Mr. Murphy

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

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

FEB 23 1960

OPERATOR'S MONTHLY REPORT AND VOUCHER

PAID ON VOUCHER & SCHEDULE OF PAYMENTS K-

Month of October, 1959 Docket No. DMEA 5008 O.M.E. Contract No. 1204
Operator's Name The New Jersey Zinc Company Minerals Zinc-Lead
Address Austinville, Va.
Contract Amount, $ 66,906 Government Participation: 50 % Amount, $ 33,453

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	834.75	56406.00	57240.75	834.75	56,298.25	57,133.00
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
Core Trays @ $2.50	25.00	1800.00	1825.00	67.50	1757.50	1825.00
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis		180.00	180.00	—	180.00	180.00
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
Incidental Allowances @ $.22/ft.	81.62	5198.38	5280.00	81.62	5198.38	5280.00
TOTALS	941.37	63584.38	64525.75	983.87	63,434.13	64,418.00

I certify that the above bill is correct and just and that payment therefor has not been received.
Date 11/12/59 *Payee Bertha Mineral Division THE NEW JERSEY ZINC CO.
Per [signature] Title Genl. 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:

$ 491.94

Signature Helen R. Miller
(Authorized Certifying Officer)

Date FEB 19 1960 Vou. No. 41

(See other side)

491.94

(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. E-1204 in accordance with the terms of the contract.

Signature [illegible] Title U. S. BUREAU OF MINES Date FEB 18 1960

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Robert A. Lawrence Title EXECUTIVE OFFICER OME FIELD TEAM REGION V Date FEB 18 1960

MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

GPO 872893

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

FEB 23 1960
O.M.E.

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

Month of October 1959 Docket No. DMEA 5008 Contract No. IDM-E-1204
Operator's Name The New Jersey Zinc Company Minerals Zinc, Lead
Address Austinville, Va.

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.	834.75	371	57240.75	24000	2.39	24000	2.50
Churn								
Auger								
Stripping								
~~Trenching~~ Sample Assay	Sple			180.00	90	2.00	300	2.00
~~Test Pits~~ Core Trays	Tray	25.00	10	1825.00	730	2.50	600	2.50
Roads and Trails								
Incidental Allowances @ $.22/ft.		81.62	371	5280.00	24000	.22	24000	.22
Total Distributed Costs		941.37		64525.75				Total Costs Authorized by Contract
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
Total Costs		941.37		64525.75				66906.00

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 Nov. 12, 1959 Operator Bertha Mineral Division THE NEW JERSEY ZINC CO.

Per [signature] Title Genl. Supt.

Remarks: Allowable costs incurred for Hole A-545.

$42.50 added to core boxes see Report of Review.

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]
MINERAL 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

CERTIFICATION

Re: Contract IDM-E-1204
Docket No. DMEA 5008 (Zinc-Lead)
Chaffin Estate Tract
Wythe County, Virginia

The assays of drill core samples were made in our laboratory and the core boxes were made in our shops.

I hereby certify that the actual costs, as indicated by our records, were as follows:

Assay Samples $3.00 each

Core Boxes $3.50 each

Bertha Mineral Division
THE NEW JERSEY ZINC CO.

J. E. Pritt

J. E. Pritt
Chief Accountant

February 11, 1960

In quintuplicate

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

October 14, 1959

OFFICIAL FILE COPY
O. M. E.
RECEIVED OCT 16 1959

DATE	INITIALS	CODE
10-16	gad	VVO
10/19	[illegible]	110
10/19	[illegible]	800
10/20	[illegible]	500

Memorandum

To: Operating Committee, OME - Washington

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

Subject: Narrative portions of Monthly Reports.

Because processing of these vouchers is being suspended for a variety of reasons, I am sending you herewith, one copy of the narrative monthly report for each of the following:

N. J. Zinc Co.
DMEA-5008 Idm-E1204, September 1959

OME -6003, Contract 2005, August-September 1959

DME -6006, Contract 2004, August-September 1959 (final?)

OME-6011 Contract 2001, September (final)

MF-104 and 104A has been detached from these reports and will be forwarded through regular channels when processed for payment.

Robert A. Laurence
Robert A. Laurence

MF-104 + 104A } filed

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

PAYMENT VOUCHER & SCHEDULE OF PAYMENTS K- 21

JAN 14 1960 O.M.E.

Month of September, 1959 Docket No. DMEA 5008 Contract No. 1204
Operator's Name The New Jersey Zinc Company Minerals Zinc-Lead
Address Austinville, Va.
Contract Amount, $ 66,906 Government Participation: 50 % Amount, $ 33,453

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	4061.00	52345.00	56406.00			
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
Core Trays @ $2.50	130.00	1670.00	1800.00			
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis		180.00	180.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify): Incidental Allowances @ $.22/ft.	371.14	4827.24	5198.38			
TOTALS	4562.14	59022.24	63584.38	4562.14	59022.24	63584.38

I certify that the above bill is correct and just and that payment therefor has not been received.
Date 10/7/59 *Payee Bertha Mineral Division THE NEW JERSEY ZINC CO.

Per W. L. Allison Title Genl. 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:

$ 2281.07

Signature Helen R. Miller
(Authorized Certifying Officer) 34

Date JAN 12 1960 Vou. No.
(See other side)

2281.07

(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-1204 in accordance with the terms of the contract.

Signature [signature] Title MINING ENGINEER U. S. BUREAU OF MINES Date JAN 11 1960

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Robert A. Lawrence Title EXECUTIVE OFFICER OME FIELD TEAM REGION V Date JAN 11 1960

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:

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(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.

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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).

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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

JAN 14 1960
O.M.E.

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

Month of September 195 9 Docket No. DMEA 5008 Contract No. 1204
Operator's Name The New Jersey Zinc Company Minerals Zinc-Lead
Address Austinville, Va.

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.	2250.00	1000	56406.00	23629	2.39	24000	2.50
Churn 1000-1500	Ft.	1250.00	500					
Auger 1500-2000	Ft.	561.00	187					
Stripping								
Trenching Sample Assay	Smp			180.00	90	2.00	300	2.00
Test Pits Core Trays	Tray	130.00	52	1800.00	720	2.50	600	2.50
Roads and Trails								
Incidental Allowances @ $.22/Ft	Ft.	371.14	1687	5198.38	23629	.22	24000	.22
Total Distributed Costs		4562.14		63584.38				Total Costs Authorized by Contract
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
Total Costs								$66906.00

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 10/7/59 Operator Bertha Mineral Div. The New Jersey Zinc Co.

Per W. L. Allen Jr. Title Genl. Supt.

Remarks: Includes costs of A-544

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

(Instructions on reverse)

(For Government use only)

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

INSTRUCTIONS

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

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

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

GPO 872894

NARRATIVE REPORT - CHAFFIN TRACT

Hole A-545 was incomplete at 714 feet at the beginning of the month. Blocky ground and a sand filled cavern caused slow drilling and the hole was at 1530 feet, barren and incomplete, at the end of the month.

Hole A-546 was incomplete at 45 feet the beginning of the month. It is now incomplete at 1986 and barren. The hole confirmed the presence of a large fault with about 1800 feet displacement.

Maps filed in envelope [illegible]

QUARTERLY SUMMARY

During the quarter ending September 30, 1959, the following holes were completed with the results noted below:

Hole	Depth	Collar	Bottom	Results
A-542	2366	Post TM	Patterson	Barren
A-543	2002	Post TM	Austinville Dolomite	5' 1% Zn estimated
A-544	1687	Post TM	Patterson	Barren

DIAMOND DRILL LOG A-545

Location: Chaffin Area, Section 219, second hole on Exploratory Fence

1086 N 9139 E

Inclination: Vertical Elevation: 2158

Started: 8/7/59 Completed:

RESULTS

From	To	Dist	Recov.	Description
0	58	58	-	Red clay
58	172	108	108	Saccharoidal dolomite locally silicified. Much "soft rock" 144-156
172	173	1	1	Oxidized low grade
173	189	16	10	Strongly metamorphosed dolomite
189	203	14	4	Saccharoidal dolomite, much "soft rock"
203	209	6	4	Buff dolomite with sand grains
209	245	36	36	Fractured saccharoidal
245	253	8	4	Fractured, oxidized, mylonite, much "soft rock"
253	269	16	13	Same, "soft rock" @ 266
269	299	30	30	Saccharoidal
299	302	3	No Core	
302	380	78	78	Varied dolomites
380	389	9	9	Archie dolomite
389	411	22	22	Varied dolomites
411	415	4	4	Pseudo sand grains
415	431	16	2	Saccharoidal "soft rock"
431	455	24	24	Varied dolomites
455	489	34	34	Dense, pseudo sand grains
489	550	61	61	Varied dolomites
550	552	2	2	Mottled dolomite
552	570	18	8	Saccharoidal dolomite
570	589	19	18	Strong met dolomite
589	650	61	57	Varied dolomites
650	658	8	7	Shaly dolomite
658	714	56	56	Varied dolomites
714	896	168	159	Light grey dolomite
896	927	31	31	Strong met Arch Reef
927	939	12	11	Light grey dolomite
939	976	37	6	"Soft rock"
976	1011	35	31	Light grey dolomite
1011	1033	22	4	"Soft rock"
1033	1056	23	23	Light grey dolomite
1056	1058	2	1/2	Soft rock
1058	1092	34	31	Varied dolomite
1092	1120	28	25	Taylor Marker?

From	To	Dist.	Recov.	Description
1120	1138	18	18	Faint Mot Pseudo Sand Grains
1138	1228	84	84	Light grey dolomite
1228	1250	22	21	Arch
1250	1255	5	0	Cavity
1255	1357	102	92	Slight local strong metamorphism
1357	1360	3	3	Pseudo sand grains and sand grains
1360	1388	28	27	Varied dolomites
1388	1457	69	63	Slight local strong metamorphism
1457	1463	6	6	Arch
1463	1478	15	15	Saccharoidal stylolites
1478	1490	12	12	Strong metamorphism
1490	1500	10	10	Faint mottling
1500	1526	26	26	Ribbony ellips Black Rock?
1526	1530	4	4	Light grey dolomite

Incomplete

BERGHA MINERAL DIVISION

THE NEW JERSEY ZINC COMPANY

AUSTINVILLE, VA.

OFFICIAL FILE COPY
O. M. E.
RECEIVED OCT 16 1959

DATE	INITIALS	CODE

October 7, 1959

Regional Executive Officer
Defense Minerals Exploration Admn.
Room 2-B, Post Office Building
Knoxville 2, Tennessee

Subject: September Monthly Report and Quarterly Summary, Chaffin Tract, Austinville, Va., DMEA 5008, Contract IDM-E-1204

Dear Sir:

Attached is our September Monthly Report and Quarterly Summary of the exploration work on the Chaffin Tract, Austinville, Virginia.

Very truly yours,

W. L. Albers

W. L. Albers
General Superintendent

WHoratioBrown:rjl
In quintuplicate
Attachments

RECEIVED
OCT 7 - 1959
U. S. Geological Survey
Geologic Division
Knoxville, Tenn.

NARRATIVE REPORT - CHAFFIN TRACT

Hole A-545 was incomplete at 714 feet at the beginning of the month. Blocky ground and a sand filled cavern caused slow drilling and the hole was at 1530 feet, barren and incomplete, at the end of the month.

Hole A-546 was incomplete at 45 feet the beginning of the month. It is now incomplete at 1986 and barren. The hole confirmed the presence of a large fault with about 1800 feet displacement.

QUARTERLY SUMMARY

During the quarter ending September 30, 1959, the following holes were completed with the results noted below:

Hole	Depth	Collar	Bottom	Results
A-542	2366	Post TM	Patterson	Barren
A-543	2002	Post TM	Austinville Dolomite	5' 1% Zn estimated
A-544	1687	Post TM	Patterson	Barren

DIAMOND DRILL LOG A-545

Location: Chaffin Area, Section 219, second hole on Exploratory Fence

1086 N 9139 E

Inclination: Vertical Elevation: 2158

Started: 8/7/59 Completed:

RESULTS

From	To	Dist	Recov.	Description
0	58	58	-	Red clay
58	172	108	108	Saccharoidal dolomite locally silicified. Much "soft rock" 144-156
172	173	1	1	Oxidized low grade
173	189	16	10	Strongly metamorphosed dolomite
189	203	14	4	Saccharoidal dolomite, much "soft rock"
203	209	6	4	Buff dolomite with sand grains
209	245	36	36	Fractured saccharoidal
245	253	8	4	Fractured, oxidized, mylonite, much "soft rock"
253	269	16	13	Same, "soft rock" @ 266
269	299	30	30	Saccharoidal
299	302	3	No Core	
302	380	78	78	Varied dolomites
380	389	9	9	Archie dolomite
389	411	22	22	Varied dolomites
411	415	4	4	Pseudo sand grains
415	431	16	2	Saccharoidal "soft rock"
431	455	24	24	Varied dolomites
455	489	34	34	Dense, pseudo sand grains
489	550	61	61	Varied dolomites
550	552	2	2	Mottled dolomite
552	570	18	8	Saccharoidal dolomite
570	589	19	18	Strong met dolomite
589	650	61	57	Varied dolomites
650	658	8	7	Shaly dolomite
658	714	56	56	Varied dolomites
714	896	168	159	Light grey dolomite
896	927	31	31	Strong met Arch Reef
927	939	12	11	Light grey dolomite
939	976	37	6	"Soft rock"
976	1011	35	31	Light grey dolomite
1011	1033	22	4	"Soft rock"
1033	1056	23	23	Light grey dolomite
1056	1058	2	1/2	Soft rock
1058	1092	34	31	Varied dolomite
1092	1120	28	25	Taylor Marker?

From	To	Dist.	Recov.	Description
1120	1138	18	18	Faint Mot Pseudo Sand Grains
1138	1228	84	84	Light grey dolomite
1228	1250	22	21	Arch
1250	1255	5	0	Cavity
1255	1357	102	92	Slight local strong metamorphism
1357	1360	3	3	Pseudo sand grains and sand grains
1360	1388	28	27	Varied dolomites
1388	1457	69	63	Slight local strong metamorphism
1457	1463	6	6	Arch
1463	1478	15	15	Saccharoidal stylolites
1478	1490	12	12	Strong metamorphism
1490	1500	10	10	Faint mottling
1500	1526	26	26	Ribbony ellips Black Rock?
1526	1530	4	4	Light grey dolomite

Incomplete

DIAMOND DRILL LOG A-546

Location: Chaffin Area, Section 181, Hole in Exploratory Fence

1761 S 9297 E

Inclination: Vertical Elevation: 2107

Started: 8/31/59 Completed:

RESULTS

From	To	Dist.	Recov.	Description
0	12	12		Red clay
12	45	33	32	Breccia with varied fragments
45	48½	3½	0	Cavity
48½	91	42½	42	Limestone and dolomite
91	119	28	28	Interbed limestone & shale
119	152	33	33	Diagenetic breccia
152	211	59	59	Strong metamorphism
211	361	150	150	Interbed shale & limestone breccia
361	463	102	102	Varied dolomites
463	550	87	87	Dolomites paint type mottling
550	649	99	99	Varied dolomites
649	666	17	17	Limestone & dolomite ellips & shale partings
666	768	102	102	Varied dolomite
768	797	29	29	Abundant Arch Mottled Marker
797	879	82	82	Varied dolomite
879	920	41	41	Bleached diagenetic breccia - top of Patterson or Ribbon
920	1240	320	319	Bleached banded and ribbony
1240	1354	114	114	Poor ellips
1354	1376	22	22	Banded ribbony
1376	1563	197	197	Ellips ribbony limestone
1563	1594	31	31	Same with peripheral oolites
1594	1654	60	60	Inter limestone & dolomites, pyrite mineralization
1654	1662	8	8	Mylonite, Fault
1662	1708	46	46	Ellips, sheared & dragged
1708	1712	4	4	Saccharoidal, mylonite, fault
1712	1721	9	9	Sheared and dragged
1721	1775	54	54	Saccharoidal mylonite, fault
1775	1970	195	195	Inter shale and limestone breccia
1970	1986	16	16	Varied dolomites

Incomplete

OFFICIAL FILE COPY O. M. E. RECEIVED SEP 18 1959		
DATE	INITIALS	CODE
9-18	gad	1V0
		1V0
		800
	To date	

OFFICE OF MINERS EXPLORATION
INTERIM REPORT

DMEA-5008, Idm-E1204 (Zinc-Lead)

Operator: The New Jersey Zinc Company, Austinville, Virginia

Location: Chaffin Estate, Wythe County, Virginia

Summary of drilling completed

	Since last inspection	To date
Number of holes.....	2	15
Footage.....	3,689	23,629*

Number of holes showing:

a)	Commercial-grade ore.....	7
b)	Non-commercial mineralization....	7
c)	No mineralization.....	1

* Totals in interim reports of 6/29/59 and 7/27/59 were both short by 40 feet due to an error in reporting footage used in deepending Hole A-531. Hole A-531 was deepened 120 feet instead of 80 feet as indicated.

Summaries of the data on the two holes completed since the last inspection are as follows:

Hole A-543: Located at coordinates 506-N; 9718-E (site L of Operator's supplementary drilling plan). Collar elevation: 2.162 feet A. T. Drilling started: 6/24/59; completed 8/5/59; Total depth: 2,002 feet. Summary log: No stratigraphic zones or markers of any degree of distinctiveness were recognized except for the "Chaffin mottled marker," which occurred at 1832-1847. Mineralization: Shine hole. 1578-1583 (5') and 1443-1444 (1') both show an estimated 1% combined lead-zinc.

Hole A-544: Located approximately 1600 feet down dip from Hole A-542. Coordinates 2322-S; 9860-E. Collar elevation: 2140 feet A.T. Drilling started: 7/18/59; completed 8/28/59. Total depth: 1687 feet. Summary log: 0-32 overburden; black to dark gray shale 233-388 with limestone congolomerate at 318-339; prominent fault zone at 521-576 repeating dark shale zone at 682-760; abundant archeocyathids at 1156-1183 may be "Chaffin mottled marker"; top of Ribbon or Patterson member of Shady dolomite at 1268(?); ellipsoidal limestone at 1605-1687 (bottom of hole). Mineralization: Trace hole. Shine of sphalerite at 1594.

Drilling in progress

Holes A-545 and -546 are currently in progress. Hole A-545, located 800 feet up dip from Hole A-543, was drilling at a depth of 824 feet at the time of inspection. As the depth of this hole already exceeds the maximum of 24,000 feet of drilling allowable under the contract terms, the Chaffin project will have been completed with the bottoming of Hole A-545, although payment will be made on only 371 feet of the hole.

Hole A-546, the first of the Operator's post-DMEA contract hole, is located midway between Holes A-542 and-544. Core from this hole was observed to a depth of 225 feet.

Inspected: September 9, 1959

Helmuth Wedow, Jr., Geologist
Geological Survey, OME

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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-9

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of August, 1959 Docket No. DMEA 5008 Contract No. 1204
Operator's Name The New Jersey Zinc Company Minerals Zinc-Lead
Address Austinville, Va.
Contract Amount, $ 66,906 Government Participation: 50 % Amount, $ 33,453

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	5006.00	47339.00	52345.00	[illegible] 9/17/59		
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
Core Trays @ $2.50	155.00	1515.00	1670.00			
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	--	180.00	180.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify): Incidental Allow. @ $.22/ft.	440.44	4386.80	4827.24			
TOTALS	5601.44	53420.80	59022.24	5601.44	53,420.80	59022.24

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

Date 9/4/59 *Payee Bertha Mineral Division THE NEW JERSEY ZINC CO.

Per [signature] Title Genl. 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:

$ 2800.72

Signature Helen R. Miller
(Authorized Certifying Officer)

Date SEP 10 1959 Vou. No. 14
(See other side)

2800.72

(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-1204, in accordance with the terms of the contract.

Signature [illegible] Title MINING ENGINEER U. S. BUREAU OF MINES Date SEP 9 1959

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Robert A. Lawrence Title EXECUTIVE OFFICER OME FIELD TEAM REGION V Date SEP 9 1959

MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of August 1959 Docket No. DMEA 5008 Contract No. 1204

Operator's Name The New Jersey Zinc Company Minerals Zinc-Lead

Address Austinville, Va.

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.	2250.00	1000	52345.00	21942	2.39	24000	2.50
Churn 1000-1500	Ft.	1250.00	500					
Auger 1500-2000	Ft.	1500.00	500					
~~Stripping~~ 2000-2500	Ft.	6.00	2					
~~Trenching~~ Sample Assay Samp				100.00	180	2.00	300	2.00
~~Test Pits~~ Core Trays	Trays	155.00	62	1670.00	668	2.50	600	2.50
Roads and Trails								
Incidental Allow. @ $.22/ft.	Ft.	440.44	2002	4827.24	21942	0.22	24000	.22
Total Distributed Costs		5601.44		59022.24	58,914.49			Total Costs Authorized by Contract
Operating Equipment Purchased					107.75			
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.					59,022.24			
Total Costs								600,000.00

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 9/4/59 Operator Bertha Mineral Division THE NEW JERSEY ZINC CO.

Per [signature] Title Genl. Supt.

Remarks: Includes costs of A-543

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)

Shreadow

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

NARRATIVE REPORT - CHAFFIN PROJECT

Hole A-543 on Section 219 was incomplete at 1908 feet at the beginning of the month. The hole was bottomed at 2002. No additional mineralization was discovered.

Hole A-544 was collared 1600 feet down dip from A-542 on Section 181. This hole penetrated a shale interbedded with breccia about 150 feet thick in the upper part of the hole. The shale zone was repeated by a fault. Three hundred and forty-one feet below the shale an Archie reef is correlated with the Mottled Marker. The bed 116 feet below the Mottled Marker is tentatively correlated with the top of the Ribbon. The Ribbon is made up of bleached ribbony beds, bleached diagenetic breccia beds, and typical ellipsoidal limestone. The hole was bottomed at 1687 feet in the Ribbon.

Although the correlations are not firm, this hole seems to indicate a reverse fault between A-544 and A-542 with the order of 1800 feet displacement. The presence of the Ribbon at 1272 indicates that the country south of the fault is relatively shallow and drillable.

Hole A-545 was collared 820 feet northwest of A-543 on Section 219. The hole has been in nondescript grey dolomite of Malden type and no definite markers have been observed. It was incomplete at 714 feet the end of the month.

Hole A-546 was collared half way between A-542 and A-544 which are 1600 feet apart. It was down 45 feet in sedimentary breccia the end of the month.

DIAMOND DRILL LOG - A-543

Location: Chaffin Area, Section 219, First Hole on Exploratory Fence

506 N 9718 E

Inclination: Vertical Elevation: 2105

Started: 6/24/59 Completed: 8/5/59

RESULTS

From	To	Dist.	Recov.	
0	53	53	0	Red clay
53	217	164	164	Varied detrital dolomites
217	252	35	35	Bleached black augen
252	264	12	12	Slightly metamorphosed dolomite
264	313	49	49	Bleached black augen
313	314	1	1	Mass solid oolites
314	330	16	16	Coarse saccharoidal dolomite
330	334	4	4	Black composite shale partings
334	411	77	77	Miscl. dolomites
411	412	1	1	Composite shale partings
412	416	4	4	Strongly metamorphosed dolomite
416	432	16	16	Breccia, Pseudo sand grains, composite shale partings
432	481	49	49	Black augen and bleached
481	483	2	2	Oolite rock
483	520	37	37	Mud flakes and pseudo sand grains
520	530	10	10	Strongly metamorphosed dolomite
530	647	117	117	Breccia, mud flakes and pseudo sand grains
647	676	29	29	Strongly metamorphosed dolomite
676	740	64	64	Black augen and bleached black
740	759	19	19	Fault zone, mylonite
759	791	32	32	Black augen and bleached black
791	803	12	12	Strongly metamorphosed dolomite
803	854	51	50	Dense and saccharoidal dolomite
854	881	27	25	Saccharoidal, composite shale partings top and bottom
881	934	53	53	Saccharoidal and breccia
934	942	8	8	Archies
942	962	20	20	Shale partings and composite shale partings
962	988	26	26	Saccharoidal
988	991	3	3	Fault
991	1078	87	87	Black augen and bleached
1078	1094	16	16	Abundant pseudo sand grains
1094	1098	4	4	Fault
1098	1320	222	222	Local stylolites and shale partings
1320	1377	57	57	Archie reef, limestone and dolomite

From	To	Dist.	Recov.	Description
1377	1404	27	27	Ribbony limestone
1404	1466	62	62	Stylolites and pseudo sand grains One foot of estimated 3% 1443 to 1444 Zn
1466	1472	6	6	Banded mottling
1472	1489	17	17	Ribbony limestone
1489	1578	89	89	Saccharoidal limestone
1578	1583	5	5	Low grade estimated 1% Zn
1583	1626	43	43	Saccharoidal dolomite
1626	1636	10	10	Dense limestone
1636	1644	8	8	Mottled dolomite
1644	1654	10	6	Saccharoidal dolomite
1654	1670	16	16	Archie limestone
1670	1694	24	24	Ribbony limestone
1694	1712	18	18	Shale partings and composite shale parting limestone
1712	1729	17	17	Archie limestone
1729	1739	10	10	Composite shale parting limestone
1739	1764	25	25	Dense limestone
1764	1785	21	21	Ribbony and composite shale partings limestone
1785	1796	11	11	Archie and mottled limestone
1796	1799	3	3	Archie and mottled dolomite
1799	1832	33	33	Highly fractured dolomite fault
1832	1847	15	15	Mottled Marker?
1847	1884	35	35	Stylolites and mottled dolomite
1884	1908	24	24	Composite shale partings, dolomite
1908	1910	2	2	Abundant pseudo sand grains
1910	1931	21	21	Saccharoidal dolomite
1931	1944	13	13	Bleached ribbony dolomite
1944	1948	4	4	Strong met
1948	1960	12	12	Saccharoidal dolomite
1960	1980	20	20	Abundant stylolites
1980	2002	22	22	Composite shale partings

BOTTOM

DIAMOND DRILL LOG A-544

Location: Chaffin Tract, 1600 ft. down dip from A-542 on Section 181

2322 S 9860 E

Inclination: Vertical Elevation: 2139

Started: 7/18/59 Completed: 8/28/59

RESULTS

From	To	Dist.	Recov.	Description
0	32	32	0	Red clay
32	103	71	71	Saccharoidal dolomite
103	121	18	18	Massive Oolite rock
121	144	23	23	Massive mud flakes and pseudo sand grains
144	233	89	78	Limestone edgewise conglomerate
233	318	85	85	Black shale
318	339	21	21	Limestone edgewise conglomerate
339	388	49	49	Black shale
389	398	9	9	Saccharoidal sandy dolomite
398	437	39	39	Saccharoidal sandy dolomite
437	466	29	29	Composite shale partings
466	474	8	8	Banded
474	521	47	47	Painted looking mottling
521	576	55	55	Mylonite, fault zone
576	632	56	56	Painted type mottling
632	652	20	20	Sheared to massive limestone
652	667	15	15	Sand grain limestone
667	682	15	15	Edgewise conglomerate
682	760	78	78	Dark grey shale
760	815	55	55	Inter diagenetic breccia & shale
815	828	13	13	Saccharoidal fractured
828	863	35	35	Dense dolomite locally composite shale partings
863	884	21	21	Varied dolomites
884	949	65	65	Painted type mottling
949	986	37	37	Ribbony ellips and composite shale partings
986	1027	41	34	Saccharoidal
1027	1053	26	26	Abundant shale partings
1053	1156	103	103	Varied dolomites
1156	1183	27	27	Abundant Archies Mot Reef MM?
1183	1242	59	59	Painted type banded mottling
1242	1256	14	14	Shale partings & mud balls
1256	1272	16	16	Saccharoidal stylolites
1272				Top of Ribbon?
1272	1305	33	33	Bleached diagenetic breccia
1305	1311	6	6	Ribbony dolomite

From	To	Dist.	Recov.	Description
1311	1326	15	15	Mottled
1326	1363	37	37	Ribbony composite shale partings
1363	1376	13	13	Stylolitic bleached
1376	1412	36	36	Banded thin ribbony met. Bleached
1412	1441	29	29	Bleached ribbony locally banded
1441	1465	24	24	Bleached diagenetic breccia
1465	1559	94	94	Bleach ribbony
1559	1570	11	11	T.O.M.?
1570	1578	8	8	Bleached diagenetic breccia
1578	1605	27	27	Ribbony dolomite
1605	1684	79	79	Ellips ribbony limestone
1684	1687	3	3	Ellips ribbony dolomite
	BOTTOM			

DIAMOND DRILL LOG A-5

Location: Chaffin Area, Section 219, second hole on Exploratory Fence

1086 N 9139 E

Inclination: Vertical Elevation: 2158

Started: 8/7/59 Completed:

RESULTS

From	To	Dist	Recov.	Description
0	58	58	-	Red clay
58	172	108	108	Saccharoidal dolomite locally silicified. Much "soft rock" 144-156
172	173	1	1	Oxidized low grade
173	189	16	10	Strongly metamorphosed dolomite
189	203	14	4	Saccharoidal dolomite, much "soft rock"
203	209	6	4	Buff dolomite with sand grains
209	245	36	36	Fractured saccharoidal
245	253	8	4	Fractured, oxidized, mylonite, much "soft rock"
253	269	16	13	Same, "soft rock" @ 266
269	299	30	30	Saccharoidal
299	302	3	No Core	
302	380	78	78	Varied dolomites
380	389	9	9	Archie dolomite
389	411	22	22	Varied dolomites
411	415	4	4	Pseudo sand grains
415	431	16	2	Saccharoidal "soft rock"
431	455	24	24	Varied dolomites
455	489	34	34	Dense, pseudo sand grains
489	550	61	61	Varied dolomites
550	552	2	2	Mottled dolomite
552	570	18	8	Saccharoidal dolomite
570	589	19	18	Strong met dolomite
589	650	61	57	Varied dolomites
650	658	8	7	Shaly dolomite
658	714	56	56	Varied dolomites

Incomplete

DIAMOND DRILL LOG A-546

Location: Chaffin Area, Section 181, Hole in Exploratory Fence

1761 S 9297 E

Inclination: Vertical Elevation: 2107

Started: 8/31/59 Completed:

RESULTS

From	To	Dist.	Recov.	Description
0	12	12		Red clay
12	45	33	32	Breccia with varied fragments

Incomplete

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
REGION V

ELECTROTECHNICAL
EXPERIMENT STATION

P. O. BOX 217
NORRIS, TENNESSEE

August 17, 1959

Memorandum

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

From: Administrative Assistant, Norris, Tennessee

Subject: Monthly reports and vouchers

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

✓ Idm-E1204	The New Jersey Zinc Company Docket No. DMEA-5008 10th payment - month of July Amount $3404.26
14-23-090-2001	Dorroh-McCormick Docket No. OME-6011 3rd payment - month of July Amount $973.75

Helen R. Miller

Helen R. Miller

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

OFFICIAL FILE COPY
O. M. E.
RECEIVED AUG 19 1959

DATE	INITIALS	CODE
8-19	gad	v vo
"	[illegible]	110

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

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

PAID 19 1959 VOUCHER & SCHEDULE OF PAYMENTS K-5 O.M.E.

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of July, 1959 Docket No. DMEA 5008 Contract No. 1204
Operator's Name The New Jersey Zinc Company Minerals Zinc - Lead
Address Austinville, Virginia
Contract Amount, $ 66,906 Government Participation: ____% Amount, $ 33,453

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	6098.00	41,241.00	47339.00	9/4/59 W.R.K.		
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
Core Trays @ $2.50	190.00	1,325.00	1515.00			
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	-	180.00	180.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify): Incidental Allowances @ $.22/ft.	520.52	3,866.28	4386.80			
TOTALS	6808.52	46,612.28	53420.80	6808.52	46,612.28	53420.80

I certify that the above bill is correct and just and that payment therefor has not been received.
Date 8/10/59 *Payee Berthe Mineral Division THE NEW JERSEY ZINC COMPANY
By [signature] Title General Superintendent

*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:
$ 3404.26
Signature Helen R. Miller (Authorized Certifying Officer)
Date AUG 17 1959 Vou. No. 7
(See other side)

3404.26

(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-1204 in accordance with the terms of the contract.

Signature T. J. Lynch Title MINING ENGINEER U. S. BUREAU OF MINES Date AUG 11 1959

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Title EXECUTIVE OFFICER OME FIELD TEAM REGION V Date AUG 11 1959

MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

AUG 19 1959
O.M.E.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of July 195 9 Docket No. DMEA 5008 Contract No. 1204

Operator's Name The New Jersey Zinc Company Minerals Zinc - Lead

Address Austinville, Virginia

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	2250.00	1000	47339.00	19940	2.37	24000	2.50
Churn 1000-1500	Ft	1250.00	500					
Auger 1500-2000	Ft	1500.00	500					
~~Stripping~~ 2000-2500	Ft	1098.00	366					
~~Trenching~~ Sample Assays	Sample	-	-	180.00	91	2.00	300	2.00
~~Test Pits~~ Core Trays	Trays	190.00	76	1515.00	606	2.50	600	2.50
Roads and Trails								
Incidental Allow. @ $.22/ft	Ft	520.52	2366	4386.80	19940	.22	24000	.22
TOTAL DISTRIBUTED COSTS		6808.52		53420.80				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		6808.52		53420.80	53313.05			$66,906

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 8/10/59 Operator Bertha Mineral Division THE NEW JERSEY ZINC CO

Per [signature] Title General Superintendent

REMARKS: Includes costs of A-542

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

(Instructions on reverse)

(For Government use only)

[signature]
GEOLOGIST, U. S. G. S.
AUG 11 '59

INSTRUCTIONS

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

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

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

GPO 872894

NARRATIVE REPORT - CHAFFIN PROJECT

Hole A-542, on Section 181, which was incomplete at 1711 feet last month was bottomed at 2366 feet. No mineralization was encountered in the hole. Due to facie changes, correlations with the holes up dip were difficult. Two quite different beds, one metamorphosed, were suspected of being the Mottled Marker. The hole was carried 150 feet below the lower bed.

Hole A-543, on Section 219, which was incomplete at 366 feet last month was still incomplete at 1908 feet the end of the month. An Archie reef practically identical with that at Fossil Point was penetrated from 1320 to 1377. One foot of estimated 3% Zn was encountered between 1443 and 1444 and five feet of estimated 1% Zn 1578 to 1583. The Mottled Marker was encountered from 1832 to 1847.

Hole A-544 was spotted 1600 feet down dip from A-542 on Section 181 at tentative location "G" shown on the map forwarded last month. This location was chosen to get on the upthrow side of a suspected fault near location "F" and to avoid hitting the fault. The hole has encountered typical upper horizon material including a total of 134 feet of black shale. It was incomplete at 398 feet the end of the month.

