge; thence S. 1 deg. and 50 min. W. 4047 feet to a stake in the back line, Jordira Allen's corner; thence S. 76 deg. E. 465 feet to a stake in the corner of the field; thence 2 deg. 55 min. W. 234 feet to John Barnard's corner; thence S. 71 deg. 35 min. E. with Barnard's line 184 feet to a stake, corner with Barnard's tract of land; thence N. 22 deg. 30 min. W. 200 feet to a stake; thence N. 2 deg. E. 1044 feet to a stake; thence S. 87 deg. and 55 min. E. 544 feet to a stake; thence N. 2 deg. E. 3160 feet to a stake in the foundation of an old chimney on top of Copper Ridge; thence Westwardly along the top of Copper Ridge 1241 feet to the said stone corner, the BEGINNING corner, containing 96 acres, more or less.

96
40
136 Total

Grantors acquired title to the above described premises by Deed of Mrs. Rosa Allen, et. al., dated November 20, 1941, and of record in the aforesaid Register's Office in Deed Book 10, Pages 282-83-84.

Together with the right to prospect for, mine, mill and remove the same, water rights, the right of ingress and egress in accordance with the terms of an Agreement of even date herewith entered into between the parties hereto. And the parties of the first part also grant to the party of the second part during said serious the right to prospect for, explore and examine all minerals, metals, ores, ore-bearing materials and rocks of any kind, including limestone, in, under or on all of said premises, including the right to enter thereupon, use and utilize water and to remove samples in accordance with the terms of the last mentioned Agreement. The terms of this option Contract and Agreement are fully set out in the Agreement of even date herewith, which is here referred to and made a part hereof as if fully set out at length.

This Contract and Agreement and each and every provision thereof shall be binding upon and inure to the benefit of the parties hereto, their heirs, executors, administrators, successors and assigns.

IN WITNESS WHEREOF, the Owners and parties of the first part have hereunto set their signatures on this the day and date first above written.

Lewis Summers
Lewis Summers.

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Maggie Tunmire
Maggie Tunmire.

STATE OF TENNESSEE

HAMBLEN COUNTY

Person ally appeared before me, James K. Miller a Notary Public in and for said County and State, the within named bargainors, LEWIS TUNMIRE AND WIFE, MAGGIE TUNMIRE, with whom I am personally acquainted, and who acknowledged that they executed the foregoing Contract and Agreement for the purposes therein contained and expressed.

Witness my hand and official seal at office on this 9th day of ~~September~~ October, 1957.

James K. Miller
Notary Public.

Commission Expires: 1-16-61

~~Qualified in Hamblen County under the provisions of Tennessee Code, Section 8-1609, et seq.~~

CONTRACT AND AGREEMENT

THIS CONTRACT AND AGREEMENT made and entered into on this 14th day of May, 1956, by and between EASTER V. WALKER COLLINS and husband, WILLIAM COLLINS, of Hancock County, Tennessee, parties of the first part, and THE NEW JERSEY ZINC COMPANY, a New Jersey Corporation, authorized to do business in the State of Tennessee, party of the second part, hereinafter called the Zinc Company:

W I T N E S S E T H :

That for and in consideration of the sum of TEN ($10.00) DOLLARS cash and other good and valuable considerations in hand paid, the receipt of which is hereby acknowledged, the parties of the first part grant and the party of the second part for a period of one year from the date hereof, with the privilege of extension for a further period not to extend beyond May 11, 1958, upon payment of sums of money agreed upon, the exclusive right and option to purchase all minerals, metals, ores, ore-bearing materials, and rocks of any kind, including limestone, in, under or on the following described premises:

SITUATE in the First Civil District of Hancock County, Tennessee, being the homeplace and all the lands of the Owners containing 103 acres, more or less, and bounded generally as follows:

On the North by the lands of Davis;
On the East by the lands of Walker Vaughn;
On the South by the lands of Walker Vaughn and Frank Tarwater; and
On the West by the lands of Davis M. C. Tarwater and Frank Tarwater.

18 counterparts
Lemmerling

The New Jersey Zinc Company
160 Front St., New York 38, N. Y.

Easter V. Wolfe Collins acquired title to the above described property by inheritance, as the sole heir at law of William Wilder and Lucinda Wilder, both deceased. For record title reference, see the following deeds of conveyance of record in Hancock County, Tennessee: Deed Book CC, Page 340, et seq. Deed Book [illegible], Page 496, Deed Book [illegible], Page 471-472, Deed Book V, Page 889, Deed Book [illegible], Page 117-118, Deed Book P, Page 3[illegible]1-3[illegible], Deed Book [illegible], Page 4[illegible]0-41, Deed Book M, Page 507. See also deed of G. W. Seals to William Wilder and wife, Lucinda Wilder dated December 6, 1911, Deed Book _____, Page _____.

Together with the right to prospect for, mine, [illegible] and remove the same; water rights, the free and uninterrupted right of ingress and egress and the right to purchase the entire surface area of the above described premises, in accordance with the terms of an Agreement of even date herewith entered into between the parties hereto.

And the parties of the first part also grant to the party of the second part during said period the right to prospect for, explore and examine all minerals, metals, ores, ore bearing materials, and rocks of any kind, including limestone, in, under or on all of said premises, including the right to enter thereupon, [illegible] all the water and to remove samples, in accordance with the terms of the first mentioned agreement. The terms of this option Contract and Agreement are fully set out in the Agreement of even date herewith, which is here referred to and made a part hereof as if fully set out at length.

This Contract and Agreement and each and every provision thereof shall be binding upon and enure to the benefit of the parties hereto, their heirs, executors, administrators, successors and assigns.

IN WITNESS WHEREOF, the Owners and parties of the first part have hereunto set their signatures the day and date first above written.

Easter V. Wolfe Collins
Easter V. Wolfe Collins.

Willie Collins
Willie Collins.

The New Jersey Zinc Company
160 Front St., New York 38, N. Y.

STATE OF TENNESSEE

HANCOCK COUNTY

Personally appeared before me, [illegible], a Notary Public in and for said County and State, the within named bargainors, EASTER V. WOLFE COLLINS AND HUSBAND WILLIE COLLINS, with whom I am personally acquainted, and who acknowledged that they executed the foregoing Contract and Agreement for the purposes therein contained and expressed.

Witness my hand and official seal at office on this 11th day of May, 1986.

[illegible]
Notary Public.

Commission Expires: 4-16-88

Qualified in Hancock County
Tennessee under the Provisions
of Tennessee Code Section
8-1601, et seq.

The New Jersey Zinc Company
160 Front St., New York 38, N. Y.

CONTRACT AND AGREEMENT

THIS CONTRACT AND AGREEMENT made and entered into on this 22nd day of March, 1956, by and between JAMES BREWER and wife, DOLLY BREWER, of Hancock County, Tennessee, hereinafter called the Owners, parties of the first part, and THE NEW JERSEY ZINC COMPANY, a New Jersey Corporation, authorized to do business in the State of Tennessee, party of the second part, hereinafter called the Zinc Company.

W I T N E S S E T H

That for and in consideration of the sum of ONE ($1.00) DOLLAR cash and other good and valuable considerations in hand paid, the receipt of which is hereby acknowledged, the parties of the first part grant unto the party of the second part for a period of one year from the date hereof, with the privilege of extension for further periods not to extend beyond March 22, 1959, upon payment of sums of money agreed upon, the exclusive right and option to purchase all minerals, metals, ores, ore-bearing materials, and rocks of any kind, including limestone, in, under or on the following described premises.

16 months X
Appearing

SITUATE in the First Civil District of Hancock County, Tennessee, being the homeplace of the Owners, adjoining the lands of H. C. Livesay, M. C. Turnmire and others, containing Ninety Six (96) acres, more or less and described as follows:

The New Jersey Zinc Company
160 Front St., New York 38, N. Y.

BEGINNING or set stone on the North side of the Valley Public Road; thence Northwardly with a conditional line made or agreed upon by M. H. Campbell and H. C. Livesay to a set stone in Willis Mills line; thence Eastwardly with said Mills line to Zo Dalton corner and line; thence down the ridge with said Dalton line to Turnmire corner and line; thence Southwardly with the said Turnmire line which is fenced to the Valley Public Road; thence Westwardly with the road to the BEGINNING corner.

Being the same property conveyed to James Brewer and wife, Dolly Brewer by Deed of M. H. Campbell and wife, dated January 25, 1946 and of Record in the Register's Office for Hancock County, Tennessee in Deed Book 12, Page 127-28.

Together with the right to prospect for, mine, mill and remove the same; water rights, the free and uninterrupted right of ingress and egress, and the right to purchase the surface area to thirty (30) acres off the extreme North portion of the above described premises, in accordance with the terms of an Agreement of even date herewith entered into between the parties hereto.

And the parties of the first part also grant to the party of the second part during said periods the right to prospect for, explore and examine all minerals, metals, ores, petroleum, natural gas, and rocks of any kind, including limestone, on and in or under all of said premises, including the right to enter thereupon, to use available water and to remove samples, in accordance with the terms of the last mentioned agreement. The terms of this option contract and Agreement are fully set out in the Agreement of even date herewith, which is here referred to and made a part hereof as if fully set out at length.

This Contract and Agreement and each and every provision thereof shall be binding upon and inure to the benefit of the parties hereto, their heirs, executors, administrators, successors and assigns.

IN WITNESS WHEREOF, the Owners and parties of the first part have hereunto set their signatures the day and date first above written.

James Brewer
James Brewer.

Dolly Brewer
Dolly Brewer.

The New Jersey Zinc Company
160 Front St., New York 38, N. Y.

STATE OF TENNESSEE

HAMPTON COUNTY

Personally appeared before me, Ben L. Callett a Notary Public in and for said County and State, the within named bargainors, JAMES PRESTON AND WIFE, LOLLY STUART, with whom I am personally acquainted and who acknowledged that they executed the foregoing Contract and Agreement for the purposes therein contained and expressed.

Witness my hand and seal at office on this the 22nd day of October, 1957.

Ben L. Callett
Notary Public.

Commission expires: 4-16-58

Qualified in Hamilton County
Tennessee pursuant to the Provisions
of Tennessee Code, Section 8-1601, et seq.

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The New Jersey Zinc Company
160 Front St., New York 38, N. Y.

CONTRACT AND AGREEMENT

THIS CONTRACT AND AGREEMENT made and entered into on this 28th day of March, 1956, by and between H. C. LIVESAY and wife, STELLA LIVESAY, of Hancock County, Tennessee, hereinafter called the Owners, parties of the first part, and THE NEW JERSEY ZINC COMPANY, a New Jersey Corporation, authorized to do business in the State of Tennessee, party of the second part, hereinafter called the Zinc Company.

W I T N E S S E T H

That for and in consideration of the sum of ONE ($1.00) DOLLAR and other good and valuable considerations in hand paid, the receipt of which is hereby acknowledged, the parties of the first part grant unto the party of the second part for a period of two years from the date hereof, with the privilege of extension for a further period not to extend beyond March 28, 1959, upon payment of sums of money agreed upon, the exclusive right and option to purchase all minerals, metals, ores, ore-bearing materials, and rocks of any kind, including limestone, in, under or on the following described premises.

, SITUATE in District Number One of Hancock County, Tennessee, and being a boundary of the Old Jordon Farm in Clinch Valley, adjoining Lawlis, Brewer and Mills and described as follows:

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The New Jersey Zinc Company
30 Front St., New York 38, N. Y.

BEGINNING at the Public Road Henry Bowlines corner on the North side of the Public Road; thence Northwardly with the said Bowlines line which is fenced to the top of Copper Ridge to Dana Bowlin line; thence Northeastwardly with the said Bowlines line to Willis Mills line; thence about same direction with the said Mills line to a set stone corner, thence Southward a conditional line agreed upon by parties of the first and second part (Mc H. Campbell and wife Lillie Campbell and H. C. Livesay and wife Stella Livesay) to a set stone corner at the Valley Public Road, then Westwardly with the road to the BEGINNING, containing by estimation 100 acres, more or less.

The Owners acquired title to the above described property by Deed of Mc H. Campbell and wife, Lillie Campbell, dated January 28, 1946, and of Record in the Register's Office for Hancock County, Tennessee, in Deed Book 13, Pages 257-258, to which reference is hdre made.

Together with the right to prospect for, mine, mill and remove the same; water rights, the right of ingress and egress, in accordance with the terms of an Agreement of even date herewith entered into between the parties hereto. And the parties of the first part also grant to the party of the second part during said periods the right to prospect for, explore and examine all minerals, metals, ores, ore-bearing materials, and rocks of any kind, including limestone, in, under or on all of said premises, including the right to enter thereupon, to use available water and to remove samples, in accordance with the terms of the last mentioned agreement. The terms of this option Contract and Agreement are fully set out in the Agreement of even date herewith, which is here referred to and made a partthereof as if fully set out at length.

This Contract and Agreement and each and every provision thereof shall be binding upon and enure to the benefit of the parties hereto, their heirs, executors, administrators, successors and assigns.

IN WITNESS WHEREOF, the Owners and parties of the first part have hereunto set their signatures the day and year first above written.

H. C. Livesay

H. C. Livesay.

Stella Livesay

Stella Livesay

The New Jersey Zinc Company
160 Front St., New York 38, N. Y.

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STATE OF TENNESSEE

HANCOCK COUNTY

Personally appeared before me, Ben S. Catlett, a Notary Public in and for said County and State, the within named bargainors, H. C. LIVESAY AND WIFE, STELLA LIVESAY, with whom I am personally acquainted, and who acknowledged that they executed the foregoing Contract and Agreement for the purposes therein contained and expressed.

Witness my hand and official seal at office on this 28th day of March, 1956,

Ben S. Catlett
Notary Public.

Commission Expires: 4-16-58

Qualified in Hancock County
Tennessee under the Provisions
of Tennessee Code, Section 8-1699, et seq.

OPTION AGREEMENT

THIS CONTRACT AND AGREEMENT made and entered into on this 16th day of September, 1956, by and between [illegible] C. BOWLIN and wife, [illegible], residents of Hancock County, Tennessee, hereinafter called the parties of the first part, and the NEW JERSEY ZINC COMPANY, a New Jersey Corporation, authorized to do business in the State of Tennessee, party of the second part, hereinafter called the Zinc Company.

WITNESSETH

That for and in consideration of the sum of ONE ($1.00) DOLLAR and other good and valuable considerations in hand paid, the receipt of which is hereby acknowledged, the parties of the first part grant unto the party of the second part for a period of one year from the date hereof, with the privilege of extension for further periods not to exceed beyond September 16, 1958, upon payment of sums of money agreed upon the exclusive right and option to purchase all minerals, metals, ores, ore-bearing materials, and rocks of any kind, including limestone, in, under or on the following described premises:

Property Acquisition Engineering

SITUATE in the First Civil District of Hancock County, Tennessee, being all the farm lands of the Owners North of the Clinch Valley Road, containing 135 acres, more or less, and bounded generally as follows:

On the North by the lands of Willis [illegible] and [illegible]
On the East by the lands of H. C. Livesay
On the South by the Clinch Valley Road and/or lands of Henry C. Bowlin and wife; and
On the West by the lands of W. M. Brewer.

The New Jersey Zinc Company
160 Front St., New York 38, N. Y.

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remaining

being all the lands acquired by the Owners by the following Deeds of conveyance: (1) Deed of Dana Bowlin and wife, Luana Bowlin, dated March 17th, 1948, and of record in the Register's Office for Hancock County, Tennessee, in Deed Book _____, Page _____. (2) Deed of Catherine Campbell, dated March 7th, 1950, and of record in the Register's Office for Hancock County, Tennessee, in Deed Book 5, Page 426-7; (3) Also all that land North of the Clinch Valley Road conveyed by Deed of W. H. Campbell and wife, Allie Campbell, dated January 20th, 1937, and of record in the Register's Office for Hancock County, Tennessee, in Deed Book 3, Page 416-17, to all of which Deeds reference is here made for a more complete description.

Together with the right to prospect for, mine, mill and remove the same; water rights, the right of ingress and egress and the right to purchase surface acreage to the extent of ten acres; together with the foot right-of-way to the Clinch Valley Road, in accordance with the terms of an Agreement of even date herewith entered into between the parties hereto. And the parties of the first part also grant to the party of the second part during said periods the right to prospect for, explore and examine all minerals, metals, ores, ore-bearing materials, and rocks of any kind, including limestone, in, under or on all of said premises, including the right to enter thereupon, to use available water and to remove samples, in accordance with the terms of the last mentioned agreement. The terms of this option Contract and Agreement are fully set out in the Agreement of even date herewith, which is here referred to and made a part hereof as if fully set out at length.

This Contract and Agreement and each and every provision thereof shall be binding upon and enure to the benefit of the parties hereto, their heirs, executors, administrators, successors and assigns.

IN WITNESS WHEREOF, the Owners and parties of the first part have hereunto set their signatures the day and year first above written.

his
Henry X C. Bowlin
Henry C. Bowlin

mark
Myrtle T. Bowlin
Myrtle T. Bowlin

Witnesses to mark:
C. J. Kennedy
T. E. Maynard

The New Jersey Zinc Company
160 Front St., New York 38, N. Y.

STATE OF TENNESSEE

HANCOCK COUNTY

Personally appeared before me, B. F. Kennedy, a Notary Public in and for said County State, the within named bargainers, HENRY C. BOWLIN AND WIFE, MYRTLE T. BOWLIN, with whom I am personally acquainted, and who acknowledged that they executed the foregoing Contract and Agreement for the purposes therein contained and expressed.

Witness my hand and official seal in Hancock County, Tennessee, on this 12th day of September, 1956

B. F. Kennedy
Notary Public.

Commission expires: April 20, 1957
Qualified in Hancock County under the provisions of Tenn. Code, Section 8-1604 et seq.

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CONTRACT AND AGREEMENT

THIS CONTRACT AND AGREEMENT made and entered into on this 31st day of August, 1956, by and between W. M. BREWER and wife, TENER BREWER of Hancock County, Tennessee, hereinafter called the Owners, parties of the first part, and THE NEW JERSEY ZINC COMPANY, a New Jersey Corporation, authorized to do business in the State of Tennessee, party of the second part, hereinafter called the Zinc Company.

WITNESSETH

That for and in consideration of the sum of ONE ($1.00) DOLLAR and other good and valuable considerations in hand paid, the receipt of which is hereby acknowledged, the parties of the first part grant unto the party of the second part for a period of one year from the date hereof, with the privilege of extension for further periods not to extend beyond August 31, 1959, upon payment of sums of money agreed upon, the exclusive right and option to purchase all minerals, metals, ores, ore-bearing materials, and rocks of any kind, including limestone, in, under or on the following described premises:

Bargain & Sell Remaining

SITUATE in the First Civil District of Hancock County, Tennessee, lying on Copper Ridge, containing 100 acres, more or less, and bounded generally as follows:

On the North by the lands of Henry Bowlin (formerly Clay Leonard) and perhaps others;
On the East by the lands of Henry Bowlin (formerly Henry Bowlin and Mc H. Campbell);
On the South by the Clinch Valley Road and the lands of Gale Walker; and
On the West by the lands of Lewis Tummire (formerly Will Allen).

The New Jersey Zinc Company
160 Front St., New York 38, N. Y.

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W. M. Brewer acquired title to the above described property by Deed of James H. Holt, et us, dated December 24, 1936, and of Record in the Register's Office for Hancock County, Tennessee, in Deed Book 3, Pages 306-307, to which deed reference is here made.

Together with the right to prospect for, mine, mill and remove the same; water rights, the right of ingress and egress, and the right to purchase surface acreage in accordance with the terms of an Agreement of even date herewith entered into between the parties hereto. And the parties of the first part also grant to the party of the second part during said periods the right to prospect for, explore and examine all minerals, metals, ores, ore-bearing materials and rocks of any kind, including limestone, in, under or on all of said premises, including the right to enter thereupon, to use available water and to remove samples, in accordance with the terms of the last mentioned agreement. The terms of this option Contract and Agreement are fully set out in the Agreement of even date herewith, which is here referred to and made a part hereof as if fully set out at length.

This Contract and Agreement and each and every provision thereof shall be binding upon and enure to the benefit of the parties hereto their heirs, executors, administrators, successors and assigns.

In Witness Whereof, the Owners and parties of the first part have hereunto set their signatures the day and year first above written.

W. M. Brewer

W. M. Brewer

Tener Brewer

Tener Brewer

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The New Jersey Zinc Company
160 Front St., New York 38, N. Y.

STATE OF TENNESSEE

HANCOCK COUNTY

Personally appeared before me B. F. Kennedy Jr. Notary Public in and for said County and State, the within named bargainors, W. M. Brewer and wife, Toner Brewer, with whom I am personally acquainted, and who acknowledged that they executed the foregoing Contract and Agreement for the purposes therein contained and expressed.

Witness my hand and official seal in Hancock County, Tennessee, on this 21 day of August, 1956.

B. F. Kennedy Jr.
Notary Public

Commission Expires: 4-30-57

Qualified in Hancock County
under the Provisions of Tennessee
Code Section 8-1609 et seq.

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The New Jersey Zinc Company
160 Front St., New York 38, N. Y.

CONTRACT AND AGREEMENT

THIS CONTRACT AND AGREEMENT made and entered into on this 10th day of April, 1957, by and between DUDLEY DALTON and wife, LOLA DALTON of Hancock County, Tennessee, hereinafter called the Owners, parties of the first part, and THE NEW JERSEY ZINC COMPANY, a New Jersey Corporation, authorized to do business in the State of Tennessee, party of the second part, hereinafter called the Zinc Company:

W I T N E S S E T H

That for and in consideration of the sum of ONE ($1.00) DOLLAR and other good and valuable considerations in hand paid, the receipt of which is hereby acknowledged, the parties of the first part grant unto the party of the second part for a period of one year from the date hereof, with the privilege of extension for further periods not to extend beyond April 10, 1962, upon payment of sums of money agreed upon, the exclusive right and option to purchase all minerals, metals, ores, ore-bearing materials, and rocks of any kind, including limestone, in, under or on the following described premises:

Z 3 year + remaining

SITUATE in the First Civil District of Hancock County, Tennessee, being all the farm lands of the Owners, consisting of two tracts, containing 100 acres, more or less, and bounded and described as follows:

TRACT ONE:

BEGINNING at a stone set in the ground near a spring branch which is also the corner of John Barnard Farm; thence North 24-1/2 deg. West 24 poles

The New Jersey Zinc Company
160 Front St., New York 38, N. Y.

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to a beech near the head of the spring, thence North 43-1/2 deg. East 6 poles to a hickory; thence North 80 deg. East 3-1/2 poles to a chinquinpin oak; thence North 1-1/2 deg. West 232 poles to a chestnut on the top of Copper Ridge; thence Eastwardly with said Ridge 60 poles to a stone planted in the ground on said Ridge; thence South 1-1/2 East 264 poles to a stake in Jess Jordan's line; thence North 85 deg. West 30 poles to a Spanish oak; thence Southerly with the Jordan line 450 feet to a set stone beside the Clinch Valley Highway; thence Westwardly along said Highway 823 feet to a cedar; thence Northerly with the old Wagon Road 500 feet to a small spring branch, continuing in same direction with said branch 260 feet to the BEGINNING, containing 100 acres, more or less.

100-10 = 90 acres.

There is excepted from the above described tract of land about 5 acres heretofore conveyed off of the Northwest portion thereof to Hubert Mills and about five acres heretofore conveyed off the Northeast portion thereof to Fred Mills.

Owners acquired title to the above described tract of land by deed of Rosa Allen, et al., dated November 28, 1944, and of record in the Register's Office for Hancock County, Tennessee, in Deed Book 10, Page 280, to which reference is here made.

TRACT TWO:

BEGINNING at the Northeast corner of C. D. Dalton line; thence South a straight line with Lewis Turnmire's line to the Main Valley Road to a set stone; thence following the road Westwardly to C. D. Dalton's line; thence North with Dalton's line to a stone corner; thence Eastwardly with Daltons line to the BEGINNING corner, containing 2 acres, more or less.

2 acres

Owners acquired title to the above described tract of land by deed of Lewis Turnmire and wife, dated December 2, 1949, and of record in the Register's Office for Hancock County, Tennessee, in Deed Book 16, Page 215-16 to which reference is here made.

Together with the right to prospect for, mine, mill and remove the same; water rights, the right of ingress and egress in accordance with the terms of an Agreement of even date herewith entered into between the parties

The New Jersey Zinc Company
160 Front St., New York 38,

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to a beech near the head of the spring; thence North 43-1/2 deg. East 6 poles to a hickory; thence North 80 deg. East 3-1/2 poles to a chinquinpin oak; thence North 1-1/2 deg. West 232 poles to a chestnut on the top of Copper Ridge; thence Eastwardly with said Ridge 60 poles to a stone planted in the ground on said Ridge; thence South 1-1/2 East 264 poles to a stake in Jess Jordan's line; thence North 88 deg. West 30 poles to a Spanish oak; thence Southerly with the Jordan line 450 feet to a set stone beside the Clinch Valley Highway; thence Westwardly along said Highway 823 feet to a cedar; thence Northerly with the old Wagon Road 500 feet to a small spring branch, continuing in same direction with said branch 260 feet to the BEGINNING, containing 140 acres, more or less.

There is excepted from the above described tract of land about 5 acres heretofore conveyed off of the Northwest portion thereof to Hubert Mills and about five acres heretofore conveyed off the Northeast portion thereof to Fred Mills.

Owners acquired title to the above described tract of land by deed of Rosa Allen, et al., dated November 28, 1944, and of record in the Register's Office for Hancock County, Tennessee, in Deed Book 10, Page 280, to which reference is here made.

TRACT TWO:

BEGINNING on the Northeast corner of D. D. Dalton line; thence South a straight line with Lewis Turnmire's line to the Main Valley Road to a set stone; thence following the road Westwardly to T. D. Dalton's line; thence North with Dalton's line to a stone corner; thence Eastwardly with Daltons line to the BEGINNING corner, containing 2 acres, more or less.

Owners acquired title to the above described tract of land by deed of Lewis Turnmire and wife, dated December 2, 1949, and of record in the Register's Office for Hancock County, Tennessee, in Deed Book 16, Page 215-16 to which reference is here made.

Together with the right to prospect for, mine, mill and remove the same; water rights, the right of ingress and egress in accordance with the terms of an Agreement of even date herewith entered into between the parties

The New Jersey Zinc Company
160 Front St., New York 38, N. Y.

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hereto. And the parties of the first part also grant to the party of the second part during said period the right to prospect for, explore and examine all minerals, metals, ores, ore-bearing materials, and rocks of any kind, including limestone, in, under or on all of said premises, including the right to enter thereupon, to use available water and to remove samples, in accordance with the terms of the last mentioned agreement. The terms of this option Contract and Agreement are fully set out in the Agreement of even date herewith, which is here referred to and made a part hereof as if fully set out at length.

This Contract and Agreement and each and every provision thereof shall be binding upon and enure to the benefit of the parties hereto, their heirs, executors, administrators, successors and assigns.

In Witness Whereof, the Owners and parties of the first part have hereunto set their signatures the day and year first above written.

Dudley Dalton
Dudley Dalton.

Lola Dalton
Lola Dalton

STATE OF TENNESSEE

HANCOCK COUNTY

Personally appeared before me, Ben S Catlett, a Notary Public in and for said County and State, the within named bargainors, DUDLEY DALTON AND WIFE, LOLA DALTON, with whom I am personally acquainted, and who acknowledged that they executed the foregoing Contract and Agreement for the purposes therein contained and expressed.

Witness my hand and official seal in Hancock County, Tennessee, on this 10 day of April, 1957.

Ben S Catlett
Notary Public.

Commission Expires: 4-16-58

Qualified in Hancock County
under the Provisions of Tennessee
Code, Section 8-1609, et seq.

The New Jersey Zinc Company
160 Front St., New York 38, N. Y.

RECEIVED OCT 16 1957

DATE	INITIALS	CODE

CONTRACT AND AGREEMENT

THIS CONTRACT AND AGREEMENT made and entered into on this 10th day of April, 1957, by and between JOHN BARNARD (WIDOWER), of Hancock County, Tennessee, hereinafter called the Owner, party of the first part, and THE NEW JERSEY ZINC COMPANY, a New Jersey Corporation, authorized to do business in the State of Tennessee, party of the second part, hereinafter called the Zinc Company:

W I T N E S S E T H

That for and in consideration of the sum of ONE ($1.00) DOLLAR and other good and valuable considerations in hand paid, the receipt of which is hereby acknowledged, the party of the first part grants unto the party of the second part for a period of one year from the date hereof, with the privilege of extension for further periods not to extend beyond April 10, 1962, upon payment of sums of money agreed upon, the exclusive right and option to purchase all minerals, metals, ores, ore bearing materials, and rocks of any kind, including limestone, in, under or on the following described premises:

Years & Extension

SITUATE in the First Civil District of Hancock County, Tennessee, being all the farm lands of the Owner, consisting of two tracts both adjoining and containing 240 acres, more or less, bounded generally as follows:

On the North by the lands of Hen Adams and Jim Stinson;
On the East by the lands of Dudley Dalton;
On the South by the lands of Bud McCoy; and
On the West by the lands of Roy Mallicoat, Tom Bowlin and Robert Wolfe.

Owner acquired title to the above described premises by the following deeds of conveyance both of record in the Register's Office for Hancock County, Tennessee: (1) Deed of J. T. Allen and wife, dated June 15, 1907, Deed Book W, Page 207, by which deed John Barnard and wife, Carrie Barnard acquired title as tenants by the entirety, and Carrie Barnard is now deceased, leaving John Barnard as survivor; (2) Deed of W. S. Moles, Clerk of the County Court, dated January 14, 1916, Deed Book S, Page 270, to both of which reference is here made.

The New Jersey Zinc Comp
160 Front St. New York 38,

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D.R.E.
RECEIVED OCT 13 1957

DATE	INITIALS	CODE

Together with the right to prospect for, mine, mill and remove the same; water rights, the right of ingress and egress, in accordance with the terms of an Agreement of even date herewith entered into between the parties hereto. And the party of the first part also grants to the party of the second part during said period the right to prospect for, explore and examine all minerals, metals, ores, ore-bearing materials, and rocks of any kind, including limestone, in, under or upon all of said premises, including the right to enter thereupon, to use available water and to remove samples, in accordance with the terms of the last mentioned Agreement. The terms of this option Contract and Agreement are fully set out in the Agreement of even date herewith which is here referred to and made a part hereof as if fully set out at length.

This Contract and Agreement and each and every provision thereof shall be binding upon and enure to the benefit of the parties hereto, their heirs, executors, administrators, successors and assigns.

In Witness Whereof, the Owner and party of the first part has hereunto set his signature the day and year first above written.

John Barnard

John Barnard.

STATE OF TENNESSEE

HANCOCK COUNTY

Personally appeared before me, Ben S. Catlett, a Notary Public in and for said County and State, the within named bargainor, JOHN BARNARD (WIDOWER), with whom I am personally acquainted, and who acknowledged that he executed the foregoing Contract and Agreement for the purposes therein contained and expressed.

Witness my hand and official seal at office on this 10 day of April, 1957.

Ben S. Catlett

Notary Public.

Commission Expires: 4-16-58

Qualified in Hancock County
under the provisions of Tennessee Code
Section 8-1609, et seq.

The New Jersey Zinc Compan
160 Front St., New York 38,

RECORD

DATE	INITIALS	CODE

CONTRACT AND AGREEMENT

THIS CONTRACT AND AGREEMENT made and entered into on this 18th day of July, 1957, by and between MACK TUNMIRE, ROXIE TUNMIRE, MILBURN TUNMIRE and wife, BLANCHE TUNMIRE, of Hancock County, Tennessee, hereinafter called the Owners, parties of the first part, and THE NEW JERSEY ZINC COMPANY, a New Jersey Corporation, authorized to do business in the State of Tennessee, party of the second part, hereinafter called the Zinc Company:

W I T N E S S E T H

THAT for and in consideration of the sum of ONE ($1.00) DOLLAR cash and other good and valuable considerations in hand paid, the receipt of which is hereby acknowledged, the parties of the first part grant unto the party of the second part the period of three years from the date hereof, the exclusive right and option to purchase all minerals, metals, ores, ore-bearing materials, and rocks of any kind, including limestone, in, under or on the following described premises:

2 years & renewable

SITUATE in the First Civil District of Hancock County, Tennessee, lying on the North side of the New Valley Road, adjoining the lands of ~~Bill~~ James Brewer, Frank Tunmire, [illegible] Tunmire and the remaining lands of Mack Tunmire and heirs, and more particularly described as follows:

> BEGINNING at a cedar corner at the New Valley Road, thence Northwardly with the old Jordon line to the Old Valley Road; thence Eastwardly with the Old Valley Road to a corner stone; thence Southwardly with a rail fence to my hog pen; thence the same direction and with the line of Lester Tunmire to the New Valley Road and a corner stone; thence Westwardly with the New Valley Road to the cedar corner, and the BEGINNING, containing 20 acres, more or less.

