December 11, 1959

Memorandum

To: E. D. Talbert, Office of Minerals Exploration, Interior Building, Washington 25, D. C.

From: Administrative Assistant, Morris, Tennessee

Subject: Monthly report and voucher

We are enclosing two copies of the following monthly report and voucher:

Idm-K1021 The New Jersey Zinc Company
Docket No. DMEA-4586
19th and final payment - month of July
Completed 7/14/59
Amount $456.59

Helen R. Miller

Enclosures
/hbm
Copies to R. A. Laurence
V. J. Lynch
Morris files
Day files

EXTRA COPY O. M. E. RECEIVED DEC 14 1959		
DATE	INITIALS	CODE
12-14	gad	220
"	FEJ	110
"	[illegible]	700

Form M[redacted]104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S MONTHLY REPORT AND VOUCHER

PAID VOUCHER & SCHEDULE
OF PAYMENTS X-18

DEC 14 1959

Month of July 1959 Docket No. DMEA 4586 Contract No. Idm E 1071
Operator's Name THE NEW JERSEY ZINC COMPANY Minerals Zinc
Address JEFFERSON CITY, TENNESSEE
Contract Amount, $105,950.00 Government Participation: 50 % Amount, $52,975.00

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling	890.00	96,610.00	97,500.00			
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision	19.53	7,330.47	7,350.00			
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
Core Boxes	3.60	896.40	900.00			
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	-	105.00	105.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	913.13	104,941.87	105,855.00			

NOTE: FINAL PAYMENT ADJUSTED IN AMOUNT OF $0.03 in ACCORDANCE WITH REPORT OF REVIEW DATED 12/7/59

(50% of Monthly Total $913.13 = $456.56 plus $0.03 = $456.59)

I certify that the above bill is correct and just and that payment therefor has not been received.
Date 8/1/59 *Payee The New Jersey Zinc Company
Per [signature] Title Chief Geologist

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the 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:
$ 456.59
Signature [signature] (Authorized Certifying Officer)
Date DEC 11 1959 Vou. No. 29
(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 ~~U. S. BUREAU OF MINES~~ GEOLOGIST, U. S. MINING ENGINEER Date DEC 10 1959

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE: ACTING EXECUTIVE OFFICER

Signature V. J. Lynch Title ~~REGION V~~ OME FIELD TEAM Date DEC 10 1959

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.

Form M[illegible]4A
(April 19[illegible])

Budget Bureau No. 42-R1151.2

DEC 14 1959 O.M.E.

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

Month of July 195 9 Docket No. DMEA 4586 Contract No. Idm E 1071
Operator's Name The New Jersey Zinc Company Minerals Zinc
Address Jefferson City, Tennessee

OPERATION	Unit	Costs This Month	Units This Month	Costs to Date	Units to Date	Unit Costs to Date	Authorized by Contract: Units	Authorized by Contract: Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes EX	Ft.	-	-	371.00	140	2.65		2.65
Drilling: Core 0-1000	"	890.00	324	89,572.00	32,572	2.75	30,000	2.75
Churn 1000-1500	"	-	-	7,557.00	2,519	3.00	5,000	3.00
Auger Assays	Ea.	-	-	105.00	105	1.00	200	1.00
Stripping Core Boxes	"	360	2	900.00	500	1.80	500	1.80
Trenching								
Test Pits								
Roads and Trails								
Tech. Serv.		19.53	93	7,350.00	35,000	0.21	35,000	0.21
Total Distributed Costs		913.13		105,855.00				Total Costs Authorized by Contract
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
Total Costs		913.13		105,855.00				

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.

Date 8/1/59 Operator The New Jersey Zinc Co.

Per [signature] Title Chief Geologist

Remarks: This report is for hole I-68

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)

[signature]
GEOLOGIST, U. S. G. S.

AUG 20 '59

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

Report for June 1959

Cedar Springs Area DMEA 4586

Contract Idm E 1071 (Zinc)

One drill operated on this project during the month. One hole was completed for a total of 1091 feet. This hole is shown in green on the accompanying map, AX-TENN-B-106.

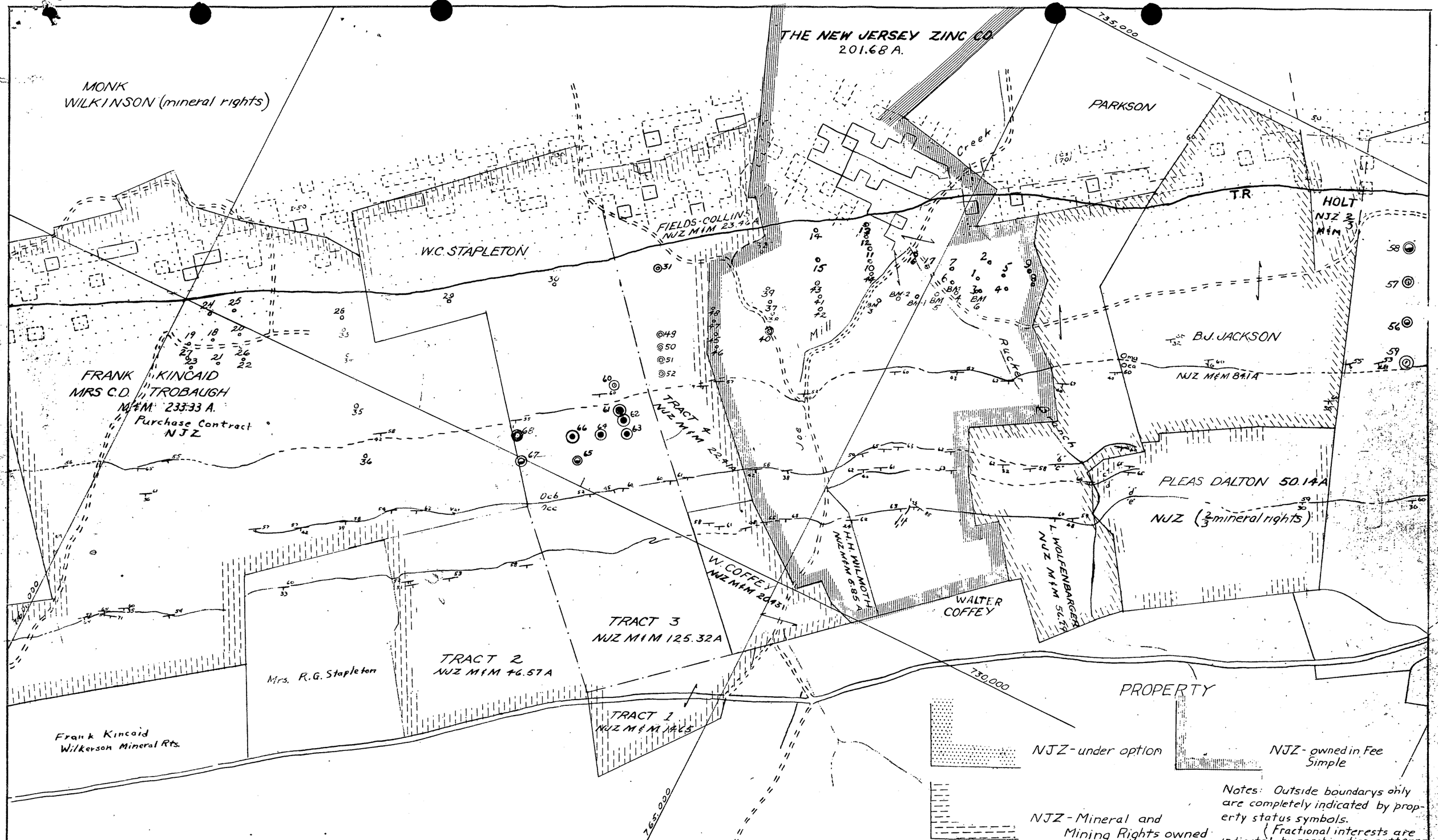
Funds allocated for this contract by the government have been expended and, with the completion of hole I-68, drilling under the contract is completed.

Hole I-68 - N.J.Z. M & M - Stapleton surface

Coordinates: 730,153.33 N; 762,665.53 E
Elevation: 1462.25

Results:

0- 1	Clay
1- 57	Chickamauga limestone
57- 771	Mascot dolomite. Traces of sphalerite 643-646
771- 928	Upper Kingsport dolomite
928	TR
928-1091	(Bottom) Lower Kingsport dolomite and limestone



POSTED TO DATE	THE NEW JERSEY ZINC COMPANY	DRAWN SJL, JFP DATE 2/17/53	COPPER RIDGE BELT	GRAINGER COUNTY, TENN.
5/30/53	ROGERSVILLE TENNESSEE	TRACED SCALE 1"=660'	SECTOR II SHEET 4SW	FILE NO. AX-TENN 106
1-56 TEW				
10-56 "				

EXTRA COPY
O. M. E
RECEIVED DEC 14 1959

DATE	INITIALS	CODE

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

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

PAID VOUCHER & SCHEDULE OF PAYMENTS K-3
JUL 28 1959
O.M.E.

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of June 1959 Docket No. DMEA 4586 Contract No. Idm E 1071

Operator's Name The New Jersey Zinc Company Minerals Zinc

Address Jefferson City, Tennessee

Contract Amount, $105,950.00 Government Participation: 50 % Amount, $52,975.00

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling	6922.00	89,688.00	96,610.00	9/28/59		
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services	519.54	6,810.93	7,330.47			
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
Core Boxes	63.00	833.40	896.40			
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	12.00	93.00	105.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	7516.54	97,425.33	104,941.87	7516.54	97425.33	104,941.87

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

Date 7/1/59 *Payee The New Jersey Zinc Company

Per [signature] Title Chief Geologist-Tenn.

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the 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:

$ 3758.27

Signature Helen R. Miller
(Authorized Certifying Officer)

Date JUL 24 1959 Vou. No. 4

(See other side)

3758.27

(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. E-1071 in accordance with the terms of the contract.

Signature T. J. Lynch Title MINING ENGINEER U. S. BUREAU OF MINES Date JUL 20 1959

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Robert A. Laurence Title EXECUTIVE OFFICER OME FIELD TEAM REGION V Date JUL 20 1959

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.

Form MF-10.1A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

JUL 27 1959
O.M.E.

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of June 1959 Docket No. DMEA 4586 Contract No. Idm E 1071
Operator's Name The New Jersey Zinc Company Minerals Zinc
Address Jefferson City, Tennessee

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts EX	Ft.	-	-	371.00	140	2.65		2.65
Winzes	"	5500.00	2000	88,682.00	32,248	2.75	30,000	2.75
Drilling: Core 0-1000	"	1422.00	474	7,557.00	2,519	3.00	5,000	3.00
Churn 1000-1500				105.00	105	1.00	200	1.00
Auger Assays	Ea.	12.00	12					
Stripping Core Boxes	"	63.00	35	896.40	498	1.80	500	1.80
Trenching								
Test Pits								
Roads and Trails Tech. Serv.	Ft.	519.54	2474	7,330.47	34,907	0.21	35,000	0.21
TOTAL DISTRIBUTED COSTS		7516.54		104,941.87				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		7516.54		104,941.87				

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: This report includes holes I-66 I-67

Date 7/1/59 Operator The New Jersey Zinc Co.

Per [signature] Title Chief Geologist-Tenn.

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)

[signature]
GEOLOGIST, U. S. G. S.
JUL 20 '59

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

Report for June, 1959

Cedar Springs Area DMEA 4586

Contract Idm E 1071 (Zinc)

OFFICIAL FILE COPY
O. M. E.
RECEIVED JUL 27 1959

DATE	INITIALS	CODE

One drill operated on this project during the month. Two holes were completed for a total of 2474' of drilling. These holes are shown in green on the accompanying map, AX-TENN-B 106.

Hole I-66 - NJZ M&M - Stapleton surface

Coordinates: 730,282.99 N; 763,114.72 E
Elevation: 1468.87'

Results:

0- 8	- -	Clay
8- 186	- -	Chickamauga limestone and dolomite
186- 873	- -	Mascot dolomite
873	- -	Chert Matrix
873- 916	- -	Upper Kingsport dolomite
916- 920	- -	4' - 2.48% zinc
920- 924	- -	4' - 5.33% zinc
924- 928	- -	4' - Trace of zinc
928- 932	- -	4' - 0.98% zinc
932- 936	- -	4' - 1.15% zinc
936- 940	- -	4' - 10.10% zinc
940- 948	- -	8' - 0.52% zinc
948- 954	- -	6' - 5.50% zinc (5' core)
954- 959	- -	5' - 2.93% zinc
959- 966	- -	7' - 0.50% zinc
966- 971	- -	5' - 3.14% zinc
971- 978	- -	7' - 6.43% zinc (5' core)

916-978 - 62' - 3.16% zinc

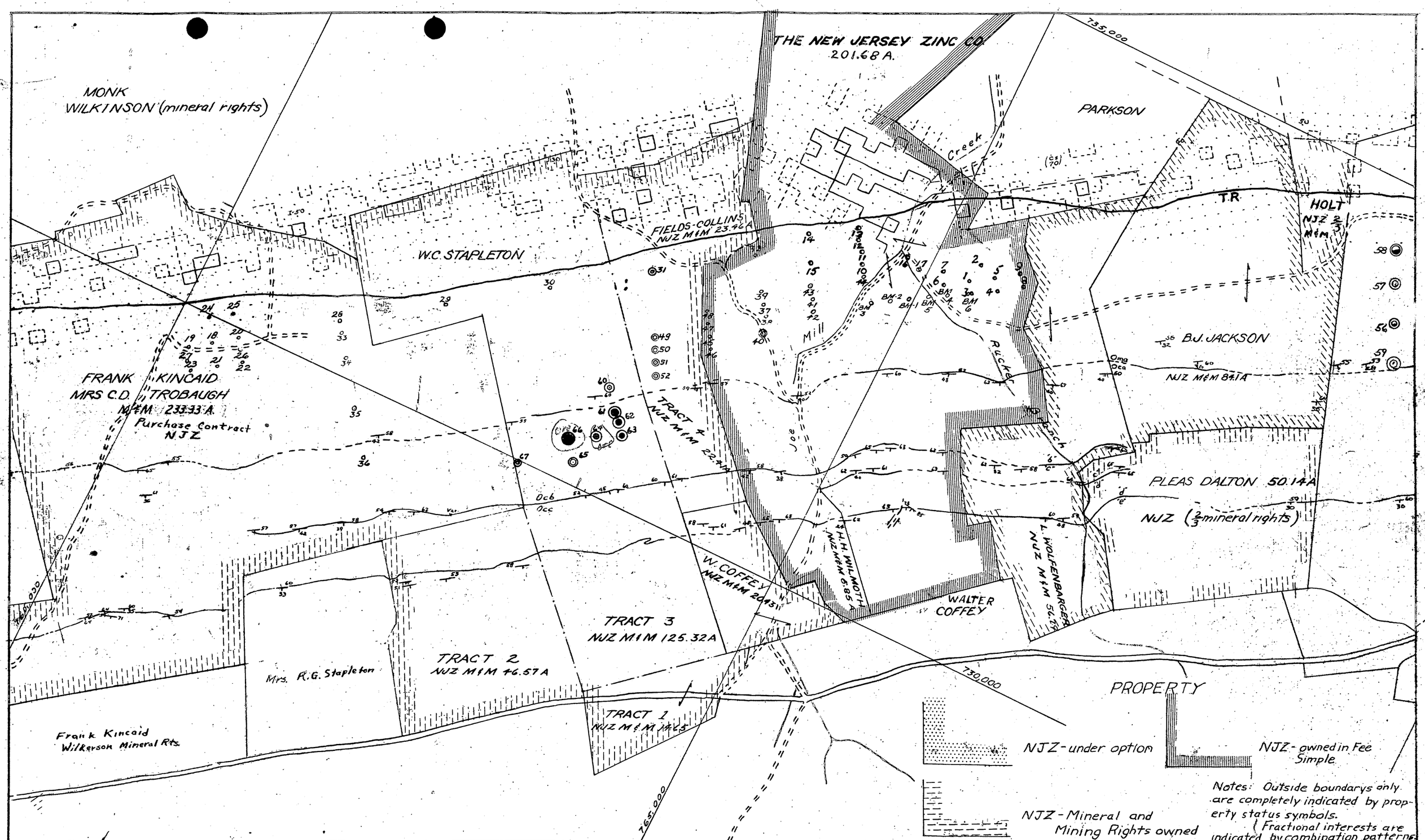
978-1053	- -	Upper Kingsport dolomite Scattered traces of sphalerite 995-1022
1053	- -	TR
1053-1219	- -	(Bottom) Lower Kingsport dolomite and limestone R & S Beds 97% dolomite

Hole I-67 - NJZ M&M - Stapleton surface

Approx. Coordinates: 729,965 N; 762,850 E
Approx. Elevation: 1460

Results:

0- 10	- -	Clay
10- 242	- -	Chickamauga limestone and dolomite
242- 935	- -	Mascot dolomite. Shine of sphalerite in chert 743'
935	- -	Chert Matrix
935-1102	- -	Upper Kingsport dolomite. Scattered traces of sphalerite 1015-1081
1102	- -	TR
1102-1255	- -	(Bottom) Lower Kingsport dolomite and limestone



POSTED TO DATE	THE NEW JERSEY ZINC COMPANY	DRAWN SJL, JFP DATE 2/17/53	COPPER RIDGE BELT	GRAINGER COUNTY, TENN.
5/30/53	ROGERSVILLE TENNESSEE	TRACED SCALE 1"=660'	SECTOR II SHEET 43W	FILE NO. AX-TENN 106
1-56 TEW				
10-56 "				

OFFICIAL FILE COPY
O. M. E.
RECEIVED JUL 27 1959

DATE	INITIALS	CODE

OFFICIAL FILE COPY
O. M. E.
RECEIVED JUL 22 1959

DATE	INITIALS	CODE
7/22	gad	220
7/22	[illegible]	110
7/22	[illegible]	800
	[illegible]	500

OFFICE OF MINERALS EXPLORATION

INTERIM REPORT

DMEA-4586, Idm-E1071-Zinc

Operator: The New Jersey Zinc Company, Jefferson City, Tennessee

Location: Cedar Springs area, Grainger County, Tennessee

Summary of drilling completed

	Since last inspection	To date
Number of holes.....	2	41
Footage.....	2,474	34,909 34,909' Talbert

Number of holes showing:

a) Commercial-grade zinc ore.....	6
b) Non-commercial zinc mineralization..	22
c) No zinc mineralization.....	13

Data on the two holes completed are summarized as follows:

Hole I-66: Located on the W. C. Stapleton property (NJZ Mining and Mineral Rights) at coordinates: 30,282-N; 63,115-E. Collar elevation: 1,469 feet A. T. Drilling started May 5, 1959 and was completed June 3, 1959. Total depth 1,219 feet.

Summary log: 0-8 overburden; 8-186 Chickamauga limestone; 186-873(CM-ss) Mascot dolomite; 873-1053? (TR?) upper Kingsport; 1053?-1219 lower Kingsport and possibly Longview dolomite (top of T-bed not recognized). Mineralization: Ore hole with runs of mineralization as follows: 878,879,908-909, shines of ZnS; 916-978 (62') with 3.16% Zn; 995 shines ZnS; 1007, 1010 and 1014, traces ZnS; 1018-1022 (4') estimated @ 1½% Zn; 1046 trace ZnS; 1066-1070

(4'½ estimated 2% Zn; 1081-1094 (13') with scattered traces ZnS.

Hole I-67: Located on the W. C. Stapleton property. Coordinates: (approximate) 729,965-N; 762-850-E. Collar elevation: (approximate) 1,460 feet A.T. Drilling started June 5, 1959; completed June 26, 1959. Total depth: 1255 feet. Summary log: 0-10 overburden; 10-242 chickamauga limestone; 242-935(CM-ss) Mascot dolomite; 935-1002(TR) upper Kingsport; 1102-1255 lower Kingsport and possibly longview dolomite (questionable top of T-bed at 1235). Mineralization: Barren hole.

Drilling in progress

Hole I-68, located approximately 200 feet up-dip from Hole I-67, is now in progress. Core was observed to a depth of 812 feet at the time of inspection. At this depth the hole was still in the lower part of the Mascot dolomite. Estimated total is about 1150 feet. As the total footage of this hole will exceed the 35,000 foot maximum of the contract, authorization has been given by the Field Team to exceed this maximum to the extent permitted by the maximum funds allowed for drilling under the contract. OK

On completion of Hole I-68 the drilling under the Cedar Springs contract will have been completed. The Operator, however, intends to continue drilling in this area on its own initiative, but will move into the tracts northeast of the Stapleton property which have been excluded from the contract area.

Inspected: July 9, 1959

Helmuth Wedow, Jr., Geologist
Geological Survey, OME

OFFICIAL FILE COPY
O. M. E.
RECEIVED JUN 15 1959

DATE	INITIALS	CODE
6/15	G	220
6/16	JEJ	800
6/18		800
~~6/18~~	~~RBG~~	~~500~~

INTERIM REPORT

DMEA-4586, Idm-E1071 (Zinc)

Operator: The New Jersey Zinc Company, Jefferson City, Tennessee

Location: Cedar Springs area, Grainger County, Tennessee

Summary of drilling completed

	Since last inspection	To date
Number of holes	1	39
Footage	1,317	32,435 X 32,433

Talbut 6/18/59

Number of holes showing:

a)	Commercial-grade zinc ore	5
b)	Non-commercial zinc mineralization . . .	22
c)	No zinc mineralization	12

The data on the one hole completed since the last inspection are summarized as follows:

Hole I-65: Located on the W. C. Stapleton property (New Jersey Zinc Company Mining and Mineral Rights) approximately 290 feet S. 13° W. of Hole I-64. Coordinates: N-30,119; E-63,232. Collar elevation: 1,461 feet. Started: 4/22/59; completed: 5/11/59. Total depth: 1,317 feet. Summary log: 0-6 residual clay overburden; 6-346 Chickamauga limestone; 346-998 Mascot dolomite; 998-1163 (TR) upper Kingsport dolomite; 1163-1290 (T-bed) lower Kingsport limestone; 1290-1317 (bottom of hole) Longview dolomite. Mineralization: Shine hole. Trace of ZnS at 1024; scattered traces ZnS at 1105-1144; shine of ZnS at 1152.

Drilling in progress

Drilling is now in progress on Hole I-66, also on the Stapleton property. At the time of inspection the hole was at a depth of 1,141 feet and core was observed to this depth. The hole appears to be strongly mineralized, although the grade may not be sufficient to meet the operator's cut-off for ore. From depths of 916 to 978 is a run of 62 feet with an average estimated grade of about 2½ percent zinc. Scattered shines and traces occur further to a depth of 1,077 feet. The hole was drilling in the lower part of the R-bed at the time of inspection, and the chances for more mineralization in S-bed appear to be excellent.

Inspected: June 2, 1959

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

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

Budget Bureau No. 42-R1036.5

PAID ON VOUCHER & SCHEDULE OF PAYMENTS K-

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

Month of May, 1959 Docket No. DMEA 4586 Contract No. Idm E 1071
Operator's Name The New Jersey Zinc Company Minerals Zinc
Address Jefferson City, Tennessee
Contract Amount, $105,950.00 Government Participation: 50 % Amount, $ 52,975.00

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling	3701.00	85,987.00	89,688.00	6/22/59 WRK		
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services	276.57	6,534.36	6,810.93			
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
Core Boxes	32.40	801.00	833.40			
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	-	93.00	93.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
				4009.97	93,415.36	97,425.33
TOTALS	4009.97	93,415.36	97,425.33			

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

Date 6/1/59 *Payee The New Jersey Zinc Company

Per [signature] Title Asst. to Gen. Supt.

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the 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:

$ 2004.98

Signature [signature]
(Authorized Certifying Officer)

Date JUN 16 1959 Vou. No. 116
(See other side)

2004.99

(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. E-1071 in accordance with the terms of the contract.

Signature [illegible] Title GEOLOGIST, U. S. G. S. Date JUN 10 1959

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE: ACTING EXECUTIVE OFFICER

Signature [illegible] Title OME - REGION V Date JUN 10 1959

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.

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of May 1959 Docket No. DMEA 4586 Contract No. Idm E 1071

Operator's Name The New Jersey Zinc Company Minerals Zinc

Address Jefferson City, Tennessee

OPERATION	Unit	Costs This Month	Units This Month	Costs to Date	Units to Date	Unit Costs to Date	Authorized by Contract: Units	Authorized by Contract: Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes EX	Ft.	-	-	371.00		2.65		2.65
Drilling: Core 0-1000	"	2750.00	1000	83,182.00		2.75	30,000	2.75
Churn 1000-1500	"	951.00	317	6,135.00		3.00	5,000	3.00
Auger Assays	Ea.	-		93.00		1.00	200	1.00
Stripping Core Boxes	"	32.40	18	833.40	463	1.80	500	1.80
Trenching								
Test Pits								
Roads and Trails								
Tech. Serv.	Ft.	276.57	1317	6,810.93	32,433	0.21	35,000	0.21
Total Distributed Costs		4009.97		97,425.33				Total Costs Authorized by Contract
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
Total Costs		4009.97		97,425.33				

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.

Date 6/1/59 Operator The New Jersey Zinc Co.

Per [signature] Title Asst. to Gen. Supt.

Remarks: This report includes I-65

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)

[signature]

GEOLOGIST, U. S. G. S.

JUN 10 1959

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

Report for May, 1959

Cedar Springs Area DMEA 4586

Contract Idm # 1071 (Zinc)

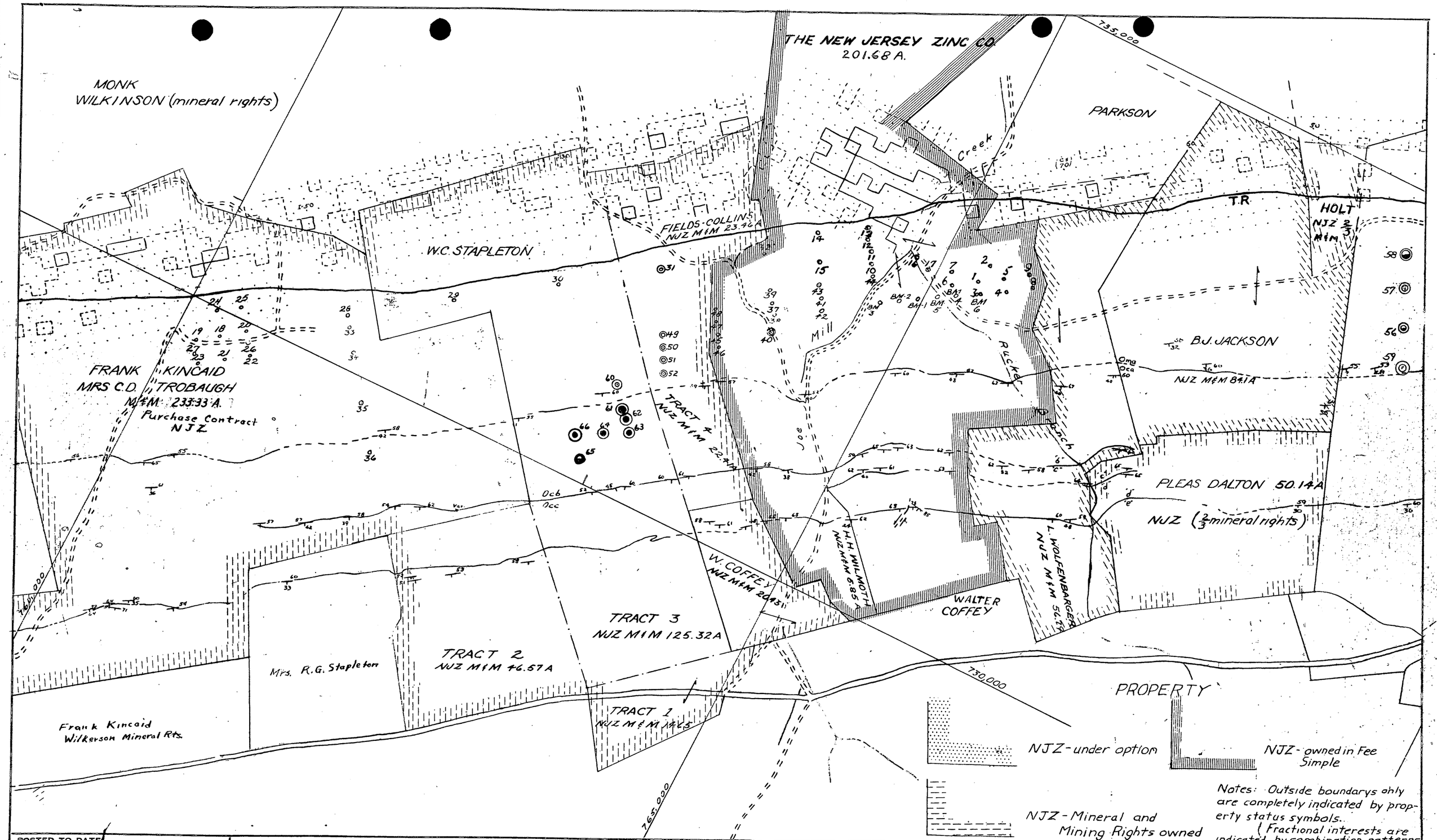
One drill operated on this project during the month. One hole was completed for a total of 1317' of drilling. This hole is shown in green on the accompanying map, AX-TENN-B-106.

Hole I-65 - N.J.Z. M & M - Stapleton surface

Coordinates: 30,118.55 N; 63,231.80 E
Elevation: 1460.68

Results:

0- 6	Clay
6- 346	Chickamauga limestone and dolomite
346- 998	Mascot dolomite
998-1163	Upper Kingsport dolomite Traces of sphalerite 1074, 1105-1154, 1152
1163	TR
1163-1290	Lower Kingsport dolomite and limestone
1290-1317	(Bottom) Longview dolomite



POSTED TO DATE			
5/30/53			
1-56 TEW			
10-56 "			

THE NEW JERSEY ZINC COMPANY
ROGERSVILLE TENNESSEE

DRAWN SJL, JFP DATE 2/17/53
TRACED SCALE 1"=660'

COPPER RIDGE BELT
SECTOR II SHEET 4SW

GRAINGER COUNTY, TENN.
FILE NO. AX-TENN 106

HOWARD SUTTON CO., INC., N. Y.

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

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

PAID ON VOUCHER & SCHEDULE OF PAYMENTS K-

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of April, 1959 Docket No. DMEA 4586 Contract No. Idm E 1071

Operator's Name The New Jersey Zinc Company Minerals Zinc

Address Jefferson City, Tennessee

Contract Amount, $ 105,950.00 Government Participation: 50 % Amount, $ 52,975.00

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling	6715.00	79,272.00	85,987.00	6/22/59		
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services	505.05	6,029.31	6,534.36			
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
Core Boxes	63.00	738.00	801.00			
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	20.00	73.00	93.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	7303.05	86,112.31	93,415.36	7303.05	86,112.31	93,415.36

MAY 21 1959 O.M.E.

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

Date 5/1/59 *Payee The New Jersey Zinc Co.

Per [signature] Title Asst. to Gen. Supt.

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the 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:

$ 3651.52

Signature [signature] (Authorized Certifying Officer)

Date MAY 19 1959 Vou. No. 112

(See other side)

16

3651.53

(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. E-1071, in accordance with the terms of the contract.

Signature [illegible] Title GEOLOGIST, U. S. G. S. Date MAY 14 1959

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature V. J. Lynch Title ACTING EXECUTIVE OFFICER REGION V Date MAY 14 1959

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.

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1512

MAY 21 1959
O.M.E.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of April 19 59 Docket No. DMEA 4586 Contract No. Idm E 2071
Operator's Name The New Jersey Zinc Company Minerals Zinc
Address Jefferson City, Tennessee

OPERATION	Unit	Costs This Month	Units This Month	Costs to Date	Units to Date	Unit Costs to Date	Authorized by Contract: Units	Authorized by Contract: Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts EX	Ft.	-	-	371.00	140	2.65		2.65
Winzes 0-1000	"	5,500.00	2000	80,432.00	29,248	2.75	30,000	2.75
Drilling: C 1000-1500	"	1,215.00	405	5,184.00	1,728	3.00	5,000	3.00
Churn Assays	Ea.	20.00	20	93.00	93	1.00	200	1.00
Au Core Boxes	"	63.00	35	801.00	445	1.80	500	1.80
Stripping								
Trenching								
Test Pits								
Tech. Serv.	Ft.	505.05	2405	6,534.36	31,116	0.21	35,000	0.21
Total Distributed Costs		7,303.05		93,415.36				Total Costs Authorized by Contract
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
Total Costs		7,303.05		93,415.36				

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.

Date 5/1/59 Operator The New Jersey Zinc Co.

Per [signature] Title Asst. to Gen. Supt.

Remarks: This report includes I-63 and I-64

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)

[signature]
GEOLOGIST, U. S. G. S.

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

Report for April 1959

Cedar Springs Area DMEA 4586

Contract Idm E 1071 (Zinc)

One drill operated on this project during the month. Two holes were completed for a total of 2405 feet of drilling. These holes are shown in green on the accompanying map, AX-TENN-B-106.