DIAMOND DRILL LOG - A-542

Location: Chaffin Area, Section 181, 1600 ft. Down Dip from A-530

S 1191 E 8728

Inclination: Vertical Elevation: 2105

Started: 6/1/59 Completed: 7/15/59

RESULTS

From	To	Dist.	Recov.	Description
0	10	10	0	Red clay
10	85	75	75	Mud flakes, Pseudo sand grains, Oolites, Mass dolomite
85	87	2	2	Mylonite, Fault
87	186	99	99	Mud flakes, Oolites, Pseudo sand grains, Occasional Archies
186	195	9	9	Black augen, mud flakes, occasional archies
195	293	98	98	Black augen, Abundant archies
293	296	3	3	Thin bedded dark gray
296	330	34	34	Diagenetic breccia, mud flakes, Pseudo sand grains, Oolites
330	414	84	84	Mud flakes, Pseudo sand grains, Oolites, Massive
414	423	9	9	Archies and augen
423	451	28	28	Black augen and thin bedded
451	459	8	8	Archies
459	470	11	11	Saccharoidal dolomite
470	534	64	64	Diagenetic breccia, pseudo sand grains & Mud flakes
534	566	32	32	Black augen and bleached black
566	600	34	34	Pseudo sand grains and Oolite, Massive
600	604	4	4	Shear zone, fault
604	610	6	6	Pseudo sand grains and oolites
610	612	2	2	Shaly dolomite
612	641	29	29	Miscl. dolomites
641	697	56	56	Pseudo sand grains, massive
697	754	57	57	Diagenetic mottling
754	768	14	14	Abundant oolites, local archies
768	810	42	42	Abundant pisolites and oolites
810	811	1	1	Shaly dolomite
811	831	20	20	Diagenetic breccia, black augen
831	862	31	31	Massive, mud flakes, local banding
862	1027	165	165	Miscl., Mottled, diagenetic breccia, etc.
1027	1040	13	13	Pseudo sand grains and oolites
1040	1125	85	85	Diagenetic breccia, oolites, pseudo sand grains and black augen
1125	1139	14	14	Limestone diagenetic breccia
1139	1161	22	22	Dolomite diagenetic breccia

From	To	Dist.	Recov.	
1161	1163	2	2	Shear zone, fault
1163	1222	59	59	Bleached black augen
1222	1232	10	10	Mass locally bedded
1232	1332	100	100	Bleached black augen and diagenetic breccia
1332	1356	24	24	Bedded limestone, oolites in bedding
1356	1365	9	9	Banded dolomite
1365	1391	26	26	Fault, Mylonite, Shear
1391	1408	17	17	Saccharoidal dolomite
1408	1490	92	92	Banded straight bands
1490	1514	24	24	Interbedded shale and diagenetic breccia
1514	1564	50	50	Mass limestone
1564	1671	107	107	Interbedded limestone and shale
1671	1707	36	36	Massive limestone
1707	1712	5	5	Mass dolomite pseudo sand grains
1712	1759	47	47	Saccharoidal dolomite
1759	1799	40	40	Strongly metamorphosed Mottled Marker?
1799	1812	13	13	Limestone, composite shale partings
1812	1857	45	45	Shale partings and stylolites
1857	1878	21	21	Metamorphosed dolomite
1878	1934	56	56	Pseudo sand grains, shale partings and composite shale partings
1934	1958	24	24	Mottled bed
1958	1983	25	25	Coarse banded split by one foot Shaly Bed
1983	2005	22	21	Dense locally mottled
2005	2019	14	14	Strongly metamorphosed
2019	2050	31	31	Ribbony shale partings
2050	2059	9	9	Saccharoidal dolomite
2059	2070	11	11	Ribbony ellipsoidal limestone
2070	2089	19	19	Locally banded, locally ribbony
2089	2105	16	16	Strongly metamorphosed dolomite
2105	2152	47	47	Mottled and ribbony locally limestone
2152	2209	57	57	Mottled Marker?
2209	2262	53	53	Ribbony limestone and dolomite
2262	2276	14	14	Dense stylolites and shale partings
2276	2309	37	37	Saccharoidal banded at top
2309	2330	21	21	Dense, archies
2330	2366	36	36	Dense stylolites and shale partings

BOTTOM

DIAMOND DRILL LOG - A-543

Location: Chaffin Area, Section 219, First Hole on Exploratory Fence

506 N 9718 E

Inclination: Vertical Elevation: 2105

Started: 6/24/59 Completed: 8/5/59

RESULTS

From	To	Dist.	Recov.	
0	53	53	0	Red clay
53	217	164	164	Varied detrital dolomites
217	252	35	35	Bleached black augen
252	264	12	12	Slightly metamorphosed dolomite
264	313	49	49	Bleached black augen
313	314	1	1	Mass solid oolites
314	330	16	16	Coarse saccharoidal dolomite
330	334	4	4	Black composite shale partings
334	411	77	77	Miscl. dolomites
411	412	1	1	Composite shale partings
412	416	4	4	Strongly metamorphosed dolomite
416	432	16	16	Breccia, Pseudo sand grains, composite shale partings
432	481	49	49	Black augen and bleached
481	483	2	2	Oolite rock
483	520	37	37	Mud flakes and pseudo sand grains
520	530	10	10	Strongly metamorphosed dolomite
530	647	117	117	Breccia, mud flakes and pseudo sand grains
647	676	29	29	Strongly metamorphosed dolomite
676	740	64	64	Black augen and bleached black
740	759	19	19	Fault zone, mylonite
759	791	32	32	Black augen and bleached black
791	803	12	12	Strongly metamorphosed dolomite
803	854	51	50	Dense and saccharoidal dolomite
854	881	27	25	Saccharoidal, composite shale partings top and bottom
881	934	53	53	Saccharoidal and breccia
934	942	8	8	Archies
942	962	20	20	Shale partings and composite shale partings
962	988	26	26	Saccharoidal
988	991	3	3	Fault
991	1078	87	87	Black augen and bleached
1078	1094	16	16	Abundant pseudo sand grains
1094	1098	4	4	Fault
1098	1320	222	222	Local stylolites and shale partings
1320	1377	57	57	Archie reef, limestone and dolomite

From	To	Dist.	Recov.	Description
1377	1404	27	27	Ribbony limestone
1404	1466	62	62	Stylolites and pseudo sand grains One foot of estimated 3% 1443 to 1444
1466	1472	6	6	Banded mottling
1472	1489	17	17	Ribbony limestone
1489	1578	89	89	Saccharoidal limestone
1578	1583	5	5	Low grade estimated 1% Zn
1583	1626	43	43	Saccharoidal dolomite
1626	1636	10	10	Dense limestone
1636	1644	8	8	Mottled dolomite
1644	1654	10	6	Saccharoidal dolomite
1654	1670	16	16	Archie limestone
1670	1694	24	24	Ribbony limestone
1694	1712	18	18	Shale partings and composite shale parting limestone
1712	1729	17	17	Archie limestone
1729	1739	10	10	Composite shale parting limestone
1739	1764	25	25	Dense limestone
1764	1785	21	21	Ribbony and composite shale partings limestone
1785	1796	11	11	Archie and mottled limestone
1796	1799	3	3	Archie and mottled dolomite
1799	1832	33	33	Highly fractured dolomite fault
1832	1847	15	15	Mottled Marker?
1847	1884	35	35	Stylolites and mottled dolomite
1884	1908	24	24	Composite shale partings, dolomite

Incomplete

DIAMOND DRILL LOG A-544

Location: Chaffin Tract, 1600 ft. down dip from A-542 on Section 181

2322 S 9860 E

Inclination: Vertical Elevation: 2139

Started: 7/18/59 Completed:

RESULTS

From	To	Dist.	Recov.	Description
0	32	32	0	Red clay
32	103	71	71	Saccharoidal dolomite
103	121	18	18	Massive Oolite rock
121	144	23	23	Massive mud flakes and pseudo sand grains
144	233	89	78	Limestone edgewise conglomerate
233	318	85	85	Black shale
318	339	21	21	Limestone edgewise conglomerate
339	388	49	49	Black shale
389	398	9	9	Saccharoidal sandy dolomite

Incomplete

BERTHA MINERAL DIVISION

THE NEW JERSEY ZINC COMPANY

AUSTINVILLE, VA.

June 9, 1959

OFFICIAL FILE COPY
O. M. E.
RECEIVED JUN 19 1959

DATE	INITIALS	CODE
6/19	G	220
		500

Regional Executive Officer
Defense Minerals Exploration Admn.
Room 2-B, Post Office Building
Knoxville 2, Tennessee

Subject: May Monthly Report
DMEA 5008, Contract IDM-E-1204
Chaffin Tract
Austinville, Virginia

Dear Sir:

Attached is our May Monthly Report on the diamond drilling of the Chaffin Tract, Austinville, Virginia.

You will note that we have overrun by seventeen core trays in the core tray account. We would like to know whether an amendment can be prepared which will permit unexpended funds in the assay category to be applied toward the overrun in the core tray category.

Very truly yours,

W. L. Albers
General Superintendent

WHoratioBrown:rjl
In quintuplicate
Attachment

RECEIVED
JUN 10 1959
U. S. Geological Survey
Geologic Division
Knoxville, Tenn.

2 cys rept. to 130
orig & cy memo to 130

EXTRA COPY
O. M. E.
RECEIVED MAY 22 1959

DATE	INITIALS	CODE
5/26	G	220
"	JEL	110
5/26	[illegible]	800
		500

Memorandum

To: Operating Committee, OME - Washington, D. C.

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

Subject: DMEA-5008, Idm-E1204(zinc) The New Jersey Zinc Co., New York, N.Y. Chaffin Tract, Wythe County, Va.

Reference is made to your memorandum of May 12. The latest interim report is attached (original and two copies).

We have just been advised that hole A-538 has been completed at 1821 feet and A-539 at 1212 feet. No mineralization was found below the depths given in the interim report. Drilling is now in progress at A-540, on section 181, 100 feet northwest (up dip) from A-538 and at A-541, on section 163, 100 feet southeast (down dip) from Hole A-539. The funds authorized in the contract will be used up before completion of these two holes.

The Operator has already suggested deepening of three holes, and we are in agreement. These holes and the proposed additional footages are:

A-531	90 feet
A-535	85 feet
A-536	50 feet

It is our opinion that additional drilling, after completion of the present authorized footage, is amply justified by the possibility of increasing the ore already discovered to a much more significant tonnage figure. Therefore we recommend the following additional work:

Also approve two extensions for [illegible] further [illegible] already found

Location	Approximate Footage
Completion of A-540	*1750
Completion of A-541	*1200
Deepening A-531, 535, 536	225
Eight more holes on Secs. 161,173 and 181.	12,000
	15,175

*Approximately 2000 feet of this footage will be covered by present authorized amount.

Precise locations of the eight new holes cannot be given, but we would suggest at least one on section 181 between A-540 and A-532; three on section 173 on strike from A-538, two or three on Section 189, also on strike from A-538. In addition, one or more up dip from A-531 and one or more to the west of A-539 and A-541, which would require addition of land to the project area, may be desirable.

In summary, we recommend authorization of additional drilling and supporting services, at the rates authorized in the existing contract, in total amount of 15,000 feet, and extension of time for completion of the project until December 31, 1959.

Robert A. Laurence
Executive Officer, OME
Region V

V. J. Lynch, Member
Bureau of Mines

RAL/zm
Cpr. Com-2
Lynch
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UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
ROOM 2-B POST OFFICE BLDG.
KNOXVILLE 2, TENN.

April 20, 1959

Memorandum

To: Operating Committee, OME - Washington

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

Subject: DMEA-5008, Idm-R1204 (Zinc-lead)
The New Jersey Zinc Co., New York, N.Y.
Chaffin Tract, Wythe County, Virginia

Reference is made to our memorandum of March 19.

Information obtained since that date tends to support the request for additional drilling, submitted by the Operator on March 15. Hole A-537 will be classed as an ore hole, thus adding to the ore shoot already discovered. Even so, the tonnage discovered will be small and though probably certified, the present program will not really explore the possibilities of the area.

We recommend approval of the Operator's request.

Robert A. Laurence,
Executive Officer, OME - Region V

Wm. A. Beck, for V. J. Lynch
Member, Bureau of Mines

RAL/zm
cc
Lynch
Files

March 19, 1959

Memorandum

To: Operating Committee, OME - Washington, D. C.

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

Subject: DMEA-5008, Idm-E1204 (zinc-lead) The New Jersey Zinc Company, New York, N.Y. Chaffin Tract, Wythe County, Virginia

Enclosed are three copies of a request submitted by the Operator for an amendment authorizing an additional $100,000 for the Chaffin project.

This has just been received and we have not had time to study the proposal or to discuss it with the Field Examiners. A memorandum containing our recommendations will follow shortly. However, we are in agreement that additional work on the Chaffin tract is justified, although a certification could possibly be supported on results to date.

We have told the Operator informally that it is probable they will be asked to complete the new OME forms and to submit financial eligibility data but that we have not actually been advised as to how requests for extensions of DMEA contracts will be handled. We suggest that a letter explaining this situation should be sent to Mr. Albers by the Washington office.

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

WAB/zm
cc: Lynch
Files, Shirley

V. J. Lynch, Member
Bureau of Mines

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
ROOM 2-B POST OFFICE BLDG.
KNOXVILLE 2, TENN.

March 19, 1959

RECEIVED
MAR 1959
CODE

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

Re: DMA-5008, Idm-F120h (~~zinc-lead~~)
Chaffin Estate
Wythe County, Virginia

Dear Mr. Albers:

Your letter of March 16 and accompanying request for an amendment to the subject contract has been forwarded to our Washington office, as the Field Team does not have the authority to make such amendments. You will be advised by the Washington office if any additional information is required.

Sincerely yours,

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

RAL/sm
cc
Opr. Com.-2
Lynch
Files
Shirley

BERTHA MINERAL DIVISION

THE NEW JERSEY ZINC COMPANY

AUSTINVILLE, VA.

March 16, 1959

RECEIVED
MAR 18 1959
U. S. Geological Survey
Geologic Division
Knoxville, Tenn.

Regional Executive Officer
Defense Minerals Exploration Admn.
Room 2-B Post Office Building
Knoxville 2, Tennessee

Subject: Request for Amendment
DMEA 5008, Contract IDM-E-1204
Chaffin Tract, Austinville, Va.

Dear Sir:

The subject contract which was designed to explore the zinc-lead potential of the Chaffin Tract adjoining the Austinville Mine property has been successful in that what appears a very significant mineral discovery has been made. However, on account of the small size of the contract, the depth of the ore and the difficulties of following it, and the potential of the relatively large acreage involved, it will be necessary to drill a larger footage in order to do a definitive job.

Therefore, it is requested that an amendment be added to the present contract increasing the footage by an additional 35,000 feet and the funds by $100,000, half to be supplied by DMEA and half by the Company.

A memorandum supporting this request, complete with maps and sections, is attached.

If this request for an amendment meets with your approval, we would appreciate it if you would prepare the amendment and forward it to us for signature.

Very truly yours,

W. L. Albers
General Superintendent

WHoratioBrown:rjl
In quintuplicate

Attachments

Original Proposal
Results to Date
Proposed Additional Work
Estimated Costs

Enclosures

Geochemical Map Chaffin Area 7GB-4338B
Section 2189A
Section 4405
Section 4406
Section 4428

Original Proposal

In the original proposal on which our present contract is based, it was pointed out that the Chaffin tract of 970 acres adjoins the Austinville Mine tract on the east and that it is underlain by the Shady formation which contains ore through a 1900-foot stratigraphic range. The orebodies of the Austinville-Ivanhoe district occur in a well defined en echelon pattern. An extrapolation of this pattern to the east indicated the possibility of ore shoots of the system on the Chaffin estate. The presence of strike and cross faulting in the area made it still more promising for ore.

On a basis of the above, it was proposed to start the exploration with a fence of four holes spaced at 800-foot intervals. The object of this drilling was to determine the location of the most promising ground and drill this ground in detail.

Results to Date

Drilling was started based on the above plan and the first hole, A-530, encountered a major thickness and grade of ore. This can be seen in plan on 7GB-4338B and in section on Section 181, 7GB-2189A. The penetration in A-530 of 106 feet of 4.0% Zn and 1.2% Pb was in the Malden Horizon, the most favorable horizon in the Austinville mine. Two additional runs of low grade were penetrated at a lower horizon.

Hole A-531 was drilled 100 feet up dip from A-530 and encountered 15 feet of 7.1% Zn and 2.4% Pb in the upper part of the Malden Horizon.

Hole A-532 was drilled 100 feet down dip from A-530. Ore and mineralization was found scattered through a 255-foot range with one of the runs of a commercial thickness and grade and several runs marginal.

On a basis of the habit of neighboring ore bodies, it was assumed that we were drilling a pencil orebody having a pitch close to N 65 E. Holes A-533 and A-534 were drilled on this assumption and both holes were essentially barren, although both had fair runs of metamorphosed ground at the Malden ore horizon.

Following this drilling, an attempt was made to trace the ore by means of geophysics. The results of the job were so indefinite that it was not possible to use them.

About this time a soil sampling or geochemical job was done over the entire area of the Chaffin tract and is shown on 7GB-4338B. Samples were spaced at 200-foot intervals on fences spaced 500 feet apart. Three areas containing anomalously high (plus 400 PPM) samples were found, plus several individual high samples.

One of the groups of anomalies starts at the middle of the west edge of 7GB-4338B and trends toward the ore bearing area now being drilled. The other two are in the general area into which the en echelon pattern of Austinville ore bodies was extrapolated. These geochemical anomalies are believed to be significant and probably indicate leakage mineralization from ore at depth in the Malden horizon.

After drilling holes A-533 and 534 on Section 189, the drill was moved to Section 173.

Hole A-535 was drilled on Section 173 S 45 W from A-530. Two thin runs of low grade were discovered well above the usual ore horizons and the drill was moved 200 feet northwest. This hole, A-536, encountered the thickest run of strong metamorphism, 80 feet, in the Malden horizon and 25 feet of low grade below the Malden.

On a basis of the showings in these two holes, a straddle was suspected and A-537 was drilled between A-535 and A-536. It is not yet down to the Malden Horizon.

As can be seen on the three cross sections, Section 173, 181, and 189, and the accompanying longitudinal section 7GB-4428, there is little or no faulting cutting the drilled area. Some was suspected but has been disproved.

At the moment the main problem is, where is the extension of the ore in A-530, 531 and 532?

Proposed Additional Work

Two principal jobs remain to be done on the Chaffin exploration:

(1) Locate the extensions of the ore already found in A-530, 531 and 532 and trace it out.

(2) Explore and try to determine the potential of the larger area.

It certainly seems reasonable to believe that the A-530 ore has an extension, probably one of considerable size. The location of this ore is our most important immediate problem. On 7GB-4338 B, proposed holes A, B, and C are the first three planned to locate and trace this ore. The number of holes needed to complete this phase of the project will depend on the size and shape of the orebody.

The potential of this large area was not fully appreciated when this job was begun, but the discovery of the A-530 ore and geochemical anomalies proved that the potential is much greater than can be tested by the limited footage available. The following program which is divided into four parts will rectify this.

It is proposed first that holes D, E, F, G, and H as shown on 7GB-4338B, be drilled on Section 181 at 800-foot intervals as planned in the original Chaffin contract. The completion of this fence will give us a much clearer picture of the adjoining country and facilitate the planning of the holes in it.

The second project is planned about 2,000 feet southwest of the present area of drilling. There is in this area a string of geochemical anomalies north of the Callahan fault. It is planned to start with two holes, I and J, drilled at 400-foot intervals on Section 129.

The third proposed project is a fence of holes spaced at 800-foot intervals across the area of geochemical anomalies and en echelon extrapolations. These holes would be placed on Section 219. Tentative locations are K, L, M, N, O, and P.

It is estimated that if the favorable horizons are not deeper than expected, 24 holes should be drilled with the footage remaining and the additional 35,000 feet requested and leave enough footage for tracing out the presently known ore and other discoveries.

Thirteen of the sixteen holes listed are designed to test the area for promising mineralization and alteration. If such promising areas are found, they will have to be drilled with a pattern of follow-up holes.

The pattern for follow-up drilling that we are now using is satisfactory, and it is suggested that we continue with that pattern.

On account of much of the proposed drilling being further down dip than that heretofore, it is probable that this job will average about 1,600 feet depth.

Estimate of Costs

In the foregoing proposals, sixteen holes are laid out and about eleven follow-up holes are expected. This should do an adequate job on the Chaffin tract.

To summarize:

Holes drilled or drilling to date	8
Holes laid out above	16
Follow-up holes	11
	35

Twelve of these holes will be paid for under the contract now in force. It is requested that an additional appropriation of $100,000 ($50,000 New Jersey Zinc Company and $50,000 DMEA) be granted to drill the additional 23 holes.

WHoratioBrown:rjl

OFFICIAL FILE COPY
O. M. E.
RECEIVED AUG 5 1959

DATE	INITIALS	CODE
8-5	gad	110
8/5	JEF	110
8/6	4007	800
8/10	K	500

OFFICE OF MINERALS EXPLORATION

INTERIM REPORT

DMEA-5008, Idm-E1204 - zinc-lead

Operator: The New Jersey Zinc Company, Austinville, Virginia

Location: Chaffin Estate, Wythe County, Virginia

Summary of drilling completed

	Since last inspection	To date
Number of holes.....	1	13
Footage.....	2,366	19,900 19,900

Number of holes showing:

a) Commercial grade zinc-lead ore.....	7
b) Non-commercial mineralization.....	5
c) No mineralization.....	1

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

Hole A-542: Located approximately 1600 feet down-dip from Hole A-530 on Section 181 (precise coordinate and elevation not yet available). Drilling started: 6/1/59; completed 7/15/59. Total depth: 2,366 feet.

Summary log: 0-10 residual clay; except for three "mottled markers" no other distinctive stratigraphic zones have yet been recognized--the three mottled-markers occur at depths of 1759-1799, 1934-1958, and 2152-2209; although none of these markers have been correlated definitely with the mottled-marker zone recognized in the holes up-dip in the section, the uppermost one is the most feasible correlation. Mineralization: barren hole.

Drilling in progress

Hole A-543 was still drilling. At the time of the current inspection it had reached a depth of 1,658 feet. Again no stratigraphic zones had been recognized with any degree of certainty, although a zone of archeocyathid material very similar to that of the Ivanhoe member occurs at a depth of 1320-1377 feet. Two short runs of mineralization estimated at 1 percent, combined lead-zinc were penetrated at depths of 1443-1444 and 1578-1583 feet.

Hole A-544 has been started at a site 1600 feet down dip from Hole A-542 on Section 181. The present depth of this hole is 212 ft.

Inspected: July 27, 1959

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

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

Budget Bureau No. 42-R1036.5

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

PAID ON VOUCHER & SCHEDULE
PAYMENTS K-

JUL 20 1959 O.M.E.R.

Month of June 1959 Docket No. DMEA 5008 Contract No. 1204
Operator's Name The New Jersey Zinc Company Minerals Zinc - Lead
Address Austinville, Virginia
Contract Amount, $ 66,906 Government Participation: ____ % Amount, $ 33,453

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:				7/24/59	J.P.K.	
Drilling	7838.50	33402.50	41,241.00	7838.50	33294.75	41,133.25
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
Core Trays @ $2.50	282.50	1042.50	1,325.00	282.50	1000.00	1282.50
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	26.00	154.00	180.00	26.00 X	154.00	X 180.00
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify): Incidental Allowances @ $.22/Ft	725.56	3140.72	3,866.28	725.56	3140.72	3866.28
TOTALS	8872.56	37739.72	46,612.28	8872.56	37,589.47	46,462.03

I certify that the above bill is correct and just and that payment therefor has not been received.
Date 7/9/59 *Payee Bertha Mineral Division The New Jersey Zinc Company
By [signature] Title General 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:
$ 4436.28
Signature [signature]
(Authorized Certifying Officer)
Date JUL 17 1959 Vou. No. 2
(See other side)

4436.28

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. E1204 in accordance with the terms of the contract.

Signature [illegible] Title GEOLOGIST, U. S. G. S. Date JUL 13 1959

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature [illegible] Title ACTING EXECUTIVE OFFICER DME - REGION V Date JUL 13 1959

MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

JUL 20 1959 O.M.E.

Month of June 1959 Docket No. DMEA 5008 Contract No. 1204

Operator's Name The New Jersey Zinc Company Minerals Zinc - Lead

Address Austinville, Virginia

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	4500.00	2000	41,241.00	17574	2.35	24000	2.50
~~Churn~~ 1000-1500	Ft	2777.50	1111					
~~Angle~~ 1500-2000	Ft	561.00	187					
~~Stripping~~ Samp.&Assay	Samp	26.00	13	180.00	90	2.00	300	2.00
~~Trenching~~ Core Trays	Trays	282.50	113	1,325.00	530	2.50	600	2.50
Test Pits								
Roads and Trails								
Incidental Allowances ~~Ft.~~ @ .22/Ft	Ft	725.56	3298	3,866.28	17574	.22	24000	.22
Total Distributed Costs		8872.56		46,612.28				Total Costs Authorized by Contract
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
Total Costs		8872.56		46,612.28				$66,906

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 7/9/59 Operator Bertha Mineral Division The New Jersey Zinc Co

Per [signature] Title General Supt.

Remarks: Includes Costs of A-540, A-541, A-531 (Deepened) A-532 (Deepened) and A-536 (Deepened)

→ 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

NARRATIVE REPORT - CHAFFIN PROJECT

Hole A-541 was at 1131 the beginning of the month. The mineralized ground reported last month between 1115 and 1129 assayed 4.83% Zn and 0.08% Pb. A second penetration between 1167 and 1215 assayed 3.1% Zn and 1.1% Pb. The hole was bottomed at 1340.

Hole A-542 was collared 800 feet down dip from A-538 on Section 181. At the end of the month the hole was incomplete at 1711. The correlation between this hole and the others up dip is not yet clear.

Hole A-543 was collared on Section 219 as the first hole in an exploratory fence, 5100 feet southeast of the Base Line. At the end of June the hole was at 366 feet in the Mystery Series.

After the discovery of the 28-foot thickness of ore between 1361 and 1389 in A-537, it was decided to deepen four of the neighboring holes to test their horizon.

A-531 was deepened from 1321 to 1441. Ore was penetrated from 1412 to 1424 running 3.97% Zn and 0.83% Pb.

A-532 was deepened from 1443 to 1498. No ore was found, but strong metamorphism was encountered.

A-535 was entered in an attempt to deepen it but conditions in the hole were so bad that the attempt was abandoned and no deepening was done.

A-536 was deepened from 1327 to 1423. Ore was encountered from 1362 to 1373 running 5.9% Zn and 0.2% Pb. This hole completed the deepening project.

QUARTERLY SUMMARY

During the quarter ending June 30, 1959, the following holes were completed with the results noted below:

Hole	Depth	Collar	Bottom	Results
A-537	1425	Post TM	Austinville Dolomite	14' 1.8% Zn, 0.1% Pb
				40' Barren
				9' 7.2% Zn, 1.0% Pb
				193' Barren
				10' 0.74% Zn, 0.15% Pb
				28' 5.8% Zn, 0.23% Pb
A-538	1821	Post TM	Austinville Dolomite	12' 1.33% Zn, Nil Pb
				42' Barren
				13' 0.15% Zn, Nil Pb
				82' Barren
				8' 3.28% Zn, 0.21% Pb
				581' Barren
				10' 0.71% Zn, 0.22% Pb
				24' 3.46% Zn, 0.29% Pb
				11' 0.2% Zn, Nil Pb
A-539	1212	Post TM	Austinville Dolomite	22' 2.09% Zn, Nil Pb
A-540	1687	Post TM	Austinville Dolomite	Mineralized
A-541	1340	Post TM	Austinville Dolomite	15' 3.9% Zn, 0.8% Pb
				32' Barren
				48' 3.1% Zn, 1.1% Pb
A-531 (Deepened)	1441	Austinville Dolomite	Austinville* Dolomite	12' 3.97% Zn, 0.83% Pb
A-532 (Deepened)	1498	Austinville Dolomite	Austinville* Dolomite	Barren
A-536	1423	Austinville Dolomite	Austinville* Dolomite	11' 5.9% Zn, 0.2% Pb

*Start of Deepening

DIAMOND DRILL LOG A-541

Location: Chaffin Area, Section 163, 100 feet Down Dip from A-539

6848 S 585 E

Inclination: Vertical Elevation: 2174

Started: 5/11/59 Completed:

RESULTS

From	To	Dist.	Recov.	Description
0	26	20		Red clay
26	114	88	84	Black augen & bleached black
114	115	1	1	Shaly dolomite
115	128	13	13	Light grey saccharoidal
128	144	16	16	Composite shale partings
144	357	213	213	Black augen and bleached black
357	358	1	1	Straticulate
358	376	18	18	Black augen
376	379	3	3	Limey straticulate
379	661	282	282	Interbedded black augen and dense black
661	665	4	4	Pseudo sand grains
665	681	16	16	Bleach black augen
681	691	10	10	Dense massive and thin bedded
691	739	48	48	Black augen and bleached
739	767	28	28	Thin bedded and massive
767	768	1	1	Oolite
768	914	146	146	Leached buff
914	921	7	6	Taylor Marker type Mottling, Taylor Marker?
921	923	2	0	Soft rock
923	942	19	19	Miscl. textures
942	943	1	0	Soft rock
943	952	9	8	Miscl. textures
952	966	14	0	Soft rock
966	1017	41	24	Fractured and broken dolomite
1017	1026	9	4	Shale partings, fractured
1026	1036	10	5	Saccharoidal, galena @ 1033
1036	1038	2	0	Cavity
1038	1047	9	4	Light grey occasional mineralization
1047	1050	3	1	Estimated 10% sphalerite
1050	1111	61	20	Light grey saccharoidal sphalerite @ 1110
1111	1115	4	4	Mottled dolomite
1115	1129	14	14	Ore, 4.83% Zn, 0.08% Pb
1129	1130	1	1	Fault zone, ore, 3.08% Zn, 0.09% Pb
1130	1134	4	4	Mylonite, fault zone
1134	1158	24	11	Strongly metamorphosed dolomite
1158	1167	9	4	Mottled dolomite
1167	1185	18	17	Mottled Marker
1167	1215	48	45	Ore, 3.1% Zn, 1.1% Pb
1215	1250	35	22	Mineralized Dolomite
1250	1340	110	83	Varied dolomites

BOTTOM

DIAMOND DRILL LOG - A-542

Location: Chaffin Area, Section 181, 1600 ft. Down Dip from A-530

S 1191 E 8728

Inclination: Vertical Elevation: 2105

Started: 6/1/59 Completed:

RESULTS

From	To	Dist.	Recov.	Description
0	10	10	0	Red clay
10	85	75	75	Mud flakes, Pseudo sand grains, Oolites, Mass dolomite
85	87	2	2	Mylonite, Fault
87	186	99	99	Mud flakes, Oolites, Pseudo sand grains, Occasional Archies
186	195	9	9	Black augen, mud flakes, occasional archies
195	293	98	98	Black augen, Abundant archies
293	296	3	3	Thin bedded dark gray
296	330	34	34	Diagenetic breccia, mud flakes, Pseudo sand grains, Oolites
330	414	84	84	Mud flakes, Pseudo sand grains, Oolites, Massive
414	423	9	9	Archies and augen
423	451	28	28	Black augen and thin bedded
451	459	8	8	Archies
459	470	11	11	Saccharoidal dolomite
470	534	64	64	Diagenetic breccia, pseudo sand grains & Mud flakes
534	566	32	32	Black augen and bleached black
566	600	34	34	Pseudo sand grains and Oolite, Massive
600	604	4	4	Shear zone, fault
604	610	6	6	Pseudo sand grains and oolites
610	612	2	2	Shaly dolomite
612	641	29	29	Miscl. dolomites
641	697	56	56	Pseudo sand grains, massive
697	754	57	57	Diagenetic mottling
754	768	14	14	Abundant oolites, local archies
768	810	42	42	Abundant pisolites and oolites
810	811	1	1	Shaly dolomite
811	831	20	20	Diagenetic breccia, black augen
831	862	31	31	Massive, mud flakes, local banding
862	1027	165	165	Miscl., Mottled, diagenetic breccia, etc.
1027	1040	13	13	Pseudo sand grains and oolites
1040	1125	85	85	Diagenetic breccia, oolites, pseudo sand grains and black augen
1125	1139	14	14	Limestone diagenetic breccia
1139	1161	22	22	Dolomite diagenetic breccia

From	To	Dist.	Recov.	
1161	1163	2	2	Shear zone, fault
1163	1222	59	59	Bleached black augen
1222	1232	10	10	Mass locally bedded
1232	1332	100	100	Bleached black augen and diagenetic breccia
1332	1356	24	24	Bedded limestone, oolites in bedding
1356	1365	9	9	Banded dolomite
1365	1391	26	26	Fault, Mylonite, Shear
1391	1408	17	17	Saccharoidal dolomite
1408	1490	92	92	Banded straight bands
1490	1514	24	24	Interbedded shale and diagenetic breccia
1514	1564	50	50	Mass limestone
1564	1671	107	107	Interbedded limestone and shale
1671	1707	36	36	Massive limestone
1707	1711	4	4	Mass dolomite pseudo sand grains

DIAMOND DRILL LOG - A-543

Location: Chaffin Area, Section 219, First Hole on Exploratory Fence

506 N 9718 E

Inclination: Vertical Elevation: 2105

Started: 6/24/59 Completed:

RESULTS

From	To	Dist.	Recov.	
0	53	53	0	Red clay
53	217	164	164	Varied detrital dolomites
217	252	35	35	Bleached black augen
252	264	12	12	Slightly metamorphosed dolomite
264	313	49	49	Bleached black augen
313	314	1	1	Mass solid oolites
314	330	16	16	Coarse saccharoidal dolomite
330	334	4	4	Black composite shale partings
334	366	32	32	Miscl. dolomites

DIAMOND DRILL LOG A-531 (Deepened)

Location: Chaffin Area, Section 181, 100 Feet Up Dip from A-530

7.72 N 7525.64 E

Inclination: Vertical Elevation: 2175.82

Started: 6/17/59 Completed: 6/20/59

RESULTS

From	To	Dist.	Recov.	Description
1321	1323	2	2	Low grade disseminated ore
1323	1343	20	20	Saccharoidal dolomite
1343	1348	5	5	Low grade breccia ore
1348	1376	28	24	Mineralized dolomite
1376	1393	17	17	Dolomite with sand grains
1393	1412	19	19	Low grade disseminated ore
1412	1424	12	12	Ore, 3.97% Zn, 0.83% Pb
1424	1441	17	17	Dolomite

BOTTOM

DIAMOND DRILL LOG A-532 (Deepened)

Location: Chaffin Area, Section 181, 100 ft. Down Dip from A-530

134.41 S 7666.29 E

Inclination: Vertical Elevation: 2163.64

Started: 6/16/59 Completed: 6/16/59

RESULTS

From	To	Dist.	Recov.	Description
1443	1473	30	30	Gray dolomite
1473	1496	23	23	Strongly metamorphosed dolomite
1496	1498	2	2	Gray dolomite

BOTTOM

DIAMOND DRILL LOG A-536 (Deepened)

Location: Chaffin Area, Section 173

210 S 7175 E

Inclination: Vertical Elevation: 2184

Started: 6/12/59 Completed: 6/12/59

RESULTS

From	To	Dist.	Recov.	Description
1327	1344	17	17	Dolomite
1344	1362	18	18	Strongly metamorphosed dolomite
1362	1373	11	11	Ore, 5.9% Zn, 0.2% Pb
1373	1423	50	50	Dolomite

BOTTOM

AGB 3940 2M 7-55

BERTHA MINERAL DIVISION

THE NEW JERSEY ZINC COMPANY

AUSTINVILLE, VA.

LABORATORY REPORT—SHIPMENTS AND MISCELLANEOUS

DDH 541 and 536

DATE 6-17-59 19

SERIAL NO.	SAMPLE DATE	MATERIAL	CAR	DRY	ZN	PB	FE		
234	6-16	Sample NO. 17242	1115 - 1122	7'	4.83	.08			
235		17243	1122 - 1130	8'	3.08	.09			
236		17244	1167 - 1179	12'	4.44	1.63			
237		17245	1179 - 1185	6'	2.35	1.01			
238		17246	1185 - 1192	7'	.50	.14			
239		17247	1192 - 1200	8'	1.34	.79			
240		17248	1200 - 1208	8'	4.40	1.07			
241		17249	1208 - 1214	6'	2.94	1.01			
242		17250	1214 - 1215	1'	10.76	5.47			
243		4501	1362 - 1367	5'	8.51	.30			
244		4502	1367 - 1373	6'	3.68	.04			

Certified True Copy
THE NEW JERSEY ZINC COMPANY

Geologist

WLS Chemist

AGB 3940 2M 7-55

BERTHA MINERAL DIVISION

THE NEW JERSEY ZINC COMPANY

AUSTINVILLE, VA.

LABORATORY REPORT—SHIPMENTS AND MISCELLANEOUS

Geology Dept. DDH A-531 DATE 6-30-59 19

SERIAL NO.	SAMPLE DATE	MATERIAL	CAR	DRY	ZN	PB	FE		
260	6-29	Samp.No. 4503	1412 - 1416	4'	1.08	1.10			
1		4504	1416 - 1424	8'	5.42	.70			

Certified True Copy
THE NEW JERSEY ZINC CO.

Geologist

RGB. Chemist

OFFICIAL FILE COPY
O. M. E.
RECEIVED JUL 6 1959

DATE	INITIALS	CODE
7-6	gad	220
		140
7-7		800
7-8		500

OFFICE OF MINERALS EXPLORATION

INTERIM REPORT

DMEA-5008, Idm-E1204 - Zinc-lead

Operator: The New Jersey Zinc Company, Austinville, Virginia

Location: Chaffin Estate, Wythe County, Virginia

Summary of drilling completed

	Since Last inspection	To date
Number of holes.....	1	12
Footage.....	1,571*	17,534*

Number of holes showing:

(a) Commercial-grade zinc-lead ore.....	7
(b) Non-commercial zinc-lead mineralization	5
(c) No zinc and/or lead mineralization.....	0

* Includes 231 feet in the deepening of Holes A-531,-532, and 536.

A summary of the drilling completed since the last inspection follows:

Hole A-541: Located approximately 100 feet down-dip from A-539 (incorrectly reported as up-dip from A-539 in last interim report). Coordinates: S-585; E-6848. Elevation of collar: 2,174 feet A.T. Drilling started: 5/11/59; completed 6/8(?)/59. Total depth: 1,340 ft. Summary log: 0-26 residual clay overburden; base (?) of "black augen" zone @ 739; Taylor Marker(?) @ 914-921; Mottled Marker(?) @ 1115-1129 or 1167-1185; bottom of hole @ 1340. Mineralization: Ore hole. 1115-1130 (15') with 3.9% Zn and 0.8% Pb; 1167-1215 (48') with 3.1% Zn and 1.1% Pb.