The New Jersey Zinc Company
60 Front St., New York 38, N.

For title see Deed Book "K.", Page 481-A, Register's Office, Hancock County, Tennessee.

Together with the right to prospect for, mine, mill and remove the same; water rights, the free and uninterrupted right of ingress and egress, in accordance with the terms of an Agreement of even date herewith entered into between the parties hereto.

And the parties of the first part also grant to the party of the second part during said period, the right to prospect for, explore and examine all minerals, metals, ores, ore-bearing materials, and rocks of any kind, including limestone, in, under or on all of said premises, including the right to enter thereupon, to use available water and to remove samples, in accordance with the terms of the last mentioned Agreement. The terms of this Option Contract and Agreement are fully set out in the Agreement of even date herewith, which is here referred to and made a part hereof as if fully set out at length.

This Contract and Agreement and each and every provision thereof shall be binding upon and inure to the benefit of the parties hereto, their heirs, executors, administrators, successors and assigns.

IN WITNESS WHEREOF, the Owners and parties of the first part have hereunto set their signatures on this the day and date first above written.

his
Mack X Lawson
MACK LAWSON.
mark

Pearl Lawson
PEARL LAWSON.

Hubson Lawson
HUBSON LAWSON.

Blanche Lawson
BLANCHE LAWSON.

The New Jersey Zinc Company
160 Front St., New York 38, N. Y.

Witness, Rect.:
[illegible]

DMEM
RECEIVED OCT 16 1957

DATE	INITIALS	CODE

STATE OF TENNESSEE

HANCOCK COUNTY

Personally appeared before me, Beul Cattell, a Notary Public in and for said County and State, the within named bargainors, MACK TUNMIRE, ROXIE TUNMIRE, MILBURN TUNMIRE AND WIFE, BLANCHE TUNMIRE, with whom I am personally acquainted, and who acknowledged that they executed the foregoing instrument for the purposes therein contained and expressed.

Witness my hand and official seal at office on this 18 day of July, 1957.

Beul Cattell
Notary Public.

Commission Expires: 4-16-58

Qualified in Hancock County,
under the provision of Tennessee
Code, Section 8-1602, et seq.

OFFICIAL FILE COPY
DMEA
RECEIVED OCT 16 1957

DATE	INITIALS	CODE

OPTION AND AGREEMENT

THIS OPTION AND AGREEMENT made and entered into on this 12th day of August, 1955, by and between [illegible] TUNMIRE (one and the same person as [illegible] TUNMIRE), LARSON TUNMIRE, NOAH TUNMIRE, CLARE TUNMIRE BOWLIN, WILLIS TUNMIRE, MOLLY TUNMIRE BOWLIN, MILDRED TUNMIRE and [illegible] TUNMIRE, of Hancock County, Tennessee, hereinafter called the Owners, parties of the first part, and THE NEW JERSEY ZINC COMPANY, a New Jersey Corporation, authorized to do business in the State of Tennessee, party of the second part, hereinafter called the Zinc Company:

WITNESSETH:

That for and in consideration of the sum of ONE ($1.00) DOLLAR cash and other good and valuable considerations in hand paid, the receipt of which is hereby acknowledged, the parties of the first part grant unto the party of the second part for a period of three years from the date hereof, the exclusive right and option to prospect all minerals, metals, ores, ore-bearing materials, and rocks of any kind, including limestone, in, under or on the following described premises:

SITUATE in the First Civil District of Hancock County, Tennessee, lying on the North side of Elliott Valley Road, consisting of two tracts, bounded and described as follows:

Tract No. 1.

On the North by the lands of Willis Tunmire, et al.;
On the East by the lands of Frank Tunmire;
On the South by the lands of Noah Tunmire, et al., under option to The New Jersey Zinc Company by Contract dated July 19, 1954, and the Elliott Road; and
On the West by the lands of James Brewer, containing 27 acres, more or less.

Signed & Sealed

The New Jersey Zinc Company
160 Front St., New York 38, N. Y.

OFFICIAL FILE COPY
DMEA
RECEIVED OCT 16 1957

DATE	INITIALS	CODE

For title reference see the Last Will and Testament of John Tunmire and wife, Hannah Tunmire, of record in the office of the County Court Clerk for Hancock County, Tennessee; and Deed of Frank Tunmire, dated February 6, 1945, and recorded in Deed Book 11, Page 567, Register's Office for Hancock County, Tennessee, to both of which instruments reference is here made.

TRACT TWO:

On the North by the lands of Frank Tunmire;
On the East by the lands of Eva Collins (formerly Lucinda Wilder) and Frank Tunmire;
On the South by the lands of Lester Tunmire; and
On the West by the lands of Mack Tunmire, et al., under option to The New Jersey Zinc Company by Contract dated July 18, 1957, containing 10 acres, more or less.

For title reference see the Last Will and Testament of John Tunmire and wife, Hannah Tunmire, of record in the office of the County Court Clerk for Hancock County, Tennessee; and Deed of Frank Tunmire, dated February 6, 1945, and recorded in Deed Book 11, Page 567, Register's Office for Hancock County, Tennessee, toboth of which instruments reference is here made.

Together with the right to prospect for, mine, mill and remove the same; water rights, the free and uninterrupted right of ingress and egress, in accordance with the terms of an Agreement of even date herewith entered into between the parties hereto.

And the parties of the first part also grant to the party of the second part during said period the right to prospect for, explore and examine all minerals, metals, ores, ore-bearing materials, and rocks of any kind, including limestone, in, under or on all of said premises, the right to purchase surface area of Tract One, including the right to enter thereupon to use available water and to remove samples, in accordance with the terms of the last mentioned Agreement. The terms of this option Contract and Agreement are fully set out in the Agreement of even date herewith, which is here referred to and made a part hereof as if fully set out at length.

The New Jersey Zinc Company
160 Front St., New York 38, N. Y.

OFFICIAL FILE
DME
RECEIVED OCT 1
COPY

DATE	INITIALS	COPY

[illegible] any provision thereof shall be [illegible] to the benefit of the parties hereto, their heirs, [illegible], successors and assigns.

IN WITNESS WHEREOF, the Owners and parties of the first part have hereunto set their signatures on the day and date first above written.

Witness Mark:
Ben S. Talbot
T. D. Hagaman

Mack Lummie.
Mark
Cleveland Lummie.
Mark
Cassie Lummie.
Cleta Lummie Bowlin.
Willia Lummie
Wesley Lummie Bowlin
Walter Lummie
Lester Lummie.

OFFICIAL FILE COPY
DMEA
RECEIVED OCT 16 1957

DATE	INITIALS	CODE

Witness Mark:
Ben S. Talbot
T. D. Hagaman

STATE OF TENNESSEE

HANCOCK COUNTY

Personally appeared before me, Ben S. Talbot, a Notary Public in and for said County and State, the within named bargainors, MACK LUMMIE (one and the same person as M. C. LUMMIE), CAPTON LUMMIE, CLEVELAND LUMMIE, CLETA LUMMIE BOWLIN, WILLIS LUMMIE, WILLIA LUMMIE, BOWLIN, WESLEY LUMMIE, WALTER LUMMIE, and LESTER LUMMIE, with whom I am personally acquainted, and who acknowledged that they executed the foregoing instrument for the purposes therein contained and expressed.

Witness my hand and official seal at office on this 12th day of August, 1957.

Ben S. Talbot
Notary Public.

Commission Expires:
4-10-58

Qualified in Hancock County
under the provision of Tennessee
Code, Section 8-1609, et seq.

The New Jersey Zinc Company
160 Front St., New York 38, N. Y.

CONTRACT AND AGREEMENT

THIS CONTRACT AND AGREEMENT made and entered into on this 21st day of August, 1957, by and between WILLIS TUNMIRE and wife, PEARL TUNMIRE, of Hancock County, Tennessee, hereinafter called the Owners, parties of the first part, and THE NEW JERSEY ZINC COMPANY, a New Jersey Corporation, authorized to do business in the State of Tennessee, party of the second part, hereinafter called the Zinc Company:

W I T N E S S E T H:

That for and in consideration of the sum of ONE ($1.00) DOLLAR cash and other good and vaulable considerations in hand paid, the receipt of which is hereby acknowledged, the parties of the first part grant unto the party of the second part for a period of three years from the date hereof, the exclusive right and option to purchase all minerals, metals, ores, ore-bearing materials and rocks of any kind, including limestone, in, under or on the following described premises:

34 mos +

SITUATE in the First Civil District of Hancock County, Tennessee, and bounded as follows:

> BEGINNING at the Old Mill Road at the mouth of the lane; thence W. with said lane to the surve in fence; then Northwest to stump and rock; then a straight line to a chestnut oak, same direction to a rock corner on Mc. H. Campbell's line at or near the top of the Ridge; thence with the said Campbell's line to a rock corner; thence E. with said Campbell's line to John Tunmire's line; thence same direction with said John Tunmire's line to a rock corner at the Mill Road, then North with the said road as it now runs to the BEGINNING corner, containing 17 acres, more or less.

Being the same property conveyed to the Owners by Deed of Henry Wolfe, dated September 1, 1934, and of record in the Register's Office for Hancock County, Tennessee, in Deed Book 17. Page 40-41.

The New Jersey Zinc Company
160 Front St., New York 38, N. Y.

OFFICIAL FILE COPY
D M E A
RECEIVED OCT 16 1957

DATE	INITIALS	CODE

Together with the right to prospect for, mine, mill and remove the same; water rights, the free and uninterrupted right of ingress and egress, in accordance with the terms of an Agreement of even date herewith entered into between the parties hereto.

And the parties of the first part also grant to the party of the second part during said period the right to prospect for, explore and examine all minerals, metals, ores, ore-bearing materials, and rocks of any kind, including limestone, in, under or on all of said premises, including the right to enter thereupon to use available water and to remove samples, in accordance with the terms of the last mentioned Agreement. The terms of this option Contract and Agreement are fully set out in the Agreement of even date herewith, which is here referred to and made a part hereof as if fully set out at length.

This Contract and Agreement and each and every provision thereof shall be binding upon and enure to the benefit of the parties hereto, their heirs, executors, administrators, successors and assigns.

IN WITNESS WHEREOF, the Owners and parties of the first part have hereunto set their signatures on this the day and date first above written.

Willis Tunmire.

Pearl Tunmire.

The New Jersey Zinc Company
160 Front St., New York 38, N. Y.

STATE OF TENNESSEE

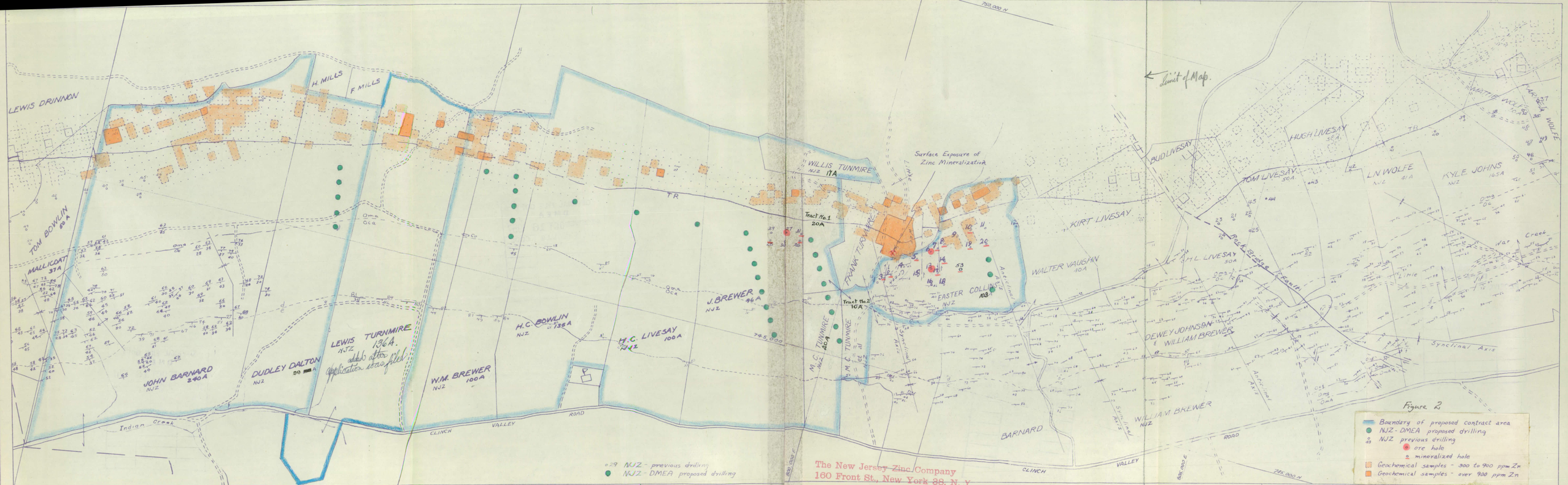
HANCOCK COUNTY

Personally appeared before me, _____, a Notary Public in and for said County and State, the within named bargainors, WILLIS TUNMIRE AND WIFE, PEARL TUNMIRE, with whom I am personally acquainted, and who acknowledged that they executed the foregoing instrument for the purposes therein contained and expressed.

Witness my hand and official seal at office on this _____ day of August, 1957.

ORIGINAL FILE COPY
DMEA
RECEIVED [illegible] 1957

DATE	[illegible]	CODE



The New Jersey Zinc Company
160 Front St., New York 38, N. Y.

THE NEW JERSEY ZINC COMPANY JEFFERSON CITY, TENNESSEE	DRAWN R.E.F. DATE 9-23-57 TRACED SCALE 1"=660'	COPPER RIDGE BELT SECTOR II AREA F	LITTLE WAR CREEK FILE NO. AX-TENN B-1310	
THE NEW JERSEY ZINC COMPANY JEFFERSON CITY, TENNESSEE	DRAWN R.E.F. DATE 9-23-57 TRACED SCALE 1"=660'	COPPER RIDGE BELT SECTOR II AREA F	LITTLE WAR CREEK FILE NO. AX-TENN B-1309	DMEA-4850.

3/4 size

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DATE | INITIALS | CODE

FIG. 1

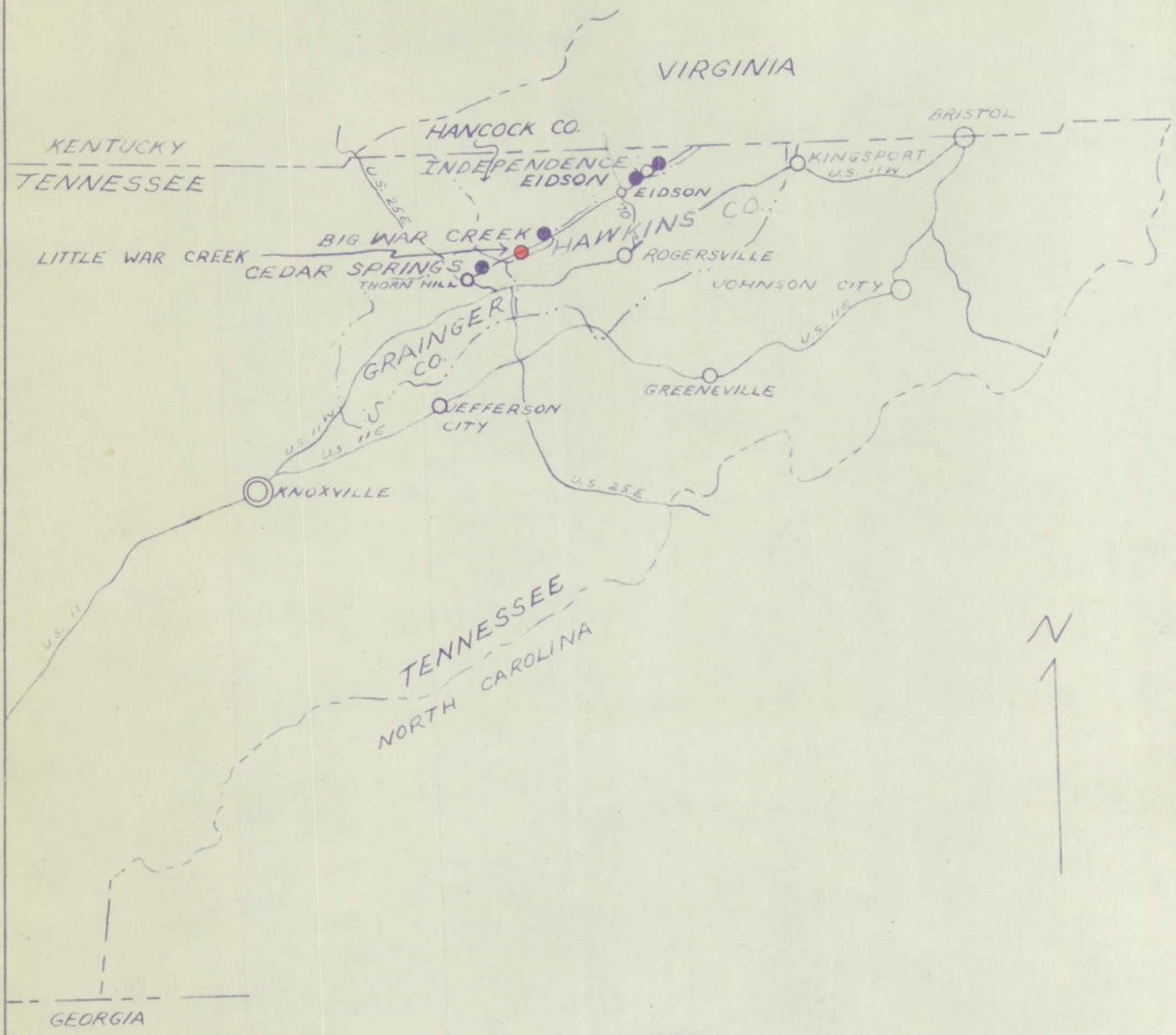

Figure 1

EXPLANATION

● - LOCATION OF PROJECT AREA

BASE - RAND-McNALLY ATLAS

The New Jersey Zinc Company
160 Front St., New York 38, N. Y.

POSTED TO DATE	THE NEW JERSEY ZINC COMPANY JEFFERSON CITY TENNESSEE	DISTRICT EAST TENNESSEE
DRAWN DATE 1-23-56 TRACED TEW SCALE 1" = 22 mi.	INDEX MAP AREAS OF DMEA APPLICATIONS	FILE NO. AX-TENN A 1143

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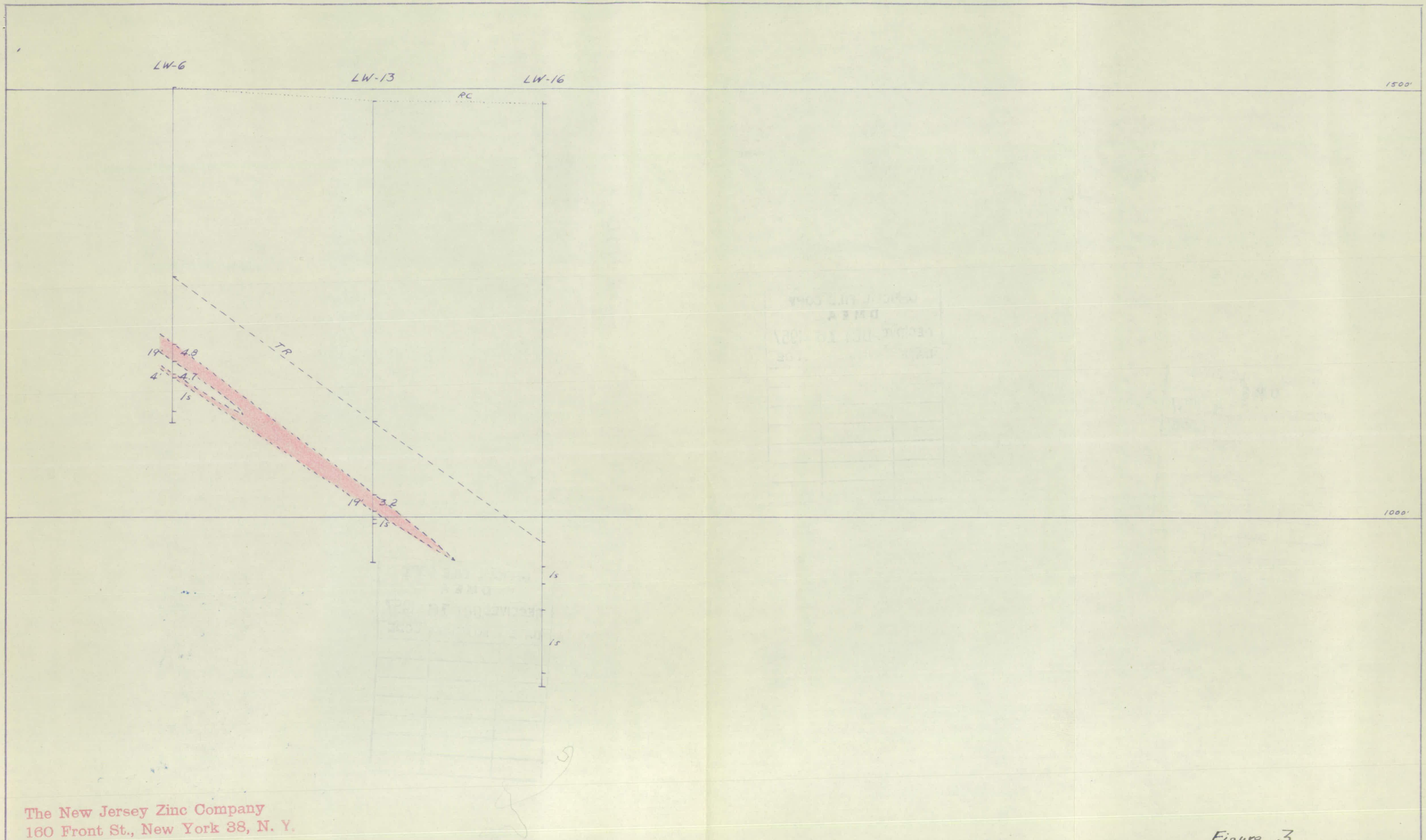
DMEA
RECEIVED OCT 16 1957

DATE	INITIALS	CODE



The New Jersey Zinc Company
160 Front St., New York 38, N. Y.

Figure 3

POSTED TO DATE	THE NEW JERSEY ZINC COMPANY	DRAWN SJL DATE 12-8-52		DISTRICT COPPER RIDGE BELT
	ROGERSVILLE TENNESSEE	TRACED SCALE 1"=100'	SECTOR II AREA F	FILE NO. AX TENN 709

OFFICIAL FILE COPY
D M E A
RECEIVED OCT 16 1957

DATE	INITIALS	CODE

OFFICIAL FILE COPY
D M E A
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DATE	INITIALS	CODE

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DATE	INITIALS	CODE

U. S. Government Messenger Envelope

Standard Form No. 65 (Rev. 1957)
Promulgated by Bureau of the Budget Circular A-33 (Rev.)

NAME (OR TITLE) OF ADDRESSEE, AGENCY, ORGANIZATIONAL UNIT, ADDRESS, AND ROOM		NAME (OR TITLE) OF ADDRESSEE, AGENCY, ORGANIZATIONAL UNIT, ADDRESS, AND ROOM	
Mr. Johnson Div. of Administrative Svcs Room 6200	STOP		STOP
~~Mr. Perry~~ ~~Personnel Mgt~~	STOP		STOP
~~Mr. Cady~~ ~~Procurement Spec.~~	STOP		STOP
Mr. Heaban Rm 4456 DMEA	STOP		STOP
	STOP		STOP
	STOP		STOP
	STOP		STOP
	STOP		STOP
	STOP		STOP
	STOP		STOP

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United States Department of the Interior

GEOLOGICAL SURVEY
BOX 25046 M.S. 939
DENVER FEDERAL CENTER
DENVER, COLORADO 80225

Rec'd 5/16/84 OME

May 3, 1984

Re: DMEA 4850 (zinc)
The New Jersey Zinc Company
Little War Creek Area
Hancock County, Tennessee
Contract Idm E-1174

Mr. T. J. Montgomery
Property Superintendent
Inspiration Mines Inc.
P.O. Box 1559
Claypool, Arizona 85532

Dear Mr. Montgomery:

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,

J. William Hasler gs

J. William Hasler, Chief
Office of Minerals Exploration

Form MME 63
(May 1970)

REQUEST FOR INFORMATION ON CERTIFIED PROJECT OR PROJECT UNDER ROYALTY AGREEMENT

1. Since August 5, 1983, 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 ☒

Has any interest been acquired since July 20, 1981 in the land within 1500 feet of the land described in the contract? (See Item 1, "Special Agreement Concerning Land" on page 2 of Annex 1 of the contract.).

2. Since August 5, 1983, 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.

Purchaser (*name and address*)	Quantity	Value

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

Type	Quantity (*tons*)	Estimated Grade	Location
Ore			
Concentrates			
Other			

3. Since August 5, 1983, has any production been transported through workings (*see of contract*)? Yes ☐ No ☒

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

Disposition of Material	Quantity	Value

Submitted by:

Name	Title
T. J. Montgomery	Property Superintendent
Address P. O. Box 1559 Claypool, Arizona 85532	**Date** 11 May 1984

United States Department of the Interior
GEOLOGICAL SURVEY
BOX 25046 M.S. 939
DENVER FEDERAL CENTER
DENVER, COLORADO 80225

IN REPLY REFER TO

August 5, 1983

Mr. T. J. Montgomery
Property Superintendent
Inspiration Mines, Inc.
P.O. Box 1559
Claypool, Arizona 85532

Re: DMEA 4850 (zinc)
The New Jersey Zinc Company
Little War Creek Area
Hancock County, Tennessee
Contract Idm E-1174

Dear Mr. Montgomery:

Thank you for sending two copies of the Warranty Deed conveying the above-referenced property to Inspiration Mines, Inc. pursuant to our request of July 18, 1983.

Should there be any production from the property before the royalty obligation period ends February 26, 1989, royalty payments should be made payable and mailed to:

Chief, Office of Minerals Exploration
U.S. Geological Survey M.S. 939
Denver Federal Center - Box 25046
Building 25, Rm. 2502
Denver, Colorado 80225

The purchaser should be advised to deduct royalties from the amount due on each shipment. Each check should be accompanied by suitable sales evidence - such as copies of settlement sheets - showing the name of the purchaser, the quantity and grade of the products sold, and the price and charges, certified to be correct by the purchaser.

Sincerely yours,

J. William Hasler

J. William Hasler, Chief
Office of Minerals Exploration

JWH:js

cc: R. Marshall, Vice President, The New Jersey Zinc Company
John J. Ellis, Vice President, Inspiration Mines, Inc.
A. T. Ovenshine, Reston
C. H. Thorman, Denver

INSPIRATION MINES, INCORPORATED

P. O. BOX 1559 CLAYPOOL, ARIZONA 85532

1 August 1983

RECEIVED
AUG 3 1983

United States Department of the Interior
Geological Survey
Box 25046, M.S. 933
Denver Federal Center
Denver, Colorado 80225

Attn: Mr. J. William Hasler

Re: DMEA 4850 (Zinc)
The New Jersey Zinc Company
Little War Creek Area
Hancock County, Tennessee
Contract Idm E-1174

Dear Mr. Hasler:

I am replying to your letter of July 15, 1983, to Mr. John Ellis. As per your request in the letter, I am enclosing two copies of the Warranty Deed conveying the property to Inspiration Mines, Inc.

Please note the last paragraph on page 3 of the document which preserves the Government's right to a percentage royalty on production as specified in the contract.

Yours truly,

INSPIRATION MINES, INC.

T. J. Montgomery

T. J. Montgomery
Property Superintendent

TJM:jab
Enclosures

xc: Mr. J. Ellis

This instrument prepared by:
J. Christopher Kirk
McCampbell & Young
P.O. Box 550
Knoxville, TN 37901

SPECIAL WARRANTY DEED

THIS DEED made as of the 11th day of July, 1983, by and between Gulf & Western Industries, Inc., a Delaware Corporation, authorized to do business in Tennessee, party of the first part, and INSPIRATION MINES, INC., a Delaware Corporation, authorized to do business in Tennessee, party of the second part:

W I T N E S S E T H

That for and in consideration of the sum of ten ($10.00) Dollars, cash in hand paid and other good and valuable considerations, the receipt of which is hereby acknowledged, the party of the first part has this day granted, bargained, and sold and does by these presents grant, bargain, sell and convey unto the party of the second part its successors and assigns, subject to the reservation and exception hereinafter set out, all its right, title and interest in and to all land, real property rights and interests, tenements and hereditaments of the party of the first part situate, lying and being the First, Second and Third Districts of Hancock County, Tennessee, including without limitation all metals, minerals, ores, ore-bearing materials and rocks of any and every kind, including limestone, in, under or upon the same, and all mines, mining rights, water rights, buildings, dwellings, physical plants and facilities, and other improvements thereon.

The property hereby conveyed includes, without limitation, all property acquired by party of the first part and its predecessor in title, The New Jersey Zinc Company, a New Jersey Corporation, under and by virtue of the instruments recorded in the Register's Office for Hancock County, Tennessee, listed in Exhibit "A" attached hereto, being 3,137.47 acres more or less, and excluding and excepting all property listed therein as heretofore conveyed away, and all of which are made a part hereof, and to which instruments reference is hereby made for a more complete description thereof. Reference is also made to the following documents evidencing successions to title:

(1) Agreement of Merger dated November 30, 1965, merging The New Jersey Zinc Company, a New Jersey Corporation, into Gulf & Western Industries, Inc., the surviving corporation.

(2) Deed from Gulf & Western Industries, Inc., to ZINMINCO, INC., a Delaware Corporation, dated February 25, 1966, Deed Book 29, Page 204.

(3) Change of name by Charter Amendment, from ZINMINCO, INC., to The New Jersey Zinc Company, a Delaware Corporation, dated June 9, 1966, File No. 1082, in the Office of the Secretary of State, State of Tennessee.

(4) Merger of The New Jersey Zinc Company into Gulf & Western Industries, a Delaware Corporation, dated May 24, 1974, Miscellaneous Book 14, Page 444.

Party of the first part, however, specifically reserves and excepts to itself its successors and assigns forever, all its right, title and interest, in fee simple in and to the freehold mineral estate in all oil and gas, and all hydrocarbons, minerals and substances associated with the extraction thereof, on, in or under the properties herein described and conveyed.

Party of the first part covenants and warrants that the location of any drill site or service installation in regard to oil and gas prospecting or production by party of the first part or its successors and assigns pursuant to the reservation contained herein shall require party of the second part's consent; provided however, that any such consent shall not be unreasonably delayed or withheld. The withholding of consent to the location of any such site or installation within any of the following perimeters, both surface or subsurface, shall be deemed reasonable:

(a) 200 feet from any house or other building, barn or structure now on the land;

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(b) 200 feet from any use or restriction heretofore reserved by party of the first part's predecessors in interest or such other areas where such predecessors in interest have agreed to waive the use of the surface thereof by written instrument recorded in the records of the county where the land affected thereby is located; or

(c) 500 feet from active or projected subsurface mining operations or an area of the surface or subsurface where such surface or subsurface mining operation will be adversely affected thereby. The determination by party of the second part of active surface or subsurface mining operation area or projected surface or subsurface mining operation areas shall be made by the party of the second part as a prudent mining operator.