Hole I-63 - N.J.Z. M & M - Stapleton surface

Coordinates: 30,520.48 N; 63,445.33 E
Elevation: 1441.70

Results:

0- 4 - - Clay
4- 163 - - Chickamauga limestone
163- 857 - - Mascot dolomite. Traces and shines of sphalerite 499-500, 565, 637
857 - - Chert Matrix
857- 882 - - Upper Kingsport dolomite. Shine of sphalerite 864-865
882- 888 - - 6' - 4.64% zinc
888- 899 - - Upper Kingsport dolomite. Shine of sphalerite 891'
899- 903 - - 4' - 0.77% zinc
903- 908 - - 5' - 5.42% zinc
908- 913 - - 5' - 0.50% zinc
913- 918 - - 5' - 3.92% zinc
918- 923 - - 5' - 3.27% zinc
923- 928 - - 5' - 11.90% zinc
928- 935 - - 7' - 0.92% zinc
935- 940 - - 5' - 6.32% zinc
940- 945 - - 5' - 5.38% zinc
945- 949 - - 4' - 6.19% zinc
949- 953 - - 4' - 0.98% zinc
953- 956 - - Kingsport dolomite
956- 961 - - 5' - 1.78% zinc
961- 966 - - 5' - 3.09% zinc
966- 970 - - 4' - 4.17% zinc
970- 975 - - 5' - 9.10% zinc
975- 980 - - 5' - 5.71% zinc
980- 984 - - 4' - 4.57% zinc

882- 903 - -21' - 1.47% zinc
903- 949 - -46' - 4.67% zinc
949- 961 - -12' - 1.07% zinc
961- 984 - -23' - 5.41% zinc

903- 984 - -81' - 4.35% zinc

984-1222 - - Kingsport dolomite (No TR recognized) Scattered traces and shines of sphalerite 990-1062
1222-1230 - - (Bottom) Longview dolomite

Hole I-64 - N.J.Z. M & M - Stapleton surface

Coordinates: 30,404.15 N; 63,281.57 E
Elevation: 1445.91'

Results:

0- 2	Clay
2- 164	Chickamauga limestone
164- 815	Mascot dolomite. Traces and shines of sphalerite 482, 528-530, 629-630
815	Chert Matrix
815- 996	Upper Kingsport dolomite. Scattered traces and shines 832-984
996	TR
996-1059	Lower Kingsport dolomite. Scattered traces of sphalerite 1012-1021
1059-1066	7' - 5.70% zinc
1066-1074	Lower Kingsport dolomite
1074-1079	5' - 5.30% zinc
1059-1079	20' - 3.55% zinc
1079-1175	(Bottom) Lower Kingsport dolomite Traces of sphalerite 1079-1085, 1110

INTERIM REPORT

DMEA-4586, Idm-E1071 (Zinc)

OFFICIAL FILE COPY
O. M. E.
RECEIVED JUN 3 1959

DATE	INITIALS	UNITS
6/3	a	220
"	JE	110
6/4	[illegible]	800
		500

Operator: The New Jersey Zinc Company, Jefferson City, Tennessee

Location: Cedar Springs area, Grainger County, Tennessee

Summary of drilling completed

	Since last inspection	To date
Number of holes	1	38
Footage	1,175	31,118 * X 31,116' Falkner

Number of holes showing:

a) Commercial-grade zinc ore	5
b) Non-commercial zinc mineralization	21
c) No mineralization	12

The data on the one hole completed since the last inspection are summarized briefly below:

Hole I-64: W. C. Stapleton property (New Jersey Zinc Co. Mining and Mineral Rights). Located approximately 200 feet southwest from Hole I-63. Coordinates 30,404-N; 63,282-E and at elevation 1,446 feet. Started drilling on 4/4/59 and completed on 4/21/59 at a total depth of 1,175 feet. Summary log: 0-2 Residual clay overburden; 2-164 Chickamauga limestone; 164-815 Mascot dolomite; 815-996 upper member of Kingsport formation (TR @ 996); 996-1175 lower member of Kingsport formation (top of T-bed not reached or not recognized). Mineralization: Traces and shines of sphalerite at 482,528-530, 629-630, 932-984, and 1012-1021; 1059-1079, 20 feet with 3.55 % Zn; traces of sphalerite 1079-1085 and 1110. Ore hole.

Drilling in progress

Drilling is currently in progress on Hole I-65 which is located 290 feet S. 13° W. of Hole I-64. At the time of inspection it was drilling in the upper member of the Kingsport formation at a depth of 1,061 feet.

Inspected: May 5, 1959

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

*Note: Correction of cumulative arithmetical and typographical errors in interim reports of 10/17/57, 12/5/57, 1/14/58, and 3/4/58 show that the correct total footage of the last previous interim report should be 29,943 feet instead of 29,935 feet. Also, cumulative total under "Units to date" in Monthly Report of Operator for December 1957 should be 18,493 feet instead of 18,491 feet. This error has carried through to the April 1959 voucher and the cumulative total should read 31,118 feet. No! 2' disallowed in Nov. MF-104 by Fld. Ins. Falkner

OFFICIAL FILE COPY
O. M. E.
RECEIVED APR 20 1959

DATE	INITIALS	CODE
4/20	Ce	220
4/21	RH	110
4/21	[illegible]	800
~~4/24~~	~~[illegible]~~	~~500~~

DMEA EXPLORATION PROJECT

INTERIM REPORT

DMEA-4586, Idm-E1071 (Zinc)

Operator: The New Jersey Zinc Company, Jefferson City, Tennessee

Location: Cedar Springs area, Grainger County, Tennessee

Summary of drilling completed

	Since last inspection	To date
Number of holes	1	37
Footage	1,230	29,935 29,900

Holes showing:

a)	Commercial-grade zinc ore	4
b)	Non-commercial zinc mineralization	21
c)	No zinc mineralization	12

A summary of the data on the one hole completed since the last inspection follows:

Hole I-63: Located on the Stapleton (NJZ M&M) property about 100 feet down-dip (southeast) of Hole I-62. Drilling started on 3/10/59 and was completed on 4/3/59 at a depth of 1,230 feet. Coordinates: 30,520-N; 63,445-E. Elevation: 1442 feet. Summary log: 0-4 overburden; 4-163(?) Chickamauga ls; 163(?)-930 Mascot dolomite; 930-1230 Kingsport and Longview formations (TR not recognized; T-bed at 1222-1226?). Mineralization: 903-984 (81') weighted average of assays 4.33 % Zn; ore hole.

Drilling in progress

Drilling is now in progress in Hole I-64 which is located approximately 200 feet southwest (on strike) from Hole I-63. The hole collared in the Chickamauga limestone and is currently drilling in the Mascot dolomite at a depth of 280 feet.

Inspected: April 7, 1959

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

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

APR 22 1959
O.M.E.

Budget Bureau No. 42-R1036.5

PAID ON VOUCHER & SCHEDULE OF PAYMENTS K-

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

Month of March, 1959 Docket No. DMEA 4586 Contract No. Idm E 1071
Operator's Name The New Jersey Zinc Company Minerals Zinc
Address Jefferson City, Tennessee
Contract Amount, $105,950.00 Government Participation: 50 % Amount, $52,975.00

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	3083.00	76,189.00	79,272.00	4/27/59 WJPA		
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services	233.31	5,796.00	6,029.31			
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
Core Boxes	28.80	709.20	738.00			
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	20.00	53.00	73.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	3365.11	82,747.20	86,112.31	3365.11	82,747.20	86,112.31

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

Date 4/1/59 *Payee The New Jersey Zinc Company

Per [signature] Title Asst. to Gen. Supt.

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the 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:

$ 1682.56

Signature Helen R. Miller (Authorized Certifying Officer)

Date APR 20 1959 Vou. No. 103

(See other side)

1682.55

(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. E-1071 in accordance with the terms of the contract.

Signature [signature] Title GEOLOGIST, U. S. G. S. Date APR 16 1959

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature [signature] Title ACTING EXECUTIVE OFFICER DMEA - REGION V Date APR 16 1959

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.

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of March 9, 195 Docket No. DMEA 4586 Contract No. Idm E 1071

Operator's Name The New Jersey Zinc Company Minerals Zinc

Address Jefferson City, Tennessee

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts EX	Ft.			371.00	140	2.65		2.65
Winzes 0-1000	"	2750.00	1000	74,932.00	27,248	2.75	30,000	2.75
Drilling: Core 1000-1500	"	333.00	111	3,969.00	1,323	3.00	5,000	3.00
Churn Assays	Ea.	20.00	20	73.00	73	1.00	200	1.00
Auger Core Boxes	"	28.80	16	738.00	410	1.80	500	1.80
Stripping								
Trenching								
Test Pits								
Roads and Trails Tech. Serv.	Ft.	233.31	1111	6,029.31	28,711	0.21	35,000	0.21
TOTAL DISTRIBUTED COSTS		3365.11		86,112.31				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		3365.11		86,112.31				

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.

Date 4/1/59 Operator The New Jersey Zinc Co.

Per [signature] Title Asst. to Gen. Supt.

Remarks: This report includes I-62

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)

[signature]
GEOLOGIST, U. S. G. S.

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

Report for March 1959

Cedar Springs Area DMEA 4586

Contract Idm E 1071 (Zinc)

One drill operated on this project during the month. One hole was completed for a total of 1111' of drilling. This hole is shown in green on the accompanying map, AX-TENN-B-106. Also included is a dip section AX-TENN-C-1423 showing holes I-60, I-61 and I-62.

Hole I-62 - N.J.Z. M & M - Stapleton surface

Coordinates: 30,598.03 N; 63,383.31 E
Elevation: 1449.68'

Results:

0- 10	Clay
10- 91	Chickamauga limestone and dolomite
91- 793	Mascot dolomite. Trace of sphalerite 406, 686
793- 798	5' - 3.98% zinc
798- 807	9' - 1.05% zinc
807- 810	3' - 5.20% zinc
810- 816	6' - Nil zinc
816- 820	4' - 3.85% zinc
820- 825	5' - 0.30% zinc
825- 830	5' - 1.17% zinc
830- 835	5' - 9.12% zinc
835- 840	5' - 6.08% zinc
	Chert Matrix at 837'
840- 845	5' - 6.62% zinc
845- 852	7' - 4.82% zinc
852- 860	8' - 15.75% zinc
860- 865	5' - 9.17% zinc
865- 870	5' - 10.90% zinc
870- 875	5' - 8.40% zinc
875- 880	5' - 3.80% zinc
880- 885	5' - 2.90% zinc
885- 890	5' - 3.15% zinc
890- 893	3' - 4.25% zinc
893- 926	Upper Kingsport dolomite
926- 930	4' - 6.53% zinc
930- 957	Upper Kingsport dolomite. Scattered shines of sphalerite
957	TR
957-1093	Lower Kingsport dolomite and limestone
1093-1111	(Bottom) Longview dolomite

17 44.95 2.64

77 6.44 Ore

77 495.94

77 495.94
23 44.95
100 540.89

5.41

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O. M. E.
RECEIVED MAR 20 1959

DATE		CODE
3-20	C	220
"	JLY	110
3/20		800
3/22		500

EXPLORATION PROJECT CONTRACT

INTERIM REPORT

DMEA-4586, Idm-E1071 - Zinc

Operator: The New Jersey Zinc Company, Jefferson City, Tenn.

Location: Cedar Springs Area, Grainger County, Tennessee

Summary of Drilling Completed

	Since last inspection	To date
Number of holes	2	36
Footage	2146	28,705 28,711

Holes showing:

a)	Commercial zinc ore	3
b)	Non-commercial zinc mineralization	21
c)	No zinc mineralization	12

Additional data on the two holes completed during the interim follows:

Hole No. I-61 - Located on W. C. Stapleton property (NJZ M and M) 200 feet south of I-60. Coordinates N30,675.34, E63,320.26; collar elevation 1462.79. Total depth 1035 feet. Drilling began 1-29-59 and was completed 2-16-59. Brief log of hole: 0-10 feet overburden, collared in Chickamauga fm; top of Mascot at 27 feet; top of Kingsport (chert matrix) at 739; Tro-pari Survey showing an inclination of 3° and a bearing of N59°W at 800 feet; top of "R" bed at 890; "T" bed from 1029 to 1034; hole bottomed at 1035 feet.

Mineralization: Sphalerite mineralization extended from 746 to 879. Ore runs are: 4' (758-762) of est. 3½% Zn; 4' (762-766) of est. 4% Zn; 3' (766-769) of est. 3% Zn; 4' (776-780) of est. 5% Zn; 4' (791-795) of est. 2% Zn; 4' (795-799) of est. 6% Zn;

Mineralization con'd: 4' (799-803) of est. 2% Zn; 5' (803-808) of est. 1% Zn; 4' (824-828) of est. 3% Zn; 7' (828-835) of est. 2½% Zn; 5' (850-855) of est. 1½% to 2% Zn; 5' (855-860) of est. 10% Zn; 5' (874-879) of est. 6% Zn. Ore hole.

Hole No. I-62. Located 100 feet south of I-61. Coordinates N30598.03, E63383.31; collar elevation 1449.68. Total depth 1111 feet. Drilling began 2-17-59 and was completed 3-9-59. Brief log of hole: 0-10 feet overburden, collared in Chickamauga; top of Mascot at 91; top of Kingsport (chert matrix) at 837; brown oolite bed at 868; top of "R" bed at 957; "T" bed from 1093 to 1102; hole bottomed at 1111 feet. Dips were taken at 107'-41°, 144'-32°, and 167'- 34°.

Mineralization: 50' (830-880) of est. 5½% Zn. Ore Hole.

Current drilling is in progress on hole No. I-63, located 100 feet south and downdip from I-62. Core was observed to a depth of 20 feet. The estimated total depth of the hole is 1200 feet.

Inspected: March 10, 1959

L. E. Shirley, Mining Engineer
Bureau of Mines (OME)

Helmuth Wedow, Jr., Geologist
Geological Survey

z

Form MF-1-4 (Rev.) (April 1952)

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

PAID ON VOUCHER & SCHEDULE OF PAYMENTS K- 53

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of February, 1959 Docket No. DMEA 4606 Contract No. 1071

Operator's Name The New Jersey Zinc Company Minerals Zinc

Address Jefferson City, Tennessee

Contract Amount, $ 105,000.00 Government Participation: 50 % Amount, $ 52,500.00

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling	2000.00	78,000.00	80,100.00	3/30/59	WRK.	
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor	217.55	5,770.00	5,770.00			
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track	25.20	672.00	797.20			
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	13.00	40.00	53.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	2255.75	79,491.45	82,747.20	3110.55	79,636.65	82,747.20

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

Date 3/30/59 *Payee The New Jersey Zinc Company

Per [signature] Title Asst. to Gen. Supt.

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the 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:

$ 1555.27

Signature [signature] (Authorized Certifying Officer)

Date MAR 20 1959 Vou. No. 98

(See other side)

1555.28

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

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of February 1959 Docket No. DMEA 4586 Contract No. Idn E 1071

Operator's Name The New Jersey Zinc Company Minerals Zinc

Address Jefferson City, Tennessee

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes EX	Ft.			371.00	140	2.65		
Drilling: Core 0-1000	"	2750.00	1000	72,182.00	26,243	2.75	30,000	2.75
Churn 1000-1500	"	105.00	35	3,636.00	1,212	3.00	5,000	3.00
Auger Assays	Ea	13.00	13	53.00	53	1.00	200	1.00
Stripping Core Boxes		25.20	14	709.20	394	1.80	500	1.80
Trenching								
Test Pits								
Roads and Trails								
		217.35	1035	5,796.00	27,600	0.21	35,000	0.21
TOTAL DISTRIBUTED COSTS		3110.55		82,747.20				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		3110.55		82,747.20				

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: This report includes hole 1-61

Date 3/1/59 Operator The New Jersey Zinc Co.

Per [signature] Title Asst. to Gen. Supt.

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)

[signature]
MINING ENGINEER
U. S. BUREAU OF MINES

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.

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GPO 872894

Report for February 1959

Cedar Springs Area DMGA 4586

Contract 1&n E 1071 (Zinc)

One drill operated on this project during the month. One hole was completed for a total of 1035' of drilling. This hole is shown in green on AA-Tenn-3-106.

<u>Hole 1-61</u> - N.J.Z. N O A - Stapleton Surface

Coordinates: 30,675.34 N; 63,320.26 E
Elevation: 1402.79

Results:

0 - 10	- - -	Clay
10 - 27	- - -	Chickamauga limestone
27 - 739	- - -	Beekmantown dolomite
730	- - -	Chert Matrix
739 - 753	- - -	Upper Kingsport dolomite. Scattered shines of sphalerite 746 - 753
753 - 762	- - -	2.42% Zinc
762 - 766	- - -	2.50% Zinc
766 - 769	- - -	2.42% Zinc
<u>753 - 769</u>	- - -	<u>11' of 2.45% Zinc</u>
769 - 776	- - -	Scattered traces of sphalerite
776 - 780	- - -	4.80% Zinc
780 - 791	- - -	Scattered traces of sphalerite
791 - 795	- - -	1.32% Zinc
795 - 799	- - -	4.80% Zinc
799 - 803	- - -	2.25% Zinc
803 - 808	- - -	1.05% Zinc
<u>791 - 803</u>	- - -	<u>17' of 2.19% Zinc</u>
803 - 824	- - -	Upper Kingsport dolomite. Strong shine of sphalerite 816
824 - 828	- - -	2.45% Zinc
829 - 833	- - -	1.75% Zinc
<u>824 - 833</u>	- - -	<u>9' of 2.06% Zinc</u>
833 - 855	- - -	Scattered shines of sphalerite
855 - 860	- - -	9.60% Zinc
860 - 863	- - -	9.60% Zinc
863 - 874	- - -	Upper Kingsport dolomite
874 - 879	- - -	5.90% Zinc
855 - 879	- - -	<u>24' of 4.45% Zinc</u>
<u>753 - 879</u>	- - -	<u>121' of 1.73% Zinc</u>
879 - 893	- - -	Upper Kingsport dolomite
893 - 900	- - -	TD
900 -1029	- - -	Lower Kingsport dolomite. Scattered traces of sphalerite 905-922
1029 -1035	- - -	(Sotton) Longview dolomite 100% dolomite in R and S Beds.

OFFICIAL FILE COPY
O. M. E.
RECEIVED FEB20 1959

DATE	INITIALS	CODE
2/20	C	220
"		110
2/24		800
3/14		500

DMEA EXPLORATION PROJECT

INTERIM REPORT

DMEA-4586, Idm-E1071-Zinc

Operator: The New Jersey Zinc Co., Jefferson City, Tennessee.

Location: Cedar Springs area, Grainger County, Tennessee

Summary of Drilling Completed

	Since last inspection	To date
Number of holes	1	34
Footage	850	26,559 X 26,565'

Holes showing:

a)	Commercial zinc ore----------	1
b)	Non-commercial zinc mineralization	21
c)	No zinc mineralization----------	12

Additional data on the one hole completed during the interim follows:

Hole No. I-60, located 400 feet on strike from I-52 (NJZ)Hole). Coordinates N730,830.26, E763,197.65; elevation at collar 1495.15. Total depth 850 feet. Drilling began 1/9/59 and was completed 1/28/29. Brief log of hole: 0-30 overburden, collared in Mascot fm; chert matrix at 542; "A" marker at 707; "B" marker at 717; "T" bed (?) from 843 to 850; hole bottomed at 850 feet. Mineralization: Shines of Zn at 675 feet.

Current drilling is in progress on Hole No.I-61 located on W. C. Stapleton property. Core was observed to a depth of 865 feet. Mineralization encountered consisted of 119 feet (746-865) of estimated 1.5% zinc.

Inspected: Feb. 10, 1959

L. E. Shirley, Mining Engineer
Bureau of Mines - OME

Helmuth Wedow, Jr., Geologist
Geological Survey, OME

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

Bureau No. 42-R1036.5

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

FEB 18 1959 PAID ON VOUCHER & SCHEDULE OF PAYMENTS K-6 O.M.E.

Month of January 195 9 Docket No. DMEA 4586 Contract No. Idm E 1071

Operator's Name The New Jersey Zinc Company Minerals Zinc

Address Jefferson City, Tennessee

Contract Amount, $ 105,950.00 Government Participation: 50 % Amount, $ 52,975.00

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:	2337.50	70,996.50	73,334.00	2/25/59		
Drilling						
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision	178.50	5,400.15	5,578.65			
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
Core Boxes	23.40	660.60	684.00			
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	-	40.00	40.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	2539.40	77,097.25	79,636.65	2539.40	77,097.25	79,636.65

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

Date 2/1/59 *Payee The New Jersey Zinc Company

Per [signature] Title Asst. to Gen. Supt.

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the 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:

$ 1269.70

Signature Helen R. Miller
(Authorized Certifying Officer)

Date FEB 16 1959 Vou. No. 88
(See other side)

13

1269.70

(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. F-1071 in accordance with the terms of the contract.

Signature [illegible] Title GEOLOGIST, U. S. G. S. ~~U. S. BUREAU OF MINES~~ Date FEB 13 1959

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE: ACTING EXECUTIVE OFFICER DME FIELD TEAM

Signature [illegible] Title ~~REGION V~~ Date FEB 13 1959

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.

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

FEB 18 1959

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

Month of Jan. 195 9 Docket No. DMEA 4586 Contract No. Idm E 1071
Operator's Name The New Jersey Zinc Company Minerals Zinc
Address Jefferson City, Tennessee

OPERATION	Unit	Costs This Month	Units This Month	Costs to Date	Units to Date	Unit Costs to Date	Authorized by Contract: Units	Authorized by Contract: Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes EX	Ft.		-	371.00	140	2.65		
Drilling: Core 0-1000	"	2337.50	850	69,432.00	25,248	2.75	30,000	2.75
Churn 1000-1500	"	-	-	3,531.00	1,177	3.00	5,000	3.00
Auger Assays	Ea.		-	40.00	40	1.00	200	1.00
Stripping Core Boxes	"	23.40	13	684.00	380	1.80	500	1.80
Trenching								
Test Pits								
Roads and Trails								
Sup. & Tech. Serv.	Ft.	178.50		5,578.65	26,565	0.21	35,000	0.21
Total Distributed Costs		2539.40		79,636.65				Total Costs Authorized by Contract
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
Total Costs		2539.40		79,636.65				

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.

Date 2/1/59 Operator The New Jersey Zinc Co.

Per [signature] Title Asst. to Gen. Supt.

Remarks: This report includes hole I-60

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)

[signature]
MINING ENGINEER
U. S. BUREAU OF MINES

INSTRUCTIONS

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GPO 872894

Report for January 1959

Cedar Springs Area DMEA 4586

Contract IdmE 1071 (Zinc)

One drill operated on this project during the month. One hole was completed for a total of 850' of drilling. This hole is shown in green on AX-TENN-B-106.

Hole I-60 - N.J.Z. M & M - Stapleton surface

Coordinates: 30,832.26 N; 63,197.67 E
Elevation: 1495.15

Results:

0- 30	Clay
30-700	Mascot and Upper Kingsport dolomite. Shine of sphalerite 675'
700	TR
700-843	Lower Kingsport limestone and dolomite
843-850	(Bottom) Longview dolomite R and S beds 42% dolomite

THE NEW JERSEY ZINC CO.
201.68 A.

MONK
WILKINSON (mineral rights)

PARKSON

735,000

Creek

T.R.

HOLT
NJZ 2/3 M&M

FIELDS-COLLINS
NJZ M&M 23.46 A

W.C. STAPLETON

B.J. JACKSON

NJZ M&M 84.1A

FRANK KINCAID
MRS C.D. TROBAUGH
M&M 233.33 A.
Purchase Contract
NJZ

TRACT 4
NJZ M&M 22.4A

Joe

Mill

Branch

PLEAS DALTON 50.14A

NJZ (2/3 mineral rights)

Occ

Occ

W. COFFEY
NJZ M&M 20.43

T.H. WILMOTH
NJZ M&M 6.85 A

WALTER
COFFEY

L. WOLFENBARGER
NJZ M&M 56.79

TRACT 3
NJZ M&M 125.32A

TRACT 2
NJZ M&M 46.57A

Mrs. R.G. Stapleton

730,000

PROPERTY

TRACT 1
NJZ M&M 14.5

Frank Kincaid
Wilkerson Mineral Rts.

765,000

NJZ - under option

NJZ - owned in Fee Simple

NJZ - Mineral and Mining Rights owned

Notes: Outside boundarys only are completely indicated by property status symbols.
(Fractional interests are indicated by combination patterns.

POSTED TO DATE 5/30/53 1-56 TEW 10-56 "	THE NEW JERSEY ZINC COMPANY ROGERSVILLE TENNESSEE	DRAWN SJL, JFP DATE 2/17/53 TRACED SCALE 1"=660'	COPPER RIDGE BELT SECTOR II SHEET 43W	GRAINGER COUNTY, TENN. FILE NO. AX-TENN 106	

HOWARD SUTTON CO. INC. N.Y.
XS407B 750 2-52

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O. M. E.
RECEIVED FEB 18 1959

DATE	INITIALS	CODE

OFFICIAL FILE COPY
O. M. E.
RECEIVED JAN 26 1959

DATE	INITIALS	CODE
1/26	C	220
"		110
1/27		800
1/27		500

DMEA EXPLORATION PROJECT

INTERIM REPORT

DMEA-4586, Idm-E1071- Zinc

Operator: The New Jersey Zinc Co., Jefferson City, Tennessee.

Location: Cedar Springs area, Grainger County, Tennessee

Drilling has resumed on this contract after a recess period of approximately eight months. Hole No. I-60 is located 400 feet on strike and southwest from I-52 on sheet 4 SW of Sector II, Copper Ridge Belt. The hole has collared in the Mascot formation and will be drilled an estimated total depth of 900 feet. Core from drilling to a depth of 216 feet was inspected.

Actual drilling of this hole began January 8, 1959.

Mr. V. J. Lynch, Member, OME Field Team accompanied the Field Examiners on this inspection.

Inspected:
January 13, 1959

L. E. Shirley, Mining Engineer
Bureau of Mines - OME

Helmuth Wedow, Jr. Geologist
Geological Survey - OME

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DMEA
RECEIVED MAY 19 1958
DATE | INITIALS | COST
5/19 | C | 220
19 | Com | 100
" | FEY | 110
5/20 | [illegible] | 200
~~500~~

DMEA EXPLORATION PROJECT

INTERIM REPORT

DMEA-4586, Idm-E1071-Zinc

Operator: The New Jersey Zinc Company, Jefferson City, Tennessee

Location: Cedar Springs Area, Grainger County, Tennessee

This contract is temporarily recessed pending approval of request for formal recess. Drilling completed since the last inspection of March 27, to the date of recess is reported below. A summary of all work completed to date follows:

Drilling Completed

Number of holes completed since last inspection	2
Footage in holes completed since last inspection....	2,229
Total number of holes completed to date.....	33
Total footage completed to date.....	25,709* *
Number of holes showing commercial zinc ore.....	1
Number of holes showing non-commercial zinc mineralization.....	20
Number of barren holes.....	12

* Hole No. CS-39 bottomed at 1159 instead of 1150 as reported in the interim report dated 3/27/58.

Additional data on the two holes completed during the interim follows:

Hole No.	Property	Total depth	Remarks
CS-41	R. Mallicoat	1070	Location: 200' updip from CS-39. Drilling began 3/10 and was completed 4/1/58. Brief log of hole: 0-2 overburden, collared in Chickamauga, top of Mascot @ 105; chert matrix @ 775; top of "R" @ 901; bottom @ 1070. Mineralization: 4' (958-962) of est. 3.5% Zn. 4'(966-970) of est. 5% Zn. 12' section assayed 3.13% Zn.

* Should be 25,715 ft.
[illegible] 5/20/58

Hole No.	Property	Total Depth	Remarks
CS-42	R. Mallicoat	1159	Location: 200' updip from CS-41. Drilling began 4/2 and was completed 4/24/58. Brief log of hole: 0-9 overburden; collared in Chickamauga; top of Mascot @ 161; chert matrix (?) @ 860; top of "R" @ 998; "T" bed from 1132 to 1133, bottom @ 1159. Mineralization: Traces of sphalerite @ 1049 and from 1055 to 1057. Traces of pyrite @ 949, 961 to 963, 971,977 to 983 and from 985 to 1159.

Core from both of these holes as well as CS-39 was examined at the core storage shed at the Flat Gap Mine of the Company.

Inspected: 5/8/58

V.J. Lynch and L. E. Shirley, Mining Engineers
Bureau of Mines (DMEA)

z

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

Budget Bureau No. 42-R1036.5

PAID ON VOUCHER & SCHEDULE OF PAYMENTS K-

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

Month of April, 1958 Docket No. DMEA 4586 Contract No. Idm E 1071
Operator's Name The New Jersey Zinc Company Minerals Zinc
Address Jefferson City, Tennessee
Contract Amount, $ 105,950.00 Government Participation 50% Amount, $ 52,975.00

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	3,227.00	67,769.50	70,996.50	6/27/58		
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision	243.39	5,156.76	5,400.15			
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
Core Boxes	30.60	630.00	660.60			
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	-	40.00	40.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	3,500.99	73,596.26	77,097.25	3500.99	73,596.26	77,097.25

I certify that the above bill is correct and just and that payment therefor has not been received.
Date 5/1/58 *Payee The New Jersey Zinc Company
Per [signature] Title Asst. To Gen. Supt.

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the 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:
$ 1750.50
Signature Helen R. Miller
(Authorized Certifying Officer)
Date JUN 2 1958 Vou. No. 174
(See other side)

1750.49

(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. E-1071 in accordance with the terms of the contract.

Signature V. J. Lynch Title MINING ENGINEER U. S. BUREAU OF MINES Date MAY 20 1958

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Robert A. Lemmon Title EXECUTIVE OFFICER DMEA FIELD TEAM ~~REGION V~~ Date MAY 20 1958

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.

Form MF-104A
(April 1962)

Budget Bureau No. 42-R1151.2

RECEIVED 5 1958

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of April 195 8 Docket No. DMEA 4586 Contract No. Idm E 1071

Operator's Name The New Jersey Zinc Company Minerals Zinc

Address Jefferson City, Tennessee

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes	Ft.	-	-	371.00	140	2.65		
Drilling: Core Ex 0-1000	"	2,750.00	1000	67,094.50	24,393	2.75	30,000	2.75
Churn 1000-1500	"	477.00	159	3,531.00	1,177	3.00	5,000	3.00
Auger Assays	Ea.	-	-	40.00	40	1.00	200	1.00
Stripping Core Boxes	"	30.60	17	660.60	367	1.80		1.80
Trenching								
Test Pits								
Roads and Trails								
Sup. & Tech. Serv.		243.39	1159	5,400.15	25,715	0.21	35,000	0.21
TOTAL DISTRIBUTED COSTS		3,500.99		77,097.25				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		3,500.99		77,097.25				

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: This report covers hole CS-42

Date 5/1/58 Operator The New Jersey Zinc Co.

Per [signature] Title Asst. to Gen. Supt.

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)

[signature]
MINING ENGINEER
U. S. BUREAU OF MINES

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

Report for April 1958

Cedar Springs Area DMEA 4586

Contract Idm E 1071 (Zinc)

One drill operated on this project during the month, and one hole was completed.

Hole CS-42 - Robert Mallicoat property - 400 feet downdip from CS-35

Coordinates: 734,244.26N; 770,276.85E
Elevation: 1405.63

0 - 161	- - - Chickamauga limestone
161 - 860	- - - Mascot dolomite
860 - 998	- - - Upper Kingsport dolomite
998	- - - TR marker
998 -1151	- - - Lower Kingsport dolomite and limestone. Trace sphalerite 1049, scattered traces sphalerite 1055-1057
1151 -1159	- - - (Bottom) Longview dolomite

The sphalerite mineralization inthis hole is very weak. However there is extensive pyrite mineralization which is encouraging.

With the completion of this hole the drilling under this contract is recessed.

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Budget Bureau No. 42-R1036.5

PAID ON VOUCHER & SCHEDULE OF PAYMENTS K- 54

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of March 1958 Docket No. DMEA 4586 Contract No. Idm E 1071
Operator's Name The New Jersey Zinc Company Minerals Zinc
Address Jefferson City, Tennessee
Contract Amount, $ 105,950.00 Government Participation: 50 % Amount, $ 52,975.00

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	6187.00	61,582.50	67,769.50	5/5/58 ARK		
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor	468.09	4,688.67	5,156.76			
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
Core Boxes	55.80	574.20				
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	3.00	37.00	40.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	6713.89	66,882.37	73,596.26	6713.89	66,882.37	73,596.26

I certify that the above bill is correct and just and that payment therefor has not been received.
Date 4/1/58 *Payee The New Jersey Zinc Company
Per [signature] Title Asst. to Gen. Supt.

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the 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:
$ 3356.94
Signature [signature] (Authorized Certifying Officer)
Date APR 24 1958 Vou. No. 163
(See other side)

3356.95

(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. E-1021 in accordance with the terms of the contract.

Signature W. J. Lynch Title EXECUTIVE OFFICER DMEA REGION V Date APR 22 1958

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Robert A. Lawrence Title MINING ENGINEER U. S. BUREAU OF MINES Date APR 22 1958

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.

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of March 1958 Docket No. DMEA 4586 Contract No. Idm E 1071

Operator's Name The New Jersey Zinc Company Minerals Zinc

Address Jefferson City, Tennessee

OPERATION	Unit	Costs This Month	Units This Month	Costs to Date	Units to Date	Unit Costs to Date	Authorized by Contract: Units	Authorized by Contract: Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes EX	Ft.							
Drilling: Core 0-1000	"	5,500.00	2000	64,715.50	23,538	2.75	30,000	2.75
Churn 1000-1500	"	687.00	229	3,054.00	1,018	3.00	5,000	3.00
Auger Assays	Ea.	3.00	3	40.00	40	1.00	200	1.00
Stripping Core Boxes	"	55.80	31	630.00	350	1.80		
Trenching								
Test Pits								
Roads and Trails								
Sup. & Tech. Ser.	Ft.	468.09	2229	5,156.76	24,556	.21	35,000	.21
Total Distributed Costs		6,713.89		73,596.26				Total Costs Authorized by Contract
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
Total Costs		6,713.09		73,596.26				

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.

Date 4/1/58 Operator The New Jersey Zinc Co.

Per [signature] Title Asst. to Gen. Supt.

Remarks: This report covers holes CS-39
CS-41

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)

[signature]
MINING ENGINEER
U. S. BUREAU OF MINES

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

Report for March, 1958

Cedar Springs Area DMEA 4586

Contract Idm E 1071 (Zinc)

One drill operated on this project during the month and two holes were completed.

Hole CS-39 - Robert Mallicoat property - 100' downdip from CS-37

Coordinates: 734,439.33 N; 770,861.71 E
Elevation: 1356.98

0- 10	- -	Clay
10- 210	- -	Chickamauga limestone
210- 858	- -	Mascot dolomite. Strong shine sphalerite at 608'
858	- -	Ce Mtx
858- 997	- -	Upper Kingsport dolomite
997	- -	TR marker
997-1120	- -	Lower Kingsport limestone and dolomite Traces Sp 1038, 1048-1049
1120-1159	- -	(Bottom) Longview limestone and dolomite

This hole is disappointing because despite its proximity to CS-37 it contains only traces of zinc.

Hole CS-41 - Robert Mallicoat property. 100' updip from CS-37.

Approx. Coord: 734,610 N; 770,760 E
Approx. Elev: 1370'

0- 2	- -	Clay
2- 105	- -	Chickamauga limestone
105- 775	- -	Mascot dolomite
775	- -	Ce Mtx
775- 901	- -	Upper Kingsport dolomite
901	- -	TR marker
901- 958	- -	Lower Kingsport dolomite/ Scattered shines Sp 937-938, 940, 941-942, 954-955
958- 962	- -	4' - 2.35% Zn
962- 966	- -	4' - 0.25% Zn
966- 970	- -	4' - 6.80% Zn
970-1070	- -	(Bottom) Lower Kingsport dolomite

The 12 feet from 958 to 970 averages 3.13% Zn. This appears to tie through to the 10' of 5.02% in the "S" bed in hole CS-37.

Attached to this report are map AX-TENN-105 and sections for all holes drilled in the first quarter of 1958, AX-TENN-C-1323, C-1329, C-1350, C-1357 and B-1333.

