UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
REGION V

ELECTROTECHNICAL
EXPERIMENT STATION

P. O. BOX 217
NORRIS, TENNESSEE

August 25, 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-E950 — The New Jersey Zinc Company
Docket No. DMEA-4153
16th payment - month of July
Amount $2478.34

Idm-E1202 — Mitchell Lumber Company, Inc.
Docket No. DMEA-4901
2nd payment - month of August
Amount $742.50

Idm-E1224 — Roland F. Beers, Inc.
Docket No. DMEA-4947
1st payment - month of July
Starting Date: 7/7/58
Amount $3249.44

Helen Miller
Helen R. Miller

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

OFFICIAL FILE COPY
DMEA
RECEIVED AUG 27 1958

DATE	INITIALS	CODE
8/27	C	220
"	FJ	110
~~x~~	~~Lily~~	~~500~~
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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 OF PAYMENTS K- 22

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of July, 1958 Docket No. DMEA 4153 Contract No. Idm E 950
Operator's Name The New Jersey Zinc Company Minerals Zinc
Address Jefferson City, Tennessee
Contract Amount, $ 214,300.00 Government Participation: 50 % Amount, $ 107,150.00

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	4,515.75	62,139.25	66,655.00	8/29/58		
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor / Supervision	437.94	6,078.24	6,516.18			
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(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	53.00	56.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	4,956.69	68,270.49	73,227.18	4956.69	68270.49	73,227.18

I certify that the above bill is correct and just and that payment therefor has not been received.
Date 8-1-58 *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:
$ 2478.34
Signature Helen R. Miller (Authorized Certifying Officer)
Date AUG 25 1958 Vou. No.
(See other side)

2478.35

(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-950 in accordance with the terms of the contract.

Signature R. J. Lynch Title MINING ENGINEER ~~S. BUREAU OF MINES~~ Date AUG 21 1958

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Robert A. Lemmene Title EXECUTIVE OFFICER DMEA FIELD TEAM ~~REGION V~~ Date AUG 21 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

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of July 1958 Docket No. DMEA 4153 Contract No. Idm E 950

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	Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core 0-1000	Ft.	3,852.75	1,401	63,217.00	22,988	2.75	60,000	2.75
Churn 1000-1500	"	663.00	221	3,438.00	1,146	3.00	10,000	3.00
Auger Assays	Ea.	3.00	3	56.00	56	1.00	400	1.00
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Sup. & Tech. Serv.		437.94	1622	6,516.18	24,134	0.27	70,000	0.27
TOTAL DISTRIBUTED COSTS		4,956.69		73,227.18				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		4,956.69		73,227.18				

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 LA-10 and LA-11

Date 8-1-58 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 July, 1958

Lawson Area DMEA 4153

Contract Idm E 950 (Zinc)

One drill operated on this project in July. Two holes, LA-10 and LA-11, were completed. A total of 1622 feet were drilled. These holes are shown in green on the attached map AX-TENN-B-568.

<u>Hole LA-10</u> - Kyle Johnson property - 200' downdip from LA-7

Coordinates: 795,529.61 N; 885,459.30 E
Elevation: 1645.25

Results:

0- 18	Clay
18-1028	Mascot dolomite and upper Kingsport dolomite. Shines of sphalerite 1010-1011
1028	TR
1028-1197	Lower Kingsport limestone and dolomite
1179-1221	(Bottom) Longview limestone and dolomite

<u>Hole LA-11</u> - Kyle Johnson property - 100' SW on strike from LA-4

Coordinates: 795,953.19 N; 885,076.23 E
Elevation: 1803.27

Results:

0- 52	Clay
52-196	Upper Kingsport dolomite
196	TR
196-222	Lower Kingsport dolomite
222-229	4' core - assayed trace of zinc.Est. 25% pyrite
229-339	Lower Kingsport dolomite and limestone. Scattered shines sphalerite 256-339
339-344	4' core assayed trace of zinc. Estimated 5-7% pyrite
344-364	Upper Kingsport dolomite
364-369	4½' core assayed trace of zinc. Estimated 7-9% pyrite
369-401	(Bottom) Lower Kingsport limestone and dolomite. Shine sphalerite 383.

DMEA
RECEIVED
DATE | INITIALS | COST
7/18 | | 225
21 | | 100
" | | 110
7/22 | | 800
| | 500

DMEA EXPLORATION PROJECT

INTERIM REPORT

DMEA-4153, Idm-E950 - Zinc

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

Location: Independence - Lawson Area, Hancock County, Tennessee

Stage II - Lawson Area.

Summary of Drilling Completed:	Since last Insp.	To date
Number of holes	2	11
Footage	1,622	6,612* 6,613'
Holes showing:		
(a) Commercial zinc ore		0
(b) Non-commercial Zn mineralization		5
(c) No mineralization		6

Jalbert 7/22/58

* Includes Hole No. LA-9 for which payment is not authorized.

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

Hole No. LA-10. C. C. Lawson Property - located 200 feet down dip from LA-7. Depth 1221 feet. Coordinates and elevation not available. Drilling began 7/2/58 and was completed 7/14/58.

Brief log of hole: 0-18 overburden; collared in Mascot fm; top of Kingsport (CM) not recognized but estimated to be at 800 ft; top of "R" bed at 1028 ft; "E" bed at 1071 ft; "T" bed from 1197 to 1201' hole bottomed at 1221 ft.
Mineralization: Scattered shines of pyrite and shine of sphalerite at 1010 feet.

Hole No. LA-11 - C. C. Lawson Property, Located approximately 100 ft southwest of LA-4 on strike fence. Coordinates not available, elevation approximately 1803 feet.
Drilling began 7/3/58 and was completed 7/11/58. Brief log of hole: 0-52 overburden; collared in Mascot fm; top of "R" bed at 196 ft., bottomed at 401 feet. Blank hole.

The Operator has discontinued drilling temporarily to evaluate the results of completed drilling. The drill has bee moved from this area to DMEA-4850 (Little War Creek Area).

Inspected: 7/14/58

L. E. Shirley, Mining Engr.
Bureau of Mines

D. H. Amos, Geologist
Geological Survey

RECEIVED JUN 30 1958		
DATE	[illegible]	[illegible]
6/30	C	220
30	Com	100
"	[illegible]	110
7/2	[illegible]	800
7/7	[illegible]	500

EXPLORATION PROJECT

INTERIM REPORT

DMEA-4153, Idm-E950 - Zinc

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

Location: Independence -Lawson Area, Hancock County, Tennessee

STAGE II - Lawson Area

SUMMARY OF DRILLING COMPLETED

	Since last inspection	To date
No. of holes	3 ✓	9 ✓
Footage	2110* ✓	4990* 4991

Holes showing:

a)	Commercial zinc ore	0
b)	Non-Commercial zinc mineralization	4
c)	No mineralization	5

* Includes Hole LA-9(depth 670) for which payment is not authorized. ?

Additional data on the three holes completed during the Interim follows:

Hole #LA-7... C. C. Lawson Property. Depth 1030 feet.
Coordinates N795693, E885348; Elevation 1714 ft.

Drilling began April 24, 1958 and was completed May 17, 1958. Brief log of hole: 0-31 overburden, collared in Mascot fm; highly fractured fault zone from 483 to 550; top of Kingsport (chert matrix) at 690; top of "R" at 866; "T" bed (?) from 1028 to 1030; bottomed at 1030.

Mineralization: Shines of sphalerite @ 424,470, 492-504 and 542.

Hole #LA-8- C. C. Lawson Property. Depth 410 ft. Coordinates N796066, E885236; elevation 1839 ft.

Drilling began 5/18/58 and was completed 5/26/58. Brief log of hole: 0-46 overburden; collared in Kingsport fm; top of "R" at 244; bottomed at 410 ft. Blank hole - no mineralization.

Hole #LA-9. C. C. Lawson Property - Depth 670. Located 200 ft., downdip from LA-8 and 85 ft along strike northeast from LA-6. Coordinates N795890, E885326; elevation 1787 ft.

Brief log of hole: 0-20 ft overburden; collared in Mascot fm; top of Kingsport (chert matrix) at 298; top of "R" at 486; "E" bed (?) at 548; "T" bed from 612 to 617; bottomed at 670.

Mineralization: No zinc mineralization.

8 ft (4820490) 8 to 10% FeS_2

158 ft (418-576) scattered FeS_2

2 ft (574-576) strong shines of FeS_2

Present drilling is confined to LA-10, located 200 ft downdip from LA-7; core has been examined to a depth of 505 ft. Estimated total depth of the hole is 1200 feet.

Date of Inspection: June 19, 1958.

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

Helmuth Wedow, Jr., Geologist
Geological Survey (DMEA)

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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
OPERATOR'S MONTHLY REPORT AND VOUCHER

RECEIVED JUL 10 1958 D.M.E.A.

Month of June, 1958 Docket No. DMEA 4153 Contract No. Idm E 950
Operator's Name The New Jersey Zinc Company Minerals Zinc
Address Jefferson City, Tennessee
Contract Amount, $ 214,300.00 Government Participation: 50% Amount, $ 107,150.00

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		62,139.25	62,139.25	8/28/68	[illegible]	
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision / Technical Services		6,077.24	6,077.24			
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis		53.00	53.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS		68,270.49	68,270.49	—	68,270.49	68,270.49

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

Date 7/1/58 *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.

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(Instructions on reverse)

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

$ ——

Signature
(Authorized Certifying Officer)

Date Vou. No.
(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. E-950 in accordance with the terms of the contract.

Signature [illegible] Title GEOLOGIST, U. S. G. S. Date JUL 14 1958

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature [illegible] Title ACTING EXECUTIVE OFFICER DMEA - REGION V Date JUL 14 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

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of June 1958 Docket No. DMEA 4153 Contract No. Idm E 950

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.	-	-	59,364.25	21,587	2.75	60,000	2.75
Chu 1000-1500	"	-	-	2,775.00	925	3.00	10,000	3.00
Auger Assays	Ea.	-	-	53.00	53	1.00	400	1.00
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Sup. & Tech. Ser.		-	-	6,078.24		0.27	70,000	0.27
TOTAL DISTRIBUTED COSTS				68,270.49				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS				68,270.49				214,300.00

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 7/1/58 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.

REMARKS: Drill hole LA-9 on the C. C. Lawson property approximately 100' NE of hole LA-6 was completed in June. Reporting of this hole is deferred pending action on our amendment request dated May 28, 1958.

(Instructions on reverse)

(For Government use only)

[signature]
GEOLOGIST, U. S. G. S.
7/4/58

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, 1958

Lawson Area DMEA 4153

Contract Idm E 950 (Zinc)

One drill operated on this project in June. Drill hole LA-9 on the C. C. Lawson property approximately 100 feet northeasterly from hole LA-6 was completed. Reporting of this hole is deferred pending action on our amendment request dated May 28, 1958.

Attached, hereto, are plan map AX-TENN 568, and sections AX-TENN B 1356, B 1354, and C 1365 showing all holes reported to date on the Lawson project.

wpb.

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 May 8 195 Docket No. DMEA 4153 Contract No. Idm E 950

Operator's Name The New Jersey Zinc Company Minerals Zinc

Address Jefferson City, Tennessee

Contract Amount, $ 214,300.00 Government Participation: 50 % Amount, $ 107,150.00

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	3967.50	58,171.75	62,139.25	7/15/58	A.P.K.	
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor / Supervision	388.80	5,689.44	6,077.24			
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment	-					
Sampling and Analysis		53.00	53.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	4356.30	63,914.19	68,270.49	4356.30	63914.19	68,270.49

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

Date 6/1/58 *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:

$ 2178.15

Signature [signature] (Authorized Certifying Officer)

Date JUN 26 1958 Vou. No. 182

(See other side)

15

2178.15

(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-950 in accordance with the terms of the contract.

Signature [illegible] Title MINING ENGINEER U. S. BUREAU OF MINES Date JUN 23 1958

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature [illegible] Title EXECUTIVE OFFICER DMEA FIELD TEAM REGION V Date JUN 23 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

RECEIVED JUN 9 1958 D.M.E.A.

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of May 1958 Docket No. DME 4153 Contract No. Idm E 950
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.	3,877.50	1410	59,364.25	21,587	2.75	60,000	2.75
1000-1500	"	90.00	30	2,775.00	925	3.00	10,000	3.00
Auger Assays	Ea.	-	-	53.00	53	1.00	400	1.00
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Sup.& Tech.Serv.	Ft.	388.80	1440	6,078.24		0.27	70,000	0.27
Total Distributed Costs		4,356.30		68,270.49				Total Costs Authorized by Contract
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
Total Costs		4,356.30		68,270.49				

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 6/1/58 Operator The New Jersey Zinc Co.

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

Remarks This report covers LA-78

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)

N. J. Lynch

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 May, 1958

Lawson Area DMEA 4153

Contract Idm E 950 (Zinc)

One drill operated on this project during the month of May and completed two holes. These holes are shown on the accompanying map AX-TENN-B-568.

Hole LA-7 - - Kyle Johnson property - 200 feet downdip from LA-6
Coordinates: 795,692.89 N; 885,347.91 E
Elevation: 1713.75

0- 31	- - Clay
31-483	- - Mascot dolomite. Trace sphalerite 424. Shine sphalerite 470
483-550	- - Strong 50° mineralized fault zone. Scattered traces sphalerite 492-504. Apparent reverse movement of 160 feet is estimated
550-690	- - Mascot dolomite
690-866	- - Upper Kingsport dolomite
866	- - TR marker
866-1028	- Lower Kingsport dolomite & limestone. "R" and "S" beds 50% dolomite
1028-1030	- (Bottom) Longview dolomite

Comment: The strong reverse fault found in this hole may have significance in ore control.

Hole LA-8 - C. C. Lawson property - 100' NE of LA-4 on strike

Coordinates: 796,065.58 N; 885,236.17 E
Elevation: 1839.37

0- 46	- - Clay
46-244	- - Upper Kingsport dolomite
244	- - TR marker
244-388	- - Lower Kingsport dolomite & limestone R and S beds 38% dolomite
388-410	- - (Bottom) Longview dolomite and limestone.

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- 9

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of April, 1958 Docket No. DMEA 4153 Contract No. Idm E 950
Operator's Name The New Jersey Zinc Company Minerals Zinc
Address Jefferson City, Tennessee
Contract Amount, $ 214,300.00 Government Participation 50 % Amount, $ 107,150.00

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	3,957.25	54,214.50	58,171.75	7/15/58 OPR.		
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision / Technical Services	388.53	5,300.91	5,689.44			
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(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	51.00	53.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	4,347.78	59,566.41	63,914.19	4347.78	59,566.41	63,914.19

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:

$ 2173.89

Signature [signature] (Authorized Certifying Officer)

Date JUN 2 1958 Vou. No. 174

(See other side)

2173.89

(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-950 in accordance with the terms of the contract.

Signature [signature] Title U. S. BUREAU OF MINES MINING ENGINEER Date MAY 20 1958

Approval by DMEA Executive Officer or Alternate:

Signature Robert A. Lawrence 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

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

Month of April 1958 Docket No. DMEA 4153 Contract No. Idm E950
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.	3,957.25	1439	55,486.75	20,177	2.75	60,000	2.75
Churn 1000-1500	"			2,685.00	895	3.00	10,000	3.00
Auger Assays	Ea.	2.00	2	53.00	53	1.00	400	1.00
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Sup. & Tech. Serv.	Ft.	388.53	1439	5,689.44		0.27	70,000	0.27
Total Distributed Costs		4,347.78		63,914.19				Total Costs Authorized by Contract
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
Total Costs		4,347.78		63,914.19				

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 5/1/58 Operator The New Jersey Zinc Co.
Per [signature] Title Asst. to Gen. Supt.

Remarks: This report covers holes
LA-4
LA-5
LA-6

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

Lawson Area DMEA 4153

Contract Idm E (Zinc)

One drill operated on this project during the month of April and completed three holes. These holes are shown on the accompanying map AX-Tenn-B-568.

Hole LA-4 - C. C. Lawson property - 800' SW on strike from LA-2

Coordinates: 796,031.13N; 885,151.37E
Elevation: 1823.75

Results:

0 - 105 - - - Clay
105 - 221 - - - Upper Kingsport dolomite
221 - - - TR marker
221 - 287 - - - Lower Kingsport dolomite and limestone
287 - 292 - 5' of 4.75% Zn) 9' averaging 4.61% zinc
292 - 296 - 4' of 4.43% Zn)
296 - 388 - - - Lower Kingsport dolomite and limestone
388 - 400 - - - (Bottom) Longview dolomite

Hole LA-5 - C. C. Lawson property - 410' NE of LA-4 on strike

Coordinates: 796,278.43N; 885,473.47
Elevation: 1905.37

0 - 24 - - - Clay
24 - 54 - - - Mascot dolomite
54 - 194 - - - Upper Kingsport dolomite
194 - - - TR Marker
194 - 360 - - - Lower Kingsport dolomite and limestone
360 - 389 - - - (Bottom) Longview dolomite

Hole LA-6 - Kyle Johnson - 200' downdip from LA-4

Coordinates: 795,856.65N; 885,248.22E
Elevation: 1781.15

0 - 30 - - - Clay
30 -323 - - - Mascot dolomite
323 -457 - - - Upper Kingsport dolomite, Trace sphalerite 439
457 - - - TR marker
457 -595 - - - Lower Kingsport dolomite, Trace sphalerite 458, 512
595 -650 - - - (Bottom) Longview dolomite.

FILE COPY
DMEA
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DATE	INITIAL	CODE
5-19	C	220
19	Com	100
"	"	110
5/20	"	800
5/21	wpb	500

DMEA EXPLORATION PROJECT

INTERIM REPORT

DMEA-4153, Idm-E950-Zinc

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

Location: Independence - Lawson Area, Hancock County, Tennessee

STAGE II - Lawson Area

Diamond drilling data on this stage of the contract to date and progress made since the last inspection of March 27, 1958 is summarized as follows:

Drilling Completed

Number of holes completed since last inspection.....	4
Footage in holes completed since last inspection....	1,839
Total number of holes completed to date.....	6
Total footage completed to date.....	2,880*
Number of holes showing commercial zinc ore.....	0
Number of holes showing non-commercial zinc mineralization.....	3
Number of barren holes.....	3

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

Hole No.	Property	Total depth	Remarks
LA-3,	C.C. Lawson	400	Coordinates and elevation not available. Drilling began 3/19 and was completed 3/28/58. Brief log of hole: 0-43 overburden; cavities from 56 to 60, 64 to66; 124 to 135, 238 to 241; "U"-255" (?) @ 137; top of "R" @ 216; "T" bed from 384 to 387; bottom @ 400. Below top of "R" bed, section is approx. 75% limestone. No.mineralization-blank hole.
LA-4,	C.C. Lawson	400	Coordinates: N796,031.13, E885,151.37; Elevation @ collar 1824'. Drilling began 3/31/58 and was completed 4/7/58. Brief log of hole: 0-105 overburden. Collared below chert matrix; top of "R" bed @ 221; "T" bed from 388 to 391; bottom @ 400. Mineralization: 5' (287-292) of 4.75% Zn; 4' (292-296) of 4.43% Zn. (9' section of 4.61% Zn)

* Should be 2,881 ft.
Talbot 5/20/58

Hole No.	Property	Total depth	Remarks
LA-5	C.C. Lawson	389	Coordinates: N796,278.43; E885,473.47 Elevation @ collar 1905'. Drilling began 4/8 and was completed 4/15/58. Brief log of hole: 0-24 overburden; collared in Mascot; chert matrix @ 54; top of "R" @ 194; top of "T" bed @ 366, bottom @ 389. This hole was completely blank of mineralization.
LA-6	C.C. Lawson	650	Coordinates : N795,856.65, E885,248.22, Elevation @ collar 1781'. Drilling began 4/16 and was completed 4/24/58. Brief log of hole: 0-30 overburden; collared in Mascot; chert matrix (?) @ 323; top of "R" @ 471; "T" bed from 595 to 602, bottom @ 650. Mineralization: Traces of sphalerite @ 439, 458 and 512. Traces of pyrite @ 458, scattered from 481 to 591

Drilling in Progress

Number of holes in progress..... 1
Footage drilled in incompleted holes at time of inspection..... 566

Available data on the one hole in progress follows:

Hole No.	Property	Present depth	Anticipated depth	Remarks
LA-7	C.C. Lawson	566	(?) due to faulting	Drilling began 4/24. Brief log of hole: 0-31 overburden. collared in Mascot. Faulting first encountered @ 426 and continues to present depth. Highly fractured zone extends from 483 to 566. The fault strikes N-NW and dips 50°-60° to the S-SE.

Inspected: May 8, 1958

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

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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 March, 1958 Docket No. DMEA 415$3 Contract No. Idm E 950

Operator's Name The New Jersey Zinc Company Minerals Zinc

Address Jefferson City, Tennessee

Contract Amount, $214,300.00 Government Participation: 50 % Amount, $107,150.00

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	3965.50	50,249.00	54,214.50	7/15/58	DPR.	
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision	389.34	4,911.57	5,300.91			
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	-	51.00	51.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	4354.84	55,211.57	59,566.41	4354.84	55,211.57	59,566.41

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:

$ 2177.42

Signature [signature]
(Authorized Certifying Officer)

Date APR 24 1958 Vou. No. 163

(See other side)

2177.42

(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-950 in accordance with the terms of the contract.

Signature W. Lynch Title U. S. BUREAU OF MINES MINING ENGI... Date APR 22 1958

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Robert A. Lawrence Title DMEA REGION V EXECUTIVE OFFICER 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 1962)

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 4153 Contract No. Idm E 950

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.	3965.50	1442	51,529.50	18,738	2.75	60,000	2.75
Drilling: Core 1000-1500	"	-	-	2,685.00	895	3.00	10,000	3.00
Drilling: Churn								
Drilling: Auger Assays	Ea.	-	-	51.00	51	1.00	400	1.00
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Sup. & Tech. Ser.	Ft.	389.34	1442	5,300.91		0.27	70,000	0.27
Total Distributed Costs		4354.84		59,566.41				Total Costs Authorized by Contract
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
Total Costs		4354.84		59,566.41				

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: LA-1, LA-2, LA-3

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

Lawson Area DMEA 4153

Contract Idm E 950 (Zinc)

One drill operated on this project during the month of March and completed 3 holes. These holes are shown on the accompanying map AX-TENN-B-568 and sections AX-TENN-B-1354 and B-1356.

Hole LA-1 - - C. C. Lawson property

Coordinates: 796,130.89 N; 885,588.29 E
Elevation: 1865.72

0- 92- - Clay
92-294 - -Mascot dolomite
294-471 - -Upper Kingsport dolomite
471 - -TR Marker
471-621 - -(Bottom) Lower Kingsport dolomite
Shine sphalerite 609. Trace sphalerite 616'

Hole LA-2 - - C. C. Lawson property - 200' updip and 400' NE on strike from LA-1

Coordinates: 796,492.04 N; 885,789.40 E
Elevation: 1930.20

0- 55 - - Clay
55- 92 - - Mascot dolomite
92-237 - - Upper Kingsport dolomite
237 - - TR marker
237-396 - - Lower Kingsport dolomite and limestone
396-421 - - (Bottom) Longview dolomite and limestone

Hole LA-3 - - C. C. Lawson property - 400' NE on strike from LA-2

Coordinates: 796,689.87 N; 886,141.29 E
Elevation: 1879.05

0- 43 - - Clay
43- 66 ? - Mascot dolomite
66-216 - - Upper Kingsport dolomite
216 - - TR marker
216-400 - - (Bottom) Lower Kingsport dolomite and limestone

The top of the Kingsport formation (Chert Matrix) is presumably lost in cavernous ground from 56-66.

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RECEIVED APR 4 1958
DATE | INITIALS | CODE
4-4 | C. | 220
4 | Com | 110
" | | 110
4/7 | | 200
4/8 | | 200

DMEA EXPLORATION PROJECT

INTERIM REPORT

DMEA-4153, Idm-E950 -Zinc

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

Location: Independence Area, Hancock County, Tennessee

STAGE II - Lawson Area

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

Drilling Completed:

Number of holes completed since last inspection.....	2
Footage in holes completed since last inspection....	1,041
Total number of holes completed to date.....	2
Total footage completed to date.....	1,041
Number of holes showing commercial zinc core.....	0
Number of holes showing non-commecial zinc mineralization.....	1
Number of barren holes.....	1

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

Hole No.	Property	Total depth	Remarks
LA-1	C.C. Lawson	621	Drilling began 2-28-58 and the hole bottomed 3-7-58. A brief log follows: 0-92 overburden; collared in Mascot fm. Chert matrix @ 294; "U"-255" bed @ 361; top of "R" @ 471; "E" bed from 522 to 525; bottomed @ 621. Mineralization: Shines of sphalerite @ 609 and 616'.
LA-2	C.C. Lawson	421	Drilling began 3-10-58 and hole bottomed 3-18. Location: Approx. 200' up dip and 400' northeast and along strike from LA-1. Brief log of hole: 0-55 overburden; chert matrix (?) 95'. "U-255" bed @ 159; top of "R" bed @ 237; "E" bed from 281 to 284; "T" (?) bed from 396 to 399; bottomed @ 421. The section below the top of the "R" bed is approximately 75% limestone; 25% dolomite. No mineralization encountered in this hole.

Drilling in Progress

Number of holes in progress..... 2 ✓

Footage drilled in incompleted holes
at time of inspection..... 344

Available data on the one hole in progress follows:

Hole No.	Property	Present depth	Estimated tot.depth	Remarks
LA-3	C.C.Lawson	344'	400'	Approximate location: 400' along strike NE of LA-2. Brief log of the hole: 0-43 overburden; Cavities from 56 to 60, 64-66, 124-135 and 238 to 241; "U-255(?) @137; top of "R" bed @ 216. No mineralization encountered to date.

Inspected March 27, 1958

L. E. Shirley, Mining Engineer
Bureau of Mines

Helmuth Wedow, Jr., Geologist
Geological Survey

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INTERIM REPORT

DMEA-4153, Idm-E950 - zinc

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

Location: Independence Area, Hancock County, Tennessee

Drilling under Stage II of this contract is now underway. One drill has been placed on the extreme west end of the contract area and actual drilling began February 28, 1958. No holes have been completed todate.

Drilling in Progress

Hole No.	Property	Present depth	Estimated total depth	Remarks
LA-1	C.C. Lawson	280	580(?)	No coordinates or collar elevations available to date. No characteristic markers have been encountered.

Future drilling will be confined to the extreme west end of the project area for the present. Geochemical soil sampling by auger drill is underway just north of the present drill site.

Inspected: March 4, 1958

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

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DATE		CODE
3/13	C	220
/13	Com	100
		110
3/14		800
3/14		500

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OFFICE OF THE SECRETARY
DMEA
RECEIVED NOV 4 1957

DATE	INITIALS	CODE

INDEPENDENCE AREA

SECTOR I COPPER RIDGE BELT

HANCOCK COUNTY, TENNESSEE

DMEA DOCKET NO. 4153 CONTRACT Idm E-950 (ZINC)

INTERIM REPORT

A. D. Hoagland

September 27, 1957

List of Illustrations

Location Map - AX-TENN B 1289	Following Page 1
Geologic and Property Maps	
AX-TENN 569 A	Following Page 2
AX-TENN 570 A	Following Page 2
Stratigraphic Position of Ore Penetrations - AX-TENN A 1292	Following Page 3
Geologic Sections Showing Drill Holes	
AX-TENN C 1171	In Envelope
AX-TENN C 1167	
AX-TENN C 1208	
AX-TENN C 1220	
AX-TENN C 1225	
AX-TENN C 1262	
Diamond Drill Logs IN-48 to IN-70 Incl.	In Envelope

Summary

Work to date in the Independence area of the Copper Ridge Belt has indicated an ore zone of about a million tons grading from 4½% to 5% Zn. This ore zone is not fully defined and the potential of the area to a depth of 1500 feet may be reasonably estimated at from 2 to 5 times that figure. The ore occurs in the Kingsport formation in relatively thin (average vertical dimension 19 feet) manto-like bodies in the plane of the bedding which has an average dip of about 56°. The steep dip and the apparent irregular nature of the ore may be expected to introduce mining problems not normally encountered in Tennessee.

The Independence ore zone is a valuable zinc resource, and further exploration to define the extent of this orebearing area is warranted.

Location

The Independence area project covered by DMEA contract Idm E-950 is comprised of 8 properties totalling approximately 687 acres lying along Copper Ridge in Hancock County, Tennessee. These properties make a rectangular block extending about 11,000 feet in a northeasterly direction parallel to the strike of the formations and about 2000 feet wide in a direction normal to the strike. The northern extremity of the area is about 3 miles southwesterly along the trend of Copper Ridge from the Virginia State Line (See Index Map, AX-TENN-B-1289).

History

There are no known exposures of zinc mineralization in the Kingsport formation in the Independence area. Outcrops of this formation are rare except in the beds of War and Willis Creeks where these streams cut through Copper Ridge. In the early months of 1952, geologic mapping and geochemical surveying by The New Jersey Zinc Company established the presence of strongly mineralized areas in the soils derived from the weathering of the Kingsport formation.

In July of the same year diamond drilling was begun to test the geochemical anomalies, and by February, 1954, 47 drill holes totalling 26,480 feet had been completed. This drilling showed extensive zinc mineralization, and it was estimated that about a half million tons of ore grading about 4% zinc had been indicated.

In May, 1956, DMEA contract Idm E 950 providing for 35,000 feet of drilling at an estimated cost of $107,150.00 was approved by the government. The purpose of the additional drilling was to further establish the gross ore potential of

the area. Drilling under this contract was begun in the same month. By May, 1957, twenty-three additional holes totalling 18,191 feet had been completed. In six of these holes, ten penetrations of mineralization of ore grade were made (hole IN-48 had 3 separate ore runs). The average grade and drill hole penetration distance (i.e., vertical distance) of these ten ore runs is 6.6% Zn over 15.2 feet. A substantial additional tonnage of zinc ore has been indicated by the recent DMEA program. Reference is made to the plan (following page 2), to the sections (Appendix A), and to the logs of drill holes IN-48 to IN-70 (Appendix B).

Property

The property included within the Independence project area is shown on map AX-TENN-B-570 and B-569. As of this date, The New Jersey Zinc Company has exercised its option to purchase 7 of these properties as listed below:

M. B. Horton Property -	Purchase of Mineral and Mining rights to 186.7 acres and surface to 50 acres made 4/29/57
Flora Horton Property -	Purchase of 61 acres of Mineral and Mining rights made 5/7/57
D. H. Darnell Property-	Purchase of 108.7 acres of Mineral and Mining rights made 5/14/57
Floyd Edens Property -	Purchase of 23.1 acres of Mineral and Mining rights made 5/27/57
Ralph Garrett Property-	Purchase of 32.0 acres of Mineral and Mining rights made 5/27/57
W. H. Horton Property -	Purchase of 75 acres of Mineral and Mining rights and 18.8 acres of surface made 6/10/57
E. F. Gilliam Property-	Purchase of 32.1 acres of Mineral and Mining rights made 8/1/57.

Geology

The Independence area lies along the southeast slope of Copper Ridge at elevations ranging from 1300' at Willis Creek to 1950' at the crest of Copper Ridge. The southeast slope of the ridge is underlain by the Kingsport, Mascot and Chicamauga formations. These lie in a monoclinal structure dipping southeastward at an average angle of about 56°. The strike is quite uniform and averages about N 60° E.

The ore at Independence has been found over a stratigraphic range of 150 feet in the lower 2/3 of the Kingsport formation. The greatest amount of ore so far found is near the top of the "R" bed as is illustrated by the graphic section, "Stratigraphic position of ore penetrations", AX-TENN-A 1292. Above the "R" bed the Kingsport formation is made up of fine grained dolomites thought to be of sedimentary origin. The lower Kingsport ("R" and "S" horizons) is made up dominantly of crystalling dolomite or limestone. The crystalline dolomite is believed to have been derived from limestone by the mineralizing process related to the emplacement of the zinc orebodies. Dolomitization is, of course, much more extensive than ore.

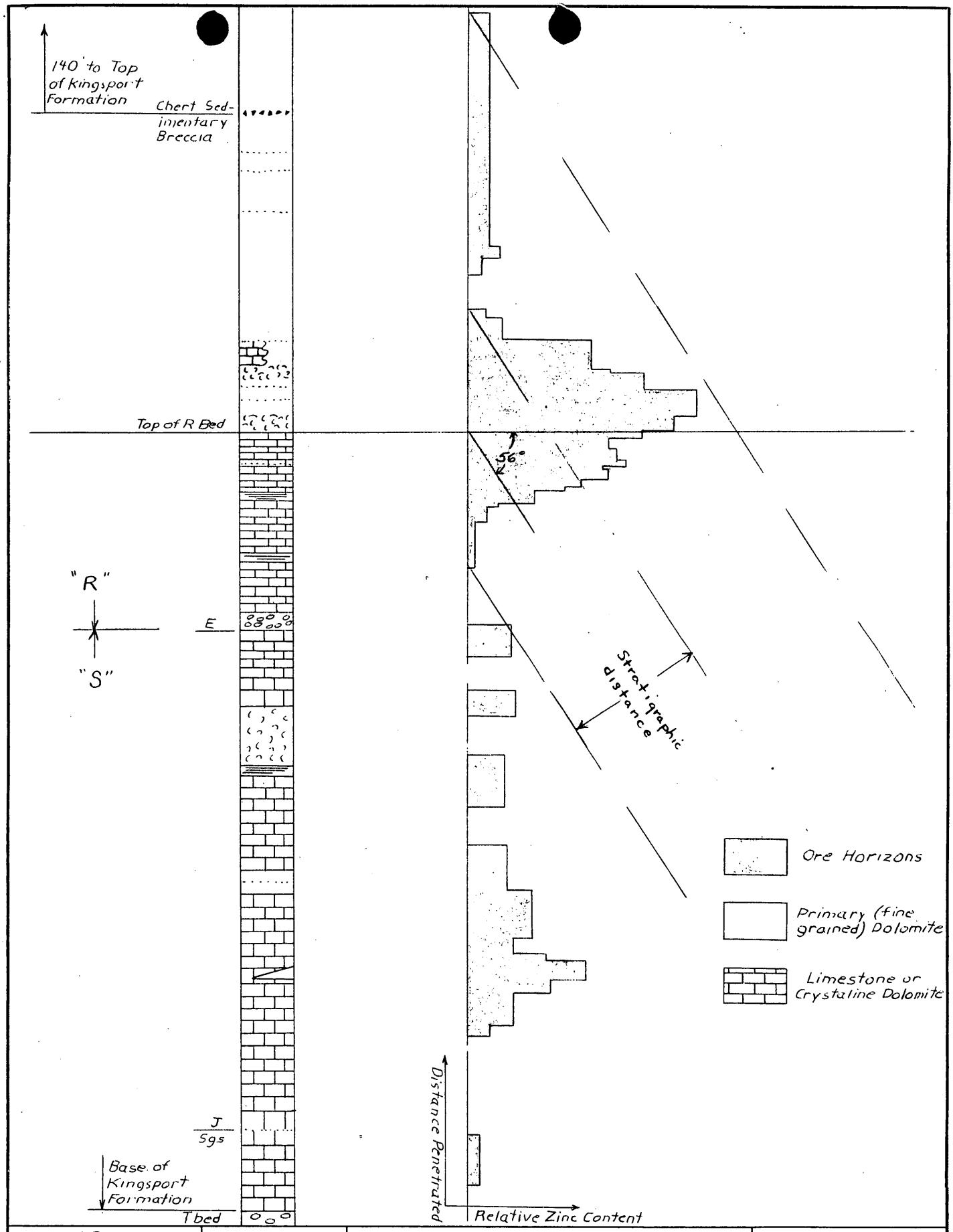
Little is known about the detailed form of the ore zones of of the structures controlling them. They appear to be of the manto type and individual ore shoots may be expected to be very irregular in outline.

The gross elongation of the Independence ore system is thought to be roughly parallel to the regional strike, but the evidence for this is tenuous.

Further study of structural and stratigraphic data obtained from the drilling so far accomplished may reveal controls which are not fully appreciated at this time. It is more than probable, however, that the structure of the Independence ore system will only be understood after a substantial amount of it has been opened up by mining. The probable irregular nature of this ore deposit must be considered when evaluating the potential of the area that has been drilled, and when further exploration by drilling is projected beyond the limits presently investigated.

There are two principal types of ore, (1) sphalerite that is found as filling associated with white gangue dolomite of openings in mosaic breccias in fine-grained (probably primary) dolomite, and (2) as sphalerite that is formed in part as replacement and in part filling openings in coarse crystalline dolomite associated with sedimentary breccias in the "R" and "S" beds. There is always more or less tectonic brecciation superimposed on the sedimentary breccias where ore and dolomite are found. The "R" and "S" bed ore zones of coarsely crystalline dolomite may be derived from sedimentary breccias that were formed largely of limestone. The dolomitization of the limestone and the introduction of the gangue dolomite are believed to be closely related in genesis and time to the introduction of the sulphide minerals.

The sulphides are sphalerite and pyrite. These minerals are closely but not uniquely associated. There is probably somewhat more pyrite in the Independence ore than is found in the other Copper Ridge zinc deposits. Locally pyrite may make up to as much as 10% of the ore while at other places the ore is essentially free of pyrite. Locally, strong pyrite mineralization is also found containing only traces of sphalerite.



DRAWN ADH	CHECKED	THE NEW JERSEY ZINC COMPANY	DATE 8-21-57
TRACED RCG	APPROVED	JEFFERSON CITY, TENNESSEE	SCALE Vert-1"=30' Horiz. 1"=30%Zn
REVISED	STRATIGRAPHIC POSITION OF ORE PENETRATIONS INDEPENDENCE AREA		AX-TENN A-1292

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

X5453A 1M 11-54

Conclusions

DMEA drilling has just about doubled the tonnage of ore indicated by the earlier drilling of The New Jersey Zinc Company. Present indications are of approximately a million tons of 4½% to 5% Zn. Exploration possibilities both to the northeast, southwest, and down dip are attractive. Because of the very steep dip (56 degrees), the area that may be economically prospected in the down dip direction is small.