It is the intention of the party of the first part to convey to party of the second part, subject to the reservation and exception above set out, all its right, title and interest in all of the land and real property rights and interests acquired by party of the first part from or through its division, The New Jersey Zinc Company, or the predecessor in interest of said division, The New Jersey Zinc Company, a Corporation, in said Hancock County, Tennessee, whether described in the instruments hereinbefore referred to or otherwise.

To have and to hold the same, together with all the hereditaments and appurtenances thereto belonging or in any wise appertaining, to the party of second part its successors or assigns forever.

Party of the second part, however, by accepting this conveyance, covenants and agrees on behalf of itself its successors and assigns to be bound by, and does hereby assume, all of the terms, covenants and conditions contained in all conveyances referred to and listed in Exhibit "A" attached hereto and further subject to the right of the US Department of the Interior to a percentage royalty on production and lien

for the payment thereof, under party of the first part's agreement with the Defense Minerals Exploration Administration of the US Department of the Interior, dated respectively May 10, 1956, (Contract #Idm E-950) May 22, 1956, (Contract #Idm E-956) June 30, 1958, (Contract #Idm E-982) and February 26, 1958, (Contract #Idm E-1174), and to indemnify and save harmless party of the first part, its successors and assigns, from any and all liabilities hereafter accruing under the provisions of said conveyances.

And the party of the first part, for itself and its successors does hereby covenant with the party of the second part, its successors and assigns that the party of the first part has not made, done, executed or suffered any act or thing whereby the above described premises or any part thereof now are or at any time hereafter shall or may be imperiled, charged or encumbered in any manner whatsoever except for 1983 taxes, which are prorated, and the matters set out above, and the party of the first part will warrant and defend its title thereto against the lawful demands of all persons claiming by, through or under the party of the first part, but not further or otherwise.

IN WITNESS WHEREOF, the party of the first part has caused this deed to be signed by its respective officers, duly authorized as of the date first above written.

GULF & WESTERN INDUSTRIES, INC.

By: [illegible]

Its: Vice President

INSPIRATION MINES, INC.

By: J H Ellis

Its: Vice President

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STATE OF TENNESSEE)
COUNTY OF KNOX)

Personally appeared before me, the undersigned authority, a Notary Public in and for said County and State, George Yarbenet, Vice President, with whom I am personally acquainted, and who, upon oath, acknowledged himself to be Vice President of Gulf & Western Industries, Inc., the within named bargainor, a corporation, and that he as such Vice President, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing the name of the corporation by himself as Vice President.

Witness my hand and official seal at office, this the 11th day of July, 1983.

Maxine W. Harris
Notary Public

My Commission Expires: 12-27-86

STATE OF TENNESSEE)
COUNTY OF KNOX)

Personally appeared before me, the undersigned authority, a Notary Public in and for said County and State, John Ellis, Vice President, with whom I am personally acquainted, and who, upon oath, acknowledged himself to be Vice President of Inspiration Mines, Inc., the within named bargainor, a corporation, and that he as such Vice President being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing the name of the corporation by himself as Vice President.

Witness my hand and official seal at office, this the 11th day of July, 1983.

Maxine W. Harris
Notary Public

My Commission Expires: 12-27-86

I hereby swear or affirm that the actual consideration or true value of this transfer, whichever is greater, is $500,000.00. Affiant J. Ellis.
Subscribed and sworn to before me this 11th day of July, 1983.

Maxine W. Harris
Notary Public

My Commission Expires: 12-27-86

RESPONSIBLE TAXPAYER:
Inspiration Mines, Inc.
P.O. Box 1559
Claypool, Arizona 85532

RSM032/I/7/11/83

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EXHIBIT A

Hancock County

TO DEED DATED July 14, 1983 FROM GULF & WESTERN INDUSTRIES, INC. TO INSPIRATION MINES, INC.

Grantor	Date of Deed	Recorded In Deed Book	Page
James Brewer, et ux	3/10/61	26	132
W. M. Brewer, et ux	7/10/61	26	319
Ephraim Clonce, et ux	3/3/59	24	153
Easter V. Wolfe Collins, et ux	5/5/59	24	237
Guy Dalton, et ux	11/23/55	21	91
D. H. Darnell, et ux	5/14/57	22	288
Mattie Pearl Drinnon	5/10/60	25	129
Floyd Edens, et ux	5/27/57	22	294
Ralph Garrett, et ux	5/27/57	22	298
E. F. Gilliam, et ux	8/1/57	22	382
Henry Gilliam, et ux	11/15/57	23	30
W. B. Gordon, et al	6/18/52	18	262
Jack Greene, et ux	11/23/55	21	89
Flora Williams Horton, et al	5/7/57	22	284
George M. Horton, et ux	7/10/61	26	316
L. W. Horton, et ux	5/31/61	26	288
M. B. Horton	4/29/57	22	269
W. H. Horton, et ux	6/10/57	22	372
Roy Hurley, et ux	2/3/61	26	78
Charlie Johns, et ux	9/18/52	18	393
Kyle Johns, et ux	2/20/62	25	460
George H. Lamb, et al	8/1/56	22	20
Mitch Lamb, et ux	8/21/67	21	397
Lewis Setsor, et ux	9/1/56	22	17
Lewis Tunmire, et al	10/27/61	26	386
Mack Tunmire, et al	7/11/60	25	201
Vickie Parker Tunmire, et al	7/11/60	25	214
Willis Tunmire, et ux	7/11/60	25	199
Gale Walker, et ux	7/10/52	18	314
Grant Walker, et ux	5/31/52	18	241
Alice Cope Wilder, et ux	8/28/56	22	14
R. L. Williams, et al.	5/3/61	26	293
Lewis Winstead, et ux	12/29/52	19	46
Lewis Winstead, et ux (Quitclaim Deed and Release)	9/18/72	Misc. 10	4
Lewis Winstead, et ux	11/23/55	21	87

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Barnett Wolfe, et ux	3/14/60	25	79
Leonard Williams, et ux	9/18/56	22	37
Bud Wolfe, et al	9/3/52	18	326
Cordie Wolfe, et al	5/25/56	21	343
David Wolfe, et ux	9/26/56	22	34
Henrietta Wolfe, et al	8/16/57	22	395
Jep H. Wolfe, et al	9/26/56	22	40
John B. Wolfe, et al	9/3/52	18	330
L. N. Wolfe, et ux	6/18/52	18	256
L. N. Wolfe, et ux	8/18/56	21	394
L. N. Wolfe	10/5/56	22	66
Mattie Wolfe	7/25/58	23	325
Roy D. Wolfe, et ux	6/11/56	21	351

EXCLUDING AND EXCEPTING such portions of the foregoing lands, or interests therein, as have been heretofore conveyed by the following deeds to Grantees named:

Grantee	Date of Deed	Recorded In Deed Book	Page
Hancock County Board of Education	3/6/58	23	270
Hancock County, Tennessee	8/30/62	Misc. 8	335
MOOSELMAC Corporation	6/30/67	Misc. 9	131
Hancock County Board of Education	3/11/68	29	440
State of Tennessee	3/10/69	Misc. 9	345
Ralph D. Seal, et ux	4/6/82	50	5

STATE OF TENNESSEE, HANCOCK COUNTY

I, or we hereby swear or affirm that the actual consideration for this transfer or value of the property transferred, whichever is greater is $500,000.00 which amount is equal to or greater than the amount which property transferred would command at a fair voluntary sale.

Q. D. Bridges
Affiant

Amt. Tax Paid $ 1,300.00

Subscribed and sworn to before me this the 12 day of July 19 83

Hugh E. Hopkins, Reg.

STATE OF TENNESSEE
HANCOCK COUNTY

Filed for record on the 12 day of July 1983 at 2:30 P M

Noted 4 page 251

and recorded Deed Book 52

Page 127 Verified.

Hugh E. Hopkins, Register

Reg. Fee 21.00

St. Rev. 1,300.00

Clk's Fee 50

This instrument prepared by:
J. Christopher Kirk
McCampbell & Young
P.O. Box 550
Knoxville, TN 37901

SPECIAL WARRANTY DEED

THIS DEED made as of the 11th day of July, 1983, by and between Gulf & Western Industries, Inc., a Delaware Corporation, authorized to do business in Tennessee, party of the first part, and INSPIRATION MINES, INC., a Delaware Corporation, authorized to do business in Tennessee, party of the second part:

W I T N E S S E T H

That for and in consideration of the sum of ten ($10.00) Dollars, cash in hand paid and other good and valuable considerations, the receipt of which is hereby acknowledged, the party of the first part has this day granted, bargained, and sold and does by these presents grant, bargain, sell and convey unto the party of the second part its successors and assigns, subject to the reservation and exception hereinafter set out, all its right, title and interest in and to all land, real property rights and interests, tenements and hereditaments of the party of the first part situate, lying and being the First, Second and Third Districts of Hancock County, Tennessee, including without limitation all metals, minerals, ores, ore-bearing materials and rocks of any and every kind, including limestone, in, under or upon the same, and all mines, mining rights, water rights, buildings, dwellings, physical plants and facilities, and other improvements thereon.

The property hereby conveyed includes, without limitation, all property acquired by party of the first part and its predecessor in title, The New Jersey Zinc Company, a New Jersey Corporation, under and by virtue of the instruments recorded in the Register's Office for Hancock County, Tennessee, listed in Exhibit "A" attached hereto, being 3,137.47 acres more or less, and excluding and excepting all property listed therein as heretofore conveyed away, and all of which are made a part hereof, and to which instruments reference is hereby made for a more complete description thereof. Reference is also made to the following documents evidencing successions to title:

(1) Agreement of Merger dated November 30, 1965, merging The New Jersey Zinc Company, a New Jersey Corporation, into Gulf & Western Industries, Inc., the surviving corporation.

(2) Deed from Gulf & Western Industries, Inc., to ZINMINCO, INC., a Delaware Corporation, dated February 25, 1966, Deed Book 29, Page 204.

(3) Change of name by Charter Amendment, from ZINMINCO, INC., to The New Jersey Zinc Company, a Delaware Corporation, dated June 9, 1966, File No. 1082, in the Office of the Secretary of State, State of Tennessee.

(4) Merger of The New Jersey Zinc Company into Gulf & Western Industries, a Delaware Corporation, dated May 24, 1974, Miscellaneous Book 14, Page 444.

Party of the first part, however, specifically reserves and excepts to itself its successors and assigns forever, all its right, title and interest, in fee simple in and to the freehold mineral estate in all oil and gas, and all hydrocarbons, minerals and substances associated with the extraction thereof, on, in or under the properties herein described and conveyed.

Party of the first part covenants and warrants that the location of any drill site or service installation in regard to oil and gas prospecting or production by party of the first part or its successors and assigns pursuant to the reservation contained herein shall require party of the second part's consent; provided however, that any such consent shall not be unreasonably delayed or withheld. The withholding of consent to the location of any such site or installation within any of the following perimeters, both surface or subsurface, shall be deemed reasonable:

(a) 200 feet from any house or other building, barn or structure now on the land;

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(b) 200 feet from any use or restriction heretofore reserved by party of the first part's predecessors in interest or such other areas where such predecessors in interest have agreed to waive the use of the surface thereof by written instrument recorded in the records of the county where the land affected thereby is located; or

(c) 500 feet from active or projected subsurface mining operations or an area of the surface or subsurface where such surface or subsurface mining operation will be adversely affected thereby. The determination by party of the second part of active surface or subsurface mining operation area or projected surface or subsurface mining operation areas shall be made by the party of the second part as a prudent mining operator.

It is the intention of the party of the first part to convey to party of the second part, subject to the reservation and exception above set out, all its right, title and interest in all of the land and real property rights and interests acquired by party of the first part from or through its division, The New Jersey Zinc Company, or the predecessor in interest of said division, The New Jersey Zinc Company, a Corporation, in said Hancock County, Tennessee, whether described in the instruments hereinbefore referred to or otherwise.

To have and to hold the same, together with all the hereditaments and appurtenances thereto belonging or in any wise appertaining, to the party of second part its successors or assigns forever.

Party of the second part, however, by accepting this conveyance, covenants and agrees on behalf of itself its successors and assigns to be bound by, and does hereby assume, all of the terms, covenants and conditions contained in all conveyances referred to and listed in Exhibit "A" attached hereto and further subject to the right of the US Department of the Interior to a percentage royalty on production and lien

for the payment thereof, under party of the first part's agreement with the Defense Minerals Exploration Administration of the US Department of the Interior, dated respectively May 10, 1956, (Contract #Idm E-950) May 22, 1956, (Contract #Idm E-956) June 30, 1958, (Contract #Idm E-982) and February 26, 1958, (Contract #Idm E-1174), and to indemnify and save harmless party of the first part, its successors and assigns, from any and all liabilities hereafter accruing under the provisions of said conveyances.

And the party of the first part, for itself and its successors does hereby covenant with the party of the second part, its successors and assigns that the party of the first part has not made, done, executed or suffered any act or thing whereby the above described premises or any part thereof now are or at any time hereafter shall or may be imperiled, charged or encumbered in any manner whatsoever except for 1983 taxes, which are prorated, and the matters set out above, and the party of the first part will warrant and defend its title thereto against the lawful demands of all persons claiming by, through or under the party of the first part, but not further or otherwise.

IN WITNESS WHEREOF, the party of the first part has caused this deed to be signed by its respective officers, duly authorized as of the date first above written.

GULF & WESTERN INDUSTRIES, INC.

By: George Gotkowitz

Its: Vice President

INSPIRATION MINES, INC.

By: J H Ellis

Its: Vice President

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STATE OF TENNESSEE)
COUNTY OF KNOX)

Personally appeared before me, the undersigned authority, a Notary Public in and for said County and State, George Yarbenet, Vice President, with whom I am personally acquainted, and who, upon oath, acknowledged himself to be Vice President of Gulf & Western Industries, Inc., the within named bargainor, a corporation, and that he as such Vice President, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing the name of the corporation by himself as Vice President.

Witness my hand and official seal at office, this the 11th day of July, 1983.

Maxine W. Harris
Notary Public

My Commission Expires: 12-27-86

STATE OF TENNESSEE)
COUNTY OF KNOX)

Personally appeared before me, the undersigned authority, a Notary Public in and for said County and State, John Ellis, Vice President, with whom I am personally acquainted, and who, upon oath, acknowledged himself to be Vice President of Inspiration Mines, Inc., the within named bargainor, a corporation, and that he as such Vice President being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing the name of the corporation by himself as Vice President.

Witness my hand and official seal at office, this the 11th day of July, 1983.

Maxine W. Harris
Notary Public

My Commission Expires: 12-27-86

I hereby swear or affirm that the actual consideration or true value of this transfer, whichever is greater, is $500,000.00. Affiant J. Ellis.
Subscribed and sworn to before me this 11th day of July, 1983.

Maxine W. Harris
Notary Public

My Commission Expires: 12-27-86

RESPONSIBLE TAXPAYER:
Inspiration Mines, Inc.
P.O. Box 1559
Claypool, Arizona 85532

RSM032/I/7/11/83

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EXHIBIT A

Hancock County

TO DEED DATED July 11, 1983 FROM GULF & WESTERN INDUSTRIES, INC. TO INSPIRATION MINES, INC.

Grantor	Date of Deed	Recorded In Deed Book	Page
James Brewer, et ux	3/10/61	26	132
W. M. Brewer, et ux	7/10/61	26	319
Ephraim Clonce, et ux	3/3/59	24	153
Easter V. Wolfe Collins, et ux	5/5/59	24	237
Guy Dalton, et ux	11/23/55	21	91
D. H. Darnell, et ux	5/14/57	22	288
Mattie Pearl Drinnon	5/10/60	25	129
Floyd Edens, et ux	5/27/57	22	294
Ralph Garrett, et ux	5/27/57	22	298
E. F. Gilliam, et ux	8/1/57	22	382
Henry Gilliam, et ux	11/15/57	23	30
W. B. Gordon, et al	6/18/52	18	262
Jack Greene, et ux	11/23/55	21	89
Flora Williams Horton, et al	5/7/57	22	284
George M. Horton, et ux	7/10/61	26	316
L. W. Horton, et ux	5/31/61	26	288
M. B. Horton	4/29/57	22	269
W. H. Horton, et ux	6/10/57	22	372
Roy Hurley, et ux	2/3/61	26	78
Charlie Johns, et ux	9/18/52	18	393
Kyle Johns, et ux	2/20/62	25	460
George H. Lamb, et al	8/1/56	22	20
Mitch Lamb, et ux	8/21/67	21	397
Lewis Setsor, et ux	9/1/56	22	17
Lewis Tunmire, et al	10/27/61	26	386
Mack Tunmire, et al	7/11/60	25	201
Vickie Parker Tunmire, et al	7/11/60	25	214
Willis Tunmire, et ux	7/11/60	25	199
Gale Walker, et ux	7/10/52	18	314
Grant Walker, et ux	5/31/52	18	241
Alice Cope Wilder, et ux	8/28/56	22	14
R. L. Williams, et al.	5/3/61	26	293
Lewis Winstead, et ux	12/29/52	19	46
Lewis Winstead, et ux (Quitclaim Deed and Release)	9/18/72	Misc. 10	4
Lewis Winstead, et ux	11/23/55	21	87

Barnett Wolfe, et ux	3/14/60	25	79
Leonard Williams, et ux	9/18/56	22	37
Bud Wolfe, et al	9/3/52	18	326
Cordie Wolfe, et al	5/25/56	21	343
David Wolfe, et ux	9/26/56	22	34
Henrietta Wolfe, et al	8/16/57	22	395
Jep H. Wolfe, et al	9/26/56	22	40
John B. Wolfe, et al	9/3/52	18	330
L. N. Wolfe, et ux	6/18/52	18	256
L. N. Wolfe, et ux	8/18/56	21	394
L. N. Wolfe	10/5/56	22	66
Mattie Wolfe	7/25/58	23	325
Roy D. Wolfe, et ux	6/11/56	21	351

EXCLUDING AND EXCEPTING such portions of the foregoing lands, or interests therein, as have been heretofore conveyed by the following deeds to Grantees named:

Grantee	Date of Deed	Recorded In Deed Book	Page
Hancock County Board of Education	3/6/58	23	270
Hancock County, Tennessee	8/30/62	Misc. 8	335
MOOSELMAC Corporation	6/30/67	Misc. 9	131
Hancock County Board of Education	3/11/68	29	440
State of Tennessee	3/10/69	Misc. 9	345
Ralph D. Seal, et ux	4/6/82	50	5

STATE OF TENNESSEE, HANCOCK COUNTY

I, or we hereby swear or affirm that the actual consideration for this transfer or value of the property transferred, whichever is greater is $500,000.00 which amount is equal to or greater than the amount which property transferred would command at a fair voluntary sale.

Q. D. Bridges
Affiant

Amt. Tax Paid $ 1,300.00

Subscribed and sworn to before me this the 12 day of July 1983

Hugh E. Hopkins, Reg

STATE OF TENNESSEE
HANCOCK COUNTY

Filed for record on the 12 day of July 1983 at 2:30 P M

Noted in Deed Book 52 page 251

and recorded in Deed Book 52

Page 127 Verified.

Hugh E. Hopkins, Register

Rec. Fee 21.00

St. Rev. 1,300.00

Clk's Fee 50

United States Department of the Interior

GEOLOGICAL SURVEY
BOX 25046 M.S. 933
DENVER FEDERAL CENTER
DENVER, COLORADO 80225

IN REPLY REFER TO

July 15, 1983

Mr. John J. Ellis, Vice President
Inspiration Mines Inc.
P.O. Box 1559
Claypool, Arizona 85532

Re: DMEA 4850 (zinc)
The New Jersey Zinc Company
Little War Creek Area
Hancock County, Tennessee
Contract Idm E-1174

Dear Mr. Ellis:

This office has just been advised through the law offices of McCampbell and Young, Knoxville, Tennessee, that the New Jersey Zinc Company has conveyed its real property in Hancock County, Tennessee to Inspiration Mines, Inc., subject to the above-referenced contract.

Enclosed is a certification of discovery or development that covers all the land described in Article 2 of the contract.

By the terms of the Exploration Project Contract, as amended, and the certification, all minerals mined or produced from February 26, 1958 to February 26, 1989 are subject to the Government's percentage royalty as set forth in the contract, until the sum of $52,752.75 is repaid to the Government.

Royalty payments should be made payable to Chief, Office of Minerals Exploration and mailed to the U.S. Geological Survey, Mail Stop 933, Denver Federal Center, Building 25, Rm. 2502, Denver, Colorado 80225. The purchaser should be advised to deduct royalties from the amount due on each shipment. Each check should be accompanied by suitable sales evidence - such as copies of settlement sheets - showing the name of the purchaser, the quantity and grade of the products sold, and the price and charges, certified to be correct by the purchaser.

Your attention is called to Article 2(d), particularly, of the contract, relating to the preservation of the Government's right to a percentage royalty on production.

Pursuant to Article 2(d) of the contract, please furnish this office with two copies of the instrument of conveyance showing the lien, or encumbrance for the preservation of the Government's right to a percentage royalty on production and payment thereof.

When production starts, please notify this office. Thereafter, if production ceases for any extended period, please notify this office at six-month intervals.

Sincerely yours,

J. William Hasler

J. William Hasler, Chief
Office of Minerals Exploration

JWH:js

cc: A. T. Ovenshine
C. H. Thorman

Robert P. Marshall, Vice President
The New Jersey Zinc Company
G & W Natural Resources Group
One Commerce Place
Nashville, Tennessee 37239

Enclosures

Rec'd 7/13/83
O ME

July 11, 1983

United States Department of Interior
Geological Survey
P. O. Box 25046 M.S.933
Denver Federal Center
Denver, Colorado 80225

Re: DMEA 4286, 4850, 4177 and 4153 (zinc)
Contract Nos. Idm-E-982, Idm-E-1174,
Idm-E-956, Idm-E-950

Gentlemen:

Please be advised that on the date hereof The New Jersey Zinc Company has conveyed subject to the above referenced contracts all of its real property in Hancock, Hawkins and Grainger Counties, Tennessee, to Inspiration Mines, Inc., which has on the date hereof assumed the said contracts. All correspondence relating to the above contracts should hereafter be addressed to Inspiration Mines, Inc., P. O. Box 1559, Claypool, Arizona, 85532, Attention John Ellis, Vice President.

Yours truly,

THE NEW JERSEY ZINC COMPANY

By Robert Marshall
Vice President

INSPIRATION MINES, INC.

By J Ellis
Vice President

G+W Natural Resources Group
GULF + WESTERN INDUSTRIES, INC

The New Jersey Zinc Exploration Company

June 2, 1983

Mr. J. William Hasler, Chief
Office of Minerals Exploration
United States Department of the Interior
Geological Survey
Box 25046 M.S. 933
Denver Federal Center
Denver, CO 80225

Dear Mr. Hasler:

RE: DMEA (zinc) contracts

Enclosed herewith are status reports for DMEA contracts with the New Jersey Zinc Company for projects located in Tennessee and Virginia. The Tennessee reports are for Contracts DMEA 4177, 4286, 4153, 4119, and 4850. The Virginia reports are for Contracts DMEA 5008 and 4681.

Sincerely,

William T. Hill
Vice President - Exploration
G+W Natural Resources Group

WTH/rb
Enclosure

cc: J. E. Nelson
Bruce Granoff

One Commerce Place • Nashville, Tennessee 37239 • (615) 259-1000

United States Department of the Interior

GEOLOGICAL SURVEY
BOX 25046 M.S. 933
DENVER FEDERAL CENTER
DENVER, COLORADO 80225

May 9, 1983

Re: DMEA 4850 (zinc)
The New Jersey Zinc Company
Little War Creek Area
Hancock County, Tenn.
Contract Idm F 1174

Mr. Frederic H. Main
Vice President, Mining
G & W Natural Resources Group
One Commerce Place
Nashville, TN 37239

Dear Mr. Main:

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,

J. William Hasler

J. William Hasler, Chief
Office of Minerals Exploration

Form MME 63
(May 1970)

REQUEST FOR INFORMATION ON CERTIFIED PROJECT OR PROJECT UNDER ROYALTY AGREEMENT

1. Since April 26, 1982, 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 ☒

Has any interest been acquired since July 20, 1981 in the land within 1500 feet of the land described in the contract? (See Item 1 "Special Agreement Concerning Land" on page 2 of Annex 1 of the contract.)

2. Since April 26, 1982, 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.

Purchaser (*name and address*)	Quantity	Value

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

Type	Quantity (*tons*)	Estimated Grade	Location
Ore			
Concentrates			
Other			

3. Since April 26, 1982, has any production been transported through workings (*see of contract*)? Yes ☐ No ☐

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

Disposition of Material	Quantity	Value

Submitted by:

Name William T. Hill	Title U.P. Exploration
Address Natural Resources Group One Commerce Pl. Nashville TN. 37329	Date 5/16/83

United States Department of the Interior
GEOLOGICAL SURVEY
BOX 25046 M.S. 933
DENVER FEDERAL CENTER
DENVER, COLORADO 80225

April 9, 1982

Re: DMEA 4850 (zinc)
The New Jersey Zinc Company
Little War Creek Area
Hancock County, Tenn.
Contract Idm E 1174

Mr. Frederic H. Main
Vice President, Mining
G & W Natural Resources Group
One Commerce Place
Nashville, TN 37239

Dear Mr. Main:

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,

J. William Hasler, Chief
Office of Minerals Exploration

Form MME 63
(May 1970)

REQUEST FOR INFORMATION ON CERTIFIED PROJECT
OR PROJECT UNDER ROYALTY AGREEMENT

1. Since July 20, 1981, 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 ☒

Has any interest been acquired since July 20, 1981 in the land within 1500 feet of the land described in the contract? (See Item 1 "Special Agreement Concerning Land" on page 2 of Annex 1 of the contract.)
yes ___ No ___

2. Since July 20, 1981, 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.

Purchaser (*name and address*)	Quantity	Value

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

Type	Quantity (*tons*)	Estimated Grade	Location
Ore			
Concentrates			
Other			

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

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

Disposition of Material	Quantity	Value

Submitted by:

Name	Title
Frederic H. Main	Vice President, Mining
Address Gulf + Western Natural Resources Group One Commerce Place Nashville, TN. 37239	**Date** 4-26-82

Natural Resources Group
GULF + WESTERN INDUSTRIES
Zinc Division

The New Jersey Zinc Company
Jefferson City, Tennessee 37760
(615) 475-2052

July 22, 1981

U. S. Department of the Interior
Geological Survey
Box 25046 M.S. 933
Denver Federal Center
Denver, Colorado 80225

Attention: J. William Hasler

Dear Sir:

Enclosed are completed questionnaires relative to the following DMEA contracts:

DMEA-4119	(Zinc)
DMEA-4126	(Zinc)
DMEA-4850	(Zinc)
DMEA-4177	(Zinc)

Note that there are two copies each for contracts 4119 and 4126. One copy is of your current request and one is a photocopy of an identical request of March 30, 1978 and our reply dated April 5, 1978.

Our Beaver Creek Mine, covered by DMEA-4126 (Strawberry Plains Area), will be placed in production as of August 1, 1981. To which office, and to whom, should our royalty checks be forwarded each month?

Very truly yours,

F. H. Main by

Frederic H. Main
Vice President - Mining

FHM/vcd
Enclosures

XC: File

United States Department of the Interior

GEOLOGICAL SURVEY
BOX 25046 M.S. 933
DENVER FEDERAL CENTER
DENVER, COLORADO 80225

July 2, 1981

Re: DMEA-4850 (zinc)
The New Jersey Zinc Company
Little War Creek Area
Hancock County, Tenn.
Contract Idm-E1174

Mr. K. R. Winslow
Executive Vice President - Mining
The New Jersey Zinc Company
65 E. Elizabeth Ave.
Bethlehem, PA 18018

Dear Mr. Winslow:

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,

J. William Hasler

J. William Hasler, Chief
Office of Minerals Exploration

Form MME 63
(May 1970)

REQUEST FOR INFORMATION ON CERTIFIED PROJECT
OR PROJECT UNDER ROYALTY AGREEMENT

1. Since March 27, 1978, 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 ☒

Has any interest been acquired since March 27, 1978 in the land within 1,500 feet of the land described in the contract? (See Item 1 "Special Agreement concerning Land" on page 2 of Annex 1 of the Contract.) Yes ___ No X

2. Since March 27, 1978, 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.

Purchaser *(name and address)*	Quantity	Value

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

Type	Quantity *(tons)*	Estimated Grade	Location
Ore			
Concentrates			
Other			

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

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

Disposition of Material	Quantity	Value

Submitted by:

Name F. H. MAIN	Title V.P MINING
Address GTW NATURAL RESOURCES GROUP ONE COMMERCE PLACE NASHVILLE, TENN 37239	Date 7/20/81

United States Department of the Interior

GEOLOGICAL SURVEY
RESTON, VIRGINIA 22092

IN REPLY REFER TO: Office of Minerals Exploration
Mail Stop 953

February 27, 1979

Re: DMEA-4850 (Zinc)
The New Jersey Zinc Company
Little War Creek Area
Hancock County, Tennessee
Contract Idm-E1176

Mr. K. R. Winslow
Executive Vice President--Mining
The New Jersey Zinc Company
65 E. Elizabeth Avenue
Bethlehem, Pennsylvania 18018

Dear Mr. Winslow:

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,

Harold Kirkemo

Harold Kirkemo, Chief
Office of Minerals Exploration

Form MME 63
(May 1970)

REQUEST FOR INFORMATION ON CERTIFIED PROJECT OR PROJECT UNDER ROYALTY AGREEMENT

1. Since March 27, 1978, 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 ☐

Has any interest been acquired since March 27, 1978, in the land within 1,500 feet of the land described in the contract? (See Item 1 "Special Agreement concerning Land" on page 2 of Annex 1 of the Contract). Yes ___ No ___

2. Since March 27, 1978, 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.

Purchaser *(name and address)*	Quantity	Value

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

Type	Quantity *(tons)*	Estimated Grade	Location
Ore			
Concentrates			
Other			

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

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

Disposition of Material	Quantity	Value

Submitted by:

Name	*Title*
Address	*Date*

HK

United States Department of the Interior

GEOLOGICAL SURVEY
RESTON, VIRGINIA 22092

IN REPLY REFER TO: Office of Minerals Exploration

March 23, 1978

Re: DMEA-4850 (Zinc)
The New Jersey Zinc Company
Little War Creek Area
Hancock County, Tennessee
Contract Idm-E1176

Mr. K. R. Winslow
Executive Vice President ~~and~~
~~General Manager~~ - Mining
The New Jersey Zinc Company
65 E. Elizabeth ~~Road~~ Avenue
Bethlehem, Pennsylvania 18018

Dear Mr. Winslow:

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,

Harold Kirkemo

Harold Kirkemo, Chief
Office of Minerals Exploration

Form MME 63
(May 1970)

REQUEST FOR INFORMATION ON CERTIFIED PROJECT OR PROJECT UNDER ROYALTY AGREEMENT

1. Since March 6, 1973, 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 ☒

Has any interest been acquired since March 6, 1973, in the land within 1,500 feet of the land described in the contract? (See Item 1 "Special Agreement concerning Land" on page 2 of Annex 1 of the Contract).

2. Since March 6, 1973, 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.

Purchaser *(name and address)*	Quantity	Value
—		

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

Type	Quantity *(tons)*	Estimated Grade	Location
Ore			
Concentrates			
Other			

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

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

Disposition of Material	Quantity	Value

Submitted by:

Name Kenneth R. Winslow	*Title* Executive Vice President - Mining
Address 65 East Elizabeth Avenue Bethlehem, Pa. - 18018	*Date* March 27, 1978

V
HK

United States Department of the Interior

GEOLOGICAL SURVEY
RESTON, VIRGINIA 22092

IN REPLY REFER TO: Office of Minerals Exploration

March 23, 1978

Re: DMEA-4850 (Zinc)
The New Jersey Zinc Company
Little War Creek Area
Hancock County, Tennessee
Contract Idm-E1176

Mr. K. R. Winslow
Executive Vice President ~~and~~
~~General Manager~~ - Mining
The New Jersey Zinc Company
65 E. Elizabeth ~~Road~~ Avenue
Bethlehem, Pennsylvania 18018

Dear Mr. Winslow:

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,

Harold Kirkemo

Harold Kirkemo, Chief
Office of Minerals Exploration

Form MME 63
(May 1970)

REQUEST FOR INFORMATION ON CERTIFIED PROJECT OR PROJECT UNDER ROYALTY AGREEMENT

1. Since March 6, 1973, 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 ☒

Has any interest been acquired since March 6, 1973, in the land within 1,500 feet of the land described in the contract? (See Item 1 "Special Agreement concerning Land" on page 2 of Annex 1 of the Contract).