DMEA
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DMEA EXPLORATION PROJECT

INTERIM REPORT

DMEA-4586, Idm-E1071-Zinc

Operator: The New Jersey Zinc Company, Jefferson City, Tennessee

Location: Cedar Springs Area, Grainger County, Tennessee

Diamond drilling data on the above contract to date and progress made since the last inspection of March 4, 1958 is summarized as follows:

Drilling Completed

Number of holes completed since last inspection....	1
Footage in holes completed since last inspection...	1,150
Total number of holes completed to date.....	31
Total footage completed to date.....	23,471*
Number of holes showing commercial zinc ore.....	1
Number of holes showing non-commercial zinc mineralization.....	18
Number of barren holes.....	12

Additional data on the one hole completed during the Interim follows:

Hole #	Property	Total depth	Remarks
CS-39	Robt.Mallicoat	1150	No additional markers recognized between "U-255" bed and the bottom @ 1150. No mineralization in this hole.

Drilling in Progress

Number of holes in progress.....	1
Footage drilled in incompleted holes at time of inspection.....	913

Available data on the one hole in progress follows:

Hole #	Property	Present depth	Est. total depth	Remarks
CS-41	R. Mallicoat	913	1050	Drilling began on March 10. Brief log to date: 0-2 overburden. Collared in Chickamauga. top of Mascot fm @ 105; Chert matrix @ 775; Top of "R" bed @ 901. No mineralization to date.

* Should be 23,477'
Talbert 4/8/58

L. E. Shirley, Mining Engineer
Bureau of Mines

Helmuth Wedow, Jr. Geologist, USGS

Inspected: March 27, 1958

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

Budget Bureau No. 40-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

PAID ON VOUCHER & SCHEDULE OF PAYMENTS K- 49

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of February, 1958 Docket No. DMEA 4586 Contract No. Idm E 1071

Operator's Name The New Jersey Zinc Company Minerals Zinc

Address Jefferson City, Tennessee

Contract Amount, $105,950.00 Government Participation 50 % Amount, $52,975.00

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling	4148.75	57,433.75	61,582.50	4/8/58	W.P.K.	
Bulldozing		adjusted for				
Crosscutting		$14.00 overclaim				
Drifting		2/1/58				
(2) Labor and Supervision:						
Labor / Supervision	313.95	4,374.72	4,688.67			
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
Coreboxes	37.80	536.40	574.20			
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	13.00	24.00	37.00			
Payroll Taxes						
Liability Insurance						
Less overclaim 2/1/58 hole CS-38	- 14.00					
(8) Contingencies (specify):						
TOTALS	4499.50	62,368.87	66,882.37	4499.50	62,368.87	66,882.37

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

Date 3/1/58 *Payee The New Jersey Zinc Company

Per W. Hoagland Title Asst. to Gen. Supt.

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the 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:

$ 2249.75

Signature Helen R. Miller
(Authorized Certifying Officer)

Date MAR 19 1958 Vou. No. 149
(See other side)

10th

2249.75

(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. E-1071 in accordance with the terms of the contract.

Signature [illegible] Title MINING ENGINEER U. S. BUREAU OF MINES Date MAR 18 1958

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Robert A Lawrence Title EXECUTIVE OFFICER DMEA FIELD TEAM REGION V Date MAR 18 1958

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.

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of February 195 8 Docket No. DMEA 4586 Contract No. Idm E 1071

Operator's Name The New Jersey Zinc Company Minerals Zinc

Address Jefferson City, Tennessee

OPERATION	Unit	Costs This Month	Units This Month	Costs to Date	Units to Date	Unit Costs to Date	Authorized by Contract: Units	Authorized by Contract: Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core 0-1000	Ft.	3698.75	1345	59,215.50	21,538	2,749	30,000	2.75
Drilling: Churn 1000-1500	"	450.00	150	2,367.00	789	3.00	5,000	3.00
Drilling: Auger Assays	Ea.	13.00	13	37.00	37	1.00	200	1.00
Stripping Core Boxes	Ea.	37.80	21	574.20	319	1.80	500	1.80
Trenching								
Test Pits Super. & Tech.								
Roads and Trails Serv.	Ft.	313.95	1495	4,688.67	22,327	.21	35,000	.21
Less Overclaim 2/1/58 - CS-38		- 14.00						
Total Distributed Costs		4499.50		66,882.37				Total Costs Authorized by Contract
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
Total Costs		4499.50		66,882.37				105,950.00

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.

Date 3/1/58 Operator The New Jersey Zinc Co.

Per [signature] Title Asst. to Gen. Supt.

Remarks: This report covers holes CS-37 CS-40

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)

[signature]
MINING ENGINEER
U. S. BUREAU OF MINES

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

Report for February 1958

Cedar Springs Area DMEA 4586

Contract Idm E 1071 (Zinc)

Two drills operated on the project during the month and two holes were completed.

Hole CS-37 - Robert Mallicoat property - 800' SW on strike from CS-22

Coordinates: 734,526.55 N; 770,808.53 E
Elevation: 1359.76

Results:

0- 155 - - Chickamauga limestone
155- 815 - - Mascot dolomite
815 - - Ce Mtx
815- 938 - - Upper Kingsport dolomite
938- 973 - - 35' ore averaging 6.24% zinc
938-943 - 5' - 2.68% zinc
943-948 - 5' - 2.66% zinc
948-953 - 5' - 5.31% zinc
953-958 - 5' - 6.92% zinc
958-963 - 5' - 8.85% zinc
963-968 - 5' - 8.97% zinc
968-973 - 5' - 8.32% zinc
973-976 - - Upper Kingsport dolomite
976 - - TR
976- 988 - - Lower Kingsport dolomite
988-1007 - - 19' ore averaging 3.41% zinc
988- 993 - 5' - 3.63% zinc
993- 998 - 5' - 2.40% zinc
998-1003 - 5' - 0.60% zinc
1003-1007 - 4' - 7.90% zinc
1007-1015 - - Lower Kingsport dolomite
1015-1025 - - 10' ore averaging 5.02% zinc
1015-1020 - 5' - 4.58% zinc
1020-1025 - 5' - 5.46% zinc
1025-1115 - - Lower Kingsport dolomite and limestone
1115-1150 - - (Bottom) Longview dolomite & limestone

This hole, with substantial footage of ore, is very promising. The drill has been moved 100' downdip to search for an extension of this ore.

Hole CS-40 - Carl Davidson property - 1250' NE on strike from CS-33

Coordinates: 738,500.82 N; 775,225.41 E
Elevation: 1562.66

Results:

0- 47 - - Clay
47-169 - - Upper Kingsport dolomite. Trace sphalerite 91',106',143',166'.
169-345 - - (Bottom) Lower Kingsport limestone and dolomite

This hole contains a small amount of zinc mineralization and strong pyrite mineralization. The area looks encouraging but no more drilling will be done until additional geochemical information is gathered to aid further drilling. This drill was moved to the Lawson Area to begin drilling on that program.

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~~3/14~~	~~Tennessee~~	~~500~~

DMEA
EXPLORATION PROJECT

INTERIM REPORT

DMEA-4586, Idm-E1071-zinc

Operator: The New Jersey Zinc Company, Jefferson City, Tennessee

Location: Cedar Springs Area, Grainger County, Tennessee

Diamond drilling data on the above contract to date and progress made since the last inspection of February 6, 1958 is summarized as follows:

Drilling Completed

Number of holes completed since last inspection..	1
Footage in holes completed since last inspection .	345
Total number of holes completed to date.....	30
Total footage completed to date.....	22,321
Number of holes showing commercial zinc ore....	1
Number of holes showing non-commercial zinc mineralization.....	18
Number of barren holes.....	11

Correct footage of complete holes - 22,321' 3/14/58

Additional information on the one hole completed during the interim is as follows:

Hole No.	Property	Total depth	Remarks
CS-40	C. Davidson	345	Coordinates: 738,500.82 North; 775,225.41 east. Collar elevation 1562.66; Hole is located 1100 ft northeast and along strike from CS-33. A brief log of the hole is as follows; 0-47 overburden; top of "TR" @ 169; "B" marker @ 191; top of "E" bed @ 206; bottomed @ 345. Mineralization: Traces of sphalerite @ 91,106,143 and 166. Scattered pyrite from 153 to 238.

Drilling in Progress

Number of holes in progress.....	1
Footage drilled in incompleted holes at time of inspection.....	927

Available data on the one hole in progress is as follows:

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Hole No.	Property	Present depth	Estimated total depth	Remarks
CS-39	R. Mallicoat	927	1200	Coordinates: 734,439.33 north, and 770,861.71 east. Collar elevation 1358.98. Drilling began 2/7/58. A brief log to date is as follows: 0-10 overburden; collared in Chickamauga ls; top of Mascot @ 210; chert matrix @ 858; "U"-255" bed from 918-920. No mineralization encountered to present depth.

Inspected: March 4, 1958

L. E. Shirley, Mining Engineer
Bureau of Mines

z

February 26, 1958

Memorandum

To: Jay L. Chambers, Defense Minerals Exploration Administration, Interior Building, Washington 25, D.C.

From: Personnel Assistant, Morris, Tennessee

Subject: Monthly reports and vouchers

We are enclosing two copies each of the following monthly reports and vouchers:

Idm-K1071	The New Jersey Zinc Company Docket No. DMEA-4586 9th payment - month of January Amount $3195.28
Idm-K1110	The New Jersey Zinc Company Docket No. DMEA-4675 1st payment - month of January Amount $95.62
Idm-K1152	Reynolds Metals Company Docket No. DMEA-4750 1st payment - month of January Starting Date: 1/5/58 Amount $800.32

Helen R. Miller

Official

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Attachments
/hbm
Copies to R. A. Laurence
V. J. Lynch
Morris files
Day files

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

Budget Bureau No. 42-R1036.5

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

PAID ON VOUCHER & SCHEDULE OF PAYMENTS K- 43

Month of January, 1953 Docket No. DMEA 4586 Contract No. Dcm E 1071
Operator's Name The New Jersey Zinc Company Minerals Zinc
Address Jefferson City, Tennessee
Contract Amount, $ 105,950.00 Government Participation: 50 % Amount, $ 52,975.00

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	6437.75	51,010.00	57,447.75	3/6/53		
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision	491.61	3,883.11	4,374.72			
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
Core Boxes	61.20	475.20	536.40			
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	-	24.00	24.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	6990.56	55,392.31	62,382.87	6990.56	55,392.31	62,382.87

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

Date 2/1/53 *Payee The New Jersey Zinc Company

Per [signature] Title Asst. to Gen. Supt.

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the 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:

$ 3495.28

Signature Helen R. Miller (Authorized Certifying Officer)

Date FEB 26 1953 Vou. No. 137

(See other side)

3495.28

(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. E-1071 in accordance with the terms of the contract.

Signature V. J. Lynch Title U. S. BUREAU OF MINES Date FEB 25 1958

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Robert A. Lawrence Title EXECUTIVE OFFICER DMEA REGION V Date FEB 25 1958

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.

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of January 195 8 Docket No. DMEA 4586 Contract No. Idm E 1071
Operator's Name The New Jersey Zinc Company Minerals Zinc
Address Jefferson City, Tennessee

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core 0-1000	Ft.	6437.75	2341	55,530.75	20,193	2.75	30,000	2.75
Churn 1000-1500	"	-	-	1,917.00	639	3.00	5,000	3.00
Auger Assays	Ea.	-	-	24.00	24	1.00	200	1.00
Stripping Core Boxes	"	61.20	34	536.40	298	1.80	500	1.80
Trenching								
Test Pits								
Roads and Trails								
Sup. & Tech. Ser.	Ft.	491.61	2341	4,374.72	20,832	.21	35,000	.21
TOTAL DISTRIBUTED COSTS		6990.56		62,382.87				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		6990.56		62,382.87				105,950.00

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.

Date 2/1/58 Operator The New Jersey Zinc Co.

Per [signature] Title Asst. Gen. Supt.

REMARKS: This report covers holes CS-35
36
38

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)

V. J. Lynch
MINING ENGINEER
U. S. BUREAU OF MINES

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

Report for January 1958

Cedar Springs Area MTEA 4586

Contract Idm E 1071 (Zinc)

Two drills operated on the project during the month and three holes were completed. The locationsof these holes are shown in green on the accompanying map.

Hole CS-35 - Robert Mallicoat property - 300' downdip from CS-32

Coordinates: 734,587.28 N; 770,068.97 E
Elevation: 1451.94

0- 10 - - Clay
10-608 - - Mascot dolomite
608 - - C Matrix
608-755 - - Upper Kingsport dolomite
755 - - TR
755-930 - - (Bottom) Lower Kingsport

Hole CS-36 - J. R. Davidson property - 300' downdip from CS-34

Coordinates: 737,385.86 N; 774,466,68 E
Elevation: 1448.91

0- 21 - - Clay
21-363 - - Mascot dolomite
363 - - Ce Matrix ?
363 -519 - - Upper Kingsport dolomite. Traces of sphalerite 503, 515, 516, 519
519 - - TR
519-524 - - Lower Kingsport dolomite
524-543 - - 19' - mineralization estimated at 1% Zn
543-701 - - (Bottom) Lower Kingsport-Upper Longview Scattered traces sphalerite 546-549, 563

Hole CS-38 - J. R. Davidson property. 300' downdip from CS-31 Coordinates 737,140.27 N, 774,007.83 E Elev. 1439.82

0- 48 - - Clay
48-528 - - Mascot and upper Kingsport dolomite Traces sphalerite 477, 483-484, 494, 495, 506-508, 527
528 - - TR ?
528-694 - - Lower Kingsport limestone and dolomite. Traces sphalerite 537-543, 545
694-701 - - T Bed
701-710 - - Longview dolomite

This hole is strongly fractured, brecciated, and mylonitized making identification of upper marker horizons uncertain.

OFFICIAL FILE COPY
DMEA
RECEIVED FEB 17 1958
DATE | CODE
2-18 | C | 220
19 | | 100
| | 110
2/21 | | 800
2/21 | | 500

INTERIM REPORT

DMEA-4586, Idm-E1071 - Zinc

Operator: The New Jersey Zinc Company, Jefferson City, Tennessee

Location: Cedar Springs Area, Grainger County, Tennessee

Diamond drilling data on the above contract todate and progress mde since the last inspection of January 14, 1958 is summarized as follows:

Number of holes completed since last inspection--	2
Footage in holes completed since last inspection--	1860
Total number of holes completed todate----------	29
Total footage completed todate----------	21,971 *
Number of holes showing commercial zinc ore-----	1
Number of holes showing non-commercial zinc mineralization----------	17
Number of barren holes----------	11

Additional information on the two holes completed during the Interim is as follows:

Hole No.	Property	Total depth	Remarks
CS-37	Robt. Mallicoat	1150	Drilling started 1-10-58 and hole was bottomed 2-4-58. A continued brief log is as follows: Chert matrix @ 815', U-255 bed @ 894. Top of "TR" @ 976', top of "E" bed @ 1007, bottomed @ 1150'.
35 x 5.5 =	192.5		
10 x 3.5 =	35.0		
10 x 4.0 =	40.0		
			Mineralization: from 938 to 973- 35' of est. 5½% Zn, 988 to 1007; 19' of est. 3½% Zn, 1015 to 1025; 10' of est. 3½% to 4% Zn.
CS-38	Davidson	710	Location: 600 ft downdip from CS-31. Coordinates: 737, 140 north and 774, 008 East. Elevation @ collar-1440'. A brief log of the hole is as follows: 0-48 overburden, top of "TR" bed @ 528; top of "E" @ 581; top of "T" @ 694, bottomed @ 710.
			Mineralization: Traces of Zn @ 477, 483, to 484, 494-495, 506 to 508, 527, 537 to 543 and @ 545.

* Should be 21,979'
Tabin
2/21/58

Drilling In Progress

Drills were being moved to holes CS-39 and CS-40 at the time of this inspection. No drilling footage will be available until the next regular inspection.

Available data on these two holes is as follows:

Hole No. Hole No.	Property	Present depth	Estimated total depth	Remarks
CS-39	Carl Davidson	0	375	Location: 1100 ft northeast and along strike from CS-33.
CS-40	Robt. Mallicoat	0	1200	Location: 100 ft downdip from CS-37.

Inspected: February 6, 1958

L. E. Shirley, Mining Engineer
Bureau of Mines

Helmuth Wedow, Jr. Geologist
Geological Survey

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ORIGINAL FILE COPY
DMEA
RECEIVED JAN 28 1958
DATE | INITIALS | CODE
1/28 | Coffee | 600
1/31 | Alley | 500

INTERIM REPORT

DMEA-4586, Idm-E1071 - Zinc

Operator: The New Jersey Zinc Co., Jefferson City, Tennessee

Location: Cedar Springs Area, Grainger County, Tennessee

Diamond drilling data on the above contract todate and progress made since the last inspection of Dec. 5, 1957 is summarized as follows:

Drilling Completed:

Number of holes completed since last inspection....	6
Footage in holes " " " "	3,679
Total number of holes completed to date	27
Total footage completed in holes todate	20,111
Number of holes showing commercial zinc ore.....	0
Number of holes showing non-commercial zinc mineralization.....	16
Number of barren holes	11

Additional data on the 6 holes completed during the interim is as follows:

Hole No.	Property	Total depth	Remarks
CS-31	J.R. Davidson (tract 1)	452	Coordinates: 737,670.79 North 773,728.24 East. Elevation:of hole at collar-1542.65' Drilling began Dec.28, 1957 and the hole was bottomed Jan.7, 1958. Mineralization: In addition to that previously reported there were traces of sphalerite at 183, 184, 196 and 199.
CS-32	Robt.Mallicoat	760	Location: 300' downdip from CS-38. Coordinates: 734,850.37 North 769,927.75 East Elevation at collar of hole: 1470.16 ft Drilling began Dec.5, 1957 and was completed (?). A brief log of the hole is as follows: 0-30 overburden, Chert matrix @ 427, U-255 bed @ 499, "TR" bed @ 579, "B" bed @ 596, "E" (?)bed @ 732, "J" bed @ 710, "T" bed from 734 to 743. Hole bottomed @ 760. No mineralization was encountered.

ACTION ON INTERIM
OR FINAL FIELD SUPERVISOR REPORT

Case 1-23

Referred to:

1. ~~Mr. Muldoonford~~
2. ~~Mr. Johnson~~
3. ~~Mr. Chambers~~
4. Docket Control Mails and Files
5. ~~[illegible]~~ Division
6. Docket Control Mails and Files
7. 500

Note comments in report regarding:

1. Footage of completed holes do 30,117'
2.
3. Talbert 1/24/57
4.

and take appropriate action.

Action taken by Division:

Robert E. Adams

Hole No.	Property	Total Depth	Remarks
CS-33	Carl Holt	368	Location: 500' northeast of CS-31. Coordinates: 737,917.25-North 774,197.76 East Elevation at collar of hole is 1507.0. Drilling began Jan.8, 1958 and the hole was completed Jan.17. A brief log of the hole is as follows: 0-65 overburden, "TR" (?) bed @ 165, "E" bed @ 215, "J" bed (?) @ 292, "T" bed @ 311,. Hole bottomed at 368. Mineralization: Traces of sphalerite @114, scant local traces from 145 to 147, 155 to 156, traces @ 160, 179,200, shines @ 225, trace @ 274, from 150-151- 1 ft of est. 7% zinc, and from 163-164-. 1 ft of est. 4% zinc.
CS-34	Carl Holt	473	Location: 300' downdip from CS-33. Coordinates and hole elevation were not available at time of inspection. Drilling began Dec. 18, 1957 and the hole was completed Dec.30, 1957. A brief log of the hole is as follows:: 0-26 overburden. Chert matrix @ 161, brown oolitic chert @ 205, U-255 bed @ 240, "TR" bed @ 324, "E" bed @ 372, "T" bed from 425-436- Hole bottomed @ 473. Mineralization: Scattered traces of sphalerite from 301 to 306, from 306 to 311, 5 ft of est. 6% zinc; from 311 to 315 4 ft of est. 2% zinc. scattered local traces from 315 to 335.
CS-35	Robt Mallicoat property	925	Location: 300' downdip from CS-32. Drilling began 12-21-57 and was completed Jan. 11,1958. A beirf log of the hole is as follows: 0-10 overburden, Chert matrix @ 608. "TR" bed @ 755, "E" bed @ 819, no "T" bed was recognized. Hole bottomed @ 925. No mineralization encountered.

Hole No.	Property	Total depth	Remarks
CS-36	J.R.Davidson	701'	Location: 300' downdip from CS-34. Drilling began Dec.3, 1957 and the hole was completed Jan. 13, 1958. A brief log of the hole is as follows: Collared in Mascot dolomite, 0-21 overburden, chert matrix @ 363, U-255(?) @454, "TR" bed @ 519, "E" bed @ 559; "T" bed was not logged, hole bottomed at 471. Mineralization: Traces of sphalerite @ 503,516,519, from 524 to 527- 3 ft of est. 1%Zn. traces from 527 to 530, from 530 to 535- 5 ft of est. 1 1/2% Zn. traces from 535 to 541, from 541 to 543- 2 ft of est. 12% Zn; trace @ 563, scattered traces from 546 to 549.

Drilling in Progress

Number of holes in progress..... 2
Total footage drilled in incompleted holes..... 239

Additional data on the two holes in progress of this time is as follows:

Hole No.	Property	Present depth	Est. Total depth	Remarks
CS-37	Robt. Mallicoat	239'	1100'	Location: 600' southwest of CS-22. A brief log of the hole to indicated present depth is as follows: Collared in Chickamauga. No over burden, Top of Knox @ 155.
CS-38	Robt. Mallicoat	0	700'	Drill moving to this hole on date of inspection.

Inspected: January 14, 1958

L. E. Shirley, Mining Engineer, USM

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Helmuth Wedow, Jr. Geologist, USGS

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
REGION V

ELECTROTECHNICAL
EXPERIMENT STATION

P. O. BOX 217
NORRIS, TENNESSEE

January 20, 1958

Memorandum

To: Jay L. Chambers, Defense Minerals Exploration Administration, Interior Building, Washington 25, D. C.

From: Personal Assistant, Norris, Tennessee

Subject: Monthly reports and vouchers

We are enclosing two copies each of the following monthly reports and vouchers:

Idm-E1071 — The New Jersey Zinc Company
Docket No. DMEA-4586
8th payment - month of December
Amount $4541.64

Idm-E1135 — Grindstaff and Greene
Docket No. DMEA-4779
2nd payment - month of December
Amount $741.75

Helen R. Miller

Helen R. Miller

Attachments
/hbm
Copies to R. A. Laurence
V. J. Lynch
Norris files
Day files

OFFICIAL FILE COPY
DMEA
RECEIVED JAN 22 1958

DATE	INITIALS	CODE
1/22	gb	220
"	[illegible]	110
~~1/22~~	~~[illegible]~~	~~500~~

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

Budget Bureau No. 42-R1036.5

RECEIVED JAN 22 1958

PAID ON VOUCHER & SCHEDULE OF PAYMENTS K-

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of December, 1957 Docket No. DMEA 4586 Contract No. Idm E 1071

Operator's Name The New Jersey Zinc Company Minerals Zinc

Address Jefferson City, Tennessee

Contract Amount, $ 105,950.00 Government Participation: 50 % Amount, $ 52,975.00

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling	8382.00	42,628.00	51,010.00	2/27/58 OK		
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision	640.08	3,243.03	3,883.11			
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
Core Boxes	61.20	414.00	475.20			
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment	-					
Sampling and Analysis		24.00	24.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	~~9083.28~~	~~46,309.03~~	~~55,392.31~~	9083.28	46,309.03	55,392.31

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

Date 1/1/58 *Payee The New Jersey Zinc Company

Per [signature] Title Asst. to Gen. Supt.

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the 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:

$ 4541.64

Signature Helen R. Miller
(Authorized Certifying Officer)

Date JAN 20 1958 Vou. No. 119
(See other side)

4541.64

(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. E-1071 in accordance with the terms of the contract.

Signature P. B. Lynch Title MINING ENGINEER U.S. BUREAU OF MINES Date JAN 17 1958

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Robert A. Lawrence Title EXECUTIVE OFFICER DMEA FIELD TEAM REGION V Date JAN 17 1958

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.

Budget Bureau No. 42-R1151.2

RECEIVED JAN 22 1958

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of December 1957 Docket No. DMEA 4586 Contract No. Idm E 1071

Operator's Name The New Jersey Zinc Company Minerals Zinc

Address Jefferson City, Tennessee

OPERATION	Unit	Costs This Month	Units This Month	Costs to Date	Units to Date	Unit Costs to Date	Authorized by Contract: Units	Authorized by Contract: Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core 0-1000	Ft.	8382.00	3048	49,093.00	17,852	2.75	30,000	2.75
Drilling: Core 1000-1500	"	-	-	1,917.00	639	3.00	5,000	3.00
Drilling: Churn Assays	Ea.	-	-	24.00	24	1.00	200	1.00
Drilling: Auger Core Boxes	Ea.	61.20	34	475.20	264	1.80	500	1.80
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Sup. & Tech. Ser.	Ft.	640.08	3048	3,883.11	18,491	0.21	35,000	.21
Total Distributed Costs		9083.28		55,392.31				Total Costs Authorized by Contract
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
Total Costs		9083.28		55,392.31				105,950.00

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.

Date 1/1/58 Operator The New Jersey Zinc Co.

Per [signature] Title Asst. to Gen. Supt.

Remarks: This report covers
CS-31
32
33
34
I-59

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)

[signature]

GEOLOGIST, U. S. G. S.

JAN 17 1958

INSTRUCTIONS

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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".

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GPO 872894

Report For December 1957

Cedar Springs Area [illegible]

Contract No 2 1071 (Zinc)

Two drills operated on the project during the month and five holes were completed. The location of these holes are shown in green on the accompanying map. Sections showing all holes drilled during the last quarter are attached.

<u>Hole 68-31</u> - Carl Holt property - 1800' NE on strike from 68-25 and 300' updip.

Coordinates: 737,670.795; 773,728.24
Elevation: 1542.65

0- 54 - - Clay
54- 75 - - Mascot dolomite
75-262 - - Upper Kingsport dolomite
Shine sphalerite 155. Traces sphalerite 156-174, 183-184, 196, 199, 200. Shine sphalerite 207
262 - - TR marker
262-452 - - (Bottom) Lower Kingsport dolomite and limestone.

<u>Hole 68-32</u> - Robert Mallicoat property. 300' downdip from 68-28

Coordinates: 734,850.378; 769,987.752
Elevation: 1470.16

0- 38 - - Clay
38-427 - - Mascot dolomite
427-579 - - Upper Kingsport dolomite
579 - - TR marker
579-734 - - Lower Kingsport dolomite and limestone
734-760 - - (Bottom) Longview dolomite and limestone

<u>Hole 68-33</u> - Carl Holt property, 540' NE of 68-31 on strike

Coordinates: 737,917.258; 774,197.763
Elevation: 1507.38

0- 65 - - Clay
65-150 - - Upper Kingsport dolomite
Traces sphalerite 114, 145-147
150-151 - - 1' mineralization estimated at 7% Zn
151-163 - - Upper Kingsport dolomite. Traces sphalerite 155-156, 160
163-164 - - 1' mineralization estimated at 4% Zn
164-165 - - Upper Kingsport dolomite
165 - - TR marker
165-311 - - Lower Kingsport dolomite and limestone
Traces sphalerite 179, 200. Shine sphalerite 225
311-360 - - (Bottom) Longview dolomite and limestone

Hole 65-24 - Carl Holt property, 300' downdip from 65-33

Approx. Coord: 737,650.00N; 776,335.00E
Approx. Elevation: 1469'

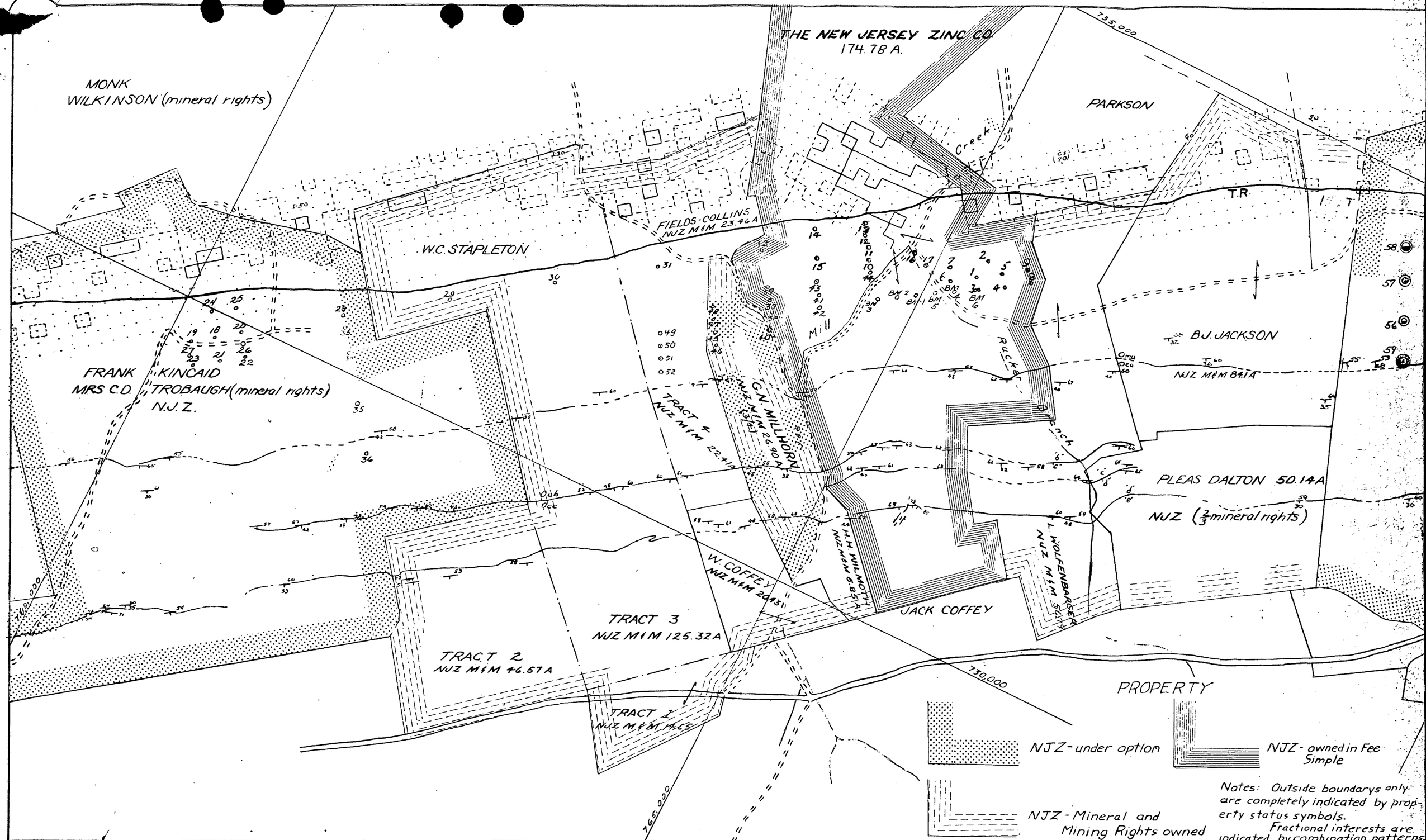
0- 28 - - Clay
28-161 - - Mascot dolomite
161-306 - - Upper Kingsport dolomite
Scattered traces sphalerite 301-306
306-315 - - 9' mineralization estimated @ 3% Zn
315-324 - - Upper Kingsport dolomite
324 - - 9N marker
324-350 - - Lower Kingsport limestone and dolomite
Strong shine sphalerite 328. Scattered traces sphalerite 315-335
350-355 - - 5' mineralization estimated @ 3% Zn
355-425 - - Lower Kingsport dolomite & limestone
425-473 - - (Bottom) Longview dolomite and limestone

Hole I-59 - J. R. Davidson property, NW tract 300' downdip from I-56

Coordinates: 733,727.50N; 768,592.59E
Elevation: 1473.30

0- 9 - - Clay
9-670 - - Mascot dolomite
670-825 - - Upper Kingsport dolomite
825 - - 9N marker
825-933 - - Lower Kingsport dolomite
933-937 - - 4' mineralization estimated @ 15% Zn
937-976 - - Lower Kingsport dolomite & limestone
976-995 - - (Bottom) Longview dolomite and limestone.

W. J. Collette/jf



Notes: Outside boundarys only are completely indicated by property status symbols.
Fractional interests are indicated by combination patterns.