In addition to the completion of Hole A-541, Holes,A-531, -532, and -536 were deepened. The deepening of Hole A-535 was also attempted but was not successful. The results of the three holes deepened are given below:

Hole A-531: Deepened from 1321 to 1441 (80-feet) in the period 6/17-19/59. A zone of ore 12 feet thick was penetrated from 1412-1424; no assays have yet been returned but the grade is estimated at between 4 and 5 percent combined lead and zinc.

Hole A-532: Deepened 55 feet from 1443-1498 on 6/16/59. No mineralization was noted in the deepened segment of the hole.

Hole A-536: Deepened 96 feet from 1327 to 1423 on 6/12/59. The hole is raised from a "shine" hole to ore rank with the penetration of 11 feet (1362-1373) containing 5.9% Zn and0.2% Pb.

Drilling in progress

Drilling is currently in progress on Holes A-542 and -543.

Hole A-542: Located about 1,600 feet down-dip (southeast) from Hole A-530. At the time of inspection it was at a depth of 1655½ ft. The stratigraphy of the hole is extremely doubtful. No markers comparable to those recognized in other drilling on the project or on the adjacent Austinville properties can be logged out. Strong faulting was noted at depths as follows: 1161-1163 feet; 1309 feet; and 1365-1391 feet. Beneath the last(and strongest) of these fault zones is rock lithologically similar to that of the "C" zone or member of the post-Ivanhoe section of the Shady dolomite. (see Operator's Application: also DMEA Field Examination Report.) If this stratigraphic interpretation is correct and no further faulting is encountered the hole may well have to go to a depth of about 2,500 feet. It was pointed out to the Operator that the maximum depth permitted by the contract was 2,000 feet and that any depth exceeding this would require an amendment, or would have to be done at his own expense. The Operator indicated that should the results obtained from drilling the remaining footage to the 2,000 foot depth indicate the need for deeper drilling he would submit a request for permission to drill to depths in excess of 2,000 feet.

Hole A-543: Located about 1,900 feet northeast (on strike) from Hole A-538 to test for the strike extension of the ore discovered therein. This location is approximately that of Site "L" as indicated on the map submitted by the Operator on March 16, 1959 in his request for an extension of the contract. Depth at the time of inspection was 305 feet. None of the core observed was sufficiently distinctive for precise stratigraphic location. Current anticipated bottoming depth is about 1,800 feet.

Inspected: June 29, 1959

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

z

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

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

JUN 18 1959
O.M.E.

PAID ON VOUCHER & SCHEDULE OF PAYMENTS K- 66

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of May, 1959 Docket No. DMEA 5008 Contract No. 1204
Operator's Name The New Jersey Zinc Company Minerals Zinc-Lead
Address Austinville, Va.
Contract Amount, $ 44,920.00 Government Participation: 50 % Amount, $ 22,460.00

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:				6/22/59 JPK		
Drilling	7243.00	26159.50	33402.50	7,135.25	26,159.50	33,294.75
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
Core Trays @ $2.50	222.50	820.00	1042.50	180.00	820.00	1000.00
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	34.00	120.00	154.00	34.00	120.00	154.00
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify): Incidental Allowances @ $.22/ft.	667.26	2473.46	3140.72	667.26	2473.46	3140.72
TOTALS	8166.76	29572.96	37739.72	8016.51	29572.96	37,589.47

I certify that the above bill is correct and just and that payment therefor has not been received.
Date June 9, 1959 Payee Bertha Mineral Division THE NEW JERSEY ZINC COMPANY
Per [signature] Title Genl. 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:
$ 4008.25
Signature Helen R. Mellen
(Authorized Certifying Officer)
Date JUN 16 1959 Vou. No. 118
(See other side)

4008.25

(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-1204 in accordance with the terms of the contract.

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

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature [illegible] Title ACTING EXECUTIVE OFFICER OME, REGION V Date JUN 10 1959

MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

JUN 18 1959
O.M.E.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of May 195 9 Docket No. DMEA 5008 Contract No. 1204

Operator's Name The New Jersey Zinc Company Minerals Zinc-Lead

Address Austinville, Va.

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		4498.50		33294.75	✓			
Drilling: Core 0-1000	Ft.	~~4500.00~~	2000	~~33402.50~~	14276	2.34	16000	2.50
~~Churn~~ 1000-1500	Ft	~~1480.00~~ 1623.25	712					
~~Auger~~ 1500-2000	Ft	963.00	321					
~~Stripping~~ Samp&Assay	Samp	34.00	17	154.00	✓ 78	2.00	200	2.00
~~Trenching~~ Core Trays	Tray	~~222.50~~	89	~~1042.50~~	✓ 417	2.50	400	2.50
Test Pits		180.00		1000.00				
Roads and Trails								
Incidental Allowances @ $0.22/ft.	Ft.	667.26	3033	3140.72	14276	✓ .22	16000	.22
TOTAL DISTRIBUTED COSTS		~~8166.76~~ 8016.51	✓	~~37739.72~~ 37,589.47				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
		8016.51		37,589.47				
TOTAL COSTS		~~8166.76~~		~~37739.72~~				$44,920.00

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 6/9/59 Operator Bertha Mineral Division THE NEW JERSEY ZINC CO.

Per [signature] Title Genl. Supt.

REMARKS: Includes costs of A-538 and A-539

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]
GEOLOGICAL U. S. G. S.

JUN 10 1959

INSTRUCTIONS

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

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

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

GPO 872894

NARRATIVE REPORT - CHAFFIN PROJECT

Hole A-538 was at 1756 the beginning of the month. It was continued through shale parting and stylolitic ground to 1821 where it was bottomed.

Hole A-539 was at 1092 the beginning of the month. It was continued through the Mottled Marker ore horizon which was barren and through the Lower Black Rock and bottomed at 1212 feet.

Hole A-540 was collared 100 feet up dip from A-538 on Section 181 to determine whether the A-538 ore extended up dip. The hole encountered considerable mineralization but no ore and was bottomed at 1687.

Hole A-541 was started 100 feet down dip from A-539 on Section 163, testing for ore on the A-530 - A-537 trend. The rock was altered and broken. Fourteen feet of estimated 3% Zn was encountered between 1115 and 1129. The hole was incomplete at 1131 at the end of the month.

DIAMOND DRILL LOG - A-538

Location: Chaffin Area, Section 181
800 ft. down dip from A-530

627 S 8165 E

Inclination: Vertical Elevation: 2165

Started: 4/4/59 Completed: 5/1/59

RESULTS

From	To	Dist.	Recov.	Description
0	44	44	0	Red clay
44	46	2	2	Pisolites
46	76	30	25	Bleach black augen
76	77	1	1	Pisolites
77	167	90	86	Saccharoidal
167	179	12	12	Abundant archies
179	248	69	69	Black augen
248	260	12	12	Abundant archies
260	268	8	8	Mottled dolomite
268	269	1	1	Oolite bed
269	317	48	46	Abundant pseudo sand grains
317	462	145	145	Bleached black augen
462	466	4	4	Dense black composite shale partings
466	555	89	88	Bleached black augen
555	560	5	5	Pseudo sand grains
560	700	140	140	Bleached black augen
700	704	4	4	Shale partings
704	761	57	55	Bleached black augen
761	763	2	2	Banded mottling
763	777	14	14	Saccharoidal
777	789	12	12	Mineralized 1.33% Zn, Nil Pb
789	810	21	19	Strong metamorphism
810	831	21	21	Dense and straticulate
831	844	13	13	Mineralized 0.15% Zn, Nil Pb
844	869	25	25	Black augen
869	926	57	57	Banded mot and banded dolomite
926	934	8	8	Mineralized 3.28% Zn, 0.21% Pb
934	1029	95	95	Bleached black augen
1029	1046	17	17	Composite shale partings and pseudo sand grains
1046	1142	96	88	Varied
1142	1284	142	142	Shale partings
1284	1300	16	16	Detrital material, three sand grains Taylor Marker?
1300	1490	190	190	Varied grey dolomite
1490	1515	25	25	Mineralized
1515	1525	10	10	Mineralized 1.21% Zn, 0.22% Pb
1525	1549	24	24	Ore, 3.46% Zn, 0.29% Pb Mottled Marker

From	To	Dist.	Recov.	Description
1549	1560	11	11	Mineralized
1560	1565	5	5	Lower black rock
1565	1579	14	14	Mineralized
1579	1626	47	47	Varied partings
1626	1635	9	9	Mineralized
1635	1742	107	107	Stylolitic shale partings
1742	1760	14	14	Mottled, archie
1760	1774	14	14	Diagenetic breccia
1774	1794	20	20	Multiple shale partings Ellipsoids
1794	1821	27	27	Stylolitic shale partings

BOTTOM

DIAMOND DRILL LOG - A-539

Location: Section 163, 565 feet S 63½ W from A-537

514 S 6778 E

Inclination: Vertical Elevation: 2176

Started: 4/11/59 Completed: 5/7/59

RESULTS

From	To	Dist.	Recov.	Description
0	48	48	0	Red clay
48	78	30	28	Black augen
78	82	4	4	Buff shaley bed
82	228	146	145	Bleached black augen
228	238	10	10	Stylolitic shale partings
238	276	38	38	Bleached black augen
276	286	10	10	Stylolitic and thick shale partings
286	340	54	54	Bleached black augen
340	345	5	5	Archies
345	537	192	192	Bleached black augen
537	541	4	4	Archies
541	664	123		Bleached black augen
664	676	13	11	Abundant partings
676	727	51	50	Bleached black augen
727	748	21	5	Strong metamorphism
748	858	110	104	Bleached black augen
858	920	62	59	Taylor Marker
920	942	22	18	Fine saccharoidal
942	964	22	22	Mineralized 2.09% Zn, 0.3% Pb
964	965	1	1	Fault
965	1029	64	62	Saccharoidal
1029	1038	9	9	Mylonite Fault top and bottom
1038	1055	15	14	Oxidized shale partings
1055	1090	35	0	Cavity
1090	1118	28	23	Strong metamorphism
1118	1139	21	20	Mottled Banded, Mottled Marker?
1139	1142	3	3	Mottled
1142	1163	21	18	Composite shale partings Lower Black Rock?
1163	1181	8	8	Mottled
1181	1184	Cavity		
1184	1212	28	2"	Soft Rock

BOTTOM

DIAMOND DRILL LOG - A-540

Location: Chaffin Area, Section 181, 100 ft. Up Dip from A-538

556 S 8094 E

Inclination: Vertical Elevation: 2165

Started: 5/4/59 Completed: 5/29/59

RESULTS

From	To	Dist.	Recov.	Description
0	78			Red clay
78	142	64	45	Bleach Black Augen Bed
142	177	35	35	Archie bed
177	230	53	53	Pseudo sand grain and speckled
230	243	13	13	Archie Bed
243	296	56	56	Bleached black augen bed
296	305	9	9	Archie Bed
305	489	184	184	Black and bleached black augen
489	500	11	11	Pseudo sand grains and mud flakes
500	529	29	29	Black augen
529	541	12	12	Pseudo sand grains in clusters
541	615	74	74	Black augen
615	648	33	33	Stylolitic shale partings
648	737	89	89	Varied dolomite
737	739	2	2	Straticulate bed
739	786	47	47	Black augen
786	797	11	11	Mineralized
797	808	11	11	Black augen
808	809	1	1	Mineralized black straticulate
809	840	31	31	Black augen
840	860	20	20	Banded Mottled Bed
860	872	12	12	Mineralized
872	975	103	103	Black augen and miscl.
975	1028	53	53	Straticulate bed
1028	1173	145	145	Black augen and straticulate
1173	1200	27	27	Mud flakes and pseudo sand grains
1200	1226	26	26	Light grey saccharoidal
1226	1255	29	26	Taylor Marker? Pseudo sand grain and TM type Mottling
1255	1298	43	43	Light grey saccharoidal
1298	1309	11	11	Thick shale partings
1309	1424	115	115	Light grey saccharoidal
1424	1437	13	13	Shale partings
1437	1463	26	26	Light grey saccharoidal
1463	1480	17	17	Mineralized composite shale partings
1480	1496	16	16	Composite shale partings

From	To	Dist.	Recov.	Description
1496	1525	29	29	Archies, strong Met, Mottled Marker?
1525	1554	29	29	Composite and stylolitic shale partings
1554	1558	4	4	Mineralized Mottled
1558	1570	12	12	Light grey saccharoidal
1570	1578	8	8	Mineralized
1578	1608	30	30	Shale partings and shaly
1608	1614	6	6	Mineralized
1614	1633	19	19	Stylolitic
1633	1635	2	2	Estimated 5% Zn
1635	1687	52	52	Stylolitic shale partings

BOTTOM

DIAMOND DRILL LOG - A-541

Location: Chaffin Area, Section 163, 100 feet Down Dip from A-539

6848 S 585 E

Inclination: Vertical Elevation: 2174

Started: 5/11/59 Completed:

RESULTS

From	To	Dist.	Recov.	Description
0	26	20		Red clay
26	114	88	84	Black augen & bleached black
114	115	1	1	Shaly dolomite
115	128	13	13	Light grey saccharoidal
128	144	16	16	Composite shale partings
144	357	213	213	Black augen and bleached black
357	358	1	1	Straticulate
358	376	18	18	Black augen
376	379	3	3	Limey straticulate
379	661	282	282	Interbedded black augen and dense black
661	665	4	4	Pseudo sand grains
665	681	16	16	Bleach black augen
681	691	10	10	Dense massive and thin bedded
691	739	48	48	Black augen and bleached
739	767	28	28	Thin bedded and massive
767	768	1	1	Oolite
768	914	146	146	Leached buff
914	921	7	6	Taylor Marker type Mottling Taylor Marker?
921	923	2	0	Soft rock
923	942	19	19	Miscl. textures
942	943	1	0	Soft rock
943	952	9	8	Miscl. textures
952	966	14	0	Soft rock
966	1017	41	24	Fractured and broken dolomite
1017	1026	9	4	Shale partings, fractured
1026	1036	10	5	Saccharoidal, galena @ 1033
1036	1038	2	0	Cavity
1038	1047	9	4	Light grey occasional mineralization
1047	1050	3	1	Estimated 10% sphalerite
1050	1111	61	20	Light grey saccharoidal sphalerite @ 1110
1111	1115	4	4	Mottled dolomite
1115	1129	14	14	Estimated 3% zinc
1129	1131	2	2	Fault zone, mineralized galena

Incomplete

AGB. 3940 2M 7-55

BERTHA MINERAL DIVISION

THE NEW JERSEY ZINC COMPANY

AUSTINVILLE, VA.

LABORATORY REPORT—SHIPMENTS AND MISCELLANEOUS

Geology Dept. Diamond Drill Hole A-538 DATE 5-5-59 19

SERIAL NO.	SAMPLE DATE	MATERIAL	Footage	DRY	ZN	PB	FE		
144	5-1	Samp.No. 17225	1515 - 1520		1.50	.43			
5		17226	1520 - 1525		.92	.01			
6		17227	1525 - 1532		2.16	.23			
7		17228	1532 - 1537		2.40	.06			
8		17229	1537 - 1542	X	4.55	.13			
9		17230	1542 - 1546		5.14	.54			
50		17231	1546 - 1549		4.18	.77			

Certified True Copy
THE NEW JERSEY ZINC COMPANY

Geologist

RGB. Chemist

AGB 3940 •2M 7-55

BERTHA MINERAL DIVISION

THE NEW JERSEY ZINC COMPANY

AUSTINVILLE, VA.

LABORATORY REPORT—SHIPMENTS AND MISCELLANEOUS

Geology Dept. Diamond Drill Holes A-538 & 539 DATE 5-6-59 19

SERIAL NO.	SAMPLE DATE	MATERIAL	~~XXX~~ Footage	DRY	ZN	PB	FE	Acetic Acid Sol. Zn	
151	5-4	Samp. No. 17232	926 - 930		3.20	.22			
2		17233	930 - 934		3.35	.20	X		A-
3		17234	777 - 783		1.90	nil			538
4		17235	783 - 789		.76	nil			
5		17236	831 - 838		.15	nil			
6		17237	838 - 844		.15	nil			
7		17238	942 - 947		1.87	nil		.58	
8		17239	947 - 952		2.40	nil	X	.19	A-
9		17240	952 - 957		2.65	nil		.10	539
60		17241	957 - 964		1.64	nil		.34	

Certified True Copy
The New Jersey Zinc Company

E. C. Whatton Jr.
Geologist

RGB. Chemist

June 16, 1959

The New Jersey Zinc Company

Austinville, Virginia

Re: Contract Idm-F120h
Docket No. DMSA-5008

Gentlemen:

Reference is made to your May 1959 voucher covering contract Idm-F120h, Docket No. DMSA-5008, Chaffin Estate, Austinville Area, Wythe County, Virginia.

This voucher is being processed for payment in the amount of $4008.25, which is 50% of the approved monthly total of $8016.51. The following disallowances have been made:

(1) Disallowance of $107.75 drilling cost. Overpayment on April Voucher of 431 feet at AX cost instead of HX cost (Hole A-537) - cost as stated in the exploration contract

(2) Disallowance of $42.50 for core trays. Contract calls for a total of 400trays in the total amount of $1000.00.

Helen R. Miller

/hbm
Copies to R. A. Laurence
W. J. Lynch
E. D. Talbert, OME, Washington, D. C.
Morris files
Day files

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

DATE	INITIALS	CODE
6/15	G	220
6/16	[illegible]	110
6/18	[illegible]	800
~~[illegible]~~		

INTERIM REPORT

DMEA-5008, Idm-E1204 (Zinc-lead)

Operator: The New Jersey Zinc Company, Austinville, Virginia

Location: Chaffin Estate, Wythe County, Virginia

Summary of drilling completed

	Since last inspection	To date
Number of holes	3	11
Footage	4,720	15,963

Number of holes showing:

a)	Commercial-grade zinc-lead ore	5
b)	Non-commercial zinc-lead mineralization .	6
c)	No zinc-lead mineralization	0

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

Hole A-538: Located approximately 800 feet southeast of Hole A-530 on Section 181. Coordinates: S-627; E-8,165. Collar elevation: 2,165 feet A. T. Drilling started: 4/4/59; completed 5/1/59. Summary log: 0-44 residual clay overburden; base of "black augen" zone at 869(?); Taylor marker(?) at 1284-1300; 1525-1549 Mottled marker; 1560-1565 Lower black rock marker; Bottom of hole at 1821. Mineralization: Ore hole. 777-789, 12' with 1.33 % Zn, nil Pb; 831-844, 13' with 0.15 % Zn, nil Pb; 926-934, 8' with 3.28 % Zn, 0.21 % Pb; 1490-1515, 25' with scattered shines of sphalerite and galena; 1515-1525, 10' with 1.21 % Zn, 0.22 % Pb; 1525-1549, 24' with 3.46 % Zn, 0.29 % Pb; 1549-1560 (11'), 1565-1579 (14'), 1626-1635 (9')---all with scattered shines and traces of sphalerite and/or galena.

Hole A-539: Located approximately 500 feet S. 61° W. of Hole A-537. Coordinates: S-514; E-6,778. Collar elevation: 2,176 A.T. Drilling started: 4/11/59; completed: 5/7/59. Total depth: 1,212 feet. Summary log: 0-48 residual clay overburden; base of "black augen" zone not recognized due to bleaching; Taylor marker at 858-920; Mottled marker(?) 1118-1139; Lower black rock marker(?) at 1142-1163; bottom of hole at 1212. Cavities: 1055-1090 and 1181-1184. Faults: 964-965 and 1029-1038. "Soft rock" at 1184-1212 (only 2 inches of core recovered) due to deep weathering and oxidation or heavy shearing. Mineralization: Shine hole. 942-964, 22' with 2.09 % Zn, 0.3 % Pb.

Hole A-540: Located approximately 100 feet up-dip from Hole A-538 on Section 181. Coordinates and elevation not yet available. Drilling started: 5/4/59; completed: 5/29/59. Total depth: 1,687 feet. Summary log: 0-78 residual clay overburden; base of "black augen" zone at 1144 (??); Taylor marker at 1226-1255; Mottled marker at 1496-1525; Lower black rock marker at 1424-1437 (??); bottom of hole at 1687. Mineralization: Shine hole. 786-797 (11') with ½ %; 808-808½ (½') with ½ %; 860-872 (12') with scattered shines and traces of ZnS and PbS; 893-895 (2') with 1 %; 1463-1480 (17') with scattered shines and traces of ZnS and PbS. Note: All percentages given are estimates of combined lead and zinc.

Drilling in progress

In anticipation of approval of at least a part of the extension of the contract as requested on March 16, 1959, the Operator has continued drilling in the Chaffin project. Two holes (A-541 and A-542) are currently in progress.

Hole A-541, located approximately 100 feet up-dip from Hole A-539, was drilling at a depth of 1,208 feet at the time of inspection. This hole is strongly mineralized and may be in ore. Estimates of values show: 14 feet (1168-1182) with approximately 3 percent and 8 feet (1200-1208) with approximately 4 percent combined lead and zinc.

Hole A-542 is located about 1,600 feet down-dip from Hole A-530 and was drilling at a depth of 273 feet when inspected. The depth of this hole may be as much as 2,000 feet, unless high-angle reverse faulting between it and Hole A-538 has thrown the collar to a lower stratigraphic position. The rocksrecovered in the first few hundred feet of drilling are too non-descript to determine the precise stratigraphic position of the collar.

If an extension to the contract is not possible then the work performed under the DMEA contract will have been completed at a depth of 1,157.7 feet in Hole A-541. The total drilling thus completed will amount to 17,120.7 feet for a total drilling cost of $40,000.00 under category I of the contract.

Inspected: June 3, 1959

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

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O. M. E.
RECEIVED MAY 22 1959

DATE	INITIALS	CODE

INTERIM REPORT

DMEA-5008, Idm-E1204 (Zinc-lead)

Operator: The New Jersey Zinc Company, Austinville, Virginia

Location: Chaffin Estate, Wythe County, Virginia

No drill holes were completed since the last inspection on April 9, 1959.

Hole A-538, started on April 4, 1959, had reached a depth of 1,638 feet. Sulfide mineralization was noted at depths as follows: 777-789, 831-844, 926-934, 1490-1515, 1515-1525, 1525-1549 (24 feet with 3.46 % Zn, 0.29 % Pb), 1549-1560, 1565-1579, and 1626-1635. Without doubt this hole will be classed as an ore hole. Estimated bottom is not known but may be as much as 2,000 feet. On completion of this hole the drill rig will move 100 feet up dip on Section 181.

Hole A-539, started on April 11, 1959, had reached a depth of 1,008 feet. At 942-964 (22') a zone containing 2.09 % Zn and 0.3 % Pb was penetrated; this zone appeared to be cut off at the base by a fault at 964-965. Because of faulting in the hole the estimated bottoming depth cannot be predicted with any accuracy; it will probably be between 1,300 and 1,400 feet.

Inspected: April 29, 1959

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

May 14, 1959

Memorandum

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

From: Administrative Assistant, Morris, Tennessee

Subject: Monthly report and voucher

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

Idm-F120k
The New Jersey Zinc Company
Docket No. DMEA-5008
7th payment - month of April
Amount $1871.50

Helen R. Miller

Attachments 2
/hbm
Copies to R. A. Laurence
V. J. Lynch
Morris files
Day files

edbra
~~OFFICIAL~~ FILE COPY
O. M. E.
RECEIVED MAY 18 1959
DATE | | |
5/18 | G | 220
5/19 | KJ | 110
| | 500

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-61

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of April, 1959 Docket No. DMEA 5008 Contract No. 1204
Operator's Name The New Jersey Zinc Company Minerals Zinc-Lead
Address Austinville, Va.
Contract Amount, $ 44,920.00 Government Participation: 50 % Amount, $ 22,460.00

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	3312.50	22847.00	26159.50	5/25/59 W.P.H.		
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
Core Trays @ $2.50	95.00	725.00	820.00			
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	22.00	98.00	120.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
Incidental Allowance @ $0.22/ft.	313.50	2159.96	2473.46			
TOTALS	3743.00	25829.96	29572.96	3743.00	25829.96	29572.96

I certify that the above bill is correct and just and that payment therefor has not been received.
Date 5/7/59 *Payee Bertha Mineral Division THE NEW JERSEY ZINC CO.
Per Title Genl. 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:
$ 1871.50
Signature Helen R. Meier
(Authorized Certifying Officer)
Date MAY 14 1959 Vou. No. 110
(See other side)

1871.50

(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-1204 in accordance with the terms of the contract.

Signature [illegible] Title GEOLOGIST, U. S. G. S. Date MAY 8 1959

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature [illegible] Title ACTING EXECUTIVE OFFICER OME - REGION V Date MAY 8 1959

MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

MAY 18 1959 O.M.E.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of April 1959 Docket No. DMEA 5008 Contract No. 1204

Operator's Name The New Jersey Zinc Company Minerals Zinc-Lead

Address Austinville, Va.

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.	2250.00	1000	26159.50	11243	2.33	16000	2.50
~~Churn~~ 1000-1500	Ft.	1062.50	425					
Auger								
~~Stripping~~ Sample Assay	Sample	22.00	11	120.00	61	2.00	200	2.00
~~Trenching~~ Core Trays	Tray	95.00	38	820.00	328	2.50	400	2.50
Test Pits								
~~Roads and Trails~~								
Incidental Allowances @ $0.22/ft.		313.50	1425	2473.46	11243	.22	16000	.22
TOTAL DISTRIBUTED COSTS		3743.00		29572.96				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		3743.00		29572.96				$44,920.00

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 5/7/59 Operator Bertha Mineral Division THE NEW JERSEY ZINC CO.

Per _____ Title Genl. Supt.

REMARKS: Includes costs of A-537

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)

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

NARRATIVE REPORT - CHAFFIN PROJECT

At the beginning of the month, diamond drill hole A-537 was at a depth of 1204 feet. The hole was continued and four feet of 1.6% Zn, Trace Pb was encountered in the Mottled Marker. Mineralized ground was encountered from 1351' to 1361' running 0.74% Zn and .15% Pb., and ore from 1361' to 1389' running 5.8% Zn and 0.23% Pb. This ore was 106 feet below the Mottled Marker at a new horizon. The hole was bottomed at 1425 feet.

A second drill was started drilling hole A-538 the 4th of April and located 800 feet down dip on Section 181 from A-530. This location is shown as hole "D" on the map accompanying our recent application to the DMEA. This hole encountered mineralization running 1.33% Zn and Nil Pb between 777' and 789'; between 831' and 844' running .15% Zn and Nil Pb; and between 926' and 934' running 3.28% Zn and 0.21% Pb. Very doubtful Taylor Marker was penetrated at 1290' and ore was discovered in the Mottled Marker between 1525' and 1549' running 3.46% Zn, 0.29% Pb. The hole was incomplete at 1756 feet, the end of the month.

Hole A-539 was located on Section 163, S 63½ W, from A-537. Taylor Marker was penetrated from 858' to 920' and mineralized ground from 942' to 964'. At 1055' a 35-foot cavity was encountered which may be associated with the Callahan Fault. The hole was incomplete at 1092' the end of the month.

DIAMOND DRILL LOG A-537

Location: Chaffin Area, Section 173 Midway between A-535 and A-536

255 S 7270 E

Inclination: Vertical Elevation: 2187

Started: 2/23/59 Completed: 4/8/59

RESULTS

From	To	Dist.	Recov.	Description
0	70	70		Red clay
70	171	101	76	Black augen dolomite
171	173	2	0	Cavity
173	205	32	24	Black augen dolomite
205	256	51	50	Black augen beds, locally bleached
256	259	3	3	Local sand grains and "mud flakes"
259	296	37	37	Black augen beds, locally bleached
296	346	50	49	Local partings and detritus
346	633	287	273	Black augen beds, locally bleached, local partings and "soft" drilling: Archaeocyathus 595, 607
633	643	10	10	Abundant thick partings
643	703	60	59	Saccharoidal
703	711	8	8	Abundant large Archaeocyathus: "Archy" Bed
711	947	236	232	Saccharoidal to finely saccharoidal, local partings and very local "mud flakes"
947	1031	84	67	Taylor Marker: "mud flakes", mottling, partings. 979-81: Fault
1031	1095	64	40	Generally saccharoidal
1095	1149	54	27	Weak mineralization
1149	1158	9	8	7.2% Zn, 1.0% Pb
1158	1161	3	3	Mineralization, abundant partings: Black Rock Marker
1161	1193	32	24	Locally abundant partings: Black Rock Marker
1193	1205	12	9	Mineralization. Est. 0.5% Zn, 0.2% Pb
1205	1225	20	14	Medium grey & buff few partings
1225	1228	3	3	Mineralized fine saccharoidal
1228	1231	3	3	Light grey saccharoidal
1231	1236	5	4	Mottled Marker
1236	1240	4	4	1.6% Zn, Tr Pb Mottled Marker
1240	1255	15	9	Mottled Marker
1255	1294	39	38	Saccharoidal dolomite
1294	1325	31	31	Mineralized
1325	1351	26	24	Saccharoidal dolomite Stylolitic partings

From	To	Dist.	Recov.	Description
1351	1361	10	10	Mineralized 0.74% Zn, 0.15% Pb
1361	1389	28	28	Ore, 5.8% Zn, 0.23% Pb
1389	1391	2	2	Medium-Dark Grey
1391	1399	8	6	Mineralized
1399	1425	34	17	Fine saccharoidal

BOTTOM

DIAMOND DRILL LOG - A-538

Location: Chaffin Area, Section 181
800 ft. down dip from A-530

627 S 8165 E

Inclination: Vertical Elevation: 2165

Started: 4/4/59 Completed:

RESULTS

From	To	Dist.	Recov.	Description
0	44	44	0	Red clay
44	46	2	2	Pisolites
46	76	30	25	Bleach black augen
76	77	1	1	Pisolites
77	167	90	86	Saccharoidal
167	179	12	12	Abundant archies
179	248	69	69	Black augen
248	260	12	12	Abundant archies
260	268	8	8	Mottled dolomite
268	269	1	1	Oolite bed
269	317	48	46	Abundant pseudo sand grains
317	462	145	145	Bleached black augen
462	466	4	4	Dense black composite shale partings
466	555	89	88	Bleached black augen
555	560	5	5	Pseudo sand grains
560	700	140	140	Bleached black augen
700	704	4	4	Shale partings
704	761	57	55	Bleached black augen
761	763	2	2	Banded mottling
763	777	14	14	Saccharoidal
777	789	12	12	Mineralized 1.33% Zn, Nil Pb
789	810	21	19	Strong metamorphism
810	831	21	21	Dense and straticulate
831	844	13	13	Mineralized 0.15% Zn, Nil Pb
844	869	25	25	Black augen
869	926	57	57	Banded mot and banded dolomite
926	934	8	8	Mineralized 3.28% Zn, 0.21% Pb
934	1029	95	95	Bleached black augen
1029	1046	17	17	Composite shale partings and pseudo sand grains
1046	1142	96	88	Varied
1142	1284	142	142	Shale partings
1284	1300	16	16	Detrital material, three sand grains Taylor Marker?
1300	1490	190	190	Varied grey dolomite
1490	1515	25	25	Mineralized
1515	1525	10	10	Mineralized 1.21% Zn, 0.22% Pb
1525	1549	24	24	Ore, 3.46% Zn, 0.29% Pb Mottled Marker

From	To	Dist.	Recov.	Description
1549	1560	11	11	Mineralized
1560	1565	5	5	Lower black rock
1565	1579	14	14	Mineralized
1579	1626	47	47	Varied partings
1626	1635	9	9	Mineralized
1635	1742	107	107	Stylolitic shale partings
1742	1756	14	14	Mottled, archie

DIAMOND DRILL LOG - A-539

Location: Section 163, 565 feet S 63½ W from A-537

514 S 6778 E

Inclination: Vertical Elevation: 2176

Started: 4/11/59 Completed:

RESULTS

From	To	Dist.	Recov.	Description
0	48	48	0	Red clay
48	78	30	28	Black augen
78	82	4	4	Buff shaley bed
82	228	146	145	Bleached black augen
228	238	10	10	Stylolitic shale partings
238	276	38	38	Bleached black augen
276	286	10	10	Stylolitic and thick shale partings
286	340	54	54	Bleached black augen
340	345	5	5	Archies
345	537	192	192	Bleached black augen
537	541	4	4	Archies
541	664	123		Bleached black augen
664	676	13	11	Abundant partings
676	727	51	50	Bleached black augen
727	748	21	5	Strong metamorphism
748	858	110	104	Bleached black augen
858	920	62	59	Taylor Marker
920	942	22	18	Fine saccharoidal
942	964	22	22	Mineralized 2.09% Zn, 0.3% Pb
964	965	1	1	Fault
965	1029	64	62	Saccharoidal
1029	1038	9	9	Mylonite Fault top and bottom
1038	1055	15	14	Oxidized shale partings
1055	1090	35	0	Cavity
1090	1092	2	2	Strong metamorphism

AGB 3940 M 7-55

BERTHA MINERAL DIVISION

THE NEW JERSEY ZINC COMPANY

AUSTINVILLE, VA.

LABORATORY REPORT—SHIPMENTS AND MISCELLANEOUS

Geology Dept. Diamond Drill Hole A-537 DATE 4-9-59 19

SERIAL NO.	SAMPLE DATE	MATERIAL	CAR Footage	DRY	ZN	PB	FE		
130	4-9	Samp. No. 17215	1095 - 1101		2.90	.16			
1		17216	1101 - 1109		.96	Nil			
2		17217	1236 - 1240		1.60	Trace			
3		17218	1351 - 1356		.45	.30			
4		17219	1361 - 1366		5.27	Nil			
5		17220	1366 - 1371		2.30	.50			
6		17221	1371 - 1376		.17	Nil			
7		17222	1376 - 1382		10.96	.16			
8		17223	1382 - 1389		8.10	.43			

Certified True Copy
THE NEW JERSEY ZINC CO.

Geologist

Chemist

AGB 3940 2M 7-55

BERTHA MINERAL DIVISION

THE NEW JERSEY ZINC COMPANY

AUSTINVILLE, VA.

LABORATORY REPORT—SHIPMENTS AND MISCELLANEOUS

Geology Dept. Diamond Drill Hole A-537 DATE 4-13-59 19

SERIAL NO.	SAMPLE DATE	MATERIAL	CAR Footage	DRY	ZN	PB	FE		
139	4-13	Samp.No. 17224	1356 - 1361	✓	1.04	nil			

Certified True Copy
THE NEW JERSEY ZINC CO.

Geologist

RGB. Chemist

AGB 3940 2M 7-55

BERTHA MINERAL DIVISION

THE NEW JERSEY ZINC COMPANY

AUSTINVILLE, VA.

LABORATORY REPORT—SHIPMENTS AND MISCELLANEOUS

Geology Dept. Diamond Drill Hole No. A-537 DATE 3-31-59 19

SERIAL NO.	SAMPLE DATE	MATERIAL	~~XXX~~ CAR Footage	DRY	ZN	PB	FE		
129	3-31	Samp.No. 17214	1149 - 1158	✓	7.22	.97			

Certified True Copy
THE NEW JERSEY ZINC CO.

Ray McPherson
Geologist

RGB. Chemist

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

DATE	INITIALS	CODE
4/20	G	220
4/21	[illegible]	110
4/21	[illegible]	800
4/23	[illegible]	500

DMEA EXPLORATION PROJECT

INTERIM REPORT

DMEA-5008, Idm-E1204 (Zinc-lead)

Operator: The New Jersey Zinc Company, Austinville, Virginia

Location: Chaffin Estate, Wythe County, Virginia

Summary of drilling completed

	Since last inspection	To date
Number of holes	1	8
Footage	1,425	11,243

Holes showing:	a) Commercial-grade ore	4
	b) Non-commercial mineralization	4
	c) No mineralization	0

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

Hole No. A-537: Located approximately mid-way between Holes A-535 and -536 at coordinates S-244; E-7271 and collar elevation 2180. Drilling started on 2/19/59 and was completed on 4/8/59 at a depth of 1,425 feet. Core size was reduced to EX at a depth of 994 feet and the hole was at a depth of 1,204 feet on 3/31/59.

Summary log: 0-70 overburden; base of black augen zone at 633; main "Archy" zone 703-711; Taylor Marker 947-1031; black rock marker 1158-1193; mottled marker 1231-1255; bottom of hole at 1,425.

Mineralization: 1095-1109 with 0.7 % Zn (est); 1109-1149 with 0.2 % Zn (est); 1149-1158 (9') with 7.2 % Zn, 1.0 % Pb; 1158-1161 with 0.1 % Zn (est); 1193-1205 with 0.5 % Zn, 0.1 Pb (est); 1225-1228 with 0.5 % Zn, 0.2 % Pb (est); 1236-1240 with 2.0 % Zn, 0.5 % Pb (est); 1294-1325 with 0.2 % Zn (est); 1351-1376 with 2.0 % Zn, 0.2 % Pb (est); 1376-1389 (13') with 9.0 % Zn, 0.3 % Pb (est); 1389-1399 with scattered shines and traces of ZnS.

