DEFENSE MINERALS EXPLORATION ADMINISTRATION
CONTRACT ADMINISTRATION AND AUDIT DIVISION

REPORT OF REVIEW

I have reviewed the Monthly Reports of:

Benjamin H. Putnam, Assignor
512 Third Street
Marietta, Ohio
and
National Lead Company, Assignee
111 Broadway
New York 6, New York

pertaining to Exploration Project Contract No. Idm-E1002, DMEA No. 4381, including Amendments Nos. 1, 2, and 3, for September 1956 to September 1957, inclusive, covering a zinc project on the Indian Creek Prospect, Grainger County, Tennessee.

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

This review was made in lieu of a final audit of the Operator's accounts and records for the reasons given in the attached schedule.

The findings of this review are stated in the following summary and the attached schedule:

Total cost billed by Operator		$40,095.00
Exceptions:		
Prior to this review	$-0-	
Herewith	1.00	1.00
Accepted cost claimed by Operator		40,094.00
Acceptable costs not claimed, to offset exceptions		1.00
Total accepted cost		40,095.00
Acceptable cost not claimed	$34.00	
Less: Offset above	1.00	33.00
Total acceptable cost, if claimed		$40,128.00

The contract calls for a 50 percent contribution of the allowable costs by the Government. Therefore, if the project is otherwise accepted as having met the terms of the contract, payments as follows are valid and proper:

On cost claimed		$20,047.50
On additional cost, if claimed		16.50
Total payable, if claimed		$20,064.00
Payable on audited claim		$20,047.50
Paid to date		19,398.92
Balance due assignee		$ 648.58
Additional payable, if claimed:		
To assignor	$14.25	
To assignee	2.25	$ 16.50

May 6, 1958

E. D. Talbert, Auditor

Benjamin H. Putnam, Assignor
and
Idm-E1002 National Lead Company, Assignee DMEA-4381

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

(a) the Monthly Reports were supported by documentary proof of that portion ($36,876.00) of the acceptable costs covering work performed at unit rates under independent contract;
(b) the balance ($3,252.00) of the acceptable costs was under a contract provision for payment by the Government at fixed unit costs for work performed; and
(c) the administrative cost to the Government of an audit would be excessive in relation to the estimated amount of possible further disallowances.

Exceptions by this review:

Assay by Union Assay Office of a sample from hole LH-1, not drilled under this contract, included in November 1956 MF-104 claim of assignor	$ 1.00

Acceptable cost not claimed by assignor:

Assays by Union Assay Office of 59 acceptable samples, claimed by assignor on November 1956, January 1957, and March 1957 MF-104s at $1.00/sample, whereas contract provides a fixed unit cost of $1.50/sample "regardless of costs incurred by the Operator"	$29.50

Acceptable cost not claimed by assignee:

Assays by Bruce Williams Laboratories of 18 acceptable samples claimed by assignee on September 1957 MF-104 at $1.25/sample, whereas contract provides a fixed unit cost of $1.50/sample "regardless of cost incurred by the Operator"	4.50
Total acceptable cost not claimed	$34.00

MAY 9 1958

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

Re: Docket No. DMEA-4381 (Zinc)
National Lead Company
Indian Creek Area
Grainger County, Tennessee
Contract No. Idm-21002

Dear Mr. Lawrence:

Enclosed are the original and four copies of the Report of Review requested by your April 25 memorandum. If you concur with the facts stated therein, the original and one copy should be forwarded to the regional finance officer, one copy each should be sent to the assignor and the assignee, and one copy should be retained in your files.

If for any reason you do not concur please return the original and all copies with your comments to this Division. In this connection it is to be noted that the Operator claimed, and your memorandum verified, the acceptable performance of 89 assays. The review, however, has disclosed that one assay covered a sample from hole LR-1, which was not drilled under this contract.

It is noted that your memorandum confirms 12,322 feet of diamond drilling, whereas the logs and contractor's invoice indicate an aggregate of 12,330 feet. This small discrepancy, however, does not affect the findings of the review since only the contract maximum of 12,000 feet is allowable.

The final (September 1957) MF-104 and attachments, together with the drilling invoices applicable to prior vouchers, which were forwarded by the regional finance officer's memorandum dated May 5, 1958, are being returned with a copy of this letter.

EDTalbert/ama
May 9, 1958

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

Sincerely yours,

(Signed) J. L. Chambers

Jay L. Chambers, Director
Contract Administration
and Audit Division

Enclosures

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
REGION V

ELECTROTECHNICAL
EXPERIMENT STATION

P. O. BOX 217
NORRIS, TENNESSEE

REGISTERED MAIL

5/8/58 C 320

800

May 5, 1958

Memorandum

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

From: Personal Assistant, Norris, Tennessee

Subject: Report of Review - Contract Idm-E1002, Docket No. DMEA-4381, National Lead Company, Indian Creek Area, Grainger County, Tennessee

A report of review in lieu of final audit is requested on the above contract.

The following documents are enclosed herewith:

1. Final MF-104, 104A and Attachments

2. Memorandum dated 4/25/58 regarding completion of this contract

3. Original invoices covering previously paid vouchers (28 invoices)

Helen Miller
Helen R. Miller

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

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

April 25, 1958

DMEA
RECEIVED MAY 8 1958

Memorandum

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

From: Executive Officer, DMEA - Region V - Knoxville

Subject: Completion- DMEA-4381, Idm-E1002-zinc. National Lead Company, Indiam Creek Area, Grainger County, Tennessee

Work on the subject contract has been completed. The following units of work have been acceptably performed as verified by our Field Examiners:

1. A total of 12,322 feet of diamond drilling completed (322 ft at Operator's expense).
2. Reaming of holes amount to 438 feet.
3. Eighty-nine samples were assayed.

An adequate final engineering and geological report has been received. A report of review is requested.

Robert A. Laurence

Robert A. Laurence

MAY 2

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

Re: Docket No. DMEA-4381 (Zinc)
National Lead Company
Indian Creek Area
Grainger County, Tennessee
Contract No. Idm-E1002

Dear Mr. Laurence:

An Operating Committee's copy of your April 25 memorandum requesting a Report of Review on the referenced project has come to the attention of this Division. The original memorandum has not been received.

An audit review of this project will be made promptly upon receipt from you of the original of the Operator's final (September 1957) MF-104 with attachments. The submission of invoices applicable to prior vouchers is not necessary in this instance, inasmuch as copies of the invoices are attached to the Washington copies of the vouchers.

Sincerely yours,

(Signed) J. L. Chambers

Jay L. Chambers, Director
Contract Administration
and Audit Division

EDTalbert/ama
May 2, 1958

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

28

April 24, 1958

Memorandum

To: Jay L. Hankins, [illegible] Land Management Administration
[illegible] - Boise

From: Executive [illegible], [illegible] - Knoxville

Subject: Completion [illegible] Report-Line.
National Land [illegible], Indian Creek Area,
Cranberry County, [illegible]

Work on the subject [illegible] has been completed.

The following [illegible] have been satisfactorily performed as verified by our [illegible]:

1. A total of [illegible] feet of diamond drilling [illegible] at the contractor's expense).

2. Reading of [illegible] at [illegible] feet.

3. [illegible] samples were analyzed.

An adequate final [illegible] and geological report has been received. A report [illegible] is requested.

Robert A. Lawrence

Original not received
(through [illegible] of Op. Comm only)
4/30/58

cc.
sc
Opr. Com-2
Finance
[illegible]

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-- 59

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of Sept. 195.7 Docket No. DMEA 4381 Contract No. Idm-E 1002
Operator's Name National Lead Co. Minerals Zinc
Address 111 Broadway, New York 6, N.Y.
Contract Amount, $ 40,530.00 Government Participation: 50 % Amount, $ 20,265.00

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	1173.00	34,827.00	36,000.00			
Bulldozing						
Crosscutting						
Drifting						
Reaming	0	876.00	876.00			
(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						
Assays	22.50	76.50	99.00			
(8) Contingencies (specify):						
Incidental Allowance @ .26/ft.	101.66	3018.34	3120.00			
TOTALS	1297.16	38,797.84	40,095.00	1297.16	38,797.84	40,095.00

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

Date Sept. 1957 *Payee National Lead 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:

$ 648.58

Signature Helen R. Miller
(Authorized Certifying Officer)

Date JUN 2 1958 Vou. No. 175
(See other side)

648.58

(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-1002 in accordance with the terms of the contract.

Signature [illegible] Title MINING ENGINEER U. S. BUREAU OF MINES Date MAY 14 1958

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Robert A. Lawrence Title EXECUTIVE OFFICER DMEA FIELD TEAM REGION V Date MAY 14 1958

MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

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

Month of Sept. 1957 Docket No. DMEA 4381 Contract No. Idm-E 1002
Operator's Name National Lead Co. Minerals Zinc
Address 111 Broadway, New York 6, N.Y.

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	Foot	1173.00	391	36,000.00	12000	3.00	12000	3.00
Churn Reaming	Foot	0	0	876.00	438	2.00	600	2.00
Auger Assays	Each	22.50	18	99.00	89	1.11	140	1.50
Stripping								
Trenching								
Test Pits								
Roads and Trails Incidental Allowance @ .26/ft.	Foot	101.66	391	3120.00	12000	.26	12000	.26
TOTAL DISTRIBUTED COSTS		1297.16		40,095.00				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		1297.16		40,095.00				

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 Sept. 1957 Operator National Lead Co.
Per [signature] 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)

[signature]
GEOLOGIST, U. S. G. S.
OCT 18 1957

INSTRUCTIONS

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

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

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

GPO 872894

JOY MANUFACTURING COMPANY

HENRY W. OLIVER BUILDING

PITTSBURGH 22, PENNSYLVANIA

CUSTOMER'S ORDER NO.	DATE	REQ. NO.	OUR ORDER NO.	DATE	AT REC. POINT	B.O. NO.
CONTRACT	CODE			DATE	AT SHIP POINT	
	63					

SOLD TO

National Lead Company
P.O. Box 2047
Morristown, Tenn.

SHIPPED TO

Indian Creek, Tenn.

~~TERMS NET 30 DAYS~~
NO CASH DISCOUNT

PLEASE REMIT TO
PITTSBURGH, PA.

INVOICE NO. 96712

INVOICE DATE 9-23-57

DATE SHIPPED

SHIPPED VIA

P. O. ADDRESS

MARKS

REQUESTED ROUTING

SHIPPED FROM

ORIGINAL QUANTITY ORDERED	UNIT	PART NUMBER	DESCRIPTION		CODE	UNIT PRICE	QUANTITY BACK ORDERED	QUANTITY SHIPPED	AMOUNT
		To 721.' agreement.	Core Drilling at Indian Creek, Tennessee as per						
		Prospect #	From	To		Total Feet		Unit Cost	Total Cost
		Woef #3 W-3	0.	721.		721.		$3.00	$2,163.00

F. O. B. SHIPPING POINT UNLESS OTHERWISE SPECIFIED

NO RETURNS ALLOWED UNLESS AUTHORIZED BY THIS OFFICE

GOODS COVERED BY THIS INVOICE WERE PRODUCED IN COMPLIANCE WITH THE REQUIREMENTS OF THE FAIR LABOR STANDARDS ACT OF 1938, AS AMENDED, INCLUDING SECTION 12(A).

FORM P133A

The Bowen Williams Laboratories

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

STATEMENT OF YOUR ACCOUNT

National Lead Company
P. O. Box [illegible]
Morristown, Tennessee

[illegible] CASH
NO DISCOUNT

DATE	ASSAY NO.	DESCRIPTION	
1957 April		Statement rendered for work from 3-26 to 4-25-57 incl.	
		Total Amount Due	$12.50

ENGINEERS
INSPECTIONS and TESTS

Batesville, Ark.
151 No. Central
Telephone 1309

Picher, Oklahoma
Connell Hotel Bldg.
Telephone 710

The Bruce Williams Laboratories

ESTABLISHED 1898

Office 618 [illegible] Joplin Street Telep[illegible] MA 3-[illegible]

JOPLIN, MISSOURI

CHEMISTS
INDUSTRIAL and ANALYTICAL

[illegible] Kansas
[illegible]
[illegible]
St. Louis, Missouri
305 [illegible] Drive
Telephone [illegible]

National Lead Company
P. O. Box 2047
Morristown, Tennessee

April 9, 1957

OUR NO.	MARK	DESCRIPTION	ZINC	IRON	LEAD	LIME	MOISTURE
765364	Dalton #8,	223-225	0.14				
365		225-227	0.28				
366		227-229	0.16				
367		235½-237½	0.30				
368		257-259	1.20				
369		259-261	0.50				
370		261-263	0.56				
371		263-264½	0.38				
372		264½-266½	3.00				
373		269-271	1.36				

Bruce Williams

INDUSTRIAL AND ANALYTICAL CHEMISTS

The Bruce Williams Laboratories

ESTABLISHED 1898

MAIN OFFICE: 618-622 JOPLIN STREET
TELEPHONE MAYFAIR 3-1556

Joplin, Missouri

ENGINEERING INSPECTIONS AND TESTS

BRANCH OFFICES:

306 VALLEY DRIVE
ST. LOUIS, MISSOURI
TELEPHONE HOBART 7-3226

219 TERMINAL WAREHOUSE BLDG.
LITTLE ROCK, ARKANSAS
TELEPHONE FRANKLIN 2-0693

CONNELL HOTEL BLDG.
PICHER, OKLAHOMA
TELEPHONE 710

STATEMENT OF YOUR ACCOUNT

National Lead Company
P. O. Box 61
Thorn Hill, Tennessee

TERMS CASH
NO DISCOUNT

DATE	ASSAY NO.	DESCRIPTION	
1957 Sept.		Statement rendered for work from 8-26 to 9-25-57 incl.	
		Total Amount Due	$25.00 – 15.00 10.00

ENGINEERS
CHEMISTS AND ASSAYERS

The Bruce Williams Laboratories [illegible] CAL

JOPLIN MISSOURI

DATE RECEIVED

Company

Joplin Hill, Texas.

LAB. NO.	MARK	DESCRIPTION	[illegible]	[illegible]
[illegible]	[illegible]	605-[illegible]	[illegible]	0.11
[illegible]		[illegible]	[illegible]	0.48
[illegible]		[illegible]	[illegible]	0.10
[illegible]		[illegible]	[illegible]	0.34
[illegible]		[illegible]	[illegible]	0.05
[illegible]		[illegible]	[illegible]	0.02
[illegible]		[illegible]	[illegible]	[illegible]
[illegible]		[illegible]	[illegible]	[illegible]
[illegible]	Composite [illegible]		[illegible]	[illegible]

Bruce Williams

ADDRESS ALL COMMUNICATIONS TO JOPLIN, MISSOURI

63-840

A PROGRESS REPORT ON THE
INDIAN CREEK PROJECT, GRAINGER COUNTY
TENNESSEE FOR SEPT. 1957

Docket No. 4381
Contract No. Idm-E 1002

During the month of September, one hole was drilled on the Indian Creek Project. Hole IM-3 was drilled 200' south of IM-2. The hole collared in the Mascot formation and was drilled to a depth of 721 feet. The results are summarized below:

Depth	Formation	Key Horizon	Zinc Mineralization	Remarks
0-7½	Overburden	———	———	——
7½-405	Mascot fm.	CMas @ 405	279-280½, 1½' @ 1% est. 280½-282½, 2' @ ½% est. Trace 348.	Light, medium and dark gray dol; some crackle breccia.
405-690	Kingsport fm.	Top "R" @ 596; "S" @ 647; "T" @ 690.	602-609, 7' @ 3/4% est; 615; 617½, 622-626½, 4½' @ 3/4% est. 629-633, 4' @ 1% est. 639½-640, ½' @ ½% est. 641½-642, ½' @ ½% est. 645-647½, 2½' @ 3/4% est. 650½-653, 2½' @ 1% est. 654½-655, ½' @ 1% est. 665½-667, 1½' @ 3/4% est. 684½-685, ½' @ 2% est.	Light, medium and dark gray dolomite; lower part interbedded with recrystalline and some limestone; in part brecciated.
690-721	Longview fm.	———	Trace @ 690½.	Recrystalline, dolomite, and chert.

The enclosed voucher shows a total of 391 drilling units for the month although the invoice from Joy Mfg. Co. shows 721 units. The 391 units is the amount authorized to complete the contract.

Drilling has been discontinued at Indian Creek and work is now underway to evaluate the drilling results. A final report on the project is being prepared.

Form MF-104 (Rev. April 1952)

RECEIVED SEP 30 1957

Budget Bureau No. 42-R1036.5

PAID ON VOUCHER & SCHEDULE OF PAYMENTS K- 16

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

Month of August 1957 Docket No. DMEA 4361 Contract No. Idm-E 1002

Operator's Name National Lead Company Minerals Zinc

Address 111 Broadway, New York 6, N.Y.

Contract Amount, $ 40,530.00 Government Participation: 50 % Amount, $ 20,265.00

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	3975.00	30,852.00	34,818.00	3,975.00	30,852.00	34,827.00
Bulldozing						
Crosscutting						
Drifting						
Roaming	0	876.00	876.00	–	876.00	876.00
(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						
Assays	0	76.50	76.50		76.50	76.50
(8) Contingencies (specify):						
Incidental Allowance @ .26/ft.	344.50	2673.84	3018.34	344.50	2,673.84	3,018.34
TOTALS	4319.50	34,478.34	38,798.84	4,319.50	34,478.34	38,797.84

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

Date August, 1957 *Payee National Lead 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:

$ 2,159.75

Signature Helen R. Miller (Authorized Certifying Officer)

Date SEP 27 1957 Vou. No. 58

(See other side)

2159.75

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Ida-E1002 in accordance with the terms of the contract.

