DEFENSE MINERALS EXPLORATION ADMINISTRATION
CONTRACT ADMINISTRATION AND AUDIT DIVISION

REPORT OF REVIEW

I have reviewed the Monthly Reports of:

The New Jersey Zinc Company
Austinville, Virginia
and
160 Front Street
New York 38, New York

pertaining to Exploration Project Contract No. Idm-2960, DMEA No. 4178, including Amendment No. 1, for the months of August 1956 to August 1957, inclusive, covering a project for the exploration of zinc on property, known as the Beaver Creek Area located in Smyth County, Virginia.

My review included an examination of the Monthly Reports (Forms MF-104) and supporting documents attached thereto, comparison of the costs claimed with the contract and pertinent schedules, verification of work performed by reference to Field Team reports and correspondence, and a determination of the reasonableness and propriety of the costs.

This review was made in lieu of a final audit of the Operator's accounts and records for the following reasons:

(a) The Monthly Reports were supported by documentary proof of that portion ($25,112.25) of the costs which covered work performed at unit rates under independent contract;
(b) the balance ($5,503.10) of the costs incurred were under a contract provision for payment by the Government on the basis of fixed unit costs of work actually performed; and
(c) the administrative cost to the Government of an audit would be excessive in relation to the estimated amount of possible disallowances thereunder.

The review disclosed the following facts in regard to the amount paid or to be paid the Operator:

| | | |
|---|---|---|
| Total cost as billed by Operator | | $30,615.35 |
| Exceptions: | | |
| Prior to this review | $ -0- | |
| Herewith | -0- | -0- |
| Total Accepted Cost | | $30,615.35 |

The contract calls for a 50 percent participation of exploration expenses by the United States Government. Therefore, payment to the Operator by the Government in the amount of Fifteen thousand three hundred seven and 67/100 Dollars is valid and proper, provided that the Regional Executive Officer, the Administrator, or other competent official has accepted or will accept the project as having otherwise met the terms of the contract.

| | |
|---|---|
| Amount payable to Operator | $15,307.67 |
| Amount reimbursed | 14,382.34 |
| Balance due Operator | $ 925.33 |

E. R. Talbert

December 9, 1957

E. R. Talbert, Auditor

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

DEC 1957

Re: Docket No. DMEA-4178 (Zinc)
The New Jersey Zinc Company
Beaver Creek Area
Smyth County, Virginia
Contract No. Idm-2960

Dear Mr. Laurence:

As requested by your memorandum of November 21, 1957, a Report of Review in lieu of a final audit of the referenced project has been prepared. The original and three copies of the report are enclosed.

If you concur with the facts stated in this Report of Review, the original and one copy should be released to the regional finance officer, one copy should be forwarded to the Operator, and one copy should be retained in your files. If for any reason you do not concur, please return the original and three copies to this Division with your comments.

The original of the final MF-104 (August 1957) and the copies of 15 invoices applicable to prior vouchers, as submitted for review by Mrs. Miller's memorandum of December 5, 1957, are being returned to her with a copy of this letter.

Sincerely yours,

(Signed) J. L. Chambers

Jay L. Chambers, Director
Contract Administration
and Audit Division

Enclosure

EDTalbert/wb
December 9, 1957

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
REGION V

ELECTROTECHNICAL
EXPERIMENT STATION

P. O. BOX 217
NORRIS, TENNESSEE

December 5, 1957

R E G I S T E R E D
M A I L

Memorandum

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

From: Personal Assistant, Norris, Tennessee

Subject: Contract Idm-E960, The New Jersey Zinc Company

A Report of Review in lieu of final audit is requested on contract Idm-E960, The New Jersey Zinc Company, Docket No. DMEA-4178, Beaver-Creek Project.

We are enclosing the final original copy of MF-104 and 104A and attachments - also invoices (15copies) covering previously paid vouchers covering the above contract.

Helen Miller
Helen R. Miller

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

DMEA
RECEIVED DEC 6 1957

| DATE | INITIALS | CODE |
|---|---|---|
| 12/6 | C | 220 |
| | | 800 |

OFFICIAL FILE COPY
DMEA
RECEIVED DEC 6 1957
DATE | INITIALS | CODE

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

November 21, 1957

Memorandum

To: Jay L. Chambers, Director Contract Administration and Audit Division.

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

Subject: Termination of DMEA-4178, Idm-E960-zinc. The New Jersey Zinc Company. Beaver Creek Area, Smyth County, Virginia

Work on the subject contract has been terminated and a request for termination agreement was made to the Operating Committee October 28.

The follwoing units of work have been acceptably performed as verified by our Field Examiners:

1. 10,370 feet of diamond drilling.

2. 7 sample analyses.

An adequate final engineering and geological report has been received. The original copy of the Operator's final voucher is attached. A report of review is requested.

Please incorporate above information in your letter to Chambers.

3 copies of your letter to this office

Robert A. Laurence
Executive Officer, DMEA
Region V

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

RECEIVED
DEC 23 1957
D.M.E.A.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Budget Bureau No. 42-R1036.5

PAID ON VOUCHER & SCHEDULE OF PAYMENTS K- 31

# OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of August, 1957 Docket No. DMEA 4178 Contract No. 960
Operator's Name The New Jersey Zinc Company Minerals Zinc
Address Austinville, Va.
Contract Amount, $44,800.00 Government Participation: 50 % Amount, $22,400.00

| 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 | 1516.20 | 23596.05 | 25112.25 | | | |
| Bulldozing | | | | | | |
| Crosscutting | | | | | | |
| Drifting | | | | | | |
| (2) Labor and Supervision: | | | | | | |
| Labor | | | | | | |
| Supervision | | | | | | |
| Technical Services | | | | | | |
| (3) Operating Mat'ls. and Supplies: | | | | | | |
| Timber | | | | | | |
| Explosives | | | | | | |
| Pipe | | | | | | |
| Track | | | | | | |
| (4) Operating Equipment: | | | | | | |
| Rental | | | | | | |
| Purchase | | | | | | |
| Depreciation | | | | | | |
| (5) Initial Rehabilitation and Repairs | | | | | | |
| (6) New Bldgs., Improvements, etc. | | | | | | |
| (7) Miscellaneous: | | | | | | |
| Repairs to Equipment | | | | | | |
| Sampling and Analysis | | 7.00 | 7.00 | | | |
| Payroll Taxes | | | | | | |
| Liability Insurance | | | | | | |
| (8) Contingencies (specify): Incidental Allowances @ $0.53/ft | 334.43 | 5161.67 | 5496.10 | | | |
| | 1850.63 | 28764.72 | 30615.35 | | | |
| TOTALS | | | | 1850.63 | 28764.72 | 30615.35 |

I certify that the above bill is correct and just and that payment therefor has not been received.
Date 9/10/57 *Payee Bertha Mineral Division THE NEW JERSEY ZINC COMPANY
Per W. L. Allen, Jr. Title 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:
$ 925.33
Signature Helen R. Miller
(Authorized Certifying Officer)
Date DEC 20 1957 Vou. No. 101
(See other side)

T 8/20

1925.30

(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-960 in accordance with the terms of the contract.

Signature [illegible] Title GEOLOGIST, U. S. G. S. Date DEC 17 1957

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature [illegible] Title ACTING EXECUTIVE OFFICER DMEA - REGION V Date DEC 17 1957

# MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

RECEIVED DEC 23 1957 D.M.E.A.

# OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of August 1957 Docket No. DMEA 4178 Contract No. 960
Operator's Name The New Jersey Zinc Company Minerals Zinc
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 0-250 | Ft | 550.00 | 250 | 25112.25 | 10370 | 2.422 | 15000 | 2.45 |
| ~~Core~~ 250-500 | " | 612.50 | 250 | | | | | |
| ~~Core~~ 500-631 | " | 353.70 | 131 | | | | | |
| Stripping | | | | | | | | |
| Trenching | | | | | | | | |
| ~~Test Pits~~ Sample Assays | Sample | | | 7.00 | 7 | 1.00 | 100 | 1.00 |
| Roads and Trails | | | | | | | | |
| Incidental Allowance @ $0.53/ft | Ft | 334.43 | 631 | 5496.10 | 10370 | 0.53 | 15000 | 0.53 |
| TOTAL DISTRIBUTED COSTS | | 1850.63 | | 30615.35 | | | | TOTAL COSTS AUTHORIZED BY CONTRACT |
| Operating Equipment Purchased | | | | | | | | |
| Initial Rehabilitation and Repairs | | | | | | | | |
| New Buildings, Improvements, etc. | | | | | | | | |
| TOTAL COSTS | | 1850.63 | | 30615.35 | | | | $44,800.00 |

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 9/10/57 Operator Bertha Mineral Division THE NEW JERSEY ZINC CO.

Per W. L. Albers Title Superintendent
W. L. Albers

REMARKS: Covers costs of BC-16

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.
SEP 16 1957

## INSTRUCTIONS

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

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

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

GPO 872894

Narrative Report - Beaver Creek Area

Diamond drilling in the Beaver Creek Area was suspended with the completion of hole BC-16. This hole was collared in the Kingsport (?) Formation and was bottomed in the Copper Ridge Formation. A total of 631 feet was drilled. Two feet of zinc mineralization, estimated at 2-3% Zn, was encountered in the Copper Ridge Formation.

Because of topography, BC-16 was not located on the drill fence as planned, but was off set about 125 feet to the east.

Diamond Drill Log - BC-16

Location: (Based on Virginia Grid System)

217,100 N 1,072,680 E

Inclination: Vertical Elevation: 2267

Object: To test for down dip extent of BC-5 mineralization.

Results:

| From | To | Dist | Recov | Description |
|---|---|---|---|---|
| 0 | 44 | 44 | 0 | Overburden |
| 44 | 113 | 69 | 50 | Light medium gray fine grained dolomite, local sand grains, rare chert, local abundant diagenetic breccia, Kingsport (?) Formation. |
| 113 | 150 | 37 | 36 | Medium to dark gray fine grained dolomite, few partings, local sand-grains, locally bleached. |
| 150 | 216 | 66 | 58 | Medium and dark gray fine grained dolomite, few partings, locally faintly mottled. |
| 216 | 249 | 33 | 32 | Light medium gray fine grained dolomite, thin wavy partings, local sand-grains. |
| 249 | 263 | 14 | 13 | Medium gray fine grained limestone, abundant thick partings, Longview Formation. |
| 263 | 280 | 17 | 15 | Light gray fine grained dolomite, local thick partings. |
| 280 | 290 | 10 | 9 | Medium gray fine grained limestone and dolomite, few thick partings. |
| 290 | 370 | 80 | 73 | Light to dark gray fine grained dolomite, local limestone, local thin wavy partings, local bleached diagenetic breccia. |
| 370 | 383 | 13 | 9 | Fault zone |
| 383 | 443 | 60 | 36 | Light to medium gray fine to finely saccharoidal dolomite, few wavy partings. |

Form DMEA-104 (Rev. 1952)

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

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

PAIN VOUCHER & SCHEDULE OF PAYMENTS K- 7

# OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of July, 1957 Docket No. DMEA 4178 Contract No. 960

Operator's Name The New Jersey Zinc Company Minerals Zinc

Address Austinville, Virginia

Contract Amount, $44,800.00 Government Participation: 50 % Amount, $22,400.00

| 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 | 1464.90 | 22131.15 | 23596.05 | | | |
| Bulldozing | | | | | | |
| Crosscutting | | | | | | |
| Drifting | | | | | | |
| (2) Labor and Supervision: | | | | | | |
| Labor | | | | | | |
| Supervision | | | | | | |
| Technical Services | | | | | | |
| (3) Operating Mat'ls. and Supplies: | | | | | | |
| Timber | | | | | | |
| Explosives | | | | | | |
| Pipe | | | | | | |
| Track | | | | | | |
| (4) Operating Equipment: | | | | | | |
| Rental | | | | | | |
| Purchase | | | | | | |
| Depreciation | | | | | | |
| (5) Initial Rehabilitation and Repairs | | | | | | |
| (6) New Bldgs., Improvements, etc. | | | | | | |
| (7) Miscellaneous: | | | | | | |
| Repairs to Equipment | | | | | | |
| Sampling and Analysis | 1.00 | 6.00 | 7.00 | | | |
| Payroll Taxes | | | | | | |
| Liability Insurance | | | | | | |
| (8) Contingencies (specify): Incidental allowance @ $0.53/ft | 324.36 | 4837.31 | 5161.67 | | | |
| TOTALS | 1790.26 | 26974.46 | 28764.72 | 1790.26 | 26974.46 | 28764.72 |

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

Date 8/6/57 *Payee Bertha Mineral Division The New Jersey Zinc Company

Per [signature] Title 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:

$ 895.13

Signature [signature] (Authorized Certifying Officer)

Date AUG 20 1957 Vou. No. 32

(See other side)

9

895.13

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. E-960 in accordance with the terms of the contract.

Signature W. J. Lynch Title MINING ENGINEER U. S. BUREAU OF MINES Date AUG 15 1957

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Robert A. Lawrence Title EXECUTIVE OFFICER DMEA FIELD TEAM REGION V Date AUG 15 1957

## MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

# UNITED STATES
# DEPARTMENT OF THE INTERIOR

## DEFENSE MINERALS EXPLORATION ADMINISTRATION

## OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of July 1957 Docket No. DMEA 4178 Contract No. 960

Operator's Name The New Jersey Zinc Company Minerals Zinc

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 0-250 | Ft | 550.00 | 250 | 23596.05 | 9739 | 2.423 | 15000 | 2.45 |
| ~~Churn~~ 250-500 | " | 612.50 | 250 | | | | | |
| ~~Auger~~ 500-612 | " | 302.40 | 112 | | | | | |
| Stripping | | | | | | | | |
| Trenching | | | | | | | | |
| ~~Test Pits~~ Sample Assays | Sample | 1.00 | 1 | 7.00 | 7 | 1.00 | 100 | 1.00 |
| Roads and Trails | | | | | | | | |
| Incidental Allowance @ $0.53/ft | | 324.36 | 612 | 5161.67 | 9739 | 0.53 | 15000 | 0.53 |
| Total Distributed Costs | | 1790.26 | | 28764.72 | | | | Total Costs Authorized by Contract |
| Operating Equipment Purchased | | | | | | | | |
| Initial Rehabilitation and Repairs | | | | | | | | |
| New Buildings, Improvements, etc. | | | | | | | | |
| Total Costs | | ~~1790.26~~ | | ~~28764.72~~ | | | | $44,800.00 |

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

Date 8/6/57 Operator Bertha Mineral Division THE NEW JERSEY ZINC CO.

Per W. L. Albers Title Superintendent

→ 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)

Remarks:

(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 - Beaver Creek Area

Exploration continued in the Beaver Creek area with the completion of hole BC-15. This hole was collared in the Kingsport (?) Formation and was bottomed in the Copper Ridge Formation at a depth of 612 feet. Two feet of mineralization assaying 3.64% Zn, 1.56% Fe and Nil Pb was encountered in the expected zone at a depth of 539-541 feet.

The drill was moved to a location approximately 200 feet down dip from BC-12.

Diamond Drill Log - BC-15

Location: (Based on Virginia Rectangular Grid System)

217,900 N 1,073,162 E

Inclination: Vertical Elevation: 2428

Object: To test for strike extension of BC-5 mineralization.

Results:

| From | To | Dist | Recov | Description |
|---|---|---|---|---|
| 0 | 53 | 53 | 0 | Overburden |
| 53 | 82 | 29 | 27 | Light to dark gray fine grained dolomite, few partings, local diagenetic breccia, local sandgrains, Kingsport (?) formation. |
| 82 | 191 | 109 | 96 | Light to medium gray fine to finely saccharoidal dolomite, local diagenetic breccia, local partings. |
| 191 | 207 | 16 | 16 | Medium gray fine grained limestone, local thick partings few thin partings, Longview Formation. |
| 207 | 220 | 13 | 12 | Light to medium gray fine grained dolomite, few thick partings. |
| 220 | 232 | 12 | 12 | Medium gray fine grained limestone, abundant thick partings, local dolomite. |
| 232 | 393 | 161 | 151 | Light to dark gray fine grained locally finely saccharoidal dolomite, local diagenetic breccia, local partings, local chert. |
| 393 | 419 | 26 | 25 | Medium gray fine grained limestone, abundant partings, local diagenetic breccia, locally dolomitic, Chepultepec Formation. |
| 419 | 449 | 30 | 30 | Medium gray fine grained limestone, local wavy partings, locally shaly. |
| 449 | 470 | 21 | 21 | Medium gray fine grained dolomite, abundant thin straight partings, locally limy. |
| 470 | 477 | 7 | 7 | Medium gray fine grained limestone abundant wavy partings, locally dolomitic. |

DDL - BC-15 - Cont.

| From | To | Dist | Recov | Description |
|---|---|---|---|---|
| 477 | 529 | 52 | 47 | Light to medium gray fine grained dolomite, local abundant wavy partings, rare chert, Copper Ridge Formation. |
| 529 | 538 | 9 | 8 | Light medium gray saccharoidal dolomite locally slightly oxidized. |
| 538 | 540 | 2 | 1½ | Medium gray fine to finely saccharoidal dolomite, rare parting, 3.64% Zn, 1.56% Fe, Nil Pb. |
| 540 | 561 | 21 | 15 | Light to medium gray fine to finely saccharoidal dolomite, local partings, local thin quartzite-sand grain. |
| 561 | 562 | 1 | 1 | Light gray finely saccharoidal to saccharoidal dolomite, few blebs sphalerite. |
| 562 | 587 | 25 | 19 | Light gray fine to finely saccharoidal dolomite, few partings, local quartzite. |
| 587 | 590 | 3 | 1 | Fault zone |
| 590 | 612 | 22 | 17 | Light medium gray fine to finely saccharoidal dolomite, wavy partings, local quartzite. |
| | 612 | | | Bottom |

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- 3

# OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of June, 1957 Docket No. DMEA 4178 Contract No. 960
Operator's Name The New Jersey Zinc Company Minerals Zinc
Address Austinville, Virginia
Contract Amount, $44,800.00 Government Participation: 50% Amount, $ 22,400.00

| 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 | 1824.00 | 20,307.15 | 22,131.15 | | | |
| Bulldozing | | | | | | |
| Crosscutting | | | | | | |
| Drifting | | | | | | |
| (2) Labor and Supervision: | | | | | | |
| Labor | | | | | | |
| Supervision | | | | | | |
| Technical Services | | | | | | |
| (3) Operating Mat'ls. and Supplies: | | | | | | |
| Timber | | | | | | |
| Explosives | | | | | | |
| Pipe | | | | | | |
| Track | | | | | | |
| (4) Operating Equipment: | | | | | | |
| Rental | | | | | | |
| Purchase | | | | | | |
| Depreciation | | | | | | |
| (5) Initial Rehabilitation and Repairs | | | | | | |
| (6) New Bldgs., Improvements, etc. | | | | | | |
| (7) Miscellaneous: | | | | | | |
| Repairs to Equipment | | | | | | |
| Sampling and Analysis | | 6.00 | 6.00 | | | |
| Payroll Taxes | | | | | | |
| Liability Insurance | | | | | | |
| (8) Contingencies (specify): Incidental Allowances @ $0.53/ft. | 394.85 | 4442.46 | 4837.31 | | | |
| TOTALS | 2218.85 | 24755.61 | 26974.46 | 2218.85 | 24755.61 | 26974.46 |

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

I certify that the above bill is correct and just and that payment therefor has not been received.
Date 7/5/57 *Payee Bertha Mineral Division The New Jersey Zinc Company
Per [signature] Title 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:
$ 1109.42
Signature [signature] (Authorized Certifying Officer)
Date JUL 18 1957 Vou. No. 11
(See other side)

8

1109.43

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

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

Signature ..... Title GEOLOGIST, U. S. G. S. Date JUL 15 1957

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature ..... Title ACTING EXECUTIVE OFFICER DMEA - REGION V Date JUL 16 1957

# MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

# UNITED STATES
# DEPARTMENT OF THE INTERIOR

## DEFENSE MINERALS EXPLORATION ADMINISTRATION

# OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of June 1957 Docket No. DMEA 4178 Contract No. 960

Operator's Name The New Jersey Zinc Company Minerals Zinc

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 | Unit Costs |
| Drifting | | | | | | | | |
| Crosscutting | | | | | | | | |
| Raising | | | | | | | | |
| Shafts | | | | | | | | |
| Winzes | | | | | | | | |
| Drilling: Core 0-250 | Ft | 550.00 | 250 | 22,131.15 | 9127 | 2.425 | 15000 | 2.45 |
| ~~Core~~ 250-500 | Ft | 612.50 | 250 | | | | | |
| ~~Auger~~ 500-745 | Ft | 661.50 | 245 | | | | | |
| Stripping | | | | | | | | |
| Trenching | | | | | | | | |
| ~~Trenching~~ Sample Analysis | Sample | | | 6.00 | 6 | 1.00 | 100 | 1.00 |
| Roads and Trails | | | | | | | | |
| Incidental Allowances @ $0.53/ft | Ft | 394.85 | 745 | 4,837.31 | 9127 | 0.53 | 15000 | 0.53 |
| TOTAL DISTRIBUTED COSTS | | 2218.85 | | 26.974.46 | | | | TOTAL COSTS AUTHORIZED BY CONTRACT |
| Operating Equipment Purchased | | | | | | | | |
| Initial Rehabilitation and Repairs | | | | | | | | |
| New Buildings, Improvements, etc. | | | | | | | | |
| TOTAL COSTS | | 2218.85 | | 26,974.46 | | | | $44,800.00 |

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

Date 7/5/57 Operator Bertha Mineral Division The New Jersey Zinc Co.

