DMEA Form 9

UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration

OFFICIAL DOCKET FILE

DMEA NO. 4673

Application (Denied
(Withdrawn
(After disposition, delete items not applicable)

Contract (Terminated - not Certified
(Cancelled
(Terminated - Certified
(Royalty Agreement

This is the official contract file containing all official records of the project. The records contained in the files are checked and are arranged in this order:

Left Side

✓ Closing letter
Interim Royalty Audits
Reports of Royalty Review
Certification of Discovery
✓ Certificate of Audit (Final)
✓ Interim Audit(s)
✓ Report of Review
Termination Notice or Agreement
Recision Notice
Assignment of Contract
✓ Contract Amendments (latest on top)
✓ Contract with all exhibits and annexes
Owner's Consent to Lien
Subordination Agreement
✓ Leases and assignments of leases
✓ Application and attachments
(3) Envelope for maps

Right Side

✓ Project summary 2-12-59
✓ Work completed analysis
All other material is filed in chronological order with correspondence including the following reports as checked:

✓ Final Field Team Report (Tab)
✓ Operator's Final Report -
(2R) Interim Reports
(2R) Operator's monthly reports and all attachments (latest on top)
X On-site Exam Report(s) (Tab) - 5-57
(4) Settlement Sheets

When the volume of records is expected to warrant additional folders, or when convenience of reference warrants separate folders for certain records, they should be set up in this order:

Left Side	Right Side
Folder No. 2: (In chron. order) Interim Summary Reports by W. O. Engineers	Operator's Semi-Annual Report for Certified Project, Field Team Interim Reports, Operator's Monthly Report with transmittal, narrative, maps, and Field Team review.

Folder No. 3: Maps (Use pocket folder or envelope. Fold maps with title block out and show reference to related document or correspondence.)

Folder No. 4: Settlement Sheets

Folder No. 5: Drill Logs

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DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
9-10	Klugescheid	500
	[illegible]	500
9-10	Chamber	800
9/11	[illegible]	220
"	[illegible]	110
"	[illegible]	100
9/12	C	220
		500

SEP 12 1958

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

Re: Docket No. DMEA-4673 (Zinc-Lead-Copper)
The New Jersey Zinc Company
Valzinco Area
Spotsylvania County, Virginia
Contract No. Idm-E1109

Dear Mr. Goodwin:

Reference is made to your completed exploration contract with the Government.

We sincerely regret that the work performed did not result in a certification of discovery or development under the provisions of the contract. In the absence of such certification, the Government retains no claim or lien against the property subject to the contract or any future production therefrom. We, therefore, are closing our books and records on this project. Your attention, however, is called to the provisions of the contract which require the Operator to keep and preserve records for the period indicated.

Your interest in the DMEA exploration program and participation therein are fully appreciated.

Sincerely yours,

C. O. Millennifont (for)

Administrator

WPKlugescheid/izm 9-10-58
cc: Adm.'rs Reading File
Contract Adm. & Audit Div.
Code 500
DMEA FT Reg. V (2)

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DEPARTMENT MINERALS EXPLORATION ADMINISTRATION
CONTRACT ADMINISTRATION AND AUDIT DIVISION

REPORT OF REVIEW

I have reviewed the Monthly Reports of:

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

pertaining to Exploration Project Contract No. Idm-E1109, DMEA No. 4673, including Amendment No. 1, for October 1957 to January 1958, inclusive, covering a zinc-lead-copper project in the Valzinco Area, Spotsylvania County, Virginia.

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 Team 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 attached schedule:

Total cost billed by Operator		$12,321.60
Exceptions:		
Prior to this review	$ -0-	
Herewith	-0-	-0-
Accepted cost claimed by Operator		$12,321.60
Acceptable cost not claimed		35.00
Total acceptable cost, if claimed		$12,356.60

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:

On cost claimed	$6,160.80
On additional cost, if claimed	17.50
Total payable, if claimed	$6,178.30
Payable on audited claim	$6,160.80
Paid to date	6,160.80
Balance due Operator	$ -0-
Additional payable, if claimed	$ 17.50

E. D. Talbert, Auditor

April 15, 1958

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

(a) the Monthly Reports were supported by documentary proof of that portion ($10,832.40) of the costs covering work performed at unit rates under independent contract;

(b) the balance ($1,524.20) of the 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 disallowances.

Acceptable cost not claimed:

140 core boxes claimed by Operator at actual cost of $2.25/each, whereas contract provides a fixed unit cost of $2.50/each "regardless of costs incurred by the Operator". Additional acceptable cost, if claimed, 140 each @ $.25 ..... $35.00

Government's copy

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EXPLORATION PROJECT CONTRACT
THE NEW JERSEY ZINC COMPANY
DOCKET NO. DMEA-4673

AMENDMENT NO. 1

It is agreed this 26th day of March, 1958, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, and the New Jersey Zinc Company that Exploration Project Contract No. Idm-E1109 (Docket No. DMEA-4673), dated July 19, 1957, is amended effective July 19, 1957, as follows:

In Exhibit "A," Estimated Costs of the Project, under the heading Actual Costs, Category (1) Independent Contracts is revised to read as follows:

"Category (1) Independent Contracts

Overburden drilling @ $2.90/ft 1/

Diamond drilling to 1,000-foot depth @ $2.70/ft. 1/ 2/ $10,920.00

"The above rates include charges for cementing and redrilling, water supply, changing of locations, reaming and casing, and all other charges which are incurred by the drilling contract.

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

Long
Hunter
App'l. Sol. Off.
Hugenhard
Wiswell
Chambers
Selfridge
Johnson

This amendment shall not be construed to increase the estimated total cost of the project, the aggregate total 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 O C Mitterdorf
Administrator, Defense Minerals
Exploration Administration

THE NEW JERSEY ZINC COMPANY

By O Boodwin

Title VICE PRESIDENT

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MF-200
(Revised June 1954)

Docket No. DMEA -4673

Commodity Zinc-Lead-Copper

Contract No. Idm-E 1109

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

EXPLORATION PROJECT CONTRACT[1]

It is agreed this ..... day of 19 JUL 1957, 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 3 maps.

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 Virginia, County of Spotsylvania, and is described in Annex I.[3]

(b) The Operator represents and undertakes that:

(1) The Operator is the [4] optionee 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] ....., [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: Interest of the owners.

(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: **Consent to Lien and Subordination Agreements 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-Lead-Copper** The work to be performed is described in Exhibit "A." The Operator on or before **November 1, 1957,** shall commence the work, and on or before **April 1, 1958** (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 an amount 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 $**12,770.00** The Government shall contribute **50** percent of the allowable costs as they are incurred in a total sum not in excess of $**6,385.00**: *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; ~~but except for any such necessary excesses in categories, subcategories, or items thereunder the Operator is not obligated to incur more than ninety-nine percent 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.

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 18. **(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 ~~six~~ **thirty** 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.

(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

Long
Dunger
[redacted]
Klugeschied
Schanes
Chambers
Selfridge
Johnson

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 PIKER JR, certify that I am the secretary of the corporation named as Operator herein; that Mr. S. S. Goodwin VICE PRESIDENT 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 Piker Jr

[CORPORATE SEAL]

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

EXPLORATION PROJECT CONTRACT
THE NEW JERSEY ZINC COMPANY
DOCKET NO. DMEA-4673

ANNEX I

The land referred to in Article 2 of the contract consists of approximately 4,240 acres in Spotsylvania County, Virginia, about 3 miles southeast of the village of Paytes, Virginia. The Operator is in possession by virtue of a "Contract and Agreement," dated May 26, 1955, between The Chesapeake Corporation of Virginia and The New Jersey Zinc Company. A copy of the contract is contained in Docket No. DMEA-4673, and the land descriptions therein are incorporated herein by reference. All of the tracts of land referred to in this Annex I, on which any exploration work is planned, appear on the attached map entitled "The New Jersey Zinc Company, DMEA-4673, Valzinco Area Composite Map, Fig. 1, AXV-531-D-BD," and are outlined in blue color.

Lands on which the Operator has Right to Prospect for Minerals, for a Period of Five Years, which expires on May 26, 1960, plus Option of Leasing Mineral and Mining Rights on not to exceed 1,000 Acres, and not to exceed 200 Acres of Surface, for a Period of Twenty Years with right to renew for two successive twenty-year periods.

1. All of a certain tract of land conveyed by W. Campbell Spratt and Lillian J. Spratt, his wife, to The Chesapeake Corporation of Virginia by deed, dated December 27, 1950, and recorded in the Office of the Clerk of the Circuit Court of Spotsylvania County, Virginia, in Deed Book 154, page 105, EXCEPT that portion which was conveyed by The Chesapeake Corporation of Virginia to W. C. Spratt, by deed dated March 20, 1951. The said tract contains approximately 2,858 acres.

2. A tract of land containing approximately 1,382 acres, acquired by The Chesapeake Corporation of Virginia as follows:

From	Date of Deed	Deed Book	Page
Panaminas, Incorporated	May 1, 1951	156	354
Rowland Hazard et al.	September 26, 1951	158	80
Randolph C. Harrison et al.	September 26, 1951	158	360

3. All the right, title, and interest of The Chesapeake Corporation of Virginia to any mineral rights acquired by said corporation in the afore-mentioned deed from Panaminas, Incorporated, dated May 1, 1951.

SPECIAL AGREEMENT CONCERNING LAND

1. In the event the Operator or any subsidiary thereof 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 lands included in this contract.

2. It is further agreed that the Operator may, at any time 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 agreements 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:

(a) certifies the lands have no known value for mineral production;

(b) has, prior to the execution of the respective amendment, surrendered or otherwise disposed of all of its interest, title, and equity in such land, 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;

(c) agrees that no benefit from such land or any production of minerals therefrom will accrue to the Operator or to any of its subsidiaries, directly or indirectly, during the period expiring thirty years from the date of this contract; and

(d) agrees that if the Operator or any of its subsidiaries acquires any interest, title, or equity 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, the land with respect to which such interest, title, or equity is acquired, and any minerals produced therefrom, shall be deemed subject to this contract and any certification of discovery or development from the date that the Operator or its subsidiaries acquired such interest, title, or equity, or any benefit therefrom, until the expiration of thirty years from the date of this contract, or until the total amount contributed by the Government without interest is fully repaid, whichever occurs first.

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EXPLORATION PROJECT CONTRACT
THE NEW JERSEY ZINC COMPANY
DOCKET NO. DMEA-4673

ANNEX II

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 (7) 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), 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 provision 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.

EXPLORATION PROJECT CONTRACT
THE NEW JERSEY ZINC COMPANY
DOCKET NO. DMEA-4673

EXHIBIT "A"

Description of the Work

The purpose of the work is to explore for ores of zinc, lead, and copper by diamond drilling (and such churn drilling of overburden as may be necessary). Ores mined in this district occurred in two parallel veins known as the Holladay and the Discovery. The Holladay vein strikes about N 45° E and dips 68° to 70° to the southeast.

Drilling shall be done, on three geochemical and geophysical anomalies, on a bearing of N 50° - 60° W and on a minus 45° inclination. The anomalies are indicated on the attached map entitled "The New Jersey Zinc Company, DMEA-4673, Valzinco Area Composite Map, Fig. 1, AXV-531-D-BD."

The locations of the holes are tentatively shown in red on two attached maps entitled "The New Jersey Zinc Company, Mineral, Va, Fig. 2, S.W. Valzinco Area, AXV-552-D-BD," and "The New Jersey Zinc Company, Mineral, Va, Fig. 2A, North Valzinco Area, AXV-554-D-B." The initial drill hole location on each anomaly is indicated on the maps as D. D. H. #1.

Holes shall be spaced at not less than 200-foot intervals, except with the prior approval of the Government. The actual locations, directions, inclinations, and depths of all holes are subject to prior Government approval.

It is estimated that approximately 10 holes will be required, having an average depth of approximately 400 feet. Not more than 4,000 feet of drilling shall be performed.

All diamond drilling shall be done with AX size or larger coring bits, except when it is necessary to use an EX size bit in order to complete a hole. Drill holes shall be reamed and cased or cemented and redrilled as necessary.

No drilling shall be performed at locations which are within 200 feet of the outside boundary of the property.

All drill holes shall be logged and all drill cores 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 assayed for zinc, lead, and copper. The remaining half of all significantly mineralized core samples shall be furnished to the Government upon request.

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

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

ESTIMATED COSTS OF THE PROJECT

Actual Costs

Category (1) Independent Contracts

Overburden drilling to 100-foot depth approximately 600 feet @ $2.90/ft. 1/	$ 1,740.00	
Diamond drilling to 1,000-foot depth approximately 3,400 feet @ $2.70/ft. 1/ 2/	9,180.00	$10,920.00

The above rates include charges for cementing and redrilling, water supply, changing of locations, reaming and casing, and all other charges which are incurred by the drilling contract.

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

Categories (2) through (7) None

Fixed Unit Costs (See Annex II of the Contract)

Incidental allowance 3/ for each foot of drilling completed 4,000 feet @ $0.30/ft.	1,200.00
Core boxes - 140 @ $2.50/each	350.00

Sample analyses - 100 @ $3.00/each sample	$ 300.00	$ 1,850.00
Estimated Total Cost of the Project		$12,770.00
Government's Participation @ 50%		$ 6,385.00

1/ See paragraph 8 of Annex II of the Contract.
2/ Any drilling with EX size bit will be at a maximum rate of $2.60 per foot.
3/ Includes all costs that might otherwise 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
(ESTABLISHED 1848)

100 FRONT STREET

NEW YORK 38, N.Y.

OFFICE OF THE
VICE PRESIDENT

March 1, 1957

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DATE	INITIALS	CODE

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

VAL ZINCO AREA
SPOTSYLVANIA COUNTY, VIRGINIA
DMEA EXPLORATION PROJECT
THE NEW JERSEY ZINC COMPANY

Gentlemen:

Enclosed herewith you will find a DMEA application in quadruplicate, pursuant to DMEA Order I, under the Defense Production Act of 1950, as amended, for an exploration project in Virginia. This one of three projects for which we are applying. It is our desire to drill these three projects in the following sequence: (1) Bondurant Area, Buckingham County; (2) The Val Zinco Area, Spotsylvania County; and (3) The Hunter Area, Louisa County.

Because of the desire to drill them in sequence we have refrained from filling in (5C) in the application. We believe we can start the first project within two weeks after the application is granted. In the same sequence as above, the projects are expected to take (1) 3 months, (2) 4 months, and (3) 6 months.

These projects are regarded as having limited objectives. Prospecting by geochemistry backed up in some cases by geophysics has discovered anomalies which are regarded as worthy of a limited test. If the proposed limited tests are unsuccessful, we would expect to drop the prospect. If successful, we will expect to do more work. We have found this procedure successful and productive in the Piedmont.

Very truly yours,

S. S. Goodwin
Vice President

SSG:ahg

Enclosure: DMEA Application

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

RECEIVED MAR 8 1957 D.M.E.A.

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. 4673
Metal or Mineral Zinc - Copper - Lead
Date Received 3-8-57
Estimated Cost $14,769.00
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 No. 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 No. 2 attached

(*b*) State any mine name by which the property is known. See Sheet No. 2

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise
See Sheet No. 2

(*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 Exhibit "A" and Sheet No. 2

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

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

4. *Physical description.*—(*a*) Describe in detail any mining or exploration operations which have been or now are being conducted upon the land, including existing mine workings and production facilities. State your interest, if any, in such operations. Also describe accessibility of mine workings for examination purposes. See Sheet No. 3 attached

(*b*) State past and current production, and ore reserves, if any, giving quantities and grades. See Sheet No. 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 No. 3 attached

(*d*) State the facts with respect to the accessibility of the project: Access roads, distances to shipping, supply and residence points. See Sheet No. 3 attached.

(*e*) State the availability of manpower, materials, supplies, equipment, water, and power.
See Sheet No. 3 attached.

16—66551-1

THE NEW JERSEY ZINC COMPANY
160 FRONT ST., NEW YORK 38, N. Y.

5. *The exploration project.*—(*a*) State the mineral or minerals for which you wish to explore This exploration seeks to discover ore bodies containing zinc, copper and lead.

(*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 No. 4 attached.

(*c*) The work will start within ..... days and be completed within ..... 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 No. 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.).

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

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

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

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

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

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

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

NOTE.—No items of general overhead, corporate management, interest, taxes (other than payroll and sales taxes), or any other indirect costs, or work performed or costs incurred before the date of the contract, should be included in the estimate of costs. See Sheet No. 5 attached.

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 1 March, 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
No. 1 (C) of Instructions
Titles, Names and Addressed of Officers

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

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THE NEW JERSEY ZINC COMPANY
160 FRONT ST., NEW YORK 38, N. Y.

Sheet No. 2
No. 3 of Instructions
Applicants Property Rights

(a) The land under consideration consists of a group of contiguous tracts, totaling 4240 acres, all optioned from the Chesapeake Corporation of Virginia. The limits of the optioned property on AXV-531 include the entire mineralized area of interest. The legal description of the property is included in the contract and agreement under which the property is controlled by this company. A copy of the contract is attached to this application (Exhibit A). Expiration date of the option is May 26, 1960.

(b) Valzinco-Holliday-Spotsylvania Pyrites-Marshall; Grindstone, New Grindstone, Roney and Marva.

(c) The New Jersey Zinc Company holds an option for the lease of up to 1000 acres of mineral rights and up to 200 acres of surface, which lease period may extend for 60 years.

This Company has the exclusive right to prospect and explore for minerals over the entire area of the option.

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THE NEW JERSEY ZINC COMPANY
160 FRONT ST., NEW YORK 38, N. Y.

Sheet No. 3
No. 4 of Instructions
Physical Description

(a) No mining operations are currently being conducted on the land. Past mine operations at the Valzinco are well described in the U. S. Bureau of Mines Report of Investigation 4403 issued January 1949, and will only be summarized here since the area of the workings is not involved in the proposed exploration.

The Valzinco mine was operated during the periods 1909-1912, 1914-1918, 1927, and 1942-1945. Maps AXV-531 and 532 show the extent of the known mine workings which are now flooded and inaccessible. A 100 ton mill which was erected by Panaminas during the period 1942-1945 has been dismantled.

The New Jersey Zinc Company briefly held an option on the Valzinco mine tract proper from October 1912 to June 1913. During this time the workings were unwatered, a small amount of drifting was done and three diamond drill holes were put down. All three holes were barren.

The present exploration by this Company has been conducted since May 1955 and has involved geochemical, geological and geophysical surveys. The geophysical surveys were largely inconclusive, probably due to the inherent, non-conducting nature of the Valzinco lead-zinc ore. However, geochemical reconnaissance and detailed sampling, as shown on map AXV-531, reveal the presence of a group of well-defined, high grade anomalies on strike from the workings to the southwest and northeast. Geological reconnaissance has shown gossanous float in the area of several anomalous highs but detailed mapping has been precluded because

THE NEW JERSEY ZINC COMPANY
160 FRONT ST., NEW YORK 38, N. Y.

of the sparse and scattered nature of the outcrops.

(b) Production from the Valzinco through 1918 is estimated by Grosh, in Bureau of Mines Report 4403, as 5000 tons of ore containing 5% lead and 12.5% zinc. No production figures are available after 1918.

No production figures are known for the Marva, Grindstone, New Grindstone and Roney prospects.

(c) The Valzinco mine production was from two parallel zones, the Holliday and Discovery veins, indicated by the workings on map AXV-532. The veins lie in a general mineralized belt extending from the Louisa County base metal deposits to north of the Austin Run mine in Stafford County. The country rock is a sericite quartz schist and quartzite which is part of the Peter's Creek quartzite formation, according to the 1928 edition of the Geologic Map of Virginia.

According to Grosh (1949) in Report 4403, "the sulfide bodies ---- occur as fillings in fault fissures." Mineralization consists of varying mixtures of sphalerite, galena, chalcopyrite, and pyrite in a gangue of quartz, pyrite and magnetite. The mineralized veins are generally conformable to the foliation or slightly crosscutting.

Mineralization is indicated by our geochemical results to extend in a zone on strike from the mine workings to the extreme north and south property boundaries of the optioned land. At least two very large anomalies are outlined on map AXV-531. The northernmost, extending to the line with C. D. Binns, is over 2000 feet long, up to 600 ft. wide, and contains values up to

THE NEW JERSEY ZINC COMPANY
160 FRONT ST., NEW YORK 38, N. Y.

1000 parts per million zinc equivalent. The southern anomaly, bisected by county road 721 is over 1600 feet long, up to 800 feet wide, and contains values up to 800 parts per million zinc equivalent. Our experience elsewhere in the Piedmont indicates these anomalies are major ones and should be tested by core drilling.

(d) The project is ten miles, airline, from Mineral, 25 miles from Fredericksburg, and 60 miles from Richmond, all three of which have rail facilities and are highway centers. Paved roads extend to the mine property and private roads permit access to nearly all portions of the mine area itself. Richmond would be the main supply point and residential facilities are available in the immediate neighborhood or in any one of several small towns within a radius of 15 miles.

(e) Manpower, materials, supplies, equipment and power will be readily available. Surface streams on the property could supply a minimum of 200 gallons per minute. The North Anna River, a major stream within six miles of the area, could be used to supplement the water supply if needed.

THE NEW JERSEY ZINC COMPANY
160 FRONT ST., NEW YORK 38, N. Y.

(b) As a preliminary test of the two largest anomalous zones we propose to drill shallow 400-500 foot holes inclined at 45° and directed approximately at right angles to the strike of the foliation. These holes would be spaced 400 feet apart initially which spacing would be decreased to obtain penetrations on the vein 200 feet apart once ore was encountered. As the strike extent of the mineralization is determined, vertical 400-1000 foot holes would be collared on the same fence as the inclined holes to establish the pitch and deeper limit of the ore. The proposed fences of holes are shown on map AXV-531.

(d) The New Jersey Zinc Company has had wide experience in large scale exploration programs in the Appalachian Piedmont as well as in many other mining districts in the U. S. This project will be under the supervision of W. L. Albers, Superintendent, and W. Horatio Brown, Chief Geologist, who have been active in Virginia for 30 and 16 years respectively.

THE NEW JERSEY ZINC COMPANY
160 FRONT ST., NEW YORK 38, N. Y.

Sheet No. 5

No. 6 of Instructions - Estimated Costs

Category No. 1 - Independent Contracts Diamond Drilling	4,000' @ $2.90/ft	=	$ 11,600
See Exhibit "B"	$ 2.70 Av. Depth .10 Service .10 Casing		
Bids from E. J. Longyear Co., Joy Mfg. Co., and Sprague & Henwood	$ 2.90		

2.6
11.5 | 4000
30
100
90
(3)

Category No. 2

a. Supervision	
Geologist - half time 4 months	1,200
Asst. Geologist-Surveyor - half time 4 months	900
b. Technical Services	
Draftsman - 1/3 time	350
c. Operating, Materials & Supplies	
Core boxes, etc.	100
d. Operating Equipment	
Cars 1440 mi. @ 8¢	115
e. Rehabilitation & Repairs - None	
f. New Buildings, Improvements - None	
g. Miscellaneous	
Chemical Assays - 100 @ $1.50	150
Accounting Charges } 30.00/mo. x 4	
Secretarial Charges }	120
Workmen's Comp. Ins. - 1% x $2570	26
Payroll Taxes - 5% x $2570	128
Core Storage	80
	$ 14,769

3/400
133 core boxes

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THE NEW JERSEY ZINC COMPANY
160 FRONT ST., NEW YORK 38, N. Y.

Exhibit "A"

Option Contracts

THE NEW JERSEY ZINC COMPANY
160 FRONT ST., NEW YORK 38

THIS CONTRACT AND AGREEMENT, made and entered into this 26th day of May, 1955, by and between THE CHESAPEAKE CORPORATION OF VIRGINIA, a Virginia corporation, with its principal office at West Point, Virginia, party of the first part, and THE NEW JERSEY ZINC COMPANY, a New Jersey corporation authorized to do business in the state of Virginia, party of the second part:

W I T N E S S E T H :

That in consideration of ONE DOLLAR ($1.00), cash in hand paid, the receipt whereof is hereby acknowledged, and other good and valuable consideration, the party of the first part doth grant unto the party of the second part, for a period of five (5) years from the date hereof, expiring on the 26th day of May, 1960, the exclusive right to prospect and search for minerals, metals, ores, ore-bearing materials, and rock of every kind, in, on or under the following described property, to-wit:

All those certain tracts or parcels of land, situate, lying and being in Livingston Magisterial District, Spotsylvania County, Virginia, containing 4240 acres, more or less, but conveyed in gross and not by the acre, and being the following properties, to-wit:

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FIRST: All that certain tract or parcel of land now owned by The Chesapeake Corporation of Virginia, situated in Livingston Magisterial District, Spotsylvania County, Virginia, described in a deed dated December 27, 1950, from W. Campbell Spratt and Lillian J. Spratt, his wife, to the said The Chesapeake Corporation of Virginia, which deed was recorded December 29, 1950, in the Office of the Clerk of the Circuit Court of Spotsylvania County, Virginia, in Deed Book 154, page 105, EXCEPT that portion of said property which was conveyed by The Chesapeake Corporation of Virginia to W. C. Spratt, by deed dated March 20, 1951, duly of record in the aforesaid Clerk's Office; the said tract containing some 2858 acres, more or less.

SECOND: All that certain tract of land in Livingston Magisterial District, Spotsylvania County, Virginia, acquired by The Chesapeake Corporation of Virginia, by deed from Panaminas, Incorporated, dated May 1, 1951, recorded May 25, 1951, in the aforesaid Clerk's Office in Deed Book 156, page 354, together with the additional undivided interests in a portion of the said property acquired by The Chesapeake Corporation of Virginia by deed dated September 26, 1951,

THE NEW JERSEY ZINC COMPANY
160 FRONT ST., NEW YORK 38, N. Y.

from Rowland Hazard, et als., recorded November 20, 1951, in the aforesaid Clerk's Office in Deed Book 158, page 80, and by deed dated September 26, 1951, from Randolph C. Harrison, et als., recorded January 23, 1952, in the aforesaid Clerk's Office in Deed Book 158, page 360, the said tract containing 1381 acres, more or less.

THIRD: All the right, title and interest of The Chesapeake Corporation of Virginia to any mineral rights acquired by said corporation in the aforementioned deed from Panaminas, Incorporated, dated May 1, 1951.

During the period herein set out and for the same consideration the party of the first part doth further grant unto the party of the second part the exclusive option of leasing for a period of twenty (20) years with right to renew for two (2) successive periods of twenty (20) years each a portion or portions of the above described premises in the aggregate not in excess of Two hundred (200) acres of surface and One thousand (1000) acres of mineral rights, such portion or portions of said premises to be so leased to be designated by a metes and bounds description and survey provided by the party of the second part, and of mining, milling, and removing minerals, metals, ores, ore-bearing materials, and rock of every kind from the premises so leased, together with certain rights with respect to the use of the surface of those portions in which mineral rights only are so leased, and together with certain rights of way across, over and under those portions of the above described premises which are not so leased.

The parties hereto have entered into a written contract and agreement of even date herewith setting out fully the rights and privileges granted in this agreement and the terms and conditions upon which they may be exercised, and the parties hereto refer to that contract and agreement for a more complete description of

THE NEW JERSEY ZINC COMPANY
160 FRONT ST., NEW YORK 38, N. Y.

these rights and the terms and conditions upon which they may be exercised, as fully as if said contract and agreement were herein set out at length.

IN WITNESS WHEREOF, the party of the first part has caused this contract and agreement to be executed by_____ _____, its President, and its corporate seal to be hereunto affixed and attested by_____, its Assistant Secretary.

THE CHESAPEAKE CORPORATION OF VIRGINIA

By_____
President

ATTEST:

_____
Assistant Secretary

DATE | INITIALS | CODE
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D M E A

STATE OF VIRGINIA

COUNTY OF KING WILLIAM, to-wit:

I,_____, a Notary Public in and for the County of King William, in the State of Virginia, do certify that _____and_____ whose names as President and Assistant Secretary, respectively, of The Chesapeake Corporation of Virginia, are signed to the foregoing contract and agreement bearing date on the 26th day of May, 1955, have acknowledged the same before me in my County and State aforesaid.

Given under my hand this_____day of May, 1955.

My commission expires _____ _____
Notary Public

THE NEW JERSEY ZINC COMPANY
160 FRONT ST., NEW YORK 38, N. Y.

EXHIBIT "B"

THE NEW JERSEY [illegible] COMPANY
160 FRONT ST., NEW YORK 38, N. Y.

JOY MANUFACTURING COMPANY
900 WOODLAND AVENUE
MICHIGAN CITY, INDIANA
TELEPHONE 7-7231

EXECUTIVE OFFICES
HENRY W. OLIVER BUILDING
PITTSBURGH 22, PA.

January 29, 1957

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DATE	INITIALS	CODE

New Jersey Zinc Company
160 Front St.
New York 1, N. Y.

Attention: Mr. A. E. Turner
Asst. Manager of Purchasing

Subject: Diamond Drilling - 1-X-524
Valzinco Mine Project - Spotsylvania County, Va.

Gentlemen:

In compliance with your letter dated January 14th, we quote below prices and conditions covering a minimum of 3,000 feet of drilling at the above project situated 10 miles north of Mineral, Virginia.

From surface to a depth of 1,000 ft. @$3.00 per ft.

Size of Core - AX

Maximum depth of holes - 1,000 ft.

Direction of holes - 45° to vertical

Maximum distance to water - 3,500 ft.

New Jersey to furnish core boxes.

Joy to haul core boxes to field storage near drill.

We will furnish for this proposed drilling, one Joy #12-B gasoline driven core drill complete with operating equipment, and will conduct the drilling operations on the basis of two 8-hour shifts per day and six days per week.

Yours very truly,

JOY MANUFACTURING COMPANY

W. J. Pilarski, Mgr.
Contract Drill Division

WJP/et

THE NEW JERSEY ZINC COMPANY
160 FRONT ST., NEW YORK 38, N. Y.

SPRAGUE & HENWOOD, Inc.
Contractors for DIAMOND DRILLING
MINERAL EXPLORATION • SOIL SAMPLING • PRESSURE GROUTING

EXECUTIVE OFFICES & PLANT
221 WEST OLIVE STREET
SCRANTON, PENNSYLVANIA
Telephone Diamond 4-8507

February 5, 1957

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

AGT

RE: Diamond Drilling -
Virginia Piedmont -
Mineral, Virginia 1-X-524

Attention: Mr. A. E. Turner, Asst. Mgr. of Purchasing

Gentlemen:

We are pleased to quote you on Diamond Drilling at the Valzinco Mine in Spotsylvania County, Virginia, approximately ten miles north of Mineral Virginia, as per your letters dated January 14 and 17, 1957. Our Contract Representative, Mr. L. E. Mark, met your Mr. E. L. Weingerg Tuesday, January 29, and went over the proposed drilling sites. We are pleased to quote on this work as follows:

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ITEM NO.

1 - For drilling AX holes to a maximum depth of 1,000 feet based on a minimum of 3,000 feet of drilling.

AX HOLES

0'	to	500'	-	$ 3.75 per lin. ft.
500 '	to	750'	-	$ 3.95 per lin. ft.
750 '	to	1000'	-	$ 4.20 per lin. ft.

2 - Reaming and casing holes - reaming holes AX to BX and inserting Ax casing - $ 1.50 per lin. ft.

3 - Casing lost in holes, or left in holes at you request --
AX casing - $ 1.70 per lin. ft.
(drive pipe for other sizes AT COST)

4 - For surveying holes, acid tube method or delays caused by you - for use of drill crew - $12.00 per hour

The above prices do not include core boxes which we understand you will furnish.

We would use Sprague & Henwood, Type No. 40 C Skid Mounted Drilling Rig as we understand many of these holes will be drilled at an angle.