2. Since March 6, 1973, 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.

Purchaser *(name and address)*	Quantity	Value

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

Type	Quantity *(tons)*	Estimated Grade	Location
Ore			
Concentrates			
Other			

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

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

Disposition of Material	Quantity	Value

Submitted by:

Name Kenneth R. Winslow	*Title* Executive Vice President - Mining
Address 65 East Elizabeth Avenue Bethlehem, Pa. - 18018	*Date* March 27, 1978

United States Department of the Interior

GEOLOGICAL SURVEY
WASHINGTON, D.C. 20242

IN REPLY REFER TO: Office of Minerals Exploration

February 27, 1973

Mr. K. R. Winslow
Divisional Manager of Mines
The New Jersey Zinc Company
Jefferson City, Tennessee 37760

Re: DMEA 4850 (Zinc)
The New Jersey Zinc Company
Little War Creek Area
Hancock County, Tennessee
Contract Idm-E1174

OFFICIAL COPY
O. M. E.
RECEIVED
MAR 19 1973
INITIALS CODE
HK 420

Dear Mr. Winslow:

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,

Harold Kirkemo

Harold Kirkemo
Chief, Office of
Minerals Exploration

Copy to R-IV

Form MME 63
(May 1970)

REQUEST FOR INFORMATION ON CERTIFIED PROJECT OR PROJECT UNDER ROYALTY AGREEMENT

1. Since March 8, 1972, 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 ☑

Has any interest been acquired since March 8, 1972 in the land within 1,500 feet of the land described in the contract? (See Item 1 "Special Agreement concerning Land" on page 2 of Annex 1 of the Contract).

2. Since March 8, 1972, 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.

Purchaser *(name and address)*	Quantity	Value

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

Type	Quantity *(tons)*	Estimated Grade	Location
Ore			
Concentrates			
Other			

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

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

Disposition of Material	Quantity	Value

Submitted by:

Name K R Wanlass	*Title* Manager of Mines
Address The New Jersey Zinc Company Jefferson City, Tennessee 37760	*Date* March 6, 1973

United States Department of the Interior

GEOLOGICAL SURVEY
WASHINGTON, D.C. 20242

IN REPLY REFER TO: Office of Minerals Exploration

February 28, 1972

Mr. K. R. Winslow
Divisional Manager of Mines
The New Jersey Zinc Company
Jefferson City, Tennessee 37760

Re: DMEA-4850 (Zinc)
The New Jersey Zinc Company
Little War Creek Area
Hancock County, Tennessee
Contract Idm-E1174

MAR 13 1972
130
120
220

Dear Mr. Winslow:

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,

Harold Kirkemo

Harold Kirkemo
Chief, Office of
Minerals Exploration

Form MME 63
(May 1970)

REQUEST FOR INFORMATION ON CERTIFIED PROJECT OR PROJECT UNDER ROYALTY AGREEMENT

1. Since March 8, 1971, 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 ☑

Has any interest in the land within 1,500 feet of the land described in the contract been acquired since March 8, 1971? (See Item 1 "Special Agreement Concerning Land" on page 2 of Annex I of the contract). Yes/ / No/✓/

2. Since March 8, 1971, 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.

Purchaser *(name and address)*	Quantity	Value

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

Type	Quantity *(tons)*	Estimated Grade	Location
Ore			
Concentrates			
Other			

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

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

Disposition of Material	Quantity	Value

Submitted by:

Name	*Title*
K. R. Winslow	Manager of Mines
Address The New Jersey Zinc Company Jefferson City, Tennessee	*Date* March 8, 1972

United States Department of the Interior

GEOLOGICAL SURVEY
WASHINGTON, D.C. 20242

IN REPLY REFER TO: Office of Minerals Exploration

February 26, 1971

OFFICIAL COPY
O. M. E.
RECEIVED
MAR 12 1971

INITIALS	CODE
gfa	1 20
HK	1 20
	220

Mr. K. R. Winslow
Divisional Manager of Mines
The New Jersey Zinc Company
Jefferson City, Tennessee 37760

Re: DMEA-4850 (Zinc)
The New Jersey Zinc Company
Little War Creek Area
Hancock County, Tennessee
Contract Idm-E1174

Dear Mr. Winslow:

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,

Harold Kirkemo

Harold Kirkemo
Chief, Office of
Minerals Exploration

copy to R-IV

Form MME 63
(May 1970)

REQUEST FOR INFORMATION ON CERTIFIED PROJECT OR PROJECT UNDER ROYALTY AGREEMENT

1. Since March 6, 1970, 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 ☑

Has any interest in the land within 1,500 feet of the land described in the contract been acquired since March 1970? (See Item 1 "Special Agreement Concerning Land" on page 2 of Annex I of the contract). Yes ☐ No ☑

2. Since March 6, 1970, 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.

Purchaser *(name and address)*	Quantity	Value

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

Type	Quantity *(tons)*	Estimated Grade	Location
Ore			
Concentrates			
Other			

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

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

Disposition of Material	Quantity	Value

Submitted by:

Name	*Title*
K. R. Winslow	Manager of Mines
Address	*Date*
Jefferson City, Tennessee	March 8, 1971

IN REPLY REFER TO:
Office of Minerals Exploration

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON, D.C. 20242

February 26, 1970

Mr. K. R. Winslow
Division Manager of Mines
The New Jersey Zinc Company
Jefferson City, Tennessee 37760

Re: DMEA-4850 (Zinc)
The New Jersey Zinc Company
Little War Creek Area
Hancock County, Tennessee
Contract Idm-E1174

Dear Mr. Winslow:

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,

Harold Kirkemo

Harold Kirkemo
Chief, Office of
Minerals Exploration

OFFICIAL
COPY
O. M. E.
RECEIVED
MAR 9 1970

INITIALS	CODE
Jla /	320
HK /	120
	220

MME Form 63
Revised 7-65

REQUEST FOR INFORMATION ON CERTIFIED PROJECT AND PROJECT UNDER ROYALTY AGREEMENT

1. Since February 21, 1969, 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 [X]
   Has any interest in the land within 1,500 feet of the land described in the contract been acquired since February 1969? (See Item 1 "Special Agreement Concerning Land" on page 2 of Annex I of the contract). Yes [ ] No [X]

2. Since February 21, 1969, has there been any production including limestone & dolomite products from the land subject to the contract? Yes [ ] No [X]

   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 [X]

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

Disposition of Material	Quantity	Value

Submitted by: K R Winslow

Name K. R. Winslow Title Divisional Manager of Mines

Address Jefferson City, Tenn. Date March 6, 1970

Excerpt from Robert A. Laurence's memorandum to Harold Kirkemo, Chief, Office of Minerals Exploration, dated August 7, 1969.

Copy of the Form MME-63, addressed to Johnson Crawford, New Jersey Zinc Company . . . has been received.

Mr. Crawford is retiring in a few months, and is currently convalescing from a severe illness. He has been succeeded at Jefferson City by K. R. Winslow, whose title is Division Manager of Mines. All correspondence concerning DMEA contracts with New Jersey Zinc Company in Tennessee should now be addressed to Mr. Winslow.

DMEA-4850

IN REPLY REFER TO:
Office of Minerals Exploration

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON, D.C. 20242

February 18, 1969

The New Jersey Zinc Company

Jefferson City, Tennessee 37760

Re: DMEA-4850 (Zinc)
The New Jersey Zinc Company
Little War Creek Area
Hancock County, Tennessee
Contract Idm-E1174

Gentlemen:

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,

Frank E. Johnson
Chief, Office of
Minerals Exploration

OFFICIAL COPY
O. M. E.
RECEIVED
FEB 24 1969

INITIALS	CODE
	136
	140
	220

MME Form 63
Revised 7-65

REQUEST FOR INFORMATION ON CERTIFIED PROJECT AND PROJECT UNDER ROYALTY AGREEMENT

1. Since ~~Since~~ February 21, 1968, 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 ☑
   Has any interest in the land within 1,500 feet of the land described in the contract been acquired since February 1968? (See Item 1 "Special Agreement Concerning Land" on page 2 of Annex I of the contract). Yes ☐ No ☑

2. Since February 21, 1968, 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 ☑

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

Disposition of Material	Quantity	Value

Submitted by:

Name Johnson Crawford Title Manager - Tennessee Operations The New Jersey Zinc Co.

Address Jefferson City, Tennessee 37760 Date February 21, 1969

IN REPLY REFER TO:
Office of Minerals Exploration

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON, D.C. 20242

February 15, 1968

The New Jersey Zinc Company

Jefferson City, Tennessee

Re: DMEA-4850 (Zinc)
The New Jersey Zinc Company
Little War Creek Area
Hancock County, Tennessee
Contract Idm-E1174

CAPITOL COPY
D. M. E.
RECEIVED
FEB 23 1968
29HL
120

Gentlemen:

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,

Frank E. Johnson

Frank E. Johnson
Chief, Office of
Minerals Exploration

Copy to R-IV

MME Form 63
Revised 7-65

REQUEST FOR INFORMATION ON CERTIFIED PROJECT AND PROJECT UNDER ROYALTY AGREEMENT

1. Since February 1967, 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 [✓]

   Has any interest in the land within 1,500 feet of the land described in the contract been acquired since April 1966? (See Item 1 "Special Agreement Concerning Land" on page 2 of Annex I of the contract). Yes [ ] No [✓]

2. Since February 1967, 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 [✓]

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

Disposition of Material	Quantity	Value

Submitted by:

Name Johnson Crawford Title Manager- Tennessee Operations The New Jersey Zinc Co

Address Jefferson City, Tennessee Date February 21, 1968

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

February 16, 1967

The New Jersey Zinc Company

Jefferson City, Tennessee

Re: DMEA-4850 (Zinc)
The New Jersey Zinc Co.
Little War Creek Area
Hancock County, Tennessee
Contract Idm-E1174

OFFICIAL COPY
C. N. E.
RECEIVED
FEB 23 1967

INITIALS	CODE
2/23	120
FEJ	110
	220

Gentlemen:

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,

Frank E. Johnson

Frank E. Johnson
Chief, Office of
Minerals Exploration

MME Form 63
Revised 3-62

REQUEST FOR INFORMATION ON CERTIFIED PROJECT AND PROJECT UNDER ROYALTY AGREEMENT

1. Since April 1966, 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 ☑
   Has any interest in the land within 1,500 feet of the land described in the contract been acquired since April 1966? (See Item 1 "Special Agreement Concerning Land" on Page 2 of Annex I of the contract). Yes/__/No/✓

2. Since April 1966, has there been any production including limestone & dolomite products 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 Item 1 of contract)? Yes ☐ No ☑

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

Disposition of Material	Quantity	Value

Submitted by:

Name Johnson Crawford Title Manager - Tennessee Operations
Address Jefferson City, Tennessee Date February 21, 1967
The New Jersey Zinc Company

4511

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON, D.C. 20242

April 1, 1966

The New Jersey Zinc Company

Jefferson City, Tennessee

OFFICIAL COPY
M. E.
RECEIVED
APR 11 1966
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220

Re: DMEA-4850 (Zinc)
The New Jersey Zinc Co.
Little War Creek Area
Hancock County, Tennessee
Contract Idm-E1174

Gentlemen:

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,

Frank E. Johnson

Frank E. Johnson
Chief, Office of
Minerals Exploration

MME Form 63
Revised 7-65

DMEA-4850
Idm-E1174

REQUEST FOR INFORMATION ON CERTIFIED PROJECT AND PROJECT UNDER ROYALTY AGREEMENT

1. Since **March 1965**, 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 [✓]

   Has any interest in the land within 1,500 feet of the land described in the contract been acquired since March 1965? (See Item 1 "Special Agreement Concerning Land" on Page 2 of Annex I of the contract). Yes/__/No/✓

2. Since **March 1965**, has there been any production **including limestone & dolomite products** 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 [✓]

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

Disposition of Material	Quantity	Value

Submitted by:

Name Johnson Crawford Title Manager - Tennessee Operations The New Jersey Zinc Company

Address Jefferson City, Tennessee Date April 7, 1966

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

March 9, 1965

Re: DMEA-4850 (Zinc)
The New Jersey Zinc Co.
Little War Creek Area
Hancock County, Tennessee
Contract Idm-E1174

The New Jersey Zinc Company

Jefferson City, Tennessee

Gentlemen:

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,

George C. Selfridge

George C. Selfridge, Chief
Division of Exploration Operations

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920

MME Form 63
Revised 3-62

DMEA-4650
Contract Idm E117

REQUEST FOR INFORMATION ON CERTIFIED PROJECT AND PROJECT UNDER ROYALTY AGREEMENT

1. Since July 1964, 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 ☑

   Has any land within 1,500 feet of the land in the contract been acquired? Yes ☐ No ☑

2. Since July 1964, has there been any production including limestone or dolomite 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 [illegible] Title Ch. Geol.

Address Jefferson City, Tenn. Date 3/29/65

4511

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

July 27, 1964

Re: DMEA-4850 (Zinc)
The New Jersey Zinc Co.
Little War Creek Area
Hancock County, Tennessee
Contract Idm-E1174

Mr. A. D. Heagland
Chief Geologist
The New Jersey Zinc Company
Jefferson City, Tennessee

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,

George C. Selfridge

George C. Selfridge, Chief
Division of Exploration Operations

OFFICIAL FILE COPY
O. M. E.
RECEIVED AUG 3 1964

DATE	INITIALS	CODE
8/3		800
		100
8/3		110
		120
		120
8/4		120M
		220

MME Form 63
Revised 3-62

REQUEST FOR INFORMATION ON CERTIFIED PROJECT AND PROJECT UNDER ROYALTY AGREEMENT

1. Since October 1963, 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 October 1963, 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 [signature] Title Chief Geologist

Address The New Jersey Zinc Co. Date July 31, 1964
Jefferson City, Tenn.

4511

THE NEW JERSEY ZINC COMPANY
(ESTABLISHED 1848)
160 FRONT STREET
NEW YORK 38, N.Y.

NJZ

October 21, 1963

Mr. F. M. Murphy, Acting Chief
Division of Minerals
U.S. Department of the Interior
Office of Minerals Exploration
Washington 25, D. C.

Re: DMEA-4850
The New Jersey Zinc Company
Little War Creek Area
Hancock County, Tennessee
Contract Idm-E1174

Dear Mr. Murphy:

Enclosed please find two completed forms of "Request for Information" relating to the subject contract.

Very truly yours,

William H. Callahan /rms

William H. Callahan
Manager of Exploration

/rms
Encl.-2

OFFICIAL FILE COPY
O. M. E
RECEIVED OCT 22 1963

DATE	INITIALS	CODE
10/22		800
		100
10/23		110
~~10/23~~	~~[illegible]~~	~~500~~
		220

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

September 18, 1963

Re: DMEA-4850 (Zinc)
The New Jersey Zinc Co.
Little War Creek Area
Hancock County, Tennessee
Contract Idm-E1174

The New Jersey Zinc Co.
160 Front Street
New York 38, New York

Gentlemen:

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,

s/F. M. Murphy

F. M. Murphy, Acting Chief
Division of Minerals

MME Form 63
Revised 3-62

REQUEST FOR INFORMATION ON CERTIFIED PROJECT AND PROJECT UNDER ROYALTY AGREEMENT

1. Since **August 7, 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 **August 7, 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 [signature] Title **Chief Geologist - Tennessee**

Address **Jefferson City, Tennessee** Date **October 9, 1963**

4511

6G 24M 1-54

COPY

HE NEW JERSEY ZINC COMPANY

EXPLORATION DEPARTMENT

Official
~~EXTRA COPY~~
O. M. E
RECEIVED AUG 9 1962

8/10	Griswold	500
8/10	Murphy	500
		220

DMEA-4850

August 7, 1962

Mr. W. R. Griswold, Chief
Division of Minerals
Office of Minerals Exploration
United States Department of the Interior
Washington 25, D. C.

Dear Mr. Griswold:

Returned, herewith, are responses to your query of July 24th relative to

DMEA-4586 (Zinc)
Cedar Springs Area
Contract Idm-E-1071

and

DMEA-4850 (Zinc)
Little War Creek Area
Contract Idm-E-1174.

Yours very truly,

THE NEW JERSEY ZINC COMPANY

Johnson Crawford

Assistant Manager of Mines

A.D.Hoagland/jf
In duplicate

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

JUL 24 1962

Re: DMEA-4850 (Zinc)
The New Jersey Zinc Co.
Little War Creek Area
Hancock County, Tennessee
Contract Idm-E1174

The New Jersey Zinc Company
160 Front Street
New York 38, New York

Gentlemen:

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,

W. R. Griswold, Chief
Division of Minerals

MME Form 63
Revised 3-62

REQUEST FOR INFORMATION ON CERTIFIED PROJECT AND PROJECT UNDER ROYALTY AGREEMENT

1. Since December 6, 1960, 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 [x] No [ ]

See Attached Sheets

2. Since December 6, 1960, has there been any production from the land subject to the contract? Yes [ ] No [x]

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 [x]

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

Disposition of Material	Quantity	Value

Submitted by:

Name A. D. Hoagland Title Chief Geologist

Address Jefferson City, Tennessee Date August 7, 1962

4511

The following options listed in Annex 1 of the subject contract have been terminated and copies of termination notices are attached hereto:

(3) Mr. & Mrs. H. C. Livesay
(6) Mr. & Mrs. Dudley Dalton
(7) Mr. John Barnard

The following options listed in Annex 1 of the subject contract have been exercised and mineral and mining rights are owned by The New Jersey Zinc Company:

(1) Easter V. Wolfe Collins and husband Willie Collins (approx. 103 acres)

(2) James Brewer and wife Dolly Brewer (approx. 96 acres)

(5) W. M. Brewer and wife Tener Brewer (approx. 100 acres)

(8) Mack Tunmire et al, (approx. 20 acres)

(9) Mack Tunmire et al, (approx. 30 acres)

(10) Willis Tunmire and wife Pearl Tunmire (approx. 17 acres)

(11) Lewis Tunmire and wife Maggie Tunmire (approx. 136 acres)

Copy

Mailed 2-17-62

Mr. and Mrs. H. C. Livesay
R. F. D. Treadway, Tennessee

Re: Prospecting and Option Agreement,
Dated March 28, 1956

Dear Mr. and Mrs. Livesay:

Pursuant to Paragraph 6 of the above agreement, we hereby terminate the said agreement effective immediately.

Thank you for your cooperation and interest in our program. We regret that our investigation of your property was not sufficiently encouraging to warrant our proceeding further.

Very truly yours,

Vice President

LGM:cp

bc: Mr. Johnson Crawford ✓
Secretary's Department

3/17/62

Mr. & Mrs. Dudley Dalton
Thorn Hill
Hancock County, Tennessee

Re: Prospecting and Option Agreement
Dated April 10, 1957

Dear Mr. & Mrs. Dalton:

Pursuant to Paragraph 6 of the above agreement, we hereby terminate the said agreement effective immediately.

Thank you for your cooperation and interest in our program. We regret that our investigation of your property was not sufficiently encouraging to warrant our proceeding further.

Very truly yours,

(Sgd.) S. S. Goodwin

Vice President

LGM:cp

bc: Messrs. J. Crawford
B. S. Catlett
Secretary's Department
Legal Department

3/17/62

Mr. John Barnard
R.F.D., Thorn Hill
Hancock, Tennessee

Re: Prospecting and Option Agreement
Dated April 10, 1957

Dear Mr. Barnard:

Pursuant to Paragraph 6 of the above agreement, we hereby terminate the said agreement effective immediately.

Thank you for your cooperation and interest in our program. We regret that our investigation of your property was not sufficiently encouraging to warrant our proceeding further.

Very truly yours,

(Sgd.) S. S. Goodwin

Vice President

LGM:cp

bc: Messrs. J. Crawford
B. S. Catlett
Secretary's Department
Legal Department

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
6/8		120
8/8		100
		220

JUN 8 1962

Memorandum

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

From: Chief, Division of Field Operations, OME

Subject: DMEA-4850 (Zinc)
The New Jersey Zinc Company
Little War Creek Area
Hancock County, Tennessee
Contract Idm-E1174

Enclosed for your files is the original of a Report of Royalty Review on the subject contract.

George C. Selfridge (RL)

Enclosure

G.C.Selfridge/bih (6-8-62)

cc to: Docket
Dir. reading file
CA & A Division
G. S. Selfridge
R. A. Laurence, USGS, Reg. IV, w/cy of Report of Royalty Review dtd 6/8/62 & orig. cy of memo dtd 6/8/62 to Chief, Div. of Field Operations from CA&A Division.
Avery Reed, USBM, Reg. IV, w/cy of ea. item sent to Mr. Laurence.

43683

E Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
		220

JUN 8 1962

Memorandum

To: Chief, Division of Field Operations

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

Subject: OMEA-4850 (Zinc)
The New Jersey Zinc Company
Little War Creek Area
Hancock County, Tennessee
Contract Idm-S1174

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 Administrative Services, 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 6-8-62

cc:
Docket
Director's Reading File
CA & A Division
Mr. Rothrock

43683

Mr. Delfridge
1/24/61

ORE RESERVE CHANGES

as of December 31, 1960

Change	Docket and Contr. No.	Operator	Reserves
Revision	4092/1085	Shasta Min.& Chem.Co.	191,111 ST - 2.8% Cu, 2.3% Zn, 1.3 oz. Ag, 0.02 oz. Au.
Revision	42/9	Taylor-Knapp Co.	291,609 LT - 22.68% Mn 122,900 ST - 6.5% Zn, 4.0 oz. Ag.
Certification	4967/1234	Roland F. Beers, Inc.	1,200,000 ST - 0.60% Ni, 0.1% Co, 0.26% Cu.
Certification	4[illegible]/[illegible]	Amer.Zinc Co. of Tenn.	11,361,735 ST - 4.[illegible]% Zn.
Certification	4850/1174	N. J. Zinc Co.	481,491 ST - 6.[illegible]% Zn.

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
12/21	[illegible]	120
12/21	Hart	124
	Friend	500
		220

Memorandum

DEC 21 1960

To: Mr. Robert A. Laurence
U. S. Geological Survey
Room 11, Post Office Building
Knoxville 2, Tennessee

From: Chief, Division of Field Operations

Subject: Records for Region IV, OME Knoxville official file
DMEA-4850 (Zinc)
The New Jersey Zinc Company
Little War Creek Area - Sector II
Hancock County, Tennessee
Contract Idm-E1174

Attached are a Report of Review with original transmittal memorandum of November 16, 1960, a copy of the Operator's final voucher with narrative for May 1960, a copy of a memorandum dated November 22, 1960, to the Chief, Fiscal Section, Division of Administrative Services, Office of the Secretary, approving payment of the final voucher, and a copy of a letter dated November 22, 1960, to the Operator from the Chief, Division of Field Operations.

/s/ George C. Selfridge (GCS)

Attachments

GCSelfridge/hb (12/20/60)
Copy to: Docket DMEA-4850
Director's Reading File
CA&A Division
G. C. Selfridge
Chron (500)

43683

Docket copy

Murphy
Friemel

PROJECT SUMMARY REPORT

By: F. M. Murphy November 30, 1960

1. Docket DMEA-4850 (Zinc)
Contract Idm-E1174

Operator - The New Jersey Zinc Company
160 Front Street
New York 38, New York

Operator's Property Rights - in Hancock County, east Tennessee.

Property	Acres	How Controlled
M. C. Tunmire, et al.	20	N.J.Z. Co. fee
" " " " "	30	Mining and Mineral Rights
Easter Collins	103	"
Lewis Tunmire	124	"
James Brewer	96	"
Willis Tunmire	17	"
H. C. Livesay	100	Option contract
H. C. Bowlin	135	"
W. M. Brewer	100	"
Dudley Dalton	96	"
John Barnard	240	"
Total approximate acreage	1,061	

2. Contract dated February 26, 1958.

Special Agreements include Operator's right to delete land; minerals include limestone and dolomite products produced in processing ore; and establish the royalty period at 30 years.

Amendments -

No. 1, September 1, 1959, extends completion date to June 1, 1960, and increases royalty period to 31 years; also, contains pseudo-certification if work is not completed.

No. 2, September 29, 1960, allows drilling of inclined holes at less than 100 feet from existing holes with prior Government approval.

Work under the contract started in April 1958 and was completed in May 1960.

Final Reports -

Operator's received in Washington November 14, 1960. It is considered acceptable as fulfilling the requirements of a final report in accordance with Article 7(c) of the contract.

Field's final report - not received to date.

Work Authorized -

Estimated total cost $106,780.00

Work Completed -

Category (1) Independent Contract drilling:

Units		Unit Cost	Total
5,071'	Overburden, NX, BX	$2.85 (Av.)	$ 14,452.50
29,788'	AX	2.75 (Max.)	81,917.00
28'	EX	2.50 (Max.)	70.00
113'	AX (Over 1000' deep)	3.00 (Max.)	339.00
35,000'			$ 96,778.50
97	samples assayed for Zn @ $1.00/s		97.00
600	core boxes @ $1.55/ea.		930.00
35,000'	incidental drilling allowance @ $0.22/ft.		7,700.00
	Total Accepted Cost		$105,505.50

3. Audit Report of Review, dated November 16, 1960

Total cost billed by Operator	$106,652.60	
Exceptions	1,147.10	1/
Total acceptable cost	$105,505.50	
Government participation @ 50%	$ 52,752.75	

1/ disallowances based on average drilling costs and extra drilling items listed by Operator not covered by the contract.

4. Certification dated December 6, 1960.

5. Factual data relating to the project:

The Little War Creek area explored under this contract lies in the Copper Ridge zinc district of east Tennessee about three miles southwest of Treadway where the Operator is now

producing from the Flat Gap mine.

The area is underlain by Ordovician Chickamauga limestone and the Mascot, Kingsport, and Longview dolomite formations. The potential zinc (sphalerite) bearing horizons are in the Kingsport formation which is divided into an upper and lower member at the top of the "R" bed of coarse crystalline dolomite which may be brecciated. The upper member averages 130 feet in thickness and the lower 113 feet.

Prior to the contract, 1952 to 1954, the Operator drilled 33 holes in the area, four of which encountered ore (the equivalent of a 15-foot thickness containing 3% zinc or better). Under the contract, 53 holes were drilled; seven of these encountered ore deposits in two area. One on the M. C. Tunmire and James Brewer properties is estimated to contain 207,833 tons averaging 7.01% Zn and the other, on the Lewis Tunmire and W. M. Brewer properties, 273,658 tons averaging 6.7% Zn. These two deposits are separated by a distance of 4,000 feet along strike and about 140 feet stratigraphically. Drilling to date on relatively wide-spaced fences has failed to confirm the continuity or minable size of these deposits. The Operator states that additional drilling on closely-spaced centers would prove whether or not these are two separate ore bodies or part of a more or less sinuous body.

The Operator did not submit an estimate of the ore reserves discovered because of the lack of proof of continuity. The above tonnage and grade estimates were made by the writer.

F M Murphy

F. M. Murphy

FMMurphy/gla
Copies: Docket
Director's Reading File
Mr. Johnson
Mr. Murphy
Chron

orm 17
59

OFFICE OF MINERALS EXPLORATION

WORK COMPLETED ANALYSIS

X Certified — After final audit or review report is received, prepare in duplicate. File original in official docket. Send copy to Code 210.

Operator: The New Jersey Zinc Co.

Actual Cost: X

State: Tennessee

Agreed Unit Cost:

Final Report of Audit:

Commodity: Zinc

Docket No.: DMEA-4850

Final Report of Review: 11/16/60

Contract No.: Idm-E1174

Type of Work (Use these categories only)	Authorized by Contract and Amendments		Completed and Paid for		Net cost after sale of Gov't. Property
	Units	Cost 1/	Units	Cost 1/	
Drifting & Crosscutting					
Raising					
Shafts					
Winzes					
Core Drilling (Specify)	35000	104480			104478.50
Surface Excavation					
Underground Excavation					
Roads and Trails					
Operating Equipment Purchased					
Surface Rehabilitation & Repairs					
Underground Rehabilitation					
New Building, Improvements, etc. 97 Assays for Zn		100.00			97.00
Other (Specify) 600 Core boxes		930.00			930.00
Totals		$105,510.00			2/ 105,505.50

1/ Round off to dollars.
2/ Net cost total must agree with final report of audit or review.

Prepared by J. M. Moyseley Date 11/30/60

52616

Form 18
60

OFFICE OF MINERALS EXPLORATION

ANALYSIS ~~OF ANNUAL REPORT~~
OF CERTIFIED PROJECT OR PROJECT UNDER ROYALTY AGREEMENT

Division of Minerals prepares in duplicate, files original in official docket, and sends copy -

To: (1) Code 110 (for verification or adjustment)
(2) Code 210

Report ~~Period~~ 11/30/60

Docket No.	Operator	Contract No.
DMEA-4830	The New Jersey Zinc Co	Idm-E1174

ORE ESTIMATES 1/	Original DMEA or OME (From Final Report)	Revised DMEA or OME	Found by Operator after DMEA-OME work
Analysis	6.8% zinc		
Tons Found		481,491	
Tons Produced (Ore or Concentrate)			
Previously Reported			
This Period			
Tons Remaining		481,491	

Comments of Analyst:

Widely-spaced fences prohibit the calculation of a good ore reserve estimate.

The above estimate covers two seperate ore bodies about 4000 feet apart on strike and about 140 feet stratigraphically. Additional drilling will be required to ascertain if these are actually two ore bodies or part of one sinuous ore body.

Prepared by [signature] Date 11/30/60

82444-60

ME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
11/30	Murphy	500
	[illegible]	500
	Dolan	140
	[illegible]	140
	[illegible]	
12/5	Talbert	800
12/6	Selfridge	130
		~~110~~
12-6	gad	220
		500

DEC 6 1960

Mr. S. S. Goodwin
Vice President
The New Jersey Zinc Company
160 Front Street
New York 38, New York

Re: DMEA-4850 (Zinc)
The New Jersey Zinc Company
Little War Creek Area - Sector II
Hancock County, Tennessee
Contract Idm-E1174

Dear Mr. Goodwin:

Enclosed is a certification of discovery or development that covers all the land described in Article 2 of the contract.

By the terms of the Exploration Project Contract, as amended, and the certification, all minerals mined or produced from February 26, 1958, to February 26, 1989, are subject to the Government's percentage royalty as set forth in the contract until the sum of $52,752.75 is repaid to the Government.

Royalty payments should be made to the Field Officer, OME, Region IV, Room 11, Post Office Building, Knoxville 2, Tennessee, by the purchaser, with checks drawn payable to the Office of Minerals Exploration. The purchaser should be advised to deduct royalties from the amount due on each shipment and send the check directly to the Field Officer. Each check should be accompanied by suitable sales evidence - such as copies of settlement sheets - showing the name of the purchaser, the quantity and grade of the products sold, and the price and charges, certified to be correct by the purchaser.

You are requested to notify the Field Officer of any changes in ownership or production rights that may have any effect on the Government's right to its percentage royalty. Your attention is called particularly to Article 2(d) of the contract relating to the preservation of the Government's right to a percentage royalty on production. Also when production starts, please notify the Field Officer. Thereafter, if production ceases for any extended period, please notify him accordingly at six-month intervals.

FMMurphy/gla 11-30-60

Sincerely yours,

Frank E. Johnson (for)

Acting Director

RECEIVED
DEC 2 1960
ASSIST. SOLICITOR
MINERAL RESOURCES

cc to: Director's Reading File
Frank E. Johnson
Review Committee
Docket
Contract Division
Region IV
Code 500
Enclosure
Harold Kirkemo, USGS
Chron

43683

ME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
11/30	Murphy	500
	[illegible]	500
	Dolan	140
	McPhilbney	140
	[illegible]	
12/5	Talbert	800
12/6	Selfridge	130 ✓
		~~110~~
12-6	gad	220

500

DEC 6 1960

Mr. Clarence A. Fredell
Director, Technical Research and
Development Division
Defense Materials Service
General Services Administration
6018 GSA Building
Washington 25, D. C.