Signature [illegible] Title MINING ENGINEER U. S. BUREAU OF MINES Date SEP 20 1957

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Robert A. Lawrence Title EXECUTIVE OFFICER DMEA FIELD TEAM REGION V Date SEP 20 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 August 1957 Docket No. DMEA 4381 Contract No. Idm-E1002
Operator's Name National Lead Company Minerals Zinc
Address 111 Broadway, New York 6, N.Y.

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	Foot	3975	1325	34,818.00	11609	3.00	12000	3.00
~~Churn~~ Reaming	Foot	0	0	876.00	438	2.00	600	2.00
~~Auger~~ Assays	Ea.	0	0	76.50	71	1.08	140	1.50
Stripping								
Trenching								
Test Pits								
Roads and Trails Incidental Allowance @.26/ft.	Foot	344.50	1325	3,018.34	11609	.26	12000	.26
Total Distributed Costs		4319.50		38,788.84				Total Costs Authorized by Contract
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
Total Costs		4319.50		38,788.84				

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 August, 1957 Operator National Lead Company

Per [signature] 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)

"Costs to date" for drilling should be $34,827.00 and "totals" should be $38,797.84.

[signature]
GEOLOGIST, U. S. G. S.
SEP 20 1957

[signature]
MINING ENGINEER
U. S. BUREAU OF MINES, SEP 20 1957

INSTRUCTIONS

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

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

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

GPO 872894

A PROGRESS REPORT ON THE
INDIAN CREEK PROJECT, GRAINGER COUNTY,
TENNESSEE FOR JULY, 1957.

Docket No. 4381
Contract No. Idm-E 1002

During the month of August, two holes were drilled on the Indian Creek Project. Leffew Heirs hole #6 (LH-6) was drilled 200' north of J.W.-4. The hole collared in the Mascot formation and was drilled to a depth of 676'. The results are summarized below:

Depth	Formation	Key Horizon	Zinc Mineralization	Remarks.
0-3	Overburden	---	---	---
3-453	Mascot	CMss @453'	Tr. ZnS @ 316½, 317½.	Light, med., and dark gray dolomite.
453-651	Kingsport fm.	Top of "R" bed @ 578'; Top of "S" bed @ 641.	---	Light, med. and dark gray dol. with re-xl in lower part; in part brecciated.
651-676	Longview fm.	Top of "T" @ 651'; Top of "U" @ 688½?	---	Med. gr. dol., and semrystalline; some brecc. TD @ 676'.

The second hole was drilled 200' south of Dalton #1(D-1). The hole collared in the Mascot formation and was drilled to a depth of 649'. The results are summarized below;

Depth	Formation	Key Horizon	Zinc Mineralization	Remarks.
0-5	Overburden	---	---	---
5-378½	Mascot fm.	CmSS @ 378½	ZnS @ 199,201, Est. 1% ZnS 213-214.	Light, med. and dark gray dol; some crackle breccia.
378½-615	Kingsport fm.	Top of "R" 516', Top of "S" @ 594½.	ZnS shine 511½, 512, 512½,514,515½,523,524, 525,526,526½,528½,529, 529½, Est. 1% Zn 530-531½,545,546,547½,549½, 551,554½,Est. 2% 556-559½, 565,568,571,577½,580½, 581,583½,584½.	Light, med., and dark gr. dol; re-xl interbedded with dol; scatt. FeS sh. from 378½-591; "R" & "S" bed zones in part brecciated.
615-649	Longview fm.	Top of "T" @ 615', Top of "U" @ 623.	---	Med. gr. brecciated dol. interbedded with re-xl.

Drilling is now underway 200' south of LW-2.

JOY MANUFACTURING COMPANY

HENRY W. OLIVER BUILDING

PITTSBURGH 22, PENNSYLVANIA

CUSTOMER'S ORDER NO.	DATE	REQ. NO.	OUR ORDER NO.	DATE	AT REC. POINT	B.O. NO.
CONTRACT	CODE			DATE	AT SHIP POINT	
	63					

SOLD TO

National Lead Company
P.O. Box 2047
Morristown, Tenn.

~~TERMS NET 30 DAYS~~
NO CASH DISCOUNT

PLEASE REMIT TO PITTSBURGH, PA.

INVOICE NO. 96621

INVOICE DATE 8-16-57

DATE SHIPPED

SHIPPED VIA

SHIPPED TO

Indian Creek, Tenn.

P. O. ADDRESS

MARKS

REQUESTED ROUTING

SHIPPED FROM

ORIGINAL QUANTITY ORDERED	UNIT	PART NUMBER	DESCRIPTION	CODE	UNIT PRICE	QUANTITY BACK ORDERED	QUANTITY SHIPPED	AMOUNT
		To 676.' agreement.	Core Drilling at Indian Creek, Tennessee as per					
		Prospect #	From / To		Total Feet		Unit Cost	Total Cost
		~~H-6~~ LH-6	0. / 676.		676.		$3.00	$2,028.00

F. O. B. SHIPPING POINT UNLESS OTHERWISE SPECIFIED

NO RETURNS ALLOWED UNLESS AUTHORIZED BY THIS OFFICE

GOODS COVERED BY THIS INVOICE WERE PRODUCED IN COMPLIANCE WITH THE REQUIREMENTS OF THE FAIR LABOR STANDARDS ACT OF 1938, AS AMENDED, INCLUDING SECTION 12(A).

FORM P133A

JOY MANUFACTURING COMPANY

HENRY W. OLIVER BUILDING

PITTSBURGH 22, PENNSYLVANIA

CUSTOMER'S ORDER NO.	DATE	REQ. NO.	OUR ORDER NO.	DATE	AT REC. POINT	B.O. NO.
CONTRACT	CODE			DATE	AT SHIP POINT	
	63					

SOLD TO

National Lead Company
Box 2047
Morristown, Tenn.

~~TERMS NET 30 DAYS~~
NO CASH DISCOUNT

PLEASE REMIT TO
PITTSBURGH, PA.

INVOICE NO. 96667

INVOICE DATE 8-24-57

DATE SHIPPED

SHIPPED VIA

SHIPPED TO

Indian Creek, Tenn.

P. O. ADDRESS

MARKS

REQUESTED ROUTING

SHIPPED FROM

ORIGINAL QUANTITY ORDERED	UNIT	PART NUMBER	DESCRIPTION	CODE	UNIT PRICE	QUANTITY BACK ORDERED	QUANTITY SHIPPED	AMOUNT
		To 649.' agreement.	Core Drilling at Indian Creek, Tennessee as per					
		Prospect #	From / To		Total Feet		Unit Cost	Total Cost
		Wolf #2	0. / 649.		649.		$3.00	$1,947.00

F. O. B. SHIPPING POINT UNLESS OTHERWISE SPECIFIED

NO RETURNS ALLOWED UNLESS AUTHORIZED BY THIS OFFICE

GOODS COVERED BY THIS INVOICE WERE PRODUCED IN COMPLIANCE WITH THE REQUIREMENTS OF THE FAIR LABOR STANDARDS ACT OF 1938, AS AMENDED, INCLUDING SECTION 12(A).

FORM P133A

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- 6

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of July, 1957 Docket No. DMEA 4381 Contract No. Idm-E 1002

Operator's Name National Lead Company Minerals Zinc

Address 111 Broadway, New York 6, N.Y.

Contract Amount, $ 40,530.00 Government Participation: 50 % Amount, $ 20,265.00

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	5,589.00	25,254.00	30,843.00	5589.00	25263.00	30852.00
Bulldozing						
Crosscutting						
Drifting						
Reaming	0	876.00	876.00	-	876.00	876.00
(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						
Assays	0	76.50	76.50	0	76.50	76.50
(8) Contingencies (specify):						
Incidental Allowance @ .26/ ft.	484.38	2189.46	2673.84	484.38	2189.46	2673.84
TOTALS	6073.38	28,395.96	34,469.34	6073.38	28404.96	34478.34

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

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

Date July 31, 1957 *Payee National Lead 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:

$ 3036.69

Signature [signature]
(Authorized Certifying Officer)

Date AUG 9 1957 Vou. No. 26
(See other side)

3036.69

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. E-1002 in accordance with the terms of the contract.

Signature W. J. Lynch Title MINING ENGINEER U. S. BUREAU OF MINES Date AUG 6 1957

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Robert A. Lemmon Title EXECUTIVE OFFICER DMEA FIELD TEAM Date AUG 6 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 4381 Contract No. Idm-E 1002

Operator's Name National Lead Company Minerals Zinc

Address 111 Broadway, New York 6, N.Y.

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	Foot	5589.00	1863	30,843.00	10284	3.00	12,000	3.00
~~Churn~~ Reaming	Foot	0	0	876.00	438	2.00	600	2.00
~~Auger~~ Assays	Ea.	0	0	76.50	71	1.08	140	1.50
Stripping								
Trenching								
Test Pits								
Roads and Trails Incidental allowance @.26/ft	Foot	484.38	1863	2673.84	10284	.26	12,000	.26
TOTAL DISTRIBUTED COSTS								TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		6073.38		34,469.34				

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

REMARKS:

Date July, 1957 Operator National Lead Co.

Per [signature] 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)

(For Government use only)

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

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

INSTRUCTIONS

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

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

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

GPO 872894

A PROGRESS REPORT ON THE
INDIAN CREEK PROJECT, GRAINGER COUNTY,
TENNESSEE FOR JULY, 1957.

Docket No. 4381
Contract No. Idm-8 1002

During the month of July, diamond drilling continued on the Indian Creek project. Love Coffee #1(C-1) was drilled 200 feet south of JM-4. The hole collared in the Mascot formation and was drilled to a depth of 863 feet.

Depth	Formation	Key Horizon	Zinc Mineralization	Remarks
0-2	Overburden	---	---	---
2-616	Mascot fm.	Chas @ 616'	---	Light, medium, and dark gray dolomite.
616-827	Kingsport fm.	Top of "R" bed @ 734; top of "S" bed @ 786.	---	Light, medium and dark gray dolomite interbedded with recrystalline. "S" bed limestone from 811-82
827-863	Longview fm.	"T" bed 827-846'	ZnS @ 836,843	Dolomite interbedded with recrystalline; in part brecciated.

LM-1 (Levy Wolfe farm) was drilled 200 feet south of C-1. The hole collared in the Mascot formation and was drilled to a depth of 1000 feet. The results are summarized on the following page:

OFFICIAL FILE COPY
OMEA
RECEIVED AUG 13 1957
DATE | INITIALS | CODE

Continued:

Depth	Formation	Key Horizon	Zinc Mineralization	Remarks
0-2	Overburden	---	---	---
2-759	Maucet fm.	CM @ 759'	---	Light, medium and dark gray dolomite.
759-990	Kingsport	Top of "R" bed @ 87; top of "S" bed @ 940'.	---	Light, medium and dark gray dolomite interbedded with recrystalline and limestone
990-1000	Longview	---	---	Dolomite;crackle breccia.

Drilling is now underway 200 feet north of JW-4.

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DMEA
RECEIVED AUG 10 1957
DATE | CODE

JOY MANUFACTURING COMPANY

HENRY W. OLIVER BUILDING

PITTSBURGH 22, PENNSYLVANIA

CUSTOMER'S ORDER NO.	DATE	REQ. NO.	OUR ORDER NO.	DATE	AT REC. POINT	B.O. NO.
CONTRACT	CODE			DATE	AT SHIP POINT	
	63					

SOLD TO

National Lead Company
Box 2047
Morristown, Tenn.

~~TERMS NET 30 DAYS~~
NO CASH DISCOUNT

PLEASE REMIT TO
PITTSBURGH, PA.

INVOICE NO. 96581

INVOICE DATE 7-25-57

DATE SHIPPED

SHIPPED VIA

SHIPPED TO

Indian Creek, Tenn.

P. O. ADDRESS

MARKS

REQUESTED ROUTING

SHIPPED FROM

ORIGINAL QUANTITY ORDERED	UNIT	PART NUMBER	DESCRIPTION		CODE	UNIT PRICE	QUANTITY BACK ORDERED	QUANTITY SHIPPED	AMOUNT
		To 1000.' ending July	Core Drilling at Indian Creek, Tennessee for period 25th as per agreement.						
		Prospect #	From	To		Total Feet		Unit Cost	Total Cost
		Wolf #1	0.	1000.		1000.		$3.00	$3,000.00

F. O. B. SHIPPING POINT UNLESS OTHERWISE SPECIFIED

NO RETURNS ALLOWED UNLESS AUTHORIZED BY THIS OFFICE

GOODS COVERED BY THIS INVOICE WERE PRODUCED IN COMPLIANCE WITH THE REQUIREMENTS OF THE FAIR LABOR STANDARDS ACT OF 1938, AS AMENDED, INCLUDING SECTION 12(A).

FORM P133A

JOY MANUFACTURING COMPANY

HENRY W. OLIVER BUILDING

PITTSBURGH 22, PENNSYLVANIA

CUSTOMER'S ORDER NO.	DATE	REQ. NO.	OUR ORDER NO.	DATE	AT REC. POINT	B.O. NO.
CONTRACT	CODE			DATE	AT SHIP POINT	

SOLD TO

National Lead Co.
P. O. Box 2047
Morristown, Tennessee

~~TERMS NET 30 DAYS~~
NO CASH DISCOUNT

PLEASE REMIT TO
PITTSBURGH, PA.

INVOICE NO. 96551

INVOICE DATE 7-19-57

DATE SHIPPED

SHIPPED VIA

SHIPPED TO

Indian Creek, Tennessee

P. O. ADDRESS

MARKS

REQUESTED ROUTING

SHIPPED FROM

ORIGINAL QUANTITY ORDERED	UNIT	PART NUMBER	DESCRIPTION	CODE	UNIT PRICE	QUANTITY BACK ORDERED	QUANTITY SHIPPED	AMOUNT
			To 863.' core drilling at Indian Creek, Tennessee as per agreement.					
			Prospect # / From / To	Total Feet		Unit Cost		Total Cost
			Caffee #1 / 0 / 863	863		$3.00		$2,589.00
			Cementing - June 2nd - 2 hrs. @ $7.50 per hr.					15.00
								$2,604.00

F. O. B. SHIPPING POINT UNLESS OTHERWISE SPECIFIED

NO RETURNS ALLOWED UNLESS AUTHORIZED BY THIS OFFICE

GOODS COVERED BY THIS INVOICE WERE PRODUCED IN COMPLIANCE WITH THE REQUIREMENTS OF THE FAIR LABOR STANDARDS ACT OF 1938, AS AMENDED, INCLUDING SECTION 12(A).

FORM P133A

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- 4

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of June 1957 Docket No. DMEA 4361 Contract No. Idm-E 1002

Operator's Name National Lead Company Minerals Zinc

Address 111 Broadway, New York 6, N.Y.

Contract Amount, $ 40,530.00 Government Participation: 50 % Amount, $ 20,265.00

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	2334.00	22,920.00	25,254.00	2334.00	22,929.00	25263.00
Bulldozing						
Crosscutting						
Drifting						
Reaming	0	876.00	876.00	–	876.00	876.00
(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						
Assays	0	76.50	76.50	–	76.50	76.50
(8) Contingencies (specify):						
Incidental allowance @ .26/ft	202.28	1987.18	2189.46	202.28	1987.18	2189.46
TOTALS	2536.28	25,859.68	28,395.96	2536.28	25868.68	28404.96

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

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

Date June, 1957 *Payee National Lead Co.

Per [signature] Title Supt.

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

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

(Instructions on reverse)

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

$ 1268.14

Signature Helen R. Moler
(Authorized Certifying Officer)

Date JUL 30 1957 Vou. No. 16
(See other side)

1268.14

(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-1002 in accordance with the terms of the contract.

Signature J. J. Lynch Title MINING ENGINEER U. S. BUREAU OF MINES Date JUL 29 1957

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Robert A. Lauer Title EXECUTIVE OFFICER DMEA FIELD TEAM REGION V Date JUL 29 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 4381 Contract No. Idm-E 1002

Operator's Name National Lead Company Minerals Zinc

Address 111 Broadway, New York 6, N.Y.

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	Feet	2334.00	778	25,254.00	8421	3.00	12,000	3.00
~~Churn~~ Roaming	Feet	0	0	876.00	438	2.00	600	2.00
~~Auger~~ Assays	Ea.	0	0	76.50	71	1.08	140	1.50
Stripping								
Trenching								
Test Pits								
Roads and Trails	Feet							
incidental allowance @ 26/ft		202.28	778	2189.46	8421	.26	12,000	.26
TOTAL DISTRIBUTED COSTS		2536.28		28,395.96				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		2536.28		28,395.96				

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 _____ Operator National Lead Co.

Per G. W. Brown 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.

REMARKS:

(Instructions on reverse)

(For Government use only)

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

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

JOY MANUFACTURING COMPANY

HENRY W. OLIVER BUILDING

PITTSBURGH 22, PENNSYLVANIA

CUSTOMER'S ORDER NO.	DATE	REQ. NO.	OUR ORDER NO.	DATE	AT REC. POINT	B.O. NO.
CONTRACT	CODE			DATE	AT SHIP POINT	

SOLD TO

National Lead Co.
Box 2047
Morristown, Tennessee

~~TERMS NET 00 DAYS~~
NO CASH DISCOUNT

PLEASE REMIT TO
PITTSBURGH, PA.

