m 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 # 14

Stages I & II

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of April, 1959 Docket No. DMEA 4907 Contract No. 1206
Operator's Name The New Jersey Zinc Company Minerals Fluorspar, zinc and lead
Address 160 Front Street, New York 38, N. Y.
Contract Amount, $39,192.00 Government Participation: 50 % Amount, $19,596.00

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~~ Overburden	44.25	554.60	598.85			
~~Bulldozing~~ NX & BX	112.10	1,234.35	1,346.45			
~~Crosscutting~~ AX	2157.10	28,283.45	30,440.55			
~~Drifting~~ Reaming	----	297.50	297.50			
Cementing	----	568.00	568.00			
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
Core Boxes	----	525.00	525.00			
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	----	210.00	210.00			
Payroll Taxes						
Liability Insurance						
Incidental Allowance	264.60	3,376.20	3,640.80			
(8) Contingencies (specify):						
Lost Time	----	240.00	240.00			
TOTALS	2578.05	35,289.10	37,867.15	2719.80	33,268.35	35,988.15

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

Date 4/23/59 *Payee The New Jersey Zinc Company

Per E. L. Weinberg Title Resident 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:

$ 1359.90

Signature Helen R. Mellin
(Authorized Certifying Officer)

Date NOV 10 1959 Vou. No. 23

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. E 1206 in accordance with the terms of the contract.

Signature W. J. Lynch Title MINING ENGINEER U. S. BUREAU OF MINES Date NOV 10 1959

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature ..... Title EXECUTIVE OFFICER OME FIELD TEAM REGION V Date NOV 10 1959

MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

Stage I

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of April 1959 Docket No. DMEA 4907 Contract No. 1206

Operator's Name The New Jersey Zinc Company Minerals Fluorspar, zinc and lead

Address 160 Front Street, New York 38, 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								
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
TOTAL DISTRIBUTED COSTS				22,314.40				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS				22,314.40				23,239.00

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 4/23/59 Operator The New Jersey Zinc Co.

Per E. L. Weinberg Title Resident Geologist

E. L. Weinberg

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

REMARKS:

(Instructions on reverse)

(For Government use only)

W. F. Lynch

INSTRUCTIONS

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

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

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

GPO 872894

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

Stage II

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of April 1959 Docket No. DMEA 4907 Contract No. 1206

Operator's Name The New Jersey Zinc Company Minerals Fluorspar, zinc and lead.

Address 160 Front Street, New York 38, 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
Incidental ~~Drifting~~ Allowance	Ft.	264.60	882	1,500.00	5000		5000	0.30
Crosscutting								
Raising								
Shafts								
~~Winzes~~ Overburden	Ft.	44.25	15	221.25	75		80	2.95
Drilling: Core NX & BX	Ft.	112.10	38	324.50	110		120	2.95
~~Churn~~ AX	Ft.	2157.10	814	12,720.00	4800		4800	2.65
Auger								
~~Stripping~~ Reaming	Ft.	-----	---	280.00	160		210	1.75
~~Trenching~~ Lost Time	Hr.	-----	---	240.00	30		30	8.00
~~Test Pits~~ Assays Sample		-----	---	192.00	32		32	6.00
Roads and Trails								
Cementing	Hr.	-----	---	------	0		43	8.00
Total Distributed Costs		2578.05		15,477.75				Total Costs Authorized by Contract
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
Total Costs		2578.05		15,477.75				15,953.50

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

Remarks: Includes portion of hole W-15 within authorized limits of contract.

Date 4/23/59 Operator The New Jersey Zinc Co.

Per E. L. Weinberg Title Resident Geologist

E. L. Weinberg

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

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

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

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GPO 872894

X 1086G 24M 1-54

COPY

THE NEW JERSEY ZINC COMPANY

EXPLORATION DEPARTMENT

April 23, 1959

P. O. Box # 129
Harrisburg, Ill.

Mr. Robert A. Laurence, U.S.G.S.
Room 2-B, Post Office Bldg.,
Knoxville, Tennessee

Re. DMEA 4907 (fluorspar, zinc,lead)
Idm-E 1206, The New Jersey Zinc Co.
Project II, Pope County, Illinois
April Monthly Report

Dear Mr. Laurence,

Attached hereto is the monthly report for April 1959 on Project II in Pope County, Illinois.

Included are the narrative summary, a log of hole W-15, drawing AX-ILL-37-A, forms MF 104 and 104A(2), and the drillers invoice for hole W-15. These data should complete that portion of Project II to which the DMEA contract contributes.

One of the five government copies has been sent directly to Mr. Amos, at his request.

RECEIVED
APR 27 1959
U. S. Geological Survey
Geologic Division
Knoxville, Tenn.

Yours sincerely,

E. L. Weinberg

E. L. Weinberg
Resident Geologist

ELW/hwd
in quintuplicate

Narrative Summary

Project II, Pope County, Illinois

For your reference we list a summary of the drilling data on Project II thru the completion of hole W-15 on April 4, 1959.

Hole No.	Feet Overburden	Feet NX & BX	Feet AX(BXWL)	Feet Reamed	Feet Drilled in April	Feet Drilled to Date
Stage I						
W-1 thru W-10	128	321	6687	10	----	7136
Stage II						
W-11	15	15	1075	0	----	1105
W-12	15	25	1075	0	----	1115
W-13	10	12	930	60	----	952
W-14	20	20	906	100	----	946
W-15	15	38	1052	0	322	1105
	75	110	5038	160	322	5223

The completion of hole W-15 concluded the DMEA program on Project II, since it more than filled the authorized quota of work in most catagories. This report, therefore, contains the completed financial summary for the entire program.

Hole W-15 (see AX-ILL-37-A) failed to intersect more than trace mineralization. It assumed an excessively steep inclination and therefore went too deep stratigraphically before it had gone sufficiently far to the northwest. If it had maintained the same rate of "droop" as the average of holes W-11, W-12 and W-13, it would have reached all the mineralized veins of W-11 at more favorable horizons.

E. L. Weinberg

E. L. Weinberg

AX5532A 2C 1-57

THE NEW JERSEY ZINC COMPANY — DRILL RECORD — Harrisburg, Illinois

Property Barnett, [illegible] S. Section coordinates: HOLE NUMBER W-15

Location SE¼ of NE¼, Sec. 28, 12-7.3957N, 4726E. Page 1 of 4

Coordinates 1292'N, 635'E Elevation 487. Bearing N 45° W

Began 3/25/59 Finished 4/4/59 Inclination -44° @ Col. Total Depth 1105

Driller C. Mills, Lamar Moore Logged by E. L. Weinberg Water Level

Joy Mfg. Co.

Graphic Fm. Log	FROM	TO	Ft. Core	Description	Eff.	Minerals
OB	0	15		Overburden		NX 15-53
						BXWL 53-1105
-15				Hardinsburg fm.		53' BX Casing.
Hardinsburg	15	35	13	Wht & brn, fn grd-med grd, highly ox ss & sh Bd'g 45° @ 17'		
-35				Contact of Hardinsburg-Golconda indefinite because of poor recovery. Top of Golconda @ 35'		
G	35	260	212	Med gy & drk gy, fn grd & med grd, faintly bn'd & fsl ls & sh, loc fos. Ls @ 45-139, 159-170, 174-209, 220-229, 235-239. Sh @ 209-220 is fn'ly bn'd.	St, Loc No.	
	(35 - 55	8')				
				Bd'g 50° @ 100'		
				Bd'g 53° @ 160'		
				Bd'g 50° @ 203'		
o						
i						
c						
o						
n						
d						
a						
-260				Top of Cypress @ 260'		
	260	406	144	Lt gy & med'drk gy & grn, med grd, c.ly bn'd & msv ss & sh. Grn sh @ 267-273.	No.	@396' is 2" (2' core missing) ma
	(395-402	5)		Fa'd @ 291½, 292, 293, 295, 297½, 303½. Ba vnlts in crb mtx. @ 292, 293. Bd'g 48° @ 263'		

AX5532A-2C 1-57

THE NEW JERSEY ZINC COMPANY

DRILL-RECORD

Harrisburg, Illinois

Property Barnett, [illegible] S.

HOLE NUMBER W-15

Page 2 of 4

Location

Coordinates

Elevation

Bearing

Began

Finished

Inclination -51° @ 300

Total Depth

Driller

Logged by E. L. Weinberg

Water Level

Fm.	Graphic Log	FROM	TO	Ft. Core	Description	Ff.	Minerals
					Bd'g 50° @ 314'		
					Bd'g 50° @ 373'		
Cypress							
					Top of Paint Creek @ 406'		
406 Paint Creek		406	491½	83	Drk gy, fn grd, fn'ly bn'd & msv, fsl sh. Sl 490-491½ is cal sh.		
					Bd'g 60° @ 479'		
					Top of Bethel @ 491½'		
491½ Bethel		491½	563½	72	Lt gy, med grd, loc bn'd, loc msv ss. Fos ls 562-563½. Calc vn @510½' @90° to bd'g.		
					Bd'g 50° @ 507'		
					Bd'g 60° @ 559'		

ABBREVIATIONS FOR WISCONSIN-ILLINOIS DRILL LOGS

abun - abundant
act - actinolite
agg - agglomerate
ab - albite
altn - alteration
alt - altered
amp - amphibole
ang - angular
ank - ankerite
an - anorthite
apa - apatite
ap - aplite
aren - arenaceous
arg - argillaceous
ark - arkose
asp - arsenopyrite
asph - asphalt
aug - augite
avg - average
approx-approximate-(ly)
bnd - band
Ba - barite
bas - basalt
bd - bed
bdd - bedded
blw - below
ben - bentonite
btw - between
bio - biotite
bit - bitumen
blk - black
blu - blue
bot - bottom
br - breccia
brt - bright
bkn - broken
brn - brown
bu - buff
cal -calcareous
cala - calamine
calc - calcite
crb - carbonaceous
cel - celestite
cmt - cement
ce - cerrusite
cc - chalcocite
cpy - chalcopyrite
ch - chert
chl - chlorite
choc - chocolate
chr - chromite
clr - clear
clvg - cleavage
c. - coarse (1-2cm)
cpt - compact
concr - concretion
cg - conglomerate
cons - considerable
cnt - contact
cr - cream colored
xb - crossbedded
crd - crushed
xln - crystalline

drk - dark
decalc - decalcified
dec - decomposed
dns - dense
db - diabase
dk - dike
dis - disseminated
dol - dolomite
dold - dolomitized
drab - drab
est - estimate(d)
ed - edgewise
eff - effervescence
encr - encrusted
enr - enriched
ens - enstatite
epi - epidote
fa - fault
fd - feldspar
ferr - ferruginous
fn - fine
fsl - fissile
Flt - fluorite
fol - foliated
f.w. - foot wall
fm - formation
fos - fossiliferous
fr - fracture
frag - fragments
Ft - franklinite
fri - friable

gb - gabbro
ga - galena
gar - garnet
gn - gneiss
gos - gossan
sg - gouge
grd - grained
gr - granite
gd - granodiorite
gran - granular
graph - graphite
gy - gray
gw - graywacke
grn - green
gs - greenstone
gnd - ground
gyp - gypsum
gen - generally
h.w. - hanging wall
hvy - heavy
hmt - hematite
h.g. - high grade
h. - horizontal
hb - hornblende
hbt - hornblendite
ig - igneous
il - ilmenite
incl - inclined
int - intense
intbd - interbedded
intr - intrusive
irreg - irregular

jar - jarosite
jas - jasper
jnt - joint
kao - kaolinite
lab - labradorite
lam - laminated (tion)
lamp - lamprophyre
lt - light
ls - limestone
lmt - limonite
lin - lineation
loc - local
lol - loellingite
l.g. - low grade

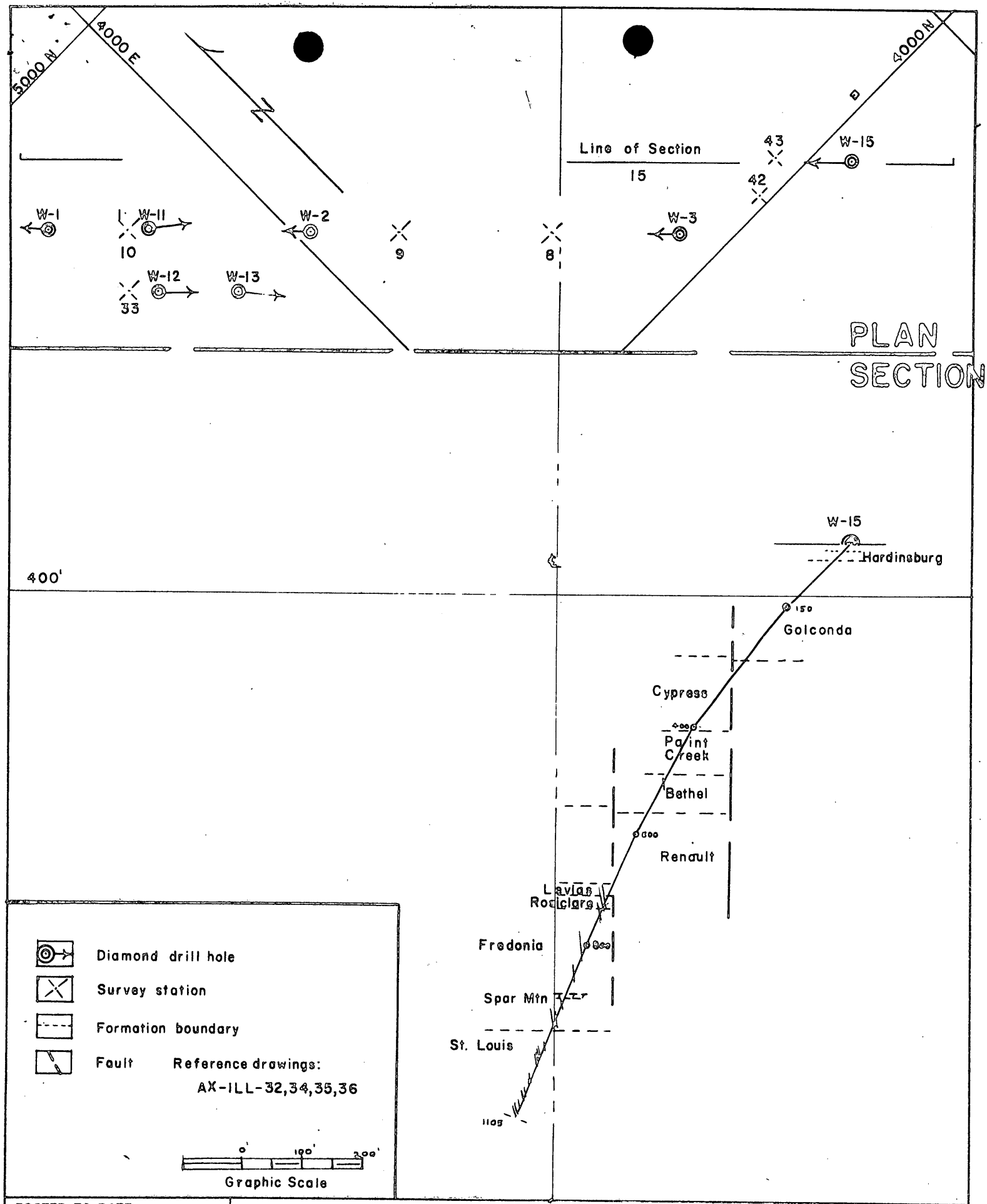
mag - magnetic
mt - magnetite
mal - malachite
ma - marcasite
msv - massive
mtl - material
mtx - matrix
med - medium
mdg - medium grained
met - metamorphic
mc - mica
min - mineral
md - moderate
mo - molybdenite
mobr - mosaic breccia
mot - mottled
mus - muscovite
prtgs - partings
nod - nodule
ol - oligoclase
ov - olivine
Oo - oolite (-ic)
orn - orange
or - orthoclase
ox - oxidized
pll - parallel
peb - pebble
pt - pegmatite
pnk - pink
phen - phenocryst
phos - phosphate(nods)
phy - phyllite
por - porphyritic
pu - pumice
purp - purple
py - pyrite
px - pyroxene
po - pyrrhotite
pet - petroleum
Q - quartz
qd - quartz diorite
qte - quartzite
recep - receptaculites
red - red
res - residue
rct - rhodochrosite
rhy - rhyolite
rby - ribbony
rk - rock