We have the necessary equipment and experienced personnel available to take care of this work.

THE NEW JERSEY ZINC COMPANY
160 FRONT ST., NEW YORK 38

TO:
The New Jersey Zinc Company

February 5, 1957

Payment to be made within thirty (30) days after date of invoice.

We trust you will find this quotation acceptable.

We wish to thank you for the opportunity of quoting on this work.

Very truly yours,

SPRAGUE & HENWOOD, INC.

Wm. J. Schank
Vice President

cgw
Enclosure: In Triplicate

THE NEW JERSEY ZINC COMPANY
160 FRONT ST., NEW YORK 38, N. Y.

Longyear

E. J. LONGYEAR COMPANY
General Offices, Foshay Tower
Minneapolis 2, Minnesota, U. S. A.
TELEPHONE: FEDERAL 2-2447 • CABLE LONGCO

February 22, 1957

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

Attn: Mr. A. E. Turner, Assistant Manager Purchasing

DIAMOND DRILLING - VIRGINIA PIEDMONT - MINERAL, VIRGINIA - 1-X-524

Gentlemen:

Confirming our telephone conversation of yesterday, we are prepared to carry out the drilling operations which you are presently considering in connection with the subject exploration program at the prices set forth in our proposal dated February 12, 1957, even though the minimum footage drill may be less than the 13,000 feet originally planned.

Trusting that we will have an opportunity to make our services available for this program, we remain,

Sincerely yours,

E. J. LONGYEAR COMPANY

Manager
Contract Drilling Division

M. J. Gleason:vr

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DATE	INITIALS	CODE

THE NEW JERSEY ZINC COMPANY
160 FRONT ST. NEW YORK 38, N. Y.

RECEIVED FEB 25 1957 PURCHASING DEPT.

Longyear

E. J. LONGYEAR COMPANY
General Offices, Foshay Tower
Minneapolis 2, Minnesota, U. S. A.
TELEPHONE: FEDERAL 2-2447 • CABLE LONGCO

February 12, 1957

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

Attention: Mr. A. E. Turner

DIAMOND DRILLING - VIRGINIA PIEDMONT - MINERAL, VIRGINIA - 1-X-524

Gentlemen:

1. Pursuant to your letters of January 14 and 17, we are pleased to submit below proposal for your contemplated exploratory drilling program which is to be carried out in the above-described district.

2. We understand that this program will consist of a minimum of 13,000 feet of diamond drilling involving four locations, with specifications as follows:

a) Bondurant Prospect, Buckingham County, Virginia
Location - 70 miles south of Mineral, Virginia
Formation - country rock - biotite quartz schist
Angle of holes - vertical or inclined to as much as 45°.
Depth of holes will vary from 300 to 1000 feet - average 300 to 500 feet.
Size of core - AX
Water supply - available within a maximum of 1,000 feet of any proposed drill hole
Minimum footage - 1500 feet

b) Austin Run, Stafford County, Virginia
Location - 55 miles north of Mineral, Virginia
Formation - country rock - feldspathic, quartz gneiss
Angle of holes - vertical or inclined to as much as 45°.
Depth of holes will vary from 300 to 1000 feet - average 300 to 500 feet
Size of core - AX
Water supply - maximum distance to water 1200 feet
Minimum footage - 1500 feet

c) Valzinco Mine, Spotsylvania County, Virginia
Location - ten miles north of Mineral, Virginia
Formation - country rock - sericite-quartz schist
Angle of holes - vertical or inclined as flat as 45°.
Depth of holes will vary 300 to 1000 feet - average 300 to 500 feet.
Size of core - AX
Water supply - maximum distance to water will be 3500 feet
Minimum footage - 3000 feet

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FEB 13 1957
PURCHASING DEPT.

THE NEW JERSEY ZINC COMPANY
160 FRONT ST., NEW YORK 38, N. Y.

d) Hunter Property, Louisa County, Virginia
Location - in and adjoining the town of Mineral, Virginia
Formation - sericite-quartz schist
Angle of holes - vertical or inclined as flat as 45°.
Depth of holes will vary from 300 to 1000 feet - average 300 to 500 feet.
Size of core - AX
Water Supply - maximum distance to water 2,000 feet.
Minimum footage - 4,000 feet

3. For this work we propose to furnish one Longyear gasoline-driven, truck-mounted diamond core drill, together with the necessary accessory equipment required to accomplish the work as now planned; and further to furnish all other service equipment required for moving and for supplying water for drilling purposes. We further propose to operate the drill on a double shift basis, six days per week.

4. We will carry public liability insurance covering personal injury and property damage, and Workmen's Compensation insurance, and also, all-risk insurance on the drilling equipment protecting against loss by theft, fire, flood, land-slides and other similar hazards.

We will also assume and pay any and all Old Age Benefit, Unemployment and Social Security taxes and contributions imposed by federal or state authorities.

Certificates showing the coverage referred to will be furnished upon request.

5. Based upon the conditions as outlined above, we are pleased to quote as follows:

a) Overburden Drilling

0 to 100 feet in depth, measured from the collar of the hole.....$2.90 per foot

b) Diamond Core Drilling

Top of Ledge to 1000 feet in depth, measured from the collar of the hole -

BX-size, recovering core approximately 7/8" in diameter.....$2.60 per foot

AX-size, and/or EX wire line, recovering core approximately 1-3/16" in diameter.....$2.70 per foot

BX-size, recovering core approximately 1-5/8" in diameter.....$3.20 per foot

NX-size, recovering core approximately 2-1/8" in diameter.....$3.75 per foot

c) Drill hole surveying using Tro-Pari instrument with instrument furnished by you.....$5.00 per hour

RECEIVED FEB 13 1957 PURCHASING DEPT.

THE NEW JERSEY ZINC COMPANY
160 FRONT ST., NEW YORK 38, N. Y.

d) Hauling drill core from drill hole location to drill storage sheds.....$3.25 per hour

e) Capping drill holes.....$3.00 per hour, plus cost of caps and other materials used in capping operation.

f) Casing left in drill holes at your request -

EX-size.....$1.47 per foot
AX-size.....$1.54 per foot
BX-size.....$1.96 per foot
NX-size.....$2.66 per foot

g) Cleaning up of drill hole locations to be carried out at the sole expense of the Longyear Company.

h) Reaming and casing, when required, will be carried out at the sole expense of the Longyear Company.

6. The above-quoted drilling rates are based on wages currently being paid in the southeastern district. If during the life of this project it becomes necessary for us to adjust the wages being paid our workmen because of demands of labor union or otherwise, it is understood and agreed that the Longyear Company reserves the right to increase drilling rates to cover resultant additional operating expenses.

7. Drill cores are to be placed in receptacles furnished by you at each drill hole location and transported to point of permanent storage as provided for herein.

8. Invoices covering work performed will be prepared in accordance with your instructions.

9. We appreciate being afforded the opportunity to consider this work. If our proposal is found acceptable, we are prepared to furnish the equipment from our Max Meadows warehouse, and commence the drilling operations promptly after receipt of official notice to proceed.

Sincerely,

E. J. LONGYEAR COMPANY

Manager
Contract Drilling Division

RECEIVED FEB 13 1957 PURCHASING DEPT.

M.J.Gleason:bal

ACCEPTED:

THE NEW JERSEY ZINC COMPANY

THE NEW JERSEY ZINC COMPANY
160 FRONT ST., NEW YORK 38, N. Y.

By:_____

Date:_____

PROJECT SUMMARY REPORT

By: J. W. Alt February 12, 1959

1. Docket No. DMEA-4673 (Zinc-Lead-Copper)
Contract No. Idm-E1109
Property: Valzinco Area
Spotsylvania County, Virginia

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

Operator's Property Rights: Optionee
Option Contract dated May 24, 1955.

2. Contract dated July 19, 1957. To complete - April 1, 1958.

Royalty payment period is increased from 10 years to 30 years.

Work Authorized

The purpose of the work is to explore for ores of zinc, lead and copper by diamond drilling (and such churn drilling of overburden as may be necessary).

It is estimated that 10 holes will be required, having an average depth of approximately 400 feet. Not more than 4,000 feet of drilling shall be performed.

Estimated Costs of the Project

Actual Costs

Category (1) Independent Contracts

Overburden drilling to 100-foot depth approximately 600 feet @ $2.90/ft.	$1,740.00	
Diamond drilling to 1,000-foot depth approximately 3,400 feet @ $2.70/ft.	9,180.00	$10,920.00

Fixed Unit Costs

Incidental allowance for each foot of drilling completed, 4,000 feet @ $0.30/ft.	$1,200.00	
Core boxes - 140 @ $2.50/each	350.00	
Sample analyses - 100 @ $3.00/each	300.00	$ 1,850.00
Total Estimated Cost of the Project		$12,770.00
Government's participation, 50%		$ 6,385.00

Amendments

No. 1 Agreed March 26, 1958, effective July 19, 1957.

Category (1) Independent Contracts is revised to read as follows:

Category (1) Independent Contracts

Overburden drilling @ $2.90/ft. Diamond drilling to 1,000-foot depth @ $2.70/ft.	$10,920.00

Work Completed

Total feet drilled in 9 holes, 3,914 feet of which 1,323 feet was in overburden	$12,356.60

Work under the terms of the contract was started on October 3, 1957 and was completed on December 30, 1957.

3. Audit: Report of Review dated April 15, 1958.

Total cost as billed by Operator	$12,321.60
No exceptions	
Accepted cost claimed by Operator	$12,321.60
Acceptable cost not claimed	35.00
Total acceptable cost if claimed.	$12,356.00

Operator's final report dated January 1958
Field Team's final report dated December 2, 1958

4. Certification of Discovery or Development.

A certification was not issued as no ore was discovered.

5. Comments:

Drilling operations were conducted in an efficient manner. Reporting of work and cost data was greatly improved over that submitted by the same Operator in exploration under preceding project DMEA-4674, Contract No. Idm-E1103.

The exploration at Valzinco discovered no significant mineralization that can be considered of economic value either now or in the future. Such weakly mineralized rock as was pentrated could account for the geochemical anomaly, but no trends were observed that would suggest that ore bodies of commercial size and grade still exist in the areas explored.

Further exploration with Government assistance is not recommended.

J. W. Alt

J. W. Alt/er
CC: Docket
Dir Read File
Chron.

DMEA Form 17
Feb. 58

DEFENSE MINERALS EXPLORATION ADMINISTRATION

WORK COMPLETED ANALYSIS

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

Operator: THE NEW JERSEY ZINC COMPANY		Actual Cost	X
State: VIRGINIA *		Agreed Unit Cost	X
Final Report of Audit		Commodity: ZINC	Docket No. DMEA-4,673
Final Report of Review	X		Contract No. Idm-E1,109

Operation	Authorized by Contract and Amendments		Completed		Net cost after sale of Government Property
	Units	Cost	Units	Cost	
Drifting & Crosscutting					
Overburden Drilling to 100' depth	1,323' @ $2.90/ft	$ 3,836.70	1,323'	$3,836.70	$ 10,832.40
Diamond Drilling to 1,000' depth	2,624' @ $2.70/ft	7,083.30	2,591'	6,995.70	
Incidental Allowance per foot drilled *	4,000' @ $0.30/ft	1,200.00	3,914'	1,174.20	1,174.20
Drilling (Specify) Core Boxes (wooden) *	140 @ $2.50 ea.	350.00	140	350.00	350.00
Surface Excavation					
Underground Excavation					
Roads and Trails					
Operating Equipment Purchased					
Surface Rehabilitation & Repairs					
Underground Rehabilitation					
New Building, Improvements, etc.					
Other (Specify) Assays-- 100 @ $3.00 ea. *		300.00			
Totals		$12,770.00		$12356.60	* $12,356.60

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

Prepared by W. P. Klugescheid Date 2/10/59.

31390

☒ Audited R&R. 4/15/58. WORK ANALYSIS SHEET - DMEA PROJECT ☒ Actual Cost

☐ Certified Analysis as of 3/14/58 *☒ Agreed Unit Costs

Incl. Voucher for Jan. 1958.

Name THE NEW JERSEY ZINC COMPANY Docket No. 4673

State VIRGINIA Commodity ZINC Idm-E No. 1109

OPERATION	AUTHORIZED Units	AUTHORIZED Cost	COMPLETED Units	COMPLETED Cost	NET COST
Drifting & Crosscutting	1,323'				
Overburden Drilling to 100' depth..	~~600'~~ @ $2.90/ft.	3,836.70 ~~$ 1,740.00~~	1,323'	3,836.70	$10,832.40
Diamond Drilling to 1,000' depth	2,624' ~~3,400'~~ @ $2.70/ft.	7,083.30 ~~9,180.00~~	2,591'	6,995.70	
Incidental Allowance per foot drilled. *	4,000' @ $0.30/ft.	1,200.00	3,914'	1,174.20	
Core Boxes * (Specify) (wooden)	140 @ $2.50 ea.	350.00	140	350.00	
Surface Excavation					
Underground Excavation					
Roads and Trails					
Operating Equipment Purchased					
Surface Rehabilitation & Repairs					
Underground Rehabilitation					
New Building, Improvements, etc.					
Other (Specify) Assays-100 @ $3.00 ea.*		300.00			
Totals		$12,770.00		$12,356.60	

Checks Audit

Date of Contract--July 19, 1957.
Completion date April 1, 1958.
Expiration date of Royalty Payments July 19, 1987

Operator's Final Report received--February 21, 1958.
Work under the Contract was completed December 30, 1957.
Amendment No. 1-Covered excess overburden drilling which had not been figured on.

Prepared by A. P. Klugescheid

Field Team Final Report received-December 5, 1958.
No Certification was recommended.
Terminal Letter dated--September 12, 1958.
Project Summary Report written.

7162

Actual Costs

Independent Contracts

Overburden drilling to 100' depth.
600' @ $2.90 — 1,740.00

D.D. to 1000' depth
3,400' @ 2.70 — 9,180.00

Fixed Unit Costs

Incidentals allowance
4000' @ $0.30 — 1,200.00

Core Boxes 140 @ 2.50 — 315.00

assays 100 @ 3.00 — 300.00

$12,735.00

Spent 1957 & ~~Nov~~ ~~Dec.~~ 1958 Jan.

Overburden drilling @ ~~$2.90~~	~~1084'~~ 1323' ~~564'~~	~~3,836.70~~ ~~3,134.90~~ ~~1,635.60~~
AX drilling to 1000' depth @ $2.70	~~1655'~~ 2,591' ~~647'~~	~~6,995.70~~ ~~4,468.50~~ ~~1,746.90~~
Core boxes @ 2.50	140	315.00
Incidental allowance @ $0.30	~~2,436~~ 3,914' ~~1,311'~~	~~1,174.20~~ ~~820.80~~ ~~393.30~~

~~4,060.80~~
~~8,737.20~~
12,321.60

MEMORANDUM FOR THE FILES

RESUME OF DRILLING RESULTS ---- DMEA-4673.

Hole No.	Total Depth.	Results.
79V	433'	343'-362' Estimated traces of Zn, Pb, Cu. Traces of Zn. at 335', 340', 379', 385', 389', 397'.
80V	404'	218'-254' Scattered traces of Zn. 258'-267' 278'-291' Estimated Traces of Zn, Pb, and Cu.
81V	374'	207'-369' Scattered Traces of Zn, Pb, Cu.
82V	689'	357'-632' Scattered traces of Zn, Pb, Cu. 527'-531' Est. ½% Zn, Tr. Pb.
83V	354'	244.5'-245' Est. 2% Zn, ½% Cu. 271'-276' Traces of Zn. 279.5'-280' Traces of Zn.
84V	482'	160'-160.5' Est. ½% Zn, Trace Pb. 214'-285' Scattered traces of Zn. 346'-347' Estimated ½% Zn, Trace Pb. 437'-438.5' 445'-445.5' Estimated 1½% Zn, Trace Pb. 448'-448.5' Estimated ½% Zn. Trace Pb.
85V	424'	251'-320', 361.5', 396'-419' Scattered traces of Zn, Pb, and Cu.
86V	370'	212.5'-257', 271'-278', 291'-366' Scattered traces of Zn, Pb, and Cu.
87V	384'	106'-193', 195'-308' Scattered traces of Zn, Pb,
Total	3,914'	

Completed to all intents and purposes.

NO ORE FOUND AND NO CERTIFICATION IS WARRANTED.

W. P. Kluge scheid

W. P. Kluge scheid

OFFICE FILE COPY
O. M. B.
RECEIVED DEC 12 1958

DATE	INITIALS	CODE
12/12	C	220
12/18	Klug.	500

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

December 11, 1958

Re: DMEA 4673; Idm E-1109
New Jersey Zinc Co.
Valzinco Area
Spotsylvania County, Virginia

~~Memorandum~~

To: W. R. Griswold, Office of Minerals Exploration

From: Commodity Specialist, Branch of Base Metals

Subject: Review of Field Team Final Report

I have reviewed the report, noted the findings, and concur with the field examiners and field team that no certificasion of discovery should be made.

It is regretable that the field examiners report gives no data whatever on the total sulfide values encountered, nor is an opinion offered on whether the exploration of the South Valzinco (Anomaly No. 1) encountered the Discovery or Halladay veins which were reported in the application review as occurring in the adjacent Valzinco mine.

O. M. Bishop

O. M. Bishop

Copy to: Division of Minerals
Mr. Kiilsgaard
Mr. Lamb
Mr. Bishop
F I L E S

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 DEC 5 1958

DATE	INITIALS	CODE
12/5	C	220
12/5	[illegible]	130
"	[illegible]	110
12/9	[illegible]	130
12/10	C	220
~~12/11~~	~~[illegible]~~	~~500~~

December 3, 1958

Memorandum

To: Operating Committee, OME - Washington

From: OME Field Team, Region V - Knoxville, Tennessee

Subject: Field Team Final Report - DMEA-4673, Idm-E1109-(zinc-lead-copper) The New Jersey Zinc Company, New York, N.Y. Valzinco Area, Spotsylvania County, Virginia.

Enclosed are the original and two copies of the Field Team final report on the Valzinco project.

Certification is not recommended.

FIELD TEAM FINAL REPORT

Robert A. Laurence

Robert A. Laurence
Executive Officer, OME
Field Team, Region V

V. J. Lynch

V. J. Lynch, Member
Bureau of Mines

Reviewed by
OME OPERATING COMMITTEE
12-9-58
(date)

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O. M. E.
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UNITED STATES

DEPARTMENT OF THE INTERIOR

OFFICE OF MINERALS EXPLORATION

FINAL REPORT

DMEA-4673, Idm-E1109, VALZINCO AREA (zinc, lead, copper)
Spotsylvania County, Virginia

H. L. Burmeister, Mining Engineer
U. S. Bureau of Mines

Helmuth Wedow, Jr., Geologist
U. S. Geological Survey

December 2, 1958

Reviewed by
OME OPERATING COMMITTEE
12-9-58
(date)

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DATE	INITIALS	CODE
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FINAL REPORT

DMEA-4673, Idm-E1109 (Zinc-lead-copper), VALZINCO AREA

Spotsylvania County, Virginia

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

By

H. L. Burmeister 1/ and Helmuth Wedow, Jr. 2/

SUMMARY AND RECOMMENDATIONS

The DMEA-assisted exploration program in the Valzinco area, Spotsylvania County, Virginia consisted of the diamond core drilling of three geochemical and related spontaneous polarization anomalies. Two of the anomalies lie in an area immediately south of the old Valzinco mine; the third is in an area approximately 3 miles N. 30° E. along the regional strike. Five holes were drilled in the South Valzinco area--- three on one anomaly, one on the second, and a deeper one to test both anomalies simultaneously. Four holes tested the anomalous conditions in the North Valzinco area. In all, a total of 3,914 feet was drilled, of which 1,323 feet was in overburden. Total cost of exploration amounted to $12,321.60 (Government share $6,160.80), as billed by the Operator, out of a total acceptable cost of $12,356.60 as computed in the DMEA Report of Review.

The locations of all drill holes were modified in advance of drilling with Government permission from those locations indicated in the contract. The modifications were deemed advisable on the basis of data obtained from a self-potential survey made by the Operator subsequent to the field examination. A greater depth of overburden than anticipated, found on drilling the first hole, required additional location changes as well as the steepening of inclination from 45 to 60 degrees.

The drill holes penetrated a sequence of as much as 400 to 500 feet of metamorphic rocks, chiefly feldspathic sericite-quartz gneisses and schists, derived from clastic sedimentary and volcanic strata.

1/ Mining Engineer, U. S. Bureau of Mines
2/ Geologist, U. S. Geological Survey

Reviewed by
OME OPERATING COMMITTEE
12-9-58
(date)

The foliation of these rocks has an average strike and dip of N. 30° E., 50°-60° SE. No definite strongly mineralized zone was encountered in the drilling, although the traces of zinc-, lead-, and copper-bearing minerals observed in widely separated sections of the core suggest the presence of broad weakly mineralized shoots plunging southwestwardly at a low angle to the plane of foliation. The highest grades of mineralized rock recovered were estimated at $1\frac{1}{2}$ percent zinc with traces of lead and copper over a core length of $1\frac{1}{2}$ feet and at 2 percent zinc and $\frac{1}{4}$ percent copper over a core length of $\frac{1}{2}$ foot.

The exploration at Valzinco discovered no significant mineralization that can be considered of economic value either now or in the future. Such weakly mineralized rock as was penetrated could account for the geochemical anomaly, but no trends were observed that would suggest that ore bodies of commercial size and grade still exist in the areas explored. Consequently, no further exploration is recommended. For these reasons the examiners also recommend that no certification be issued for this contract.

INTRODUCTION

The property explored under this DMEA contract is known as the Valzinco area. The center of the area is approximately 3 miles southeast of the village of Paytes, Spotsylvania County, Virginia. Access to the area is by State Route 606 from Paytes and thence by other highways, graveled roads, and wood trails to the drilling areas. (See fig. 1.) The optioned area included in the contract totaled 4,240 acres, most of which is outlined on figure 2.

The field operations were conducted by Mr. E. L. Weinberg, the New Jersey Zinc Company's District Geologist at nearby Mineral, Virginia, assisted by Mr. C. L. Hamilton. Exploration conducted by the office at Mineral is supervised by Dr. W. H. Brown, Chief Geologist of the Operator's Bertha Mineral Division with headquarters at Austinville, Virginia. The actual drilling operations were contracted to the E. J. Longyear Company, Minneapolis, Minnesota.

DESCRIPTION OF WORK COMPLETED

Work under this contract in the Valzinco area was started on October 3 and was completed on December 30, 1957. Exploration consisted entirely of diamond core drilling from the surface. All hard rock was cored at AX-size chiefly with BX-wireline equipment. A total of 3,914 feet was drilled in nine holes. Of this total 1,323 feet was in overburden for an average of 147 feet of overburden per hole.

Because of the gradational nature of the contact between the soft saprolitic overburden and hard rock, it was necessary to set NX-size casing to an average depth of 20 feet in partially decomposed rock to a point where the BXWL equipment could core satisfactorily. Drill holes were collared at intervals of approximately 400 feet along the strike of the anomalies. Excluding Hole 82-V the eight remaining holes averaged 403 feet in length. Hole 82-V was so located as to permit a combined test of two overlapping geochemical "highs" and was drilled to a depth of 689 feet. As seen in figure 2 and on the maps accompanying the Operator's final report, no portion of any drill hole is less than 700 feet from the DMEA contract property boundary.

The engineering data on the nine holes drilled are summarized in table 1. The approximate locations and directions are spotted on figure 2.

EXPENDITURES

The Report of Review of the Valzinco contract, issued by DMEA on April 15, 1958, shows the following cost summary:

Total cost billed by Operator	$ 12,321.60
Exceptions	0.00
Accepted cost claimed by Operator	$ 12,321.60
Acceptable cost not claimed	35.00
Total acceptable cost, if claimed	$ 12,356.60

The examiners' review of costs is as follows:

Total approved cost in contract	$ 12,770.00
Total cost of project claimed by Operator	12,321.60
Government share of cost (at 50 percent)	6,160.80
Government share unexpended	224.20
Value of production during exploration	None
Royalty due Government	None

The difference of $35.00 in the total cost claimed by the Operator and the total acceptable cost is due to the actual cost of the 140 core boxes claimed by the Operator at $2.25 each, whereas the contract provides for core boxes at $2.50 each "regardless of costs incurred by the Operator" (i.e., fixed unit cost). Thus, if the Operator so requests, an additional $35.00 can be allowed for core boxes of which the Government's share would be $17.50.

EFFICIENCY OF OPERATIONS

Drilling operations were conducted in an efficient manner. Reporting of work and cost data was greatly improved over that submitted by the same Operator in exploration under preceding project DMEA-4674, Contract Idm-E1103. No equipment was purchased for this project.

GEOLOGY

The bedrock of the Valzinco area consists of a variety of schists, gneisses, and quartzites of the Peters Creek formation of the Glenarm series. The age of the formation has been designated as late Precambrian or Cambro-Ordovician. Open cuts in the vicinity of the old Valzinco mine expose gossanous quartzite and hematite-sericite schist. Diamond drilling under this DMEA contract in the two areas both north and south of the old mine cored a wide variety of metamorphic rocks that strike approximately N. 30° E. and dip 50° to 60° SE. The variation in rock type is due chiefly to variable percentages of the main mineral constituents, namely, feldspar, quartz, sericite, and biotite. Minor accessory amounts of chlorite and a carbonate mineral occur locally. Petrographic studies by the Operator's geologists show that the schists, gneisses, and quartzites encountered in the drilling were probably a series of interbedded clastic sedimentary and volcanic rocks. Despite the variable but bedded nature of the lithology, correlation from hole to hole is extremely difficult. However, certain gross correlatable units were recognized in the holes of the South Valzinco area and a thin

(4-8 feet) zone of quartz-sericite-feldspar schist was sufficiently distinctive to serve as a correlation marker in the four holes of the North Valzinco area. Although the North and South areas are essentially on strike, none of the lithologic units penetrated was recognized in both areas. The stratigraphic sequences of metamorphic rocks cored in the Valzinco drilling are summarized by area in table 2. The only intrusive igneous rock encountered in the drilling was a diabase and serpentinite dike, of which a core length of 14 feet was cut at a depth of 137½ to 151½ feet in Hole 86-V in the North Valzinco area. The precise relationship of this mafic dike to the metamorphic rocks is not known, but from the appearance of the core there is the suggestion that it crosscuts the foliation and hence is dike-like rather than sill-like in habit.

MINERALIZATION

The mineralization in the Valzinco areas drilled under this DMEA contract consists of pyrite accompanied by trace amounts of sphalerite, galena, chalcopyrite, and pyrrhotite. These sulfide minerals occur together or separately as disseminations in the schist, gneiss, and quartzite country rock or as cross-cutting, fracture-filling veinlets as much as several tenths of an inch thick. This habit strongly suggests that the sulfides are probably hydrothermal in origin, although some of the pyrite and pyrrhotite may be syngenetic.

All nine holes cored show traces of the above mentioned base-metal minerals but no strongly mineralized zone was encountered. Although the tonnage of sulfide-bearing rock is great, the concentration of zinc, lead, and copper is in no sense commercial, either now or in the future. The best runs of mineralized core include; (1) 4 feet estimated at $\frac{1}{2}$ percent zinc with a trace of lead in Hole 82-V; (2) $1\frac{1}{2}$ feet estimated at $1\frac{1}{2}$ percent zinc with traces of lead and copper in Hole 84-V; and (3) $\frac{1}{2}$ foot estimated at 2 percent zinc and $\frac{1}{4}$ percent copper in Hole 83-V. The distribution of the base-metal occurrences logged-out in study of the drill core is shown by hole in the graph of figure 3.

No straightforward conclusions were reached as to possible structural control of the mineralization. The distribution of the widely scattered traces of sulfides suggests the presence of broad weakly mineralized shoots plunging southwestwardly at a low angle to both the plane of foliation and regional strike. However, no trends were observed that would suggest that ore bodies of commercial grade and size still exist in the areas explored. It appears that sufficient base metals are present to account for the geochemical "highs" in the overburden.

TABLE 1.—SUMMARY OF ENGINEERING DATA OF DIAMOND-DRILL HOLES IN THE VALZINCO AREA, SPOTSYLVANIA COUNTY, VIRGINIA (DMEA-4613, IDM-E1109, ZINC-LEAD-COPPER).

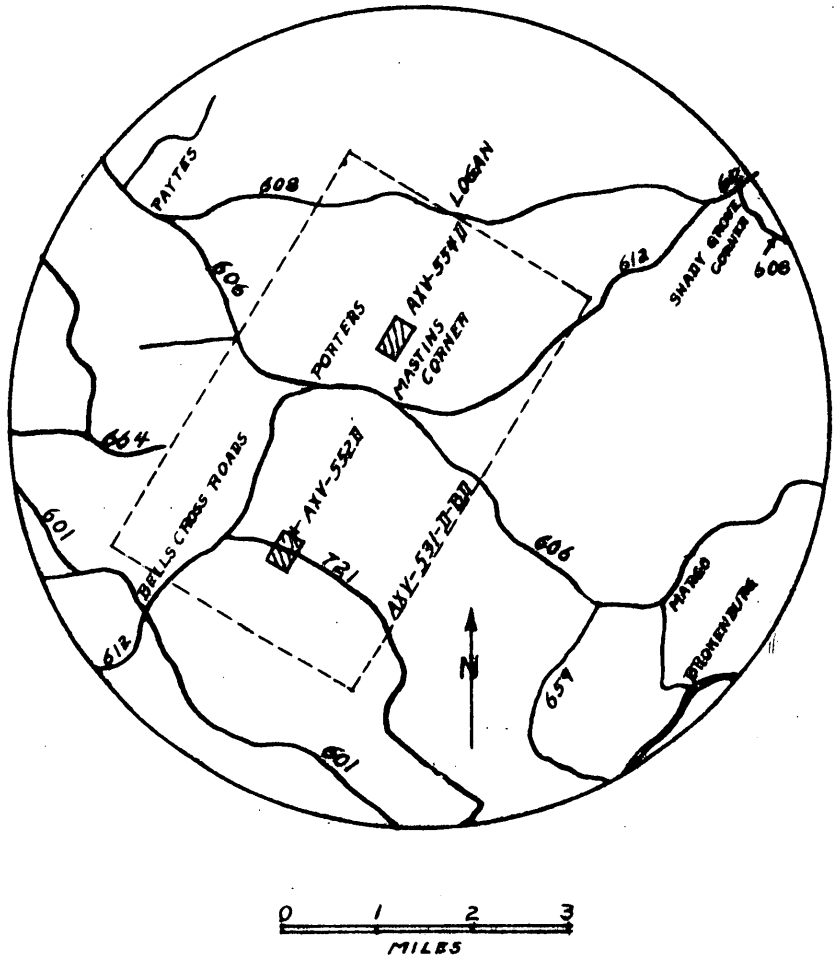
	SOUTH VALZINCO AREA					NORTH VALZINCO AREA				TOTAL	AVERAGE
HOLE NUMBER	79-V	80-V	81-V	82-V	83-V	84 V	85-V	86-V	87-V		
LOCATION OF COLLAR	200' SE. OF SELF-POTENTIAL ANOMAY	407' N17°E FROM 79-V	418' S42½°W FROM 79-V	400' N29½°E FROM 80-V	578' N10°W FROM 82-V	250' SE. OF GEOCHEMICAL ANOMALY	403' N39°E FROM 84-V	396' S41°W FROM 84-V	402' S40°W FROM 86-V	--	--
COLLAR COORDINATES	N-80,335 E-66,777	N-80,727 E-66,897	N-80,052 E-66,468	N-81,073 E-67,085	N-81,642 E-66,987	N-91,996 E-74,622	N-92,310 E-74,877	N-91,691 E-74,358	N-91,384 E-74,107	--	--
ATTITUDE AT COLLAR AND AT DEPTH OF 300 FEET	N70°W, -45° N76°W, -43°	N69°W, -60° N71°W, -51°	N68°W, -59½° N69°W, -54½°	N 69°W, -60° N 69°W, -49° N 74°W, -45½° (AT 500')	N72°W, -60° N59°W, -47°	N72°W, -60° N 68W, -50°	N66°W, -60° N 61½°W, 56° (AT 200')	N70°W, -59° N 66°W - 53° (AT 200')	N68°W, -60° N 65½°W - 46°	--	--
ELEVATION OF COLLAR (FEET)	419	421	408	417	408	347	347	387	395	--	--
TOTAL LENGTH (FEET)	433	404	374	689	354	482	424	370	384	3,914	435
LENGTH: OVER BURDEN	224	190	150	193	174	150	90	90	62	1,323	147
ROCK	209	214	224	496	180	332	334	280	322	2,591	288
VERTICAL DEPTH OF OVER BURDEN (FEET)	159	135	106	137	124	106	64	64	44	--	105
DATE STARTED	10/3/57	10/14/57	10/22/57	10/30/57	11/11/57	11/19/57	11/29/57	12/7/57	12/18/57	--	--
DATE BOTTOMED	10/14/57	10/21/57	10/27/57	11/8/57	11/15/57	11/27/57	12/4/57	12/16/57	12/30/57	--	--
NO. OF WORKING DAYS PER HOLE	9½	6½	6	9	5	8	5	8	10	67	7½
AVERAGE NO OF FEET DRILLED/DAY	45.6	62.2	62.3	76.6	70.8	60.3	84.8	46.2	38.4	--	60.8

ANOMALY NO. 1 — ANOMALY NO. 2 — ANOMALY NO. 3

HW-11/58

Table 2.--Stratigraphic sequences of metamorphic rocks penetrated in diamond drilling in the Valzinco area, Spotsylvania County, Virginia (DMEA-4673, Idm-E1109, Zinc-lead-copper).