Re: DMEA-4850 (Zinc)
The New Jersey Zinc Company
Little War Creek Area - Sector II
Hancock County, Tennessee
Contract Idm-R1174

Dear Mr. Fredell:

I am enclosing one copy of a certification of discovery or development relating to the subject exploration contract.

The contract, dated February 26, 1958, covered an exploration project estimated to cost $106,780.00, with Government participation amounting to $53,390.00. Total accepted costs of the project were $105,505.50, of which the Government paid $52,752.75.

The project work covered eleven tracts of land aggregating 1061 acres in the Copper Ridge zinc district of eastern Tennessee. The area lies about three miles southwest of Treadway where the Flat Gap mine is located. Work completed consisted of core drilling 53 holes, aggregating 35,000 feet, on widely-spaced fences. Two ore deposits separated by a distance of 4,000 feet on strike and about 140 feet stratigraphically were penetrated. Since the drill fences were so widely spaced, it is not known whether or not these are two separate ore bodies or part of a more or less sinuous body. The one on the M. C. Tunmire and James Brewer tracts is estimated to contain 207,833 tons averaging 7.01 percent zinc, and the other, on the Lewis Tunmire and W. M. Brewer tracts, 273,658 tons averaging 6.7 percent zinc.

FMMurphy/gla 11-30-60
cc to: Director's Reading File
Frank E. Johnson
Review Committee
Harold Kirkemo, USGS
Region IV
Docket
Code 500
Enclosure

Sincerely yours,

Frank E. Johnson (for)

Acting Director

RECEIVED
DEC 2 1960
ASST. SOLICITOR
MINERAL RESOURCES

43683

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
11/16	Houk	124
11/16	GCS	120
11-22	gad	220

NOV 22 1960

Mr. Johnson Crawford
General Superintendent
The New Jersey Zinc Company
Jefferson City, Tennessee

Re: DMEA-4850 (Zinc)
The New Jersey Zinc Company
Little War Creek Area - Sector II
Hancock County, Tennessee
Contract Idm-E1174

Dear Mr. Crawford:

Enclosed for your information is a copy of a Report of Review on the project costs under the subject contract. The balance due of $1404.26 will be paid shortly.

Sincerely yours,

George C. Selfridge (fw)

Chief, Division of Field Operations

Enclosure

LGHouk/fw-11/15/60

cc: Docket
Director's Read. File
CA&A Division
Reg. IV (2)
Fiscal Section, Div. Admin. Services
Mr. Houk
~~Mr. Selfridge~~
Chron.

43683

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
11/16	Houk	124
11/16	GCS	120
11-22	gad	220

NOV 22 1960

Memorandum

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

From: Chief, Division of Field Operations

Subject: DMRA-4850 (Zinc)
The New Jersey Zinc Company
Little War Creek Area - Sector II
Hancock County, Tennessee
Contract Idm-E1174

Attached is the original of a Report of Review by the Contract Administration and Audit Division, OME, on the above-noted project in which we concur. The original (with supporting documents) and two copies of the May 1960 voucher are attached.

The indicated balance due the Operator may be paid.

Charles G. Selfridge (fw)

Attachments

LGHouk/fw-11/15/60
cc: Docket
Director's Read.File
CA&A Division
Reg. IV (2)
Mr. Houk
~~Mr. Selfridge~~
Chron.

43683

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
11-16	gad	220
		120
11/16	Hank	

NOV 16 1960

Memorandum

To: Chief, Division of Field Operations

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

Subject: DMEA-4850 (Zinc)
The New Jersey Zinc Company
Little War Creek Area
Hancock County, Tennessee
Contract Idm-E1174

As requested by your November 15 memorandum, a Report of Review in lieu of a final audit of the subject contract has been prepared. The original and two copies are attached.

If you concur in the facts as stated in this Report of Review, distribution should be made in accordance with section 4 of OME Circular 2, dated February 17, 1960. If for any reason you do not concur, please return the original and both copies to this Division with your comments.

It is to be noted that the total amount paid to date to the Operator under this contract is $51,348.49 and not $47,409.01 as stated in your memorandum.

Attachments

EDTalbert/ama
November 16, 1960

Copy to: Docket
Director's Reading File
CA & A Division
Mr. Rothrock

43683

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
	Houk	124
11/15	GCS	120
		220

NOV 15 1960

Memorandum

To: Contract Administration and Audit Division

From: Chief, Division of Field Operations

Subject: Request for Report of Review
DMEA-4850 (Zinc)
The New Jersey Zinc Company
Little War Creek Area - Sector II
Hancock County, Tennessee
Contract Idm-E1174

Work was completed on May 20, 1960.

The following units of work were completed and are accepted:

(1) 55,375 feet of DD
(2) 600 core boxes
(3) 97 assays.

The Operator's final report was received on November 14, 1960, and it is acceptable.

The total amount paid to date is $47,409.01.

A Report of Review is in order and requested. The original and copies of the May (final) voucher with supporting documents previously furnished you are being held by the Division of Field Operations.

George C. Selfridge

Attachment

LGHouk/fw-11/15/60
cc: Docket
Director's Read.File
Region IV (2)
Mr. Houk
Mr. Selfridge
Chron.

43683

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
ROOM 11 POST OFFICE BLDG.
KNOXVILLE 2, TENN.

OFFICIAL FILE COPY
RECEIVED Nov. 14 1960

DATE		
11-14	gad	rvo
11-14		lvf
11/14		800
"	Griswold	500
	Murphy	

November 10, 1960

Memorandum

To: Mr. George C. Selfridge, Chief
Division of Field Operations, OME, Washington, D. C.

From: Robert A. Laurence

Subject: Final Report, DMEA-4850, Contract No. Idm-E1174 (Zinc)
The New Jersey Zinc Company, Jefferson City, Tennessee
Little War Creek Area, Hancock County, Tennessee

Enclosed are three copies of final report on the Little War Creek project, Hancock County, Tennessee, DMEA Contract Idm-E 1174, and original and two copies of their transmittal letter.

(See separate red-bound folder marked "1-A")

Robert A. Laurence

Robert A. Laurence

(See separate bound folder)

OPERATOR'S FINAL REPORT

THE NEW JERSEY ZINC COMPANY
(ESTABLISHED 1848)
160 FRONT STREET
NEW YORK 38, N.Y.

CABLE ADDRESS
"JERSEZINC"

OFFICIAL FILE COPY
O. M. E.
RECEIVED NOV 14 1960

DATE	INITIALS	CODE

HORSE HEAD PRODUCTS ®

PLEASE ADDRESS REPLY TO

Jefferson City, Tennessee

November 9, 1960

Mr. L. G. Houk, Field Officer
O.M.E., Region IV
Room 11, Post Office Building
Knoxville 2, Tennessee

Dear Mr. Houk:

Enclosed, herewith, are five copies of final report on the Little War Creek Project, Hancock County, Tennessee, DMEA Contract Idm-E-1174.

This report was prepared by Mr. F. T. Fischer and presents a complete and concise factual record of the results of the work accomplished on the project.

Very truly yours,

THE NEW JERSEY ZINC COMPANY

Johnson Crawford

Assistant Manager of Mines

A.D.Hoagland/jf
In Quintuplicate

RECEIVED
NOV 10 1960
U. S. Geological Survey
Geologic Division
Knoxville, Tenn.

OFFICIAL FILE COPY
O. M. E.
RECEIVED OCT 3 1960

DATE	INIT.	
10-3	gad	VVO
	EEF	800
10-3	Murphy	500

REGION IV

SEP 30 1960

Mr. Johnson Crawford
General Superintendent
The New Jersey Zinc Company
Jefferson City, Tennessee

Re: DMEA-4350 (Zinc)
The New Jersey Zinc Company
Little War Creek Area - Sector II
Hancock County, Tennessee
Contract Idm-E1174

Dear Mr. Crawford:

Reference is made to your letter of June 20, 1960, enclosing the final voucher (May 1960) on the subject contract and stating the final operator's report is in preparation. We shall be pleased to receive this report as soon as practicable.

Sincerely yours,

Lawrence G. Houk

Lawrence G. Houk
Acting Field Officer
Region IV

LGHouk/fw-9/28/60

cc: OME Washington Office (2)
Reg. IV (2)
Chron-Mr. Houk

124

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
ROOM 1, POST OFFICE BLDG.
KNOXVILLE 2, TENNESSEE

OFFICIAL FILE COPY
O. M. E.
RECEIVED SEP 15 1960

DATE	INITIALS	CODE
	Houk	124

September 13, 1960

Memorandum

To: L. G. Houk, Acting Field Officer, Region IV

From: V. J. Lynch, Knoxville, Tennessee

Subject: DMEA-4850, Idm-E1174 (zinc) The New Jersey Zinc Co. Little War Creek Area, Hancock County, Tennessee Documented costs for 600 core boxes.

Attached is the original and one copy of supporting documentation for total costs for 97 assays and 600 core boxes as claimed on the final (May 1960) MF-104 for the subject project, as requested in your memorandum to Mr. Johnson Crawford on August 8, 1960.

V. J. Lynch

V. J. Lynch

124

OFFICIAL FILE COPY
O. M. E.
RECEIVED AUG 10 1960

DATE	INITIALS	CODE
8-10	gad	VVO
		800
		500

Room 11, Post Office Bldg.,
Knoxville 2, Tennessee

AUG 8 1960

Mr. Johnson Crawford
Assistant Manager of Mines
New Jersey Zinc Company
Jefferson City, Tennessee

Re: [illegible]-4850 (Zinc)
New Jersey Zinc Company
Little War Creek Area
Hamblen County, Tennessee
Contract Idm-21174

Dear Mr. Crawford:

The total costs claimed on the final (May 1960) [illegible]-104 include unsompensated costs of $1,177.00 for 97 assays and 600 core boxes. The contract provides for Government contribution to the actual costs of these items, but not in excess of $1.00 for each sample assayed and $1.50 for each core box purchased. Thus, these items require support by original documentation (Inter-Departmental memoranda, invoices, assay reports, etc.) or certified copies thereof. In order to avoid an audit disallowance of these costs, it is suggested that the supporting documentation be submitted.

Sincerely yours,

Lawrence G. Houk

Lawrence G. Houk
Acting Field Officer
Region IV

LGHouk/gla
8-5-60
cc to: Region IV (2)
Washington Office
CAAA Division
Mr. Lawrence
Mr. Wedow
Chron

FOWARDED BY LYNCH 8-8960

OFFICIAL FILE COPY
O. M. E.
RECEIVED AUG 5 1960

DATE	INIT.	
8-5	gad	200
8/8	[illegible]	800
		500

AUG 5 1960

Memorandum

To: Mr. Victor Lynch, Region IV

From: Lawrence G. Houk, Acting Field Officer, Region IV

Subject: Documentation of costs

DWEA-4850
E-1174

Attached is a copy of a self-explanatory memorandum from the Division of Contract Administration and Audit, and a prepared letter to the New Jersey Zinc Company which should be forwarded if the documents are not in Knoxville.

Lawrence G. Houk

LGHouk/gla
Attachments
cc to: Washington Office
CA&A Division
Mr. Lawrence
Mr. Wedow
Chron

ME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
8/3	Selfridge	120
8-3	gad	220
	~~Murphy~~	~~500~~

AUG 3 1960

Memorandum

To: Acting Field Officer, Region IV

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

Subject: DMEA-4850 (Zinc)
The New Jersey Zinc Company
Little War Creek Area
Hancock County, Tennessee
Contract Idm-E1174

An audit review, preliminary to the preparation of a Report of Review on the subject contract, has disclosed that the total of $106,652.60 claimed on the final (May 1960) MF-104 includes $1,177.00 in undocumented costs. These undocumented costs are:

97 Assays	@ $1.00	$ 97.00
600 Core boxes	@ 1.80	1,080.00

The contract provides for contribution by the Government on the basis of actual costs at not to exceed the unit costs of $1.00 for each sample assayed and $1.80 for each core box purchased. In accordance with the instructions on the reverse of the Operator's Monthly Report and Voucher, Form MF-104 (Rev.) these items must be supported by original documentation (priced assay reports and invoices) or certified copies thereof.

It is suggested that you advise the Operator of this requirement in order that he may furnish the required documentation and thereby avoid a disallowance in the settlement of the account.

EDTalbert/ama
August 3, 1960

Copy to: Docket
Director's Reading File
CA & A Division
Mr. Talbert
Mr. Rothrock

43683

124

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
ROOM 1, POST OFFICE BLDG.
KNOXVILLE 2, TENNESSEE

June 22, 1960

Memorandum

To: L. G. Houk, Acting Field Officer, Region IV

From: V. J. Lynch, Knoxville, Tennessee, OME

Subject: Operator's Monthly Report & Voucher (May 1960)
DMEA-4850, Idm-E1174, The New Jersey Zinc Co.
Little War Creek Area, Grainger County, Tennessee

Attached is the original and three copies of the subject voucher. This project was completed May 20, 1960. Government participation on this voucher is $1,969.74.

V. J. Lynch

JUN 24 1960
O.M.E.

THE NEW JERSEY ZINC COMPANY
(ESTABLISHED 1848)
CABLE ADDRESS
"JERSEZINC"
160 FRONT STREET
NEW YORK 38, N.Y.
HORSE HEAD PRODUCTS ®

PLEASE ADDRESS REPLY TO

Jefferson City, Tennessee
June 20, 1960

Mr. L. G. Houk, Field Officer
O.M.E. Region IV
Room 11, Post Office Building
Knoxville 2, Tennessee

Dear Mr. Houk:

Enclosed, herewith, are original and three copies of report for the month of May on DMEA project #4850, contract Idm-E-1174, Little War Creek Area, Tennessee. Drilling on this project was stopped with the completion of hole LW-106 which was bottomed on May 20, 1960. The provisions for drilling have been essentially fulfilled and no further exploration under the contract is planned. The final report on this project is in preparation.

Yours very truly,

THE NEW JERSEY ZINC COMPANY

Johnson Crawford

Assistant Manager of Mines

A.D.Hoagland/jf
In duplicate

RECEIVED
JUN 21 1960
U. S. Geological Survey
Geologic Division
Knoxville, Tenn.

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
ROOM 1, POST OFFICE BLDG.
KNOXVILLE 2, TENNESSEE

April 22, 1960

OFFICIAL FILE COPY
O. M. E.
RECEIVED APR 25 1960

DATE	INITIALS	CODE
4-25	gad	220
4/25		800
4-26	Murphy	500
		112

Memorandum

To: L. G. Houk, Acting Field Officer, OME - Washington

From: V. J. Lynch, U. S. Bureau of Mines, Knoxville, Tenn.

Subject: Monthly Report on DMEA-4850, Idm-E1174-Zinc (March 1960) The New Jersey Zinc Company.

Enclosed are the original and two copies of the subject monthly report. Government participation $1,848.31.

V. J. Lynch

zm

THE NEW JERSEY ZINC COMPANY
(ESTABLISHED 1848)
CABLE ADDRESS
"JERSEZINC"
160 FRONT STREET
NEW YORK 38, N.Y.

HORSE HEAD PRODUCTS ®

PLEASE ADDRESS REPLY TO

Jefferson City, Tennessee
April 20, 1960

Mr. L. G. Houk, Field Officer
O.M.E., Region IV
Room 11, Post Office Building
Knoxville 2, Tennessee

Dear Mr. Houk:

Enclosed, herewith, are original and three copies of report for the month of March on DMEA project # 4850, Contract Idm-E-1174, Little War Creek Area, Tennessee.

Yours very truly,

THE NEW JERSEY ZINC COMPANY

Johnson Crawford Cast

Assistant Manager of Mines

A.D.Hoagland/jf
In duplicate

RECEIVED
APR 21 1960
U. S. Geological Survey
Geologic Division
Knoxville, Tenn.

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
ROOM 11 POST OFFICE BLDG.
KNOXVILLE 2, TENN.

March 22, 1960

OFFICIAL FILE COPY
O. M. E.
RECEIVED MAR 24 1960

DATE	INITIALS	CODE
3/24	RCW	225
		[redacted]
3/24	Murphy	303

Mr. A. D. Hoagland
Chief Geologist
The New Jersey Zinc Company
Jefferson City, Tennessee

DMEA-4850, Idm-E1174-Zinc
The New Jersey Zinc Company
Little War Creek area
Grainger County, Tennessee

Dear Mr. Hoagland:

This will confirm approval given by telephone today to drill Hole No.101 as follows:

The hole will be located on the W. M. Brewer property about 130 feet down-dip from D. D. hole No.87. It will be drilled in a north-west direction and inclined -50°. The hole will extend to an inclined depth of about 790 feet.

The purpose of this hole is to explore the area between D.D. Hole Nos. 75 and 76. D.D. Hole No.75 penetrated 16 feet of 6% zinc mineralization and D.D. Hole No. 76 indicated about 65 feet of scattered zinc mineralization.

Sincerely yours,

V. J. Lynch, Acting
Executive Officer, OME
Region V

RAL/zm

cc:
Opr. Com-2
Lynch
Files

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
		120
		110
		225

Docket Dmea 4209

FEB 23 1960

Memorandum

To: Acting Associate Solicitor, Division of Mineral Resources

From: Acting Director, Office of Minerals Exploration

Subject: Docket No. DMEA-4209 (Zinc)
American Zinc Company of Tennessee
Strawberry Plains Area
Knox, Jefferson, and Grainger Counties, Tennessee
Contract No. Idm-2990

The attached memorandum is sent you for comment and surnaming.

The subject contract incorporates a SPECIAL AGREEMENT CONCERNING LAND which in part reads:

> "1. In the event the Operator at any time during the period expiring ten years from the date of this Contract acquires any interest, title, or equity in any lands contiguous to the premises described in this Contract, it is agreed that such contiguous lands shall thereupon become subject to the provisions of this Contract and the parties hereto shall promptly execute amendments to this Contract listing such contiguous lands as included in this Contract."

Webster's New International Dictionary, Second Edition, defines "contiguous":

> "In actual contact; touching; also, near, though not in contact; neighboring; adjoining; near in succession."

What is the Department's usual legal interpretation of the word "contiguous"?

The above-quoted part of the SPECIAL AGREEMENT CONCERNING LAND was designed especially to preclude operators who were exploring a long, relatively narrow outcrop zone of limestone formations containing zinc ore bodies from leapfrogging sections along the zone and then later closing the gaps with additional contracts, thereby limiting their possible royalty liabilities should any of the projects prove unsuccessful. One such case actually occurred, the land being between

8623

that of Contract Idm-E950 (Docket No. DMEA-4153, Kidson Area) and that of Contract Idm-E956 (Docket No. DMEA-4177, Independence Area). Instead of granting a third contract, DMEA allowed the project as an amendment to Contract No. Idm-E950.

The wording used in the subject contract appears in other contracts both prior and subsequent to the effective date of this contract, July 20, 1956. In some of the later contracts the only change that was made in the phrasing was to add the words "or any subsidiary thereof" after the word "Operator" in the first line of the paragraph.

Starting in mid-1957, the New Jersey Zinc Company requested that the SPECIAL AGREEMENT CONCERNING LAND be modified, pointing out that "contiguous" by definition is not necessarily limited to include contact, but may connote nearness or proximity, and suggested that the word "abutting" be substituted. It was here that the phrase "creeping contiguity" was coined. Additional history may be found in the correspondence from January 8 to March 7, 1958, in the accompanying docket DMEA-4850, the contract of which was the first to incorporate a revision of the SPECIAL AGREEMENT CONCERNING LAND which reads as follows:

> "1. In the event the Operator or any subsidiary thereof (whether wholly owned or otherwise), at any time during the period expiring ten years from the date of this contract acquires any interest, title, or equity (exclusive of agreements granting the rights to explore, purchase, or acquire leases) in or with respect to any land, including minerals therein, situate within 1500 feet of the land described in this contract, at the contract date and the right to make such acquisition postdated this contract, it is agreed that such land shall thereupon become subject to the provisions of this contract, and the parties hereto shall promptly execute amendments to this contract listing such land as land included in this contract."

Thus DMEA decided that any land within one claim length (1,500 feet) should be governed by the terms of the contract.

The attached memorandum states "However, at least all such lots as are contiguous to the contract property lines must be added, under the terms of the contract." The New Jersey Company pointed out that possibly the terms of the exploration contract could be circumvented if "contiguous" were to mean "abutting" by acquiring and adding to the contract a very narrow strip between land in the contract and lands later acquired next to the strip. What will legal interpretation be in the subject case regarding the definition of the word "contiguous"? The entire townsite of Strawberry Plains is only 1,500 feet square (see map with February 8, 1960, memorandum from Laurence).

The new SPECIAL AGREEMENT CONCERNING LAND incorporated in the accompanying Contract Idm-21174, docket No. DMEA-4850, states in part:

> ".....acquires any interest, title, or equity (exclusive of agreements granting the rights to explore, purchase, or acquire leases) in or with respect to any land, including minerals therein, situate within 1500 feet of the land described in this contract, at the contract date and the right to make such acquisition postdates this contract. ...."

It would appear that this wording should be modified if used in the future to cover the eventuality of land being added by amendment to the contract on which work would be done without having to be sure that the amendment is made effective as of the date of the contract. With the field people being able to add land to the contract by amendment, it is possible that they would do so without taking the date of the contract into account, and thus unwittingly add a "buffer zone" between the land in the contract and any that might be later acquired beyond the "buffer zone."

Frank E. Johnson

Acting Director

Attachments

GCSelfridge/hb (2/19/60)
Copy to: Director's File
Director's Reading File
Frank E. Johnson
George C. Selfridge
Mails & Files
Docket DMEA-4209
Docket DMEA-4850

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
ROOM 2-B POST OFFICE BLDG.
KNOXVILLE 2, TENN.

October 29, 1959

OFFICIAL FILE COPY
O. M. E.
RECEIVED NOV 3 1959

DATE	INITIALS	CODE
11-3	gad	VVO
11/3	[illegible]	800
	[illegible]	500

Mr. Johnson Crawford
Assistant Manager of Mines
The New Jersey Zinc Company
Jefferson City, Tennessee

Re: DMEA-4850, Idm-E1174-zinc
Little War Creek Area
Hancock County, Tennessee

Dear Mr. Crawford:

This will confirm the approval given Mr. Hoagland by telephone today, to drill the first inclined hole on the Little War Creek project.

The hole is to be drilled on the dip fence which includes LW-55 thru LW 59, and will be collared about 75 feet southeast of the collar of LW 55. Inclination, -50°; bearing northwest along the fence; approximate depth 750 feet.

Sincerely yours,

Robert A. Laurence
Executive Officer, OME
Region V

RAL/sm
cc
Opr. Com-2
Lynch
Files

Hole No.	Property	Depth	Remarks
LW-85	Lewis Tunmire	610'	486,506' Traces of Zinc. 515'-523' 4.19% Zn. 523'-533' Traces of Zinc. 541'-551' Tr. 2.34% Zn. 551'-557' Traces of Zinc.
Not classed as an ore hole by the Operator as no single run contains as much as 50 feet-percent units.			
LW-86	Lewis Tunmire	660'	581'-620' Scattered traces of Zinc.
LW-87	Lewis Tunmire	932'	Barren Hole
LW-88	Lewis Tunmire	540'	Barren Hole
LW-89	Dudley Dalton	496'	320'-333' Est. 2% Zn. 339'-354' Est. ½-1% Zn. 440'-455' Est. 1/4% Zn.
LW-90	Dudley Dalton	872'	763'-765' Est. 4% Zn.
LW-91	John Barnard	458'	Trace Hole
LW 92	"	788'	676-687 2.51% zn
LW 93	"	800'	Shine hole
completed LW 94	M.C. Tunmire	713'	512-614' 5% Est. ore hole
12/3/59 LW. 95	J. Brewer	713'	274-549' 1% to 3% zn.
1/26/60 LW 96	J. "	750'	381-614 mineralized ½ to 1%
2/8/60 LW 97	"	540'	200-232 ½% to 1' of 15% zn
2/22/60 LW 98	"	575'	330-350 2% zn 363 369 3% "

ore holes. L.W. 57 - 66 - 70 - 74 - 75 - 94 -

Hole No.	Property	Depth	Remarks
LW-72	Lewis Tunmire	340'	271'-274' -- 1.10 % Zn. 274'-279' -- 1.00 % Zn. 279'-283' -- 0.78 % Zn. 292'-296' -- 1.65 % Zn. 296'-300' -- 0.50 % Zn.
			271'-283' -- 12'--0.95 % Zn. 292'-300' -- 8' -1.07% Zn.
LW-73	W. M. Brewer	350'	273'-280' -- Est.).50% Zn.
LW-74	Lewis Tunmire	540'	474'-478' -- 4.60 % Zn. 478'-483' -- 7.22 % Zn. 483'-487' -- 11.18 % Zn. 487'-492' -- 14.52 % Zn. 492'-504' -- Traces Zn.
	X Ore		18' -- 9.55 % Zn.
LW-75	Lewis Tunmire	603'	513'-517' -- 3.76 % Zn. 517'-520' -- 0.10 % Zn. 520'-525' -- 15.10 % Zn. 525'-529' -- 1.13 % Zn.
	X. Ore		513'-529' -- 16' @ 5.96% Zn.
LW-76	Lewis Tunmire	805'	553'-557' -- Est. 1% Zn. 560'-561' -- Est. 3% Zn. 570'-590' -- Est. 0.5% Zn. 603'-612' -- Est. 0.5% Zn. 764'-768' -- Est. 0.5 to 1% Zn.
LW-77	Lewis Tunmire	446'	388' Tr. of Zn. 400'-420' -- Est. 0.5% Zn.
LW-78	Lewis Tunmire	502'	309' Shines 355'-437' -- Scattered Tr. & Shines
LW-79	Lewis Tunmire	500' 500	175' Tr. 366'-395'-- Scattered Trs. & Shines 384'-388' -- Est. 1% Zn.
LW-80	W. M. Brewer	524'	Scattered Traces of Sphalerite.
LW-81	Lewis Tunmire	740'	264' Shines of Sphalerite. 707' Trace of Sphalerite.
LW-82	W. M. Brewer	731'	590'-595' -- 2% Zn. Est.
LW-83	W. M. Brewer	640'	477'-480' -- 3% Zn. Est.
LW-84	Lewis Tunmire	724'	Traces of sphalerite 234'-240' scatteres shines 262'-266'.

Hole No.	Property	Depth	Remarks
LW-65	J. Brewer	580'	Traces of Sphalerite in various places.
LW-66	M. C. Tunmire	640'	223'-225' Est. 5% Zn. 366'-370' -- 3.37% Zn. 387'-433' -- 1.32% Zn (46'). 433'-446' -- 3.43% Zn. 446'-485' -- 1.44% Zn. (39'). --- 387'-485' -- 1.65% Zn. (98'). 387'-391' -- 2.39% Zn. 391'-397' -- 0.17% Zn. 397'-403' -- 2.31% Zn. 403'-406' -- 0.25% Zn. 406'-411' -- 2.08% Zn. 411'-416' -- 2.50% Zn. 416'-420' -- 0.50% Zn. 420'-425' -- 0.48% Zn. 425'-433' -- 1.00% Zn. 433'-438' -- 4.65% Zn. 438'-443' -- 3.09% Zn. 443'-446' -- 1.98% Zn. 446'-451' -- 0.15% Zn. 451'-454' -- 1.12% Zn. 454'-458' -- Tr. 458'-461' -- 2.50% Zn. 461'-464' -- 1.18% Zn. 464'-468' -- Tr. 468'-473' -- 2.70% Zn. 473'-477' -- 3.20% Zn. 477'-480' -- 0.90% Zn. 480'-485' -- 2.40% Zn.
LW-67	M. C. Tunmire	1,028'	Scattered shines of sphalerite at 807'
LW-68	M. C. Tunmire	770'	501'-508' -- Est. 1.5% Zn. Shines and traces in other parts of hole.
LW-69	J. Brewer	1,079'	Blank Hole.
LW-70	Lewis Tunmire	314'	188'-191' -- 1.02% Zn. 191'-196' -- 3.49% Zn. 196'-201' -- 3.35% Zn. 201'-207' -- 3.61% Zn. 19' of 3.10% Zn.
LW-71	Lewis Tunmire	354'	284'-310' -- Est. 1.0% Zn.

SUMMARY OF DRILL HOLE DATA.

Hole No.	Property	Depth	Remarks
LW-55	M. C. Tunmire	890'	794'-798' -- 3.02% Zn. 798'-802' -- 1.49% Zn. 802'-805' -- 0.80% Zn. 818'-823' -- 1.10% Zn. 823'-828' -- 2.36% Zn. 828'-834' -- 1.78% Zn.
LW-54	Ditto	1,006'	Traces of Sphalerite @ 753', 801', 809'. Scattered shines @ 825' and traces @ 835' and 850'.
LW-56	Ditto	810'	724'-725' Est. 3% Zn. 742'-750' Est. 1-34% Zn.
LW-57	Ditto	676'	369'-374' -- 3.38% Zn. 384'-389' -- 3.25% Zn. 389'-394' -- 4.65% Zn. 394'-399' -- 17.5% Zn. 399'-406' -- 15.8% Zn. 406'-411' -- 17.75% Zn. 411'-416' -- 13.40% Zn. 416'-419' -- 10.70% Zn. 419'-422' -- 13.40% Zn. 433'-451' Est. 3% Zn. 457'-478' Est. 3% Zn. 478'-505' Est. 0.5% - 1.0% Zn.
		36' -- 12.06% Zn.	
LW-58	Ditto	610'	368'-371' -- 16.48% Zn. 401'-406' -- 1.23% Zn.
LW-59	Ditto	710'	543'-544' Est. 15% Zn. Assay - 7.30 562'-567' Est. 2.5% Zn. " - 1.90
LW-60	J. Brewer	825'	304'-305' Est. 6% Zn. 308'-312' Est. 2½% Zn. 352'-357' Est. 1-3/4% Zn.
LW-61	Ditto	875'	Traces of Zn in places.
LW-62	Ditto	720'	231'-233' Est. 2% Zn. 408'-456' Est. 0.5% Zn. 466'-480' Est. 1.5% Zn.
LW-63	Ditto	885'	Shines and traces in various places.
LW-64	Ditto	676'	Shines and traces in various places.

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
ROOM 11 POST OFFICE BLDG.
KNOXVILLE 2, TENN.

OFFICIAL FILE COPY
O. M. E.
RECEIVED OCT 12 1959

DATE	INITIALS	CODE
10/12	RCW	285
~~10/12~~	~~Klugh~~	~~500~~

October 8, 1959

Memorandum

To: Operating Committee, OME - Washington

From: Executive Officer, OME - Region V-Knoxville, Tenn.

Subject: Signed Amendment No.2. The New Jersey Zinc Co. DMEA-4850, Idm-E1174 (zinc) Little War Creek

Attached are the Government and Audit copies of the subject amendment signed by the Vice President of The New Jersey Zinc Co.

The usual distribution of the other copies has been made.

Robert A. Laurence
EXECUTIVE OFFICER
OME FIELD TEAM
REGION V

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
	Klugescheid	500
	Luisoni	500
9/29	Talbert	800
9/29	GCL	130
9/30	Johnson	110
9/30	RCW	220
		500

SEP 29 1959

Memorandum

To: Executive Officer, OME Field Team, Region V

From: Chairman, Operating Committee, OME

Subject: Docket No. DMEA-4850 (Zinc)
The New Jersey Zinc Company
Little War Creek Area, Sector II
Hancock County, Tennessee
Contract No. Idm-81174

In accordance with the request of the Operator, dated September 9, 1959, and your recommendation, dated September 11, we are enclosing the original and four copies of proposed Amendment No. 2 (one page) to the above contract, signed by the Acting Director for the Government. We are also enclosing two extra copies for the use of the Field Team.