rnd - round
rt - rutile
rpt-replacement
sach - saccharoidal
s.g. - sand grain(s)
ss - sandstone
sdy - sandy
sch - schist
sms - seams (to 0.1')
ser - sericite
srp - serpentine
sh - shale
shrd - sheared
sid - siderite
sil - siliceous
sl - slight
smt - smithsonite
sps - sparse
spk - speckled
sph - sphalerite
spn - sphene
spl - spinel
stn - stain
stl - steel
st - strong
str - strontianite
sty - stylolites
sul - sulfides
sy - syenite
sts - siltstone
tc - talc
tx - texture
tk - thick
tn - thin
tnt - titanite
und - undulating
unox - unoxidized
vn - vein
vnlt - veinlet
v. - vertical
vy - very
vc - very coarse
vf - very fine
vio - violet
vol - volcanic
vug - vuggy

wk - weak
wht - white
wt - willemite
w. - with
wit - witherite
wlst - wollastonite
xc - crosscut(ting)
yel - yellow
zeo - zeolite
zt - zincite
zr - zircon
zo - zone

Tr - trace

Use chemical symbols for metals.



POSTED TO DATE	THE NEW JERSEY ZINC COMPANY	DISTRICT Harrisburg, Illinois
DRAWN 4/59 E.L.W. TRACED SCALE 1" = 200'	SECTION LINE 15, Project II, Pope County, Ill.	FILE NO. AX-ILL-37-A

X 5407 C 1M 3-53

X 1086G 24M 1-54

COPY

THE NEW JERSEY ZINC COMPANY

EXPLORATION DEPARTMENT

April 23, 1959

P. O. Box # 129
Harrisburg, Ill.

Mr. Robert A. Laurence, U.S.G.S.
Room 2-B, Post Office Bldg.,
Knoxville, Tennessee

Re. DMEA 4907 (fluorspar, zinc,lead)
Idm-E 1206, The New Jersey Zinc Co.
Project II, Pope County, Illinois
April Monthly Report

Dear Mr. Laurence,

Attached hereto is the monthly report for April 1959 on Project II in Pope County, Illinois.

Included are the narrative summary, a log of hole W-15, drawing AX-ILL-37-A, forms MF 104 and 104A(2), and the drillers invoice for hole W-15. These data should complete that portion of Project II to which the DMEA contract contributes.

One of the five government copies has been sent directly to Mr. Amos, at his request.

Yours sincerely,

E. L. Weinberg

E. L. Weinberg
Resident Geologist

EIW/hwd
in quintuplicate

RECEIVED
APR 27 1959
U. S. Geological Survey
Geologic Division
Knoxville, Tenn.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
REGION V

ELECTROTECHNICAL
EXPERIMENT STATION

P. O. BOX 211
NORRIS, TENNESSEE

Official copy
~~EXTRA COPY~~

O. M. E.
RECEIVED MAY 18 1959

DATE	INITIALS	CODE
5/11	a	220
"		110
		600

May 7, 1959

Memorandum

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

From: Administrative Assistant, Norris, Tennessee

Subject: Monthly report and voucher

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

Idm-E1206 The New Jersey Zinc Company
Docket No. DMEA-4907
6th payment - month of March
Amount $2998.85

Helen R. Miller
Helen R. Miller

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

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

Budget Bureau No. 42-R1036.5

PAID ON VOUCHER & SCHEDULE OF PAYMENTS K- 60

Stage I and II

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of March 1959 Docket No. DMEA 4907 Contract No. 1206
Operator's Name The New Jersey Zinc Company Minerals Fluorspar, zinc and lead.
Address 160 Front Street, New York 38, N. Y.
Contract Amount, $39,192.00 Government Participation: 59 % Amount, $ 19,596.00

O.M.E. MAY 1 1959

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:						
~~Diming~~ Overburden	88.50	466.10	554.60	88.50	430.70	519.20
~~Bulldozing~~ NX & BX	169.40	1,064.95	1,234.35	94.40	985.30	1079.70
~~Crosscutting~~ AX	4865.40	23,418.05	28,283.45	4865.40	21881.05	26,746.45
~~Drilling~~ Reaming	280.00	17.50	297.50	280.00	17.50	297.50
Cementing	------	568.00	568.00	—	568.00	568.00
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
Core Boxes	------	525.00	525.00	—	525.00	525.00
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	66.00	144.00	210.00	66.00	144.00	210.00
Payroll Taxes						
Liability Insurance						
Incidental Allowance	569.40	2,806.80	3,376.20	569.40	2621.10	3190.50
(8) Contingencies (specify):						
Lost Time	108.00	132.00	240.00	34.00	98.00	132.00
TOTALS	6146.70	29,142.40	35,289.10	5997.70	27270.65	33,268.35

I certify that the above bill is correct and just and that payment therefor has not been received.
Date 4/8/59 *Payee The New Jersey Zinc Company
Per E. L. Weinberg Title Resident 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:
$ 2998.85
Signature Helen R. Melin
(Authorized Certifying Officer)
Date MAY 7 1959 Vou. No. 109
(See other side)

3025.85

(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-1206 in accordance with the terms of the contract.

Signature W. Lynch Title MINING ENGINEER U.S. BUREAU OF MINES Date MAY 4 1959

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Robert A. Lemmon Title EXECUTIVE OFFICER DMEA FIELD TEAM REGION V Date MAY 4 1959

MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

MAY 11 1959 O.M.E.

Stage I

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

Month of March 1959 Docket No. DMEA 4907 Contract No. 1206

Operator's Name The New Jersey Zinc Company Minerals Fluorspar, zinc & lead.

Address 160 Front Street, New York 38, 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								
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
TOTAL DISTRIBUTED COSTS				22,314.40				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS				22,314.40				23,239.00

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 4/8/59 Operator The New Jersey Zinc Co.

Per E. L. Weinberg Title Resident Geologist

E. L. Weinberg

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)

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

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

MAY 11 1959 O.M.E.

Stage II

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

Month of March 1959 Docket No. DMEA 4907 Contract No. 1206

Operator's Name The New Jersey Zinc Company Minerals Fluorspar, zinc & lead

Address 160 Front Street, New York 38, 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~~ Incidental Allowance	Ft.	569.40	1898	1,235.40	4118		5000	0.30
Crosscutting								
Raising			94.40					
Shafts								
~~Winzes~~ Overburden	Ft.	88.50	30	177.00	60		80	2.95
Drilling: Core NX & BX	Ft.	169.40	32	212.40	72		120	2.95
~~Churn~~ AX	Ft.	4865.40	1836	10,562.90	3986		4800	2.65
Auger								
~~Stripping~~ Reaming	Ft.	280.00	160	280.00	160		210	1.75
~~Trenching~~ Lost Time	Hr.	108.00	13½	240.00	30		30	8.00
~~Test Pits~~ Assays Sample		66.00	11	192.00	32		32	6.00
Roads and Trails								
Cementing	Hr.	------	0	------	0		43	8.00
Total Distributed Costs		~~6146.70~~ 6071.70		12,899.70				Total Costs Authorized by Contract
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
		6071.70						
Total Costs		6146.70		12,899.70				15,953.50

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

Remarks: Includes holes W-13, W-14 and assays from W-13.

Date 4/8/59 Operator The New Jersey Zinc Co.

Per E. L. Weinberg Title Resident Geologist

E. L. Weinberg

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)

D. 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

X 1086G 24M 1-54

COPY

THE NEW JERSEY ZINC COMPANY

EXPLORATION DEPARTMENT

April 9, 1959

P. O. Box # 129
Harrisburg, Ill.

Mr. Harry L. Burmeister
U. S. Bureau of Mines
College Park, Maryland

Re: D M E A 4907 (fluorspar, zinc, lead)
Idm-E 1206, The New Jersey Zinc Co.
Project II, Pope County, Illinois
March Monthly Report

Dear Mr. Burmeister,

Attached hereto is the monthly report for March 1959 on Project II in Pope County, Illinois.

Included are the narrative summary, logs of holes W-13 and W-14, drawings AX-ILL-35-A(rev) and AX-ILL-36-A, assay reports on 11 samples from hole W-13, forms MF 104 and 104A(2), and drillers invoices from holes W-13 and W-14.

Yours sincerely,

E. L. Weinberg

E. L. Weinberg
Resident Geologist

E.L.W/hwd
in quintuplicate

X 1086G 24M 1-54

COPY

THE NEW JERSEY ZINC COMPANY — EXPLORATION DEPARTMENT

Narrative Summary

Project II, Pope County, Illinois

For your reference we list a summary of the drilling data on Project II thru March 1959:

Hole No.	Feet Overburden	Feet NX & BX	Feet AX(BXWL)	Feet Reamed	Feet Drilled in March	Feet Drilled to Date
Stage I						
W-1 thru W-10	128	321	6687	10	---	7136
Stage II						
W-11	15	15	1075	0	---	1105
W-12	15	25	1075	0	---	1115
W-13	10	12	930	60	160	952
W-14	20	20	906	100	946	946
W-15 (incomplete)	15	38	730	---	783	783
	75	110	4716	160	1889	4901

Permission to drill holes W-14 and W-15 was confirmed by Mr. Laurence's letters of March 16th and 26th. The amendment extending the completion date of the contract to May 20, 1959 was signed by our Company prior to the March 20th deadline.

Assays from hole W-13 (see attached assay sheet) were approximately as estimated last month. Weighted averages based on assays in the two main mineralized zones are:

Footage	% Fluorite	% Pb	% Zn
730-764	51.8	4.55	5.41
783-798	39.1	2.37	9.29

Hole W-14 (see AX-ILL-36-A) failed to intersect more than trace mineralization. It is now believed that the fault intersected in the Paint Creek formation was the same one intersected in W-13 from 730 to 734 (see AX-ILL-35-A). If this is so, the intersection in W-14 was too high stratigraphically, and the fault appears to have assumed a more westerly strike between W-13 and W-14 than it had between W-11 and W-13.

The collar location for hole W-15 is shown on the plan portion of AX-ILL-35-A. It had not intersected any mineralization by the end of the month.