	Unit No.	Description	Stratigraphic thickness (feet)
SOUTH VALZINCO AREA	1.	Biotite-sericite-quartz gneiss and schist	50
	2.	Feldspathic sericite-quartz schist and gneiss with local micaeous conglomeratic and quartzitic zones throughout and marked by a prominent conglomeratic zone at top . .	300
	2a.	Sericite-quartz gneiss and conglomerate with relative high content of carbonate minerals (present only in Hole 82-V from 95 to 145 feet below top of Unit 2) 45	
	3.	Feldspathic sericite-biotite-quartz gneiss and conglomerate	175
	3a.	Chlorite-sericite-quartz schist (present only in Hole 82-V at top of Unit 3) 30	
		Total	525
NORTH VALZINCO AREA	1.	Slightly feldspathic biotite-sericite-quartz with local conglomeratic and gneissic zones	110
	2.	Quartz-sericite-feldspar schist	4-8
	3.	Sericite-quartz-feldspar schist and gneiss with local conglomeratic and strongly biotitic zones (not recognized in Hole 85-V)	100
	4.	Feldspathic biotite-sericite quartz schist and gneiss	200
		Total	418



DMEA 4673, Idm-E 1109
NEW JERSEY ZINC CO.

AXV-552 D = FIG. 2 of EXAMINATION

AXV-554 D = FIG. 2A of EXAMINATION

VALZINCO AREA
SPOTSYLVANIA COUNTY, VA.

AREA and MAP LOCATION

FIG.-1

March 1958

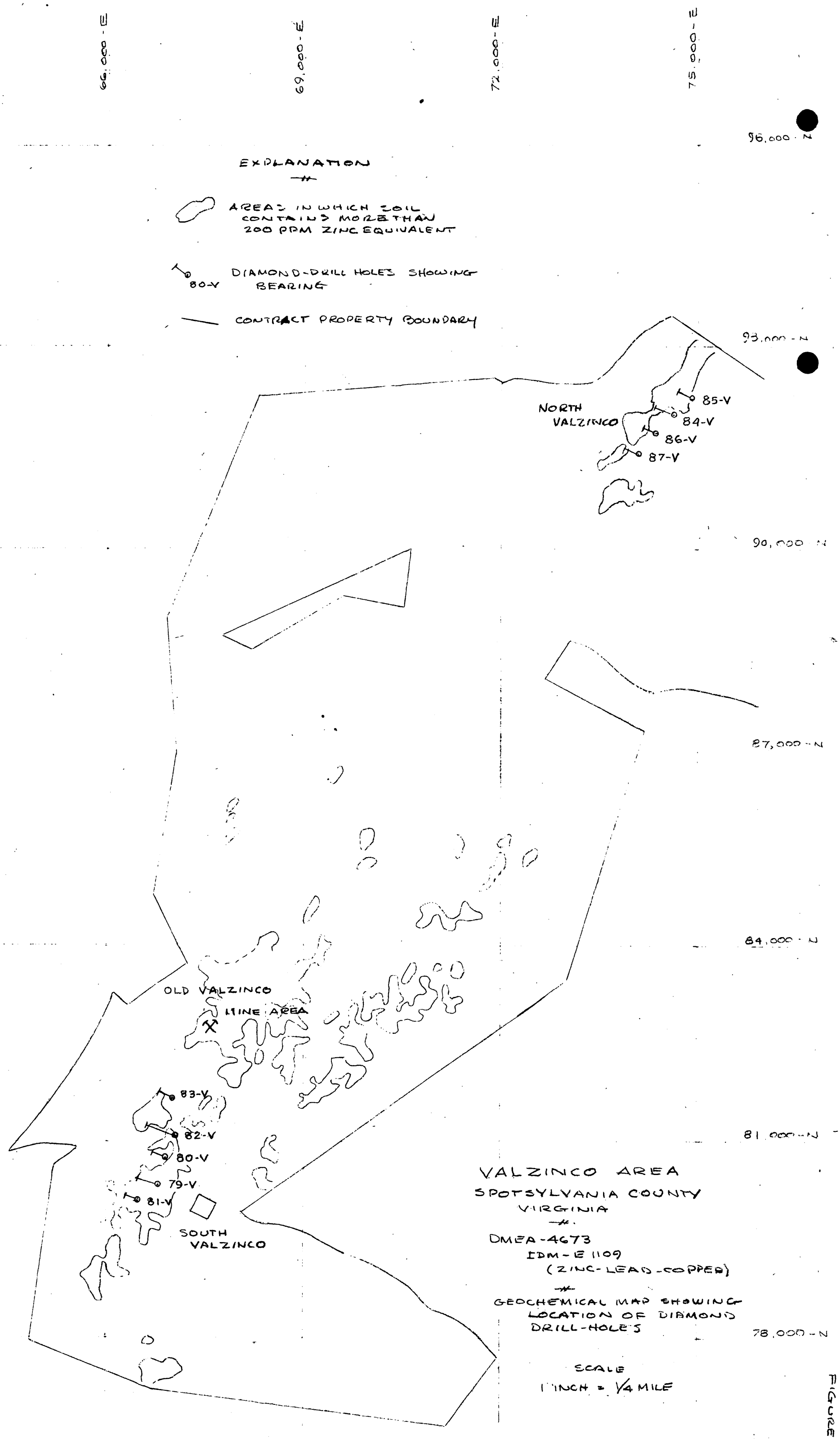
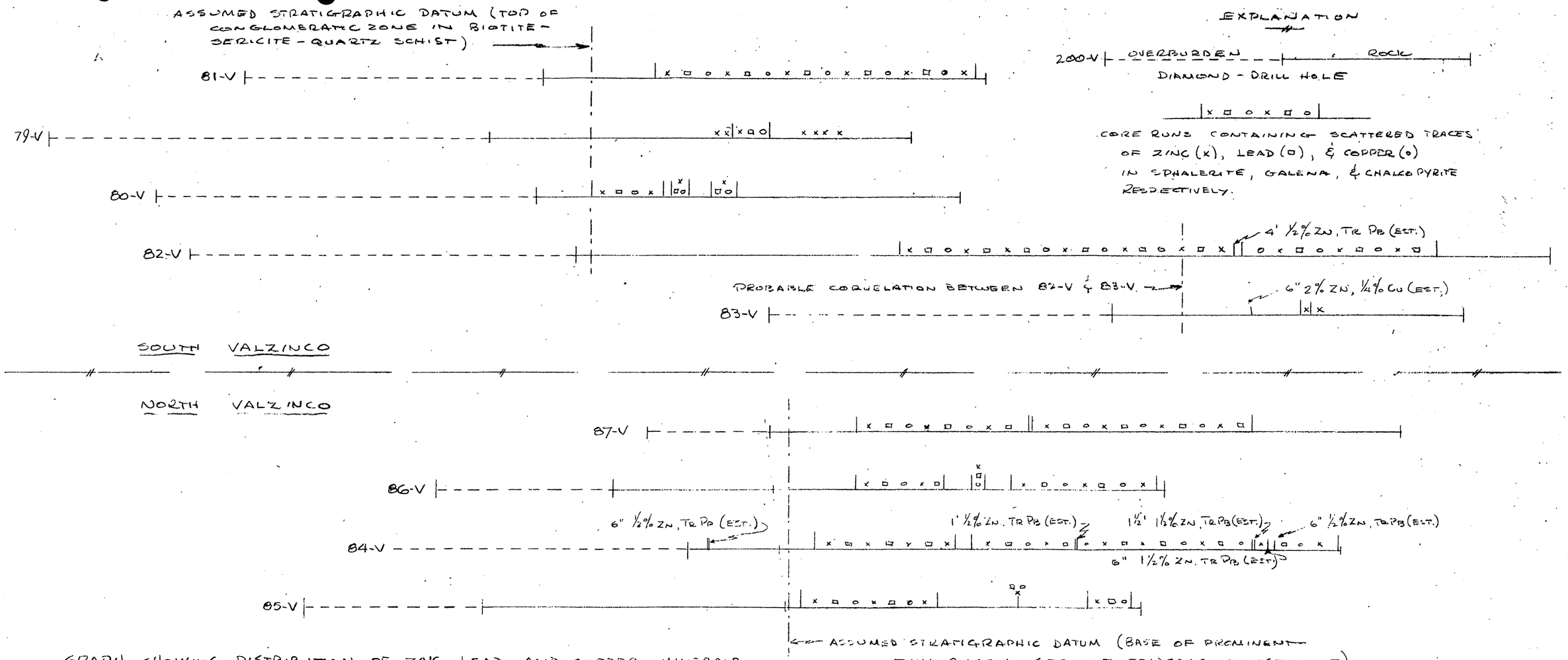


FIGURE 2

HW-11/58

FIGURE 3



GRAPH SHOWING DISTRIBUTION OF ZINC, LEAD, AND COPPER MINERALS IN DIAMOND-DRILL HOLES AT VALZINCO, SPOTSYLVANIA COUNTY VIRGINIA

DMEA-4673, IDM-E 1109 (ZINC-LEAD-COPPER)

NOTE: SCALE OF DRILL HOLES IS 1" = 40'; HOLES ARE ARRANGED ARBITRARILY AT EVEN SPACING FROM SOUTH (AT TOP) TO NORTH (AT BOTTOM) -- TOPS OF HOLES ARE AT LEFT.

HW - 11/58

DMEA Form 7
(12-56)

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Date	Surname	Code
4/15	Talbert	800
4/16	[illegible]	220
4/16	[illegible]	

APR 15 1958

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

Re: Docket No. DMFA-4673 (Zinc)
The New Jersey Zinc Co.
Valzinco Area
Spotsylvania County, Virginia
Contract No. Idm-E1109

Dear Mr. Laurence:

Enclosed are the original and three copies of a Report of Review covering the above-cited contract. If you concur with the facts as stated in this report, please make the usual distribution. If for any reason you do not concur, please return the original and all copies with your comments to this Division.

Sincerely yours,

(Signed) J. L. Chambers

Jay L. Chambers, Director
Contract Administration
and Audit Division

Enclosures

EDTalbert/ama
April 15, 1958

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

8623

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
ROOM 13 POST OFFICE BLDG
KNOXVILLE 2, TENN.

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April 11, 1958

Memorandum

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

From: Field Team, Region V, Knoxville, Tennessee

Subject: Amendment No. 1, Docket No. DMEA-4673, Contract Idm-E1109
The New Jersey Zinc Company, 168 Front St., New York, N. Y.
Valzinco Area, Spotsylvania County, Virginia

Enclosed are two signed copies of the subject amendment.

The usual distribution of the other copies has been made by this office.

Robert A. Laurence
Robert A. Laurence
Executive Officer

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

Enclosures 2

DMEA Form 7
(12-56)

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Date	Surname	Code
3/25	Klugescheid	500
	Brown	500
3-25	Chamberlin	800
3/26	[illegible]	130
"	Johnson	110
"	Mattenson	100
		~~115~~
		220
		500

500

MAR 27 1958

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

Re: Docket No. DMEA-4673 (Zinc-Lead-Copper)
The New Jersey Zinc Company
Valzinco Area
Spotsylvania County, Virginia
Contract No. Idm-E1109

Dear Mr. Laurence:

We are enclosing the original and four copies of a proposed Amendment No. 1 (two pages) to the cited contract, signed by the Administrator for the Government. We are also enclosing two extra copies for the use of the Field Team.

Through an oversight, the cost of the overburden drilling in the contract was worded as follows:

Overburden drilling to 100-foot depth
approximately 600 feet @ $2.90/ft. 1/ $ 1,740.00

This wording would permit the payment of a maximum of only 100 feet of overburden drilling in any one hole. It was assumed that there would be no more than 100 feet of overburden in any hole, but this was only an estimate, and there was no intention to limit the amount of overburden drilling paid per hole. The amendment permits payment of all overburden drilling actually done.

If the amendment meets with your approval, kindly present it to the Operator for approval and signature and, when completed, distribute all 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.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (GCS)

Enclosures
APPROVED:

P. F. Yopes (GCS)
Member, Bureau of Mines

Thor H. Kiilsgaard (GCS)
Member, Geological Survey

WPKlugescheid/er 3/24/58
Copy to: Docket
Admr R File
Op. Committee
Mr. Bishop, USBM
Mr. Kiilsgaard, USGS
Chron.

8623

Government's copy

EXPLORATION PROJECT CONTRACT
THE NEW JERSEY ZINC COMPANY
DOCKET NO. DMEA-4673

AMENDMENT NO. 1

It is agreed this ___ day of _____, 1958, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, and the New Jersey Zinc Company that Exploration Project Contract No. Idm-E1109 (Docket No. DMEA-4673), dated July 19, 1957, is amended effective July 19, 1957, as follows:

In Exhibit "A," Estimated Costs of the Project, under the heading Actual Costs, Category (1) Independent Contracts is revised to read as follows:

"Category (1) Independent Contracts

Overburden drilling, ~~approximately 600 feet~~ 800 @ $2.90/ft 1/	~~$1,740.00~~	
Diamond drilling to 1000-ft. depth, ~~approximately 3,400 feet~~ @ $2.70/ft. 1/ 2/	~~9,180.00~~	$10,920.00

"The above rates include charges for cementing and redrilling, water supply, changing of locations, reaming and casing, and all other charges which are incurred by the drilling contract.

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
ROOM 13 POST OFFICE BLDG.
KNOXVILLE 2, TENN.

March 24, 1958

DMEA
RECEIVED MAR 26 1958
DATE | INITIALS | CODE
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3/27 | wp/ly | 500

Memorandum

To: Operating Committee, DMEA - Washington

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

Subject: Amendment to revise permissible overburden drilling-depths. DMEA-4673, Idm-E1109(zinc-lead-copper) The New Jersey Zinc Co., Valzinco area, Spotsylvania, County, Virginia.

In reference to Mr. Chambers' letter of March 19, on the problem of overburden drilling in the subject contract area:

The Field Team recommends that an amendment to the subject contract be prepared to permit such overburden drilling as was required to complete the Valzinco project satisfactorily and was subsequently vouchered by the Operator.

Depth of overburden in the subject area was estimated originally by as between 50 and 100 feet. This estimate was based on all available, but limited, evidence and was an opinion shared by both the Operator and the DMEA Field Examiners. However, local geologic conditions proved to be such that the weathering of hard bedrock to saprolite (overburden) had proceded in the vicinity of some drill sites to far greater depths than anticipated. That the depth of overburden could not be predicted with any certainty in advance of actual drilling is evidenced in part by the fact that neither the Operator nor the DMEA Field Examiners, in submitting drilling cost estimates, recommended separation of the two types of ground to be drilled. In order to combat the problem of deeper overburden than anticipated, at least partially, the Field Team approved the steepening of the holes to an inclination of minus-60 degrees (from minus-45 degrees as established by the contract) when the first hole completed on the project showed an overburden penetration in excess of 200 feet. Unfortunately, the 100-foot depth limitation set forth in the contract was interpreted by those directly concerned with the drilling to mean that both the depth and quantity of overburden drilling were estimates or approximations only, and, if necessary, as such could be exceeded provided that

the totals of 4,000 feet of all drilling at a cost of $10,920.00 were not exceeded.

We suggest, therefore, that Paragraph 5 of page 1, Exhibit A, be amended to read as follows:

"It is estimated that approximately 10 holes will be required, having an average depth of approximately 400 feet. Because the depth of overburden, estimated at 50 to 100 feet, is only approximate, not more than 4,000 feet of combined overburden and diamond drilling shall be performed."

The section on "Estimated Costs of the Project" should be amended to read as follows:

"Actual costs

Category (1) Independent Contracts

Overburden drilling to depths of 0 to about 250 feet, approximately 1,500 @ $2.90/ft....$4,350.00

Diamond drilling from bottom of overburden to depth of about 1,000 feet, approximately 2,433 feet @ $2.70/ft..... 6,570.00(rnd)

$10,920.00

The above rates include...."

V. J. Lynch, Acting
Executive Officer, DMEA
Region V

Helmuth Wedow, Jr., Geologist
Geological Survey

DMEA Form 7
(12-56)

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Date	Surname	Code
3/18	Talbert	800
3/19	C	220
~~3/19~~	~~[illegible]~~	~~500~~

MAR 19 1958

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

Re: Docket No. DMEA-4673 (Zinc)
The New Jersey Zinc Co.
Valzinco Area
Spotsylvania County, Virginia
Contract No. Idm-E1109

Dear Mrs. Miller:

Enclosed are the nine drilling invoices and one core box invoice submitted with your March 12 request for a Report of Review on the referenced project. The Report of Review, however, cannot be issued until a decision is made on amendment of the contract.

This contract provides for overburden drilling only "to 100-foot depth". Both the logs and invoices indicate that the overburden drilling exceeded 100 feet in 6 of the 9 holes completed. Unless the contract is appropriately amended a disallowance of $1,394.90 for an aggregate excess of 481 feet @ $2.90/ft. will be necessary.

Sincerely yours,

(Signed) J. L. Chambers

Jay L. Chambers, Director
Contract Administration
and Audit Division

Enclosures

EDTalbert/ama
March 18, 1958

Copy to: Docket
Admr. Reading File
Mr. Laurence
Mr. Chambers
Mr. Talbert

8623

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
3/19	Klugescheid	500

500

March 19, 1958

Memorandum

To: Associate Solicitor, Division of Mineral Resources

From: Director, Division of Base Metals

Subject: Preparation of Amendment No. 1 for Docket No. DMEA-4673, The New Jersey Zinc Company, Valzinco Area, Spotsylvania County, Virginia, Zinc-Lead-Copper.

Will you kindly prepare an Amendment No. 1 for the cited contract as follows:

In Exhibit "A" of the Contract, Estimated Costs of the Project, Actual Costs, Category (1) Independent Contracts, first item, delete "to 100-foot depth".

W. R. Griswold

WPKlugescheid/er
Copy to: Docket
Chron.

8623

Memorandum for the Files

From: W. P. Klugescheid, Division of Base Metals

Subject: Justification for Amendment No. 1 for Docket No. DMEA-4673 (Zinc-Lead-Copper), The New Jersey Zinc Company, Valzinco Area, Spotsylvania County, Virginia, Contract No. Idm-E1109.

In Exhibit "A" under Actual Costs, Category (1) Independent Contracts, it was estimated, from the geological data available, that the overburden would not exceed 100 feet. This estimate has proven to be incorrect and as it was not intended to limit the amount of overburden drilling "to 100 foot depth", the elimination of this phrase is necessary.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
ROOM 13 POST OFFICE BLDG.
KNOXVILLE 2, TENN.

March 10, 1958

OFFICE SECRETARY
DMEA
RECEIVED MAR 11 1958
DATE | INITIALS | CODE
3/12 | C | 220
3/12 | | 800
| | 500

Memorandum

To: Operating Committee - DMEA - Washington
From: Executive Officer, DMEA - Region V - Knoxville, Tenn.
Subject: (Final) Operator's Report - DMEA-4673, Idm-E1109
The New Jersey Zinc Co.
Valzinco Area, Spotsylvania County, Virginia

Transmitted are three copies of the subject report.

Robert A. Laurence

zm.

THE NEW JERSEY ZINC COMPANY

(ESTABLISHED 1848)

CABLE ADDRESS
"JERSEZINC"

160 FRONT STREET

NEW YORK 38, N.Y.

February 19, 1958

PLEASE ADDRESS REPLY TO

P. O. Box 67
Mineral, Virginia

Mr. H. L. Burmeister
U. S. Bureau of Mines
College Park, Maryland

Re: Final Report
DMEA 4673 (Zinc-lead-copper)
Contract No. Idm-E-1109
Valzinco Area
Spotsylvania County
Virginia

Dear Mr. Burmeister:

Attached is the final report on our DMEA contract for the Valzinco area.

Very truly yours,

W. L. Albers,
General Superintendent

CLHamilton/mmk
in quintuplicate

OFFICIAL FILE COPY
DMEA
RECEIVED MAR 11 1958

DATE	INITIALS	CODE

RECEIVED
MAR 6 - 1958
U. S. Contracting Officer
Cambridge, Massachusetts
Bureau of Mines

OFFICIAL FILE COPY
DMEA
RECEIVED MAR 11 1958

DATE	INITIALS	CODE

OPERATOR'S FINAL REPORT

FINAL REPORT

VALZINCO AREA

SPOTSYLVANIA COUNTY, VIRGINIA

by

E. L. Weinberg and C. L. Hamilton

The New Jersey Zinc Company
Mineral, Virginia
January, 1958

Operator Final Report

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Plan and section - DDH 85-V (AXV-601-B)
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Combined Plan and Longitudinal Section for Drill Holes 79-V through 83-V (AXV-590-D) - in pocket
Combined Plan and Longitudinal Section for Drill Holes 84-V through 87-V (AXV-606-D) - in pocket

Appendix

Logs for drill holes 79 thru 87

SUMMARY

This report covers results of diamond drilling performed from October through December, 1957, in the Valzinco area, Spotsylvania County, Virginia, under DMEA contract Idm-E-1109.

Surface exploration and diamond drilling in the Valzinco area did not discover a definite, mineralized zone, but the drill holes penetrated widely spread traces of sphalerite, galena, and chalcopyrite. The best penetrations include four feet of an estimated ½% zinc and trace lead in hole 82-V, and 1½ feet of an estimated 1½% zinc and trace lead and copper in 84-V.

GENERAL INTRODUCTION

Diamond drilling in the Valzinco area was supervised directly from the Mineral office of The New Jersey Zinc Company under DMEA contract number Idm-E-1109.

The area consists of a group of contiguous tracts, totaling 4,240 acres, all optioned from the Chesapeake Corporation of Virginia. The property extends from one-half mile to four miles northeast of Bells Cross Roads, and is approximately eleven miles west-southwest of Spotsylvania Court House.

According to the Geologic Map of Virginia, edition of 1928, the area is underlain by Peters Creek quartzite and chlorite schist. This formation belongs to the Glenarm series, designated as pre-Cambrian, but more recent work indicates a possible Cambro-Ordovician age.

Previous mining activity includes the Valzinco Mine and the Grindstone, New Grindstone, and Marva prospects. The latter three gold prospects consisted of shallow shafts and trenches.

The Valzinco Mine produced lead and zinc and was operated during the periods 1909-1912, 1914-1918, 1927, and 1942-1945 by various companies. Production was from two parallel zones, the Holladay and Discovery veins. W. A. Grosh, (1949), in Bureau of Mines Report 4403, estimated production through 1918 totaled 5000 tons of ore containing 12.5% zinc, and 5% lead. No production figures are available after 1918.

The New Jersey Zinc Company briefly held an option on the Valzinco mine tract proper from October 1912 to June 1913. During this time the workings were unwatered, a small amount of drifting was done, and three diamond drill holes were put down. All three holes were barren.

More recent exploration by this Company has been conducted since May 1955 and has involved geochemical, geophysical and geological surveys. On account of a lack of outcrops geochemical and geophysical indications were considered more diagnostic than geological indications. Three geochemical anomalies were found and self potential anomalies coincided with two of these. During geologic mapping some gossanous float was discovered. The three anomalies were recommended for drilling.

DIAMOND DRILLING

Drilling on the Valzinco area took place from October 3rd to December 29, 1957. The nine holes drilled totaled 3,914 feet and can be summarized as follows:

Hole No.	Overburden	BXWL (AX)[x]	Total Footage
79-V	0-224 (224)	224-433 (209)	433
80-V	0-190 (190)	190-404 (214)	404
81-V	0-150 (150)	150-374 (224)	374
82-V	0-193 (193)	193-689 (496)	689
83-V	0-174 (174)	174-354 (180)	354
84-V	0-150 (150)	150-482 (332)	482
85-V	0- 90 (90)	90-424 (334)	424
86-V	0- 90 (90)	90-370 (280)	370
87-V	0- 62 (62)	62-384 (322)	384
TOTAL	1323	2591	3914

[x]includes NX and BX footage necessary to set casing

Holes 79-V through 87-V are shown on maps AXV-580, 587, 588, 589, 596, 598, 601, 602, and 603-B, respectively, and also on the longitudinal sections, AXV-590 and 606-D, all of which are attached. Formation boundaries on the sections correspond to those used in the attached logs. Abbreviations conform to a standardized list in use at the Mineral office and can also be correlated with the names used on the logs.

These holes were drilled as nearly normal to the dip and strike of the formations as possible, being limited in this mainly by overburden depth and drill contract provisions. All holes were designed to intersect the downdip projection of the geochemical "highs". On the south Valzinco area the downdip projection of the self potential "high" which coincided with the geochemistry, was also tested. Collars of the holes were placed in order to center the target intersections halfway along the planned footage of the hole, this footage being approximately 200 feet for the 400 foot holes. One long hole, 82-V, was drilled to test two overlapping geochemical "highs".

Correlation of formations from one hole to the next is difficult, although all 9 holes penetrate a series of feldspathic gneisses and schists. All the holes at anomaly 1 (79-V through 82-V) penetrate biotite-sericite-quartz gneiss below the overburden, and the lower contact of that formation can be correlated through the four holes (Map 590-D). Zinc and lead mineralization occurs below the contact in all four holes. The deeper part of 82-V, which is on strike from 83-V, correlates fairly well with 83-V (Map 590-D).

Holes 84-V through 87-V, drilled at anomaly 3, penetrate gneisses and schists similar to those penetrated at anomalies 1 and 2. A thin bed (4-8 feet) of quartz-sericite-feldspar schist can be correlated through the four holes at anomaly 3, while feldspathic biotite-sericite-quartz schist and gneiss can be correlated between 84-V and 86-V, and possibly between 86-V and 87-V (Map 606-D). All four holes at anomaly 3 penetrate traces of zinc, lead, and copper.

Some of the formations at anomalies 1, 2, and 3 have textures suggestive of volcanic tuffs. Thin sections of sericite-biotite-quartz gneiss from 80-V at 346 feet and of feldspar-biotite-sericite-quartz gneiss from 81-V at 304 feet contain abundant "spherulites" of feldspar, indicating possible recrystallization from volcanic glass. A thin section of sericite-quartz-feldspar schist from 82-V at 241½ feet is conglomeratic and shows evidence of cyclic deposition of coarse and fine sediments. A fourth thin section of biotite-sericite-quartz schist from 79-V at 261½ has well-developed schistosity and may have been igneous or sedimentary. The rock contains over 10% feldspar which can be seen microscopically, but not megascopically. The whole series of gneisses and schists penetrated probably represent interbedded sediments and volcanic tuffs. Some of the conglomeratic schists and gneisses may be reworked tuffs, as indicated by the high feldspar content.

Although a definite mineralized zone is not present at the Valzinco, all nine holes penetrated traces of zinc through thicknesses of from 35 feet in hole 83-V to 275 feet in 82-V. The best penetrations included 4 feet of estimated ½% zinc and trace lead in 82-V, and 1½ feet of 1½% zinc and trace lead and copper in 84-V.

GEOLOGY AND MINERALIZATION

Drilling shows the bedrock is a series of feldspathic sericite-quartz schists and gneisses with carbonate, chlorite, and biotite as accessory minerals. The regional strike is approximately N30°E at a dip of 50 to 60° southeast. Surface mapping disclosed very little because of the scarcity of outcrops.

The mineralization consists of sphalerite, galena, chalcopyrite, pyrite, and traces of pyrrhotite. Some of the pyrite and pyrrhotite may be syngenetic. The mineralization is disseminated or present in veinlets 1 to 10 mm thick, which commonly are cross-cutting in relation to the foliation and may follow fractures. This is strong evidence for a hydrothermal origin of the mineralization. The sphalerite, galena, chalcopyrite, pyrite, and pyrrhotite are subhedral to euhedral and may occur together or separately in the veinlets. The sphalerite is all a reddish-brown color and may occur in the presence or absence of iron-bearing minerals. Mineralization is very low grade, mainly in trace amounts. There is sufficient bulk of mineralization scattered over large footages to have been interesting, had the same amount been more intensely concentrated.

CONCLUSIONS

A definite mineralized zone was not encountered. The mineralization is scattered and definitely below ore grade. We, therefore, consider our work completed in this area.

E. L. Hartley

C. L. Hamilton

Form MF-104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.5

MAR 11 1958

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of Final Report 1958 Docket No. DMEA 4673 Contract No. Idm-E-1109
Operator's Name The New Jersey Zinc Company Minerals Zinc-lead-copper
Address 160 Front Street, New York 38, NY
Contract Amount, $12,770.00 Government Participation: 50 % Amount, $6,385.00

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling BXWL(AX)	-	6995.70	6995.70			
~~Drilling~~ Overburden	-	3836.70	3836.70			
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
Core boxes	-	315.00	315.00			
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
Incidental allowance	-	1174.20	1174.20			
Analyses	-	-	-			
(8) Contingencies (specify):						
TOTALS	-	12321.60	12321.60 ✓			

I certify that the above bill is correct and just and that payment therefor has not been received.

Date ..... *Payee The New Jersey Zinc Company

Per W. A. [illegible] Title General Supt.

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

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

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$.....

Signature .....
(Authorized Certifying Officer)

Date ..... Vou. No. .....
(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. ..... in accordance with the terms of the contract.

Signature ..... Title ..... Date .....

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature ..... Title ..... Date .....

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

GPO 872893

Form MF-104A
(April 1962)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
OPERATOR'S UNIT COST AND PROGRESS REPORT

RECEIVED MAR 11 1958 D.M.E.A.

Month of Final Report 8 Docket No. DMEA 4673 Contract No. Idm-E-1109
Operator's Name The New Jersey Zinc Company Minerals Zinc-lead-
Address 160 Front Street, New York 38, NY copper

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT	
							Units	Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core BXWL(AX)	feet	-	-	6995.70	2591		3400	2.70
Overburden	feet	-	-	3836.70	1323		600	2.90
Auger								
Stripping Analyses	1	-	-		-		100	3.00
Trenching Core boxes	1	-	-	315.00	140		140	2.50
Test Pits								
Roads and Trails								
Incidental allowance	feet	-	-	1174.20	3914		4000	0.30
TOTAL DISTRIBUTED COSTS		-	-	12321.60				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc								
TOTAL COSTS								

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

REMARKS:

Date Operator The New Jersey Zinc Co.