If the amendment meets with your approval, kindly present it to the Operator for approval and signature and, when completed, distribute the copies in the usual manner. In the event that the amendment is not satisfactory and cannot be amended within your delegated authority, return all copies with your recommendations concerning any modifications.

/s/ George C. Selfridge

Enclosures

APPROVED:

Frank D. Lamb
Member, Bureau of Mines

Harold Kirkemo
Member, Geological Survey

cc: Docket
Director's Read. File
Operating Committee
Harold Kirkemo, USGS
O. M. Bishop, USBM
Chron.

WPKlugescheid/GMcC
September 24, 1959

8623

Form 7

OFFICIAL FILE COPY

Date	Surname	Code
	Wyneschek	500
9/21	J. Lynch	140
	H. Fleur	

September 18, 1959

SOLICITOR
SEP 18 1959
INTERIOR DEPT.
RECEIVED
SEP 21 1959
ASSOC. SOLICITOR
MINERAL RESOURCES

Memorandum

To: Associate Solicitor, Division of Minerals Resources

From: W. R. Griswold, Chief, Division of Minerals

Subject: Preparation of Amendment No. 2
Docket No. DMEA-4850 (Zinc)
The New Jersey Zinc Company
Little War Creek Area, Sector II
Hancock County, Tennessee
Contract No. Idm-E1174

Will you kindly prepare Amendment No. 2 in accordance with the following draft:

EXPLORATION PROJECT CONTRACT
THE NEW JERSEY ZINC COMPANY
DOCKET NO. DMEA-4850

AMENDMENT NO. 2

It is agreed this _____ day of _____, 1959, between the United States of America, acting through the Department of the Interior, Office of Minerals Exploration, hereinafter called the "Government", and The New Jersey Zinc Company, hereinafter called the "Operator", that Exploration Project Contract No. Idm-E1174 (Docket No. DMEA-4850), dated February 26, 1958, as amended, hereinafter called the "Contract", is further amended, as follows:

To Exhibit "A" ~~add~~ add item 8 as follows:

8. Inclined holes may be drilled at intervals of less than 100 feet from existing holes with prior Government approval. These holes may be drilled to intersect other holes already drilled. The actual locations, directions, inclinations, and depths of all such holes are subject to prior Government approval.

8623

This amendment shall not be construed to increase the estimated total cost of the project, the aggregate amount which the Government may be required to contribute, the amount of any item designated as "maximum", or the fixed unit cost of any item of work.

Executed in quintuplicate the day and year first above written.

THE NEW JERSEY ZINC COMPANY

By _____

Title _____

THE UNITED STATES OF AMERICA

By _____
Acting Director, Office of
Minerals Exploration

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code

September 18, 1959

Memorandum

To: OME Files

From: W. P. Klugescheid, Mining Engineer, Division of Minerals, OME

Subject: Justification for Amendment No. 2
Docket No. DMEA-4850 (Zinc)
The New Jersey Zinc Company
Little War Creek Area, Sector II
Hancock County, Tennessee
Contract No. Idm-E1174

The Operator requested some angle holes for the purpose of obtaining additional information relative to the character of the mineralization in this area. Relatively narrow steeply dipping mineralized zones may be present in this area. If this is the case it would be very easy to miss possibly important ore bodies even with drilling on the fences at intervals as close as 100 feet.

The Field Team regards this request with favor and no limit has been placed on the number of holes of this type that can be drilled, as there remain only about five holes to be drilled on the contract.

W.P.Klugescheid
W. P. Klugescheid

WPKlugescheid/GMcC

8623

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
ROOM 11 POST OFFICE BLDG.
KNOXVILLE 2, TENN.

September 11, 1959

OFFICIAL FILE COPY
O. M. E.
RECEIVED SEP 14 1959

DATE	INITIALS	CODE
9-14	gad	VVO
		130
~~9-15~~	~~Klage~~	~~500~~

Memorandum

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

From: Field Team, OME - Region V - Knoxville, Tennessee

Subject: DMEA-4850, Idm-E1174 (zinc) The New Jersey Zinc Co., New York, N.Y. Little War Creek Area, Hancock County, Tennessee

Enclosed are the original and one copy of a request from the Operator for approval of drilling some angle holes.

As we interpret the terms of Exhibit "A", angle holes can be drilled, with Government approval, without an amendment. However, one of the Operator's proposed angle holes is, at the collar, only 50 feet from two other holes already drilled on the same fence, and all three proposed angle holes would (on paper, at least) intersect earlier vertical holes on the same fence. Therefore, we assume that an amendment would be required in order to authorize the proposed angle holes.

Compilation of drilling data, now in progress by Mr. Wedow, suggests that there is a strong possibility that these ore shoots may be thin and steeply dipping, with the strike closely parallel to that of the rock strata, or that they may actually be controlled by fractures approximately normal to the bedding, and, therefore, holes drilled toward the southeast may be preferable. It should be emphasized that our approval of some angle drilling would be to establish geologic control of ore zones, and not simply to extend the ore zone an additional 50 or 60 feet, as the section through LW-57 might suggest.

Therefore, we recommend approval of an amendment whereby collar locations of angle holes may be chosen at points on the fences without regard to the 100-foot spacing, and without restricting the distance at which holes may approach each other. After such authorization is approved, we would then confer with the Operator to select a specific site for the first angle hole.

Robert A. Laurence
Robert A. Laurence
Executive Officer, OME
Region V

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

THE NEW JERSEY ZINC COMPANY
(ESTABLISHED 1848)
CABLE ADDRESS
"JERSEZINC"
160 FRONT STREET
NEW YORK 38, N.Y.

OFFICIAL FILE COPY
O. M. E.
RECEIVED SEP 14 1959
DATE | INITIALS | CODE
HORSEHEAD PRODUCTS ®
PLEASE ADDRESS REPLY TO

Jefferson City, Tennessee
September 9, 1959

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

RECEIVED
SEP 11 1959
U. S. Geological Survey
Geologic Division
Knoxville, Tenn.

Subject: DOCKET NO. DMEA 4850 (ZINC)
LITTLE WAR CREEK AREA
HANCOCK COUNTY, TENNESSEE
CONTRACT Idm E 1174

Dear Mr. Laurence:

Request is hereby made for an amendment to the subject contract which will provide for the drilling of inclined holes. The purpose of drilling inclined holes at Little War Creek is to obtain additional information relative to the character of mineralization in this area and, if possible, to establish evidence that a deposit of economic significance is present. It is anticipated that two or three angle holes, in the most strategic locations will furnish a significant guide as to the optimum utilization of this technique.

The thinking behind this stems from the possibility that relatively narrow steeply dipping mineralized zones may be present in this area. A number of the vertical holes that have been drilled may have penetrated the mineralized halo associated with such a zone yet missed the ore bearing portion thereof. Drill hole LW-57 with a penetration of 109 feet averaging 7.01% Zn may have actually passed through a major part of the vertical extent of a thin, steeply dipping tabular body. Such a body, even if only 20 feet thick, could be of economic significance if it had sufficient vertical and lateral extent. Yet if it were vertical, it would be only fortuitously discovered and followed by vertical holes spaced as much as 100 feet apart.

Two idealized sections attached hereto, one through hole I-57, I-58, etc., and the other through hole

I-78, illustrate in a general way the possible application of inclined holes at Little War Creek. Although it appears that the best opportunity to achieve optimum utilization of the hole would be to drill at as acute an angle as possible to the bedding, present thinking here is that the holes should be drilled nearly normal to the bedding. It is expected that further development of thought would result as the program progresses.

It is assumed that the most favorable trend direction is close to the strike of the beds, and data recently compiled by Mr. Wedow support this assumption.

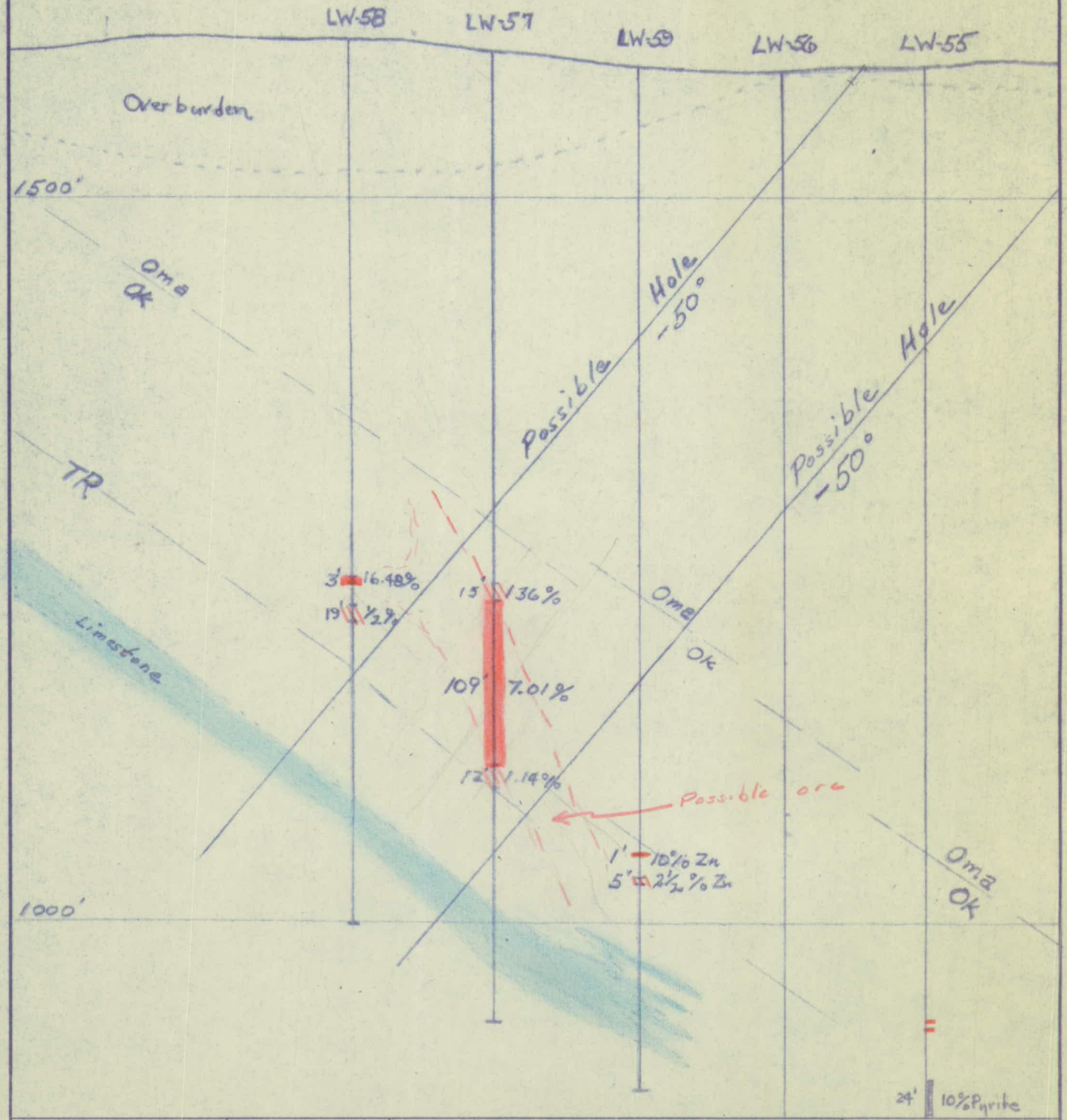
Yours very truly,

THE NEW JERSEY ZINC COMPANY

Johnson Crawford

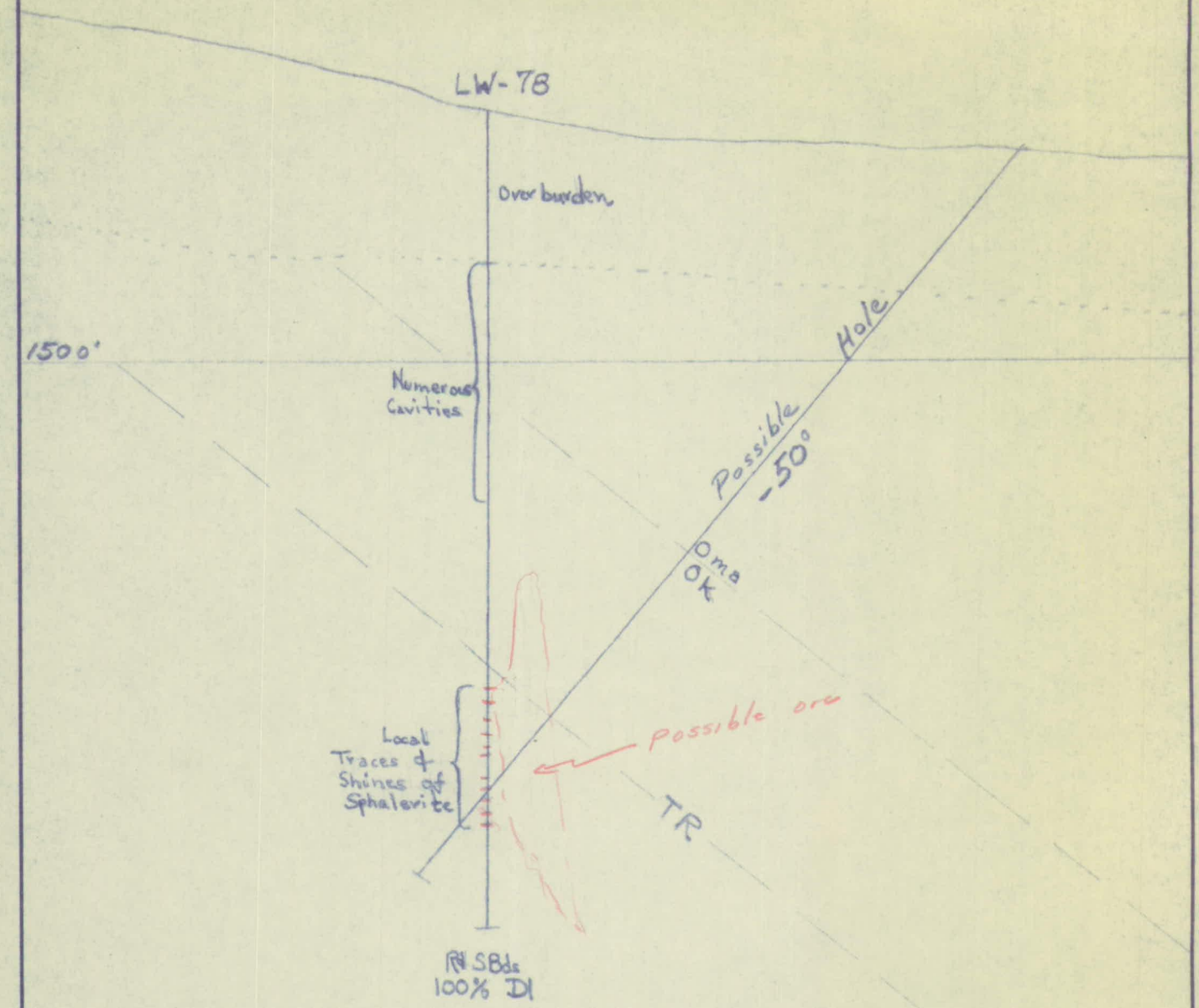
Assistant Manager of Mines

A. D. Hoagland/jf
In Quadruplicate



DRAWN	CHECKED	THE NEW JERSEY ZINC COMPANY	DATE 9-9-59
TRACED	APPROVED		SCALE 1" = 100'
REVISED	Dip Section Thru LW-57, etc.		

THIS DRAWING IN DESIGN AND DETAIL IS OUR PROPERTY AND MUST NOT BE USED EXCEPT IN CONNECTION WITH OUR WORK. ALL RIGHTS OF DESIGN AND INVENTION ARE RESERVED. THIS DRAWING MUST BE RETURNED TO THE NEW JERSEY ZINC COMPANY.



DRAWN	CHECKED	THE NEW JERSEY ZINC COMPANY	DATE 9-9-59
TRACED	APPROVED		SCALE 1" = 100'
REVISED	Dip Section Thru LW-78		

THIS DRAWING IN DESIGN AND DETAIL IS OUR PROPERTY AND MUST NOT BE USED EXCEPT IN CONNECTION WITH OUR WORK. ALL RIGHTS OF DESIGN AND INVENTION ARE RESERVED. THIS DRAWING MUST BE RETURNED TO THE NEW JERSEY ZINC COMPANY.

X5453A 1M 11-54

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
ROOM 11 POST OFFICE BLDG.
KNOXVILLE 2, TENN.

September 11, 1959

OFFICIAL FILE COPY
O. M. E.
RECEIVED SEP 14 1959

DATE	INITIALS	CODE
9-14	gad	VVO
		VVO
9-15	[illegible]	[illegible]

Memorandum

To: Operating Committee, OME - Washington

From: Executive Officer, OME - Region V - Knoxville, Tenn.

Subject: Signed Amendment DMEA-4850, Idm-E1174-zinc.
Signed Amendment No. 1. Little War Creek Area.

Attached are the Government and Audit copies of the subject signed amendment.

The usual distribution of the other copies has been made by this office.

Robert A. Laurence

Robert A. Laurence

z

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
	Klugescheid	500
	[illegible]	500
8/31	Talbot	800
		130
9/1	Selbridge	100
9-1	[illegible]	220
		500

SEP 1 1959

Memorandum

To: Executive Officer, OME Field Team, Region V

From: ACTING Chairman, Operating Committee, OME

Subject: Docket No. DMEA-4850 (Zinc)
The New Jersey Zinc Company
Little War Creek Area, Sector II
Hancock County, Tennessee
Contract No. Idm-81174

We are enclosing the original and four copies of proposed Amendment No. 1 (two pages) to the above contract, signed by the Acting Director for the Government. We are also enclosing two extra copies for the use of the Field Team.

The amendment was drawn up according to the recommendation in your memorandum, dated August 10, 1959, and the request of the Operator.

If the amendment meets with your approval, kindly present it to the Operator for approval and signature and, when completed, distribute the copies in the usual manner. In the event that the amendment is not satisfactory and cannot be amended within your delegated authority, return all copies with your recommendations concerning any modifications.

You will note that the amendment contains an automatic termination and a conditional pseudo-certification.

/s/ W. R. Griswold (GMcC)

Enclosures

APPROVED:

Frank D. Lamb (GMcC)
Member, Bureau of Mines

Harold Kirkemo (GMcC)
Member, Geological Survey

cc: Docket
Director's Reading File
O.M. Bishop, USBM
Harold Kirkemo, USGS
Operating Committee
Chron.

WPKlugescheid/GMcC
August 31, 1959

8623

Form 7
(58)

R
SOLICITOR

AUG 26 1959

INTERIOR DEPT.

RECEIVED
AUG 27 1959
ASSOC. SOLICITOR
MINERAL RESOURCES

FROM SOLICITOR
AUG 28 1959
FOR SIGNATURE

OFFICIAL FILE COPY

Date	Surname	Code
8/25	Klugerchard	500
		~~500~~
8/27	J. Lynch	140
8/27	Sullen	

August 25, 1959

Memorandum

To: Associate Solicitor
Division of Mineral Resources

From: W. R. Griswold, Chief
Division of Minerals

Subject: Preparation of Amendment No. 1
Docket No. DMEA-4850 (Zinc)
The New Jersey Zinc Company
Little War Creek Area, Sector II
Hancock County, Tennessee
Contract No. Idm-E1174

Will you kindly prepare Amendment No. 1 for the cited contract in accordance with the following draft:

EXPLORATION PROJECT CONTRACT
THE NEW JERSEY ZINC COMPANY
DOCKET NO. DMEA-4850

AMENDMENT NO. 1

It is agreed this _____ day of _____, 1959, between the United States of America, acting through the Department of the Interior, Office of Minerals Exploration, hereinafter called the "Government," and The New Jersey Zinc Company, hereinafter called the "Operator," that Exploration Project Contract No. Idm-E1174 (Docket No. DMEA-4850), dated February 26, 1958, is amended as follows:

1. The date fixed in the Contract for completion of the work is extended from October 1, 1959, to June 1, 1960.

2. The maximum period for royalty payments provided for in Article 8(b)(2) of the Contract is increased from 30 years to 31 years from the date of the Contract.

43683

3. It is the essence of ~~this~~ the Contract that the work be completed before the termination of the period herein fixed for completion and if it is not so completed, in the manner required by the Contract, the following provisions shall thereupon become effective:

(a) The Contract and all obligations of the parties thereunder, except as otherwise herein provided shall be and are hereby terminated, effective June 1, 1960.

(b) The Government will contribute only to the allowable costs of any work performed prior to the relevant date as set forth under 3(a) above.

(c) The Operator shall promptly perform all winding-up and settlement actions provided for in the Contract, including the rendering of the final report and final account.

(d) The Operator, as principal if the Operator is the producer, or as surety if the Operator is not the producer (for example, if the Operator either transfers or fails to retain its interest in the land), shall pay to the Government the royalty on production provided for in the Contract, in the same manner and amount and for the full period of time provided for in the Contract (as amended herein), as if certification of discovery or development had been made, such certification being hereby waived by the Operator. In addition, all rights of the Government provided for in the Contract, with respect to a certification of discovery or development, and all rights of the Government as to reports (including preservation of

the Operator's records), audit, and recovery of any overpayment, are hereby preserved.

(e) The Operator hereby releases and agrees to save the Government harmless from all claims and demands under and arising out of the Contract, except as otherwise provided in this Amendment No. 1

This amendment shall not be construed to increase the estimated total cost of the project, the aggregate amount which the Government may be required to contribute, the amount of any item designated as "maximum," or the fixed unit cost of any item of work.

Executed in quintuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

By_____
Acting Director, Office of
Minerals Exploration

THE NEW JERSEY ZINC COMPANY

By_____

Title_____

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
8/25		500
	[illegible]	500

August 25, 1959

Memorandum

To: The File

From: W. P. Klugescheid, Mining Engineer
Division of Minerals

Subject: Justification for Amendment No. 1
Docket No. DMEA-4850 (Zinc)
The New Jersey Zinc Company
Little War Creek Area, Sector II
Hancock County, Tennessee
Contract No. Idm-E1174

In a letter, dated May 29, 1959, the Operator requested:

1. A recess of the contract which would provide for a 12-month extension to the termination date, or

2. Termination of the contract with the provision that the H. C. Livesay, H. C. Bowlin, Dudley Dalton, and John Barnard properties may be deleted from the contract while the New Jersey Zinc Company retains its option to purchase these properties.

The Field Team did not wish to see the project terminated as only 63 percent of the work has been completed and there is a very good chance that significant ore could be discovered if it were completed. To date there have been some holes which showed good ore but further discoveries would make a more convincing certification possible. They are willing to consider a recess.

The Field Team was informed that a recess could not be granted as there was no really adequate reason given therefor.

The deletion of the above-mentioned properties was denied as being too radical a departure from any previous procedure.

Continuation of the work was recommended and a possible extension of the completion time was stated as a possibility.

After talking over the matter with the New York office, the Operator decided that the work would continue and they have requested an extension of the completion date until June 1, 1960. This was also recommended by the Field Team as being much more satisfactory from the standpoint of the Government.

An automatic termination at the end of the completion time has been incorporated into the amendment and a conditional pseudo-certification will protect the Government against any possible lack of interest in the project in the future.

The conditions of this amendment are in the interest of the Government as a cessation of activity here would leave this area up in the air as far as its true worth is concerned.

W. P. Klugescheid

W. P. Klugescheid

WPK/gla 8-25-59
cc to: Docket
Chron

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
ROOM 2-B POST OFFICE BLDG.
KNOXVILLE 2, TENN.

OFFICIAL FILE COPY
O. M. E.
RECEIVED AUG 12 1959

DATE	INITIALS	CODE
8-12	gad	VVO
		130
~~8-14~~	~~K~~	~~500~~

August 10, 1959

Memorandum

To: Operating Committee, OME - Washington, D. C.

From: OME Field Team, Region V - Knoxville, Tennessee

Subject: DMEA-4850, Idm-E1174(zinc) The New Jersey Zinc Co.
Little War Creek Area, Hancock County, Tennessee

Reference is made to our memorandum of July 17.

Mr. Hoagland has advised us that the Operator would like to request an extension of the completion date until June 1, 1960. They estimate that the remaining authorized drilling footage can be completed by that time.

In our opinion, this is preferable to terminating without completion, at the present expiration date, October 1, 1959. Therefore, we recommend approval of an amendment authorizing the extension of this contract to June 1, 1960.

Robert A. Laurence
Robert A. Laurence
Executive Officer, OME
Region V

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
ROOM 2-B POST OFFICE BLDG.
KNOXVILLE 2, TENN.

July 17, 1959

Memorandum

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

From: Field Team, Region V, Knoxville 2, Tennessee

Subject: DMEA-4850, Idm-E1174 (Zinc)
The New Jersey Zinc Company, New York, New York
Little War Creek Area, Hancock County, Tennessee

Following receipt of your letter of July 7, we conferred with Mr. A. D. Hoagland, the Operator's Chief Geologist for Tennessee concerning the Little War Creek project, on July 14.

Mr. Hoagland will write us, after discussing your suggestions with his New York office. We will notify you as soon as we hear from him.

Robert A. Laurence
Robert A. Laurence
Executive Officer

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

OFFICIAL FILE COPY
O. M. E.
RECEIVED JUL 20 1959

DATE	INITIALS	CODE
7-20	gad	vvo

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
7-1	Klugscheid	500
7-1	Johnson	500
7/7	[illegible]	130
"	Johnson	110
		~~100~~
		~~HB~~
7-7	gad	220
		500

JUL 7 1959

Memorandum

To: Executive Officer, OME Field Team, Region V

From: Chairman, Operating Committee, OME

Subject: Docket No. DMEA-4850 (Zinc)
The New Jersey Zinc Company
Little War Creek Area-Sector II
Hancock County, Tennessee
Contract No. Idm-E1174

We regret that due to rush of other work we were unable to reply sooner to the request of the Operator, dated May 29, 1959, transmitted with your memorandum, dated June 1, 1959.

We are not in a position to grant a recess to the Operator as there is no good and sufficient reason given for asking it, other than to suit its convenience. We could, of course, terminate the contract but, as you have mentioned, it would be very undesirable from both the viewpoint of the Government and of the Operator as there is certainly a good probability of discovering further ore with the footage of drilling remaining.

If the Operator should continue the work, it might be possible to obtain an extension of completion time; but, even at the rate at which the work has been going, it would be necessary to request an extension unless the work were speeded up considerably.

Concerning the request for deletion of the H. C. Livesay, H. C. Bowlin, Dudley Dalton, and John Barnard properties from the contract, if a termination is decided on, it would not be possible to comply with the wishes of the Operator as this method would be a radical departure from any previous procedure. It might be possible, however, to insert a clause in the Termination Agreement which would allow the Operator a year of grace in which to decide as to whether to delete the properties from the contract or not in the usual manner.

We would suggest that you communicate with the Operator and see if it cannot see some possible way of continuing the work as it would be of mutual advantage. If the decision is that this is not possible, then we would like to know what they would think of the year deletion option as stated above.

/s/ George C. Selfridge (HB)

APPROVED:

Frank D. Lamb (HB)
Member, Bureau of Mines

Harold Kirkemo (HB)
Member, Geological Survey

WRGriswold/er 7-1-59
Copy to: Docket
Dir Read File
Op. Committee
Mr. Bishop, USBM
Mr. Kirkemo, USGS
Chron.

43683

John Barnard property	240 acres.
H. C. Livesay property	100 acres.
H. C. Bowlin	135 acres.
Dudley Dalton	92 acres.
Total	567 acres.

567/1069 :: 53.04% of the total property

Michell Sato.

In the present contract the clause regarding deletions is as follows:

It is further agreed that the Operator that the Operator may, at any time prior to furnishing the Government with the final report, request the Government to delete from this contract such land listed in this Annex I, or in any amendments thereto, as has no known value for mineral production. The Government will, if it concurs that the land has no known value for mineral production, promptly prepare amendments removing the specified land from the contract, which amendments shall provide that the Operator:

The former clause in other contracts read:

It is further agreed that the Operator may, at any time within one year from the [before the expiration of sixty days following the conclusion or] termination of exploration work performed pursuant to the terms of this Contract, request the Government to delete from this Contract such lands described in the Option Contracts listed in this Annex I, or in any amendments thereto, as have no known value for mineral production. The Government will promptly prepare amendments removing the specified lands from the Contract which amendments shall provide that the Operator:

Drilling is now about 63% complete. The total time necessary to reach present state of completion has been from about April 1, 1958 to May 15, 1959 or 13.5 months.

100/63 :: 1.59 x 13.5 :: 21.5 months would be necessary.

or until January 15, 1960. Completion date is October 1, 1959.

(over)

From Termination Agreement with Deletion.

(b) has, prior to the execution of the respective amendment, surrendered or otherwise disposed of all its interest, title, and equity in such lands, and any minerals produced therefrom, including any option, lease, or permit thereto, without any consideration whatsoever, including future compensation, for such surrender or disposition, other than relief from the cost of maintaining such interest;

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

OFFICIAL FILE COPY
O. M. E.
RECEIVED JUN 3 1959

DATE	INITIALS	CODE
6/3	G	220
		130
6/5	Wge	500

June 1, 1959

Memorandum

To: Operating Committee, OME - Washington

From: OME Field Team, Region V - Knoxville, Tennessee

Subject: DMEA-4850, Idm-E1174(zinc) The New Jersey Zinc Co., New York, N.Y. Little War Creek Area, Hancock County, Tennessee.

Enclosed are the original and one copy of a request from the Operator for either a recess or termination of the subject contract.

At present, the authorized drilling is 63% complete. We think the probability of discovering additional significant tonnage of ore with the remaining footage is good, and we do not wish to see the contract terminated without testing this possibility. Obviously, the Operator is trying to reduce expenses as a result of the present conditions in the zinc industry, and we have no desire to insist on a pound of flesh; nevertheless we do not think the Government's interests will be best served by termination at this stage. If it is possible for a DMEA contract to be extended that far, we would be agreeable to the Operator's request for a recess until not later than July 1, 1960, with an extension of the completion date until June 30, 1961.

If it is not possible to extend the contract that far ahead, then we recommend approval of a recess until not later than January 2, 1960 and completion on or before June 30, 1960. This would require operation of two drill rigs for the six-month active period but with termination of DMEA-4286 and completion of DMEA-4586 in October (see our memorandum of May 20), this should impose no hardship on the Operator.

If neither of these is feasible, then we would be agreeable to termination, with certification recommended. We do not recommend approval of the Operator's request to delay their decision on exercising their options on the Livesay, Bowlin, and Dalton tracts. If termination is approved at their request, it is not unreasonable to expect them to make this decision within the sixty-day period provided by the "Special Agreement Concerning Land."

Robert A. Laurence

Robert A. Laurence
Executive Officer, OME
Field TEam, REgion V

V. J. Lynch

V. J. Lynch, Member
Bureau of Mines

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
1/23	Klugescheid	500
	Williams	500
1/24	Talbert	800
1/22	[illegible]	130
1/27	Lamb	130
1/27	Pilsgaard	100
1/29	Edison	110
26	Mattendorf	100
		[illegible]
2/27		220
		500

FEB 26 1958

13

Mr. S. S. Goodwin, Vice-President
The New Jersey Zinc Company
160 Front Street
New York 38, New York

Re: Docket No. DMEA-4850 (Zinc)
The New Jersey Zinc Company
Little War Creek Area-Sector II
Hancock County, Tennessee

Dear Mr. Goodwin:

In reference to your application of October 11, 1957, we are enclosing the original and four copies of a proposed long-form contract for the cited project, signed by the Administrator, Defense Minerals Exploration Administration. The complete contract includes the contract form (MF-200), Annex I (three pages), Annex II (two pages), Exhibit "A" (three pages), and one map.

If the contract meets with your approval, please sign all copies, retain the "Operator's Copy" for your files, and transmit the others to this office. In case it should not meet with your approval, please return all copies to us with your comments.

Sincerely yours,

G. O. Williams (for)

Administrator

Enclosures
WRKLUGESCHEIDER 1/23/58
Copy to: Docket
Admr R File
Op. Committee
Mr. Bishop, USBM
Mr. Kiilsgaard, USGS
Region V (2)
Chron.