INVOICE NO. 96546

INVOICE DATE 7-8-57

DATE SHIPPED

SHIPPED VIA

SHIPPED TO

Indian Creek, Tennessee

P. O. ADDRESS

MARKS

REQUESTED ROUTING

SHIPPED FROM

ORIGINAL QUANTITY ORDERED	UNIT	PART NUMBER	DESCRIPTION	CODE	UNIT PRICE	QUANTITY BACK ORDERED	QUANTITY SHIPPED	AMOUNT
			To 778.' core drilling at Indian Creek, Tennessee for period ending June 30th as per agreement.					
			Prospect JW-4 From 0 to 778. Total 778.' @ $3.00 per ft.				Total	$2,334.00
			Cementing JW-4 - June 15th 6 hours @ $7.50 per hour					45.00
								$2,379.00

OFFICIAL FILE COPY
D M E A
RECEIVED AUG 1 1957

DATE	INITIALS	CODE

F. O. B. SHIPPING POINT UNLESS OTHERWISE SPECIFIED

NO RETURNS ALLOWED UNLESS AUTHORIZED BY THIS OFFICE

GOODS COVERED BY THIS INVOICE WERE PRODUCED IN COMPLIANCE WITH THE REQUIREMENTS OF THE FAIR LABOR STANDARDS ACT OF 1938, AS AMENDED, INCLUDING SECTION 12(A).

FORM P133A

Continued:

Depth	Formation	Key Horizon	Zinc Mineralization	Remarks
0-2	Overburden	---	---	---
2-759	Mascot fm.	GM @ 759'	---	Light, medium and dark gray dolomite.
759-990	Kingsport	Top of "R" bed @ 87; top of "S" bed @ 940'.	---	Light, medium and dark gray dolomite interbedded with recrystalline and limestone
990-1000	Longview	---	---	Dolomite;crackle breccia.

Drilling is now underway 200 feet north of JW-4.

OFFICIAL FILE COPY
DMEA
RECEIVED AUG 1957
DATE CODE

A PROGRESS REPORT ON THE
INDIAN CREEK PROJECT, GRAINGER
COUNTY, TENNESSEE FOR JUNE, 1957.

By: W.T. Hill

Docket No. 4381
Contract No. Idr-E 1002

Diamond drilling was resumed on the Indian Creek project on June 1st, 1957 on the John Wolfenberger farm. J.W. #4 collared in the Mascot formation and was drilled to a depth of 778'. The results are summarized below:

Depth	Formation	Key Horizon	Zinc Mineralization	Remarks
0-3	Overburden	—	—	—
3-524'	Mascot fm.	CMax: 524'	386-387 Est.1%ZnS	Light, med., and dark gray dolomite
524-727'	Kingsport fm.	Top of "R" @ 642, Top of "S" @ 687.	FeS shines @ 682, 684,685,686,690, 691,692,702,703, 705,708.	Dolomite, light, med. and dark gray dol. interbedded with recrystalline; some brecciation.
727-778'	Longview fm.	—	FeS shines: 762,763; 1% FeS @ 765-767; 771½ 773.	Dolomite & recrystalline, in part brecciated.

Drilling is now underway 200 feet to the south of JW#4.

OFFICIAL FILE COPY
D.M.E.A.
RECEIVED
COPY

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- 77

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of May, 1957 Docket No. DMEA 4381 Contract No. Idm-E 1002
Operator's Name National Lead Co. Minerals Zinc
Address 111 Broadway, New York 6, New York
Contract Amount, $40,530.00 Government Participation: 50 % Amount, $20,265.00

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	279.00	22,650.00	22,920.00	279.00	22650.00	22,929.00
Bulldozing						
Crosscutting						
Drifting						
Reaming	0	876.00	876.00		876.00	876.00
(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						
Assays	0	76.50	76.50		76.50	76.50
(8) Contingencies (specify):						
Incidental allowance @ .26/ft.	24.18	1963.00	1987.18	24.18	1963.00	1987.18
TOTALS	303.18	25,565.50	25,859.68	303.18	25565.50	25,868.68

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

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

Date May, 1957 *Payee National Lead Company

Per [signature] Title Supt.

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

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

(Instructions on reverse)

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

$ 151.59

Signature Helen R. Meier
(Authorized Certifying Officer)

Date JUN 19 1957 Vou. No. 207
(See other side)

151.59

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. E-1002 in accordance with the terms of the contract.

Signature [illegible] Title MINING ENGINEER U. S. BUREAU OF MINES Date JUN 18 1957

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature [illegible] Title EXECUTIVE OFFICER DMEA FIELD TEAM REGION V Date JUN 18 1957

MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Form ME-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of May 1957 Docket No. DMEA 4381 Contract No. Idm-E 1002

Operator's Name National Lead Company Minerals Zinc

Address 111 Broadway, New York, 6, New York

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	Feet	279.00	93	22,920.00	7643	3.00	12000	3.00
~~Churn~~ Reaming	Feet	0	0	876.00	438	2.00	600	2.00
~~Auger~~ Assays	Ea.	0	0	76.50	71	1.08	140	1.50
Stripping								
Trenching								
Test Pits								
Roads and Trails incidental allowance @ .26/ft	Feet	24.18	93	1987.18	7643	.26	12000	.26
TOTAL DISTRIBUTED COSTS		303.18		25,859.68				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS								

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

Date May, 1957 Operator National Lead Co.

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.

REMARKS:

(Instructions on reverse)

(For Government use only)

RECEIVED JUN 21 1957 DMEA

[signature]

GEOLOGIST, U. S. G. S.

JUN 17 '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

INVOICE

MARIETTA, OHIO

TO: B.H. PUTNAM
512 Third St.
Marietta, Ohio

May 31, 1957

IN ACCOUNT WITH
PUTNAM DRILLING COMPANY

512 Third Street P.O. Box 647 Phone Fr. 4-6761

Statement for drilling Indian Creek Project
DMEA Contract No. 4381 for May.

Core Hole Dalton No. 8

Drilled 93' @ 3.00 $279.00

I hereby certify that to the best of my knowledge and belief, the above invoice is correct and just, and in accordance with the bid submitted by Putnam Drilling Company.

B.H. Putnam, Operator
By: William T. Hill
William T. Hill
General Superintendent

OFFICIAL FILE COPY
DMEA
RECEIVED JUN 21 1957
DATE | INITIALS | CODE

A PROGRESS REPORT ON THE
INDIAN CREEK PROJECT, GRAINGER COUNTY
TENNESSEE FOR MAY, 1957.

By: W.T. Hill

Docket No. 4381
Contract No. Idm-E 1002

During the month of May, hole Dalton #8 was completed. Drilling was resumed at 277 feet and the hole was drilled to a total depth of 370'. The results are summarized below:

Depth	Formation or Member	Key Horizon	Zinc Mineralization	Remarks
277-370	Kingsport	"R" & "S" beds.	Shine @ 293, Est. ½% ZnS @ 333-334	brecciated recrystalline and dolomite.

Drilling is now underway on the John Wolfenbarger farm.

ORIGINAL FILE COPY
DMBA
RECEIVED JUN 21 1957
DATE

A PROGRESS REPORT ON THE
INDIAN CREEK PROJECT, GRAINGER COUNTY,
TENNESSEE FOR APRIL, 1957.

OFFICIAL FILE COPY
DMEA
RECEIVED MAY 20 1957

DATE	INITIALS	CODE
5/20	C	220
/21	COM	100
		800

By: W.T. Hill

Docket No. 4381
Contract No. Idm-E 1002

During the month of April, the core drilling was discontinued in order to properly evaluate the drilling results and study the geology of the area.

A program of detailed geologic mapping was undertaken and has been completed. The mapping consisted of:

(1) Remapping the Chickamauga, Mascot-Kingsport and Longview contacts.
(2) Mapping and studying in detail the shearing and jointing that occurs in the surface exposure.

A geophysical survey using "electrical resistivity methods" was undertaken and completed. The results of this survey are now being studied and evaluated.

Since the drilling was temporarily halted, the "Operators unit Cost and Progress Report" is not being submitted with this report.

RECEIVED
MAY 13 1957
U. S. BUREAU OF MINES
DEF. MIN. ADM.
Knoxville, Tennessee

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

Budget Bureau No. 42-R1036.5

PAID ON VOUCHER & SCHEDULE OF PAYMENTS K- 62

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

Month of March, 1957 Docket No. DMEA 4381 Contract No. Lim-E 1002
Operator's Name B.H. Putnam Minerals Zinc
Address 512 Third Street, Marietta, Ohio
Contract Amount, $ 40,530.00 Government Participation: 50 % Amount, $ 20,265.00

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	831.00	21,819.00	22,650.00	831.00	21819.00	22650.00
Bulldozing						
Crosscutting						
Drifting						
Reaming	108.00	768.00	876.00	108.00	768.00	876.00
(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	51.00	25.50	76.50	51.00	25.50	76.50
Liability Insurance						
Incidental Allowance @ 0.26 /ft.	216.06	1890.98	2107.04	72.02	1890.98	1963.00
(8) Contingencies (specify):						
TOTALS	1215.82	24,503.48	25,709.54	1062.02	24,503.48	25,565.50

RECEIVED APR 15 1957 D.M.E.A.

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

Date March 28, '57 *Payee B.H. Putnam

Per [signature] Title Geologist

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

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

(Instructions on reverse)

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

$ 531.01

Signature [signature]
(Authorized Certifying Officer)

Date APR 11 1957 Vou. No. 169
(See other side)

6

531.01

(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-1002 in accordance with the terms of the contract.

Signature N. J. Lynch Title U. S. BUREAU OF MINES Date APR 8 1957

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Robert A. Lawrence Title EXECUTIVE OFFICER DMEA REGION V Date APR 8 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 March 1957 Docket No. DMEA 438 Contract No. Idm-E 1002
Operator's Name B.H. Putnam Minerals Zinc
Address 512 Third St., Marietta, Ohio

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	Feet	831.00	277	22,650.00	7750	3.00	12,000	3.00
Churn reaming	Feet	108.00	54	876.00	438	2.00	600	2.00
Auger Assays	Ea.	51.00	51	76.50	71	1.08	140	1.50
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Incidental Allowance @ .26/ft.	Foot	216.06	831	2107.04	7750	.26	12,000	.26
TOTAL DISTRIBUTED COSTS								TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		1215.62		25,709.54				

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

Date March 31, 1957 Operator B.H. Putnam

Per [signature] Title Geologist

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)

RECEIVED APR 1 1957 DMEA

[signature] GEOLOGIST, USGS APRIL 5, 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

A PROGRESS REPORT ON
THE INDIAN CREEK PROJECT,
GRAINGER COUNTY, TENNESSEE
MARCH, 1957

By: W.T. Hill

Docket No. 4381
Contract No. Idm-E 1002

During the month of March, one hole was drilled on the Indian Creek Project. D#8 was drilled 150' southwest of D#4. The hole collared in the top of the Kingsport formation. The results are summarized below:

Depth	Formation or Member	Key Horizon Markers	Zinc Mineralization	Remarks
0-52	Overburden	—	—	—
52-214	Kingsport dolomite	—	186-188 @ .25%	light, medium gray dolomite
214-277	Kingsport limestone	— —	223-225 @ .75% 225-227 @1.00% 227-229½ @ 1.00% 235½-237½ @ .50% 257-259 @ 2.00% 259-261 @ .75% 261-263 @ 1.00% 263-264½ @ .75% 264½-266½ @ 2.50% 269-271 @ 2.25%	—

This hole has not been completed.

RECEIVED

INVOICE

MARIETTA, OHIO

To: B.H. Putnam
512 Third Street
Marietta, Ohio

March 31, 1957

RECEIVED APR 5 1957 DIVISION OF RESEARCH

IN ACCOUNT WITH

PUTNAM DRILLING COMPANY

512 Third Street P.O. Box 647 Phone Fr. 4-6761

Statement for drilling Indian Creek Project DMEA Contract No. 4381 for March.

Core Hole Dalton No.8

Drilled	277' @ 3.00	831.00
Reaming	54' @ 2.00	108.00
		$ 939.00

I hereby certify that to the best of my knowledge and belief, the above invoice is correct and just, and in accordance with the bid submitted by Putnam Drilling Company.

B.H. Putnam, Operator
By: William T. Hill
William T. Hill
General Superintendent

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- 55

Month of February, 1957 Docket No. DMEA 4381 Contract No. Idn-E 1002
Operator's Name B.H. Putnam Minerals Zinc
Address 512 Third Street, Marietta, Ohio
Contract Amount, $ 40,530.00 Government Participation: 50 % Amount, $ 20,265.00

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	4629.00	17,190.00	21,819.00			
Bulldozing						
Crosscutting						
Drifting						
Reaming	—	768.00	768.00			
(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	—	25.50	25.50			
Payroll Taxes						
Liability Insurance						
Incidental Allowance @ 0.26 /ft.	401.18	1489.80	1890.98			
(8) Contingencies (specify):						
TOTALS	5030.18	19,473.30	24,503.48	5,030.18	19,473.30	24,503.48

RECEIVED MAR 11 1957 D.M.E.A.

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

Date Feb. 28, 1957 *Payee B.H. Putnam

Per William Riley Title Gen. Supt.

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

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

(Instructions on reverse)

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

$ 2,515.09

Signature Helen R. Miller
(Authorized Certifying Officer)

Date MAR 7 1957 Vou. No. 140
(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. F-1022 in accordance with the terms of the contract.

Signature [illegible] Title GEOLOGIST, U. S. G. S. Date MAR - 5 1957

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Robert A. Lawrence Title EXECUTIVE OFFICER DMEA REGION V Date MAR 5 1957

MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

RECEIVED MAR 11 1957 D.M.E.A.

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

Month of February 1957 Docket No. DMEA 4381 Contract No. Idm-E 1002
Operator's Name D.H. Putnam Minerals Zinc
Address 512 Third Street, Marietta, Ohio.

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	Foot	462900	1543	21,819.00	7273	3.00	12.000	3.00
~~Churn~~ Reaming	Foot	—	—	768.00	384	2.00	600	2.00
~~Auger~~ Assays	Ea.	—	—	25.50	20	1.275	140	1.50
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Incendental Allowance @ .26/ft.	Foot	401.18	1543	1890.98	7273	.26	12000	.26
TOTAL DISTRIBUTED COSTS								TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		5020.18		24,503.48				

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

Date Feb. 28, 1957 Operator D.H. Putnam

Per [signature] Title Gen. Supt.

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

(Instructions on reverse)

REMARKS:

(For Government use only)

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

MAR - 5 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

Invoice

Marietta, Ohio

To: B.H. Putnam
512 Third Street,
Marietta, Ohio

Feb. 28, 1957

In Account With

Putnam Drilling Company

512 Third St. P.O. Box 647 Phone Fr. 4-6761

Statement for drilling Indian Creek
Project DMEA Contract No. 4381
for February.

Core Hole Mallicoat No. 2

Drilled 500' @ $3.00 $1500.00

I hereby certify that to the best of my knowledge and belief the above invoice is correct and just, and in accordance with the bid submitted by Putnam Drilling Company.

OFFICIAL FILE COPY
D M E A
RECEIVED MAR 11 1957

DATE	INITIALS	CODE

B.H. Putnam, Operator

By: William T. Hill

William T. Hill
General Superintendant.

INVOICE

Marietta, Ohio

To: B.H. Putnam
512 Third Street,
Marietta, Ohio

Feb. 28, 1957

In Account With

Putnam Drilling Company

512 Third St. P.O. Box 647 Phone Fr. 4-6761

Statement for drilling Indian Creek
Project DMEA Contract No. 4381
for February.

Core Hole A.B. Dalton #6

Drilled 497' @ $3.00 $1491.00

I hereby certify that to the best of my knowledge and belief the above invoice is correct and just, and in accordance with the bid submitted by Putnam Drilling Company.

B.H. Putnam, Operator

William T. Hill

William T. Hill
General Superintendant

OFFICIAL FILE COPY
DMEA
RECEIVED MAR 11 1957

DATE	INITIALS	CODE

INVOICE

Marietta, Ohio

To: B.H. Putnam
512 Third Street,
Marietta, Ohio

Feb. 28, 1957

In Account With

Putnam Drilling Company

512 Third Street P.O. Box 647 Phone Fr. 4-6761

Statement for drilling Indian Creek
Project DMEA Contract No. 4381
for February.

Core Hole Scearce #1

Drilled	71' @ $3.00	$213.00

I hereby certify that to the best of my knowledge and belief the above incoice is correct and just, and in accordance with the bid submitted by Putnam Drilling Company.

B.H. Putnam, Operator

By: William T. Hill

William T. Hill
General Superintendant

OFFICIAL FILE COPY
D M E A
RECEIVED MAR 11 1957

DATE	INITIALS	CODE

INVOICE

Marietta, Ohio

To: B.H. Putnam
512 Third Street,
Marietta, Ohio

Feb. 28, 1957

In Account With

Putnam Drilling Company

512 Third Street P.O. Box 647 Phone Fr. 4-6761

Statement for drilling Indian Creek
Project DMEA Contract No. 4381
for February.

Core Hole A.B. Dalton #7

Drilled 475' @ $3.00 $1425.00

I hereby certify that to the best of my knowledge and belief the above invoice is correct and just, and in accordance with the bid submitted by Putnam Drilling Company.