E. L. Weinberg

E. L. Weinberg

act - actinolite
agg - agglomerate
ab - albite
altn - alteration
alt - altered
amp - amphibole
ang - angular
ank - ankerite
an - anorthite
apa - apatite
ap - aplite
aren - arenaceous
arg - argillaceous
ark - arkose
asp - arsenopyrite
asph - asphalt
aug - augite
avg - average
approx-approximately
bnd - band
Ba - barite
bas - basalt
bd - bed
bdd - bedded
blw - below
ben - bentonite
btw - between
bio - biotite
bit - bitumen
blk - black
blu - blue
bot - bottom
br - breccia
brt - bright
bkn - broken
brn - brown
bu - buff
cal -calcareous
cala - calamine
calc - calcite
crb - carbonaceous
cel - celestite
cmt - cement
ce - cerrusite
cc - chalcocite
cpy - chalcopyrite
ch - chert
chl - chlorite
choc - chocolate
chr - chromite
clr - clear
clvg - cleavage
c. - coarse (1-2cm)
cpt - compact
concr - concretion
cg - conglomerate
cons - considerable
cnt - contact
cr - cream colored
xb - crossbedded
crd - crushed
xln - crystalline

crk - dark
decalc - decalcified
decomposed
dns - dense
db - diabase
dk - dike
dis - disseminated
dol - dolomite
dold - dolomitized
drab - drab
est - estimate(d)
ed - edgewise
eff - effervescence
encr - encrusted
enr - enriched
ens - enstatite
epi - epidote
fa - fault
fd - feldspar
ferr - ferruginous
fn - fine
fsl - fissile
Flt - fluorite
fol - foliated
f.w. - foot wall
fm - formation
fos - fossiliferous
fr - fracture
frag - fragments
Ft - franklinite
fri - friable

gb - gabbro
ga - galena
gar - garnet
gn - gneiss
gos - gossan
gg - gouge
grd - grained
gr - granite
gd - granodiorite
gran - granular
graph - graphite
gy - gray
gw - graywacke
grn - green
gs - greenstone
gnd - ground
gyp - gypsum
gen - generally
h.w. - hanging wall
hvy - heavy
hmt - hematite
h.g. - high grade
h. - horizontal
hb - hornblende
hbt - hornblendite
ig - igneous
il - ilmenite
incl - inclined
int - intense
intbd - interbedded
intr - intrusive
irreg - irregular

jar - jarosite
jas - jasper
jnt - joint
kao - kaolinite
lab - labradorite
lam - laminated (tion)
lamp - lamprophyre
lt - light
ls - limestone
lmt - limonite
lin - lineation
loc - local
lol - loellingite
l.g. - low grade

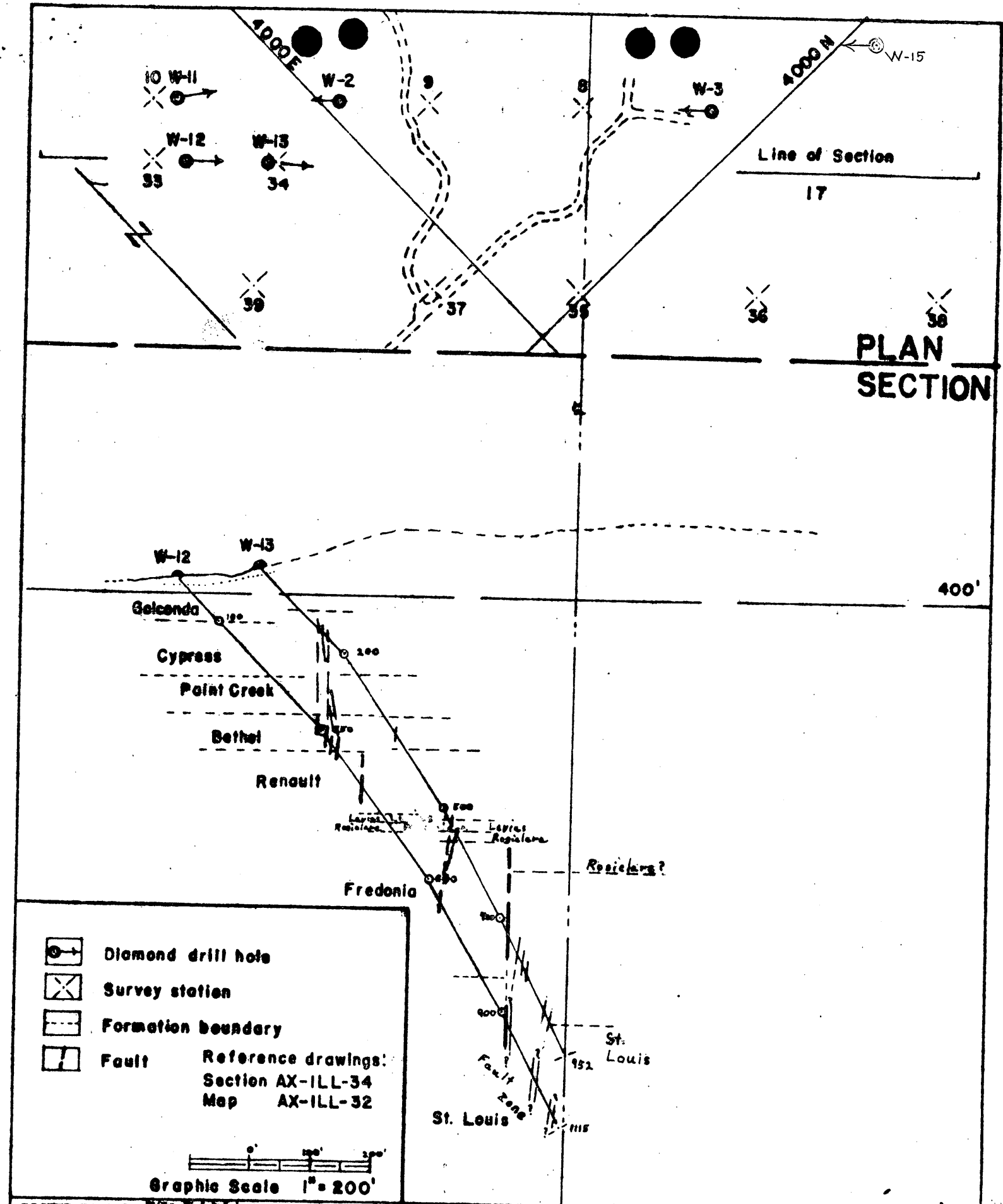
mag - magnetic
mt - magnetite
mal - malachite
ma - marcasite
mav - massive
mtl - material
mtx - matrix
med - medium
mdg - medium grained
met - metamorphic
mc - mica
min - mineral
md - moderate
mo - molybdenite
mobr - mosaic breccia
mot - mottled
mus - muscovite
prtgs - partings
nod - nodule
ol - oligoclase
ov - olivine
Oo - oolite (-ic)
orn - orange
or - orthoclase
ox - oxidized
pll - parallel
peb - pebble
pt - pegmatite
pnk - pink
phen - phenocryst
phos - phosphate(nods)
phy - phyllite
por - porphyritic
pu - pumice
purp - purple
py - pyrite
px - pyroxene
po - pyrrhotite
pet - petroleum
Q - quartz
qd - quartz diorite
qte - quartzite
recep - receptaculites
red - red
res - residue
rct - rhodochrosite
rhy - rhyolite
rbv - ribbony
rk - rock

rnd - round
rt - rutile
rpt-replacement
sach - saccharoidal
s.g. - sand grain(
ss - sandstone
sdy - sandy
sch - schist
sms - seams (to 0.
ser - sericite
srp - serpentine
sh - shale
shrd - sheared
sid - siderite
sil - siliceous
sl - slight
smt - smithsonite
sps - sparse
spk - speckled
sph - sphalerite
spn - sphene
spl - spinel
stn - stain
stl - steel
st - strong
str - strontianite
sty - stylolites
sul - sulfides
sy - syenite
sts - siltstone
tc - talc
tx - texture
tk - thick
tn - thin
tnt - titanite
und - undulating
unox - unoxidized
vn - vein
vnlt - veinlet
v. - vertical
vy - very
vc - very coarse
vf - very fine
vio - violet
vol - volcanic
vug - vuggy

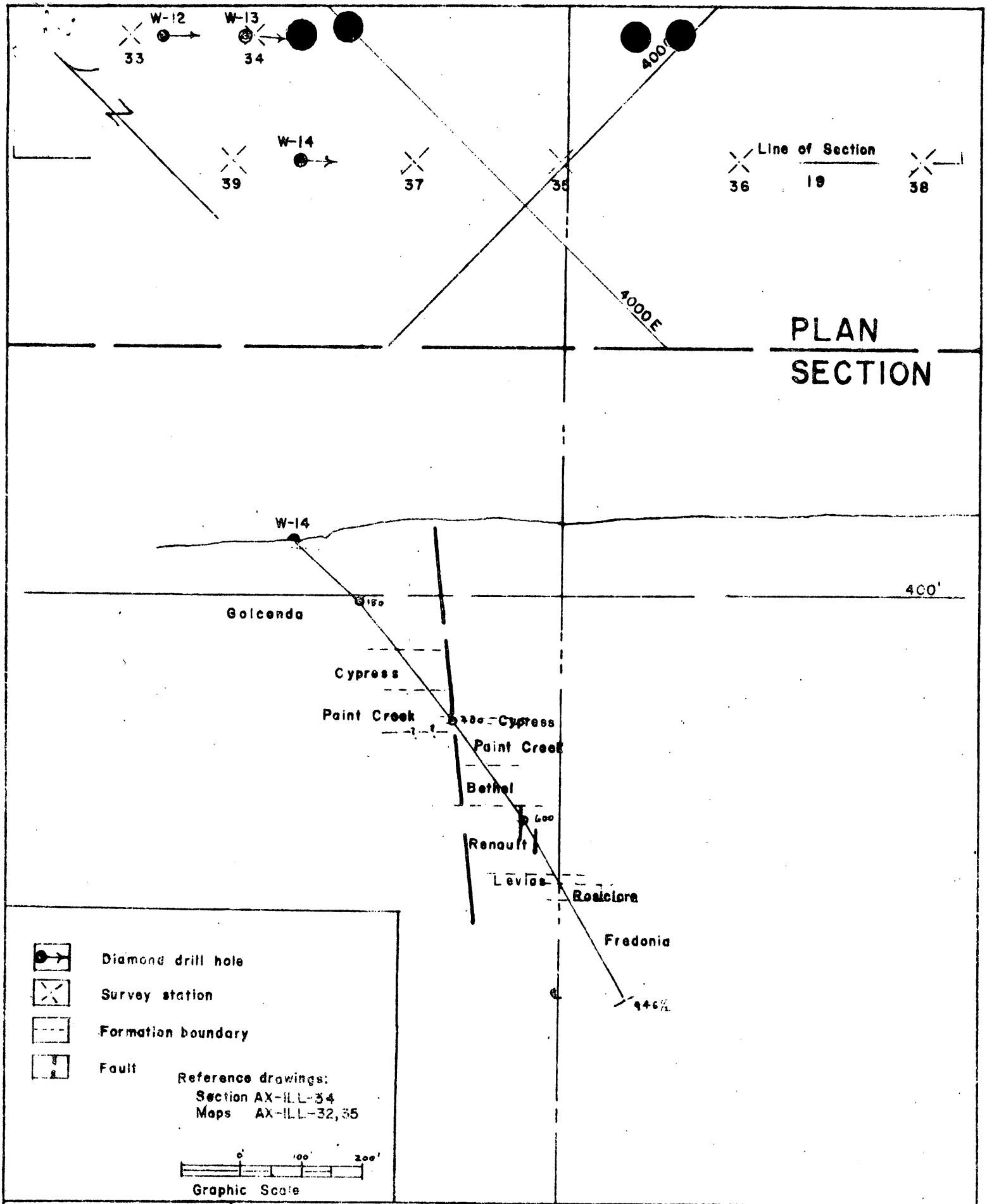
wk - weak
wht - white
wt - willemite
w. - with
wit - witherite
wlst - wollastonite
xc - crosscut(ting)
yel - yellow
zeo - zeolite
zt - zincite
zr - zircon
zo - zone

Tr - trace

Use chemical symbols for metals.



POSTED TO DATE 5/30	THE NEW JERSEY ZINC COMPANY Harrisburg, Illinois	DISTRICT ILLINOIS
DRAWN ELW DATE 2/59 TRACED SCALE 1" = 200'	Area of SECTION LINE 17, Project II, Pope Co., Ill.	FILE NO. AX-ILL-35-A,



POSTED TO DATE	THE NEW JERSEY ZINC COMPANY Harrisburg, Illinois	DISTRICT ILLINOIS
DRAWN ELW DATE 4/59 TRACED SCALE 1" = 200'	SECTION LINE 19, Project II, Pope County, Ill.	FILE NO. AX-ILL-36-A

X 6407 C TM 3-53

AB-3883-3M-7-52

THE NEW JERSEY ZINC COMPANY

FRANKLIN, N. J.

TO The New Jersey Zinc Co., P. O. Box 129, Harrisburg, Ill. March 26, 1959

SUBJECT ASSAYS - DDH W-13 HARRISBURG, ILLINOIS **FILE NO.**

Attention: Mr. E. L. Weinberg

The Franklin chemists report the results of the analysis of your eleven samples from Diamond Drill Hole W-13, Project II, Stage II:

	FOOTAGE		PERCENT		
SAMPLE NO.	From	To	CaF_2	Zn	Pb
C - 40	722	730	3.11	0.032	< 0.025
C - 41	730	734	50.21	0.06	2.94
C - 42	734	742	78.10	2.27	3.81
C - 43	742	747	41.94	6.15	4.28
C - 44	747	752	43.34	3.89	4.38
C - 45	752	757 1/2	24.45	11.40	2.18
C - 46	757 1/2	764	57.63	8.11	8.82
C - 47	783	787	48.23	9.04	1.29
C - 48	787	790 1/2	26.70	27.83	6.68
C - 49	790 1/2	794 1/2	6.70	0.22	0.15
C - 50	794 1/2	798	78.08	1.40	1.85

D. McKechnie
D. McKechnie
Superintendent

L. G. Hooker/lgh

Copies: Messrs. W. H. Callahan
J. M. Hague
D. McKechnie
Laboratory File

Certified True Copy
E. L. Weinberg
Resident Geologist

May 6, 1959

The New Jersey Zinc Company
160 Front Street
New York 38, New York

Re: Contract Ida-F1206
Docket No. DMEA-4907

Gentlemen:

Reference is made to your March voucher covering the above contract.

This voucher is being processed today in the amount of $2998.85, which is 50% of the approved monthly total - $5,997.70. Adjustments have been made as follows:

NX & BX Drilling -- claimed 32 feet at $2.95/ft.	$ 169.40	
Corrected 32 feet at $2.95/ft.	94.40	
Disallowance		$75.00
Hale Surveys -- Claimed 13-1/2 hours at $8.00/hr.	$ 108.00	
Corrected 13-1/2 hours at $6.00/hr.(invoice cost)	81.00	
Disallowance		27.00

Also an adjustment is being made on your March voucher covering overpayment of $47.00 on your February voucher as follows:

Hale Surveys -- Claimed 8-1/2hours at $8.00/hr.	$ 68.00	
Corrected 3-1/2 hours at $6.00/hr.(invoice cost)	21.00	
(Disallowed 5 hours hauling core)		
Disallowance		47.00

Total disallowed . . . . $ 149.00

Very truly yours,

Helen R. Miller
Administrative Assistant

hbm
Copies to R. A. Laurence
V. J. Lynch
E. D. Talbert
Morris files
Day files

EXTRA COPY O. M. E. RECEIVED MAY 7 1959		
DATE	INITIALS	CODE
5/7	G	220
5/8	Jy	110
		600

May 5, 1959

Memorandum

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

From: Administrative Assistant, Morris, Tennessee

Subject: Monthly report and voucher

We are enclosing two copies of the following monthly report and voucher. This voucher covers Hole No. W-8, which was declared an incompleted hole by the Washington Office, and payment for this hole was disallowed.