POSTED TO DATE			
5/30/53			
1-56 TEW			
10-56 "			

THE NEW JERSEY ZINC COMPANY
ROGERSVILLE TENNESSEE

DRAWN SJL, JFP DATE 2/17/53
TRACED SCALE 1"=660'

COPPER RIDGE BELT
SECTOR II SHEET 43W

GRAINGER COUNTY, TENN.
FILE NO. AX-TENN 106

OFFICIAL FILE COPY
D M E A
RECEIVED JAN 22 1958

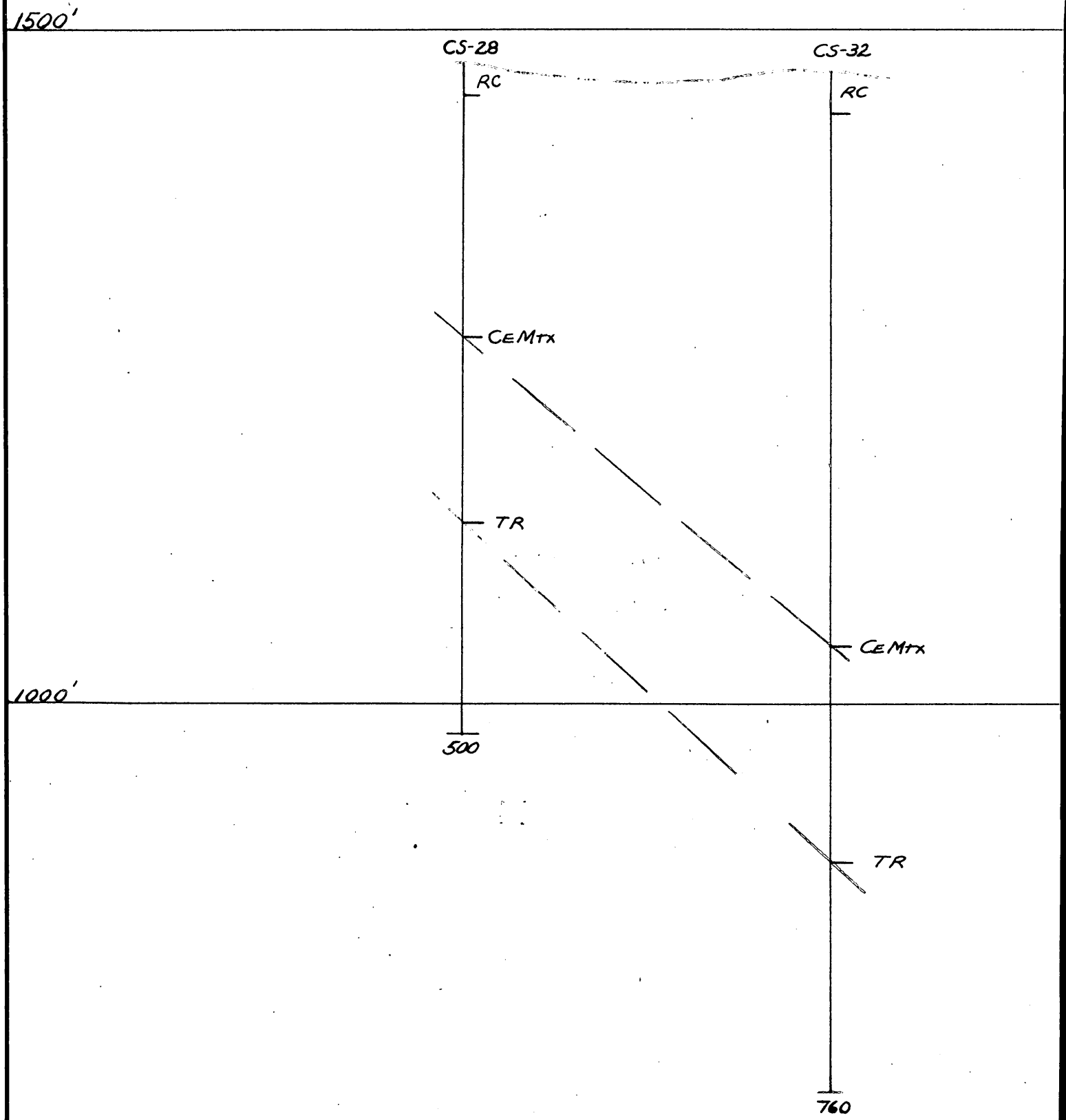
DATE	INITIALS	CODE

OFFICIAL FILE COPY
D M E A
RECEIVED JAN 22 1958

DATE	INITIALS	CODE

OFFICIAL FILE COPY
D M E A
RECEIVED JAN

DATE	INITIALS



DRAWN WJC	DIP SECTION CS-28-32-	DATE 12-20-57
TRACED	SECTOR II AREA H	SCALE 1" = 100'
CHECKED	COPPER RIDGE BELT	AX-TENN, C-1323
APPROVED		

OFFICIAL FILE COPY
DMEA
RECEIVED

DATE	IN	ADE

DMEA
RECEIVED DEC 13 1957

DATE	INITIALS	CODE
12/13	gb	220
16	CDM	100
16	Mg	500

INTERIM REPORT

DMEA-4586, Idm-E1071 (Zinc)

Operator: The New Jersey Zinc Company, Jefferson City, Tennessee

Location: Cedar Springs Area, Grainger County, Tennessee

Diamond drilling data on the above project to date ~~and progress~~ made since the last inspection of November 7, 1957 is summarized as follows:

Drilling completed:

Footage in holes completed since last inspection	3,042
Total footage in holes completed todate	16,432
Number of holes completed since last inspection	4
Total number of holes completed todate	21
Number of holes showing commercial zinc ore	0
Number of holes showing non-commercial zinc mineralization	12
Number of barren holes	9

Additional data on the four holes completed during the interim is as follows:

Hole No.	Property	Total Depth	Remarks
I-57	J. R. Davidson (tract 2)	632	No additional mineralization encountered other than that previously reported.
I-58	J. R. Davidson (tract 2)	406	Location: 300 feet updip from I-57 Collared in Mascot; chert matrix @ 111, U-255 bed @ 179', TR bed @ 258, "E" bed @ 301, "J" sand @ 382, "T" bed @ 405. Mineralization: @ 228-229, 1' of 35% Zn (est), @ 229-231, scattered traces of sphalerite.
I-59	J. R. Davidson (tract 2)	987	Location: 300 ft downdip from I-56; collared in Mascot fm, chert matrix @ 678, U-255 bed @ 743, TR bed @ 825, "E" bed @ 876, "J" bed @ 947, "T" bed @ 976. Mineralization: 833-837; traces of sphalerite
CS-30	J. R. Davidson (tract 1)	1017	Mascot fm from 0-692, chert matrix @ 692 ft. TR bed @ 841, sands @ 1002 and 1006. Bottomed in sed. breccia. No mineralization noted in this hole.

Drilling in progress:

Number of holes in progress 2
Total footage drilled in incompleted holes at time of inspection 424

Additional data of the two holes in progress at this time is as follows:

Hole No.	Property	Present Depth	Estimated Total Depth	Remarks
CS-31	J. R. Davidson (tract 1)	424	452	Located 1200 feet NE of CS-25; collared near bottom of Mascot fm. "U-255" bed at 136 ft. Mineralization: Zn shine @ 155 ft; scattered traces of sphalerite from 156 to 174 feet; shine @ 207; trace of sphalerite @ 208 ft.
CS-32	Robert Mallicoat	0	700 +	Located 300 feet downdip from CS-28 Drill moving to this location on date of inspection.

Inspected: December 5, 1957

L. E. Shirley, Mining Engineer
U. S. Bureau of Mines

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

g

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Budget Bureau No. 42-R1036.5

PAID ON VOUCHER & SCHEDULE OF PAYMENTS K-32

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of November, 1957 Docket No. DMEA 4586 Contract No. Idm E 1071
Operator's Name The New Jersey Zinc Company Minerals Zinc
Address Jefferson City, Tennessee
Contract Amount, $105,950.00 Government Participation: 50 % Amount, $52,975.00

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:	8210.25	34,423.25	42,633.50	1/14/58 W.P.R. 8204.75		
Drilling						
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision	626.64	2,616.81	3,243.45	626.22	✓	
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
Core Boxes	194.40	219.60	414.00	194.40	✓	
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	-	24.00	24.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
				9025.37		46,309.03
TOTALS	8031.29	39,283.66	46,314.95	~~9031.29~~	27283.66	~~46,314.95~~

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

Date Dec. 19, 1957 *Payee The New Jersey Zinc Company

Per Johnson Crawford Title Supt. for Tennessee

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the 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:

$ ~~4515.65~~ 4512.68

Signature Helen R. Melin
(Authorized Certifying Officer)

Date DEC 24 1957 Vou. No. 105
(See other side)

4515.64

(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. E-1071 in accordance with the terms of the contract.

Signature S. C. Bergman Title GEOLOGIST, U. S. G. S. Date DEC 18 195

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature V. E. Lynch Title ACTING EXECUTIVE OFFICER DMEA—REGION V Date DEC 18 195

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.

Form ME-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of November 1957 Docket No. DMEA 4586 Contract No. Idm E 1071

Operator's Name The New Jersey Zinc Company Minerals Zinc

Address Jefferson City, Tennessee

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core 0-1000	Ft.	8159.25	~~2967~~ 2965	40,716.50	14806	2.75	30,000	2.75
Churn 1000-1500	"	51.00	17	1,917.00	639	3.00	5,000	3.00
Auger								
Stripping Assays	Ea.	-	-	24.00	24	1.00	200	1.00
Trenching Core Boxes	"	194.40	108	414.00	230	1.80	500	1.80
Test Pits								
Roads and Trails								
Sup. & TechnSer.	Ft.	626.64	~~2984~~ 2982	3,243.45		0.21	35,000	0.21
TOTAL DISTRIBUTED COSTS		9031.29		46,314.95				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		9031.29		46,314.95				105,950.00

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.

Date Dec. 19, 1957 Operator The New Jersey Zinc Co.

Per Johnson Crawford Title Supt. for Tennessee

REMARKS: This report covers drill holes:
CS-29
30
I-57
58

→ 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)

V. J. Lynch
MINING ENGINEER
U. S. BUREAU OF MINES

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

Report for November 1957

Cedar Springs Area DMEA 4586

Contract Idm E 1071 (Zinc)

Hole CS-29 - J. R. Davidson - NE tract - 200' downdip from CS-27

Coordinates: 736,411.98N; 773,070.40E
Elevation: 1457.09

0- 8 - - Clay
8-617 - - Mascot dolomite
617-759 - - Upper Kingsport dolomite
759 - - TR marker
759-929 - - (Bottom) Lower Kingsport limestone and dolomite

Hole CS-30 - J. R. Davidson - NE tract, 400' downdip from CS-29

Approx. Coordinates: 736,025.00N; 773,240.00E
Approx. Elevation: 1325.00

0- 2 - - Clay
2-692 - - Mascot dolomite
692-841 - - Upper Kingsport dolomite. Trace sphalerite
841 - - @ 768. TR marker @ 841
841-1017 - (Bottom) Lower Kingsport limestone and dolomite

Hole I-57 - J. R. Davidson - SW tract. 500' SW. I-55 on strike

Approx. Coordinates: 734,290.00N; 768,300.00E
Approx. Elevation: 1480'

0- 8 - - Clay
8-282 - - Mascot dolomite
282-425 - - Upper Kingsport dolomite
425 - - Traces sphalerite 337,416,418. TR marker 425
425-431 - - Lower Kingsport dolomite. Traces sphalerite 425, 426
431-437 - - 6' mineralization est. @ 1% Zn
437-632 - - (Bottom) Lower Kingsport limestone and dolomite

Hole I-58 - - J. R. Davidson, SW tract, 300' updip from I-57

Approx. Coordinates: 734,585.00N; 768,220.00E
Approx. Elevation: 1500'

0- 74 - - Clay
74-228 - - Upper Kingsport dolomite
228-229 - - 1' ore estimated @ 35% Zn
229-258 - - Upper Kingsport dolomite. Scattered traces sphalerite 229-231
258-- - TR marker
258-405 - - Lower Kingsport dolomite and limestone
405-406 - - (Bottom) Longview dolomite.

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

RECEIVED DEC 6 1957 D.M.E.A.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Budget Bureau No. 42-R1036.5

PAID ON VOUCHER & SCHEDULE OF PAYMENTS K- 288

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of October, 1957 Docket No. DMEA 4586 Contract No. Idm E 1071

Operator's Name The New Jersey Zinc Company Minerals Zinc

Address Jefferson City, Tennessee

Contract Amount, $ 105,950.00 Government Participation: 50 % Amount, $ 52,975.00

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling	10,831.25	23,592.00	34,423.25	12/27/57		
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision	821.52	1,795.29	2,616.81			
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
Core Boxes	-	219.60	219.60			
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	10.00	14.00	24.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
Totals	11,662.77	25,620.89	37,283.66	11,662.77	25,620.89	37,283.66

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

Date 11-15-57 *Payee The New Jersey Zinc Company

Per [signature] Title Asst. to the Supt.

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the 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:

$ 5831.38

Signature Helen R. Melin
(Authorized Certifying Officer)

Date DEC 4 1957 Vou. No. 90
(See other side)

6

5831.39

(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. E 1071 in accordance with the terms of the contract.

Signature H. Weaver Title GEOLOGIST, U. S. G. S. Date NOV 26 1957

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature V. J. Lynch Title ACTING EXECUTIVE OFFICER DMEA - REGION V Date NOV 26 1957

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.

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

RECEIVED DEC 6 1957 D.M.E.A.

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

Month of October 1957 Docket No. DMEA 4586 Contract No. Idm E 1071

Operator's Name The New Jersey Zinc Company Minerals Zinc

Address Jefferson City, Tennessee

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core 0-1000	Ft.	9952.25	3619	32,557.25	11,839	2.75	30,000	2.75
Churn 1000-1500	"	879.00	293	1,866.00	622	3.00	5,000	3.00
Auger								
Stripping Assays	Ea.	10.00	10	24.00	24	1.00	200	1.00
Trenching Core Boxes	"	-	-	219.60	122	1.80	500	1.80
Test Pits								
Roads and Trails								
Sup. & Tech. Ser.	Ft.	821.52	3912	2,616.81	12,461	0.21	35,000	0.21
TOTAL DISTRIBUTED COSTS		11,662.77		37,283.66				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		11,662.77		37,283.66				105,950.00

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.

Date 11-15-57 Operator The New Jersey Zinc Co.

Per [signature] Title Asst. to the Supt.

REMARKS: This report covers drill holes:
CS-26
CS-27
CS-28
I-55
I-56

→ 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)

NOTE: OPERATORS NARRATIVE SHOWS A DEPTH OF 783 FEET FOR HOLE I-56; 773 FEET IS CORRECT AND WAS SO BILLED BY THE OPERATOR

[signature]
GEOLOGIST, U. S. G. S.

NOV 26 1957

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

Report for October 1957

Cedar Springs Area DMEA 4586

Contract Idm E 1071 (Zinc)

Hole CS-26 - Woodrow Davidson - NJZ Company mining and mineral rights - 100' downdip from CS-24

Coordinates: 734,635.14 N; 771,432.67 E
Elevation: 1382.88

0- 10 - - RC
10- 319 - - Chickamauga limestone
319- 974 - - Mascot dolomite
Shine sphalerite 927
974-1049 - - Upper Kingsport dolomite
1049-1074 - - 25' mineralization estimated @ 1½% Zn
1074-1121 - - Upper Kingsport dolomite
Traces & shines sphalerite 1077-1103
1121-1129 - - 8' ore estimated @ 3½% Zn 4
1129-1154 - - Upper Kingsport dolomite
Shines sphalerite 1131, 1143, 1148. TR at 1154
1154-1172 - - Lower Kingsport dolomite
Traces sphalerite 1168, 1170
1172-1183 - - 11' mineralization estimated @ 1½% Zn
1183-1202 - - Lower Kingsport dolomite
Traces sphalerite 1188-1190, 1191
1202-1205 - - 3' mineralization estimated @ 1½% Zn
1205-1245 - - Lower Kingsport dolomite & limestone
1245-1293 - - (Bottom) Longview dolomite & limestone

R and S Beds 89% dolomite

Hole CS-27 - J. R. Davidson - NE tract - 300' downdip from CS-25

Coordinates: 736,546.21 N; 772,957.03 E
Elevation: 1495.66

0- 20 - - Clay
20-491 - - Mascot dolomite
491-644 - - Upper Kingsport dolomite
644-800 - - (Bottom) Lower Kingsport dolomite

Hole CS-28 - Robert Mallicoat property - NJZ mining and mineral rights - 600' NE on strike from I-53

Coordinates: 735,089.99 N; 769,794.39 E
Elevation: 1476.60

0- 24 - - Clay
24-212 - - Mascot dolomite
212-339 - - Upper Kingsport dolomite
Traces sphalerite @ 324
339-500 - - Lower Kingsport limestone & dolomite

R and S beds 41% dolomite

Hole I-55 - J. R. Davidson - SW tract - 600' SW of I-53 - on strike

Coordinates: 734,529.96 N; 768,743.30 E
Elevation: 1501.45

0- 47 - - Clay
47-252 - - Mascot dolomite
252-386 - - Upper Kingsport dolomite
386-546 - - Lower Kingsport dolomite & limestone

R and S Bed 47% dolomite

Hole I-56 - J. R. Davidson - SW tract

Coordinates: 733,999.10 N; 768,454.94 E
Elevation: 1499.11

0- 4 - - Clay
4-479 - - Mascot dolomite
479-587 - - Upper Kingsport dolomite
587-588 - - 1' ore estimated @ 15% Zn
588-613 - - Upper Kingsport dolomite
613-768 - - Lower Kingsport dolomite & limestone
768-783 - - Longview limestone & dolomite

R and S beds 29% dolomite.

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DATE	INITIALS	CODE
11/15	gb	220
15	cdm	100
20	[illegible]	

INTERIM REPORT

DMEA-4586, Idm-E1071 (Zinc)

Operator: The New Jersey Zinc Company, Jefferson City, Tennessee

Location: Cedar Springs area, Grainger County, Tennessee

Diamond drilling on the Cedar Springs project of the New Jersey Zinc Company in the Copper Ridge district to date and since the last inspection on October 17, 1957 is summarized as follows:

Drilling completed:

Footage in holes completed since last inspection . . .	1,702
Total footage in holes completed to date	13,390
Number of holes completed since last inspection . . .	2
Total number of holes completed to date	17
Number of holes showing commercial zinc ore	0
Number of holes showing non-commercial zinc mineralization	9
Number of barren holes	8

Drilling in progress:

Number of holes in progress	2
Total footage drilled in incompleted holes at time of inspection	850

Brief summaries of the two holes completed since the last inspection follow:

Hole no.	Property	Total Depth	Remarks
I-56	J. R. Davidson (tract-2)	773	Location: About 500 feet southwest and 320 feet down-dip from Hole 1-55. Abbreviated log: 0-4 residual clay; 4-479 Mascot dolomite; 479-613 upper Kingsport dolomite member; 613-768 lower Kingsport limestone member (top of S-bed @ 648?); 738-773 Longview dolomite. Mineralization: Shine hole; 1 foot (587-588) w/ 15 % Zn (est).
CS-29	J. R. Davidson (tract-1)	929	Location: About 200 feet down dip from Hole CS-27. Abbreviated log: 0-8 residual clay; 8-617 Mascot dolomite; 617-759 upper Kingsport dolomite member; 759-929 lower Kingsport limestone member and Longview dolomite. Most of Kingsport formation was highly brecciated and silicified and marker toward bottom of hole not recognizable. Mineralization: None; barren hole.

ACTION ON INTERIM
ORIGINAL FIELD TEAM REPORT

Date 11/15/57

Referred to:

1. ~~Mr. Murvendorf~~
2. ~~Mr. Johnson~~
3. Mr. Chambers
4. Docket Control Mails and Files
5. ~~Division~~
6. ~~Docket Control Mails and Files~~
7. 500

Note comments in report regarding:

1. Correct footage of completed hole is 13,391'
2. Talbert 11/19/57
3.
4.

and take appropriate action.

- - - - - - - -

Action taken by Division:

Robert E. Adams

gb

Available data on the two holes currently drilling are given below:

Hole no.	Property	Present Depth	Estimated Total Depth	Remarks
I-57	J. R. Davidson (tract-2)	586	650	Located about 320 feet up-dip from Hole I-56; collares in Mascot dolomite; currently drilling in lower Kingsport limestone member; traces of sphalerite @ 337, 418, 425, 426, and @ 431-437 6 feet w/ 1 % Zn (est).
CS-30	J. R. Davidson (tract-1)	264	1100	Located about 400 feet down dip from Hole CS-29; collared and drilling in Mascot dolomite.

Inspected: November 7, 1957

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

V. J. Lynch and L. E. Shirley, Mining Engr.
U. S. Bureau of Mines

OFFICIAL FILE COPY
DMEA
RECEIVED Oct 25 1957

DATE		CODE
10/25	C	220
"	CMU	100
10/28	Mag	500

INTERIM REPORT

DMEA-4586, Idm-E1071 (Zinc)

Operator: The New Jersey Zinc Company, Jefferson City, Tennessee

Location: Cedar Springs area, Grainger County, Tennessee

The diamond drilling program of the New Jersey Zinc Company in the Cedar Springs area of the Copper Ridge district to date and since the last inspection on September 19, 1957 is summarized as follows:

Drilling completed:

Footage in holes completed since last inspection	4,268
Total footage in holes completed to date	11,688
Number of holes completed since last inspection	6
Total number of holes completed to date	15
Number of holes showing commercial zinc ore	0
Number of holes showing non-commercial zinc mineralization	8
Number of barren holes	7

Drilling in progress:

Number of holes in progress	2
Footage drilled in in completed holes	130

Brief summaries of the six holes completed since the last inspection follow:

Hole No.	Property	Total Depth	Remarks
CS-25	J. R. Davidson (Tract 1)	636	Location: About 900 feet NE of Hole CS-3 on line with Hole CS-14. Abbreviated log: 0-7 residual clay; 7-290 Mascot dolomite; 290-468 upper Kingsport dolomite member; 468-577(??) lower Kingsport limestone member; 577(??)-636 Longview dolomite. Mineralization: Traces of ZnS as follows: 411-426, 446, 472-478.
CS-26	Woodrow Davidson	1293	Location: 100 feet down dip from Hole CS-24. Abbreviated log: 0-10 residual clay; 10-319 Chickamauga limestone; 319-974 Mascot dolomite; 974-1154 upper Kingsport dolomite member; 1154-1230(?) lower Kingsport limestone member; 1230(?)-1293 Longview dolomite. Mineralization: Zinc as follows: Shine @ 927; 1049-1074 (25') w/ 1½ % Zn (est); scattered traces and shines @ 1077-1103; 1121-1129 (8') w/ 3½% Zn (est); traces and shines @ 1131, 1143,1148, 1168, and 1170; 1172-1183 (11') w/ 1½% Zn (est); traces @ 1188-1191; 1202-1205 (3') w/ 1½% Zn (est).

ACTION ON ~~INTERIM~~
OR FINAL FIELD TEAM REPORT
Date 10/25

Referred to:

1. ~~Mr. Mittendorf~~
2. ~~Mr. Johnson~~
3. ~~Mr. Chambers~~
4. Docket Control Mails and Files
5. ~~Division~~
6. Docket Control Mails and Files
7. 500

Note comments in report regarding:

1. Footage completed since last inspection totals 4,269',
2. making correct total to date for 15 holes 11,689'
3. Talbot 10/28/57
4.

and take appropriate action.

- - - - - - - -

Action taken by Division:

Robert E. Adams

Hole No.	Property	Total Depth	Remarks
CS-27	J. R. Davidson (tract-1)	800	Location: 300 feet downdip from Hole CS-25 Abbreviated log: 0-20 residual clay; 20-490(??) Mascot dolomite; 490(??)-644 upper Kingsport dolomite member; 644-800 lower Kingsport limestone member and Longview dolomite (chert-matrix ss and T-bed not recognized--Mascot dolomite highly brecciated and Kingsport highly silicified and brecciated). Mineralization: Barren hole.
CS-28	Robert Mallicoat	500	Location: 1200 feet southwest of Hole CS-14. Abbreviated log: 0-24 residual clay; 24-202 Mascot dolomite; 202-339 upper Kingsport dolomite member; 339-500 lower Kingsport limestone member and Longview dolomite (T-bed not recognized). Mineralization: Trace of ZnS @ 324; barren hole.
I-54	J. R. Davidson (tract-2)	494	Location: About 100 feet up-dip from Hole I-53. Abbreviated log: 0-19 residual clay; 19-180 Mascot dolomite; 180-315 upper Kingsport dolomite member; 315-435 lower Kingsport limestone member; 435-494 Longview dolomite. Mineralization: 300-301 (1') w/ 25% Zn (est); shine hole.
I-55	J. R. Davidson (tract-2)	546	Location: 600 feet southwest of Hole I-53. Abbreviated log: 0-47 residual clay; 47-252 Mascot dolomite; 252-386 upper Kingsport dolomite member; 386-546 lower Kingsport limestone member (probably bottomed 1-2 feet above T-bed). Mineralization: Strong shine of FeS_2@ 405-407; barren hole, S-bed mostly limestone.

With the transfer of one drill rig back to the Big War project (DMEA-4286) since the last inspection only two rigs are currently operating at Cedar Springs. Available pertinent data on the two holes currently drilling are summarized as follows:

Hole No.	Property	Depth	Est. Total Depth	Remarks
CS-29	J. R. Davidson (tract-1)	130	1050	Located about 300 feet downdip from Hole CS-27; collared and drilling in Mascot dolomite (overburden 8')
I-56	J. R. Davidson (tract-2)	--	550	Located about 600 feet southwest of Hole I-55; moving and setting up.

Inspected: October 17, 1957

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

L. E. Shirley, Mining Engineer
U. S. Bureau of Mines

D MEA-4586

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

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

RECEIVED OCT 25 1957 D.M.E.A.

PAID VOUCHER & SCHEDULE
PAYMENTS K-21

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of September 1957 Docket No. DMEA 4586 Contract No. Idm E 1071
Operator's Name The New Jersey Zinc Company Minerals Zinc
Address Jefferson City, Tennessee
Contract Amount, $105,950.00 Government Participation: 50 % Amount, $ 52,975.00

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	7948.00	15,644.00	23,592.00	10/31/57		
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision	603.12	1,192.17	1,795.29			
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
Core Boxes	82.80	136.80	219.60			
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment	7.00	7.00	14.00			
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	8640.92	16,979.97	25,620.89	8640.92	16,979.97	25620.89

I certify that the above bill is correct and just and that payment therefor has not been received.
Date 10-1-57 *Payee The New Jersey Zinc Company
Per [signature] Title Asst. to the Supt.

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the 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:
$ 4320.46
Signature Peter R. Mullin
(Authorized Certifying Officer)
Date OCT 23 1957 Vou. No. 72
(See other side)

4320.46

(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. E-1071 in accordance with the terms of the contract.

Signature V. J. Lynch Title MINING ENGINEER U. S. BUREAU OF MINES Date OCT 18 1957

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Robert A. Lawrence Title EXECUTIVE OFFICER DMEA FIELD TEAM REGION V Date OCT 18 1957

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.

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

RECEIVED
OCT 25 1957
D.M.E.A.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of [illegible] 195[illegible] Docket No. DMEA [illegible] Contract No. [illegible]
Operator's Name [illegible] Minerals [illegible]
Address [illegible]

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	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Drilling: Core	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Churn								
Auger	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Stripping	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Trenching								
Test Pits								
Roads and Trails	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]
TOTAL DISTRIBUTED COSTS		[illegible]		[illegible]				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		8640.92		25,620.89				[illegible]

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.

Date [illegible] Operator [illegible]

Per [illegible] Title [illegible]

REMARKS: [illegible]

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) [illegible]

GEOLOGIST, U. S. G. S.

OCT 18 1957

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

Report for September 1957

Cedar Springs Area D.M.E.A. 4586

Contract Idm E 1071 (Zinc)

Two drills operated on the Cedar Springs project during the first part of the month and a third drill was placed in operation during the latter part of the month. Four holes were completed, summary logs of which follow:

Hole CS-24 - Woodrow Davidson - New Jersey Zinc Company mineral and mining rights, 100' downdip from CS-22

Coordinates: 734,724.69; 771,381.48
Elevation: 1393.14

0 - 5 - - - Clay
5 - 243 - - - Chickamauga limestone
243 - 895 - - - Mascot dolomite, shines sphalerite at 644', 785'
895 -1019 - - - Upper Kingsport dolomite, traces sphalerite 992', 1003', 1014', 1016'
1019 -1030 - - - 11' mineralization averaging 0.78% Zn
1019 - 1025 - - - 1.10% Zn (5' core)
1025 - 1030 - - - 0.40% Zn
1030 -1062 - - - Upper Kingsport dolomite, TR at 1062'. Local shines sphalerite 1036', 1047', 1054'
1062 -1066 - - - Lower Kingsport dolomite
1066 -1088 - - - 22' mineralization averaging 1.04% An
1066 - 1072 - - - 0.88% Zn (5' core)
1072 - 1078 - - - 1.26% Zn (5' core)
1078 - 1083 - - - 0.98% Zn
1083 - 1088 - - - 1.03% Zn
1088 -1099 - - - Lower Kingsport dolomite
1099 -1105 - - - 6' mineralization assaying 1.03% Zn (5' core)
1105 -1166 - - - Lower Kingsport dolomite
1166 -1200 - - - (Bottom) Longview dolomite & limestone

CENTRAL COPY
OF
RECORD
DATE INITIALS COPY

Hole CS-25 - J. R. Davidson property - NE tract

Coordinates: 736,923.01; 772,814.18
Elevation: 1671.00

0 - 70 - - - Clay
70 - 290 - - - Mascot dolomite
290 - 468 - - - Upper Kingsport dolomite, traces sphalerite 411-426'. Tr at 468'
468 - 577 - - - Lower Kingsport dolomite, traces sphalerite 472-478'
577 - 636 - - - (Bottom) Longview dolomite and limestone.

Hole I-53 - J. R. Davidson property - SW tract

Coordinates: 734,788.39; 769,279.88
Elevation: 1491.42

0 - 13 - - - Clay
13 - 256 - - - Mascot dolomite
256 - 373 - - - Upper Kingsport dolomite
373 - 375 - - - 2' mineralization estimated at 25% Zn
375 - 404 - - - Upper Kingsport dolomite, shines sphalerite 377'. TR at 404'
404 - 511 - - - Lower Kingsport dolomite
511 - 543 - - - (Bottom) Longview dolomite and limestone

Hole I-54 - J. R. Davidson property - SW tract, 100' updip from I-53

Coordinates: 734,872.38; 769,223.00
Elevation: 1490.50

0 - 19 - - - Clay
19 - 180 - - - Mascot dolomite
180 - 300 - - - Upper Kingsport dolomite
300 - 301 - - - 1' mineralization estimated at 25% Zn
301 - 315 - - - Upper Kingsport dolomite, TR at 315'
315 - 435 - - - Lower Kingsport dolomite
435 - 493 - - - (Bottom) Longview dolomite and limestone.

OFFICIAL FILE COPY
DMEA
RECEIVED SEP 27 1957

DATE		CODE
9/27	B	220
30	Corr	100
10/1	wes	500

INTERIM REPORT

DMEA-4586, Idm-E1071 (Zinc)

Operator: The New Jersey Zinc Company, Jefferson City, Tennessee

Location: Cedar Springs area, Grainger County, Tennessee

Diamond drilling on the Cedar Springs quadrangle of the New Jersey Zinc Company to date and since the last inspection on August 29, 1957 is summarized as follows:

Drilling completed:

Footage in holes completed since last inspection . . .	1,743
Total footage in holes completed to date	7,420
Number of holes completed since last inspection . . .	2
Total number of holes completed to date	9
Number of holes showing commercial zinc ore	0
Number of holes showing non-commercial zinc mineralization	6
Number of barren holes	3

Drilling in progress:

Number of holes in progress	3
Total footage in incompleted holes	616

Summaries of the two holes completed since the last inspection follow:

Hole No.	Property	Total Depth	Remarks
I-53	J. R. Davidson (Tract-2)	543	Location: 1800 feet SE (on strike line) from CS-14 (see contract map). Abbreviated log: 0-13 overburden; 13-256 Mascot dolomite; 256-404 upper Kingsport dolomite member; 404-543 lower Kingsport limestone member. Mineralization: 373-374; 1 ft w/ 35% Zn (est); scattered strong shines of ZnS @ 320-321 and 374-377.
CS-24	Woodrow Davidson	1200	Location: 100 ft down-dip from Hole CS-22. Abbreviated log: 0-5 overburden; 5-243 Chickamauga ls; 243-895 Mascot dolomite; 968-1062 upper Kingsport dolomite member; 1062-1166 lower Kingsport limestone member; 1166-1200 Longview dolomite. Mineralization: Shines of ZnS @ 785, 992, 1008, 1014; 1019-1030, 11 ft w/ 1% Zn (est); shines of ZnS @ 1036, 1047, 1054, and 1060; 1066-1088, 22 ft w/ 1% Zn (est); traces of ZnS @ 1090, 1095; 1099-1105, 6 ft w/ 2% Zn (est).

With the move of one drill rig from the Big War project (DMEA-4286) to Cedar Springs three rigs are now in operation on this project. Available data on the three holes currently drilling are summarized below:

Hole No.	Property	Depth	Estimated Total Depth	Remarks
I-54	J. R. Davidson (Tract-2)	24	480	Collared and drilling in Mascot dolomite at site 100 feet up-dip from Hole I-53.
CS-25	J. R. Davidson (Tract-1)	505	635	Collared in Mascot dolomite at site about 900 feet NE of Hole CS-3 on line with Hole CS-14; chert-matrix ss @ 290; TR @ 468; currently drilling in lower member of Kingsport fm; Mineralization as follows: traces of ZnS @ 411-426 and 446; scattered traces of ZnS @ 472-478 with traces of Cu associated with FeS_2 rosettes.
CS-26	Woodrow Davidson	87	1300	Collared and drilling in Chickamauga ls at site 100 feet down-dip from Hole CS-24.

Inspected: September 19, 1957

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

L. E. Shirley, Mining Engineer
U. S. Bureau of Mines

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

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

PAID ON VOUCHER 9 SCHEDULE OF PAYMENTS K-

RECEIVED SEP 19 1957 DMEA

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of [illegible], 195[illegible] Docket No. DMEA [illegible] Contract No. [illegible]
Operator's Name [illegible] Minerals [illegible]
Address [illegible]
Contract Amount, $ [illegible] Government Participation: [illegible]% Amount, $ [illegible]

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:	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Drilling						
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor	[illegible]	[illegible]	[illegible]			
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track	[illegible]	[illegible]	[illegible]			
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	[illegible]	[illegible]	[illegible]			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	[illegible]	[illegible]	[illegible]	3,058.25	13,921.72	16,979.97

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

Date [illegible] *Payee [illegible]

Per [illegible] Title [illegible]

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the 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:

$ 1529.12

Signature Helen R. Meier
(Authorized Certifying Officer)

Date SEP 17 1957 Vou. No. 54

(See other side)

1,529.13

(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. Tam E1071 in accordance with the terms of the contract.

Signature W. T. Beck Title MINING ENGINEER U. S. BUREAU OF MINES Date SEP 16 1957

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Robert A. Lawrence Title EXECUTIVE OFFICER DMEA FIELD TEAM REGION V Date SEP 16 1957

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.

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

RECEIVED SEP 19

Month of [illegible] 195[illegible] Docket No. DMEA [illegible] Contract No. [illegible]
Operator's Name [illegible] Minerals [illegible]
Address [illegible]

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	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Churn	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Auger								
Stripping	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Trenching	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Test Pits								
Roads and Trails								
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
TOTAL DISTRIBUTED COSTS		[illegible]		[illegible]				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		[illegible]		[illegible]				

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.

Date [illegible] Operator [illegible]

Per [illegible] Title [illegible]

REMARKS: This report covers drill hole [illegible]

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

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RECEIVED SEP 19 1957

DATE	INITIALS	CODE

Report for August 1957

Cedar Springs Area DMEA 4594

Contract 26E E 1071 (Zinc)

During August, 1 drill operated in the Cedar Springs area. One hole, with a depth of 1085' was completed. A log summary follows:

<u>Hole C[illegible]-22</u> - (Woodrow Davidson) New Jersey Zinc Mineral Rights

Coordinates: 734,[illegible].95 N; 771,261.62 E
Elevation: 1340.[illegible]'

0- 9 - - Clay
9- 57 - - Chickamauga limestone
57-710 - - Pascot dolomite
710-875 - - Upper Kingsport dolomite
875 - - SR
875-1082 - Lower Kingsport, 945 dolomite
1082-1085 - (Bottom) Longview dolomite.