By W. E. Albers Title Superintendent

W. E. Albers

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

REMARKS:

(Instructions on reverse)

(For Government use only)

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

GEOLOGIST, U. S. G. S.

JUL 15 1957

## INSTRUCTIONS

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

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

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

GPO 872894

| From | To | Dist | Recov | Description |
|---|---|---|---|---|
| 443 | 527 | 84 | 73 | Medium gray fine grained limestone, abundant partings, local sand grains, local dolomite, Chepultepec Formation. |
| 527 | 560 | 33 | 29 | Light to medium gray fine grained dolomite, few thin partings, Copper Ridge Formation. |
| 560 | 565 | 5 | 1 | Fault Zone |
| 565 | 581 | 16 | 8 | Light to medium gray fine to finely saccharoidal dolomite, rare parting. |
| 581 | 583 | 2 | 2 | Medium gray finely saccharoidal dolomite, fractured, ZnS (est. 2-3% Zn) in fractures. |
| 583 | 631 | 48 | 35 | Light to medium gray fine grained dolomite, local sand grains, local thin quartzite. |
| | 631 | | | Bottom |

Narrative Report - Beaver Creek Area, Smyth County, Va.

Exploration in the Beaver Creek area continued with the completion of diamond drill hole BC-14, located 200 feet down dip from BC-13. This hole was collared in the Kingsport (?) Formation and was bottomed in the Copper Ridge Formation at a depth of 745 feet. A mineralized zone one foot thick and estimated at less than 1% Zn was encountered at a depth of 626-627.

BC-15 is shown on the section but is not covered by a detailed log or voucher in this report.

Quarterly Summary

Exploration by diamond drilling was resumed in the Beaver Creek area during the quarter ending June 30. Hole BC-12 encountered 10 feet of 2.9% Zn at the expected zone of the Copper Ridge formation. This hole is located 200 feet down dip from BC-6.

A second fence of three holes 600 feet east of the first fence has been completed with only thin beds or traces of zinc mineralization encountered.

OFFICIAL FILE COPY
D M E A
RECEIVED JUL 22 1957

| DATE | INITIALS | CODE |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

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- 75

# OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of May, 1957 Docket No. DMEA 4178 Contract No. 960
Operator's Name The New Jersey Zinc Company Minerals Zinc
Address Austinville, Virginia
Contract Amount, $44,800.00 Government Participation: 50 % Amount, $22,400.00

| 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 | 1691.70 | 18615.45 | 20307.15 | | | |
| Bulldozing | | | | | | |
| Crosscutting | | | | | | |
| Drifting | | | | | | |
| (2) Labor and Supervision: | | | | | | |
| Labor | | | | | | |
| Supervision | | | | | | |
| Technical Services | | | | | | |
| (3) Operating Mat'ls. and Supplies: | | | | | | |
| Timber | | | | | | |
| Explosives | | | | | | |
| Pipe | | | | | | |
| Track | | | | | | |
| (4) Operating Equipment: | | | | | | |
| Rental | | | | | | |
| Purchase | | | | | | |
| Depreciation | | | | | | |
| (5) Initial Rehabilitation and Repairs | | | | | | |
| (6) New Bldgs., Improvements, etc. | | | | | | |
| (7) Miscellaneous: | | | | | | |
| Repairs to Equipment | | | | | | |
| Sampling and Analysis | | 6.00 | 6.00 | | | |
| Payroll Taxes | | | | | | |
| Liability Insurance | | | | | | |
| (8) Contingencies (specify): Incidental Allowances @ $0.53/ft | 368.88 | 4073.58 | 4442.46 | | | |
| TOTALS | 2060.58 | 22695.03 | 24755.61 | 2060.58 | 22695.03 | 24755.61 |

RECEIVED JUN 17 1957 D.M.E.A.

I certify that the above bill is correct and just and that payment therefor has not been received.
Date 6/5/57 *Payee Bertha Mineral Division The New Jersey Zinc Company
Per [signature] Title 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:
$ 1030.29
Signature Helen R. Muller
(Authorized Certifying Officer)
Date JUN 14 1957 Vou. No. 203
(See other side)

1030.29

(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-960 in accordance with the terms of the contract.

Signature N. J. Lynch Title U. S. BUREAU OF MINES Date JUN 10 1957

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature [illegible] Title EXECUTIVE OFFICER DMEA FIELD TEAM REGION V Date JUN 10 1957

# MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

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

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

Month of May 1957 Docket No. DMEA 4178 Contract No. 960
Operator's Name The New Jersey Zinc Company Minerals Zinc
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 0-250 | Ft | 550.00 | 250 | 20307.15 | 8382 | 2.423 | 15000 | 2.45 |
| Churn 250-500 | " | 612.50 | 250 | | | | | |
| Auger 500-696 | " | 529.20 | 196 | | | | | |
| Stripping | | | | | | | | |
| Trenching | | | | | | | | |
| ~~xxxxx~~ SampleAssays | Sample | | | 6.00 | 6 | 1.00 | 100 | 1.00 |
| Roads and Trails | | | | | | | | |
| Incidental Allowances @ $0.53/ft | Ft | 368.88 | 696 | 4442.46 | 8382 | 0.53 | 15000 | 0.53 |
| TOTAL DISTRIBUTED COSTS | | 2060.58 | | 24755.61 | | | | TOTAL COSTS AUTHORIZED BY CONTRACT |
| Operating Equipment Purchased | | | | | | | | |
| Initial Rehabilitation and Repairs | | | | | | | | |
| New Buildings, Improvements, etc. | | | | | | | | |
| | | 2060.58 | | 24755.61 | | | | |
| TOTAL COSTS | | | | | | | | $44,800.00 |

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 6/5/57 Operator Bertha Mineral Division The New Jersey Zinc Co.

Per U. L. Mibers Title Superintendent

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)

REMARKS:

(For Government use only)

Jeremiah Lucas Jr.
GEOLOGIST, U. S. G. S.
JUN 10 '57

## 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 - Beaver Creek Area, Smyth County, Va.

Exploration continued in the Beaver Creek Area with the completion of BC-13, located 600 feet east of BC-5. Only traces of mineralization were encountered in the expected zone.

BC-13 was collared in the Longview (or possibly younger beds) formation and was bottomed in the Copper Ridge Formation at a depth of 696 feet.

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PMGA
RECEIVED JUN 17 1957

| DATE | INITIALS | CODE |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

Diamond Drill Log - BC-13

Location: (Based on Virginia Military grid system)

217,700 N 1,073,170 E

Inclination: Vertical Elevation: 2440

Object: To test for BC-5 mineralization to the east.

Results:

OFFICIAL FILE COPY
DMEA
RECEIVED JUN 17 1957
DATE | INITIALS | CODE

| From | To | Dist. | Recov | Description |
|---|---|---|---|---|
| 0 | 96 | 96 | 0 | Overburden |
| 96 | 160 | 64 | 45 | Light gray finely saccharoidal to saccharoidal dolomite local sand grains, local chert, Longview (?) Formation. |
| 160 | 295 | 135 | 124 | Light to dark gray fine grained locally finely saccharoidal dolomite, local diagenetic breccia, local partings. |
| 295 | 312 | 17 | 16 | Medium gray fine grained limestone, local thick partings. |
| 312 | 328 | 16 | 16 | Light to light medium gray fine grained dolomite, local bleaching, local partings. |
| 328 | 340 | 12 | 11 | Medium gray fine grained limestone, local abundant thick partings. |
| 340 | 527 | 187 | 175 | Light to dark gray fine graimed dolomite, locally finely saccharoidal, local diagenetic breccia, local chert, local partings. |
| 527 | 553 | 26 | 24 | Medium gray fine grained limestone, local thick wavy partings, Chepultepec Formation. |
| 553 | 580 | 27 | 26 | Light to dark gray fine grained dolomite, local sandgrains, few partings, local banding. |
| 580 | 587 | 7 | 7 | Medium gray fine grained limestone, few thick partings. |
| 587 | 605 | 18 | 16 | Medium to dark gray fine grained dolomite, local straight partings Copper Ridge Formation |

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- 69

# OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of April, 1957 Docket No. DMEA 4178 Contract No. 960
Operator's Name The New Jersey Zinc Company Minerals Zinc
Address Austinville, Virginia
Contract Amount, $ 44,800.00 Government Participation: 50% Amount, $ 22,400.00

| 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 | 1194.90 | 17420.55 | 18615.45 | | | |
| Bulldozing | | | | | | |
| Crosscutting | | | | | | |
| Drifting | | | | | | |
| (2) Labor and Supervision: | | | | | | |
| Labor | | | | | | |
| Supervision | | | | | | |
| Technical Services | | | | | | |
| (3) Operating Mat'ls. and Supplies: | | | | | | |
| Timber | | | | | | |
| Explosives | | | | | | |
| Pipe | | | | | | |
| Track | | | | | | |
| (4) Operating Equipment: | | | | | | |
| Rental | | | | | | |
| Purchase | | | | | | |
| Depreciation | | | | | | |
| (5) Initial Rehabilitation and Repairs | | | | | | |
| (6) New Bldgs., Improvements, etc. | | | | | | |
| (7) Miscellaneous: | | | | | | |
| Repairs to Equipment | | | | | | |
| Sampling and Analysis | 3.00 | 3.00 | 6.00 | | | |
| Payroll Taxes | | | | | | |
| Liability Insurance | | | | | | |
| (8) Contingencies (specify): Incidental Allowance @ $0.53/ft | 271.36 | 3802.22 | 4073.58 | | | |
| TOTALS | 1469.26 | 21225.77 | 22695.03 | 1469.26 | 21225.77 | 22695.03 |

RECEIVED MAY 17 1957 D.M.E.A.

I certify that the above bill is correct and just and that payment therefor has not been received.
Date 5/8/57 *Payee Bertha Mineral Division The New Jersey Zinc Company
Per [signature] Title 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:
$ 734.63
Signature Helen R. Meier (Authorized Certifying Officer)
Date MAY 15 1957 Vou. No. 189
(See other side)

6

734.63

(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-96 in accordance with the terms of the contract.

Signature Kenneth Weden Jr. Title GEOLOGIST, U. S. G. S. Date MAY 14 1957

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature V. J. Lynch Title ACTING EXECUTIVE OFFICER DMEA - REGION V Date MAY 14 1957

# MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

# UNITED STATES
# DEPARTMENT OF THE INTERIOR

## DEFENSE MINERALS EXPLORATION ADMINISTRATION

## OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of April 1957 Docket No. DMEA 4178 Contract No. 960
Operator's Name The New Jersey Zinc Company Minerals Zinc
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 0-250 | Ft | 550.00 | 250 | 18615.45 | 7686 | 2.422 | 15000 | 2.45 |
| 250-500 | " | 612.50 | 250 | | | | | |
| 500-512 | " | 32.40 | 12 | | | | | |
| Stripping | | | | | | | | |
| Trenching | | | | | | | | |
| Sample Assays | Sample | 3.00 | 3 | 6.00 | 6 | 1.00 | 100 | 1.00 |
| Roads and Trails | | | | | | | | |
| Incidental Allowances @ $0.53/ft | Ft | 271.36 | 512 | 4073.58 | 7686 | 0.53 | 15000 | 0.53 |
| TOTAL DISTRIBUTED COSTS | | 1469.26 | | 22695.03 | | | | TOTAL COSTS AUTHORIZED BY CONTRACT |
| Operating Equipment Purchased | | | | | | | | |
| Initial Rehabilitation and Repairs | | | | | | | | |
| New Buildings, Improvements, etc. | | | | | | | | |
| TOTAL COSTS | | | | | | | | $44,800.00 |

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 5/8/57 Operator Bertha Mineral Division The New Jersey Zinc Co.

Per W. L. Albers Title Superintendent

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)

REMARKS:

(For Government use only)

RECEIVED MAY 17 1957 D.M.E.A.

Kenneth Lucas Jr.
GEOLOGIST, U. S. G. S.
MAY 14 1957

## INSTRUCTIONS

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

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

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

GPO 872894

Narrative Report - Beaver Creek Area

Drilling has been resumed on the Kestner Property in the Beaver Creek Area. Hole BC-12, located 200 feet down dip from BC-6, was collared in the Longview Formation and was bottomed in the Copper Ridge Formation at a depth of 512 feet. Ten feet of mineralized ground, assaying 2.9% Zn, was encountered between 477 and 487 feet.

The drill has been moved to a location 600 feet east of BC-5 to determine the strike extent of the mineralization.

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RECEIVED MAY 17 1957

| DATE | INITIALS | CODE |
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Diamond Drill Log - BC-12

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RECEIVED MAY 17 1957

| DATE | INITIALS | CODE |
|---|---|---|
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| | | |
| | | |
| | | |
| | | |
| | | |

Location: (Based on Virginia Rectangular Grid System)

217,355 N 1,072,565 E

Inclination: Vertical Elevation: 2268 (?)

Object: To test for down dip extent of mineralization encountered in BC-6

Results:

| From | To | Dist. | Recov. | Description |
|---|---|---|---|---|
| 0 | 22 | 22 | 0 | Overburden |
| 22 | 148 | 126 | 121 | Light to medium gray fine grained dolomite, local sand grains, few partings, local diagenetic breccia, Longview Formation. |
| 148 | 187 | 39 | 37 | Interbedded medium gray fine grained limestone and medium gray fine grained dolomite, local partings. |
| 187 | 327 | 140 | 136 | Light to medium gray fine grained dolomite, local thin chert, few scattered sand grains, local partings. |
| 327 | 328 | 1 | 1 | Fault zone |
| 328 | 361 | 33 | 25 | Medium gray fine to finely saccharoidal dolomite, local abundant partings. |
| 361 | 398 | 37 | 35 | Interbedded medium gray fine grained limestone, abundant partings and dark gray fine grained dolomite. Chepultepec Formation. |
| 398 | 418 | 20 | 20 | Dark gray fine grained dolomite, local abundant thin straight partings. |
| 418 | 424 | 6 | 6 | Medium gray fine grained limestone, local thin partings. |
| 424 | 466 | 42 | 41 | Light to dark gray fine grained dolomite, local thin straight partings, locally finely saccharoidal, Copper Ridge Formation. |
| 466 | 467 | 1 | 1 | Dark gray finely saccharoidal dolomite, traces Zn. |
| 467 | 477 | 10 | 10 | Light gray fine grained dolomite, local thick partings. |

X 1036 150M

COPY

Austinville, Va.
May 13, 1957

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D M E A
RECEIVED MAY 17 1957

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

Re: Monthly Report
Beaver Creek Area, Smyth County, Va.
Docket #DMEA 4178, Contract #960

Gentlemen:

Enclosed is our April monthly report on the Beaver Creek Area. Drilling was resumed on the Kestner property on April 10 and hole BC-12, located 200 feet down dip from BC-6, encountered mineralization in the expected zone.

Very truly yours,

W. B. Albers,
Superintendent

R.C.G.
RCGilbert/mjf
In quintuplicate

RECEIVED
MAY 14 1957
Knoxville, Tenn.

X 1086 150M

COPY

Austinville, Va.
April 12, 1957

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

Subject: Quarterly Summary, Beaver Creek Area,
Smyth County, Va., Docket #DMEA ~~4173~~ 4178
Contract #960

Dear Sir:

Enclosed is our first quarter 1957 summary for the Beaver Creek Project. Drilling was recessed in this area in January. Further exploration by diamond drilling on the Kestner property will begin during April.

Very truly yours,

W. L. Albers/gm

W. L. Albers,
Superintendent

R.C.G. 6/1/57
RCGilbert/mjf
In quintuplicate

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RECEIVED APR 22 1957

| DATE | | CODE |
|---|---|---|
| 4/22 | C | 220 |
| " | Com | 100 |
| | | 800 |

Quarterly Summary - Beaver Creek Area, Smyth County, Va.

Only two holes were drilled in the Beaver Creek Area, both on the Ray McAllister Property, during the quarter. These holes, BC-10 and BC-11, were collared in the Copper Ridge and bottomed in the same formation. A total of 888 feet were drilled. No zinc mineralization was encountered.

Drilling at this property has been recessed and will be considered as non-productive. However, plans have been made to further prospect the Kestner Property by drilling at least three additional holes. At the completion of the drilling of the Kestner Property, final recommendations will be considered for the Beaver Creek Area.