Idm-K1206 The New Jersey Zinc Company
Docket No. DMEA-4907
Month of January - Stage I
Amount: 0

Helen R. Miller

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

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

Stage I

Budget Bureau No. 42-R1036.5

MAY 7 1959 O.M.E.

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

Month of January, 1959 Docket No. DMEA 4907 Contract No. 1206
Operator's Name The New Jersey Zinc Company Minerals Fluorspar, zinc & lead
Address 160 Front Street, New York 38, N. Y.
Contract Amount, $ 39,192.00 Government Participation: 50 % Amount, $ 19,596.00

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 Overburden	35.40	342.20	377.60			
~~Bulldozing~~ NX & BX	79.65	867.30	946.95			
~~Crosscutting~~ AX	1537.00	16,183.55	17720.55			
~~Drifting~~ Reaming	------	17.50	17.50			
Cementing	------	568.00	568.00			
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
Core Boxes	24.00	501.00	525.00			
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	----	18.00	18.00			
Payroll Taxes						
Liability Insurance						
Incidental Allowance	185.70	1955.10	2140.80			
(8) Contingencies (specify):						
TOTALS	1861.75	20,452.65	22,314.40			

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

Date 2/4/59 *Payee The New Jersey Zinc Company

Per E. J. Wanberg Title Resident 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:

$ 0

Signature
(Authorized Certifying Officer)

Date Vou. No.
(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. E 1206 in accordance with the terms of the contract.

Signature W. L. Burmeister Title Mining Engr. Date 2/11/59

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature ..... Title ..... Date .....

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

Stage I

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

Month of January 1959 Docket No. DMEA 4907 Contract No. 1206

Operator's Name The New Jersey Zinc Company Minerals Fluorspar, zinc and lead

Address 160 Front Street, New York 38, 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
Incidental Allowance	Ft	185.70	619	2140.80	7136	--	7160	0.30
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes								
Overburden	Ft.	35.40	12	377.60	128	--	100	2.95
Drilling: Core NX & BX	Ft.	79.65	27	946.95	321	--	150	2.95
Churn AX	Ft.	1537.00	560	17,720.55	6687	--	6910	2.65
Auger Core Box	Box	24.00	8	525.00	175	--	175	3.00
Stripping Reaming	Ft.	----	0	17.50	10	--	300	1.75
Trenching Lost Time	Hr.	----	0	------	0	--	40	8.00
Test Pits Assays	Sample	----	0	18.00	3	--	32	6.00
Roads and Trails								
Cementing	Hr.	----	0	560.00	71	--	60	8.00
Total Distributed Costs		1861.75		22,314.40				Total Costs Authorized by Contract
Operating Equipment Purchased		--		--				
Initial Rehabilitation and Repairs		--		--				
New Buildings, Improvements, etc.		--		--				
		--		--				
Total Costs		1861.75		22,314.40				23,239.00

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

Date 2/4/59 Operator The New Jersey Zinc Co.

Per E. L. Weinberg Title Resident Geologist

E. L. Weinberg

Remarks: Includes hole U-8. Core box billing included a total of 161 boxes thru last month, and, therefore, the 8 boxes charged this month to bring the total to the authorized amount (175), do not have a separate bill attached.

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)

R. F. Burmeister 2/11/59

(For Government use only)

INSTRUCTIONS

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

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

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

GPO 872894

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

DATE	INITIALS	CODE
4-15	C	220
"	JE	110
4/16	[illegible]	800
		600

INTERIM REPORT
DMEA-4907 Idm-E1206

Operator: New Jersey Zinc Company, Harrisburg, Illinois

Location: Project II, Pope County, Illinois

A project inspection of thesubject contract was conducted on April 7, 1959. Drilling outlined under this contract has been completed and the Operator is now doing additional exploration in the area. Core recovered since the last project inspection was examined. Results obtained by the contract work and preparation of the Operator's final report were discussed with Mr. E. L. Weinberg, the Operator's geologist.

Drilling completed on this project is summarized as follows:

Number of holes completed	15 ✗ 14 accepted
Number of holes completed since last inspection	3 ✓
Footage in holes completed	12,359 *
Footage in holes completed since last inspection	3,003 ✓
Footage allowed by contract terms	12,136
Number of ore holes	3 ✓
Number of indicative holes.	1
Number of trace holes	4
Number of speck trace holes	3
Number of barren holes	4

Of the three holes completed since the last project inspection, one (W-13) discovered ore-grade mineralization and two (W-14 and W-15) encountered traces of mineralization. Summary logs of these three holes are as follows:

Hole No.	Depth in Feet	Description
W-13	0-10	Overburden.
	10-98	Golconda limestone and shale.
	98-243	Cypress sandstone.
	243-324	Paint Creek shale.
	324-351	Bethel sandstone.
	351-354	Fault zone with shines of fluorite and barite.
	354-388	Bethel sandstone.
	388-520½	Renault limestone.

* Includes 619' (W-8) disallowed, 94' (W-3) reporting error by Fld. Eng., and 223' (W-15) at Operator's expense. Talbot 4/16/59

W-13 (con't)	520½-534	Levias limestone.
	534-561½	Rosiclare sandstone.
	561½-722	Fredonia limestone.
	722-749	Fault zone with very high grade fluorite, and ore-grade sphalerite and galena; see assay results below.
	749-764	Fault zone with ore-grade fluorite and sphalerite in calcite gangue; see assay results below.
	764-783	Fredonia limestone.
	783-798	Fault zone with ore-grade fluorite and sphalerite; see assay results below.
	798-873	Fredonia limestone.
	873-888	Calcite vein.
	888-912	Fredonia limestone.
	912-952	St. Louis limestone
	952	Bottom.
W-14	0-20	Overburden.
	20-257	Golconda limestone and shale.
	257-340	Cypress sandstone.
	340-391	Paint Creek shale.
	391-405	Fault zone.
	405-496	Paint Creek shale,
	496-578	Bethel sandstone.
	578-709	Renault limestone; fault at 638 feet.
	709-724	Levias limestone.
	724-752	Rosiclare sandstone.
	752-946	Fredonia limestone; traces of fluorite at 806, 823, 909, 929, and 940 feet.
	946	Bottom.
W-15	0-15	Overburden.
	15-35	Hardinsburg (?) sandstone.
	35-260	Golconda limestone and shale.
	260-406	Cypress sandstone; faults at 291½ and 303½ feet.
	406-491½	Paint Creek shale.
	491½-563½	Bethel sandstone.
	563½-682	Renault limestone.
	682-691	Fault zone.
	691-712½	Levias limestone.
	712½-732	Rosiclare sandstone.
	732-950	Fredonia limestone; much vein calcite; traces of fluorite at 923 and 927½-928 feet.
	950-1105	St. Louis limestone; traces of fluorite at 965-967, 970-977, 1059, 1101 and 1104 feet.
	1105	Bottom.

The weighted average of assays in Hole W-13 are as follows;

Depth in Feet	True Thickness	%CaF_2	%Zn	%Pb
730-764	about 20 ft.	51.8	5.41	4.55
783-798	about 10 ft.	39.1	9.29	2.37

Sufficient footage was not provided in Stage II of the contract to complete Hole W-15; thus, 223 feet of this hole was drilled at the Operator's expense.

At present the Operator is doing additional drilling in the northeast portion of the contract area to further explore the ore-grade mineralization discovered by the contract drilling.

Dewey H. Amos
Geologist
U. S. Geological Survey

OFFICIAL FILE COPY
O. M. E.
RECEIVED MAR 13 1959

DATE	INITIALS	CODE
3/13	C	220
"		110
3/13		800
3/16		600

INTERIM REPORT
DMEA-4907 Idm-E1206

Operator: New Jersey Zinc Company, Harrisburg, Illinois

Location: Project II, Pope County, Illinois

A project inspection of the subject contract was made on March 3, 1959. Results obtained to date and contemplated future work were discussed with Mr. E. L. Weinberg, the Operator's geologist. Core recovered since the last project inspection was examined.

Drilling completed under the contract to date and since the last project inspection is summarized as follows:

Number of holes completed to date	12
Number of holes completed since last inspection	1
Footage in holes completed to date	? 9,263 9356'
Footage in holes completed since last inspection	1,115
Number of ore holes	2
Number of indicative holes	1
Number of trace holes	2
Number of speck trace holes	3
Number of barren holes	4

The hole (W-12) completed since the last project inspection encountered zinc mineralization of estimated ore grade. A summary log of this hole is as follows:

Depth in Feet	Description
0-15	Overburden.
15-95	Golconda limestone and shale.
95-227	Cypress sandstone.
227-314	Paint Creek shale.
314-399	Bethel sandstone.
399-518½	Renault limestone and shale.
518½-534	Levias limestone.
534-554	Rosiclare sandstone.
554-691	Fredonia limestone.
691-693	Shale.
693-928½	Fredonia limestone.

928½-942	Calcite vein with sphalerite, galena and fluorite; interval 932-942 has estimated 7% zinc and 2% lead.
942-1019	Fredonia limestone.
1019-1036	Calcite vein with sphalerite, galena and vfluorite; interval 1021-1031 has estimated 8% zinc and 2% lead.
1036-1115	St. Louis limestone with shines of sphalerite.
1115	Bottom.

One hole (W-13) was in progress at the time of the inspection. This incomplete hole has encountered very high grade fluorspar and zinc ore. A summary log of this hole is as follows:

Depth in Feet	Description
0-10	Overburden.
10-98	Golconda limestone and shale.
98-243	Cypress sandstone.
243-324	Paint Creek shale.
324-351	Bethel sandstone.
351-354	Fault zone with shines of fluorite and barite.
354-388	Bethel sandstone.
388-520½	Renault limestone.
520½-534	Levias limestone.
534-561½	Rosiclare sandstone.
561½-722	Fredonia limestone.
722-749	Fault zone with very high ore-grade fluorite, ore-grade sphalerite and traces of galena.
749-764	Fault zone with ore grade fluorite and sphalerite in calcite gangue.
764-783	Fredonia limestone.
783-797	Fault zone with ore grade fluorite and sphalerite.
797-873	Fredonia limestone.
873-888	Calcite vein.
888-912	Fredonia limestone.
912-913	St. Louis chert.

Verbal approval was given by the field examiner to drill a fourth Stage II hole under the contract. The hole (to be designated W-14 by the Operator) is to be about 200 feet southwest of Hole W-13 along the strike of the ore-bearing structure. The collar of the hole will be located 220 feet S.21°W. of the collar of Hole W-13. The hole will be drilled at a -45° inclination in a S.45°E. direction and will be approximately 900 feet deep.

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

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

MAR 16 1959

Stages I & II

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

PAID ON VOUCHER & SCHEDULE OF PAYMENTS K- 51

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of February, 1959 Docket No. DMEA 4907 Contract No. 1206

Operator's Name The New Jersey Zinc Company Minerals Fluorspar, zinc and lead)

Address 160 Front Street, New York 38, N. Y.

Contract Amount, $ 39,192.00 Government Participation: 50% Amount, $ 19,596.00

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 Overburden	44.25	421.85	466.10	44.25	386.45	430.70
~~Drilling~~ NX & BX	73.75	991.20	1,064.95	73.75	911.55	985.30
~~Crosscutting~~ AX	2848.75	20,569.30	23,418.05	2848.75	19032.30	21881.05
~~Drifting~~ Reaming	-----	17.50	17.50	-	17.50	17.50
Cementing	-----	568.00	568.00	-	568.00	568.00
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
Core boxes	----	525.00	525.00	-	525.00	525.00
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	126.00	18.00	144.00	126.00	18.00	144.00
Payroll Taxes						
Liability Insurance						
Incidental Allowance	334.50	2,472.30	2,806.80	334.50	2286.60	2621.10
(8) Contingencies (specify):						
Lost Time	68.00	64.00	132.00	68.00	30.00	98.00
TOTALS	3495.25	25,647.15	29,142.40	3495.25	23,775.40	27,270.65

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

Date 3/2/59 *Payee The New Jersey Zinc Company

Per E. L. Weinberg Title Resident 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:

$ 1747.62

Signature Arthur R. Miller (Authorized Certifying Officer)

Date MAR 12 1959 Vou. No. 94

(See other side)

1/5

1747.62

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

Stage I

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of Feb. 1959 Docket No. DMEA 4907 Contract No. 1206
Operator's Name The New Jersey Zinc Company Minerals Fluorspar, zinc & Lead
Address 160 Front Street, New York 38, 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								
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
TOTAL DISTRIBUTED COSTS				22,314.40				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc								
TOTAL COSTS				22,314.40				23,239.00

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

Date 3/2/59 Operator The New Jersey Zinc Co.

Per E. L. Weinberg Title Resident Geologist
E. L. Weinberg

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

REMARKS:

(Instructions on reverse)

(For Government use only)

W. M. Beck
MINING ENGINEER
U. S. BUREAU OF MINES

INSTRUCTIONS

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

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

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

GPO 872894

Form DMF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

Stage II

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of February 1959 Docket No. DMEA 4907 Contract No. 1206

Operator's Name The New Jersey Zinc Company Minerals Fluorspar, zinc & lead

Address 160 Front Street, New York 38, 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
Incidental ~~Drifting~~ Allowance	Ft.	334.50	1115	666.00	2220	---	5000	0.30
Crosscutting								
Raising								
Shafts								
~~Winzes~~ Overburden	Ft.	44.25	15	88.50	30	---	80	2.95
Drilling: Core NX & BX	Ft.	73.75	25	118.00	40	---	120	2.95
~~Churn~~ AX	Ft.	2848.75	1075	5697.50	2150	---	4800	2.65
Auger								
~~Stripping~~ Reaming	Ft.	---	0	----	0	---	210	1.75
~~Trenching~~ Lost Time	Hr.	68.00	8½	132.00	16½	---	30	8.00
~~Test Pits~~ Assays Sample		126.00	21	126.00	21	---	32	6.00
Roads and Trails								
Cementing	Hr.	----	0	----	0	---	43	8.00
TOTAL DISTRIBUTED COSTS		3495.25		6828.00				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		3495.25		6828.00				15,953.50

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

REMARKS: Includes hole W-12 and assays from W-11 & W-12.