Within the project area, only about 40% of the ground to a depth of 1500 feet has been tested with a satisfactory degree of thoroughness. It is reasonable to expect that the untested area may contain an amount of ore equivalent to that in the area tested. Furthermore, the possible ore potential of the tested area is certainly as much as twice the million tons indicated by the drilling. By this reasoning, it seems that a potential for the project area of from 2 million tons to 5 million tons is a valid expectation, and further drilling to discover the extent of the ore bearing area is warranted.

OFFICIAL FILE COPY
DMEA
RECEIVED JUN 12 1957

DATE	INITIALS	CODE
6/12	JWS	220
"	CFM	100
6/14	WPR	500

INTERIM REPORT

DMEA-4153, Idm-E950 - Zinc

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

Location: Independence area, Hancock County, Tennessee

With the completion of Hole IN-70 on May 9, 1957 the Independence project of the New Jersey Zinc Company in the Copper Ridge district has been recessed. The diamond drilling completed to the recess date and since the last previous inspection on May 2, 1957 is summarized as follows:

Footage in holes completed since last inspection	1,241
Total footage in holes completed to date	18,191
Number of holes completed since last inspection	1
Total number of holes completed to date	23
Number of holes showing commercial zinc ore	7*
Number of holes showing non-commercial zinc mineralization	6*
Number of barren holes	10*

*Revised according to assay results on the basis of the Operator's statement that a minimum of 50 units (feet X percent) is the cut-off on an ore hole with the minimum percentage needed being 3.0 percent.

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

Hole no.	Property	Depth	Remarks
IN-70	M. B. Horton	1241	"TR" @ 1030; "E" bed @ 1076; "T" bed @ 1211-1218; 1 ft estimated @ 2 % Zn @ 1004-1005 and a trace of sphalerite @ 1118; local shines and traces of pyrite @ 1100, 1142, 1147, 1159-1169, 1170, 1175, and 1176.

Although the Operator has recently discussed the possibility of termination and certification of the Independence project with the Field Team, he has not yet formally indicated future plans for the project and has asked for a brief informal recess while considering the problem. On receipt of a formal communication from the Operator, the Field Team will also submit its recommendation.

Inspected: May 27, 1957

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

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

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

Bassinder
Litty

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Budget Bureau No. 42-R1036.5

PAID ON VOUCHER & SCHEDULE
PAYMENTS K- 75

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of May, 1957 Docket No. DMEA 4153 Contract No. Idm E-950
Operator's Name The New Jersey Zinc Co. Minerals Zinc
Address Jefferson City, Tennessee
Contract Amount, $ 107,150.00 Government Participation: 50 % Amount, $ 53,575.00

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	3,473.00	46,776.00	50,249.00	8/8/57.		
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision / Technical Services	335.07	4,576.50	4,911.57			
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis		51.00	51.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	3,808.07	51,403.50	55,211.57	3808.07	51,403.50	55,211.57

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:
$ 1904.03
Signature Helen R. Miller
(Authorized Certifying Officer)
Date JUN 27 1957 Vou. No. 210
(See other side)

1904.04

(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-950 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. Lawrence 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 4153 Contract No. Idm E-950

Operator's Name The New Jersey Zinc Co. Minerals Zinc

Address Jefferson City, Tenn.

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 0-1000	Ft.	2,750.00	1,000	47,564.00	17,296	2.75	30,000	2.75
~~Chips~~ 1000-1500	"	723.00	241	2,685.00	895	3.00	5,000	3.00
Auger								
Stripping								
Trenching Assays	Assay	-	-	51.00	51	1.00	200	1.00
Test Pits								
Roads and Trails								
Supervision and Technical Service	Ft.	335.07	1,241	4,911.57	18,191	0.27	35,000	0.27
TOTAL DISTRIBUTED COSTS		3,808.07		55,211.57				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		3,808.07		55,211.57				

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

Per [signature] Title Asst. to the Supt.

REMARKS: This report covers drill hole IN-70

→ 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 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 May 1957

Independence Area DMEA 4153

Contract Idm E-950 (Zinc)

During May one drill operated on the Independence project part of the month. With the completion of hole IN-70 on May 9th, the drill was moved to another project and further work on contract Idm E-950 is being postponed pending study and re-evaluation of data. A summary log of hole IN-70 follows:

Hole IN-70 - W. H. Horton Property 200' downdip from IN-69

Coordinates: 803,276.53N; 898,026.87 E
Elevation: 1397.56'

0- 5	Clay
5- 62	Chickamauga limestone
62- 800	Mascot dolomite
800-1004	Upper Kingsport dolomite
1004-1005	1' estimated @ 2% Zn
1005-1030	Upper Kingsport dolomite
1030	TR Marker
1030-1151	Lower Kingsport limestone and dolomite, trace Zn at 1118'.
1151-1169	18' estimated to contain 8% pyrite
1169-1211	Lower Kingsport limestone and dolomite
1211-1241	(Bottom) Longview limestone and dolomite.

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DMEA
RECEIVED
DATE
CODE

A. D. Hoagland/dm

INTERIM REPORT

DMEA-4153, Idm-E950 - Zinc

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

Location: Independence area, Hancock County, Tennessee

No diamond-drill holes were completed on the New Jersey Zinc Company's Independence project since the last inspection on April 11, 1957. Additional data on the hole currently drilling is given below:

Hole no.	Property	Depth	Est. depth	Remarks
IN-70	M. B. Horton	1030	1300	Chert-matrix ss not recognized, base of Mascot dolomite probably @ 870; currently drilling in upper Kingsport fm.

Unless significant mineralization is discovered in Hole IN-70, currently drilling, to warrant additional drilling on the same fence or an adjacent fence, the Operator plans to recess the subject project and request termination and certification. If approval is granted, the drill rig now operating at Independence will be moved to the Big War Creek project (DMEA-4286) or the Cedar Springs area (DMEA-4586) for which a contract has recently been agreed upon.

Inspected: May 2, 1957

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

OFFICIAL FILE COPY
DMEA
RECEIVED MAY 16 1957

DATE	INITIALS	CODE
5/16	JWZ	220
17	CBW	100
5/17	WRG	500

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 No. 70

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of April, 1957 Docket No. DMEA 4153 Contract No. Idm E-950
Operator's Name The New Jersey Zinc Company Minerals Zinc
Address Jefferson City, Tennessee
Contract Amount, $ 107,150.00 Government Participation: 50 % Amount, $ 53,575.00

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	2455.75	44,320.25	46,776.00	8/8/57 O.K.		
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision	241.11	4,335.39	4,576.50			
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment	-					
Sampling and Analysis		51.00	51.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	2696.86	48,706.64	51,403.50	2696.86	48706.64	51,403.50

RECEIVED MAY 20 1957 D.M.E.A.

I certify that the above bill is correct and just and that payment therefor has not been received.
Date 5/1/57 *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:
$ 1348.43
Signature Helen R. Miller (Authorized Certifying Officer)
Date MAY 16 1957 Vou. No. 191
(See other side)

1348.43

(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-950 in accordance with the terms of the contract.

Signature [illegible] Title GEOLOGIST, U. S. G. S. Date MAY 15 1957

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature [illegible] Title ACTING EXECUTIVE OFFICER DMEA - REGION V Date MAY 15 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 April 7 195 Docket No. DMEA 4153 Contract No. Idm E-950

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 0-1000	Ft.	2455.75	893	44,814.00	16,296	2.75	30,000	2.75
Drilling: Core 1000-1500	"	- -	-	1,962.00	654	3.00	5,000	3.00
Churn								
Auger								
Stripping								
Trenching Assays	Assays	- -	-	51.00	51	1.00	200	1.00
Test Pits								
Roads and Trails								
Supervision and Technical Services	Ft.	241.11	893	4,576.50	16,950	0.27	35,000	0.27
TOTAL DISTRIBUTED COSTS		2696.86		51,403.50				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		2696.86		51,403.50				

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 IN-69.

Date 5-1-57 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 MAY 20 1957 D.M.E.A.

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

MAY 15 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 April 1957

Independence Area DMEA 4153

Contract Idm E-950

During April one drill operated on the Independence project. Only one hole, IN-69, was completed. A summary log of this hole follows:

Hole IN-69 - W. H. Horton property - 100' downdip from hole IN-68

Coordinates: 803,436,48 N; 897,922.71 E
Elevation: 1350.74'

Depth	Remarks
0- 2'	Clay
2-515'	Mascot dolomite
515-695'	Upper Kingsport dolomite
695'	TR marker
695-891'	Lower Kingsport, 31% dolomite
891-893'	(Bottom) Longview dolomite.

A. D. Hoagland/jf

OFFICIAL FILE COPY
DMEA
RECEIVED MAY 20 1957

DATE	INITIALS	CODE

OFFICIAL FILE COPY
DMEA
RECEIVED APR 22 1957

DATE	INITIALS	CODE
4/22	C	220
23	[illegible]	100
4/26	[illegible]	500

INTERIM REPORT

DMEA-4153, Idm-E950 - Zinc

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

Location: Independence area, Hancock County, Tennessee

Diamond drilling on the Independence project in the Copper Ridge district completed to date and since the last inspection ~~on March 28, 1957~~ is summarized as follows:

Drilling completed:

Footage in holes completed since last inspection . . .	893
Total footage in holes completed to date	16,950
Number of holes completed since last inspection . . .	1
Total number of holes completed to date	22
Number of holes showing commercial zinc ore	10 ✓
Number of holes showing non-commercial zinc mineralization	4
Number of barren holes	8

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

Hole no.	Property	Depth	Remarks
IN-69	W. H. Horton	893	Located 100 ft down dip from Hole IN-68; collared in Mascot dol; chert-matrix ss @ 515; "U-255" bed @ 621; "TR" @ 695; top of "T" bed @ 891; barren hole.

Pertinent available information on the hole currently drilling is tabulated below:

Hole no.	Property	Depth	Est. depth	Remarks
IN-70	M. B. Horton	245	1200	Located 100 ft down dip from Hole IN-69; collared in Chickamauga ls; top of Mascot dol @ 62; currently drilling in Mascot dol.

Inspected: April 11, 1957

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- 64

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

Month of March, 1957 Docket No. DMEA 4153 Contract No. Idm E-950
Operator's Name The New Jersey Zinc Company Minerals Zinc
Address Jefferson City, Tennessee
Contract Amount, $ 107,150.00 Government Participation: 50 % Amount, $ 53,575.00

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:	3643.75	40,676.50	44,320.25	5/28/57 OPK.		
Drilling						
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision / Technical Services	357.75	3977.64	4335.39			
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(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	49.00	51.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	4003.50	44703.14	48706.64	4003.50	44703.14	48706.64

RECEIVED APR 22 1957 D.M.E.A.

I certify that the above bill is correct and just and that payment therefor has not been received.
Date 4-1-57 *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:

$ 2001.75

Signature Helen R. Miller
(Authorized Certifying Officer)

Date APR 19 1957 Vou. No. 176
(See other side)

2001.75

(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-950 in accordance with the terms of the contract.

Signature J. E. Lynch Title MINING ENGINEER U. S. BUREAU OF MINES Date APR 18 1957

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Robert A. Lawrence Title EXECUTIVE OFFICER DMEA REGION V Date APR 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 M-104A
(April 1952)

Budget Bureau No. 42-R1151.2

RECEIVED APR 29 1957 D.M.E.A.

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

Month of March 195 7 Docket No. DMEA 4153 Contract No. Idm E-950

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.	3643.75	1325	42,358.25	15403	2.75	30,000	2.75
Churn 1000-1500	"	-	-	1,962.00	654	3.00	5,000	3.00
Auger								
Stripping								
Trenching								
Test Pits Assays	Assay	2.00	2	51.00	51	1.00	200	1.00
Roads and Trails								
Supervision and Technical Services	Ft.	357.75	1325	4335.39	16057	0.27	35,000	0.27
TOTAL DISTRIBUTED COSTS		4003.50		48,706.64				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		~~4003.50~~		~~48,706.64~~				

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 4-1-57 Operator The New Jersey Zinc Co.

Per [signature] Title Asst. to the Supt.

REMARKS: This report covers Holes: IN-67 IN-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, USGS
APRIL 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

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DATE	INITIALS	CODE

Report for March, 1957

Independence Area DMEA 4153

Contract Idm E-950

During March, 1 drill operated on the Independence project. Holes IN-67 and 68, totalling 1325' were completed. Log summaries of these holes follow:

Hole IN-67 - W. H. Horton property - 200' downdip from IN-66

Coordinates: 803,607.52 N; 897,797.82 E
Elevation: 1268.93'

Depth	Remarks
0- 1	Red Clay
1-191	Mascot dolomite. Chert matrix marker 191'
191-365	Upper Kingsport dolomite
365	TR marker
365-381	Lower Kingsport limestone. Trace sphalerite 379'
381-384	Lower Kingsport dolomite
384-389	5' - 6.60% Zn
389-545	Interbedded limestone and dolomite of lower Kingsport. Trace sphalerite 397'. E Marker 427'
545-591	(Bottom) Longview dolomite.

Hole IN-68 - W. H. Horton property - 100' downdip from IN-67

Coordinates: 803,513.91 N; 897,866.48 E
Elevation: 1301.93'

Depth	Remarks
0-514	Mascot and upper Kingsport dolomites. Chert Matrix marker not recognized but contact possibly at 336'
514	TR marker
514-522	8' - 3.97% Zn
522-688	Interbedded limestone and dolomite of lower Kingsport
688-734	(Bottom) Longview dolomite.

T. E. Wayland/jf

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RECEIVED APR 8 1957

DATE	INITIALS	CODE
4/8	C	220
8	COM	100
4/8	URY	500

INTERIM REPORT

DMEA-4153, Idm-E950 - Zinc

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

Location: Independence area, Hancock County, Tennessee

Diamond drilling completed to date and since the last inspection on March 7, 1957 on the Independence project is summarized as follows:

Footage in holes completed since last inspection	734
Total footage in holes completed to date	16,057
Number of holes completed since last inspection	1
Total number of holes completed to date	21
Number of holes showing commercial zinc ore	10 ✓ 50+%
Number of holes showing non-commercial zinc mineralization	4 ✓ 20%
Number of barren holes	7

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

Hole No.	Property	Depth	Remarks
IN-68	W. H. Horton	734	Located 100 ft down dip from Hole IN-67; collared in Mascot dol; chert-matrix ss not recognized but base of Mascot probably at 336; "TR" @ 514; top of Longview dol @ 688. Ore hole; 8 ft estimated @ 7 % Zn 514-522.

Hole IN-69 is now in progress. It is located 100 feet down dip from Hole IN-68 and is now drilling in the Kingsport formation at a depth of 756 feet. The chert-matrix sandstone was penetrated at 515 feet. The hole will be bottomed at about 920 feet.

Inspected: March 28, 1957

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

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

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RECEIVED MAR 20 1957
DATE | INITIALS | CODE
3/20 | C | 20
3/20 | COW | 100
3/22 | WRG | 500

INTERIM REPORT

DMEA-4153, Idm-E950 - Zinc

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

Location: Independence area, Hancock County, Tennessee

Diamond drilling completed to date and since the last inspection on February 14, 1957 on the Independence project of the New Jersey Zinc Company is summarized as follows:

Footage in holes completed since last inspection	915
Total footage in holes completed to date	15,323
Number of holes completed since last inspection	2
Total number of holes completed to date	20
Number of holes showing commercial zinc ore	9 ✓
Number of holes showing non-commercial zinc mineralization	4
Number of barren holes	7

9/20

Brief summaries of the two holes completed since the last inspection are given below:

Hole No.	Property	Depth	Remarks
IN-66	W. H. Horton	325	Summary log: 0-280 Kingsport formation; "TR" @ 103 280-325 Longview formation Zinc mineralization: None
IN-67	W. H. Horton	590	Summary log: 0-191 Mascot dolomite 191- ? Kingsport formation; "TR" @ 365 ? -590 Longview formation (top not recognized) Zinc Mineralization: trace @ 379; 5 ft estimated @ 6% @ 384-389; trace @ 397 Location: 200 ft down dip from Hole IN-66

Hole IN-68, also on the W. H. Horton property, was in progress at the time of inspection. It is located 100 feet down dip from Hole IN-67 and was collared and currently drilling in the Mascot dolomite at a depth of 302 feet. The anticipated bottoming depth for this hole is 700 feet.

Inspected: March 7, 1957

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

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 No. 58

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of February 195 7 Docket No. DMEA 4153 Contract No. Idm E-950

Operator's Name The New Jersey Zinc Company Minerals Zinc

Address Jefferson City, Tennessee

Contract Amount, $ 107,150.00 Government Participation: 50 % Amount, $ 53,575.00

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:	3880.75	36,795.75	40,676.50	5/3/57	[illegible]	~~[illegible]~~
Drilling						
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision / Technical Services	379.08	3,598.56	3,977.64			
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment	-					
Sampling and Analysis		49.00	49.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	4259.83	40,443.31	44,703.14	4259.83	40443.31	44,703.14

RECEIVED MAR 29 1957 D.M.E.A.

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

Date 3-1-57 *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:

$ 2129.92

Signature [signature] (Authorized Certifying Officer)

Date MAR 27 1957 Vou. No. 155

(See other side)

2129.91

(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-950 in accordance with the terms of the contract.

Signature [illegible] Title MINING ENGINEER U. S. BUREAU OF MINES Date MAR 26 1957

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Robert A. Lawrence Title EXECUTIVE OFFICER DMEA REGION V Date MAR 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 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 February 1957 Docket No. DMEA 4153 Contract No. Idm E-950

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.	3643.75	1325	38,714.50	14,078	2.75	30,000	2.75
Churn 1000-1500	"	237.00	79	1,962.00	654	3.00	5,000	3.00
Auger								
Stripping Assays		- -	--	49.00	49	1.00	200	1.00
Trenching								
Test Pits								
Roads and Trails								
Supervision & Tech. Services	Ft.	379.08	1404	3,977.64	14,732	0.27	35,000	0.27
TOTAL DISTRIBUTED COSTS		4259.83		44,703.14				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		4259.83		44,703.14				

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 3-1-57 Operator The New Jersey Zinc Co.

Per W. Hoagland Title Asst. to the Supt.

REMARKS This report covers holes IN-65 and IN-66.

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 MAR 26 1957 DMEA

Kenneth Lewis Jr.
GEOLOGIST USGS
MARCH 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 February 1957

Independence Area DMEA 4153

Contract Idm E-950

During February, 1 diamond drill operated in the Independence area. Two holes, IN-65 and 66, totaling 1404 feet were completed. Log summaries of these holes follow:

Hole IN-65 - M. B. Horton property - 200' downdip from IN-64

Coordinates: 804,956.75 N; 900,224.84 E
Elevation: 1634.28'

0- 14	Red Clay
43- 642	Mascot dolomite. Chert matrix marker at 642'
642- 865	Upper Kingsport dolomite
865	TR marker
865-1048	Lower Kingsport interbedded limestone and dolomite. Dolomitization 27%
1048-1079	(Bottom) Longview dolomite. Top of T bed 1048

Hole IN-66 - W. H. Horton property

Coordinates: (approx.) 803,760 N; 897,700 E
Elevation: (") 1270'

0- 3	Red Clay
3-103	Upper Kingsport dolomite
103-	TR marker
103-280	Lower Kingsport interbedded limestone and dolomite. Dolomitization 28%
280-325	(Bottom) Longview dolomite. Top of T bed 280'

R. C. Greene/jf

EXTRA COPY
DMEA
RECEIVED MAR 29 1957

DATE	INITIALS	CODE

INTERIM REPORT

DMEA-4153, Idm-E950 (Zinc)

RECEIVED FEB 21 1957 D.M.E.A.

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

Location: Independence area, Hancock County, Tennessee

The diamond drilling completed to date on New Jersey Zinc's Independence project is summarized as follows:

Footage in holes completed since last inspection . . .	1,079
Total footage in holes completed to date	14,408
Number of holes completed since last inspection . . .	1
Total number of holes completed to date	18
Number of holes showing commercial zinc ore	8
Number of holes showing non-commercial zinc mineralization	4
Number of barren holes	6

Additional pertinent data obtained on the completed hole since the last inspection on January 24, 1957 follow:

Hole no.	Property	Depth	Remarks
IN-65	M. B. Horton	1079	Top of "R" bed (TR) @ 856; barren hole.

With the completion of hole IN-65 the drill was moved to a new fence 2850 feet southwest along the strike from Hole IN-65. The first hole (IN-66) in this new fence is at the up-dip end of the fence. It was collared and was currently drilling in the Kingsport formation. The depth at the time of inspection was 123 feet and the hole will be bottomed at about 325 feet. The top of the "R" bed was encountered at a depth of 103 feet.

Inspected: February 14, 1957

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

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

Budget Bureau No. 42-R0065

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 January 1957 Docket No. DMEA 4153 Contract No. Idm E-950
Operator's Name The New Jersey Zinc Company Minerals Zinc
Address Jefferson City, Tennessee
Contract Amount, $107,150.00 Government Participation 50 % Amount, $53,575.00

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:	2310.00	34,485.75	36,795.75	5/3/57 O.K.P.K.		
Drilling						
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision	226.80	3,371.76	3,598.56			
Technical Service						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	- -	49.00	49.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	2536.80	37,906.51	40,443.31	2536.80	37,906.51	40443.31

RECEIVED FEB 21 1957 D.M.E.A.

I certify that the above bill is correct and just and that payment therefor has not been received.
Date 2-1-57 *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:
$ 1268.40
Signature Helen R. Melin (Authorized Certifying Officer)
Date FEB 19 1957 Vou. No. 134
(See other side)

1268.40

(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-950 in accordance with the terms of the contract.

Signature Helmuth Wedow, Jr. Title GEOLOGIST, U. S. G. S. Date FEB 13 1957

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature V. J. Zapach Title ACTING EXECUTIVE OFFICER ~~DMEA - REGION V~~ Date FEB 15 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 FEB 21 1957 D.M.E.A.

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

Month of January 1957 Docket No. DMEA 4153 Contract No. Idm E-950

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	Feet	2310.00	840	35,070.75	12,753	2.75	30,000	2.75
Churn 1000-1500	"	- -	--	1,725.00	575	3.00	5,000	3.00
Auger								
Stripping								
Trenching								
Test Pits Assays	Assay	- -	--	49.00	49	1.00	200	1.00
Roads and Trails								
Supervision & Tech. Services	Feet	226.80	840	3598.56	13,328	0.27	35,000	0.27
TOTAL DISTRIBUTED COSTS		2536.80		40,443.31				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		2536.80		40,443.31				

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 2-1-57 Operator The New Jersey Zinc Co.

Per [signature] Title Asst. to the Supt.

REMARKS: This report covers hole IN-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.

FEB 13 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 January 1957

Independence Area DMEA 4153

Contract Idm E-950

During January, one diamond drill operated in the Independence area. Hole IN-64, totalling 840 feet, was completed. A log summary of this hole follows:

Hole IN-64 - M. B. Horton property - 100' downdip from IN-61

Coordinates: (approx.) 805,130 N; 900,138 E
Elevation: (") 1698'

Depth	Remarks
0- 64	Red Clay
64-402	Mascot dolomite. Chert matrix marker 402'
402-621	Upper Kingsport dolomite
621	TR marker
621-627	Lower Kingsport dolomite
627-654	Lower Kingsport limestone
654-683	Lower Kingsport dolomite
683-703	Lower Kingsport limestone
703-718	Lower Kingsport dolomite
718-731	Lower Kingsport limestone
731-737	Lower Kingsport dolomite
737-776	Lower Kingsport limestone
776-796	Lower Kingsport dolomite
796-802	Lower Kingsport limestone
802-840 * (Bottom)	Lower Kingsport dolomite

* Possibly Longview at bottom, but T bed not recognized.

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DMEA
RECEIVED FEB 21 1957
DATE | INITIALS | CODE

T. E. Wayland/jf

RECEIVED
JAN 28 1957
D.M.E.A.

INTERIM REPORT

DMEA-4153, Idm-E950
(Zinc)

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

Location: Independence Area, Hancock County, Tennessee

No diamond-drill holes were completed on the Independence project of the New Jersey Zinc Company since the last inspection on January 10, 1957.

The one drill rig currently operating on the project was located on Hole IN-65. The hole was collared in the Mascot formation, penetrated the chert-matrix sandstone (Mascot-Kingsport contact) at 642 feet, and was drilling at a depth of 731 feet at the time of inspection. The latest estimated bottoming depth of the hole is at 1070 feet.

Inspected: January 24, 1957

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

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

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RECEIVED JAN 22 1957 DMEA

INTERIM REPORT
DMEA-4153, Idm-E950 - Zinc

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

Location: Independence area, Hancock County, Tennessee

Diamond drilling on the Independence project of the New Jersey Zinc Company completed to date and since the last inspection on December 13, 1956 is summarized as follows:

Footage in holes completed since last inspection ----	1,330
Total footage completed to date ----------	13,329
Number of holes completed since last inspection -----	2
Number of holes completed to date ----------	17
Number of holes showing commercial zinc ore ---------	8
Number of holes showing non-commercial zinc mineralization ----------	4
Number of barren holes ----------	5

The summary of data obtained on the holes completed since the last inspection is given below:

Hole No.	Property	Depth	Remarks
IN-63	Horton	490	Shine hole; top of Longview @ 467 Estimated zinc as follows: Shines @ 256 and 267 289-294; 5 ft @ 2-2½ % Shines @ 421 435-436; 1 ft @ 10 % 459-460; 1 ft @ 6% Shines @ 464 and 467
IN-64	Horton	840	Located 100 feet SE of Hole IN-60; collared in Mascot fm; chert matrix ss @ 402; "TR" @ 621; top of Longview fm not recognized. Blank hole.

At the time of the current inspection the one drill rig operating at Independence was moving and setting up on the site of Hole IN-65. This hole is located about 200 feet southeast of Hole IN-64 and will probably bottom at about 1050 feet. Should Hole IN-65 not penetrate commercial zinc ore or show at least a strong shine, then it will be the last hole on this exploration fence and the drill will be moved to a new fence of holes, probably southwest of the central area excluded from the DMEA contract.

Inspected: January 10, 1957

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

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

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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-44

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of December 1956 Docket No. DMEA 4153 Contract No. Idm E 950
Operator's Name The New Jersey Zinc Company Minerals Zinc
Address Jefferson City, Tennessee
Contract Amount, $ 107,150.00 Government Participation: 50 % Amount, $ 53,575.00

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:	3049.75	31,436.00	34,485.75	5/3/57		
Drilling						
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision	299.48	3,072.33	3,371.76			
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	8.00	41.00	49.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	3357.18	34,549.33	37,906.51	3357.18	34549.33	37906.51

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

I certify that the above bill is correct and just and that payment therefor has not been received.
Date 1-1-57 *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:
$ 1678.59
Signature Peter R. Miller
(Authorized Certifying Officer)
Date FEB 6 1957 Vou. No. 117
(See other side)

1678.59

(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-950 in accordance with the terms of the contract.

Signature S. C. Berryman Title GEOLOGIST, U. S. G. S. Date JAN 29 1957

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature V. J. Lynch Title ACTING EXECUTIVE OFFICER DMEA - REGION V Date JAN 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 December 6 195 Docket No. DMEA 4153 Contract No. Idm E 950

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	Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core 0-1000	Ft.	3049.75	1109	32,760.75	11,913	2.75	30,000	2.75
Churn 1000-1500	"	- -	--	1,725.00	575	3.00	5,000	3.00
Auger								
Stripping								
Trenching								
Test Pits Assays	Assay	8.00	8	49.00	49	1.00	200	1.00
Roads and Trails								
Supervision and Technical Services	Ft.	299.43	1109	3,371.76	12,488	0.27	35,000	0.27
TOTAL DISTRIBUTED COSTS		3357.18		37,906.51				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		3357.18		37,906.51				

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

Per [signature] Title Asst. to the Supt.

REMARKS: This report covers holes IN-62 63

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 December 1956

Independence Area - DMEA 4153

Contract Idm E-950

One diamond drill operated in the Independence area during December. Holes IN-62 and 63, totalling 1109 feet, were completed (see map AX-TENN-569A). Log summaries of these holes follow:

Hole IN-62 - M. B. Horton property - 100' updip from IN-61

Coordinates: 805,307.68 N; 900,059.09 E
Elevation: 1760.73

Depth		Remarks
0- 70		Red Clay
70-215		Mascot dolomite. Chert matrix marker 215'
215-401		Upper Kingsport dolomite
401		TR marker
401-450		Lower Kingsport dolomite. E marker 450'
450-461		Lower Kingsport limestone
461-476		Lower Kingsport dolomite
476-488	12' - 8.50% Zn of which 3.66% is soluble Zn	
488-509		Lower Kingsport dolomite. Shine sphalerite 497'. Oxidized sulfide 506'
509-519	10' - 3.58% Zn	
519-538		Lower Kingsport dolomite
538-542		Lower Kingsport limestone
542-571		Lower Kingsport dolomite
571-619	(Bottom)	Longview dolomite. T bed 571-587'

Hole IN-63 - M. B. Horton property - 100' updip from IN-62

Coordinates: 805,396.22 N; 900,006.86 E
Elevation: 1785.26

Depth		Remarks
0- 50		Red Clay
50- 56		Mascot dolomite. Chert matrix marker 56'
56-267		Upper Kingsport dolomite. Shines sphalerite 256, 267'
267		TR marker
267-271		Lower Kingsport dolomite
271-288		Lower Kingsport limestone
288-289		Lower Kingsport dolomite
289-294	5' - 2.2½% Zn Est.	
294-318		Lower Kingsport dolomite. E marker 318'
318-340		Lower Kingsport limestone
340-368		Lower Kingsport dolomite

Hole IN-63 - Continued

Depth	Remarks
368-374	Lower Kingsport limestone
374-377	Lower Kingsport dolomite
377-384	Lower Kingsport limestone
384-435	Lower Kingsport dolomite. Strong shine sphalerite 421'
435-436	1' - 10% Zn Est.
436-459	Lower Kingsport dolomite. Shine oxidized sulfide 450'
459-460	1' - 6% Zn Est.
460-490 (Bottom)	Lower Kingsport and Longview dolomites. Strong shines sphalerite 464, 467'. Contact (T bed) not recognized, but possibly at 467'

DETAIL OF ASSAYS MADE IN DECEMBER

Hole	Depth	Feet	% Zn	% Acetic Acid Sol. Zn
IN-62	476-477	1	14.35	11.30
	480-488	8	10.95	4.07
	509-514	5	5.63	0.62
	514-519	5	1.52	0.13

RECEIVED
DEC 21 1956
D.M.E.A.

INTERIM REPORT

DMEA-4153, Idm-E950-Zinc

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

Location: Independence Area, Hancock County, Tennessee

DRILLING COMPLETED

Completed diamond drilling to date on the Independence Area project amounts to 11,999 feet in 15 holes. Hole IN-62 on the M. B. Horton property was completed since the last inspection on November 29, 1956 on reaching a depth of 619 feet. Commercial zinc ore occurs in Hole IN-62 as follows: 8 feet (480-488) estimated at 10 percent zinc, and 10 feet (509-519) estimated at 6 percent zinc; a shine of sphalerite was logged at a depth of 497 feet.

The recording of IN-62 as a commercial hole brings the number of holes containing commercial ore to 8 in a total of 15 holes completed; in addition 3 holes showed non-commercial zinc mineralization, and 4 were blank.

NOTE: In the Interim Report dated November 29, 1956, the completed hole described as bottoming at 720 feet was erroneously reported as No. IN-60; the correct designation is IN-61 (M. B. Horton property).

DRILLING IN PROGRESS

Hole IN-63, 100 feet horizontally northwest of IN-62 and also on the Horton property, had reached a depth of 399 feet at the time of the current inspection; it will be bottomed at 490 feet. This hole was collared in the Mascot formation and penetrated the chert matrix sandstone at 56 feet. Zinc mineralization was noted as follows: shines at depths of 256 and 267 feet, and 5 feet (289-294) estimated at 2-2½ percent zinc.

Inspected: December 13, 1956

Helmuth Wedow, Geologist
U. S. Geological Survey

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INTERIM REPORT

DMEA-4153, Idm-E950 - Zinc

RECEIVED
DEC 10 1956
DMEA

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

Location: Independence area, Hancock County, Tennessee

DRILLING COMPLETED

Fourteen holes totaling 11,380 feet of diamond drilling have been completed to date on the New Jersey Zinc Independence project. One hole (No. IN-60) was bottomed at 720 feet since the last inspection date (November 15, 1956). Fifteen feet of zinc ore estimated to contain 5 percent Zn occurs at 486-501 feet, and six feet of ore estimated at 12-13 percent Zn occurs at 555-561 feet.

In the 14 holes completed 7 contained zinc ore, 3 show non-commercial zinc mineralization, and 4 are blank.

DRILLING IN PROGRESS

One hole is currently in progress and has reached a depth of 490 feet. Pertinent data on this hole are summarized as follows:

Hole No.	Depth	Estimated Depth	Remarks
IN-62	490	620	In Kingsport formation; Chert matrix at 215; strongly oxidized from 481 to 485 with some core loss; 8 ft est. at 10% Zn from 480 to 488.

Inspected: November 29, 1956

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

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

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INTERIM REPORT

DMEA-4153, Idm-E950 - Zinc

RECEIVED NOV 28 1956 DMEA

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

Location: Independence Area, Hancock County, Tennessee

Thirteen holes totaling 10,660 feet of diamond drilling have been completed at this project. One hole was finished since the last interim report. A summary of this hole is given below:

Hole No.	Depth	Remarks
IN-60	525	Some scattered Zn shines, but no mineralization of importance.

One hole is currently in progress. A summary of this hole is as follows:

Hole No.	Depth	Esti. Depth	Remarks
IN-61	556	720	5 ft. esti. 5% Zn @ 485½ to 490 ft. 3 " " 3% Zn @ 492 to 495 ft. 1 " " 2% Zn @ 500 to 501 ft.

Of the 13 holes completed 6 have discovered minable zinc ore, 3 have revealed non-commercial zinc mineralization and 4 have been blank holes.

Inspected: November 15, 1956

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

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RECEIVED
NOV 7 1956
D.M.E.A.

INTERIM REPORT

DMEA-4153, Idm-E950-Zinc

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

Location : Independence Area, Hancock County, Tennessee

A total of 10,135 feet of diamond drilling has been completed in 12 drill holes. Since the last interim report one hole has been completed. A summary of this hole follows:

Hole No. & Property	Depth	Remarks
IN-59, M. B. Horton	735	Blank Hole

One hole is currently in progress. Below is a summary of this hole:

Hole No. & Prop.	Depth	Esti. depth	Remarks
IN-60, M.B. Horton	493	525	Trace of ZnS at 247 ft. Now in lower Kingsport fm.

Of the 12 completed holes, 6 have discovered minable zinc ore. Two have revealed non-commercial mineralization, and 4 have been blank holes.

Inspected: November 2, 1956

V. J. Lynch, Mining Engineer
Bureau of Mines

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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 OF PAYMENTS K-

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of November 1956 Docket No. DMEA 4153 Contract No. Idm-E-950

Operator's Name The New Jersey Zinc Company Minerals Zinc

Address Jefferson City, Tennessee

Contract Amount, $107,150.00 Government Participation: 50 % Amount, $53,575.00

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	3,423.75	28,012.25	31,436.00	1/31/57		
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision	336.15	2,736.18	3,072.33			
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	4.00	37.00	41.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	3,763.90	30,785.43	34,549.33	3763.90	30785.43	34549.33

RECEIVED JAN 2 1957 O.M.E.A.

Bugnolo
Bilsky
Betty

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

Date Dec. 1, 1956 *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:

$ 1881.95

Signature [signature] (Authorized Certifying Officer)

Date JAN 4 1957 Vou. No. 98

(See other side)

1881.95

(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-950 in accordance with the terms of the contract.

Signature Kenneth Weaver Title GEOLOGIST, U. S. G. S. Date DEC 26 1956

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE: ACTING EXECUTIVE OFFICER

Signature W. J. Lynch Title DMEA - REGION V Date DEC 27 1956

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

RECEIVED JAN 2 1957 D.M.E.A.

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of November 6 195 Docket No. DMEA 4153 Contract No. Idm-E-950

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	Feet	3,423.75	1245	29,711.00	10,804	2.75	30,000	2.75
1000-1500	"	- -	---	1,725.00	575	3.00	5,000	3.00
Churn								
Auger								
Stripping								
Trenching Assays	Assay	4.00	4	41.00	41	1.00	200	1.00
Test Pits								
Roads and Trails								
Supervision & Technical Services	Ft.	336.15	1245	3,072.33	11,379	0.27	35,000	0.27
TOTAL DISTRIBUTED COSTS		3,763.90		34,549.33				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		3,763.90		34,549.33				

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 Dec. 1, 1956 Operator The New Jersey Zinc Co.

Per [signature] Title Asst. to the Supt.

REMARKS: This report covers holes ~~IN-60~~ 61

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

X 1086G 24M 1-54

COPY

Jefferson City, Tennessee

THE NEW JERSEY ZINC COMPANY

EXPLORATION DEPARTMENT

RECEIVED JAN 7 1957 D.M.E.A.

Report for November, 1956

Independence Area DMEA - 4153

Contract IDM-E-950

One diamond drill operated in the Independence area during November, Holes IN-60 and 61, totalling 1245 feet were completed (see map AX-TENN-569A). Log summaries of these holes follow:

Hole IN-60 - M. B. Horton property - 200 feet updip from IN-59.

Coordinates: 805,808.11 N; 900,913.90 E
Elevation: 1716.55'

Depth	Remarks
0- 31 - - - - -	Red Clay
31- 73 - - - - -	Mascot dolomite. Chert matrix marker 73'
73-316' - - - -	Upper Kingsport dolomite. Trace sphalerite 247'
316' - - - -	TR marker
316-361 - - - - -	Lower Kingsport dolomite
361-417 - - - - -	Lower Kingsport limestone
417-525 - (bottom)	Lower Kingsport and Longview dolomites. Contact (T Bed) not recognized.