Drilling in progress

A second drill rig was moved onto the project in the latter part of March and started drilling Hole A-538 on 4/4/59. This hole is at location DDH-2 as shown on the contract map---800 feet S. 45° E. of Hole A-530 on Section 181. Core was observed to a depth of 200 feet; anticipated depth of the hole is between 1700 and 1800 feet.

The first drill rig had just completed Hole A-537 as reported above and was moving to a site 500 feet S. 61° W. of Hole A-537. This will be Hole A-539 with an estimated depth of 1,400 feet.

Inspected: April 9, 1959

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
REGION V

ELECTROTECHNICAL
EXPERIMENT STATION

P. O. BOX 217
NORRIS, TENNESSEE

April 15, 1959

Memorandum

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

From: Administrative Assistant, Norris, Tennessee

Subject: DMEA-5008, Idm-E1204, The New Jersey Zinc Company, (Zinc), March Monthly Report and Quarterly Summary

Attached are two copies of the subject reports of the Chaffin Tract, Wythe County, Virginia.

No invoices were received and no costs claimed on this report.

Helen Miller
Helen R. Miller

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

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

DATE	INITIALS	
4/20	C	220
"	JEJ	110
~~4/21~~	~~Klug~~	~~[illegible]~~

BERTHA MINERAL DIVISION

THE NEW JERSEY ZINC COMPANY

AUSTINVILLE, VA.

April 9, 1959

Regional Executive Officer
Defense Minerals Exploration Admn.
Room 2-B, Post Office Building
Knoxville 2, Tennessee

Subject: March Monthly Report and Quarterly Summary, Chaffin Tract, Austinville, Va., DMEA 5008, Contract IDM-E-1204

Dear Sir:

Attached is our March Monthly Report and Quarterly Summary of exploration on the Chaffin Tract, Austinville, Virginia.

No drill contractor's invoice was received since that reported last month. Consequently, no cost report or voucher is enclosed.

Very truly yours,

W. L. Albers
General Superintendent

RMK
RayMKnutson:rjl
In quintuplicate
Attachments

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

DATE	INITIALS	CODE

RECEIVED
APR 13 1959
U. S. Geological Survey
Geologic Division
Knoxville, Tenn.

NARRATIVE REPORT - CHAFFIN TRACT

DDH A-537 was at 205 feet at the month's beginning. Intermittent "Black Augen" beds continued to 633. At 703-711 the Archaeocyathus Bed was penetrated, and at 947-1031 the Taylor Marker. Weak mineralization appeared at 1095-1149, followed by 9 feet which assayed 7.2% Zn, 1.0% Pb. This has the stratigraphic position of the main ore horizon of A-530. The hole was at 1204 feet at the month's end, still short of Mottled Marker and the less mineralized horizons.

The drillers' rods became stuck, forcing a reduction to EX core size at 994 feet, using standard rather than wire line equipment.

Trotter-Pajari Surveys

As noted in the December quarterly report, Trotter-Pajari surveying of the Chaffin holes was begun but was disrupted due to loss of the special rods. These were since replaced, but the instrument proper then broke down. Its repair has been delayed because the manufacturer has either moved or quit the business. Pending the instrument's return, we submit results of surveying to date.

Two maps of the results are attached. That which is labeled "Factual Plotting" omits deviations for holes not surveyed. This map plots all data as objectively read.

The second map is labeled "Interpretive Plotting". On this the survey of one hole, A-533, is modified. Because its vertical angles were all within two degrees of vertical, we concluded that bearings were unreliable and have substituted a northerly bearing which is the average of A-531 and A-532. The discovery hole, A-530, was blocked at depth and the three holes on Section 173 remain unsurveyed. For these four holes the average bearing and deviation of A-531 and A-532 was assumed. Sectional plotting is based throughout on this interpretive plotting.

The excess wandering of A-534 is well established. It is at least in part due to deviation which maintained as of the first hard rock drilling below the rock-soil interface. Study of the origin of this deviation is still in progress, with a view toward its elimination in future drilling. Study of A-534's location at the ore horizon shows that the hole was of little value in terms of a drill fence normal to the northeasterly trending pencils.

When the Tro-Pari instrument is again available, further surveys will be made and their results reported.

QUARTERLY SUMMARY

During the quarter ending March 31, 1959, the following holes were completed with the results noted below:

Hole No.	Depth	Collar	Bottom	Results
A-536	1327	Post-TM	Austinville Dolomite	20' 0.8% Zn, 0.8% Pb 5' 0.4% Zn, Nil Pb

DIAMOND DRILL LOG A-537

Location: Chaffin Area, Section 173 Midway between A-535 and A-536

255 S 7270 E

Inclination: Vertical Elevation: 2187

Started: 2/23/59 Completed:

RESULTS

From	To	Dist.	Recov.	Description
0	70	70		Red clay
70	171	101	76	Black augen dolomite
171	173	2	0	Cavity
173	205	32	24	Black augen dolomite
205	256	51	50	Black augen beds, locally bleached
256	259	3	3	Local sand grains and "mud flakes"
259	296	37	37	Black augen beds, locally bleached
296	346	50	49	Local partings and detritus
346	633	287	273	Black augen beds, locally bleached, local partings and "soft" drilling: Archaeocyathus 595, 607
633	643	10	10	Abundant thick partings
643	703	60	59	Saccharoidal
703	711	8	8	Abundant large Archaeocyathus: "Archy" Bed
711	947	236	232	Saccharoidal to finely saccharoidal, local partings and very local "mud flakes"
947	1031	84	67	Taylor Marker: "mud flakes", mottling, partings. 979-81: Fault
1031	1095	64	40	Generally saccharoidal
1095	1149	54	27	Weak mineralization
1149	1158	9	8	✓ 7.2% Zn, 1.0% Pb
1158	1161	3	3	Mineralization, abundant partings: Black Rock Marker
1161	1193	32	24	Locally abundant partings: Black Rock Marker
1193	1204	11	8	Mineralization. Est. 0.5% Zn, 0.2% Pb

Incomplete

AGB 3940 2M 7-55

BERTHA MINERAL DIVISION

THE NEW JERSEY ZINC COMPANY

AUSTINVILLE, VA.

LABORATORY REPORT—SHIPMENTS AND MISCELLANEOUS

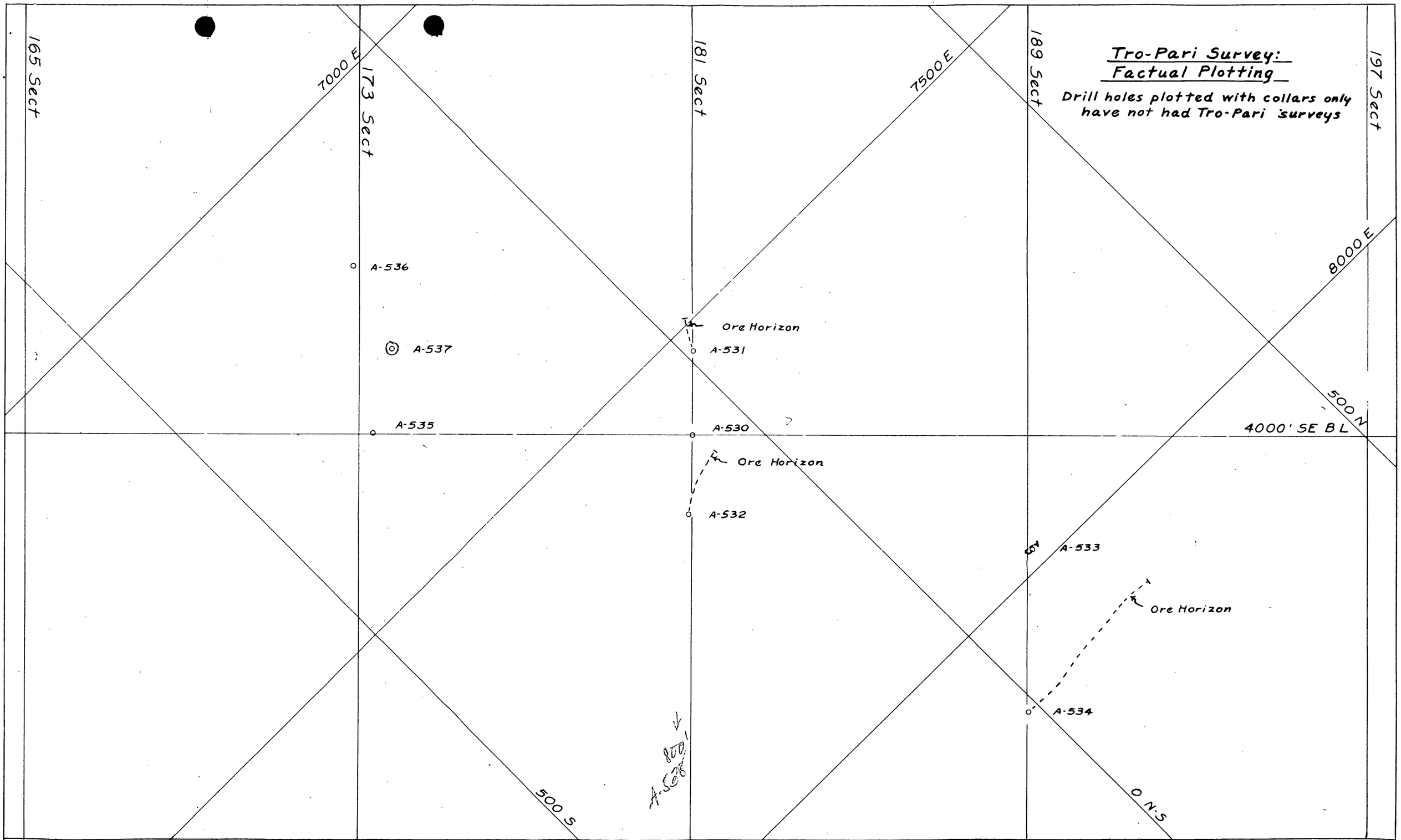
Geology Dept. Diamond Drill Hole No. A-537 DATE 3-31-59 19

SERIAL NO.	SAMPLE DATE	MATERIAL	~~OAR~~ Footage	DRY	ZN	PB	FE		
129	3-31	Samp.No. 17214	1149 - 1158		7.23	.97			

Certified True Copy
THE NEW JERSEY ZINC CO.

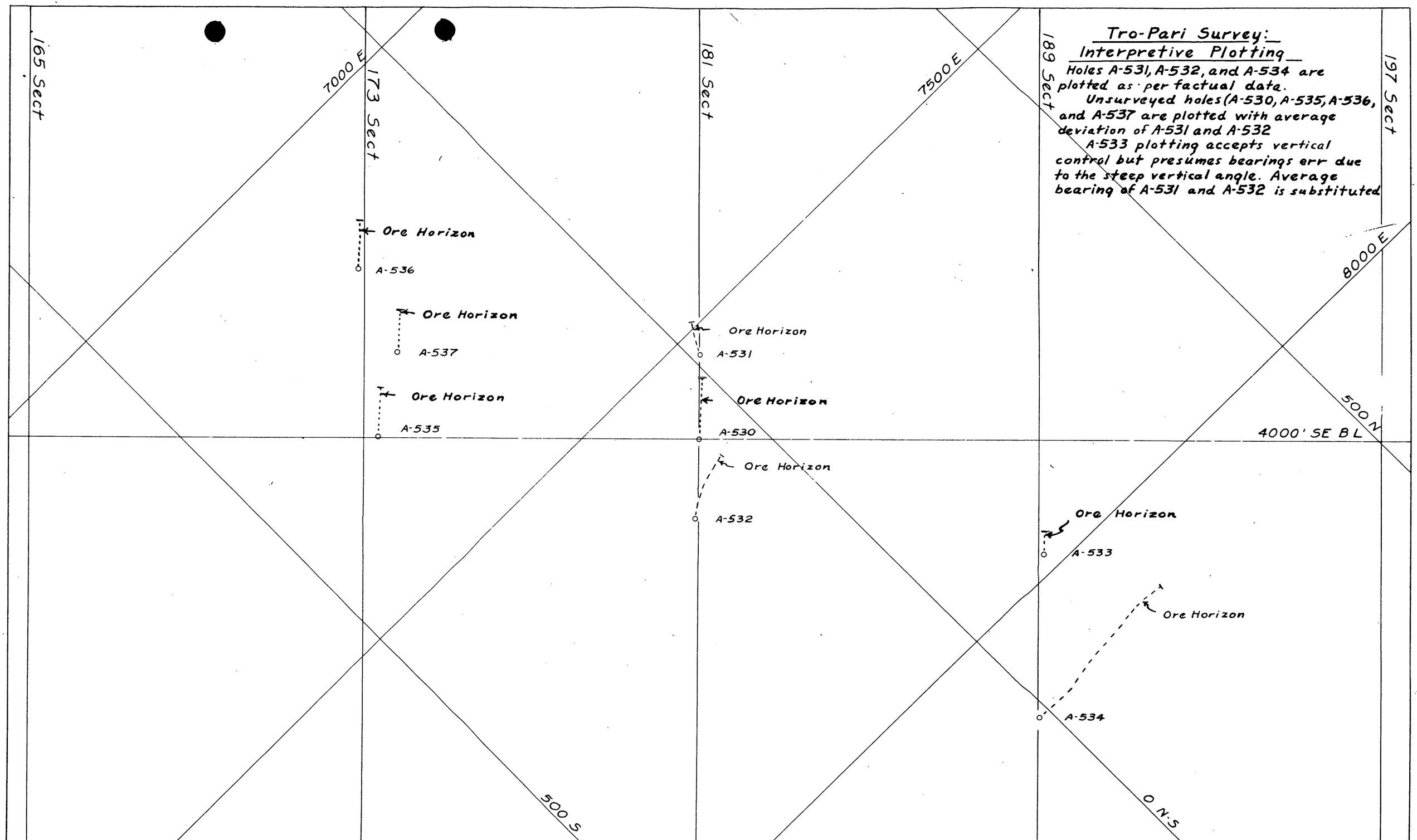
Ray McPherson
Geologist

RGB. Chemist



POSTED TO DATE	THE NEW JERSEY ZINC COMPANY Austinville, Virginia	DRAWN RMK DATE 4-1-59 TRACED SCALE 1" = 100'	CHAFFIN AREA TRO-PARI SURVEY	DISTRICT AUSTINVILLE, VA. FILE NO.

X 5407 B 1M 3-53



POSTED TO DATE	THE NEW JERSEY ZINC COMPANY Austinville, Virginia	DRAWN RMK DATE 4-1-59 TRACED SCALE 1" = 100'	CHAFFIN AREA TRO-PARI SURVEY	DISTRICT AUSTINVILLE, VA. FILE NO.

X 5407 B 1M 3-53

OFFICIAL FILE COPY
O. M. E.
RECEIVED MAR 19 1959

DATE	INITIALS	CODE
3-19	C	220
	JH	110
3/19		800
3/23		500

INTERIM REPORT

DMEA EXPLORATION PROJECT

DMEA-5008, Idm-E1204 - Zinc

Operator: The New Jersey Zinc Company, Austinville, Virginia

Location: Chaffin Estate, Wythe County, Virginia

Summary of Drilling Completed

	Since last inspection	To date
Number of holes	1	7
Footage	1327	9818

Holes showing:

a)	Commercial ore----------	3
b)	Non-commercial mineralization------	4
c)	No mineralization----------	0

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

Hole No. A-536 - Located 200 feet northwest from A-535 on Section 173. Coordinates E7175, S210; elevation at collar 2184.0 feet. Total depth 1327 feet. Drilling began 1-2-59 and was completed 2-18-59. Brief log of hole: 0-70 feet overburden, collared in Black Augen; cavity from 80-120; fault from 120-128; cavity from 139 to 144; cavity from 154 to 161; black augen zone extends to 633 feet; abundant archies from 633 to 649; Taylor marker zone from 901 to 1010; strong metamorphism from 1030 to 1109; black rock marker from 1109 to 1131; dolomite from 1131 to 1137; hole bottomed at 1137 feet.

Mineralization: 2' (1028-1030) of 0.5% Pb; 31' (1078-1109) of rare traces of Zn; 18' (1182-1200) of locally strong mineralization in dolomite; 20' (1259-1279) of 0.8% Zn, 0.8% Pb; 5' (1279-1284) of 0.4% Zn, nil Pb; 2' (1284-1286) of weak mineralization; 3' (1324-1327) of traces of zinc.

Current drilling is in progress on Hole No. A-537 located midway between holes A-535 and A-536 on Section 173. Core was observed to a depth of 768 feet. No mineralization has been encountered to date.

Inspected: March 12, 1959.

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

Helmuth Wedow, Jr., Geologist
Geological Survey

z

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
REGION V

ELECTROTECHNICAL
EXPERIMENT STATION

3-104 & 104 a

OFFICIAL FILE COPY
P. O. BOX 27
NORRIS, TENNESSEE
RECEIVED
MAR 16 1959

DATE	INITIALS	CODE
3/16	C	220
"		110
3/18		500

March 12, 1959

Memorandum

To: - Jay L. Chambers, Office of Minerals Exploration,
Interior Building, Washington 25, D. C.

From: Administrative Assistant, Norris, Tennessee

Subject: Monthly reports and vouchers

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

Idm-E1088 — B. H. Putnam
Docket No. DMEA-4580
15th payment - month of February
Amount $2443.39

Idm-E1204 — The New Jersey Zinc Company
Docket No. DMEA-5008
6th payment - month of February
Amount $1728.97

Idm-E1206 — The New Jersey Zinc Company
Docket No. DMEA-4907
5th payment - months of January
and February - 2 vouchers
Amount $3409.00 Total ($1661.38 - January and
1747.62 - February)

Idm-E1222 — Appalachian Sulphides, Inc.
Docket No. DMEA-5044
5th payment - month of February
Amount $8377.07

Helen Miller
Helen R. Miller

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

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 February 195 9 Docket No. DMEA 5008 Contract No. 1204
Operator's Name The New Jersey Zinc Company Minerals Zinc-Lead
Address Austinville, Virginia
Contract Amount, $ 44,920.00 Government Participation: 50% Amount, $ 22,460.00

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	3067.50	19779.50	22847.00	3/20/59		
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
Core Trays @ $2.50	92.50	632.50	725.00			
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment	6.00	92.00	98.00			
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify): Incidental Allowance @ $0.22/ft.	291.94	1868.02	2159.96			
TOTALS	3457.94	22372.02	25829.96	3457.94	22372.02	25829.96

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

Date March 10, 1959 Payee Bertha Mineral Division THE NEW JERSEY ZINC CO.

Per [signature] Title Genl. 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:

$ 1728.97

Signature Helen R. Miller
(Authorized Certifying Officer)

Date MAR 12 1959 Vou. No. 93
(See other side)

6

(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-1204 in accordance with the terms of the contract.

Signature W. M. Beck Title MINING ENGINEER U. S. BUREAU OF MINES Date MAR 11 1959

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature V. J. Lynch Title ACTING EXECUTIVE OFFICER DME - REGION V Date MAR 11 1959

MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of February 1959 Docket No. DMEA 5008 Contract No. 1204

Operator's Name The New Jersey Zinc Company Minerals Zinc-Lead

Address Austinville, Virginia

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.	2250.00	1000	22847.00	9818	2.33	16000	2.50
Drilling: Core 1000-1500	Ft.	817.50	327					
Drilling: Chum								
Drilling: Auger								
Stripping Sample Assys Sample		6.00	3	98.00	50	2.00	200	2.00
Trenching Core Trays Tray		92.50	37	725.00	290	2.50	400	2.50
Test Pits								
Roads and Trails								
Incidental Allowances @ $0.22/ft.		291.94	1327	2159.96	9818	.22	16000	.22
Total Distributed Costs		3457.94		25829.96				Total Costs Authorized by Contract
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
Total Costs		3457.94		25829.96				244920.00

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 March 10, 1959 Operator Bertha Mineral Division THE NEW JERSEY ZINC CO.

Per W. L. Ellwood Title Genl. Supt.

Remarks: Includes costs of A-530

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. 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

NARRATIVE REPORT - CHAFFIN PROJECT

At the beginning of the month, diamond drill hole A-536 was at 620 feet. This was thirteen feet above the Archeocyathus Bed. The Taylor Marker, Black Rock and Mottled Marker were penetrated in turn. Seventy-nine feet of strongly metamorphosed dolomite was penetrated in the Malden horizon and considerable scattered mineralization encountered. A twenty foot run of 0.8% Zn and 0.8% Pb was the best run found. The hole was bottomed at 1327 feet.

Hole A-537 was collared between 535 and 536 on the belief that these holes had straddled ore. It had reached 205 feet, still in the black augen bed, by the end of the month.

DIAMOND DRILL LOG A-536

Location: Chaffin Area on Section 200 feet NW of A-535

210 S 7175 E

Inclination: Vertical Elevation: 2184

Started: 1/2/59 Completed: 2/18/59

RESULTS

From	To	Dist	Recov	Description
0	70	70	0	Red clay
70	80	10	7	Varied dolomite
80	120	40	0	Cavity
120	128	8	1	Fault
128	139	11	4	Black augen type dolomite, bleached
139	144	5	0	Cavity
144	154	10	2	Black augen dolomite, bleached
154	161	7	0	Cavity
161	188	27	5	Drillers log as "Soft Rock" Black augen bleached
188	593	405	374	Black augen zone, usually bleached, locally pseudo sand grains
593	620	27	27	Fine saccharoidal dolomite
620	633	13	13	Bleached grey saccharoidal dolomite - Base of Black Augen?
633	649	16	16	Archeocyathus Marker
649	901	252	247	Varied Dolomites
901	1010	109	98	Taylor Marker Zone, possibly repeated
1010	1023	13	13	Moderate metamorphism
1023	1028	5	5	Grey Dolomite
1028	1030	2	2	Mineralized, estimated .5% Pb
1030	1078	48	46	Strong metamorphism
1078	1109	31	31	Strong metamorphism with very weak mineralization
1109	1131	22	22	Black Rock Marker
1131	1182	51	51	Varied Dolomites
1182	1200	18	18	Mineralized Dolomite
1200	1212	12	12	Grey dolomite
1212	1244	32	30	Mottled Marker
1244	1259	15	15	Varied Dolomites
1259	1279	20	19	0.8% Zn & 0.8% Pb
1279	1284	5	5	0.4% Zn, Nil Pb
1284	1286	2	2	Mineralized
1286	1306	20	17	Grey dolomite
1306	1327	21	21	Sand grains, dolomite. Locally mineralized

BOTTOM

DIAMOND DRILL LOG A-537

Location: Chaffin Area, Section 173 Midway between A-535 and A-536

255 S 7270 E

Inclination: Vertical Elevation: 2187

Started: 2/23/59 Completed:

RESULTS

From	To	Dist.	Recov.	Description
0	70	70		Red clay
70	171	101	76	Black augen dolomite
171	173	2	0	Cavity
173	205	32	24	Black augen dolomite

Incomplete

AGB 3940 2M 7-55

BERTHA MINERAL DIVISION

THE NEW JERSEY ZINC COMPANY

AUSTINVILLE, VA.

LABORATORY REPORT—SHIPMENTS AND MISCELLANEOUS

Geology Dept. Diamond Drill Hole No. A-536 DATE 2-24-59 19

SERIAL NO.	SAMPLE DATE	MATERIAL	Footage	DRY	ZN	PB	FE		
80	2-24	Samp.No. 17211	1259 - 1269	X	.78	.35			
1		17212	1269 - 1279		.95	1.30			
2		17213	1279 - 1284		.45	nil			

Certified True Copy
THE NEW JERSEY ZINC COMPANY

M. Whatiot Barr

Geologist

RGB. Chemist

BERTHA MINERAL DIVISION

THE NEW JERSEY ZINC COMPANY

AUSTINVILLE, VA.

Austinville, Va.
March 10, 1959

Regional Executive Officer
Defense Minerals Exploration Admn.
Room 2-B Post Office Building
Knoxville 2, Tennessee

Subject: February Monthly Report
DMEA 5008, Contract IDM-E-1204
Chaffin Tract, Austinville, Va.

Dear Sir:

Attached is our February monthly report on the diamond drilling of the Chaffin Tract, Austinville, Virginia.

Very truly yours,

W. L. Albers
General Superintendent

WHoratioBrown:rjl
In quintuplicate
Attachment

RECEIVED
MAR 11 1959
U. S. Geological Survey
Geologic Division
Knoxville, Tenn.

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

DATE	INITIALS	CODE
2-20	C	220
"		110
		800
		500

DMEA EXPLORATION PROJECT

INTERIM REPORT

DMEA-5008, Idm-E1204 - Zinc

Operator: The New Jersey Zinc Co., Austinville, Virginia

Location: Chaffin Estate, Wythe County, Virginia

No holes have been completed on this contract during the interim due to inclement weather, sickness and lay-off of drillers and general slow progress of recent drilling.

Drilling continues on Hole No.A-536, located 200 feet northwest of Hole No. A-535 on Section 173. Drilling began January 2, 1959 and the present depth of the hole is 947 feet. The total estimated depth of the hole is 1390 feet. No mineralization has been encountered to date.

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

Inspected: February 12, 1959

Helmuth Wedow, Jr., Geologist
Geological Survey - OME

z

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
REGION V

ELECTROTECHNICAL
EXPERIMENT STATION

P. O. BOX 217
NORRIS, TENNESSEE

February 6, 1959

Memorandum

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

From: Administrative Assistant, Norris, Tennessee

Subject: Monthly report and voucher

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

Idm-E1204 The New Jersey Zinc Company
Docket No. DMEA-5008
5th payment - month of January
Amount $1791.09

Helen Miller
Helen R. Miller

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

OFFICIAL FILE COPY
O. M. E.
RECEIVED FEB 9 1959

DATE	INITIALS	CODE
2-9	C	220
"	FEB	110
~~2-9~~	~~RCB~~	~~500~~

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

FEB 1959 O.M.E.

Budget Bureau No. 42-R1036.5

PAID ON VOUCHER & SCHEDULE
PAYMENTS K- 45

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of January, 195 9 Docket No. DMEA 5008 Contract No. 1204
Operator's Name The New Jersey Zinc Company Minerals Zinc-Lead
Address Austinville, Virginia
Contract Amount, $ 44920.00 Government Participation: 50 % Amount, $ 22460.00

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	3172.50	16607.00	19779.50	2/11/59		
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
Core Trays @ $2.50	102.50	530.00	632.50			
(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	86.00	92.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify): Incidental Allowance @ $0.22/ft.	301.18	1566.84	1868.02			✓
TOTALS	3582.18	18789.84	22372.02	3582.18	18789.84	22372.02

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

Date Feb. 4, 1959 Payee Bertha Mineral Division THE NEW JERSEY ZINC CO.

Per [signature] Title Genl. 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:

$ 1791.09

Signature Helen R. Mueller
(Authorized Certifying Officer)

Date FEB 6 1959 Vou. No. 86

(See other side)

1791.09

(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-1204 in accordance with the terms of the contract.

Signature W. J. Lynch Title MINING ENGINEER U. S. BUREAU OF MINES Date FEB 5 1959

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Robert A. Lawrence Title EXECUTIVE OFFICER OME FIELD TEAM REGION V Date FEB 5 1959

MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

FEB 9 1959
OMF

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of January 1959 Docket No. DMEA 5008 Contract No. 1204
Operator's Name The New Jersey Zinc Company Minerals Zinc-Lead
Address Austinville, Virginia

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.	2250.00	1000	19779.50	8491	2.33	16000	2.50
~~XXXX~~ 1000-1500	Ft.	922.50	369					
Auger								
~~XXXX~~ Sampling Sample Assays	Samp.	6.00	3	92.00	47	2.00	200	2.00
~~XXXX~~ Trenching Core Trays	Tray	102.50	41	632.50	253	2.50	400	2.50
Test Pits								
Roads and Trails								
Incidental Allowances @ $0.22/ft.		301.18	1369	1868.02	8491	.22	16000	.22
TOTAL DISTRIBUTED COSTS		3582.18		22372.02				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		3582.18		22372.02				$44920.00

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 Feb. 4, 1959 Operator Bertha Mineral Div. THE NEW JERSEY ZINC CO.

Per [signature] Title Genl. Supt.

REMARKS: Includes costs of A-535

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

NARRATIVE REPORT - CHAFFIN PROJECT

Diamond drill hole A-536 was collared January 2. Freezing weather and a stuck bit and broken core barrel which had to be fished out, limited progress during the month.

Three openings - one a 40-foot one - were penetrated in the first 161 feet. Nearly the entire footage drilled was typical black augen bed, usually bleached. The bottom of the black augen was probably penetrated at 593. At the end of the month, the hole was at 620 feet.

DIAMOND DRILL LOG A-536

Location: Chaffin Area on Section 200 feet NW of A-535

210 S 7175 E

Inclination: Vertical Elevation: 2184

Started: 1/2/59 Completed:

RESULTS

From	To	Dist	Recov	Description
0	70	70	0	Red clay
70	80	10	7	Varied dolomite
80	120	40	0	Cavity
120	128	8	1	Fault
128	139	11	4	Black augen type dolomite, bleached
139	144	5	0	Cavity
144	154	10	2	Black augen, dolomite, bleached
154	161	7	0	Cavity
161	188	27	5	Drillers log as "Soft Rock" Black augen bleached
188	593	405	374	Black augen zone, usually bleached, locally pseudo sand grains
593	620	27	27	Fine saccharoidal dolomite

AGB 3940 2M 7-55

BERTHA MINERAL DIVISION

THE NEW JERSEY ZINC COMPANY

AUSTINVILLE, VA.

LABORATORY REPORT—SHIPMENTS AND MISCELLANEOUS

Geology Dept. Diamond Drill Hole No. A-535 DATE 1-5-59 19__

SERIAL NO.	SAMPLE DATE	MATERIAL	Feet	DRY	Zn	Pb	Fe		
1	1-5	Samp.No. 17195	656 - 662		1.75	.33			
2		17196	662 - 669		.96	nil			
3		17197	685 - 694		.93	1.29			

Certified True Copy

THE NEW JERSEY ZINC COMPANY

Geologist

RGB. Chemist

BERTHA MINERAL DIVISION

THE NEW JERSEY ZINC COMPANY

AUSTINVILLE, VA.

Austinville, Va.
February 4, 1959

Regional Executive Officer
Defense Minerals Exploration Admn.
Room 2-B Post Office Building
Knoxville 2, Tennessee

Subject: January Monthly Report
DMEA 5008, Contract IDM-E-1204
Chaffin Tract, Austinville, Va.

Dear Sir:

Attached is our January monthly report on the diamond drilling of the Chaffin Tract, Austinville, Virginia.

Very truly yours,

W. L. Albers
General Superintendent

WHoratioBrown:rjl
In quintuplicate
Attachment

RECEIVED
FEB - 5 1959
U. S. Geological Survey
Geologic Division
Knoxville, Tenn.

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

DATE	INITIALS	CODE
1/26	C	220
1/4	VHL	110
1/27	[illegible]	800
1/28	[illegible]	500

DMEA EXPLORATION PROJECT

INTERIM REPORT

DMEA-5008, Idm-E1204-Zinc

Operator: The New Jersey Zinc Co., Austinville, Virginia

Location: Chaffin Estate, Wythe County, ~~Virginia~~.

Summary of Drilling Completed

	Since last inspection	To date
Number of holes	1	6
Footage	1369	8491

Holes showing:

a) Commercial mineralization.....	3
b) Non-commercial mineralization.....	3
c) No mineralization.....	0

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

Hole No. A-535- Located 385 feet S45°W from A-530. Coordinates E7330, S330; elevation at collar 2187 feet. Drilling began 11/14/58 and was completed 12/29/58. Brief log of hole: 0-76 overburden, collared in black augen zone; 76-656 black augen zone containing cavities; 656-777 dolomite containing mud flakes and sand grains; 777-788 archey bed; 788-1061 dolomite w/ sand grains and Taylor marker at base; 1061-1064 fault; 1064-1250 dolomite; 1250-1262 shale partings; 1262-1298 dolomite; 1298-1312 mottled marker; 1312-1369 dolomite; hole bottomed at 1369 feet. Mineralization: 13 ft (656-669) of 1.3% Zn, 0.1% Pb; 9 ft. (685-694) 0.9% Zn, 1.3% Pb; 4 ft. (810-814) traces of zinc, scattered pyrite. The following mineralization was present but not assayed: 7 ft. (958-965) of less than 0.2% Zn estimated; 2 ft. (982-984) of less than 0.1% Zn estimated;

3 ft.(1054-1057) of 0.5% Zn. estimated; 4 ft.(1057-1061) 0.5% Zn estimated.

Current drilling is in progress on Hole No. A-536, located 200 feet from A-535 on Section 173; Coordinates 203 S, 7168 E. The hole collared in the black augen zone and core was observed to a depth of 311 feet in this zone.

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

Inspected: January 15, 1959

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

Helmuth Wedow, Jr. Geologist
Geological Survey - OME

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BERTHA MINERAL DIVISION

THE NEW JERSEY ZINC COMPANY

AUSTINVILLE, VA.

OFFICIAL FILE COPY
O M E
RECEIVED JAN 23 1959
DATE

January 12, 1959

Regional Executive Officer
Defense Minerals Exploration Admn.
Room 2-B Post Office Building
Knoxville 2, Tennessee

Subject: December Monthly Report and Quarterly Summary, Chaffin Tract, Austinville, Va., DMEA 5008, Contract IDM-E-1204

Dear Sir:

Attached is our December Monthly Report and Quarterly Summary of the exploration work on the Chaffin Tract, Austinville, Virginia.

No drill contractor's invoice was received during the month; therefore, no cost report or voucher is enclosed herewith.

Very truly yours,

W. L. Albers
General Superintendent

WHoratioBrown:vhc
In quintuplicate
Attachments

RECEIVED
JAN 13 1959
U. S. Geological Survey
Geophysical Branch
Washington, D. C.

NARRATIVE REPORT - CHAFFIN TRACT

The month started with DDH A-535 just below the Ivanhoe Member or Archeocyathus (Archy) Bed as it is usually known. The hole penetrated the Taylor Marker which was repeated by a fault; encountered 46 feet of strong metamorphism in the Malden ore horizon, then penetrated the Black Rock and Mottled Markers before bottoming at 1369 feet. The hole encountered no ore but the mineralization found above the Archy Bed last month and the presence of the metamorphosed ground is believed to indicate that there is ore within 200 feet. Freezing weather delayed progress during December.

Hole A-536 was collared 200 feet northwest of A-535 but no progress was made during the month.

During the month, a survey of the deflections of the holes with a Tro-pari compass was started. Due to an accident in which the aluminum rods were lost, the job could not be completed. New rods have been ordered, and we expect to show the corrected location of the holes in the next quarterly report.

QUARTERLY SUMMARY

During the quarter ending December 31, the following holes were completed with the results noted below:

Hole No.	Depth	Collar	Bottom	Results
A-533	1384	Post T.M.	Austinville Dolomite	Barren
A-534	1370	Post T.M.	Austinville Dolomite	Barren
A-535	1369	Post T.M.	Austinville Dolomite	13' 1.3% Zn, 0.1% Pb 16' Barren 9' 0.9% Zn, 1.3% Pb

DIAMOND DRILL LOG A-535

Location: Chaffin Area on Austinville Grid
S 45 W from A-530 on Section 173

330 S 7330 E

Inclination: Vertical Elevation: 2187

Started: 11/14/58 Completed: 12/29/58

Results

From	To	Dist.	Recov.	Description
0	76	76	--	Red Clay
76	101	25	23	Black augen zone
101	103	2	0	Cavity
103	159	56	54	Black augen zone
159	160	1	1	Abundant "forams"
160	171	11	10	Black augen zone
171	172	1	0	Cavity
172	252	80	58	Black augen zone
252	277	25	20	Light gray with few sand frains
277	656	379	372	Black augen zone. 656 Base of augen
656	669	13	13	Mineralized, 1.3% Zn, 0.1% Pb
669	685	16	16	Mud flake dolomite
685	694	9	9	Mineralized .9% Zn, 1.3% Pb
694	747	53	53	Dirty dolomite
747	768	21	20	Mud flakes and sand grains
768	769	1	0	Cavity
769	777	8	3	Light gray dolomite
777	788	11	8	Archybed
788	1049	261	248	Varied dolomites; Locally mineralized
1049	1061	12	8	Dolomite sand grains Taylor Marker/
1061	1064	3	2	Fault Mineralized
1064	1095	31	31	Varied dolomite
1095	1105	10	10	Dolomite sand grains Taylor Marker
1105	1174	69	68	Varied dolomite
1174	1220	46	46	Strong met dolomite
1220	1250	30	30	Miscellaneous dolomite
1250	1262	12	12	Shale partings - Black Rock
1262	1298	34	32	Dolomite locally metamorphosed
1298	1312	14	14	Mottled Marker
1312	1369	57	51	Varied dolomites

BOTTOM

OF THE INTERIOR
MINERALS
ADMINISTRATION
TON 25, D. C.