Date 3/2/59 Operator The New Jersey Zinc Co.

Per E. L. Weinberg Title Resident Geologist

E. L. Weinberg

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

(Instructions on reverse)

(For Government use only)

W. A. Beck

MINING ENGINEER
U. S. BUREAU OF MINES

X 1086G 24M 1-54

COPY

THE NEW JERSEY ZINC COMPANY

EXPLORATION DEPARTMENT

Narrative Summary

Project II, Pope County, Illinois

For your reference we list a summary of the drilling data on Project II thru February 1959. The details of Stage I are included in the January report:

Stage I						
Hole No.	Feet overburden	Feet NX & BX	Feet AX(BXWL)	Feet Reamed	Feet Drilled in February	Feet Drilled to date
W-1 thru W-10	128	321	6687	10	------	7136
Stage II						
W-11	15	15	1075	0		1105
W-12	15	25	1075	0	854	1115
W-13	10	10	772	0	792	792
Totals	40	50	2922	0	1646	3012

Permission to drill hole W-13 was confirmed by Mr. Lynch's letter of February 16th. On the same date, a proposed amendment number 3 to the contract was submitted to Mr. Goodwin, Vice President of our Company, by Mr. Lynch. This amendment would extend the completion date of the contract to May 20, 1959.

Assays from W-11 indicated two main zones of low grade mineralization. Assays from the equivalent zones in W-12 were considerably higher in lead and zinc but the fluorspar analysis was still low (see attached assay sheets).

Drilling in W-13 had penetrated two well mineralized zones by the end of the month, although the hole was still incomplete. Estimates of these zones are as follows, subject to later modification by assay results:

Footage	% Fluorite	% Barite	% Zn	% Pb
730-764	45	10	6	2½
783-798	50	5	6	2

(The second zone is estimated to 798, although drilling had only gone to 792 by February 28th)

The location of holes W-11, W-12 and W-13 are shown on drawing AX-ILL-35-A. Holes W-11 and W-12 penetrated the mineralized zone approximately 180 feet apart, along strike. Holes W-12 and W-13 penetrated the mineralized zone approximately 200 feet apart along the dip of the vein.

Yours truly,

E. L. Weinberg

E. L. Weinberg

AX5[illegible]

THE NEW JERSEY ZINC COMPANY

DRILL RECORD

Harrisburg, Illinois

HOLE NUMBER W-12

Property Barnett, R. S.

Page 1 of 4

Location NW¼, NE¼, Sec 28, L2-7

Coordinates 619'N, 1048'E

Elevation 426

Bearing S45°E @ collar

Began 1/29/59

Finished 2/11/59

Inclination -45° @ coll.

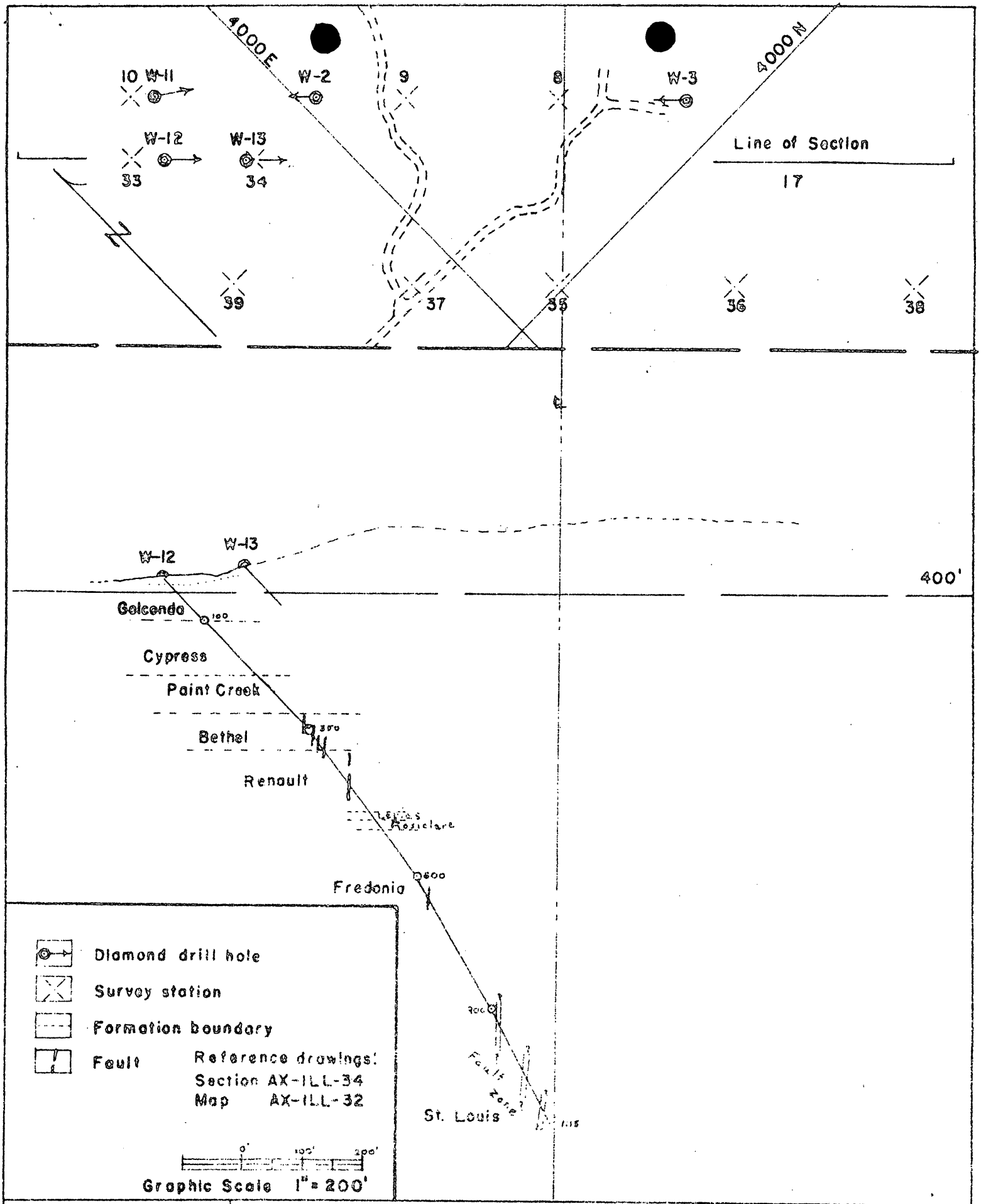
Total Depth 1115

Driller Mills & Lamar (Joy)

Logged by E. L. Weinberg

Water Level

Geographic Log	FROM	TO	Ft Cor.	Description	Eff.	Minerals
OB	0	15	--	Overburden		
				Golconda from 15		
-15 Golconda	15	49	34	Drk gy & brn, fn grd, loc'y tn bdd, gen msv sh. Fos @ 15-16. Bd'g 45° @ 32'	loc sl	NX 15-40; BXWL 40-1115'.
	49	95	41	Med-drk gy & grnish gy, fn grd, gen msv, loc'y bdd, loc'y fos sh, ls & ss. Ls @ 49-57; ss @ 59-62½, 80-81. Gradual increase of ss over sh from 81-95. Bd'g 50° @ 87'	loc st	
				Top of Cypress @ 95'		
-95- Cypress	95	227	132	Lt & drk gy, med grd, gen bnd, loc msv, loc cg'ic ss, sh & cg. Drk gy ss @ 120½-131, 139-142, 143-150, 210-216; cg @ 216-227. Possible fa @ 110' @ 40° to hole direction & right angles to bd'g. Bd'g 45° @ 106'; 46° @ 117'; 48° @ 210'	No	
				Top of Paint Creek @ 227'		
-227- Paint Creek	227	314	87	Drk gy & brn, fn grd, msv & tn bdd sh. Sl'ly cal @ 311-314. Bd'g 55° @ 260'; 55° @ 299'	No	



POSTED TO DATE	THE NEW JERSEY ZINC COMPANY Harrisburg, Illinois	DISTRICT ILLINOIS
DRAWN ELW DATE 2/59 TRACED SCALE 1" = 200'	Area of SECTION LINE 17, Project II, Pope Co., Ill.	FILE NO. AX-ILL-35-A

AB-3803-30-7-52

THE NEW JERSEY ZINC COMPANY

FRANKLIN, N. J.

TO The New Jersey Zinc Co., P. O. Box 129, Harrisburg, Ill. February 20, 1959

SUBJECT ASSAYS - D D H W-11 HARRISBURG, ILL. FILE NO.

Attention: Mr. E. L. Weinberg

The Franklin chemists report the results of the analysis of your twelve samples from Diamond Drill Hole W-11, Project II, Stage II:

Sample No.	Footage		Percent		
	From	To	CaF_2	Zn	Pb
C - 19	833	837 1/2	7.98	0.42	0.026
C - 20	883	888	0.81	0.74	0.29
C - 21	888	893	0.16	0.16	0.055
C - 22	893	898	0.07	1.51	0.030
C - 23	898	903	0.23	0.49	0.020
C - 24	903	905 1/2	0.04	0.019	0.008
C - 25	925	932	0.09	0.21	0.22
C - 26	959	963	0.09	0.72	0.033
C - 27	1023	1028	0.05	0.016	0.073
C - 28	1028	1033	0.03	0.009	0.016
C - 29	1033	1038	0.03	0.09	0.004
C - 30	1038	1042	0.18	7.17	0.51

D. McKechnie

D. McKechnie
Superintendent

L. G. Hooker/lgh

Copies: Messrs. W. H. Callahan
J. M. Hague
D. McKechnie
Laboratory File

Certified True Copy
E. L. Weinberg
President - Geologist

AP-3883-300-7-52

THE NEW JERSEY ZINC COMPANY

FRANKLIN, N. J.

TO The New Jersey Zinc Co., P. O. Box 129, Harrisburg, Ill. February 26, 1959

SUBJECT ASSAYS - D D H W-12 HARRISBURG, ILLINOIS **FILE NO.**

Attention: Mr. E. L. Weinberg

The Franklin chemists report the results of the analysis of your nine samples from Diamond Drill Hole W-12, Project II, Stage II:

	FOOTAGE		PERCENT		
SAMPLE NO.	From	To	CaF_2	Zn	Pb
C - 31	932	936	0.23	18.35	3.62
C - 32	936	942	1.59	4.63	2.12
C - 33	1019	1021	0.10	6.30	0.36
C - 34	1021	1024	0.49	14.39	2.22
C - 35	1024	1027	0.03	1.24	1.37
C - 36	1027	1031	< 0.03	6.81	0.99
C - 37	1031	1036	0.05	0.43	0.34
C - 38	1085	1086 1/2	0.10	21.17	0.16
C - 39	1093	1096 1/2	0.08	13.35	0.33

D. McKechnie
D. McKechnie WEP
Superintendent

L. G. Hooker/lgh

Copies: Messrs. W. H. Callahan
J. M. Hague
D. McKechnie
Laboratory File

Certified True Copy
E. L. Weinberg
Resident Geologist

X 1086G 24M 1-54

COPY

THE NEW JERSEY ZINC COMPANY

EXPLORATION DEPARTMENT

March 6, 1959

P. O. Box # 129
Harrisburg, Ill.

Mr. Harry L. Burmeister
U. S. Bureau of Mines
College Park, Maryland

Re: DMEA 4907 (fluorspar, zinc, lead)
Idm-E 1206, The New Jersey Zinc Co.
Project II, Pope County, Illinois
February Monthly Report

Dear Mr. Burmeister,

Attached hereto is the monthly report for February 1959 on Project II in Pope County, Illinois.

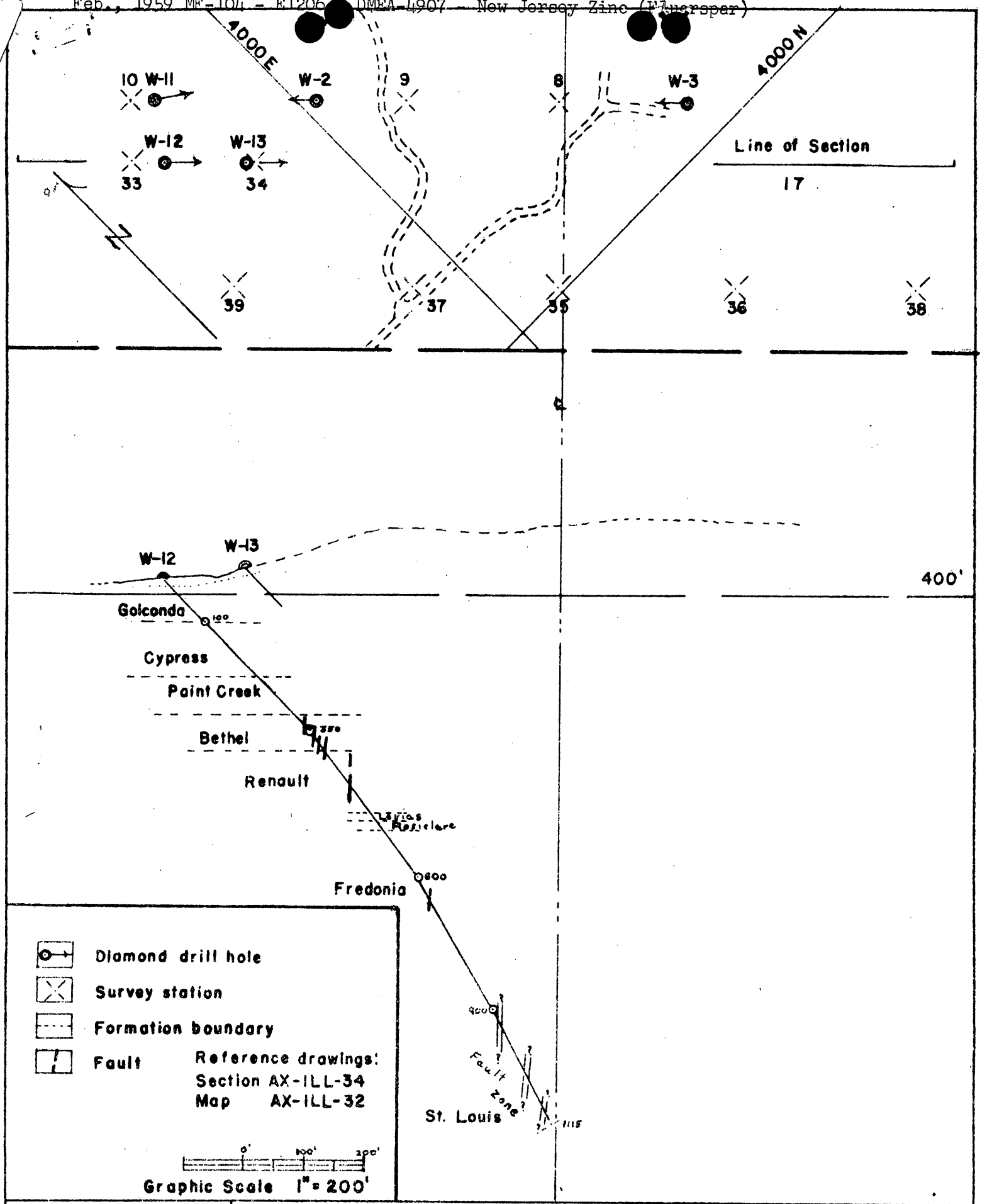
Included please find the Narrative summary, a log of hole W-12, drawing AX-ILL-35-A, the W-12 driller's invoice, forms MF 104 and 104A(2), and assay reports for 21 samples from holes W-11 and W-12.