Hole IN-61 - M. B. Horton property - approximately 500' S 60° W of IN-52

Coordinates: 805,221.37 N; 900,097.02 E
Elevation: 1730.24

Depth	Remarks
0- 78 - - - - -	Red Clay
78-325 - - - - -	Mascot dolomite. Chert matrix marker 325'
325-486 - - - - -	Upper Kingsport dolomite. Traces sphalerite 409, 484. Shine sphalerite 418'. Trace pyrite 410'.
486-501 - - - - -	15' - 4.79% Zn
495 - - - - -	TR marker
501-528 - - - - -	Lower Kingsport dolomite (R bed) Shine pyrite, trace sphalerite526'.
528-530 - - - - -	2' - 1½% Zn Est.
530-551 - - - - -	Lower Kingsport dolomite. (R Bed) E marker 551'.
551-555 - - - - -	Lower Kingsport dolomite. (S bed)
555-561 - - - - -	6' - 10.75% Zn
561-562 - - - - -	Lower Kingsport dolomite (S bed)
562-609 - - - - -	Lower Kingsport limestone (S bed)
609-644 - - - - -	Lower Kingsport dolomite (S bed)
644-675 - - - - -	Longview dolomite
675-682 - - - - -	Longview limestone
682-720 - (bottom)	Longview dolomite

DETAILS OF ASSAYS MADE IN NOVEMBER

Hole	Depth	Feet	% Zn	Average
IN-61	486-490	4	16.00	
"	490-495	5	0.92	486-501 - 15' - 4.79% Zn
"	500-501	1	3.20	
"	555-561	6	10.75	

RECEIVED
OCT 19 1956

INTERIM REPORT

DMEA-4153, Idm-E950-Zinc

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

Location: Independence Area, Hancock County, Tennessee

A total of 9400 feet of diamond drilling has been completed in 11 drill holes. Two holes were completed during this period. A summary of these two holes is as follows:

Hole No. & Property	Depth	Remarks
IN-57, D. H. Darnell	1200	Blank
IN-58, M. B. Horton	1046	Blank

Only one drill is in operation at this project. A summary of the one hole in progress is as follows:

Hole No. & Prop.	Depth	Esti. depth	Remarks
IN-59, M. B. Horton	166	800	In Mascot fm

Of the 11 holes completed to date, six have discovered commercial zinc ore, 2 have revealed non-commercial zinc mineralization and 3 have been blank.

Inspected: October 11, 1956

V. J. Lynch, Mining Engineer
Bureau of Mines

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

Budget Bureau No. 42-R1036.5

PAID ON VOUCHER & SCHEDULE OF PAYMENTS No.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of October 195 6 Docket No. DMEA 4153 Contract No. Idm- E950

Operator's Name The New Jersey Zinc Company Minerals Zinc

Address Jefferson City, Tennessee

Contract Amount, $ 107,150.00 Government Participation: 50 % Amount, $ 53,575.00

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	8259.25	19,753.00	28,012.25	6/12/56		
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor / Supervision	804.87	1,931.31	2,736.18			
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis		37.00	37.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	9064.12	21,721.31	30,785.43	9064.12	21721.31	30785.43

RECEIVED NOV 23 1956

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

Date Nov. 4, 1956 *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:

$ 4532.06

Signature Helen R. Meier (Authorized Certifying Officer)

Date NOV 21 1956 Vou. No. 77

(See other side)

4532.06

(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-950 in accordance with the terms of the contract.

Signature T. J. Lynch Title MINING ENGINEER U. S. BUREAU OF MINES Date NOV 20 1956

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Robert A. Lawrence Title EXECUTIVE OFFICER DMEA REGION V Date NOV 20 1956

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

RECEIVED NOV 23 1956 D.M.E.A.

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of October 6 1956 Docket No. DMEA 4153 Contract No. Idm-B 950

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 0-1000	Ft.	7521.25	2735	26,297.25	9559	2.75	30,000	2.75
Drilling: Core 1000-1500	"	738.00	246	1,725.00	575	3.00	5,000	3.00
Churn								
Auger								
Stripping								
Trenching Assays	Assay	- -	- -	37.00	37	1.00	200	1.00
Test Pits								
Roads and Trails Supervision and Technical Services	Ft.	804.87	2981	2,736.18	10,134	0.27	35,000	0.27
TOTAL DISTRIBUTED COSTS		9064.12		30,785.43				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		9064.12		30,785.43				

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 Nov. 4, 1956 Operator The New Jersey Zinc Co.

Per [signature] Title Asst. to the Supt.

REMARKS: This report covers holes: IN-57, 58, 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]
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 October, 1956

Independence Area - DMEA 4153

Contract Idm - E-950

One of the two diamond drills originally assigned to the Independence area was removed during October, 1956. Holes IN-57, 58, and 59, totalling 2981 feet, were completed (see maps AX-TENN-569A, 570A). Log summaries of these holes follow:

Hole IN-57

Coordinates: 806,111.12N; 902,982.43E
Elevation: 1,570.89

Depth	Remarks
0- 22	Red clay
22-857	Mascot dolomite. Chert matrix marker not recognized, but base of dark gray dolomite at 857 believed to be contact.
857-984	Upper Kingsport dolomite. U255 @ 916'
984	TR marker
984-1050	Interbedded limestone and dolomite of lower Kingsport (R bed). E marker 1050'.
1050-1200 (Bottom)	Interbedded limestone and dolomite at lower Kingsport (S bed)

Hole IN-58

Coordinates: 805,095.48 N; 900,690.16 E
Elevation: 1,564.46

Depth	Remarks
0- 48	Red clay
48-710	Mascot dolomite. Chert matrix marker not recognized, but base of dark gray dolomite at 710' believed to be contact.
710-843	Upper Kingsport dolomite. Brown oolitic chert? 782'. Trace pyrite 782'
843	TR marker
843-910	Interbedded limestone and dolomite of lower Kingsport (R bed) E marker 910'
910-933	Interbedded limestone and dolomite of lower Kingsport (S bed)
933-1020	Lower Kingsport limestone (S bed)
1020-1034	Lower Kingsport dolomite (S bed)
1034-1046 (Bottom)	Longview dolomite. T bed? 1034-1036.

Hole IN-59

Coordinates: 805,623.44 N; 900,986.13 E
Elevation: 1,660.44

Depth	Remarks
0- 50	Red clay
50-260	Mascot dolomite. Chert matrix marker 260'
260-533	Upper Kingsport dolomite. Locally strong fracturing, brecciation, and reddish coloration. No Upper Kingsport markers recognized.
533	TR marker ?
533-588	Lower Kingsport dolomite (R bed). E marker ? 566'
588-611	Lower Kingsport limestone (S bed)
611-735 (Bottom)	Lower Kingsport (S bed) and Longview dolomites. T bed ? 643-650'

The stratigraphy of hole IN-59 is obscure. Some of the markers have been obliterated by a strong development of breccia and a reddish coloration which extends from the Mascot into the lower Kingsport.

RECEIVED
OCT 22 1956

INTERIM REPORT

DMEA-4153, Idm-E950 (zinc)

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

Location: Independence Area, Hancock County, Tennessee

Nine drill holes totaling 7,154 feet have been completed on this contract. No holes have bottomed since the last interim report (Sept. 13, 1956).

Two holes are in progress. A summary of these holes is as follows:

Hole No. & Property	Depth	Esti, depth	Remarks
IN-57, D. H. Darnell	904	1350	In Mascot fm
IN-58, M.B. Horton	844	1100	In Mascot fm

Of the nine holes completed to date, six have discovered zinc mineralization of commercial grade and mineable thickness, two revealed indicative non-commercial mineralization and one was blank.

Inspected: September 27, 1956

W A Beck

Wm. A. Beck, Mining Engineer
U. S. Bureau of Mines

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RECEIVED
SEP 19 1956

INTERIM REPORT

DMEA-4153, Idm-E950 - Zinc

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

Location: Independence Area, Hancock County, Tennessee

Nine drill holes totaling 7154 feet have been completed on this contract. Two holes have bottomed since the last interim report, August 30, 1956. A summary of these holes is as follows:

Hole No. & Property	Depth	Remarks
IN-56, M.B. Horton	880	27 ft of esti. 6 - 7% Zn @ 726-753 ft
IN-55, D.H. Darnell	890	Blank

Two holes are in progress. A summary of these two is as follows:

Hole No. & Prop.	Depth.	Esti Depth	Remarks
IN-58 M.B. Horton	339	1000	In Mascot fm
IN-57 D.H.Darnell	348	1350	In Mascot fm

Of the nine holes completed to date, six have discovered zinc mineralization of commercial grade and mineable thickness, two revealed indicative non-commercial mineralization and one was blank.

In the interim report dated Aug. 30, 1956, hole IN-54 was reported to be on the Ralph Garrett property, it should have been reported as being on the M.B. Horton property and hole IN-55 should have been reported as being on the D. H. Darnell property instead of Ralph Garrett land.

Inspected: September 13, 1956

W A Beck

Wm. A. Beck, Mining Engineer
U. S. Bureau of Mines

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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 OF PAYMENTS K-

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of September 1956 Docket No. DMEA 4153 Contract No. Idm-E-950
Operator's Name The New Jersey Zinc Company Minerals Zinc
Address Jefferson City, Tennessee
Contract Amount, $ 107,150.00 Government Participation: 50% Amount, $ 53,575.00

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:	4867.50	14,885.50	19,753.00	11/19/56	W.P.K.	
Drilling						
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor	477.90	1,453.41	1,931.31			
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	6.00	31.00	37.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	5351.40	16,369.91	21,721.31	5351.40	16,369.91	21,721.31

RECEIVED NOV 2 1956 DMEA

Roosevelt
~~Klengenschmidt~~
Betty

I certify that the above bill is correct and just and that payment therefor has not been received.
Date 10/18/56 *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:
$ 2675.70
Signature [signature]
(Authorized Certifying Officer)
Date NOV 5 1956 Vou. No. 62
(See other side)

2675.70

(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. E-950 in accordance with the terms of the contract.

Signature V. J. Lynch Title Mining Eng Date 10-23-56

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Robert A. Lawrence Title EXECUTIVE OFFICER DMEA REGION V Date OCT 24 1956

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 MGF-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 Sept. 1956 Docket No. DMEA 4153 Contract No. Idm-E-950
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	Feet	4867.50	1770	18,766.00	6824	2.75	30,000	2.75
Core 1000-1500	"	-	-	987.00	329	3.00	5,000	3.00
Auger								
Stripping								
Trenching								
Test Pits Assay	Assay	6.00	6	37.00	37	1.00	200	1.00
Roads and Trails								
Supervision & Technical Services	Feet	477.90	1770	1,931.31	7153	0.27	35,000	0.27
TOTAL DISTRIBUTED COSTS		$5,351.40		21,721.31				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		$5,351.40		21,721.31				

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 10/18/56 Operator The New Jersey Zinc Co.

Per [signature] Title Asst. to the Supt.

REMARKS: This report covers holes: IN-55
56
Also 1 assay of IN-54
(see August, 1956 Report)

→ 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)

N. J. Lynch
Bureau of Mines
10-23-56

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, 1956

Independence Area DMEA-4153

Contract Idm-E-950

RECEIVED NOV 7 1956 D.M.E.A.

Two diamond drills operated in the Independence area during September, 1956. Holes IN-55, and IN-56, totalling 1770 feet were completed (see strip map AX-TENN-569A and 570A). Holes IN-48, 50, 52, 53, 56, and 58 are shown on attached section AX-TENN-C-1171. Log summaries of holes IN-55 and 56 follow:

Hole IN-55

Coordinates: 806,364.74 N; 902,835.28 E
Elevation: 1638.98

Depth	Remarks
0- 50'	Red clay
50-516'	Mascot dolomite. Chert matrix marker 516'
516-676'	Upper Kingsport dolomite
676'	Top of the R bed
676-694'	Lower Kingsport dolomite
694-701'	" " limestone
701-708'	" " dolomite
708-730'	" " limestone
730-748'	" " dolomite. E marker at 738
748-794'	Lower Kingsport limestone
794-870'	" " dolomite
870-890' (Bottom)	Longview dolomite. T bed 870-876'

This drill has moved 300' downdip to the IN-57 location.

Hole IN-56

Coordinates: 805,192.74 N; 900,656.01 E
Elevation: 1586.92

Depth	Remarks
0- 28'	Red clay
28-578'	Mascot dolomite. Chert matrix marker 578'
578-726'	Upper Kingsport dolomite
726-753	27' - 8.19% Zn

Hole IN-56 (cont'd)

Depth	Remarks
736'	Top of the R bed
753-762'	Lower Kingsport limestone
762-769'	" " dolomite. E marker 766'
769-779'	Lower Kingsport limestone
779-793'	" " dolomite
793-808'	" " limestone
808-820'	" " dolomite
820-836'	" " limestone
836-843'	" " dolomite
843-880' (Bottom)	" " limestone

The drill has moved 100' downdip to the IN-58 location.

Detail of Assays Made in September, 1956

Hole	Footage	% Zn	Weighted Averages
IN-54	720-724	5.14	
IN-56	726-731	2.66)	
	731-736	14.25)	726-753
	736-741	3.91)	
	741-746	2.28)	27' - 8.19% Zn
	746-753	15.11)	

INTERIM REPORT

DMEA-4153, Idm-E950 (zinc)

RECEIVED
SEP - 6 1956

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

Location: Independence Area, Hancock County, Tennessee

Seven drill holes totaling 5384 feet have been completed on this contract. One hole has bottomed since the last interim report (August 15, 1956). A summary of this hole is as follows:

Hole No. & Property	Depth	Remarks
IN-54, Garrett	902	4 ft. estimated 2% Zn at 675-679 ft.
		5 ft. estimated 16% Zn at 679-684 ft.
		3 ft. estimated 2½% Zn at 684-687 ft.
	20	8 ft. estimated 20% Zn at 687-695 ft.
	12.7%	4 ft. estimated 4% Zn at 720-724 ft.

Two holes are in progress. A summary of these two holes is as follows:

Hole No. & Property	Depth	Est. Depth.	Remarks
IN-55, Garrett	613	850	Chert matrix (base of Mascot fm.) at 516 ft.
IN-56, M. B. Horton	586	900	Chert matrix (base of Mascot fm.) at 578 ft.

Of the seven holes completed to date, five have discovered zinc mineralization of commercial grade and mineable grade and the other two revealed indicative non-commercial mineralization.

Inspected: August 30, 1956

Wm. A. Beck, Mining Engineer
U. S. Bureau of Mines

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

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INTERIM REPORT

DMEA-4153, Idm-E950 (zinc)

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

Location: Independence Area, Hancock County, Tennessee

Six drill holes totaling 4482 feet have been completed on this contract. Two holes have been finished since the last interim report (7-23-56). A summary of these two holes is as follows:

Hole No. & Prop.	Depth	Remarks
IN-51, Garrett	1330	R bed - 1120 to 1164 ft. Top Longview fm (T bed at 1290 ft. Shine of sphalerite at 1200 ft.
IN-53, M.B. Horton	681	Top Longview fm (T bed) at 665 ft. 22 ft of esti. 2% Zn @ 490 - 512 ft.

One hole is currently in progress. A summary of this hole is as follows:

Hole No. & Prop.	Depth	Esti. Depth	Remarks
IN-54, M.B. Horton	765	900	U-255 bed at 571 ft Top R bed at 696 ft Top S bed at 748 ft 4-ft esti 2% Zn @ 675-679 ft 5 ft esti 16% Zn @ 679-684 ft 3 ft " 2½% Zn @ 684-687 ft 8 ft " 20% Zn @ 687 - 695 ft 2 ft " 1% Zn @ 695-697 ft 4 ft " 4% Zn @ 720 - 724 ft

Of the six holes completed to date, four have discovered ore of commercial grade and minable thickness and the other two revealed indicative non-commercial mineralization.

A recent property survey has shown that Holes IN-49 and IN-51 are on the Garrett property rather than on the Horton property as previously reported.

Inspected: Aug.15, 1956

D. H. Amos, Geologist
Geological Survey

L. E. Shirley, Mining Engineer
Bureau of Mines

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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

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of August 1956 Docket No. DMEA 4153 Contract No. Idm I-950
Operator's Name The New Jersey Zinc Company Minerals Zinc
Address Jefferson City, Tennessee
Contract Amount, $ 107,150.00 Government Participation: 50% Amount, $ 53,575.00

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	6217.50	8660.00	14,877.50	10/3/56 WPK	Granted	
Bulldozing					Disapproved	
Crosscutting						
Drifting					Betty	
(2) Labor and Supervision:						
Labor	602.37	851.04	1,453.41			
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	0.00	23.00	31.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	6827.87	9542.04	16,369.91	6827.87	9542.04	16,369.91

I certify that the above bill is correct and just and that payment therefor has not been received.
Date Sept. 1, 1956 *Payee The New Jersey Zinc Company
Per Johnson Crawford Title Supt. for 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:
$ 3413.93
Signature Helen R. Miller (Authorized Certifying Officer)
Date SEP 19 1956 Vou. No. 45
(See other side)

3413.94

(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. IAm E950 in accordance with the terms of the contract.

Signature W. A. Beck Title Mining Engr. USBM Date SEP 18 1956

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Robert A. Newman Title EXECUTIVE OFFICER DMEA REGION V Date SEP 18 1956

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 August 1956 Docket No. DMEA 4153 Contract No. Idm E-950

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.	5230.50	1902	13,093.50	5054	2.75	30,000	2.75
Churn 1000-1500	ft.	987.00	329	987.00	329	3.00	9,000	3.00
Auger								
Stripping								
Trenching								
Test Pits Assays	Assay	0.00	6	31.00	31	1.00	200	1.00
Roads and Trails								
Supervision and Technical services	Ft.	602.37	2231	1,453.41	5383	0.27	35,000	0.27
TOTAL DISTRIBUTED COSTS		6827.87		16,369.91				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		6827.87		16,369.91				

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 9/17/56 Operator The New Jersey Zinc Co.

Per Johnson Crawford Title Supt. for Tenn.

REMARKS: This report covers Holes IN-51 IN-54

Also 3 analyses of IN-53

→ 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)

W. A. Beck, Mining Engineer
U.S.B.M.

SEP 18 1956

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 August, 1956

Independence Area - DMEA 4153

Contract Idm E-950

Two diamond drills operated in the Independence area during August. Holes IN-51 and IN-54, totalling 2231 feet, were completed (see map AX-TENN-569A). Log summaries of these holes follow:

Hole IN-51

Coordinates: 805,466.06N; 901,732.88E
Elevation: 1568.65'

Depth	Remarks
0- 30'	Red clay
30-899'	Mascot dolomite
899-1120'	Upper Kingsport dolomite Chert Matrix marker 899'.
1120'	Top of the R bed
1120-1290'	Lower Kingsport limestone Shine sphalerite in dolomite fracture 1200'. E marker - 1164'.
1290-1329'	(Bottom) Longview dolomite. T bed (?) 1290-1298

This drill has moved to the IN-55 location, approximately 1300 feet to the northeast on the D. H. Darnell property. (300' downdip from IN-10).

Hole IN-54

Coordinates: 805,228.17N; 900,612.68E
Elevation: 1614.92

Depth	Remarks
0- 105'	Red Clay
105-502'	Mascot dolomite. Chert matrix marker 502'
502- 675'	Upper Kingsport dolomite
675- 697'	22' - 11.13% Zn (Top of the R bed - 696')
697- 720'	Lower Kingsport dolomite. Scattered traces sphalerite 605-611'.
720- 724'	4' - 3% Zn Estimated
724- 747'	Lower Kingsport dolomite. E marker 747
747- 764'	Lower Kingsport limestone
764- 780'	Lower Kingsport dolomite
780- 797'	Lower Kingsport limestone
797- 806'	Lower Kingsport dolomite

Hole IN-54 Cont'd.

Depth	Remarks
806-853'	Lower Kingsport limestone
853-860'	Lower Kingsport dolomite
860-895'	Lower Kingsport limestone
895-897'	Lower Kingsport dolomite
897-902'	(Bottom) Longview dolomite. T bed 897-900'

This drill has moved 100' down dip to the IN-56 location.

Detail of Assays Made in August, 1956

Hole	Footage		% Zn
IN-53	488-492		3.09
	492-500		0.80
	509-512		5.60
	Weighted Averages		
	488-500	12'	1.56% Zn
	488-512	24'	1.48% Zn
IN-54	675-679		0.82
	679-684		15.80
	684-687		1.88
	687-695		19.50
	695-697		0.48
	Weighted Averages		
	679-695	16'	15.04% Zn
	675-697	22'	11.15% Zn

Independence Area - DMEA 4153

Contract Idm E-950 (Zinc)

COORDINATES AND ELEVATIONS OF HOLES PREVIOUSLY REPORTED

Hole	Coordinates	Elevation
IN-48	805,644.45N; 900,451.75E	1742.85'
IN-49	805,740.49N; 901,606.04E	1645.07'
IN-50	805,559.06N; 900,498.39E	1709.96'
IN-52	805,456.33N; 900,526.85E	1679.54'
IN-53	805,371.63N; 900,572.84E	1644.11'

JUL 30 1956

INTERIM REPORT

DMEA-4153, Idm-E950 (zinc)

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

Location: Independence Area, Hancock County, Tennessee

Four drill holes totaling 2,471 feet have been completed on this contract. One hole has been finished since the last interim report, June 27, 1956, was submitted.

A summary of this hole is as follows:

Hole No. & Property	Depth	Remarks
IN-52, M.B. Horton	652	Chert matrix (base of Mascot fm.) at 192 ft. U-255 bed at 250 ft. Traces sphalerite at 308 ft. TR bed at 421 ft. Estimated 5% Zn at 428 to 440 ft. Estimated 3% Zn at 448 to 450 ft. T bed at 586 to 589 ft.

Two holes are currently in progress. A summary of these holes is as follows:

Hole No. & Prop.	Depth	Esti.depth	Remarks
IN-51, M. B. Horton	1129	1350	Chert matrix (base of Mascot fm.) @ 899 ft. U-255 bed at 1027 ft. Top R bed at 1120 ft.
IN-53, M.B. Horton	491	700	Chert matrix (base of Mascot fm.) at 291 ft. U-255 bed at 423 ft. TR bed at 481 ft. Traces of sphalerite @ 478,480,484 and 489 to 490 ft.

Of the four holes completed to date, three have discovered ore of commercial grade and minable thickness and the other revealed indicative non-commercial mineralization.

Inspected: July 23, 1956

V. J. Lynch, Mining Engineer, USBM.

Dewey Amos, Geologist, USGS.

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

Month of July 1956 Docket No. DMEA 4153 Contract No. Idm-E950
Operator's Name The New Jersey Zinc Company Minerals Zinc
Address Jefferson City, Tennessee
Contract Amount, $ 107,150.00 Government Participation: 50 % Amount, $ 53,575.00

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	3665.75	5002.25	8668.00	10/3/56	W.P.K.	Brownell
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision	359.91	491.13	851.04			
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(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	10.00	23.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	$4038.66	$5503.38	$9542.04	$4038.66	$5503.38	$9,542.04

I certify that the above bill is correct and just and that payment therefor has not been received.
Date 8/17/56 *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:
$ 2019.66
Signature Helen R. Meller
(Authorized Certifying Officer)
Date Vou. No. 31
(See other side)

RECEIVED AUG 24 1956

2019.66

(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. Fd mE950 in accordance with the terms of the contract.

Signature W. M. Beck Title Mining Engr. USBM Date AUG 2 1956

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Robert A. Lawrence Title EXECUTIVE OFFICER DMEA REGION V Date AUG 20 1956

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 1956 Docket No. DMEA 4153 Contract No. Idm-E950

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.	3665.75	1333	8668.00	3152	2.75	30,000	2.75
Churn 1000-1500	"	-	-	-	-	-	5,000	3.00
Auger								
Stripping								
Trenching								
Test Pits Assays	Assay	13.00	13	23.00	23	1.00	200	1.00
Roads and Trails								
Supervision and Technical	ft.	359.91	1333	851.04	3152	0.27	35,000	0.27
TOTAL DISTRIBUTED COSTS		$4033.66		$9542.04				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		$4038.66		$9542.04				

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 8/17/56 Operator The New Jersey Zinc Co.

Per A D Hoagland Title Asst. to the Supt.

REMARKS: This report covers drill holes IN-52
IN-53
Also 10 analyses of IN-48
(See June, '56 Report)

→ 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)

W A Beck, Mining Engr.
U.S.B.M.

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 1956

Independence Area - DMEA 4153

Contract Idm - E950

Two diamond drills operated in the Independence Area during July. One of these drills has had considerable mechanical difficulty and is now being repaired. The other drill completed two holes, IN-52 and IN-53. (See map AX-TENN-569A). Log summaries of these holes follow:

Hole	Depth	Remarks
IN-52	0- 65'	Red clay
	65-194'	Mascot dolomite
	194-423'	Upper Kingsport dolomite. Chert matrix marker 194'. Trace sphalerite 308'
	423'	Top of R bed
	423-428'	Lower Kingsport dolomite
	428-440'	12' 1.97% Zn
	440-444'	Lower Kingsport dolomite
	444-446'	2' 0.50% Zn
	446-467'	Lower Kingsport dolomite. Shine sphalerite 452. E marker 467'.
	467-472'	Lower Kingsport limestone
	472-486'	Lower Kingsport dolomite
	486-574'	Lower Kingsport limestone
	574-587'	Lower Kingsport dolomite
	587-652'	(Bottom) Longview dolomite T Bed 587-590'.
IN-53	0- 90'	Red Clay
	90-291'	Mascot dolomite
	291-481'	Upper Kingsport dolomite. Chert Matrix marker 291'. Traces sphalerite 478-480'
	481'	Top of R Bed
	481-488'	Lower Kingsport dolomite. Trace sphalerite 484'
	488-500'	12' 1½% Zn Estimated
	500-509'	Lower Kingsport dolomite
	509-512'	3' 10% Zn Estimated
	512-546'	Interbedded limestone and dolomite of lower Kingsport. E marker 546'
	546-564'	Lower Kingsport limestone
	564-668'	Lower Kingsport dolomite
	668-681'	(Bottom) Longview dolomite. T bed 668-674'

Detail of Analyses Made in July, 1956

Hole	Footage	% Zn	Remarks
IN-48	180-185	0.26	Ac. Acid Sol. Zinc
	" "	0.63	Total Zinc
(See June 1956 Report)	185-190	3.94	Ac. Acid Sol. Zinc
	" "	4.51	Total Zinc
	190-195	0.76	Ac. Acid Sol. Zinc
	" "	0.98	Total Zinc
	195-200	1.80	Ac. Acid Sol. Zinc
	" "	3.35	Total Zinc
	200-205	4.50	Ac. Acid Sol. Zinc
	" "	5.53	Total Zinc

Weighted Averages:

180-205' - 25' - 2.25% Zc Acid Sol. Zinc
180-205' - 25' - 3.00% Total Zinc

This oxidized zone is interpreted to indicate an original zinc sulfide zone grading higher than 3% zinc.

Hole	Footage	% Zn	Remarks
IN-52	428-434	2.68	
	434-440	1.26	
	444-446	0.50	

Weighted Average:

428-440' - 12' - - 1.97% Zn

INTERIM REPORT

DMEA-4153, Idm-E950 - Zinc

RECEIVED
JUL 2 - 1956

Operator: New Jersey Zinc Company, Jefferson City, Tennessee

Location: Independence Area, Hancock County, Tennessee

Since the Interim report of June 1, 3 drill holes totalling 1819 feet have been completed.

A summary of these holes is as follows:

Hole No. & Name	Depth	Remarks
1N-49, M. B. Horton	900	Traces of Zn at 708 to 715 ft.
1N-48 " "	399	142-148, 6 ft of 2.02% Zn 180-205, 25 ft of oxidized material 229-236, 7 ft of 11.0% Zn 310-317, 7 ft of 8.75% Zn
1N-50, M. B. Horton	520	274-295, 2 ft. esti. 4.5% Zn 304-339, 35 ft " 0.5% Zn

Two holes are currently in progress. A summary of these holes is as follows:

Hole No.	Depth	Esti.depth	Remarks
IN-51 (M.B.Horton)	452	1250	In Mascot fm
1N-52 " "	333	640	In upper Kingsport fm. Shines at 307 feet.

For locations of holes see Figure 2A of Independence Area Contract. Holes IN-48,50 and 52 compose first section of holes on the M. B. Horton property with Hole No. IN-48 fartherest north. Holes IN-49 and IN-51 are the two holes shown about 1000 ft to the northeast, near the Garrett property line.

Of the three completed holes, two have discovered ore of commercial grade and minable thickness and one revealed zinc mineralization of sub-commercial grade.

Inspected: June 27, 1956

V. J. Lynch, Mining Engineer
Bureau of Mines

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INTERIM REPORT

DMEA-4153, Idm-E950 - Zinc

Operator: New Jersey Zinc Company, Jefferson City, Tennessee

Location: Independence Area, Hancock County, Tennessee

The project was started on May 17 when two drills were put in operation on the M. B. Horton property.

A total of 411 feet of drilling has been accomplished to date in two holes. Neither hole has been completed. A summary of the two holes is as follows:

Property and Hole No.		Depth	Est. Depth	Remarks
M. B. Horton	48	96 ft	500 ft	Probably in upper Kingsport fm.
M. B. Horton	49	315 ft	800 ft	In Mascot fm.

Neither hole has yet reached the ore formation.

Inspected: June 1, 1956

V. J. Lynch

V. J. Lynch, Mining Engineer
Bureau of Mines

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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

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of June 195 6 Docket No. DMEA 4153 Contract No. Idm-E950
Operator's Name The New Jersey Zinc Company Minerals Zinc
Address Jefferson City, Tennessee
Contract Amount, $ 107,150.00 Government Participation: 50% Amount, $ 53,575.00

RECEIVED JUL 30 1956

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:						Approved
Drilling	5002.25	-	5002.25			
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision	491.13	-	491.13			
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment	10.00	-	10.00			
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	5503.38		5503.38	5503.38		5503.38

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

Date July 15, 1956 *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:

$ 2751.69

Signature [signature]
(Authorized Certifying Officer)

Date JUL 23 1956 Vou. No. 6

(See other side)

2751.69

(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. Idm-E950 in accordance with the terms of the contract.

Signature Henry H. Amos Title Geologist-USGS Date July 25, 1956

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature V. J. Lynch Title ACTING EXECUTIVE OFFICER ~~DMEA REGION V~~ Date JUL 25 1956

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

RECEIVED
JUL 30

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of June 195[illegible] Docket No. DMEA [illegible] Contract No. [illegible]
Operator's Name The New Jersey Zinc Company Minerals Zinc
Address Gardner City, Kansas

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	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2.75	[illegible]	[illegible]
Churn								
Auger								
Stripping								
Trenching								
Test Pits	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Roads and Trails	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.27	[illegible]	[illegible]
Overhead and Indirect Services								
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 July 15, 1956 Operator The New Jersey Zinc Company
Per [illegible] Title Pres. to the [illegible]

REMARKS: This report covers drill holes [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)

Henry H. Amos
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.

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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

THE NEW JERSEY ZINC COMPANY

COPY

Jefferson City, Tennessee
EXPLORATION DEPARTMENT

JUL 30 1953

Report for June 1956

Independence Area - DMEA 4153

Contract Idm-E950

Two diamond drills completed three holes in the Independence Area during June, 1956 (see Figure 1). Log summaries of these holes follow:

Hole	Depth	Remarks
IN-48	0- 43'	Red clay
	43-142'	Upper Kingsport dolomite. Local shines sphalerite.
	142-148'	6 feet 2.02% Zn
	148-184'	Upper Kingsport dolomite. Local shines sphalerite and oxidized zinc.
	184'	Top of "R" bed
	184-229'	Lower Kingsport dolomite. Local shines sphalerite and oxidized zinc. From 180-205' - 25 feet oxidized and leached zone which may have been ore grade before leaching.
	229-236'	7 feet 9.79% Zn
	236-310'	Lower Kingsport dolomite. Local shines sphalerite and oxidized zinc.
	310-317'	7 feet 8.75% Zn
	317-369'	Lower Kingsport dolomite
	369-399'	(Bottom) Longview dolomite

Hole	Depth	Remarks
IN-49	0- 27'	Red clay
	27-432'	Mascot dolomite
	432-690'	Upper Kingsport dolomite
	690'	Top of "R" bed
	690-868'	Lower Kingsport dolomite and limestone. Traces of sphalerite from 708-715 feet.
	868-900'	(Bottom) Longview dolomite.

Hole	Depth	Remarks
IN-50	0- 50'	Red clay.
	50-110'	Mascot dolomite
	110-274'	Upper Kingsport dolomite. Local traces sphalerite.
	274-295'	21 feet 2.99% Zn
	295-301'	Upper Kingsport dolomite
	301'	Top of "R" bed
	301-304'	Lower Kingsport dolomite
	304-339'	35 feet 1/2% Zn estimated
	339-506'	Lower Kingsport dolomite. Traces sphalerite 377-379, 466 feet.
	506-520'	(Bottom) Longview dolomite

Detail of Analyses made in June, 1956

D.D.H.	Footage	% Zn		Remarks
IN-48	142-148'	2.02		
	229-233'	10.75	17'	Total Zn
	229-233'	3.57		Ac.Acid Sol. Zn
	233-236'	8.50		Total Zn
	233-236'	6.95		Ac.Acid Sol. Zn
	310-317'	8.75	7'	
IN-50	274-279'	1.33		
	279-284'	3.16	16'	
	284-289'	4.05		
	289-295'	3.34		

LOCATION: Copper Ridge Belt
Sector I
Area B
PROPERTY: M.B. Horton

THE NEW JERSEY ZINC CO.
Jefferson City, Tenn.

STARTED 5-29-56 BOTTOMED 6-8-56 LOG BY TEW, RCG, ADH
SHED NO. B-1 DISCARDED

X Sec C 1171 HOLE NO. IN-48
ELEVATION 1943.85'
COORDS. 805,644.45 N 900,451.25 E
BRG. INCL. 90°

DEPTH FROM	DEPTH TO	DIST.	CORE	FM.	MKRS.	ROCK	REMARKS	MINERALIZATION	ANALYSES SMPL. NO.	FROM	TO	% Zn	% Soluble Zn	
0	43					RC	BX-AX 59							
43	142	99	81	OK	CeSedBr 98	DI	dip 55° Sgs, 60 Ce, Wk Frng 67, Open 76-86 Ce 87 CeBr 86, 98 Sgs, Grn Sh, Ce Frags, We 99, 102 Sc Crs Sgs 113	Tr Sp 118, VSt Shi Sp 123 St Shis Sp, Py 128 Tr Sp 133 Shi Sp 136						
142	148	6	6			AOre	Sgs 143	Shis Sp in Dol Frs St Shis Py 145-147	6274	142	148	2.02		
148	184	36	30			DI	We, Ce Br 149-158 We 164 Hi Ang Fa 165	Shi Py 149 Ox Zn 160-165 Tr, Shis, Sp, Py 168, 169, 174, 182	10005	180	185	0.63	0.26	
									10006	185	190	4.51	3.94	
									10007	190	195	0.98	0.76	
									10008	195	200	3.35	1.80	
					TR 184				10009	200	205	5.53	4.50	
184	229				E 224	DI	Open 187-189 We, CeSed Br 189-195 We 195-203 Ls 224-226 possible Ox Ore Zo 184-205	Ox Zn 189, 200-205 Tr Sp 224, 220, 226		Averages: 180	205			
										85	Feet	3.00	2.25	
229	236	7	4			Bore	We 232-235	Dissem Sp in Crs Xtaline DI	6273	229	233	10.75	3.57	7'
									6260	233	236	8.50	6.95	9.79 % Zn
236	310	74	44			DI	St Ox, We 257-309	Shi Sp 238 Ox Zn 288, 303-304						
310	317	7	7			Bore		Dissem Sp, Lo Ros	6272	310	317	8.75		
317	369	52	52		J 326	DI	Sgs 326	Shis Py 317-318						
369	379	10	10		Tbed	DI								
379	399	20	20			DI	Sgs 391							
	399	Bottom												

LOCATION Copper Ridge Belt
Sector I
Area B

PROPERTY

THE NEW JERSEY ZINC CO.

Jefferson City, Tenn.

STARTED 5-24-56 BOTTOMED 6-15-56 LOG BY TEW
SHED NO. B-1 DISCARDED 0-655

X Sec C 1167 **HOLE NO.** IN-49
ELEVATION 1645.07
COORDS. 805,740.49 N 901,606.04 E
BRG. INCL. 90°

DEPTH FROM	DEPTH TO	DIST.	CORE	FM.	MKRS.	ROCK	REMARKS	MINERALIZATION	ANALYSES SMPL. NO.	FROM	TO
0	27					RC	BX-AX 50				
27	690	663	578	Oma -Ok	PbCg 413 BuAc 528 BrnOo? 578 U255 612 LP677	DI	dip 55° We 43 Abu Sgs in Ce 122 OoCe 133 St Mylon 183 Ce Sed Br, Frng 198 Abu Sgs 237 Hi Ang Fa 248, 289 4" Grn Sh 301 15" Ce 329 6" Ce 342 Abu Sgs, OoCe 392 Hi Ang Fa 401 Sgs, Oo in PbCg over Sh 413 (Rock appears ReXln) Bu Ac 427-429 Num Sgs 431-432 St Fa Zo 455-460 Frng 460-474 St Hi Ang Fa 486-488 Sh Pt Zo 506-518 Num Sgs/Grn Sh 531 Abu Sgs, Ce 544 (Wk Sh Ptng Above) Bu Ac Zo 533-538 Num Sgs/Bk Sh 567 St Ce (Oo?) 578 Sgs in Dist Bn Zo 612 Sgs in Hi Ang Fa Zo 616 Sgs 626-628 Num Sgs 651 Ce Sed Br 657 Sgs/Sh 677					
690	800	110	101	Ok	TR690 B 706 E772	DI	Fi-M, Lo Crs Xln Ls 731-732, 775-780	Sc Trs Sp, Py in Dol Frs 708-715			
800	859	59	57			DI	M-Crs Xln Sgs 829	Sc. Trs Py in Dol Frs 803-805, 808-811, 816-819 Syn Py 823, 826 Trs Py in Dol Frs 832, 833			
859	868	9	8			Ls	1' ReXln DI 867-868				
868	873	5	5		Tbed	DI	Fi-Fi Xln Sgs 873				
873	900	27	26			DI	M-Crs Xln				
	900	Bottom									

LOCATION Copper Ridge Belt
Sector I
Area B
PROPERTY M.B. Horton

THE NEW JERSEY ZINC CO.