L BUSINESS

(PMGC)

Approved 1958

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O. M. E.
RECEIVED DEC 30 1958

DATE	INITIALS	CODE
12/30	J. G.	235
		~~118~~
12/30		800
~~12/31~~		

DMEA EXPLORATION PROJECT

INTERIM REPORT

DMEA-5008, Idm-E1204 - Zinc

Operator: The New Jersey Zinc Company, Austinville, Virginia

Location: Chaffin Estate, Wythe County, Virginia

No holes have been completed on this contract during the interim. Several days delay in drill operations recently has been due to inclement weather. Drill Hole No. A-535, located 385 feet S. 45° W. from A-530 is now in progress. Core was observed to a depth of 1,119 feet. Estimated total depth of the hole is 1,400 feet. Mineralization has been encountered as follows: 9' (685-694) of est. 1 % zn plus Pb; 4' (810-814) FeS_2 with traces of zinc; 7' (958-965) of less than 0.2 % zn est.; 2' (982-984) of less than 0.1 % zn est.; 3' (1054-1057) of est. 5 % zn and 0.3 % Pb; 4' (1057-1061) of est. 0.5 % zn.

The results of the geophysical survey mentioned in the interim report of November 20, 1958 have not been received to date according to the staff at Austinville.

Inspected: December 18, 1958

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

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
REGION V

ELECTROTECHNICAL
EXPERIMENT STATION

P. O. BOX 217
NORRIS, TENNESSEE

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O. M. E.
RECEIVED DEC 15 1958

DATE	INITIALS	CODE
12/15	C	220
"	HH	210
12/16	Kelly	500

December 11, 1958

Memorandum

To: Jay L. Chambers, Office of Minerals Exploration, Interior Building, Washington 25, D. C.

From: Administrative Assistant, Norris, Tennessee

Subject: Monthly report and voucher

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

Idm-E1204 The New Jersey Zinc Company
Docket No. DMEA-5008
4th payment - month of November
Amount $1790.70

Helen R. Miller

Helen R. Miller

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

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

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

RECEIVED DEC 15 1958

PAID ON VOUCHER & SCHEDULE OF PAYMENTS K-

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of November 1958 Docket No. DMEA 5008 Contract No. 1204
Operator's Name The New Jersey Zinc Co Minerals Zinc - Lead
Address Austinville, Virginia
Contract Amount, $44,920.00 Government Participation: 50 % Amount, $22,460.00

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	3175.00	13432.00	16607.00	12/16/58		
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
Core Trays @$2.50	105.00	425.00	530.00			
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	None	86.00	86.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify): Incidental Allowance @ $0.22/Ft	301.40	1265.44	1566.84			
TOTALS	3581.40	15208.44	18789.84	3581.40	15208.44	18,789.84

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

Date 12/9/58 *Payee Bertha Mineral Div. THE NEW JERSEY ZINC CO

Per M L Allen Title General 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)

1790.70

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

$ 1,790.70

Signature Helen R. Miller
(Authorized Certifying Officer)

Date DEC 1 1958 Vou. No. 68
(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. Am-E1240 in accordance with the terms of the contract.

Signature [illegible] Title GEOLOGIST, U. S. G. S. Date DEC 10 1958

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE: Alternate ACTING EXECUTIVE OFFICER

Signature [illegible] Title ONE FIELD TEAM REGION V Date DEC 10 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

RECEIVED DEC 15 1958 O.M.E.

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

Month of November 195 8 Docket No. DMEA 5008 Contract No. 1204

Operator's Name The New Jersey Zinc Company Minerals Zinc - Lead

Address Austinville, Va.

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	2250.00	1000	16607.00	7122	2.33	16000	2.50
Drilling: Core 1000-1500	Ft	925.00	370					
Churn								
Auger								
Stripping								
xxxxxSample Assays	Samp	None	None	86.00	43	2.00	200	2.00
Trenching xxxxxCore Trays	Tray	105.00	42	530.00	212	2.50	400	2.50
Test Pits								
Roads and Trails Incidental Allowances @ $0.22/Ft	Ft	301.40	1370	1566.84	7122	.22	16000	.22
Total Distributed Costs		3581.40		18789.84				Total Costs Authorized by Contract
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
Total Costs		3581.40		18789.84				44920.00

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 12/9/58 Operator Bertha Mineral Div. The New Jersey Zinc Co

Per W. H. Albers Title General Supt.

Remarks: Includes costs of A-534

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)

GEOLOGIST, U. S. G. S.

DEC 10 1958

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

NARRATIVE REPORT -- CHAFFIN PROJECT

The month started with DDH-A-534 immediately above the Ivanhoe Member at a depth of 855 feet. The hole was drilled to a bottom at 1370 and the Ivanhoe Marker, Taylor Marker, Black Rock Marker, and Mottled Marker were recognized. No ore and only two slight traces of mineralization were found. Instead of ore the drill penetrated strongly metamorphosed ground above the Black Rock.

DDH-A-535 was collared alongside the road southwest of A-530. The hole is characterized by a lack of limestone and good development of the Black Augen beds. Thirteen feet of estimated one half percent zinc and lead combined and 9 feet of 1% estimated zinc and lead combined were penetrated above the Taylor Marker. The hole is incomplete at 795 feet.

Attached is a geochemical map of the Chaffin tract included at the request of Mr. Wedow.

DIAMOND DRILL LOG A-534

Location: Chaffin Area on Austinville Grid
S 45 E 195 feet from A-533 on Section 189

14 S 8114 E

Inclination: Vertical Elevation: 2152

Started: 10/11/58 Completed: 11/12/58

Results

From	To	Dist.	Recov.	Description
0	78	78		Red clay
78	269	191	172	Limestone cavernous upper part, Black augen and sedimentary breccia types
269	273	4	4	Black Augen Dolomite
273	502	229	229	Limestone, Black Augen and sedimentary breccia type
502	553	51	51	Black Augen dolomite
553	614	61	61	Limestone, Black Augen and shale partings
614	628	14	14	Limestone with few small sand grains
628	676	48	48	Limestone, Black Augen
676	682	6	6	Dolomite, fine saccharoidal
682	713	31	30	Well bedded dolomite
713	720	7	5	Mylonite, fault zone
720	727	7	0	Cavity
727	747	20	19	Massive limestone
747	760	13	13	Saccharoidal dolomite
760	779	19	16	Strong met dolomite
779	839	60	60	Saccharoidal dolomite
839	855	16	16	Saccharoidal dolomite with mud flakes. Mud flake bed
855	859	4	4	Saccharoidal slight met dolomite
859	867	8	8	Ivanhoe Member abundant archies
867	927	60	58	Dense limestone
927	1057	130	128	Varied slight met dolomite
1057	1059	2	1	Fault
1059	1074	15	13	Fine saccharoidal dolomite with sand grains. Taylor Marker
1074	1083	9	9	Dolomite locally banded
1083	1085	2	1	Fault
1085	1171	86	83	Slight Met dolomite
1171	1183	12	12	Strong met dolomite
1183	1244	61	60	Slight met dolomite
1244	1278	34	34	Black Rock Marker
1278	1329	51	51	Varied dolomite local abundant sand grains, Trace sphalerite
1329	1341	12	12	Mottled Marker
1341	1352	11	11	Lower Black Rock, Trace Sphalerite
1352	1360	8	8	Dolomite locally abundant sand grains
1360	1370	10	10	Saccharoidal dolomite

BOTTOM

DIAMOND DRILL LOG A-535

Location: Chaffin Area on Austinville Grid
S 45 W from A-530 on Section 173

330 S 7330 E

Inclination: Vertical Elevation: 2187

Started: 11/14/58 Completed:

Results

From	To	Dist.	Recov.	Description
0	76	76	--	Red Clay
76	101	25	23	Black augen zone
101	103	2	0	Cavity
103	159	56	54	Black augen zone
159	160	1	1	Abundant "forams"
160	171	11	10	Black augen zone
171	172	1	0	Cavity
172	252	80	58	Black augen zone
252	277	25	20	Light gray with few sand grains
277	656	379	372	Black augen zone. 656 Base of augen
656	669	13	13	Mineralized, estimated .5% Zn + Pb
669	685	16	16	Mud flake dolomite
685	694	9	9	Mineralized 1% Zn + Pb
694	747	53	53	Dirty dolomite
747	768	21	20	Mud flakes and sand grains
768	769	1	0	Cavity
769	795	26	18	Light gray dolomite

Incomplete

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DATE	INITIALS	CODE
12/1	C	220
1	FE	110
12/1	[illegible]	800
12/1	[illegible]	500

DMEA EXPLORATION PROJECT

INTERIM REPORT

DMEA-5008, Idm-E1204 - Zinc

Operator: The New Jersey Zinc Company, Austinville, Virginia

Location: Chaffin Estate, Wythe County, Virginia

Summary of Drilling Completed

	Since last inspection	To date
Number of holes	1	5
Footage	1370	7,122

Holes showing:

a) Commercial zinc ore----------	3
b) Non-commercial zinc mineralization-----	2
c) No zinc mineralization----------	0

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

Hole No. A-534(b) - Located 195 feet S45°E from A-533 on Section 189. Coordinates E8117,S18; elevation at collar 2152 ft; depth 1370 feet. Drilling began 10/11/58 and was completed 11/12/58. Brief log of hole: 0 - 78 ft. overburden; 78-614 ft. Black Augen dolomite containing partings and sections of sedimentary breccia, shale and limestone; 614-628 linestone containing few scattered sand grains, 628-676 ft. linestone and dolomite; 713-720 ft. fault zone; 720-727 ft. cavity. No recovery; 727-839 ft. dolomite of various types; 859-867 ft. Archey ls; 1059-1074 ft. Taylor Marker; 1244-1278 Black Rock Marker; 1330-1340 mottled marker; hole bottomed at 1370 feet. Faulting from 1057 to 1059; 1085 and 1091 feet. Mineralization: Minor scattered traces of sphalerite in Black Rock marker from 1244 to 1278.

Drilling is presently in progress on Hole A-535, located 385 feet S45°W from A-530. Core was observed to a depth of 343½feet. The hole collared in Black Augen dolomite and is presently drilling in the same marker. Estimated total depth of this hole is 1400 feet.

A geophysical survey of the first five holes drilled to date was completed by the Palmerton, N.J. Geophysical Section of the Company on the date of this visit. John Naratil and Harold Swanson and Austinville personnel, conducted the study using the Applied Potential method. Results of this work will not be known until Research Personnel at Palmerton, N.J., has had an opportunity to study and evaluate the findings.

Inspected: November 20, 1958

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

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

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

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

PAID ON VOUCHER & SCHEDULE OF PAYMENTS K-

RECEIVED NOV 13 1958 O.M.E.

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of October, 1958 Docket No. DMEA 5008 Contract No. 1204
Operator's Name The New Jersey Zinc Company Minerals zinc-lead
Address Austinville, Virginia
Contract Amount, $44,920.00 Government Participation: 50 % Amount, $22,460.00

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	3210.00	10222.00	13432.00	12/16/58	WRK	
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
Core trays @ $2.50	102.50	322.50	425.00			
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	None	86.00	86.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
Incidental Allowance @ $0.22/ft.	304.48	960.96	1265.44			
TOTALS	3616.98	11591.46	15208.44	$3,616.98	$11,591.46	$15,208.44

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

Date 11/7/58 *Payee Bertha Mineral Division THE NEW JERSEY ZINC COMPANY

Per W. L. Allen Title Genl. 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:

$1,808.49

Signature Helen R. Miller
(Authorized Certifying Officer)

Date NOV 12 1958 Vou. No. 56
(See other side)

1808.49

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Idm-E1204 in accordance with the terms of the contract.

Signature [illegible] Title MINING ENGINEER U. S. BUREAU OF MINES Date NOV 10 1958

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Robert A. Lawrence Title EXECUTIVE OFFICER OME FIELD TEAM REGION V Date NOV 10 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

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

Month of October 195 8 Docket No. DMEA 5008 Contract No. 1204
Operator's Name The New Jersey Zinc Company Minerals Zinc-Lead
Address Austinville, Virginia

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.	2250.00	1000	13432.00	5752	2.34	16000	2.50
~~Churn~~ 1000-1500	Ft.	960.00	384					
Auger								
Stripping								
~~Trenching~~ Sample Assay	Samp	None	None	86.00	43	2.00	200	2.00
~~Test Pits~~ Core Trays	Tray	102.50	41	425.00	170	2.50	400	2.50
Roads and Trails								
Incidental Allowance @ $0.22/ft.	Ft.	304.48	1384	1265.44	5752	.22	16000	.22
TOTAL DISTRIBUTED COSTS		3616.98		15208.44				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		3616.98		15208.44				$44,920.00

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

Date 11/7/58 Operator Bertha Mineral Div. The New Jersey Zinc Co.

Per W. L. Allen Title Gen. Supt.

REMARKS: Includes costs of A-533

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)

H Wardner
GEOLOGIST, U. S. G. S.

NOV 10 '58

INSTRUCTIONS

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GPO 872894

Narrative Report - Chaffin Project

The month started with DDH A-533 at a depth of 733 feet. The hole encountered only traces of sphalerite mineralization and was bottomed in the sand grain beds below the Mottled Marker at a depth of 1384 feet.

Hole A-534 was collared 200 feet southeast of A-533 but was lost and was moved 5 feet northwest. At the end of the month, the hole was incomplete immediately above the Ivanhoe Member at a depth of 855 feet.

During the month, considerable success was achieved in stratigraphic correlations. We can now recognize the Ivanhoe or Carbide Member, the Taylor Marker sometimes, the Black Rock Marker, the Mottled Marker, and the lower sand grain horizons below the Mottled Marker.

DIAMOND DRILL LOG A-533

Location: Chaffin Area on Austinville Grid
N 65 E 470 feet from A-530 on Section 189

128.06 N 7980.15 E

Inclination: Vertical Elevation: 2151.27
Started: 9/23/58 Completed: 10/10/58

Results

From	To	Dist.	Recov.	Description
0	75	75	-	Red clay
75	115	40	40	Arch limestone
115	211	96	92	Varied dense limestone
211	230	19	19	Arch Reef
230	267	37	35	Foraminifera or Oolites?
267	597	330	226	Interbedded limestone and dolomite - sand grains 514
597	616	19	19	Taylor Marker? and T.M. Mot.
616	714	98	98	Interbedded LGy Sach and Black Augen dolomite
714				Base of Black Augen
714	733	19	19	Light Grey Sach Dolomite
733	747	14	14	Varied dolomite mud flakes and shale partings
747	784	37	37	Arch Reef - Ivanhoe Member
784	871	87	87	Varied dolomite with shale partings and mud flakes
871	886	15	15	Mud flake Bd Marker
886	914	28	28	Slightly metamorphosed saccharoidal dolomite
914	922	8	8	Stylolitic Parting Bd
922	1209	287	284	Varied types of dolomite
1209	1245	36	36	Shale Parting - Black Rock Marker
1245	1289	44	44	Varied dolomites
1289	1295	6	6	Sach Dolomite rare sand grains
1295	1312	17	17	Mottled Marker
1312	1320	8	8	Varied dolomites
1320	1332	12	12	Saccharoidal dolomite with sand grains
1332	1355	23	23	Saccharoidal dolomite
1355	1366	11	11	Fine dolomite few sand grains
1366	1372	6	2	Fault zone. Mylonite
1372	1384	12	12	Saccharoidal dolomite with sand grains

BOTTOM

DIAMOND DRILL LOG A-534

Location: Chaffin Area on Austinville Grid
S 45 E 195 feet from A-533 on Section 189

14 S 8114 E

Inclination: Vertical Elevation: 2152

Started: 10/11/58 Completed:

Results

From	To	Dist.	Recov.	Description
0	78	78		Red clay
78	269	191	172	Limestone cavernous upper part, Black augen and sedimentary breccia types
269	273	4	4	Black Augen Dolomite
273	502	229	229	Limestone, Black Augen and sedimentary breccia type
502	553	51	51	Black Augen dolomite
553	614	61	61	Limestone, Black Augen and shale partings
614	628	14	14	Limestone with few small sand grains
628	676	48	48	Limestone, Black Augen
676	682	6	6	Dolomite, fine saccharoidal
682	713	31	30	Well bedded dolomite
713	720	7	5	Mylonite, fault zone
720	727	7	0	Cavity
727	747	20	19	Massive limestone
747	760	13	13	Saccharoidal dolomite
760	779	19	16	Strong met dolomite
779	839	60	60	Saccharoidal dolomite
839	855	16	16	Saccharoidal dolomite with mud flakes. Mud flake bed

Incomplete

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DATE	INITIALS	CODE
10/31	C	220
"	[illegible]	110
10/31	[illegible]	800
10/31	[illegible]	500

DMEA EXPLORATION PROJECT

INTERIM REPORT

DMEA-5008, Idm-E1204 - Zinc

Operator: The New Jersey Zinc Company, Austinville, Virginia.

Location: Chaffin Estate, Wythe County, Virginia.

Summary of Drilling Completed

	Since last inspection	To date
Number of holes	1	4
Footage	1384	5,752

Holes showing:

a)	Commercial zinc ore----------	3
b)	Non-commercial zinc mineralization----------	1
c)	No zinc mineralization----------	0

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

Hole No. A-533: Located 470 feet N65°E from Hole No. A-530 on Section 189. Coordinates N128.06, E7980.15; elevation at collar 2151.27; depth 1384 feet. Drilling began 9/23/58 and was completed 10/10/58. Brief log of core: 0-75 feet overburden, collared in Post-Taylor (?) marker; 75-115 feet Archey limestone; 115-211 dense limestone; 211-230 feet Archey limestone; 230-267 feet oolite or foraminifera (?) bed; 267-597 feet interbedded limestones and dolomites with scattered sand grains at 514 feet; 597-616 Taylor Marker (?); 616-714 interbedded light gray sacch and black Augen dolomite, base of black augen at 714 feet; 714-733 feet light gray sacch dolomite; 1245-1261 traces of sphalerite and pyrite; 1295-1312 feet mottled marker; very rare traces of disseminated sphalerite at 1314 feet; fault from 1366

to 1372 feet; 1372-1375 feet sand grain marker; bottom of hole at 1384 feet in sacch dolomite.

Current drilling is in progress on Hole No. A-534. Coordinates E-8117, S18; collar elevation 2152 feet. Core was observed to a depth of 116 feet. Estimated total depth is 1490 feet. Some difficulty has been experienced in drilling this hole and is the drillers second attempt at this site. The first coring was begun on 10/11/58 and was drilled to 232 feet before losing the hole. The second attempt was begun 10/14/58 and is apparently drilling in good ground at 116 feet.

Inspected: October 22, 1958

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

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

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INTERIM REPORT

DMEA-5008, Idm-E1204, Zinc.

Operator: The New Jersey Zinc Co., Austinville, Virginia

Location: Chaffin Estate, Wythe County, Virginia

Summary of Drilling Completed

	Since last inspection	To date
Number of holes	1	3
Footage	1443	4368

Holes showing:

(a)	Commercial zinc ore----------	3
(b)	Non-Commercial zinc mineralization---------	0
(c)	No zinc mineralization----------	0

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

Drill Hole No. A-532. Located 4100 feet south of base line on Section 181. Coordinates S 134.41, E7669.29; Collar elevation 2163.64. Depth 1443 feet. Drilling began September 4, 1958. Brief log of hole: 0-58 overburden; 58-315 limestone and dolomite; 315-331 foraminifera or oolites; 331-546 interbedded limestone and dolomite; Base of black augen @ 727; 727-1133 interbedded linestone and dolomite of various types; 1133 to 1390 lead-zinc mineralization and dolomite of various types; 1390-1418 dolomite; 1418-1443 dolomite containing sand grains.

Mineralization:

6'	(1133-1139)	2.4% Zn 0.2 Pb.
6'	(1208-1214)	3.6% Zn 0.2 Pb.
6'	(1214-1220)	10.7% Zn 0.9 Pb.
6'	(1244-1250)	5.2% Zn 2.6 Pb.
2'	(1250-1252)	0.8% Zn 0.7 Pb.
92'	(1298-1390)	1.8% Zn 0.2 Pb.

Current drilling is confined to Hole No.A-522 located 470 feet N65°E from A-530. Core was observed to a depth of 1337½ feet. The estimated total depth of this hole is 1420 feet. No appreciable amount of mineralization has been encountered to date. Upon completion of this hole the drill will probably be located on Hole A-534 approximately 400 feet southwest from A-530.

Inspected: 10/9/58

Helmuth Wedow, Geologist
Geological Survey

L. E. Shirley, Mining Engineer
Bureau of Mines

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

RECEIVED OCT 17 1958

Budget Bureau No. 42-R1036.5

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

PAID ON VOUCHER & SCHEDULE OF PAYMENTS K-

Month of September 1958 Docket No. DMEA 5008 Contract No. 1204
Operator's Name The New Jersey Zinc Company Minerals Zinc-Lead
Address Austinville, Virginia
Contract Amount, $ 44,920.00 Government Participation: 50% Amount, $ 22,460.00

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	6410.00	3812.00	10222.00			
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
Core Trays @ $2.50	205.00	117.50	322.50			
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	44.00	42.00	86.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
Incidental Allowance @ $0.22/ft.	608.08	352.88	960.96			
TOTALS	7267.08	4324.38	11591.46	7267.08	4324.38	11591.46

I certify that the above bill is correct and just and that payment therefor has not been received.
Date 10/9/58 *Payee Bertha Mineral Division THE NEW JERSEY ZINC CO.
Per W. L. Allred Title General 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)

$3,633.54

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:
$3,633.54
Signature Helen R. Mullin
(Authorized Certifying Officer)
Date OCT 15 1958 Vou. No. 18
(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. Idm-E1204 in accordance with the terms of the contract.

Signature V. J. Lynch Title MINING ENGINEER U. S. BUREAU OF MINES Date OCT 14 1958

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Robert A. Lawrence Title EXECUTIVE OFFICER MINING ENGINEER U. S. BUREAU OF MINES REGION V Date OCT 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 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 September 1958 Docket No. DMEA 5008 Contract No. 1204

Operator's Name The New Jersey Zinc Company Minerals Zinc-Lead

Address Austinville, Virginia

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.	4500.00	2000	10222.00	4368	2.34	16000	2.50
1000-1500	Ft.	1910.00	764					
~~Churn~~								
~~XXXX~~								
~~Auger~~								
Stripping								
~~Trenching~~ Sample Assays	Samp	44.00	22	86.00	43	2.00	200	2.00
~~Test Pits~~ Core Trays	Trays	205.00	82	322.50	129	2.50	400	2.50
Roads and Trails								
Incidental Allowances @ $0.22/Ft.	Ft.	608.08	2764	960.96	4368	.22	16000	.22
TOTAL DISTRIBUTED COSTS		7267.08		11591.46				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		7267.08		11591.46				$44,920.00

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.

REMARKS: Includes costs of A-531 and A-532

Date 10/9/58 Operator Bertha Mineral Division THE NEW JERSEY ZINC CO.

Per W. L. Allen Jr. Title General 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 OCT 17 1958 O.M.E.

GEOLOGIST, U. S. G. S.

OCT 14 '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

AGB 3940 ZM 7-55

BERTHA MINERAL DIVISION

THE NEW JERSEY ZINC COMPANY

AUSTINVILLE, VA.

LABORATORY REPORT—SHIPMENTS AND MISCELLANEOUS

Geology Dept. Diamond Drill Hole A-531 DATE 9-3-58 19

SERIAL NO.	SAMPLE DATE	MATERIAL	CAR	DRY	ZN	PB	FE		
656	9-3	Samp. No. 17173	1113 - 1118		10.30	2.55			
7		17174	1118 - 1123		4.00	2.49			
8		17175	1123 - 1128		6.96	2.20			

Certified True Copy
THE NEW JERSEY ZINC COMPANY

Geologist

RGB Chemist

AGB 3940 M 7-55

BERTHA MINERAL DIVISION

THE NEW JERSEY ZINC COMPANY

AUSTINVILLE, VA.

LABORATORY REPORT—SHIPMENTS AND MISCELLANEOUS

Geology Dept. Diamond Drill Hole No. A-532 DATE 10-2-58 19

SERIAL NO.	SAMPLE DATE	MATERIAL	XXXXX Feet	DRY	ZN	PB	FE		
668	9-30	Samp.No. 17176	1133 - 1139	6'	2.42	.23	✓		
9		17177	1208 - 1214	6'	3.63	.19	✓		
70		17178	1214 - 1220	6'	10.71	.87	✓		
1		17179	1244 - 1250	6'	5.15	2.57	✓		
2		17180	1250 - 1252	2'	.77	.67	✓		
3		17181	1298 - 1302	4'	4.64	.94	✓		
4		17182	1302 - 1307	5'	.40	.33	✓		
5		17183	1307 - 1316	9'	.10	nil	✓		
6		17184	1316 - 1322	6'	.95	nil	✓		
7		17185	1322 - 1329	7'	.35	nil	✓		
8		17186	1329 - 1335	6'	1.70	.23	✓		
9		17187	1335 - 1341	6'	1.65	1.12	✓		
80		17188	1341 - 1347	6'	1.75	nil	✓		
1		17189	1347 - 1352	5'	3.86	nil	✓		
2		17190	1352 - 1357	5'	4.14	.17	✓		
3		17191	1357 - 1365	8'	.40	nil	✓		
4		17192	1365 - 1370	5'	1.56	nil	✓		
5		17193	1370 - 1380	10'	1.65	.27	✓		
6		17194	1380 - 1390	10'	1.40	.36	✓		

Certified True Copy
THE NEW JERSEY ZINC COMPANY

Geologist

RGB. Chemist

BERTHA MINERAL DIVISION

THE NEW JERSEY ZINC COMPANY

AUSTINVILLE, VA.

October 9, 1958

Regional Executive Officer
Defense Minerals Exploration Admn.
Room 2-B Post Office Building
Knoxville 2, Tennessee

Subject: September Monthly Report and Quarterly Summary, Chaffin Tract, Austinville, Va., DMEA 5008, Contract IDM-E-1204

Dear Sir:

Attached is our September Monthly Report and Quarterly Summary of the exploration work on the Chaffin Tract, Austinville, Virginia.

Very truly yours,

W. L. Albers
W. L. Albers
General Superintendent

WHoratioBrown:rjl
In quintuplicate
Attachments

RECEIVED
OCT 10 1958
U.S. Geological Survey

Narrative Report - Chaffin Project

The month started with A-531 at a depth of 1234 feet. This hole can be seen on Section 7GB-2189A. The hole was continued through the Mottled Marker and just past the up dip projection of the lower ore in A-530 without discovering any further mineralization. It was bottomed at 1321 feet.

A-532 was collared 100 feet southeast of A-530 as shown on 7GB-2189A. The hole was characterized by a big increase in limestone in the top 700 feet and by a lack of definite known district-wide markers in the upper 1100 feet. However, enough local markers that can be traced from hole to hole are found to give a fair picture.

Hole A-533 was collared N65E 430 feet from A-530 on Section 189. To date the hole is very similar to A-532 with the top 600 feet predominantly limestone. The best marker found to date in the upper horizons is the bed of either foraminifera or oolites found in holes A-530 and 532. The hole was incomplete at 733 feet at the end of the month.

Quarterly Summary

During the quarter ending September 30, the following holes were completed with the noted results:

Hole No.	Depth	Collar	Bottom	Results	
A-530	1604	Post TM	Austinville Dolomite	106'	4.0% Zn, 1.2% Pb
				23'	2.0% Zn, 0.9% Pb
				9'	2.0% Zn, Nil Pb
A-531	1321	Post TM	Austinville Dolomite	15'	7.1% Zn, 2.4% Pb
A-532	1443	Post TM	Austinville Dolomite	6'	2.4% Zn, 0.2% Pb
				12'	7.1% Zn, 0.5% Pb
				8'	4.1% Zn, 1.1% Pb
				61'	1.8% Zn, 0.2% Pb

DIAMOND DRILL LOG A-531

Location: Austinville Grid: 3900 ft. southeast of base line on Section 181

7.72 N 7525.64 E

Inclination: Vertical Elevation: 2175.82

Results

From	To	Dist.	Recov.	Description
0	60	60	0	Red clay overburden
60	168	108	78	Black augen dolomite zone locally bleached
168	286	196	105	Abundant archies. The lower part of this zone may be dolomitized Ivanhoe Member
286	414	128	128	Partly bleached black augen zone
414	451	44	44	Bed of multiple shale partings. Apparently a Marker
451	558	107	107	Bleached? Black augen
558	716	158	152	Varied types of dolomite
716	787	71	71	Zone of abundant partings. Possibly Black Rock Marker.
787	821	34	34	Mud flake dolomite
821	1076	255	255	Varied types of dolomite Fault 954-958
1076	1113	37	37	Strong Met Dolomite
1113	1128	15	15	Ore 7.1% Zn, 2.4% Pb
1128	1141	13	13	Strong Met Dolomite
1141	1234	93	93	Light gray slight Met dolomite
1234	1239	5	5	Fa, LoMylonite, Slight Met
1239	1256	17	17	Medium grey sach. Rare sand-grains.
1256	1269	13	13	Prominent mottling Mottled Marker.
1269	1283	14	14	Sach, thick partings
1283	1290	7	7	Sach abundant sandgrains
1290	1317	27	27	Strong met
1317	1321	4	4	Light grey sach

BOTTOM

DIAMOND DRILL LOG A-532

Location: Chaffin Area on Austinville Grid
4100 ft. south of Base Line on Section 181

134.41 S 7666.29 E

Inclination: Vertical Elevation: 2163.64

Object: To test for ore down dip from A-530

Results

From	To	Dist.	Recov.	Description
0	58	58	0	Red clay
58	99	41	35	Dense limestone and fine sach dolomite.
99	185	86	85	Interbedded black augen and mud flake dolomite
185	240	55	55	Reef limestone
240	260	20	20	Black augen dolomite
260	274	14	14	Reef limestone
274	315	43	43	Interbedded limestone and dolomite, black augen, Arch and Sh Pts
315	331	16	16	Forams or Oolites
331	546	215	214	Interbedded limestone and dolomite, varied types.
546	562	16	16	Composite shale parting bed.
562	674	112	112	Dense limestone
674	727	53	53	Varied dolomites. Base of black augen.
727	812	85	85	Varied dolomites with interbedded limestone.
812	848	36	36	Dolomite Arch Reef.
848	914	66	66	Interbed limestone & dolomite
914	942	28	28	Mud flake dolomite
942	1133	191	190	Varied types of dolomite
1133	1139	6	6	2.4% Zn, 0.2% Pb
1139	1208	71	70	Varied types of dolomite
1208	1220	12	12	7.1% Zn, 0.5% Pb
1220	1244	24	24	Light grey sach dolomite
1244	1252	8	8	4.1% Zn, 1.1% Pb
1252	1298	46	46	Varied mineralized dolomites
1298	1302	4	4	4.6% Zn, 0.9% Pb
1302	1329	27	27	0.4% Zn, 0.1% Pb
1329	1347	18	17	1.7% Zn, 0.4% Pb
1347	1357	10	10	4.0% Zn, 0.1% Pb
1357	1365	8	7	0.4% Zn, Nil Pb
1365	1390	25	25	1.5% Zn, 0.2% Pb
1390	1397	7	7	Light grey sach dolomite
1397	1418	21	21	Mottled dolomite
1418	1443	25	25	Sand grain dolomite

BOTTOM

DIAMOND DRILL LOG A-533

Location: Chaffin Area on Austinville Grid
N 65 E 470 feet from A-530 on Section 189

128.06 N 7980.15 E

Inclination: Vertical Elevation: 2151.27

Results

From	To	Dist.	Recov.	Description
0	75	75	-	Red clay
75	115	40	40	Arch limestone
115	211	96	92	Varied dense limestone
211	230	19	19	Arch Reef
230	267	37	35	Foraminifera or Oolites?
267	597	330	226	Interbedded limestone and dolomite - sand grains 514
597	616	19	19	Taylor Marker? and T.M. Mot.
616	714	98	98	Interbedded LGy Sach and Black Augen dolomite
714				Base of Black Augen
714	733	19	19	Light Grey Sach Dolomite

Incomplete

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DATE | TO | CODE
9/19 | C | 220
9/22 | | 100
9/22 | | 110
9/22 | | 800
9/24 | | 500

DMEA EXPLORATION PROJECT

INTERIM REPORT

DMEA-5008, Idm-E1004 (zinc)

Operator: The New Jersey Zinc Co., Austinville, Virginia

Location: Chaffin Estate, Wythe County, Virginia

Summary of Drilling Completed

	Since last inspection	To date
Number of holes	2	2
Footage	2925	2925

Holes showing:

a)	Commercial zinc ore	2
b)	Non-commercial zinc mineralization	0
c)	No zinc mineralization	0

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

Hole No. A-530- (continued from interim report of Aug. 8, 1958).

From 1577 to 1604 undifferentiated dolomite and limestone containing scattered traces of sphalerite; hole bottomed at 1604. For mineralization refer to the above mentioned interim report.

Hole No. A-531- Located 3900 feet southeast of base line on Section 181 on NJZ Company property. Depth 1321 feet. Coordinates N 17.72, E 7,525.64; collared 2175.82(elevation). Drilling began 8/10/58 and was completed 9/3/58.

Brief log of hole: 0-60 overburden, collared in "Mystery Series"; 60-168 Black Augen dolomite, 78 feet of core recovery; 168-286 Archey zone; 286-414 Black Augen dolomite, partly bleached; 414-451 shale partings; 451-558 Black Augen dolomite(?); 558-565 fault;

565-716 varied types of dolomite; 716-787 Black Rock Marker containing local Zn, Pb and FeS_2 from 764 to 787; 787-1113 mud flake dolomite., varied types of dolomite, with faulting observed from 954 to 958; 15 feet (1113-1128) ore zone composed of 7.1% zinc and 2.4% lead; 1128-1234 strong met. dolomite, local zinc at 1212 feet; 1239 to 1241 fault; 1256-1269 mottled marker; 1269-1283 few thick partings; 1283-1290 very abundant sand grains; 1290-1317 strong met. dolomite; 2 ft (1306-1308) 1% zinc and lead combined; 1317-1321 local Zn and Pb mineralization; hole bottomed at 1321 feet.

Drill hole A-532, located 100 feet southwest of A-530 is now in progress. Core was examined to a depth of 395 feet; estimated total depth is 1400 feet.

Inspected: Sept. 10, 1958

L. E. Shirley, Mining Engineer
Bureau of Mines

Helmuth Wedow, Jr. Geologist
Geological Survey

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

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

PAID ON VOUCHER & SCHEDULE OF PAYMENTS K-

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of August 195 8 Docket No. DMEA 5008 Contract No. 1204
Operator's Name The New Jersey Zinc Company Minerals Zinc - Lead
Address Austinville, Va.
Contract Amount, $ 44,920.00 Government Participation: 50% Amount, $ 22,460.00

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	$3812.00	None	$ 3812.00	9/18/58	[illegible]	
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
Core Trays @ $2.50	117.50	None	117.50			
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	42.00	None	42.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
Incidental Allowances $0.22/ft.	352.88	None	352.88			
TOTALS	4324.38	None	4324.38	4,324.38	—	4,324.38

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

Date 9/5/58 *Payee Bertha Mineral Division THE NEW JERSEY ZINC COMPANY

Per W. L. Allen Title General 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)

2,162.19 S 7/3

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

$2,162.19

Signature [illegible]
(Authorized Certifying Officer)

Date SEP 1 0 1958 Vou. No. 34
(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. Idm-E1204 in accordance with the terms of the contract.

Signature W. A. Beck Title U. S. BUREAU OF MINES Date SEP 8 1958

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Robert A. Lawrence Title EXECUTIVE OFFICER DMEA FIELD TEAM REGION V Date SEP 8 1958

MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of August 1958 Docket No. DMEA 5003 Contract No. 1204
Operator's Name The New Jersey Zinc Company Minerals Zinc - Lead
Address Austinville, Va.

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.	2250.00	1000	3812.00	1604	2.377	16,000	2.50
Churn 1000-1500	"	1250.00	500					
Auger 1500-1604	"	312.00	104					
Stripping								
Trenching								
Test Pits Sample Assays	Samp.	42.00	21	42.00	21	1.00	200	2.00
Roads and Trails Core Trays	Trays	117.50	47	117.50	47	2.50	400	2.50
Incidental Allowance @ $0.22/ft.	Ft.	352.88	1604	352.88	1604	.22	16000	.22
Total Distributed Costs		$4324.38		4324.38				Total Costs Authorized by Contract
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
Total Costs		$4324.38		$4324.38				$44,920.00

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.