Yours sincerely,

E. L. Weinberg

E. L. Weinberg
Resident Geologist

ELW/hwd
in quintuplicate



POSTED TO DATE	THE NEW JERSEY ZINC COMPANY Harrisburg, Illinois	DISTRICT ILLINOIS
DRAWN ELW DATE 2/59 TRACED SCALE 1" = 200'	Area of SECTION LINE 17, Project II, Pope Co., Ill.	FILE NO. AX-ILL-35-A

X 8407 C 1M 3-53

AX5532A 20 1-3

THE NEW JERSEY ZINC COMPANY

DRILL RECORD

Harrisburg, Illinois

HOLE NUMBER W-12

Page 1 of 4

Property Barnett, R. S.

Location NW¼, NE¼ Sec 28, T2-7

Coordinates 619'N, 1048'E

Elevation 426

Bearing S45°E @ collar

Began 1/29/59

Finished 2/11/59

Inclination -45° @ coll

Total Depth 1115

Driller Mills & Lamar (Joy)

Logged by E. L. Weinberg

Water Level

Graphic Log	FROM	TO	Ft Core	Description	Wt.	Minerals
OB	0	15	--	Overburden		
				Colcanda from 15		
-15- Colcanda	15	49	34	Drk gy & brn, fn grd, loc'y to bdd, gen msv sh. Fos @ 15-16. Bd'g 45° @ 32'	loc at	NX 15-40; BXW 40-1115'.
	49	95	41	Med-drk gy & grnish gy, fn grd, gen msv, loc'y bdd, loc'y fos sh, ls & ss. Ls @ 49-57; ss @ 59-62½, 80-81. Gradual increase of ss over sh from 81-95. Bd'g 50° @ 87'	loc at	
				Top of Cypress @ 95'		
-95- Cypress	95	227	132	Lt & drk gy, med grd, gen bnd, loc msv. No loc cg'ic ss, sh & cg. Drk gy ss @ 120½-131, 139-142, 143-150, 210-216; cg @ 216-227. Possible fa @ 110' @ 40° to hole direction & right angles to bd'g. Bd'g 45° @ 106' 46° @ 117' 48° @ 210'		
				Top of Paint Creek @ 227'		
-227- Paint Creek	227	314	87	Drk gy & brn, fn grd, msv & tn bdd sh. No Sl'ly cal @ 311-314. Bd'g 55° @ 260' 55° @ 299'		

AG-2603-BM-7-62

THE NEW JERSEY ZINC COMPANY

FRANKLIN, N. J.

TO The New Jersey Zinc Co., P. O. Box 129, Harrisburg, Ill. February 20, 1959

SUBJECT ASSAYS - D D H W-11 HARRISBURG, ILL. FILE NO.

Attention: Mr. E. L. Weinberg

The Franklin chemists report the results of the analysis of your twelve samples from Diamond Drill Hole W-11, Project II, Stage II:

Sample No.	Footage		Percent		
	From	To	CaF_2	Zn	Pb
C - 19	833	837 1/2	7.98	0.42	0.026
C - 20	883	888	0.81	0.74	0.29
C - 21	888	893	0.16	0.16	0.055
C - 22	893	898	0.07	1.51	0.030
C - 23	898	903	0.23	0.49	0.020
C - 24	903	905 1/2	0.04	0.019	0.008
C - 25	925	932	0.09	0.21	0.22
C - 26	959	963	0.09	0.72	0.033
C - 27	1023	1028	0.05	0.016	0.073
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C - 29	1033	1038	0.03	0.09	0.004
C - 30	1038	1042	0.18	7.17	0.51

D. McKechnie

D. McKechnie
Superintendent

L. G. Hooker/lgh

Copies: Messrs. W. H. Callahan
J. M. Hague
D. McKechnie
Laboratory File

Certified True Copy
E. L. Weinberg
President - Geologist

AB-3883-2M-7-52

THE NEW JERSEY ZINC COMPANY

FRANKLIN, N. J.

TO The New Jersey Zinc Co., P. O. Box 129, Harrisburg, Ill. February 26, 1959

SUBJECT ASSAYS - D D H W-12 HARRISBURG, ILLINOIS **FILE NO.**

Attention: Mr. E. L. Weinberg

The Franklin chemists report the results of the analysis of your nine samples from Diamond Drill Hole W-12, Project II, Stage II:

	FOOTAGE		PERCENT		
SAMPLE NO.	From	To	CaF_2	Zn	Pb
C - 31	932	936	0.23	18.35	3.62
C - 32	936	942	1.59	4.63	2.12
C - 33	1019	1021	0.10	6.30	0.36
C - 34	1021	1024	0.49	14.39	2.22
C - 35	1024	1027	0.03	1.24	1.37
C - 36	1027	1031	< 0.03	6.81	0.99
C - 37	1031	1036	0.05	0.43	0.34
C - 38	1085	1086 1/2	0.10	21.17	0.16
C - 39	1093	1096 1/2	0.08	13.35	0.33

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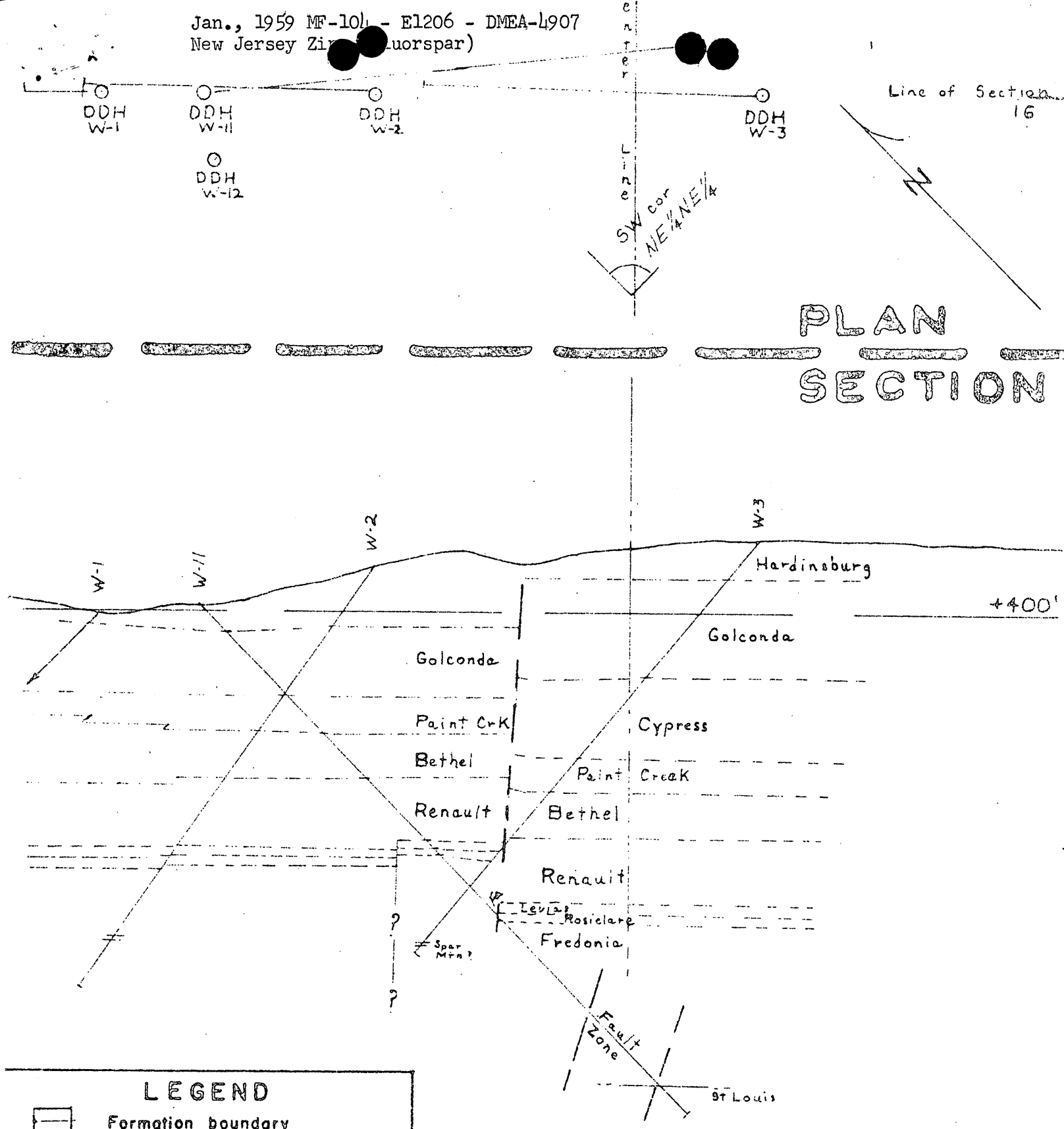
J. M. Hague
D. McKechnie
Laboratory File

Certified True Copy
C. A. Weinberg
Resident Geologist

Jan., 1959 MF-10[illegible] - E1206 - DMEA-4907
New Jersey Zi[illegible] Fluorspar)



LEGEND

Formation boundary

Fault

Reference drawings:
Section AX-ILL-34
Map AX-ILL-32

0 100 200 feet
Graphic Scale ~~1"=100'~~ 1" = 200' RRB.

SECTION LINE 16 AREA
PROJECT II
POPE CO., ILLINOIS

THE NEW JERSEY ZINC COMPANY — DRILL RECORD — Harrisburg, Illinois

Property Barnett, R. S. [redacted] r on L.) [redacted] E NUMBER W-11

Location NW¼ of NE¼, Sec 28, T12S, R7E — Page 1 of 4

Coordinates 702'N, 1107'E — Elevation 411.45 — Bearing S 50°E

Began 1/8/59 — Finished 1/24/59 — Inclination -45 — Total Depth 1105'

Driller Mills & Lamar (Joy) — Logged by E. L. Weinberg — Water Level

Fm	Graphic Log	FROM	TO	Ft Core	Description	Eff.	Minerals
OB		0	15	—	Overburden		NX to 30' BXWL 30'-1105'
Golconda (15')		15	30	12	Golconda from 15'- Med-med drK gy, med-c grd ls, ss & sh; sh @ 15-23 Sl'y-cal ss @ 23-30; Weathered to 30'	Sl @ 26	
		30	60	30	Med-med drK gy, fn grd, msv & lam sh & sts; sts @ 30-36' Bd'g 50° @ 32'	No	
Cypress (60')		60	79	19	Top of Cypress @ 60' Lt med gy, bnd'd, fn grd ss w. sh partings Bd'g 45° @ 70'	No	
		79	106	21	Med-drK gy, med grd ss, msv & bnd'd (6' of core lost between 72' & 92') Bd'g 50° @ 106'	No	
		106	183	77	Lt gy, med-c grd, msv & bnd'd ss w. local sh partings. SS locally sach @ 114-117, 122-127, 133-150 Sh partings abun @ 117-122, 150-156, 163-167	No	
		183	201	18	Drk-med gy, fn-med grd, sh & sdy cg. RK is msv sh @ top, grading to sdy sh, thence to cg'ic ss w. scattered sh frag's.	Sl @ 201	
Paint Creek (201')		201	286	85	Top of Paint Creek @ 201 Med drK gy, fn grd, faintly bnd'd sh w. local sdy Bd's @ 237-238, 281½-282 Bd'g 48° @ 204' " 38° @ 282	Sl @ 212-216	

abun - abundant
act - actinolite
agg - agglomerate
ab - albite
altn - alteration
alt - altered
amp - amphibole
ang - angular
ank - ankerite
an - anorthite
apa - apatite
ap - aplite
aren - arenaceous
arg - argillaceous
ark - arkose
asp - arsenopyrite
asph - asphalt
aug - augite
avg - average

bnd - band
Ba - barite
bas - basalt
bd - bed
bdd - bedded
blw - below
ben - bentonite
btw - between
bio - biotite
bit - bitumen
blk - black
blu - blue
bot - bottom
br - breccia
brt - bright
bkn - broken
brn - brown
bu - buff
Cal -calcareous
cala - calamine
calc - calcite
crb - carbonaceous
cel - celestite
cmt - cement
ce - cerrusite
cc - chalcocite
cpy - chalcopyrite
ch - chert
chl - chlorite
choc - chocolate
chr - chromite
clr - clear
clvg - cleavage
c. - coarse (1-2cm)
cpt - compact
concr - concretion
cg - conglomerate
cons - considerable
cnt - contact
cr - cream colored
xb - crossbedded
crd - crushed
xln - crystalline