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Budget Bureau No. 42-R1036.5

PAID ON VOUCHER & SCHEDULE OF PAYMENTS K- 9

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of July, 1957 Docket No. DMEA 4586 Contract No. E 1071
Operator's Name The New Jersey Zinc Company Minerals Zinc
Address Jefferson City, Tennessee
Contract Amount, $105,950.00 Government Participation: 50 % Amount, $ 52,975.00

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:	5575.50	7243.50	12,819.00	10/18/57		
Drilling						
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision	423.78	553.14	976.92			
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
Core Boxes	50.40	68.40	118.80			
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	5.00	2.00	7.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	6054.68	7867.04	13,921.72	6054.68	7867.04	13,921.72

I certify that the above bill is correct and just and that payment therefor has not been received.
Date 8-1-57 *Payee The New Jersey Zinc Company
Per [signature] Title Asst. to the Supt.

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the 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:
$ 3027.34
Signature Helen R. Miller
(Authorized Certifying Officer)
Date AUG 29 1957 Vou. No. 39
(See other side)

3027.34

(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. E-1071 in accordance with the terms of the contract.

Signature V. J. Lynch Title U. S. BUREAU OF MINES Date AUG 28 1957

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Robert A. Lawrence Title EXECUTIVE OFFICER DMEA FIELD TEAM REGION V Date AUG 28 1957

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.

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of July 1957 Docket No. DMEA 4586 Contract No. E-1071

Operator's Name The New Jersey Zinc Company Minerals Zinc

Address Jefferson City, Tennessee

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core 0-1000	Ft.	5263.50	1914	12,507.00	4548		30,000	2.75
Drilling: Core 1000-1500	"	312.00	104	312.00	104		5,000	3.00
Drilling: Churn								
Drilling: Auger								
Stripping Assay	Ea.	5.00	5	7.00	7	1.00	200	1.00
Trenching Core Boxes	Ea.	50.40	28	118.80	66	1.80	500	1.80
Test Pits								
Roads and Trails								
Supervision and Technical Services	Ft.	423.78	2018	976.92	4652	0.21	35,000	0.21
TOTAL DISTRIBUTED COSTS		6054.68		13,921.72				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		6054.68		13,921.72				

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.

Date 8-1-57 Operator The New Jersey Zinc Co.

Per [signature] Title Asst. to the Supt.

REMARKS: This report covers Holes CS-21 and CS-22

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)

[signature]

GEOLOGIST, U. S. G. S.

AUG 20 1957

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

Report for July 1957

Cedar Springs Area DMEA 4586

Contract Idm E-1071 (Zinc)

In July, one drill operated in the Cedar Springs area and two holes were completed. Summary logs of these holes, CS-21 and CS-22, follow:

<u>Hole CS-21</u> - Woodrow Davidson property, 200 feet down-dip from CS-20

Approx. Coordinates: 735,080 N; 771,180 E
" Elevation: 1410'

0- 22 - - Clay
22-645 - - Mascot dolomite
645-758 - - Upper Kingsport dolomite
758-880 - - Lower Kingsport, 40% dolomite
880-914 - - (Bottom) Longview formation

<u>Hole CS-22</u> - Woodrow Davidson property, 300 feet down-dip from hole CS-21

Approx. Coordinates: 734,825 N; 771,330 E
" Elevation: 1425'

0- 2 - - Clay
2-171 - - Chicamauga limestone
171-823 - - Mascot dolomite
823-973 - - Upper Kingsport dolomite
973-999 - - Weakly mineralized, estimated ½% Zn
999-1029 - 30' mineralization averaging 1.62% Zn assays as follows:
999-1004 - - 2.03% Zn
1004-1009 - - 0.35% "
1009-1014 - - 3.30% "
1014-1019 - - 1.33% "
1019-1023 - - Nil (not assayed)
1023-1029 - - 2.25% Zn
1029-1037 - Weakly mineralized, estimated ½% to 1% Zn
1037-1093 - Lower Kingsport
1093-1104 - (Bottom) Longview dolomite.

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INTERIM REPORT

DMEA-4586, Idm-E1071 (Zinc)

Operator: The New Jersey Zinc Company, Jefferson City, Tennessee

Location: Cedar Springs area, Grainger County, Tennessee

Drilling on the Cedar Springs project in the Copper Ridge district completed to date and since the last inspection on August 8, 1957 is summarized as follows:

Footage in holes completed since last inspection . . .	1,025
Total footage in holes completed to date	5,677
Number of holes completed since last inspection . . .	1
Total number of holes completed to date	7
Number of holes showing commercial zinc ore	0
Number of holes showing non-commercial zinc mineralization	4
Number of barren holes	3

Data on the one hole completed since the last inspection are summarized below:

Hole No.	Property	Total depth	Remarks
CS-23	Woodrow Davidson	1025	Location: 100 feet up dip from Hole CS-22. Abbreviated log: 0-9 overburden; 9-57 Chickamauga limestone; 57-710 Mascot dolomite; 710-875 upper Kingsport dolomite member; 875-1002 lower Kingsport limestone member; 1002-1025 Longview dolomite (T-bed @ 1002-1004). Mineralization: Trace ZnS @ 858; scattered pyrite @ 917-928 and 996.

Hole CS-24 located 100 feet downdip from Hole CS-22 is now in progress. It is collared in the Chickamauga limestone, is currently drilling in the Mascot dolomite (top at a depth of 243 feet), and will bottom at a depth of about 1230 feet.

Inspected: August 29, 1957

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

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DATE	INITIALS	CODE
8/14	CHM	100
~~8/15~~	~~[illegible]~~	~~500~~

INTERIM REPORT

DMEA-4586, Idm-E1071 - Zinc

Operator: The New Jersey Zinc Company, Jefferson City, Tennessee

Location: Cedar Springs area, Grainger County, Tennessee

Diamond drilling completed on the Cedar Springs project to date and since the last inspection on July 25, 1957 is summarized as ~~follows:~~

Footage in holes completed since last inspection . . .	1,104
Total footage in holes completed to date	4,652
Number of holes completed since last inspection . . .	1
Total number of holes completed to date	6 ✓
Number of holes showing commercial zinc ore	0 ✓
Number of holes showing non-commercial zinc mineralization	3
Number of barren holes	3

Additional available information on the one hole completed since the last inspection is given below:

Hole No.	Property	Total depth	Remarks
CS-22	Woodrow Davidson	1104	TR @ 990; E marker not recognized; T-bed @ 1093-1098; estimated zinc as follows: 4 ft @ 3%; 973-977 ✓ 11 ft @ 1½%; 999-1010 ✓ 8 ft @ 3%; 1010-1018 ✓ 6 ft @ 3%; 1023-1029 2 ft @ 4%; 1035-1037 not bad! Also shines of sphalerite @ 983, 984, 985, 986, 988, 994, 1045, 1063, and 1064.

With the strong showing of mineralization in Hole CS-22, the drill rig was moved 100 feet up dip to Hole CS-23, rather than to the other end of the fence as was reported in the last previous interim report. Available data on the hole in progress are as follows:

Hole No.	Property	Depth	Est. total depth	Remarks
CS-23	Woodrow Davidson	734	1025	Collared in Chickamauga ls and drilling in Mascot dolomite (top @ 57).

Inspected: August 8, 1957

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

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8/2 Klug 500

INTERIM REPORT

DMEA-4586, Idm-E1071 - Zinc

Operator: The New Jersey Zinc Company, Jefferson City, Tennessee

Location: Cedar Springs area, Grainger County, Tennessee

Drilling completed to date and since the last inspection on July 11, 1957 on the Cedar Springs project of the New Jersey Zinc Company in the Copper Ridge district is summarized as follows:

Drilling completed:

Footage in holes completed since last inspection	0
Total footage in holes completed to date	3,548
Number of holes completed since last inspection	0
Total number of holes completed to date.	5
Number of holes showing commercial zinc ore	0
Number of holes showing non-commercial zinc mineralization	2
Number of barren holes	3

One hole was in progress at the time of the inspection. Preliminary available data on this hole are given below:

Hole No.	Property	Present Depth	Estimated Total Depth	Remarks
CS-22	W. Davidson	962 ft.	1150 ft.	Chert matrix at 823 ft. Brown oolitic chert at 872 ft. Trace of sphalerite at 961 ft.

Upon completion of Hole CS-22 the drill will be moved 200 feet updip from CS-14.

Inspected: July 25, 1957

V. J. Lynch, Mining Engineer
U. S. Bureau of Mines

Dewey H. Amos, Geologist
U. S. Geological Survey

Form MF-[illegible]4 (Rev.)
April 1952)

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Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

PAID ON VOUCHER & SCHEDULE OF PAYMENTS K- 5

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of June 7 195 Docket No. DMEA 4506 Contract No. E-1071

Operator's Name The New Jersey Zinc Company Minerals Zinc

Address Jefferson City, Tennessee

Contract Amount, $ 105,950.00 Government Participation: 50 % Amount, $ 52,975.00

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling	5013.50	1430.00	7243.50	8/15/57	W.P.H.	Betty
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor / Supervision / Technical Services	443.94	109.20	553.14			
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
Core Boxes	55.80	12.60	68.40			
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	-	2.00	2.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	6313.24	1553.80	7867.04	6313.24	1553.80	7867.04

RECEIVED AUG 9 1957 D.M.E.A.

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

Date 7-1-57 *Payee The New Jersey Zinc Company

Per [signature] Title Asst. to the Supt.

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the 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:

$ 3156.62

Signature Helen R. Miller (Authorized Certifying Officer)

Date AUG 5 1957 Vou. No. 19 (See other side)

3156.62

(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. E-1071 in accordance with the terms of the contract.

Signature V. J. Lynch Title MINING ENGINEER U. S. BUREAU OF MINES Date AUG 1 1957

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Robert A. Laurence Title AUG 1 1957 Date AUG 1 1957

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.

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of June 1957 Docket No. DMEA 4586 Contract No. E-1071

Operator's Name The New Jersey Zinc Company Minerals Zinc

Address Jefferson City, Tennessee

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core 0-1000	Ft.	5813.50	2114	7243.50	2634	2.75	30,000	2.75
Chum 1000-1500	"	- -	-	- -	-	-	5,000	3.00
Auger								
Stripping Assay	Ea.	- -	-	2.00	2	1.00	200	1.00
Trenching Core Boxes	"	55.80	31	68.40	38	1.80	500	1.80
Test Pits								
Roads and Trails								
Supervision and Tech. Services	Ft.	443.94	2114	553.14	2634	0.21	35,000	0.21
TOTAL DISTRIBUTED COSTS		6313.24		7867.04				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		6313.24		7867.04				

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.

Date 7/1/57 Operator The New Jersey Zinc Co.

Per [signature] Title Asst. to the Supt.

REMARKS: This report covers drill holes:
CS-18
CS-19
CS-20

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)

RECEIVED AUG 9 1957 D.M.E.A.

[signature]
MINING ENGINEER
U. S. BUREAU OF MINES

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

Report for June 1957

Cedar Springs Area BMEA 4506

Contract Idm B 1071 (Zinc)

During June, one drill operated in the Cedar Springs area and three holes were completed.

Attached, hereto, are a plan map and a section showing the location and structural details of the holes drilled to date on the project. Summary logs of the holes drilled in June follows:

Hole CS-18 - Woodrow Davidson property, 100 feet downdip from hole CS-17

Coordinates: Approximate: 735,515 N; 770,980 E
Elevation: Approximate: 1440'

0- 8 - - Clay
8-289 - - Mascot dolomite
289-437 - - Upper Kingsport dolomite
437 - - TR marker
437-588 - - Lower Kingsport limestone and dolomite. "R" and "S" beds, 36% dolomite
588-606 - - (Bottom) Longview dolomite and limestone.

Hole CS-19 - Woodrow Davidson property, 100 feet downdip from hole CS-18

Coordinates: 735,430.21 N 770,977.36 E
Elevation: 1437.64

0- 27 - - Clay
27-355 - - Mascot dolomite
355-515 - - Upper Kingsport dolomite
515 - - TR marker
515-666 - - Lower Kingsport limestone and dolomite, "R" and "S" beds 80% dolomite
666-679 - - (Bottom) Longview dolomite

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DATE | INITIALS | CODE

Hole CS-20 - Woodrow Davidson property, 200 feet downdip from CS-19

Coordinates: 735,260.56 N 771,077.06
Elevation: 1422.65

0- 16 - - Clay
16-500 - - Mascot dolomite
500-659 - - Upper Kingsport dolomite
659 - - TR marker
659-734 - - Lower Kingsport dolomite, local traces Zn and strong shines of pyrite
734-737 - - 3' estimated 3% Zn
737-780 - - Lower Kingsport dolomite, local traces Zn and shines of pyrite. "R" and "S"

beds 100% dolomite.
780-029 - - (Bottom) Longview dolomite

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DATE | INITIALS | CODE
7/22 | CGW | 100
7/22 | KLG | 500

INTERIM REPORT

DMEA-4586, Idm-E1071 - Zinc

Operator: The New Jersey Zinc Company, Jefferson City, Tennessee

Location: Cedar Springs area, Grainger County, Tennessee

Drilling completed to date and since the last inspection on June 27, 1957 on the Cedar Springs project of the New Jersey Zinc Company in the Copper Ridge district is summarized as follows:

Footage in holes completed since last inspection . . .	914
Total footage in holes completed to date	3,548
Number of holes completed since last inspection . . .	1
Total number of holes completed to date	5
Number of holes showing commercial zinc ore	0
Number of holes showing non-commercial zinc mineralization	2
Number of barren holes	3

The one hole completed since the last inspection is summarized as follows:

Hole no.	Property	Depth	Remarks
CS-21	Woodrow Davidson	914	Location: 200 feet down dip from Hole CS-20. Abbreviated log: 0-22 Overburden; 22-645? Mascot dolomite; 645?-758 upper Kingsport dolomite member; 758-796 lower Kingsport--R bed; 796-881 lower Kingsport--S bed; 881-914 Longview dolomite (T bed @ 881-892). Mineralization: Barren

Hole CS-22 drilling at the time of the current inspection, is located 300 feet down dip from Hole CS-21 on the Woodrow Davidson property. Hole CS-22 collared in the Chickamauga limestone, reached the top of the Mascot dolomite at a depth of 171 feet, and was drilling at a depth of 211 in the Mascot dolomite at the time of inspection. It will be bottomed at about 1200 feet.

Inspected: July 11, 1957

V. J. Lynch, Mining Engineer
U. S. Bureau of Mines

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

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RECEIVED JUL 8 1957

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INTERIM REPORT

DMEA-4586, Idm-E1071 - Zinc

Operator: The New Jersey Zinc Company, Jefferson City, Tennessee

Location: Cedar Springs area, Grainger County, Tennessee

Diamond drilling on the Cedar Springs project in the Copper Ridge district completed to date and since the last inspection on June 13, 1957 is summarized as follows:

Footage in holes completed since last inspection . . .	829
Total footage in holes completed to date	2,634
Number of holes completed since last inspection . . .	1
Total number of holes completed to date	4
Number of holes showing commercial zinc ore	0
Number of holes showing non-commercial zinc mineralization	2
Number of barren holes	2

A summary of the one hole completed since the last inspection follows:

Hole no.	Property	Depth	Remarks
CS-20	Woodrow Davidson	829	Location: 200 feet down dip from Hole CS-19. Abbreviated log: 0-16 Overburden; 16-500 Mascot dolomite; 500-659 upper Kingsport dolomite member; 659-715 lower Kingsport--R bed; 715-780 lower Kingsport--S bed; 780-829 Longview dolomite (T bed @ 780-785). Mineralization: Traces of sphalerite @ 234, 697, and 747; 3 ft estimated @ 3% Zn @ 734-737; local traces and shines of pyrite @ 630-776.

One hole was drilling at the time of the current inspection. Preliminary available data on this hole are given below:

Hole no.	Property	Depth	Est. depth	Remarks
CS-21	Woodrow Davidson	344	1000	Located 200 feet down dip from Hole CS-20; collared and drilling in Mascot dolomite (22 feet of overburden).

Inspected: June 27, 1957

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

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

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

PAID ON VOUCHER & SCHEDULE 79
OF PAYMENTS K-

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of May, 1957 Docket No. DMEA 4586 Contract No. Idn E-1071
Operator's Name The New Jersey Zinc Company Minerals Zinc
Address Jefferson City, Tennessee
Contract Amount, $ 105,950 Government Participation: 50 % Amount, $ 52,975.00

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling	1,430.00	-	1,430.00	8/13/57		
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision / Technical Services	109.20	-	109.20			
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
Core Boxes	12.60	-	12.60			
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	2.00	-	2.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	1,553.80		1,553.80	1553.80	-	1553.80

RECEIVED JUL 1 1957 D.M.E.A.

I certify that the above bill is correct and just and that payment therefor has not been received.
Date 6-1-57 *Payee The New Jersey Zinc Co.
Per [signature] Title Asst. to the Supt.

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the 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:
$ 776.90
Signature Helen R. Miller
(Authorized Certifying Officer)
Date JUN 27 1957 Vou. No. 210
(See other side)

776-90

(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. E-1071 in accordance with the terms of the contract.

Signature W. J. Lynch Title MINING ENGINEER U. S. BUREAU OF MINES Date JUN 24 1957

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Robert A. Lemmon Title EXECUTIVE OFFICER DMEA FIELD TEAM REGION V Date JUN 24 1957

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.

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of May 1957 Docket No. DMEA 4586 Contract No. E-1071

Operator's Name The New Jersey Zinc Company Minerals Zinc

Address Jefferson City, Tennessee

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core 0-1000	Ft.	1,430.00	✓ 520	1,430.00	520	2.75	30,000	2.75
Churn 1000-1500	"	-	-	-	-	-	5,000	3.00
Auger								
Stripping Assay	ea.	2.00	✓ 2	2.00	2	1.00	200	1.00
Trenching Core Boxes	"	12.60	✓ 7	12.60	7	1.80	500	1.80
Test Pits								
Roads and Trails								
Supervision and Tech. Services	Ft.	109.20	✓ 520	109.20	520	.21	35,000	.21
TOTAL DISTRIBUTED COSTS		1,553.00	✓	1,553.00				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: This report covers drill hole CS-17.

Date 6-1-57 Operator The New Jersey Zinc Co.

Per [signature] Title Asst. to the Supt.

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)

RECEIVED JUN 1 1957

[signature]
MINING ENGINEER
U. S. BUREAU OF MINES

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

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DATE	[illegible]	CODE

Report for May 1957

Cedar Springs Area DMEA 4586

Contract Idn E-1071 (Zinc)

Drilling started on the Cedar Springs project on May 14, 1957, and one hole with a depth of 520 feet was completed during the month. A log summary of this hole follows:

<u>Hole CS-17</u> - Woodrow Davidson property, 100' downdip from CS-14

Coordinates: 735,605 N; 770,830 E

Elevation: 1,450'

0 - 17 - - - - - Clay

17 - 217 - - - - - Mascot dolomite

217 - 371 - - - - - Upper Kingsport dolomite

371 - - - - - TR Marker

371 - 375 - - - - - Lower Kingsport dolomite

375 - 379 - - - - - <u>4' assay value 4.75% Zn</u>

379 - 385 - - - - - 6' assay value 0.16% Zn

385 - 510 - - - - - Lower Kingsport dolomite and limestone, 45% dolomite

510 - 520 - - - - - (Bottom) Longview dolomite.

A. D. Moagland/dm

INTERIM REPORT

DMEA-4586, Idm-E1071-Zinc

Operator: The New Jersey Zinc Company, Jefferson City, Tennessee

Location: Cedar Springs area, Grainger County, Tennessee

Diamond drilling completed on the Cedar Springs project of the New Jersey Zinc Company in the Copper Ridge district to date and since the last inspection May 27, 1957 is summarized as follows:

Footage in holes completed since last inspection ...	1,285
Total footage in holes completed to date.....	1,805
Number of holes completed since last inspection.....	2
Total number of holes completed to date.....	3
Number of holes showing commercial zinc ore.....	0 ✓
Number of holes showing non-commercial zinc mineralization.....	1
Number of barren holes.....	2

Brief summaries of the two holes completed since the last inspection follow:

Hole No.	Property	Depth	Remarks
CS-18	Woodrow Davidson	606	Location: 100 ft down dip from Hole CS-17. Abbreviated log: 0-8 Overburden; 8-289 Mascot dolomite; 289-437 upper Kingsport dolomite; 437-489 lower Kingsport --R bed; 489-588 lower Kingsport--S-bed; 588-606 Longview dolomite (T bed 588-597). Mineralization: Shine of pyrite 397-399; barren hole.
CS-19	Woodrow Davidson	679	Location: 100 ft down dip from Hole CS-18. Abbreviated log: 0-27 Overburden; 27-355 Mascot dolomite; 355-515 upper Kingsport dolomite; 515-557 lower Kingsport-R-bed; 557-666 lower Kingsport--S bed; 666-679 Longview dolomite (T bed 666-675). Mineralization: Scattered shines of pyrite 579-607; barren hole.

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6/21 C 720
75 C 100
6/25 OPK 500

Hole CS-20 was drilling at the time of inspection. It is located on the Woodrow Davidson property about 200 ft down dip from Hole CS-19. Hole CS-20 was collared and at a depth of 173 ft is currently drilling in the Mascot dolomite. It will probably bottom at a depth of about 750 ft.

Inspected: June 13, 1957

V. J. Lynch, Mining Engineer
Bureau of Mines

Helmuth Wedow, Jr, Geologist, Geological Survey.

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DATE	INITIALS	CODE
6/12	JWL	220
"	COMM	100
6/14	[illegible]	500

INTERIM REPORT

DMEA-4586, Idm-21071 - Zinc

Operator: The New Jersey Zinc Company, Jefferson City, Tennessee

Location: Cedar Springs area, Grainger County, Tennessee

Diamond drilling on the Cedar Springs project of the New Jersey Zinc Company in the Copper Ridge district was initiated on May 14, 1957 with the drill rig moved off the recessed Independence project (DMEA-4153).

The first hole to be completed was located 100 feet down dip from Hole CS-14 (pre-DMEA drilling). Significant data on the first hole are summarized below:

Hole no.	Property	Depth	Remarks
CS-17	Woodrow Davidson	520	Abbreviated log: 0-17 overburden; 17-217 Mascot dolomite; 217-371 Upper Kingsport dolomite; 371-407 Lower Kingsport ("R" bed); 407-510 Lower Kingsport ("S" bed); 510-520 Longview dolomite ("T" bed). Mineralization: Trace of ZnS and FeS_2 @ 223; traces of pyrite @ 292, 362, 363, 366-371; shine of sphalerite @ 367; 4 ft estimated @ 6 % Zn @ 375-379; traces of sphalerite @ 379-382, and 385.

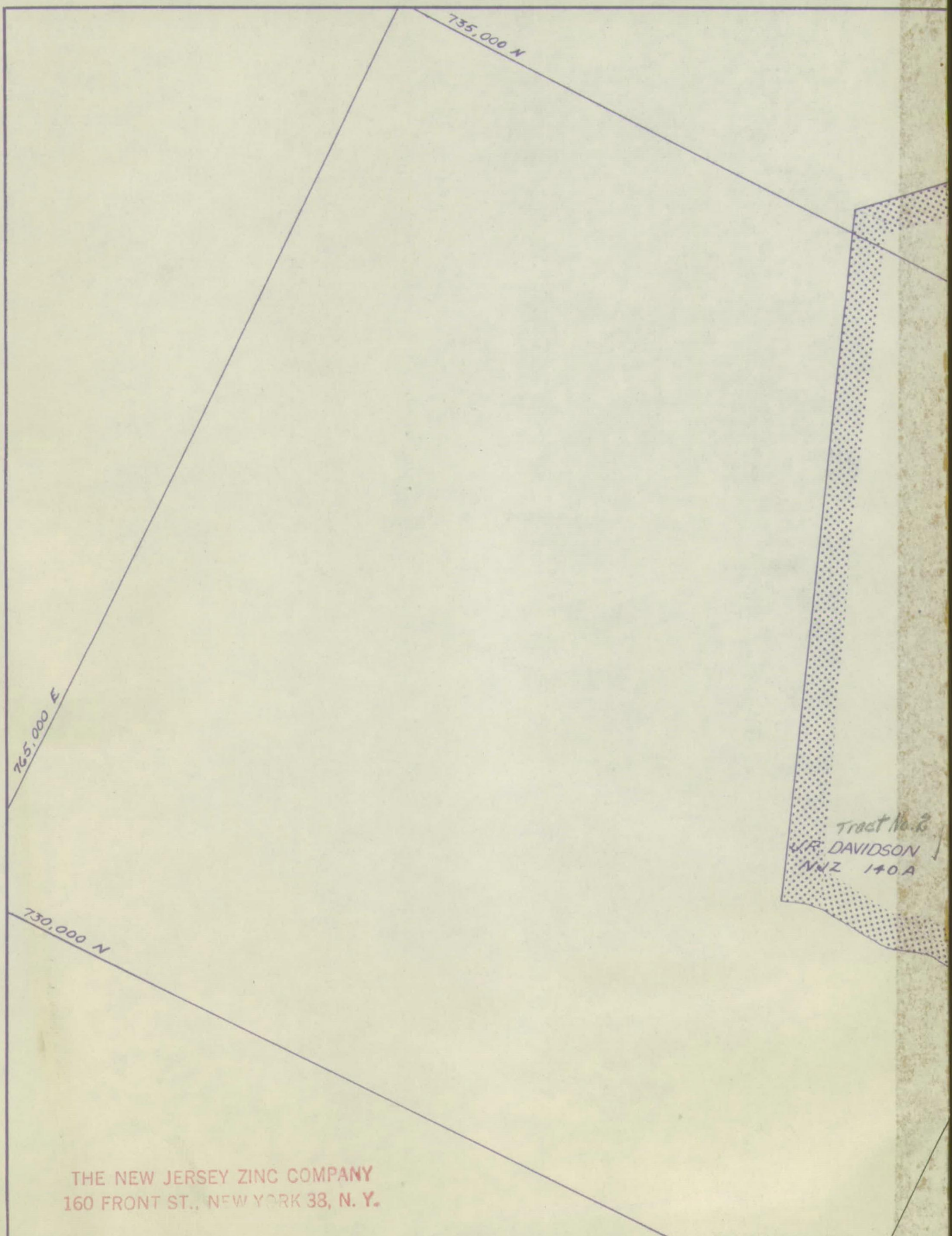
Data on the hole currently drilling are summarized below:

Hole no.	Property	Depth	Est. depth	Remarks
CS-18	Woodrow Davidson	264	610	Located 100 feet down dip from Hole CS-17; collared in Mascot dolomite; currently drilling in lower part of Mascot dolomite.

Inspected: May 27, 1957

V. J. Lynch, Mining Engineer
U. S. Bureau of Mines

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



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

DRAWN TEW	CHECKED	THE NEW JERSEY ZINC COMPANY	DATE 12-7-56
TRACED TEW	APPROVED	JEFFERSON CITY, TENNESSEE	SCALE 1" = 660
REVISED	SW BOUNDARY OF J.R. DAVIDSON PROPERTY COPPER RIDGE BELT SECTOR II AREA I		AX-TENN A 1227

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.

FIGURE 2

AREA EXCLUDED FROM DMEA CONTRACT

HARVEL

Creek

NELSON DALTON NJZ 12A

WOODROW DAVIDSON NJZ 92A

SEE FIG. 3

J.R. DAVIDSON NJZ 140A

CARLIE LANE NJZ MEM 139A

SEE FIG. 4

J.R. DAVIDSON NJZ 145A

Tract No. 1

CARL HOLT NJZ 20A

ALICE DALTON

TR

740,000

ZILPHA CABBAGE

B.E DAVIDSON

CARL DAVIDSON

Oma

Oca

Ocb

ROBERT MALLICOAT NJZ 151A

Cedar

735,000 N

735,000 E

EXPLANATION

- Oc Chickamauga limestone
- Oma Mascot Formation
- Ok Kingsport Formation
- Olv Longview Formation
- 65/45 Dip & Strike
- Geochemical samples 300-900 ppm outlined by dashed line; over 900 ppm by solid line
- Proposed Drill Holes
- Ore
- Mineralized

Base - TVA Quad 1625W, 1715W & aerial photos
Property - PMA, JFP, HWM
Geology - J. Rodgers (U.S.G.S.)
Geochemical Survey -

PROPERTY

- NJZ - under option
- NJZ - Mineral and Mining rights owned
- NJZ - owned in Fee Simple

POSTED TO DATE	THE NEW JERSEY ZINC COMPANY	DRAWN SJL, JFP DATE 2-14-52	COPPER RIDGE BELT	GRAINGER COUNTY, TENN.
3/31/53	ROGERSVILLE TENNESSEE	TRACED SCALE 1"=660'	SECTOR II SHEET 3SW	FILE NO. AX-TENN 105
1-56 TEW				

Figure 1

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POSTED TO DATE	THE NEW JERSEY ZINC COMPANY	DRAWN SJL, JFP DATE 2-14-52	COPPER RIDGE BELT	GRAINGER COUNTY, TENN.
3/31/53	ROGERSVILLE TENNESSEE	TRACED SCALE 1"=660'	SECTOR II SHEET 3SW	FILE NO. AX-TENN 105
1-56 TEW				

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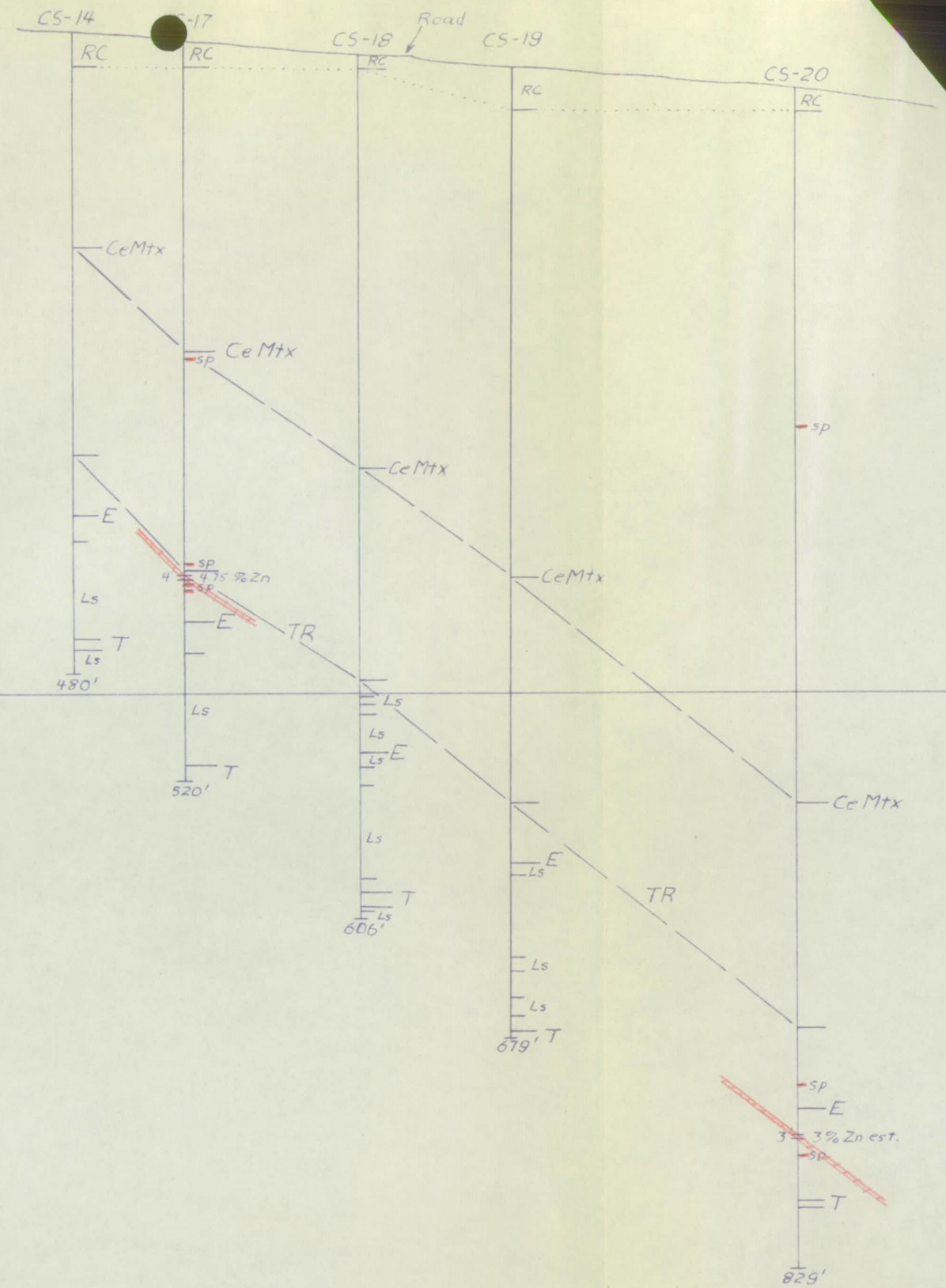
DATE	INITIALS	CODE



DRAWN RCG	DIP SECTION CS-23,14,17,18,19,20,21,22	DATE 7-16-57
TRACED RCG	SECTOR II AREA H	SCALE 1" = 100'
CHECKED	COPPER RIDGE BELT	AX-TENN C-1283
APPROVED		