Jefferson City, Tenn.

STARTED 6-9-56 BOTTOMED 6-21-56 LOG BY TEW, RCG
SHED NO. _____ DISCARDED _____

X Sec C1171 **HOLE NO.** IN-50
ELEVATION 1249.86
COORDS. 805,559.06N 900,488.39E
BRG. _____ INCL. 90°

DEPTH FROM	DEPTH TO	DIST.	CORE	FM.	MKRS.	ROCK	REMARKS	MINERALIZATION	ANALYSES SMPL. NO.	FROM	TO			
0	50					RC	BX-AX 71							
50	110	60	56	Oma		DI	dip 57° CeMtx ss 51							
110	274	164	154	Ok	CeMtx 110 BrnQo? 210	DI	Ce Mtx ss 110 (Br Bn Zo above) Qo Ce 132 Ble 145-162 Sgs in Ce 162 Ce Sed Br 174 Qo Ce 210 Sgs 211 Rq Sgs 222 Sc Num Sgs 230-235 Sc Ce Sed Br 243-246 4" Grn Sh w Sgs 247 Sc Sgs in Dis + Bn Zo 249-251 Sgs over Blue Sh 256 Ce Sed Br w Sgs 268-269 Sed Br 272-274	Tr Sp, Py in Dol Frs 208, 210 Trs Py in Dol Frs 241 Tr Sp, Py in Dol Fr 245 Sc Trs Sp, Py in Dol Frs 249-253 259-262, 272-274						
									10001	274	279	1.33		
274	295	21	21	4½% E		Aore	Fi-Fi Xln Abu Sed Br	Ros Sp in Dol Frs & Sed Br	10002	279	284	3.16	21'	
									10003	284	289	4.05	2.99	16'
									10004	289	295	3.34		3.50
295	301	6	6		TR 301	DI	Fi-Fi Xln Lo Sed Br	Tr Py 296						
301	304	3	3			DI	Fi-M Xln Lo Sed Br	Tr Sp 303						
304	339	35	34	½% E	B 309	Min	Fi-M Xln Lo Sed Br	Sc Trs Sp, Py in Dol Frs Cds 30 307, 332						
339	506	167	164		E 369 H 428 J 488	DI	dip 47° Sgs 368 Wc 370-382 (possible Ox Zn) open 395-399 Wc 399-406 Strat DI 410-412 Abu Sgs 428 Ce Sed Br w Sgs 441 Cot Rk Ce 452, 453, 458 Dk Gy Fi Gr Bn DI 467 Conc Ce Nods 470 Crs Sgs 488 Ce 491, 492, 495, 497 Ce Sed Bn w Sgs 501	Sc Trs Py 460-470 Tr Sp 466 Tr Py 480 Shi Py 496						
506	511	5	2	Olv	Tbed	DI	Fi Gr							
511	520	9	8			DI	Fi Xln Qtz filled Vugs 517-520							
	520	Bottom												
							Hole cemented to 300' above bottom							

LOCATION Copper Ridge Belt
Sector I
Area B
PROPERTY M. B. Horton

THE NEW JERSEY ZINC CO.
Jefferson City, Tenn.

STARTED 6-16-56 BOTTOMED 8-10-56 LOG BY TEW-RCG
SHED NO. B-1 DISCARDED None

X Sec C 1167 HOLE NO. IV-31
ELEVATION 1568.65
COORDS. 805,466.06 N 901,732.88 E
BRG. INCL. 90°

DEPTH FROM	DEPTH TO	DIST.	CORE	FM.	MKRS.	ROCK	REMARKS	MINERALIZATION	ANALYSES SMPL. NO.	FROM	TO
0	30					RC	BX-AX 50				
30	899	869	801	Oma	58°	DI	Dist Bn 41-46 Pb Cg 68 Sc Rddsh 57-83 Frng 106 Sc Rddsh 114-128 Br 129-133 Sc Rddsh Ce 136-138 Sc Rddsh DI 154-199 Sgs 207, 231 Bu Ac Zo 266-270 Ce Mtx Ss 274 Gng Dol Ac 274-275 Sgs 283-285				
					65°		Rddsh 318-384 Sgs 336, 337 Frng 351 Abu Sgs 366 Ce Mtx Ss 398 Sgs 409 Bu Ac, Sgs 419-421 Wk Lo Ang				
					65°		Fa 425 Frng 435 Sgs 475 Wk Frng 494 Hi Ang Fa Sgs Ce Sed Br, Sgs 556 Sgs 561 Oo Ce 563, 564 Hi Ang Fa, Sgs 598 Vugs 604, 615 Ra Sgs 623-626 Sgs 630 Ra Sgs 633 Cot Rk Ce 641 Ce Sed Br, Abu Sgs 660 Ce Mtx Ss 664 Abu Sgs, Cot Rk Ce 670-672 Frng 677-678 Sgs 688(?) Bu Ac 704 We 705-711 Wk Oo Ce 719 Cot Rk Ce 742-744 Ra Sgs 749 Ce Sed Br 769 Hi Ang Fa 772 Gng Dol 776 Wk Hi Ang Fa 808 Oo Ce/Sgs 821 Sgs, Ce Chips 841 Sgs 858 Cot Rk Ce, Sgs 858-860 Hi Ang Fa 897 Strat DI/ Sgs, Ce 899	Ox Sulfides ? 604			
					Ce Mtx 899						
899	1120	220	214	OK	Brn Oo 973	DI	Sgs 955, 957 Hi Ang Fa 957 Oo Ce 973 Ce Mtx Ss 1002 Ce Sed Br 1006 St Oo Ce 1031 Hi Ang Fa 1032 Sgs, Dist Bn 1046-1051 Ce Sed Br 1058 Abu Sgs 1064 Frng Sgs 1077-1078, 1081 MXln DI 1082-1084 Bddng Pl Fa 1085 Sed Br 1088-1094 Sgs 1093 Sed Br 1112-1120	Shi Py 1027 Tr Py 1065			
					60° U355 1027 LP 1093						
1120	1156	36	32		TR 1120 A 1130	Ls	Sc Sed Br, Rddsh 1120-1133 Sgs 1130 Fi XIn DI 1156-1164	Py in Dol 1150-1152 St shi sp 1200			
1156	1218	62	59		E 1164	DI	Fi-MXln Lo Crs XIn 1172-1176, 1200-1218				
1218	1290	71	58		I 1298 J 1277	Ls	Ce Cg 1234 DI 1245-1248 Cot Rk Ce 1247 Sgs in Sh Pt vugs 1272, 1277				
1290	1329	39			T bed? 1290-1298 O 1319	DI	Wht Gng Dol Frs 1291 Sgs 1298 Oo Cot Rk Ce 1307-1308 Fi Bu DI, Ce, Oo Ce 1316-1318 Ce Pb Cg (oo?) 1319 Cot Rk Ce 1325-1327 Grn Sh 1328				
	1329	Bottom									

LOCATION Copper Ridge Belt
Sector I
Area B
PROPERTY M. B. Horton

THE NEW JERSEY ZINC CO.
Jefferson City, Tenn.

STARTED 6-21-56 BOTTOMED 7-3-56 LOG BY RCG
SHED NO. B-1 DISCARDED

X Sec C1171 **HOLE NO.** IN-52
ELEVATION 1679.54
COORDS. 805,456.33 N 900,526.8 E
BRG. INCL. 90°

DEPTH FROM	DEPTH TO	DIST.	CORE	FM.	MKRS.	ROCK	REMARKS	MINERALIZATION	ANALYSES SMPL. NO.	FROM	TO		
0	65					RC	BX-AX 72						
65	193	129	128	Oma	Num Sgs 70 Sgs in Pb Cg 107	DI	Sgs, Grn Sh, Ce Nod 70 Ce 72, 75, 78 Sgs, Ce 101 DI Pb Cg w Sgs, Ce 107 Abu Bn Sgs 110 Sgs, Grn sh Sed Br 129 Qtz filled Vugs 143 Ce Sed Br 145-147 Ble 149-174 Ce 160 Frng 186-190 VS+Hi Ang Fa 188 Ce Mtx SS 193						
193	423	229	214	Ok	Ce Mtx 193 Bu Ae 220 U 255 251 Oo Ce Mtx SS 260 Ce Sed Br? 268 LP? 336	DI	Sgs 195 Sgs in Sed Br 206 Ble 206-226 Ra Sgs 225 Sc-Bn Sgs, Dist Strat DI 242-251 Sgs in Oo Ce 250 Ble 251-268 Oo Ce Sed Br 268 1" Grn Sh 269 Ble 276-302 Ce 296 Sc Sgs, Dist Bn, Ce 298 Ce 306 Ble 314-330 Ce 325 Sgs, Sed Br 329 Cot Rk Ce 331 Oo Ce 333 Ra Sgs 353 Grn Sh 361 Sgs 366 Sgs, Grn Sh 401 Sgs 415	Tr Py 289 Tr Sp 308 Shi Sp 311 Tr Py 393, 401					
423	428	5	3		TR 423	DI	M-Crs Xln Open 425-427					% Zn	
428	440	12	11	1.97% Zn	A 428 B 440	A orc	Crs Sgs 428 Fi Gr Bu Bn DI 440	Dissem Sp in DI Lo Sp in Dol, Qtz Frs Py 429, 440	10010 10011	428 434	434 440	2.68 1.26	
440	444	4	4			DI	M-Crs Xln						
444	446	2	2	.50% Zn		A orc	M-Crs Xln	Dissem Sp in DI	10012	444	446	.50	
446	467	21	21		C? 450 E 467	DI	Fi-Crs Xln Fi Gr Bn DI 450, 466-471 Cot Rk Ce 467 3" Blk Sh 454	St Dissem Py 446-447, 452 St Shi Dissem Sp 452					
467	472	5	5			Ls							
472	486	14	14			DI	Fi-Crs Xln Oo Ce 482						
486	574	88	78		I? 529 J 551	Ls	Bn Fi Gr DI 529-531 MXln DI 541-545 Sgs 551						
574	587	13	12			DI	Fi-MXln						
587	590	3	3	Oly	Thed	DI	Fi-Fi Xln Ce 587, 589						

THE NEW JERSEY ZINC CO.

HOLE NO. IN-52 (cont.)

LOCATION

PROPERTY

STARTED BOTTOMED LOG BY RCG

SHED NO. DISCARDED

ELEVATION

COORDS.

BRG. INCL.

DEPTH FROM	DEPTH TO	DIST.	CORE	FM.	MKRS.	ROCK	REMARKS	MINERALIZATION	ANALYSES SMPL. NO.	FROM	TO			
590	629	39	36	O/V	U bed O?604	DI	Fi-Crs Xln							
629	652	23	23		V bed	DI	Fi Gr-Crs Xln Sgs 638 Ce Nods 643, 644, 645, 646, 647, 648							
	652	Bottom												

LOCATION Copper Ridge Belt
Sector I
Area B
PROPERTY M.B. Horton

THE NEW JERSEY ZINC CO.
Jefferson City, Tenn.

STARTED 7-5-56 BOTTOMED 7-26-56 LOG BY TEW-RCG
SHED NO. B-1 DISCARDED O-278

X Sec C 1171 HOLE NO. IN-53
ELEVATION 1644.11
COORDS. 805,371.63 N 900,572.84 E
BRG. INCL. 90°

DEPTH FROM	DEPTH TO	DIST.	CORE	FM.	MKRS.	ROCK	REMARKS	MINERALIZATION	ANALYSES SMPL. NO.	FROM	TO		
0	90					RC	BX-AX 93						
90	481	391	376	Oma		DI	Hi Ang (Bdng) Fa 116 Ce 124 Ce, Cot Rk Ce 134-136 Sgs 140 OoCe 151 Ox, Vugs 168 Sc WK, LoSt Blc 168-218, 248-266 Sgs 192 Scd Br or PbCg 232-233 Bu Ac 240						
				OK 291	CcMtx 291		Cot Rk Ce 248 Ce Mtx ss 291						
					Brn Oo 359 U 255 423 LP 468		Blc 300-318 Cot Rk Ce Chips in Brn DI 304 Bu Ac 343 Sgs 347 Blc 366- Cot Rk Ce 350 Sgs 351 OoCe 359 45° @ 350 Sgs, Ce Frags, Dist Bu 380 Cot Rk Ce 387-388, 395 Abu Sgs 421-423 Sgs in Cot Rk 433 Sgs 440, 468 Blc 464-473	St Shi Py 447 Trs Py 460-462 St Shi Sp, Py 478 Trs Sp, Py 480					
481	490	9	9		TR 481		Fi-MXln DI	Tr Sp, 484 Tr Py 486 Tr Py, Sp 489-490					
											% Zn		
490	512	22	22			A orc	Fi-Crs Xln DI, Lo Scd Br Cc, Blk Sh 501-502, 506 Qtz fld Vugs 509 1" Cc/1" Fi DI 518	Shis Sp in Dol frs, Lo Rosettes 490-509 St Shi Py 500 Disem Sp in Crs Xln DI 509-512	10029 10030 10031	488 492 509	492 500 512	3.09 .80 5.60	12' 1.56
512	526	14	14			DI	Crs Xln						
526	528	2	2			Ls							
528	530	2	2			DI	M Xln						
530	533	3	3			Ls							
533	546	13	13		E 546	DI	Fi-MXln Cot Rk Cc 542, 543						
546	564	18	18			Ls	Dk Shy Ptngs 562-564						
564	580	16	16			DI	Fi-MXln, Lo Mot, Lo Strat 4" Cc 578						
580	668	88			I 626 J 655	Ls	2" Cc 606 1" Cc 607 Crs Xln DI 639-642						
668	681	13	12	Olv	T bed 668-674	DI							
	681	Bottom					Hole cemented 300' above bottom						

LOCATION: Copper Ridge Belt
Sector I
Area B
PROPERTY: M. B. Horton

THE NEW JERSEY ZINC CO.

Jefferson City, Tenn.

STARTED 7-30-56 BOTTOMED 8-17-56 LOG BY RCG-TEW
SHED NO. B1- Stacked on floor DISCARDED 0-4:50

X Sec C1171 HOLE NO. IN-54
ELEVATION 1614.92
COORDS. 805,288.17N 900,612.68E
BRG. INCL.

DEPTH FROM	DEPTH TO	DIST.	CORE	FM.	MKRS.	ROCK	REMARKS	MINERALIZATION
0	105					RC	BX-AX 108	
105	675	570	522	Omar-Ok		DI	Ae 167-172 Ground core 192-193 Sgs, Sed Br 203-204 Rc Xln 208-212 Ce Cg, Sgs 246 Ce 248 Sc Sgs, Ce Pbs 266-268 Cot Rk Cc, Lo clear Ce 269-271 Calc Vug 273 Ce Nods 287 Ce/Cot Rk 288-291 Ce 297-298 Ce Pb Cg 303-304 Sc Cot Rk Ce 327-330 Sgs in Ce Nod 331 Ble 338-350 Cot Rk Cg 352 Sgs 357 Grn Sh, We 364 Ce 375 Grn Sh, We 377 We 379 Sgs/Hy Ce 393 Ce 410, 412 We 415, 423 Sgs, Wk Ce Mtx 502 Irreg Ce 511 Ble 525-529, 531-535 Ce 536, 537 Sgs in Ce Cg 538 Ce Nod 546, 548, 556 Grn Sh 557, 560 Blk Sh 565 Ce Nods 567, 571 Dist Bn 570-571 Bn Sgs 571 Oo Ce Nod 576 Bdd Ce 577 Ble 580-587 Red Ce Nods 4 Frags 600-604 Grn Sh 604-606 Grn Sh, Pk Xln DI 617 Grn Sh 625 Sgs/Grn Sh 637 Grn Sh 642 3" Grn Sh 654 Grn Sh 663, 666	Tr Py 674
					57' @ 399			
					U 255 571			
					Ce Sed Br 604			
					590 @ 636			
					LP 658			
675	697	22	21	Ok 11.13% Zn	TR 696	Core		St Shis, Rosettes Sp, Py in Dol Frs
697	720	23	23			DI	Fi-M Xln Vugs 702-704 Fi Bn DI 704 Ce Sed Br 704-708 Ce Nods Fi DI 716-717	Trs Sp 705, 709, 710, 711
720	724	4	4	5.14% Zn		B ore		
724	747	23	23			DI	Ls 732-734 Cot Rk Cc Nods 743	
747	764	17	15			Ls		
764	780	16	15		F-G 772	DI	Fi-M Xln Dk Mot DI 765-771 Dk Strat DI 771-772 Ce Pb Cg 778	
780	897	117	110		I 841 J 863	I ls/dl	Dolimitization 15% Bdd Ce 807 Dk Gy Bn DI 839-841 Ra Sgs 863	
897	902	5	4	Olv	Tbed 897-900	DI	Fi Gr 897-900 Sc Bn, Dol Ac 897-900	
	902	Bottom						
							Hole cemented 300' above bottom	

ANALYSES

SMPL. NO.	FROM	TO		
#	From	To	Ft.	% Zn
10050	675	679	4	0.82
10049	679	684	5	13.80
10048	684	687	3	1.88
10047	687	695	8	19.50
10046	695	697	2	0.48
6261	720	724	4'	5.14
Averages:				
	675	697	22	11.13
	679	695	16	15.04

LOCATION Copper Ridge Belt
Sector I
Area B

PROPERTY D. H. Darnell

THE NEW JERSEY ZINC CO.

Jefferson City, Tenn.

STARTED 8-17-56 BOTTOMED 9-7-56 LOG BY RCG, TEW

SHED NO. B-6 DISCARDED O-467

X Sec C 1208 HOLE NO. IN-55

ELEVATION 1638.80

COORDS. 806,364.74 N. 902,835.28 E

BRG. INCL.

DEPTH FROM	DEPTH TO	DIST.	CORE	FM.	MKRS.	ROCK	REMARKS	MINERALIZATION	ANALYSES SMPL. NO.	FROM	TO		
0	50					RC	BX-AX 67						
50	676	626	498	Oma		DI	CotRk 51 Grn Sh 62 Ce 67 Grn Sh 71 Rd Ce 72 Open 84-104, 108-118 2' recovery 118-134 Open 148-154 Bx core 154-158 We 159 Ra Sgs 178 Mylon, Fa 195 Ce 197 CotRk 198-199 Ra Sgs 204 Bdd Ce 218 Sgs 226 Ce, Sed Br 229-231 Abu Sgs/Ce, Grn Sh 233 Frng 264 Bddng Fa 270 Num Sgs 308 Sc Wk Ble 308-370 Sgs 354 Sgs in Cot Rk PbCg 376 Hi Ang Fa 387 Sgs in Grn Sh 413 Ce Mtx Ss 452 Sgs 503 Ce Mtx ss 516, 519 Ble 531-535, 538-545, 556-572 Ce Mtx 544 Ce Cg 552 Ce Nods 568 Sgs 573 OoCe Nod, Sc Sgs in PbCg 577 Num Sgs 588-589 Ce Sed Br 600-604 Dist Strat 607-609 Sc Sgs 609 Sgs/Grn Sh 616, 633 Dol Ac 618, 621, 625, 626, 627 Grn Sh 641 Frng 661-666 St Frng 664						
				Ok 516	Ce Mtx 516								
					Brn Oo 577								
					U 255 609								
676	694	18	18		TR 676 B 683	DI	Fi-MXln CotRk Ce w clear Ce Frags 676-682 CotRk Ce 684 PbCg 685 Grn Sh 687						
694	701	7	7			Ls							
701	708	7	7			DI	Ce Nods & Frags 708						
708	730	22	20			Ls							
730	748	18	18		E 738	DI	Ce Nods, Br, Oos 733 Ce Nods, Br 738						
748	794	46	41		F-G 780	Ls	Dk Gy Ce 748, 761 DI 777-780						
794	870	76	65		I? 824	DI	Fi-MXln Frng 814-824 Ce Nod 832, 837 Dol Frs 842-847 CotRk/OoCe 844 CotRk/Ce Nods 847 Ce Nod 866						
870	890	20		Olv	Tbed 870-876	DI	Sgs, Ce 875 Sgs 879 Ce Nod 881, 882, 883 Sgs 889						
	890	Bottom											

THE NEW JERSEY ZINC CO.

Jefferson City, Tenn.

LOCATION: Copper Ridge Belt, Sector I, Area B

PROPERTY: M.B. Horton

X Sec C 1171

HOLE NO. 1 N 56

ELEVATION 1586.92

COORDS. 805,192.74 N 900,651.01 E

BRG. _____ INCL. _____

STARTED 8-20-56 BOTTOMED 9-7-56 LOG BY RCG-TEW

SHED NO. B-6 DISCARDED 0-1489

DEPTH FROM	DEPTH TO	DIST.	CORE	FM.	MKRS.	ROCK	REMARKS	MINERALIZATION
0	28					RC		
28	578	550	520	Oma	60°@ 60'	DI	Fi-Fi Xln, Sc Rddsh 28-51 Blk Sh 72 We 74 Abu Sc Sgs in Dist Bn DI 81-83 Grn Sh 89 We 98-99 Sc Rddsh 108-134 Intense Red 120-124 Sed Br 137-139 Grn Sh, Rd Ce 140-141 Sed Br 164, 166-167 We 167-168 Qtz lined Vugs 168 Bu Stks in Dk Gy DI (Wet?) 181, 186, 187, 188 Frag 196 St Ce Mtx ss 197-198 Rd & Grn Ce, Grn Sh 204-205 Sc Sgs 211 Oo Ce Nods 213 We 238 Ce Nod 267 2" Grn Sh 267 Ce 276, 278 We 278-309 Sgs 304, 309, 311 Rc Xln DI 314-315 Wk Bddng Fa 333 Sgs 370 Sgs in Pb Cg 396 Abu Sgs 417 Wk Blc 415-452 Sgs 422 Sgs in Pb Cg 444 Sc Sgs in Dist Bn 447 Sgs in Pb Cg 466 Sgs 479-481 Wk Pb Cg, Sgs in Bu Zo 519 Frag 516 Sgs 547 Sgs/Grn Sh 569	Tr Py (Syn?) 368 Soft Grn Min 461
578	726	147	139	Ok	Ce Mtx 578 Brn Oo 646 U 255 675	DI	Ce Mtx ss 578 Ce 584, 609 Bdd Cc, Sgs 610 Ce 616 Cot Rk, Dol Br 620 Oo Ce 646 Cot Rk Cg 16" Cot Rk Ce 697 Strat DI 665-669 Ce Br 670 14" Cc/4" Grn Sh 671-673 Dist Strat 673-675 Sc Ra Sgs 675 Bdd Ce 700 MXln DI 714-716, 720-721	Tr Py 585
726	753	27	27	8.19% Zn	TR 736 B 741	Bore	Sc Ce Nods, Fi Bu DI 739-741	Shis, Rosettes Sp in Dol Frs, Lo Py
753	880	127	121		E 766 F 779 G 780 H 792 I 815	I S/dl	Dolomitization 31% Ce Nods, Fi DI 765-767 Dk Strat DI 779-780 Ra Sgs/Bdd Ce 792-793	
	880	Bottom						

ANALYSES

SMPL. NO.	FROM	TO		

#	From	To	% Zn	Ft.
10081	726	731	2.66	5
82	731	736	14.25	5
83	736	741	3.91	5
84	741	746	2.28	5
85	746	753	15.11	7
Average	726	753	8.19%	27'

LOCATION Copper Ridge Belt
Sector I
Area B

PROPERTY D. H. Darnell

THE NEW JERSEY ZINC CO.

Jefferson City, Tenn.

STARTED 9-7-56 BOTTOMED 10-5-56 LOG BY RCG-TEW

SHED NO. B-6 DISCARDED None

X Sec C-1208 HOLE NO. IN-57

ELEVATION 1570.71

COORDS. 806,111.12 N 902,982.43 E

BRG. INCL.

DEPTH FROM	DEPTH TO	DIST.	CORE	FM.	MKRS.	ROCK	REMARKS	MINERALIZATION	ANALYSES SMPL. NO.	FROM	TO
0	22					RC	Bx-Ax 37				
22	857	835	737	Oma		DI	Sc Rddsh Bn 29-193 Pb Cg 55 St Hi Ang Fa 82 Clay 126-128 Sgs 217 Ce Mtx ss 260 Sgs in Dist Bn 267 269 Rddsh 269-274 Sgs 291 Sgs in Ce 331 Rddsh 305-442 Cot Rk, Ce Mtx ss 331 Sgs 370 St Rddsh 355-356 Sgs 375 We 379 Abu Sgs 384-386 St Rddsh 421-423 We, Sed Br 435-439 Ra Sgs, Oo Ce Nod 466-467 Ra Sgs/Rd Sh 496 Sc Sgs 504 Oo Ce Nods 505 Wk Hi Ang Fa 524 Sc-Num Sgs 526 Num Sgs/Cot Rk 564 Ra Sgs 572 Sgs 590 Rd Cc, Grn Sh, Crs Sgs 593-594, 596 Sgs 603 Ce Nods/Sc-Num Sgs 605-608 Ra Sgs 619 Cc Pb Cg 639 Ra Sgs 660, 662 15" Ce 672 Cc, Ra Sgs 682-683 Sgs, Cot Rk Cg 723 Ra Sgs 724 My lo, Fang? 733 Sgs, Cot Rk Cg 741 8" Oo Ce 753	Grnsh Min 201			
					TOk		Dk DI 767-826 Ra Sgs 789 Core Spilled 796-811 Sc-Bn				
857	984	127	113	Ok	857	DI	Num Sgs 828-829 Sgs 834, 840 Oo Ce 844 Bo # Dk Zo 857 Sgs 864 Ce Nod 877, 888 St Frng, Fa, Oo Ce 894 Cot				
					U25s		Rk Cg 894-896 Sc Sgs 905-908 Dist Strat 912-916				
					916		Sgs 916 10" Ce 916 Crs Sgs 918 Sc Sgs 930-932 70° Fa 932 Sgs/Grn Sh 937 Ce 937-940 Cc 949 Blk Sh 951,				
					LP965		955 Strat DI/Grn Sh/Mot DI, No Sgs 965				
984	1050	66	59		TR984	Ils/dl	Dolomitization 21% Sgs 990 Fi Xln 1021-1024 Ce Nod				
					A990		1024 DI, Ce Nods 1045-1050				
					C1024						
					E1050						
1050	1200	150	135		G1071		Dolomitization 38%				
					I1124						
					J1162		Top of Tbed 1200				
	1200	Bottom									

LOCATION Copper Ridge Belt
Sector I
Area B
PROPERTY M. B. Horton

THE NEW JERSEY ZINC CO.

Jefferson City, Tenn.

STARTED 9-8-56 BOTTOMED 10-2-56 LOG BY RCG
SHED NO. B-6 DISCARDED 0-627

X Sec C-1171 HOLE NO. IN-58
ELEVATION 1564.46
COORDS. 805,095.48 N 900,690.16 E
BRG. INCL.

DEPTH FROM	DEPTH TO	DIST.	CORE	FM.	MKRS.	ROCK	REMARKS	MINERALIZATION	ANALYSES SMPL. NO.	FROM	TO
0	48					RC	BX-AX 70				
48	843	795	694	Oma -Ok	51°@ 60, 180	DI	Sgs 82 Opcn 88-92 Sc Rddsh 81-263 Sgs 116 Bddng Fa 166 Sgs 201 Abu Sgs 211-213 (W PbCg) Num Sgs 242 Sgs 258 Sc Sgs, Ce, Cgl 290 Cc Mtxss 320 15" Ce, Grn Sh 326 Oo Ce 332-333 Cc 354 PbCg, Sc Sgs 387 Grn Sh 388 Bdd Ce, Grn Sh, Sgs 395 Ra Sgs 404 Ce Grn Sh 405 Calc Vug 418 Dl, Ce Frags 423-424 Sc Sgs 427-428 Sc Sgs, Cot Rk, Sed Br 429-436 MXln Dl 436-444 Wk Hi Ang Fa 462 Cc Pb Cg w sgs 471 Ce frags, Cot Rk 492 Sc Sgs 495, 496 Cot Rk 505-506 Ce 513-514, 540 Sgs, Co + Rk Cg 563 Abu Sgs, Wk PbCg 565 Sgs, Grn Sh, Wk Frng 584 Sc-Abu Sgs, Grn Sh 598-601 Ce Nod 610 Bn Sgs 663 Frng 666, 672 Bottot				
					TOk? 710		Dk Dl Zo 710 Ce Nods 718-719, 728, 729 Frng 733, 736 Grn Sh 739 Sgs 750 Sc-Num Sgs 768 Sc Ce, Cot Rk, Br				
					Brn Oo? 782		777-782 Grn Sh 782 Sc Ra Sgs 784-785 Grn Sh, Xln Dl Br 790-791 Sgs, Grn Sh 812 Ce/Cat Rk 820-821 Fi-MXln Dl 821-831	Tr Py 782			
843	851	8	8	OK	TR 843 50°@851	DI	Ce Nods 850 Fi Bu Dl 861				
851	881	30	28		B 861	Ls	Ls Sed Br 864-871 Sgs 871				
881	886	5	5		C 884	DI	MXln Ce Nods 884				
886	902	16	12			Ls					
902	910	8	8		E 910	DI	MXln 902-905 Fi Xln 905-910 Cc Nods 906, 907, 910				
910	924	14	14		F 929	Ls	Grn Sh, Syng Py 910	Tr Syng Py 910			
924	933	9	8		G 930	DI					
933	1020	87	76			Ls	Ce Nod 935 PbCg 939-945 Dl 949-952 Ce Nods 964, 965 PbCg, Incip Dlztn 983-993 Dl 993-995 Incip Dlztn 995-1002 Dl 1002-1003 PbCg, Incip Dlztn 966-976 Ra Sgs 979 Strat Dl 976-979				
					I 979						
1020	1046	26	24		J 1027	DI	Fi-Fi Xln 1020-1027 Sgs 1027 MXln 1027-1034 Fi-Fi Xln 1034-1046 Ce Nod 1036 Cot Rk 1036-1038				
				Olv? 1034	Tbed? 1034-1036						
	1046	bottom									

LOCATION Copper Ridge Belt
Sector I
Area B
PROPERTY M.B. Horton

THE NEW JERSEY ZINC CO. X Sec C-1220
Jefferson City, Tenn.

HOLE NO. IN-59
ELEVATION 1660.44

STARTED 10-8-56 BOTTOMED 10-24-56 LOG BY TEW-RCG COORDS. 805,623.44 N 900,896.13 E
SHED NO. _____ DISCARDED _____ BRG. _____ INCL. _____

DEPTH FROM	DEPTH TO	DIST.	CORE	FM.	MKRS.	ROCK	REMARKS	MINERALIZATION	ANALYSES SMPL. NO.	FROM	TO		
0	50	—	—			RC	BX-AX 56						
50	544	494	433	Oma-		DI	Ce Pb Cg 73 Cot Rk 80-82 Sgs 89 Ce Pb Cg 100						
				Ok			Cot Rk Ac 108 Pb Cg, Oo Ce? 118 Wk Frng 156 Cot Rk						
				45° 53			Cg 168 Ce 169 We 176 We, Frng 179 Rddsh 190-215						
				50° 64			Intense Red 193-197, 207-210 Br, Sgs, MXln DI 207-210						
					Ce Mx?		Ce 219 St Hi Ang Fa 221 Frng, Lo St 221-268 Sgs 260						
					260		Wk Hi Ang Fa 268 Sc Rddsh 274-305 Intense Red						
				56° 317			275-276, 283-289 Dol Fvs, Sed Br 314-315 Sc Num						
							Sgs 323 Frng 324 Sgs in Ce 331 Hi Ang Fa 332 Lo						
							Sed Br 336-350 Sgs 358 Cot Rk Br 363 Sgs 384-385						
							Sc Rddsh 387-398 Rd Sh 398-400 Hi Ang Fas 426,						
							427 Sgs 458 Blk-Rd Shy DI 459-464, 469 Sc Rddsh						
				57° 490	LP? 490		473-512 Rd Sh 475, 477 Num Sgs, Grn Sh 490						
							Rd Sh 493 6" Rd Sh 495 Sgs 502 Ra Sgs 504 St						
					TR? 533		Rddsh, Abu Rd Sh, Lo Ble, Grn Sh 512-544 Sgs 540						
					A? 540								
544	588	44	41	Ok	E? 566	DI	Fi-MXln, Lo Sed Br, Rddsh DI Rd Ce 547 Brn Mot 578-						
							580 Sgs 588						
588	611	23	20			Ls	Lo Rddsh, Lo Sed Br Pb Cg 598						
611	735	124	108	Ok-	Tbed?	DI	Fi-MXln, Lo Rddsh Oo Ce 617 Ls 615, 624-628 Bddng						
				Olv	643-650		Fa 647, 682 Sgs 693, 702 Num Sgs 717						
	735	Bottom											

LOCATION Copper Ridge Belt
Sector I
Area B

PROPERTY M. B. Horton

THE NEW JERSEY ZINC CO.
Jefferson City, Tenn

X Sec C-1220

HOLE NO. IN-60

ELEVATION 1716.55

STARTED 10-25-56 BOTTOMED 11-3-56 LOG BY RCG, TEW COORDS. 805,808.11 N 900,913.90 E

SHED NO. _____ DISCARDED _____ BRG. _____ INCL. _____

DEPTH FROM	DEPTH TO	DIST.	CORE	FM.	MKRS.	ROCK	REMARKS	MINERALIZATION	ANALYSES SMPL. NO.	FROM	TO
0	31					RC	NX-BX 33 BX-AX 41				
31	316	285	219	Oma-OK	62° 50	DI	LoWk Rddsh 31-100 We 31-33 Open 50-53, 59-63 Sc Frng, Mylon 63-96 Ce Pb Cg, Sgs 73 Frng 123, 124, 129, 144, 147, 150-155 OoCe, Sgs 137 St Mylon 161 60° Fa 183 Cot Rk Cg, Sgs 186 Mylon 195 Dk Gy Dl Sly, Plugs 202-206 Sc Sgs 204-206 Ra Sgs 211 Sgs 225, 226, 237 Sed Br, Sgs 248 Mylon 256 Sed Br 263 Mylon 273 Frng 281-284 Sed Br 286-316 Num Sgs 287, 313	Tr Sp, Py 247 Tr Py 252			
316	361	45	40	OK	TR? 316 B? 318	DI	Fi-MXln, Lo Sed Br Sc Rddsh 344-361 Ls 353-354				
361	417	56	49			Ls	Sc Rddsh Partial Dlztn 361-367 Fi Xln Dl 369-371 Sgs 390 MXln Red Dl 388-389, 390-393, 396-397				
417	525	108	98	OK-Olv		DI	Ls, Partial Dl 435-437 Ce 449 Brn Bn Zo, Ce Nods 490-493 Frng 505-510 Sc Num Sgs 508-510 Sgs 522				
	525	Bottom									

LOCATION Copper Ridge Belt
Sector 1
Area B
PROPERTY M. B. Horton

THE NEW JERSEY ZINC CO. X Sec C-1225
Jefferson City, Tenn.

STARTED 11-6-56 BOTTOMED 11-19-56 LOG BY RCG, TEW
SHED NO. B-6 DISCARDED

HOLE NO. IN-61
ELEVATION 1730.24
COORDS. 805,221.37 N 900,097.02 E
BRG. INCL.

DEPTH FROM	DEPTH TO	DIST.	CORE	FM.	MKRS.	ROCK	REMARKS	MINERALIZATION	ANALYSES SMPL. NO.	FROM	TO		
0	78					RC	NX-BX 80 BX-AX 91						
78	325	247	204	Oma		DI	Sgs 78 PbCg 92-93 Open 93-96 CotRk 102 RaSgs 115 Ce, CotRk 126-127 Sgs 130, 154 Sgs, Pb Cg 174 Ac 191-200 Ce, CotRk 214-216 Frag, Sc We 241-255 VSt HiAng Fa 253 Sgs 312, 318 We 323 CeMtx SS 325						
				55° @ 222									
325	486	161	141	OK	CeMtx 325 U255 359 CeSedBr 426 LP472	DI	Blc 346-348 CeNods, Dist Bn, Sgs 357-359 Sgs 395 Sc Sgs 410-412 CeSed Br w CotRk, Sgs 426 Ra Sgs 434 Nu Sgs in Gru Sh 455 Ra Sgs/ Gru Sh 472	Tr Sp 409 Tr Py 410 Shi Sp 418 Tr Sp 484					
												ft.	% Zn
486	501	15	14	4.79% Zn	TR495	Aore	Sed Br 499-501 FiBn DI Frag 500	Rosettes Sp in Dol Frs	10133	486	490	6	16.00
									10134	490	495	5	0.92
501	528	27	22			DI	MXln, Sed Br 501-503	Shi Py, Tr Sp 526	10135	500	501	1	3.20
										486	501	15'	4.79% Zn
528	530	2	2	1½% Zn	Est	Aore	qtz vug 530						
530	555	25	22		E551	DI	Fi-M, Lo Crs Xln	Shis Rep Sp, Lo Py, CdS 558					
									10136	555	561	6'	10.75
555	561	6	6	10.75% Zn		Core	Crs Xln DI						
561	562	1	1			DI	Crs Xln						
562	609	47	40			Ls	PbCg 578 FiGr DI 589-591 Dol Fr 590						
609	644	35	26		J 612	DI	M-Crs Xln Ra Sgs in Fi DI 612, 641						
644	675	31	27	Olv	TUed 644-652 O?653	DI	Fi-MXln HyCe 651 CotRk 653, PbCg?						
675	682	7	6			Ls							
682	720	38	32			DI	Ra Sgs 698 Brn Bn Zo 704-708						
	720	Bottom											

LOCATION Copper Ridge Belt
Sector I
Area B
PROPERTY M.B. Horton

THE NEW JERSEY ZINC CO. X Sec C-1225
Jefferson City, Tenn.