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DMEA
RECEIVED APR 22 1957

| DATE | REMARKS | CODE |
|---|---|---|
| | | |
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| | | |
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| | | |
| | | |
| | | |

DDL - BC-13 - (Cont)

| From | To | Dist. | Recov | Description |
|---|---|---|---|---|
| 605 | 607 | 2 | 2 | Medium gray saccharoidal dolomite, diagenetic breccia. |
| 607 | 656 | 49 | 46 | Light to medium gray fine local finely saccharoidal dolomite, local partings, local vugs. |
| 656 | 660 | 4 | 4 | Light to light medium gray saccharoidal dolomite, rare parting, trace of sphalerite at 657. |
| 660 | 679 | 19 | 13 | Light to dark gray fine grained dolomite, local thin straight partings. |
| 679 | 683 | 4 | 3 | Light to light medium gray saccharoidal dolomite, massive, trace of sphalerite at 681. |
| 683 | 696 | 13 | 12 | Light to dark gray fine grained dolomite, local shattering, local thin quartzite. |
| | 696 | | | Bottom |

DDL - BC-12 (Cont)

| From | To | Dist. | Recov | Description |
|---|---|---|---|---|
| 477 | 481 | 4 | 4 | Medium gray finely saccharoidal to saccharoidal dolomite, few vugs. Disseminated Zn (Assay: 6.03% Zn) |
| 481 | 483 | 2 | 2 | Medium gray finely saccharoidal to saccharoidal dolomite. Disseminated pyrite, local zinc (Assay: 0.22% Zn). |
| 483 | 487 | 4 | 4 | Medium gray finely saccharoidal dolomite, disseminated Zn (Assay: 1.12% Zn) |
| 487 | 512 | 25 | 22 | Light to dark gray fine grained dolomite, locally finely saccharoidal, few partings. |
| | 512 | | | Bottom |

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

Budget Bureau No. 42-R1036.5

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

PAID ON VOUCHER & SCHEDULE OF PAYMENTS K- 47

Month of January 1957 Docket No. DMEA 4178 Contract No. 960
Operator's Name The New Jersey Zinc Company Minerals Zinc
Address Austinville, Virginia
Contract Amount, $44,800.00 Government Participation: 50% Amount, $22,400.00

| 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 | 2050.60 | 15369.95 | 17420.55 | | | |
| Bulldozing | | | | | | |
| Crosscutting | | | | | | |
| Drifting | | | | | | |
| | | | | | | |
| (2) Labor and Supervision: | | | | | | |
| Labor | | | | | | |
| Supervision | | | | | | |
| Technical Services | | | | | | |
| (3) Operating Mat'ls. and Supplies: | | | | | | |
| Timber | | | | | | |
| Explosives | | | | | | |
| Pipe | | | | | | |
| Track | | | | | | |
| | | | | | | |
| | | | | | | |
| (4) Operating Equipment: | | | | | | |
| Rental | | | | | | |
| Purchase | | | | | | |
| Depreciation | | | | | | |
| (5) Initial Rehabilitation and Repairs | | | | | | |
| (6) New Bldgs., Improvements, etc. | | | | | | |
| (7) Miscellaneous: | | | | | | |
| Repairs to Equipment | | | | | | |
| Sampling and Analysis | | 3.00 | 3.00 | | | |
| Payroll Taxes | | | | | | |
| Liability Insurance | | | | | | |
| | | | | | | |
| | | | | | | |
| (8) Contingencies (specify): Incidental Allowances @ $0.53/ft | 470.64 | 3331.58 | 3802.22 | | | |
| | | | | | | |
| TOTALS | 2521.24 | 18704.53 | 21225.77 | 2521.24 | 18704.53 | 21225.77 |

I certify that the above bill is correct and just and that payment therefor has not been received.
Date 2/4/57 *Payee Bertha Mineral Division THE NEW JERSEY ZINC CO.
Per [signature] Title 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:
$ 1260.62
Signature Helen R. Miller
(Authorized Certifying Officer)
Date FEB 12 1957 Vou. No. 128
(See other side)

1260.62

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. E960 in accordance with the terms of the contract.

Signature [illegible] Title GEOLOGIST, U. S. G. S. Date FEB 11 1957

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature V. J. Lynch Title ACTING EXECUTIVE OFFICER DMEA - REGION V Date FEB 11 1957

# MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

# UNITED STATES
# DEPARTMENT OF THE INTERIOR

## DEFENSE MINERALS EXPLORATION ADMINISTRATION

## OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of January 1957 Docket No. DMEA 4178 Contract No. 960

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

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 0-250 | Ft | 1100.00 | 500 | 17420.55 | 7174 | 2.428 | 15000 | 2.45 |
| ~~Churn~~ 250-500 | Ft | 950.60 | 388 | | | | | |
| Auger | | | | | | | | |
| Stripping | | | | | | | | |
| Trenching | | | | | | | | |
| ~~Test Pits~~ Sample Assays | Sample | | | 3.00 | 3 | 1.00 | 100 | 1.00 |
| Roads and Trails | | | | | | | | |
| Incidental Allowances @ 0.53/ft | | 470.64 | 888 | 3802.22 | 7174 | 0.53 | 15000 | 0.53 |
| TOTAL DISTRIBUTED COSTS | | 2521.24 | 888 | 21225.77 | | | | TOTAL COSTS AUTHORIZED BY CONTRACT |
| Operating Equipment Purchased | | | | | | | | |
| Initial Rehabilitation and Repairs | | | | | | | | |
| New Buildings, Improvements, etc. | | | | | | | | |
| TOTAL COSTS | | 2521.24 | | 21225.77 | | | | 44800.00 |

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

Date 2/4/57 Operator Bertha Mineral Division THE NEW JERSEY ZINC CO.

Per W. L. Albers Title Superintendent

REMARKS:

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.

FEB 11 1957

## INSTRUCTIONS

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

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

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

GPO 872894

Narrative - Beaver Creek Area - January 1957

Diamond drill hole BC-10 was collared and bottomed in the Copper Ridge Formation, and was drilled to a depth of 470 feet. No zinc mineralization was encountered.

Diamond drill hole BC-11 was collared in the Copper Ridge Formation and bottomed at a depth of 418 feet in the Copper Ridge. This hole was barren.

With the completion of BC-11 the proposed fence of five holes on the McAllister property is finished. Only scattered traces and thin beds of low grade mineralization were encountered. No further testing is planned for this area.

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DMEA
RECEIVED FEB 1

| DATE | INITIALS | CODE |
|---|---|---|
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EXTRA COPY
DMEA
RECEIVED FEB 14 1957
DATE | INITIALS | CODE

Diamond Drill Log - BC-10

Location: 600 feet north of BC-7

Elevation: 2315 (?) Incl: Vertical

Object: To test down dip extent of mineralization that crops out and is marked by a geochemical anomaly.

Results:

| From | To | Dist | Recov | Description |
|---|---|---|---|---|
| 0 | 62 | 62 | 0 | Overburden |
| 62 | 65 | 3 | 3 | Light medium gray fine grained dolomite, few partings, local bleaching. Copper Ridge Formation. |
| 65 | 66 | 1 | 1 | Quartzite |
| 66 | 113 | 47 | 31 | Light to medium gray fine grained dolomite, local partings, local diagenetic breccia. |
| 113 | 118 | 5 | 5 | Quartzite |
| 118 | 239 | 121 | 95 | Light to medium gray fine grained dolomite, local abundant sand grains, local partings, local diagenetic breccia. |
| 239 | 242 | 3 | 3 | Quartzite |
| 242 | 284 | 42 | 33 | Light to medium gray fine to fine saccharoidal dolomite local partings, local diagenetic breccia. |
| 284 | 290 | 6 | 6 | Medium gray fine grained limestone, abundant thick wavy partings. |
| 290 | 294 | 4 | 4 | Light gray fine grained dolomite, abundant bleached diagenetic breccia. |
| 294 | 319 | 25 | 24 | Medium gray oolitic limestone. |
| 319 | 327 | 8 | 8 | Medium gray fine grained dolomite, local thin straight partings. |
| 327 | 333 | 6 | 6 | Medium gray fine grained locally oolitic limestone, few partings. |

DDL - BC-10 (CONT.)

| From | To | Dist | Recov | Description |
|---|---|---|---|---|
| 333 | 449 | 116 | 106 | Light to medium gray fine grained dolomite, local abundant partings, local diagenetic breccia, locally bleached. |
| 449 | 455 | 6 | 5 | Medium gray fine grained limestone, abundant thick wavy partings. |
| 455 | 459 | 4 | 2 | Silicified oolites in chert matrix. |
| 459 | 470 | 11 | 11 | Medium to dark gray fine grained dolomite partings. |
| | 470 | Bottom | | |

Diamond Drill Log - BC-11

Location: 800 feet north of BC-7

Elevation: 2353 (?) Inclination: Vertical

Object: To test ground down dip from mineralized outcrop and a geochemical anomaly.

Results:

| From | To | Dist | Recov | Description |
|---|---|---|---|---|
| 0 | 28 | 28 | 0 | Overburden |
| 28 | 94 | 66 | 58 | Light to light medium gray fine grained dolomite, local sand grains, local partings, local thin quartzite, Copper Ridge Formation. |
| 94 | 220 | 126 | 70 | Light to medium gray fine grained dolomite, local abundant sandgrains, local thin quartzite, local diagenetic breccia, few partings. |
| 220 | 243 | 23 | 17 | Interbedded oolitic limestone and medium gray fine grained dolomite with sand grains. |
| 243 | 248 | 5 | 5 | Light gray fine grained dolomite, abundant bleached diagenetic breccia. |
| 248 | 270 | 22 | 13 | Medium gray oolitic limestone. |
| 270 | 287 | 17 | 7 | Light medium gray fine grained dolomite, few partings. |
| 287 | 289 | 2 | 1 | Quartzite |
| 289 | 328 | 39 | 38 | Light to medium gray fine grained dolomite, local diagenetic breccia, local abundant partings, locally limy. |
| 328 | 338 | 10 | 10 | Medium gray fine grained limestone, abundant thick partings. |
| 338 | 396 | 58 | 45 | Light to medium local dark gray fine grained dolomite, local thick partings, local diagenetic breccia. |
| 396 | 407 | 11 | 11 | Medium gray fine grained limestone, abundant thick wavy partings. |
| 407 | 410 | 3 | 3 | Silicified oolites in chert, diagenetic breccia. |
| 410 | 418 | 8 | 8 | Medium gray fine grained dolomite, local partings, local limestone. |
| | 418 | Bottom | | |

Austinville, Va.
February 8, 1957

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

Subject: January Report - Beaver Creek, Virginia
Docket #DMEA 4178, Contract #960

Dear Sir:

Enclosed is our January monthly report on the Beaver Creek project. Hole BC-11 completes the initially proposed fence of five holes on the McAllister property, and the results do not indicate further work on this property. We are investigating the feasibility of a limited amount of additional drilling on the Kestner property.

Very truly yours,

W. L. Albers,
Superintendent

R.C.G.
RCGilbert/mjf
In quintuplicate

RECEIVED
FEB 11 1957

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-

# OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of December, 1956 Docket No. DMEA 4178 Contract No. 960
Operator's Name The New Jersey Zinc Company Minerals Zinc
Address Austinville, Virginia
Contract Amount, $ 44,800.00 Government Participation: 50 % Amount, $ 22,400.00

| 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 | 2624.70 | 12745.25 | 15369.95 | | | |
| Bulldozing | | | | | | |
| Crosscutting | | | | | | |
| Drifting | | | | | | |
| (2) Labor and Supervision: | | | | | | |
| Labor | | | | | | |
| Supervision | | | | | | |
| Technical Services | | | | | | |
| (3) Operating Mat'ls. and Supplies: | | | | | | |
| Timber | | | | | | |
| Explosives | | | | | | |
| Pipe | | | | | | |
| Track | | | | | | |
| (4) Operating Equipment: | | | | | | |
| Rental | | | | | | |
| Purchase | | | | | | |
| Depreciation | | | | | | |
| (5) Initial Rehabilitation and Repairs | | | | | | |
| (6) New Bldgs., Improvements, etc. | | | | | | |
| (7) Miscellaneous: | | | | | | |
| Repairs to Equipment | | | | | | |
| Sampling and Analysis | | 3.00 | 3.00 | | | |
| Payroll Taxes | | | | | | |
| Liability Insurance | | | | | | |
| (8) Contingencies (specify): Incidental Allowances @ $0.53/ft | 588.83 | 2742.75 | 3331.58 | | | |
| TOTALS | 3213.53 | 15491.00 | 18704.53 | 3213.53 | 15491.00 | 18704.53 |

RECEIVED JAN 18 1957 D.M.E.A.

I certify that the above bill is correct and just and that payment therefor has not been received.
Date 1/7/57 *Payee Bertha Mineral Division The New Jersey Zinc Co.
Per [signature] Title 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:
$ 1606.76
Signature [signature] (Authorized Certifying Officer)
Date JAN 16 1957 Vou. No.
(See other side)

4

1606.77

(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-960 in accordance with the terms of the contract.

Signature W. J. Lynch Title MINING ENG. S. BUREAU OF MINES Date JAN 15 1957

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Robert A. Lawrence Title EXECUTIVE OFFICER DMEA REGION V Date JAN 15 1957

# MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

# UNITED STATES
# DEPARTMENT OF THE INTERIOR

## DEFENSE MINERALS EXPLORATION ADMINISTRATION

## OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of December 1956 Docket No. DMEA 4178 Contract No. 960

Operator's Name The New Jersey Zinc Company Minerals Zinc

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 | Unit Costs |
| Drifting | | | | | | | | |
| Crosscutting | | | | | | | | |
| Raising | | | | | | | | |
| Shafts | | | | | | | | |
| Winzes | | | | | | | | |
| Drilling: Core 0-250 | Ft | 1100.00 | 500 | 15369.95 | 6286 | 2.445 | 15000 | 2.45 |
| ~~Churn~~ 250-500 | | 1225.00 | 500 | | | | | |
| ~~Auger~~ 500-750 | | 299.70 | 111 | | | | | |
| Stripping | | | | | | | | |
| Trenching | | | | | | | | |
| ~~Test~~ Sample Assays | Sample | | | 3.00 | 3 | 1.00 | 100 | 1.00 |
| Roads and Trails | | | | | | | | |
| Incidental Allowances @ $0.53/ft | Ft | 588.83 | 1111 | 3331.58 | 6286 | 0.53 | 15000 | 0.53 |
| TOTAL DISTRIBUTED COSTS | | 3213.53 | 1111 | 18704.53 | | | | TOTAL COSTS AUTHORIZED BY CONTRACT |
| Operating Equipment Purchased | | | | | | | | |
| Initial Rehabilitation and Repairs | | | | | | | | |
| New Buildings, Improvements, etc. | | | | | | | | |
| TOTAL COSTS | | | | | | | | $44,800.00 |

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

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

Per W. L. Albers Title Superintendent

REMARKS:

RECEIVED JAN 18 1957 D.M.E.A.

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)

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 - Beaver Creek - December 1956

RECEIVED JAN 18 1957 D.M.E.A.

Hole number BC-8 was collared in the Chepultepec Formation and was bottomed in the Copper Ridge. One foot of mineralization (estimated 2% Zn) was intercepted at a depth of 312-313 feet. This hole bottomed at 523 feet.

Hole number BC-9 was collared in the Chepultepec and bottomed in the Copper Ridge Formation. Three feet of mineralized ground (estimated 1% Zn) was cut at a depth of 291 to 294. This hole was bottomed at a depth of 588 feet.

Quarterly Summary - October-December 1956

Five holes totalling 3,340 feet were completed during the quarter ending December 31. Holes BC-5 and BC-6 completed the proposed fence on the Kestner property, and holes BC-7, BC-8 and BC-9 were drilled on the Ray McAllister property.

Hole BC-5 cut 5 feet that averaged 8.13% Zn and BC-6 cut 9 feet (3 feet recovered) of 1.81% Zn. Since the mineralization was too thin to be of economic value, it was decided, by mutual consent, to recess the drilling on this property.

Holes BC-7, BC-8 and BC-9, totalling 1622 feet, were drilled on the McAllister property, being three holes on a proposed fence of 5 holes. Only thin intercepts of low grade mineralization have been cut during the drilling. The mineralization occurs at the expected horizon in the Copper Ridge.

Holes BC-5 and BC-6 were collared in the Longview formation, cut through the Chepultepec, and bottomed in the Copper Ridge. Holes BC-7, BC-8 and BC-9 collared in the Chepultepec and bottomed in the Copper Ridge.

Diamond Drill Log, Hole No. BC-8

Location: 200 feet north of BC-7

Elevation: 2215 (?) Inclination: Vertical

Object: To test ground down dip from a mineralized outcrop that is marked by a geochemical anomaly.

Results:

| From | To | Dist | Recov | Description |
|---|---|---|---|---|
| 0 | 6 | 6 | | Overburden |
| 6 | 11 | 5 | 5 | Medium gray fine grained dolomite, wavy partings Chepultepec formation. |
| 11 | 15 | 4 | 4 | Medium gray fine grained limestone, wavy thick partings. |
| 15 | 18 | 3 | 3 | Light medium gray fine grained dolomite, abundant sand grains, few parts. |
| 18 | 21 | 3 | 3 | Medium gray fine grained limestone, abundant wavy partings. |
| 21 | 165 | 144 | 121 | Light to medium gray fine, local saccharoidal, dolomite, local diagenetic breccia, local partings local vugs, Copper Ridge Formation. |
| 165 | 191 | 26 | 25 | Light to medium gray fine grained dolomite, local abundant sand grains, few partings. |
| 191 | 194 | 3 | 3 | Quartzite |
| 194 | 264 | 70 | 69 | Medium gray fine grained dolomite, local diagenetic breccia, local partings. |
| 264 | 268 | 4 | 4 | Light gray fine grained dolomite, abundant sand grains. |
| 268 | 299 | 31 | 31 | Light to dark gray fine grained dolomite, local diagenetic, local thick partings. |
| 299 | 310 | 11 | 11 | Light to medium gray fine grained dolomite, local abundant sand grains, local diagenetic breccia, few partings. |
| 310 | 343 | 33 | 30 | Medium to dark gray fine grained local saccharoidal dolomite, local diagenetic breccia, few partings 312-313 1' est. 2% Zn. |

| From | To | Dist | Recov | Description |
|---|---|---|---|---|
| 343 | 360 | 17 | 17 | Medium gray fine grained limestone, abundant oolites, local thick partings, local sand grains. |
| 360 | 364 | 4 | 4 | Light gray fine grained dolomite, abundant bleached diagenetic breccia. |
| 364 | 389 | 25 | 25 | Medium gray fine grained dolomite, abundant oolites, rare thin partings. |
| 389 | 402 | 13 | 13 | Interbedded medium gray fine grained limestone and dolomite, few partings, local oolites. |
| 402 | 514 | 112 | 112 | Light to medium gray fine grained dolomite, local thin sandgrain bed, local diagenetic breccia, few partings. |
| 514 | 521 | 7 | 6 | Interbedded medium gray fine grained dolomite and limestone. |
| 521 | 522 | 1 | 1 | Silicified oolites in chert. Trace fluorite. |
| 522 | 523 | 1 | 1 | Fault zone |
| | 523 | | | Bottom |

RECEIVED JAN 13 1957 D.M.E.A.

Diamond Drill Log - BC-9

Location: 400 feet north of BC-7

Elevation: 2285 (?) Inclination: Vertical

Object: To test ground down dip from mineralization that crops out and is marked by a geochemical anomaly.