Per W. L. Albers Title General Supt.
W. L. Albers

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

(Instructions on reverse)

(For Government use only)

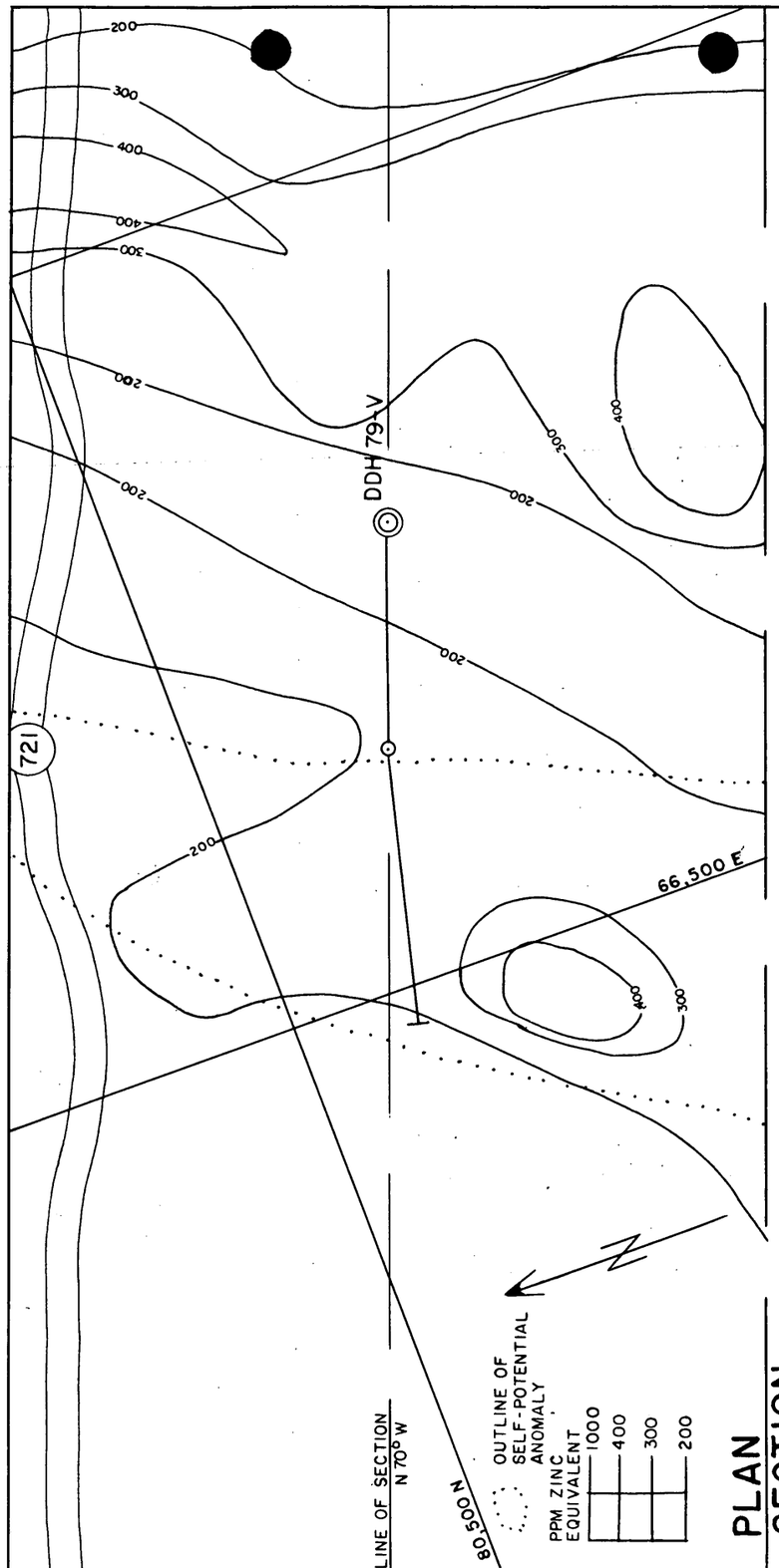
INSTRUCTIONS

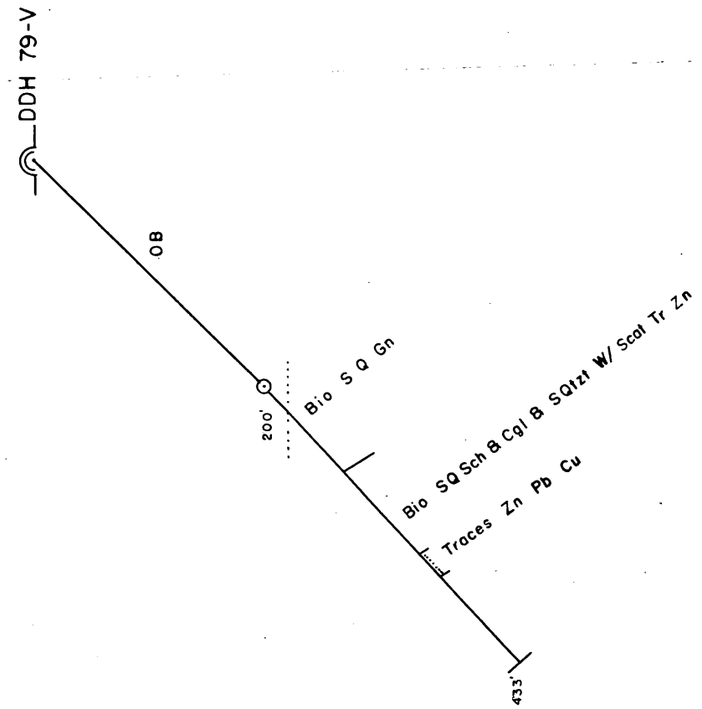
Preparation of Form MF-104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF-104A has been designed to tie in with Form MF-104 for both monthly and cumulative costs. The "Total Costs" on Form MF-104A for each month should equal the monthly "Total Costs" as reported on Form MF-104. This is also true of the "Total Costs To Date".

In preparing Form MF-104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 872894



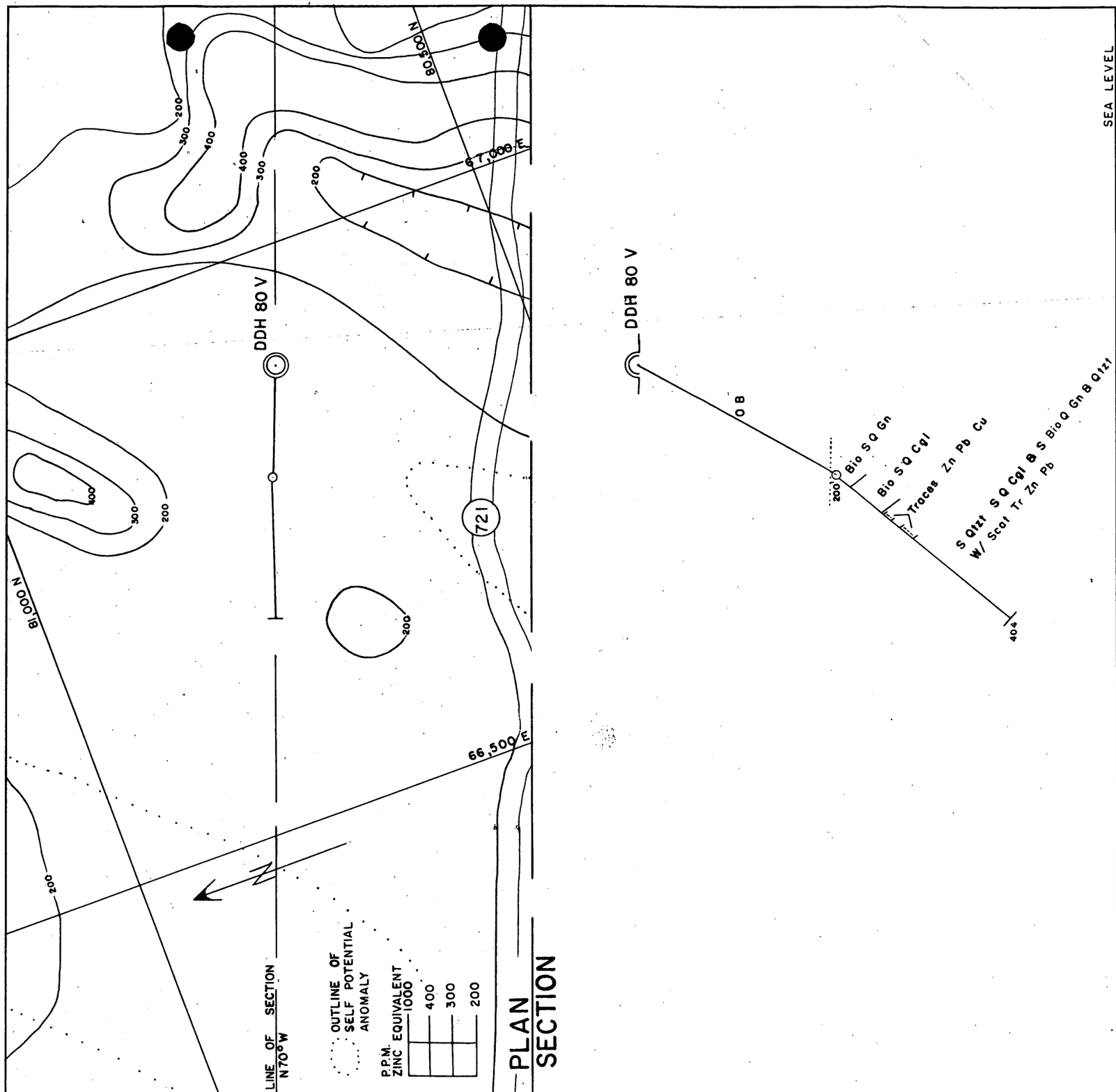


SECTION

SEA LEVEL

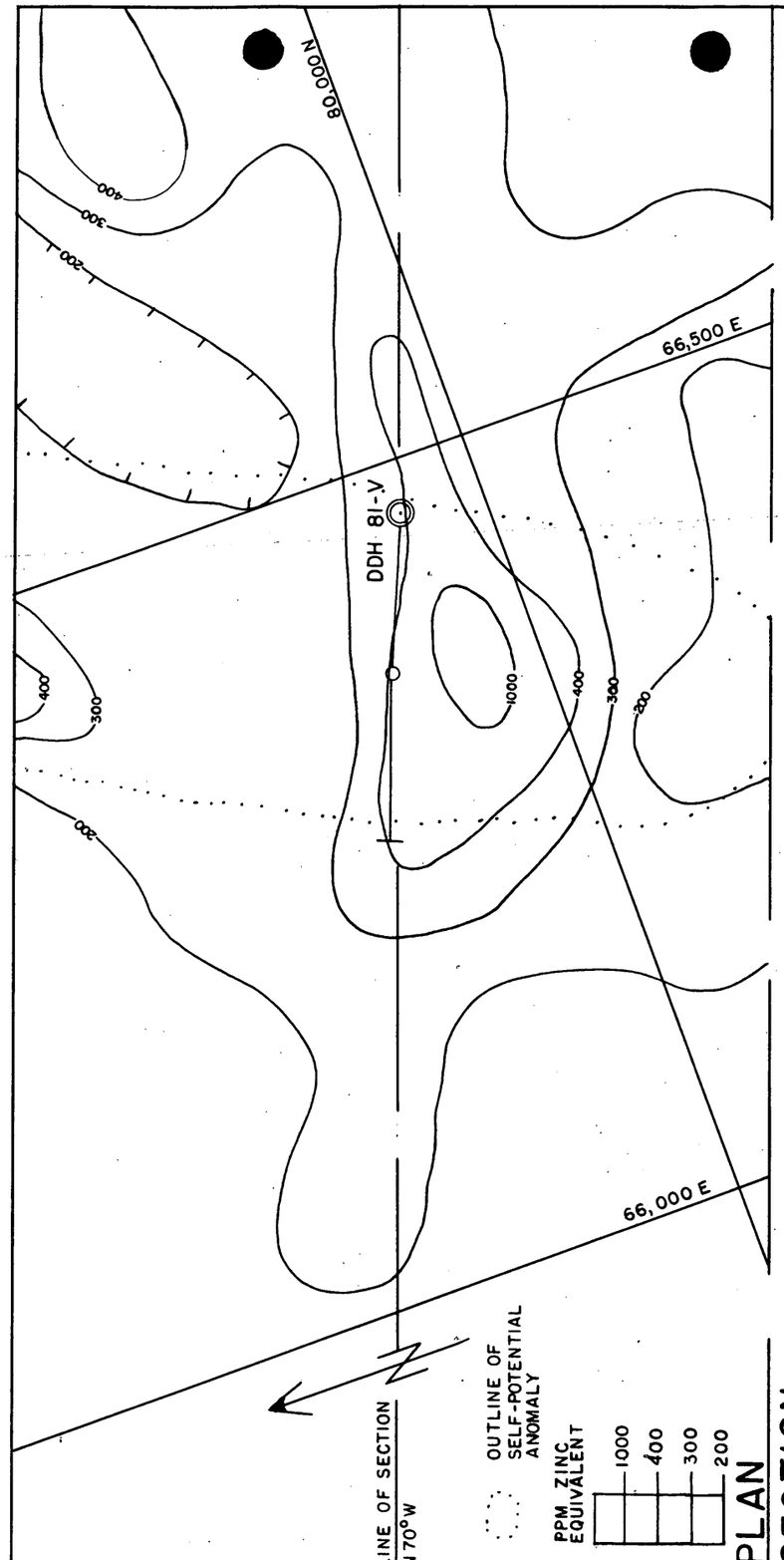
SERIAL NUMBER		DATE ISSUED		REFERENCE DRAWINGS	REVISIONS	THE NEW JERSEY ZINC COMPANY MINERAL VA.	DRAWN C.L.H.	PLAN AND SECTION DDH 79. V SOUTH VALZINCO AREA	DATE 11/5/57
THIS DRAWING IN DESIGN AND DETAIL IS OUR PROPERTY AND MUST NOT BE USED EXCEPT IN CONNECTION WITH OUR WORK. ALL RIGHTS OF DESIGN AND INVENTION ARE RESERVED. THIS DRAWING MUST BE RETURNED TO THE NEW JERSEY ZINC COMPANY.				AXV-552-D			TRACED		SCALE 1"=100'
							CHECKED		AXV-580-B-A
							APPROVED		

X5453B 1M 11-54

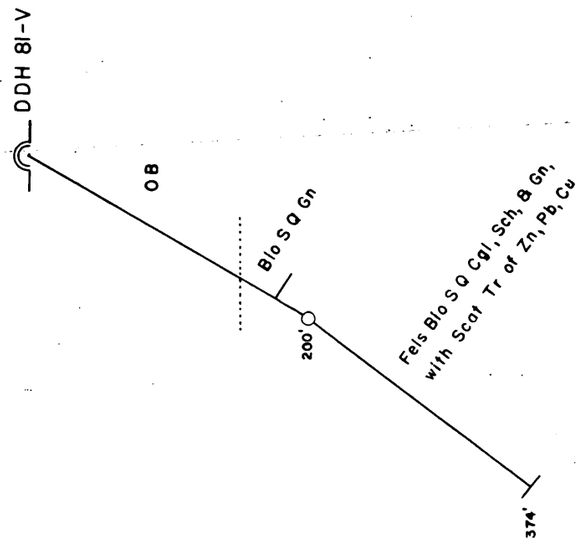


SERIAL NUMBER		DATE ISSUED		REFERENCE DRAWINGS	REVISIONS	THE NEW JERSEY ZINC COMPANY MINERAL VA.	DRAWN C.L.H.	PLAN AND SECTION DDH 80 V SOUTH VALZINCO AREA	DATE 11/6/57
THIS DRAWING IN DESIGN AND DETAIL IS OUR PROPERTY AND MUST NOT BE USED EXCEPT IN CONNECTION WITH OUR WORK. ALL RIGHTS OF DESIGN AND INVENTION ARE RESERVED. THIS DRAWING MUST BE RETURNED TO THE NEW JERSEY ZINC COMPANY.				AXV-552-D			TRACED		SCALE 1" = 100'
							CHECKED		AXV-587-B-A
							APPROVED		

X5453B 1M 11-54



PLAN

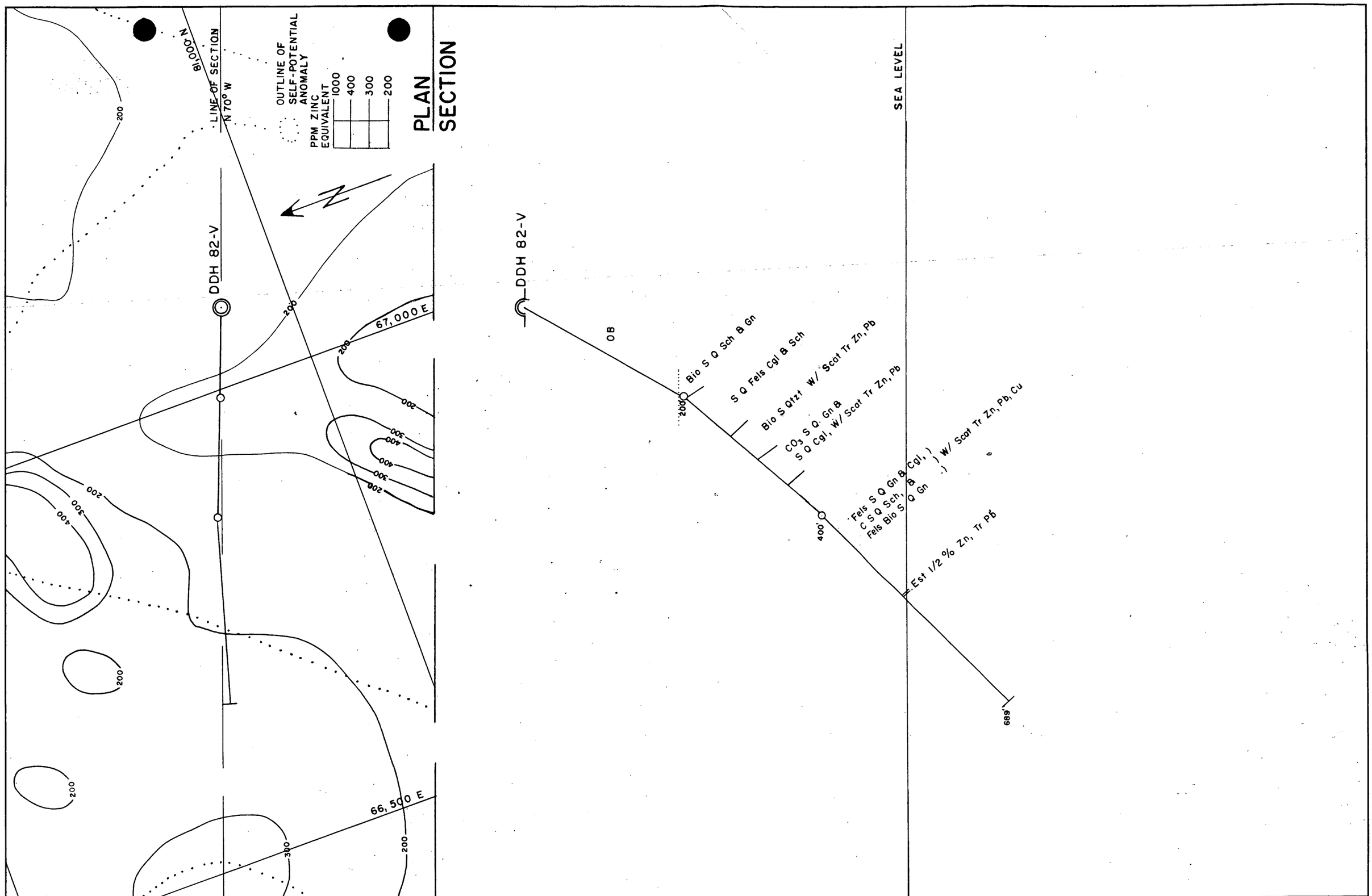


SEA LEVEL

SECTION

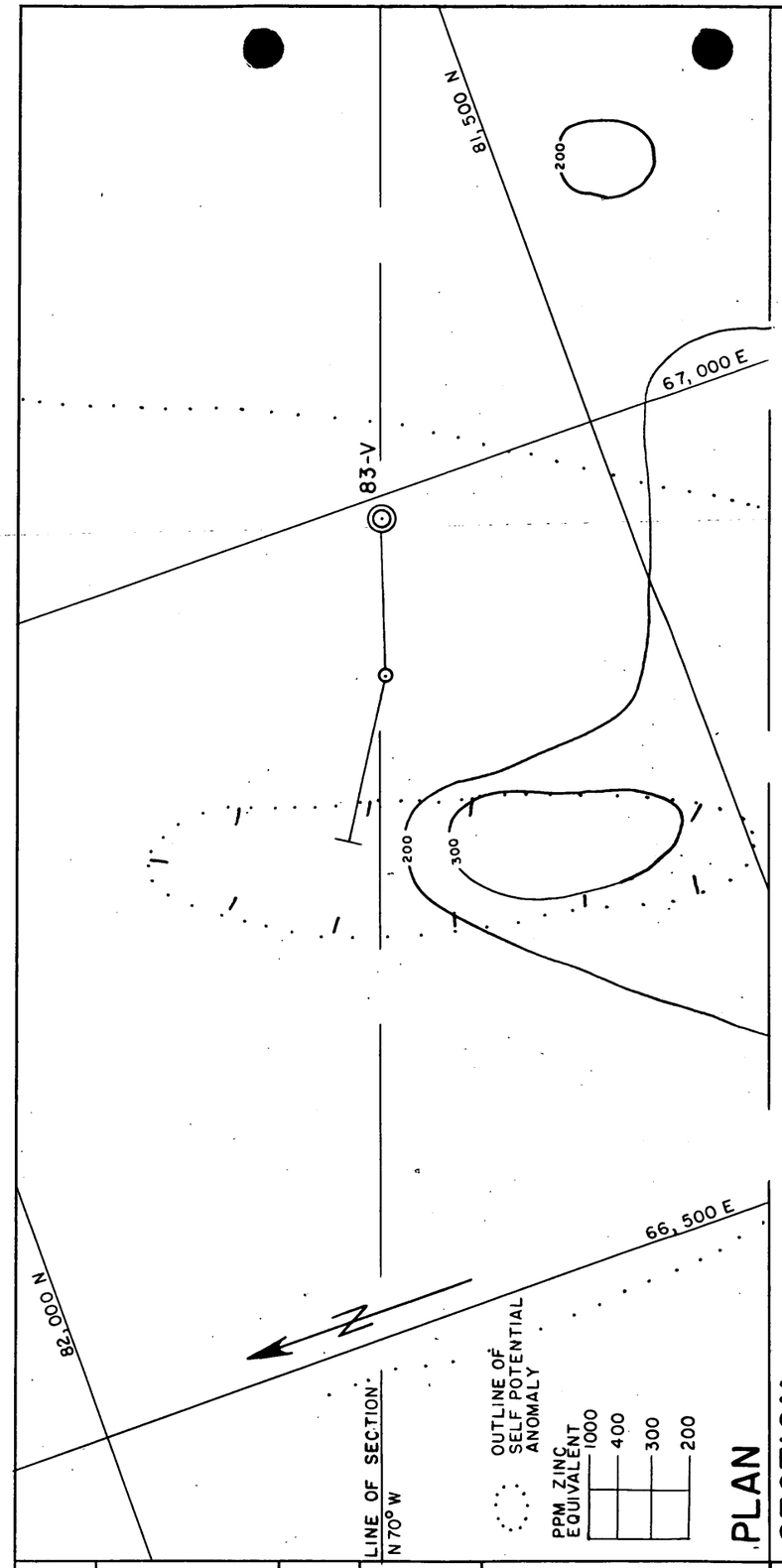
SERIAL NUMBER		DATE ISSUED		REFERENCE DRAWINGS	REVISIONS	THE NEW JERSEY ZINC COMPANY MINERAL, VA.	DRAWN CLH	PLAN & SECTION	DATE NOV. 6, 1957
THIS DRAWING IN DESIGN AND DETAIL IS OUR PROPERTY AND MUST NOT BE USED EXCEPT IN CONNECTION WITH OUR WORK. ALL RIGHTS OF DESIGN AND INVENTION ARE RESERVED. THIS DRAWING MUST BE RETURNED TO THE NEW JERSEY ZINC COMPANY.				AXV-552-D			TRACED	DDH 81-V	SCALE 1" = 100'
							CHECKED	SOUTH VALZINCO AREA	AXV-588-B-A
							APPROVED		

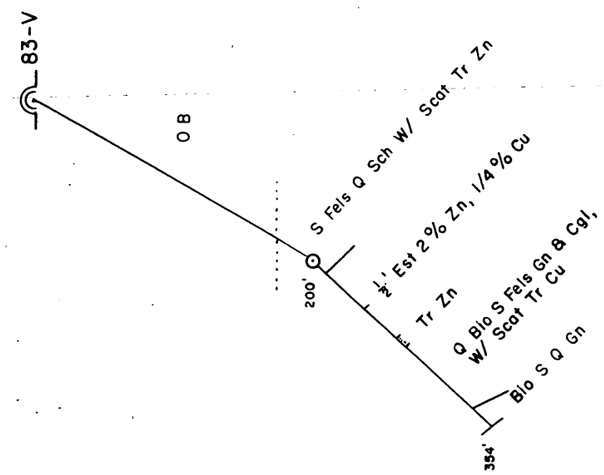
X5453B 1M 11-54



SERIAL NUMBER		DATE ISSUED		REFERENCE DRAWINGS	REVISIONS	THE NEW JERSEY ZINC COMPANY MINERAL, VA.	DRAWN CLH	PLAN & SECTION DDH 82-V SOUTH VALZINCO AREA	DATE 11/11/57
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.				AXV-552-D			TRACED		SCALE 1" = 100'
							CHECKED		AXV-589-B-A
							APPROVED		

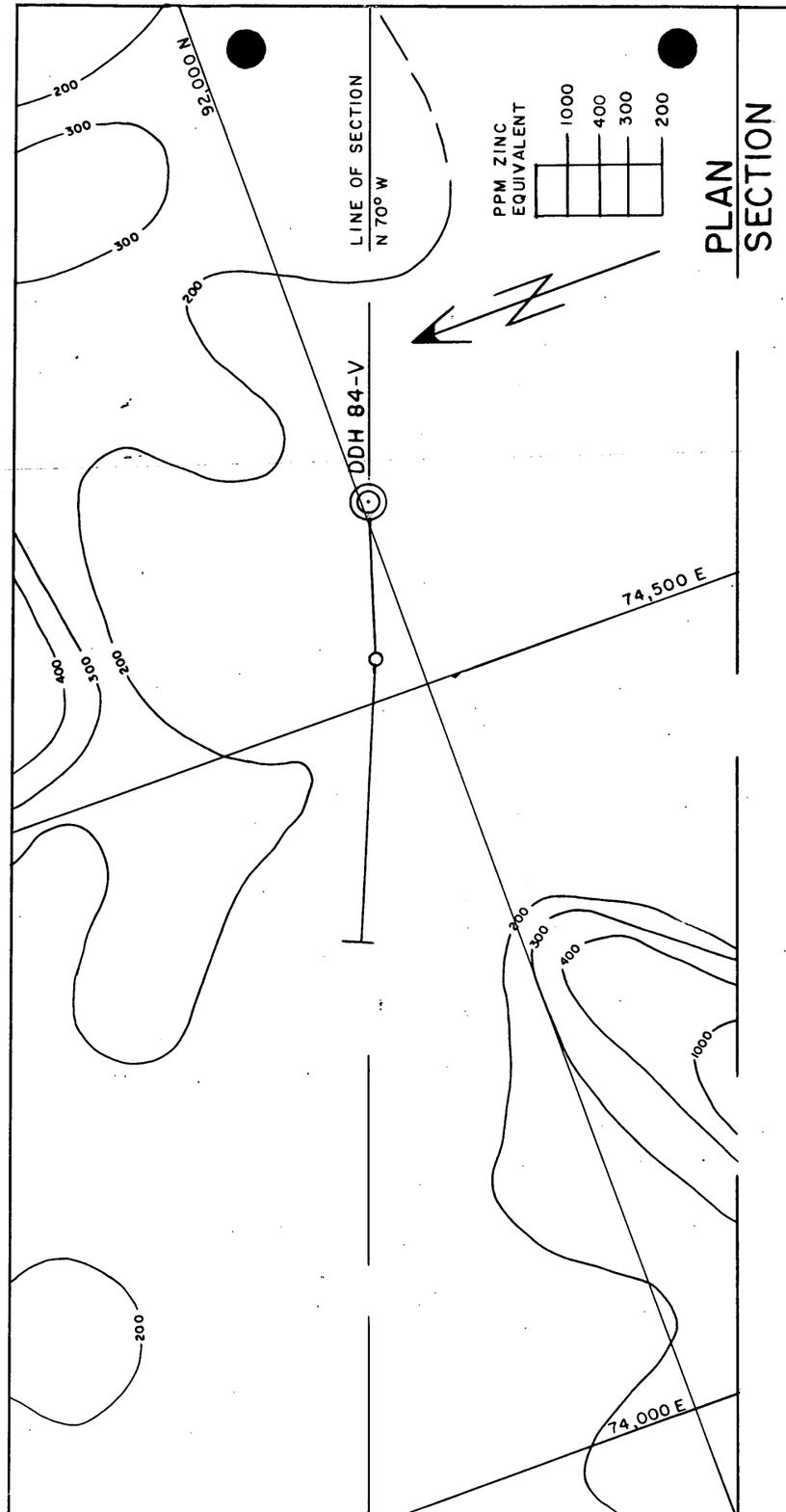
X5453B 1M 11-54

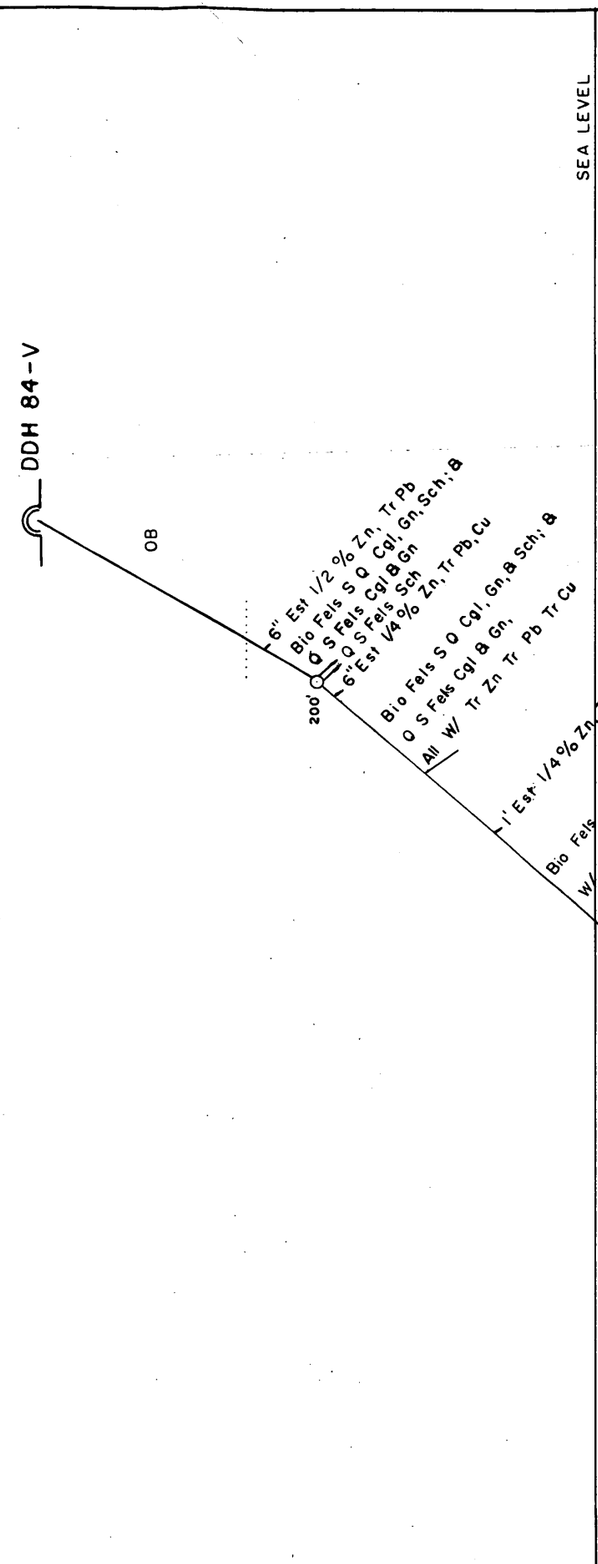




SERIAL NUMBER		DATE ISSUED		REFERENCE DRAWINGS	REVISIONS	THE NEW JERSEY ZINC COMPANY MINERAL, VA.	DRAWN CLH	PLAN & SECTION DDH 83-V SOUTH VALZINCO AREA	DATE NOV. 21, 1957
THIS DRAWING IN DESIGN AND DETAIL IS OUR PROPERTY AND MUST NOT BE USED EXCEPT IN CONNECTION WITH OUR WORK. ALL RIGHTS OF DESIGN AND INVENTION ARE RESERVED. THIS DRAWING MUST BE RETURNED TO THE NEW JERSEY ZINC COMPANY.				AXV-542-D			TRACED		SCALE 1" = 100'
							CHECKED		AXV-596-B-A
							APPROVED		