Remarks: Includes cost of A-530

Date 9/5/58 Operator Bertha Mineral Division THE NEW JERSEY ZINC COMPANY

Per W. L. Allen Title General 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)

W. A. Beck MINING ENGINEER U. S. BUREAU OF MINES

1958

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

BERTHA MINERAL DIVISION

THE NEW JERSEY ZINC COMPANY

AUSTINVILLE, VA.

September 5, 1958

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

Subject: August Monthly Report
DMEA 5008 Contract IDM-E-1204
Chaffin Tract, Austinville, Va.

Dear Sir:

Attached is our August Monthly Report on the Chaffin Tract, Austinville, Virginia.

It is of especial interest in that two ore holes are reported.

Very truly yours,

W. L. Albers/sgm

W. L. Albers
General Superintendent

WHoratioBrown:rjl
In quintuplicate
Attachments

RECEIVED
SEP 6 - 1958

Narrative

The month started with DDH A-530 at a depth of 1085 feet. At 1126', the drill encountered ore which over a total distance of 106' assayed 4.0% Zn and 1.2% Pb. A second run was penetrated from 1301' to 1324' which assayed 2.0% Zn and 0.9% Pb. A third run 9' thick was encountered at 1334' and assayed 2.0% Zn and Nil Pb. Scattered mineralization was encountered to the bottom at 1604'. The stratigraphy was characterized by rather unsatisfactory identification of markers.

DDH A-531 was collared 100 feet northwest of A-530. In this hole, markers were even scarcer than in A-530 but it now appears that three or four horizons can be recognized. Opposite the top of the 106-foot run in A-530, 15 feet of ore was encountered at 1113', assaying 7.1% Zn and 2.4% Pb. It would appear from these two penetrations that we have the up dip fringe of the ore especially as strongly metamorphosed ground is present both above and below the A-531 ore placing it above and up dip from the main showing in A-530.

DIAMOND DRILL LOG - A-530

Location: Austinville Grid: 4,000 ft. south of base line on Section 181

61.53 S 7598.15 E

Inclination: Vertical Elevation 2170.97

Object: To test for ore body en echelon from Austinville Orebodies.

Results

From	To	Dist.	Recov.	Description
0	83	83	0	Red clay overburden
83	120	37	26	Dolomite Locally Archies and Mud Flakes
120	124	4	4	Dense limestone
124	139	15	15	Dolomite, fine sach mottled
139	153	14	14	Dense limestone
153	276	123	118	Black Augen dolomite locally leached, archies
276	328	51	50	Archie & Fossil Limestone Ivanhoe Member???
328	647	319	318	Black augen dolomite largely bleached, locally archies
647	689	42	42	Mud flakes, Pseudo sand grains, Rare Partings, Mottled, Taylor Marker??
689	848	159	159	Light medium gray dolomite, local archies, local mottled
848	855	7	7	Medium to dark gray abundant shale partings Black Rock Marker?
855	1002	147	145	Very varied types of dolomite
1002	1003	1	1	Mylonitic fault zone
1003	1036	33	31	Mottled dolomite, Taylor Marker???
1036	1085	49	48	Medium gray sach dolomite
1085	1111	26	26	Medium gray sach dolomite
1111	1126	15	15	Strong Met, locally sach
1126	1130	4	4	Mineralized 1.6% Zn, Nil Pb
1130	1151	21	21	Ore 4.6% Zn, 0.2% Pb
1151	1166	15	15	Ore 3.9% Zn, Nil Pb
1166	1179	13	13	Ore 4.1% Zn, 1.1% Pb
1179	1186	7	7	Ore 14.8% Zn, 8.2% Pb
1186	1194	8	8	Mineralized 0.6% Zn, 0.1% Pb
1194	1206	12	12	Low grade 1.9% Zn, 0.4% Pb
1206	1213	7	7	Ore 9.4% Zn, 4.8% Pb
1213	1220	7	7	Medium gray sach dolomite

DIAMOND DRILL LOG -- A-530 (Cont)

From	To	Dist.	Results Recov.	Description
1220	1232	12	12	Ore 4.5% Zn, 1.2% Pb
1232	1239	7	7	Mineralized
1239	1275	36	36	Medium gray sach
1275	1288	13	13	Mottled Marker?
1288	1301	13	13	Medium gray sach
1301	1324	23	22	Low grade 2.0% Zn, 0.9% Pb
1324	1334	10	10	Mineralized medium gray sach
1334	1343	9	9	Low grade 2.0% Zn, Nil Pb
1343	1368	25	25	Mineralized light medium gray dolomite
1368	1448	80	80	Light medium gray dolomite
1448	1451	3	3	Estimated 2% Zn and .3% Pb
1451	1534	83	83	Varied types of dolomite
1534	1604	70	68	Banded sach dolomite mineralized nearly to bottom.

Bottom

(N.B.) 476-503 should be added as a marker. It is a lower black rock type multiple shale parting bed.

DIAMOND DRILL LOG A-531

Location: Austinville Grid: 3900 ft. southeast of base line on Section 181

7.72 N 7525.64 E

Inclination: Vertical Elevation: 2175.82

Results

From	To	Dist.	Recov.	Description
0	60	60	0	Red clay overburden
60	168	108	78	Black augen dolomite zone locally bleached
168	286	196	105	Abundant archies. The lower part of this zone may be dolomitized Ivanhoe Member
286	414	128	128	Partly bleached black augen zone
414	451	44	44	Bed of multiple shale partings. Apparently a Marker
451	558	107	107	Bleached? Black augen
558	716	158	152	Varied types of dolomite
716	787	71	71	Zone of abundant partings. Possibly Black Rock Marker.
787	821	34	34	Mud flake dolomite
821	1076	255	255	Varied types of dolomite Fault 954-958
1076	1113	37	37	Strong Met Dolomite
1113	1128	15	15	Ore 7.1% Zn, 2.4% Pb
1128	1141	13	13	Strong Met Dolomite
1141	1234	93	93	Light gray slight Met dolomite

Incomplete

ASB 394 55

BERTHA MINERAL DIVISION

THE NEW JERSEY ZINC COMPANY

AUSTINVILLE, VA.

LABORATORY REPORT—SHIPMENTS AND MISCELLANEOUS

Geol.

Diamond Drill Hole No. A-530 DATE 8-7-58 19

SERIAL NO.	SAMPLE DATE	MATERIAL	~~CAR~~ Feet	DRY	Zn	Pb	Fe		
607	8-6	Sample No. 17152	1126 - 1130		1.61	.01			
608		17153	1130 - 1136		4.46	.14			
609		17154	1136 - 1143		8.76	.32			
610		17155	1143 - 1151		2.80	.05			
611		17156	1151 - 1158		.46	Nil			
612		17157	1158 - 1166		.27	"			
613		17158	1166 - 1173		3.86	.31			
614		17159	1173 - 1179		6.02	1.97			
615		17160	1179 - 1186		14.81	8.23			
616		17161	1186 - 1194		.59	.11			

Certified True Copy
THE NEW JERSEY ZINC COMPANY

W. Walter Ma

Geologist

WLS Chemist

AGB 3940 2M 7-55

BERTHA MINERAL DIVISION

THE NEW JERSEY ZINC COMPANY

AUSTINVILLE, VA.

LABORATORY REPORT—SHIPMENTS AND MISCELLANEOUS

Diamond Drill Hole No. A-530 DATE 8-8-58 19

SERIAL NO.	SAMPLE DATE	MATERIAL	~~CAR~~ Feet	DRY	ZN	PB	FE		
617	8-6	Sample No. 17162	1198 - 1206		2.39	.37			
618		17163	1206 - 1213		9.43	4.82			
			1213 - 1220	- - -	- - -	- - -	- - 7'	Waste	
619		17164	1220 - 1226		5.75	2.02			
620		17165	1226 - 1232		3.22	.44			
			1232 - 1301	- - -	- - -	- - -	- - 69'	Waste	
621		17166	1301 - 1306		.50	2.55			
622		17167	1306 - 1312		1.70	.38			
623		17168	1312 - 1318		1.70	.89			
624		17169	1318 - 1324		3.95	.07			
			1324 - 1334	- - -	- - -	- - -	- - 10'	Waste	
625		17170	1334 - 1338		2.34	Nil			
626		17171	1338 - 1343		1.65	"			

Certified True Copy
THE NEW JERSEY ZINC COMPANY

E. W. Matson Jr.

Geologist

WLS Chemist

AGB 9940 M 7-55

BERTHA MINERAL DIVISION

THE NEW JERSEY ZINC COMPANY

AUSTINVILLE, VA.

LABORATORY REPORT—SHIPMENTS AND MISCELLANEOUS

Geology

Diamond Drill Hole No. A-530

DATE 8-11-58 19

SERIAL NO.	SAMPLE DATE	MATERIAL	CAR Feet	DRY	Zn	Pb	Fe		
827	8-8	Sample No. 17172	1194 - 1198		.96	.37			

Certified True Copy
THE NEW JERSEY ZINC COMPANY

Geologist

WLS

Chemist

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DMEA
RECEIVED AUG 21 1958

DATE	INITIALS	COST
8/21	H. G.	225
21	Cohn	100
"	[illegible]	110
8/25	[illegible]	800
~~8/26~~	~~[illegible]~~	~~500~~

DMEA EXPLORATION PROJECT

INTERIM REPORT

DMEA-5008, Idm-E1204 (zinc)

Operator: The New Jersey Zinc Co., Austinville, Virginia

Location: Chaffin Estate, Wythe County, Virginia

No holes have been completed on the project up to the date of this visit. Hole No. A-530 has been drilled to a depth of 1,577 feet and drilling will be continued as long as mineralization is encountered.

The hole is located 4000 feet south of the base line on Section 181. The coordinates given in the previous interim report were in error and should read 61.53 south and 7598.15 east. The collar elevation should also be changed to read 2170.97 feet.

A brief log of the hole follows: 0-83 feet overburden, collared in Post-Carbide; 83-276 dolomite and limestone; 276-328 feet Archie bed; 328-647 Black Augen dolomite; 647-689 Taylor Marker(?); 689-848 light gray dolomite containing local archies; 848-855 feet shale partings in Black Rock Marker (?); 855-1002 dolomite undifferentiated; 1002-1003 feet Mylonitic fault zone; 1003-1036 mottled dolomite, Taylor Marker; 1035-1288 feet mottled marker containing disseminated pyrite; 1288 to 1577 dolomite and limestone, undifferentiated.

Mineralization:

60 ft (1126-1186) 4.6% Zn. 1.3% lead
46 ft (1186-1232) 3.2% Zn. 1.0% lead
69 ft (1232-1301) scattered traces of Zn and Pb.
23 ft (1301-1324) 2.0% Zn. 0.9% lead
41 ft (1334-1338) 2.3% Zn. Nil lead
5 ft (1338-1343) 1.7% Zn. Nil lead
Scattered shines of sphalerite extended to 1577 feet.

Inspected: August 8, 1958

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

Helmuth Wedow, Jr. Geologist
Geological Survey (DMEA)

z

COPY
DMEA
RECEIVED AUG 18 1958

DATE	INITIALS	CODE
8/13	N.g.	325
11	RJ	110
		500

BERTHA MINERAL DIVISION

THE NEW JERSEY ZINC COMPANY

AUSTINVILLE, VA.

Austinville, Va.
August 6, 1958

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

Subject: July Monthly Report
DMEA 5008 Contract IDM-E-1204
Chaffin Tract, Austinville, Va.

Dear Sir:

Attached is our first monthly report on the Chaffin Tract, Austinville, Virginia.

Since no holes were completed in July, we are only submitting a partial log and narrative account.

Very truly yours,

W. L. Albers
W. L. Albers
General Superintendent

WHoratioBrown:rjl
In quintuplicate
Attachment

Narrative

Diamond drilling was started July 9, 1958. The first hole, A-530, was designated as DDH 1 on both the DMEA application and contract.

A-530 was collared in the dolomite beds above the Ivanhoe Member which was apparently penetrated between 284 and 328 feet. It is possible that the Taylor Marker is repeated in the hole by a fault. The hole was still in the Austinville dolomite at 1085 the end of the month.

DIAMOND DRILL LOG - A-530

Location: Austinville Grid: 4,000 ft. south of base line on Section 181

61.53 S 7598.15 E

Inclination: Vertical Elevation 2170.97

Object: To test for ore body en echelon from Austinville Orebodies.

Results

From	To	Dist.	Recov.	Description
0	83	83	0	Red clay overburden
83	120	37	26	Dolomite Locally Archies and Mud Flakes
120	124	4	4	Dense limestone
124	139	15	15	Dolomite, fine sach mottled
139	153	14	14	Dense limestone
153	276	123	118	Black Augen dolomite locally leached, archies
276	328	51	50	Archie & Fossil Limestone Ivanhoe Member???
328	647	319	318	Black augen dolomite largely bleached, locally archies
647	689	42	42	Mud flakes, Pseudo sand grains, Rare Partings, Mottled, Taylor Marker??
689	848	159	159	Light medium gray dolomite, local archies, local mottled
848	855	7	7	Medium to dark gray abundant shale partings Black Rock Marker?
855	1002	147	145	Very varied types of dolomite
1002	1003	1	1	Mylonitic fault zone
1003	1036	33	31	Mottled dolomite, Taylor Marker???
1036	1085	49	48	Medium gray sach dolomite

Incomplete

7-28	C	220
28	Com	100
"	Kj	110
7/29	[illegible]	800
		500

INTERIM REPORT

DMEA-5008, Idm-E1204 (Zinc-lead)

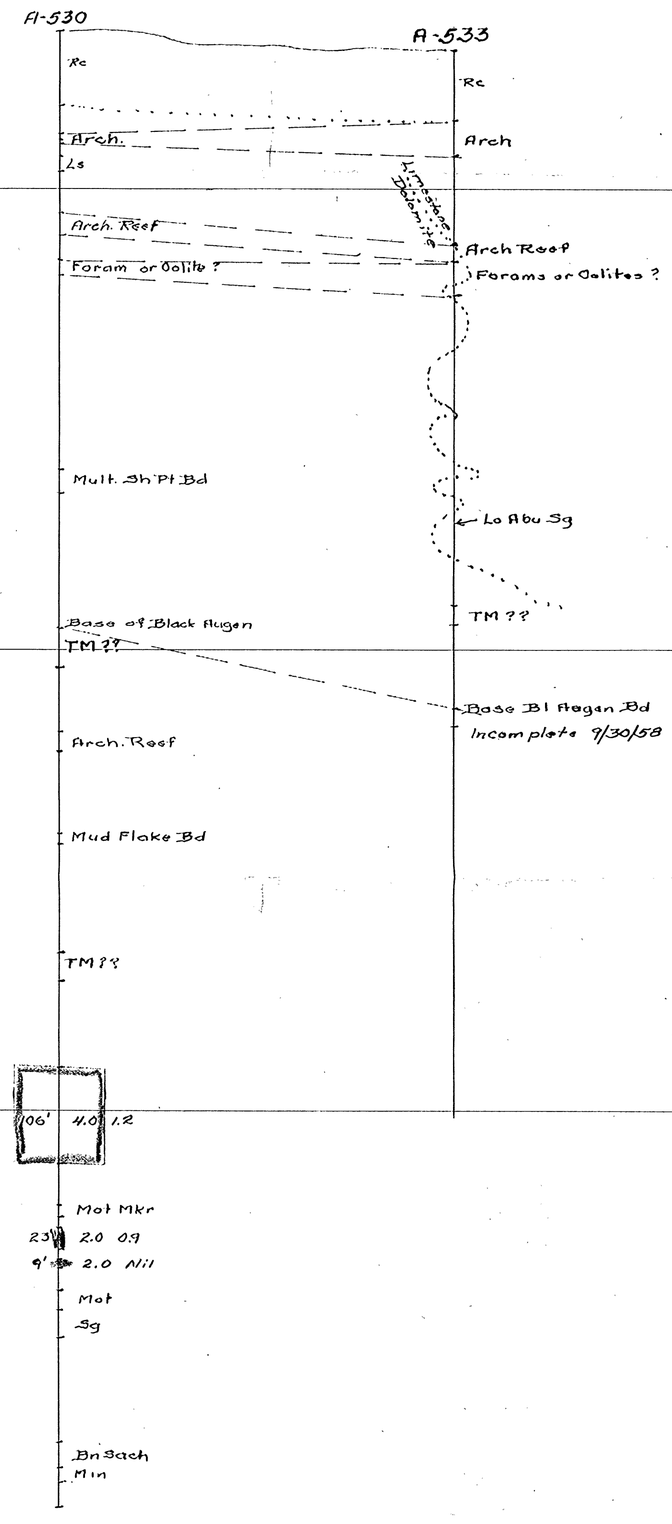
Operator: The New Jersey Zinc Company, Austinville, Virginia

Location: Chaffin Estate, Wythe County, Virginia

The Chaffin project was started on July 3, 1958 with the surveying of several proposed drill hole sites. Subsequently, the drilling contractor, Joy Manufacturing Company, moved a BXWL rig into the area and started drilling on July 9. Hole A-530, the first hole to be drilled on the project, was in progress at the time of this inspection. This hole is located at coordinates 60.31 South, 7,596.85 East (Operator's Austinville coordinate system) and has a collar elevation of 2,172.61 feet. It is also located at a point 4,000 feet southeast of the baseline on Section 181, approximately the same location as DDH-1 on the contract map. At the time of inspection it was drilling at a depth of 315 feet. It was probably collared in the post-Ivanhoe member of the Shady dolomite and penetrated 83 feet of overburden. At the current drilling depth it is probably in the Ivanhoe member although the depth of the top of the Ivanhoe has not yet been logged out with certainty.

Inspected: July 14, 1958

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



POSTED TO DATE

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BERTHA MINERAL DIVISION
THE NEW JERSEY ZINC COMPANY

DRAWN
TRACED

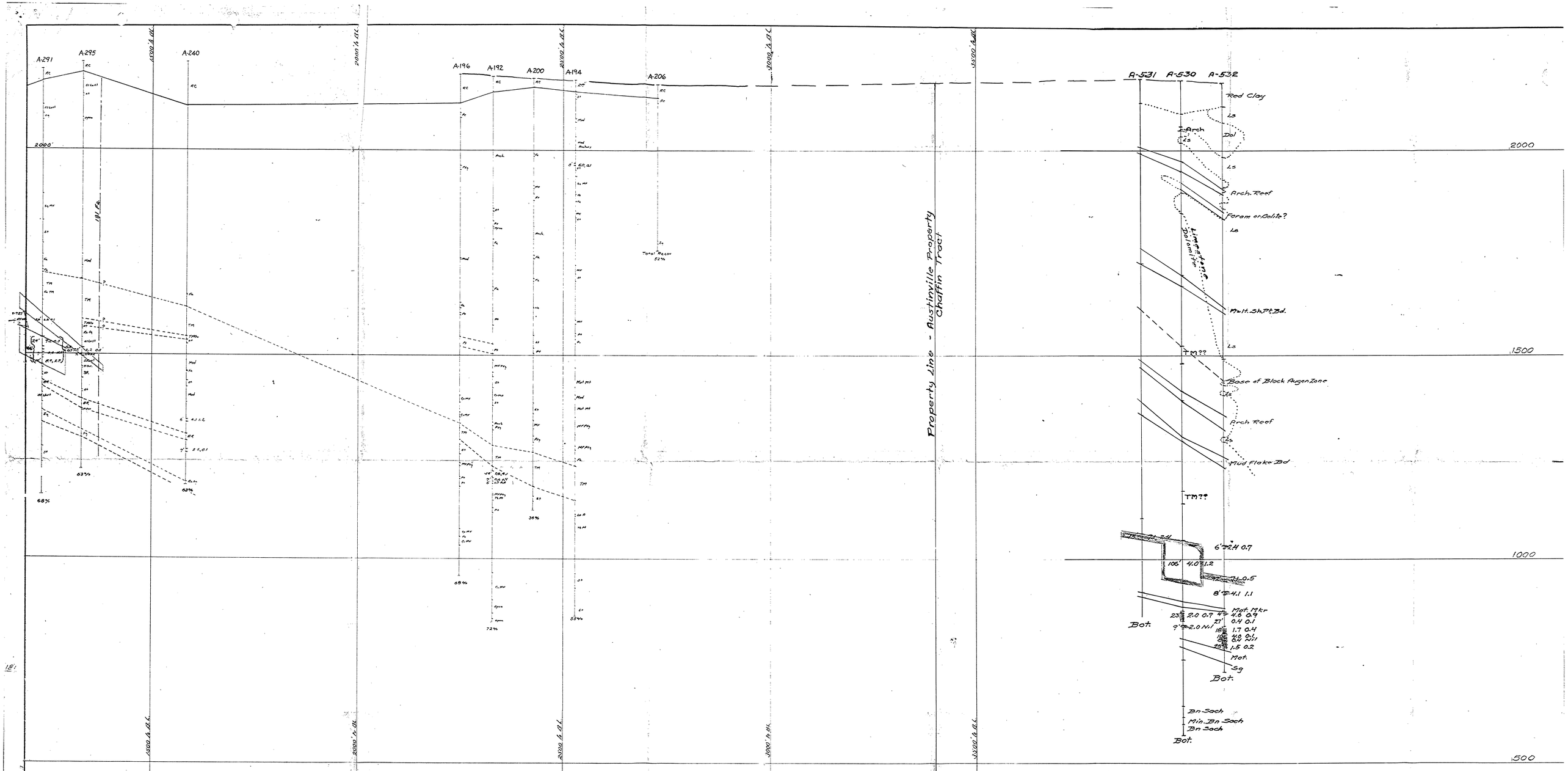
DATE 10/58
SCALE 100' = 1"

CHAFFIN AREA
STRIKE SECTION N65E

FILE No. 7GB-4400

HOWARD SUTTON CO., INC. N. Y.

AGB46250 4C 10-53



POSTED TO DATE

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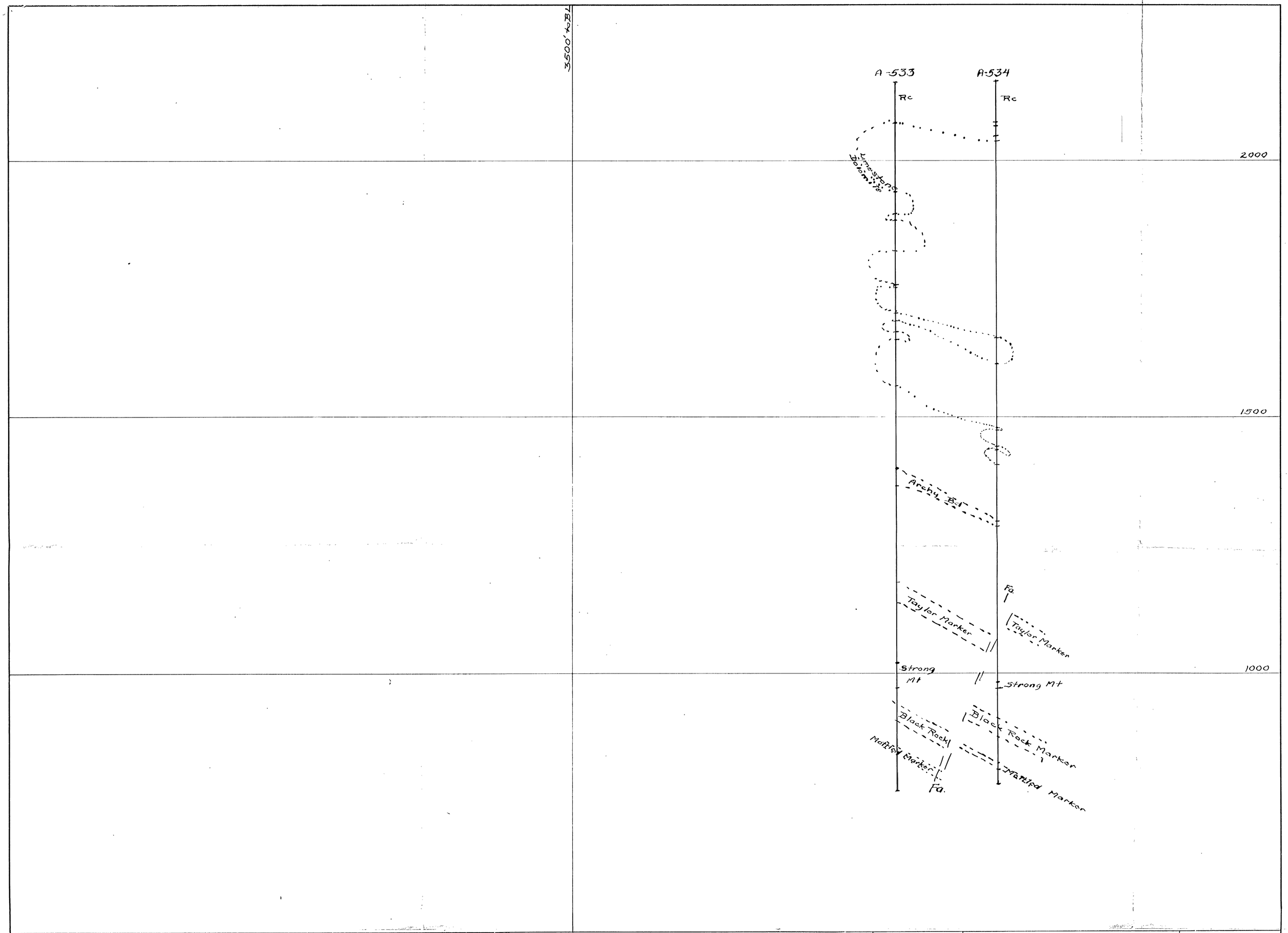
BERTHA MINERAL DIVISION
THE NEW JERSEY ZINC COMPANY

DRAWN J.R.F. DATE 8-53
TRACED SCALE 1" = 100'

AUSTINVILLE
CROSS SECTION 181-1SE

CHAFFIN AREA
FILE NO. **7GB - 2189-A**

HOWARD SUTTON CO., INC. N. Y.



SERIAL NUMBER		DATE ISSUED		REFERENCE DRAWINGS	REVISIONS

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

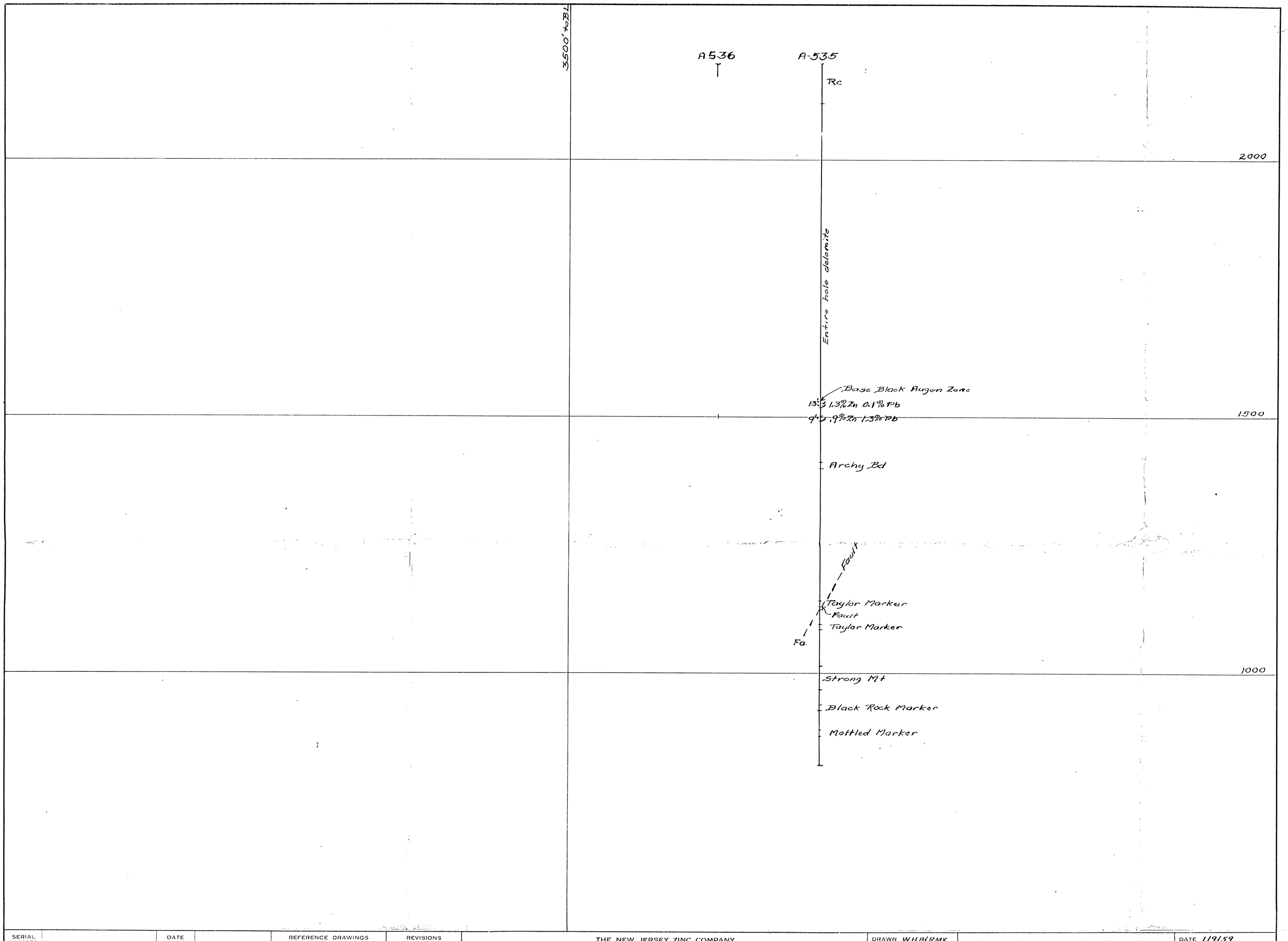
THE NEW JERSEY ZINC COMPANY

AUSTINVILLE, VA.

DRAWN W.H.B./R.M.K.
TRACED W.H.B.
CHECKED
APPROVED

CHAFFIN SECTION 189

DATE 1/9/59
SCALE 100' = 1"
7GB-4406



SERIAL NUMBER	DATE ISSUED	REFERENCE DRAWINGS	REVISIONS	THE NEW JERSEY ZINC COMPANY	DRAWN W.H.B./R.M.K.	CHAFFIN SECTION 173	DATE 1/9/59
				AUSTINVILLE, VA.	TRACED W.H.B.		SCALE 100' = 1"
					CHECKED		7GB-4405
					APPROVED		

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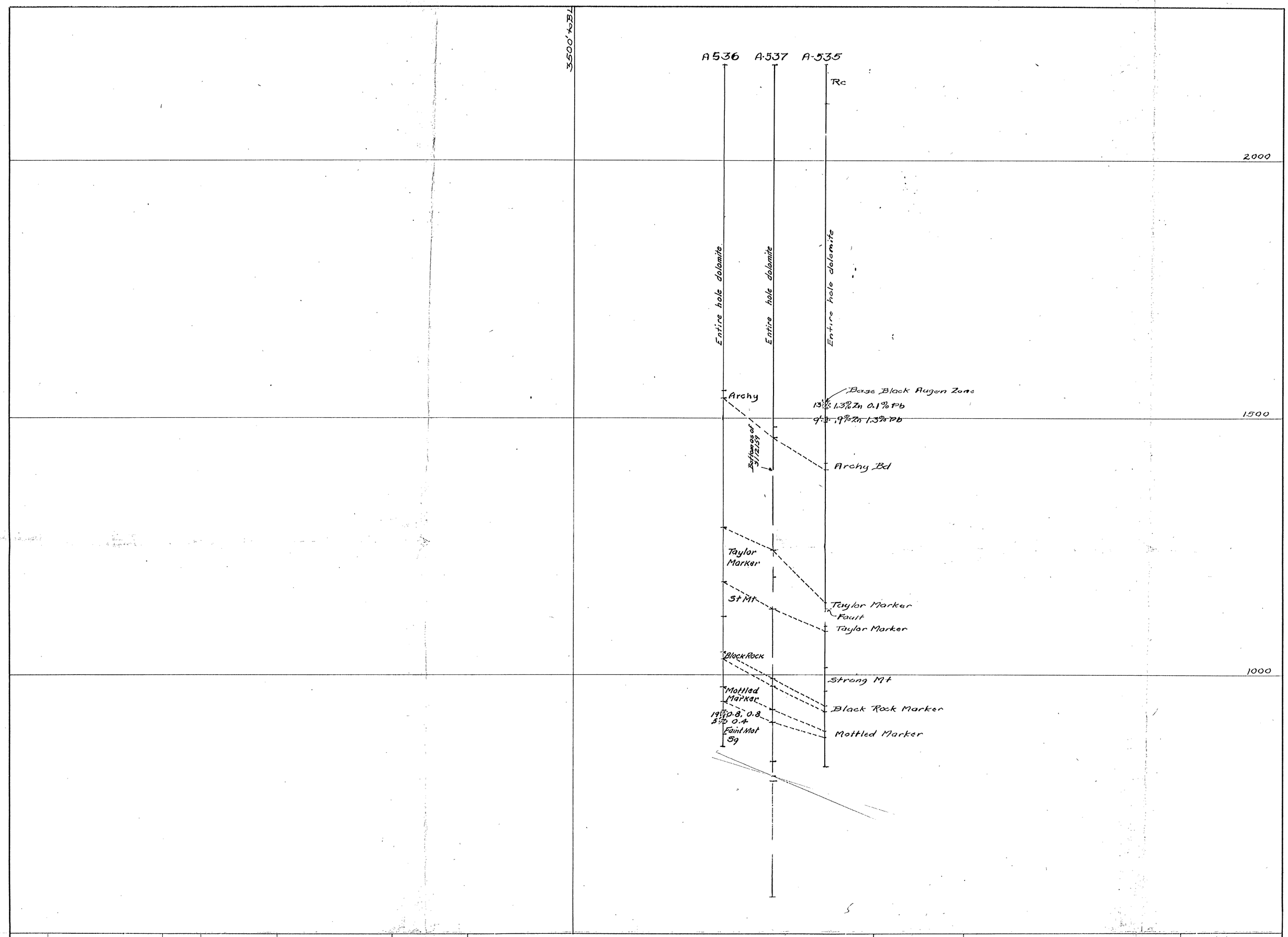

SERIAL NUMBER		DATE ISSUED		REFERENCE DRAWINGS	REVISIONS	THE NEW JERSEY ZINC COMPANY	DRAWN W.H.B./R.M.K.	CHAFFIN SECTION 173	DATE 1/9/59
						AUSTINVILLE, VA.	TRACED W.H.B.		SCALE 100' = 1"
							CHECKED		7GB-4405
							APPROVED		

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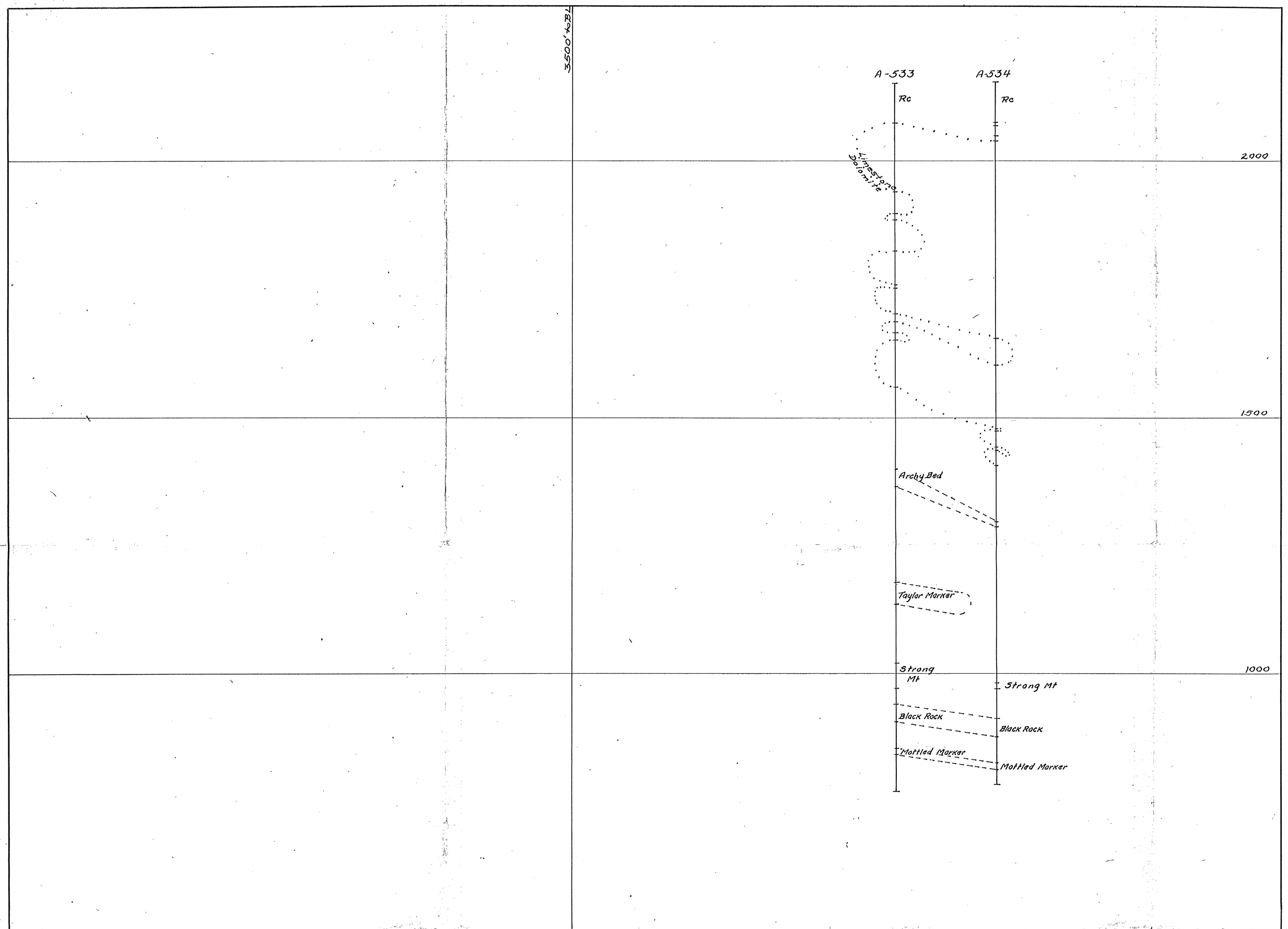