B.H. Putnam, Operator

By: William T. Hill

William T. Hill
General Superintendant

OFFICIAL FILE COPY
DMEA
RECEIVED MAR 11 1957

DATE	INITIALS	CODE

A Progress Report on the
Indian Creek Project, Grainger County,
Tennessee for February, 1957.

OFFICIAL FILE COPY
DMEA
RECEIVED MAR 11 1957

DATE	INITIALS	COD.

By: W.T. Hill

Docket No. 4381
Contract No. Idm-E 1002

During the month of February, three holes were drilled and one was deepened on the Indian Creek Project. D#2 was drilled 300 feet northeast of D#5. The hole collared in the Kingsport formation and was drilled to a depth of 500 feet. The results are summarized below:

Depth	Formation or Member	Key Horizon Markers	Zinc Mineralization ESTIMATED	Remarks
0'-86'	Overburden	---	---	---
86'-256'	Kingsport dolomite	K.P. oolite @ 119'	---	dolomite; some crackle breccia
256-404'	Kingsport limestone	---	322-333,11' @ .25% Zn.	dolomite, recrystalline, limestone; well brecciated. Mainly limestone from 347-404.
404-500'	Longview formation	404-466 Lv. recrystalline bed.	---	Siliceous recrystalline, sandy; some dolomite.

D#6 was drilled 150' northeast of D#5. The hole collared in the Mascot formation and was drilled to a depth of 497'. The results are summarized below:

Depth	Formation or Member	Key Horizon Markers	Zinc Mineralization ESTIMATED	Remarks
0-55'	Overburden	---	---	---
55-78	Mascot formation	CMss @ 78'	---	dolomite; many cavitys.
78-281'	Kingsport dolomite	KP oolite @ 129½'	TR. @ 215,217, 242-243, 1' @ 1.5% 254-259, 5' @ .25%	dolomite; heavily faulted; mainly crackle breccia.
281-435'	Kingsport limestone	---	286-287, 1' @.25% 287-288½, 1½ @ 2.5% 288½-289½,1'@.50% Tr. @ 292,303. 329-330,1'@ .50% 332-335, 3'@ .2% 336½-337½, 1' @ 1.% 339-340, 1'@ .50% 341-342, 1'@ 1%	Recrystalline and dolomite; fair brecciated.
435-497	Longview formation	435-487 Lv recrystalline bed.	---	Sandy recrystalline and dolomite.

A cross-section of holes which included Sc#1 and #2 revealed that Sc#1 had been bottomed short of a mineralized zone that occured in Sc#2. As a result of this study, it was decided to deepen Sc#1. The results of the deepening are summarized below:

Depth	Formation or Member	Key Horizon Markers	Zinc Mineralization	Remarks
650-675	Kingsport limestone	---	---	dolomite and recrystalline
675-721	Longview formation	675-720 Lv recrystalline bed	---	Sandy recrystalline.

D#7 was drilled 150' southwest of D#5. The hole collared in the Mascot formation and was drilled to a depth of 475'. The results are summarized below:

Depth	Formation or Member	Key Horizon Markers	Zinc Mineralization ESTIMATED.	Remarks
0-43'	Overburden	---	---	---
43-66½	Mascot formation	Cmss @ 66½'	---	dolomite.
66½-256'	Kingsport dolomite	KP oolite @ 120'	240½-242½, 2' @ .25% 245-246, 1' @ .50	dolomite; lower part brecciated.
256-416'	Kingsport limestone	---	shines @ 312,320 321. 364½-365½, 1' @ 1.%. 374-375, 1' @ 1.%.	dolomite and recrystalline, well brecciated.
416-475	Longview formation	416-467 Lv recrystalline bed.	---	Recrystalline, sandy.

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

Budget Bureau No. 42-R1036.5

PAID ON VOUCHER & SCHEDULE OF PAYMENTS K- 30

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of January, 1957 Docket No. DMEA 4231 Contract No. [illegible]
Operator's Name [illegible] Minerals [illegible]
Address 512 Third Street, Marietta, Ohio.
Contract Amount, $ 40,530.00 Government Participation: 50 % Amount, $ 20,265.00

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	4533.00	12,657.00	17,190.00	4503.00	12,687.00	17,190.00
Bulldozing						
Crosscutting						
Drifting						
Reaming	—	768.00	768.00	—	768.00	768.00
(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	22.50	25.50	3.00	22.50	25.50
Payroll Taxes						
Liability Insurance						
Incidental Allowance @ .20¢/ft.	390.26	1,099.54	1,489.80	390.26	1,099.54	1489.80
(8) Contingencies (specify):						
TOTALS	4926.26	14,547.04	19,473.30	4896.26	14,577.04	19473.30

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

I certify that the above bill is correct and just and that payment therefor has not been received.
Date Jan. 31, 1957 *Payee [illegible]
Per [illegible] Title [illegible]

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

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

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:
$ 2448.13
Signature [illegible]
(Authorized Certifying Officer)
Date FEB 20 1957 Vou. No. 135
(See other side)

2448.13

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

Signature Helmuth Wedow, Jr. Title GEOLOGIST, U. S. G. S. Date FEB 19 1957

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature V. J. Lynch Title ACTING EXECUTIVE OFFICER DMEA - REGION V Date FEB 19 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 FEB 25 1957 D.M.E.A.

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of January 1957 Docket No. DMEA 4381 Contract No. Idm-E 1002

Operator's Name B. H. Putnam Minerals Zinc

Address 512 Third Street Marietta, Ohio

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	Foot	$4533.00	1501	$17,220.00	5730	$3.00	12,000	$3.00
Drilling: Core								
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
TOTAL DISTRIBUTED COSTS		$4533.00		$17,220.00				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		$4533.00		$17,220.00				$17,220.00

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 Jan. 31, 1957 Operator B. H. Putnam

Per William Thief Title General Supt

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

REMARKS:

(Instructions on reverse)

(For Government use only)

$30.00 claimed for cementing was disallowed.
V.J.L.

Hermann Lucas Jr.
GEOLOGIST, U. S. G. S.
FEB 19 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

Invoice

Marietta, Ohio

To B. H. Putnam
512 Third Street
Marietta, Ohio

January 31, 1957

EXTRA COPY
DMEA
RECEIVED FEB 2
DATE | INITIALS | CODE

In Account With

PUTNAM DRILLING COMPANY

512 Third Street | P. O. Box 647 | Phone FR 4-6761

Statement for drilling Indian Creek Project DMEA Contract No. 4381 for January.

Core Hole No. A. B. Dalton #5

Footage Drilled	475'	@ $3.00	$1425.00
Cementing Hole			15.00
			$1440.00

I hereby certify that to the best of my knowledge and belief that the above invoice is correct and just and in accordance with the bid submitted by Putnam Drilling Company.

B. H. Putnam, Operator

By: William T. Hill
William T. Hill
General Superintendent

Invoice

Marietta, Ohio

To B. H. Putnam, Appro
512 Third Street
Marietta, Ohio

January 31, 1957

In Account With

PUTNAM DRILLING COMPANY

512 Third Street | P. O. Box 647 | Phone EX 4-6761

Statement ~~fro~~ For drilling Indian Creek Project IMEA Contract No. 4361 for January.

Core Hole No. A. B. Dalton #4

Footage Drilled	356	@ $3.00	$1068.00
Cementing Hole			15.00
			$1083.00

I hereby certify that to the best of my knowledge and belief the above invoice is correct and just and in accordance with the bid submitted by Putnam Drilling Company.

B. H. Putnam, Operator

By: William T. Hill
William T. Hill
General Superintendent

Invoice

Marietta, Ohio

To B. H. Putnam, Appro
512 Third Street
Marietta, Ohio

January 31, 1957

In Account With

PUTNAM DRILLING COMPANY

512 Third Street | P. O. Box 647 | Phone FR 4-6761

Statement for drilling Indian Creek Project DMEA Contract No. 4381 for January.

Core Hole No. L. J. Mallicoct #1

Footage Drilled	284'	@ $3.00/ft.	$852.00

I hereby certify that to the best of my knowledge and belief the above invoice is correct and just and in accordance with the bid submitted by Putnam Drilling Company.

B. H. Putnam, Operator

By: William T. Hill
William T. Hill
General Superintendent

Invoice

Marietta, Ohio

To B. H. Putnam, Appro
512 Third Street
Marietta, Ohio

January 31, 1957

In Account With

PUTNAM DRILLING COMPANY

512 Third Street | P. O. Box 647 | Phone FR 4-6761

Statement for drilling Indian Creek Project DMRA Contract No. 4381 for January.

Core Hole No. A. B. Dalton #3

Footage Drilled	386'	@ $3.00	$1158.00

I hereby certify that to the best of my knowledge and belief the above invoice is correct and just and in accordance with the bid submitted by Putnam Drilling Company.

B. H. Putnam, Operator

By: William T. Hill
William T. Hill
General Superintendent

Telephone EMpire 3-3302

Hand Sample Serial 9001-3

Mine B. H. Putman, Operator

ASSAY REPORT

UNION ASSAY OFFICE, Inc.

J. V. SADLER, President
A. C. SELBY, Vice-Pres. & Treas.
LILY M. HOTTINGER, Secretary
Salt Lake City 10, Utah

RESULTS PER TON OF 2000 POUNDS

Jan. 3, 1957

NO.	GOLD Ozs. per Ton	SILVER Ozs. per Ton	LEAD Per Cent Wet	COPPER Per Cent	INSOL. Per Cent	ZINC Per Cent	SULPHUR Per Cent	IRON Per Cent	LIME Per Cent	Per Cent	Per Cent	VALUE GOLD
A.B. Dalton #1 489' 490½						2.2						
A.B. Dalton #1 491¼-491 3/4						3.1						
A.B. Dalton #1 494-496						1.9						

Remarks

Charges $ 3.00

J. V. Sadler

A PROGRESS REPORT ON THE
INDIAN CREEK PROJECT, GRAINGER COUNTY,
TENNESSEE FOR JANUARY, 1957

EXTRA COPY
DMEA
RECEIVED FEB 25 1957

DATE	INITIALS	CODE

By: W.T. Hill

Docket No. 4381
Contract No. Idm-E 1002

During the month of January, four holes were drilled on the Indian Creek Project. D#3 was drilled 300' northeast of D#2. The hole collared in the Kingsport formation and was drilled to a depth of 386 feet. The results are summarized below:

Depth	Formation or Member	Key Horizon Markers	Zinc Mineralization	Remarks
0'-20'	Overburden	—	—	—
20'-133'	Kingsport dolomite	—	110-111@.9% Zn.	Medium gray dolomite, occassional crackle breccia.
		—	Tr.@119',123' 126-127 @1.00% Zn.	
133'-265'	Kingsport Limestone	—	Tr.@ 149	Recrystalline and dolomite; brecciated.
			204-208 @.85 Zn.	
265-386	Longview	base of re-xl unit @ 334'		Recrystalline, sandy; and fine dolomites near base.

D#4 was drilled 300' northeast of D#3. The hole collared in the Kingsport and was drilled to a depth of 356 feet. The results are summarized below:

Depth	Formation or Member	Key Horizon Markers	Zinc Mineralization	Remarks
0-115'	Overburded	—	—	—

115'-146'	Kingsport dolomite	---	133½-156' @.97% Zn.	dolomite in part brecciated.
146'-280'	Kingsport Limestone	--- ---	160-167½ @ 1.05% Zn. 198-200½ @ .4% Zn.	brecciated dolomite and recrystalline; very siliceous.
280-356	Longview dolomite	Base of re-xl unit 350'	331-333 @ 1.7% Zn.	Sand recrystalline and dolomite.

D#5 was drilled south 300' of D#4. The hole collared in the Mascot formation and was drilled to a depth of 475 feet. The results are summarized below:

Depth	Formation or Member	Key Horizon Markers	Zinc Mineralization	Remarks
0'-56'	Overburden	---	---	---
56'-86½'	Mascot fm.	CMBS @ 86½	---	crackled dolomite
86½'-300'	Kingsport dolomite	Kingsport oolite @ 143'	245-256½ @1.04% Zn. 259-274½ @.38% Zn. 285-290½ @ .3% Zn.	Brecciated dolomite
300'-427'	Kingsport limestone	---	328-338½ @ .27% Zn. 272-277 @ .56% 390½-396 @ .032% Zn.	Recrystalline brecciated.
427-475	Longview fm.	---	---	Recrystalline, sandy, semi fine grained dolomite.

M#1 (Mallicoat farm) was drilled 300 feet northeast of D#4. The hole collared in the Kingsport dolomite and was drilled to a depth of 254 feet. The results are summarized below:

Depth	Formation or Member	Key Horizon Markers	Zinc Mineralization	Remarks
0'-49'	Overburden	---	---	---
49'-112'	Kingsport dolomite	--- ---	--- ---	Unbrecciated dolomite.
112'-249'	Kingsport limestone	--- ---	--- ---	Limestone, recrystalline & dolomite
249'-254'	Longview fm.	---	---	Recrystalline & dolomite.

Drilling is now underway 300 feet southwest of M#1.

Form MF-104 (Rev. 5)
(April 1952)

Budget Bureau No. 42-R1036.5

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

PAID ON VOUCHER & SCHEDULE
PAYMENTS K- 41

Month of December, 1956 Docket No. DMEA 4381 Contract No. Idm-E 1002
Operator's Name B. H. Putnam Minerals Zinc
Address 512 Third Street Marietta, Ohio
Contract Amount, $40,530.00 Government Participation: 50 % Amount, $20,265.00

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	$3009.00	$9678.00	$12,687.00			
Bulldozing						
Crosscutting						
Drifting						
Reaming	158.00	610.00	768.00			
(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	----	22.50	22 22.50			
Payroll Taxes						
Liability Insurance						
Incidental Allowance @ 26¢/ft.	260.78	838.76	1,099.54			
(8) Contingencies (specify):						
TOTALS	$3427.78	$11149.26	$14,577.04	3427.78	11 149.26	14577.04

RECEIVED JAN 18 1957 DMEA

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

Date 12-31-56 *Payee B. H. Putnam

Per [signature] Title General Superintendent

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

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

(Instructions on reverse)

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

$ 1713.89

Signature Helen R. Miller
(Authorized Certifying Officer)

Date JAN 16 1957 Vou. No. 0
(See other side)

1713.89

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. E1002 in accordance with the terms of the contract.

Signature V. J. Lynch Title MINING ENGINEER U. 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 3IF-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 4381 Contract No. Idm-E 1002
Operator's Name B. H. Putnam Minerals Binc
Address 512 Third Street Marietta, Ohio

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	Foot	$3009.00	1003	$12687.00	4229	$3.00	12,000	$3.00
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Reaming	Foot	158.00	79	768.00	384	$2.00	600	$2.00
TOTAL DISTRIBUTED COSTS		$3167.00		$13455.00				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc								
TOTAL COSTS		$3167.00		$13455.00				$13455.00

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

Date Dec. 31, 1956 Operator B. H. Putnam

Per William T. Wise Title General 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)

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

Invoice

Marietta, Ohio

RECEIVED JAN 2 1957

To B. H. Putnam, Appre
512 Third Street
Marietta, Ohio

December 31, 1956

In Account With

PUTNAM DRILLING COMPANY

512 Third Street | P. O. Box 647 | Phone FR 4-6761

Statement for drilling Indian Creek Project DMEA Contract No. 4381 for December

Core Hole No. A. H. Dalton #1

Footage Drilled	601'	@ $3.00	$1803.00
Footage Reamed	79'	@ $2.00	158.00
Cementing Hole			15.00
			$1976.00

I hereby certify that to the best of my knowledge and belief the above invoice is correct and just and in accordance with the bid submitted by Putnam Drilling Company.

B. H. Putnam, Operator

By: William T. Hill
William T. Hill
General Superintendent

Invoice

Marietta, Ohio

To B. H. Putnam, Appre
512 Third Street
Marietta, Ohio

December 31, 1956

In Account With

PUTNAM DRILLING COMPANY

512 Third Street | P.O. Box 647 | Phone FR 4-6761

Statement for drilling Indian Creek Project DMRA Contract No. 4381 for December.

Core Hole No. A. B. Dalton #2

Footage Drilled	402'	@ $3.00/ft.	$1206.00

I hereby certify that to the best of my knowledge and belief the above invoice is correct and just and in accordance with the bid submitted by Putnam Drilling Company.

B. H. Putnam, Operator

By: William T. Hill
William T. Hill
General Superintendent

A PROGRESS REPORT ON THE
INDIAN CREEK PROJECT, GRAINGER COUNTY,
TENNESSEE FOR DECEMBER, 1956

By: W. T. Hill

Docket No. 4381
Contract No. Idm-E 1002

During the month of December, two holes were drilled on the Indian Creek Project. D#1 (Dalton farm) was drilled 600' northeast of SC#2. The hole collared in the Maccot formation and was drilled to a depth of 601 feet. The results are summarized below:

Depth	Formation or Member	Key Horizon Markers	Zinc Mineralization	Remarks
0'-17'	Overburden	—	—	—
17'-211½'	Maccot fm. Sm	Upper CM as @ 30'; Double oolite zone @ 170' & 182'. The "CM" @ 211½'.	Trace Zns. @ 101'	Light to medium gray dolomite with some dark gray beds. Some "crackle breccia."
211½'-394½'	Kingsport dolomite	Kingsport oolite @ 365'.	Est. 1% Zns. from 241½'-242'; Zns. shines @ 251', 259'.	Light, medium, and dark gray dolomite with some semi-recrystalline. Very little brecciation.
394'-540'	Kingsport limestone	"S" bed from 470'-506', "T" bed from 506'-525', "U" bed from 525'-540'.	7' of 1.24% Zns. 489'-496', trace Zns. @ 499½'.	Alternate beds of limestone, dolomite and recrystalline, with secondary chert. Some "crackle" and rubble breccia.