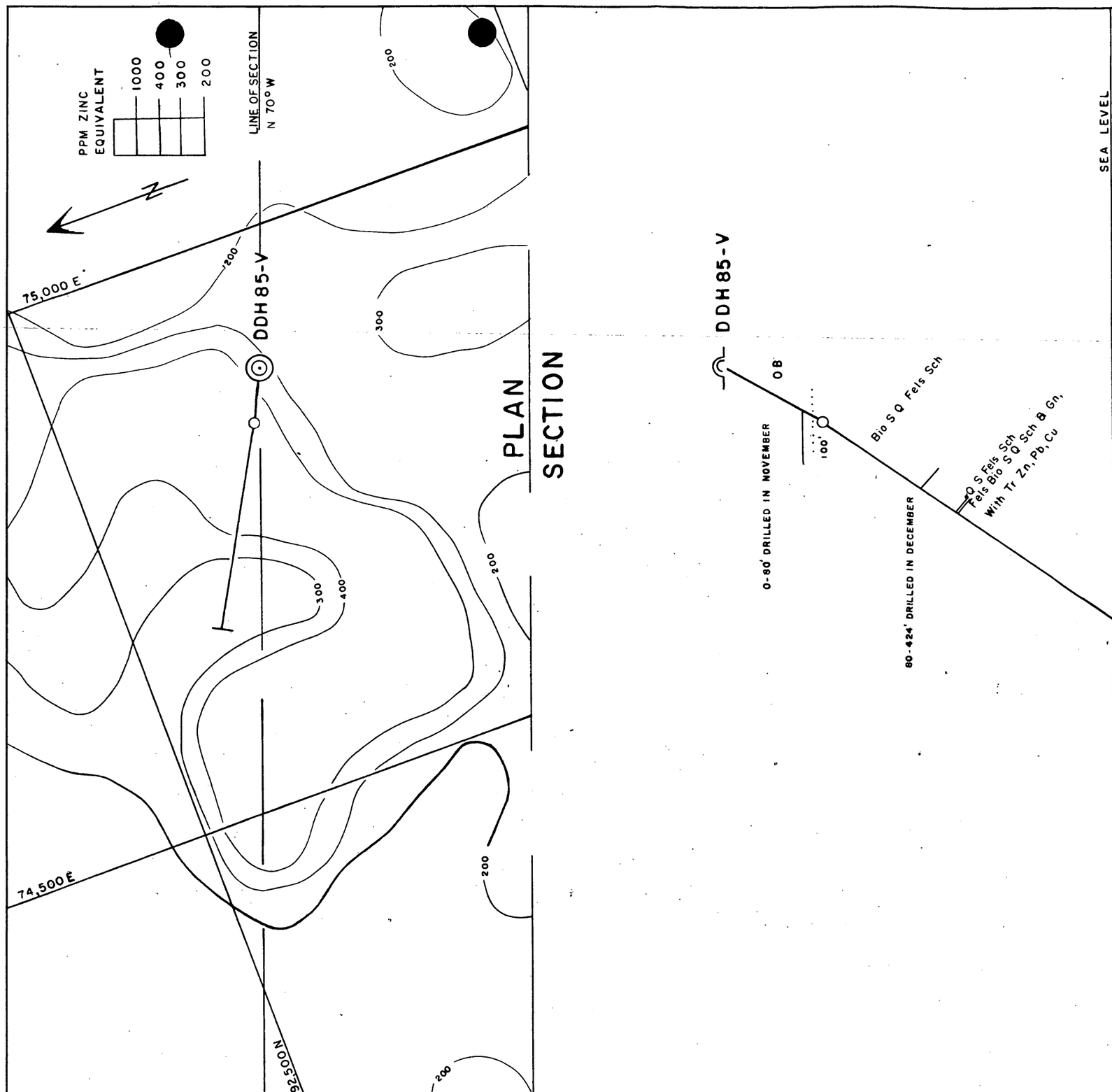
X5453B 1M 11-54





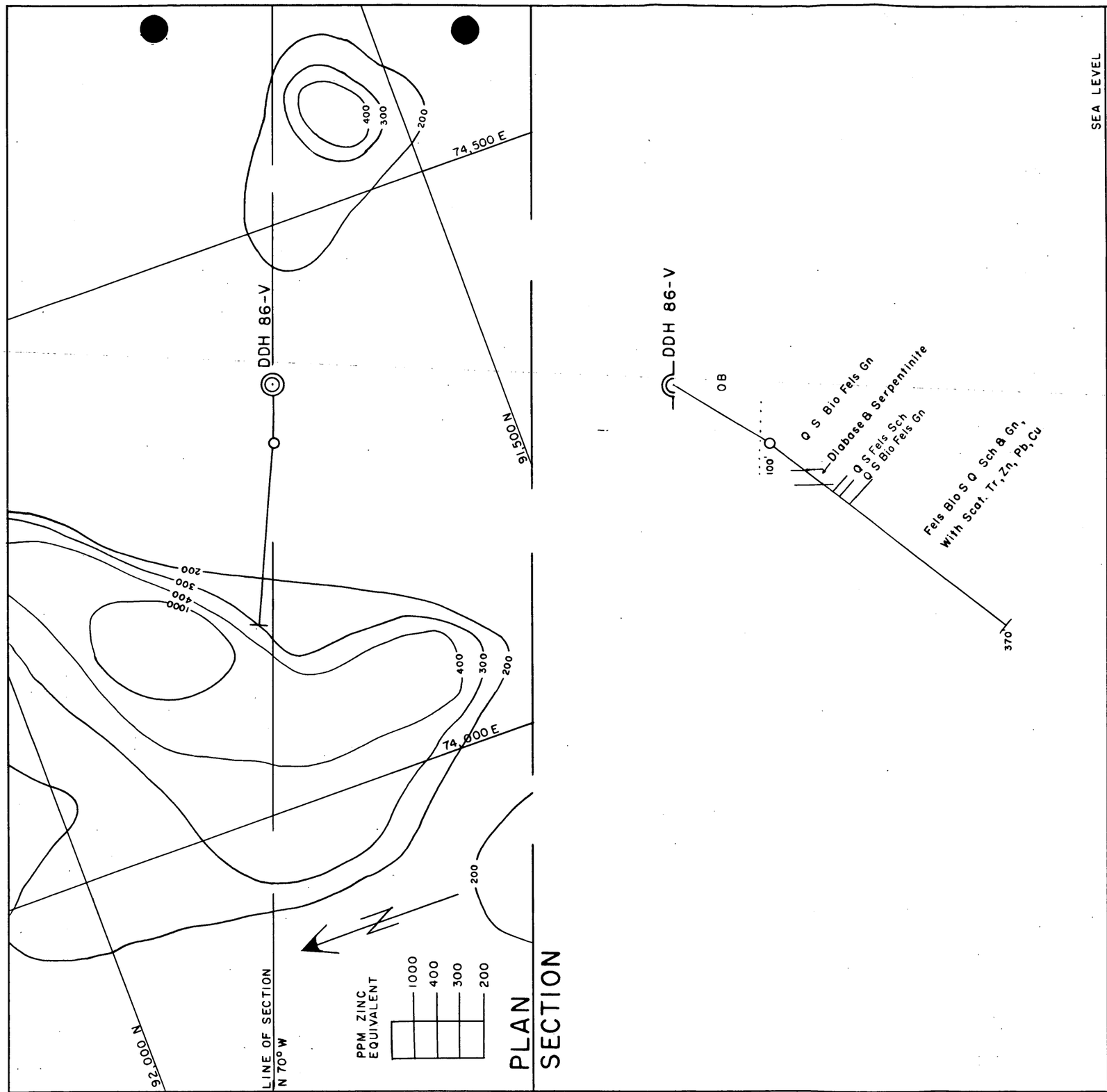
SERIAL NUMBER		DATE ISSUED		REFERENCE DRAWINGS	REVISIONS	THE NEW JERSEY ZINC COMPANY MINERAL, VA.	DRAWN CLH	PLAN & SECTION	DATE NOV. 27, 1957
THIS DRAWING IN DESIGN AND DETAIL IS OUR PROPERTY AND MUST NOT BE USED EXCEPT IN CONNECTION WITH OUR WORK. ALL RIGHTS OF DESIGN AND INVENTION ARE RESERVED. THIS DRAWING MUST BE RETURNED TO THE NEW JERSEY ZINC COMPANY.				AXV-554-D			TRACED	DDH 84-V	SCALE 1" = 100'
							CHECKED	NORTH VALZINCO AREA	AXV-598-B-A
							APPROVED		

X5453B 1M 11-54



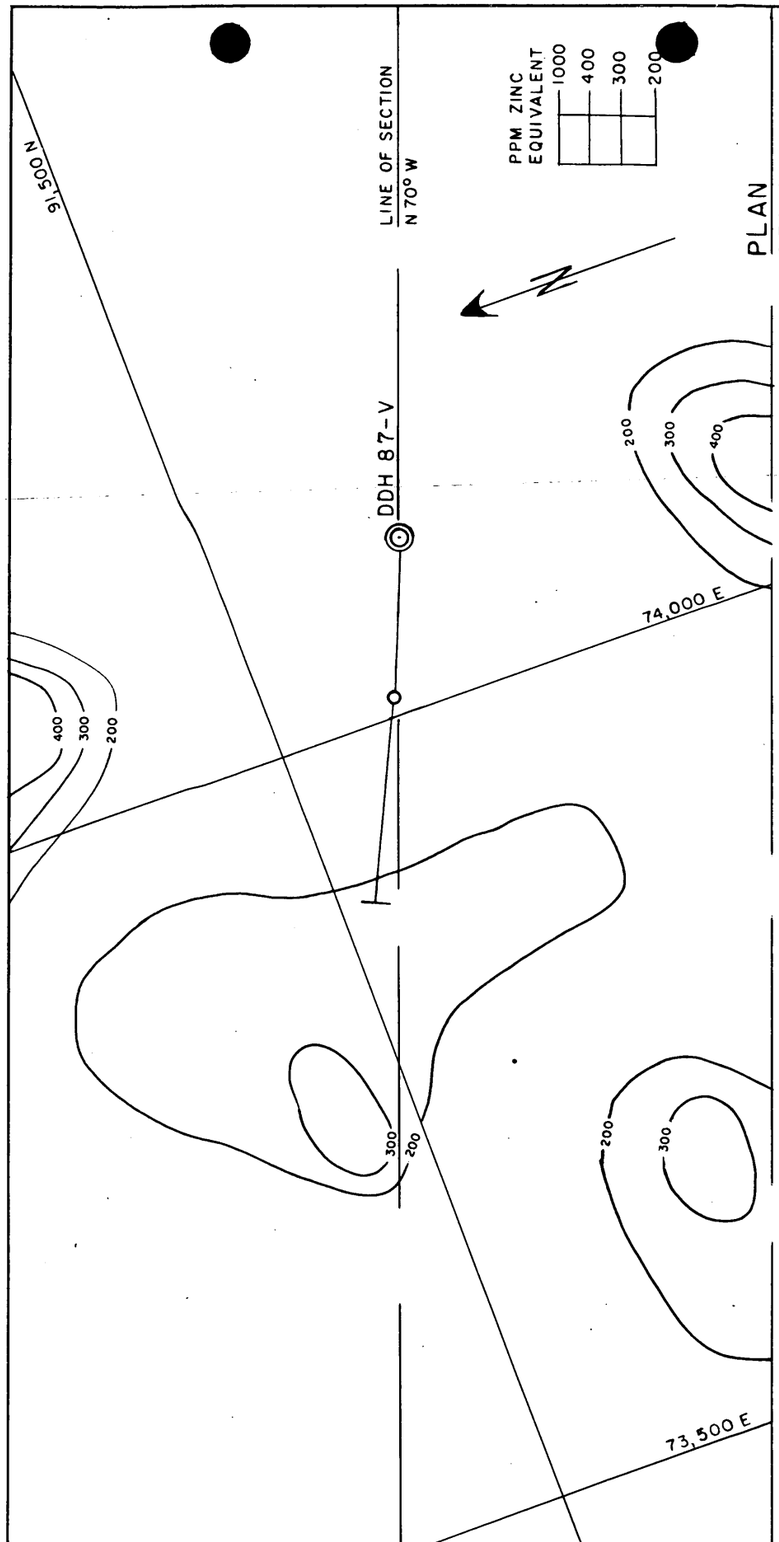
SERIAL NUMBER		DATE ISSUED		REFERENCE DRAWINGS	REVISIONS	THE NEW JERSEY ZINC COMPANY MINERAL, VA.	DRAWN W.R.H.	PLAN & SECTION DDH 85-V NORTH VALZINCO AREA	DATE 12/10/57
THIS DRAWING IN DESIGN AND DETAIL IS OUR PROPERTY AND MUST NOT BE USED EXCEPT IN CONNECTION WITH OUR WORK. ALL RIGHTS OF DESIGN AND INVENTION ARE RESERVED. THIS DRAWING MUST BE RETURNED TO THE NEW JERSEY ZINC COMPANY.				AXV- 554-D-8			TRACED		SCALE 1" = 100'
							CHECKED		AXV-601-B-A
							APPROVED		

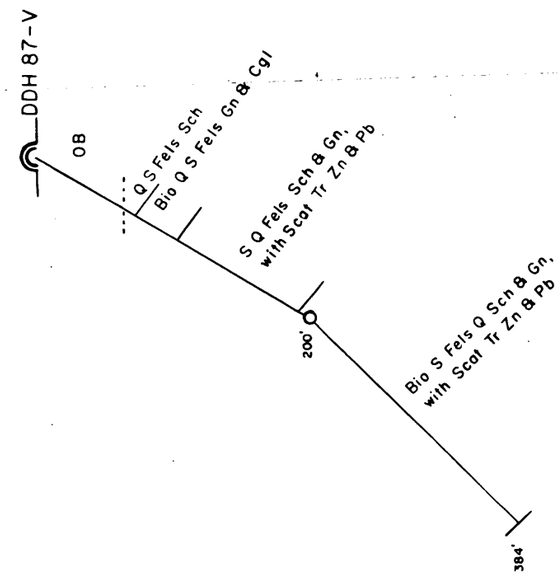
X5453B 1M 11-54



SERIAL NUMBER		DATE ISSUED		REFERENCE DRAWINGS	REVISIONS	THE NEW JERSEY ZINC COMPANY MINERAL, VA.	DRAWN CLH	PLAN & SECTION DDH 86-V NORTH VALZINCO AREA	DATE DEC. 17, 1957
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.				AXV - 554 - D			TRACED		SCALE 1" = 100'
							CHECKED		AXV - 602 - B - A
							APPROVED		

X5453B 1M 11-54





SERIAL NUMBER		DATE ISSUED		REFERENCE DRAWINGS	REVISIONS	THE NEW JERSEY ZINC COMPANY MINERAL, VA.	DRAWN CLH	PLAN & SECTION DDH 87-V NORTH VALZINCO AREA	DATE 1/2/58
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.				AXV-554-D			TRACED		SCALE 1" = 100'
							CHECKED		AXV-603-B-A
							APPROVED		

X5453B 1M 11-54

APPENDIX

Logs for drill holes 79 through 87

South Valzinco

DDH 79-V

Started: October 3, 1957
Bottomed: October 14, 1957
Location: 200 feet SE of center of self-potential anomaly.
Coordinates: 80,334.69N
66,777.26E
Bearing: N70° W @ collar,
N76° W @ 300'
Inclination: -45° @ collar,
-43° @ 300'
Elevation: 419
Objective: Test geochemical and self-potential anomalies.

0-220	Overburden
220-433	Biotite-sericite-quartz schist, gneiss, and conglomerate, and sericite quartzite. 343-362 Estimated trace of zinc, lead, and copper. Traces zinc at 335, 340, 385, 379, 389, 397.
433	Bottom

South Valzinco

DDH 80-V

Started: October 14, 1957
Bottomed: October 21, 1957
Location: 407 feet N17°E from 79-V
Coordinates: 80,727.36N
66,896.68E
Elevation: 421 feet
Inclination: -60° @ collar,
-51° @ 300'
Bearing: N69° W @ collar,
N71° W @ 300 feet.
Objective: Test geochemical and self potential anomalies.

0-190	Overburden
190-218	Biotite-sericite-quartz gneiss.
218-254	Biotite-sericite-quartz conglomerate. Scattered traces of zinc and lead.
254-404	Sericite-biotite-quartz conglomerate, gneiss, and quartzite. 253-267,278-291 Estimated trace of zinc, lead, and copper.
404	Bottom

South Valzinco

DDH 81-V

Started: October 22, 1957
Bottomed: October 27, 1957
Location: 418 feet S42½°W of 79-V
Coordinates: 80,052.21N
66,467.82E
Elevation: 408
Inclination: -59½° @ collar, -54½° @ 300 feet.
Bearing: N68° W @ collar, N69° W @ 300 feet
Objective: Test geochemical and self-potential anomalies.

0-150	Overburden
150-175	Biotite-sericite-quartz gneiss.
175-374	Feldspar-biotite-sericite-quartz conglomerate, gneiss and schist. 207-369 Scattered traces of zinc, lead, and copper.
374	Bottom

South Valzinco, Anomalies 1 and 2

DDH 82-V

Started: October 30, 1957
Bottomed: November 8, 1957
Location: 400 feet N29½°E from 80-V
Coordinates: 81,072.66N
67,085.01E
Elevation: 417
Bearing: N69°W @ collar,
N69°W @ 300',
N74°W @ 500'
Inclination: -60° @ collar
-49° @ 300'
-45½° @ 500'
Objective: Test geochemical and self-potential anomalies

0 - 193	Overburden
193 - 201	Sericite-quartz schist and gneiss
201 - 268	Sericite-quartz-feldspar conglomerate and schist
268 - 307	Biotite-sericite quartzite
307 - 350	Carbonate-sericite-quartz gneiss and sericite-quartz conglomerate
350 - 689	Chlorite-biotite-feldspar-sericite-quartz schist and gneiss. 357-632 Scattered traces of zinc, lead, and copper including estimated ½% zinc, trace lead @ 527-531
689	Bottom

South Valzinco, Anomaly 2

DDH 83-V

Started: November 11, 1957
Bottomed: November 15, 1957
Location: 578 feet N10½°W of DDH 82-V
Coordinates: 81,642.32N
66,986.77E
Elevation: 408'
Bearing: N72°W @ collar
N59°W @ 300'
Inclination: -60° @ collar
-47° @ 300'
Objective: Test geochemical and self-potential anomalies

0 - 174	Overburden
174 - 210	Sericite-feldspar-quartz schist
210 - 338	Quartz-biotite-sericite-feldspar-gneiss and conglomerate 244½-245 Estimated 2% zinc, ¼% copper 271-276, 279½-280 Scattered traces of zinc in sphalerite
338 - 354	Biotite-sericite-quartz gneiss
354	Bottom

North Valzinco, Anomaly 3

DDH 84-V

Started: November 19, 1957
Bottomed: November 27, 1957
Location: 250 feet southeast of center of geochemical anomaly
Coordinates: 91,995.80N
74,621.57E
Elevation: 347'
Bearing: N72°W @ collar
N68¼°W @ 300'
Inclination: -60° @ collar
-50° @ 300'
Objective: Test geochemical anomaly

0 - 150	Overburden
150 - 289	Biotite-feldspar-sericite-quartz conglomerate, schist, and gneiss 160-160½ Estimated ½% zinc, trace lead 214-285 Scattered traces of zinc and lead. Recovery only 44½' out of 71' from 214-285
289 - 482	Biotite-feldspar-sericite-quartz schist 293-481½ Scattered traces of zinc, lead, and copper including: 346-347 Estimated ½% zinc, trace lead 437-438½, 445-445½ Estimated 1½% zinc, trace lead 448-448½ Estimated ½% zinc, trace lead
482	Bottom

North Valzinco, Anomaly 3

DDH 85-V

Started: November 29, 1957
Bottomed: December 4, 1957
Location: 403 feet N39°E of 84-V
Coordinates: 92,310.16N
74,877.25E
Elevation: 347
Bearing: N66°W @ collar
N61½°W @ 200'
Inclination: -60° @ collar
-56° @ 200'
Objective: Test geochemical anomaly

0 - 90	Overburden
90 - 206½	Biotite-sericite-quartz-feldspar schist
206½ - 424	Feldspar-biotite-sericite-quartz schist and gneiss 251-320, 361½, 396-419 - Scattered traces of zinc, lead, copper
424	Bottom

North Valzinco, Anomaly 3

DDH 86-V

Started: December 7, 1957
Bottomed: December 16, 1957
Location: 396 feet S41°W of DDH 84-V
Coordinates: 91,690.90N
74,877.25E
Elevation: 387
Bearing: N70°W @ collar
N66°W @ 200'
Inclination: -59° @ collar
-53° @ 200'
Objective: Test geochemical anomaly

0 - 90	Overburden
90 - 190	Quartz-sericite-biotite-feldspar gneiss (137½-151½ Diabase)
190 - 370	Feldspar-biotite-sericite-quartz schist and gneiss 212½-257, 271-278, 291-366 - Scattered traces of zinc, lead and copper
370	Bottom

DDH 87-V

Started: December 18, 1957
Bottomed: December 30, 1957
Location: 402 feet S40°W of 86-V
Coordinates: 91,384.02N
74,106.56E
Elevation: 395
Bearings: N68°W @ collar,
N65½°W @ 300'
Inclination: -60° @ collar
-46° @ 300'
Objective: Test geochemical anomaly

0 - 62	Overburden
62 - 103	Biotite-quartz sericite-feldspar gneiss and conglomerate
103 - 193	Sericite-quartz-feldspar schist and gneiss 106-193 Traces of zinc and lead
193 - 384	Biotite-sericite-feldspar-quartz schist and gneiss 195-308 Traces of zinc and lead
384	Bottom

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
ROOM 13 POST OFFICE BLDG.
KNOXVILLE 2, TENN.

RECEIVED MAR 11 1958

DATE	INITIALS	CODE
3/12	C	220
		~~1K~~ 500

March 10, 1958

Memorandum

To: J. L. Chambers, Director Contract Administration and Audit Division - DMEA

From: Executive Officer, DMEA - Region V - Knoxville, Tenn.

Subject: Completion of DMEA-4673 (zinc-lead-copper).
The New Jersey Zinc Co., New York, N.Y.
Valzinco area, Spotsylvania County, Virginia
Contract No. Idm-E1109

Work under the subject contract was completed on December 30, 1957. An acceptable final engineering and geologic report was received March 6-1958.

The following units of work have been satisfactorily completed, as verified by our Field Examiners:

Overburden drilling	1,323 ft.
Diamond drilling	2,591 "
Core Boxes	140
Sample analyses	none

Through some misunderstanding, the January voucher was not recognized as a final voucher, and was forwarded for payment. We are asking Mrs. Helen Miller to send you her file of vouchers and supporting documents. A Report of Review is requested.

Robert A. Laurence

RAL/zm
cc
Cpr. Com-2
Lynch
Files

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
ROOM 13 POST OFFICE BLDG.
KNOXVILLE 2, TENN.

November 13, 1957

OFFICIAL FILE COPY
DMEA
RECEIVED NOV 15 1957

DATE	INITIALS	CODE
11/15	gb	220
11/15	[illegible]	800
11/18	Klug	500

Mr. W. L. Albers, Supt.
Bertha Mineral Division
The New Jersey Zinc Company
Austinville, Virginia

DMEA-4673, Idm-E1109-Zinc
Valzinco Area
Spotsylvania County, Va.

Dear Mr. Albers:

This will constitute approval of the amended locations for drill hole 82-V, replacing the former location of Hole 4 on anomaly 1 and Hole 1 on anomaly 2, as requested in your letter of October 31. The location of the collar of this hole is 400 feet N 30°E from the collar of Hole 80-V.

Sincerely yours,

V. J. Lynch, Acting
Executive Officer, DMEA
Region V

RAL/zm
cc
Opr. Com.-2
Burmeister
E. Weinberg
Lynch
Files

THE NEW JERSEY ZINC COMPANY

160 FRONT STREET

NEW YORK 38, N.Y.

OFFICIAL FILE COPY
DMEA
RECEIVED NOV 15 1957

DATE	INITIALS	CODE

October 31, 1957

PLEASE ADDRESS REPLY TO
P. O. Box 67
Mineral, Va.

Mr. Robert A. Laurence
Regional Executive Officer
Defense Minerals Exploration Administration
Room 13, Post Office Building
Knoxville 2, Tennessee

Re: Amended hole locations
Docket 4673, Contract Idm-E 1109
Valzinco Area, Spotsylvania
County, Virginia

Dear Sir:

In accordance with the discussion at Mineral on October 11, 1957 held with Messrs. Wedow and Burmeister and as confirmed by telephone with Mr. Wedow on October 30, 1957 we herewith submit amended locations for hole four on anomaly one and hole one on anomaly two at the Valzinco area. We have now placed the collar of the fourth hole drilling on anomaly one 400' N30°E of the location of hole two(hole two is 80-V as located by our letter of October 11, 1957.) This fourth hole on anomaly one will also take the place of hole one on the second anomaly if it (82-V) is allowed to go to approximately 700 feet in depth.

The present hole, 82-V, is inclined at 60° and is directed N70°W.

Yours sincerely,

W. L. Albers,
Superintendent

E. L. Weinberg/jjf
in quintuplicate

RECEIVED
NOV 6 - 1957
U. S. Geological Survey
Geologic Division
Knoxville, Tenn.

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

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DMEA
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DATE	INITIALS	CODE
10/21	C	220
10/21	Klug	500

October 18, 1957

Mr. W. L. Albers, Superintendent
Bertha Mineral Division
The New Jersey Zinc Company
Austinville, Virginia

Re: DMEA-1673 (Zinc)
Valzinco Area
Spotsylvania County, Virginia
Contract Idm-E1109

Dear Mr. Albers:

This will constitute approval of the amended locations of the holes on the original fence at Valzinco anomaly one, as outlined in your letter of October 11, 1957, and discussed with Mr. Medow and Mr. Burmeister.

Sincerely yours,

Robert A. Laurence
Executive Officer
DMEA Field Team, Region V

RAL/mg
cc - Operating Committee (2)
Mr. V. J. Lynch
Mr. W. T. Millar
Mr. E. L. Weinberg
File

THE NEW JERSEY ZINC COMPANY

(ESTABLISHED 1848)

CABLE ADDRESS
"JERSEZINC"

100 FRONT STREET

NEW YORK 38, N.Y.

October 11, 1957

PLEASE ADDRESS REPLY TO
P. O. Box 67
Mineral, Virginia

Regional Executive Officer
Defense Minerals Exploration Administration
Room 13, Post Office Building
Knoxville 2, Tennessee

Re: Docket 4673, Contract 1109
Valzinco Area, Spotsylvania
County, Virginia

Dear Sir:

We herewith submit amended locations for the original fence of holes on Valzinco anomaly one, in accordance with our discussion at Mineral on October 11, 1957 held with Messrs. Wedow and Burmeister of the DMEA field team. This was deemed necessary following appraisal of the overburden depth and depth to mineralization encountered in the first hole drilled on Valzinco anomaly one, 79V.

It is now proposed that the new fence of holes on anomaly one be drilled one to two hundred feet northwest of the original fence, as shown on map AXV-542-D-CK, and be inclined from 45° to 60° depending on conditions as they develop in the field. Hole 80V will be the first hole drilled under this revised fence and will be collared about 410 feet N15°E of hole 79V.

Yours sincerely,

W. L. Albers,
Superintendent

E. L. Weinberg/jjf
in quintuplicate

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DMEA
RECEIVED OCT 21 1957

DATE	INITIALS	CODE

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OCT 18 1957
U. S. Geological Survey
Geologic Division
Washington, D.C.

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
	Klugescheid	

October 9, 1957

Memorandum for the Files

From: Director, Division of Base Metals

Subject: Phone Conversation on Docket No. DMEA-4673, The New Jersey Zinc Company, Val Zinco Area, Spotsylvania County, Virginia, Zinc.

On this day Mr. H. Wedow, Geologist, USGS, from Region V called Mr. Weinberg, Geologist of The New Jersey Zinc Company, in Mineral, Virginia, to discuss a change in drilling on the above-mentioned project. The reason for this change was the excessive amount of overburden encountered while drilling the first hole.

W. R. Griswold

WPKlugescheid/er 10/17/57
Copy to: Docket
Chron.

8623

THE NEW JERSEY ZINC COMPANY

(ESTABLISHED 1848)

CABLE ADDRESS
"JERSEZINC"

160 FRONT STREET

NEW YORK 38, N.Y.

October 2, 1957

PLEASE ADDRESS REPLY TO
P. O. Box 67
Mineral, Virginia

Regional Executive Officer
Defense Minerals Exploration Administration
Room 13, Post Office Building
Knoxville 2, Tennessee

Re: DMEA 4673(Zinc-lead-copper)
Valzinco Area
Spotsylvania County, Virginia
Contract Idm-E 1109

Dear Sir:

This will confirm my telephone conversation of September 27, 1957 with Mr. H. L. Burmeister, at which time I advised him the drill on our Bondurant DMEA project would be moved to the Valzinco area on or about October 2, 1957. With this move the drilling on the Bondurant will have been completed to within a few feet of the authorized footage.

The drill will first be located on the Valzinco at diamond drill hole site 1 on anomaly 1, as authorized by your letter of September 13, 1957.

Very truly yours,

W. L. Albers,
Superintendent

El L. Weinberg
in quintuplicate

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DMEA
RECEIVED OCT 9 1957

DATE	INITIALS	CODE
10/9	B.	220
10/9		800
~~10/9~~	~~Klag~~	~~[illegible]~~

RECEIVED
OCT 7 - 1957
U. S. Geological Survey
Geologic Division
Knoxville, Tenn.