Results:

| From | To | Dist | Recov | Description |
|---|---|---|---|---|
| 0 | 2 | 2 | | Overburden |
| 2 | 21 | 19 | 6 | Medium gray fine grained limestone, few wavy partings, locally dolomitic, Chepultepec formation. |
| 21 | 186 | 165 | 121 | Light to medium gray fine grained dolomite, local partings, diagenetic breccia, rare sand grains, Copper Ridge formation |
| 186 | 188 | 2 | 2 | Quartzite |
| 188 | 190 | 2 | 2 | Medium gray fine grained dolomite, few partings. |
| 190 | 191 | 1 | 1 | Quartzite |
| 191 | 291 | 100 | 93 | Light medium to medium gray fine grained dolomite, local abundant sandgrains, local partings, local diagenetic breccia. |
| 291 | 294 | 3 | 3 | Estimated 1% ZnS, disseminated. |
| 294 | 326 | 32 | 24 | Light to medium gray fine grained dolomite, few partings, local diagenetic breccia. |
| 326 | 327 | 1 | 1 | Fault zone. |
| 327 | 340 | 13 | 13 | Medium gray oolitic limestone, few styolites. |
| 340 | 344 | 4 | 4 | Light gray fine grained dolomite, abundant diagenetic breccia, generally bleached. |
| 344 | 365 | 21 | 21 | Medium gray fine grained limestone, locally oolitic, local diagenetic breccia. |
| 365 | 367 | 2 | 2 | Quartzite |

| From | To | Dist | Recov | Description |
|---|---|---|---|---|
| 367 | 384 | 17 | 14 | Interbedded medium gray fine grained limestone, local diagenetic breccia, and medium gray fine grained dolomite local partings. |
| 384 | 392 | 8 | 4 | Light gray fine grained dolomite, abundant sand grains, local quartzite. |
| 392 | 488 | 96 | 94 | Medium gray fine grained dolomite, local partings, local diagenetic breccia. |
| 488 | 499 | 11 | 11 | Medium gray fine grained limestone, local thick partings, local diagenetic breccia. |
| 499 | 501 | 2 | 2 | Silicified oolites in chert. |
| 501 | 525 | 24 | 22 | Light to medium gray fine grained dolomite, few partings. |
| 525 | 531 | 6 | 6 | Medium gray fine grained limestone, few thick wavy partings. |
| 531 | 588 | 57 | 57 | Light to medium gray fine grained dolomite, local abundant partings, local diagenetic breccia. |
| | 588 | | | Bottom |

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

Budget Bureau No. 42-R1036.5

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

PAID ON VOUCHER & SCHEDULE OF PAYMENTS K-

# OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of November, 1956 Docket No. DMEA 4178 Contract No. 960
Operator's Name THE NEW JERSEY ZINC COMPANY Minerals Zinc
Address Austinville, Virginia
Contract Amount, $ 44,800.00 Government Participation: 50 % Amount, $ 22,400.00

| 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 | 5510.30 | 7234.95 | 12,745.25 | | | |
| Bulldozing | | | | | | |
| Crosscutting | | | | | | |
| Drifting | | | | | | |
| (2) Labor and Supervision: | | | | | | |
| Labor | | | | | | |
| Supervision | | | | | | |
| Technical Services | | | | | | |
| (3) Operating Mat'ls. and Supplies: | | | | | | |
| Timber | | | | | | |
| Explosives | | | | | | |
| Pipe | | | | | | |
| Track | | | | | | |
| (4) Operating Equipment: | | | | | | |
| Rental | | | | | | |
| Purchase | | | | | | |
| Depreciation | | | | | | |
| (5) Initial Rehabilitation and Repairs | | | | | | |
| (6) New Bldgs., Improvements, etc. | | | | | | |
| (7) Miscellaneous: | | | | | | |
| Repairs to Equipment | | | | | | |
| Sampling and Analysis | 3.00 | | 3.00 | | | |
| Payroll Taxes | | | | | | |
| Liability Insurance | | | | | | |
| (8) Contingencies (specify): Incidental Allowances @ $.053/ft | 1181.37 | 1561.38 | 2742.75 | | | |
| TOTALS | 6694.67 | 8796.33 | 15491.00 | 6694.67 | 8796.33 | 15491.00 |

RECEIVED DEC 17 1956 D.M.E.A.

I certify that the above bill is correct and just and that payment therefor has not been received.
Date 12/7/56 *Payee Bertha Mineral Division THE NEW JERSEY ZINC COMPANY
Per [signature] Title 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:
$ 3349.33
Signature [signature] (Authorized Certifying Officer)
Date DEC 14 1956 Vou. No.
(See other side)

3347.34

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. E-960 in accordance with the terms of the contract.

Signature W. J. Lynch Title MINING ENGINEER U. S. BUREAU OF MINES Date DEC 13 1956

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Robert A. Lawrence Title EXECUTIVE OFFICER DMEA REGION V Date DEC 13 1956

# MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

RECEIVED DEC 17 1956 D.M.E.A.

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

Month of November 1956 Docket No. DMEA 4178 Contract No. 960
Operator's Name THE NEW JERSEY ZINC COMPANY Minerals Zinc
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 0-250 | ft | 1650.00 | 750 | 12,745.25 | 5175 | 2.462 | 15000 | 2.45 |
| 250-500 | ft | 1837.50 | 750 | | | | | |
| 500-750 | ft | 1379.70 | 511 | | | | | |
| 750-1000 | ft | 643.10 | 218 | | | | | |
| Trenching | | | | | | | | |
| Sample Assays | Sample | 3.00 | 3 | 3.00 | 3 | 1.00 | 100 | 1.00 |
| Roads and Trails | | | | | | | | |
| Incidental Allowances @ $0.53/ft | | 1181.37 | 2229 | 2742.75 | 5175 | 0.53 | 15000 | 0.53 |
| TOTAL DISTRIBUTED COSTS | | 6694.67 | | 15491.00 | | | | TOTAL COSTS AUTHORIZED BY CONTRACT |
| Operating Equipment Purchased | | | | | | | | |
| Initial Rehabilitation and Repairs | | | | | | | | |
| New Buildings, Improvements, etc. | | | | | | | | |
| TOTAL COSTS | | 6694.67 | | 15491.00 | | | | 44,800.00 |

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 12/7/56 Operator Bertha Mineral Division THE NEW JERSEY ZINC CO.

Per W. L. Albers Title Superintendent

W. L. Albers

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

REMARKS:

(Instructions on reverse)

(For Government use only)

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

## INSTRUCTIONS

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

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GPO 872894

Narrative - Beaver Creek Area - November 1956

RECEIVED DEC 17 1956 D.M.E.

Hole number BC-5, which was collared in the Longview Formation, cut through the Chepultepec, and was bottomed in the Copper Ridge Formation, intercepted ore-grade mineralization. Two samples of core were assayed, a four (4) foot sample assaying 4.00 per cent zinc and a one (1) foot sample assaying 24.65 per cent zinc, for a total of five (5) feet averaging 8.13 per cent zinc. This zinc mineralization is at the expected ore zone in the Copper Ridge formation, at a depth of 435-440. A total of 659 feet was drilled in this hole.

Hole number BC-6 was collared in the Longview Formation, cut through the Chepultepec, and was bottomed in Copper Ridge formation. Nine (9) feet of mineralization was encountered at a depth of 445-454. Only three feet of core was recovered in the mineralized horizon. This mineralization, from the expected ore zone in the Copper Ridge formation, analyzed 1.81 per cent zinc. A total of 659 feet was drilled in this hole.

Since the mineralization in holes BC-5 and BC-6 was too thin to be commercial, it was decided by mutual agreement to recess the testing program on this property. By consent, testing was begun on the Ray McAllister property, which lies about two miles to the southwest.

Hole number BC-7, the southernmost hole on a proposed north-south fence of five (5) holes on the Ray McAllister property, was collared in the Chepultepec formation and bottomed in the Copper Ridge formation. Traces of zinc mineralization were found at 315 feet. This hole bottomed at a depth of 511 feet.

Diamond Drill Log - BC-5

Location: 600 feet south of BC-1

Elevation: 2370' ?  Incl: Vertical

Object: To test ground east of mineralization that crops out along Beaver Creek and is marked by a geochemical anomaly.

Results

| From | To | Dist | Recov | Description |
|---|---|---|---|---|
| 0 | 1 | 1 | | Residual Clay |
| 1 | 89 | 88 | 84 | Light to medium gray fine grained dolomite, local diagenetic breccia, local partings local sandgrains. |
| 89 | 106 | 17 | 15 | Light medium gray fine grained limestone, abundant wavy partings. |
| 106 | 117 | 11 | 11 | Light gray fine grained dolomite, local diagenetic breccia, local partings. |
| 117 | 131 | 14 | 14 | Light to medium gray fine grained limestone, abundant wavy partings. |
| 131 | 320 | 189 | 186 | Light to medium gray fine grained dolomite local partings, local diagenetic breccia. |
| 320 | 378 | 58 | 58 | Light to medium gray fine grained limestone, local abundant wavy partings interbedded with dolomite, local sand grains. Chepultepec formation. |
| 378 | 435 | 57 | 55 | Light gray fine grained dolomite, local abundant sandgrains, local partings, local diagenetic breccia. Copper Ridge formation. |
| 435 | 440 | 5 | 5 | 8.13% Zn |
| 440 | 578 | 78 | 67 | Light to medium, local dark gray fine to saccharoidal dolomite, local sand grains, local partings local diagenetic breccia. |
| 578 | 696 | 118 | 107 | Light to medium gray fine grained dolomite, abundant sand grains, local quartzite, locally oolitic, local diagenetic breccia, local partings. |

BC-5 - Cont.

| From | To | Dist | Recov | Description |
|---|---|---|---|---|
| 696 | 739 | 43 | 43 | Medium gray fine grained limestone, locally oolitic, locally dolomitic, abundant partings, local diagenetic breccia. |
| 739 | 759 | 20 | 20 | Medium gray fine grained dolomite, local sandgrains, local partings, fault zone 746-753. |
| 759 | 780 | 21 | 21 | Medium gray fine grained oolitic limestone, local thick partings. |
| 780 | 850 | 70 | 70 | Light gray fine grained dolomite local partings, local diagenetic breccia. |
| 850 | 852 | 2 | 2 | Silicified oolites in chert. |
| 852 | 859 | 7 | 7 | Medium gray fine grained dolomite, few thick partings. |
| | 859 | | | Bottom |

Diamond Drill Log - BC-6

Location: 1000 feet south of BC-1

Elevation: 2310 (?) Inclination: Vertical

Object: To test ground east of mineralization that crops out along Beaver Creek and is marked by a geochemical anomaly.

Results

| From | To | Dist | Recov | Description |
|---|---|---|---|---|
| 0 | 84 | 84 | 0 | Overburden |
| 84 | 152 | 68 | 62 | Interbedded medium gray fine grained limestone with wavy partings and light to medium gray fine grained dolomite, local diagenetic breccia, partings. Presumably Longview formation. |
| 152 | 330 | 178 | 177 | Light to medium gray fine grained dolomite, partings, local diagenetic breccia, local chert, 189-190 fault zone. Trace ZnS @ 262. |
| 330 | 394 | 64 | 64 | Interbedded medium gray fine grained limestone with wavy partings and light to medium gray fine grained dolomite with partings, local diagenetic breccia, rare chert, presumable Chepultepec formation. |
| 394 | 445 | 51 | 47 | Light to medium gray fine grained dolomite, local abundant sand grains, few partings, Copper Ridge formation. |
| 445 | 454 | 9 | 3 | 1.8% Zn |
| 454 | 519 | 65 | 64 | Light to medium gray fine grained dolomite, local partings, locally oolitic local sandgrains. |
| 519 | 661 | 142 | 135 | Light to medium gray fine grained dolomite, local abundant sand grains, local quartzite beds fault zone 577-583. |
| 661 | 663 | 2 | 2 | Weak mineralization, estimated 0.5% Zn. |
| 663 | 694 | 31 | 29 | Light to medium gray fine grained dolomite, few sand grains, locally oolitic, local diagenetic breccia. |

BC-6 - Cont.

| From | To | Dist | Recov | Description |
|---|---|---|---|---|
| 694 | 787 | 93 | 93 | Interbedded medium gray oolitic limestone and light to medium gray fine grained dolomite, partings local diagenetic breccia. |
| 787 | 854 | 67 | 66 | Medium gray fine dolomite, locally limy, locally oolitic local diagenetic breccia, partings. |
| 854 | 856 | 2 | 2 | Silicified oolites in chert. |
| 856 | 859 | 3 | 3 | Medium gray fine grained dolomite, partings. |
| | 859 | | | Bottom |

Diamond Drill Log - BG-7

Location: 900 feet west of Ray McAllister - R. G. McAllister corner on line with Olin-Mathieson mineral reservation.

Elevation: 2140 (?) Incl. Vertical

Object: To test for down dip extent of mineralization that crops out and is marked by a geochemical anomaly.

Results

| From | To | Dist | Recov | Description |
|---|---|---|---|---|
| 0 | 7 | 7 | | Overburden |
| 7 | 21 | 14 | 13 | Light to dark gray fine grained dolomite, abundant wavy partings, local sandgrains, Chepultepec formation. |
| 21 | 23 | 2 | 2 | Medium gray fine grained limestone, wavy partings. |
| 23 | 193 | 170 | 169 | Light to medium gray fine grained dolomite, local partings, local sand grains, Copper Ridge formation. |
| 193 | 197 | 4 | 4 | Quartzite |
| 197 | 212 | 15 | 15 | Light medium gray fine grained dolomite, local diagenetic breccia, partings. |
| 212 | 214 | 2 | 2 | Quartzite |
| 214 | 312 | 98 | 96 | Light to light medium gray fine grained dolomite, local diagenetic breccia, local sandgrains, partings. Trace ZnS 216-217. |
| 312 | 314 | 2 | 2 | Quartzite |
| 314 | 343 | 29 | 24 | Light to medium gray fine grained dolomite, local sandgrains, partings, local diagenetic breccia. Four inches ZnS at 315 Est. 3%. |
| 343 | 387 | 44 | 44 | Interbedded light to medium gray fine grained limestone, locally oolitic and light to medium gray fine grained dolomite, diagenetic breccia, partings. |

BC-7 - Cont.

| From | To | Dist | Recov | Description |
|---|---|---|---|---|
| 387 | 389 | 2 | 2 | Quartzite |
| 389 | 399 | 10 | 10 | Medium gray fine grained dolomite, abundant partings. |
| 399 | 402 | 3 | 3 | Medium gray fine grained limestone abundant oolites. |
| 402 | 464 | 62 | 62 | Light medium gray fine grained dolomite local sand grains, local diagenetic breccia, partings. |
| 464 | 511 | 47 | 47 | Medium gray fine grained dolomite, local diagenetic breccia, partings. |
| | 511 | | | Bottom |

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

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

PAID ON VOUCHER & SCHEDULE OF PAYMENTS K-

# OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of September, 1956 Docket No. DMEA 4178 Contract No. 960
Operator's Name The New Jersey Zinc Company Minerals Zinc
Address Austinville, Virginia
Contract Amount, $ 44,800.00 Government Participation: 50% Amount, $ 22,400.00

| 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 | 1985.00 | 5249.95 | 7234.95 | | | |
| Bulldozing | | | | | | |
| Crosscutting | | | | | | |
| Drifting | | | | | | |
| (2) Labor and Supervision: | | | | | | |
| Labor | | | | | | |
| Supervision | | | | | | |
| Technical Services | | | | | | |
| (3) Operating Mat'ls. and Supplies: | | | | | | |
| Timber | | | | | | |
| Explosives | | | | | | |
| Pipe | | | | | | |
| Track | | | | | | |
| (4) Operating Equipment: | | | | | | |
| Rental | | | | | | |
| Purchase | | | | | | |
| Depreciation | | | | | | |
| (5) Initial Rehabilitation and Repairs | | | | | | |
| (6) New Bldgs., Improvements, etc. | | | | | | |
| (7) Miscellaneous: | | | | | | |
| Repairs to Equipment | | | | | | |
| Sampling and Analysis | | | | | | |
| Payroll Taxes | | | | | | |
| Liability Insurance | | | | | | |
| (8) Contingencies (specify): Incidental Allowances per ft. @0.53/ft | 424.00 | 1137.38 | $1561.38 | | | |
| TOTALS | 2409.00 | 6387.33 | $8796.33 | 2409.00 | 6387.33 | 8796.33 |

RECEIVED NOV 2 1956 C.M.E.A.

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

Date 10/15/56 *Payee Bertha Mineral Division THE NEW JERSEY ZINC COMPANY

Per W. L. Albers Title 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:

$ 1204.50

Signature Helen R. Mullin
(Authorized Certifying Officer)

Date NOV 5 1956 Vou. No. 83
(See other side)

V

1204.50

(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-960 in accordance with the terms of the contract.

Signature W. J. Lynch Title Mining Eng. Date 10-19-56

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Robert A. Laurence Title EXECUTIVE OFFICER DMEA REGION V Date OCT 19 1956

# MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Form MF-194A
(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 1956 Docket No. DMEA 4178 Contract No. 960

Operator's Name The New Jersey Zinc Company Minerals Zinc

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 0-250 | Ft | $550.00 | 250 | 7234.95 | 2946 | 2.456 | 15000 | $2.45 |
| ~~Chips~~ ~~Auger~~ 250-500 | | 612.50 | 250 | | | | | |
| 500-750 | | 675.00 | 250 | | | | | |
| ~~Stripping~~ 750-800 | | 147.50 | 50 | | | | | |
| Trenching | | | | | | | | |
| ~~Test Pits~~ Sample Assays | Sample | | | | | | 100 | $1.00 |
| Roads and Trails | | | | | | | | |
| Incidental Allowances | Ft | 424.00 | 800 | 1561.38 | 2946 | 0.53 | 15000 | 0.53 |
| TOTAL DISTRIBUTED COSTS | | 2409.00 | 800 | 8796.33 | | | | TOTAL COSTS AUTHORIZED BY CONTRACT |
| Operating Equipment Purchased | | | | | | | | |
| Initial Rehabilitation and Repairs | | | | | | | | |
| New Buildings, Improvements, etc. | | | | | | | | |
| TOTAL COSTS | | | | | | | | $44,800.00 |

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 10/15/56 Operator Bertha Mineral Division THE NEW JERSEY ZINC CO.

Per W. L. Albers Title Superintendent

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

REMARKS:

(Instructions on reverse)

(For Government use only)

W. J. Lynch
Bureau of Mines
10-19-56

## INSTRUCTIONS

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

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

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

GPO 872894

RECEIVED NOV 4 1956

Narrative - September 1956

Beaver Creek Area, Smyth County, Virginia

BC-4, located 200 feet south of BC-3, encountered only traces of zinc mineralization. The hole was collared in the Longview formation, cut through the Chepultepec, and was bottomed in the Copper Ridge formation at a depth of 800 feet.

BC-5, located 200 feet south of BC-4, was incomplete at 493 feet as of this report date. However, 5 feet of mineralized ground (8.13 per cent zinc) was cut at 435-440 feet.