540'-601'	Longview dolomite	——	——	Dolomite, recrystalline and chert.

Dalton hole #2 (D-2) was drilled 600 feet southwest of D#1. The hole collared in the Kingsport formation and was drilled to a depth of 402 feet. The results are summarized below:

Depth	Formation or Member	Key Horizon Markers	Zinc Mineralization	Remarks
0'-88'	Overburden	——	——	——
88'-187'	Kingsport dolomite	——	——	Light, medium and dark gray dolomite.
187'-335'	Kingsport limestone	——	ns. shines @ 280', 295½', 296'.	Dolomite and recrystalline.
225'-402'	Longview dolomite	——	——	Mostly recrystalline with beds of chert and dolomite.

The mineralization in D#2 appears to be equivalent stratigraphically to that in D#1. Drilling is now underway 300 feet northeast of D#2.

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 4381 Contract No. Idm-E 1002
Operator's Name B. H. Putnam Minerals Zinc
Address 512 Third Street, Marietta, Ohio
Contract Amount, $ 40,530.00 Government Participation: 50 % Amount, $ 20,265.00

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	$4284.00	$5394.00	$9678.00			
Bulldozing						
Crosscutting						
Drifting						
Reaming	366.00	244.00	610.00			
(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	16.50	22.50			
Payroll Taxes						
Liability Insurance						
Incidental Allowance @ 26¢/ft.	371.28	467.48	838.76			
(8) Contingencies (specify):						
TOTALS	$5027.28	$6121.98	$11,149.26	5027.28	6121.98	11,149.26

RECEIVED DEC 14 1956 D.M.E.A.

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

Date Nov. 30, 1956 *Payee B. H. Putnam

Per [signature] Title General Sup.

*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:

$ 2513.64

Signature [signature]
(Authorized Certifying Officer)

Date DEC 11 1956 Vou. No. 21
(See other side)

2-

2513.64

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. E1002 in accordance with the terms of the contract.

Signature V. J. Lynch Title MINING ENGINEER U.S. BUREAU OF MINES Date DEC 10 1956

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Robert A. Lawrence Title EXECUTIVE OFFICER DMEA REGION V Date DEC 11 1956

MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

RECEIVED DEC 4 1956

Month of November 1956 Docket No. DMEA 4381 Contract No. Idm-E-1002
Operator's Name B. H. Putnam Minerals Zinc
Address 512 Third Street, Marietta, Ohio

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	Foot	$4284.00	1428	$9678.00	3226	$3.00	12,000	$3.00
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Reaming	Foot	366.00	183	610.00	427	$2.00	600	$2.00
TOTAL DISTRIBUTED COSTS		$4650.00		$10288.00				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		$4650.00		$10288.00				$10,288.00

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

Date Nov. 30, 1956 Operator B. H. Putnam

Per W. T. Kelly Title General Sup.

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

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

Invoice

Marietta, Ohio

To B. H. Putnam, Appro
512 Third Street
Marietta, Ohio

November 30, 1956

RECEIVED DEC 14 1956 D.M.E.A.

In Account With

PUTNAM DRILLING COMPANY

512 Third Street P.O. Box 647 Phone FR 4-6761

Statement for drilling Indian Creek Project DMEA Contract No. 4381 for November, 1956.

Core Hole No. LH#5

Footage Drilled	721'	@ $3.00	$2,163.00
Footage Reamed	183'	@ $2.00	366.00
			2,529.00

I hereby certify that to the best of my knowledge and belief the above invoice is correct and just and in accordance with the bid submitted by Putnam Drilling Company.

B. H. Putnam, Operator

By: William T. Hill
William T. Hill
General Supertindent

Invoice

Marietta, Ohio

DEC 14 1956

To B. H. Putnam, Appro
512 Third Street
Marietta, Ohio

November 30, 1956

In Account With

PUTNAM DRILLING COMPANY

512 Third Street | P.O. Box 647 | Phone FR 4-6761

Statement for drilling Indian Creek Project DMRA Contract No. 4381 for November.

Core Hole No. SC#2

Footage Drilled	707'	@ $3.00	$2121.00

I hereby certify that to the best of my knowledge and belief the above invoice is correct and just and in accordance with the bid submitted by Putnam Drilling Company.

B. H. Putnam, Operator

By: William T. Hill
William T. Hill
General Superintendent

RECEIVED
DEC 14 1956

Telephone EMpire 3-3302

Hand Sample Serial 7049-54

Mine B. H. Putnam

ASSAY REPORT

UNION ASSAY OFFICE, Inc.

J. V. SADLER, President
A. C. SELBY, Vice-Pres. & Treas.
LILY M. HOTTINGER, Secretary

Salt Lake City 10, Utah

Nov. 20, 1956

RESULTS PER TON OF 2000 POUNDS

NO.	GOLD Ozs. per Ton	SILVER Ozs. per Ton	LEAD Per Cent Wet	COPPER Per Cent	INSOL. Per Cent	ZINC Per Cent	SULPHUR Per Cent	IRON Per Cent	LIME Per Cent	Per Cent	Per Cent	VALUE GOLD
LH-1-34-35						1.1						
LH-4-118½-119½						1.1						
LH-4-127-128						0.9						
LH-4-139-142						1.5						
LH-4-254-255						1.9						
LH-4-680½-681						1.6						

Remarks

Charges $ 6.00

A PROGRESS REPORT ON THE
INDIAN CREEK PROJECT, GRAINGER COUNTY
TENNESSEE FOR NOVEMBER, 1956

By: W. T. Hill

RECEIVED
DEC 14 1956
DMEA

Docket No. 4381
Contract No. Idm-E 1002

During the month of November, two holes were drilled on the Indian Creek Project.

LH#5 was drilled 300 feet southwest of LH#4. The hole was collared stratigraphically in the Mascot formation and was drilled to a depth of 721 feet. The results are summarized below:

Depth	Formation or Member	Key Horizon Markers	Zinc Mineralization	Remarks
0-14	Overburden	—	—	—
14-315	Mascot dolomite	Upper GM type sand @ 132, 144, 153.	Trace Zns @ 57'	Unbrecciated dolomite. Some faulting.
315-570	Kingsport dolomite	Base Kingsport dolomite @ 570'	—	Heavy brecciation from 500-570. Breccia mineralized with pyrite.
570-721	Kingsport limestone	Top Kingsport @ 570	—	Recrystalline interbedded with dolomite breccia

Due to the interesting occurrences of mineralization in SC#1 (Stearling Scearce property) and the large soil anomaly, a hole was drilled approximately 400' northeast of SC#1. The hole collared in the Mascot formation and was drilled to a depth of 707 feet. The results are summarized below:

Depth	Formation or Member	Key Stratigraphic Horizons	Zinc Mineralization	Remarks
0-42	Overburden	—	—	—
42-250	Mascot dolomite	Upper CM 55 @ 69, 83, 90	—	Unbrecciated dolomite. Some secondary chert seams.
250-476	Kingsport dolomite	Base of the Kingsport dolomite @ 476	Trace Zns. @ 357'	Fes shines from 266-476. Heavy breccia from 452-476.
476-675	Kingsport limestone	—	492-492½ ½% Zn. Traces @ 493, 494, 498, 499, 500-501½ 1% Zn. 502-503½ ½%. Traces 505, 506½.	Recrystalline and dolomite. Very siliceous.
675-709	Longview dolomite	—	—	Dolomite, interbedded with recrystalline & semi-recrystalline. Some oolite chert.

The mineralization encountered in SC#2 is not stratigraphically the same as that which occurs in SC#1.

Drilling is now underway on the Dalton farm. The drilling site is located 600 feet northeast of SC#2.

DMF-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-29

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of Sept. & Oct., 1956 Docket No. DMEA 4381 Contract No. Idm-E 1002
Operator's Name B. H. Putnam Minerals zinc
Address 512 Third St. Marietta, Ohio
Contract Amount, $40,530.00 Government Participation: 50% Amount, $20,265.00

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	$5394.00	0	$5394.00			
Bulldozing						
Crosscutting						
Drifting						
Reaming	244.00	0	244.00			
(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	16.50	0	16.50			
Payroll Taxes						
Liability Insurance						
Incidental Allowance @ 26¢/ft.	467.48	0	467.48			
(8) Contingencies (specify):						
TOTALS	$6121.98	0	$6121.98			

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

I certify that the above bill is correct and just and that payment therefor has not been received.
Date Nov. 9, 1956 *Payee B. H. Putnam
Per [signature] Title General Supt.

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

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

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of: 3060.99
$ 3060.99
Signature Helen R. Mullin (Authorized Certifying Officer)
Date NOV 21 1956 Vou. No. 79
(See other side)

1 9/17

(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. F1002 in accordance with the terms of the contract.

Signature Hermann Lerdau Title GEOLOGIST, U. S. G. S. Date NOV 15 1956

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Robert A. Lawrence Title EXECUTIVE OFFICER DMEA REGION V Date NOV 15 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
NOV 23 1956
D.M.E.A.

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

Month of Sept. & Oct 1956 Docket No. DMEA 4381 Contract No. Idm-E 1002
Operator's Name B. H. Putnam Minerals Zinc
Address 512 Third St. Marietta, Ohio

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	Foot	$5394.00	1798	$5394.00	1798	$3.00	12,000	$3.00
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Reaming	Foot	244.00	122	244.00	122	$2.00	600	$2.00
TOTAL DISTRIBUTED COSTS		$5638.00		$5638.00				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		$5638.00		$5638.00				$5638.00

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 Octo. 30, 1956 Operator B. H. Putnam

Per [signature] Title General Sup.

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)

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

INSTRUCTIONS

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

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

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

GPO 872894

Invoice

Marietta, Ohio

RECEIVED
NOV 23 1956

To E. H. Putnam, Appro
512 Third Street
Marietta, Ohio

October 30, 1956

In Account With

PUTNAM DRILLING COMPANY

512 Third Street | P.O. Box 647 | Phone FR 4-6761

Statement for drilling Indian Creek Project BMBA Contract No. 4381 for September and October, 1956.

Core Hole No. LH#2

Footage Drilled	363'	@ $3.00	$1,089.00

I herby certify that to the best of my knowledge and belief the above invoice is correct and just and in accordance with the bid submitted by Putnam Drilling Company.

E. H. Putnam, Operator

By: William T. Hill
William T. Hill
General Superintendent

Invoice

Marietta, Ohio

To B. H. Putnam, Appro
512 Third Street
Marietta, Ohio

October 30, 1956

In Account With

PUTNAM DRILLING COMPANY

512 Third Street | P.O. Box 647 | Phone FR 4-6761

Statement for drilling Indian Creek Project DWSS Contract No. 4381 for October.

Core Hole No. DH-9

Footage Drilled	725'	@ 03.00	$ 2,175.00
Footage Reamed	122'	@ 02.00	244.00
			$ 2,412.00

I hereby certify that to the best of my knowledge and belief the above invoice is correct and just and in accordance with the bid submitted by Putnam Drilling Company.

B. H. Putnam, Operator

By: William T. Hill
William T. Hill
General Superintendent

Invoice

Marietta, Ohio

To D. H. Putnam, Agent
512 Third Street
Marietta, Ohio

October 30, 1956

In Account With

PUTNAM DRILLING COMPANY

512 Third Street | P.O. Box 647 | Phone PA 4-6761

Statement for drilling Indian Creek Project WPA Contract No. [illegible]
for October.

Core Hole No. [illegible]

Footage Cored	720' @	13.00/ft.	[illegible]

I hereby certify that to the best of my knowledge and belief the above invoice is correct and just and in accordance with the bid submitted by Putnam Drilling Company.

D. H. Putnam, Operator

By: William T. Hill
General Superintendent

THE BROWN LABORATORY

2263 Broadway
GRAND JUNCTION, COLORADO

ANALYTICAL DEPARTMENT

PHONE 1543-W

CERTIFICATE OF ANALYSIS

TO

B. H. Putnam - Operator
P. O. Box 550
Maryville, Penn.

Date 10-24-56
Order No. 8029-S

Material: Ore Samples - 7
Received: 10-23-56
For: Analysis

Lab. No.	Your No.	Description	~~%ZnO~~ % Zn	%U_3O_8	%V_2O_5	%$CaCO_3$
8029-1	LH # 3	202-204	1.00			
8029-2	"	211-213	1.95			
8029-3	"	218-221.5	0.82			
8029-4	"	225.25-226	3.48			
8029-5	"	227.5-228.5	1.48			
8029-6	"	229-230	1.20			
8029-7	"	236-238	0.68			

Analyst.

P. O. Box 566

Phone 3-6449

THE NICHOLS LABORATORY

ANALYTICAL AND INDUSTRIAL CHEMISTS
SINCE 1900

KNOXVILLE (1) TENNESSEE

October 17, 1956

Received: 10-11-56
Sample: Ore
From: Putnam Mining Company

Marks	Zinc
LM #3 204 1/2 - 206 1/2	.72
LM #3 208 1/2 - 210 1/2	.72
LM #3 221 1/2 - 222 1/2	1.84
LM #3 222 1/2 - 224 1/2	7.38

THE NICHOLS LABORATORY

W. M. Nichols

W. M. NICHOLS

A PROGRESS REPORT ON THE
INDIAN CREEK PROJECT, GRAINGER COUNTY,
TENNESSEE FOR SEPTEMBER AND OCTOBER, 1956

By: W. T. Hill

Docket No. DMEA 4381
Contract No. Idm-E 1002

Drilling began on the Indain Creek Project on September 17, 1956 on the Leffew Heirs tract. Detailed logs and a map showing the hole locations are submitted with this report.

The first hole drilled was LH#2, which is located approximately 300' north of LH#1. The hole was collared stratigraphically near the top of the Kingsport dolomite and was drilled to a depth of 363'. The results are summarized below:

Depth	Formation or Member	Key Horizon Markers	Remarks
0'-80'	Overburden	---	---
80'-248'	Kingsport dolomite	A type CM sand @ 13'. Base of the Kingsport dolomite @ 248'.	Some scattered brecciation filled with gangue dolomite and occasional pyrite.
248'-355½'	Kingsport limestone	Probable Kingsport limestone base @ 355½'.	Mostly recrystalline and dolomite with a bed of limestone @ 346½'-354'. Dolomite heavily brecciated and sealed with white gangue dolomite or chert.
355½'-363'	Longview dolomite	Top of Longview dolomite @ 355½'?	Medium-gray siliceous dolomite.

The second drilling site (LH#3) is located approximately 300' south-south-west of LH#1. The hole was collared in the Mascot dolomite and was drilled to a depth of 725'. The results are summarized below:

Depth	Formation or Member	Key Stratigraphic Horizons	Zinc Mineralization	Remarks
0'-16'	Overburden	---	---	---
16'-280'	Mascot dolomite	Upper CM sands @ 96', 97', 98', 107'. Lower CM sands @ 242', 279'. The "CM" sand @ 279'.	Sporatic zinc mineralization from 155'-239'; 11' of .79% Zn. from 202'-213½'; 8' @ 2.76% Zn. from 218'-226'.	Numerous oxidized shears from 100'-155'. Breccia in the mineralized zone is mostly the "crackle" type with occasional zones of "rubble" breccia.
&				
280'-512'	Kingsport dolomite	Top of Kingsport dolomite @ 280'. CM type sand @ 314½' Kingsport oolite zone @ 267' & 279'.	----	Pyrite mineralization from 305'-390'; steep angled faults from 410'-565'.
512'-725'	Kingsport limestone	Top Kingsport limestone @ 512'.	---	Recrystalline and dolomite are occasionally brecciated. Mainly dolomite from 512' to 572'. A mixture of dolomite & recrystalline from 572'-645'. Mostly recrystalline from 645'-725'

LH#4 was located 300' southwest of LH#3 in order to investigate the extent of the ore in LH#3. The hole was collared in the Mascot dolomite and was drilled to a depth of 710'. The results are summarized below:

Depth	Formation or Member	Key Stratigraphic Horizons	Zinc Mineralization	Remarks
0'-4	Overburden	---	---	---
4'-310'	Mascot dolomite	Upper CM type sands @ 125¼', 145'. Lower CM type sands @ 256', 298', 311'. The "CM" sand @ 311'.	Scattered Zns. shines from 113'-163'. Shines from 254'-255'.	Brecciation is randomly distributed with both "crackle", and "rubble" types present.
310'-543'	Kingsport dolomite	Kingsport "oolite" zone @ 398', 406'.	---	Brecciation strong from 395'-543'. Breccia heavily mineralized with pyrite.
543'-710'	Kingsport limestone	---	Zns. shines from 680½'-681'.	543'-664' a mixture of dolomite and recrystalline from 542-664'. Mostly recrystalline from 665'-710'.

The mineralization encountered in LH#4 from 113'-163' does not appear to be stratigraphically the same as that which occurs in LH#3 from 155'-239'. The mineralized zone in LH#4 from 254'-255' appears to be an extension of the ore encountered in LH#3 from 218'-230'.

Drilling is now underway 300' southwest of LH#4 as indicated on the accompanying map. The present program is to continue drilling at the proposed drill sites until more can be learned of the nature and the extent of the mineralization.