September 13, 1957 9-17 C 220
9/17 Klug 500

Mr. G. L. Albers, Superintendent
Sperry Mineral Division
The New Jersey Zinc Company
Austinville, Virginia

Re: DMEA-4673 (Zinc-lead-copper)
Walsingo Area
Spotsylvania County, Virginia
Contract Ida-E1109

Dear Mr. Albers:

This will constitute approval of the new drill sites as requested in your letter of September 10, and recommended by Mr. Lurvsister and Mr. Redes. No amendment is considered necessary.

Sincerely yours,

Robert A. Lawrence
Executive Officer
DMEA Field Team, Region V

RAL/mg
cc - Operating Committee (3)
Mr. T. J. Lynch
Mr. A. T. Millar
Finance Office
File

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
ROOM 13 POST OFFICE BLDG
KNOXVILLE 2, TENN.

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D M E A
RECEIVED 1957

DATE	INITIALS	CODE
9-17	C	220
9/18	[illegible]	130
9/18	[illegible]	500

September 13, 1957

Memorandum

To: Operating Committee, DMEA, Washington 25, D. C.

From: Field Team, DMEA, Region V, Knoxville 2, Tennessee

Subject: Docket No. DMEA-4673, Contract No. Idm-E1109
(Zinc-lead-copper)
The New Jersey Zinc Company, New York, New York
Valzinco Area, Spotsylvania County, Virginia

Enclosed are three copies of a letter from the Operator, requesting changed location of the initial drill holes at the Valzinco project. Please refer also to the recent interim report by H. L. Burmeister and Helmuth Wedow, Jr.

We approve the proposed changes. It is our interpretation of the contract (paragraphs 3 and 4 of exhibit "A"), that an amendment is not needed, and we are authorizing the Operator to drill at the proposed sites. If this is incorrect and an amendment is considered necessary, please have one drafted or notify us so that we may write it.

Robert A. Laurence
Robert A. Laurence
Executive Officer

S A Feitler
S. A. Feitler, for V. J. Lynch
U. S. Bureau of Mines

Enclosures 3

THE NEW JERSEY ZINC COMPANY

(ESTABLISHED 1848)

CABLE ADDRESS
"JERSEZINC"

160 FRONT STREET

NEW YORK 38, N.Y.

September 10, 1957

PLEASE ADDRESS REPLY TO
P. O. Box 67
Mineral, Virginia

Regional Executive Officer
Defense Minerals Exploration Administration
Room 13, Post Office
Knoxville 2, Tennessee

Subject: Docket 4673, Contract 1109
Valzinco Area, Spotsylvania County,
Virginia

Dear Sir:

We herewith submit amended locations for the initial holes on Valzinco anomalies 1, 2 and 3(rf. maps AXV-552,554), in accordance with our discussion at Mineral on September 5, 1957 held with Messrs. Wedow and Burmeister of the DMEA field team. This was deemed necessary following a reappraisal of the original data and consideration of self-potential data obtained after the preliminary field examination.

It is now proposed that diamond drill hole 1(Exhibit A, paragraph 3) on each anomaly be moved approximately as follows:

Anomaly No.	Distance of hole from original position	Bearing from original position
1	100 feet	N50°W
2	150 feet	N50°W
3	200 feet	N60°W

Very truly yours

W. L. Albers,
Superintendent

E. L. Weinberg/jjf
in quintuplicate

RECEIVED
SEP 12 1957

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
8/11	Klugescheid	500
	Williams	500
8/14	GCS	130
"	Johnson	110
"	Rittenhouse	100
8/15	[illegible]	225
		500

500

AUG 15 1957

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

Re: Docket No. DMEA-4673 (Zinc-Lead-Copper)
The New Jersey Zinc Company
Valzinco Area
Spotsylvania County, Virginia
Contract No. Idm-E1109

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.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (GCS)
WPKlugescheid/er 8/14/57
Copy to: Docket
Admr R File
Op. Committee
Mr. Bishop, USBM
Mr. Kiilsgaard, USGS
Chron.

Enclosures

APPROVED:

P. F. Yopes (GCS)
Member, Bureau of Mines

N. E. Nelson (GCS)
Member, Geological Survey

8623

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

OFFICE OF THE
VICE PRESIDENT

HORSE HEAD PRODUCTS ®

August 2, 1957

Mr. C. O. Mittendorf, Administrator
Defense Minerals Exploration Administrator
United States Department of the Interior
Washington 25, D. C.

Re: DOCKET NO. DMEA-4673 (ZINC-LEAD-COPPER)
THE NEW JERSEY ZINC COMPANY
VALZINCO AREA
SPOTSYLVANIA COUNTY, VIRGINIA

Dear Mr. Mittendorf:

Returned herewith are the original and the three government copies of a contract covering proposed exploration work on the subject area, in accordance with your letter dated July 19, 1957.

The contract meets with our approval, and we have no recommended changes. Accordingly, we have signed all copies, are forwarding you the four government copies, retaining the "Operator's Copy" for our files.

Very truly yours,

S. S. Goodwin
Vice President

SSG:ahg

OFFICIAL FILE COPY
DMEA
RECEIVED AUG 6 1957

DATE	INITIALS	CODE
8/6	P.K.	220
8/7	B	215
8/7	Klug.	500

Operating Committee -
Docket No 4673

I note that this contract offers 20¢ per foot more for over burden drilling than for diamond drilling. Contract Nos - 936, 937, 950, 956, 960, 970, 971, 982, 1071, all with New Jersey, and 1022, 1002, and 1088 with Nat. Lead make no difference in in costs.

Jay L. Chambers

[illegible]

7/9/57

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
7/8/57	Klugescheid	500
	Brandt	500
7/10	Fisher	500
7/12	Selfridge	230
7/12	Bastow	230
7/12	Kiilsgaard	230
7/12	Johnson	110
7/12	Mittendorf	100
7/16	C	225

KB.

JUL 19 1957

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

Re: Docket No. DMEA-4673 (Zinc-Lead-Copper)
The New Jersey Zinc Company
Valzinco Area
Spotsylvania County, Virginia

Dear Mr. Goodwin:

In reference to your application of March 1, 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 three maps.

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.

The diamond drilling costs are based on the bid submitted by the E. J. Longyear Company.

Sincerely yours,

C. O. Mittendorf (for)

Administrator

WPKlugescheid/er (7/8/57)
rewritten 7/11/57
Copy to: Docket
Admr R File
Op. Committee
Mr. Bishop, USBM
Mr. Kiilsgaard, USGS
Region V (2)
Chron.

Enclosures

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DMEA Form 7
(12-56)

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7/8	Klugeschei	500
	Sumrow	500
7/12	GCS	130
"	Johnson	100
19	Chatkadoy	220
		500

7-9 Chamber 800

JUL 19 1957

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

Re: Docket No. DMEA-4673 (Zinc-Lead-Copper)
The New Jersey Zinc Company
Valzinco Area
Spotsylvania County, Virginia

Dear Mr. Laurence:

As requested by the Applicant, we are forwarding the original and four copies of a proposed contract to its New York City office.

We are enclosing two extra copies, minus the form, for the Field Team use. This material consists of Annex I (three pages), Annex II (two pages), Exhibit "A" (three pages), and three maps.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (HB)
WPKlugesheid/er 7/8/57
Copy to: Docket
Admr R File
Op. Committee
Mr. Bishop, USBM
Mr. Kiilsgaard, USGS
Chron.

Enclosures

APPROVED:

/S/ O. M. Bishop (HB)
Member, Bureau of Mines

Thor H. Kiilsgaard (HB)
Member, Geological Survey

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RECEIVED JUN 19 1957
DATE | INITIALS | CODE
6/19 Jaff 228
6/20 WPK 500

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

June 18, 1957

Re: DMEA 4673; Lead; $14,634.62
New Jersey Zinc Co.,
Valzinco Property
Spotsylvania County, Va.

Memorandum

To: W. R. Griswold, DMEA

From: O. M. Bishop, USBM

Subject: Review of Field Team Report, dated June 5, 1957, and received June 12, 1957.

The New Jersey Zinc Co. requested DMEA assistance to diamond drill a maximum of 10 diamond drill holes totaling 4,000 feet to explore certain anomalies revealed by geophysical and geochemical work on a tract of 4,240 acres which includes the old Valzinco property, which was a minor producer during both World Wars.

I noted that the field examiners report is weak in terms of past production and looked up production data during the period 1942-45 to augment it. From September 1942 through January 1945 the mine plant treated 67,000 tons of ore (including 5,400 tons of tailings) to recover 204 ozs. gold; 35,646 ozs. silver; 290 tons copper; 1,078 tons lead; and 3,139 tons of zinc.

On the basis of past production, geologic setting, geochemical and self-potential anomalies a work program is outlined with the concurrence of the field examiners to core drill 3 anomalies and test both the Discovery and Holladay ore zones.

The entire project appears soundly conceived with regard to theory, procedure and estimated costs.

I concur with the field team recommendations.

O. M. Bishop

O. M. Bishop

cc: Division of Minerals
Mr. Kiilsgaard
Mr. Lamb
Files

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
6/13	Klugescheid	SVC

500

June 13, 1957

Memorandum

To: Associate Solicitor, Division of Mineral Resources

From: Director, Division of Base Metals

Subject: Preparation of Contract for Docket No. DMEA-4673, The New Jersey Zinc Company, Valzinco Area, Spotsylvania County, Virginia, Zinc-Lead-Copper.

Will you please prepare a contract for the cited application. A draft of the contract, Exhibit "A", Annex I, Annex II and one copy of each of three maps are attached to this memorandum. We will hold the rest of the maps here in our office. Consents to Lien have been waived.

W. R. Griswold

Enclosures

WPKlugescheid/er
Copy to: Docket
Chron.

8623

June 12, 1957.

Memorandum for the Files

From: W. P. Klugescheid, Division of Base Metals.

Subject: Changes in Costs from those submitted by the Field Team, Docket DMEA-4673, The New Jersey Zinc Company, Valzinco Area, Spotsylvania County, Virginia (Zinc-Lead-Copper).

Charges for service and casing are unwarranted as they do not appear in the bid made by The E. J. Longyear Company.

No allowance was made for drilling in overburden so we have assumed that there may be 60 feet in each hole. This data was obtained from W. P. Williams.

The headquarters of The New Jersey Zinc Company in the area under consideration is at Mineral, Virginia at a distance of only 24 miles from this project. As this is within easy striking distance from the headquarters we have assumed that the one-half time allowance for the Geologist should cover all the technical expenditures necessary.

Cost of fire assays for gold and silver have been eliminated as these values do not seem to be very important.

W. P. Klugescheid

W. P. Klugescheid

IN REPLY REFER TO:

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DMEA
RECEIVED JUN 13 1957

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6/13	ZWP	220
6/13	WHR	500

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

June 12, 1957

Re: DMEA 4673
New Jersey Zinc Co.
Valzinco property
Spotsylvanic Co., Virginia
App. Est. $14,769.00
Rec'd Est. 14,634.62
Lead-zinc-copper

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 by diamond drilling the southwest and northeast extensions of the 2-Valzinco mine structures. One vein, the Holliday, has been developed by extensive underground workings and some production, at least 5,000 tons through 1918, was achieved. Between 1942 and 1945, a 100 ton mill was operated but the production is not immediately available. Mining and diamond drilling appear to have bottomed the Holliday and the small Discovery oreshoots.

The extensions of the developed area have been prospected geochemically and by self potential methods. Both procedures showed anomalous conditions in several areas and the examiners and Field Team recommend that diamond drilling be done to test 3 of the anomalies.

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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DMEA
RECEIVED JUN 7 1957

DATE	INITIALS	CODE
6/7	JWD	220
		130-HB
6-10	C	220
6/10	WPK	500

June 5, 1957

Memorandum

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

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

Subject: Docket No. DMEA-4673, New Jersey Zinc Company
Valzinco area, Spotsylvania County, Virginia

Transmitted are four copies of examination report covering the subject application.

The Field Team agrees with the recommendations of the field examiners and the estimated costs of the proposed exploration project.

Robert A. Laurence
Robert A. Laurence
Executive Officer

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

Enclosures 4

Reviewed by
DMEA OPERATING COMMITTEE
6-10-57
(date)

ON SITE
REPORT

FIELD TEAM REPORT ON EXAMINATION OF PROPERTY

by

H. L. Burmeister and W. P. Williams[1/]

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DMEA
RECEIVED JUN 6 1957
DATE | INITIALS | CODE
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220

DMEA Docket No. 4673

Applicant: New Jersey Zinc Company
160 Front Street
New York, New York

SUMMARY

The New Jersey Zinc Company, with district office at Mineral, Virginia, has applied for DMEA assistance under DMEA docket no. 4673, to explore for lead-zinc-copper deposits. The property involved consists of a large tract of land that contains the old Valzinco mine.

In order to delimit areas most suitable for core drilling and to furnish justification for such drilling the applicant completed thorough geochemical and geophysical surveys on the property. The surveys resulted in major anomalies that appear to well warrant further exploration by drilling.

The proposed work would consist of a total of 4,000 feet of diamond core drilling, in a maximum of 10 holes, at a total estimated cost of $14,634.62.

The examining team believe that there is a good chance that the proposed drilling project would result in the discovery of new lead-zinc-copper reserves. It is recommended therefore that the application for DMEA assistance be approved.

Reviewed by
DMEA OPERATING COMMITTEE
6-10-57
(date)

1/ H. L. Burmeister, U. S. Bureau of Mines (engineer)
W. P. Williams, U. S. Geological Survey (geologist)

CONCLUSIONS AND RECOMMENDATIONS

In the absence of outcrops by which to form a geologic evaluation of the areas in question and in the presence of 50 to 100 feet of overburden and soil cover a geophysical and goechemical approach to the problem of delineating favorable areas within which to conduct further exploration seems applicable and strongly indicated. The applicant has completed geophysical and geochemical surveys which results in well defined, probably significant, anomalies by means of geochemical soil sampling and by self-potential methods.

The field examiners agree with the applicant Company that the geochemical and geophysical anomalies are large enough and well enough developed to warrant further exploration by core drilling methods. It is accordingly recommended that a DMEA contract be prepared to provide for exploratory core drilling on three anomalies on the Valzinco property. Hole locations, spacing, and estimated costs are outlined in this report.

TIME SPENT ON PROPERTY, ETC.

About four hours were spent on the property and two hours in the office. The proposed drilling sites were observed for accessibility and drill setups. The examiners were accompanied by Allen Heyl, U. S. G. S., and W. Horatio Brown, company regional geologist, E. L. Weinberg and Charles Hamilton, company geologists. Mr. Weinberg would be in direct charge of any work under a DMEA contract.

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NAME AND LOCATION OF PROPERTY

This property is known as the Valzinco area. The center of the property is approximately 3 miles southeast of the Village of Paytes, Spotsylvania County, Virginia and can best be reached from Paytes by Route 606 as indicated on Fig. 1.

Highways, graveled and woods roads give easy access to drilling areas in all seasons.

COMPETENCY OF APPLICANT AND PERSONNEL

The New Jersey Zinc Company is without question financially responsible. Exploration would be under the general direction of W. H. Brown, company regional geologist and under the direct supervision of E. L. Weinberg, geologist in charge of the Company's Mineral, Virginia office.

APPLICANT'S PROPERTY RIGHTS

The property under consideration is held under an option from the Chespeake Corporation of Virginia, to search for minerals on a group of contiguous tracts totaling 4,240 acres. The option expires May 26, 1960. The New Jersey Zinc Company may lease mineral rights up to a total of 1,000 acres in one or more portions. They may also lease up to 200 acres of surface rights. The original lease would be for 20 years and may be extended for 2 successive periods of 20 years. The exploration area of the lease only is shown on company map AXV - 531.

All of the 4,240 acres are subject to Government royalty. "Consent to Lien" has been waived by the Government.

GEOLOGY AND ORE DEPOSITS

The Valzinco property is situated in the Appalachian Piedmont physiographic province. The land surface is gently rolling and topographic relief in the region is only about 100 to 140 feet. The surface of the property is relatively level, and outcrops are exceedingly sparse.

Country rock on the property consists of late Precambrian quartz-sericite schist and quartzite. About 100 feet north of the Valzinco main shaft a shallow open cut has exposed dark, reddish brown gossanous quartzite and hematite-sericite schist. At that spot the foliation of the rocks strikes N 21° E and the dip is 72° SE. The Holladay vein of the old Valzinco mine strikes about N 45° E and dips 68° to 70° southeast.

The Valzinco property lies within a mineralized zone that extends about 30 miles north-northeasterly from Mineral, Virginia to the Rapidan River. Widely scattered gossan outcrops mark the position of the mineralized zone which contains widely distributed deposits of copper, lead, zinc, gold, and silver.

Ore minerals in the main shaft dump and in shallow open cuts near the shaft consist of chalcopyrite, sphalerite, galena, silver, and gold. Magnetite is locally very abundant. Gangue minerals are quartz, sericite and/or chlorite, pyrrhotite, and magnetite. U. S. Bureau of Mines, Report of Investigations 4403, Investigation of Valzinco Lead-Zinc-Mine, Spotsylvania County, Va., which describes the Valzinco property and some Government drilling done there, reports that average mill heads for 4 months selected at random over a period of a year were 7.8 percent zinc, and 3.7 percent lead. The ore was from the

Holladay vein. Four cut samples from the Discovery vein gave maximum assay values of 23.4 percent zinc, 1.64 percent lead, 4.81 percent copper, 0.01 ounces gold per ton, and o.81 ounces silver per ton.

At the Valzinco mine, ore was formerly produced from two parallel veins called the Holladay and Discovery veins. These veins have a general strike of about north 45° E and dip 68° to 70° southeast. The ore zone in the Holladay vein has a maximum width of 10 feet and averages about 4 feet in width. The Holladay vein has been developed on strike by underground drifts for 2,000 feet and to a depth of 350 feet. The Discovery vein is relatively undeveloped by underground workings but has been traced by diamond drilling for a strike length of over 1,300 feet. Both veins appear to contain the same percentage of zinc but the Holladay vein has a higher percentage of lead while the Discovery vein has a higher percentage of copper.

The U. S. Bureau of Mines estimates (War Minerals Report 452) that on April 1, 1944 about 7,044 tons of ore was left in the Holladay vein and that the Discovery vein contains a total of 4,000 tons of indicated ore of mill grade and an additional 8,000 tons of inferred ore.

Mr. H. W. Brown, the company regional geologist informed the examiners that the New Jersey Zinc Company considers economic cut-off to be 50 foot-percent units for zinc, 1 percent lead is considered equivalent to 1 percent zinc and 1 percent copper is equivalent to 2 percent zinc or lead. Not less than 2 percent zinc is to be considered.

PAST EXPLORATION

The applicant company states that they drilled three holes on the property in 1912 and 1913. The holes were reportedly barren. The U. S. Bureau of Mines drilled nine holes on the property in 1943. Results of the drilling are given in R. I. 4403. Only one hole intersected ore of commercial grade and thickness. After the Bureau of Mines drilling, Panaminas, Inc., subsidiary of Ventures, Ltd., drilled five holes on the property. One hole is reported to have cut ore.

Since the New Jersey Zinc Company has acquired control of the property they have completed geophysical and geochemical surveys. These surveys consisted of geochemical soil sampling, self-potential surveying, and electromagnetic surveying.

Large, well developed anomalies were discovered by geochemical soil sampling and by the self-potential method. The electromagnetic work did not provide sharp anomalies. The geochemical and self-potential anomalies are shown on figures 2, 2A, 3, and 3A.

Two hundred parts per million zinc equivalent is considered background concentration of metal in soil in the vicinity of the property. Figures 2 and 2A show soil sample points and metal concentrations as zinc equivalents. During the field examination three geochemical anomalies were chosen with mutual agreement as possible drilling sites. Geochemical values within the three chosen anomalies range as high as 1,340 ppm in anomaly no. 1, 520 ppm in anomaly no. 2, and 1,305 ppm in anomaly no. 3. It thus appears that the geochemical anomalies are of such magnitude as to be considered important and significant.

Depth of burial, state and rate of oxidation of sulphides, grade and density of ore, and other factors, all combine to make self-potential results sometimes difficult of interpretation. Personnel of the Geophysics Branch, U. S. Geological Survey, feel that self-potential measurements that amount to 50 millivolts or more below reference point are significant and constitute an anomaly. That is an offhand generalization that is subject to many variables. Anomaly no. 1 shows a reading of -116 millivolts below reference point. The Applicant is of the opinion that such readings constitute a strong anomaly. The field examiners share that opinion.

DEVELOPMENT AND PRODUCTION

The property has been developed by a main, vertical single-compartment shaft 250 feet deep with drift levels at 100, 150, 200, and 250 feet. A secondary vertical shaft is 125 feet deep. The Discovery vein, located in the hanging wall of the Holladay vein is developed by a drift about 200 feet long on the 250 feet level. A 320-feet crosscut connects the two veins. The workings in the mine total about 5,000 feet in linear extent. All mine openings were flooded and inaccessible at the time of the field examination. A timber head-frame and ore bin in poor repair at the main shaft is the only structure on the property today.

The Valzinco mine was operated from about 1914 to 1918 by the Virginia Lead and Zinc Corporation. Operations stopped about 1918 after an estimated 5,000 tons of ore was produced containing about 5 percent lead and 12.5 percent zinc. The Panaminas Company rehabilitated the mine in 1942 and built a modern flotation plant of 100 tons daily capacity. Production was begun in September 1942 and apparently continued until sometime late in 1944 or early 1945. The mine has been shut down since. Production figures for the last

period of production could not be found.

AVAILABILITY OF SUPPLIES, MANPOWER, POWER, ETC.

Manpower is easily available in the immediate well-settled farm area and also from nearby Fredricksburg, Richmond and Mineral. Supplies may be procured from Richmond or Fredricksburg which are also railway shipping points. Water in limited quantities is found in small streams on the property and could be procured in larger quantities within 6 miles. Power lines cross the property.

APPLICANT'S PROPOSAL

The Applicant plans to start this exploration after completing work on DMEA 4674 (Bondurant) and also to complete DMEA 4673 before starting on DMEA 4675 (Hunter and Kent).

The Applicant proposed to drill a total of 4,000 feet of (AX - BXWL) core hole on 2 geochemical and spontaneous polarization anomalies. The location of these anomalies are shown on Figures 2, 2A, 3 and 3A. During the field examination it was agreed to include a third anomaly for exploration. The number of holes was not stated in the application but it was indicated that initially holes would be drilled on 400 foot spacing, on a minus 45° inclination and to be 400 to 500 feet each in length. After ore was located holes would be spaced on 200 foot centers. As the strike length of the mineralization was established, vertical holes would be collared on the

same fence as the inclined holes and drilled to a depth of 400 to 1,000 feet to explore for ore at greater depth down the dip.

The time of starting or completing work after date of the contract was not specified in the application. These items were reviewed with the Applicant and the results of mutual agreement are set forth in this report under, "Proposed Revised Project". Revised maps accompany this report.

PROPOSED REVISED PROJECT

It is proposed that exploration on this project follow completion of drilling under DMEA 4674. This is in conformance with the expressed wishes of the Applicant.

The application specified core drilling on 2 anomalies, as indicated on original application map. The Operator and examiners agreed to spread the drilling over three, rather than two, anomalies. This would ensure that both the Holladay and Discovery zones would be tested by drill holes. The original southwestern anomaly remains as it was and on the accompanying map is designated as anomaly No. 1. The additional anomaly is designated as anomaly No. 2 and the original northeastern anomaly is now to be known as anomaly No. 3. The original drill fence on anomaly No. 1 will be moved westward to sufficiently clear the drill holes of the unleased J. Chewning property line. The drill fences for all three anomalies are shown on the accompanying maps.

It is proposed to core drill 4,000 feet (AX - BXWL) size in a maximum of 10 holes averaging approximately 400 feet each in length and drilled on a minus 45° inclination on a bearing of about N 50° - 60° W. With Government consent and then only after the strike length has been established by 45° holes, the number of 45° inclined holes may be decreased and a maximum of two vertically

How with so few holes?

collared holes drilled to an approximate length of 800 feet each to test for mineralization at depth and to intercept the formation down-dip. The initial drill hole location on each anomaly is indicated on the accompanying map, Fig's. 3 and 3A. Spacing of adjacent holes may be at either 200 or 400 foot intervals, and may continue on any anomaly, with consent of the Government.

It is planned to start drilling with 1 rig on a 2-shift, 6 day-per-week basis. It is possible, but not probable, that drilling results will indicate that 2 drills can be efficiently employed and results correlated. This will be done if geological evidence indicates it is desirable.

Review of company drilling records over an active 4 month period indicates that in this ground an average of 31 feet of advance per shift should be maintained if unusual difficulties are not encountered. In calculating costs, a period of 3 months is allowed for completion of actual work, rather than the 4 months specified in the application. This is with the agreement of the Applicant.

The Applicant did not indicate starting or completion time in the application. He has now requested that the time for starting after signing of contract be considered 4 months and time of completion not over 8 months after date of contract. The starting time is set at 4 months, to allow completion of work under Docket DMEA 4674 before starting this one.

ALLOWABLE COSTS OF PROJECT

Independent Contracts

(E. J. Longyear bid)

4,000 feet (AX - BXWL) core drilling

basic	$2.70 per foot
service	.10 per foot
casing	.10 per foot
	$2.90 per foot

Total Independent Contracts - 4000 ft. @ $2.90. . . . . .$11,600.00

Labor and Supervision

Geologist (half time) 3 months @ $300.00	$900.00
Assist. geologist, surveyor (half time) 3 months @ $225.00	675.00
Draftsman (1/3 time) 3 months @ $87.33	262.00
Accounting & typing 3 months @ $30.00	90.00

Total Labor and Supervision . . . . . .$ 1,927.00

Operating Equipment

None

Operating Materials & Supplies

140 core boxes @ $2.50
(balance can be reused for DMEA 4674) . . . . . .$ 350.00

New or Rehabilitated Buildings

None

Rental

Core shed 3 months @ $10.00 . . . . . .$ 30.00

Miscellaneous

Car mileage - 48 miles per round trip 1,400 miles @ $0.08		$112.00
Work Comp.	1.0%	
Payroll Taxes	5.0%	
Total	6.0% on $1,927.00	115.62
Chem. Assays (Cu-Pb-Zn) 100 @ $3.00		300.00
Fire Assays (Au-Ag) 100 @ $2.00		200.00
Total Miscellaneous		$727.62

Total Project $14,634.62

May 1957

W. P. Williams
Geologist

H. L. Burmeister
Mine Examination and
Exploration Engineer

31 ft/shift Assume 3 mos duration of work

31 x 2 = 62'/day

25
62
50
150
1550
3
4,650' in 3 mos.

Starting time 4 mos from date of contract.
allow 3 mos to finish

Overburden drilling

to 100' depth 10 x 60' = 600' @ 2.90/ft. = $ 1,740.00

3,400' @ $2.70/ft to 1000' depth = 9,180.00

Geologist 1/2 time for 3 mos @ $300 = 900.00

Accounting and Typing @ $30.00 for 3 mos 90.00

Cores & Sheds 3 mos @ $10.00 30.00

Car Mileage - 1400 miles @ $0.08 112.00

Compensation 6% of 990.00 = 0.30/ft 4000' 60.00

1192.00

100 Assays @ 3.00 ea.	$300.00
140 core boxes @ $2.50 ea.	350.00
	12,762.00
Incidental Expenses 4,000' @ $0.30	1,200.00
Revised	$13,970.00
	6,385.00

1200
300
350
9,180
1,740
13,770 OK

FOR OTHER
MAPS — SEE OTHER ENVELOPE

DMEA Form 7
(12-56)

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Date	Surname	Code
3/20	Klugescheid	500
	[illegible]	500
3/20	Selbridge	130
"	Johnson	110
"	Mittendorf	100
3/21	C	250

500.

MAR 21 1957

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

Kiilsgaard
Lamb

Re: Docket No. DMEA-4673 (Zinc-Copper-Lead)
The New Jersey Zinc Company
Valzinco Area
Spotsylvania County, Virginia

Dear Mr. Goodwin:

Your application for Government assistance to explore the cited property has been reviewed by the Base Metals Division 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 you at an early date.

Sincerely yours,

C. O. Mittendorf (for)

Administrator

WPKlugescheid/er 3/20/57
Copy to: Docket
Admr R File
Op. Committee
Base Metals
Mr. Bishop, USBM
Mr. Kiilsgaard, USGS
Region V, (2)
Chron.

8623

DMEA Form 7
(12-56)

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Date	Surname	Code
3/20	Klugescheid	500
	Fringnel	500
3/20	Selfridge	120
"	Johnson	110
"	Mittendorf	100
		225
		500.

MAR 21 1957

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

Re: Docket No. DMEA-4673 (Zinc-Copper-Lead)
The New Jersey Zinc Company
Valzinco Area
Spotsylvania County, Virginia

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.

This project is to have precedence over DMEA-4675, as requested by the Applicant.

Copies of memoranda dated March 14, 1957, by N. E. Nelson, Geological Survey, and O. M. Bishop, Bureau of Mines, relating to the project, are enclosed for your information. We are also enclosing a copy of the application for the use of the Field Team.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (DHB)

WPKlugescheid/er 3/20/57

Copy to: Docket
Admr R File
Op. Committee
Mr. Bishop, USBM
Mr. Kiilsgaard, USGS
Chron.

Enclosures

APPROVED:

Frank D. Lamb (DHB)
Member, Bureau of Mines

Thor H. Kiilsgaard (DHB)
Member, Geological Survey

8623

IN REPLY REFER TO:

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

OFFICIAL FILE COPY
DMEA
RECEIVED MAR 15 1957

DATE	INITIALS	CODE
3/15	C	220
3/15	WPK	500

March 14, 1957

Re: DMEA's 4673, 4674, and 4675
New Jersey Zinc Company
Tracts in (a) Spotsylvania,
(b) Buckingham, and (c) Louisa
Counties, Virginia
(a) $14,769
(b) $ 9,681 Zinc-copper-lead
(c) $22,092

Memorandum

To: W. R. Griswold, Defense Minerals Exploration Administration

From: N. E. Nelson, U. S. Geological Survey

Subject: Review of 3 applications

In the 3 similar applications the applicant requests assistance in exploring by drilling 3 areas that have been prospected by geochemical field work and which show anomalous soil zinc conditions.

The zinc indications, it is proposed to explore, are all located in the broad band of schists and gneisses which extends from Buckingham to Stafford Counties. DMEA assisted work has been done on tracts held by Virginia Mining Company and the Roland Beers interests. Limited success and certification attended the Virginia Mining Company work. The Beers work was generally unsuccessful and certification was not recommended.

Referral of the applications to the Field Team is recommended.

N. E. Nelson

N. E. Nelson

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

OFFICIAL FILE COPY
DMEA
RECEIVED MAR 15 1957

DATE	INITIALS	CODE
3/15	C	220
3/15	WPK	500

March 14, 1957

Re: DMEA 4673; Cu-Pb-Zn;
$14,769
The New Jersey Zinc Co.
Valzinco Area
Spottsylvania County, Va.

Memorandum

To: W. R. Griswold, DMEA

From: O. M. Bishop, USBM

Subject: Application dated March 1, 1957, received March 12, 1957.