Quarterly summary - July-September, 1956

Drilling began July 12 in the Beaver Creek area. To date four holes totalling 2946 feet have been completed with only traces of zinc mineralization encountered in each hole. Only BC-5, which is incomplete, has cut ore-grade material (5 feet of 8.13 per cent Zn). Only one hole is planned on the present fence after the completion of BC-5, unless more mineralization is encountered.

The ore grade mineralization is in the Copper Ridge formation at apparently the same horizon as the surface mineralization.

Hole BC-1 was collared and bottomed in the Copper Ridge formation. BC-2 was collared in Chepultepec and bottomed in Copper Ridge. BC-3 and BC-4 were collared in Longview, cut the Chepultepec, and bottomed in Copper Ridge. BC-5 collared in Longview, cut the Chepultepec and is expected to bottom in Copper Ridge.

DIAMOND DRILL LOG - BC-4

Location: 600 feet south of BC-1

Elevation: (Approximate) 2390 Inclination: Vertical

Object: To test ground east of mineralization that crops out along Beaver Creek and is marked by a geochemical anomaly.

Results:

| From | To | Dist. | Recov. | Description |
|---|---|---|---|---|
| 0 | 42 | 42 | 0 | Residual clay |
| 42 | 61 | 19 | 19 | Light gray fine grained dolomite, partings, local diagenetic breccia; probably Longview formation. |
| 61 | 66 | 5 | 5 | Light medium gray fine grained limestone, abundant wavy partings. |
| 66 | 257 | 191 | 188 | Light to medium gray fine to saccharoidal dolomite, local partings, local diagenetic preccia. 171-172 trace ZnS. |
| 257 | 320 | 63 | 63 | Interbedded medium gray fine grained limestone, wavy partings, and medium gray fine grained dolomite, local sand grains, Chepultepec formation. |
| 320 | 365 | 45 | 41 | Light to medium gray fine grained dolomite, local diagenetic breccia local partings, Copper Ridge formation 346 trace ZnS. |
| 365 | 456 | 91 | 73 | Light to medium gray fine grained dolomite, local sand grains, local abundant partings. 391 trace ZnS. |
| 456 | 459 | 3 | 3 | Quartzite |
| 459 | 477 | 18 | 13 | Light gray fine grained dolomite, few partings. |
| 477 | 497 | 20 | 18 | Light to medium gray fine grained dolomite, local abundant sand grains, few partings. |
| 497 | 499 | 2 | 2 | Quartzite |

DDH-BC-4 - Results - Cont.

| From | To | Dist. | Recov. | Description |
|---|---|---|---|---|
| 499 | 584 | 85 | 83 | Medium gray fine to fine saccharoidal dolomite, local diagenetic breccia, local partings. |
| 584 | 592 | 8 | 8 | Light to medium gray fine grained dolomite, local abundant sandgrains. |
| 592 | 597 | 5 | 5 | Quartzite |
| 597 | 604 | 7 | 7 | Medium gray fine grained dolomite abundant sandgrains. |
| 604 | 642 | 38 | 37 | Light to medium gray fine to fine saccharoidal dolomite, local wavy partings. |
| 642 | 684 | 42 | 42 | Interbedded medium gray oolitic limestone and fine grained medium gray dolomite, few partings. |
| 684 | 698 | 14 | 14 | Interbedded light gray fine grained dolomite, abundant sandgrains and quartzite. |
| 698 | 798 | 100 | 100 | Interbedded medium gray fine grained dolomite, local abundant sandgrains, local diagenetic breccia, local abundant partings. |
| 798 | 800 | 2 | 1 | Silicified oolites in chert. |
| | 800 | | | Bottom |

X-1086 150M

COPY

Austinville, Va.
October 15, 1956

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

Subject: Beaver Creek, Virginia
Docket #DMEA 4178 Contract #960

Dear Sir:

Enclosed is our report on our DMEA contract for Beaver Creek. We held this report over one extra day hoping to receive an additional invoice, but it did not arrive.

Very truly yours,

W. L. Albers,
Superintendent

WHoratioBrown/mjf
In quintuplicate

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- 20

# OPERATOR'S MONTHLY REPORT AND VOUCHER

RECEIVED SEP 24 1956

Month of August, 1956 Docket No. DMEA 4198 Contract No. 960
Operator's Name The New Jersey Zinc Company Minerals Zinc
Address Austinville, Virginia
Contract Amount, $ 44,800.00 Government Participation: 50% Amount, $ 22,400.00

| 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 | $5249.95 | None | $5249.95 | | | |
| Bulldozing | | | | | | |
| Crosscutting | | | | | | |
| Drifting | | | | | | |
| (2) Labor and Supervision: | | | | | | |
| Labor | | | | | | |
| Supervision | | | | | | |
| Technical Services | | | | | | |
| (3) Operating Mat'ls. and Supplies: | | | | | | |
| Timber | | | | | | |
| Explosives | | | | | | |
| Pipe | | | | | | |
| Track | | | | | | |
| (4) Operating Equipment: | | | | | | |
| Rental | | | | | | |
| Purchase | | | | | | |
| Depreciation | | | | | | |
| (5) Initial Rehabilitation and Repairs | | | | | | |
| (6) New Bldgs., Improvements, etc. | | | | | | |
| (7) Miscellaneous: | | | | | | |
| Repairs to Equipment | | | | | | |
| Sampling and Analysis | | | | | | |
| Payroll Taxes | | | | | | |
| Liability Insurance | | | | | | |
| (8) Contingencies (specify): Incidental allowances per ft. @ $0.53/ft | $1137.38 | None | 1137.38 | | | |
| TOTALS | 6387.33 | | 6387.33 | 6387.33 | — | 6387.33 |

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

Date 9/14/56 *Payee THE NEW JERSEY ZINC CO.

Per [signature] Title Supt

BERTHA MINERAL DIVISION

*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:

$ 3,193.66

Signature Helen R. Miller
(Authorized Certifying Officer)

Date SEP 21 1956 Vou. No. 19

(See other side)

1 7/12 3193.67

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Tam E960 in accordance with the terms of the contract.

Signature W. T. Beck Title Mining Engr USBM Date SEP 20 1956

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

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

# MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

RECEIVED
SEP 24 1956

# OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of August 1956 Docket No. DMEA 4178 Contract No. 960
Operator's Name The New Jersey Zinc Company Minerals Zinc
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 | Ft | 5249.95 | 2146 | 5249.95 | 2146 | 2.446 | 15000 | $2.45 |
| Churn | | | | | | | | |
| Auger | | | | | | | | |
| Stripping | | | | | | | | |
| Trenching | | | | | | | | |
| ~~Test Pits~~ Sample Assays | Sample | | | | | | 100 | 1.00 |
| Roads and Trails | | | | | | | | |
| Incidental Allowances | Ft | 1137.38 | 2146 | 1137.38 | 2146 | 0.53 | 15000 | 0.53 |
| TOTAL DISTRIBUTED COSTS | | 6387.33 | 2146 | 6387.33 | | | | TOTAL COSTS AUTHORIZED BY CONTRACT |
| Operating Equipment Purchased | | | | | | | | |
| Initial Rehabilitation and Repairs | | | | | | | | |
| New Buildings, Improvements, etc. | | | | | | | | |
| | | 6387.33 | | 6387.33 | | | | $44,800.00 |
| TOTAL COSTS | | | | | | | | |

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

BERTHA MINERAL DIVISION
THE NEW JERSEY ZINC CO.

Date 9/14/56 Operator

Per [signature] Title 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)

REMARKS:

(For Government use only)

W. A. Beck, Mining Engineer
USBM

SEP 20 1956

## INSTRUCTIONS

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

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

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

GPO 872894

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(C) Narrative

Diamond drilling was begun July 12, 1956 in the Beaver Creek area of Smyth County, Virginia. The first hole to be drilled was the northernmost of the six holes shown on the DMEA application, and was designated BC-1. BC-1 was collared and bottomed in the Copper Ridge formation, and, as shown in the attached log of the hole, an interval of two feet of mineralized ground was encountered.

Hole BC-2, which is 200 feet south of BC-1, encountered one foot of weakly mineralized ground. BC-1 and BC-2 were drilled deeper than the known mineralized horizon in order to gain necessary stratigraphic information, and to test a deeper horizon that is known to carry mineralization at a nearby locality. BC-2 collared in the Chepultepec formation (mainly limestone) and bottomed in the Copper Ridge (see attached logs).

Hole BC-3, located 200 feet south of BC-2, encountered only scattered traces of mineralization. It was collared above the Chepultepec in dolomite and was bottomed in Copper Ridge.

Unless otherwise stated, the ground drilled is dolomite. Only slightly blocky ground and a few small caves are the only hazard to drilling. The structure of the area appears to be simple.

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DIAMOND DRILL LOG - BC-1

Location: 300 feet south of Kestner-Morley corner on D. R. Kestner property.
Elevation: (Approximate) 2190 Inclination: Vertical
Object: To test for an assumed ore shoot pitching east from a geochemical anomaly and a mineralized outcrop.

Results:

| From | To | Dist. | Recov. | Description |
|---|---|---|---|---|
| 0 | 9 | 9 | | Residual clay |
| 9 | 47 | 38 | 26 | Fine grained light to medium gray dolomite, abundant sand grains, locally abundant wavy partings. Copper Ridge formation. |
| 47 | 60 | 13 | 12 | Fine grained light gray dolomite, local abundant sand grains and quartzite. |
| 60 | 93 | 33 | 33 | Fine grained light to medium gray dolomite, partings, local diagenetic breccia. |
| 93 | 95 | 2 | 2 | Weak disseminated zinc mineralization, partially oxidized. Estimated less than 1%. |
| 95 | 141 | 46 | 42 | Light to medium gray fine grained dolomite, local abundant partings, locally oolitic, and local diagenetic breccia. |
| 141 | 146 | 5 | 5 | Quartzite |
| 146 | 199 | 53 | 53 | Medium gray fine grained dolomite, partings, locally oolitic. |
| 199 | 217 | 18 | 18 | Oolitic medium gray limestone |
| 217 | 260 | 43 | 42 | Medium gray fine grained dolomite, abundant partings, local diagenetic breccia, locally limy. |
| 260 | 276 | 16 | 15 | Medium gray fine grained limestone, abundant partings. |
| 276 | 345 | 69 | 69 | Medium gray fine grained dolomite abundant partings, locally oolitic, local diagenetic breccia. |

| From | To | Dist. | Recov. | |
|---|---|---|---|---|
| 345 | 346 | 1 | 1 | Silicified oolites in chert. |
| 346 | 392 | 46 | 40 | Medium gray fine grained dolomite, abundant partings, local diagenetic breccia, locally limy. |
| 392 | 404 | 12 | 4 | Fault zone with strong mylonite. |
| 404 | 438 | 34 | 34 | Medium gray fine grained dolomite, abundant partings. |
| 438 | 440 | 2 | 2 | Fault zone |
| 440 | 515 | 75 | 75 | Medium gray fine grained dolomite, partings, locally oolitic, local diagenetic breccia. |
| 515 | 520 | 5 | 5 | Light gray fine grained dolomite rare partings. |
| 520 | 569 | 49 | 49 | Medium gray fine grained dolomite abundant partings, local sand grains (547-549), local diagenetic breccia. |
| 569 | 579 | 10 | 10 | Straticulate bedded dolomite. |
| 579 | 581 | 2 | 1 | Fault zone |
| 581 | 688 | 107 | 105 | Light to medium gray fine grained dolomite, partings, locally oolitic, local diagenetic breccia, local straticulate bedding. |
| | 688 | | | Bottom |

DIAMOND DRILL LOG - BC-2

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Location: 200 feet south of BC-1
Elevation: (Approximate) 2270 Inclination: Vertical
Object: To test for an assumed ore shoot pitching east from a geochemical anomaly and a mineralized outcrop.

Results:

| From | To | Dist. | Recov. | Description |
|---|---|---|---|---|
| 0 | 23 | 23 | | Residual clay |
| 23 | 35 | 12 | 12 | Medium gray fine grained dolomite, local limestone, local abundant partings, sand grains. Apparently Chepultepec formation. |
| 35 | 55 | 20 | 20 | Light to medium gray fine grained dolomite, partings. Copper Ridge formation. |
| 55 | 56 | 1 | 1 | Weakly mineralized ground, traces sphalerite. |
| 56 | 82 | 26 | 16 | Light to medium gray fine grained dolomite local abundant partings, local sandgrains (74-82). |
| 82 | 84 | 2 | 2 | Weakly mineralized ground, traces sphalerite, partially oxidized. |
| 84 | 136 | 52 | 46 | Light gray fine grained dolomite, partings and local sand grains (109-120). |
| 136 | 173 | 37 | 36 | Light gray fine grained dolomite, rare thin partings, abundant sand grains. |
| 173 | 212 | 39 | 38 | Light to medium gray fine grained dolomite, partings, local sandgrains (189-205). |
| 212 | 214 | 2 | 2 | Quartzite |
| 214 | 298 | 84 | 78 | Light to medium gray fine grained dolomite, partings, local diagenetic breccia, local sand grains (277-286, 289-293). |
| 298 | 301 | 3 | 3 | Quartzite |
| 301 | 354 | 53 | 51 | Light to medium gray fine grained dolomite, partings, locally oolitic, local limestone. |
| 354 | 374 | 20 | 20 | Medium gray limestone, few oolites and rare stylolites. |

DDH - DC-2 - Results - Cont.

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| From | To | Dist. | Recov. | Description |
|---|---|---|---|---|
| 374 | 412 | 38 | 30 | Interbedded dolomite with shale partings, local sand grains (393-412) and limestone. |
| 412 | 424 | 12 | 8 | Medium gray fine grained limestone, abundant partings. |
| 424 | 495 | 71 | 71 | Medium gray fine grained dolomite abundant partings, local diagenetic breccia. |
| 495 | 497 | 2 | 2 | Silicified oolites. |
| 497 | 658 | 161 | 151 | Medium gray fine grained dolomite, locally abundant partings and local diagenetic breccia. |
| 658 | 664 | 6 | 6 | Light gray fine grained dolomite, rare thin partings. |
| 664 | 780 | 116 | 115 | Light to medium gray fine grained dolomite, local diagenetic breccia, local abundant partings. |
| 780 | 790 | 10 | 10 | Light gray fine saccharoidal dolomite, abundant wavy partings. |
| 790 | 823 | 33 | 23 | Light to medium gray fine grained dolomite, local diagenetic breccia, local partings. |
| | 823 | | | Bottom |

DIAMOND DRILL LOG - BC-3

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SEP 24 1956

Location: 200 feet south of BC-2
Elevation: (Approximate) 2350 Inclination: Vertical
Object: To test for an assumed ore shoot pitching east from a geochemical anomaly and a mineralized outcrop.

Results:

| From | To | Dist. | Recov. | Description |
|---|---|---|---|---|
| 0 | 47 | 47 | | Residual clay |
| 47 | 137 | 90 | 25 | Light to medium gray fine grained dolomite, local diagenetic breccia, partings, apparently Longview formation. |
| 137 | 183 | 46 | 38 | Interbedded medium gray fine grained limestone, wavy partings, and medium gray fine grained dolomite, partings Copper Ridge Formation. |
| 183 | 296 | 113 | 101 | Light to medium gray fine grained dolomite, local diagenetic breccia, partings. |
| 296 | 344 | 48 | 45 | Light to medium gray fine grained dolomite, local abundant sand grains, partings, diagenetic breccia. Rare trace sphalerite. |
| 344 | 346 | 2 | 2 | Quartzite. |
| 346 | 435 | 89 | 89 | Light to medium gray fine to saccharoidal dolomite, local abundant partings, locally oolitic very rare trace sphalerite. |
| 435 | 444 | 9 | 9 | Interbedded dolomite and quartzite. |
| 444 | 493 | 49 | 36 | Light to medium gray fine to saccharoidal dolomite, partings, local diagenetic breccia. |
| 493 | 511 | 18 | 7 | Medium gray oolitic limestone, local dolomite. |
| 511 | 531 | 20 | 16 | Light to medium gray dolomite, fine grained, locally oolitic, partings, local diagenetic breccia. |
| 531 | 535 | 4 | 4 | Quartzite |

DDH - DC 3 - Results - Cont.

| From | To | Dist | Recov. | Description |
|---|---|---|---|---|
| 535 | 551 | 16 | 14 | Medium gray fine grained dolomite, partings, local diagenetic breccia, locally limy. |
| 551 | 566 | 15 | 14 | Light to medium gray fine grained locally oolitic limestone, partings. |
| 566 | 635 | 69 | 67 | Light to medium gray fine grained dolomite, local diagenetic breccia, partings. |
| | 635 | | | Bottom |

JUL 17 1958

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

Re: Docket No. DMEA-4176 (Zinc)
The New Jersey Zinc Company
Beaver Creek Area
Smyth County, Virginia
Contract No. Idm-8960

Dear Mr. Goodwin:

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

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

Your interest in the Defense Minerals Exploration Administration exploration program and participation therein are fully appreciated.

Sincerely yours,

C. O. Mittendorf

Administrator

WPKlugesheid/er
Copy to: Docket
Admr R File
Op. Committee
Mr. Bishop, USBM
Mr. Kiilsgaard, USGS
Region V (2)
Mr. Chambers, DMEA
Chron.

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# TERMINATION AGREEMENT

It is agreed this 4th day of September, 1957, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and the New Jersey Zinc Company, hereinafter called the "Operator," parties to that certain Exploration Project Contract No. Idm-E960 (Docket No. DMEA-4178), dated May 31, 1956, as amended, hereinafter called the "Contract," that:

1. Effective August 22, 1957, the Contract and all obligations of the parties thereunder, except as otherwise herein expressly provided, shall be and are hereby terminated.

2. The Government shall contribute only to the agreed actual and unit costs of work performed prior to August 22, 1957.

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

4. All rights of the Government provided for in the Contract with respect to certification of discovery or development, percentage royalty and liens for its payment, records, audits, and recovery of any overpayment, are preserved.

5. The Operator hereby releases and agrees to save the Government harmless from all claims or demands under or arising out of said Contract, except as otherwise provided in this termination agreement.

IN WITNESS WHEREOF, these parties have executed this agreement as of the day and year first above written.