STARTED 11-20-56 BOTTOMED 12-1-56 LOG BY TEW, RCG
SHED NO. _____ DISCARDED 0-185

HOLE NO. 1N-62
ELEVATION 1760.73
COORDS. 805,307.68 N 900,059.09 E
BRG. _____ INCL. _____

DEPTH FROM	DEPTH TO	DIST.	CORE	FM.	MKRS.	ROCK	REMARKS	MINERALIZATION	ANALYSES SMPL. NO.	FROM	TO			
0	70					RC	BX-AX 80							
70	215	145		Oma		DI	Sgs, Pb Cg 78 We 94-95, 112, 124, 129-132, 134-138 Num Bn Sgs 143 Rddsh DI 168-170 Abu Bn Sgs, Pb Cg, Lo CeMtx 213-215							
215	401	186		Ok	CeMtx 215	DI	Sc Ble 233-250 Cot Rk Cg 260-263 Ble 269-270, 274-280 Sgs 281 Oo Ce 287 Sgs, Cot Rk Pb Cg 287-288 Sc Sgs 303-306 Sgs 307-308 Dist Strat 313-317 Cc 317-321 Sgs 323 Dist. Strat 348-359 Sgs/Sh 371 Wk 60° Fa 381	Tr Py 335						
					LP371									
401	450	49	46		TR 401 B? 410 E 450	DI	Fi-MXln Sed Br 401-411 Ls 411-416							
450	461	11	9			Ls	MXln DI 454-456							
461	476	15	13			DI	Fi-MXln We, Ox 471-476							
476	477	1	1	14.35% Zn		Core		Sp + Ox Sul, Cds	10141	476	477	1/1	14.35	11.30
									10142	480	488	3/8	10.95	4.07
477	480	3	2			DI	Fi Xln							
480	488	8	3	10.95% Zn		Core	Soft Rk 481-487	Sp + Ox Sul, Cds		476	488	12'	8.50% Zn 3.66% Sol Zn	
488	509	21	20			DI		Shi Sp 497, 509 Shi Ox Sul 506 Py 507						
509	519	10	7	3.58% Zn		Core		Shis, Rosettes Sp Py in Dol Frs, Lo Dissem Sp, Cds	10143	509	514	3½/5	5.63	0.62
									10144	514	519	3½/5	1.52	0.13
519	538	19	19			DI				509	519	10'	3.58% Zn .37% Sol Zn	
538	542	4	4			Ls	Blk Sh 541-542							
542	571	29	29			DI								
571	619	48	40	Olv	Tbed 571-587	DI	Fi Fi Xln DI, Cc Nods 571-587 Brn Bng, Hy Cc 609-619							
	619	Bottom												

LOCATION Copper Ridge Belt
Sector I
Area B
PROPERTY M. B. Horton

THE NEW JERSEY ZINC CO. X Sec C-1225
Jefferson City, Tenn.

STARTED 12-3-56 BOTTOMED 12-15-56 LOG BY RCG, TEW
SHED NO. _____ DISCARDED none

HOLE NO. IN-63
ELEVATION 1785.26
COORDS. 805,396.22 N 900,006.86 E
BRG. _____ INCL. _____

DEPTH FROM	DEPTH TO	DIST.	CORE	FM.	MKRS.	ROCK	REMARKS	MINERALIZATION	ANALYSES SMPL. NO.	FROM	TO
0	50					RC	BX-AX 60				
50	56	6	6	Oma		DI	Abu Sgs, Ce Mtx, Pb Cg 56				
56	267	211	160	OK	Ce Mtx 56	DI	We 56, 58 Sc Rddsh 58— OoCc, Ra Sgs 64 L+Gy DI, Bng 80-85 Cc, Ra Sgs 97 Open 130-147 Cot Rk 172-174 Ra Sgs 182-184, 194 Wk Ble 207-237 Dist Strat w Ce Nods 214-230 L Phoviz ? 241 Vug 267	Shi Sp 256, 267			
267	271	4	4		TR 267	DI	Fi-MXln Fi Bu DI 269-271				
271	288	17	12			Ls					
288	289	1	1			DI	MXln				
289	294	5	5	2-2½%	Zn Est	Aore					
294	318	24	23		E 318	DI	Fi-MXln				
318	340	22	22			Ls	Pb Cg 319				
340	368	28	26			DI	Fi-Fi Xln DI Ac 342-346 Wk OK 346 Ce Sed Br 380-381				
368	374	6	5			Ls					
374	377	3	3			DI	Fi-MXln				
377	384	7	6			Ls	Silic. Gastrpd in Sed Br 380-381				
384	435	51	31			DI	M-Crs Xln We, Ox 391-412 Soft Rk 407-412, 413-417 Sed Br 429	Ox Sul ? 391-412 Stshi Sp 421, Shi Dissem Py 422, 426			
435	436	1	1	10% Zn	Est.	Bore					
436	459	23	19			DI		Shi Ox Sul 450			
459	460	1	1	6% Zn	Est	Bore					
460	490	30	28	OIV? 467	Thed? 467-471	DI		V St Sh. Sp 464, 467			
	490	Bot + Ang									

LOCATION Copper Ridge Belt
Sector I
Area B
PROPERTY M. B. Horton

THE NEW JERSEY ZINC CO.

Jefferson City, Tenn.

STARTED 12-17-56 BOTTOMED 1-9-57 LOG BY RCG, TEW
SHED NO. _____ DISCARDED _____

HOLE NO. IN-64
ELEVATION 1694.79'
COORDS. 805,129.38N 900,139.96E
BRG. _____ INCL. _____

DEPTH FROM	DEPTH TO	DIST.	CORE	FM.	MKRS.	ROCK	REMARKS	MINERALIZATION	ANALYSES SMPL. NO.	FROM	TO		
0	64					RC	BX-AX 74						
64	402	338	246	Oma		DI	OoCe 65 PbCg 66 SoftRk 92-104 ScRdMot 113-178 IntenseRed 117-129 Cc, Grn Sh 145 Rd Sh in CeSedBr 164-178 ScSgs 169-175 DkGyDI 184-217 Sgs 216 CeSedBr 237 Sgs, Pbs 255, 270 FiBu DI w Ce 292 CotRk PbCg 314-316 AbuSgs In DI-Ce PbCg 320-321 CotRk 358-360 Frag 386-389 We 390 DkDI, Shy Ptings 389-398 Frag 398-402 Ce Mtx ss 402						
402	621	219	194	Ok	CeMtx 402	DI	Sgs 416 BuAc 448-450 Sgs 457 CeMtx, PbCg 468 RaSgs 476 Ce Nods in Lt Brn DI 498, 507 DistBrn 527-531 Sgs CotRk PbCg 535 Abu Sgs 545-546 Sgs 554 CeSed Br 555 Sgs 560 Strat DI/RdSh/ FiXln Mot DI 597-600 ScRddsh, LoGrnsh 597-621						
					LP 598								
621	628	7	7		TR 621	DI	Fi-MXln, Grn Sh & Ce, LoSedBr 621-625, 627-628 Ls 625-627						
628	654	26	26		A 630	LS	Sgs, SedBr 630 DI 635-638						
654	683	29	28		D 659 E 683	DI	Fi-MXln ScCe Nods 654-656 CotRkNods 678-680 Conc Nods Ce 680-681						
683	703	20	18			LS	PbCg 683						
703	718	15	14			DI	Fi-MXln						
718	731	13	12			LS	Incip Dlztn						
731	737	6	6			DI	Ls 737-738						
737	776	39	37		I 763	LS							
776	796	20	12			DI	M-Crs Xln						
796	802	6	6			LS							
802	840	38				DI	Fi-MXln Ce Nods 825, 826, 834, 839, 836						

LOCATION Copper Ridge Belt
Sector I
Area B
PROPERTY M.B. Horton

THE NEW JERSEY ZINC CO.
Jefferson City, Tenn.

X Sec C-1225

STARTED 1-10-52 BOTTOMED 2-8-52 LOG BY TEW, RCG
SHED NO. _____ DISCARDED _____

HOLE NO. IN-65
ELEVATION 1634.28
COORDS. 804,956.75N 900,224.84E
BRG. _____ INCL. _____

DEPTH FROM	DEPTH TO	DIST.	CORE	FM.	MKRS.	ROCK	REMARKS	MINERALIZATION	ANALYSES SMPL. NO.	FROM	TO
0	43					RC	NX-BX 44 BX-AX 60				
43	856	813	721	Oma-Ok		DI	Red Ce 43 Sgs 44 Clay 50-54 Dol Fr 65 Sc Rd Strat & Mot 92-126 Hi Aug Fa 115,120 Wk Ce Mtx 55 153 Dist Strat DI/V Abu Sgs 172-175 Rd Mot 222-225 Ra Sgs 231 Qtz Vug 268 Mot DI w Cot Rk 274-284 Pb Cg 285 Abu Sgs 295-297 Fvug 302 Sed Br 303 Sgs 304 Nu Sgs 341 Sc Rd Mot 341-372 Ce Sed Br, Rd & Grn Sh 372 Rd Sh, Sed Br 378 Grn Sh, Sed Br 388 Calc Vugs 399 Sgs, Grn Sh 403 Sgs, Sh, Ce 407-408 Sgs, Sed Br 416-417 Num Sgs/Grn Sh 421 Sgs, Pb Cg 460-461 Ra Sgs 470 Cot Rk Br 480-483 Ra Sgs in Bu DI 488 6" Ce 501 Cot Rk 508-510 Sgs, Pb Cg 514 Sgs, Dist Bn 534 Ra Sgs 536 Cot Rk 540 Sgs 562 Sc Abu Sgs, Pb Cg 565-567 Sgs 568 Sc Rddsh, M Gy DI 572-579 Ce Blebs 584-585 Ra Sgs 585 Sgs, Grn				
					Ce Mty? 642		Ce, Grn Sh 601 Fa 638 Sc Sgs 641-644, 670, 692				
					Brn Oo 710		Ce Pb Cg, Abu Sgs 703-706 Ce Nod, Wky Oo 710 Sc Rddsh 728-729 Sgs in (Oo?) Ce 734 Ra Sgs 762 Sgs, Cot Rk Cg 765 Sc Abu Sgs 770-779 Dist Strat 782-786 Ra				
					U255		Sgs 786 Sc Sgs 795-797 Sgs w Grn Sh 819 6" Grn				
					779 to 786		Sh 834 Rd & Grn Sh 856				
					LP 834						
856	896	40	36		TR 856	Ls	Rddsh Ce 861, 862, 865 DI 863-865, 873-874 Ra Sgs 886 Ce 896 Ra Sgs				
896	924	28	28		E 924	DI					
924	939	15	14			Ls	Sed Br 932-934				
939	952	13	11			DI	Fi-M Xln Fossiliferous Zo 944-946				
952	968	16	14			Ls					
968	974	6	6			DI	Fi-M Xln				
974	1043	69	63		I 1003	Ls	Sgs 996 Dk DI 1001-1003 Ra Sgs? 1023				
1043	1079	36	27		T 1048 -1052 "O" 1074	DI	M-Crs Xln				
							Ras bed dolomitization 27%				

LOCATION Copper Ridge Belt
Sector I
Area B
PROPERTY W. H. Horton

THE NEW JERSEY ZINC CO.

Jefferson City, Tenn

X Sec C-1262

STARTED 2-13-57 BOTTOMED 2-16-57 LOG BY RCG
SHED NO. _____ DISCARDED _____

HOLE NO. IN-66
ELEVATION 1267.38'
COORDS. 803,773.72 N 897,681.73 E
BRG. _____ INCL. _____

DEPTH FROM	DEPTH TO	DIST.	CORE	FM.	MKRS.	ROCK	REMARKS	MINERALIZATION	ANALYSES SMPL. NO.	FROM	TO
0	3					RC	NX-BX 6 BX-AX 14				
3	103	100	96	ok	LP? 85		SS 3 (to 6' probably boulders) Sgs 16 Sc Sgs 25-28 Ce Sed Br 34 Fi-MXln Dl 34-30 Sgs, Small Vugs 50 We 67 72 Ra Sgs/sh Bs Sgs 97, 110, 112				
103	107	4	4	ok	TR103	Ls					
107	121	14	14		B112 or 121	Dl	M-CrsXln Ls 113-114				
121	137	16	16			Ls					
137	142	5	5			Dl	MXln				
142	144	2	2			Dl	FiXln, Ce Nods				
144	163	19	16			Ls					
163	168	5	5		E168	Dl	Fi Xln Ce Nods				
168	181	13	13			Ls					
181	192	11	9		F188 G189	Dl	FiXln, M-Dk Gy, Mot Strat 188-189				
192	232	40	35			Ls	Partail Dlztn 230-232				
232	238	6	6			Dl	Fi-MXln				
238	248	10	10			Ls	Partial Dlztd				
248	255	7	7			Dl	MXln, Sc Vugs				
255	280	25	25			Ls	MXln Dl 263-264				
280	288	8	8	Olr	T bed 280-288	Dl	Fi Gr				
288	325	37	37		U-V Beds	Dl	Fi-MXln Ce Nods 293, 295 Sc Cot Rk, Sed Bx Frng 310-324				

THE NEW JERSEY ZINC CO.

Jefferson City, Tenn

X Sec C-1262

HOLE NO. 2N-67

LOCATION Copper Ridge Belt
Sector I
Area B

PROPERTY W.H. Horton

STARTED 2-18-57 BOTTOMED 3-1-57 LOG BY RCG

SHED NO. _____ DISCARDED _____

ELEVATION 1268.93'

COORDS. 803,607.52N 897,797.92

BRG. _____ INCL. _____

DEPTH FROM	DEPTH TO	DIST.	CORE	FM.	MKRS.	ROCK	REMARKS	MINERALIZATION	ANALYSES SMPL. NO.	FROM	TO		
0	1					RC	NX-AX 10						
1	365	364	336	Oma OK	Vug 20 Vug 36-39, 125 126 CeMtx 191 U 255 250	DI	Ce Sed Br 7 Core spilled 19-26 Sgs 18 Frng 14 Sgs 27 Ce PbCg, Sgs 48-51 Frng 63 Sgs, PbCg 64 Sgs/sh 69 Dist St/ Sgs 79 Sc Ble 77-104 Sgs 85 Ra Sgs in Dist St 103 Sc Sgs 105-107 Sgs/sh 122 Sgs/sh 138 St Hi Ang Fa 165 Sgs, Mylon 170 ½" Ce Mtx Ss 191 Cot RK 219 Sgs 222 Ce Mtx, Bu Sgs 224 Sc Ce, Sgs, Cg 228-230 Ra Sgs, Grn Sh 240 Bu/Sgs, Cg 250 Bu/Sgs 279 Oo Ce 281 Fi-MXln DI 302-309 Sgs in Sed Br 315-317 8" Gr Sh 353	Shi Py 31 Tr Py 136 Flecks Syn Py 242-243					
365	381	16	16	OK	TR 365 A 375	Ls	Hy Ce 375, 381, Nu Sgs 375	Ble: 240-250 262-280 288-290 296-300 315-317 320-328 330-353 St Py 381-383					
381	384	3	3			DI	MXln		10159	384	389	Et 5"	7.27 6.60
384	389	5	5	6.60	B 385	Bore							
389	405	16	16			DI	M-Cns Xln						
405	422	17	17			Ls							
422	427	5	5		E 427	DI	Wht Ce Nods						
427	443	16	15			Ls	Sed Br 427-428						
443	454	11	11		F 448 6450	DI							
454	545	91	79			Ls	Ce Nods 457 Incip Dlztn 477-480 FiXln DI 499 501 MXln DI 514-519, 526-527 Sgs/sh 530						
545	591	46	41	Olr	T bed 545-547 "O" 567	DI	Fi-MXln Ls 564-567						
	591	Bottom											

LOCATION Copper Ridge Belt
Sector I
Area B
PROPERTY W. H. Horton

THE NEW JERSEY ZINC CO.
Jefferson City, Tenn

X Sec C 1262

STARTED 3-4-57 BOTTOMED 3-14-57 LOG BY RCG
SHED NO. _____ DISCARDED _____

HOLE NO. IN-6E
ELEVATION 1301.93'
COORDS. 803,513.91N 897,866.4
BRG. _____ INCL. _____

DEPTH FROM	DEPTH TO	DIST.	CORE	FM.	MKRS.	ROCK	REMARKS	MINERALIZATION	ANALYSES SMPL. NO.	FROM	TO		
0	514	514	462	Ottma Ot 48°-63		DI	BX-AX10 Nun Sgs 34-35 Ce Mtx 55 63 Sgs 77 Cot RK Cg in DK DI 55 Cot RK 94 Sgs 116, 134 Sc Sed Br 127-144 Fing 189-190, 197 Cot RK Cg 207 Sgs 218-219 Sgs Pb Cg 240 Cot RK 242 Sgs 261, 276 St Fa 299-362 St Fa Zo 332-336 Sc Num Bu Sgs 390-392 Oo Ce 396 Wk Ble, Sc Ce Nods 413-415 Sgs 415 Sc Wk Ble 415-457 Sgs 443 Fa Sgs Cot RK Cg 446 Sc Num Sgs 457-460 Sgs Cot RK 466 Ce 466-468 Sc Sgs 468-469, 473-476 Sc Ble, Strat 479-514	Py in Ce 141					
					TOK? 336								
					21255? 460								
514	522	8	6	39 Mix	TR514	Aore	Sgs 514	St Shis Dissem Sp + Py Gyp 517	10160	514	522	ft 8/6	Zn 3.57
522	523	1	1		A523	Ls	Sgs 523						
523	529	6	6		B520	DI	Fi Xln						
529	543	14	13			Ls							
543	556	13	13			DI							
556	573	17	15			Ls							
573	579	6	4		E577	DI	Fi Xln						
579	589	10	10			Ls							
589	636	47	34		F597 6598	DI	Partial Ls 606-609 Cts Xln, Si; 609-615 Cts Xln DI 615-636						
636	640	4	4			Ls							
640	663	23	20			DI	Cts Xln Ls 645-646, 652-656						
663	686	23	23			Ls							
686	734	48	39	Olr	Tbed 688-692	DI	Fi Xln 686-692 Sgs 692 Mx Xln 692-698 Fi Gr 698-700 Mx Xln 700-712 Ls Sed Br 712-713 Fi-Mx Xln 713-720 Ls 720-726 Fi-Mx Xln DI 726-734						
	734	Bottom											

LOCATION Copper Ridge Belt
Sector I
Area B
PROPERTY W.H. Horton

THE NEW JERSEY ZINC CO.

Jefferson City, Tenn

X Sec C-1262

STARTED 3-15-57 BOTTOMED 4-1-57 LOG BY RCG-TEW
SHED NO. _____ DISCARDED 0-481

HOLE NO. IN-67
ELEVATION 1350.74
COORDS. 803,436.48N 897,922.71E
BRG. _____ INCL. _____

DEPTH FROM	DEPTH TO	DIST.	CORE	FM.	MKRS.	ROCK	REMARKS	MINERALIZATION	ANALYSES SMPL. NO.	FROM	TO
0	515	515	400	Ome		Dl	BX-AX (2' rec) 10 Ce Mtx ss 10 Frng 21 Sc Rddsh 50-181 St Fa 61 Frng 67 St Fa 77 Sgs 118, 127 Dk Gy Dl 129-131 Abu Sgs 138-139 Cg 37 sgs/sh 180 Sed Br 181-184 Sgs 187 Sgs in PbCg 211 Abu Sgs 239-240, 244 FiXln (ReXln?) 243-247 Sc Rddsh 279-300 Re Sgs 300 Wh Silica 310-312 Sed Br 334 Sgs in Ce Pb Cg 338 Hi Frng Fa 337 Sgs in Ce 339 Sgs 351 Ce Pb Cg 411-412 Cot Rk 417-418 Sgs in Ce 422 St Frng 432-434 Sgs, PbCg 447 Sc Mu Sgs 450-452 Sgs in Cot Rk 480 Dk Dl 500-514 Frng 511-513					
515	695	180	169	Ok	CeMtx 515 U2555 621	Dl	Frng Dk Dl, Sly Ptngs 537-547 Sgs 556 Re Sgs, Ce 566 Sgs 569 Abu Br Sgs 570-571 Sc-Bu Sgs 596, 621 OoCe Nods/Sgs, Cot RkCg/Grn Sh 625 Sc Abu Sgs 633-635 Sc Ce, Sed Br, Grn Sh 641-645 Sgs, Grn Sh 679 Sc Rddsh 683-695				
695	696	1	1		TR695	Dl	MXln, Red + Grn				
696	725	29	29		A702 B713	Ls	Incip Dlztn 699-701 MXln Dl 701-703 Sgs 702 Fi Bu Dl 713 MXln Dl 723-724				
725	735	10	10			Dl	MXln 725-732 FiXln 732-735				
735	752	17	17			Ls					
752	756	4	4		E756	Dl	FiXln Ce Nods				
756	770	14	13			Ls					
770	779	9	9		F774 G775	Dl					
779	854	75	66			Ls	Gastropods in Ce 801 Dl 816-819, 822-823, 831-833, 839-842				
854	891	37	31		J760	Dl	Sgs 860 Ls 872-876 CrsXln Dl 883-887				
891	893	2	½	Olv	Tbed		FiXln Ce Nods				
	893	Bottom									

LOCATION Copper Ridge Belt
Sector I
Area B
PROPERTY M. B. Horton

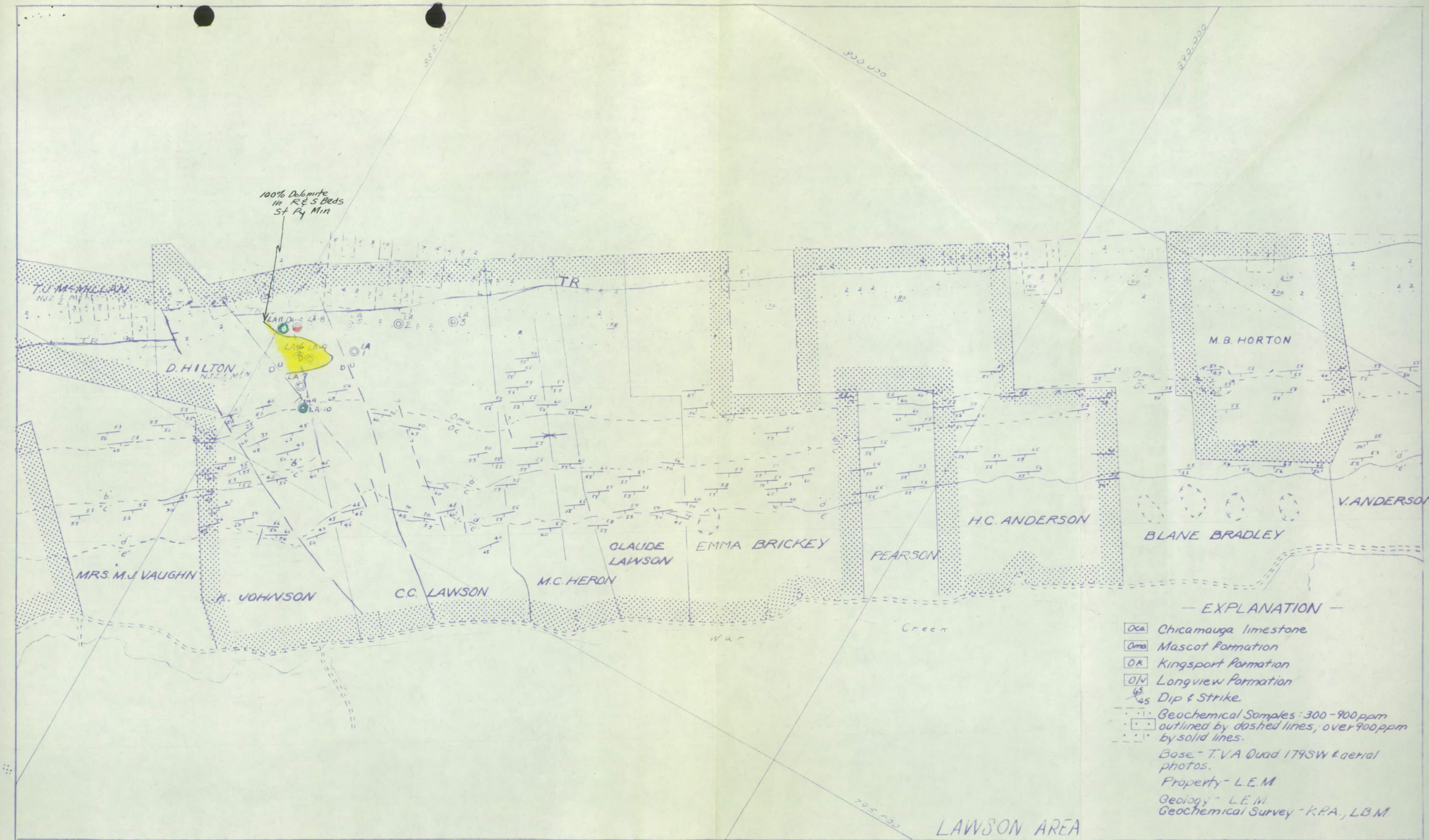
THE NEW JERSEY ZINC CO.

Jefferson City, Tenn.

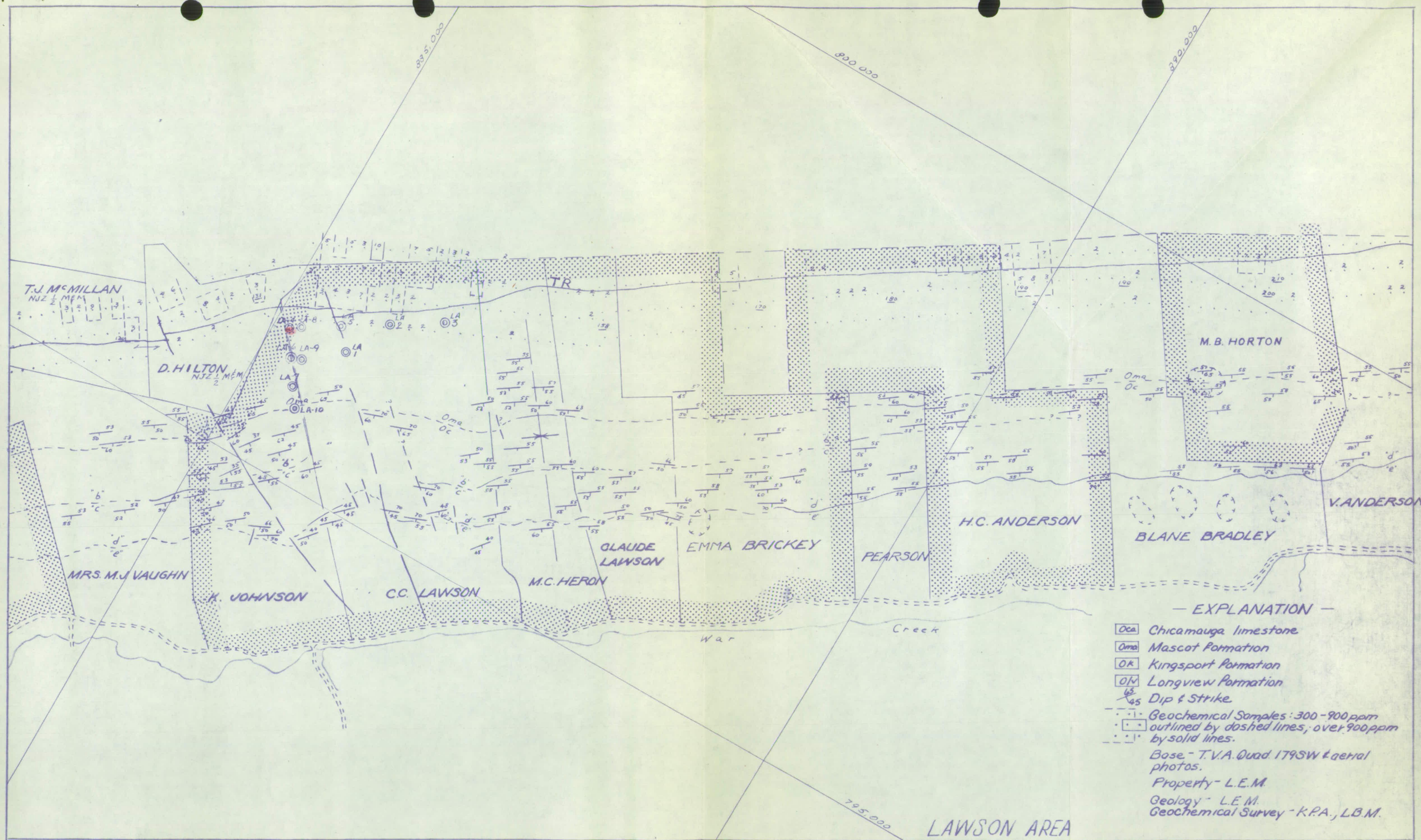
STARTED 4-2-57 BOTTOMED 5-9-57 LOG BY RCG, REF
SHED NO. B-6 DISCARDED none

HOLE NO. IN-70
ELEVATION 1397.56'
COORDS. 803,276.53N 898,026.[illegible]
BRG. INCL.

DEPTH FROM	DEPTH TO	DIST.	CORE	FM.	MKRS.	ROCK	REMARKS	MINERALIZATION	ANALYSES SMPL. NO.	FROM	TO
0	5	5	–			RC					
5	28	23	18	Oc		Ls	Cgl 26-28				
28	62	34	29	Oc		Dl, Cgl	Ce 28-32, 38-41, 49, 56-58, 59-62				
62	1030	968	704	Oma-OK		Dl	Sc Rddsh 104-121 Bu Wxy Strat Dl, Ce 131-136 So Ct Rk 145-148, 152-153 Sc Rddsh 136-245 Sed Br 213-215 St Hi Ang Fg 245 Sc Frg 245-248 Open 276-277 Mylo 278-300 Ce Mtx SS 315 Red Strat 312-330 Sc Rddsh 351- Sgs 377, 387 Mylo 392 Frg to 401 Abu Sgs in Strat Dl 441-444 Sgs 472 Ra Sgs in Ce 515 Ce Mtx SS 542 Sgs 556, 589 Bu Ra Sgs 607-608 Sgs 612 Cot Rk 613-615 Sed Br 638-641 DK Ce W Wht Gmg 676, 683 Cot Rk 701-704 Sc Sgs 231-232 Wk Ble 746-770 Cot Rk, Sgs 802-803 Frg 833-839 Soft Rk 834-837 Num	Hematite 174			
					Brn Oo 897 U-255 964		Bnd Sgs 891 Brn Oo Ce, Peb Cgl 896-897 Num Sgs, Cot Rk 918-919 Ca Vug 925 Ble 934-959 Sgs 947, 961-964, 974 Sc Sgs 984-986 Ce, Grn Sh 991 1992 Sgs, Grn Sh, Ce Sed Br 1030-1033	St Shi Sp 1004-1005	2% Zn Est		
1030	1049	19	19		TR-1030	Dl	Fi Crs Dl Buff Dl Br, Grn Sh ("B"): 1039				
1049	1071	22	18			Ls	Ls Lo Rd Ptngs Sed Br 1050				
1071	1078	7	5			Dl	Lt Gy Fi Dl				
1078	1089	11	7			Ls	Ls				
1089	1099	10	8			Dl	D Gy Fi Dl				
1099	1113	14	6			Ls	Gy Fi Dl, Abu Frag	Tr Py 1100			
1113	1115	2	2			Dl	Crs Rex In Dl				
1115	1118	3	3			Ls					
1118	1133	15	15			Dl	Cr Rex In 4" Bd Ce 1133	Tr Sp 1118			
1133	1134	1	1			Ls	Ls				
1134	1211	77	64		"J" 1198	Dl	M Gy Crs Rex In Dl Cot Rk 1145 Ra Crs Sgs 1198 "J."				
1210	1218	6	4	Olv	T-Bd	Ls	Fi Dl w/ Sc Ce Nds	Sc St Shi Sp 1157-1169			
1218	1241	23	19			Dl	Fi Dl Sc-Abu Sgs 1239 ("B" Sg)	Tr Py 1142, 1147, 1170, 1175, 1176 (Approx 5-10% Py)			
Bottom				1241							

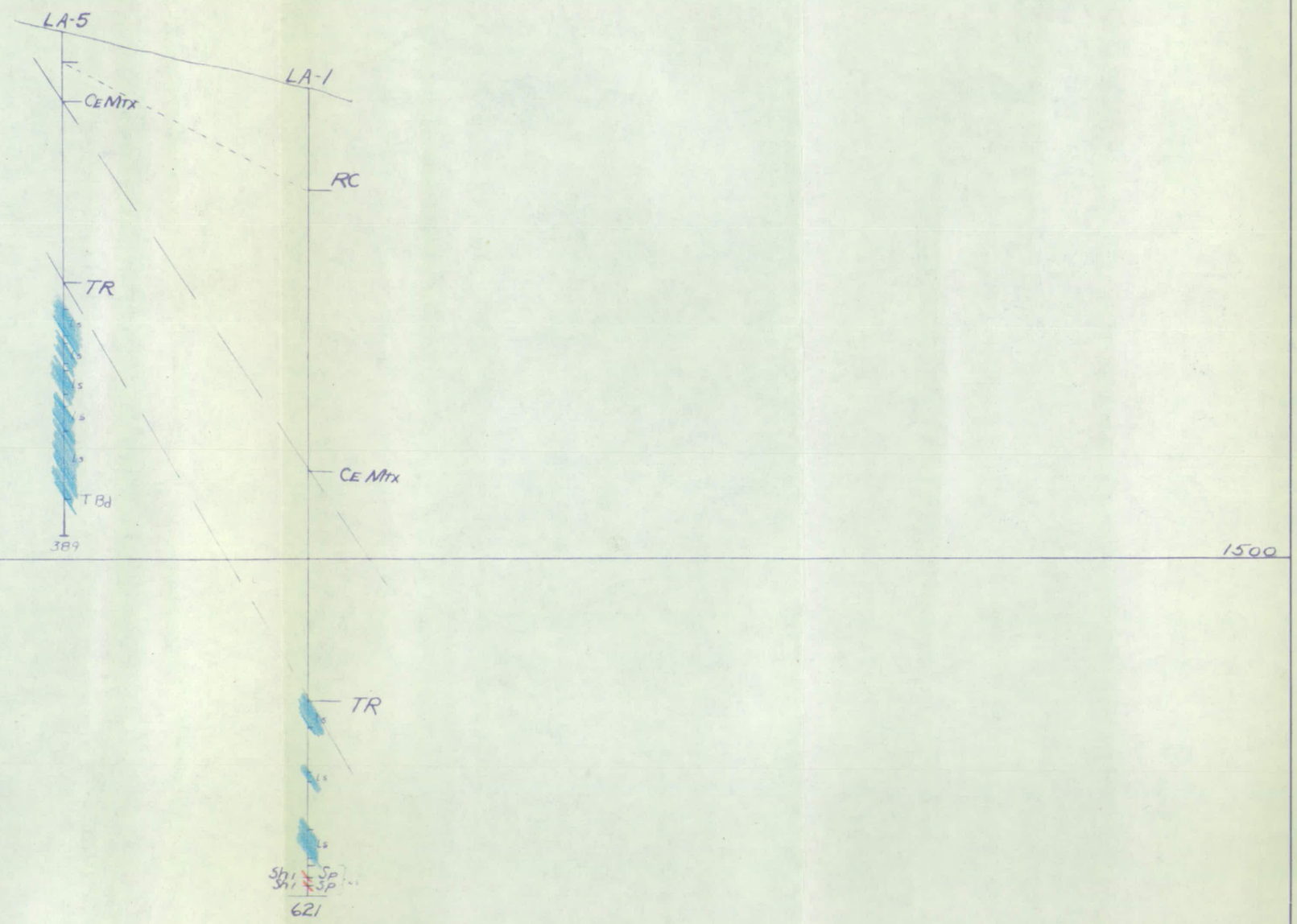


POSTED TO DATE 4-56 TEN	THE NEW JERSEY ZINC COMPANY ROGERSVILLE TENNESSEE	DRAWN SJL, JFP DATE 3-30-53 TRACED SCALE 1"=660'	COPPER RIDGE BELT SECTOR I SHEET 10NE	HAWKINS CO., TENN. FILE NO. AX-TENN 56B


835,000
800,000
820,000
795,000
T.J. McMILLAN
NJZ ½ MEM
D. HILTON
NJZ ½ MEM
TR
LA-9
LA-10
LA 1
LA 2
LA 3
LA 4
LA 5
LA 7
LA 8
Oma
Oc
M.B. HORTON
H.C. ANDERSON
BLANE BRADLEY
V. ANDERSON
PEARSON
EMMA BRICKEY
CLAUDE LAWSON
M.C. HERON
C.C. LAWSON
K. JOHNSON
MRS. M.J. VAUGHN
War
Creek
— EXPLANATION —
Oca Chicamauga limestone
Oma Mascot Formation
Ok Kingsport Formation
Ol Longview Formation
65/45 Dip & Strike
Geochemical Samples: 300-900 ppm outlined by dashed lines; over 900 ppm by solid lines.
Base - T.V.A. Quad. 179SW & aerial photos.
Property - L.E.M.
Geology - L.E.M.
Geochemical Survey - K.P.A., L.B.M.
LAWSON AREA
POSTED TO DATE
4-56 TEN
THE NEW JERSEY ZINC COMPANY
ROGERSVILLE TENNESSEE
DRAWN SJL, JFP DATE 3-30-53
TRACED SCALE 1"=660'
COPPER RIDGE BELT
SECTOR I SHEET 10NE
HAWKINS CO., TENN.
FILE NO. AX-TENN 56B

OFFICIAL FILE COPY
D M E A
RECEIVED JUL 23 1958

DATE	INITIALS	CODE



SERIAL NUMBER		DATE ISSUED		REFERENCE DRAWINGS	REVISIONS	THE NEW JERSEY ZINC COMPANY JEFFERSON CITY, TENN	DRAWN WJC TRACED CHECKED APPROVED	DIP SECTION LA 5,1 SECTOR I LAWSON AREA COPPER RIDGE BELT	DATE 4-16-58 SCALE 1" = 100 AX-TENN B-1356

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.