The New Jersey Zinc Company has optioned 4,240 acres comprising a mineralized area known as the Valzinco-Halliday-Spottsylvania, Pyrites-Marshall; Grindstone, Roney and Marva mines area. The Valzinco mine has been the source of a considerable tonnage of ore produced in 1909-12, 1914-18, 1927 and 1942-45. Prior to 1918 about 5,000 tons of ore containing 5 percent lead and 12.5 percent zinc were mined and between late 1942 and 1945 Panaminas Co. operated a 100-ton per day flotation mill, on sulfide base metal minerals derived from two parallel steeply dipping veins. In the latter half of 1943 the Bureau of Mines drilled 9 holes totaling 4,213 feet of bore. That work and 5 subsequent holes by Panaminas demonstrated that the Holliday ore-shoot was a lens which bottomed at the 350-foot level and did not extend beyond the development workings. Commercial mineralization on the Discovery vein was also very limited.

The New Jersey Company, since May 1955, has made geologic, geophysical and geochemical maps of an area extending northeast and southwest from the earlier mine. Geochemical anomalies which are well developed warrant core drilling. The Company proposes 4,000 feet of diamond drilling. The holes will be drilled at an angle of 45 degrees and normal to the strike of the foliation in the quartz schist country rock, and will test the two major geochemical anomalies. Holes are to be spaced at 400-foot intervals initially and at 200 feet when ore is encountered. If the work is successful the company plans additional work.

I recommend that the application be referred to the field for review. It seems doubtful that an examination of the area is needed, it is my conclusion that the data presented amply warrant the exploration proposed, and I recommend that a contract be written.

O. M. Bishop

O. M. Bishop

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration
Washington 25, D. C.

March 11, 1957

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

Subject: DMEA-4673
Re: Exploration Assistance
Val Zinco area

Gentlemen:

Your application for exploration assistance, dated March 1, 1957 submitted to our office at Washington, D. C. has been assigned Docket Number DMEA-4673 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, Chief
Operations Control and
Statistics Division

Copy to: Region V

SERIAL NUMBER	DATE ISSUED	REFERENCE DRAWINGS	REVISIONS
		AXV 531-D-BD	

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THE NEW JERSEY ZINC COMPANY
MINERAL, VA

FIG. 2.

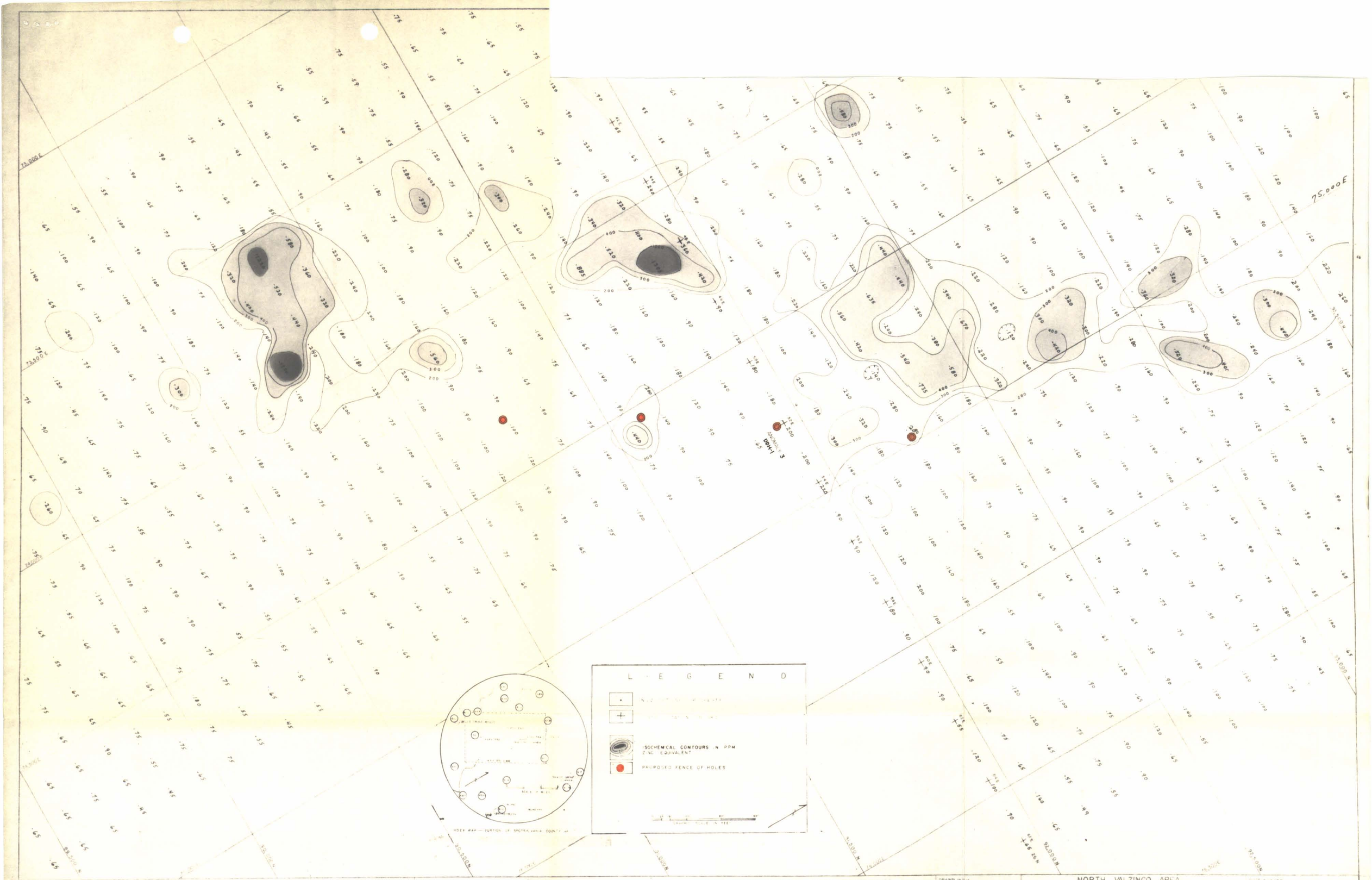
DRAWN Staff
TRACED
CHECKED
APPROVED

S.W. VALZINCO AREA
GEOCHEMISTRY DMEA-4673.

DATE MAY 1-1957
SCALE 1" = 100'

AXV-552-D-BD

½ Size



THE NEW JERSEY ZINC COMPANY
MINERAL, VA

FIG. 2A.

DRAWN W.R.H.
TRACED
CHECKED
APPROVED

NORTH VALZINCO AREA

GEOCHEMISTRY
DMEA-4673.

DATE 5-27-57
SCALE 1"=100'

AXV-554-D-B

1/2 Sepia

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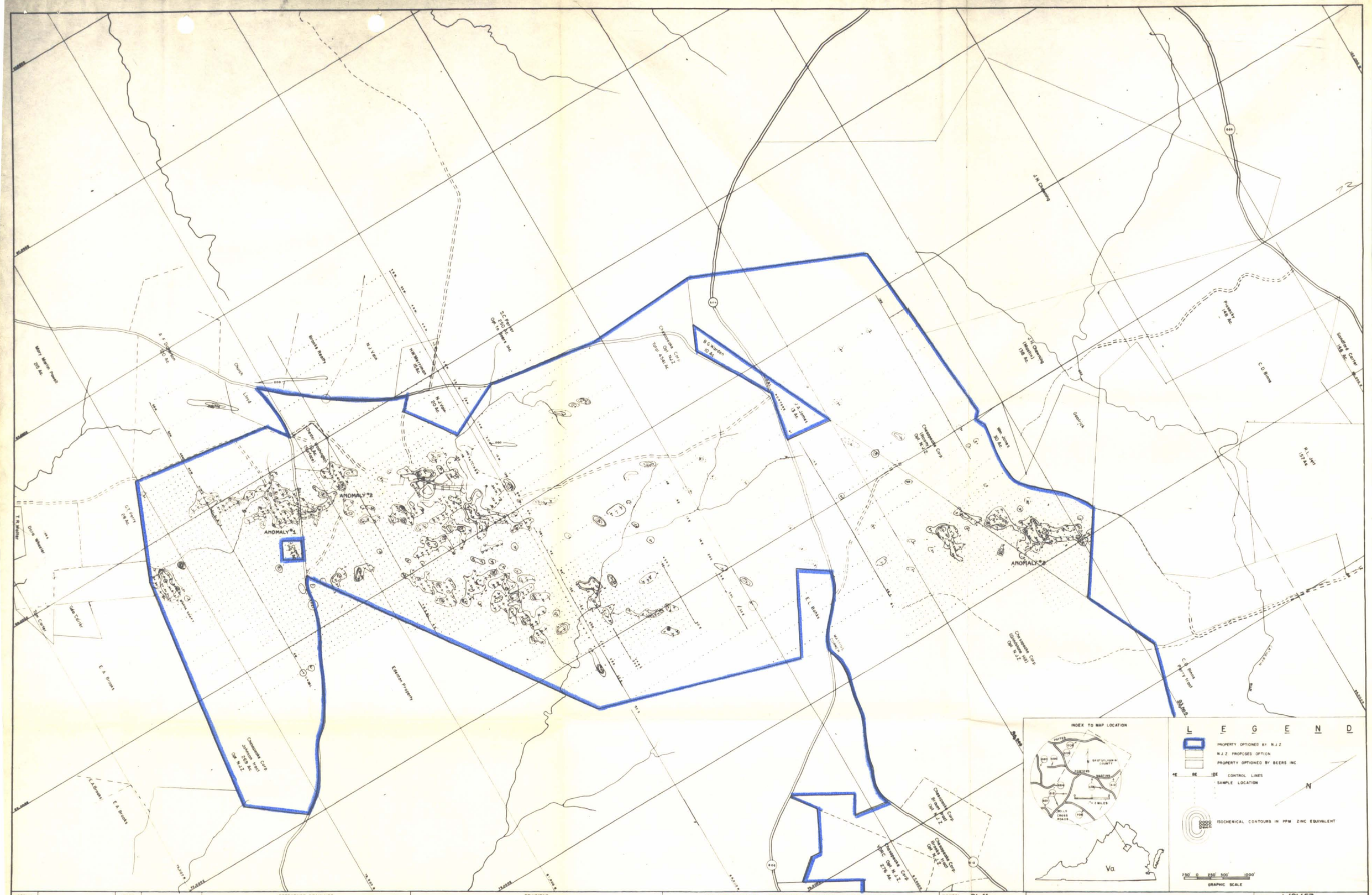

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AXV-246-D-B1	AXV-259-D-B1
AXV-246-D-D	AXV-259-D-D
AXV-253-D-B	
AXV-253-D-D	

REVISIONS

4/57	Staff		

THE NEW JERSEY ZINC COMPANY

DMEA-4673.

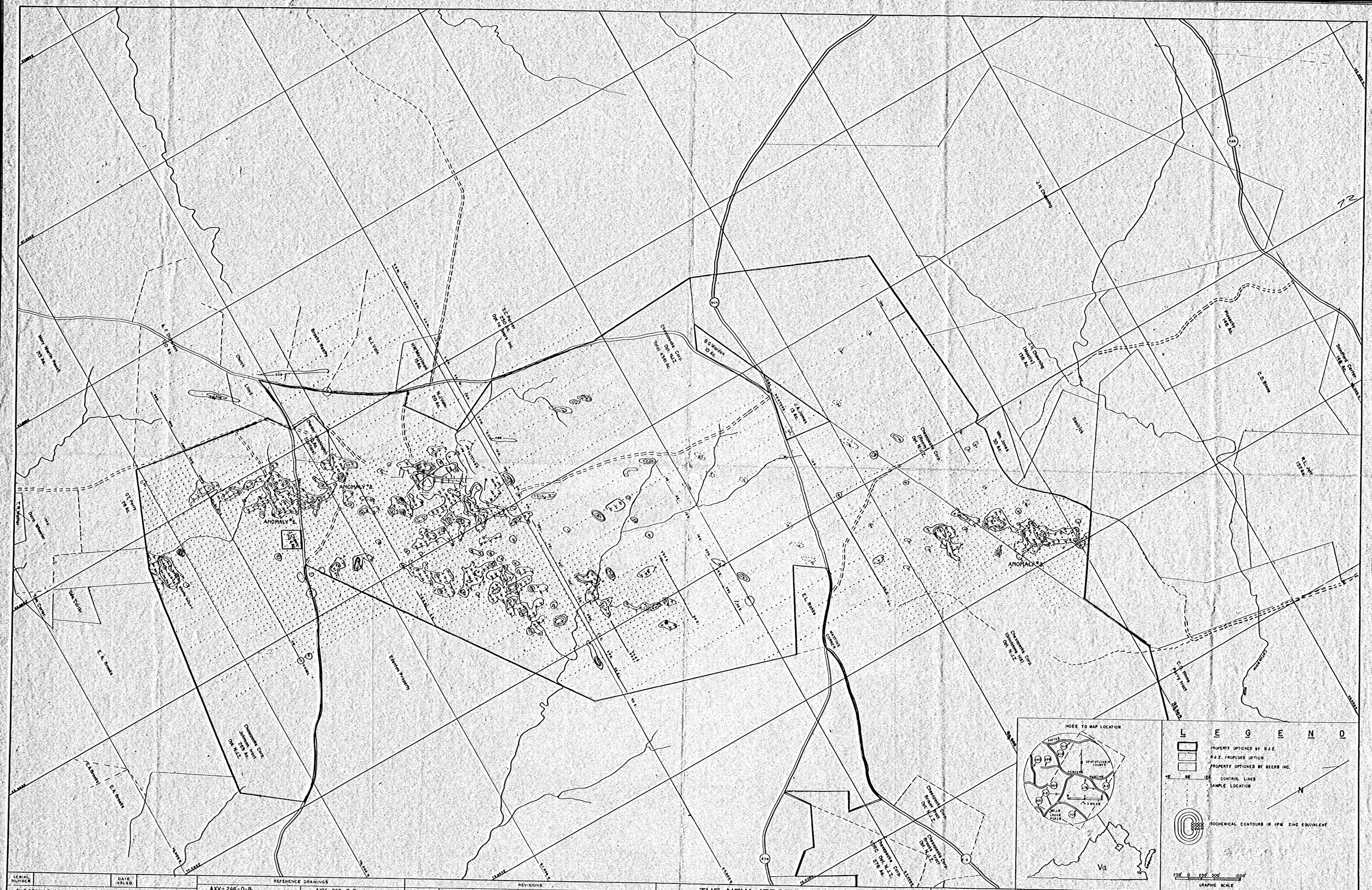
DRAWN	Staff
TRACED	PLW
CHECKED	
APPROVED	

VALZINCO AREA COMPOSITE MAP

FIG. 1.

DATE	1/21/57
SCALE	1" = 660'

AXV-531-D-BD



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AXV-246-D-0	AXV-259-D-0
AXV-253-D-8	
AXV-253-D-0	

REVISIONS

4/57	Staff		

THE NEW JERSEY ZINC COMPANY

DMEA-4673.

DRAWN	Staff
TRACED	PLW.
CHECKED	
APPROVED	

VALZINCO AREA COMPOSITE MAP

FIG. 1.

DATE	1/21/57
SCALE	1" = 660'

AXV-531-D-80

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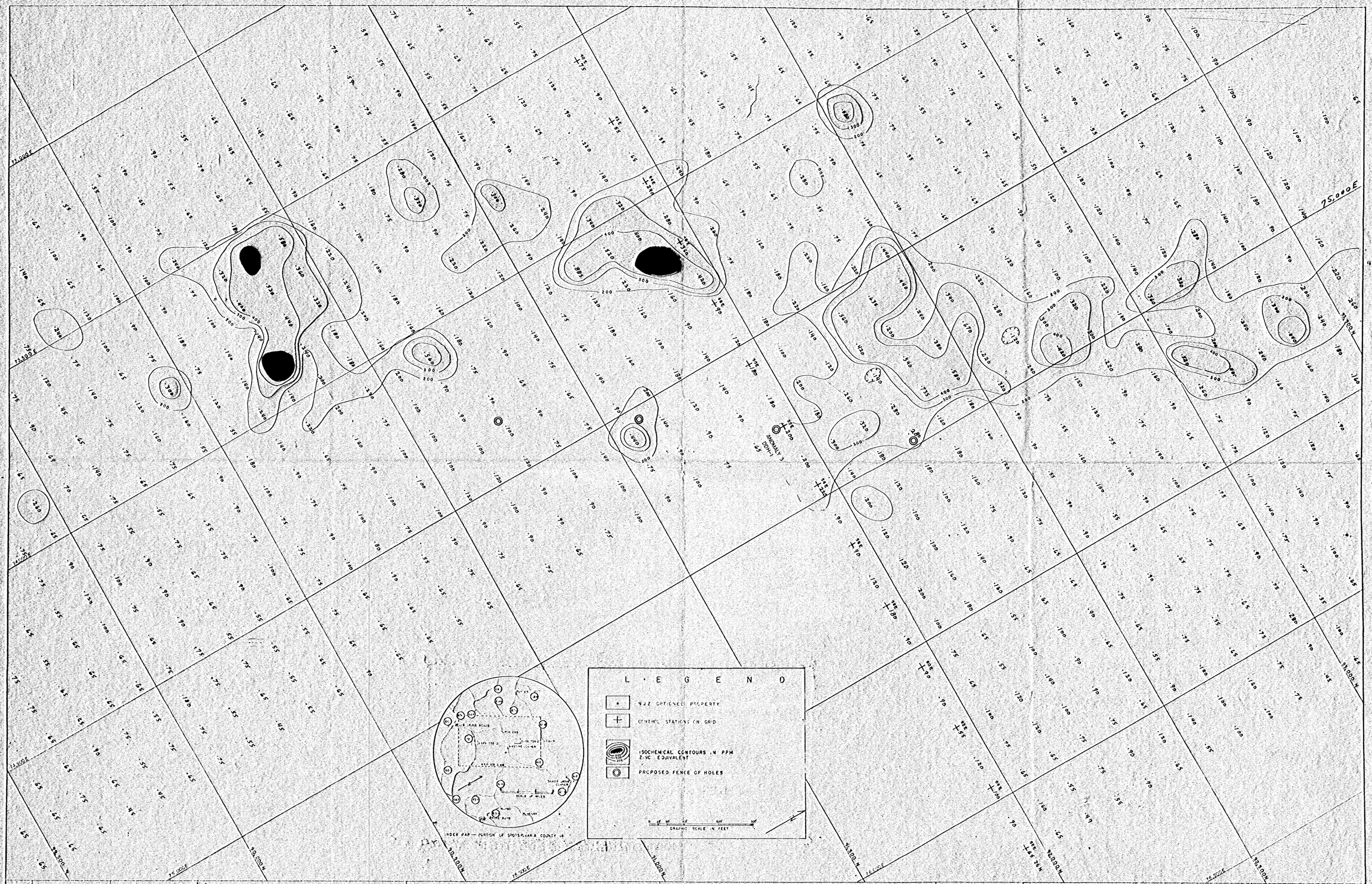

SERIAL NUMBER	DATE ISSUED	REFERENCE DRAWINGS	REVISIONS	THE NEW JERSEY ZINC COMPANY MINERAL, VA FIG. 2A.	DRAWN W.R.H. TRACED CHECKED APPROVED
		AXV-554-D-30			

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NORTH VALZINCO AREA

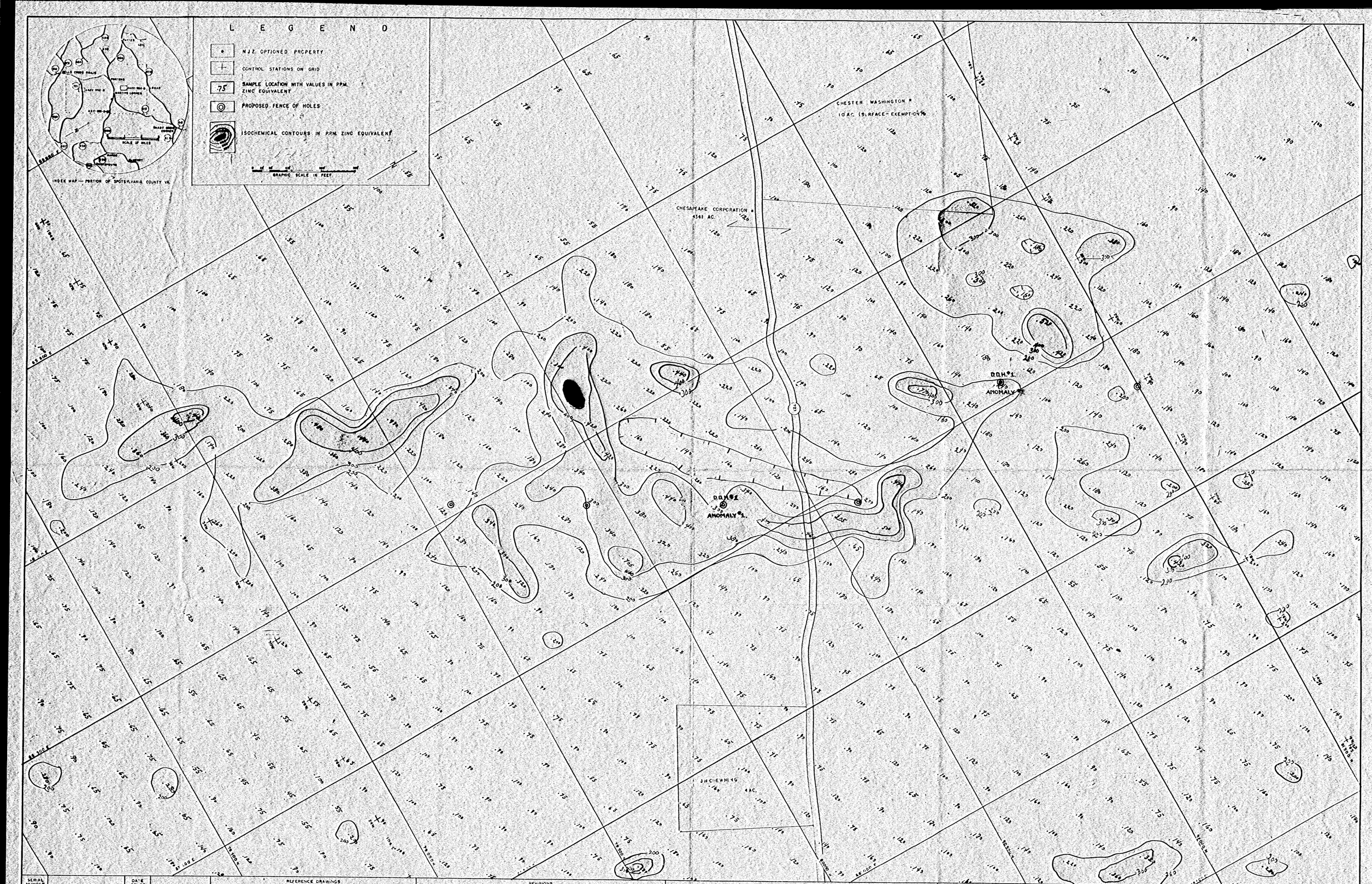
GEOCHEMISTRY

DMEA-4673

DATE 5/2/57

SCALE 1"=100'

AXV-554-D-8



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THE NEW JERSEY ZINC COMPANY
MINERAL, VA

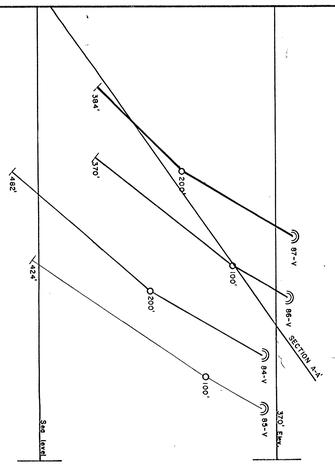
FIG. 2.

DRAWN Staff
TRACED
CHECKED
APPROVED

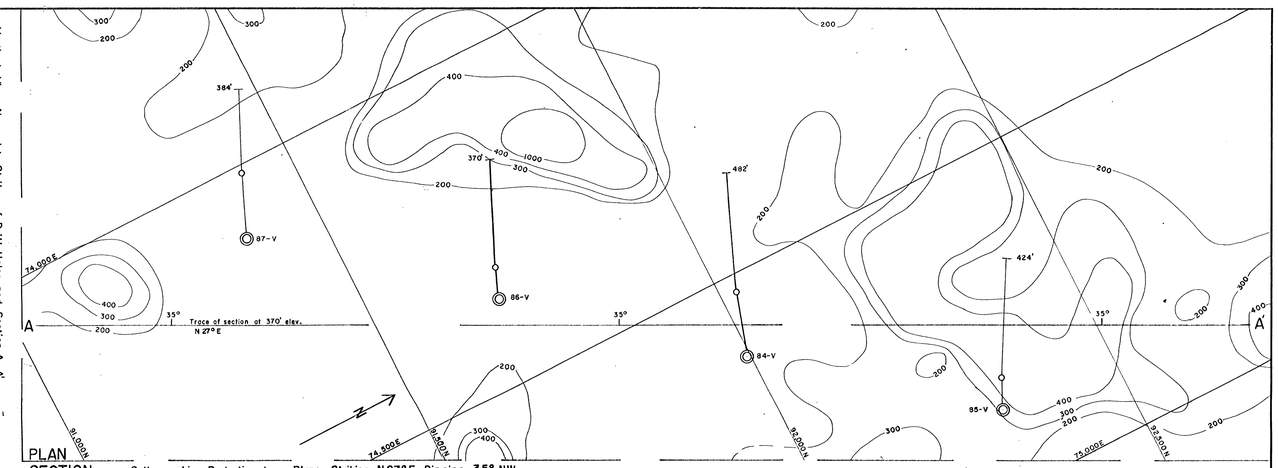
S.W. VALZINCO AREA
GEOCHEMISTRY DMEA-4673

DATE MAY 1-1957
SCALE 1" = 100'

AXV-552-0-BD

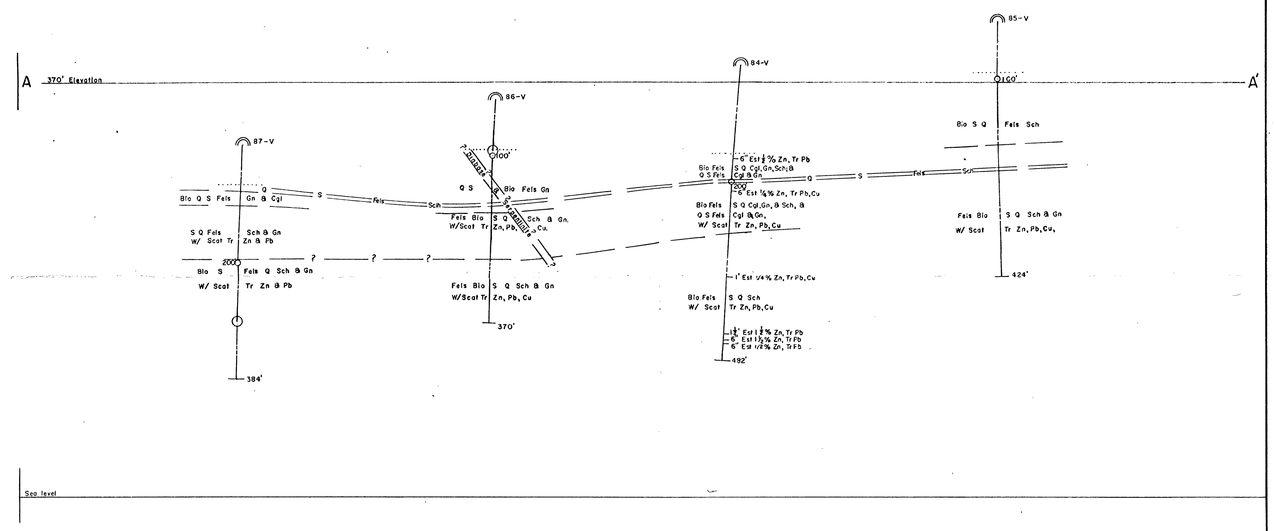


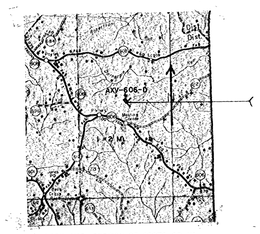
Vertical View, Normal to Strike, of Drill Holes and Section A-A'



SECTION A-A'

Orthographic Projection to a Plane Striking N 27° E, Dipping 35° NW
Stratigraphic Section - Plane Approximately Normal to Dip





INDEX MAP- PORTION OF SPOTS. CO. VA.

L E G E N D

- Intersection of drill hole with plane of section
- DDH over 10' below section
- Point in hole showing distance from collar
- DDH over 10' above section
- Bottom of overburden
- Geochemical anomaly - PPM zinc equivalent (1000, 500, 300, 200)
- Probable contact
- Inferred contact

0 25' 50' 75' 100' 200' 300'
Graphic Scale

SERIAL NUMBER		DATE ISSUED	

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CLH	1/30/58		

THE NEW JERSEY ZINC COMPANY
MINERAL, VA.