THE UNITED STATES OF AMERICA

By C. Mittendorf
Administrator, Defense Minerals Exploration Administration

NEW JERSEY ZINC COMPANY

By J. Bordeen

Title Vice President

RECEIVED OCT 30 1957

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EXPLORATION PROJECT CONTRACT
THE NEW JERSEY ZINC COMPANY
DOCKET NO. DMEA-4178

AMENDMENT NO. 1

It is agreed this 21st day of August, 1957, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and The New Jersey Zinc Company, hereinafter called the "Operator," that Exploration Project Contract Idm-8960 (Docket No. DMEA-4178), dated May 31, 1956, hereinafter called the "Contract," is amended as follows:

1. The following tracts of land, all being described on pages 4 and 5 of Annex I of the Contract, are deleted from the land referred to in Article 2 and Annex I of the Contract:

| Name of Property Owner | |
|---|---|
| R. Glenn McAllister and Mary L. McAllister | Tracts I and II |
| W. C. McAllister and Mary E. McAllister and others | Tracts I, II, and III |
| R. J. McAllister and India McAllister | One Tract |
| J. Otis Rice (sometimes Rice) and Minnie J. Rice | Tracts I, II, III, and IV |
| William T. Rice (sometimes Rice) and Gladys Rice | One Tract |

2. The Operator:

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

(b) Has, prior to the execution of this amendment, surrendered or otherwise disposed of all its interest, title, and equity in such lands, and any minerals produced therefrom, including any option, lease or permit thereto, without any consideration whatsoever, including future compensation, for such surrender or disposition, other than relief from the cost of maintaining such interest;

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

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

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

Executed in quintuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

By Frank E. Johnson
ACTING Administrator, Defense Minerals
Exploration Administration

THE NEW JERSEY ZINC COMPANY

By [illegible]

Title VICE PRESIDENT

DMEA Form 14

Contract No. Idm-E 960

Docket No. 4178

DEPARTMENT OF THE INTERIOR

**Terminated contract**

DEFENSE MINERALS EXPLORATION ADMINISTRATION

Obligation Document

TO: Chief, Finance Section, Budget and Finance Branch, Bureau of Mines

Please make the following entry on the records of the Defense Minerals Exploration Administration under the Strategic and Critical Minerals Exploration Program.

| Date of Contract | Region | State | Commodity |
|---|---|---|---|
| May 31, 1956 | V | Virginia | Zinc |

Name and Address of Operator: The New Jersey Zinc Company
160 Front Street
New York 38, New York

| | Reserve | Obligation |
|---|---|---|
| Prior Amount | 0 | 22,400.00 |
| Increase | 0 | 0 |
| Decrease | 0 | 7,092.33 |
| Revised Amount | 0 | 15,307.67 |

Remarks:

ALLEN S. DAKAN
(Name)

Allen S. Dakan, Chief
Operations Control and
Statistics Division
(Title)

Date delivered to Bureau of Mines, Washington 12/19/57

22845

Contract No. Idm-E 960

Docket No. 4178

DEPARTMENT OF THE INTERIOR

Executed contract

DEFENSE MINERALS EXPLORATION ADMINISTRATION

TO: Chief, Finance Section, Budget and Finance Branch, Bureau of Mines

Please make the following entry on the records of the Defense Minerals Exploration Administration under the Strategic and Critical Minerals Exploration Program.

| Date of Contract | Region | State | Commodity |
|---|---|---|---|
| May 31, 1956 | V | Virginia | Zinc |

Name and Address of Operator: The New Jersey Zinc Company
160 Front Street
New York 38, New York

| | Reserve | Obligation |
|---|---|---|
| Prior Amount | $22,400.00 | 0 |
| Increase | 0 | $22,400.00 |
| Decrease | 22,400.00 | 0 |
| Revised Amount | 0 | $22,400.00 |

Remarks:

(Name)
Robert E. Adams, Chief
Operations Control and
Statistics Division
(Title)

Date Delivered to Bureau of Mines, Washington 6/13/56

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Government's Copy

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JUN 12 1956

MF-200
(Revised June 1954)

Docket No. DMEA 4178

Commodity Zinc

Contract No. Idm-E 960

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

## EXPLORATION PROJECT CONTRACT[1]

It is agreed this MAY 31 1956 day of ....., 195..., between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and [2] THE NEW JERSEY ZINC COMPANY, a New Jersey corporation, whose mailing address is 160 Front Street, New York 38, New York, hereinafter called the "Operator," as follows:

ARTICLE 1. *This contract* is entered into under the authority of the Defense Production Act of 1950, as amended. It consists of this form (MF-200), the attached Exhibit "A," Annex I, and one map

The Operator shall not transfer or assign this contract or any right thereunder without the written consent of the Government.

ARTICLE 2. *Operator's property rights.*—(a) The land which is the subject of this contract (hereinafter called "the land") is in the State of Virginia, County of Smyth, and is described in Annex I.[3]

(b) The Operator represents and undertakes that:

(1) The Operator is the [4] optionee (see Annex I) of [5] ..... in the land, in possession and entitled to possession for all of the purposes of this contract, under and by virtue of a [6] ....., [7] ....recorded in Book ....., page ....., official records of said County; and

(2) The Operator's right, title, or interest (whether as owner, lessee, or otherwise) is subject only to the following claims, liens, or encumbrances: None

(c) The Subordination Agreement of the holder of any claim, lien, or encumbrance listed above, and (if the Operator does not hold the legal title) the Consent to Lien of any holder of the legal title

[1] If sufficient space is not provided in any blank, use an extra sheet of paper and refer to it in the blank.
[2] Insert name, and if an organization, its nature (corporation and place of incorporation, partnership with names of partners, etc.).
[3] State on a separate sheet marked "Annex I" the legal description or enough to identify the property, particularly excluding any areas from which the production is not to be subject to the Government's percentage royalty.
[4] Insert "owner," "lessee," "contract purchaser," "locator," etc.
[5] Insert "the entire interest," "the mineral rights," "an undivided one-third," etc.
[6] Insert "deed," "lease," "contract," "location notice," "patent," etc.
[7] If not recorded, so indicate by inserting "un."

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

(d) The Operator shall preserve and maintain his right, title, and interest in the land and his right to the possession thereof for the purposes of this contract, and shall devote the land and all existing improvements, facilities, buildings, installations, and appurtenances to the purposes of this contract. Until the lapse of the time within which the Government may make a certification of discovery or development without any such certification having been made, and after any such certification has been made, the Operator shall neither transfer, convey, nor surrender the land nor any right, title, or interest therein, nor permit nor suffer any claim, lien, or encumbrance thereon, without expressly referring to and providing in the instrument of conveyance, lien, or encumbrance for the preservation of the Government's right to a percentage royalty on production and lien for the payment thereof. If the Government makes no certification of discovery or development within the time limited in Article 8, it shall thereafter have no claim against the land or any production therefrom except for any production referred to in Article 8(b)(1).

ARTICLE 3. *The exploration project.*—The project is a search for indicated or undeveloped deposits of Zinc. The work to be performed is described in Exhibit "A." The Operator on or before August 1, 1956 shall commence the work, and on or before November 1, 1957. (unless the Operator's obligation to prosecute the work is terminated—see Article 10) shall either have completed the work or shall have incurred allowable costs (see Article 6) in a sum not less than the estimated total allowable cost set forth in Exhibit "A."

ARTICLE 4. *Performance of the work.*—(a) *Operator's responsibility.*—The work shall be performed with reasonable diligence, efficiently, expertly, in a workmanlike manner, in accordance with good mining standards and State regulations for health and safety and for liability insurance covering employment; and with suitable and adequate equipment, facilities, materials, supplies, and labor, to bring it to completion within the time fixed.

(b) *Independent contracts.*—To the extent that the allowable costs are estimated in Exhibit "A" with express reference to performance by independent contractors on a unit-price basis (such as per foot of drilling, per foot of drifting, per hour of bulldozer operations), the work may be so performed; but if the reference in Exhibit "A" to any such independent contract requires the Government's approval thereof, payments under such contract will not be allowable costs unless the Government gives its written approval of the contract. Any such independent contract shall refer to some specific and identifiable part of the work, and shall be subject to all of the pertinent terms and conditions of this exploration contract; but the Government shall not be considered a party thereto, and its rights under this contract, including the right to terminate its contributions, shall not be affected thereby. Regardless of the provisions of any such independent contract and regardless of the Government's approval thereof, the Government will participate in payments to the independent contractor only on account of work performed in accordance with the provisions of this exploration project contract, and only to the extent that the Government deems the unit prices for the work under the independent contract to be reasonable.

(c) *Government may inspect.*—The Operator shall consult with and inform the Government on all phases of the work as it progresses. The Government may enter at all reasonable times to inspect the work under the contract, and also after a certification of discovery or development to inspect production operations and underground workings. The operator shall provide the Government with all reasonable means of access for such inspections.

ARTICLE 5. *Contribution by the Government.*—The estimated total allowable cost of the project, set forth in Exhibit "A," is the sum of $44,800.00. The Government shall contribute 50 percent of the allowable costs as they are incurred in a total sum not in excess of $22,400.00: *Provided,* That until the Operator has rendered to the Government his final report, and any final auditing required by the Government has been made, and a final settlement of the contract has been made, the Government may withhold from the last

voucher or vouchers such sums as it sees fit not in excess of 10 percent of the estimated total cost of the work or not in excess of the amount of the Government's contribution to the cost of property which is or may become subject to disposal as provided in Article 9(c), whichever is greater. The Government will make its contribution on the basis of the monthly vouchers referred to in Article 7(b), but all payments by the Government are provisional only, subject to audit, until the account between the Operator and the Government is finally audited and settled. "Costs incurred" mean costs that have been paid or have become due and payable, or that in the opinion of the Government have become an obligation. The Government may make payments directly to independent contractors and suppliers for the account of the Operator rather than to the Operator.

ARTICLE 6. *Estimated costs.*—(a) *Categories of costs.*—The allowable costs of the work to which the Government shall contribute are limited to those that are direct, reasonable, necessary, and that are estimated in Exhibit "A" by categories as specified in this article. If any category or subcategory is omitted from the estimate of costs, or if the word "none" is annexed to the listing thereof, costs under such category or subcategory are not allowable. Any excess over any estimate which is indicated as the maximum of any category, subcategory, or item, either as to requirement or related cost, and any excess over the estimated total allowable cost of the work, shall not be allowable. Any excess over the estimate of any category, subcategory, or item, either as to requirement or related cost, not indicated as a maximum shall be allowable within the limit of the estimated total allowable cost of the work. To the extent that excesses over maximums other than the estimated total allowable cost of the work may be necessary for the performance of the work, the Operator shall incur such excesses for his own account without contribution by the Government; but except for any such necessary excesses in categories, subcategories, or items thereunder the Operator is not obligated to incur more than his agreed percentage of the estimated, total allowable cost of the work. **See Article 13.**

To the extent specified in this article or in Exhibit "A" the following categories, subcategories, and elements thereof are maximums; but if not so specified either here or in Exhibit "A" they are not maximums, and may be exceeded within the limit of the estimated total allowable cost of the work:

CATEGORY (1)—INDEPENDENT CONTRACTS.—Work to be performed under independent contracts (see Article 4(b)). The estimated total amount of this category and the estimated cost of each unit of work for performance under an independent contract are maximums.

CATEGORY (2)—PERSONAL SERVICES.

*Subcategory (a)—Supervision.*—All elements of this subcategory (number of supervisors, periods of employment, rates of pay, and total) are maximums.

*Subcategory (b)—Technical services.*—All elements of this subcategory (number of technicians, periods of employment, rates of pay, and total) are maximums.

*Subcategory (c)—Labor.*

CATEGORY (3)—OPERATING MATERIALS AND SUPPLIES.—Includes such items as drill bits and steel, explosives, fuel, pipe, power, small tools costing less than $50 each, timber, track.

CATEGORY (4)—OPERATING EQUIPMENT.

*Subcategory (a)—Rental.*—The number of each object to be rented [6 mine cars, 1 truck], the rate of rental [$100 per month, $5 per hour], and the total of this subcategory are maximums.

*Subcategory (b)—Purchases.*—The estimated total of this subcategory is a maximum.

*Subcategory (c)—Depreciation.*—All elements of this subcategory (time periods, rate of depreciation, and subcategory total) are maximums.

CATEGORY (5)—INITIAL REHABILITATION AND REPAIRS.—Estimates under this category include all requirements and related costs, such as labor, materials and supplies, and supervision at a rate not higher than provided for in Category (2), and shall not be duplicated under any other category. The estimated total of this category is a maximum.

*Subcategory (a)—Initial rehabilitation and repairs of existing buildings, fixtures, and installations (exclusive of mine workings).*—The estimated total of this subcategory is a maximum.

*Subcategory (b)—Initial rehabilitation and repairs of operating equipment.*—The estimated total of this subcategory is a maximum.

CATEGORY (6)—NEW BUILDINGS, FIXTURES, AND INSTALLATIONS (EXCLUSIVE OF MINE WORKINGS).—Estimates under this category include all requirements and related costs, such as labor, materials and supplies, and supervision at a rate not higher than provided for in Category (2), and shall not be duplicated under any other category. The estimated total of this category is a maximum.

CATEGORY (7)—MISCELLANEOUS.—Repairs and maintenance (other than initial) of operating equipment, analytical work, prints and other reproductions, accounting, Operator's share of payroll taxes, liability insurance covering employment, travel, communications, and any other items of requirement or cost that do not fall within any of the first 6 categories.

THE ESTIMATED TOTAL ALLOWABLE COST of the work is a maximum.

(b) *Nonallowable costs.*—The following costs are not allowable for contribution by the Government:

(1) *Costs of the land,* such as rental, depreciation, depletion, or other cost of acquiring, owning, or holding possession;

(2) *Indirect costs,* such as general overhead, corporate management, interest, taxes (other than payroll and sales taxes), insurance (other than liability insurance covering employment), damages to persons, damages to property (other than necessary repairs or replacements of equipment or other property used in the work);

(3) *Previous work* performed or costs incurred before the date of this contract; and

(4) *Deferred payments.*—Any costs incurred by the Operator under any rental-purchase agreement, installment-purchase agreement, or any agreement for the purchase of goods under the provisions of which payment of the full purchase price is deferred more than 90 days from the delivery of the goods; unless the purchase agreement is approved by the Government in writing.

(c) *Reductions in costs.*—The Operator shall account for and give the Government credit for any incidental benefits, credits, or money received in the ordinary course of business in prosecuting the work (as by salvage or sale of materials or equipment, furnishing of room or board, furnishing of power or services to third persons, rebates or discounts on purchases, etc.), in the same ratio in which the Government contributes to costs; and such amounts shall be treated as a reduction in costs incurred so that they are available for use within the limit of the original estimated total cost. This provision does not apply to receipts from production which are subject to the Government's percentage royalty under the provisions of Article 9.

**See Article 13.**

ARTICLE 7. *Reports, accounts, audits.*—(a) *Operator's records.*—The Operator shall keep suitable records and accounts of the work performed and of any production in which the Government may have an interest; and shall preserve those with respect to work performed for at least three years after final payment by the Government, and those with respect to production for at least three years after any obligation to pay royalties to the Government has terminated. The Government may inspect and audit said records and accounts at any time, either by itself or by a certified public accountant. If the Government elects to audit said records and accounts relating to the exploration work by certified public accountant, it may do so as a cost of the work to which the Operator shall contribute. The Comptroller General of the United States or his representative, until the expiration of said three-year periods, shall have access to and the right to examine any pertinent books, documents, papers, and records of the Operator. All of the Operator's vouchers and records and accounts relating thereto and the Government's payments thereof remain subject to adjustment until final audit by the Government. If work under this contract is carried on in conjunction with any other operations, or if labor, supervision, services, materials, supplies, equipment, facilities, or other requirements for carrying on the work are also used in connection with other operations, the costs shall be segregated and accounted for on a basis and by methods and accounts that are satisfactory to and approved by the Government.

(b) *Progress reports and vouchers.*—The Operator shall provide the Government with five copies of monthly progress reports in three sections as follows: (1) Operator's Monthly Report and Voucher showing detailed costs incurred during the reporting period; (2) Operator's Unit Cost and Progress Report showing the various types of work performed during the reporting period and costs incurred for each type of work; and (3) a Narrative Report of the work performed during the reporting period including adequate engineering-geological maps or sketches, drill hole logs and locations, and assay reports on samples taken concurrently with advance in mineralized ground. (Forms for reporting under (1) and (2) above will be provided by the Government.)

(c) *Final report.*—Upon completion of the work or termination of the Government's obligation to contribute to costs, the Operator shall furnish the Government with five copies of a final report (in addition to the final progress report and voucher). This final report shall include a geological and engineering evaluation of the results of the work performed under the contract with an estimate of the ore reserves resulting from such work, complete assay data, adequate geological and engineering maps or sketches, and a summary of the work performed and related costs incurred.

(d) *Report of sales.*—The Operator shall provide the Government with suitable accounting and documentary evidence covering all production to which the Government's percentage royalty relates, such as copies of smelter or concentrator settlement sheets, and certified accounts of production and sale or other disposition of production.

(e) *Compliance with requirements.*—If in the opinion of the Government any of the Operator's reports, records, or accounts are insufficient or incomplete, or if the Operator fails to make them, the Government may procure the making or completion of such with suitable attachments as an expense of the work to which the Operator shall contribute. The Government may withhold approval and payment of any vouchers relating to insufficient or incomplete reports, records, or accounts.

ARTICLE 8. *Repayment by Operator.*—(a) *Certification.*—If the Government considers that a discovery or development from which production may be made has resulted from the work, the Government, at any time not later than six months after a sufficient final report and final account (see Article 7) has been rendered, may so certify in writing to the Operator. Such certification shall describe broadly or indicate the nature of the discovery or development.

(b) *Royalty on production.*—The Operator, as principal if the Operator is the producer, or as surety if the Operator is not the producer, shall pay to the Government a royalty on all minerals mined or produced from the land, as follows: (1) regardless of any certification of discovery or development, from the date of the contract until the lapse of the time within which the Government may make such certification, or until the total net amount contributed by the Government without interest is fully repaid, whichever occurs first; or (2) if the Government makes a certification of discovery or development, within a period of ~~ten~~ thirty years from the date of the contract, or until the total net amount contributed by the Government without interest is fully repaid, whichever occurs first. **See Article 13.**

(c) *Basis for computation.*—The Government's royalty shall be a percentage of the gross proceeds (including any bonuses, premiums, allowances, or other benefits) from the production sold, in the form sold (ore, concentrates, metal, or equivalent), at the point of delivery (the f. o. b. point); *except,* that charges of *the buyer* arising in the regular course of business, and shown as deductions on the buyer's settlement sheets, on account of the cost of treatment processes performed by *the buyer,* sampling and assaying to determine the value of the production sold, and freight paid by *the buyer* to a carrier (not the Operator), shall be allowed as deductions in arriving at the "gross proceeds" as that term is used herein. Any costs of treatment processes, sampling or assaying, or transportation, performed or paid by the Operator or by anyone other than the buyer, are not deductible in arriving at the "gross proceeds" as that term is here used. The term "treatment processes," as here used, means those processes (such as milling, concentrating, smelting, refining, or equivalent) applied to the crude ore or other production after it is extracted from the ground, to put it into a commercially marketable form; excluding fabricating or manufacturing. **See Article 13.**

(d) *Unsold production.*—If any production (ore, concentrates, metal, or equivalent), after the lapse of six months from the date the ore was extracted from the ground, remains neither sold nor used by the Operator in integrated manufacturing or fabricating operations (for instance, if it is stockpiled), the Government, at its option, as long as it so remains, may require the computation and payment of its royalty on the value of such production in the form (ore, concentrates, metal, or equivalent) it is in when the Government elects to require computation and payment. If any production is used by the Operator in integrated manufacturing or fabricating operations before the Government makes its election, the Government's royalty on such production shall be computed on the value therof in the form in which and at the time when it is so used. "Value" as here used means what is or would be gross income from mining operations for percentage depletion purposes in Federal income tax determination, or the market value, whichever is greater.