drk - dark
decalc - decalcified
dec - decomposed
dns - dense
db - diabase
dk - dike
dis - disseminated
dol - dolomite
dold - dolomitized
drab - drab
est - estimate(d)
ed - edgewise
eff - effervescence
encr - encrusted
enr - enriched
ens - enstatite
epi - epidote
fa - fault
fd - feldspar
ferr - ferruginous
fn - fine
fsl - fissile
flt - fluorite
fol - foliated
f.w. - foot wall
fm - formation
fos - fossiliferous
fr - fracture
frag - fragments
ft - franklinite
fri - friable

gb - gabbro
ga - galena
gar - garnet
gn - gneiss
gos - gossan
gg - gouge
grd - grained
gr - granite
gd - granodiorite
gran - granular
graph - graphite
gy - gray
gw - graywacke
grn - green
gs - greenstone
gnd - ground
gyp - gypsum

h.w. - hanging wall
hvy - heavy
hmt - hematite
h.g. - high grade
h. - horizontal
hb - hornblende
hbt - hornblendite
ig - igneous
il - ilmenite
incl - inclined
int - intense
intbd - interbedded
intr - intrusive
irreg - irregular

jar - jarosite
jas - jasper
jnt - joint
kao - kaolinite
lab - labradorite
lam - laminated (tion)
lamp - lamprophyre
lt - light
ls - limestone
lmt - limonite
lin - lineation
loc - local
lol - loellingite
l.g. - low grade

mag - magnetic
mt - magnetite
mal - malachite
ma - marcasite
msv - massive
mtl - material
mtx - matrix
med - medium
mdg - medium grained
met - metamorphic
mc - mica
min - mineral
md - moderate
mo - molybdenite
mobr - mosaic breccia
mot - mottled
mus - muscovite

nod - nodule
ol - oligoclase
ov - olivine
Oo - oolite (-ic)
orn - orange
or - orthoclase
ox - oxidized
pll - parallel
peb - pebble
pt - pegmatite
pnk - pink
phen - phenocryst
phos - phosphate(nods)
phy - phyllite
por - porphyritic
pu - pumice
purp - purple
py - pyrite
px - pyroxene
po - pyrrhotite
pet -petroleum
Q - quartz
qd - quartz diorite
qte - quartzite
recep - receptaculites
red - red
res - residue
rct - rhodochrosite
rhy - rhyolite
rby - ribbony
rk - rock

rnd - round
rt - rutile

sach - saccharoidal
s.g. - sand grain(s)
ss - sandstone
sdy - sandy
sch - schist
sms - seams (to O.F)
ser - sericite
srp - serpentine
sh - shale
shrd - sheared
sid - siderite
sil - siliceous
sl - slight
smt - smithsonite
sps - sparse
spk - speckled
sph - sphalerite
spn - sphene
spl - spinel
stn - stain
stl - steel
st - strong
str - strontianite
sty - stylolites
sul - sulfides
sy - syenite
sts- siltstone
tc - talc
tx - texture
tk - thick
tn - thin
tnt - titanite
und - undulating
unox - unoxidized
vn - vein
vnlt - veinlet
v. - vertical
vy - very
vc - very coarse
vf - very fine
vio - violet
vol - volcanic
vug - vuggy

wk -weak
wht - white
wt - willemite
w. - with
wit - witherite
wlst - wollastonite
xc - crosscut(ting)
yel - yellow
zeo - zeolite
zt - zincite
zr - zircon
zo - zone

Tr - trace

Use chemical symbols for metals.

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

Budget Bureau No. 42-R1036.5

MAR 16 1959 O.M.

Stage II

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

PAID ON VOUCHER & SCHEDULE OF PAYMENTS K- 51

Month of January 1959 Docket No. DMEA 4907 Contract No. 1206
Operator's Name The New Jersey Zinc Company Minerals Fluorspar, zinc & lead.
Address 160 Front Street, New York 38, N. Y.
Contract Amount, $39,192.00 Government Participation: 50 % Amount, $ 19,596.00

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 Overburden	44.25	---	44.25	44.25	342.20	386.45
~~Bulldozing~~ MX & BX	44.25	---	44.25	44.25	867.30	911.55
~~Crosscutting~~ AX	2848.75	---	2848.75	2848.75	16183.55	19032.30
~~Drifting~~ Reaming	-----	---	00.00	-	17.50	17.50
Cementing	-----	---	00.00	-	568.00	568.00
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
Core Boxes	---	---	00.00	24.00	501.00	525.00
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	---	---	00.00	—	18.00	18.00
Payroll Taxes						
Liability Insurance						
Incidental Allowance	331.50		331.50	331.50	1955.10	2286.60
(8) Contingencies (specify):						
Lost Time	64.00		64.00	30.00	-	30.00
TOTALS	3332.75		3,332.75	3322.75	20,452.65	23,775.40

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

Date 2/4/59 *Payee The New Jersey Zinc Co.

Per S. L. Weinberg Title Resident 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:

$ 1661.37

Signature Helen R. Miller (Authorized Certifying Officer)

Date MAR 12 1959 Vou. No. 94

(See other side)

5

1661.37

(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-1206 in accordance with the terms of the contract.

Signature R. Burmeister Title Mining Engr. Date 2/11/59

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature V. J. Lynch Title ACTING EXECUTIVE OFFICER DME - REGION V Date MAR 9 1959

MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

Stage II

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of January 195 9 Docket No. DMEA 4907 Contract No. 1206
Operator's Name The New Jersey Zinc Company Minerals Fluorspar, zinc & lead
Address 160 Front Street, New York 38, 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
Incidental ~~Drifting~~ Allowance	Ft.	331.50	1105	331.50	1105	---	5000	0.30
Crosscutting								
Raising								
Shafts								
~~Winzes~~ Overburden	Ft.	44.25	15	44.25	15	---	80	2.95
Drilling: Core NX & BX	Ft.	44.25	15	44.25	15	---	120	2.95
~~Churn~~ AX	Ft.	2848.75	1075	2848.75	1075	---	4800	2.65
~~Auger~~ Core Box	Box	---	---	---	---	---	---	----
~~Stripping~~ Reaming	Ft.	---	0	---	0	---	210	1.75
~~Trenching~~ Lost Time	Hrs	64.00	8	64.00	8	---	30	8.00
~~Test Pits~~ Assays	Sample	---	0	---	0	---	32	6.00
~~Roads and Trails~~								
Cementing	Hr.	---	0	---	0	---	43	8.00
TOTAL DISTRIBUTED COSTS		3332.75		3332.75				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		3332.75		3332.75	3298.75			15,953.50

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

Date 2/4/59 Operator The New Jersey Zinc Co.

Per E. L. Weinberg Title Resident Geologist
E. L. Weinberg

→ 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: Includes hole W-11
$30.00 allowed for lost time
FHB

(Instructions on reverse)

Subject to decision on hole W-8 (For Government use only)
W. J. Burmeister

INSTRUCTIONS

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

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

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

GPO 872894

Narrative Summary

Project II, Pope County, Illinois

For your reference we list a summary of the drilling data on Project II thru January 31, 1959:

Hole No.	Feet Overburden	Feet NX & BX	Feet AX(BXWL)	Feet Reamed	Feet Drilled in January	Feet Drilled to date.
			Stage I			
W-1	20	10	691	0		721
W-2	20	56	728	0		804
W-3	7	84	751	0		842
W-4	7	27	771	0		805
W-5	13	21	878	0		912
W-6	9	21	686	0		716
W-7	27	38	215	0		280
~~W-8~~	~~12~~	~~27~~	~~580~~	~~0~~	Disallowed	~~619~~
W-9	13	17	720	0		750
W-10	00	20	667	10		687
Total	128	321	6687	10		7136
			Stage II			
W-11	15	15	1075	0	1105	1105
W-12	15	25	221	0	261	261

Please note that all drilling this month was on Stage II of the p roject. Permission to begin Stage II with hole W-11 was given in Mr. Laurence's letters of January 13th and 19th. Permission to drill W-12 was given in Mr. Laurence's letter of January 30th.

Attempts to continue hole W-8 beyond its original bottom of 619 feet were abandoned after a string of AX rods became stuck in the hole and could not be salvaged. By agreement with OME representative Dewey Amos, the hole was considered completed at 619 feet since it had already reached its primary target, the Bethel-Renault contact.

Hole W-11 was drilled to further test the mineralization found in W-3. As is shown on the attached log, mineralization was encountered to some degree on the west side of the fault logged at 673', and then became increasingly abundant down to 1043½'. Brecciation and calcite veination (shown in red on the log) also were abundant in the mineralized zone. Core was split a nd sent for fluorspar-zinc-lead assay from the following footages in W-11:

Sample No.	Footage
C-19	833 to 837½
C-20	883 to 888
C-21	888 to 893

Narrative Summary

Sample No.	Footage		
C-22	893	to	898
C-23	898	to	903
C-24	903	to	905½
C-25	925	to	932
C-26	959	to	963
C-27	1023	to	1028
C-28	1028	to	1033
C-29	1033	to	1038
C-30	1038	to	1042

Hole W-12 was collared on January 29th and reached 261 feet on Janua ry 31st. Its objective is to test the southwest strike extension of the mineralization found in hole W-11.

The location of holes W-11 and W-12 are shown on the attached sketch map and section.

A word of explanation is in order concerning the financial summary this month. Since both holes W-8 and W-11 are charged, and since the first is a Stage I hole and the latter a Stage II hole, separate forms MF-104A and MF-104 were made out to include each Stage. We trust this will not cause undue confusion.

In addition, we note that you have received bills for a total of 181 core boxes whereas we have only charged off 167 thru December. We have therefore included charges for eight additional core boxes this month to bring us up to the authorized limit of 175 core boxes.

Yours truly,

E. L. Weinberg

E. L. Weinberg

AX5532A 2C 1-57

THE NEW JERSEY ZINC COMPANY — DRILL RECORD — Harrisburg, Illinois

Property Barnett, R. (Miller on L.) (Baumer) — HOLE NUMBER W-11

Location NW¼ of NE¼, Sec 28, T12S, R7E — Page 1 of 4

Coordinates 702' N, 1107' E — Elevation 411.45 — Bearing S 50° E

Began 1/8/59 — Finished 1/24/59 — Inclination -45 — Total Depth 1105'

Driller Mills & Lamar (Jay) — Logged by E. L. Weinberg — Water Level

Graphic Log	FROM	TO	Ft. Core	Description	Eff.	Minerals
OB	0	15	—	Overburden		NX to 30' BXWL 30'-1105'
Golconda	15	30	12	Golconda from 15'- Med-med drK gy, med-c grd ls, ss & sh; sh @ 15-23 Sly-cal ss @ 23-30; Weathered to 30'	Sl @26'	
	30	60	30	Med-med drK gy, fn grd, msv & lam sh & sts; sts @ 30-36' Bd'g 50° @ 32'	No	
Cypress	60	79	19	Top of Cypress @ 60' Lt med gy, bnd'd, fn grd ss w. sh partings Bd'g 45° @ 70'	No	
	79	106	21	Med-drK gy, med grd ss, msv & bnd'd (6' of core lost between 72' & 92') Bd'g 50° @ 106'	No	
	106	183	77	Lt gy, med-c grd, msv & bnd'd ss w. local sh partings. SS locally sach @ 114-117, 122-127, 133-150 Sh partings abun @ 117-122, 150-156, 163-167	No	
	183	201	18	Brk-med gy, fn-med grd, sh & sdy cg. RK is msv sh @ top, grading to sdy sh, thence to cg'ic ss w. contorted sh frag's.	Sl @ 201	
Paint Creek	201	286	85	Top of Paint Creek @ 201 Med drK gy, fn grd, faintly bnd'd sh w. local sdy Bd's @ 237-238, 281½-282 Bd'g 48° @ 204' " 38° @ 282	Sl @ 212-216	

abun - abundant
act - actinolite
agg - agglomerate
ab - albite
altn - alteration
alt - altered
amp - amphibole
ang - angular
ank - ankerite
an - anorthite
apa - apatite
ap - aplite
aren - arenaceous
arg - argillaceous
ark - arkose
asp - arsenopyrite
asph - asphalt
aug - augite
avg - average

bnd - band
Ba - barite
bas - basalt
bd - bed
bdd - bedded
blw - below
ben - bentonite
btw - between
bio - biotite
bit - bitumen
blk - black
blu - blue
bot - bottom
br - breccia
brt - bright
bkn - broken
brn - brown
bu - buff
Cal -calcareous
cala - calamine
calc - calcite
carb - carbonaceous
cel - celestite
cmt - cement
cc - corrasite
cc - chalcocite
cpy - chalcopyrite
ch - chert
chl - chlorite
choc.- chocolate
chr - chromite
clr - clear
clvg - cleavage
c. - coarse (1-2cm)
cpt - compact
concr - concretion
cg - conglomerate
cons - considerable
cnt - contact
cr - cream colored
xb - cross-bedded
crd - crushed
xln - crystalline
crk - cherk
decale - decalcified
dec - decomposed
dns - dense
db - diabase
dk - dike
dis - disseminated
dol - dolomite
dold - dolomitized
drab - drab
est - estimate(d)
ed - edgewise
eff - effervescence
encr - encrusted
enr - enriched
ens - enstatite
epi - epidote
fa - fault
fd - feldspar
ferr - ferruginous
fn - fine
fsl - fissile
flt - fluorite
fol - foliated
f.w. - foot wall
fm - formation
fos - fossiliferous
fr - fracture
frag - fragments
ft - franklinite
fri - friable

gb - gabbro
ga - galena
gar - garnet
gn - gneiss
gos - gossan
gg - gouge
grd - grained
gr - granite
gd - granodiorite
gran - granular
graph - graphite
gy - grey
gw - graywacke
grn - green
gs - greenstone
gnd - ground
gyp - gypsum

h.w. - hanging wall
hvy - heavy
hmt - hematite
h.g. - high grade
h. - horizontal
hb - hornblende
hbt - hornblendite
ig - igneous
il - ilmenite
incl - inclined
int - intense
intbd - interbedded
intr - intrusive
irreg - irregular
jasp - jasperite
jas - jasper
jnt - joint
kno - knoxville
lab - labradorite
lam - laminated (tion)
lamp - lamprophyre
lt - light
ls - limestone
lmt - limonite
lin - lineation
loc - local
lol - loellingite
l.g. - low grade

mag - magnetite
mt - magnetite
mal - malachite
ma - marcasite
mav - massive
mtl - material
mtx - matrix
med - medium
mdg - medium grained
met - metamorphic
mc - mica
min - mineral
md - moderate
mo - molybdenite
mobr - mosaic breccia
mot - mottled
mus - muscovite