Mr. L. T. Warshaw
Vice President
National Lead Company
111 Broadway
New York 6, New York

Re: Docket No. DMMA-4381 (Zinc)
National Lead Company
Indian Creek Area
Grainger County, Tennessee
Contract No. 14m-81002

Dear Mr. Warshaw:

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

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

We appreciate your interest and participation in the Defense Minerals Exploration Administration exploration program which has now been succeeded by the Office of Minerals Exploration program.

Sincerely yours,

WEGriswold/mr 11-3-58
Copy to: Docket
Dir. Head. File
Op. Committee
Mr. Bishop, USBM
Mr. Killegaard, USGS
Mr. B. H. Putnam, Assignor
Region V(2)
Mr. Jay Chambers
Chron.

FRED E. [illegible]

Acting Director

Mr. Benjamin H. Putnam
170 East Fourteen Street
Chicago 11, Illinois

Re: Docket No. DMI-4381 (Xim)
National Lead Company
Indian Creek Area
Grainger County, Tennessee
Contract No. 1dm-K1002

Dear Mr. Putnam:

Enclosed is a copy of a self-explanatory letter of today to the Operator under the above-cited contract.

This correspondence relates to the Assignment of Contract signed by you on April 15, 1957, under the Defense Minerals Exploration Administration program which has now been succeeded by the Office of Minerals Exploration program.

Sincerely yours,

Frank E. Johnson

Acting Director

Enclosure

WrGriswold/ar 11-3-58
Copy to: Docket
Dir Read. File
Op. Committee
Mr. Bishop, USBM
Mr. Kiilsgaard, USGS
Region V (2)
Mr. Chambers
Chron.

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

EXTRA COPY
D M E A
RECEIVED SEP 18 1957
DATE | INITIALS | CODE
200

September 16, 1957

Mr. Benjamin H. Putnam
P. O. Box 647
Marietta, Ohio

Re: Docket No. DMEA-4381 (Zinc)
Nat'l Lead Co., Assignee
Indian Creek Project
Grainger County, Tennessee
Contract No. Idm-E1002

Dear Mr. Putnam:

Some time ago, Mr. Burwell asked me if renewal of your performance bond for the Indian Creek (and also Thorn Hill) project is required. I referred this to our Washington office, and today received a reply stating, in part:

> "We are advised that, as the requirement of the bond is a necessary incident of the contract, the Government can not waive this security without some benefit to the Government for so doing. Therefore, as there is no such benefit, the premium for the bond should be paid.
>
> "As to the question who should pay the premium, the requirement of the bond is an obligation of both the assignor and the assignee, and they will have to resolve this question between themselves."

I regret the long delay in obtaining this answer, but the matter required legal clearance.

Sincerely yours,

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

RAL/mg
cc - Operating Committee (2)
Mr. V. J. Lynch
Mr. G. Bryan
File

Aud OFFICIAL FILE COPY
DMEA
RECEIVED JUL 22 1957
DATE | INITIALS | CODE
800

EXPLORATION PROJECT CONTRACT

NATIONAL LEAD CO., Assignee
Docket No. 4381

AMENDMENT No.3

It is agreed this 5th day of July 1957, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, and National Lead Company, that Exploration Project Contract Idm-E1002 (Docket No. DMEA-4381), dated August 31, 1956 and amended January 24 and May 13, 1957, is further amended, effective August 31, 1956 as follows:

In Annex I of the contract, there is hereby added the following parcel of land:

Name of Property Owner	County	Approximate Acreage
Lou Coffey (life estate)	Grainger	8

Legal description of this parcel is contained in an agreement, signed by Lou Coffey and six heirs, certified by D. S. Beeler, Henley R. Clement and Chas. V. Fisher, Notaries Public, and recorded on July 2, 1957 in Miscellaneous Deeds Book 19, page 233 in the Register's Office, Grainger County, Tennessee. A copy of this agreement is contained in the official docket file of DMEA pertaining to this contract. The tract is shown, without designation of owner-ship, on the map entitled "Map of Indian Creek Prospect", attached to the original contract.

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, nor the amount of any item designated as "maximum."

Executed in quintuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

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

NATIONAL LEAD COMPANY, (Assignee)

BY [signature]

Title VICE PRESIDENT

z

Government Copy

OFFICIAL FILE COPY
DMEA
RECEIVED MAY 27 1957

DATE	INITIALS	CODE
		800

EXPLORATION PROJECT
CONTRACT
NATIONAL LEAD COMPANY, Assignee

Docket No. DMEA-4381-Zinc.

AMENDMENT No.2

It is agreed this 13th day of May 1957, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, and National Lead Company, that Exploration Project Contract Idm-E1002 (Docket No. DMEA-4381), dated August 31, 1956, and amended January 24, 1957, be further amended as follows:

ARTICLE 3 is amended to provide for completion of the work on or before November 1, 1957, instead of June 1, 1957 as originally stated in the contract.

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, nor the amount of any item designated as "maximum."

Executed in sextuplicate the day and year first above written.

NATIONAL LEAD COMPANY

By [signature]

Title VICE PRESIDENT

THE UNITED STATES OF AMERICA

By [signature]
Executive Officer, DMEA
Field Team, Region V

Z

Audit copy

ASSIGNMENT OF CONTRACT

WHEREAS, the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and Benjamin H. Putnam of 170 N. Pearson Street, Chicago 11, Illinois, hereinafter called the "Assignor," entered into Exploration Project Contract Ldm-81001 (Docket No. DMEA-4381), dated August 31, 1954, hereinafter called the "Contract"; and

WHEREAS, National Lead Company, a New Jersey corporation, whose address is 111 Broadway, New York 6, N. Y., hereinafter called the "Assignee", has acquired the Assignor's interest in the land which is the subject of the Contract and the Assignee desires to complete the work under the Contract;

NOW THEREFORE, effective April 1, 1957, the Assignor, subject to acceptance by the Assignee and the consent of the Government, in consideration of the sum of One Dollar ($1.00) and other good and valuable consideration received from the Assignee does hereby assign, transfer, and convey to the Assignee all of its right, title, and interest in the Contract: Provided, That the Government shall make payment to the Assignor on all claims and vouchers for the Government's contribution to the costs of work performed under the Contract prior to said effective date, and upon payment thereof the Government shall be and is hereby released by the Assignor from all claims under the Contract.

The Assignor consents to all future amendments (including a termination agreement) and assignments of the Contract and waives notice thereof.

Dated this 15th day of April, 1957.

OFFICIAL FILE COPY
DMEA
RECEIVED APR 24 1957
DATE | INITIALS | CODE

Benjamin H. Putnam [Seal]
Benjamin H. Putnam (Assignor)

ASSIGNEE'S ACCEPTANCE

The Assignee hereby accepts the above Assignment and agrees to be bound by the terms, provisions, and conditions of the Contract. The Assignee expressly assumes and agrees to pay to the Government any

royalty that may have accrued and remain unpaid on the effective date of the assignment and that may accrue thereafter under the provisions of the Contract.

Dated this 17th day of April, 1957.

NATIONAL LEAD COMPANY (Assignee)

By [signature]

Title Vice President

I, J. J. Lawler, certify that I am the assistant secretary of the corporation named herein; that L. T. Warshow who signed this instrument on behalf of the corporation, was then a Vice President of said corporation; that said instrument 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.

J. J. Lawler (Corporate Seal)

GOVERNMENT'S CONSENT

The Government, this 3rd day of May, 1957, hereby consents to the above Assignment without releasing the Assignor from any of the terms, provisions, and conditions of the Contract, and any amendment (including a termination agreement) and assignment thereof.

THE UNITED STATES OF AMERICA

By [signature]
Administrator, Bureau Minerals
Exploration Administration

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

Re: Docket No. DMEA-4381 (Zinc)
National Lead Company, Assignee
of Benjamin H. Putnam
Indian Creek Project
Grainger County, Tennessee
Contract No. Idm-41002

Dear Mr. Laurence:

With reference to the cited project, we are enclosing the Finance Office, Field Team, and Operator's (Assignor) copies of the Assignment of Contract, which have been signed by the Administrator for the Government. Kindly forward the Operator's Copy (Assignor) to Mr. Benjamin H. Putnam.

An extra copy is also enclosed for the use of the Field Team.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee

WHGriswold/er 5/7/57

Enclosures

Copy to: Docket
Adm H File
Op. Committee
Mr. Bishop, USBM
Mr. Kiilsgaard, USGS
Mr. Jay Chambers, DMEA
Chron.

APPROVED:

Frank [illegible]
Member, Bureau of Mines

Thor H. Kiilsgaard
Member, Geological Survey

OFFICIAL FILE COPY
GOVERNMENT COPY
DMEA
RECEIVED FEB 1 1957

DATE	INITIALS	CODE

EXPLORATION PROJECT CONTRACT

BENJAMIN H. PUTNAM
Docket No.DMEA-4381

AMENDMENT No.1

It is agreed this 24th day of January 1957, ~~between~~ the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, and Benjamin H. Putnam, that Exploration Project Contract No. Idm-E1002 (Docket No. DMEA-4381) dated August 31, 1956, is amended, effective January 2, 1957 as follows:

In Annex I of the contract, there is hereby added the following parcel of land, shown on map entitled "Sketch Map of L. F. Mallicoat Farm, Grainter Co.,Tenn." attached hereto and made a part hereof, which parcel is further identified as follows:

Name of Property Owner	Approximate acreage
L. F. Mallicoat and Ida Mallicoat	150

******

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 fixed unit cost of any item of work.

Executed in sextuplicate the day and year first above written.

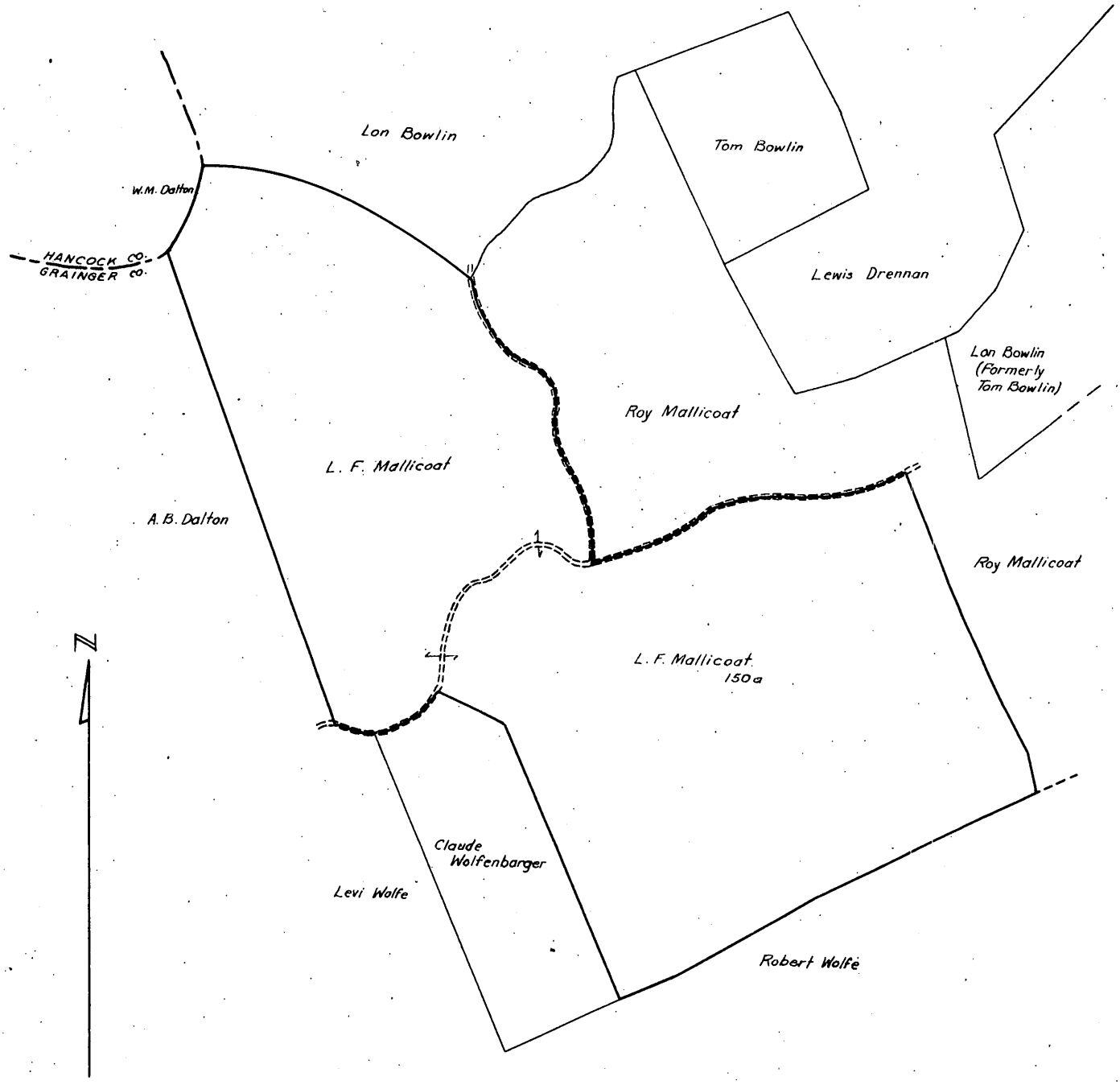
BENJAMIN H. PUTNAM

By [signature]

UNITED STATES OF AMERICA

By Robert A. Lawrence
Executive Officer,
Defense Minerals Exploration
Administration, Region V

Z



Scale: 1 inch = 660 feet

SKETCH MAP OF L. F. MALLICOAT FARM, GRAINGER CO., TENN.

U.S.D.A. - Soil Conservation Service - Aerial Photograph

AGREEMENT

This Agreement, made and entered into this 16 thday of March, 1956, by and between

L. F. Mallicoat and Ida Mallicoat his wife of Route 1, Thorn Hill Tennessee.

hereinafter referred to as Parties of the First Part, and B. H. PUTNAM, Chicago, Illinois, hereinafter referred to as Party of the Second Part.

Witnesseth:

First: That First Parties, for and in consideration of the sum of thirty seven 50/100 Dollars ($ 37.50) cash to them in hand paid by Second Party, the receipt of which is hereby acknowledged, do hereby grant unto Second Party, the exclusive right, at any time within three years from the date hereof, to purchase for the sum of One hundred fifty Dollars ($150.00) per acre, all of the minerals (including metallic and non-metallic ores, rock and substances, oil and gas), mineral interests, mineral rights and mining rights in and to the following described lands:

Situated in the 4 th Civil District of Grainger County, State of Tennessee, containing 150 acres, more or less, and bounded generally as follows:

On the North by the lands of W. N. Dalton and Lon Bowlin

On the East by the lands of Roy Mallicoat

On the South by the lands of Robert Wolf

On the West by the lands of A. B. Dalton and Cloud Wolfenburger

Second: During the term of this option or any extensions thereof, Second Party shall have the exclusive right to prospect and drill for minerals (as hereinbefore defined) contained in the lands herein optioned, with churn drills, diamond drills and/or other prospecting methods, provided the same be done in such a manner as to do the least damage to the surface of said lands commensurate with good prospecting practices. Second Party shall be liable for all actual damages done to growing crops and fences, as the result of said drilling.

Third: If this option is not exercised, Second Party agrees to fill up, or plug in a suitable manner, all drill holes, unless First Parties designate one or more of such holes to be left open for use as water wells, or other purpose of First Parties, in which event First Parties shall pay for the casing.

Fourth: In order to exercise said option Second Party shall give notice in writing to First Parties, either by delivering the same to them personally, or, by registered mail to their usual place of residence. Within thirty days after receiving such notice First Parties shall execute and deliver a general warranty deed to the Second Party, or any person designated by Second Party, said deed to convey all of the minerals (as hereinabove defined,) mineral interest, mineral rights and mining rights in and to said lands, free of all liens and encumbrances.

Upon receipt of said deed Second Party shall make payment to First Parties of a sum equivalent to One Hundred fifty ($ 150.00 per acre, (the acreage to be ascertained by instrumental survey made at the expense of Second Party) for the minerals (as hereinabove defined), mineral interests, mineral rights and mining rights in and to said lands.

Fifth: Second Party agrees to exercise such option within Three months from this date, or pay to First Parties Thirty seven and 50/100 Dollars ($ 37.50) each Three Months thereafter until said option is exercised or this agreement terminated.

Sixth: All machinery, equipment, tools, etc., taken upon said lands shall be deemed to be the property of Second Party, and in the event this option is not exercised, Second Party shall have the right during the term hereof, or any extensions thereof, and for a reasonable time thereafter, to remove all such machinery, tools, etc., from said lands.

Seventh: If this option is exercised, the Second Party shall have the free right to enter, at anytime and from time to time, upon the surface of said lands for the purpose of drilling and prospecting for, and mining and removing all of said minerals (as hereinabove defined) contained in said lands. Second Party shall also have the right to transport minerals (as hereinabove defined) from other lands of Second Party or third persons, over, under and across said lands, and to bring said minerals to the surface thereof and remove the same therefrom. It is agreed, however, that Second Party shall be liable to First Parties for actual damages that may occur to the surface of said lands or the improvements thereon, as the result of such drilling, prospecting and mining operations, or in the moving of minerals and materials across said surface.

Eighth: Payment of all moneys due under this option may be made, by cash or check, to L. F. Mallicoat at the above address.

made payable to _____ order and mailed _____ at _____ P. O.