(e) *Percentages of royalty.*—The percentages of the Government's royalty shall be as follows:

One and one-half (1½) percent of amounts ("gross proceeds" or "value") not in excess of eight dollars ($8.00) per ton of production in the form in which sold, held, or used, plus one-half (½)

percent for each additional full fifty cents ($0.50) by which such amounts exceed eight dollars ($8.00) per ton, but not in excess of five (5) percent of such amounts.

(For instance: the royalty on an amount of five dollars ($5.00) per ton would be one and one-half (1½) percent; on an amount of ten dollars ($10.00) per ton, three and one-half (3½) percent.)

(f) *Time for computation and payment.*—The Government's royalty shall be computed and paid currently upon each lot sold, held, or used in integrated operations, as the case may be, as above provided in this article.

(g) *Lien for payment.*—To secure the payment of its percentage royalty, there is hereby granted to the Government a lien upon the land or the Operator's interest in the land and upon any production of minerals therefrom, until the royalty claim is extinguished by lapse of time or is fully paid.

(h) *Notice to purchasers.*—The Operator shall give notice of the Government's claim for royalty to any purchaser of the production, and shall authorize and direct such purchaser to pay the royalty directly to the Government and to furnish the Government with copies of the settlement sheets. If the records of any production and sales or other disposition of production, whether the production is by the Operator or by others, are not made available to the Government, the amount of the royalty may be estimated by the Administrator, Defense Minerals Exploration Administration, or his successor, and his estimate thereof shall be final and binding upon the Operator.

(i) *No obligation to produce.*—Nothing in this contract is to be construed as imposing any obligation on the Operator or the Operator's successor in interest to engage in any production operations.

(j) *Government not obligated to buy.*—Nothing in this contract shall be construed as imposing any obligation on the Government to purchase any minerals mined or produced from the land.

ARTICLE 9. *Interests in purchased property.*—(a) *Title and ownership.*—All costs under this contract shall be incurred by the Operator in the Operator's own name and for the Operator's own account; but any property acquired to the cost of which the Government contributes shall belong to the Operator and the Government jointly in proportion to their respective contributions, although title thereto shall be taken in the name of the Operator.

(b) *Preservation of property.*—Until the final disposal of any property in which the Government has an interest the Operator shall preserve and protect same for the best interest of the Government, any reasonable and necessary costs thereof to be treated as an allowable cost of the project. After the completion of the work or termination of the Government's obligation to contribute, or when such property is not in use for or needed for the work, the Operator shall neither use it without the written consent of the Government nor without paying a reasonable rental to be fixed by the Government for its interest.

(c) *Disposal of property.*—Upon the completion of the work or termination of the Government's obligation to contribute to costs, or when the property is no longer needed for the work, the Operator shall promptly dispose of salable or salvageable property in which the Government has an interest for the joint account of the Government and the Operator, either by return to the vendor, by sale to others, or purchase by the Operator or the Government at a price at least as high as could be obtained from others, unless the Government in writing waives its interest in any such property. Without advance approval of the sales price by the Government the Operator shall not sell at any price any item of property the cost of which was more than $500, and shall not sell at less than 25 percent of the purchase price any item of property which cost $500 or less. The Government, in lieu of approving the sales price for any such item, may itself purchase the item at the best price which the Operator is able to obtain or himself cares to give. Property remaining upon any termination of the work shall be considered in groups or categories (such as drill steel, or explosives, or pipe, or rails), and if the original cost of the remaining unexpended portion of any such group or category is less than $50, the Government waives its interest therein. If necessary to accomplish the disposal of any item the Operator shall dismantle and sever it from the land, the cost thereof to be treated as a cost of the project.

(d) *Default of the Operator re disposal.*—If within 90 days after the completion of the work or termination of the Government's obligation to contribute to costs, or after the property is no longer needed for the work, or after such further time as the Government may in writing allow, the Operator has failed to sell or otherwise liquidate or dispose of any property in which the Government has an interest, the Government, at any time prior to final settlement under the contract, may pursue one of the following two courses: (1) the Government, by written notice to the Operator, may place upon such property what in its opinion is a fair valuation thereof, not in excess of the cost less 1.66 percent per month from the

date such property was purchased under this contract to the termination of said 90-day period; and such property shall thereupon be considered and accounted for as having been purchased by the Operator at the valuation so fixed by the Government; or (2) the Government may enter and take possession of such property wherever it may be found, and remove and dispose of it for the joint account of the parties.

ARTICLE 10. *Termination of the Government's obligations.*—(a) If in the opinion of the Government operations at any time have failed to achieve anticipated results that indicate the probability of making a worthwhile discovery, and in the opinion of the Government further operations are not justified, the Government may give the Operator written notice thereof, and thereupon: (1) the Government shall be free of all obligation to contribute to costs not then incurred other than such as may be allowable under the provisions of the contract as necessary and incidental to winding up, reporting, and accounting; and (2) the Operator shall be free of all obligation to prosecute the work other than such as may be necessary and incidental to winding up, reporting, and accounting.

(b) If in the opinion of the Government the Operator is in any manner in default under the terms of the contract, the Government may give the Operator written notice of such default with a specification of reasonable time within which the default must be cured; and if the Operator fails to cure such default as required, thereupon: (1) the Government shall be relieved of all obligation to contribute to costs not incurred when the notice was given, other than such as may be allowable by the provisions of the contract as necessary and incidental to winding up, reporting, and accounting; and (2) the Operator shall be free of all obligation to prosecute the work other than such as may be necessary and incidental to winding up, reporting, and accounting. The remedy provided for the Government in this paragraph "(b)" is in addition to any other remedy provided in this contract, and in addition to any other remedy the law may provide for breach of contract.

(c) The giving of any notice by the Government under the provisions of this Article 10 shall not affect the Government's rights as provided for in the contract with respect to a percentage royalty, and such rights shall be fully preserved.

ARTICLE 11. *Notices to be given by the Government* may be delivered to the Operator, or may be sent by registered mail addressed to the Operator at his mailing address stated in this contract. If mailed, notices are deemed to have been delivered five days after the date of mailing.

ARTICLE 12. *Officials not to benefit.*—No member of or delegate to Congress or resident commissioner shall be admitted to any share or part of this contract or to any benefit that may arise therefrom; but this provision shall not be construed to extend to this contract if made with a corporation for its general benefit.

ARTICLE 13. *Changes and added provisions.*— (a) Categories (2) through (7) of Article 6(a) are deleted. (b) To the extent that costs are set forth in Exhibit "A" as "Fixed Unit Costs" they are in lieu of the actual costs that otherwise would be allowable costs of the project under Article 6 of the contract. The Government will contribute to the fixed unit costs as they accrue, on the basis of units of work actually performed. The fixed unit costs include all costs of the work necessary to complete the project. (c) That part of the last sentence in the first paragraph of Article 6(a) commencing after the semicolon, is deleted. (d) In Article 6(c), the reference to Article 9 is changed to Article 8. (e) In Article 8(b): (1) the word "minerals" includes limestone and dolomite products produced in processing ore; and (2) the words "ten years" are changed to "thirty years." (f) The following clause is added to Article 8(c): Provided, however, That so long as the Operator operates smelting facilities as an integrated part of its business, the settlement made by the Operator's smelter to its mine or mill on the ore or concentrates subject to the Government's royalty shall be, for the purpose of calculating the royalty payable to the Government under this contract, on the same settlement basis that the said smelter makes to its independent suppliers under the schedule most favorable to any independent supplier, or should gross income from mining operations for percentage depletion purposes in Federal income tax determination show a greater value for ore or concentrate sales than that value which would result from applying the smelter schedule most favorable to an independent supplier, the greater value will be used as the basis for calculating royalty payable to the Government.

Executed in sextuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

By C. D. Mitchenor
Administrator, Defense Minerals
Exploration Administration

THE NEW JERSEY ZINC COMPANY
(Operator)

By S. S. Goodwin

VICE PRESIDENT

---

I, Walter R. Anyan, certify that I am the secretary of the corporation named as Operator herein; that S. S. Goodwin who signed this contract on behalf of the Operator, was then Vice President of said corporation; that said contract was duly signed for and in behalf of said corporation by authority of its governing body, and is within the scope of its corporate powers.

Walter R. Anyan

[CORPORATE SEAL]

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

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EXPLORATION PROJECT CONTRACT
THE NEW JERSEY ZINC COMPANY
DOCKET NO. DMEA-4178

ANNEX I

The land referred to in Article 2 of the contract consists of various privately owned tracts of land which are held by the Operator pursuant to option contracts, which permit it to engage in mineral exploration with option to purchase all mineral and mining rights upon such tracts. Such land areas are shown outlined in blue on the map (Fig. 1) entitled "The New Jersey Zinc Company, Marion, Virginia, Beaver Creek Area, ....DMEA-4178," which is attached hereto and made a part of this contract.

The various land parcels are identified as follows:

All references to Deed and Will Books concern those books which are on file in the Clerk's Office of Smyth County, Virginia.

G. W. Tyler and H. R. Tyler and others.

Expiration date of option contract (including renewals) with The New Jersey Zinc Company--February 24, 1959.

Land. Approximately 62.7 acres described in deed by Carter Tyler, Trustee, to Mary S. Tyler, dated February 1, 1937, and recorded in Deed Book 73, page 236.

D. R. Kestner and Pearl Kestner.

Expiration date of Option contract (including renewals) with The New Jersey Zinc Company--April 9, 1957.

Land. Approximately 118.57 acres, being the same land conveyed to D. R. Kestner by G. E. Callihan by deed dated October 23, 1947 and recorded in Deed Book 79, page 152.

James F. Worley and Josephine O. Worley and others.

Expiration date of Option contract (including renewals) with The New Jersey Zinc Company--May 9, 1959.

Land. Approximately 10 acres, consisting of two parcels, namely, approximately 8½ acres, known as Lot No. One of partition of estate of Z. F. Worley as shown on Plat Book One, page 86, and decree

recorded in Deed Book 66, page 55; and approximately $1\frac{1}{2}$ acres which were devised to James F. Worley by will of Z. F. Worley dated September 6, 1917 and recorded in Will Book 9, page 219; less, however, approximately $\frac{1}{2}$ acre, conveyed by James F. Worley and wife to James C. Worley by deed dated March 15, 1949 and recorded in Deed Book 105, page 20.

Josephine Olinger Worley and James F. Worley and others.

Expiration date of Option contract (including renewals) with The New Jersey Zinc Company--April 24, 1957.

Land. Tract I--Approximately 50 acres allotted to the above-mentioned owners by decree entered in Circuit Court of Smyth County on March , 1954 and recorded in Deed Book 127, page 1.

Tract II--Approximately 26 acres, being the same property conveyed by J. H. Troutman and wife to W. V. Olinger by deed dated January 28, 1941 and recorded in Deed Book 82, page 87.

Tract III--Approximately 18 acres, being the same property conveyed to W. V. Olinger by J. H. Troutman and Susie Olinger Troutman by deed dated January 28, 1941 and recorded in Deed Book 82, page 87.

W. T. Worley and Virgie Lee Worley.

Expiration date of Option contract (including renewals) with The New Jersey Zinc Company--May 3, 1959.

Land. Tract I--Approximately 20.5 acres known as Lot No. 5 of Z. F. Worley estate assigned to W. T. Worley by commissioners appointed to partition the Z. F. Worley estate and by decree of the Circuit Court of Smyth County and recorded in Deed Book 66, page 55.

Tract II--Approximately 2 acres of Lot. No. 2 of the Z. F. Worley estate, being the same tract of land conveyed to W. T. Worley by Trigg Parker and wife by deed dated April 10, 1948 and recorded in Deed Book 108, page 188.

Tract III--A small parcel of land conveyed to W. T. Worley by J. F. Worley and wife by deed dated January 26, 1952 and recorded in Deed Book 114, page 202.

There is to be excepted and deducted from the foregoing three tracts of land, a small parcel of land conveyed to S. E. Frye and wife by deed dated April 29, 1946 and recorded in Deed Book 93, page 235.

James F. Worley and Josephine O. Worley and others.

Expiration date of Option contract (including renewals) with The New Jersey Zinc Company--May 8, 1959.

Three tracts totaling approximately 27 acres.

Land. Tract I--Approximately 16 acres known as Lot. No. 1 in the partition of the Z. F. Worley estate, being also the same tract conveyed to James G. Worley by James F. Worley and wife by deed dated January 4, 1954 and recorded in Deed Book 126, page 132, wherein the said James F. Worley reserved a life estate.

Tract II--Approximately 11 acres being also the same tract conveyed to J. G. Worley by J. F. Worley and wife by deed dated January 4, 1954 and recorded in Deed Book 126, page 132, wherein the said J. F. Worley reserved a life estate.

Tract III--Approximately ½ acre conveyed to J. G. Worley by J. F. Worley and wife by deed dated March 15, 1949 and recorded in Deed Book 105, page 120.

There is to be excepted and deducted from the foregoing tracts a small parcel of land conveyed by J. F. Worley and wife to W. T. Worley by deed dated January 26, 1952 and recorded in Deed Book 114, page 202.

Birdie B. Keene and Jasper Keene (sometimes King or Keen).

Expiration date of Option contract (including renewals) with The New Jersey Zinc Company--May 11, 1959.

Land. That certain tract of land containing approximately 11½ acres conveyed to Birdie B. King by Lonnie May Blevins and husband by deed dated February 28, 1949 and recorded in Deed Book 103, page 590.

There is to be excepted and deducted from the above tract, a tract of approximately 2 acres conveyed by Lonnie May Blevins and husband to L. D. Osburne by deed dated June 2, 1939 and recorded in Deed Book 78, page 420.

George R. Bise (sometimes Bice) widower and Ocie W. Lawrence, unmarried.

Expiration date of Option contract (including renewals) with The New Jersey Zinc Company--May 19, 1959.

Two tracts of land totaling approximately 60 acres.

Tract I--Approximately 37 acres conveyed to George R. Bise by R. B. DeBord and wife by deed dated January 31, 1936 and recorded in Deed Book 72, page 214.

Tract II--Containing 23 acres more or less conveyed to George R. Bise and Ocie W. Lawrence by Jessie H. Smith and others by deed dated January 10, 1938 and recorded in Deed Book 75, page 51. This tract is only partially shown on Figure 1 as the latter is too short.

R. Glenn McAllister and Mary L. McAllister.

Expiration date of Option contract (including renewals) with The New Jersey Zinc Company--August 16, 1959.

Tract I--Containing 97.7 acres more or less conveyed to R. G. McAllister by deed dated December 20, 1928 and recorded in Deed Book 60, page 104.

There is to be excepted and deducted from the above tract of land a tract of 5 acres conveyed by R. G. McAllister and wife to W. C. McAllister by deed dated February 21, 1938 and recorded in Deed Book 76, page 423.

Tract II--Containing 14 acres more or less conveyed to R. G. McAllister by C. J. McAllister and wife by deed dated February 21, 1938 and recorded in Deed Book 75, page 453.

W. C. McAllister and Mary K. McAllister and others.

Expiration date of Option contract (including renewals) with The New Jersey Zinc Company--August 17, 1959.

Land. Tract I--Approximately 45½ acres acquired by W. C. McAllister under the will of A. K. McAllister probated October 12, 1934 and recorded in Will Book 12, page 64 and by deed from J. N. McAllister and wife dated March 13, 1936 and recorded in Deed Book 71, page 539.

Tract II--Consisting of 5 acres and being the same property as conveyed to W. C. McAllister by R. G. McAllister and wife by deed dated February 21, 1938 and recorded in Deed Book 76, page 423.

Tract III--Containing 20 acres more or less and being the same property which was devised by A. K. McAllister by his will probated October 12, 1934 and recorded in Will Book 12, page 64, to Annie C. McAllister, his widow, (now Annie C. Jones), for life, with remainder to W. C. McAllister.

R. J. McAllister and India McAllister.

Expiration date of Option contract (including renewals) with The New Jersey Zinc Company--August 18, 1959.

Tract of land containing 114 acres conveyed to R. J. McAllister by the partition deed of the J. S. McAllister estate dated December 20, 1928 and recorded in Deed Book 60, page 104. The owners of the land do not own the mineral on the entire tract but only on 38 acres thereof. Reference is made to a deed from the Mathieson Alkali Works to J. S. McAllister and others, dated September 28, 1917 and recorded in Deed Book 43, page 257 for a description of that portion of the tract on which the mineral and mineral rights are reserved by the Mathieson Alkali Works.

J. Otis Bise (sometimes Bice) and Mamie J. Bise.

Expiration date of Option contract (including renewals) with The New Jersey Zinc Company--Auguat 20, 1959.

Land. Tract I--Containing 10 acres more or less conveyed to J. Otis Bise and Mamie Bise by J. B. Keesling and wife by deed dated May 6, 1925 and recorded in Deed Book 531, page 267.

Tract II--Approximately one-half acre conveyed to J. Otis Bise by John T. and Margaret Breedlove by deed dated March 19, 1928 and recorded in Deed Book 58, page 500.

Tract III--Containing 9 acres more or less conveyed to J. Otis Bise et ux by Cordia Jones and others by deed dated September 21, 1949 and recorded in Deed Book 107, page 135.

Tract IV--Being that certain tract described as Tract II in the aforesaid deed to J. Otis Bise et ux from Cordia Jones and others, and containing 9.43 acres.

William T. Bise (sometimes Bice) and Gladys Bise.

Expiration date of Option contract (including renewals) with The New Jersey Zinc Company--August 27, 1959.

Land. A tract containing 14 acres more or less conveyed to William T. Bise by John T. Breedlove and wife by deed dated September 4, 1946 and recorded in Deed Book 94, page 557.

SPECIAL AGREEMENT CONCERNING LAND.

1. In the event the Operator at any time during the period expiring ten years from the date of this contract acquires any interest, title or equity, in any lands contiguous to the premises described in this contract, it is agreed that such contiguous lands shall thereupon become subject to the provisions of this contract and the parties hereto shall promptly execute amendments to this contract listing such contiguous lands as lands included in this contract.

2. It is further agreed that the Operator may, at any time before the expiration of sixty days following the conclusion or termination of exploration work performed pursuant to the terms of this contract, request the Government to delete from this contract such lands described in the Option contracts listed in this Annex I, or in any amendments thereto, as have no known value for mineral production. The Government will promptly prepare amendments removing the specified lands from the contract, which amendments shall provide that the Operator:

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

(b) has, prior to the execution of the respective amendment, surrendered or otherwise disposed of all of its interest, title, and equity in such lands, and any minerals produced therefrom, including any option, lease or permit thereto, without any consideration whatsoever, including future compensation, for such surrender or disposition, other than relief from the cost of maintaining such interest;

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

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

EXPLORATION PROJECT CONTRACT
THE NEW JERSEY ZINC COMPANY
DOCKET NO. DMEA-4178

RECEIVED
JUN 12 1956

EXHIBIT "A"

Description of the Work

The purpose of the project is to explore for ores of zinc by diamond drilling (plus necessary overburden drilling). The holes to be initially drilled pursuant to the contract are roughly indicated on the attached (Fig. 1) map referred to in Annex I.