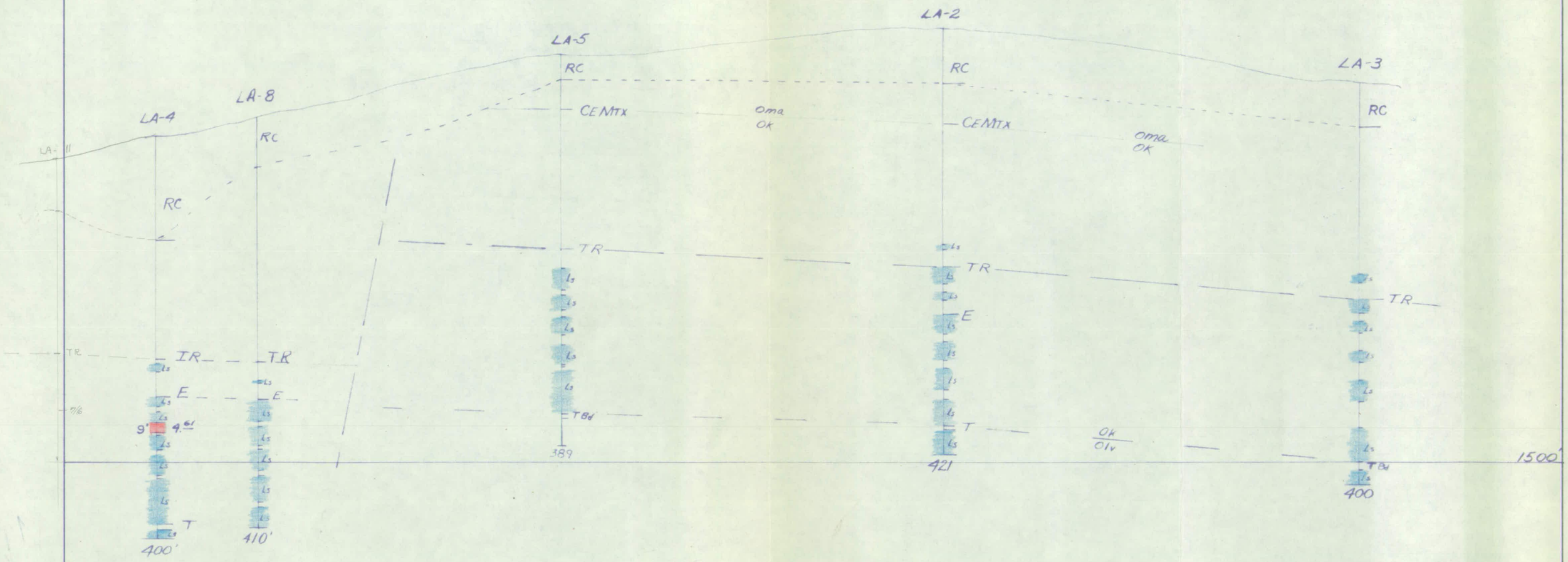
X5453B 1M 11-54

OFFICIAL FILE COPY
D M E A
RECEIVED JUL 23 1958

DATE	INITIALS	CODE

OFFICIAL FILE COPY
D M E A
RECEIVED JUL 23 1958

DATE	INITIALS	CODE



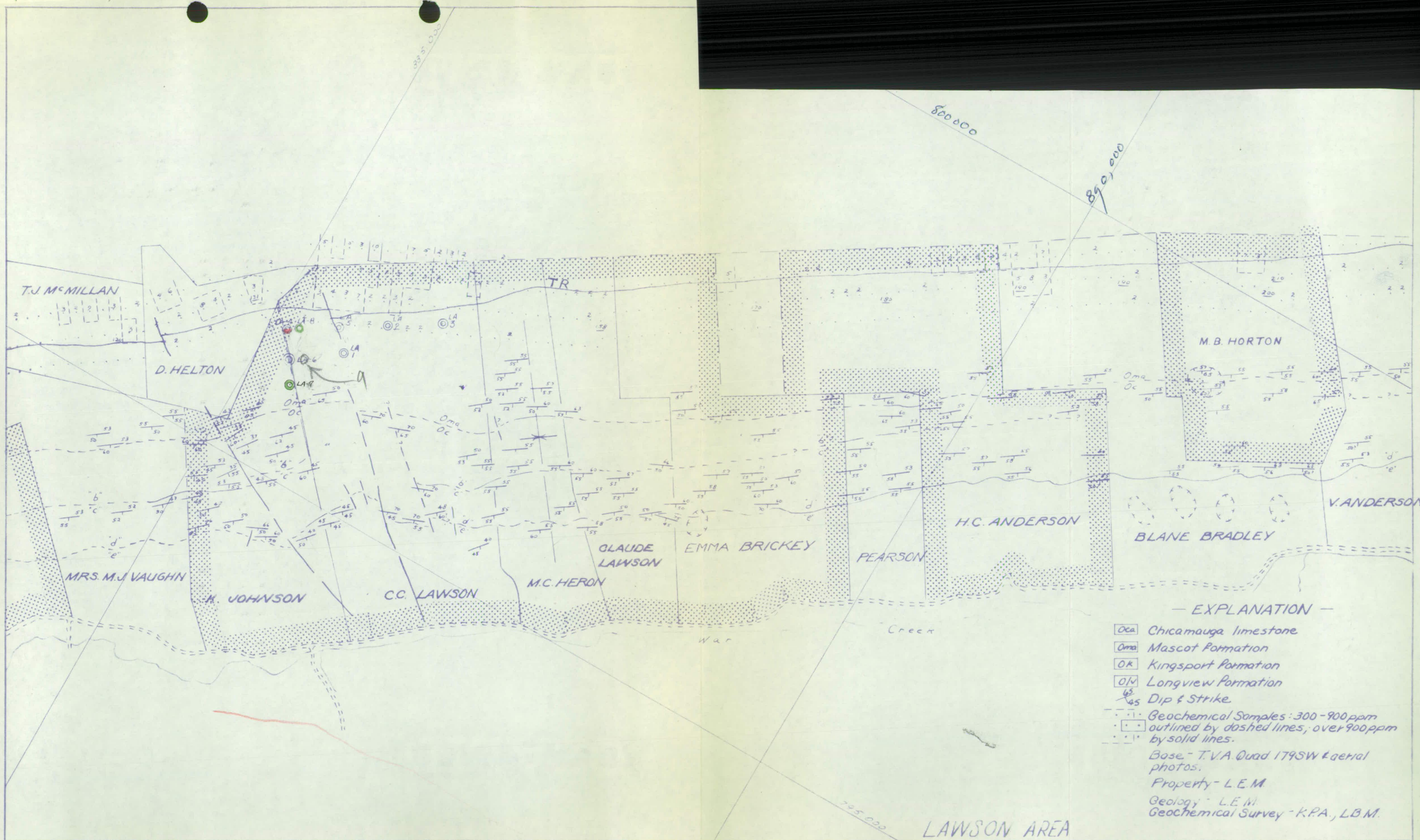
SERIAL NUMBER		DATE ISSUED		REFERENCE DRAWINGS	REVISIONS	THE NEW JERSEY ZINC COMPANY	DRAWN WJC	LONGITUDINAL SECTION LA-4,5,2,3,8	DATE 4-14-58
						JEFFERSON CITY, TENNESSEE	TRACED	SECTOR I LAWSON AREA	SCALE 1" = 100
							CHECKED	COPPER RIDGE BELT	AX TENN B-1354
							APPROVED		

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.

X5453B 1M 11-54

OFFICIAL FILE COPY
D M E A
RECEIVED JUL 23 1958

DATE	INITIALS	CODE



LAWSON AREA

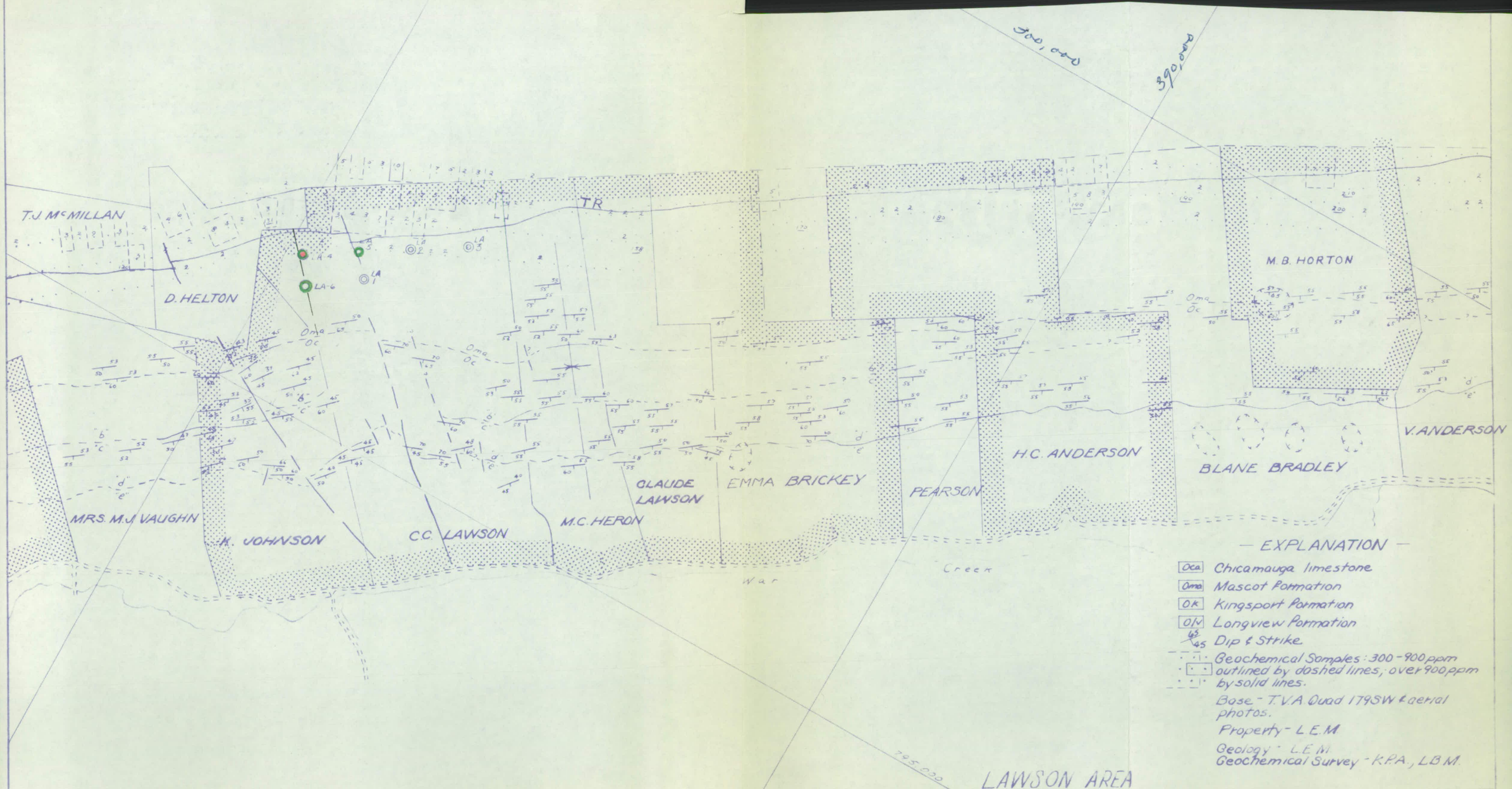
POSTED TO DATE 4-56 TEN	THE NEW JERSEY ZINC COMPANY ROGERSVILLE TENNESSEE	DRAWN SJL, JFP DATE 3-30-53 TRACED SCALE 1"=660'	COPPER RIDGE BELT SECTOR I SHEET 1 ONE
			HAWKINS CO., TENN. FILE NO. AX-TENN 568

OFFICIAL FILE COPY
DMEA
RECEIVED JUN 30 1958

DATE	INITIALS	

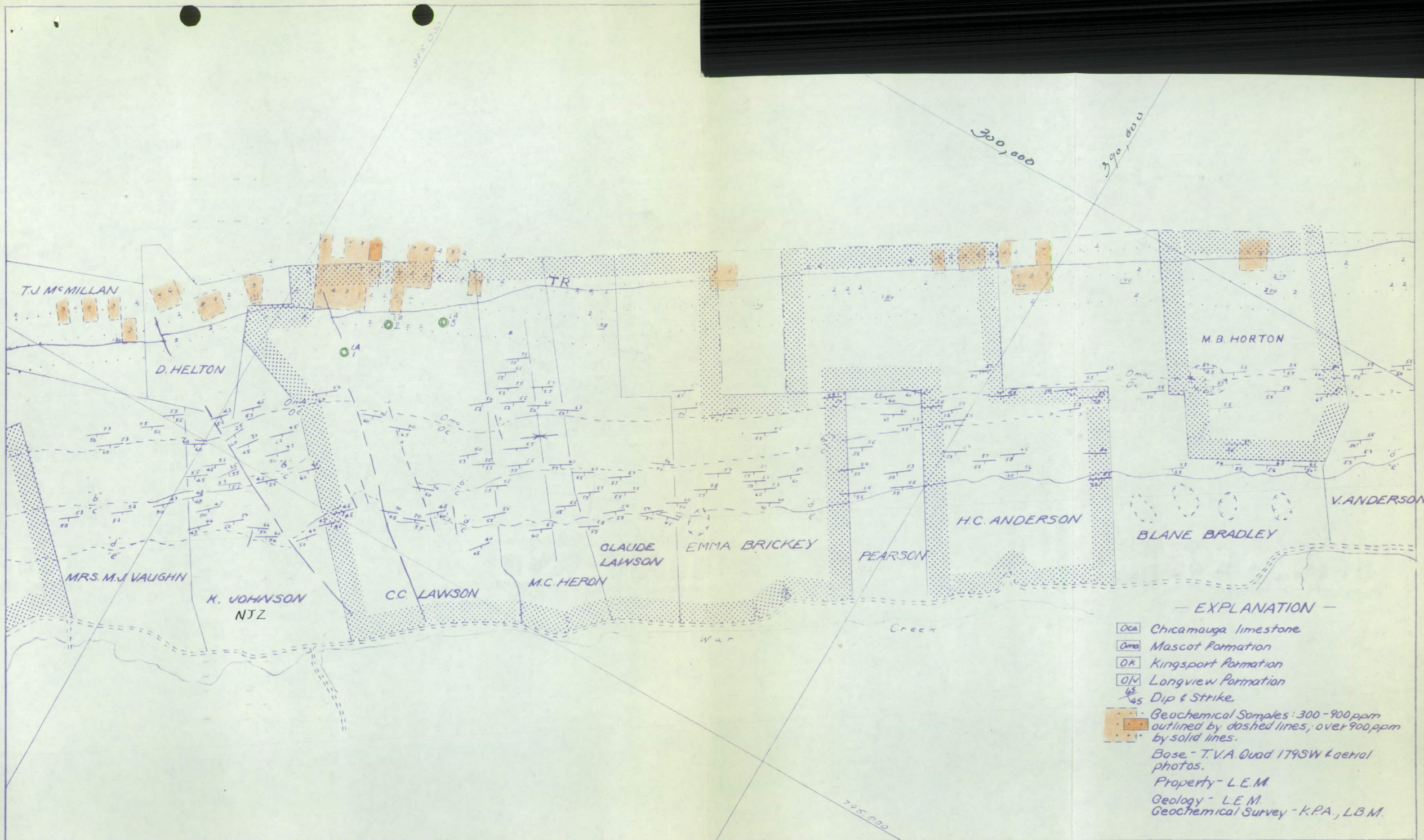
OFFICIAL FILE COPY
DMEA
RECEIVED JUN 30 1958

DATE	INITIALS	CODE



POSTED TO DATE 4-56 TEN	THE NEW JERSEY ZINC COMPANY ROGERSVILLE TENNESSEE	DRAWN SJL, JFP DATE 3-30-53 TRACED SCALE 1"=660'	COPPER RIDGE BELT SECTOR I SHEET IONE
			HAWKINS CO., TENN. FILE NO. AX-TENN 56B

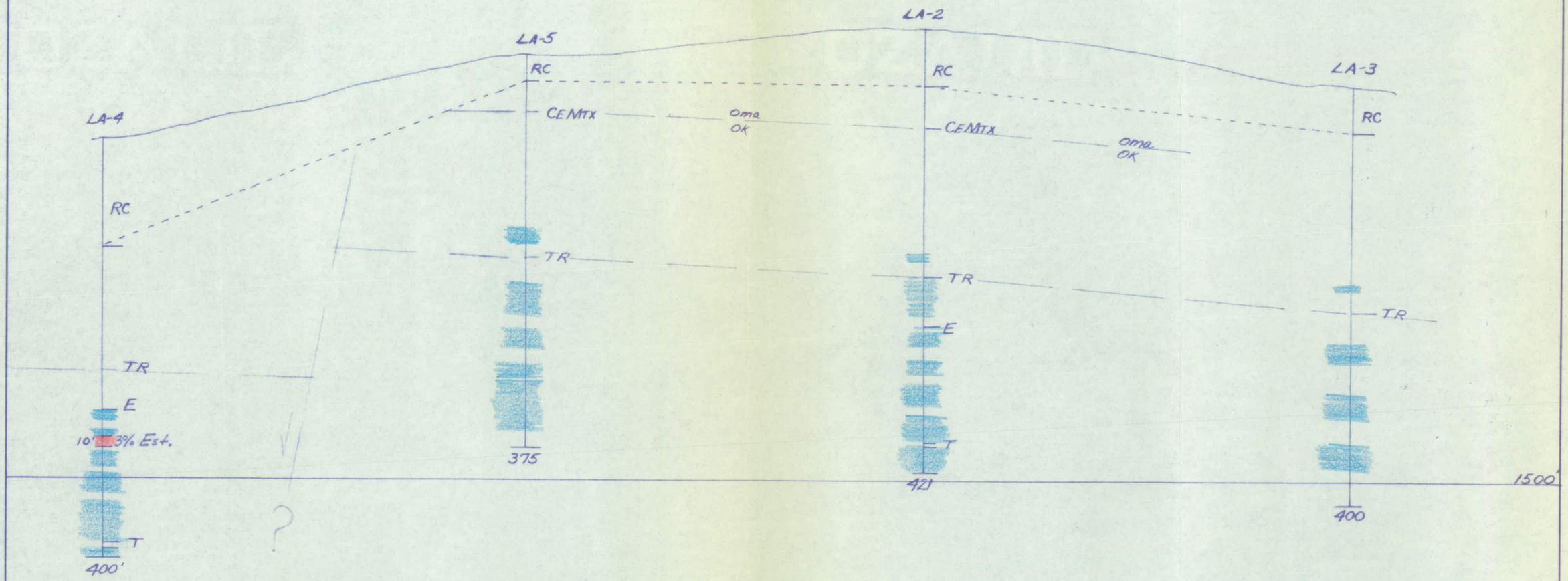
EXTRA COPY
RECEIVED
DMEA
JUN 5 1958
DATE | INITIALS | CODE



POSTED TO DATE 4-56 TEN	THE NEW JERSEY ZINC COMPANY ROGERSVILLE TENNESSEE	DRAWN SJL, JFP DATE 3-30-53 TRACED SCALE 1"=660'	COPPER RIDGE BELT SECTOR I SHEET 10NE	HAWKINS CO., TENN. FILE NO. AX-TENN 56B

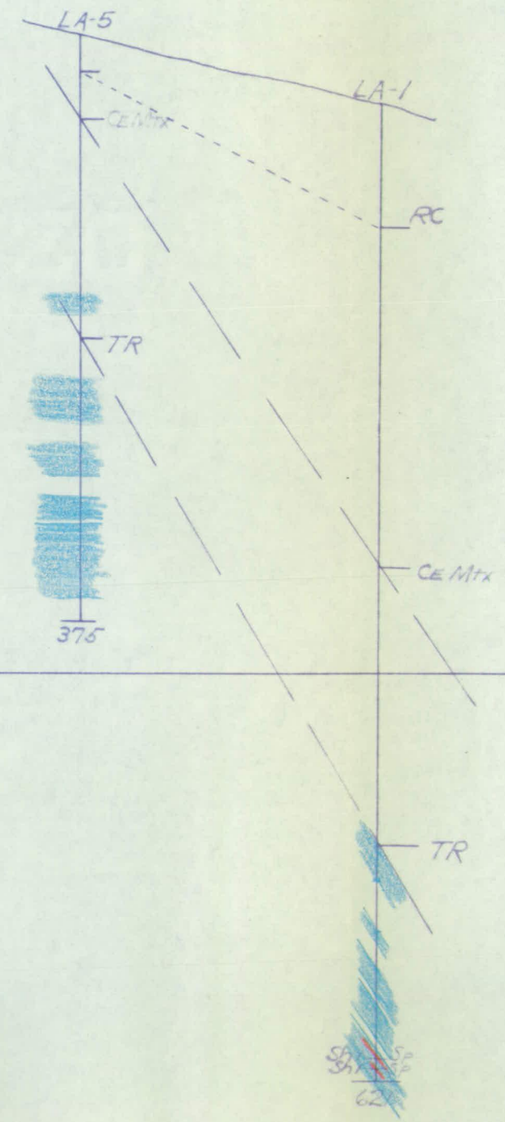
OFFICIAL FILE COPY
DMEA
RECEIVED APR 28 1958

DATE	INITIALS	CODE



SERIAL NUMBER		DATE ISSUED		REFERENCE DRAWINGS	REVISIONS	THE NEW JERSEY ZINC COMPANY	DRAWN WJC	LONGITUDINAL SECTION LA-4,5,2,3	DATE 4-14-58
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.						JEFFERSON CITY, TENNESSEE	TRACED	SECTOR I LAWSON AREA	SCALE 1" = 100
							CHECKED	COPPER RIDGE BELT	AX TENN B-1354
							APPROVED		

X5453B 1M 11-54



SERIAL NUMBER		DATE ISSUED		REFERENCE DRAWINGS	REVISIONS	THE NEW JERSEY ZINC COMPANY JEFFERSON CITY, TENN	DRAWN WJC	DIP SECTION LA 5,2 SECTOR I LAWSON AREA COPPER RIDGE BELT	DATE 4-16-58
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-1356
							APPROVED		

X5453B 1M 11-54

OFFICIAL FILE COPY
D M E A
RECEIVED APR 28 1958

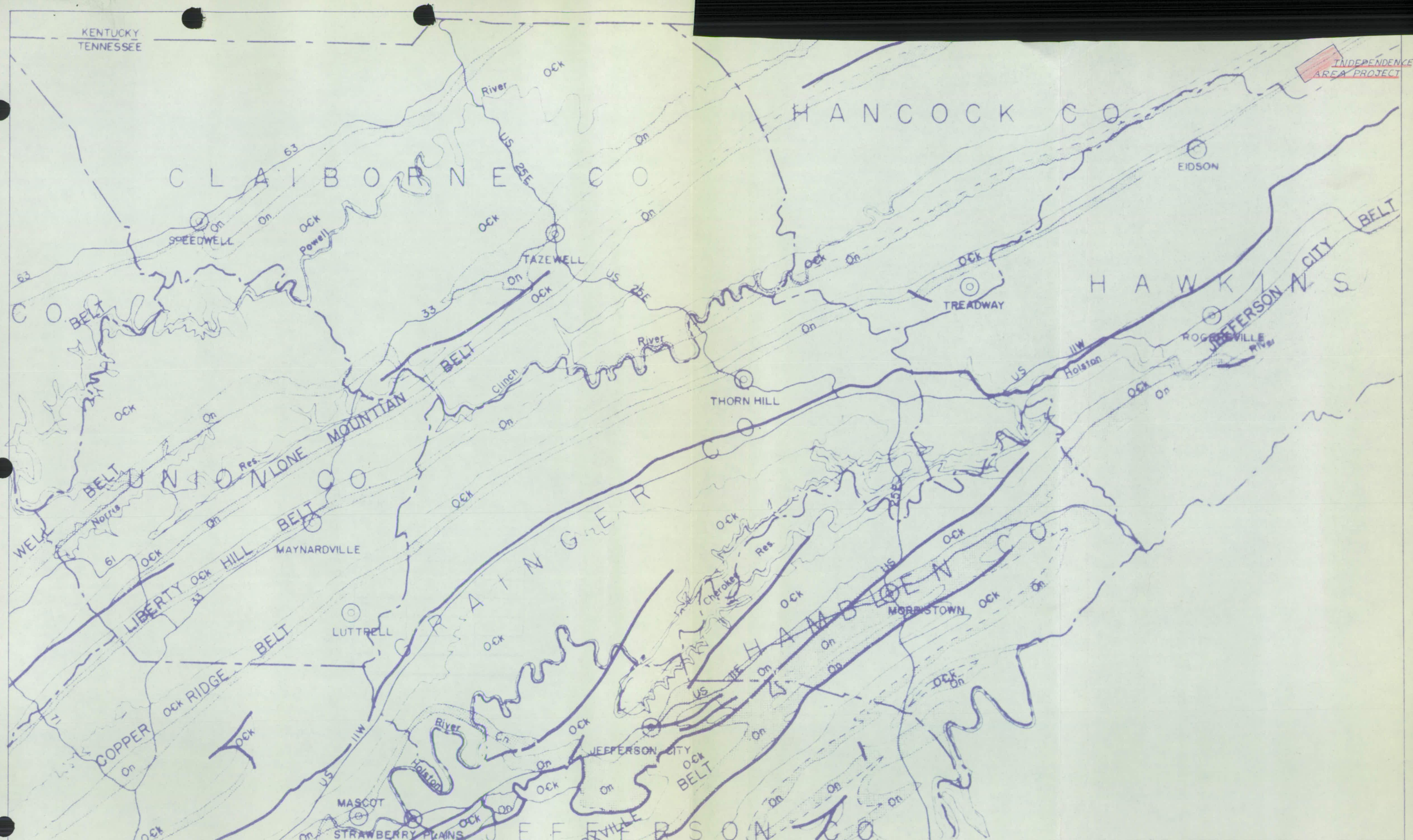
DATE	INITIALS	CODE

OFFICIAL FILE COPY
D M E A
RECEIVED APR 28 1958

DATE	INITIALS	CODE

OFFICIAL FILE COPY
D M E A
RECEIVED APR 1958

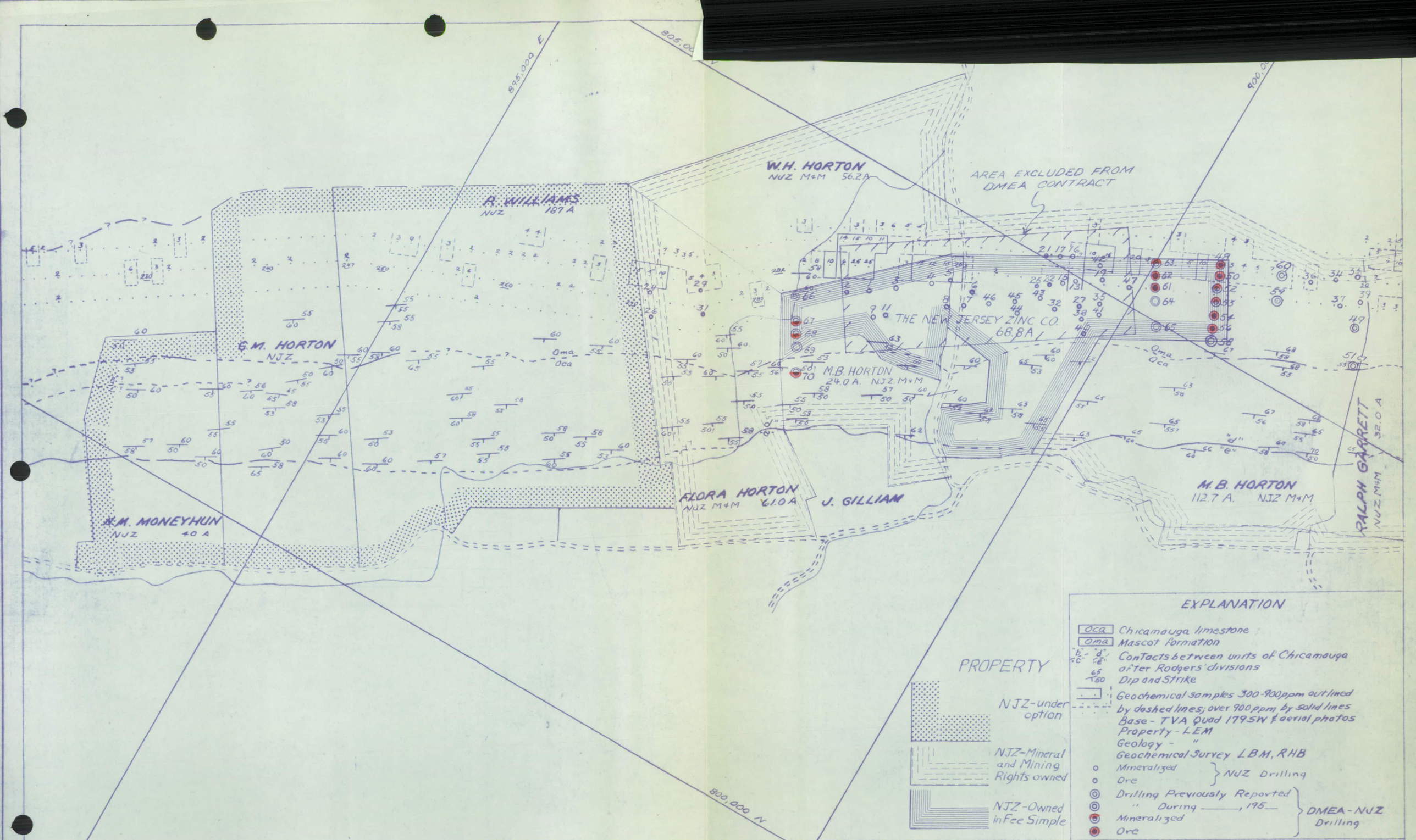
DATE	INITIALS	CODE



THE NEW JERSEY ZINC CO. JEFFERSON CITY, TENNESSEE	EAST TENNESSEE ZINC DISTRICT	DRAWN - USGS TRACED - HW Mal SCALE - 1" = 4 mi	DATE 8-7-57 AX-TENN 8-1289

OFFICIAL FILE COPY
DMEM
RECEIVED NOV 4 1957

DATE	INITIALS	CODE



THE NEW JERSEY ZINC COMPANY
JEFFERSON CITY TENNESSEE

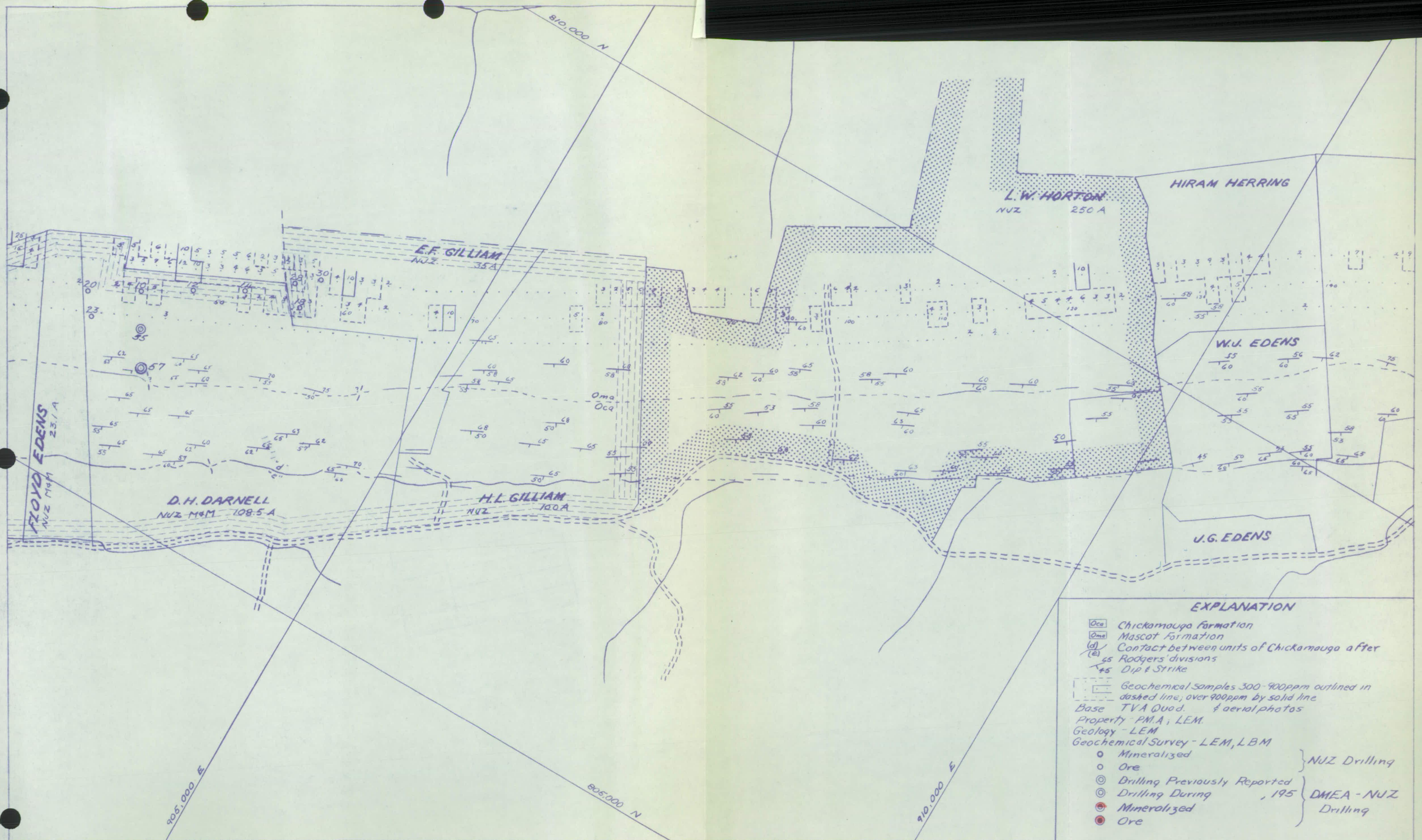
DRAWN STAFF DATE 7-31-56
TRACED TEW SCALE 1" = 660'

COPPER RIDGE BELT
SECTOR I SHEET 11NE

HANCOCK CO., TENN.
FILE NO. AX-TENN 569 A

OFFICIAL FILE COPY
DMEA
RECEIVED NOV 4 1957

DATE	INITIALS	CODE



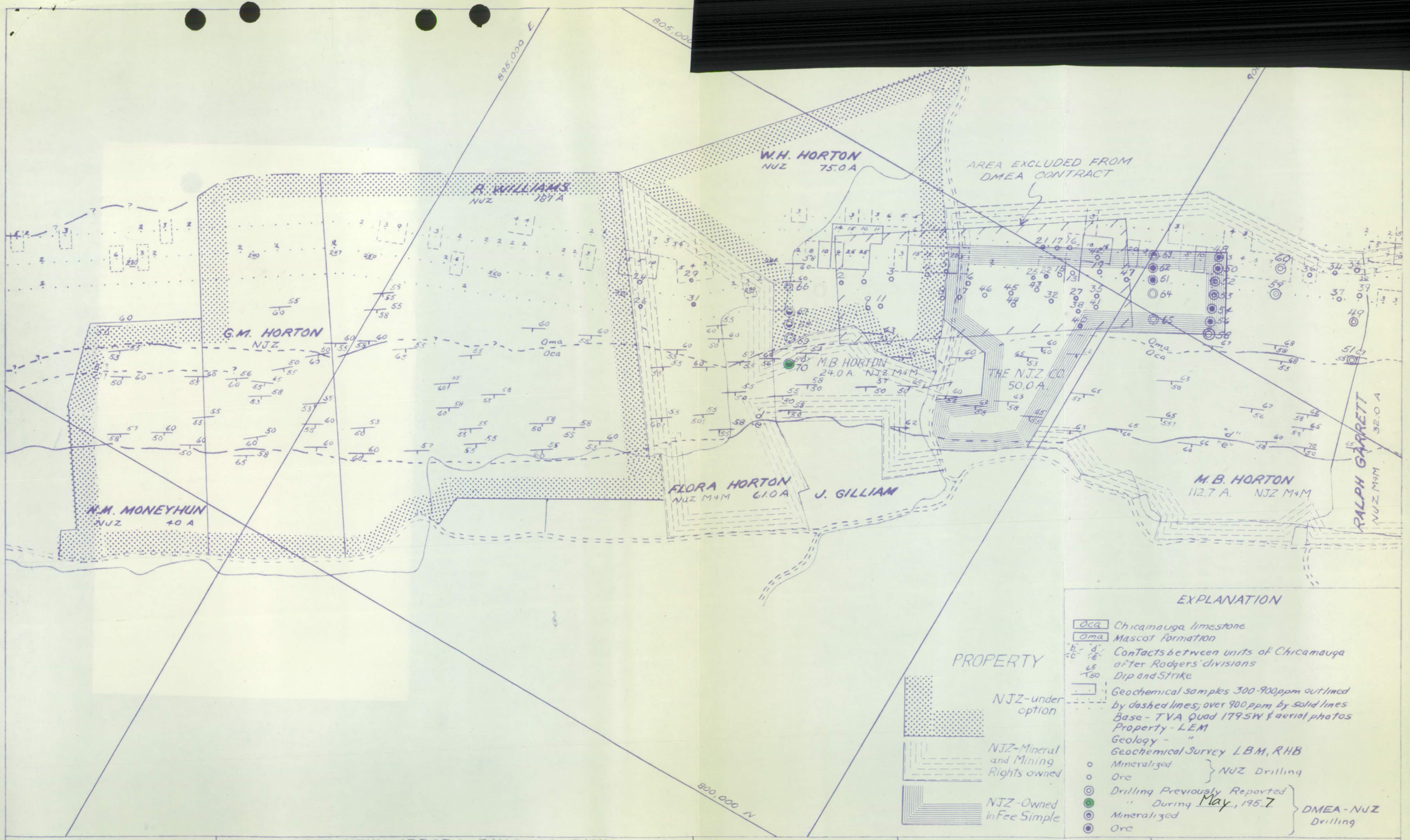
THE NEW JERSEY ZINC COMPANY
JEFFERSON CITY TENNESSEE

DRAWN STAFF DATE 8-14-56
TRACED TRW SCALE 1" = 660'

COPPER RIDGE BELT
SECTOR I SHEET 12 NE

HANCOCK CO., TENN.
FILE NO. AX-TENN 570 A

OFFICIAL RECORD COPY
DMEEA
RECEIVED NOV 4 1957
DATE | INITIALS | CODE



THE NEW JERSEY ZINC COMPANY	DRAWN STAFF DATE 7-31-56	COPPER RIDGE BELT	HANCOCK CO., TENN.
JEFFERSON CITY TENNESSEE	TRACED TEW SCALE 1" = 660'	SECTOR I SHEET 11NE	FILE NO. AX-TENN 569 A

ACTION ON INTERIM
OR FINAL FIELD TEAM REPORT

Date 5-16-57

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. Possible termination
2.
3.
4.

and take appropriate action.