Ninth: This agreement shall be binding upon and inure to the benefit of the parties hereto, their heirs, executors, administrators, successors and assigns, it being expressly understood that the second party shall have the right to assign this option to any person or corporation it sees fit.

In Witness Whereof the First Parties have hereunto set their hands on the day and year first above written.

Witnesses:

Chas. V. Fisher

Earl B. Jones

L. F. Mallicoat
L F. Mallicoat

Ida Mallicoat
Ida Mallicoat

2-265

State of Tennessee,

County of Grainger,

Personally appeared before me, Chas. V. Fisher, a Notary Public in and for Said County and State

the within named L. F. Mallicoat and Ida Mallicoat his wife

the bargainors, with whom I am personally acquainted, and who acknowledged that They executed the within instrument for the purposes therein contained.

Witness my hand and official seal at Grainger County, Tennessee, this 16 th day of March, 19 56

My Commission Expires 10/ 10/ 57

Chas. V. Fisher
Notary Public

State of Tennessee,

County of,

Personally appeared before me, , a Notary Public in and for Said County and State

the within named

the bargainor, with whom I am personally acquainted, and who acknowledged that executed the within instrument for the purposes therein contained.

Witness my hand and official seal at, Tennessee, this day of, 19.

My Commission Expires

Notary Public

State of Tennessee,

County of,

Personally appeared before me, , a Notary Public in and for Said County and State

the within named

the bargainor, with whom I am personally acquainted, and who acknowledged that executed the within instrument for the purposes therein contained.

Witness my hand and official seal at, Tennessee, this day of, 19.

My Commission Expires

Notary Public

No. 2-265

OPTION CONTRACT

TO

STATE OF TENNESSEE

Grainger COUNTY.

Register's Office

Received for record the 3rd day of May, A. D. 1956

at 9:10 o'clock A. M. Noted in Note Book F, page 34 and recorded in Book Miscellaneous, Vol. 18, page 453

Fee paid, $2.75

Witness my hand,

Alva Brady Register.

State Tax $

Clerk's Fee $

Total $

C O P Y

OFFICIAL FILE COPY
DMEA
RECEIVED FEB 1 1957

DATE	INITIALS	CODE
2-1	C	220
		800

B. H. PUTNAM OPERATOR
Maryville, Tennessee

January 16, 1957

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

Dear Mr. Laurence:

Our drilling program on the Indian Creek project (Docket No. DMEA-4381) has revealed the presence of zinc mineralization on the northeast portion of the properties on which application for DMEA aid was made. The drilling shows that the mineralization increases in intensity and grade from southwest to northeast with the best holes occuring adjacent to the northeast property line. In order to determine the extent and commercial possibilities of this area, we will have to drill some holes on the adjacent L. F. Mallicoat farm. I would like to request that this farm be added to the present program. I have included with this request copies of the option agreement and a map showing the Mallicoat farm.

Sincerely,

s/ William T. Hill

General Superintendent

copied by ZM

cc: 3 to Opr. Com.
Laurence
Lynch

DMEA Form 14

Contract No. Idm-E 1002

Docket No. 4381

DEPARTMENT OF THE INTERIOR

~~XXXXX~~ Additional release

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
August 31, 1956	V	Tennessee	Zinc

Name and Address of Operator: National Lead Co.
170 E. Pearson Street
Chicago 11, Illinois

	Reserve	Obligation
Prior Amount	0	20,064.00
Increase	0	0
Decrease	~~0~~	~~16.50~~
Revised Amount	0	20,047.50

Remarks:

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

Date delivered to Bureau of Mines, Washington 9/23/58

22848

DMEA Form 14

Contract No. Idm-E 1002

Docket No. 4381

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
August 31, 1956	V	Tennessee	Zinc

Name and Address of Operator: ~~Benjamin H. Putnam~~ National Lead Co.
170 E. Pearson Street
Chicago 11, Illinois

	Reserve	Obligation
Prior Amount	0	20,265.00
Increase	0	0
Decrease	0	201.00
Revised Amount	0	20,064.00

Remarks:

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

Date delivered to Bureau of Mines, Washington 5/20/58

22845

Contract No. Idm-E 1002

Docket No. 4381

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
August 31, 1956	V	Tennessee	Zinc

Name and Address of Operator: Benjamin H. Putnam
170 E. Pearson Street
Chicago 11, Illinois

	Reserve	Obligation
Prior Amount	$20,265.00	0
Increase	0	$20,265.00
Decrease	20,265.00	0
Revised Amount	0	$20,265.00

Remarks:

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

Date Delivered to Bureau of Mines, Washington 9/26/56

98963

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.
ROOM 13 POST OFFICE BLDG.
KNOXVILLE 2, TENN.

RECEIVED
SEP 14 1956

September 12, 1956

Registered Mail
Air Mail

Memorandum

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

From: Executive Officer, DMEA Field Team, Region V

Subject: Docket No. DMEA-4381 (Zinc)
B. H. Putnam, Chicago, Illinois
Indian Creek Area, Grainger County, Tennessee

Enclosed is Performance Bond, in the amount of $20,265.00, received from the Applicant. Copies of the contract have been given to the Applicant's field geologist, for execution.

Robert A. Laurence

Robert A. Laurence

Enclosure

STANDARD FORM 25
REVISED NOVEMBER 1950
PRESCRIBED BY GENERAL
SERVICES ADMINISTRATION
GENERAL REGULATION NO. 5

PERFORMANCE BOND

(*See Instructions on Reverse*)

RECEIVED SEP 14 1956

DATE BOND EXECUTED August 31, 1956

PRINCIPAL

B. H. PUTNAM, 512 Third Street, Marietta, Ohio

SURETY AMERICAN SURETY COMPANY OF NEW YORK, a New York Corporation having a usual place of business at Columbus, Ohio

PENAL SUM OF BOND (*express in words and figures*)	CONTRACT NO.	DATE OF CONTRACT
Twenty Thousand Two Hundred Sixty Five and No/100 - - - - - - -($20,265.00)- - - - - - - - - - - - - -	I.D.M.-E 1002	August 31, 1956

KNOW ALL MEN BY THESE PRESENTS, That we, the PRINCIPAL and SURETY above named, are held and firmly bound unto the United States of America, hereinafter called the Government, in the penal sum of the amount stated above, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the principal entered into a certain contract with the Government, numbered and dated as shown above and hereto attached;

NOW THEREFORE, if the principal shall well and truly perform and fulfill all the undertakings, covenants, terms, conditions, and agreements of said contract during the original term of said contract and any extensions thereof that may be granted by the Government, with or without notice to the surety, and during the life of any guaranty required under the contract, and shall also well and truly perform and fulfill all the undertakings, covenants, terms, conditions, and agreements of any and all duly authorized modifications of said contract that may hereafter be made, notice of which modifications to the surety being hereby waived, then, this obligation to be void; otherwise to remain in full force and virtue.

IN WITNESS WHEREOF, the above-bounden parties have executed this instrument under their several seals on the date indicated above, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

In Presence of:

WITNESS		INDIVIDUAL PRINCIPAL	
1. John B. Lemmond	as to	B. H. Putnam	[SEAL]
2.	as to		[SEAL]
3.	as to		[SEAL]
4.	as to		[SEAL]

WITNESS		INDIVIDUAL SURETY	
1.	as to		[SEAL]
2.	as to		[SEAL]

Attest:	CORPORATE PRINCIPAL	
	BUSINESS ADDRESS	
	BY	AFFIX CORPORATE SEAL
	TITLE	

Attest:	CORPORATE SURETY: AMERICAN SURETY COMPANY OF NEW YORK	
	BUSINESS ADDRESS: 17 South High Street, Columbus, Ohio	
M. J. Scott	BY: M. L. Jenks	AFFIX CORPORATE SEAL
M. J. Scott, Res. Asst. Secy.	TITLE: M. L. Jenks, Res. Vice Pres.	

STANDARD FORM 25
NOVEMBER 1950 EDITION

16—30441-2

The rate of premium on this bond is $10.00 per thousand.

Total amount of premium charged, $ 202.65

(The above must be filled in by corporate surety)

CERTIFICATE AS TO CORPORATE PRINCIPAL

I, ..., certify that I am the ..... secretary of the corporation named as principal in the within bond; that .....,

who signed the said bond on behalf of the principal, was then ..... of said corporation; that I know his signature, and his signature thereto is genuine; and that said bond was duly signed, sealed, and attested for and in behalf of said corporation by authority of its governing body.

..... [CORPORATE SEAL]

INSTRUCTIONS

1. This form shall be used for construction work or the furnishing of supplies or services, whenever a performance bond is required. There shall be no deviation from this form except as authorized by the General Services Administration.

2. The surety on the bond may be any corporation authorized by the Secretary of the Treasury to act as surety, or two responsible individual sureties. Where individual sureties are used, this bond must be accompanied by a completed Affidavit of Individual Surety for each individual surety (Standard Form 28).

3. The name, including full Christian name, and business or residence address of each individual party to the bond shall be inserted in the space provided therefor, and each such party shall sign the bond with his usual signature on the line opposite the scroll seal, and if signed in Maine or New Hampshire, an adhesive seal shall be affixed opposite the signature.

4. If the principals are partners, their individual names shall appear in the space provided therefor, with the recital that they are partners composing a firm, naming it, and all the members of the firm shall execute the bond as individuals.

5. If the principal or surety is a corporation, the name of the State in which incorporated shall be inserted in the space provided therefor, and said instrument shall be executed and attested under the corporate seal as indicated in the form. If the corporation has no corporate seal the fact shall be stated, in which case a scroll or adhesive seal shall appear following the corporate name.

6. The official character and authority of the person or persons executing the bond for the principal, if a corporation, shall be certified by the secretary or assistant secretary, according to the form herein provided. In lieu of such certificate there may be attached to the bond copies of so much of the records of the corporation as will show the official character and authority of the officer signing, duly certified by the secretary or assistant secretary, under the corporate seal, to be true copies.

7. The date of this bond must not be prior to the date of the instrument in connection with which it is given.

U. S. GOVERNMENT PRINTING OFFICE 16—30441-2

Form G 337

AUTHORITY OF SIGNERS FOR SURETY

RECEIVED
SEP 14 1956

Transcripts from the Record Book of the Board of Trustees

American Surety Company of New York

"A meeting of the Board of Trustees of AMERICAN SURETY COMPANY OF NEW YORK was held at the office of the Company, No. 100 Broadway, New York City, on Tuesday, April 17, 1956 at twelve o'clock noon.

* * * *

"Upon motion duly made, seconded and unanimously carried, the following Resident Officers were elected, to hold office until their respective successors shall have been duly chosen and shall qualify, or until they shall resign or be removed as provided in the By-Laws:

PLACE	RESIDENT VICE-PRESIDENTS	RESIDENT ASSISTANT SECRETARIES
COLUMBUS, OHIO	F. A. BURNETT	F. A. BURNETT
	M. L. JENKS, JR.	M. L JENKS, JR.
	E. M. KELLETT	E. M. KELLETT
	B. M. PENNELL	B. M. PENNELL
	M. E. RUDEN	M. E. RUDEN
	JOHN B. TWYFORD	M. J. SCOTT

* * * *

"The following resolution was duly adopted:

"RESOLVED, That the Chairman of the Board, the President, the First Vice President, the Vice Presidents and the Resident Vice Presidents be, and they hereby are, and each of them is hereby authorized and empowered to execute and deliver any and all surety bonds and undertakings for or on behalf of the Company, in its business and in accordance with its charter; such bonds and undertakings to have in every instance, however, the seal of the Company affixed thereto, and to be attested by the signature of the Secretary, an Assistant Secretary, or a Resident Assistant Secretary of this Company."

* * * *

STATE OF NEW YORK,
} ss.:
COUNTY OF NEW YORK,

I, E. H. Judson Assistant Secretary of AMERICAN SURETY COMPANY OF NEW YORK, do hereby certify that the foregoing transcripts from the Record Book of the Board of Trustees of AMERICAN SURETY COMPANY OF NEW YORK are correct transcripts from said Record Book; I further certify that the foregoing transcript of resolution is a just, true, correct and complete copy of the original thereof.

Given under my hand and the seal of the Company, at New York, N. Y., on August 31, 1956.

E H Judson
ASSISTANT SECRETARY.

Government's Copy

RECEIVED
SEP 24 1956

MF-200
(Revised June 1954)

Docket No. DMEA 4381

Commodity Zinc

Contract No. Idm-E 1002

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

EXPLORATION PROJECT CONTRACT[1]

It is agreed this AUG 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] Benjamin H. Putnam, whose mailing address is 170 E. Pearson St. Chicago 11, Illinois, 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 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 Tennessee, County of Grainger, and is described in Annex I.[3]

(b) The Operator represents and undertakes that:

(1) The Operator is the [4] Optionee 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: Performance Bond in lieu of Consent to Lien

(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 November 1, 1956 shall commence the work, and on or before June 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 8) in a sum equal to or more than the estimated total allowable cost set forth in Exhibit "A."~~ See Article 13.

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 $ 40,530.00 The Government shall contribute 50 percent of the allowable costs as they are incurred in a total sum not in excess of $ 20,265.00 : *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 the excess 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~~ 15 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.

(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) In Article 3, the words following the reference to Article 10 are deleted, and the following words are substituted: "shall have completed the work."

(b) Categories (2) through (7) of Article 6(a) are deleted.

(c) In addition to the costs of work estimated in Exhibit "A" by categories of actual costs, the costs of work requirements specified in Exhibit "A" as "Fixed Unit Costs" are allowable costs of the project. The Government will contribute to the fixed unit costs as work units are performed. A "Fixed Unit Cost" is an agreed price for each unit of work to be performed regardless of costs incurred by the Operator. Costs set forth in Exhibit "A" include all allowable costs of the work to be performed under the contract.

(d) In Article 6(a), that part of the last sentence in the first paragraph commencing after the semicolon, is deleted.

(e) In Article 6(c), the reference to Article 9 is changed to Article 8.

(f) In Article 8(b): The word "minerals" includes limestone and dolomite products produced in processing ore.

Executed in sextuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

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

BENJAMIN H. PUTNAM
(Operator)

By Arthur L. Putnam

I, ..., certify that I am the ..... secretary of the corporation named as Operator herein; that ..... who signed this contract on behalf of the Operator, was then ..... 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.

.....

[CORPORATE SEAL]

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

EXPLORATION PROJECT CONTRACT
BENJAMIN H. PUTNAM
DOCKET NO. DMEA-4381

RECEIVED
SEP 24 1956

ANNEX I

The land referred to in Article 2 comprises a total of 378 acres, more or less, and consists of six parcels of land with respect to which the Operator, by agreements with the fee owners, has the exclusive right to prospect and drill for minerals and exclusive option to purchase the mineral rights.

The parcels are identified as follows:

Claude Wolfenbarger	18 acres
John and Ida Wolfenbarger	50 acres
Starling Scearce	35 acres
A. B. and Pearley (Pearlie) Dalton	50 acres
Henry L. and Martha Wolfe, et al.	82 acres
(Leffew Heirs) Cleo Cope, et al.	143 acres

The legal descriptions of the parcels are contained in separate certificates of title covering each parcel, certified by D. S. Beeler, attorney, Rutledge, Tennessee. Copies of each certificate are contained in the official docket file of the Defense Minerals Exploration Administration, and the descriptions therein are incorporated herein by reference.

Copies of the following agreements under which the Operator holds the land are contained in the official docket file of DMEA pertaining to this Contract and are recorded in the Register's Office, Grainger County, Tennessee:

Claude Wolfenbarger - dated January 21, 1956, recorded in Miscellaneous Book, Volume 18, page 351.

John and Ida Wolfenbarger - dated January 17, 1956, recorded in Miscellaneous Book, Volume 18, page 358.

Starling Scearce - dated January 18, 1956, recorded in Miscellaneous Book, Volume 18, page 354.

A. B. and Pearley Dalton - dated January 27, 1956, recorded in Miscellaneous Book, Volume 18, page 353.

Henry L. Wolfe and Martha Wolfe, et al. (heirs of S. F. Wolfe) - dated February 29, 1956, recorded in Miscellaneous Deeds Book, Volume 18, page 443, also page 445.

Cleo and Wallace Cope, et al. - dated January 18, 1956, recorded in Miscellaneous Book, Volume 18, page 342.

All of the above-cited land parcels are shown on the attached map entitled "Map of Indian Creek Prospect."

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 ten 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 ten 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 ten 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.

RECEIVED
SEP 24 1956

EXPLORATION PROJECT CONTRACT
BENJAMIN H. PUTNAM
DOCKET NO. DMEA-4381

EXHIBIT "A"

Description of the Work

The purpose of the project is to explore for ores of zinc by diamond drilling, plus such overburden drilling as may be necessary. The holes to be drilled are roughly indicated on the attached map entitled "Map of Indian Creek Prospect." The locations, inclinations, and depths of all holes shall be subject to prior Government approval. The hole locations shown on the map may be changed by the Operator in the light of results obtained as the work progresses, if such change is approved in advance by the Government.

It is estimated that twenty-three diamond drill holes, the depths of which will vary from approximately 400 feet to approximately 600 feet, will be required to accomplish the purpose of the project. All holes shall be drilled to the bottom of the Kingsport limestone, the underlying member of the Kingsport formation, unless the Government approves modification of such exploratory method. The total footage drilled shall not exceed 12,000 feet.