The objective of the work is to investigate the ore potential of the Knox dolomite, or more exactly, the Copper Ridge dolomite which underlies the area, and which outcrops on the slopes of Beaver Creek valley. Drill holes are expected to vary from 200 feet to nearly 1,000 feet in depth locally, with an average between 500 and 600 feet. Approximately 24 holes will be required. Not more than 15,000 feet of drilling shall be performed, provided, however, that the Operator may, upon the written approval of the Government, perform more than 15,000 feet of drilling so long as the total cost of all drilling work allowable under the contract is not exceeded.

The project is not intended to accomplish the outlining of individual ore bodies. The proposed work consists of north-south fences of diamond drill holes designed to intercept pencil-shaped ore bodies pitching into the bedding from the outcrops. The drill holes shall not be located on closer spacing than 200 feet in each fence nor shall the fences be closer together than 600 feet, except with prior approval of the Government.

All diamond drilling, including the location and depths of holes, will be subject to prior Government approval.

All drill holes shall be logged geologically and all drill core will be made available to the Government for examination. All significantly mineralized core will be properly sampled and assayed for zinc. Such assays, together with proper geological logs of drill holes, will be reported to the Government, together with proper plan maps and sections showing the progress of the work. Diamond drilling will be done with AX size or larger coring bits.

The project work shall be supervised at all times by competent engineers or geologists.

## Estimated Cost of the Project

### Actual Costs

Category (1) Independent Contracts

| | | |
|---|---|---|
| Overburden drilling and diamond drilling to 250-foot depth, approximately 6,000 feet @ $2.20/ft. | $13,200.00 | |
| Diamond drilling 250-foot to 500-foot depth, approximately 4,500 feet @ $2.45/ft. | 11,025.00 | |
| Diamond drilling 500-foot to 750-foot depth, approximately 3,000 feet @ $2.70/ft. | 8,100.00 | |
| Diamond drilling 750-foot to 1,000-foot depth, approximately 1,500 feet @ $2.95 | 4,425.00 | |
| The above rates cover charges for reaming, cementing, water supply, casing, changing of location, and all other charges which may be incurred by the diamond drill contractor. 1/ | | $36,750.00 |

Categories (2) through (7)

None

### Fixed Unit Costs (see Article 13)

| | | |
|---|---|---|
| Incidental allowance for each foot of drilling completed, 15,000 feet @ $0.53 | $ 7,950.00 | |
| 100 samples of drill core to be assayed @ $1.00 per sample | 100.00 | 8,050.00 |
| Estimated Total Cost of the Project | | $44,800.00 |
| Government Participation @ 50% | | $22,400.00 |

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

Contr[illegible] No. Idm-E 960

Docket No. DMEA 4178

DEPARTMENT OF THE INTERIOR

**Approved contract**

DEFENSE MINERALS EXPLORATION ADMINISTRATION

TO: Chief, Finance Section, Budget and Finance Branch, Bureau of Mines

Please make the following entry on the records of the Defense Minerals Exploration Administration under the Strategic and Critical Minerals Exploration Program.

| Date of Contract | Region | State | Commodity |
|---|---|---|---|
| May 31, 1956 | V | Virginia | Zinc |

Name and Address of Operator: The New Jersey Zinc Company
160 Front Street
New York 38, New York

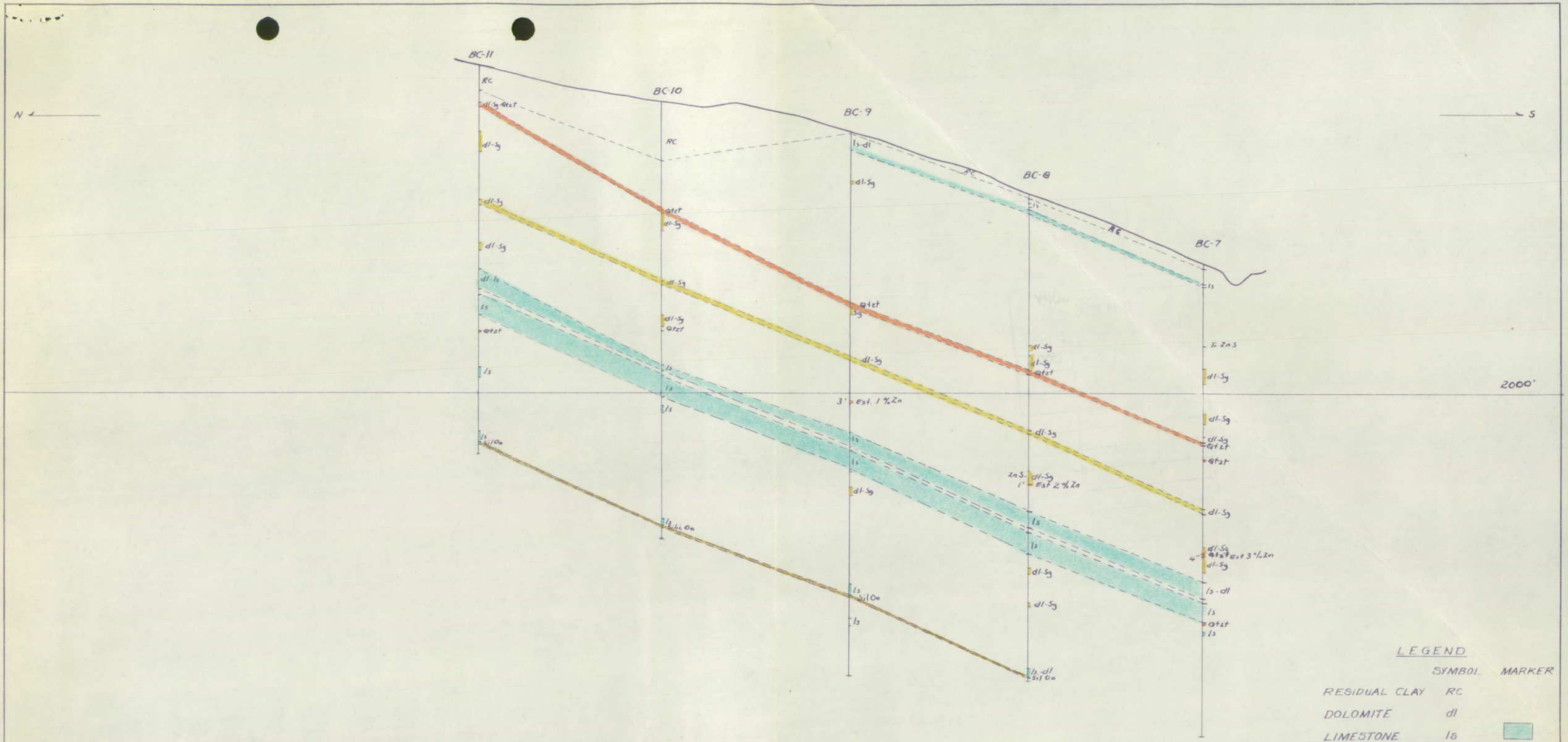
| | Reserve | Obligation |
|---|---|---|
| Prior Amount | 0 | 0 |
| Increase | $22,400.00 | 0 |
| Decrease | 0 | 0 |
| Revised Amount | $22,400100 | 0 |

Remarks:

(Name)
Robert E. Adams, Chief
Operations Control and
Statistics Division
(Title)

Date Delivered to Bureau of Mines, Washington 5/31/56

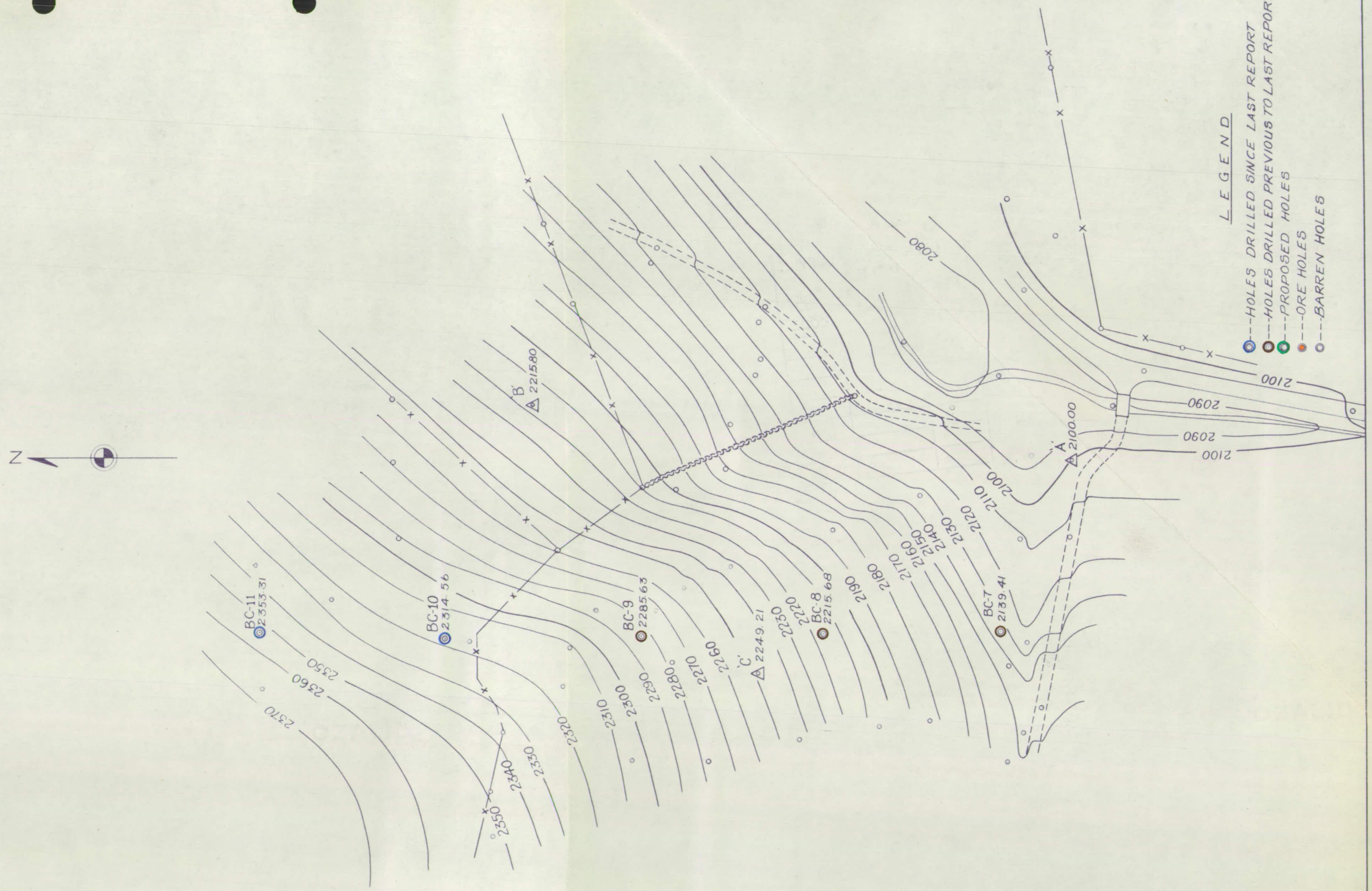
98963




Note: Rock is dolomite unless otherwise indicated

| POSTED TO DATE | THE NEW JERSEY ZINC COMPANY | DRAWN R.C.G. DATE 1-3-57 TRACED SCALE 1"=100' | GEOLOGIC SECTION NO. I BEAVER CREEK AREA II | DISTRICT SMYTH COUNTY, VA. FILE NO. |
|---|---|---|---|---|

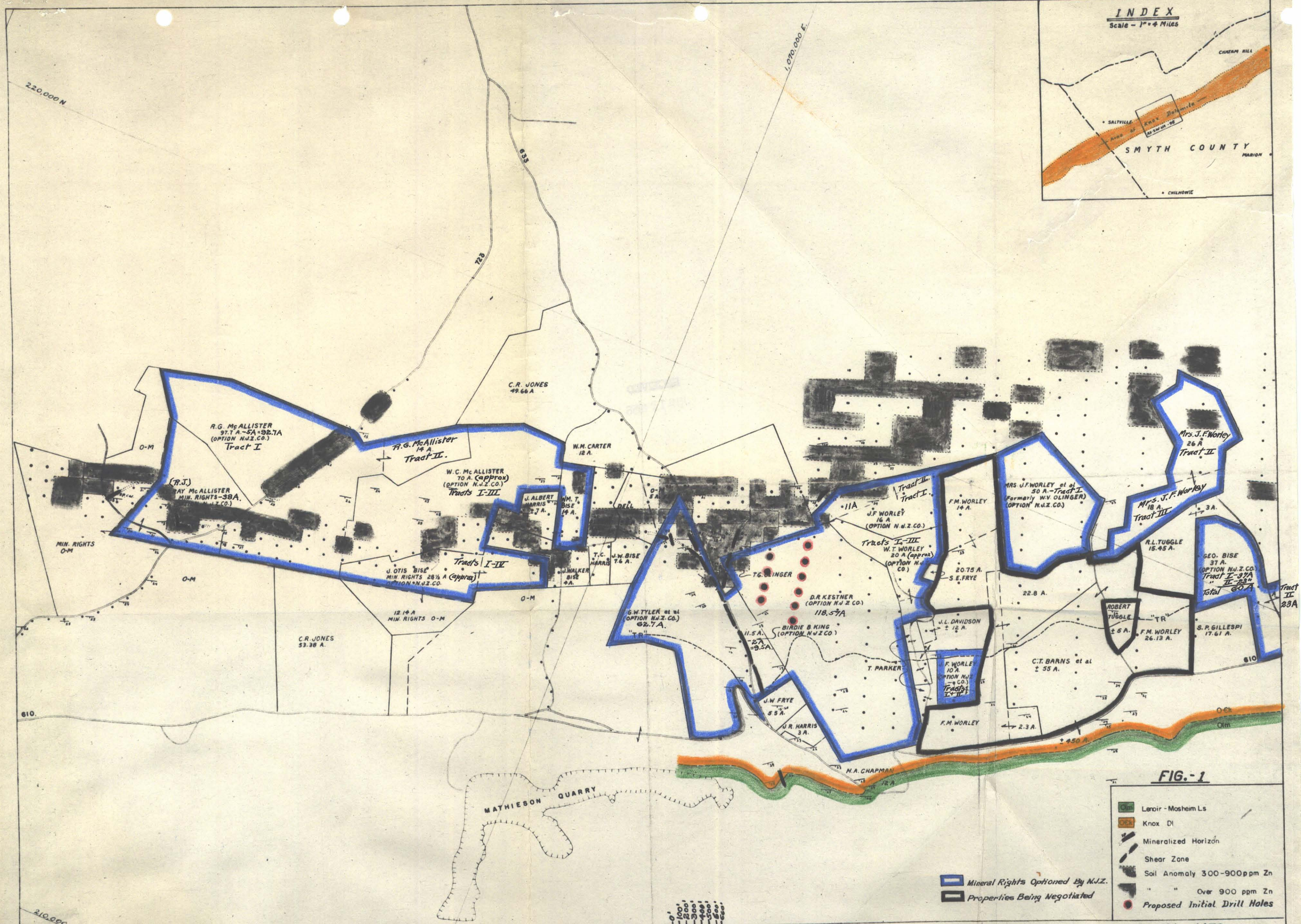
X 5407 B 1M 3-53




NOTE: ELEVATIONS BASED ON APPROXIMATE DATA

| POSTED TO DATE | THE NEW JERSEY ZINC COMPANY<br>AUSTINVILLE, VIRGINIA. | DRAWN | DATE 12/13/56 | BEAVER CREEK AREA II | DISTRICT SMYTH COUNTY, VA. |
|---|---|---|---|---|---|
| | | TRACED E.E.F. | SCALE 1"=100' | | FILE NO. |

X 5407 B 1M 3-53


INDEX
Scale - 1" = 4 Miles
CHATAM HILL
SALTVILLE
Area of Knox Dolomite
AX-SW VA-98
SMYTH COUNTY
MARION
CHILHOWIE
220,000 N
1,070,000 E.
633
728
C.R. JONES 49.66 A.
R.G. McALLISTER 97.7 A.-5A=92.7A (OPTION N.J.Z.CO.) Tract I
R.G. McAllister 14 A Tract II.
W.C. McALLISTER 70 A. (approx) (OPTION N.J.Z.CO.) Tracts I-III
W.M. CARTER 12 A.
J. ALBERT HARRIS 2.7 A.
WM. T. BISE 14 A.
DELL
T.C. HARRIS
J.W. BISE 7.6 A.
J. WALKER BISE 4 A.
J. OTIS BISE MIN. RIGHTS 28½ A (approx) OPTION N.J.Z.CO.
Tracts I-IV
12.14 A MIN. RIGHTS O-M
C.R. JONES 53.38 A.
(R.J.) RAY McALLISTER MIN. RIGHTS-38A.
MIN. RIGHTS O-M
O-M
G.W. TYLER et al (OPTION N.J.Z.CO.) 62.7 A.
"TR"
T.G. OLINGER
D.R. KESTNER (OPTION N.J.Z.CO.) 118.5+A
BIRDIE B. KING (OPTION N.J.Z.CO.)
11.5 A. -2A =9.5A
T. PARKER
J.W. FRYE 5.5 A.
J.R. HARRIS 3 A.
J.F. WORLEY 16 A (OPTION N.J.Z.CO.)
Tracts I-III
W.T. WORLEY 20 A (approx) (OPTION N.J.Z.CO.)
Tract II
Tract I
11A
F.M. WORLEY 14 A.
20.75 A. S.E. FRYE
22.8 A.
J.L. DAVIDSON ± 12 A.
J.F. WORLEY 10 A. (OPTION N.J.Z.CO.) Tracts I-II
F.M. WORLEY
2.3 A.
C.T. BARNS et al ± 55 A.
MRS. J.F. WORLEY et al 50 A.-Tract I (Formerly W.V. OLINGER) (OPTION N.J.Z.CO.)
Mrs. J.F. Worley 26 A Tract II
Mrs. J.F. Worley 18 A. Tract III
3 A.
R.L. TUGGLE 15.45 A.
ROBERT TUGGLE ± 5 A.
"TR"
F.M. WORLEY 26.13 A.
GEO. BISE 37 A. (OPTION N.J.Z.CO.) Tract I-37A II-23A Total 60 A
Tract II 23A
S.P. GILLESPI 17.61 A.
610
450 A.
Oek
Olm
H.A. CHAPMAN 12 A.
MATHIESON QUARRY
610.
210,000
Mineral Rights Optioned By N.J.Z.
Properties Being Negotiated
0' 100' 200' 300' 400' 500' 600'
SCALE.
FIG.-1
Olm Lenoir - Mosheim Ls
Oek Knox Dl
Mineralized Horizon
Shear Zone
Soil Anomaly 300-900 ppm Zn
" " Over 900 ppm Zn
Proposed Initial Drill Holes
POSTED TO DATE
THE NEW JERSEY ZINC COMPANY
MARION, VIRGINIA
DRAWN P. A. R.
TRACED
DATE JAN. 1954
SCALE 1" = 660'
BEAVER CREEK AREA
DISTRICT
DMEA-4178.
FILE NO. AX-SW VA-98
THE NEW JERSEY ZINC COMPANY 160 FRONT ST., NEW YORK N.Y.