- - - - - - - - - -

Action taken by Division:

None needed
WPY.

~~Robert E. Adams~~
JWR

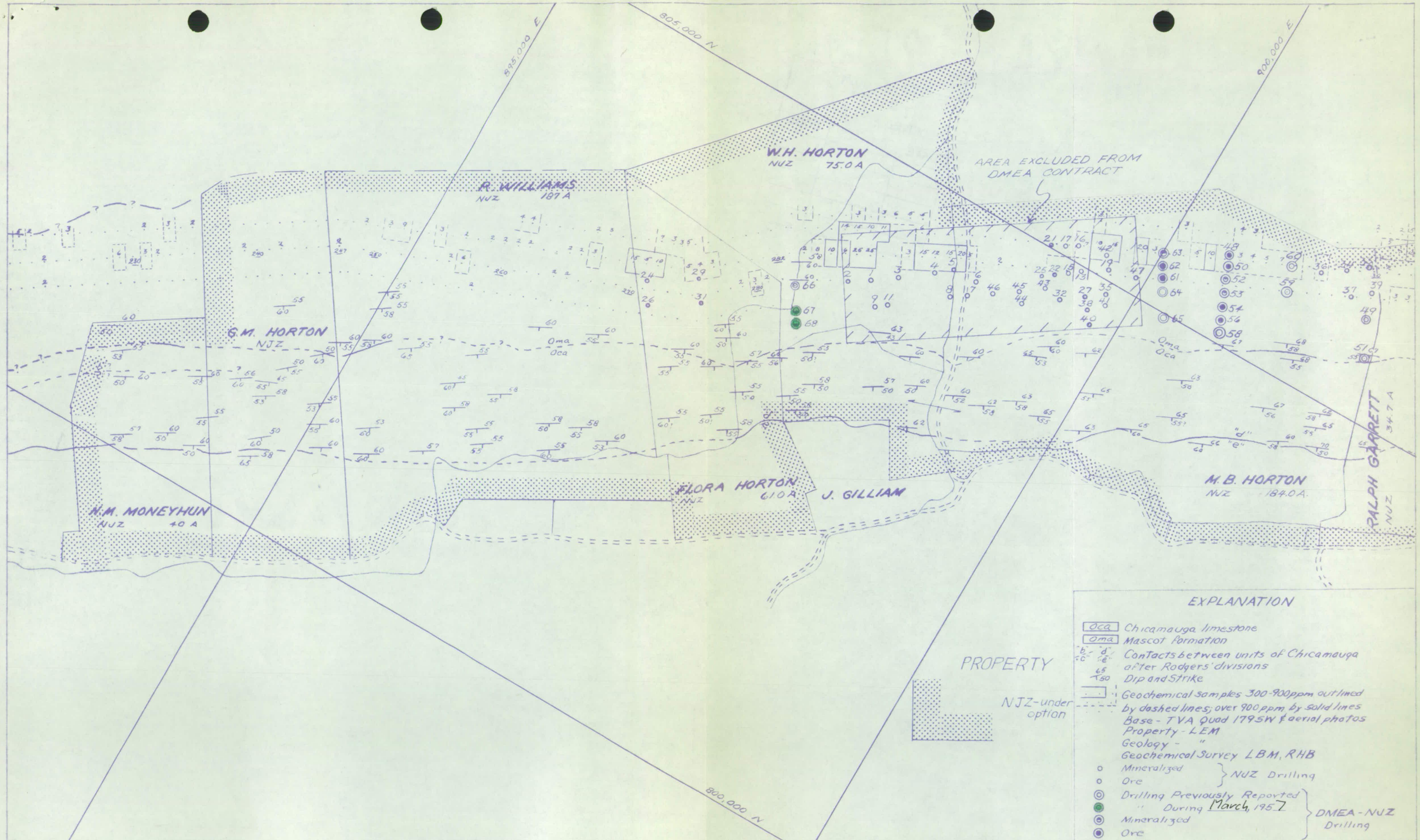
EXTRA COPY
D M E A
RECEIVED JUL 1 1957

DATE	INITIALS	CODE

THE NEW JERSEY ZINC COMPANY	DRAWN STAFF DATE 7-31-56	COPPER RIDGE BELT	HANCOCK CO., TENN.
JEFFERSON CITY TENNESSEE	TRACED TEW SCALE 1" = 660'	SECTOR I SHEET 11NE	FILE NO. AX-TENN 569 A

OFFICIAL FILE COPY
D M E A
RECEIVED MAY 20 1957

DATE	INITIALS	CODE



THE NEW JERSEY ZINC COMPANY	DRAWN STAFF DATE 7-31-56	COPPER RIDGE BELT	HANCOCK CO., TENN.
JEFFERSON CITY TENNESSEE	TRACED TEW SCALE 1" = 660'	SECTOR I SHEET IINE	FILE NO. AX-TENN 569 A

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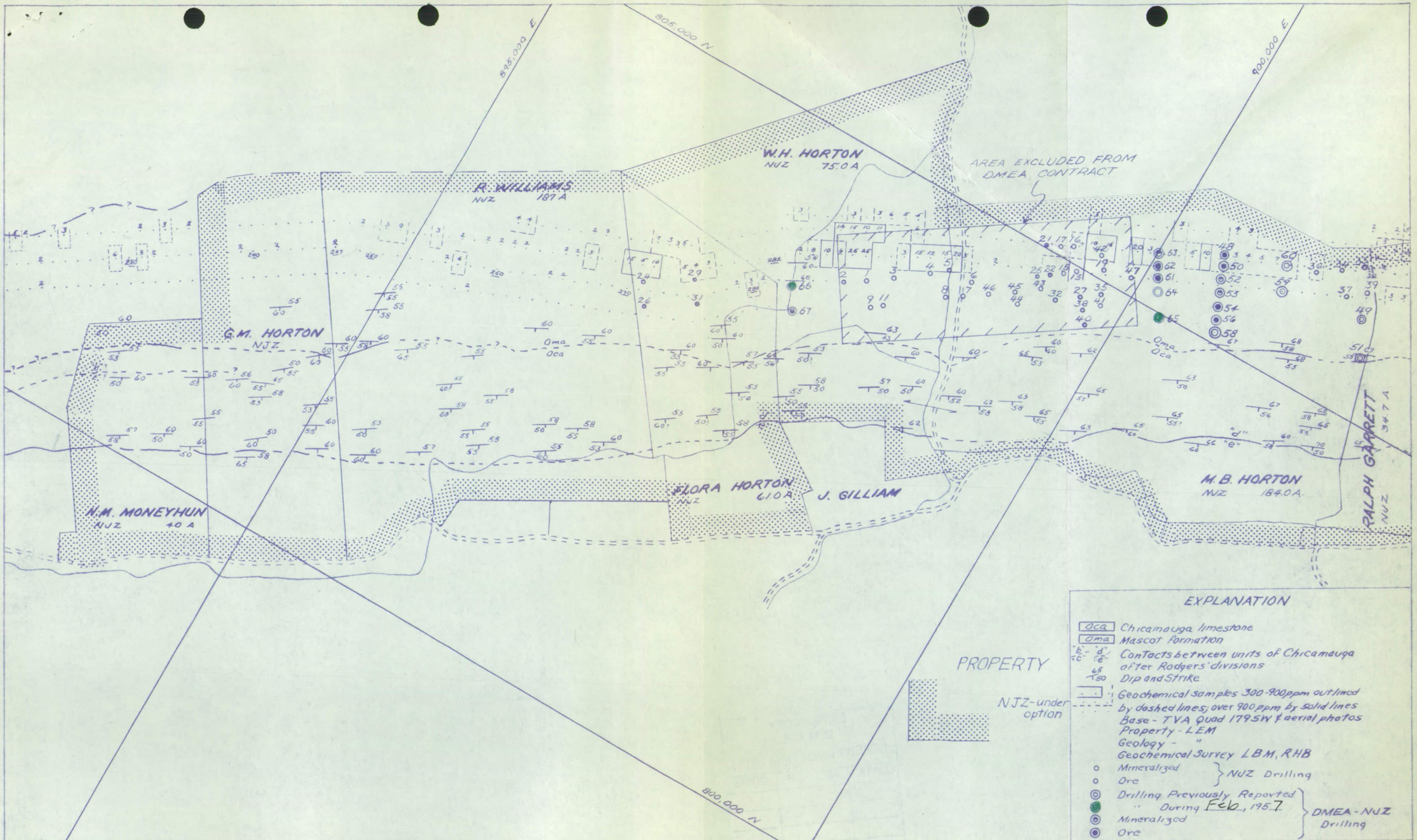
D M E A
RECEIVED APR 22 1957

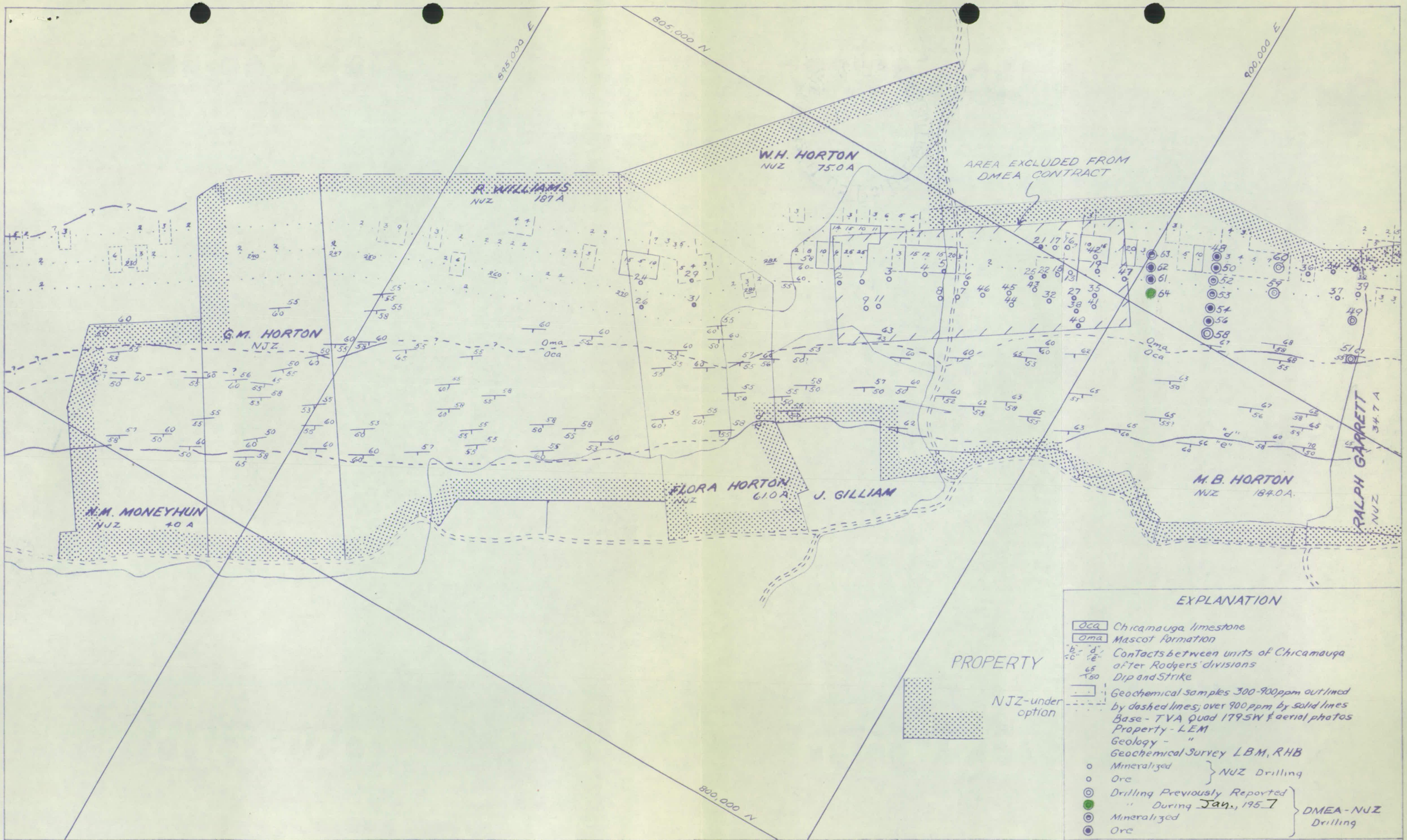
DATE	INITIALS	CODE



THE NEW JERSEY ZINC COMPANY JEFFERSON CITY TENNESSEE	DRAWN STAFF DATE 7-31-56 TRACED TEW SCALE 1" = 660'	COPPER RIDGE BELT SECTOR I SHEET 11NE	HANCOCK CO., TENN. FILE NO. AX-TENN 569 A	

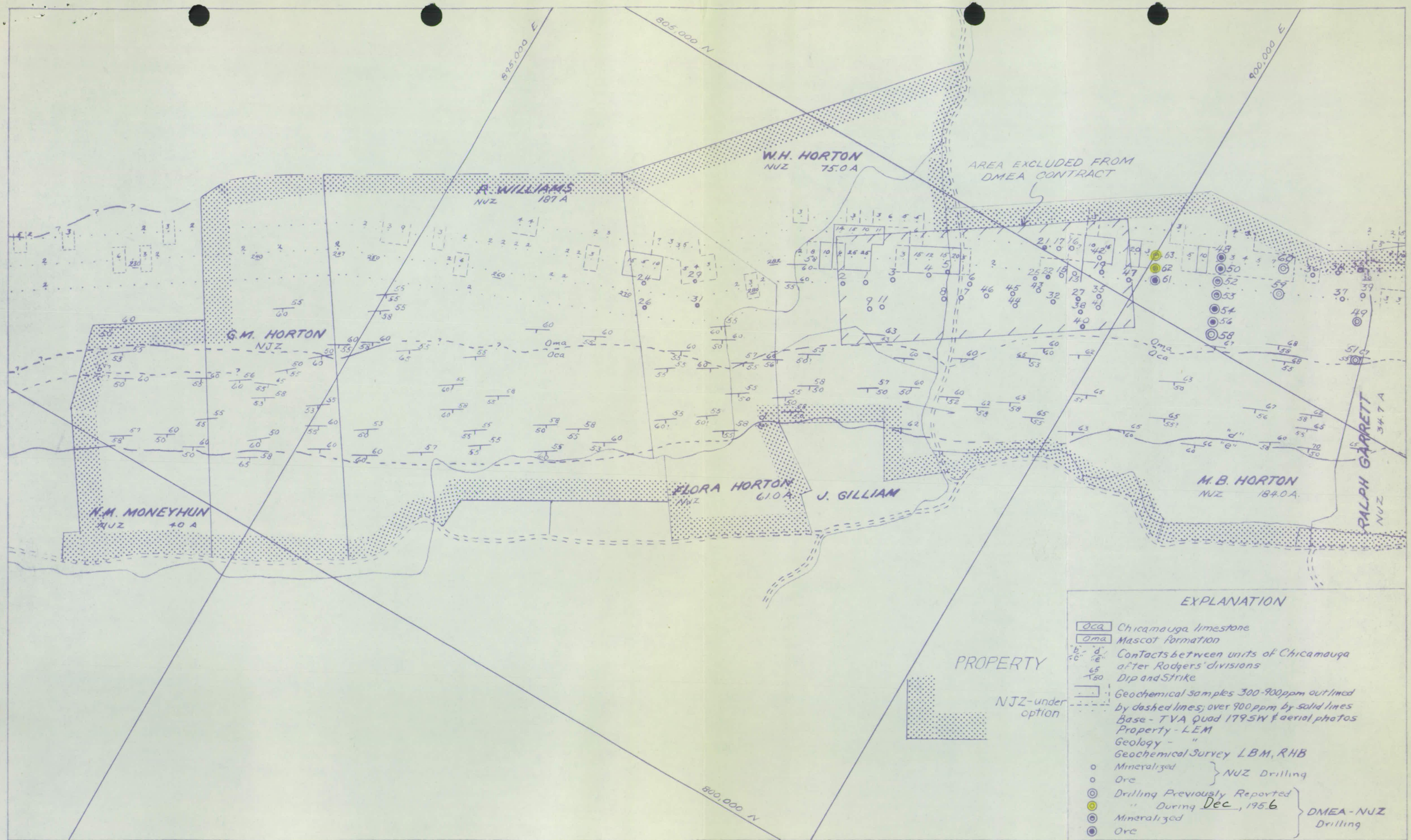
EXTRA COPY
D M E A
RECEIVED MAR 29 1957

DATE	INITIALS	CODE



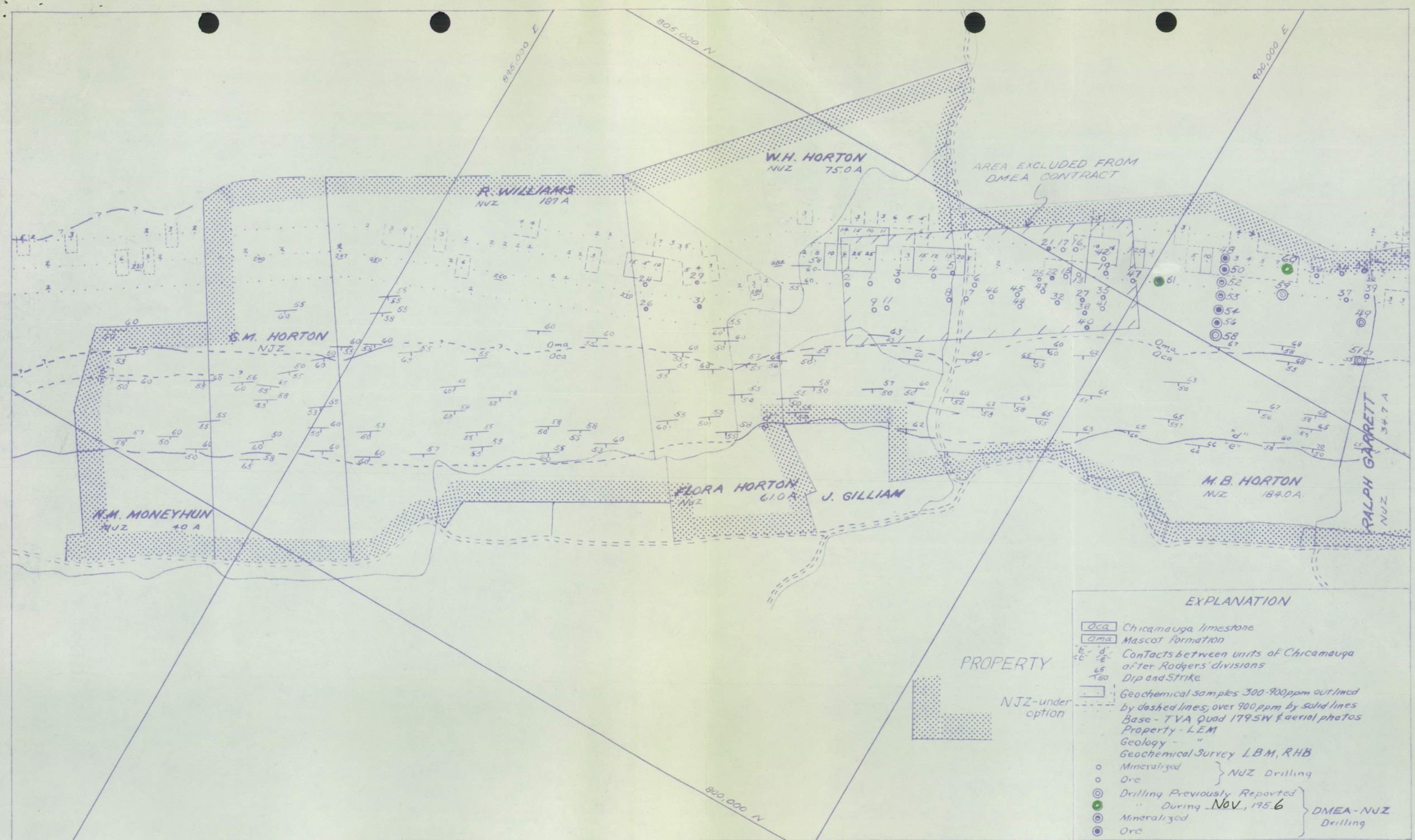
THE NEW JERSEY ZINC COMPANY	DRAWN STAFF DATE 7-31-56	COPPER RIDGE BELT	HANCOCK CO., TENN.
JEFFERSON CITY TENNESSEE	TRACED TEW SCALE 1" = 660'	SECTOR I SHEET 11NE	FILE NO. AX-TENN 569 A

RECEIVED
FEB 21 1957
D.M.E.A.



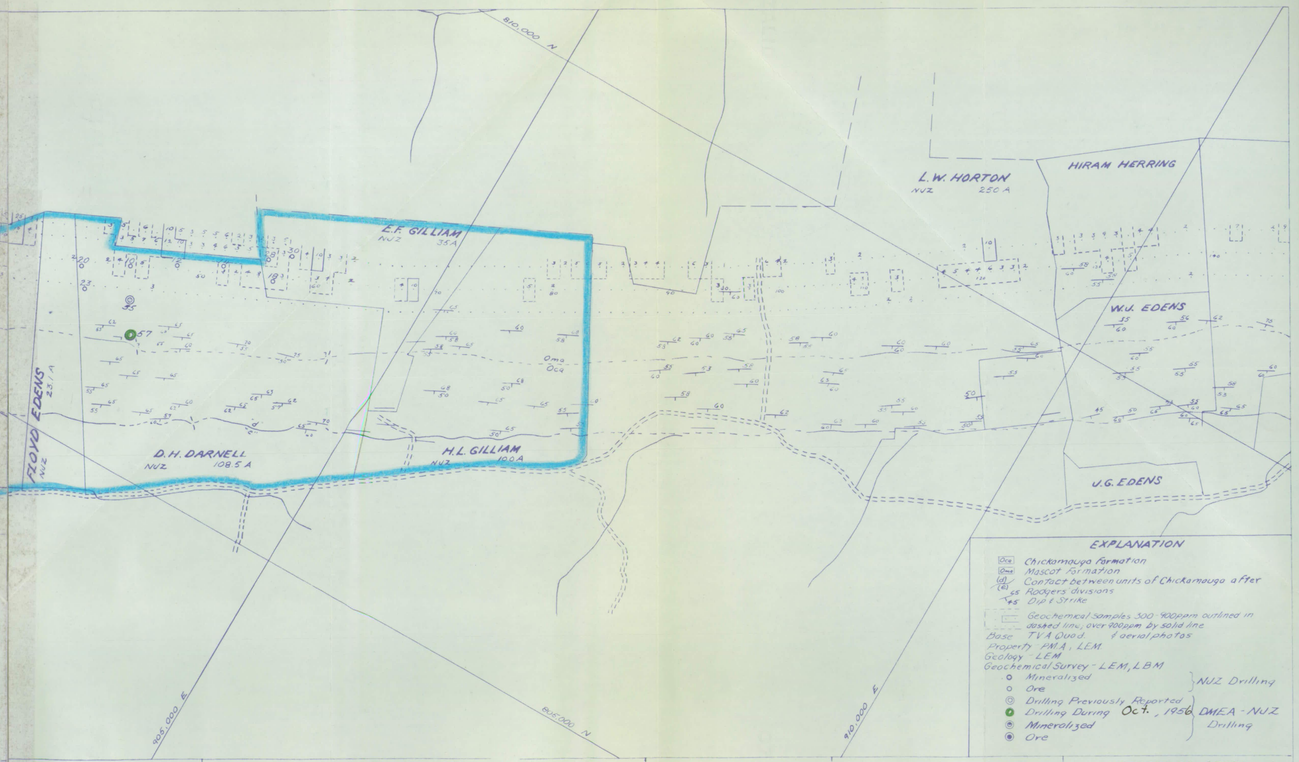
THE NEW JERSEY ZINC COMPANY	DRAWN STAFF DATE 7-31-56	COPPER RIDGE BELT	HANCOCK CO., TENN.
JEFFERSON CITY TENNESSEE	TRACED TEW SCALE 1" = 660'	SECTOR I SHEET 11NE	FILE NO. AX-TENN 569 A

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

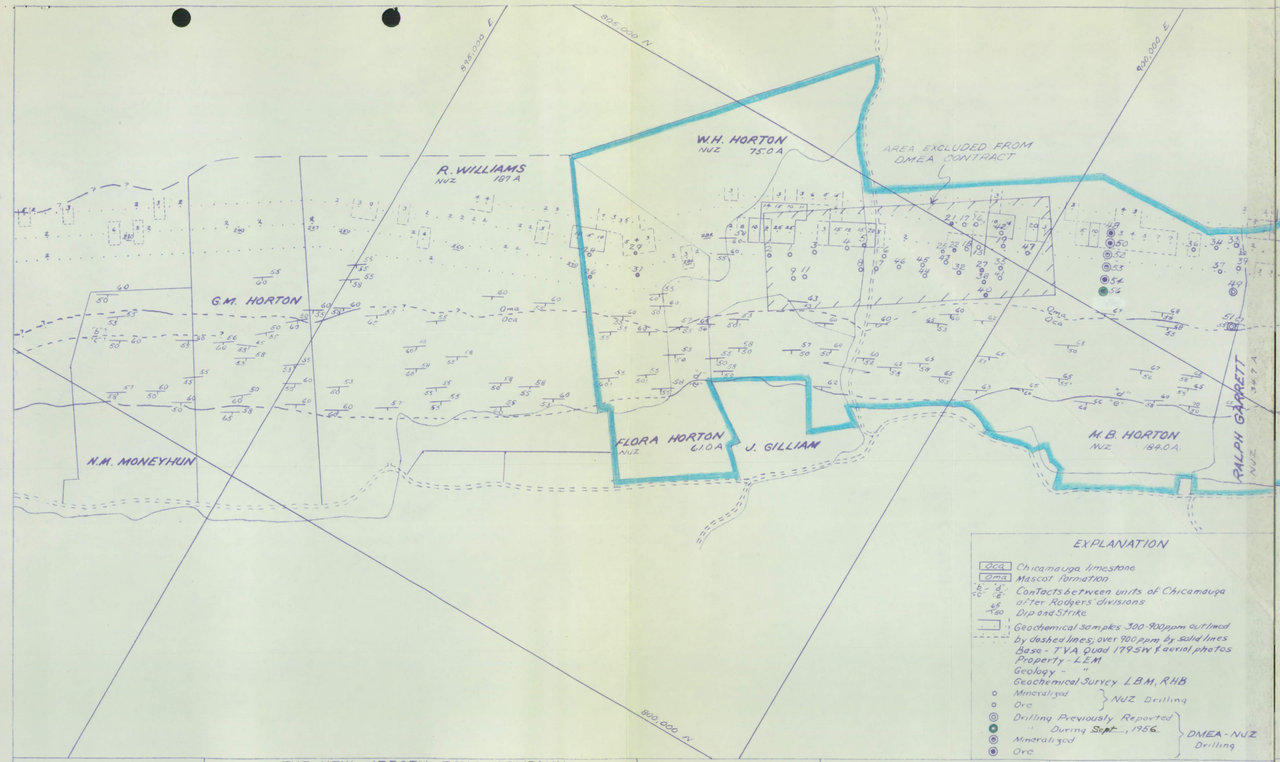


THE NEW JERSEY ZINC COMPANY	DRAWN STAFF DATE 7-31-56	COPPER RIDGE BELT	HANCOCK CO., TENN.
JEFFERSON CITY TENNESSEE	TRACED TEW SCALE 1" = 660'	SECTOR I SHEET 11NE	FILE NO. AX-TENN 569 A

RECEIVED
JAN 7 1957
D.M.E.A.



THE NEW JERSEY ZINC COMPANY JEFFERSON CITY TENNESSEE	DRAWN STAFF DATE 7-31-56 TRACED TEW SCALE 1" = 660'	COPPER RIDGE BELT SECTOR I SHEET 11 NE	HANCOCK CO., TENN. FILE NO. AX-TENN 569 A	
THE NEW JERSEY ZINC COMPANY JEFFERSON CITY TENNESSEE	DRAWN STAFF DATE 8-14-56 TRACED TEW SCALE 1" = 660'	COPPER RIDGE BELT SECTOR I SHEET 12 NE	HANCOCK CO., TENN. FILE NO. AX-TENN 570 A	

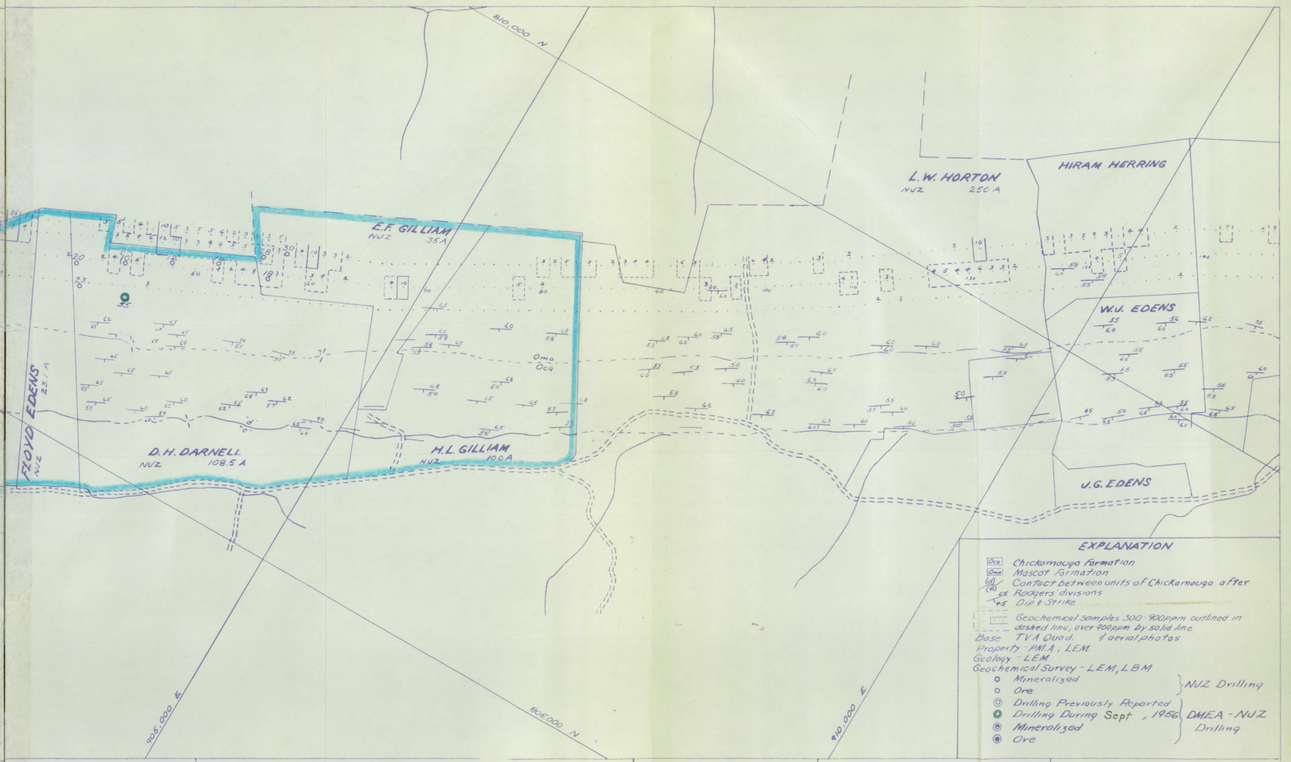


THE NEW JERSEY ZINC COMPANY
JEFFERSON CITY TENNESSEE

DRAWN STAFF DATE 7-31-56
TRACED TEW SCALE 1" = 660'

COPPER RIDGE BELT
SECTOR I SHEET 11 NE

HANCOCK CO., TENN.
FILE NO. AX-TENN 569 A

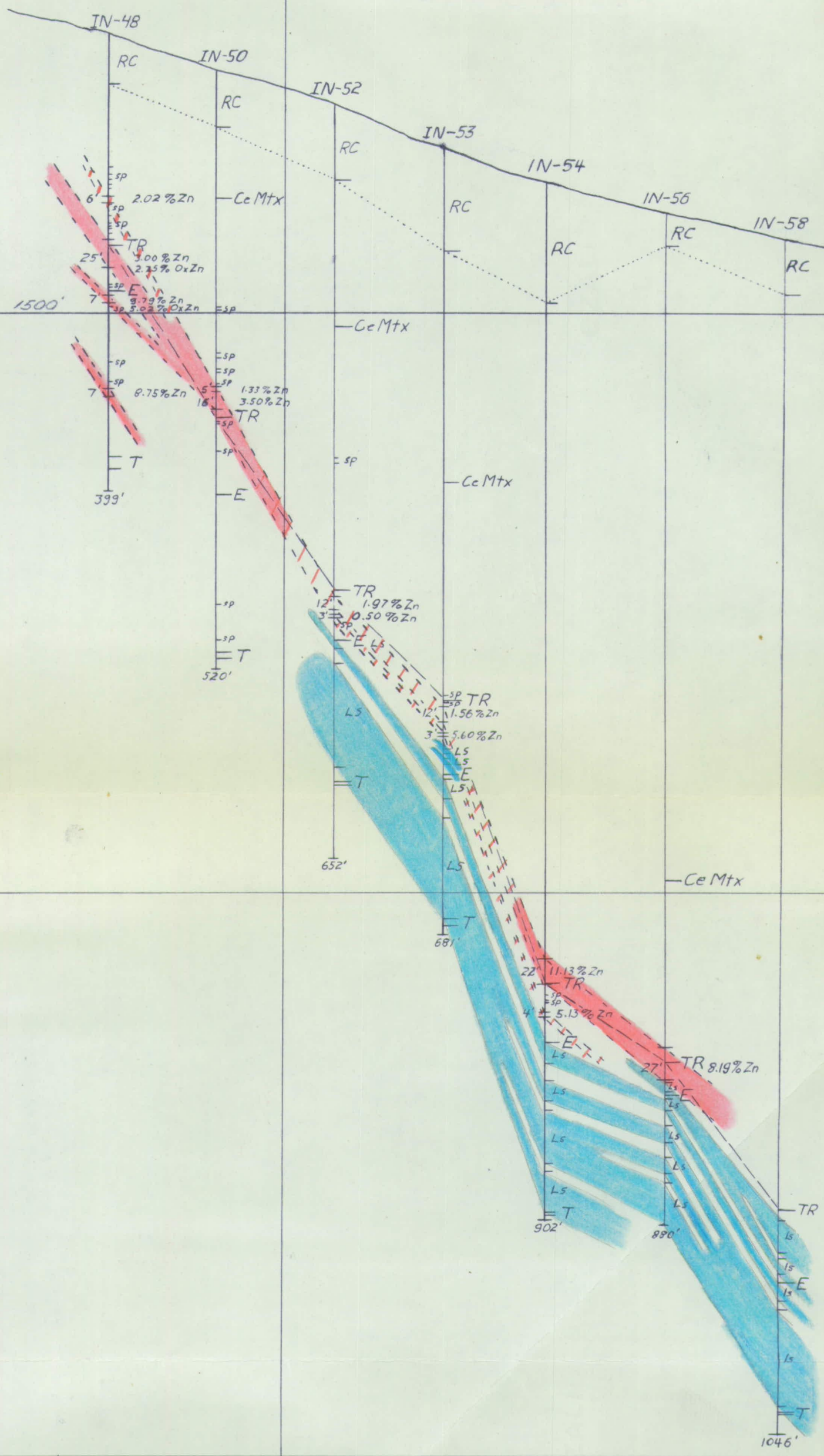


THE NEW JERSEY ZINC COMPANY
JEFFERSON CITY TENNESSEE

DRAWN STAFF DATE 8-14-56
TRACED TEW SCALE 1" = 660'