8623

Government's copy

MF-200
(Revised June 1954)

Docket No. DMEA 4850

Commodity Zinc

Contract No. Idm-E

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

EXPLORATION PROJECT CONTRACT[1]

It is agreed this ..... day of ....., 195..., between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and [2] The New Jersey Zinc Company, a New Jersey Corporation, whose mailing address is 160 Front Street, New York 38, New York, 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, ~~xxxx~~ Annex II, and map (Figure 2).

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 Tennessee, County of Hancock, and is described in Annex I.[3]

(b) The Operator represents and undertakes that:

(1) The Operator is the [4] See Annex I of [5] See Annex I 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: Interests of owners of tracts listed in Annex I

(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: Consents to Lien of owners of optioned tracts are waived.

(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). See Annex I

ARTICLE 3. *The exploration project.*—The project is a search for indicated or undeveloped deposits of Zinc. The work to be performed is described in Exhibit "A." The Operator on or before March 1, 1958 shall commence the work, and on or before September 1, 1959 (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 8) in a sum not less than the estimated total allowable cost set forth in Exhibit "A."~~ See Annex II

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 $106,780.00. The Government shall contribute 50 percent of the allowable costs as they are incurred in a total sum not in excess of $~~54,175.00~~ $53,390.00: *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

Category (7) Miscellaneous None except:		
200 samples assayed @ $1.00*/ each sample	$200.00	
Core boxes - 500 @ $1.80*/each box	900.00	$1,100.00
Fixed Unit Costs (See Annex II.)		
Incidental allowance 1/ for each foot of drilling completed, 35,000 feet @ $0.27/ft.		9,450.00
Estimated Total cost of the Project		$108,350.00
Government Participation @ 50%		$ 54,175.00

*In addition to the maximums fixed in the contract form, an asterisk indicates maximum.

1/ Includes all costs that might be allowable costs of the project under catagories (1) through (7) of Article 6(a) except as otherwise scheduled in Exhibit "A."

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
1/23	Klugescheid	500
	Schiewald	500
1/24	Jackson	800
1/27	[illegible]	130
1/29	Johnson	110
2/6	Mittenthal	100
		220
		500

FEB 26 1958

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

Re: Docket No. DMEA-4850 (Zinc)
The New Jersey Zinc Company
Little War Creek Area-Sector II
Hancock County, Tennessee

Dear Mr. Laurence:

As requested by the Applicant, we are forwarding the original and four copies of a proposed long-form contract to its New York City office.

We are enclosing two extra copies, minus the form, for Field Team use. This material consists of Annex I, (three pages), Annex II (two pages), Exhibit "A" (three pages), and one map.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (JHB)

Enclosures

WPKlugescheid/er 1/23/58
Copy to: Docket
Admr R File
Op. Committee
Mr. Bishop, USBM
Mr. Kiilsgaard, USGS
Chron.

APPROVED:

Frank D. Lamb (JHB)
Member, Bureau of Mines

Thor H. Kiilsgaard (JHB)
Member, Geological Survey

P. S. We have reduced the allowance for the draftsman by $600.00 with a corresponding reduction in Workman's Compensation and Insurance and Payroll Taxes. The Incidental allowance thus becomes $0.22 per foot drilled.

8623

Memorandum for the Files

From: W. P. Klugescheid, Mining Engineer

Subject: Justification for the Incidental Allowance per foot drilled.

Road distance from Jefferson City, Tennessee to the Little War creek Area. Scaled is 10.2" @ 4 miles to the inch :: 40.8 miles plus at least 4 miles for extra distance for zig zags over the ridge gives 45 plus miles each way.

If we assume 2 trips per week for one year (to be conservative) we have: 90 x 104 :: 9,360 miles so the allowance of 10,000 miles for travel as given by the Field Team is reasonable.

Engineering Expense.

Let us assume that we have two drills working two shifts and that average advance per shift will be 30 feet. Then we have 6 x 2 x 60 :: 720 feet per week or approximately one hole. Allow 2 extra days for delays of all kinds and this would give us a hole every 8 days. We assume that the engineers operate on a 5-day basis. One day a week would be 20% of their time as given by the Field Team. If we assume that spotting a hole will occupy one day a week including the traveling time, then we have for the stretch out to 18 months, 1 day necessary for every 8 days of operation would give approximately 13% of their time for spotting holes. As there will be other work to be done, the 20% of the engineers time is probably correct.

Allowance for the two engineers and the draftsman is $3,500.00 for 18 months, will give: 3,500/3 :: $1,167.00 per man for the 18 months.

3,500/0.20 @ $17,500.00 / 54 :: $325.00 per man per month which is a resonable salary.

If we assume that we eliminate one half of the draftsman's time, which is reasonable as there is not a great deal of this kind of work done, then we have $1,170 - 600.00 :: 570.00 remaining for the draftsman. Or taking it this way: 3,500 - 600 :: 2,900 for engineering and drafting.

Then	Geologist 1/3 time for 18 months	$ 3,000.00
	Engineers & Draftsman	2,900.00
	Accounting and clerical, 18 mos. @ $30.00 per month	540.00
	Workmen's Compensation (1%)	65.00
	Insurance & Payroll taxes (5%)	325.00
	Transportation - auto - 10,000 miles @ $0.08/mile	800.00
	Total	$ 7,630.00

7,630/35,000 :: <u>$0.22 Incidental allowance per foot.</u>

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
ROOM 1[illegible] FED. BLDG.
KNOXVILLE 2, TENN.

February 17, 1958

DMEA
RECEIVED FEB 19 1958

DATE	INITIALS	CODE
2-19	C	220
2-19	[illegible]	500

Memorandum

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

From: Field Team, Region V, Knoxville, Tennessee

Subject: Docket No. DMEA-4850 (Zinc)
The New Jersey Zinc Company
Little War Creek area, Hancock County, Tennessee

In reply to your letter of February 7, 1958 on the subject application:

(1) Attached hereto is a revised estimated cost analysis of the subject project which provides for estimated unit costs more similar to the nearby Big War Creek project (DMEA-4286). Review of the rates of progress of current and completed projects by the New Jersey Zinc Company in the Copper Ridge district shows that a 15- to 18-month contract would provide a more realistic completion period than the 12-month contracts originally in force. Consequently, we strongly recommend that if a contract is prepared on the subject application, the period be for 18 months. Such a longer period of time under the present circumstances will permit sounder exploration practice in that drilling information will accrue at a slower rate which in turn allows for a more satisfactory review and interpretation of the data gained. With the longer contract period recommended we have therefore reduced geological service to one-third time.

(2) With the recommended 18-month contract the estimated cost of surveying and drafting remains as requested by the Applicant. It appears to us that these services are a fixed-unit cost regardless of contract time. For example, if 100 man-hours are required to survey 50 holes, then 100 man-hours will be spent, irrespective of whether the 50 holes are completed in 6, 12, or 18 months.

(3) The New Jersey Zinc Company operates engineering and geological offices at the Flat Gap mine solely for the service of the mine. All their exploration work in the Copper Ridge district is conducted out of Jefferson City. Housing for additional personnel is not available at Flat Gap. The item for transportation, therefore, should remain as indicated.

(4) Except for reducing geological services and increasing accounting and clerical service to provide for the 18-month recommended contract period, the only significant change made in the estimated unit costs is to provide for an additional 100 core boxes. Experience to date has shown that drilling on Copper Ridge tends to be slightly deeper than anticipated and that the chances have increased for ore discoveries in the Mascot dolomite above the Kingsport formation. The number of core boxes, therefore, has been increased to provide for retention of more core from the favorable zones.

V. J. Lynch

V. J. Lynch
Acting Executive Officer

F. G. Lesure

F. G. Lesure, Geologist
U. S. Geological Survey

Enclosures 3

Revised estimated costs, DMEA-4850 (Zinc)

Diamond Drilling:

As submitted in Field Examination Report (December 13, 1957)		$97,800.00

Estimated Unit Costs:

Geologist 1/3-time @ $500.00/Mo.	$3,000.00	
Surveying, drafting	3,500.00	
Accounting and clerical service @ $30.00/Mo.	540.00	
Transportation - auto 10,000 miles @ $0.08/Mile	800.00	
Sample assays 200 samples @ $1.00/Each	200.00	
Core boxes 600 @ $1.80/Each	1,080.00	
Workmen's Compensation (1%)	70.00	
Insurance, payroll taxes (5%)	350.00	
Sub-total		9,540.00
TOTAL		$107,340.00

FEB 19 1958
DATE | CODE

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
2/7	Klugescheid	500
	Lamb	500
2/7	[illegible]	130
"	Johnson	110
"	Chatterton	100
2/10	C	~~MB~~
		220
		500

500

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

FEB 7 1958

Re: Docket No. DMEA-4850 (Zinc)
The New Jersey Zinc Company
Little War Creek Area-Sector II
Hancock County, Tennessee

Dear Mr. Laurence:

Before completing the proposed long-form contract for the cited project we would like to obtain some information on the following items of cost, as shown on the on-site report:

(1) Do you think that this project would require three-quarters of the time of a geologist for a period of a year? In some of the projects we have allowed one-third, and in still others one-half of the time of a geologist. We want to be fair in this matter but we do not wish to specify an excessive amount of supervision of this kind.

(2) It would appear as though the examining team made an error in figuring the surveying and drafting. The total is the same as in the application and as the allowable time for this supervision has been reduced to 12 months from 18 months for the rest of the work it ought also to have been done in this instance.

(3) Does New Jersey Zinc have an engineering and geological office at the Flat Gap Mine now, or is all their work still done from the Jefferson City office? If they do have an office at Flat Gap it would appear that the amount of transportation allowed is excessive. Will you please review this item for us?

If you will get the requested information to us as soon as possible, we will be able to complete the proposed contract in short order.

Sincerely yours, WPKlugescheid/er 2/7/58
George C. Selfridge
Copy to: Docket
Admr R File
Op. Committee
Mr. Bishop, USBM
Mr. Kiilsgaard, USGS
Chron.

Chairman, Operating Committee (GCS)

APPROVED:

Frank D. Lamb (GCS)
Member, Bureau of Mines

Thor H. Kiilsgaard (GCS)
Member, Geological Survey

8623

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

JAN 21 1958

Memorandum

To: Administrator, DMEA
Attention: W. R. Griswold

From: Associate Solicitor, Division of Mineral Resources

Subject: Docket No. DMEA-4850, The New Jersey Zinc Company (Lead-Zinc)

As requested in Mr. Griswold's memorandum dated January 8, we have prepared the subject contract.

While preparing the contract I received from the Operator's lawyer a letter dated January 6, 1958, concerning the conferences held here with respect to the Special Agreement Concerning Land. The letter is substantially accurate with respect to our tentative agreements concerning revisions that could be made, and is acceptable to us with such modifications of the language in the letter as we have made (but which the company has not yet seen). Copies of the Jersey Zinc letter to me are attached for your study in connection with the subject contract.

Mr. Miller's letter also requests that the changes be made not only in the new contracts executed with Jersey Zinc, but retroactively with respect to outstanding contracts. We hesitate to recommend any retroactive action because of the question of consideration for so doing and because of the effect that such action would have upon contracts with other companies, which, in fairness, probably would have to be similarly revised.

Robert P. Dwyer

Attachments

THE NEW JERSEY ZINC COMPANY
(ESTABLISHED 1848)

CABLE ADDRESS
"JERSEZINC"

100 FRONT STREET

NEW YORK 38, N.Y.

January 6, 1958

Robert P. Dwyer, Esq.
Associate Solicitor
Division of Mineral Resources
Solicitor's Office
U. S. Department of the Interior
Washington 25, D. C.

Re: The New Jersey Zinc Company;
DMEA Contract Revision

Dear Mr. Dwyer:

Mr. Hoagland and I appreciated very much the opportunity of meeting with you and Mr. Rubin to work out a revision of the language in the provision entitled "Special Agreement Concerning Land" in our several DMEA contracts. We wish to thank you for your interest and assistance and believe that our conference was eminently successful. As agreed, I enclose herewith, with four additional copies for use within DMEA, a revision of the language as I believe it was tentatively agreed upon.

"SPECIAL AGREEMENT CONCERNING LAND

"1. In the event the Operator or any subsidiary thereof, whether wholly-owned or otherwise, at any time during the period expiring ten years from the date of this contract acquires any interest, title or equity (exclusive of agreements granting

rights to explore, purchase or lease) in or with respect to any land, or minerals therein, situate within fifteen hundred feet of the land described in this contract at the contract date and the right to make any such acquisition postdates this contract, it is agreed that such land shall thereupon become subject to the provisions of this contract and the parties hereto shall promptly execute amendments to this contract listing such land as land included in this contract.

"2. It is further agreed that the Operator may, at any time prior to furnishing the Government with the final report, request the Government to delete from this contract such land listed in this Annex I, or any amendments thereto, as has no known value for mineral production. The Government will promptly prepare amendments removing the specified land from the contract, which amendments shall provide that the Operator:

(a) certifies the land has no known value for mineral production;

(b) agrees that if the Operator or any subsidiary thereof, whether wholly-owned or otherwise, holds, acquires or reacquires any interest, title or equity (exclusive of agreements granting rights to explore,

purchase or lease) in such land or any minerals produced therefrom, or derives any benefit therefrom, before the expiration of thirty years from the date of this contract such land shall be deemed subject to this contract and any certification until the expiration of thirty years from the date of this contract or until the total net amount contributed by the Government without interest is fully repaid, whichever occurs first."

As to the revision of Paragraph 1 above, I believe you will find the changes are in line with our tentative understanding; and the explanation for the same, set forth in my letter to Mr. Griswold of July 10, 1957, are still germane. After the expression in parenthesis, I have included suggested language which I believe covers the cogent point raised by Mr. Rubin relating to an assignment by an Operator of an option subject to royalty payments.

You will note that the revision of Paragraph 2 eliminates subparagraphs (b) and (c) even though I realize that a policy decision has not been made in this respect. I understand that it is your feeling that the Government would be agreeable to permitting an Operator to drop lands from the contract in which it did not have a lease or title without requiring such Operator to surrender its interest. However, we feel that this privilege should also be extended to the situation where the Operator may

already have a lease on the land or even title thereto as it may not wish to have such land included in the project contract but, furthermore, may not desire to dispose of such interest at the present time for the reasons set forth in Paragraph (f) on page 6 of the July 10 letter. This Company's leases generally contain a thirty-day termination clause which may be rendered inapplicable if it did not have such right.

Former subparagraph (c) has been deleted in line with our tentative thinking that it may be inconsistent. Subparagraph (d) has been revised to bring it in line with the above revisions even though I realize we did not have the opportunity of discussing this too thoroughly. You may wish to refer to my comments in the earlier letter on this subject.

I trust you will find this revision and comments thereon constructive and hope that we may reach an agreement on the language presently. As I explained, we have several project contract applications on file with you, and we contemplate making application for several more during the coming year. I believe it would be advantageous to have the revision incorporated in such contracts as well as to have it apply to our contracts presently in being. We visualize amending the present contracts by one amendatory letter to cover the same and believe that there will be adequate consideration from both parties to uphold the amendment.

We hope that we shall hear from you on this matter shortly;

THE NEW JERSEY ZINC COMPANY
160 FRONT STREET
NEW YORK 38, N. Y.

and, again, I wish to thank you and the other personnel of the Administration who were so helpful. With all best wishes, I remain

Very sincerely yours,

LINDLEY G. MILLER

LGMiller/rm
Encs.

Legal Department

cc: Robert P. Dwyer, Esq. (4)

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
1/8	Klugescheid	500

500

January 8, 1958

Memorandum

To: Associate Solicitor, Division of Mineral Resources

From: Director, Division of Base Metals

Subject: Preparation of A Contract for Docket No. DMEA-4850 (Zinc), The New Jersey Zinc Company, Little War Creek Area-Sector II, Hancock County, Tennessee.

Will you please prepare a contract for the cited application. A draft of the contract, Exhibit "A", Annex I, and Annex II are attached to this memorandum. Consents to Lien have been waived. Also attached is one copy of the map, we have retained the necessary maps and will attach them to the contract.

You will note that the "Special Agreement Concerning Land" in Annex I is the same one that has been used in the past. After the conference with The New Jersey Zinc people, we assume that there will be some changes in the cited agreement.

W. R. Griswold

W. R. Griswold

Attachment

WPKlugescheid/er
Copy to: Docket
Chron.

8623

OFFICIAL FILE COPY
DMEA
RECEIVED JAN 6 1958
DATE | INITIALS | CODE
1/6 | C | 220
500

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

January 3, 1958

Re: DMEA 4850; Zinc; $108,565;
The New Jersey Zinc Co.
Little War Creek Area-
Sector II
Hancock County, Tenn.

Memorandum

To: W. R. Griswold, DMEA

From: O. M. Bishop, USBM

Subject: Review of field examination report of 12/16/57.

The applicant has options to explore and purchase 11 tracts totaling 1,073 acres on the Southeast flank of Copper Ridge some 3 miles southeast of the New Jersey Zinc Company's Flat Gap Mine.

Structural conditions in combination with known mineralization found in soil, rock outcrops, and drill holes warrant additional drilling according to the field team. A total of 35,000 feet of diamond drilling is proposed. Of that quantity about 20,000 would be used in relatively widely spaced drilling.

I concur with the exploration program outlined and recommend that a contract be prepared in conformance to the field team suggestions.

O. M. Bishop

O. M. Bishop

cc: Division of Minerals
Mr. Kiilsgaard
Mr. Lamb
Mr. Bishop
F I L E S

OFFICIAL FILE COPY
DMEA
RECEIVED JAN 2 1958
INITIALS | CODE
C 220
W P Kling 500

IN REPLY REFER TO:

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

December 30, 1957
Re: DMEA 4850
New Jersey Zinc Co.
Little War Creek Area
Hancock County, Tennessee
Applicant's Estimate $113,940.00 - Zinc
Recommended Estimate $108,565.00

Memorandum

To: W. R. Griswold, Defense Minerals Exploration Administration

From: N. E. Nelson, U. S. Geological Survey

Subject: Review of Field Team Report

The applicant requested assistance in exploring other tracts of land aggregating 1,073 acres, in the Copper Ridge Belt, by 35,000 feet of diamond drilling. The applicant has drilled over 15,000 feet in 33 holes of which 3 are classed as ore holes.

Two of the ore holes, Nos. 6 & 13, are adjacent and about 235 feet apart. The third ore hole, No. 27, is about 1,900 feet to the west of 6 and 13. The potentiality of the holes appears to be limited, as 10 non-ore holes surround them. The examiners estimate 50,000 to 100,000 tons of 4% zinc rock may be inferred as a result of the drilling.

The application for assistance in doing additional drilling is supported for the most part by location and the results of geochemical testing for soil zinc. In this case, except for one tract not in the project area, the results of the soil tests are not as encouraging as in other areas that have been soil tested and drilled.

Of 146 holes, totalling 111,642 feet, drilled in 7 projects in the Copper Ridge Belt, as of Dec. 5, 1957, 16 are classed as ore holes. No overall estimate of reserves resulting from the drilling has come to hand. Probably the only worthwhile ore body as yet indicated is that at the Flat Gap mine which is reported to contain about 7,000,000 tons of 4% zinc rock.

The examiners and Field Team recommend approval of the application. I concur with the recommendation.

N. E. Nelson

N. E. Nelson

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
ROOM 13 POST OFFICE BLDG.
KNOXVILLE 2, TENN.

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~~12/20~~	~~Kbg~~	~~500~~

December 17, 1957

Memorandum

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

From: Acting Executive Officer, DMEA Field Team, Region V

Subject: Docket No. DMEA-4850 (Zinc)
The New Jersey Zinc Company, New York 38, N. Y.
Little War Creek area, Hancock County, Tennessee

Enclosed is letter from the New Jersey Zinc Company, dated November 29, 1957, requesting that the Lewis Tunmire property be included within the scope of the project. A copy of the short form of the option contract is also enclosed.

These were inadvertently omitted when the examination report by the Field Team was mailed to you yesterday.

Enclosed are the eight extra copies of the map which were also omitted.

V. J. Lynch

V. J. Lynch

Enclosures 10

RAL ✓
HW ✓
file

THE NEW JERSEY ZINC COMPANY

(ESTABLISHED 1848)

CABLE ADDRESS
"JERSEZINC"

100 FRONT STREET

NEW YORK 38, N.Y.

HORSE HEAD PRODUCTS ®

PLEASE ADDRESS REPLY TO

Jefferson City, Tennessee
November 29, 1957

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DATE	INITIALS	CODE

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

Subject: DOCKET NO. DMEA - 4850 (ZINC)
LITTLE WAR CREEK AREA, TENNESSEE

Attn: Mr. Helmuth Wedow, Jr.

Gentlemen:

This is to advise, in response to your letter of the 27th, that the deed book and page reference to the deed of G. W. Seals to William Wilder was not filled in in our option contract because at the time of closing this instrument had not been placed on record.

Yours very truly,

THE NEW JERSEY ZINC COMPANY

Johnson Crawford

Superintendent for Tennessee

A.D.Hoagland/jf
In duplicate

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DEC - 9 1957
U. S. Geological Survey
Geologic Division
Knoxville, Tenn.

THE NEW JERSEY ZINC COMPANY
(ESTABLISHED 1848)

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"JERSEZINC"

160 FRONT STREET

NEW YORK 38, N.Y.

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PLEASE ADDRESS REPLY TO

Jefferson City, Tennessee
November 29, 1957

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RECEIVED DEC 20 1957

DATE	INITIALS	CODE

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

Subject: DOCKET NO. DMEA-4850 (ZINC)
LITTLE WAR CREEK AREA, TENNESSEE

Dear Mr. Laurence:

Subsequent to submittal of application for DMEA assistance on captioned project, an option was secured to the Lewis Tunmire property. We request that this property be included within the scope of the project and a copy of the short form of the option contract is included herewith.

The Lewis Tunmire property may be seen on map AX-TENN-B-1310 which accompanies application. It is located between the Dudley Dalton and W. M. Brewer properties. The spelling of the name with an R, Turnmire, is the popular one generally used by these people, although the name is spelled Tunmire on their deed.

Yours very truly,

THE NEW JERSEY ZINC COMPANY

Johnson Crawford

Superintendent for Tennessee

A.D.Hoagland/jf
In duplicate

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U. S. Geological Survey
Radiologic Physics
Knoxville, Tenn.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
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KNOXVILLE 2, TENN.

DEC 16 1957

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12/23	C	220
12/23	[illegible]	500

Memorandum

To: Operating Committee, DMEA - Washington

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

Subject: Field Examination Report, DMEA-4850 (zinc)
The New Jersey Zinc Co., New York, N.Y.
Little War Creek Area, Hancock County, Tennessee

Enclosed are 3 copies of the subject report, with eight extra copies of Figure 2 for use in a contract, if approved.

This area is located in the Copper Ridge district, one of the best areas in Tennessee for potential zinc discoveries. We strongly recommend approval of a contract, similar to those already in force with the same Applicant, in the Copper Ridge district.

To provide flexibility to meet conditions as they arise, without frequently amending the contract, we recommend (1) provision for both strike and dip fences, (2) provisions for spacing on the fences as close as 100 feet when desirable, and (3) provision for reducing to EX size when necessary. The following items should be approximate amounts, rather than maximums: (1) number of drill holes (2) total footage within any depth category, as 0 - 1000 feet, etc., and (3) the total footage of each core size. We suggest using a "description of the Work" under exhibit "A" similar to that of Idm-E1071, (DMEA-4586) except that, in paragraph 2 the wording should be changed to "dip and strike fences," and in paragraph 3, the interval between fences be changed to 400 feet (with the understanding that initial fences would be 800 feet or more apart).

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

Robert A. Laurence
Robert A. Laurence
Executive Officer, DMEA
Region V

Reviewed by
DMEA OPERATING COMMITTEE
12-23-57
(date)

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UNITED STATES

DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

FIELD EXAMINATION REPORT, REGION V

ON-SITE REPORT.

DMEA-4850 (Zinc) LITTLE WAR CREEK AREA
Hancock County, Tennessee

Helmuth Wedow, Jr., Geologist
U. S. Geological Survey

and

L. E. Shirley, Mining Engineer
U. S. Bureau of Mines

December 13, 1957

Reviewed by
DMEA CHIEF GEOLOGIST
12-23-57
(date)

DMEA
RECEIVED DEC 18 1957
DATE | INITIALS | CODE

FIELD EXAMINATION REPORT

DMEA-4850 (Zinc), LITTLE WAR CREEK AREA

Applicant: The New Jersey Zinc Company, New York 38, N. Y.

Location: Little War Creek area, Hancock County, Tennessee

SUMMARY AND RECOMMENDATIONS

Geochemical soil surveying followed by preliminary diamond drilling (over 15,000 feet in 33 holes) has shown a potential for zinc-bearing ore bodies of commercial grade and thickness in the Little War Creek area of the Copper Ridge district. Proposed additional diamond drilling amounting to 35,000 feet is planned to examine further the habit of the mineralization and ore in areas immediately adjacent to previous drilling and also to explore in the vicinity of previously untested geochemical anomalies--thus, in general, testing the gross ore potential of the proposed project area. No changes in the drilling pattern proposed by the Applicant have been suggested except that provision should be made for drilling strike fences with relatively closely spaced holes as well as dip fences, should such a change appear warranted as the drilling progresses.

The exploration program, as planned in general, is excellent, and the area has as good or better a potential for obtaining significant reserves of zinc ore as most of the other area currently being explored in the Copper Ridge district with DMEA assistance. Approval of this application is strongly recommended.

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REFERENCES CITED

Rodgers, John, 1943, Geologic map of Copper Ridge district, Hancock and Grainger Counties, Tennessee: U. S. Geol. Survey, Strategic Minerals Investigations, Preliminary map.

Rodgers, John, 1953, Geologic map of East Tennessee, with explanatory text: Tenn. Div. Geol., Bull. 58, Pt. 2.

Secrist, Mark H., 1924, Zinc deposits of East Tennessee: Tenn. Div. Geol., Bull. 31.

INTRODUCTION

The Little War Creek application of the New Jersey Zinc Company was referred to the Field Team on November 18, 1957. In anticipation of its referral, members of the Field Team discussed the proposed exploration in a meeting with the Applicant's representatives at Jefferson City, Tennessee, on November 6, 1957, and, in the course of an inspection trip to other New Jersey Zinc DMEA projects on Copper Ridge on November 7, 1957, examined the actual site in the field and reviewed core from previous (1952-1954) diamond drilling, now stored at the Flat Gap mine. The meeting at Jefferson City was attended by Messrs. A. D. Hoagland, D. L. Kendall, and W. J. Collett, for the Applicant, and R. A. Laurence, V. J. Lynch, L. E. Shirley, and Helmuth Wedow, Jr. for DMEA. The site and core examinations were made by Collett, Lynch, Shirley, and Wedow.

The Little War Creek area lies in the Copper Ridge zinc district of East Tennessee. It is about three miles southwest of Treadway where the Applicant is developing the Flat Gap mine in an ore body of substantial tonnage and grade. In addition to the Flat Gap mine, the Applicant has also discovered substantial tonnages of commercial zinc ore at localities on Copper Ridge as follows:

1) Idol, about 10 miles southwest of Flat Gap.

2) Eidson, about 13-14 miles northeast of Flat Gap, where part of the exploration was recently completed with Government assistance (DMEA-4177).

3) Independence, about 19-20 miles northeast of Flat Gap, where about half of the original Government assistance program (DMEA-4153) has been completed and the project is currently recessed, and a second stage essentially doubling the original amount of DMEA drilling has been approved on adjacent properties.

In addition, the Applicant is exploring with Government assistance in the Cedar Springs (DMEA-4586) and Big War Creek (DMEA-4286) areas, eight miles southwest and four miles northeast, respectively, from the Flat Gap mine, where smaller, yet still significant amounts of ore have already been discovered.

The location of the Little War Creek area and its geographic relationship to other DMEA contracts in the Copper Ridge district are shown in figure 1.

LOCATION AND ACCESSIBILITY

The Little War Creek area is located on Copper Ridge in Hancock County, Tennessee. It lies about three miles southwest of the Applicant's Flat Gap mine and about nine miles northeast of Thorn Hill, a small settlement at the junction of the Clinch Valley Road (State Highway 131) and U. S. Highway 25-E. Access to the area is via the Clinch Valley Road, either from Flat Gap or Thorn Hill, and thence via a network of secondary county roads and farm lanes that traverse most of the area involved. The nearest rail facility is at Washburn, a station on a branch line of the Southern Railway, about 24 miles to the southwest. It is about 30 miles by good hard surface road to the main line of the Southern at Morristown, Tennessee.

PROPERTY OWNERSHIP

Eleven tracts from ten property owners totaling approximately 1073 acres on the southeast flank of Copper Ridge comprise the Little War Creek area. The Applicant holds options on these tracts providing for full prospecting privileges and the right to purchase mineral and mining rights and, in some cases, surface areas. The properties included in the project area are listed below:

Property owner	Approximate acreage	Final expiration date of option 1/
Easter Collins	103	5/11/59
James Brewer	96	3/22/59
H. C. Livesay	100	3/28/59
H. C. Bowlin	135	9/12/59
W. M. Brewer	100	8/31/59
Dudley Dalton	96 92	4/10/62
John Barnard	240	4/10/62
Mack Tunmire, et al.	20	7/18/60
Mack Tunmire, et al.	30	8/12/60
Willis Tunmire	17	8/21/60
Lewis Tunmire (Turnmire) 2/	136	9/30/59
	1073	

1/ Includes extensions permitted.
2/ Added by letter from Applicant, dated November 29, 1957 - letter and copy of option included with covering memorandum transmitting this report.

In reference to the query in Item 3 of the letter of referral from the Operating Committee the Applicant has been requested to furnish the missing deed book and page numbers. His reply indicates that at the time the option had been closed the instrument referred to had not been placed on record. On the three options that have less than 18 months to run it is anticipated that the Applicant, if a contract is granted, will do the required drilling before the options expire.

GEOLOGIC SETTING

The geology of the Little War Creek area is typical of the Copper Ridge zinc district as a whole (Rodgers, 1943). The Cambrian Copper Ridge dolomite and the Lower Ordovician Chepultepec, Longview, Kingsport, and Mascot formations, all of the Knox dolomite group, and the basal beds of the Middle Ordovician Chickamauga limestone are the major stratigraphic units that comprise the shallower bedrock of Copper Ridge. Structurally, in Copper Ridge, these stratigraphic units are homoclinal in the thrust sheet that is bounded above by the Saltville fault and below by the Copper Creek fault (Rodgers, 1953). The strike of the strata in the proposed project area varies from about N. 60° E. to N. 80° E. and the dip from 25° to 50° SE, averaging between 35° and 45° SE. The change in strike from about N. 60° E. at the northeast end of the area to about N. 80° E. at the southwest end takes place in the vicinity of the water gap where Little War Creek cuts through Copper Ridge. Minor tear or cross faults with only relatively small displacement are present locally in the project area. The Rockbridge fault, about a half mile northeast of the project area is one of the few major tear faults cutting Copper Ridge (Rodgers, 1943 and 1953) and may be a factor in the structural disturbance that caused the pronounced local bend in strike mentioned above.

The geologic habit of zinc ore bodies known elsewhere in the Copper Ridge district is that of relatively narrow shoots, generally lying in the plane of the bedding, with their long axes commonly parallel to or at a small angle to the strike of bedrock. Locally, however, ore bodies have been found with the axis of elongation at a high angle or even normal to the the strike. The zinc ores in the upper member of the Kingsport formation and

in the Mascot dolomite are usually breccia zones or fracture fillings in fine-grained dolomite. In the lower member of the Kingsport (R- and S-beds), however, the ores are more commonly replacement deposits in coarsely dolomitized limestones. Gradations between these two types, depending on local conditions, have been found. It is anticipated that the habit of the zinc ores, as described above, will persist in the Little War Creek area.