SERIAL NUMBER		DATE ISSUED		REFERENCE DRAWINGS	REVISIONS

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THE NEW JERSEY ZINC COMPANY

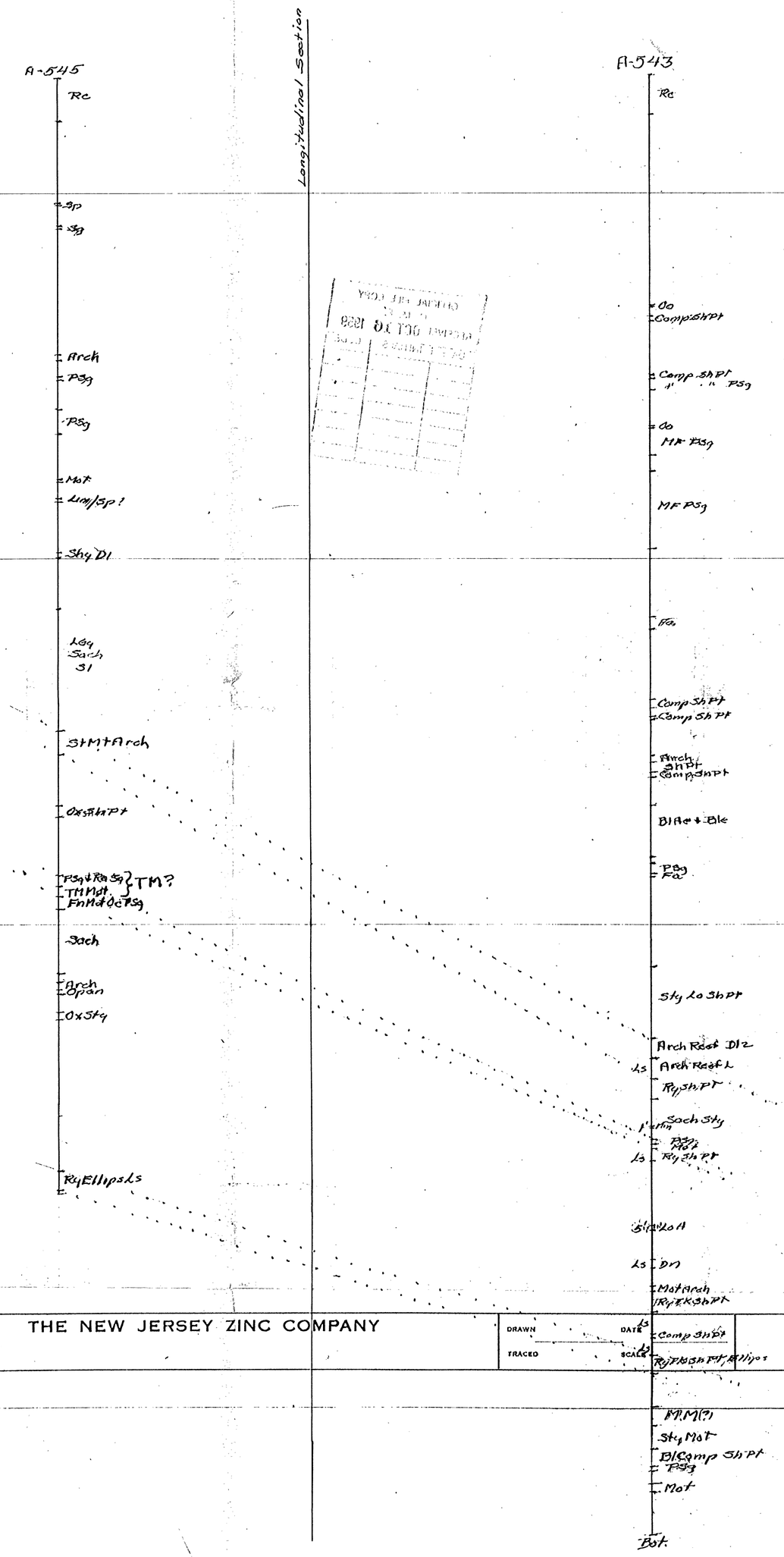
AUSTINVILLE, VA.

DRAWN W.H.B./R.M.K.
TRACED W.H.B. E.E.F.
CHECKED
APPROVED

CHAFFIN SECTION 189

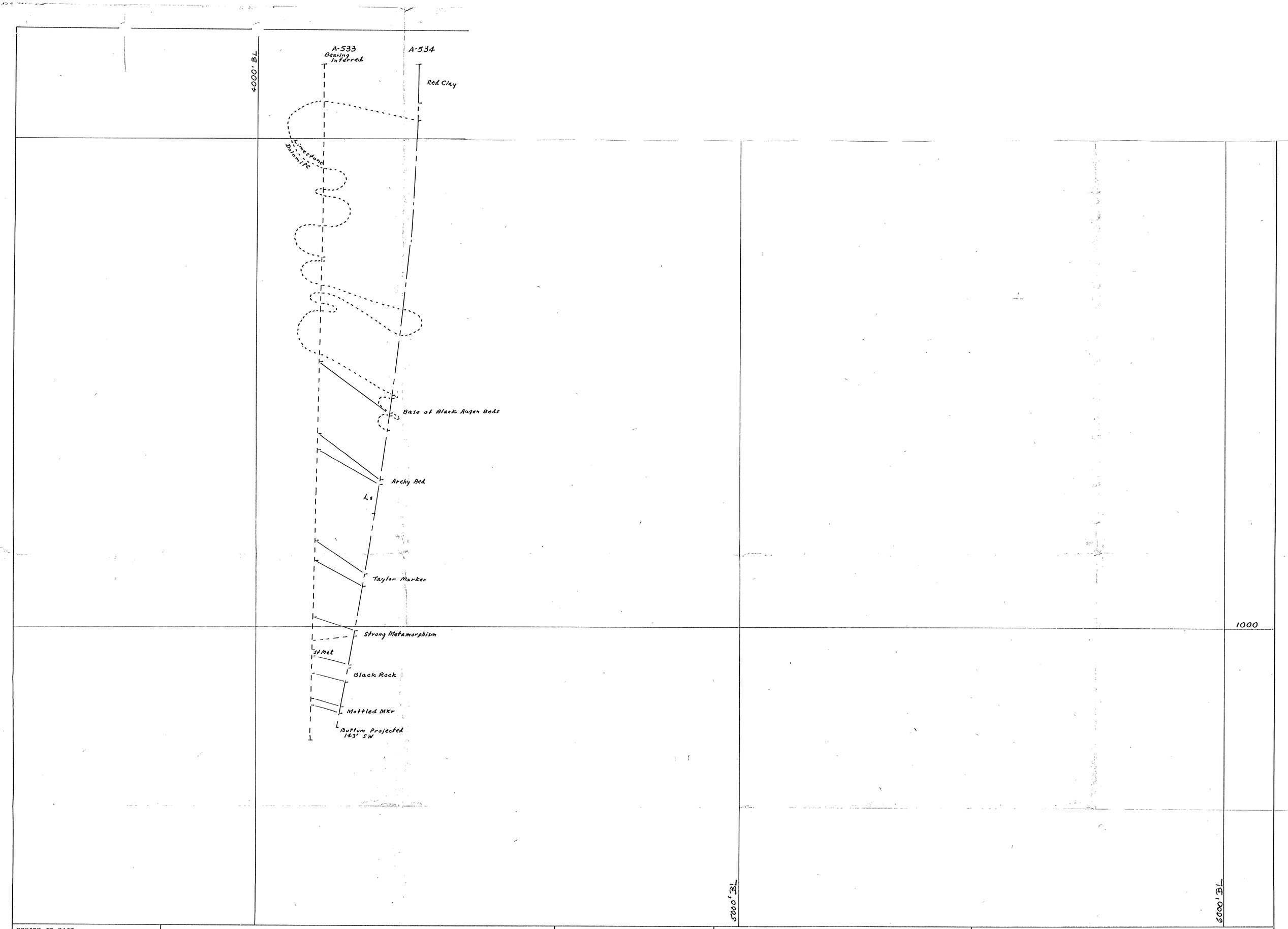
DATE 1/9/59
SCALE 100' = 1"
7GB-4406

AS453C 1M 11-54



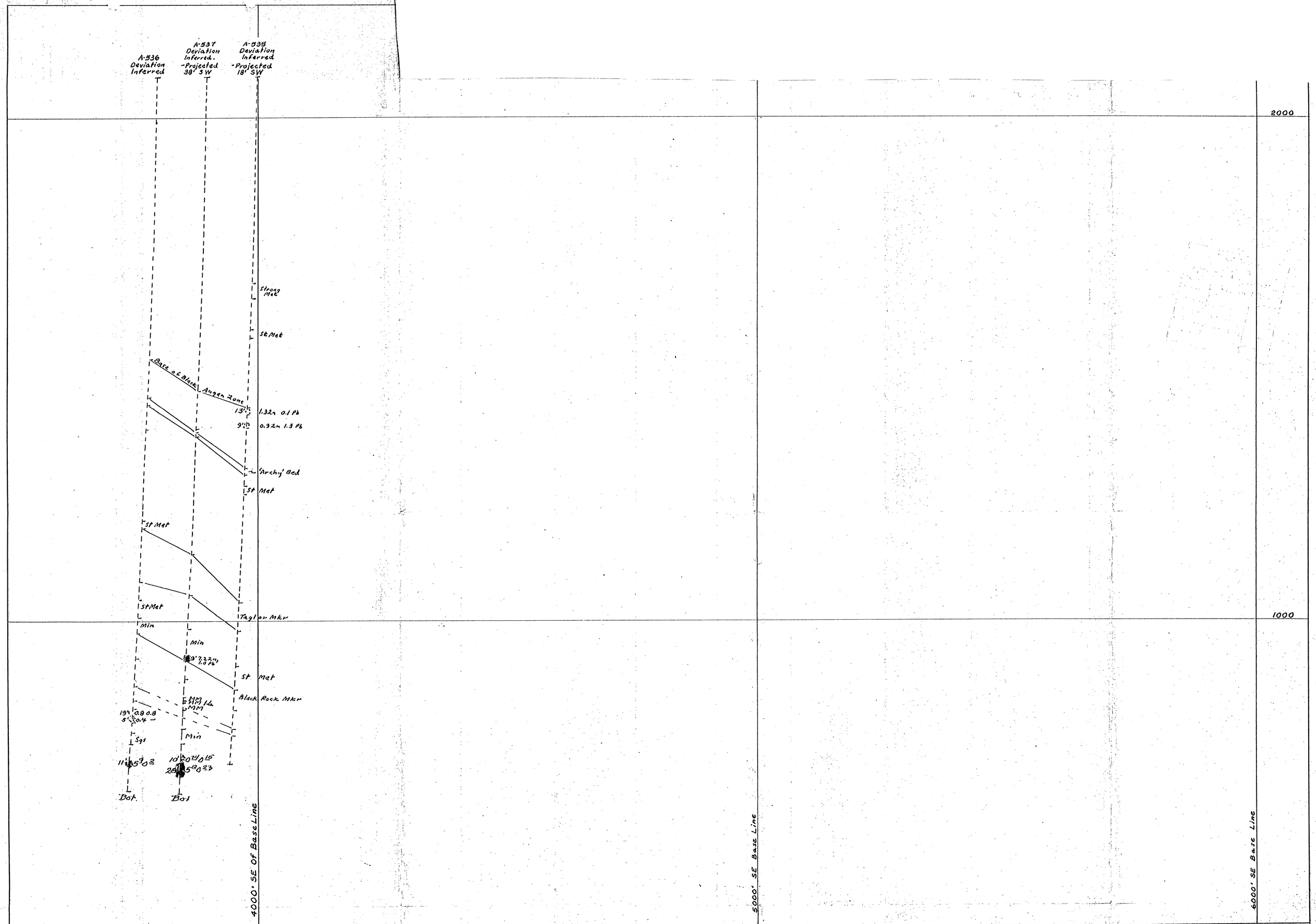
POSTED TO DATE	THE NEW JERSEY ZINC COMPANY	DRAWN / DATE / TRACED / SCALE	CHAFFIN SECTION 219	DISTRICT / FILE NO.

HOWARD BUTTON CO., INC., N. Y.
X5407A 750 2-52

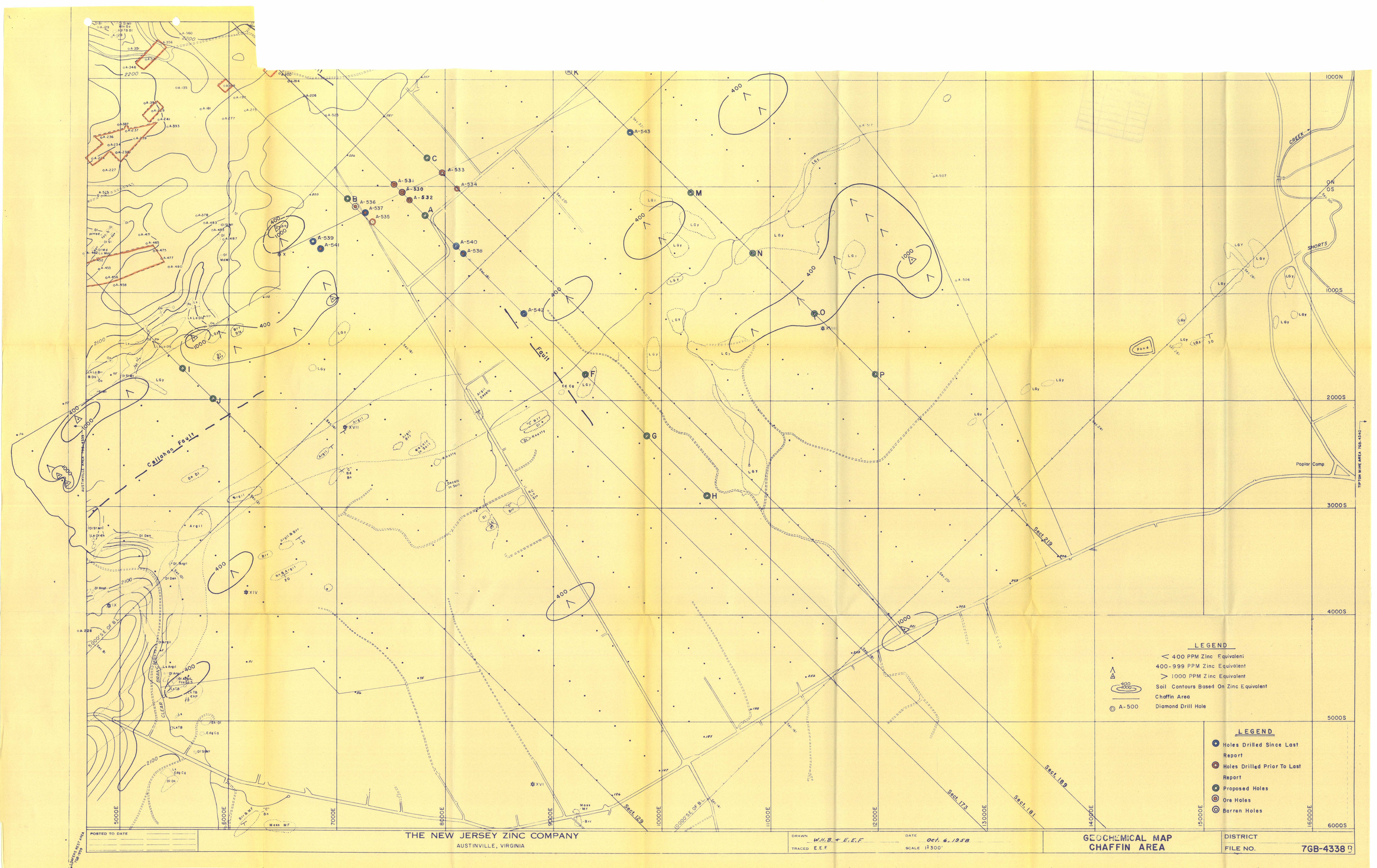


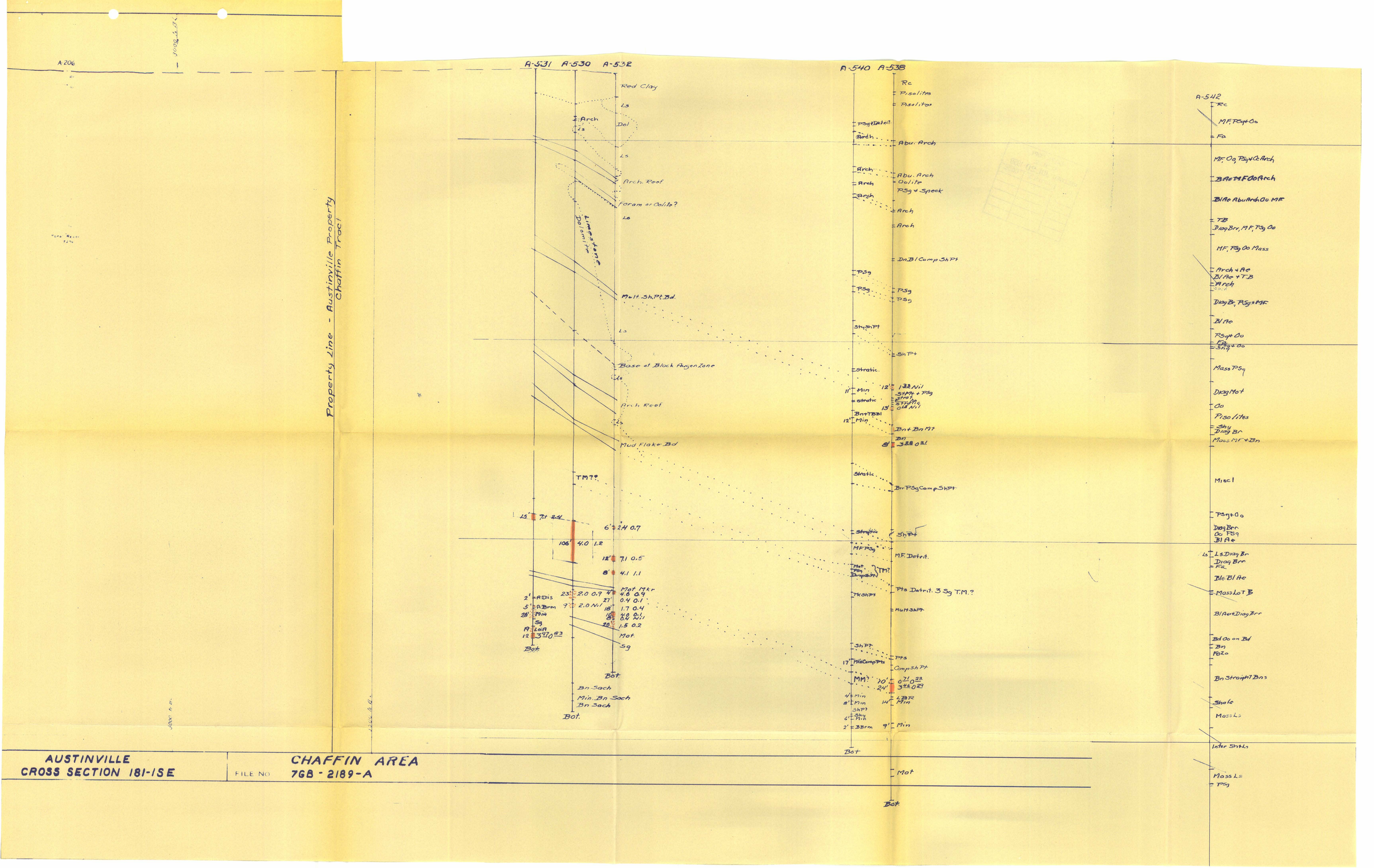
POSTED TO DATE	THE NEW JERSEY ZINC COMPANY **AUSTINVILLE, VA.**	DRAWN TRACED	DATE 4-6-59 SCALE 100	**CHAFFIN SECTION 189**	DISTRICT **AUSTINVILLE** FILE NO.

X5407A 1M 3-53



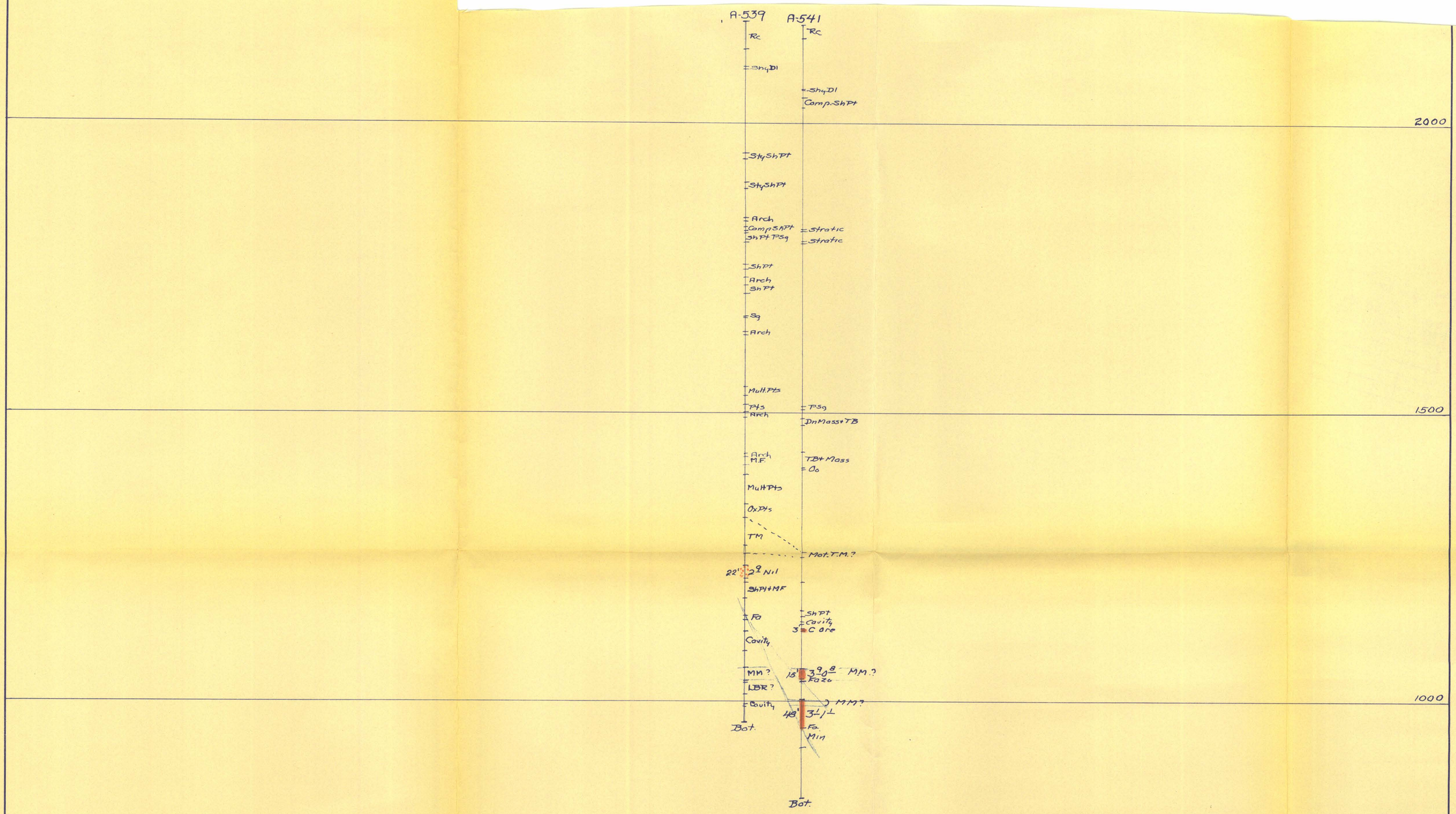
POSTED TO DATE	THE NEW JERSEY ZINC COMPANY AUSTINVILLE, VA.	DRAWN DATE 4-6-59 TRACED SCALE 100	CHAFFIN SECTION 173	DISTRICT AUSTINVILLE FILE NO. 7GB-4622


LEGEND
< 400 PPM Zinc Equivalent
400-999 PPM Zinc Equivalent
> 1000 PPM Zinc Equivalent
Soil Contours Based On Zinc Equivalent
Chaffin Area
A-500 Diamond Drill Hole
LEGEND
Holes Drilled Since Last Report
Holes Drilled Prior To Last Report
Proposed Holes
Ore Holes
Barren Holes
Callahan Fault
Fault
Sect. 129
Sect. 173
Sect. 181
Sect. 189
Sect. 219
1000N
0N
0S
1000S
2000S
3000S
4000S
5000S
6000S
5000E
6000E
7000E
8000E
9000E
10000E
11000E
12000E
13000E
14000E
15000E
16000E
Poplar Camp
Pond
CREEK
SHORTS
CLEAR BRANCH
AUSTINVILLE - PRICE TWP. LINE
TIPTON MINE AREA TGB-4340
POSTED TO DATE
THE NEW JERSEY ZINC COMPANY
AUSTINVILLE, VIRGINIA
DRAWN W.H.B. + E.E.F.
TRACED E.E.F.
DATE Oct. 6, 1958
SCALE 1" = 300'
GEOCHEMICAL MAP
CHAFFIN AREA
DISTRICT
FILE NO. 7GB-4338



AUSTINVILLE
CROSS SECTION 181-1SE

FILE NO. CHAFFIN AREA
7GB - 2189 - A



SERIAL NUMBER		DATE ISSUED		REFERENCE DRAWINGS	REVISIONS

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THE NEW JERSEY ZINC COMPANY

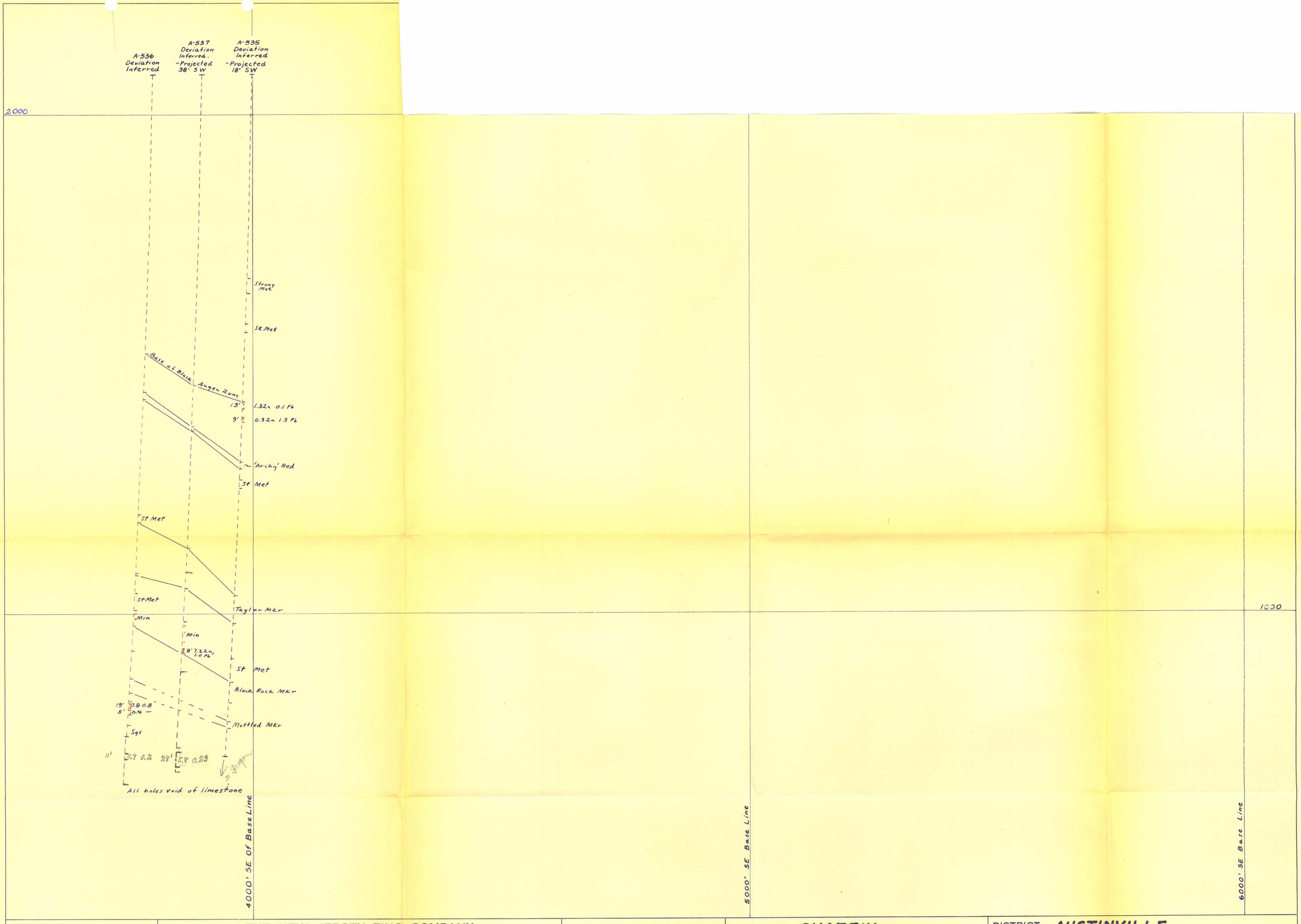
AUSTINVILLE, VIRGINIA.

DRAWN
TRACED
CHECKED
APPROVED

SECTION 163
CHAFFIN TRACT
AUSTINVILLE, VA.

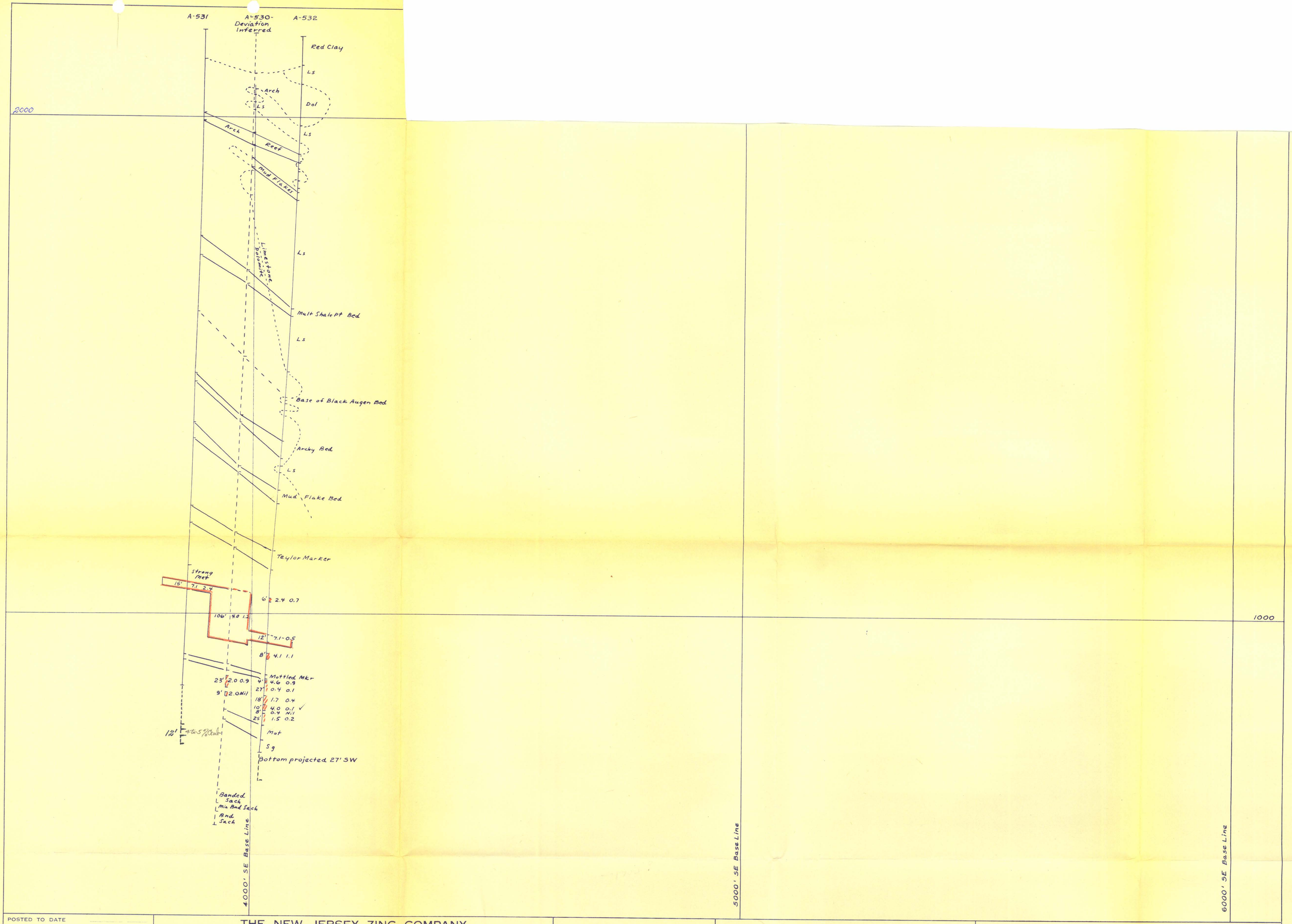
DATE 6/30/59
SCALE 100' = 1"
7GB-4621

X5453C 1M 11-54



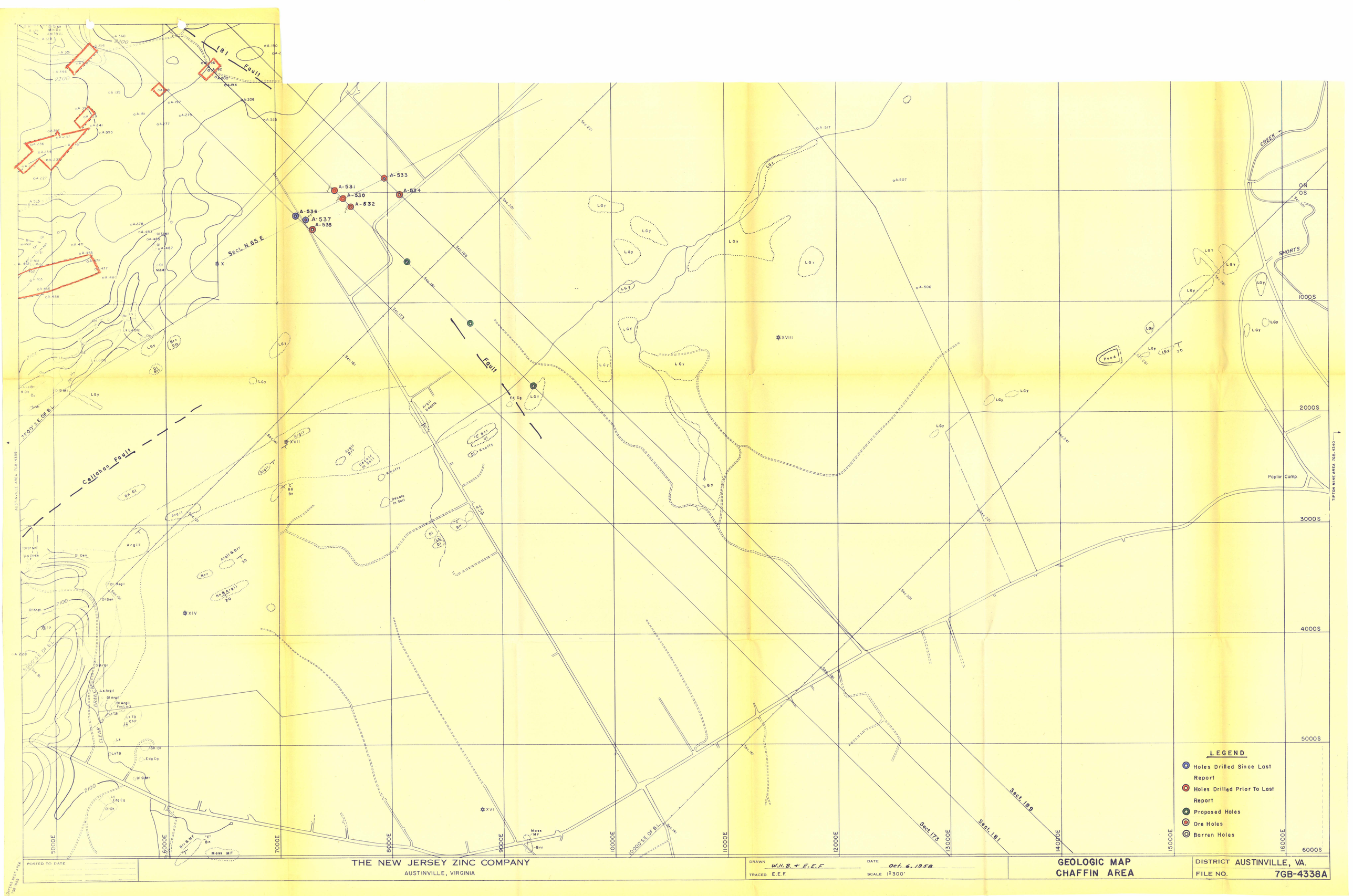
POSTED TO DATE	THE NEW JERSEY ZINC COMPANY **AUSTINVILLE, VA.**	DRAWN DATE 4-6-59 TRACED SCALE 100	**CHAFFIN SECTION 173**	DISTRICT **AUSTINVILLE** FILE NO.