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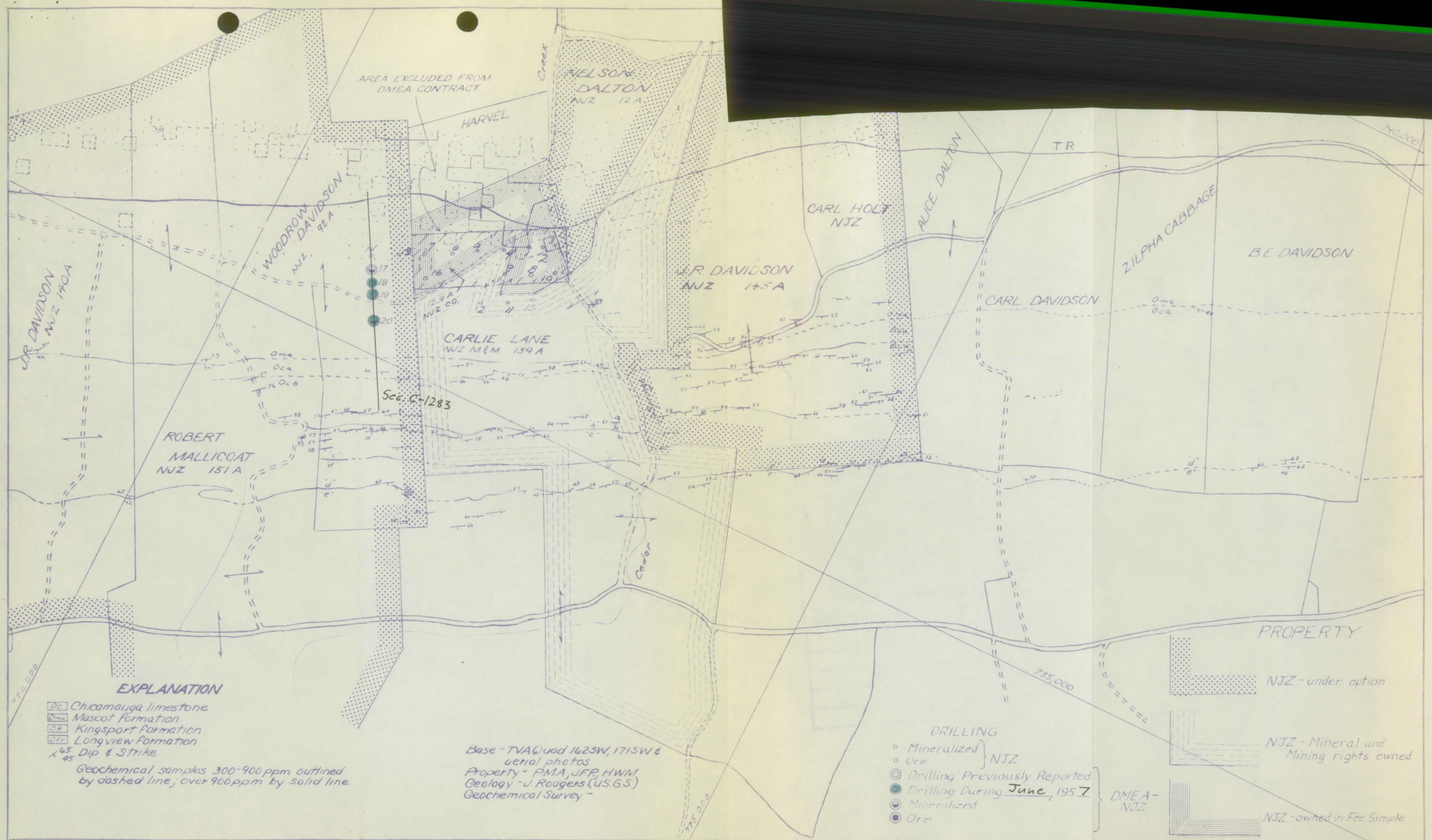
DATE	INITIALS	CODE



POSTED TO DATE 3/31/53 1-56 TEW	THE NEW JERSEY ZINC COMPANY ROGERSVILLE TENNESSEE	DRAWN SJL, JFP DATE 2-14-52 TRACED SCALE 1"=660'	COPPER RIDGE BELT SECTOR II SHEET 3SW	GRAINGER COUNTY, TENN. FILE NO. AX-TENN 105

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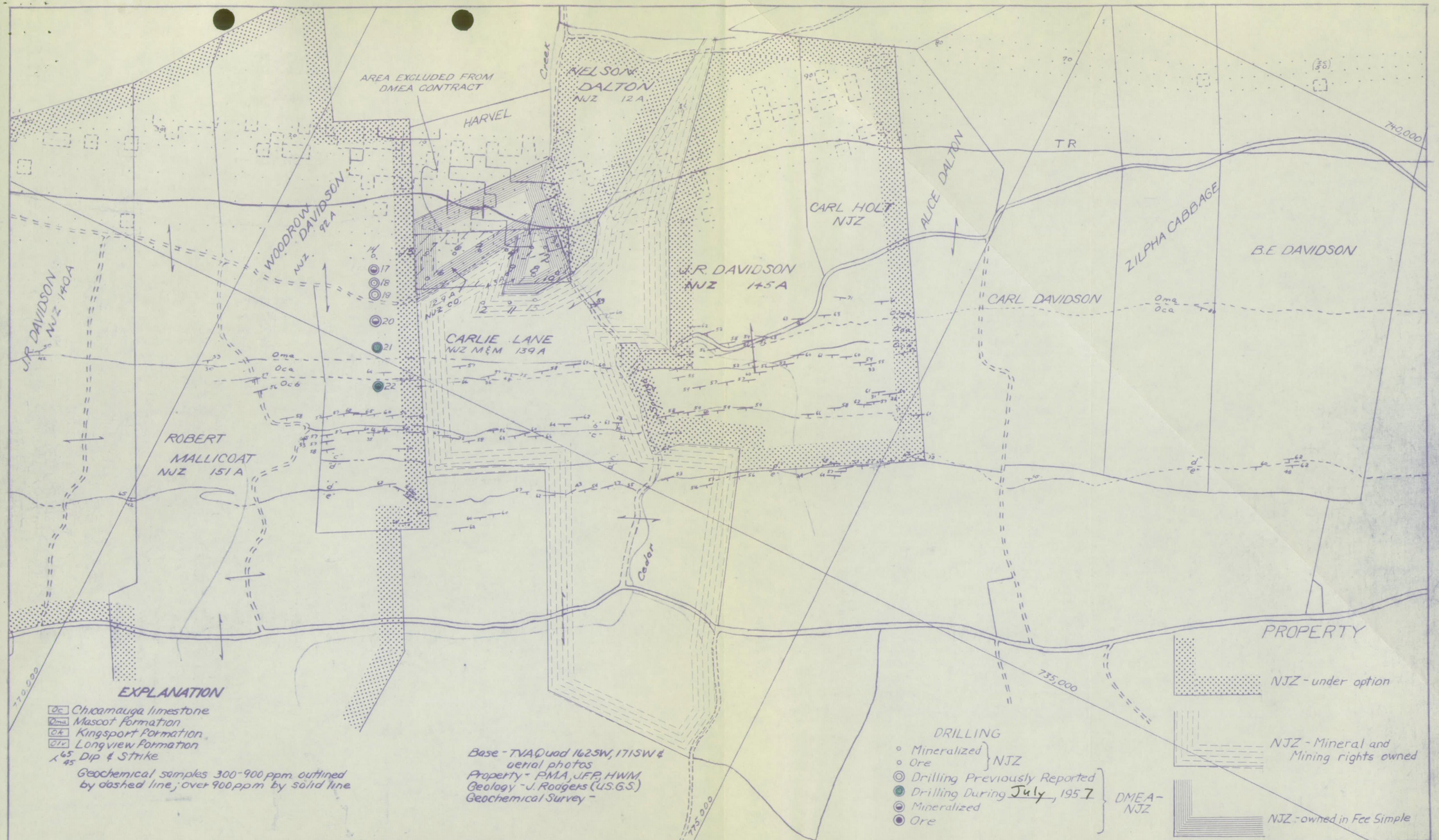
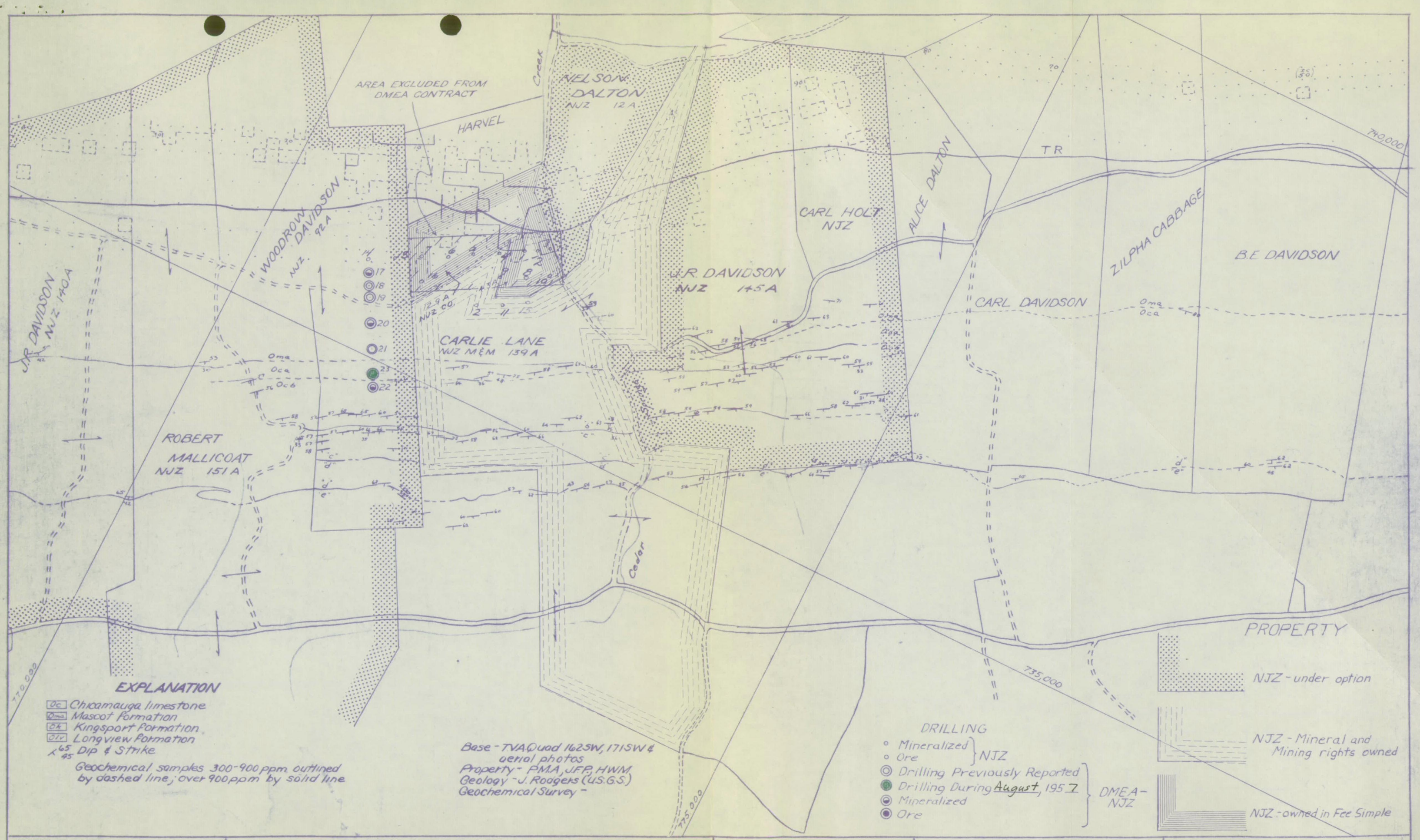


POSTED TO DATE 3/31/53 1-56 TEW	THE NEW JERSEY ZINC COMPANY ROGERSVILLE TENNESSEE	DRAWN SJL, JFP DATE 2-14-52 TRACED SCALE 1"=660'	COPPER RIDGE BELT SECTOR II SHEET 3SW	GRAINGER COUNTY, TENN. FILE NO. AX-TENN 105



POSTED TO DATE 3/31/53 1-56 TEW	THE NEW JERSEY ZINC COMPANY ROGERSVILLE TENNESSEE	DRAWN SJL, JFP DATE 2-14-52 TRACED SCALE 1"=660'	COPPER RIDGE BELT SECTOR II SHEET 3-SW	GRAINGER COUNTY, TENN. FILE NO. AX-TENN 105

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DATE	INITIALS	CODE

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DATE	INITIALS	CODE

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DATE	INITIALS	CODE

POSTED TO DATE 3/31/53 1-56 TEW	THE NEW JERSEY ZINC COMPANY ROGERSVILLE TENNESSEE	DRAWN SJL, JFP DATE 2-14-52 TRACED SCALE 1"=660'	COPPER RIDGE BELT SECTOR II SHEET 3-SW	GRAINGER COUNTY, TENN. FILE NO. AX-TENN 105

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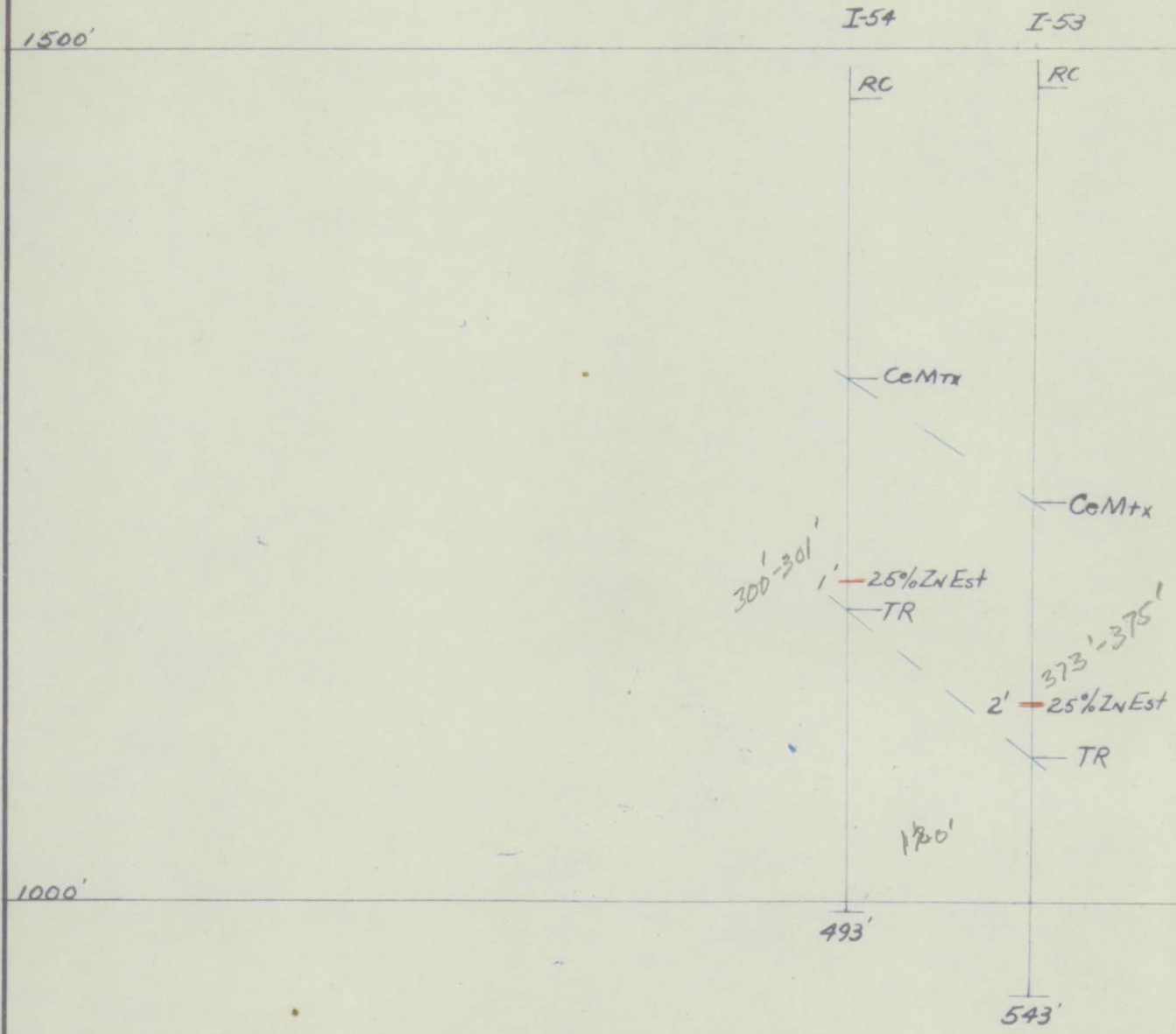

DRAWN WJC	DIP SECTION CS-54,53	DATE 1-7-58
TRACED	SECTOR II AREA H	SCALE 1" = 100'
CHECKED		AX-TENN C-1326
APPROVED	COPPER RIDGE BELT	

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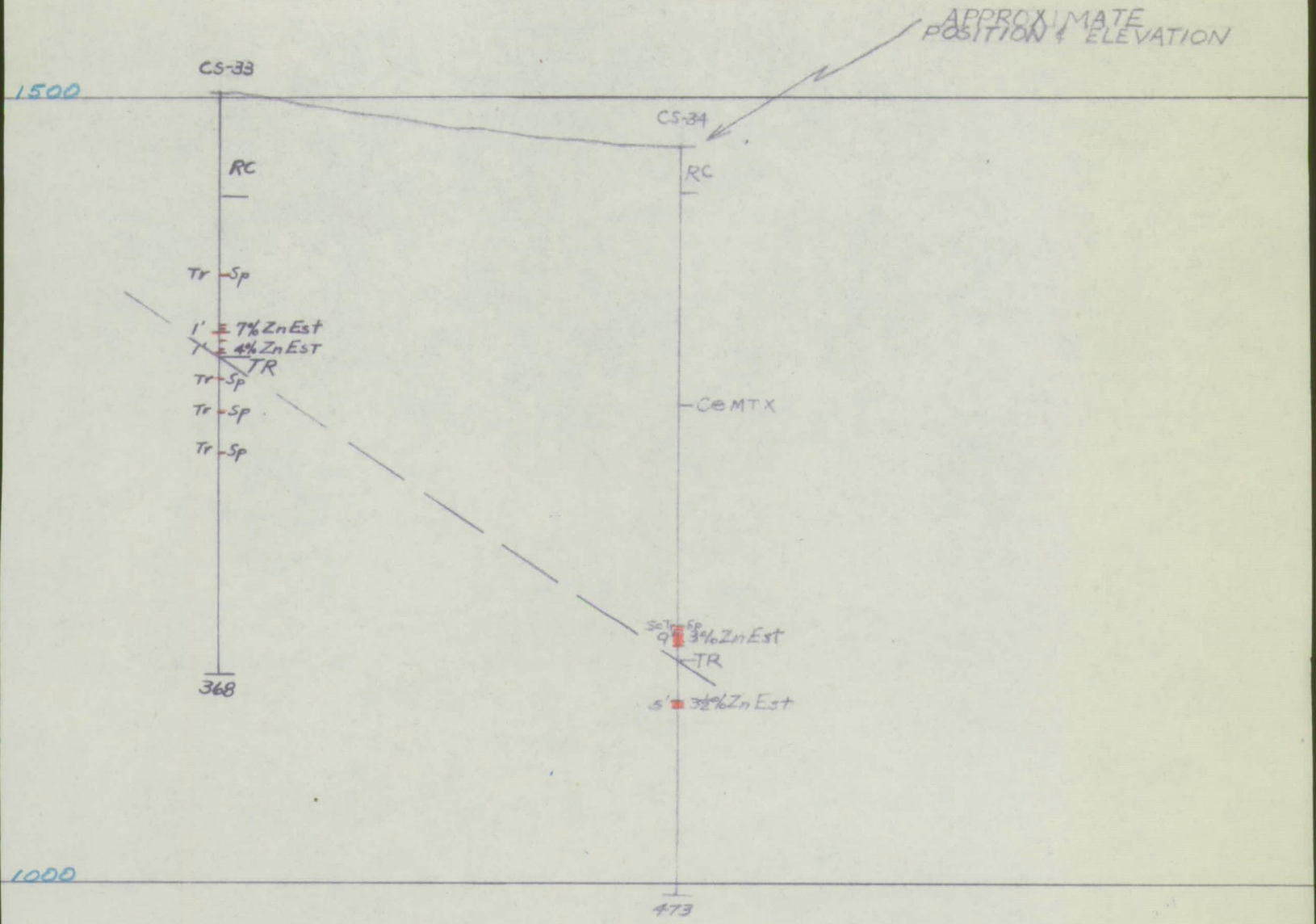

DRAWN WJC	DIP SECTION CS 33,34,	DATE 1-15-58
TRACED	SECTOR II AREA H	SCALE 1" = 100
CHECKED		AX-TENN C-1329
APPROVED	COPPER RIDGE BELT	

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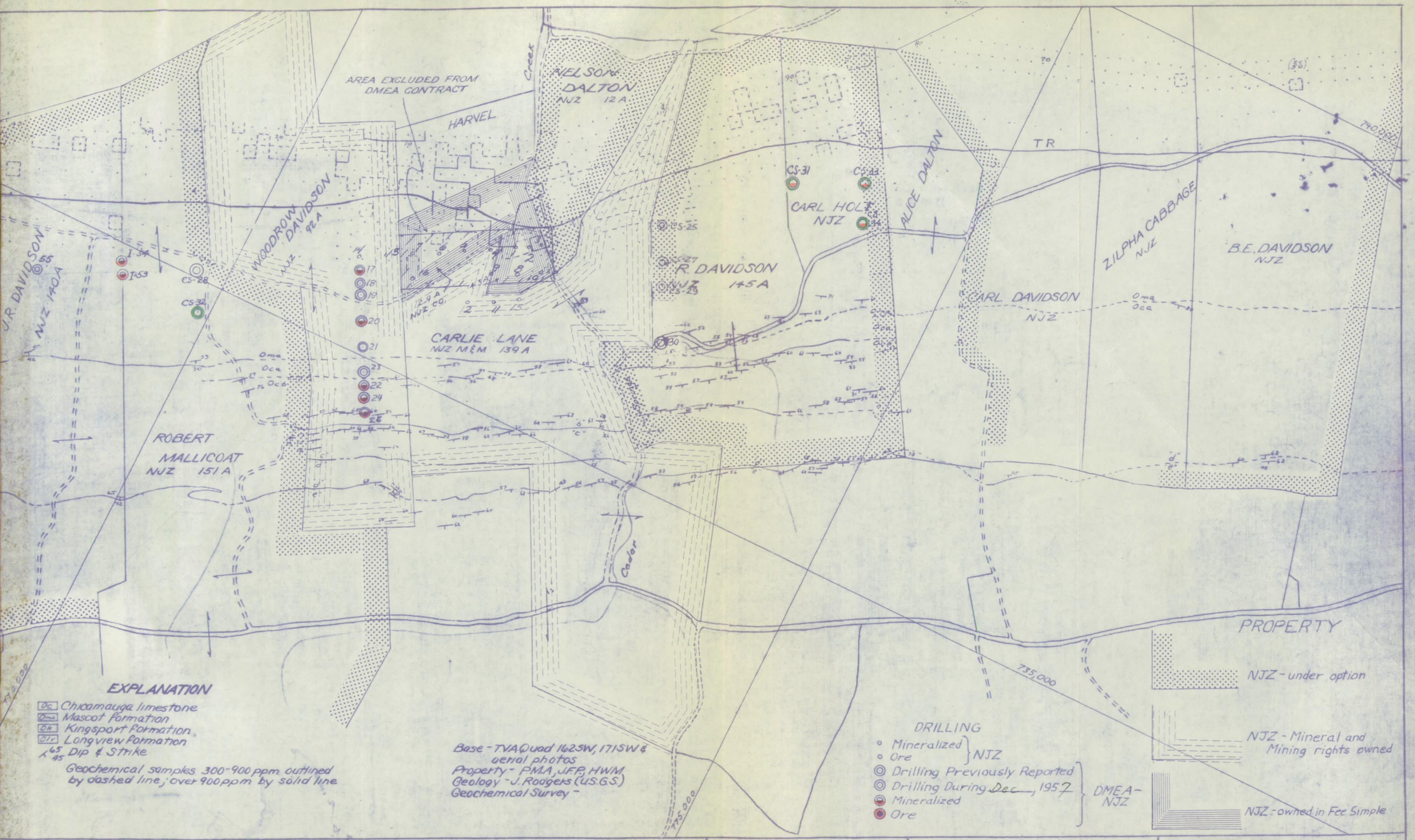

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3/31/53	ROGERSVILLE TENNESSEE	TRACED SCALE 1"=660'	SECTOR II SHEET 3SW	FILE NO. AX-TENN 105
1-56 TEW				

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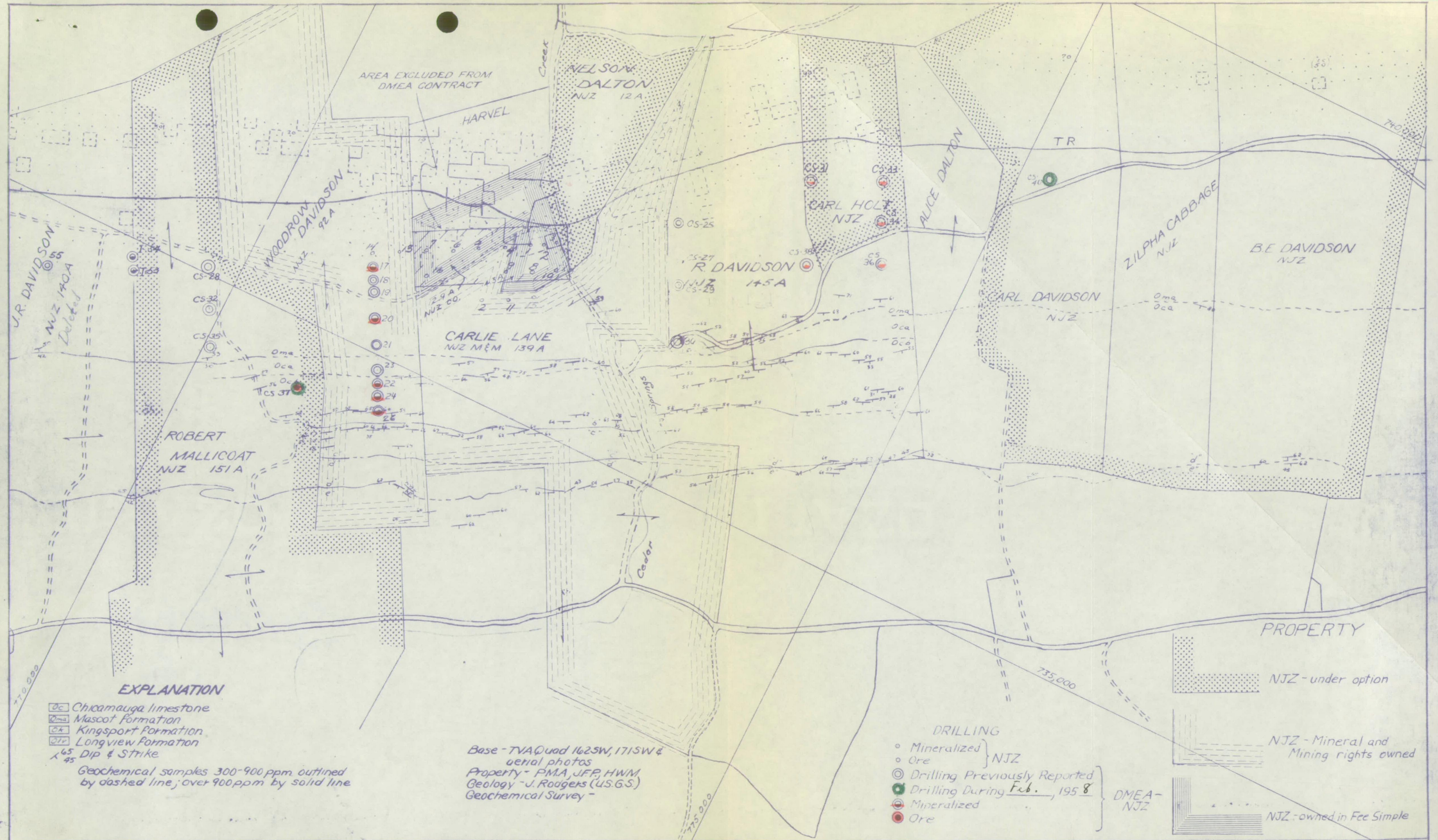

POSTED TO DATE 3/31/53 1-56 TEW	THE NEW JERSEY ZINC COMPANY ROGERSVILLE TENNESSEE	DRAWN SJL/JFP DATE 2-14-52 TRACED SCALE 1"=660'	COPPER RIDGE BELT SECTOR II SHEET 3SW	GRAINGER COUNTY, TENN. FILE NO. AX-TENN 105

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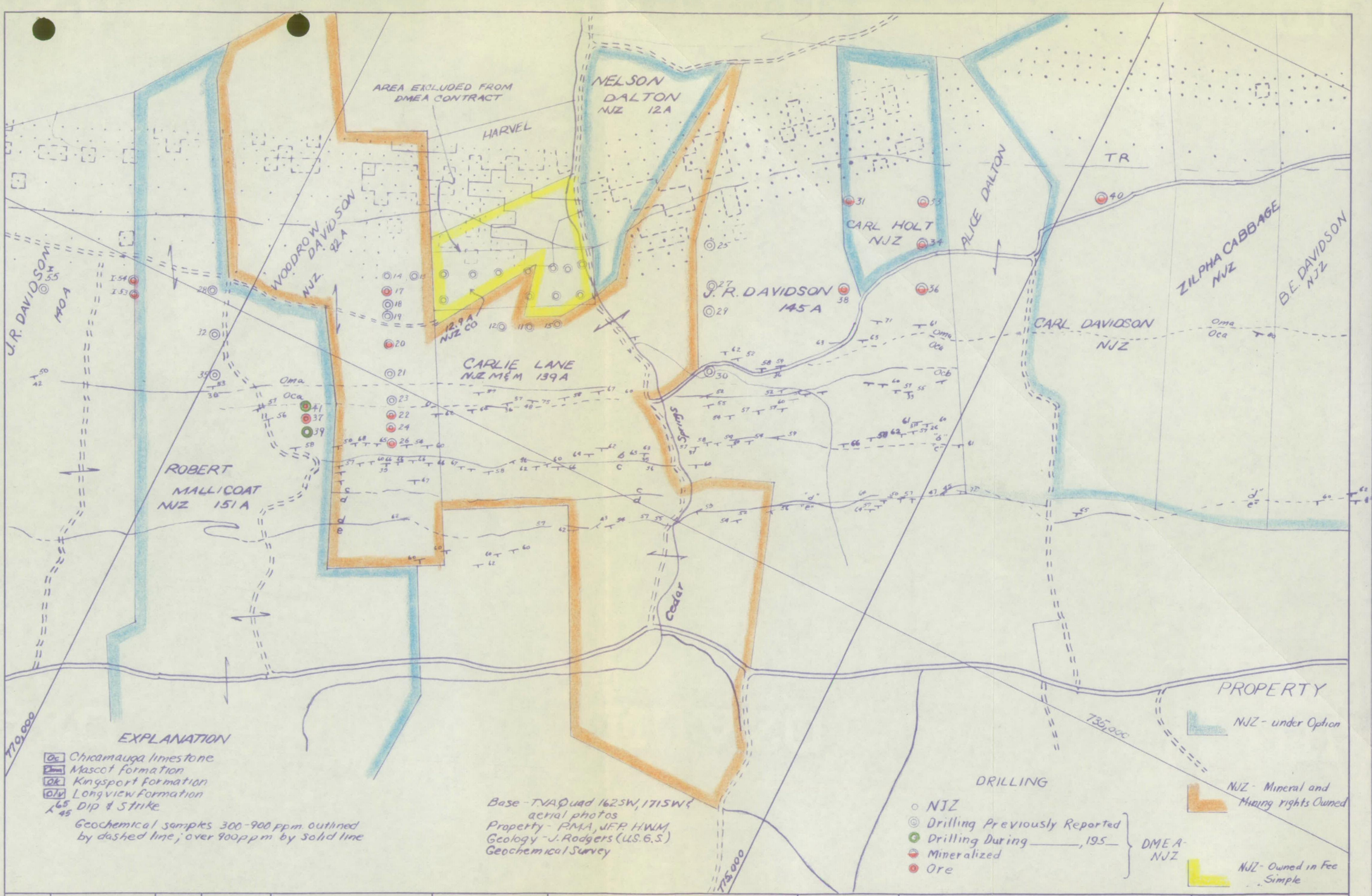

SERIAL NUMBER		DATE ISSUED		REFERENCE DRAWINGS	REVISIONS	THE NEW JERSEY ZINC COMPANY	DRAWN S&L, JFP	COPPER RIDGE BELT	DATE 4-2-58
THIS DRAWING IN DESIGN AND DETAIL IS OUR PROPERTY AND MUST NOT BE USED EXCEPT IN CONNECTION WITH OUR WORK. ALL RIGHTS OF DESIGN AND INVENTION ARE RESERVED. THIS DRAWING MUST BE RETURNED TO THE NEW JERSEY ZINC COMPANY.				Traced from AX Tenn 105		JEFFERSON CITY, TENN	TRACED WJC, EWR	SECTOR II CEDAR SPRINGS	SCALE 1" to 660'
							CHECKED		AX-TENN B-1351
							APPROVED		

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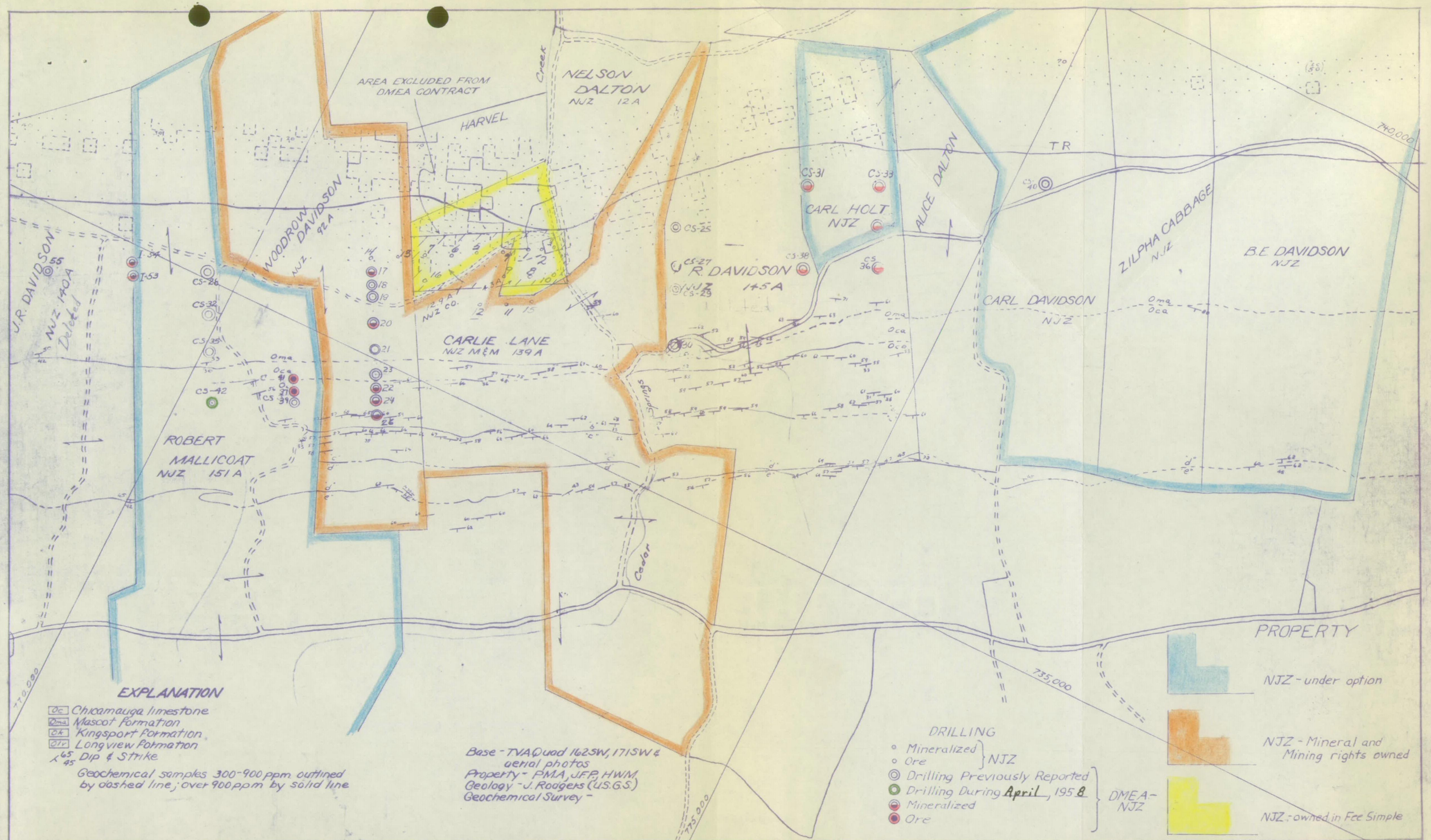