The continuing review of the geologic data gained in the DMEA explorations programs on Copper Ridge by members of the Field Team has shown that structural contouring of several of the marker beds penetrated in the drilling and plotting of the convergence of selected penetration intervals (in-hole thickness) from the structure contour maps may be of significance as an additional guide in the selection of new drill-hole sites as a drilling program progresses. Tentative conclusions reached to date with this study technique suggest that the vicinity of intermediate penetration thicknesses of the upper member of the Kingsport formation, and, also, in some cases the lower member, may be more favorable for the localization of ore shoots in the Kingsport. As the variations in penetration thickness of a particular interval may be due to: 1) stratigraphic thinning or 2) structural flattening, or 3) both, it is not yet known which of these items may be the most influential, or for that matter, because of the need for additional data as well as further review of data at hand, whether such variations actually have any relationship to possible ore controls. This technique has been discussed with the Applicant's geologists, and it is anticipated that it will be applied in the Little War Creek area to drill-hole data already available.

MINERALIZATION

No mining operations have been conducted within the Little War Creek area, although outcrops of zinc-bearing strata, chiefly of the Kingsport formation, have long been noted in the gap where Little War Creek cuts through Copper Ridge. These occurrences have been known as the C. S. Davis prospect (Secrist, 1924, p. 91, and Rodgers, 1943). No other surface exposures showing sulfide minerals are known within the project area. On the other hand, diamond drilling by the Applicant in the period 1952-1954 (see below) made three ore penetrations out of 33 holes drilled and of the 30 remaining holes at least 15 revealed more than trace amounts of sphalerite. The grouping of the ore holes, however, does not permit the blocking out and calculation of indicated ore, though it is reasonable to infer the presence of at least 50,000 to 100,000 tons of mineralized rock of minable thickness with an average grade of about 4.0 percent zinc in the vicinity of the three holes.

The amount of the mineralization in the holes already drilled in the project area, from information supplied verbally by the Applicant, is given below:

Hole No.	Thickness (feet)	Percent Zinc
LW-1	Not given, probably nil	
-2	2	4.0
-3	13	1.2
-4	Traces at 7 places	
-5	7	2.5
-6	19	4.8
	(of which 14 feet contained 6.2%)	
	4	4.7
-7	42	2.0
-8	7	0.5
	10	2.4
	(interval)	
	12	1.7
	(interval)	
	9	1.2

Hole No.	Thickness (feet)	Percent Zinc
LW-9	Traces at 6 places	
-10	9	2.9
	(interval)	
	5	2.6
-11	Not given, probably nil	
-12	Not given, probably nil	
-13	19	3.2
-14	3	2.0 (est)
-15	Not given, probably nil	
-16	Not given, probably nil	
-17	12	2.7
-18	Scattered traces	
-19	8	3.2
	(interval)	
	13	2.4
-20	3	2.6
	(interval)	
	13	1.8
-26	13	1.4
-27	44	4.0
	(or 93	2.7)
	(or 106	2.5)
-28	10	0.8
-29	Traces at 4 places	
-30	Traces at 8 places	
-31	34	0.8
-53	5	4.7
	(90-foot interval)	
	4	1.4

NOTE: Holes LW-38, -39, -40, -41, -45, and -46 at the southwest end of the project area (John Barnard property) were reported, verbally, to have been completely unmineralized.

In addition, the Applicant, as previously mentioned, has almost completed development on the Flat Gap mine about three miles northeast of the Little War Creek area. The ore body being developed at Flat Gap is reported to contain about 7,000,000 tons of at least 4-5 percent zinc ore.

EXPLORATION

Prior to the interest of the New Jersey Zinc Company in Copper Ridge no prospecting is known to have been done in Little War Creek area. By 1952 the Applicant had completed a preliminary geologic mapping and geochemical soil sampling program in the area. The geologic mapping revealed the possibility for minor structures which may or may not be related to possible ore occurrence. The soil sampling showed localized occurrences of anomalous amounts of zinc, the strongest of which is found in the Little War Creek Gap straddling the known surface zone of mineralization. Following the geochemical work the Applicant diamond-drilled over 50 holes in the Little War Creek area of which 33 are within the area proposed for DMEA assistance. The result of this drilling has been discussed briefly above.

Other exploration in immediately adjacent areas consists of the National Lead (Putnam) Indian Creek project (DMEA-4381) about a mile to the southwest and the National Lead Rockbridge (non-DMEA) project immediately adjacent to the New Jersey Zinc Company properties on the northeast. Although the National Lead Indian Creek project made no major ore penetration, it did reveal fair thicknesses of mineralized ground in the Kingsport, particularly at the northeastern end of the project area. The details of the drilling on the National Lead Rockbridge project are only sketchily known. Suffice it to say that the drilling has been done between the Rockbridge fault and the northeast end of the New Jersey Zinc Little War project, chiefly on the Kirt Livesay and Walter Vaughn properties. The results, as of about mid-October, were reported as negative.

Proposed DMEA Program

The presence of geochemical soil anomalies, the surface showings of zinc mineralization in highly favorable ground (breccia and coarse recrystalline dolomite), and the ore and otherwise strongly mineralized ground encountered in previous diamond drilling all combine with the proximity to the Applicant's developed mine and mill facilities at Flat Gap to recommend the Little War Creek area as one of the more favorable areas in which to explore for zinc in the Copper Ridge district.

The Applicant proposes to explore the area with 35,000 feet of diamond drilling of which about 20,000 feet would be expended in drilling at relatively widely spaced intervals and the remainder would be used for closer check drilling. The proposed pattern of drilling calls for a series of widely spaced exploration fences that would be oriented normal or nearly normal to the strike of bedrock. This orientation is based chiefly on the assumption of a greater probability that possible ore shoots are elongated in a direction close to the regional strike. The initial widely spaced fences would be 800 or more feet apart with the individual holes on 100- to 300-foot centers. Later more closely spaced drilling would close in the fences to 400-foot widths with hole spacing again at not less than 100 feet--the precise locations of the fences and the individual holes therein being governed by the results obtained from the more widely spaced drilling.

The examiners are in general agreement with the exploration plan as proposed. However, as pointed out on Sheet No. 3 of the application -- "Although probabilities favor a strike elongation of ore trend, exploration should not be predicated exclusively on the concept of strike ore zones".

Thus, it may be well to include in a possible original contract, as was recently amended into the Big War Creek contract (DMEA-4286), provision for drilling strike fences to explore for possible ore bodies in which the axial trend has a high dip component.

The proposed holes in the Little War Creek area will collar chiefly in the upper part of the Kingsport formation or in the Mascot dolomite or basal beds of the Chickamauga limestone. They will be bottomed in the basal Kingsport or topmost Longview depending upon satisfactory recognition of the T-bed or the occurrence of significant mineralization in the holes. The depths of individual holes will range from 300 or 400 feet to a maximum of about 1500 feet and average about 700-800 feet.

approx 47 holes

Cost estimate

The field examiners recommend a modified long form type contract that provides for a maximum of 35,000 feet of diamond drilling and related services. Contract drilling costs should be considered as maximums and footage amounts as approximate. All other items should be treated as fixed unit costs. The drilling should be done with AX and/or BX size bits and provision should be made to drill with EX size bit if this size is deemed necessary to complete a hole. Drill holes should be reamed and cased or cemented and redrilled if necessary.

The Applicant's estimates are based on an 18-month period for completion of the project. The field examiners' estimates are based on a 12-month period, which appears more in line for this amount of drilling. It is suggested that the normal clause of royalty repayment period of 30 years duration be included if a contract is prepared.

The following breakdown of costs deemed necessary for successful completion of this project is as follows:

Diamond Drilling:

0-1000 ft depth AX, approximately 29,000 feet @ $2.75/ft	$79,750.00	
BX, approximately 1,000 feet @ $3.05/ft	3,050.00	
1000-1500 ft depth AX, approximately 5,000 feet @ $3.00/ft	15,000.00	
Total		$97,800.00

Estimated Unit Costs:

Geologist, 3/4 time @ $500.00/Mo.	4,500.00	
Surveying, drafting	3,500.00	
Accounting @ $30.00/Mo.	360.00	
Sample Assays - 200 @ $1.00/each	200.00	
Core boxes - 500 @ $1.80/each	900.00	
Transportation - 10,000 miles @ 8¢/Mile	800.00	
Workmen's Compensation (1%)	85.00	
Insurance, payroll taxes (5%)	420.00	
Total		10,765.00
Total Estimated Cost of Project		$108,565.00

It is also recommended that, if a contract is prepared for this proposed project, the cost of core boxes be included in the "Cost of Incidentals" as was done in earlier contracts, for example, Big War Creek (DMEA-4286), rather than being shown as a separate item under " Fixed Unit Costs" as in Cedar Springs (DMEA-4586). Such inclusion in the incidental allowance per foot of drilling relates the number of core boxes used directly to the footage actually drilled, thus simplifying both accounting and administrative procedures.

Helmuth Wedow, Jr., Geologist
U. S. Geological Survey

L. E. Shirley, Mining Engineer
U. S. Bureau of Mines

December 13, 1957

THE NEW JERSEY ZINC COMPANY
(ESTABLISHED 1848)
CABLE ADDRESS
"JERSEZINC"
160 FRONT STREET
NEW YORK 38, N.Y.

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O. M. E.
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~~Jefferson City, Tennessee~~
May 29, 1959

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

Subject: LITTLE WAR CREEK PROJECT, TENNESSEE
DMEA-4850 - Idm E 1174 - ZINC

Dear Mr. Laurence:

In the exploration of the subject area under DMEA contract Idm E-1174, penetrations of ore grade mineralization have been made in one hole on the M. C. Tunmire property and in three holes on the Lewis Tunmire property. No drilling has been accomplished under this project on the H. C. Livesay, H. C. Bowlin, Dudley Dalton and John Barnard properties, and no ore is known to be present on them.

We do not consider that further drilling in the area is advisable at this time and request either of the following:

1. A recess of the contract which would provide for a 12 months extension to the termination date, or

2. Termination of the contract with the provision that the H. C. Livesay, H. C. Bowlin, Dudley Dalton, and John Barnard properties may be deleted from the contract while The New Jersey Zinc Company retains its option to purchase these properties. It would be understood that should the Zinc Company purchase any of the said properties at any time during the period covered by the contract or any extension thereof, the purchased properties would return to the contract.

The government would benefit from such an arrangement because the Zinc Company would be in position to retain intact its prospecting and purchase rights so that at a future date, exploration and testing of said properties could be

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Geologic Division
Knoxville, Tenn.

accomplished. This would enhance the probability that these properties would ultimately become a part of the contract area and improve the chances of eventual return to the government of the funds advanced by it. It would be equally detrimental to both government and Company should the company be obliged to make premature termination of its prospecting and purchase rights thus placing in jeopardy the possibility of future testing and acquisition.

A recess of the drilling on the Little War project is requested pending a determination of the questions stated above.

Yours very truly,

THE NEW JERSEY ZINC COMPANY

Johnson Crawford

General Superintendent

A. D. Hoagland/jf
In Quadruplicate

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
3/14	Klugescheid	500
	Hirsch	500
3/17	[illegible]	130
"	[illegible]	110
"	Whitenton	100
3/18	C	220
		500

500

MAR 18 1958

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

Re: Docket No. DMEA-4850 (Zinc)
The New Jersey Zinc Company
Little war Creek Area-Sector II
Hancock County, Tennessee
Contract No. Idm-E1174

Dear Mr. Laurence:

Enclosed are the Field Team and Finance Office copies of the cited contract, signed by the Operator and the Government.

We are also enclosing an unsigned copy of the contract for the use of the Field Team.

You will note that under 2(b) of the "Special Agreement Concerning Land", the word "only" has been deleted on the fourth line. This was done at the request of the Operator and was agreed to by our Legal Division.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (JB)

WPKlugescheid/er 3/14/58
Copy to: Docket
Admr R File
Op. Committee
Mr. Bishop, USBM
Mr. Kiilsgaard, USGS
Chron.

Enclosures

APPROVED:

P. F. Yopes (JB)
Member, Bureau of Mines

Thor H. Kiilsgaard (JB)
Member, Geological Survey

8623

THE NEW JERSEY ZINC COMPANY

(ESTABLISHED 1848)

HORSE HEAD PRODUCTS ®

100 FRONT STREET

NEW YORK 38, N.Y.

OFFICE OF THE
VICE PRESIDENT

March 10, 1958

Mr. C. O. Mittendorf, Administrator
United States Department of the Interior
Defense Minerals Exploration Administration
Washington 25, D. C.

Re: Docket No. DMEA-4850 (Zinc)
The New Jersey Zinc Company
Little War Creek Area - Sector II
Hancock County, Tennessee

Dear Mr. Mittendorf:

Returned herewith are the original and three copies of the contract for the cited project, all duly signed. We have retained the "Operator's Copy".

Very truly yours,

S. S. Goodwin
Vice President

SSG/JBC:ei

OFFICIAL FILE COPY
DMEA
RECEIVED MAR 11 1958

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Subject: Telephone call between Mr. Rubin and Mr. Lindley Miller of legal department of New Jersey Zinc HUR

Discussed deleting the word "only" from the parentheses in paragraph 1 and subparagraph 2(b) of Special Agreement Concerning land in Docket No. DMEA 4850. Company wanted word deleted as casting doubt on their right, for example, to acquire timber land or access rights. We consented to deletion of word as in no way diminishing rights of the Government.

Phone call made over phone of the Division of Base Metals on Friday afternoon, March 7, 1958.

OFFICE OF THE SECRETARY
DMEA
RECEIVED MAR 10 1958

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Form 7
(12-56)

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Date	Surname	Code
3/6	Klugescheid	500
	Lamb	500
3/7	[illegible]	130
a	Johnson	110
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3/10	C	220
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MAR 7 1958

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

Re: Docket No. DMEA-4850 (Zinc)
The New Jersey Zinc Company
Little War Creek Area-Sector II
Hancock County, Tennessee

Dear Mr. Laurence:

We are enclosing copies of letter from the Legal Division to the Legal Department of the New Jersey Zinc Company which is self-explanatory.

As you will have noticed, the "Special Agreement Concerning Land" in Annex I, of the proposed contract for the cited project has been changed considerably from the former ones. We hope that all differences have now been ironed out and that administration of this contract will be simpler.

Sincerely yours,

George C. Selfridge
Chairman, Operating Committee (GCS)
WRKlugescheid/er 3/6/58
Copy to: Docket
Admr R File
Op. Committee
Mr. Bishop, USBM
Mr. Kiilsgaard, USGS
Chron.

Enclosure
APPROVED:

Frank D. Lamb (FDL)
Member, Bureau of Mines

Thor H. Kiilsgaard (THK)
Member, Geological Survey

8623

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

MAR 5 1958

Lindley G. Miller, Esq.
Legal Department
The New Jersey Zinc Company
150 Front Street
New York 38, N. Y.

Re: The New Jersey Zinc Company, contract revision

Dear Mr. Miller:

With a letter dated February 26, 1958, Mr. Mittendorf sent to Mr. S. S. Goodwin, Vice-President, of The New Jersey Zinc Company, a proposed contract for the project, Docket No. DMEA-4850. This contract incorporates revised provisions for the "Special Agreement Concerning Land" essentially as we discussed them here and as set forth in your letter to me of February 26, 1958.

A few revisions were made for clarity. In the second parenthesis in paragraph 1 and in paragraph 2(b), we have added the words "only" and "acquire" to emphasize that the references are to limited rights. In the second sentence of paragraph 2, the words "if it concurs that the land has no known value for mineral production", were also added to emphasize the mutuality of the provision regarding the value of land.

Your letter also anticipates amending all existing contracts held by The New Jersey Zinc Company to incorporate the new provisions of the "Special Agreement Concerning Land". It was indicated to you at our meeting that such a proposition was a doubtful one. It has since been determined administratively that, apart from any questions of legal consideration, such an amendment is objectionable from a policy standpoint. Therefore, we are sorry to advise you that such a proposal is not under consideration here.

I apologize for the delay in responding to your letter. However, we could not comment upon the language with any finality until the proposed language, now set forth in the draft of contract DMEA-4850, had been approved by the Administrator.

HCRubin/eal - 3/4/58

Very truly yours,

Robert P. Dwyer
Associate Solicitor

Copy to: Solicitor's Docket (2)
W. R. Griswold, Rm.4442
R. P. Dwyer
H. C. Rubin
chron.

rm 7
(12-56)

OFFICIAL FILE C

Date	Surname	Code
2/28	Klugescheid	500

500

February 28, 1958

Memorandum

To: Associate Solicitor, Division of Minerals Resources

From: Director, Division of Base Metals

Subject: A letter to The New Jersey Zinc Company, Docket No. DMEA-4850, The New Jersey Zinc Company, Little War Creek Area-Sector II, Hancock County, Tennessee, Zinc.

Will you please write a letter to The New Jersey Zinc Company concerning what has been done as regards matters discussed with their lawyers and engineers in conferences here in Washington. These discussions concerned some changes which they desired made in the contracts. Docket No. DMEA-4850, The New Jersey Zinc Company, Little War Creek Area, Sector II, Hancock County, Tennessee, Zinc, is the first of the contracts which has the desired changes incorporated therein. The cited docket accompanies this memorandum.

W. R. Griswold

W. R. Griswold

WPKlugescheid/er
Copy to: Docket
Chron.

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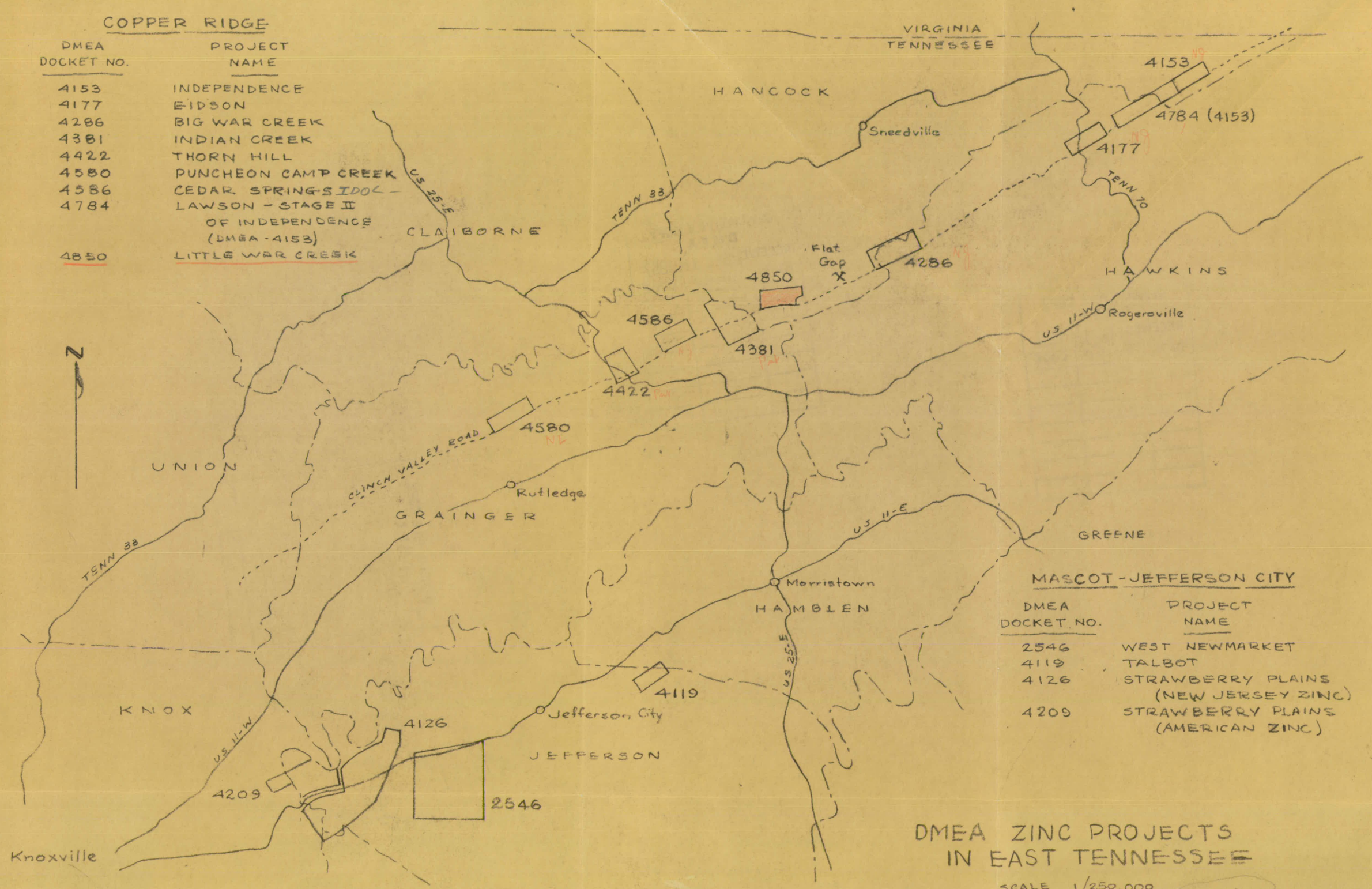
FIGURE 1


COPPER RIDGE
DMEA DOCKET NO.
PROJECT NAME
4153 INDEPENDENCE
4177 EIDSON
4286 BIG WAR CREEK
4381 INDIAN CREEK
4422 THORN HILL
4580 PUNCHEON CAMP CREEK
4586 CEDAR SPRINGS IDOL
4784 LAWSON - STAGE II OF INDEPENDENCE (DMEA-4153)
4850 LITTLE WAR CREEK
VIRGINIA
TENNESSEE
HANCOCK
Sneedville
CLAIBORNE
US 25-E
TENN 33
Flat Gap
HAWKINS
Rogersville
US 11-W
TENN 70
UNION
CLINCH VALLEY ROAD
Rutledge
GRAINGER
TENN 33
US 11-E
GREENE
Morristown
HAMBLEN
US 25-E
KNOX
US 11-W
Jefferson City
JEFFERSON
Knoxville
N
MASCOT-JEFFERSON CITY
DMEA DOCKET NO.
PROJECT NAME
2546 WEST NEWMARKET
4119 TALBOT
4126 STRAWBERRY PLAINS (NEW JERSEY ZINC)
4209 STRAWBERRY PLAINS (AMERICAN ZINC)
DMEA ZINC PROJECTS IN EAST TENNESSEE
SCALE 1/250,000
1" = 4 miles

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RECEIVED DEC 18 1957

DATE	INITIALS	CODE

OFFICIAL FILE COPY
DMEA
RECEIVED DEC 18 1957

DATE	INITIALS	CODE

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DMEA
RECEIVED DEC 18 1957

DATE	INITIALS	CODE

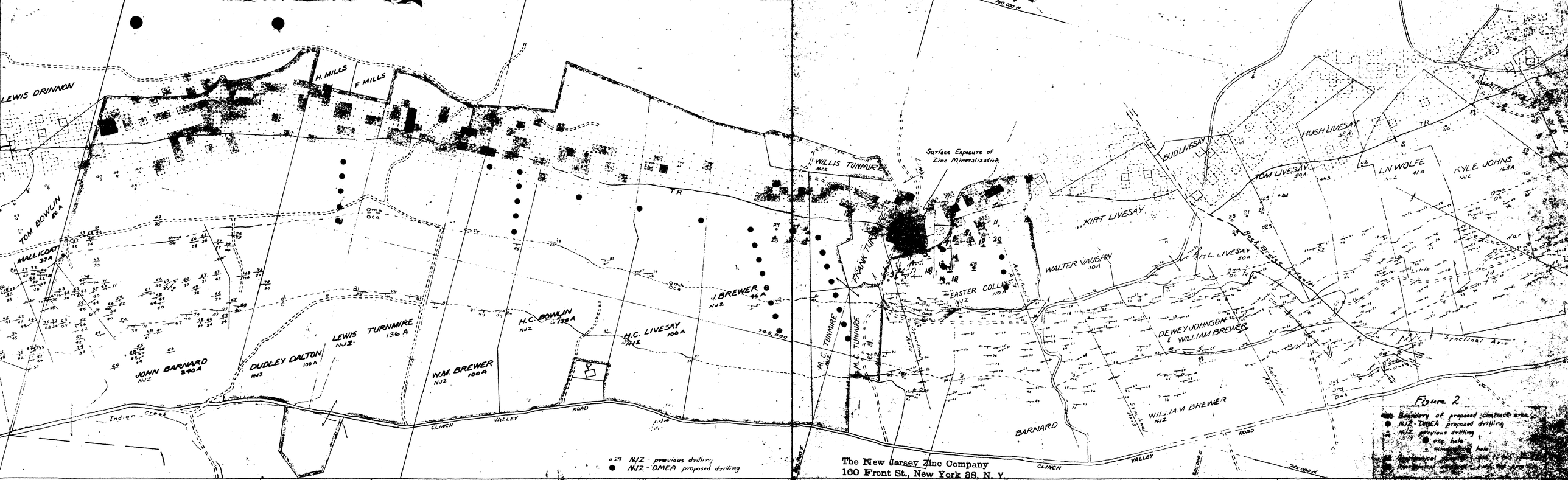

Figure 2

Boundary of proposed contract area
● NJZ - DMEA proposed drilling
NJZ previous drilling
core hole
hole
hole
hole

The New Jersey Zinc Company
160 Front St., New York 88, N. Y.

THE NEW JERSEY ZINC COMPANY JEFFERSON CITY, TENNESSEE	DRAWN R.E.F. DATE 9-23-57 TRACED SCALE 1"=660'	COPPER RIDGE BELT SECTOR II AREA F	LITTLE WAR CREEK FILE NO. AX-TENN B-1310

THE NEW JERSEY ZINC COMPANY
JEFFERSON CITY, TENNESSEE
DRAWN R.E.F. DATE 9-23-57
TRACED SCALE 1"=660'
COPPER RIDGE BELT
SECTOR II AREA F.
LITTLE WAR CREEK
FILE NO. AX-TENN B-1310

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RECEIVED DEC 18 1957
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RECEIVED DEC 18 1957
DATE | INITIALS | CODE

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
11/13	Klingenschied	500
	Grisamb	500
11-15	Martin	130
"	Johnson	110
"	Rattendorf	100
		~~HB~~
11/18	C	220
		500

500

NOV 18 1957

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

Re: Docket No. DMEA-4850 (Zinc)
The New Jersey Zinc Company
Little War Creek Area-Sector II
Hancock County, Tennessee

Dear Mr. Laurence:

The cited application for exploration assistance is being referred to your office for consideration, a field examination of the property if warranted, and recommendations.

If the property is favorably considered by the Field Team, the following points should be taken into consideration:

1. Three of the "Contracts and Agreements" will have less than 18 months to run by the time a contract could be prepared and it would be necessary either to get an extension of time, or else to do the drilling on these properties before the options expire.

2. The incidental allowance per foot drilled would have to conform more or less with that used in DMEA-4286, Big War Creek Area.

3. At the top of the second page of the "Contract and Agreement" with Easter Collins, the deed book and page of the deed of G. W. Seals to William Wilder and his wife, Lucinda Wilder, is missing. It may be that this is not available but, if it was left out inadvertantly, it would be desirable to have it.

Copies of memoranda dated October 21 and November 5, 1957, by W. P. Williams, Geological Survey, and O.M. Bishop, Bureau of Mines, respectively, relating to the project, are enclosed for your information.

8623

We are also enclosing a copy of the application for the use of the Field Team.

Sincerely yours,

W. S. Martin

ACTING Chairman, Operating Committee (WB)

Enclosures

APPROVED:

Frank D. Lamb (WB)
Member, Bureau of Mines

W. P. Williams (WB)
Member, Geological Survey

WPKlugescheid/er 11/13/57
Copy to: Docket
Admr R File
Op. Committee
Mr. Bishop, USBM
Mr. Kiilsgaard, USGS
Chron.

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
11/13	Klugescheid	500
	Friauf	500
11/15	Martin	130
11/15	Lamb	130
11/25	Johnson	110
"	Mittendorf	100
		~~110~~
		220
11/15	Williams	500
		130

500

NOV 18 1957

Mr. S. S. Goodwin, Vice President
The New Jersey Zinc Company
160 Front Street
New York 38, New York

Re: Docket No. DMEA-4850 (Zinc)
The New Jersey Zinc Company
Little War Creek Area-Sector II
Hancock County, Tennessee

Dear Mr. Goodwin:

Your application for Government assistance to explore the cited property has been reviewed by the Division of Base Metals of the Defense Minerals Exploration Administration and has been referred to:

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

If the Field Team requires additional information concerning your application, they will contact your Tennessee field office at an early date.

Sincerely yours,

C. O. Mittendorf (fw)

Administrator

WPKlugescheid/er 11/13/57
Copy to: Docket
Admr R File
Op. Committee
Mr. Bishop, USBM
Mr. Kiilsgaard, USGS
Region V (2)
Chron.

8623

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

November 5, 1957

Re: DMEA 4850; Zinc; $113,940
The New Jersey Zinc Company
Little War Creek Area
Copper Ridge Belt
Hancock County, Tenn.

Memorandum

To: W. R. Griswold, DMEA

From: O. M. Bishop, USBM

Subject: Review of Application, dated October 11, 1957

The applicant company holds options on 937 acres of land on the strike of the favorable Kingsport formation, 3 miles southwest of the Company's Flat Gap Mine. This area is mostly overlain with soil residuum, but along the southwest side of Little War Creek, zinc mineralization occurs in the outcropping lower Kingsport formation. Geochemical sampling of the subsoil residuum show anomalous quantities of zinc and 3 drill holes (out of 33 drilled by the applicant in 1952-1954) show commercial zinc ore, 19 to 44 feet in thickness.

On the basis of the outcrop, the geochemical anomalies, and the three ore holes the applicant proposes to drill several profiles of holes normal to the strike. Each series of holes will be 400 feet or more apart and holes within the sections will be spaced at 100 to 300 feet apart. About 20,000 feet of drilling will be done at wide spacings and another 15,000 feet will be used to check at closer intervals.

I recommend that the project proposal be referred to the Field Team. Although the proposal appears to have much merit, it might be that the field team will consider some modification of the program wise in the light of the Rock Bridge fault and other structural elements. At that time the field team might also inquire about contract prices for drilling, and whether bids are available.

O. M. Bishop

O. M. Bishop

OFFICIAL FILE COPY
DMEA
RECEIVED NOV 5 1957

DATE	INITIALS	CODE
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11/6	[illegible]	500

Copy to: Division of Minerals
Mr. Kiilsgaard
Mr. Lamb
Branch of Base Metals
F i l e s

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

OFFICIAL FILE COPY
DMEA
IN REPLY REFER TO:
RECEIVED OCT 22 195
DATE | INITIALS | COPY
10/22 | gb | 220
10/22 | Klug. | 500

Memorandum October 21, 1957

To: W. R. Griswold, Defense Minerals Exploration Administration

From: W. P. Williams, U. S. Geological Survey

Subject: Review of application, DMEA 4850, (zinc), The New Jersey Zinc Co., Little War Creek area, Copper Ridge, Tennessee.

The applicant proposes to explore for zinc ore bodies in the favorable Kingsport formation of the Knox group in east Tennessee. The property upon which exploration is proposed comprises a total of 957 acres in two tracts. The tracts are about 1,100 feet apart.

The Kingsport formation, the potential ore zone, is covered with clay mantle on the property. The applicant believes the area is favorable for ore deposits, however, on the basis of geochemical soil sample anomalies that are present. If the applicant has performed other geophysical surveys on the property he makes no mention of them.

The proposed project would consist of a total of 35,000 feet of diamond drilling at a total estimated cost of $113,940.

The property probably warrants further exploration, as the area is located in a region where large zinc ore deposits have been discovered by exploration projects very much like the one proposed. I recommend, however, that the application be referred to the Field Team for further study, field examination if necessary, and report.

The applicant states that E. J. Longyear Company was the lowest bidder on the proposed drilling. Competitive bids, however, do not accompany the application.

W. P. Williams

W. P. Williams

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

October 16, 1957

New Jersey Zinc Company
160 Front Street
New York 38, New York

Gentlemen:

Subject: DMEA-4850

Your application for exploration assistance, dated October 11, 1957 submitted to our office at Washington, D. C. has been assigned Docket Number DMEA-4850 and referred to the Base Metals Division in the Washington office. Kindly identify all future correspondence relating to your application by this Docket Number.

Sincerely yours,

Allen S. Dakan, Director
Operations Control and
Statistics Division

Copy to:

Region V