COPPER RIDGE BELT
SECTOR I SHEET 12 NE

HANCOCK CO., TENN.
FILE NO. AX-TENN 570 A



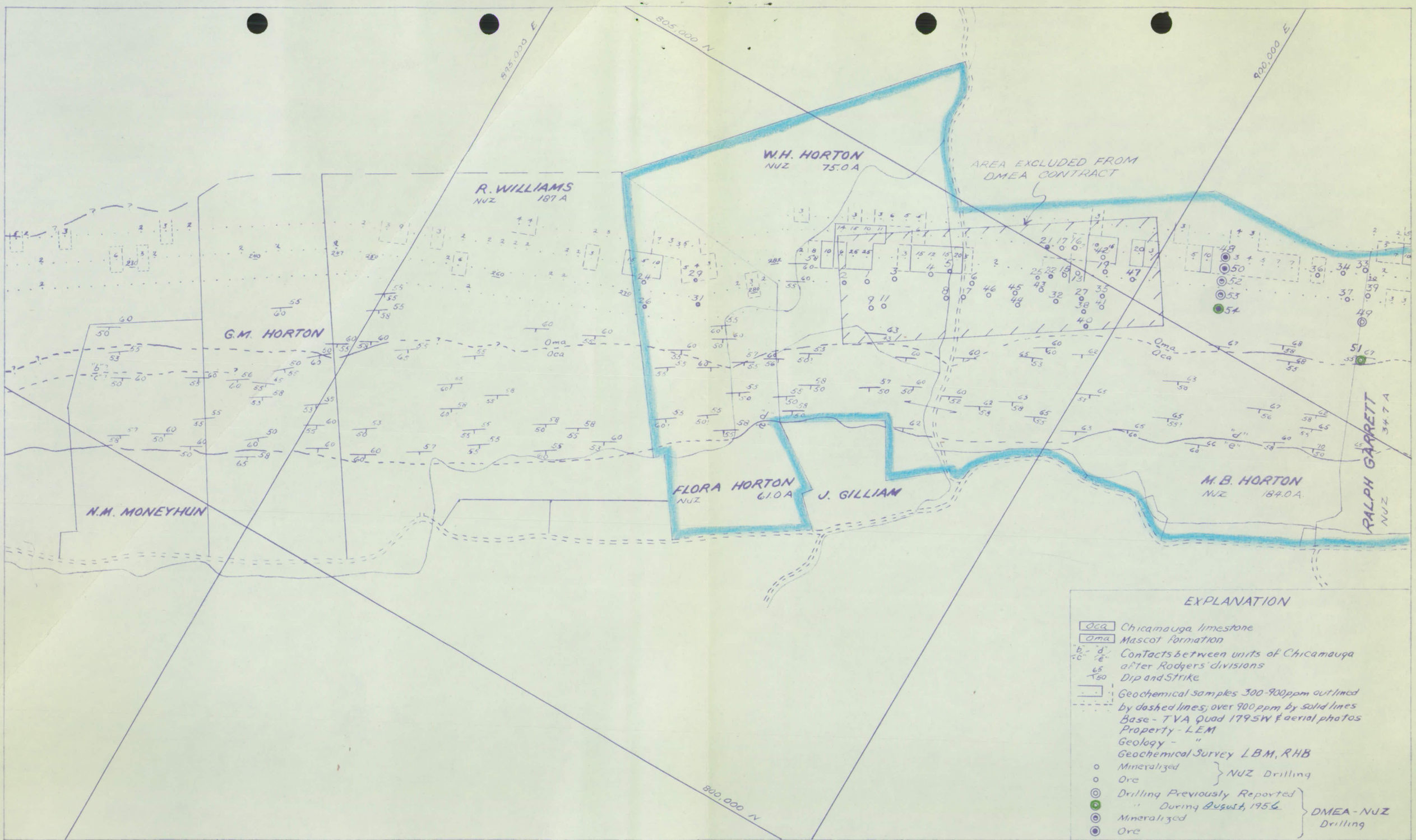
THE NEW JERSEY ZINC COMPANY

JEFFERSON CITY, TENNESSEE

DRAWN RCG	DIP SECTION - IN 48, 50, 52, 53	DATE 5-29-56
TRACED RCG	SECTOR I AREA B 54, 56, 58	SCALE 1" = 100'
CHECKED	COPPER RIDGE BELT	AX-TENN C-1171
APPROVED		

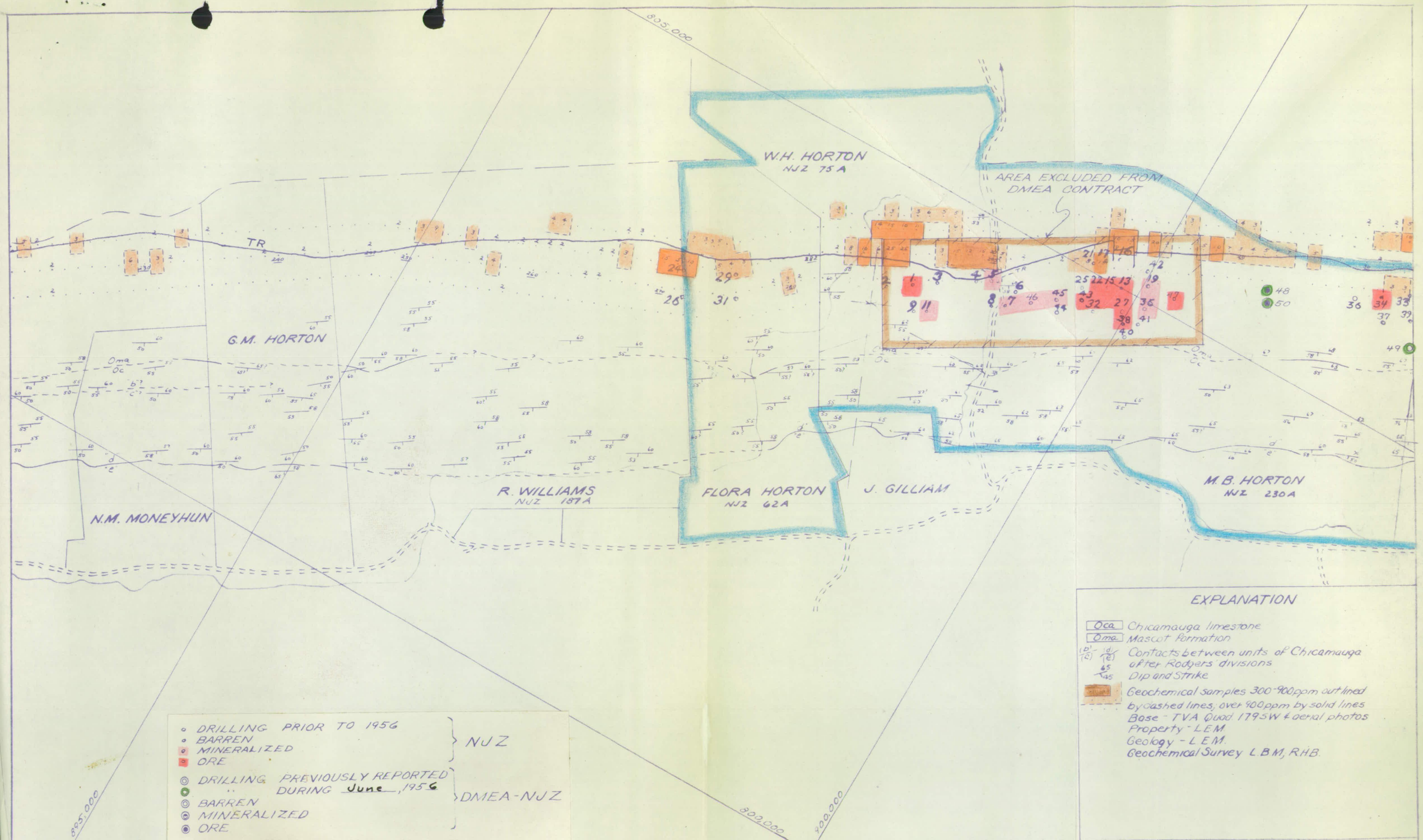
805,500 N
900,512 E

805,000 N
900,730 E



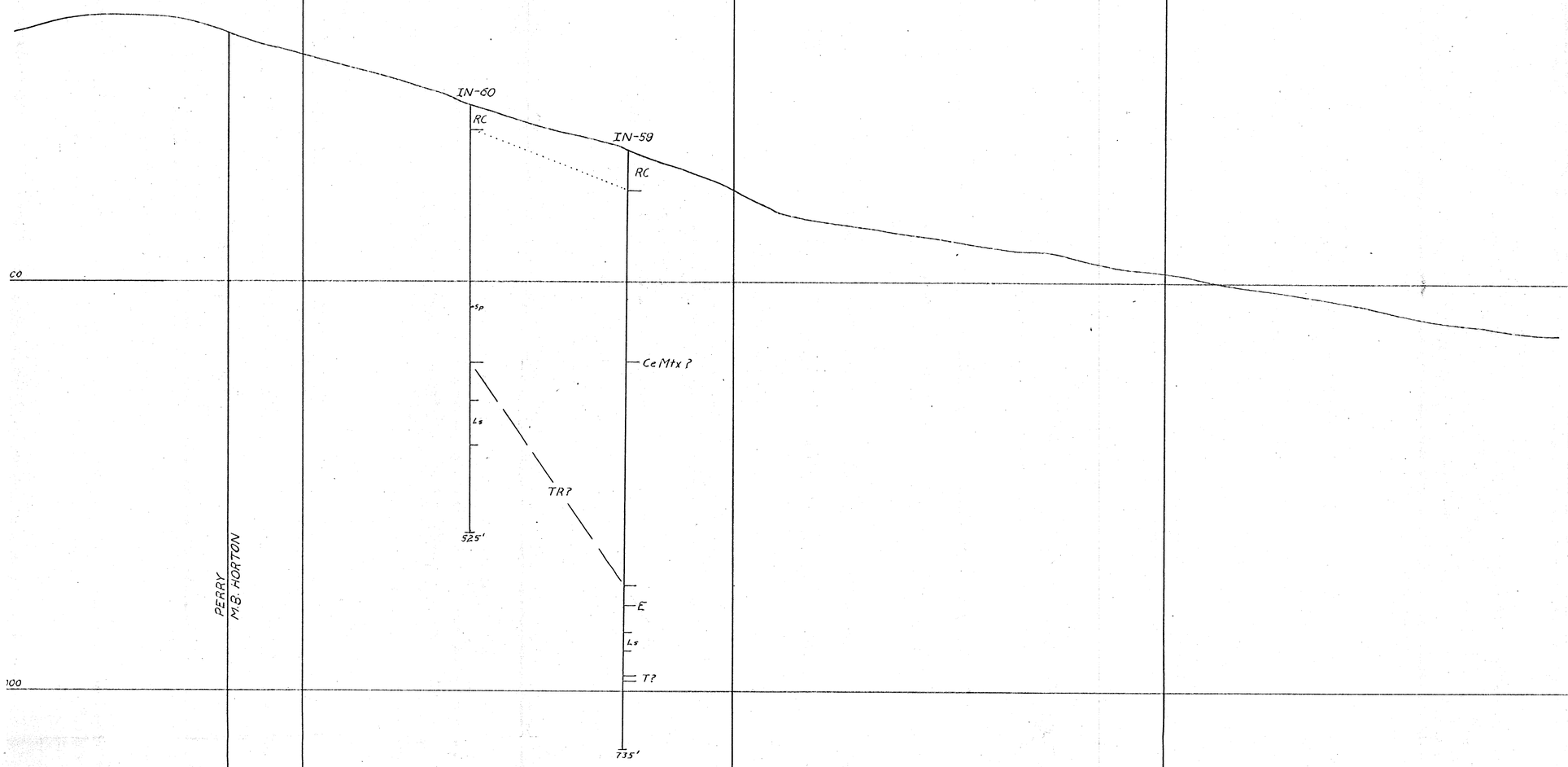
THE NEW JERSEY ZINC COMPANY	DRAWN STAFF DATE 7-31-56	COPPER RIDGE BELT	HANCOCK CO., TENN.
JEFFERSON CITY TENNESSEE	TRACED TEW SCALE 1" = 660'	SECTOR I SHEET 11NE	FILE NO. AX-TENN 569 A

THE NEW JERSEY ZINC COMPANY	DRAWN STAFF DATE 7-31-56	COPPER RIDGE BELT	HANCOCK CO., TENN.
JEFFERSON CITY TENNESSEE	TRACED TEW SCALE 1" = 660'	SECTOR I SHEET 1 INE	FILE NO. AX-TENN 569 A



POSTED TO DATE		THE NEW JERSEY ZINC COMPANY	DRAWN L.E.M. DATE 3-24-53	COPPER RIDGE BELT	HANCOCK CO., TENN
3/31/53	1/1/54	ROGERSVILLE TENNESSEE	TRACED S.J.L., J.F.P. SCALE 1" = 660'	SECTOR I SHEET I INE	FILE NO. AX-TENN 569
5/30/53	7-1-56				

Fig. 1



SERIAL NUMBER		DATE ISSUED		REFERENCE DRAWINGS	REVISIONS

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THE NEW JERSEY ZINC COMPANY

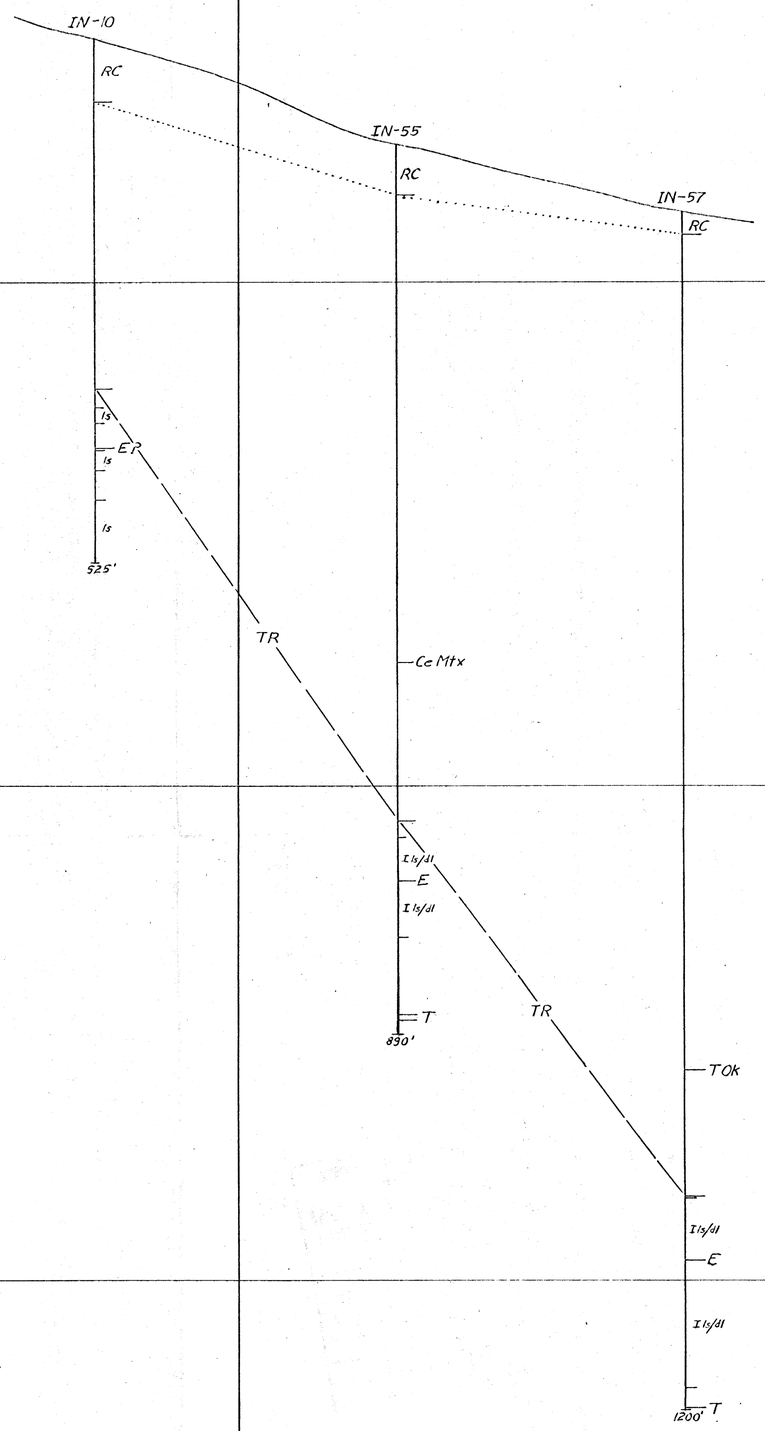
JEFFERSON CITY, TENNESSEE

DRAWN RCG
TRACED RCG
CHECKED
APPROVED

DIP SECTION IN-60,59
SECTOR I AREA B
COPPER RIDGE BELT

DATE 11-15-56
SCALE 1" = 100
AX-TENN C-1220

X5453C 1M 11-54



SERIAL NUMBER		DATE ISSUED		REFERENCE DRAWINGS	REVISIONS	THE NEW JERSEY ZINC COMPANY	DRAWN RCG	DIP SECTION IN-10, 55, 57	DATE 10-22-56
						JEFFERSON CITY, TENNESSEE	TRACED RCG	SECTOR I AREA B	SCALE 1" = 100'
							CHECKED	COPPER RIDGE BELT	AX-TENN C-1208
							APPROVED		

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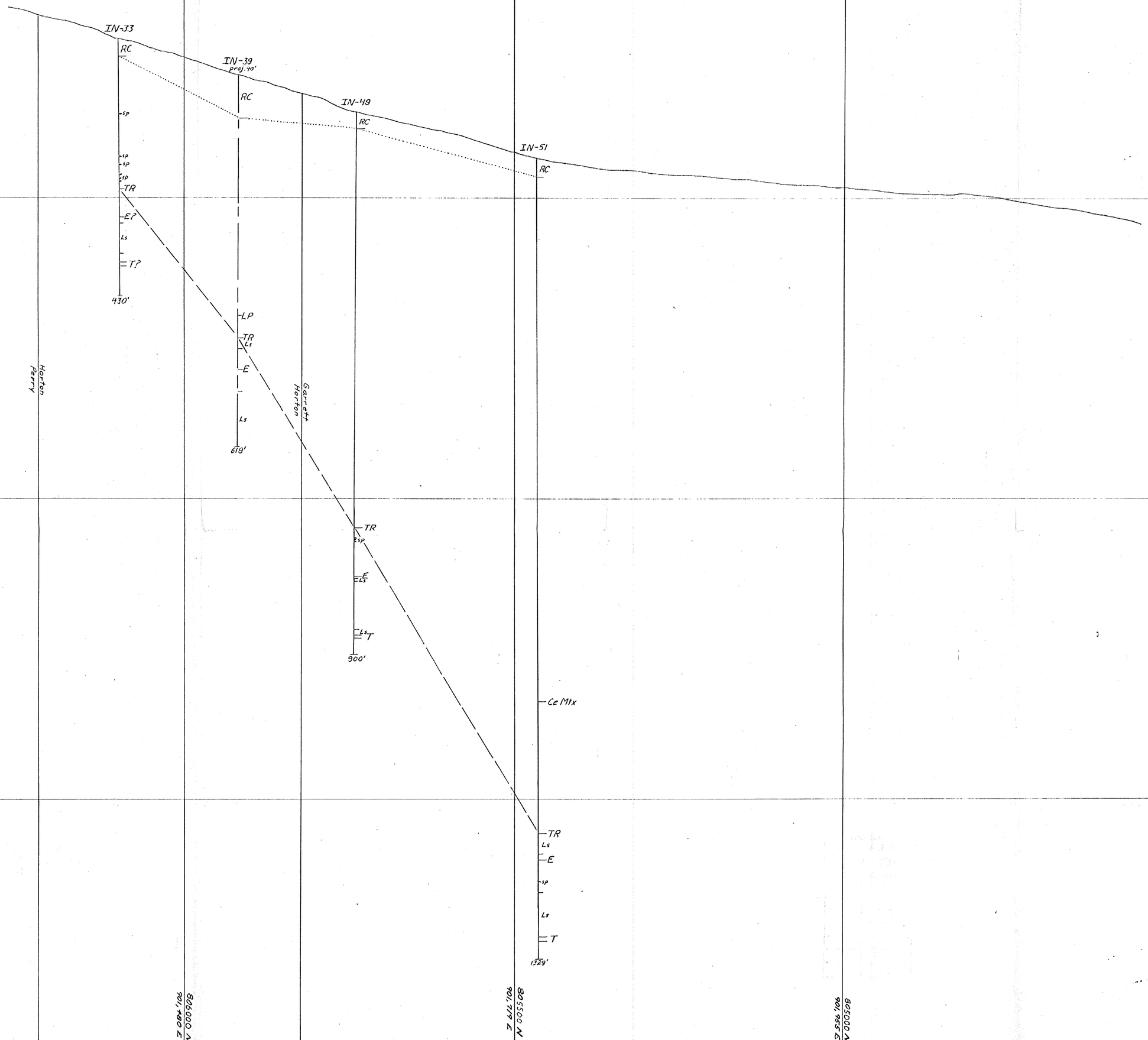
X5453C 1M 11-54



DATE ISSUED		REFERENCE DRAWINGS	REVISIONS
		AX-TENN D964	TEN 9-18-64

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THE NEW JERSEY ZINC COMPANY

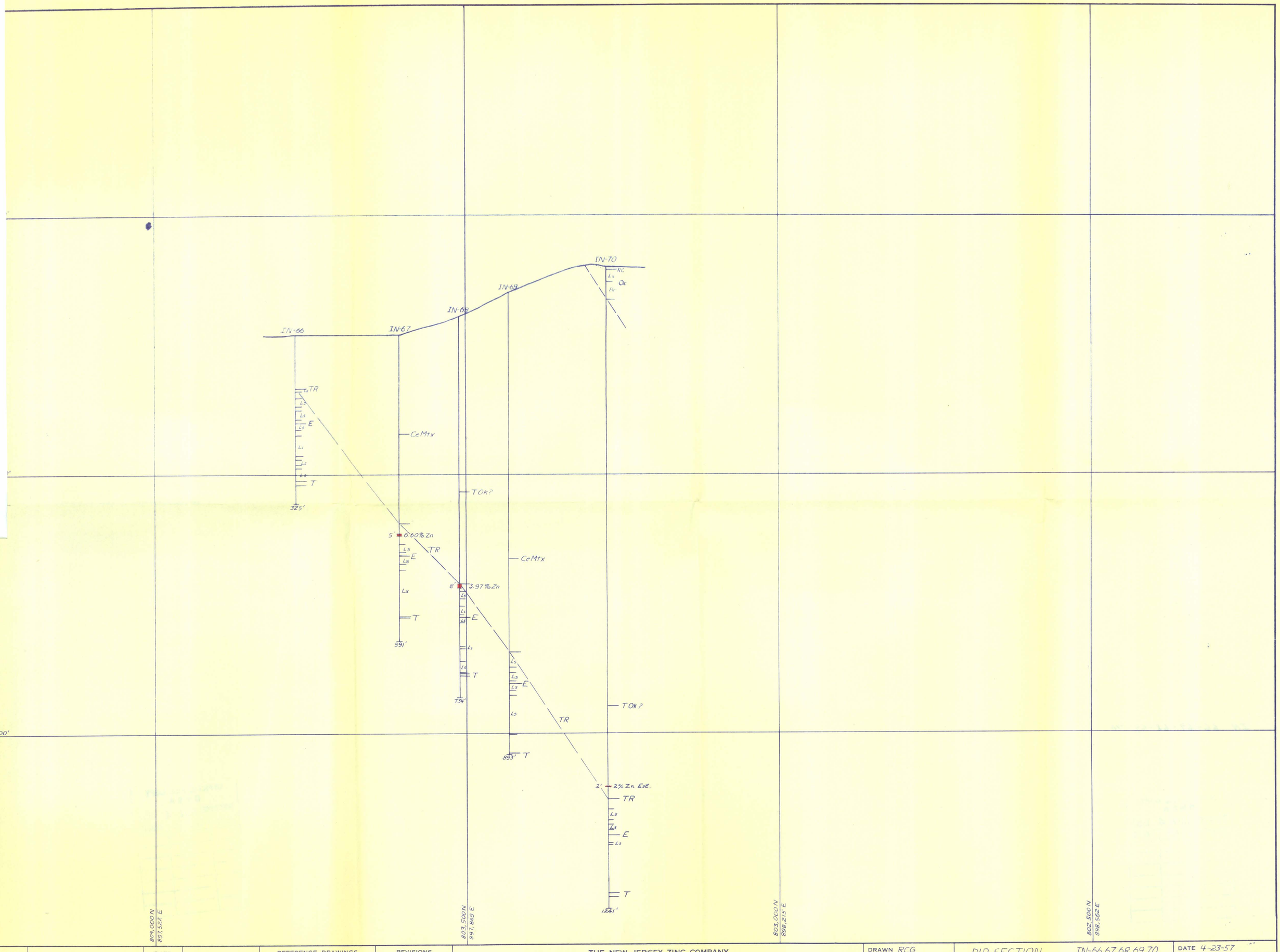
JEFFERSON CITY TENNESSEE

DRAWN	RCG
TRACED	RCG
CHECKED	
APPROVED	

DIP SECTION - IN 33, 39, 49, 51
SECTOR I AREA B
COPPER RIDGE BELT

DATE	5-28-56
SCALE	1" = 100
	AX-TENN C-1167

X5453C 1M 11-54



SERIAL NUMBER		DATE ISSUED		REFERENCE DRAWINGS	REVISIONS

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THE NEW JERSEY ZINC COMPANY

JEFFERSON CITY, TENNESSEE

DRAWN	RCG
TRACED	RCG
CHECKED	
APPROVED	

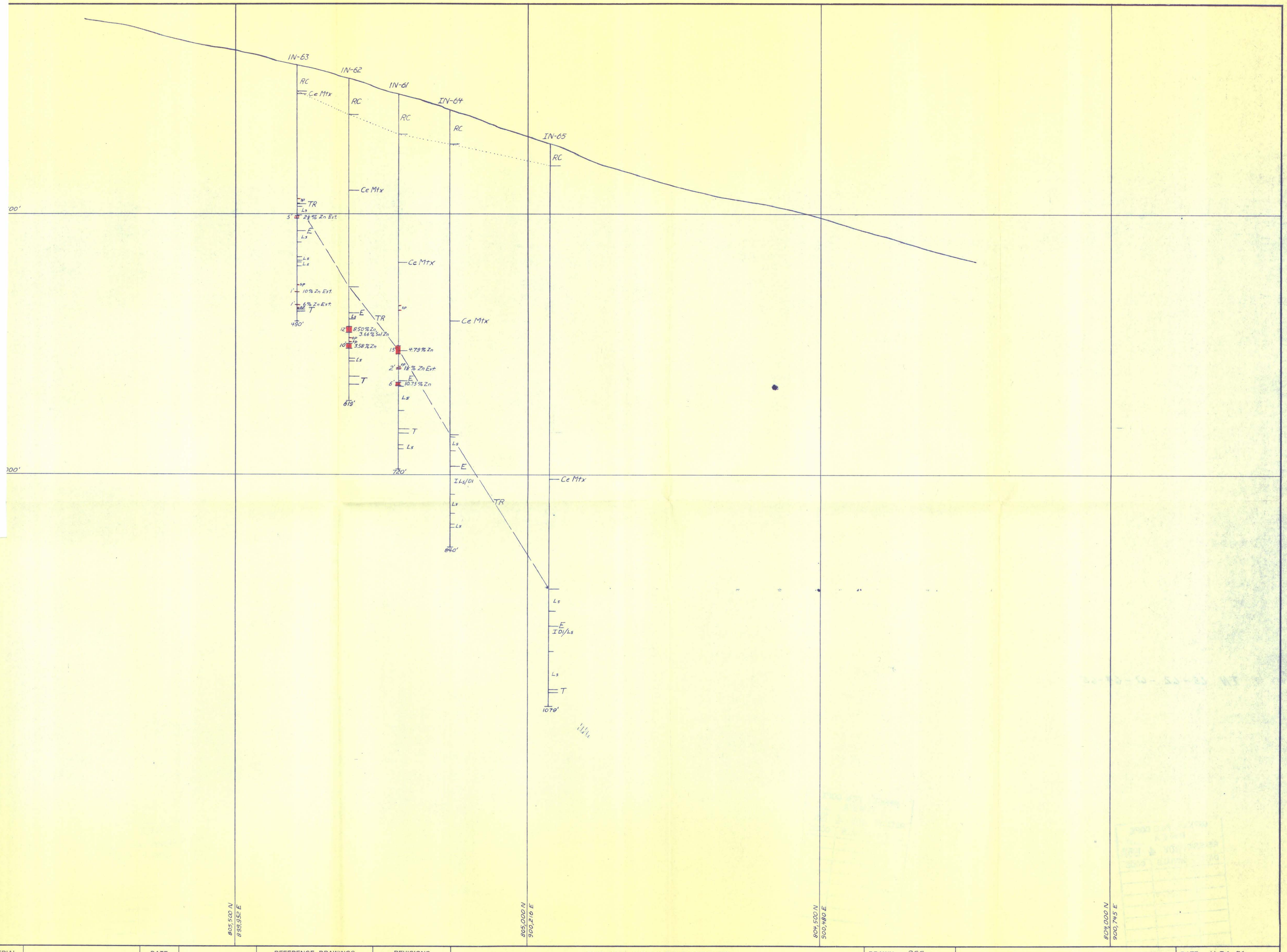
DIP SECTION IN-66, 67, 68, 69, 70

SECTOR I AREA B

COPPER RIDGE BELT

DATE	4-23-57
SCALE	1" = 100'
	AX-TENN C-1262

X5463C 1M 11-54



SERIAL NUMBER		DATE ISSUED		REFERENCE DRAWINGS	REVISIONS

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THE NEW JERSEY ZINC COMPANY

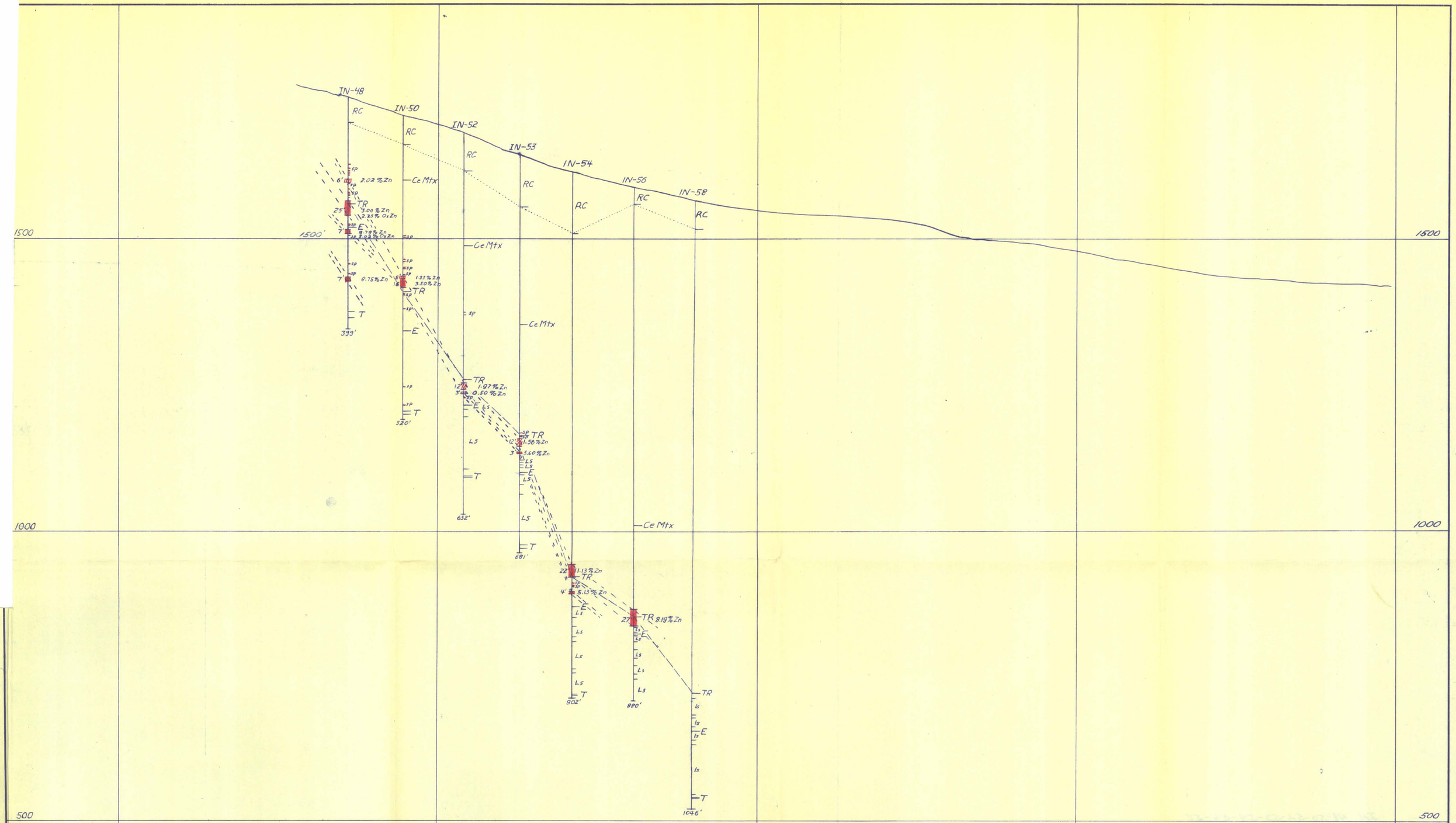
JEFFERSON CITY, TENNESSEE

DRAWN	RCG
TRACED	RCG
CHECKED	
APPROVED	

DIP SECTION IN-63,62,61,64,65
SECTOR I AREA B
COPPER RIDGE BELT

DATE	11-26-56
SCALE	1"=100'
	AX-TENN C-1225

X5453C 1M 11-54



SERIAL NUMBER		DATE ISSUED		REFERENCE DRAWINGS	REVISIONS	THE NEW JERSEY ZINC COMPANY	DRAWN RCG	DIP SECTION - IN 48, 50, 52, 53, 54, 56, 58 SECTOR I AREA B COPPER RIDGE BELT	DATE 5-29-56
				AX-TENN D 964	TEW 9-18-56	JEFFERSON CITY TENNESSEE	TRACED RCG		SCALE 1" = 100'
							CHECKED		AX-TENN C-1171
							APPROVED		

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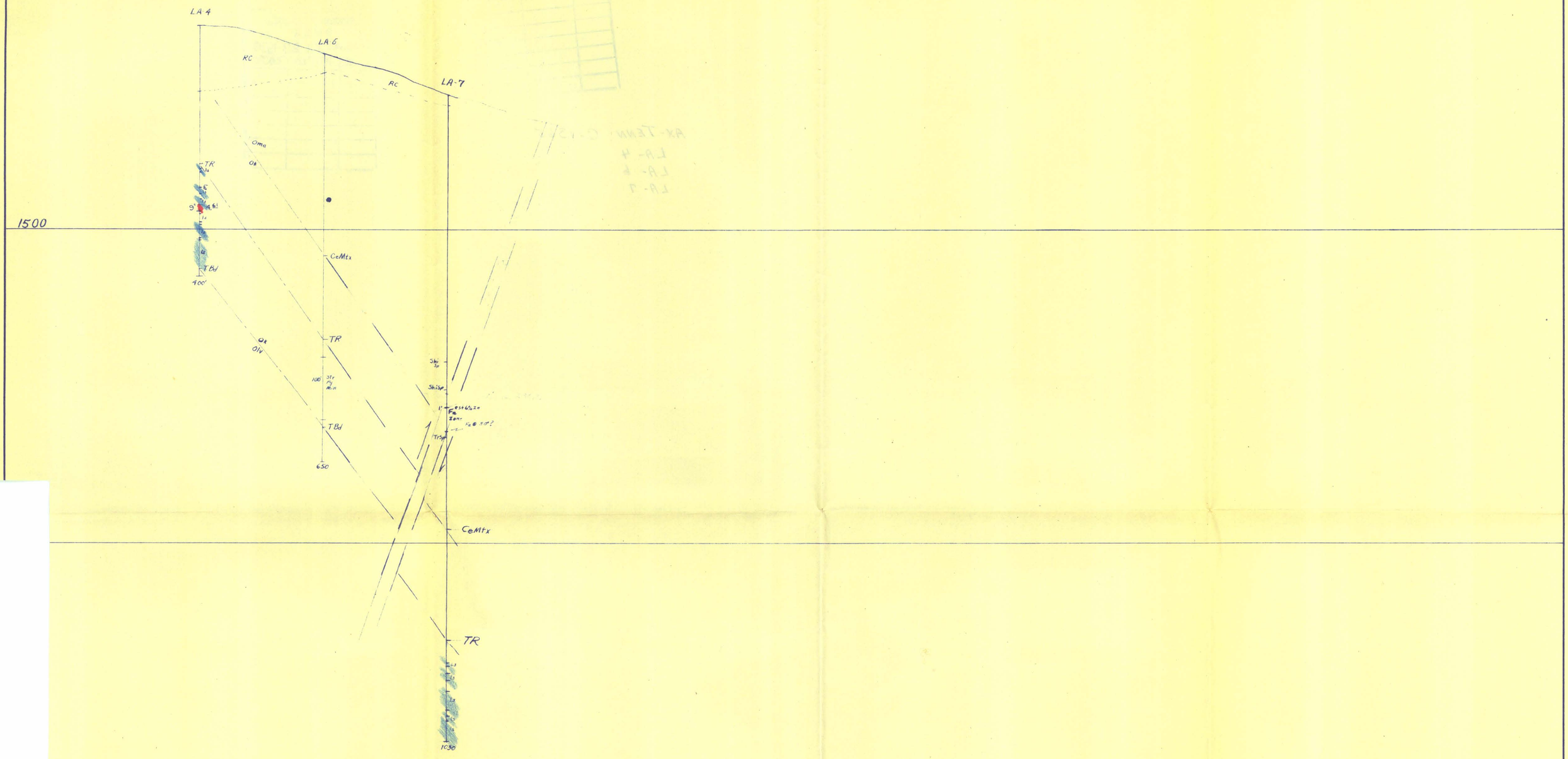
X5453C 1M 11-54



	DATE ISSUED		REFERENCE DRAWINGS	REVISIONS	THE NEW JERSEY ZINC COMPANY	DRAWN	Copper Ridge Belt	DATE 5-6-58
						TRACED	Sector I Area C	SCALE 1" = 100'
					JEFFERSON CITY, TENN	CHECKED	Dip Section LA 4, 6, 7	AX-Tenn C-1365
						APPROVED		

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X5453C 1M 11-54