All drill core shall be properly logged and made available to the Government for examination. All significantly mineralized units of core shall be properly sampled and assayed for zinc; no sample shall be taken representing more than five feet of core length. Such assays, together with proper logs of drill holes, shall be reported to the Government, together with plan maps and sections showing the progress of the work. Diamond drilling shall be done with AX size, or larger, coring bits.

The project work shall be supervised at all times, by a competent engineer or geologist.

Estimated Cost of the Project

Actual Costs

Category (1) Independent Contracts

Overburden drilling and diamond drilling,
12,000 feet @ $3.00/ft. $36,000.00

Reaming - 600 feet	@ $2.00/ft.	$ 1,200.00	$37,200.00

The above rates cover all charges for reaming, cementing, water supply, casing, change of location, and all other charges which may be incurred by the diamond drill contractor. Casing left in holes at Option of the Operator shall not be a charge under the contract.

Categories (2) through (7)	None		-

Fixed Unit Costs (See Artice 13)

Incidental allowance 1/ for each foot of drilling completed, 12,000 feet	@ $0.26/ft.	$ 3,120.00	
140 Samples of drill core to be assayed	@ $1.50/sample	210.00	3,330.00
Estimated Total Cost of the Project			$40,530.00
Government's Participation @ 50%			$20,265.00

1/ Includes all costs of the project whatsoever that are not included under Category (1) Independent Contracts and the fixed unit costs for assaying, and is in lieu of Categories (2) through (7) of Article 6(a) of the Contract.

Contract No. Idm-E 1002

Docket No. 4381

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
August 31, 1956	V	Tennessee	Zinc

Name and Address of Operator: Benjamin H. Putnam
170 E. Pearson St.
Chicago 11, Illinois

	Reserve	Obligation
Prior Amount	0	0
Increase	$20,265.00	0
Decrease	0	0
Revised Amount	$20,265.00	0

Remarks:

(Name)

Allen S. Daken, Chief
Operations Control and
Statistics Division

(Title)

Date Delivered to Bureau of Mines, Washington 8/31/56

98963

Company	National Oil & Gas Development Corporation
Farm	Hollenbeck
Well No.	1
County	Allegheny
State	Pennsylvania
Commenced	8-27-63
Completed	8-29-63
Rotary Table Elev.	Bridge Below Ft.
Total Depth	1,910 Ft.
Casing Record	8 5/8" - 20 Ft.
	4 1/2" - 1,910 Ft.
	Dropped 4 1/2" - 1,910

FORM 100-1-Drilled and Cored Well Record-Pittsburgh Pa. 1946

Depth	Formation
0'	Surface
10'	Sand
20'	Shale
30'	Sand
40'	Shale
50'	Sand
60'	Shale
70'	Sand
80'	Shale
90'	Sand
100'	Shale
110'	Sand
120'	Shale
130'	Sand
140'	Shale
150'	Sand
160'	Shale
170'	Sand
180'	Shale
190'	Sand
200'	Shale
210'	Sand
220'	Shale
230'	Sand
240'	Shale
250'	Sand
260'	Shale
270'	Sand
280'	Shale
290'	Sand
300'	Shale
310'	Sand
320'	Shale
330'	Sand
340'	Shale
350'	Sand
360'	Shale
370'	Sand
380'	Shale
390'	Sand
400'	Shale
410'	Sand
420'	Shale
430'	Sand
440'	Shale
450'	Sand
460'	Shale
470'	Sand
480'	Shale
490'	Sand
500'	Shale
510'	Sand
520'	Shale
530'	Sand
540'	Shale
550'	Sand
560'	Shale
570'	Sand
580'	Shale
590'	Sand
600'	Shale
610'	Sand
620'	Shale
630'	Sand
640'	Shale
650'	Sand
660'	Shale
670'	Sand
680'	Shale
690'	Sand
700'	Shale
710'	Sand
720'	Shale
730'	Sand
740'	Shale
750'	Sand
760'	Shale
770'	Sand
780'	Shale
790'	Sand
800'	Shale
810'	Sand
820'	Shale
830'	Sand
840'	Shale
850'	Sand
860'	Shale
870'	Sand
880'	Shale
890'	Sand
900'	Shale
910'	Sand
920'	Shale
930'	Sand
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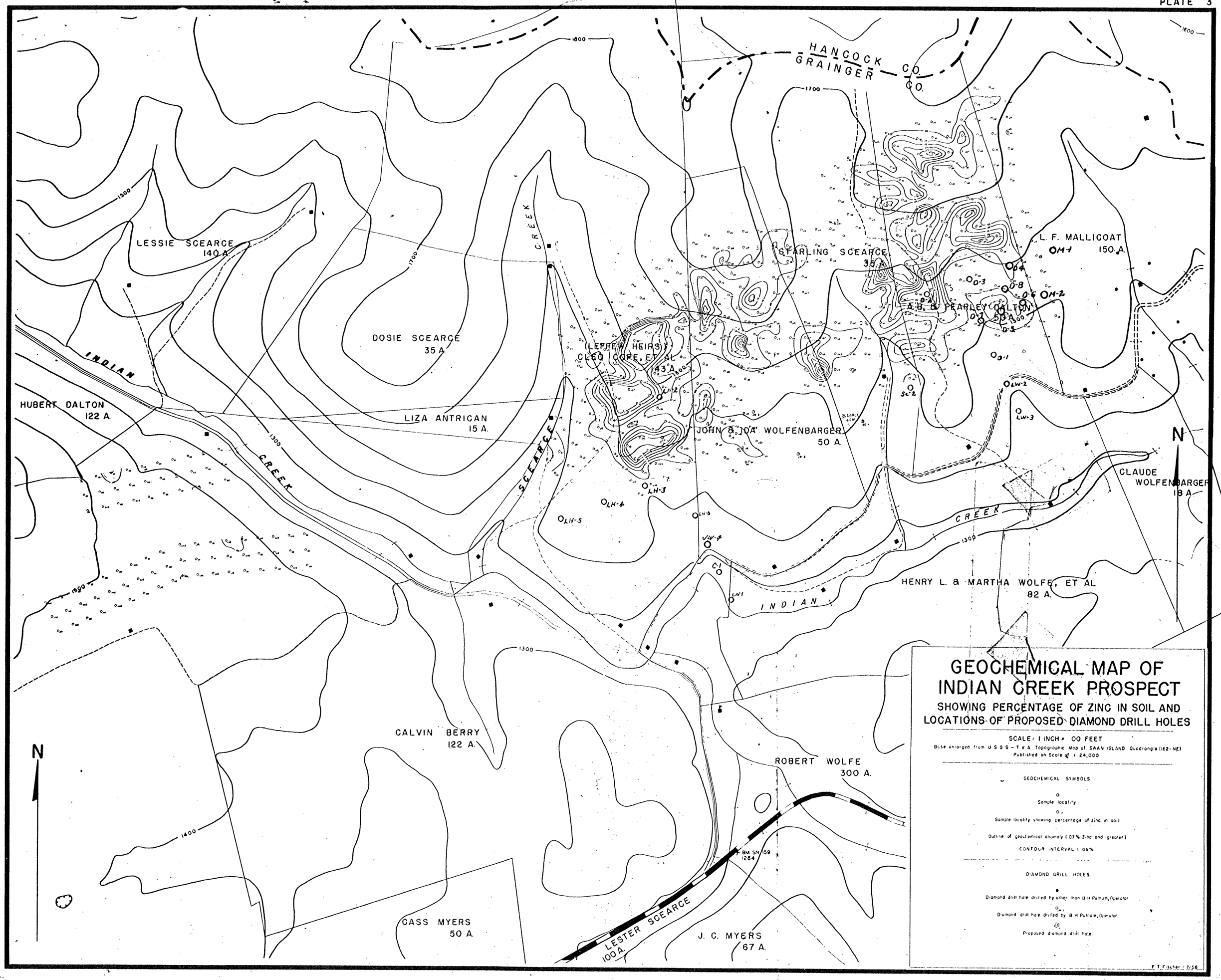
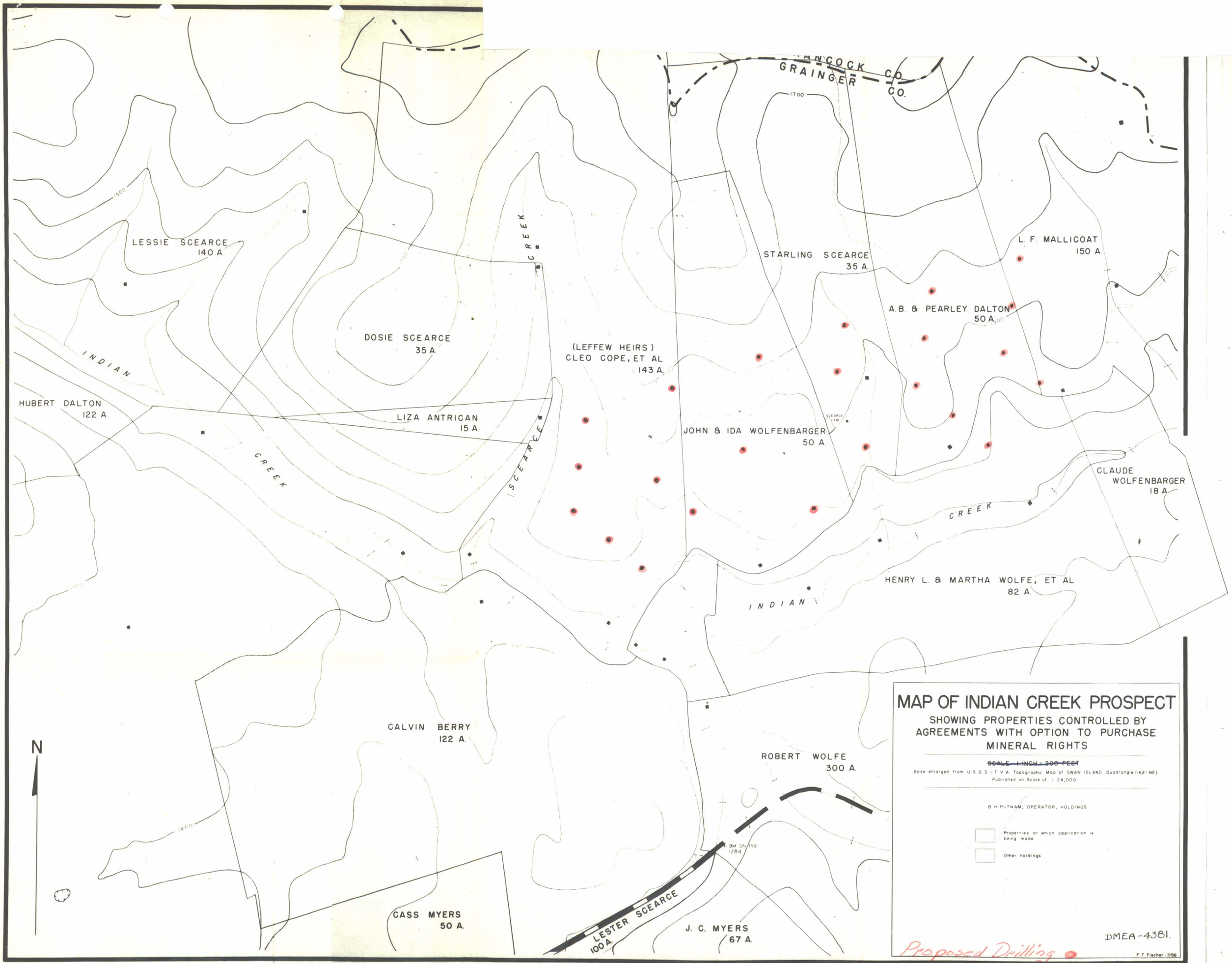
960'	Shale
970'	Sand
980'	Shale
990'	Sand
1000'	Shale
1010'	Sand
1020'	Shale
1030'	Sand
1040'	Shale
1050'	Sand
1060'	Shale
1070'	Sand
1080'	Shale
1090'	Sand
1100'	Shale
1110'	Sand
1120'	Shale
1130'	Sand
1140'	Shale
1150'	Sand
1160'	Shale
1170'	Sand
1180'	Shale
1190'	Sand
1200'	Shale
1210'	Sand
1220'	Shale
1230'	Sand
1240'	Shale
1250'	Sand
1260'	Shale
1270'	Sand
1280'	Shale
1290'	Sand
1300'	Shale
1310'	Sand
1320'	Shale
1330'	Sand
1340'	Shale
1350'	Sand
1360'	Shale
1370'	Sand
1380'	Shale
1390'	Sand
1400'	Shale
1410'	Sand
1420'	Shale
1430'	Sand
1440'	Shale
1450'	Sand
1460'	Shale
1470'	Sand
1480'	Shale
1490'	Sand
1500'	Shale
1510'	Sand
1520'	Shale
1530'	Sand
1540'	Shale
1550'	Sand
1560'	Shale
1570'	Sand
1580'	Shale
1590'	Sand
1600'	Shale
1610'	Sand
1620'	Shale
1630'	Sand
1640'	Shale
1650'	Sand
1660'	Shale
1670'	Sand
1680'	Shale
1690'	Sand
1700'	Shale
1710'	Sand
1720'	Shale
1730'	Sand
1740'	Shale
1750'	Sand
1760'	Shale
1770'	Sand
1780'	Shale
1790'	Sand
1800'	Shale
1810'	Sand
1820'	Shale
1830'	Sand
1840'	Shale
1850'	Sand
1860'	Shale
1870'	Sand
1880'	Shale
1890'	Sand
1900'	Shale
1910'	Sand

STATE: Tennessee
COUNTY: Cumberland
WELL NAME: Taylor Creek
COMPANY: R. H. Peterson & Co.
WELL NO.: 1
FIELD: Dunlap
ELEVATION: 1700
COMMENCED: 5-9-57
COMPLETED: 5-22-57
TOOLS: Cable
DRILLER: Dunlap Drilling Co.
PRODUCTION:
SIZE: 7 5/8"
DEPTH: 33'
FROM: 0 TO: 33'
CASING RECORD
Dk. gr.
Dk. red
Sandy, red grave.

Overburden →

FORM 186-1-M 5-57 Printed by Hamilton Co., Tulsa


GEOCHEMICAL MAP OF
INDIAN CREEK PROSPECT
SHOWING PERCENTAGE OF ZINC IN SOIL AND
LOCATIONS OF PROPOSED DIAMOND DRILL HOLES
SCALE: 1 INCH = 00 FEET
Base enlarged from U S G S – T V A Topographic Map of SWAN ISLAND Quadrangle (162-NE)
Published on Scale of 1 24,000
GEOCHEMICAL SYMBOLS
Sample locality
Sample locality showing percentage of zinc in soil
Outline of geochemical anomaly (.07% Zinc and greater)
CONTOUR INTERVAL = 05%
DIAMOND DRILL HOLES
Diamond drill hole drilled by other than B H Putnam, Operator
Diamond drill hole drilled by B H Putnam, Operator
Proposed diamond drill hole
F T Fischer - 7-56
HANCOCK CO.
GRAINGER CO.
LESSIE SCEARCE 140 A.
DOSIE SCEARCE 35 A.
HUBERT DALTON 122 A.
LIZA ANTRICAN 15 A.
(LEPPEW HEIRS) CLEO COPE, ET AL 43 A.
JOHN & JOA WOLFENBARGER 50 A.
STARLING SCEARCE 35 A.
A.B. & PEARLEY DALTON 50 A.
L. F. MALLICOAT 150 A.
CLAUDE WOLFENBARGER 18 A.
HENRY L. & MARTHA WOLFE, ET AL 82 A.
CALVIN BERRY 122 A.
ROBERT WOLFE 300 A.
CASS MYERS 50 A.
J. C. MYERS 67 A.
LESTER SCEARCE 100 A.
BM SN 159 1284
INDIAN CREEK
SCEARCE CREEK
N
1600
1700
1800
1500
1300
1400


HANCOCK CO.
GRAINGER CO.
1700
1500
LESSIE SCEARCE
140 A.
DOSIE SCEARCE
35 A.
INDIAN
CREEK
HUBERT DALTON
122 A.
LIZA ANTRICAN
15 A.
SCEARCE
CREEK
(LEFFEW HEIRS)
CLEO COPE, ET AL
143 A.
STARLING SCEARCE
35 A.
L. F. MALLICOAT
150 A.
A.B. & PEARLEY DALTON
50 A.
JOHN & IDA WOLFENBARGER
50 A.
SCEARCE CEM.
CLAUDE
WOLFENBARGER
18 A.
CREEK
HENRY L. & MARTHA WOLFE, ET AL
82 A.
INDIAN
CALVIN BERRY
122 A.
ROBERT WOLFE
300 A.
BM SN 159
1284
LESTER SCEARCE
100 A.
CASS MYERS
50 A.
J. C. MYERS
67 A.
N
MAP OF INDIAN CREEK PROSPECT
SHOWING PROPERTIES CONTROLLED BY
AGREEMENTS WITH OPTION TO PURCHASE
MINERAL RIGHTS
~~SCALE - 1 INCH = 200 FEET~~
Base enlarged from U.S.G.S.-T.V.A. Topographic Map of SWAN ISLAND Quadrangle (162-NE)
Published on Scale of 1:24,000
B.H. PUTNAM, OPERATOR, HOLDINGS
Properties on which application is being made
Other holdings
DMEA-4381.
Proposed Drilling
F.T. Fischer - 7/56