POSTED TO DATE 8/31/53 1-56 TEW	THE NEW JERSEY ZINC COMPANY ROGERSVILLE TENNESSEE	DRAWN SJL, JFP DATE 2-14-52 TRACED SCALE 1"=660'	COPPER RIDGE BELT SECTOR II SHEET 3SW	GRAINGER COUNTY, TENN. FILE NO. AX-TENN 105

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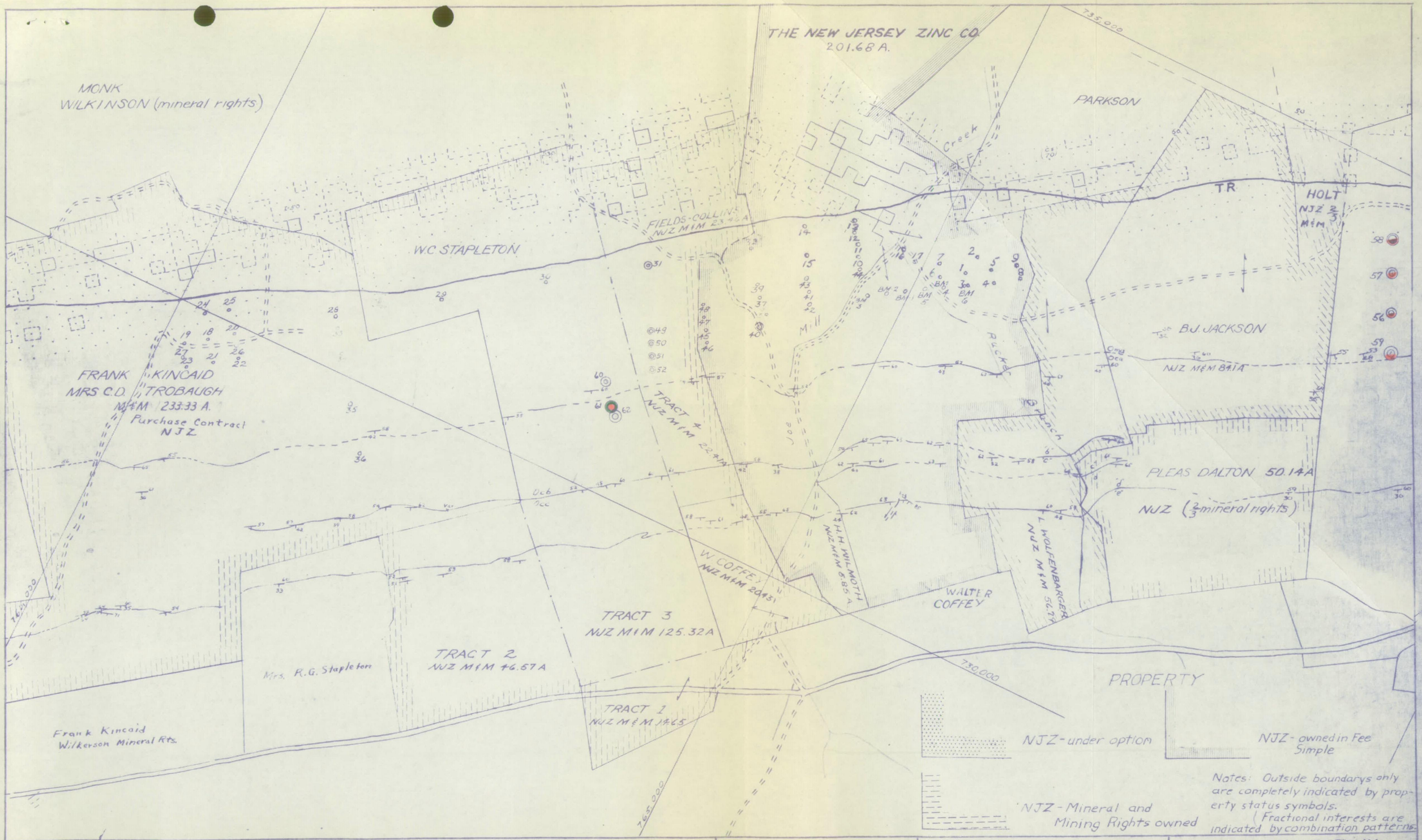
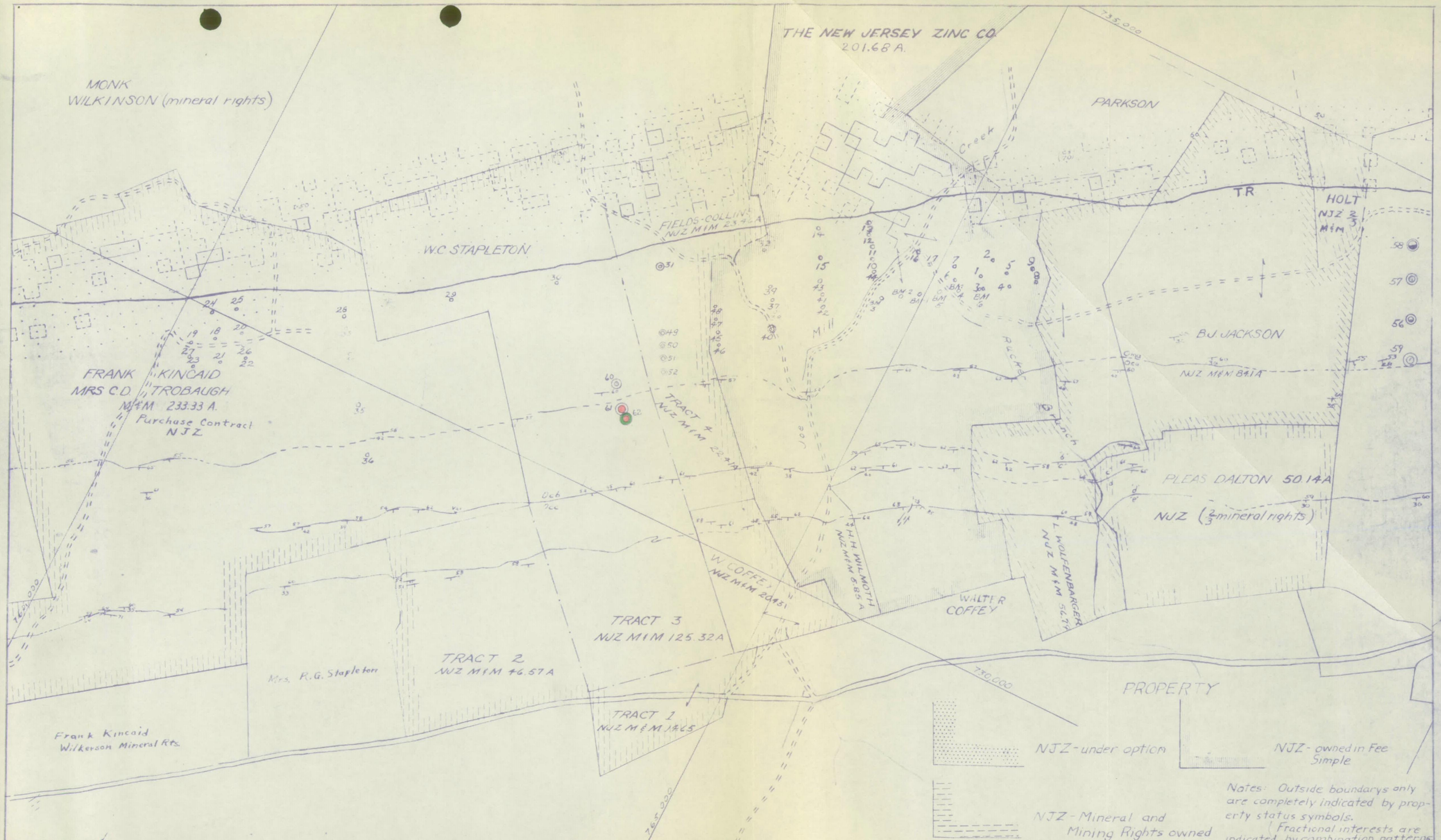
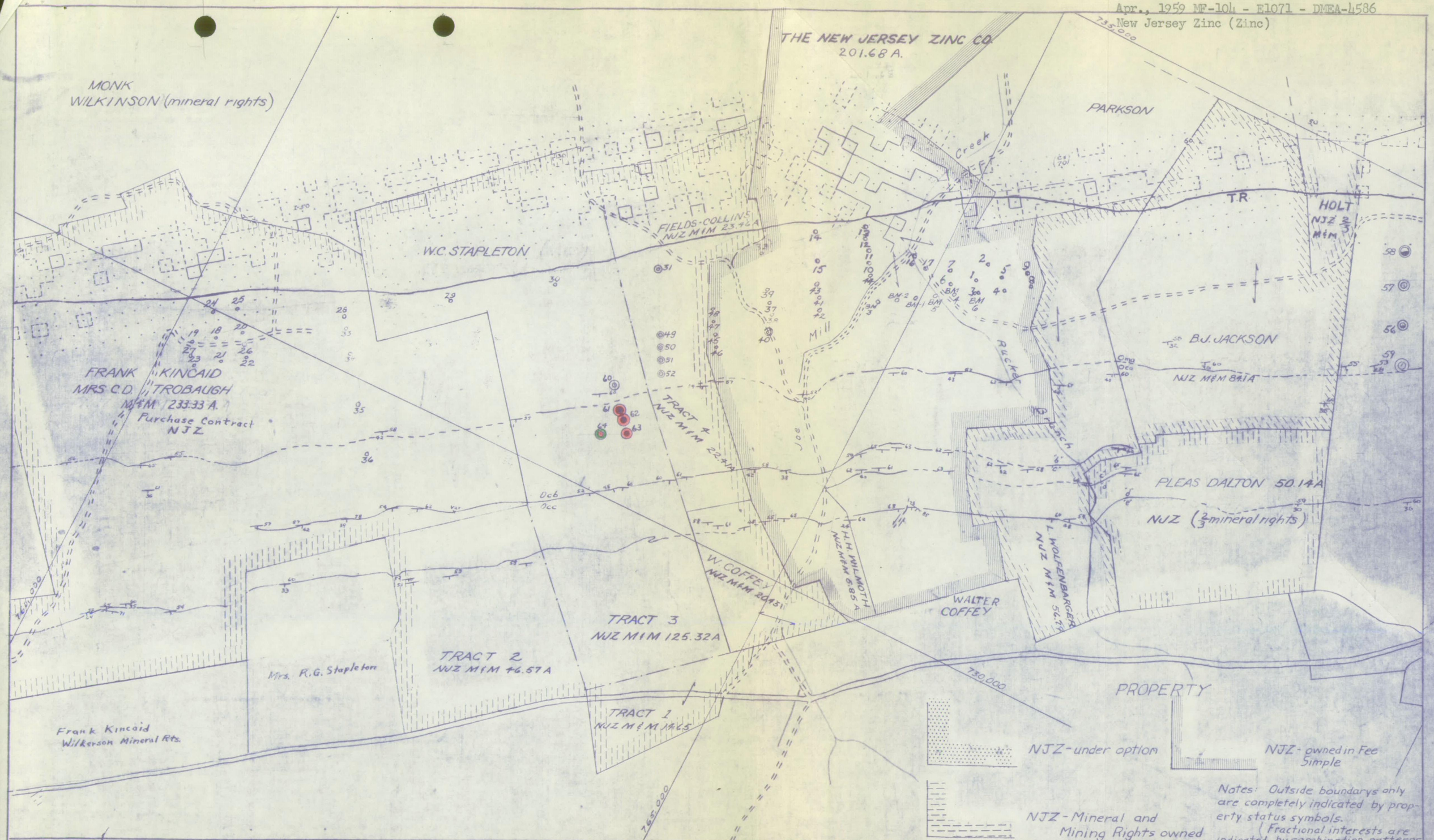
RECEIVED JUN 5 1958

DATE	INITIALS	CODE



POSTED TO DATE 5-30-53 1-56 TEW 10-56 "	THE NEW JERSEY ZINC COMPANY ROGERSVILLE TENNESSEE	DRAWN SJL, JFP DATE 2/17/53 TRACED SCALE 1"=660'	COPPER RIDGE BELT SECTOR II SHEET 4SW
GRAINGER COUNTY, TENN. FILE NO. AX-TENN 106			


THE NEW JERSEY ZINC CO.
201.68 A.
MONK
WILKINSON (mineral rights)
PARKSON
W.C STAPLETON
FIELDS-COLLINS
NJZ M&M 23.42A
TR
HOLT
NJZ 2/3 M&M
BJ JACKSON
NJZ M&M 84.1A
FRANK KINCAID
MRS C.D. TROBAUGH
M&M 233.33 A.
Purchase Contract
NJZ
TRACT 4
NJZ M&M 22.41A
PLEAS DALTON 50.14A
NJZ (2/3 mineral rights)
H.H. WILMOTH
NJZ M&M 6.85A
L. WOLFENBARGER
NJZ M&M 56.7A
W. COFFEY
NJZ M&M 20.451
WALTER COFFEY
TRACT 3
NJZ M&M 125.32A
TRACT 2
NJZ M&M 46.57A
Mrs. R.G. Stapleton
TRACT 1
NJZ M&M 14.45
Frank Kincaid
Wilkerson Mineral Rts.
PROPERTY
NJZ - under option
NJZ - owned in Fee Simple
NJZ - Mineral and Mining Rights owned
Notes: Outside boundarys only are completely indicated by property status symbols.
(Fractional interests are indicated by combination patterns.)
POSTED TO DATE
5/30/53
1-56 TEW
10-56 "
THE NEW JERSEY ZINC COMPANY
ROGERSVILLE TENNESSEE
DRAWN SJL, JFP DATE 2/17/53
TRACED SCALE 1"=660'
COPPER RIDGE BELT
SECTOR II SHEET 4SW
GRAINGER COUNTY, TENN.
FILE NO. AX-TENN 106


THE NEW JERSEY ZINC CO.
201.68 A.
MONK
WILKINSON (mineral rights)
PARKSON
W.C. STAPLETON
FIELDS-COLLINS
NJZ M&M 23.42 A
HOLT
NJZ 2/3
M&M
T.R.
B.J. JACKSON
NJZ M&M 8.41 A
FRANK KINCAID
MRS C.D. TROBAUGH
M&M 233.33 A.
Purchase Contract
NJZ
TRACT 4
NJZ M&M 22.41 A
PLEAS DALTON 50.14 A
NJZ (2/3 mineral rights)
W. COFFEY
NJZ M&M 20.43 A
H.H. WILMOTH
NJZ M&M 6.85 A
L. WOLFENBARGER
NJZ M&M 56.79
WALTER COFFEY
TRACT 3
NJZ M&M 125.32 A
TRACT 2
NJZ M&M 46.57 A
Mrs. R.G. Stapleton
TRACT 1
NJZ M&M 14.45
Frank Kincaid
Wilkerson Mineral Rts.
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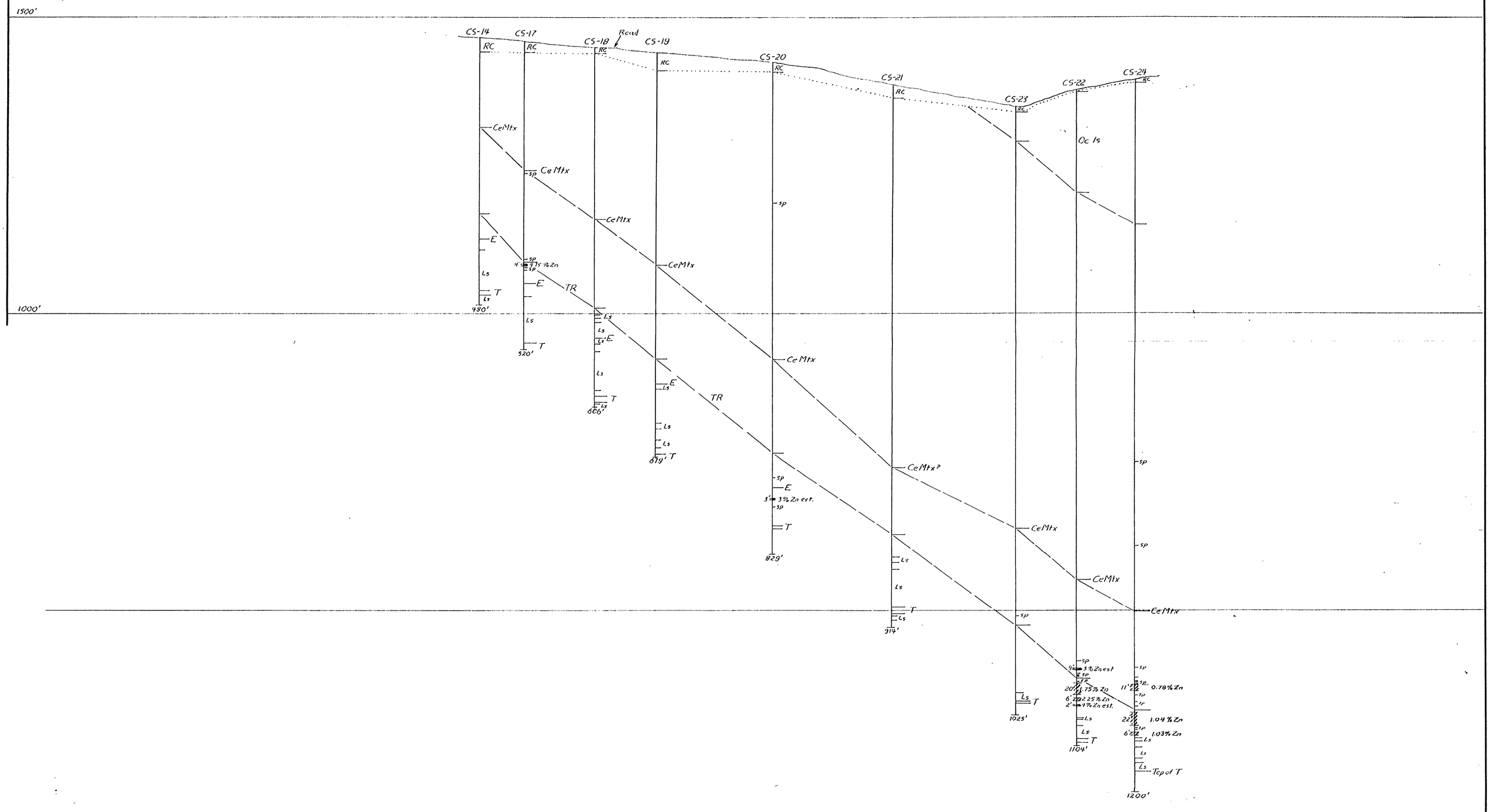
POSTED TO DATE
5/30/53
1-56 TEW
10-56 "
THE NEW JERSEY ZINC COMPANY
ROGERSVILLE TENNESSEE
DRAWN SJL, JFP DATE 2/17/53
TRACED SCALE 1"=660'
COPPER RIDGE BELT
SECTOR II SHEET 4SW
GRAINGER COUNTY, TENN.
FILE NO. AX-TENN 106

MAY 21 1959
O.M.E.

POSTED TO DATE 5/30/53 1-56 TEW 10-56 "	THE NEW JERSEY ZINC COMPANY ROGERSVILLE TENNESSEE	DRAWN SJL, JFP DATE 2/17/53 TRACED SCALE 1"=660'	COPPER RIDGE BELT SECTOR II SHEET 4SW	GRAINGER COUNTY, TENN. FILE NO. AX-TENN 106

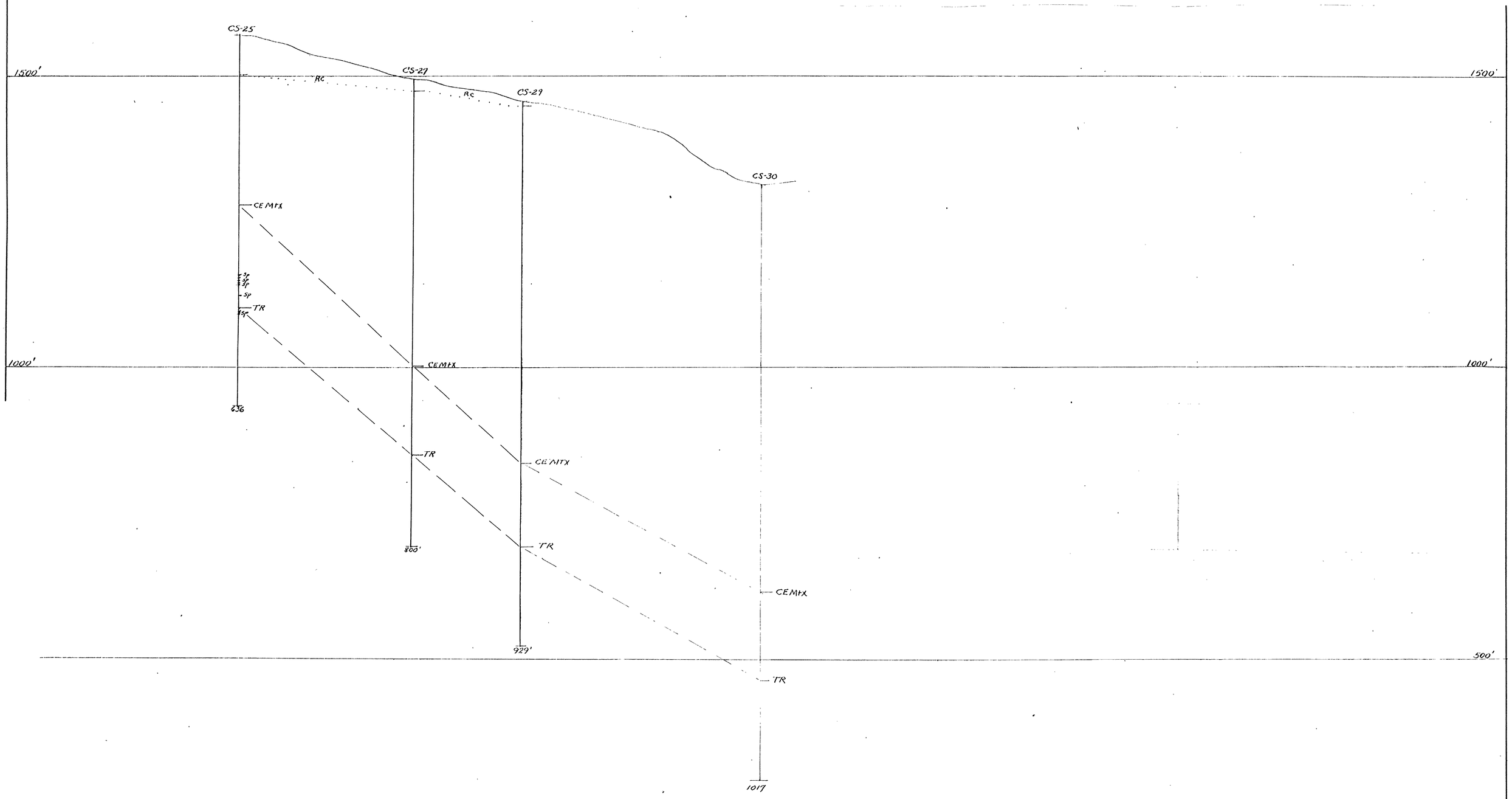
MAY 21 1959
O.M.E.



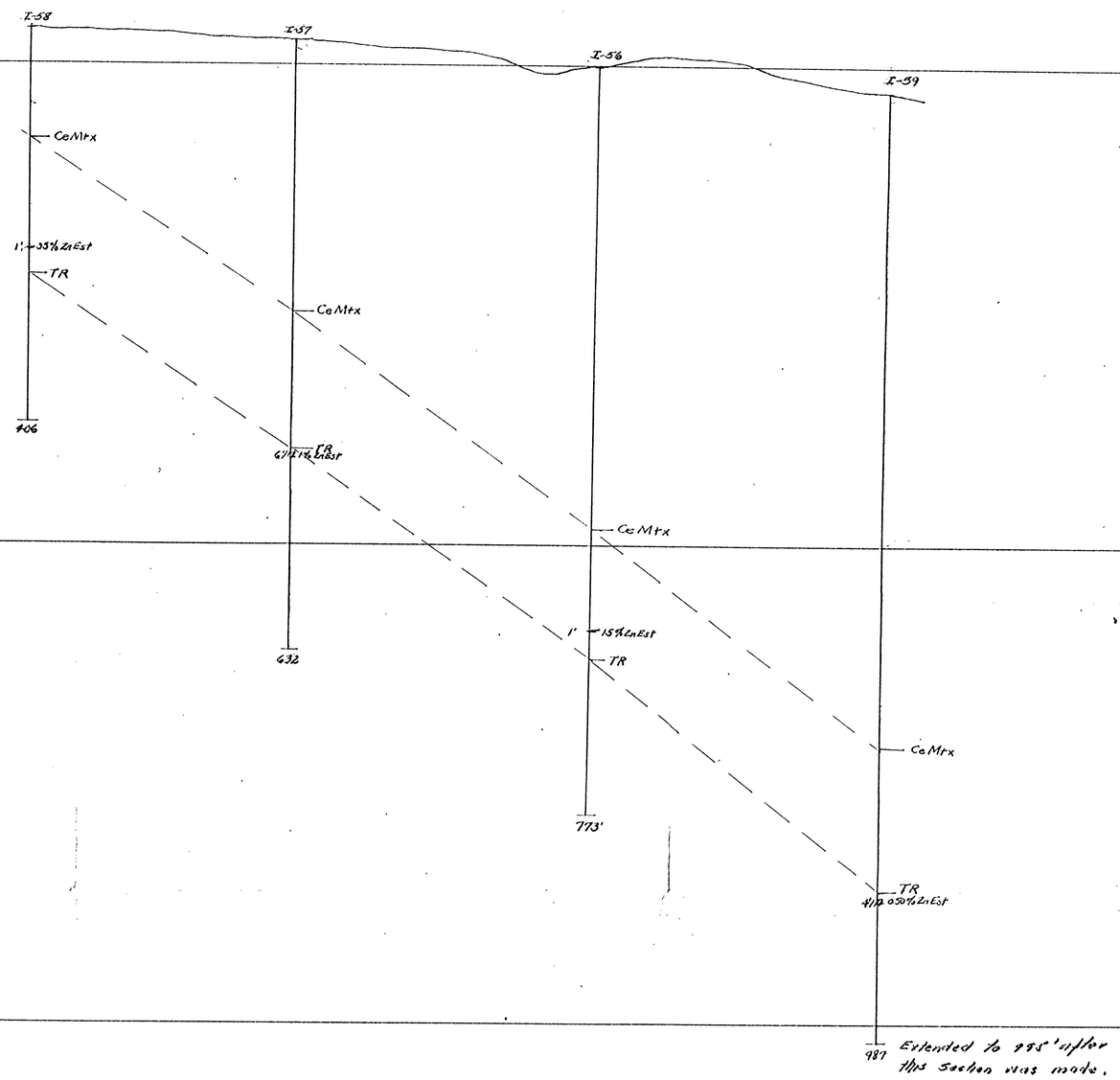
	DATE ISSUED		REFERENCE DRAWINGS	REVISIONS	THE NEW JERSEY ZINC COMPANY	DRAWN RCG	DIP SECTION CS-2, 14, 17, 18, 19, 20, 21.	DATE 7-16-57
						TRACED RCG	SECTOR II AREA H 23, 22, 24	SCALE 1"=100'
					JEFFERSON CITY, TENNESSEE	CHECKED	COPPER RIDGE BELT	AX-TENN C-1283
						APPROVED		

AWING IN DESIGN AND DETAIL IS OUR PROPERTY AND MUST NOT BE
CEPT IN CONNECTION WITH OUR WORK. ALL RIGHTS OF DESIGN
ENTION ARE RESERVED. THIS DRAWING MUST BE RETURNED TO
V JERSEY ZINC COMPANY.

X5453C 1M 11-54



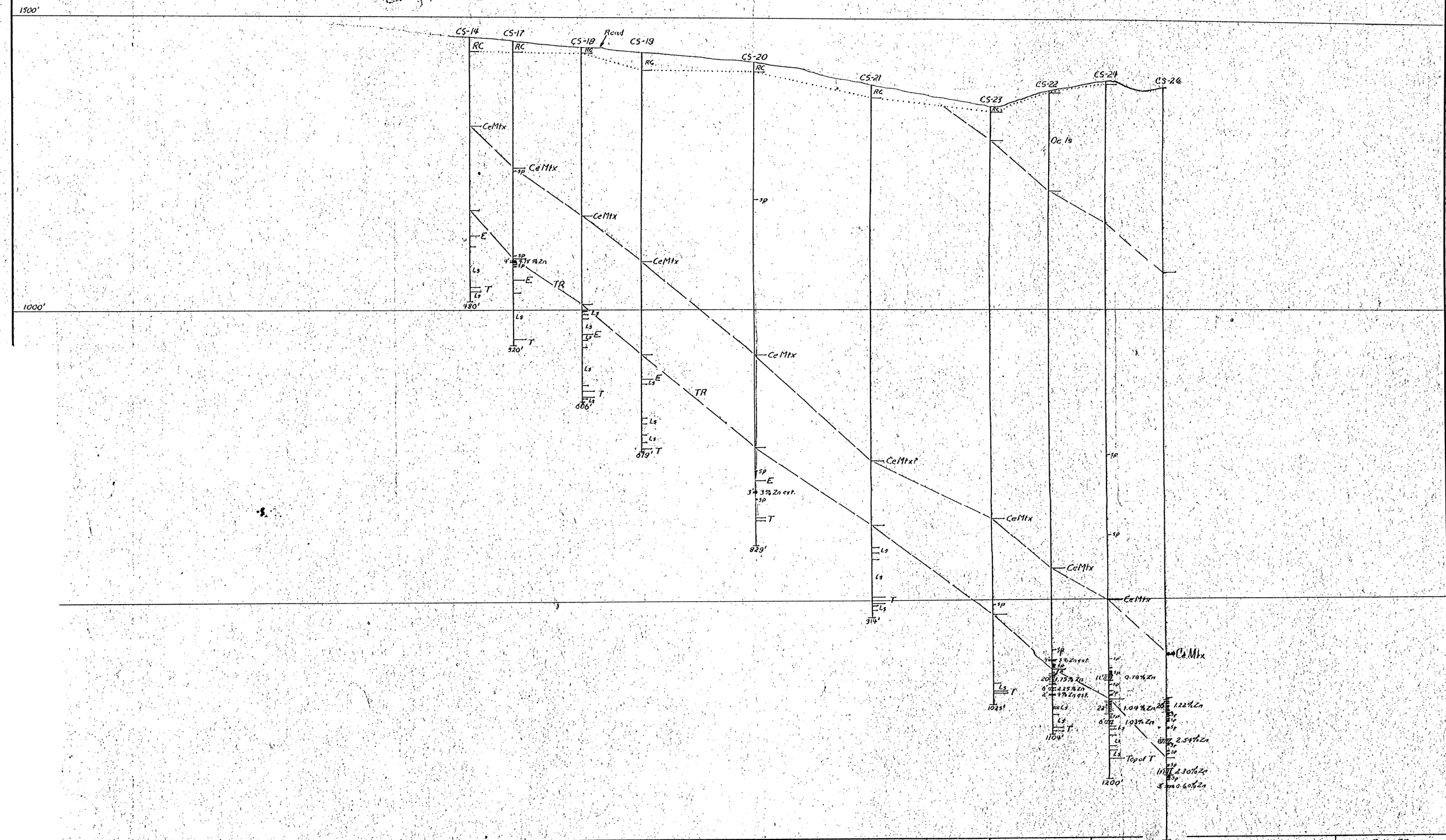
TO DATE	THE NEW JERSEY ZINC COMPANY	DRAWN WJC DATE 11-5-57 TRACED WJC SCALE 1" = 100'	DIP SECTION CS-25, 27 SECTOR II AREA H COPPER RIDGE BELT	DISTRICT FILE NO. AXTENN - C-1318



	DATE ISSUED		REFERENCE DRAWINGS	REVISIONS	THE NEW JERSEY ZINC COMPANY	DRAWN WJC	DIP SECTION I-58-57-56-59	DATE 12-13-57
					JEFFERSON CITY, TENNESSEE	TRACED WJC	SECTOR II AREA H	SCALE 1" = 100'
						CHECKED	COPPER RIDGE BELT	AX-TENN C-1322
						APPROVED		

AWING IN DESIGN AND DETAIL IS OUR PROPERTY AND MUST NOT BE
XCEPT IN CONNECTION WITH OUR WORK. ALL RIGHTS OF DESIGN
VENTION ARE RESERVED. THIS DRAWING MUST BE RETURNED TO
W JERSEY ZINC COMPANY.

X5453C 1M 11-54



DATE ISSUED	REFERENCE DRAWINGS	REVISIONS

WING IN DESIGN AND DETAIL IS OUR PROPERTY AND MUST NOT BE
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NTION ARE RESERVED. THIS DRAWING MUST BE RETURNED TO
JERSEY ZINC COMPANY.