DRAWN	CLH
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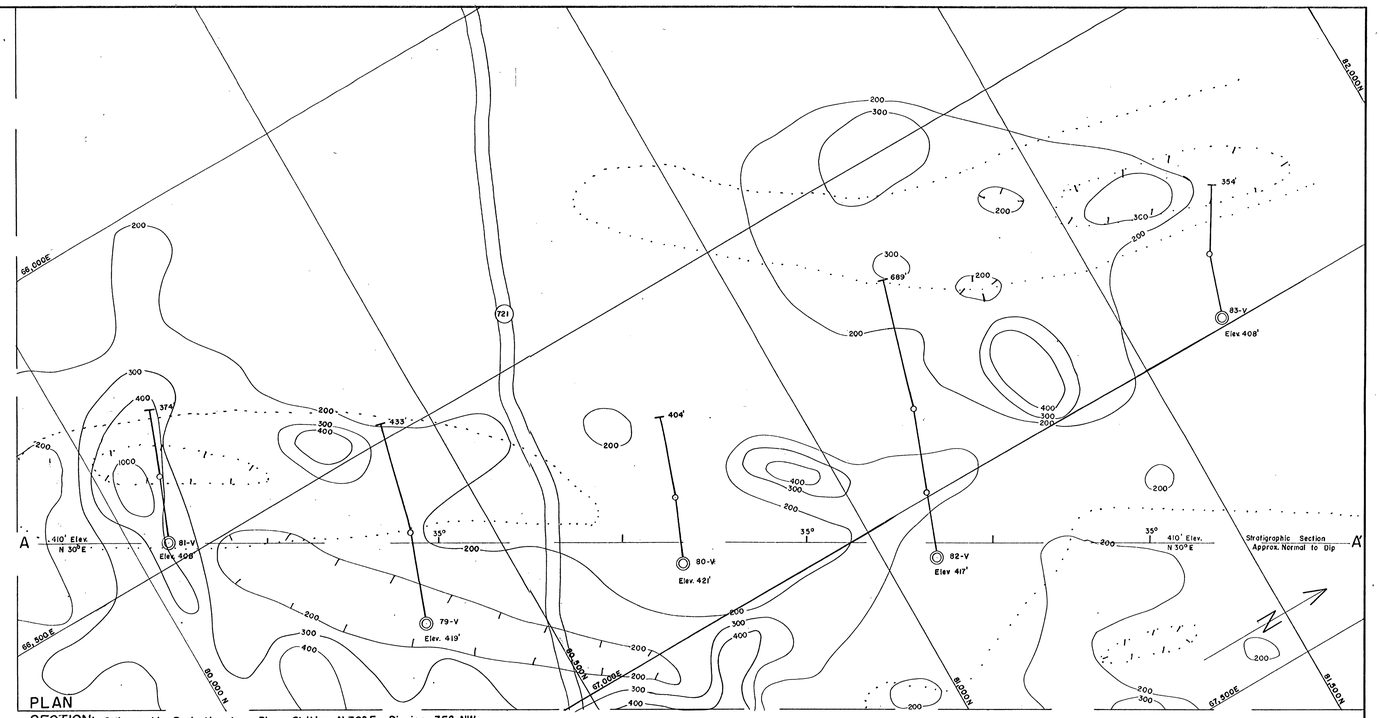
CHECKED	
APPROVED	

NORTH VALZINCO AREA
Plan and Sections - showing stratigraphy

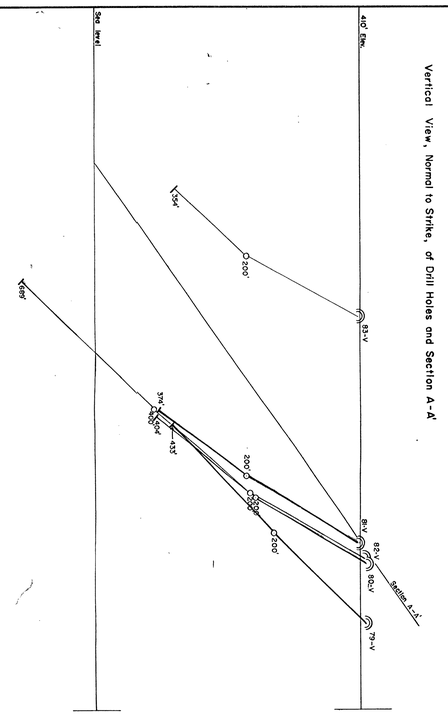
DATE	1/8/57
SCALE	1" = 100'

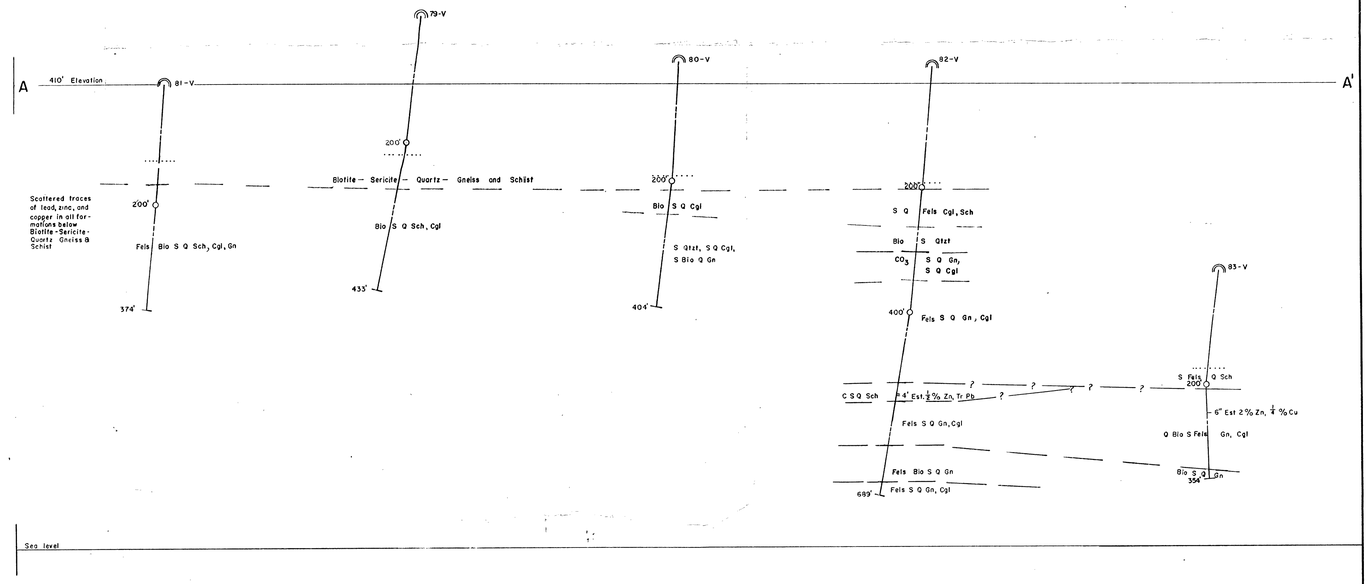
AXV-606-D-A1

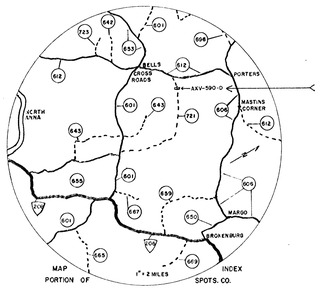
X54570-1M 11-54



SECTION: A-A' Orthographic Projection to a Plane Striking N 30° E, Dipping 35° NW; Stratigraphic Section-- Plane Approximately Normal to Dip.







LEGEND

- Intersection of drill hole with plane of section
- DDH over 10' below section
  Point in hole, showing distance from collar
- DDH over 10' above section
- Bottom of overburden
- Self potential anomaly
- Geochemical anomaly - PPM zinc equivalent (1000, 400, 100, 200)
- Probable contact
- Inferred contact

0 25' 50' 75' 100' 200' 300'
Graphic Scale

SERIAL NUMBER		DATE ISSUED	

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CLH	1/25/58		

THE NEW JERSEY ZINC COMPANY
MINERAL, VA.

DRAWN	CLH
TRACED	PLW
CHECKED	
APPROVED	

SOUTH VALZINCO AREA
Plan And Sections - showing stratigraphy

DATE	12/18/57
SCALE	1" = 100'

AXV- 590-D-A1

X5455D 7M 9-54

L E G E N D
NJZ OPTIONED PROPERTY
CONTROL STATIONS ON GRID
STATION LOCATIONS WITH VALUES IN MILLIVOLTS ABOVE OR BELOW REFERENCE
PROPOSED DIAMOND DRILL HOLES
SELF POTENTIAL CONTOURS IN MILLIVOLTS ABOVE OR BELOW REFERENCE
GRAPHIC SCALE IN FEET.
INDEX MAP — PORTION OF SPOTSYLVANIA COUNTY VA
BELLS CROSS ROADS
PORTERS
LOGAN
MARTINS CORNER
SHADY GROVE CORNER
SCALE OF MILES
MARBO
McHENRY
AXV-552-D
AXV-554-D
AXV-531-D-80
ANOMALY 3
DDH-1
48E-26N
POTENTIAL REFERENCE
THE NEW JERSEY ZINC COMPANY
MINERAL, VA
NORTH VALZINCO AREA
SELF POTENTIAL
DATE 5/2/57
SCALE 1"=100'
AXV-554-D-Ck
DRAWN W.R.H.
TRACED
CHECKED
APPROVED
REFERENCE DRAWINGS
AXV-531-D-80
REVISIONS
GENERAL NUMBER
DATE ISSUED
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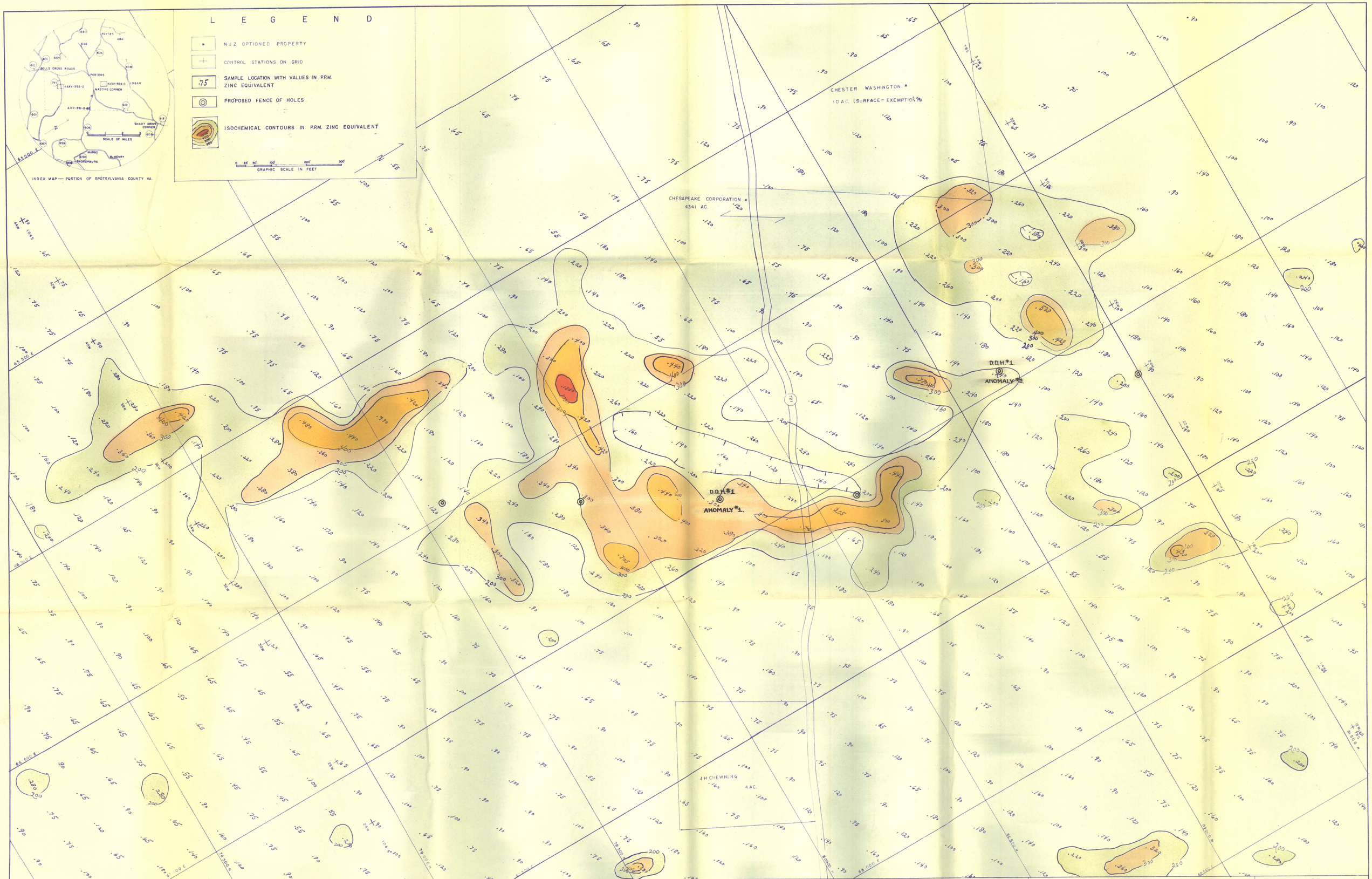

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THE NEW JERSEY ZINC COMPANY
MINERAL, VA

FIG. 2.

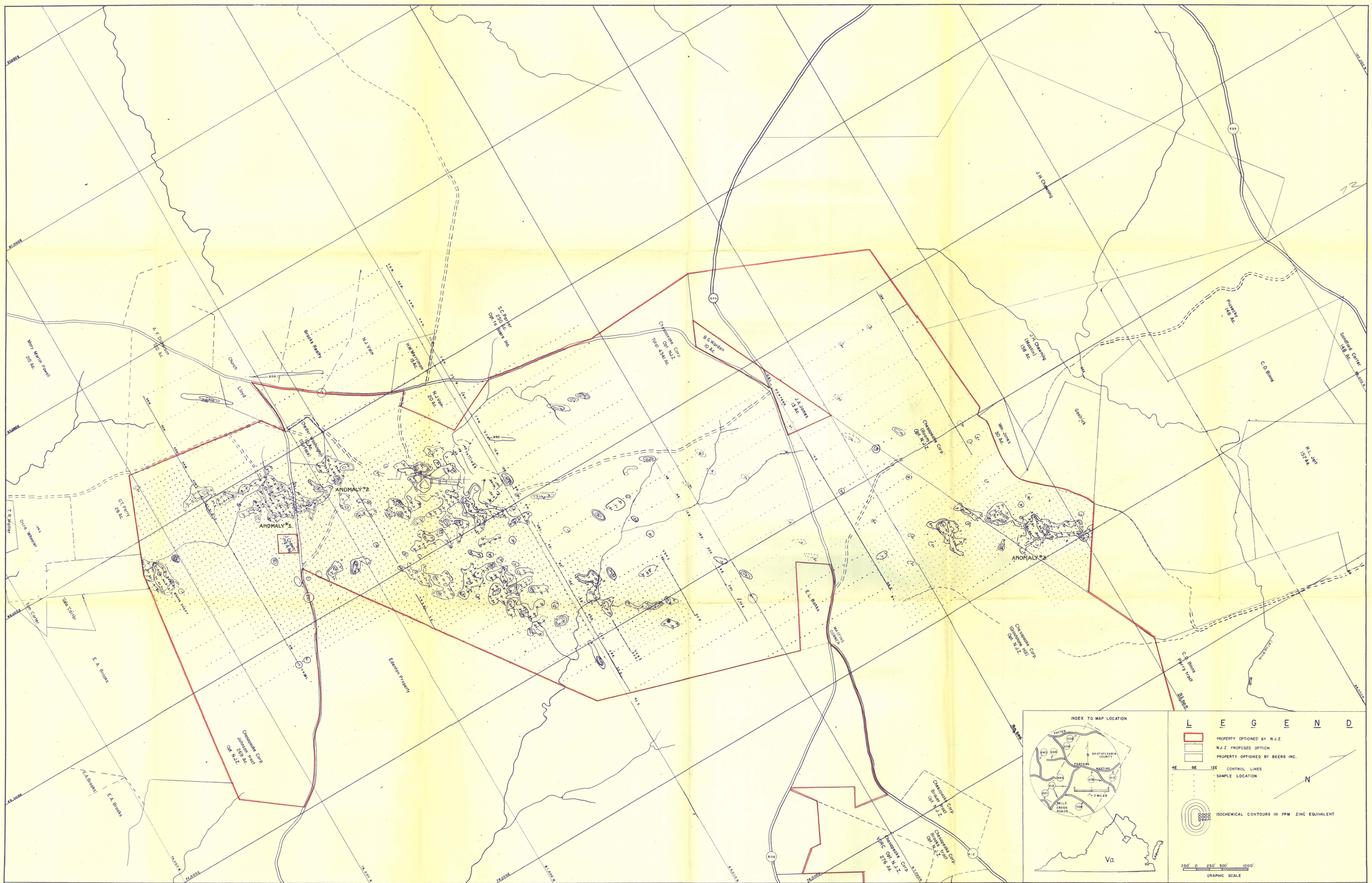
DRAWN Staff
TRACED
CHECKED
APPROVED

S.W. VALZINCO AREA
GEOCHEMISTRY DMEA-4673.

DATE MAY 1-1957
SCALE 1" = 100'
AXV-552-D-BD

½ Size

X54950 (M 9-54)



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AXV-246-D-B	AXV-259-D-B1
AXV-246-D-D	AXV-259-D-D
AXV-253-D-B	
AXV-253-D-D	

REVISIONS			
4/57	Staff		

THE NEW JERSEY ZINC COMPANY

DMEA-4673.

DRAWN	Staff
TRACED	P.L.W.
CHECKED	
APPROVED	

VALZINCO AREA COMPOSITE MAP

FIG. 1.

DATE	1/21/57
SCALE	1" = 660'

AXV-531-D-BD

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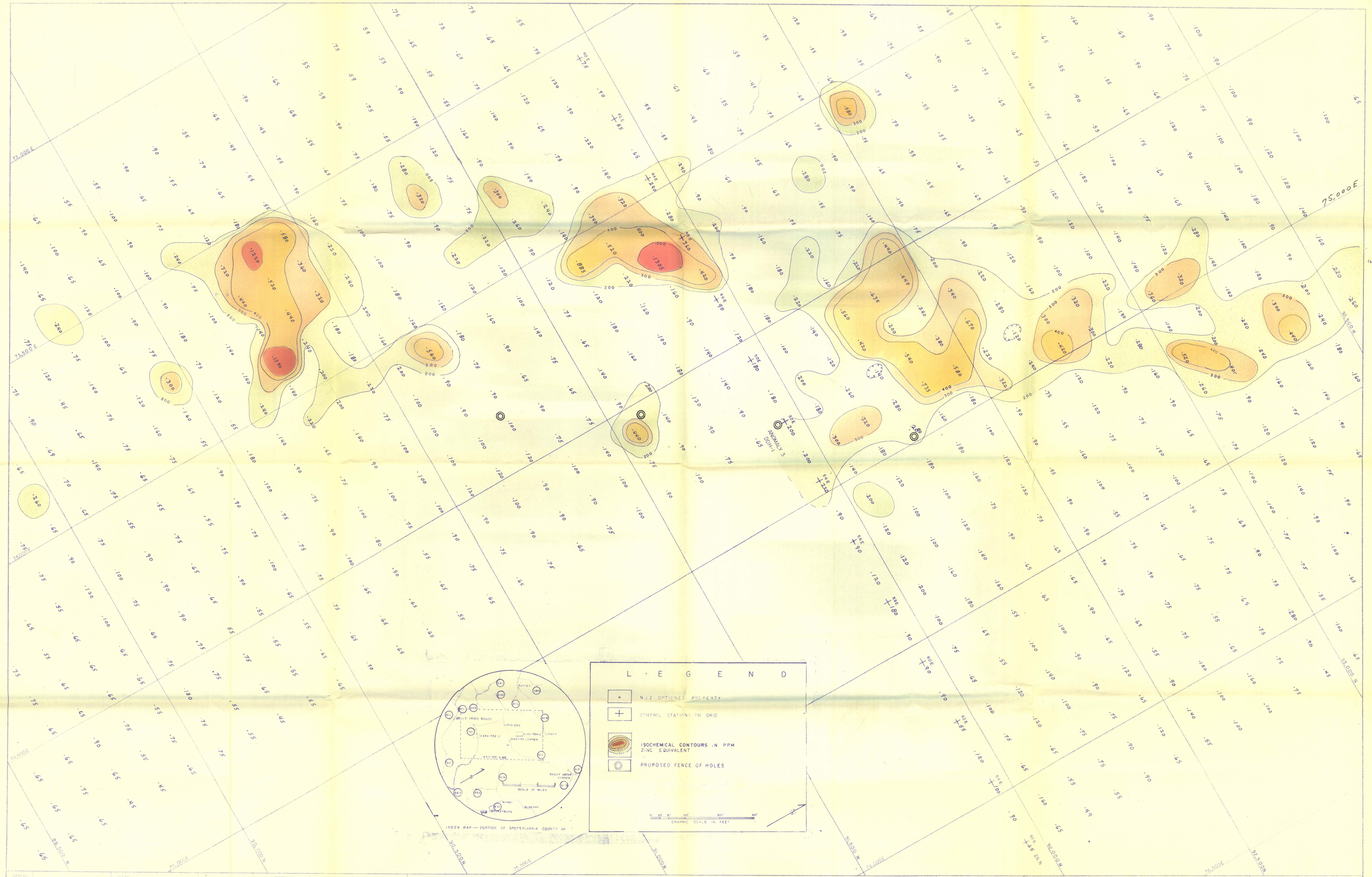
X14530 7-4 10-54



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THE NEW JERSEY ZINC COMPANY
MINERAL, VA

FIG. 2A.

DRAWN	W.R.H.
TRACED	
CHECKED	
APPROVED	

NORTH VALZINCO AREA

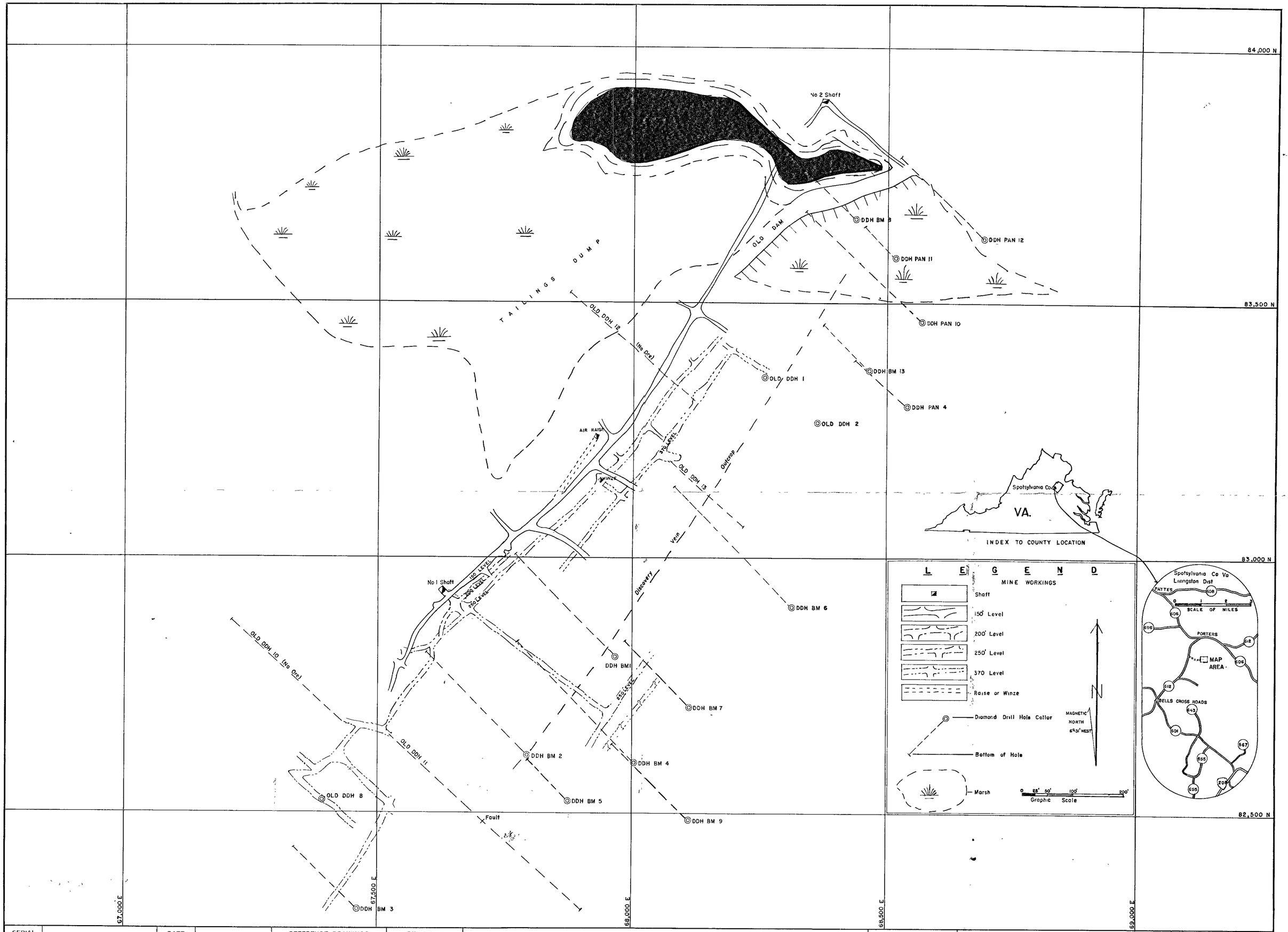
GEOCHEMISTRY

DMEA-4673.

DATE 6/2/57
SCALE 1"=100'

AXV-554-D-B

1/2 size



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				PANAMINAS-MINE PLAN-M8	

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THE NEW JERSEY ZINC COMPANY

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CHECKED	
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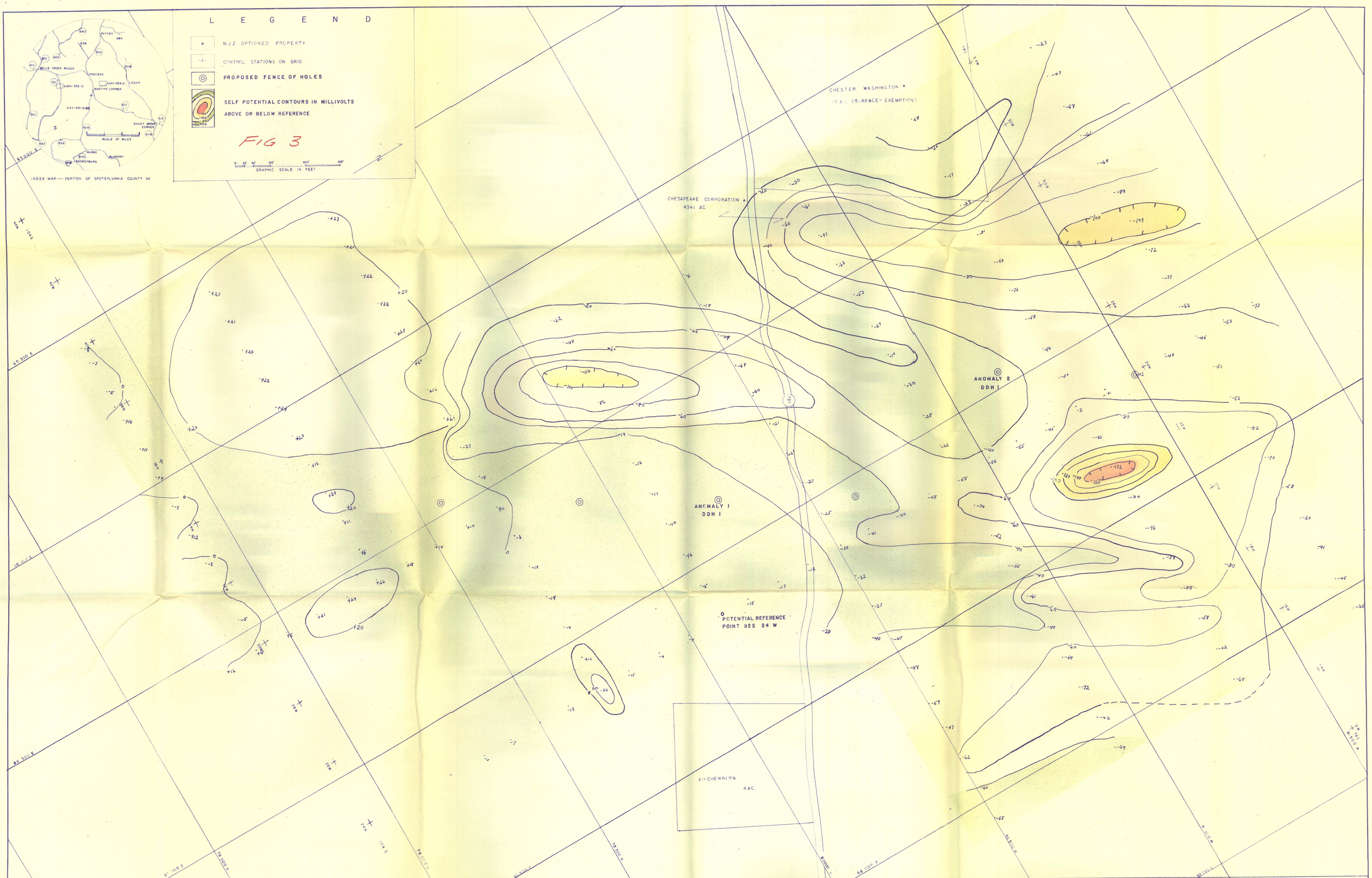
VALZINCO MINE AREA
SPOTSYLVANIA CO. VIRGINIA

DATE	1/57
SCALE	1" = 100'

AXV-532-C-A

THE NEW JERSEY ZINC COMPANY
150 FRONT ST, NEW YORK 38 N Y.

X5463C 1M 11-54



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THE NEW JERSEY ZINC COMPANY
MINERAL, VA

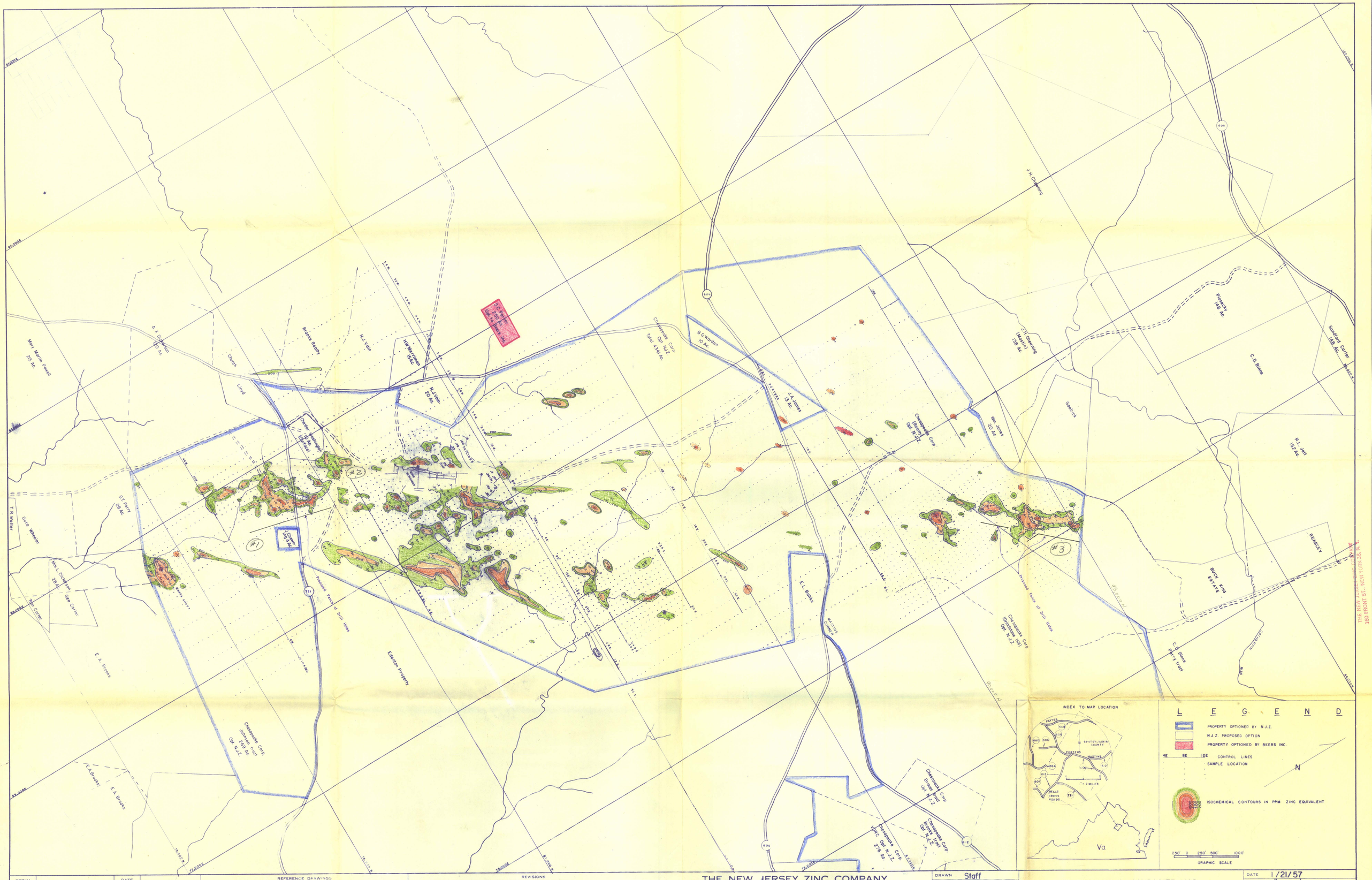
DRAWN Staff
TRACED
CHECKED
APPROVED

S.W. VALZINCO AREA

SELF POTENTIAL

DATE MAY 1-1957
SCALE 1" = 100'

AXV-552-D — Ck



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AXV-246-D-D	AXV-259-D-D
AXV-253-D-B	
AXV-253-D-D	

REVISIONS

THE NEW JERSEY ZINC COMPANY

DRAWN	Staff
TRACED	P.L.W.
CHECKED	
APPROVED	

VALZINCO AREA COMPOSITE MAP

DATE	1/21/57
SCALE	1" = 660'

AXV-531-D-B1,D

THE NEW JERSEY ZINC COMPANY
160 FRONT ST., NEW YORK 38, N.Y.