X5407A 1M 3-53



POSTED TO DATE	THE NEW JERSEY ZINC COMPANY **AUSTINVILLE, VA.**	DRAWN / DATE TRACED / SCALE	**CHAFFIN SECTION 181**	DISTRICT **AUSTINVILLE, VA.** FILE NO.

X5407A 1M 3-53



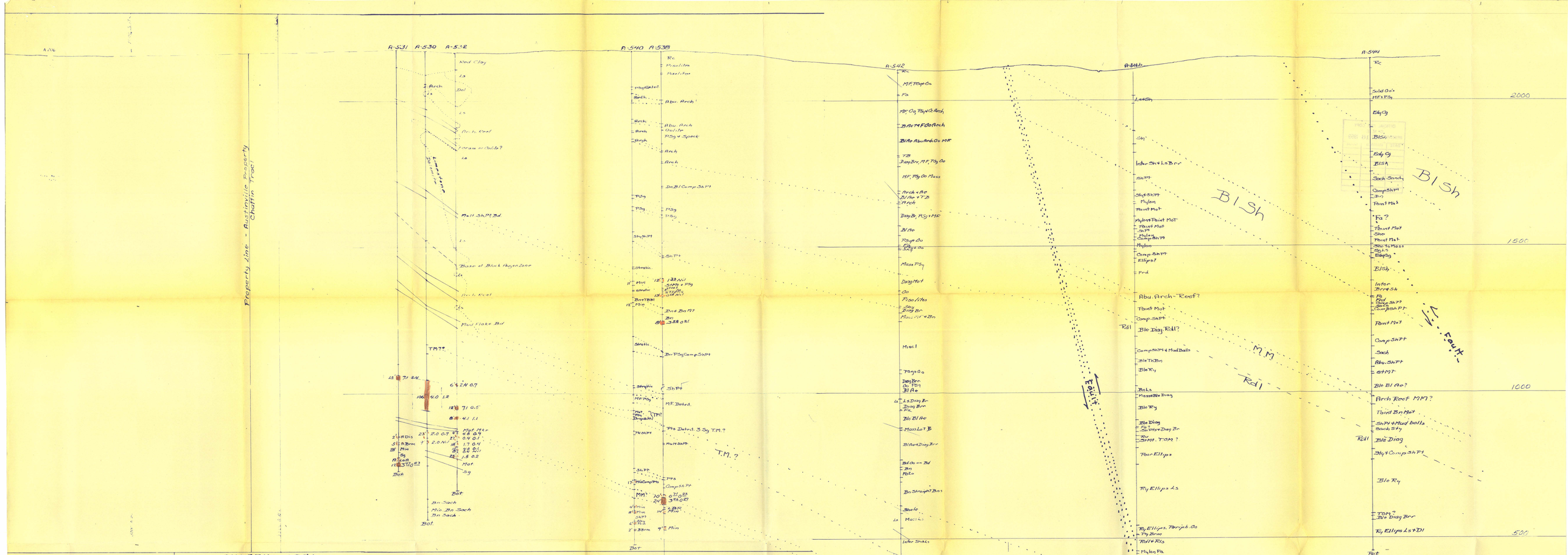
POSTED TO DATE

THE NEW JERSEY ZINC COMPANY
AUSTINVILLE, VIRGINIA

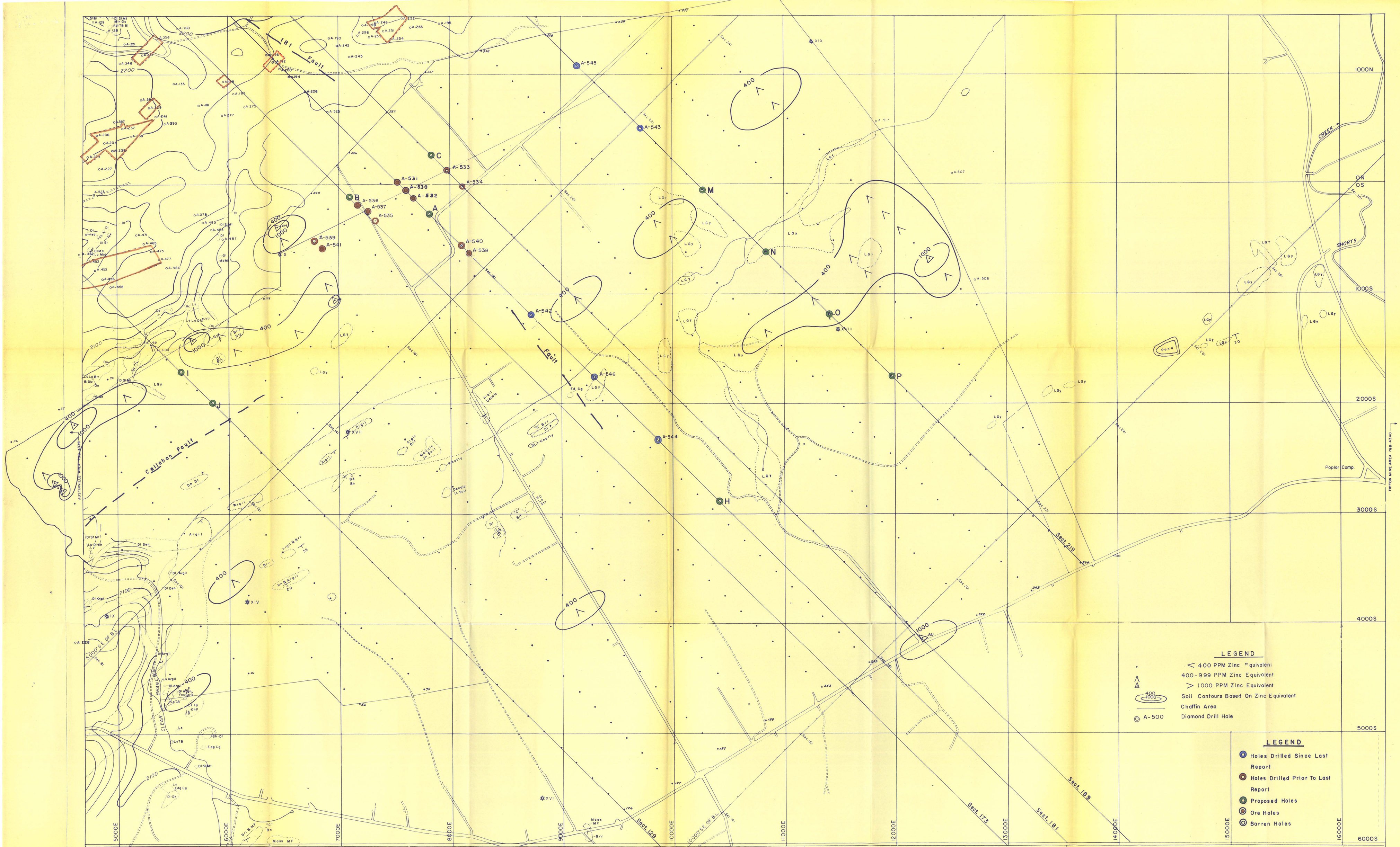
DRAWN W.H.B. + E.E.F. DATE Oct. 6, 1958
TRACED E.E.F. SCALE 1" = 300'

GEOLOGIC MAP
CHAFFIN AREA

DISTRICT AUSTINVILLE, VA.
FILE NO. 7GB-4338A



AUSTINVILLE CROSS SECTION 181-ISE	FILE NO.	CHAFFIN AREA 7GB-2189-A



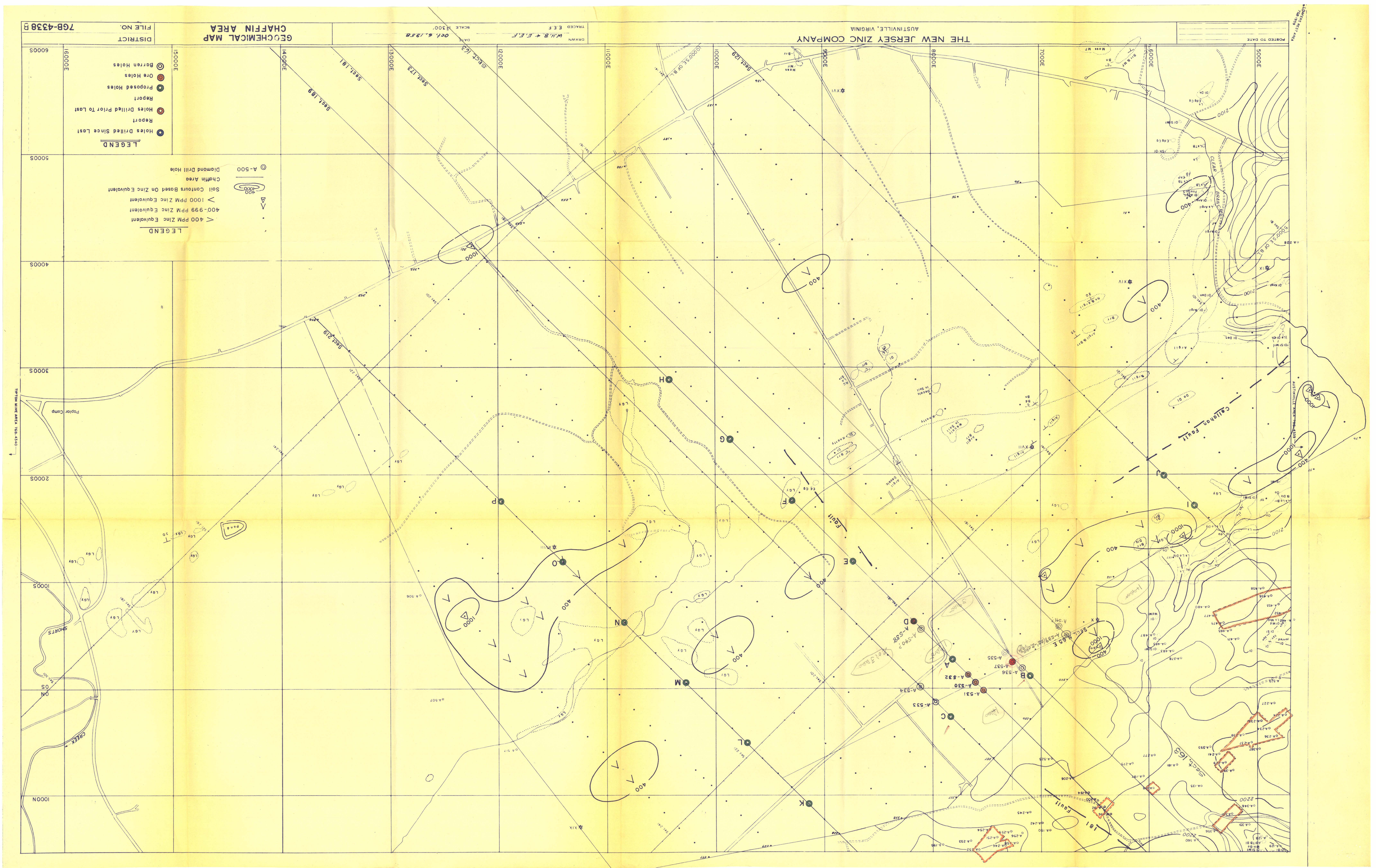
POSTED TO DATE

THE NEW JERSEY ZINC COMPANY
AUSTINVILLE, VIRGINIA

DRAWN W.H.B. + E.E.F. DATE Oct. 6, 1958
TRACED E.E.F. SCALE 1" 300'

GEOCHEMICAL MAP
CHAFFIN AREA

DISTRICT
FILE NO. 7GB-4338


THE NEW JERSEY ZINC COMPANY
AUSTINVILLE, VIRGINIA
GEOCHEMICAL MAP
CHAFFIN AREA
DISTRICT
FILE NO. 7GB-433B
POSTED TO DATE
DRAWN W.H.B. + E.E.F.
DATE Oct. 6, 1958
TRACED E.E.F.
SCALE 1" = 300'
LEGEND
Holes Drilled Since Last Report
Holes Drilled Prior To Last Report
Proposed Holes
Ore Holes
Barren Holes
LEGEND
< 400 PPM Zinc Equivalent
400-999 PPM Zinc Equivalent
> 1000 PPM Zinc Equivalent
Soil Contours Based On Zinc Equivalent
Chaffin Area
A-500 Diamond Drill Hole
Calhoun Fault
Fault
Sect. 163
Sect. 181
Sect. 199
Sect. 219
Sect. 173
Sect. 129
Poplar Camp
CLEAR BRANCH
CREEK
SHORTS
1000S
2000S
3000S
4000S
5000S
6000S
1000N
1000E
2000E
3000E
4000E
5000E
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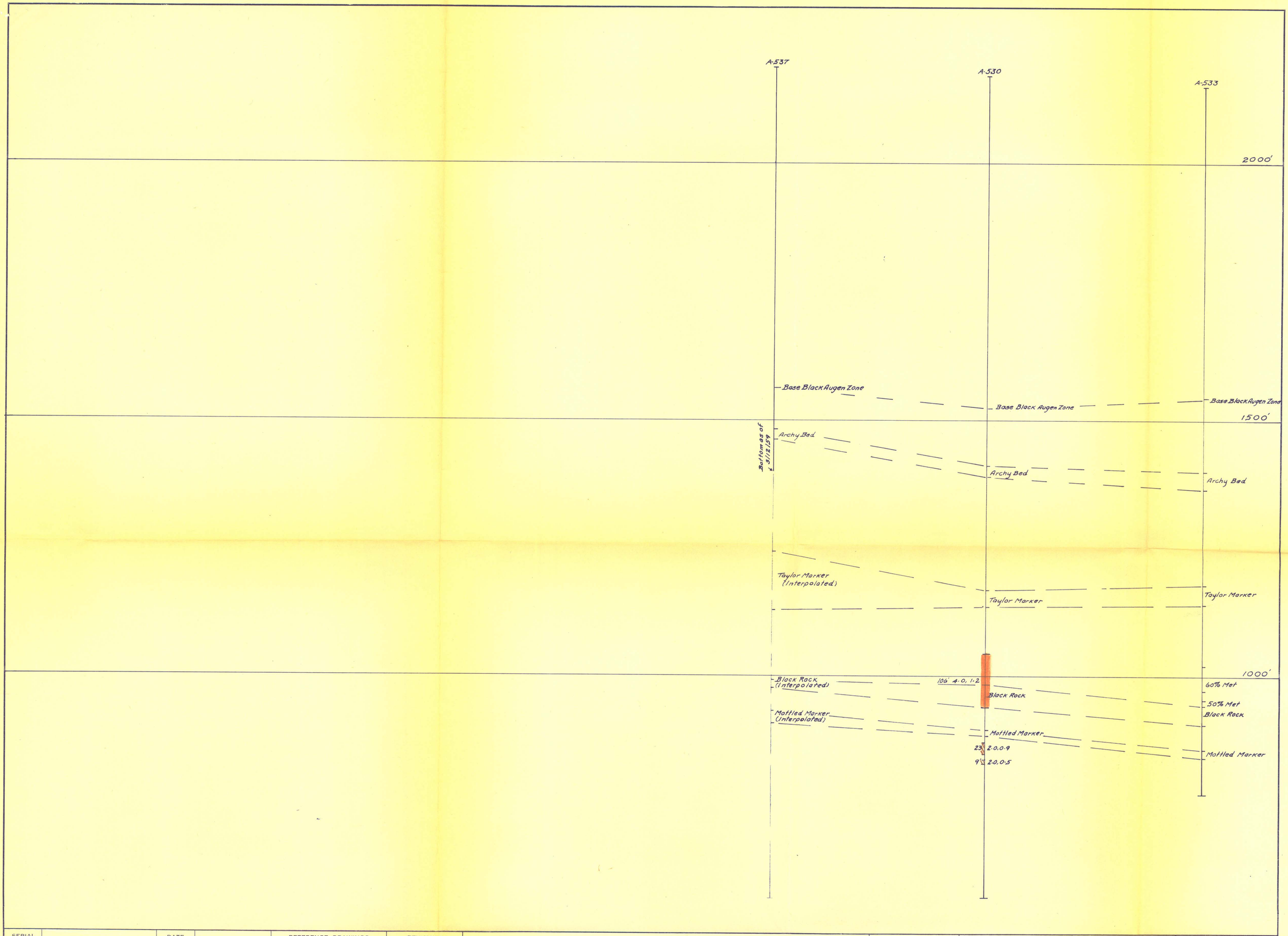
15000E
16000E



SERIAL NUMBER		DATE ISSUED		REFERENCE DRAWINGS	REVISIONS	THE NEW JERSEY ZINC COMPANY	DRAWN R.M.K.	CHAFFIN	DATE 3/13/59
						AUSTINVILLE, VA.	TRACED E.E.F.	LONG SECTION N63½°E	SCALE 1"=100'
							CHECKED		7GB-4428
							APPROVED		

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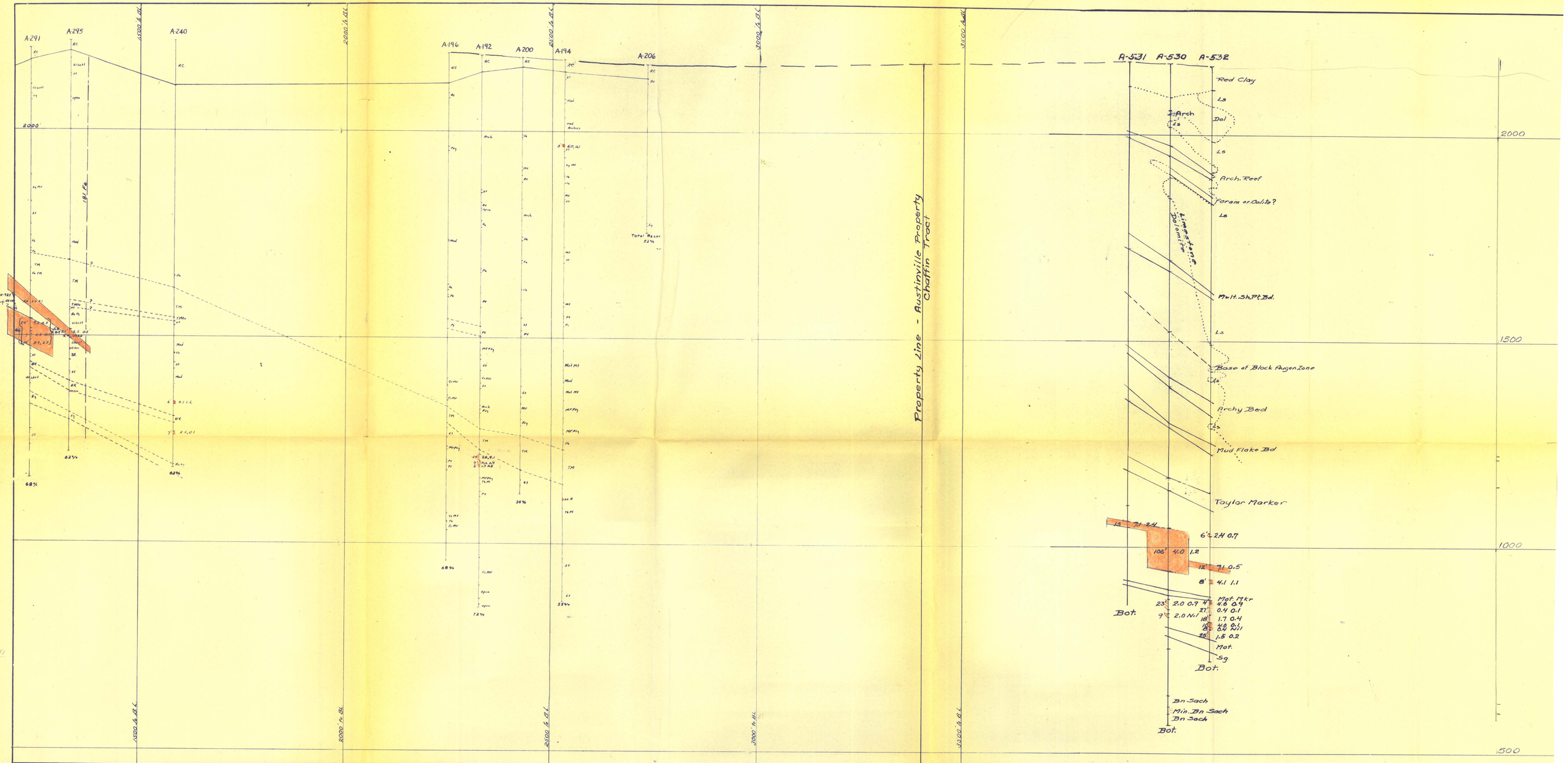
X5453C 1M 11-54



POSTED TO DATE

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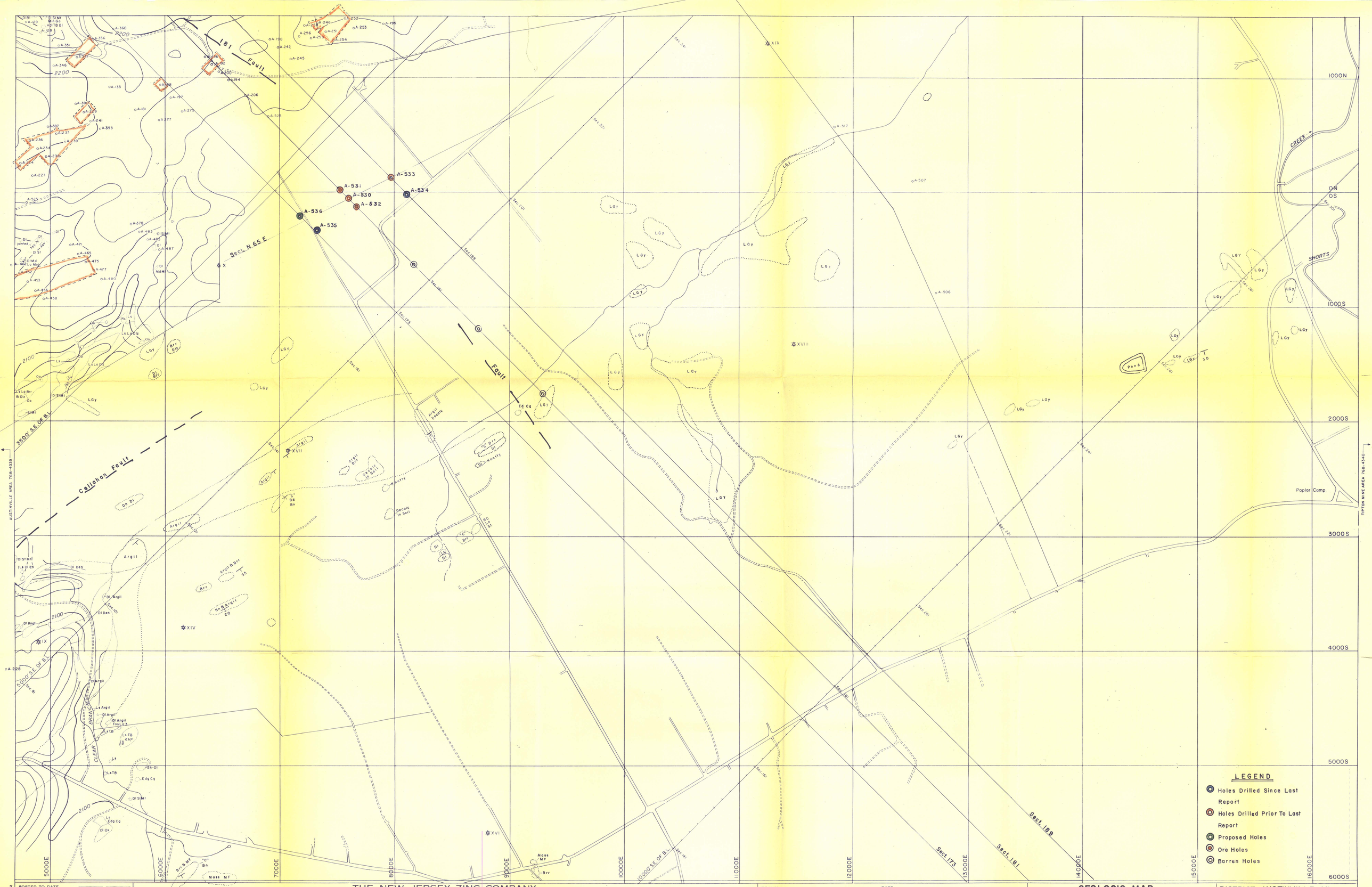
BERTHA MINERAL DIVISION
THE NEW JERSEY ZINC COMPANY

DRAWN J.R.F. DATE 8-53
TRACED SCALE 1" = 100'

AUSTINVILLE
CROSS SECTION 181-1SE

CHAFFIN AREA
FILE No. **7GB - 2189-A**

HOWARD BUTTON CO. INC. N. Y.



AUSTINVILLE AREA 7GB-4339

TIPTON MINE AREA 7GB-4340

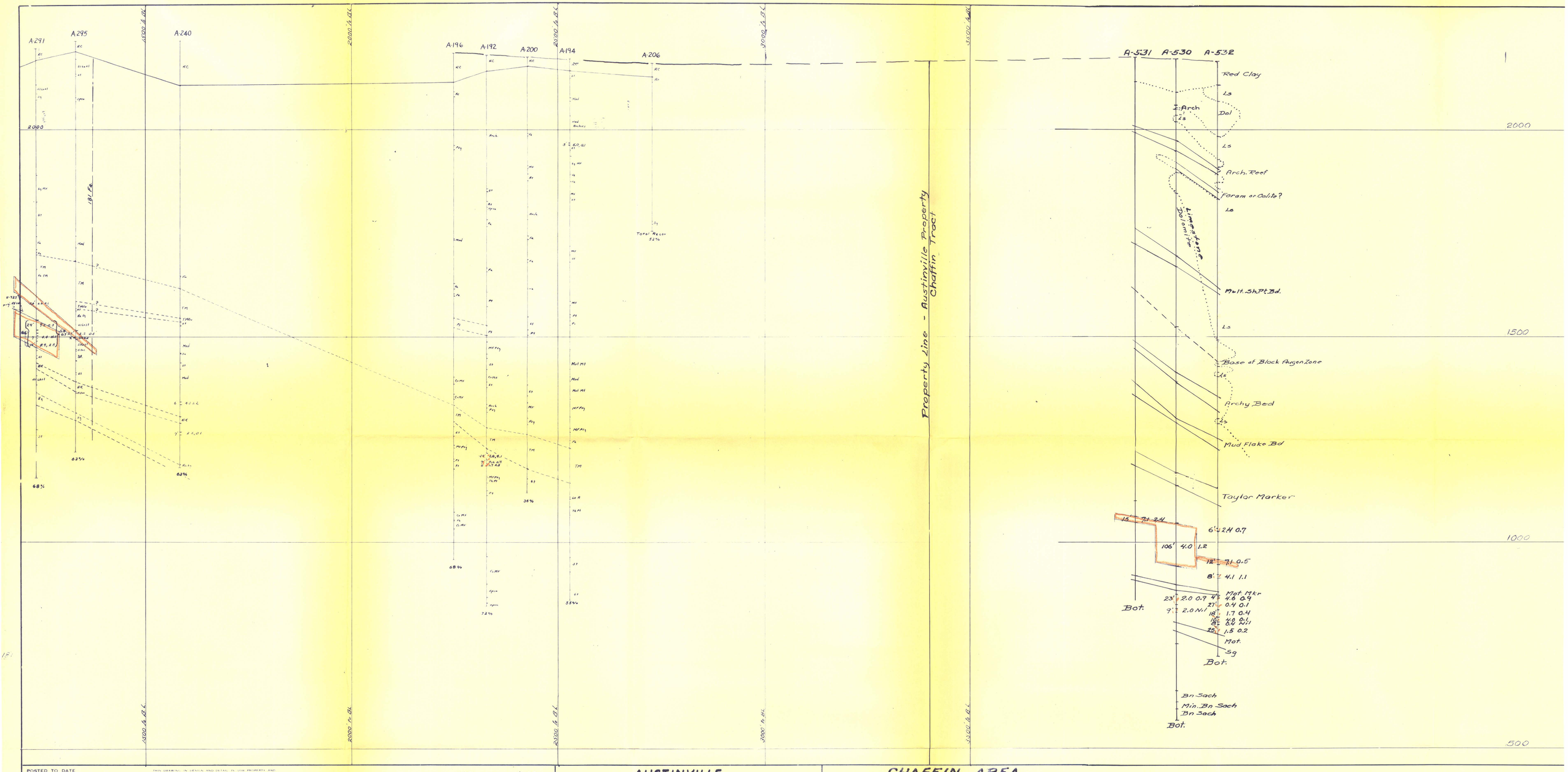
POSTED TO DATE

THE NEW JERSEY ZINC COMPANY
AUSTINVILLE, VIRGINIA

DRAWN W.H.B. + E.E.F. DATE Oct. 6, 1958
TRACED E.E.F. SCALE 1" = 300'

GEOLOGIC MAP
CHAFFIN AREA

DISTRICT AUSTINVILLE, VA.
FILE NO. 7GB-4338A



POSTED TO DATE

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BERTHA MINERAL DIVISION
THE NEW JERSEY ZINC COMPANY

DRAWN J.R.F. DATE 8-53
TRACED SCALE 1" = 100'

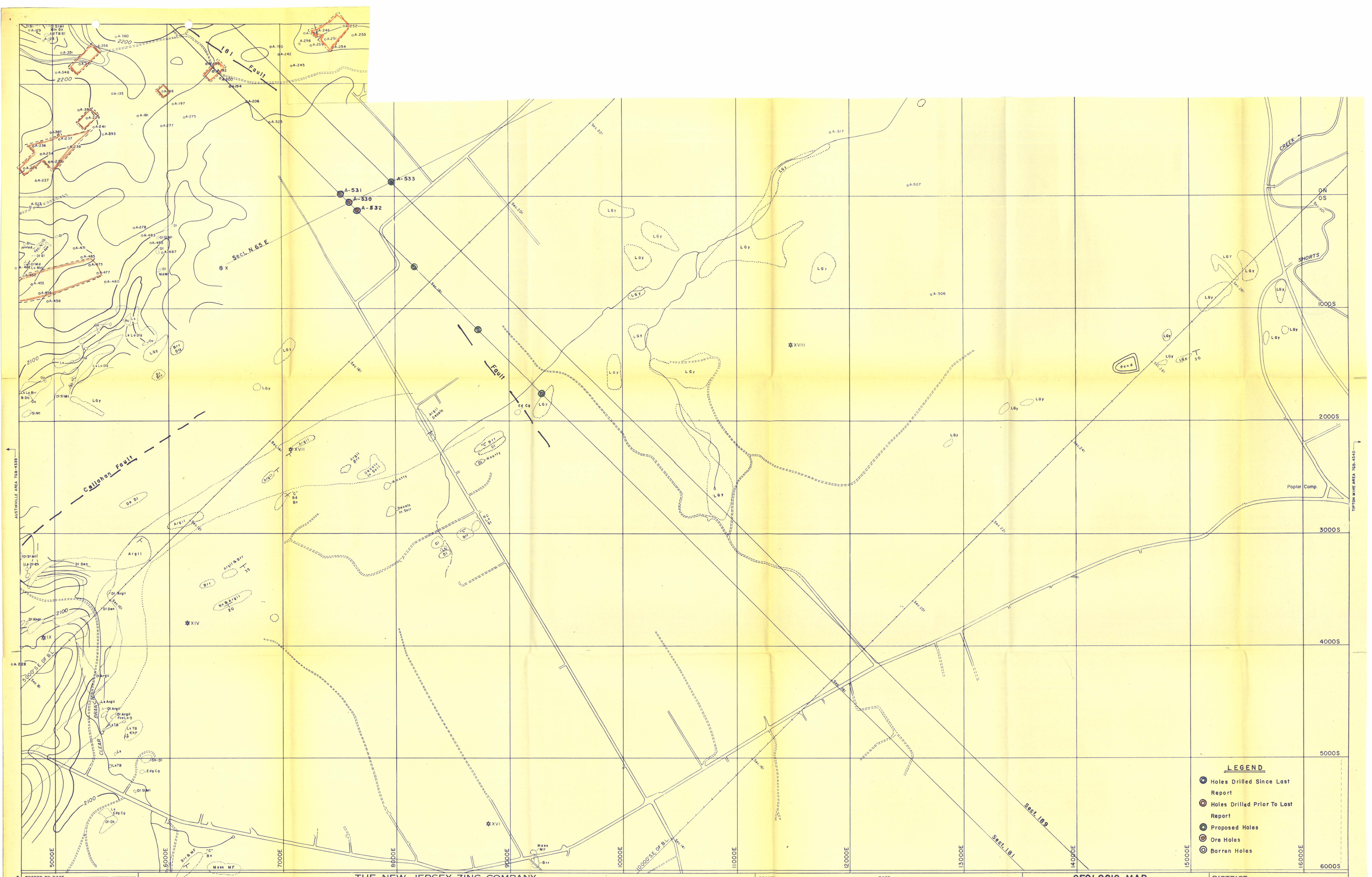
AUSTINVILLE
CROSS SECTION 181-1SE

CHAFFIN AREA

FILE NO. 7GB - 2189-A

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

181 Fault
Callahan Fault
Fault
Sect. N 65 E
Sect. 189
Sect. 181
CLEAR BRANCH
CREEK
SHORTS
Pond
Poplar Camp
A-531
A-530
A-532
A-533
A-534
A-535
5000' S.E. OF B.L.
10,000' S.E. OF B.L.
5000E
6000E
7000E
8000E
9000E
10000E
11000E
12000E
13000E
14000E
15000E
16000E
ON
OS
1000S
2000S
3000S
4000S
5000S
6000S
LEGEND
< 400 P.P.M. Zinc equivalent
400 to 999 P.P.M. Zinc equivalent
> 1000 P.P.M. Zinc equivalent
Drill Contours based on Zinc equivalent
Chaffin Area
A-500 Diamond Drill Hole
LEGEND
Holes Drilled Since Last Report
Holes Drilled Prior To Last Report
Proposed Holes
Ore Holes
Barren Holes
POSTED TO DATE
THE NEW JERSEY ZINC COMPANY
AUSTINVILLE, VIRGINIA
DRAWN W.H.B. + E.E.F.
TRACED E.E.F.
DATE Oct. 6, 1958
SCALE 1" = 300'
GEOCHEMICAL MAP
CHAFFIN AREA
DISTRICT
FILE NO. 7GB-4338 B



POSTED TO DATE

THE NEW JERSEY ZINC COMPANY
AUSTINVILLE, VIRGINIA

DRAWN W.H.B. + E.E.F. DATE Oct. 6, 1958
TRACED E.E.F. SCALE 1" = 300'

GEOLOGIC MAP
CHAFFIN AREA

DISTRICT
FILE NO. 7GB-4338A