THE NEW JERSEY ZINC COMPANY

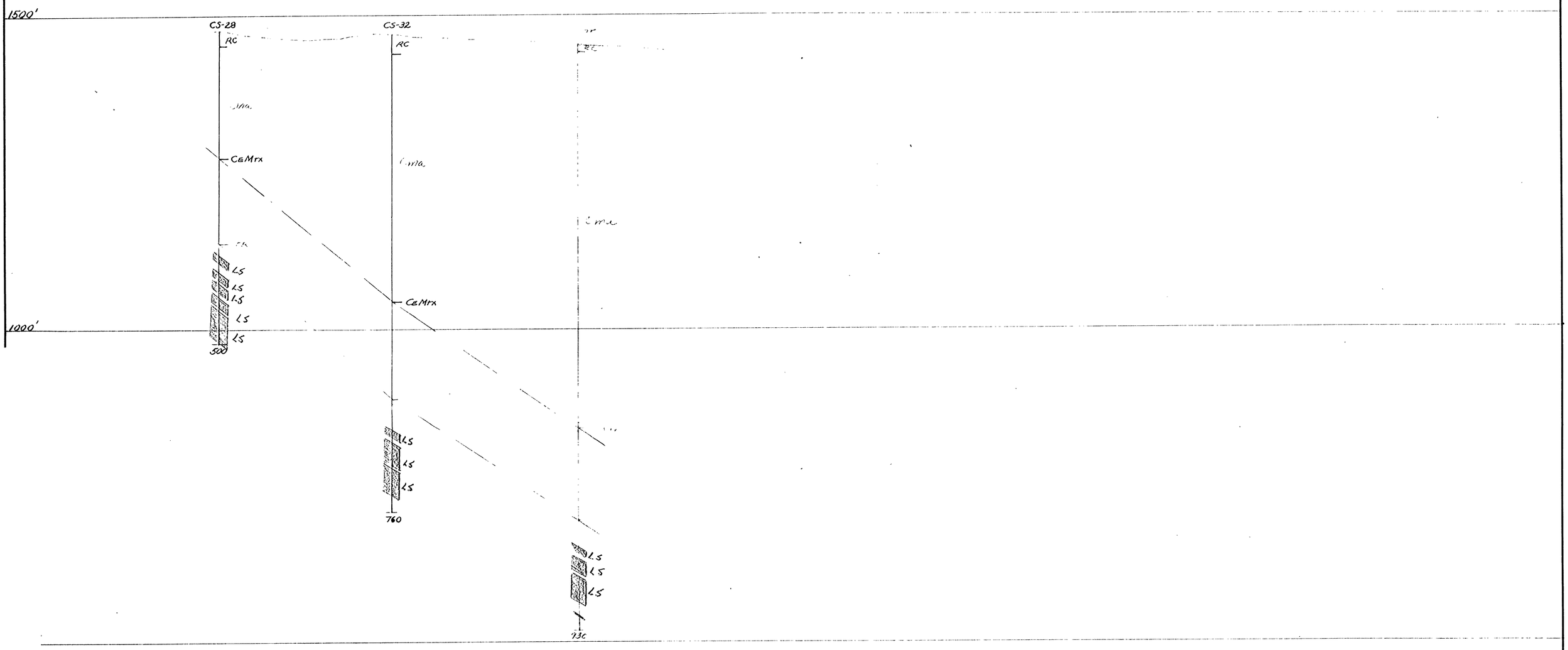
JEFFERSON CITY, TENNESSEE

DRAWN	RCG
TRACED	RCG
CHECKED	
APPROVED	

DIP SECTION CS-2, 14, 17, 18, 19, 20, 21
SECTOR II AREA H 23, 22, 24, 26
COPPER RIDGE BELT

DATE	7-16-57
SCALE	1" = 100'
	AX-TENN C-1283

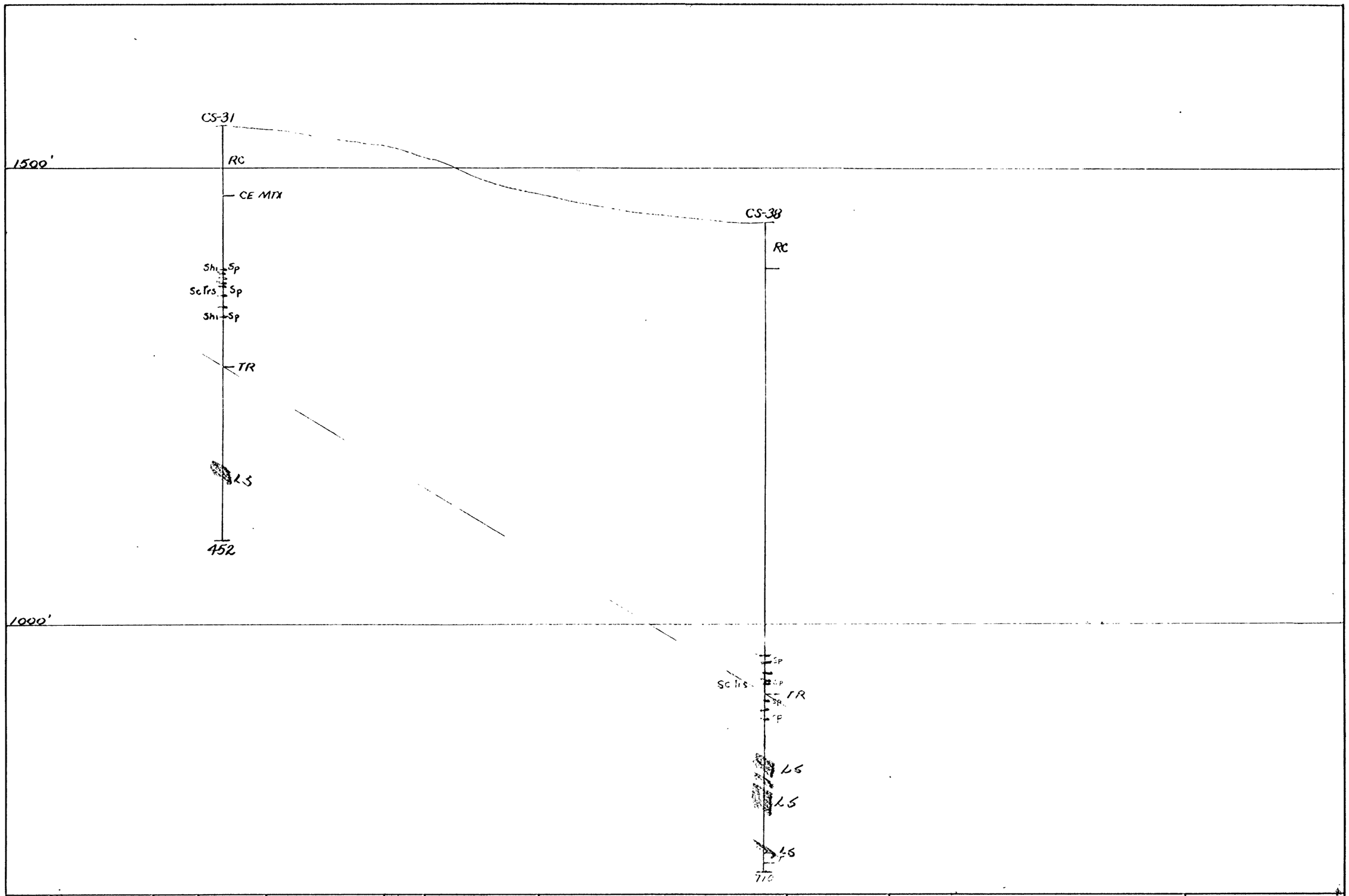
X6465C 1M 11-54



AL ER		DATE ISSUED		REFERENCE DRAWINGS	REVISIONS	THE NEW JERSEY ZINC COMPANY JEFFERSON CITY, TENNESSEE	DRAWN WJC TRACED CHECKED APPROVED	DIP SECTION CS-28-32-35 SECTOR II AREA H COPPER RIDGE BELT	DATE 12-20-57 SCALE 1" = 100' AX-TENN, C-1323

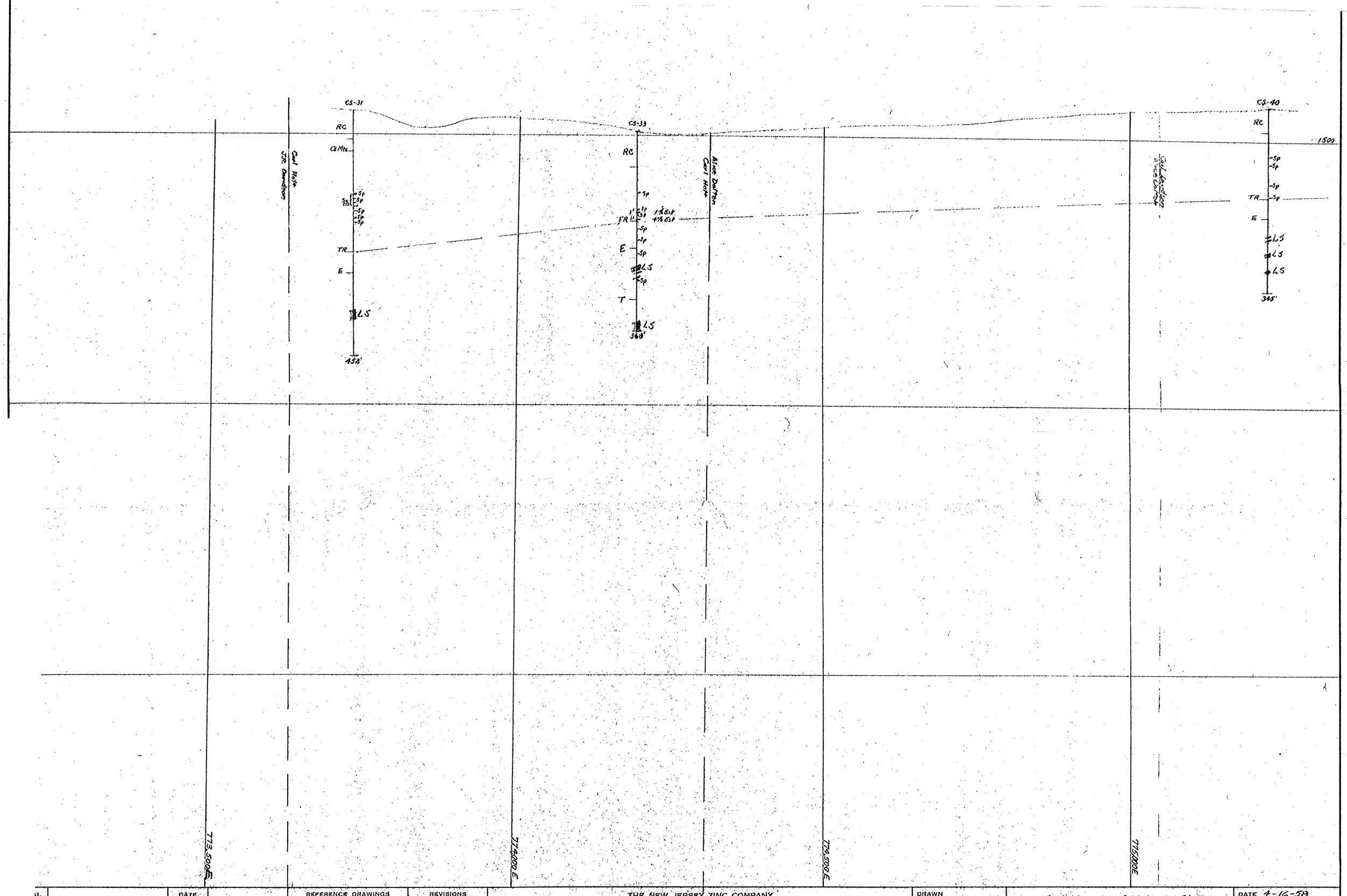
DRAWING IN DESIGN AND DETAIL IS OUR PROPERTY AND MUST NOT BE EXCEPT IN CONNECTION WITH OUR WORK. ALL RIGHTS OF DESIGN NVENTION ARE RESERVED. THIS DRAWING MUST BE RETURNED TO IEW JERSEY ZINC COMPANY.

X5453C 1M 11-54



SERIAL NUMBER		DATE ISSUED		REFERENCE DRAWINGS	REVISIONS	THE NEW JERSEY ZINC COMPANY JEFFERSON CITY, TENN.	DRAWN W.J.C.	DIP SECTION CS 31,38, SECTOR II AREA H COPPER RIDGE BELT	DATE 1-22-58
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.							TRACED		SCALE 1" = 100'
							CHECKED		AX-TENN B-1333
							APPROVED		

X5453B 1M 11-54



DATE ISSUED	REFERENCE DRAWINGS	REVISIONS	

DRAWING IN DESIGN AND DETAIL IS OUR PROPERTY AND MUST NOT BE EXCEPT IN CONNECTION WITH OUR WORK. ALL RIGHTS OF DESIGN INVENTION ARE RESERVED. THIS DRAWING MUST BE RETURNED TO NEW JERSEY ZINC COMPANY.

THE NEW JERSEY ZINC COMPANY

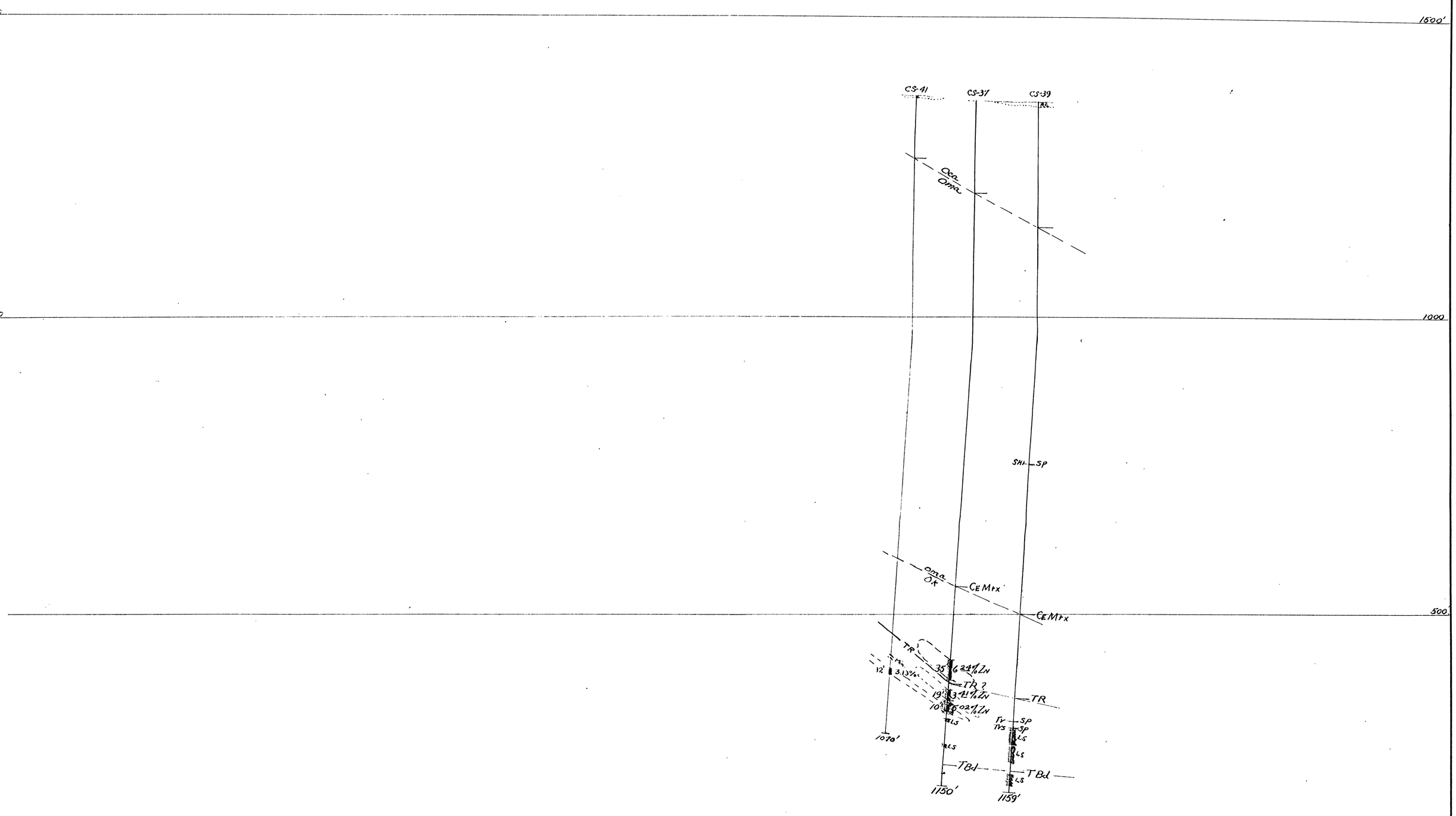
JEFFERSON CITY, TENNESSEE

DRAWN
TRACED
CHECKED
APPROVED

LONGITUDINAL SECTION CS-31,33,40
SECTOR II CEDAR SPRINGS AREA
COPPER RIDGE BELT

DATE 4-16-58
SCALE 1" = 100'
AX-TENN C-1357

X5453C 1M 11-54



Deflection of CS-39 not measured. Section assumes deflection parallel to that of hole CS-37.

Deflection of CS-41 approx. 7° from vertical @ 760'. Bearing not determined.

L ER		DATE ISSUED	

DRAWING IN DESIGN AND DETAIL IS OUR PROPERTY AND MUST NOT BE EXCEPT IN CONNECTION WITH OUR WORK. ALL RIGHTS OF DESIGN NVENTION ARE RESERVED. THIS DRAWING MUST BE RETURNED TO EW JERSEY ZINC COMPANY.

REFERENCE DRAWINGS	REVISIONS

THE NEW JERSEY ZINC COMPANY

JEFFERSON CITY, TENNESSEE

DRAWN	EWR, VWJC
TRACED	
CHECKED	
APPROVED	

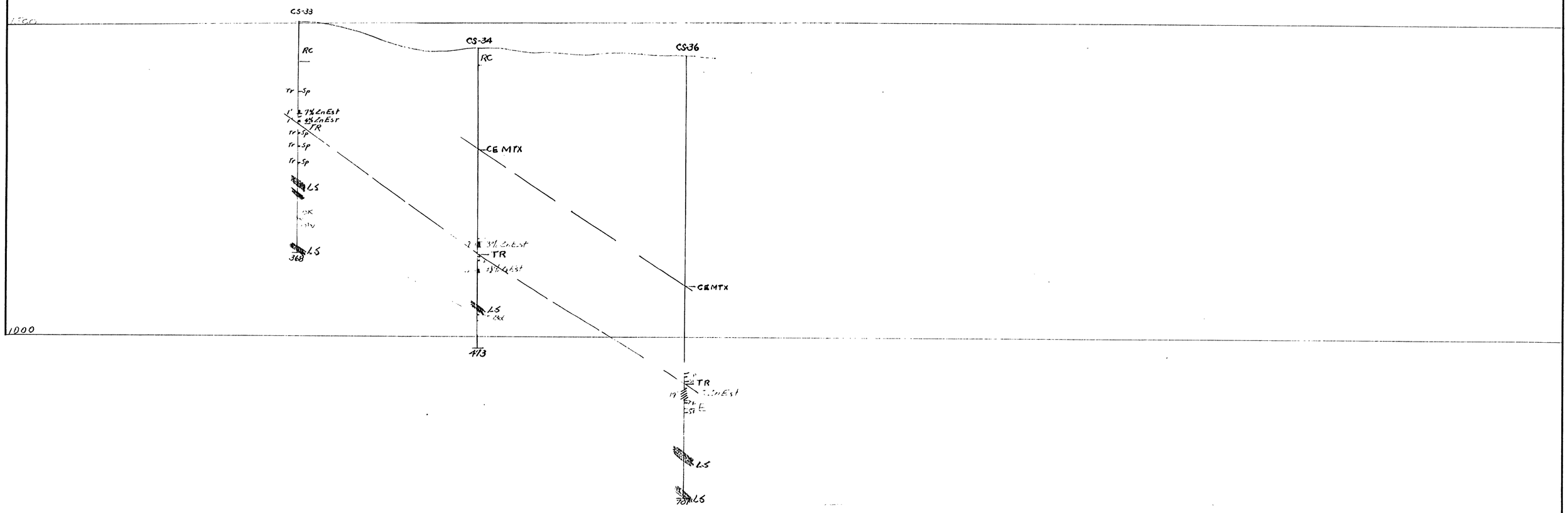
DIP SECTION CS- 41, 37, 39

SECTOR II AREA H

COPPER RIDGE BELT

DATE	MAR. 3, 1958
SCALE	1" = 100'
	AX-TENN-C-1350

X5453C 1M 11-54



	DATE ISSUED		REFERENCE DRAWINGS	REVISIONS	THE NEW JERSEY ZINC COMPANY	DRAWN WJC	DIP SECTION CS 33,34,36	DATE 1-15-58
					JEFFERSON CITY, TENNESSEE	TRACED	SECTOR II AREA H	SCALE 1" = 100
						CHECKED	COPPER RIDGE BELT	AX-TENN C-1329
						APPROVED		

VING IN DESIGN AND DETAIL IS OUR PROPERTY AND MUST NOT BE
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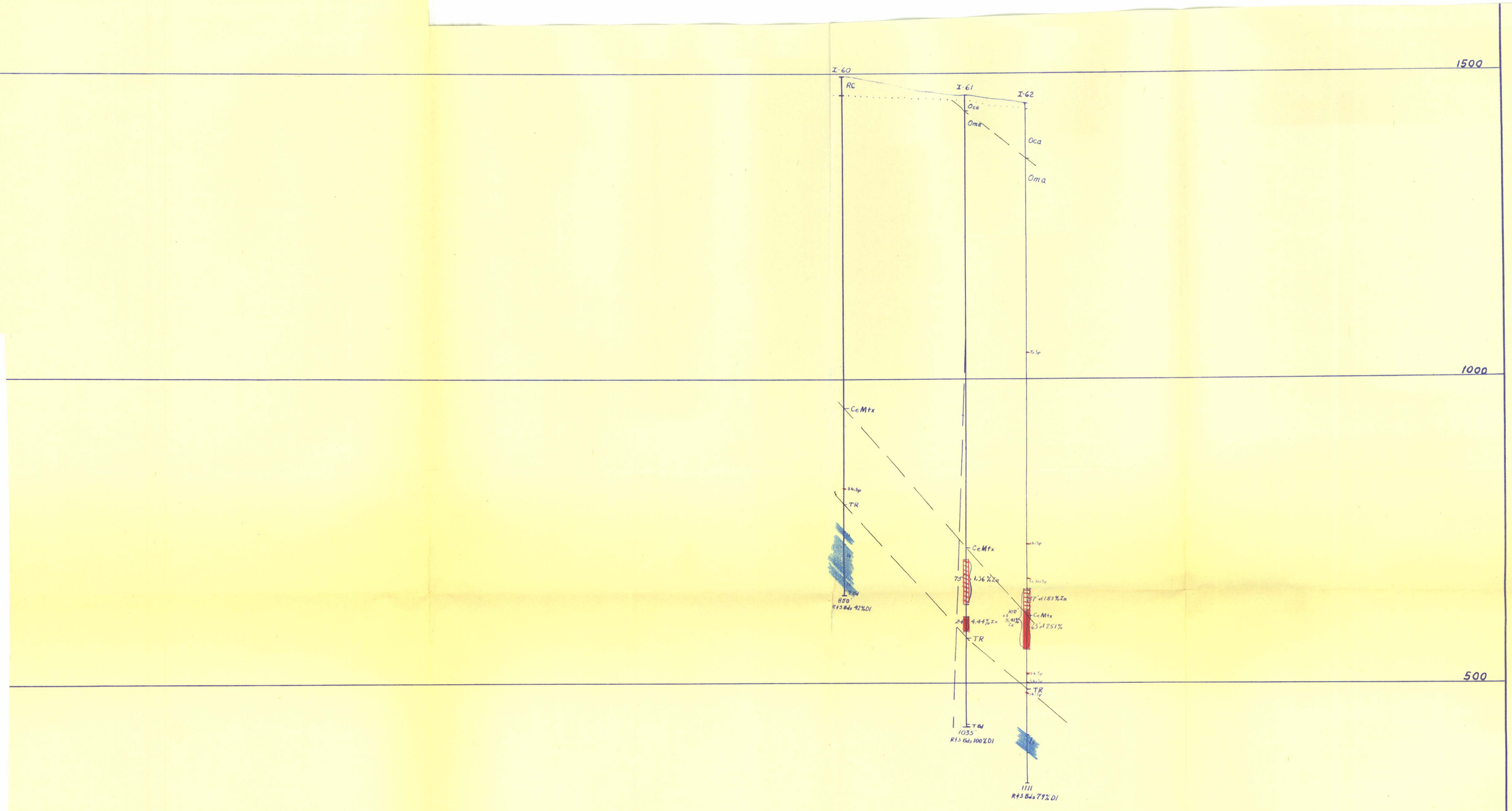
NTION ARE RESERVED. THIS DRAWING MUST BE RETURNED TO
JERSEY ZINC COMPANY.

X5453C 1M 11-54



IAL BER		DATE ISSUED		REFERENCE DRAWINGS	REVISIONS

DRAWING IN DESIGN AND DETAIL IS OUR PROPERTY AND MUST NOT BE D EXCEPT IN CONNECTION WITH OUR WORK. ALL RIGHTS OF DESIGN INVENTION ARE RESERVED. THIS DRAWING MUST BE RETURNED TO NEW JERSEY ZINC COMPANY.

THE NEW JERSEY ZINC COMPANY

Jefferson City, Tenn.

DRAWN	EWR
TRACED	
CHECKED	
APPROVED	

Dip Section I-60,61,62,63
Sector II Area I
Copper Ridge Belt

DATE	2/5/59
SCALE	1" = 100'
	AX-Tenn C-1423

X5453C 1M 11-54

THE NEW JERSEY ZINC CO.
174.78 A.

MONK WILKINSON (mineral rights)

PARKSON

W.C. STAPLETON

FIELDS-COLLINS
NJZ M&M 23.94 A

TR

FRANK KINCAID
MRS C.D. TROBAUGH (mineral rights)
NJZ.

G.N. MILLIGAN
NJZ M&M 10.94 A

TRACT 4
NJZ M&M 2.24 A

BJ JACKSON
NJZ M&M 84.1 A

J.R. DAVIDSON
NJZ M&M 14.0 A

PLEAS DALTON 50.14 A
NJZ (2/3 mineral rights)

J.H. HOLSTEAD
NJZ M&M 8.8 A

L. HOLLENBACK
NJZ M&M 5.6 A

W. COFFEY
NJZ M&M 2.4 A

JACK COFFEY

TRACT 3
NJZ M&M 125.32 A

TRACT 2
NJZ M&M 46.67 A

TRACT 1
NJZ M&M 14.6 A

PROPERTY

NJZ - under option

NJZ - owned in Fee Simple

NJZ - Mineral and Mining Rights owned

Notes: Outside boundarys only are completely indicated by property status symbols.
Fractional interests are indicated by combination patterns.

POSTED TO DATE 9-26-55 1-26-56 10-56	THE NEW JERSEY ZINC COMPANY ROGERSVILLE TENNESSEE	DRAWN SJL, JFP TRACED	DATE 2/17/53 SCALE 1"=660'	COPPER RIDGE BELT SECTOR II SHEET 43SW	GRAINGER COUNTY, TENN. FILE NO. AX-TENN 106

AREA EXCLUDED FROM DMEA CONTRACT

HARVEL

NELSON DALTON
NJZ 12 A

WOODROW DAVIDSON
NJZ 12 A

J.R. DAVIDSON
NJZ M&M 14.5 A

CARL HOLT
NJZ

ALICE DALTON

TR

ZILPHA CALDWAGE
NJZ

B.E. DAVIDSON
NJZ

CARL DAVIDSON
NJZ

CARLIE LANE
NJZ M&M 139 A

ROBERT MALLICOAT
NJZ 15.1 A

Creek

PROPERTY

NJZ - under option

NJZ - Mineral and Mining rights owned

NJZ - owned in Fee Simple

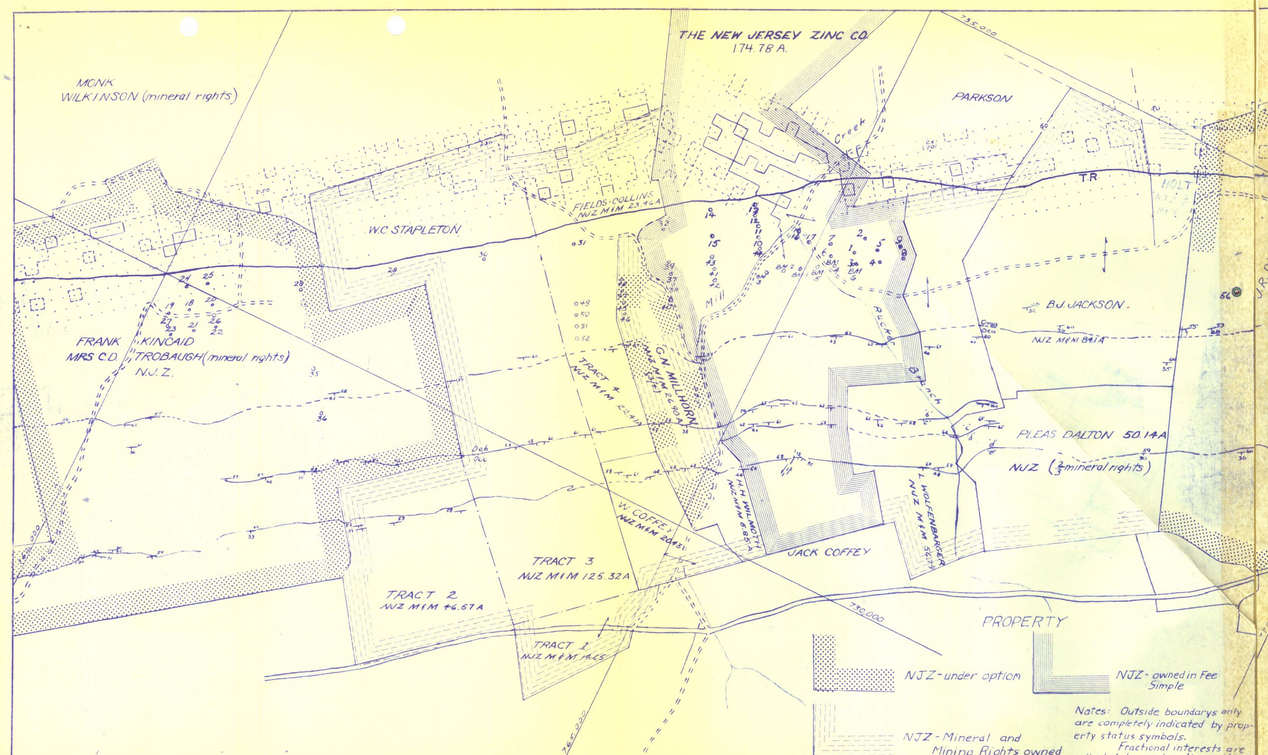
EXPLANATION

- Ocm Chickamauga limestone
- Km Mascot formation
- Ok Knoxville formation
- Ok Longview formation
- 45/85 Dip & Strike
- Geochemical samples 300-900 ppm outlined by dashed line; over 900 ppm by solid line

Base - TVA Quad 11-23SW, 17-15SW & aerial photos
Property - PMA, JFP, HWM
Geology - J. Rodgers (U.S.G.S.)
Geochemical Survey -

DRILLING
- Mineralized } NJZ
- Ore
- Drilling Previously Reported } DMEA-NJZ
- Drilling During Nov, 1952
- Mineralized
- Ore

POSTED TO DATE 9-31-56 7-56 TEN	THE NEW JERSEY ZINC COMPANY ROGERSVILLE TENNESSEE	DRAWN SJL, JFP TRACED	DATE 2-14-52 SCALE 1"=660'	COPPER RIDGE BELT SECTOR II SHEET 33SW	GRAINGER COUNTY, TENN. FILE NO. AX-TENN 105


THE NEW JERSEY ZINC CO.
174 TB A.
MONK
WILKINSON (mineral rights)
PARKSON
WC STAPLETON
FIELDS-COLLINS
NJZ MIM 29.94A
TR
FRANK
KINCAID
MRS C.D.
TROBAUGH (mineral rights)
N.J.Z.
G.N. MILHORN
NJZ MIM 20.02A
TRACT 4
NJZ MIM 2.34A
B.J. JACKSON.
NJZ MEM 84A
PLEAS DALTON 50.14A
NJZ (½ mineral rights)
WOLFENBARGER
NJZ MIM 56.5A
JACK COFFEY
W. COFFEY
NJZ MIM 20.45A
TRACT 3
NJZ MIM 125.32A
TRACT 2
NJZ MIM 46.67A
TRACT 1
NJZ MIM 14.6A
PROPERTY
NJZ - under option
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Notes: Outside boundarys only are completely indicated by property status symbols. Fractional interests are indicated by combination patterns.
POSTED TO DATE
9-26-55
1-56 TEN
10-56
THE NEW JERSEY ZINC COMPANY
ROGERSVILLE TENNESSEE
DRAWN SJL, JFP DATE 2/17/53
TRACED SCALE 1"=660'
COPPER RIDGE BELT
SECTOR II SHEET 43W
GRAINGER COUNTY, TENN.
FILE NO. AX-TENN 106

AREA EXCLUDED FROM DMEA CONTRACT
HARVEL
NELSON DALTON
NJZ 12 A.
WOODROW DAVIDSON
NJZ 92A
J.R. DAVIDSON
NJZ 140A
CARLIE LANE
NJZ MEM 139A
ROBERT MALLICOAT
NJZ 151A
DAVIDSON
NJZ
145A
CARL HOLT
NJZ
ALICE DALTON
TR
ZILPHA CABBAGE
B.E. DAVIDSON
CARL DAVIDSON
PROPERTY
NJZ - under option
NJZ - Mineral and Mining rights owned
NJZ - owned in Fee Simple
EXPLANATION
Ok Chickamauga limestone
Mm Mascot Formation
Ko Kingsport Formation
Ol Longview Formation
Dip & Strike
Geochemical samples 300-900 ppm outlined by dashed line; over 900 ppm by solid line.
Base - TVA Quad 162SW, 171SW & aerial photos
Property - PMA, JFP, HWM
Geology - J. Rodgers (U.S.G.S.)
Geochemical Survey -
DRILLING
Mineralized
Ore
NJZ
Drilling Previously Reported
Drilling During Oct, 1957
Mineralized
Ore
DMEA - NJZ
POSTED TO DATE
9/31/53
1-56 TEN
THE NEW JERSEY ZINC COMPANY
ROGERSVILLE TENNESSEE
DRAWN SJL, JFP DATE 2-14-52
TRACED SCALE 1"=660'
COPPER RIDGE BELT
SECTOR II SHEET 33W
GRAINGER COUNTY, TENN.
FILE NO. AX-TENN 105