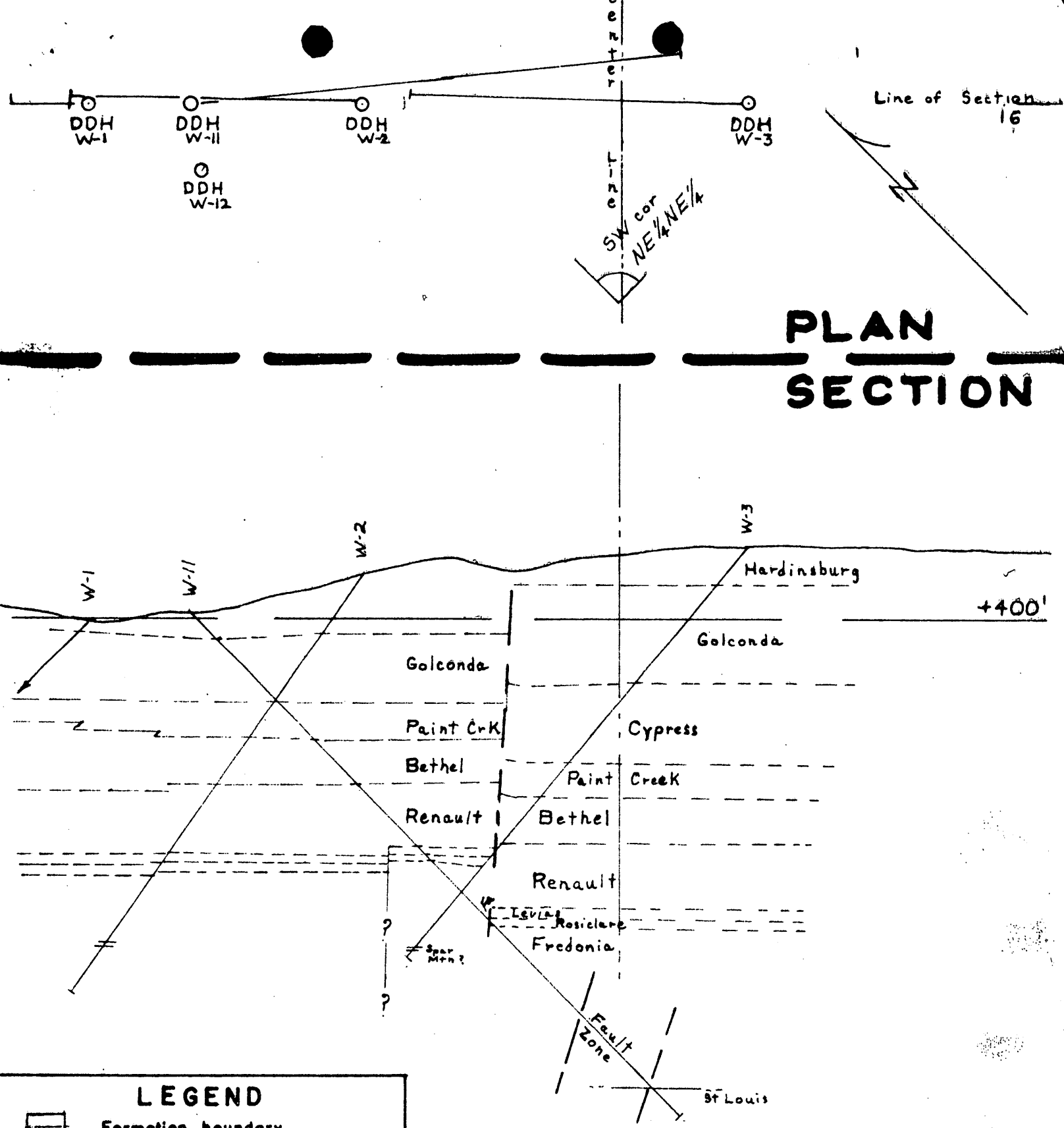
nod - nodule
ol - oligoclase
ov - olivine
Oo - oolite (-ic)
orn - orange
or - orthoclase
ox - oxidized
pll - parallel
peb - pebble
pt - pegmatite
pnk - pink
phen - phenocryst
phos - phosphate(nodules)
phy - phyllite
por - porphyritic
pu - pumice
purp - purple
py - pyrite
px - pyroxene
po - pyrrhotite
pet -petroleum
Q - quartz
qd - quartz diorite
qte - quartzite
recep - receptaculites
red - red
res - residue
rct - rhodochrosite
rhy - rhyolite
rby - ribbony
rk - rock
rnd - rounded
rt - rutile

sach - saccharoidal
s.g. - sand grain(s
ss - sandstone
sdy - sandy
sch - schist
sms - seams (to O.P
ser - sericite
srp - serpentine
sh - shale
shrd - sheared
sid - siderite
sil - siliceous
sl - slight
smt - smithsonite
sps - sparse
spk - speckled
sph - sphalerite
spn - sphene
spl - spinel
stn - stain
stl - steel
st - strong
str - strontianite
sty - stylolites
sul - sulfides
sy - syenite
sts- siltstone
tc - talc
tx - texture
tk - thick
tn - thin
tnt - titanite
wnd - undulating
unox - unoxidized
vn - vein
valt - veinlet
v. - vertical
vy - very
vc - very coarse
vf - very fine
vio - violet
vol - volcanic
vug - vuggy

wk - weak
wht - white
wt - willemite
w. - with
wit - witherite
wlst - wollastonite
xo - crossout(ting)
yel - yellow
zeo - zeolite
zt - zincite
zr - zircon
zo - zone

Use chemical symbols for metals.

Tr - trace



LEGEND

Formation boundary

Fault

Reference drawings:
Section AX-ILL-34
Map AX-ILL-32

0 100 200 feet
Graphic Scale ~~1" = 100'~~ 1" = 200'

SECTION LINE 16 AREA
PROJECT II
POPE CO., ILLINOIS

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

March 9, 1959

Memorandum

To: Finance Officer, Region V - OME - Norris, Tenn.

From: Acting Executive Officer, OME - Region V

Subject: January 1959, Monthly Report & Vouchers -
DMEA-4907, Idm-E1206(fluorspar, zinc-lead)
The New Jersey Zinc Company
Project II, Pope County, Illinois

Transmitted are the original and two copies of the subject monthly report in the amount of $1,661.37.

The Washington office has declared Hole W-8 to be an incompleted hole. Payment on this hole has, therefore, been disallowed. The attached MF-104 and MF104A forms are for hole W-11 only.

V. J. Lynch

VJL/zm
cc
Lynch
Burmeister
Files

X 1086G 24M 1-54

COPY

THE NEW JERSEY ZINC COMPANY

EXPLORATION DEPARTMENT

February 4, 1959

P. O. Box # 129
Harrisburg, Ill.

Mr. H arry L. Burmeister
Mine Examination & Exploration Engineer
U. S. Bureau of Mines
College Park, Maryla nd

Re: DMEA 4907 (fluorspar, zinc, lead)
Idm-E 1206, The New Jersey Zinc Co.
Project II, Pope County, Illinois
January Monthly Report

Dear Mr. Burmeister,

Attached hereto is the monthly report for January 1959 on Project II in Pope County, Illinois.

A drillers invoice for hole W-8 is attached and cha rges for it are included in the financial statement even though some question has been raised concerning this hole in correspondence between Knoxville and this office (refer to Mr. Laurence's letter of January 30, 1959 and our reply of February 2, 1959)

Yours sincerely,

E. L. Weinberg

E. L. Weinberg
Resident Geologist

ELW/hwd
in quintuplica te

FEB 9 AM 8:46
BUREAU OF MINES
COLLEGE PARK, MD.

OFFICIAL FILE COPY
O. M. E.
RECEIVED FEB 18 1959

DATE	INITIALS	CODE
2/18		220
"		110
2/19		800
		600

INTERIM REPORT
DMEA-4907 Idm-E1206

Operator: New Jersey Zinc Company, Harrisburg, Illinois

Location: Project II, Pope County, Illinois

A project inspection of the subject contract was made on February 10, 1959. Results obtained to date and contemplated future work were discussed with Mr. E. L. Weinberg, the Operator's geologist. Core recovered since the last project inspection was examined.

Drilling completed under the contract to date and since the last project inspection is summarized as follows:

Number of holes completed to date	11
Number of holes completed since last inspection	1
Footage in holes completed to date.	8,148
Footage in holes completed since last inspection.	1,105
Number of ore holes	1
Number of indicative holes	1
Number of trace holes	2
Number of speck trace holes	3
Number of barren holes.	4

The hole (W-11) completed since the last project inspection encountered zinc mineralization of estimated ore grade. A summary log of this hole is as follows:

Depth in Feet	Description
0-15	Overburden.
15-60	Golconda limestone and shale.
60-201	Cypress sandstone.
201-286	Paint Creek shale.
286-377	Bethel sandstone.
377-513	Renault limestone and shale.
513-530	Levias limestone.
530-544	Rosiclare sandstone.
544-672	Fredonia limestone.
672-674	Rosiclare (?) sandstone.
674-883	Fredonia limestone.
883-905	Calcite vein with sphalerite, galena and fluorite; estimated 1% zinc.

905-1023	Fredonia limestone; traces of fluorite.
1023-1043½	Calcite vein with sphalerite, galena and fluorite; interval 1038-1042 has estimated 9% zinc and 4% lead.
1043½-1105	St. Louis limestone.
1105	Bottom.

One hole (W-12) was in progress at the time of the inspection. This incomplete hole has encountered ore-grade mineralization. A summary log of this hole is as follows:

Depth in Feet	Description
0-15	Overburden.
15-95	Golconda limestone and shale.
95-227	Cypress sandstone.
227-314	Paint Creek shale.
314-399	Bethel sandstone.
399-518½	Renault limestone and shale.
518½-534	Levias limestone.
534-554	Rosiclare sandstone.
554-691	Fredonia limestone.
691-693	Shale.
693-928½	Fredonia limestone.
928½-942	Calcite vein with sphalerite, galena and fluorite; interval 932-942 has estimated 7% zinc and 2% lead.
942-1019	Fredonia limestone.
1019-1036	Calcite vein with sphalerite, galena and fluorite; interval 1021-1031 has estimated 8% zinc and 2% lead.
1036-1085	St. Louis limestone with shines of sphalerite.

Verbal approval was given by the field examiner to drill a third Stage II hole under the contract. The hole (to be designated W-13 by the Operator) is to be about 135 feet vertically above and parallel to Hole W-12. This hole will intersect the ore-bearing structures discovered in W-12 at favorable stratigraphic horizons and will determine the dip extent of the known mineralization. In addition it will furnish accurate information concerning the dips of the ore-bearing structures. The collar of

the hole will be located 135 feet S.45°E. of the collar of Hole W-12. The hole will be drilled at a -45° inclination in a S.45°E. direction and will have an estimated total depth of 1000 feet.

A fourth Stage II hole is warranted about 200 feet southwest of Hole W-12 to determine the strike extent of the known mineralization, although the exact location can not be decided until Hole W-13 is completed. This

Dewey H. Amos
Geologist
U.S.Geological Survey

OFFICIAL FILE COPY
O. M. E.
RECEIVED FEB 2 1959

DATE	INITIALS	CODE
2-3	C	220
"	JH	170
		600

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
REGION V

ELECTROTECHNICAL
EXPERIMENT STATION

P. O. BOX 217
NORRIS, TENNESSEE

January 29, 1959

Memorandum

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

From: Administrative Assistant, Norris, Tennessee

Subject: Monthly report and voucher

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

Idm-E1206 The New Jersey Zinc Company
Docket No. DMEA-4907
4th payment - month of December
Amount $2201.82

Helen Miller
Helen R. Miller

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

4170

MF-104 (Rev.)
April 1952)

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

PAYMENT VOUCHER & SCHEDULE OF PAYMENTS K-82

FEB 2 1959 OIL

STAGE I

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of December, 1958 Docket No. DMEA 4907 Contract No. 1206

Operator's Name The New Jersey Zinc Company Minerals Fluorspar

Address 160 Front Street, New York 38, N. Y. Zinc & Lead

Contract Amount, $ 39,192.00 Government Participation: 50% Amount, $ 19,596.00

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 Overburden	38.35	303.85	342.20			
~~Building~~ NX & BX	109.15	758.15	867.30			
~~Crosscutting~~ AX	3675.55	12,508.00	16,183.55			
~~Drifting~~ Reaming	17.50	none	17.50			
Cementing	none	568.00	568.00			
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
Core Boxes	114.00	387.00	501.00			
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	18.00	none	18.00			
Payroll Taxes						
Liability Insurance						
Incidental allowance	431.10	1,524.00	1,955.10			
(8) Contingencies (specify):						
TOTALS	4403.65	16,049.00	20,452.65	4403.65	16,049.00	20,452.65

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

Date Jan. 2, 1959 *Payee The New Jersey Zinc Company

Per J M Hague 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:

$ 2201.82

Signature Helen R. Miller
(Authorized Certifying Officer)

Date JAN 29 1959 Vou. No. 83
(See other side)

4

2201-83

(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-1206 in accordance with the terms of the contract.

Signature [illegible] Title MINING ENGINEER U. S. BUREAU OF MINES Date JAN 27 1959

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Robert A. Lemmon Title EXECUTIVE OFFICER OME FIELD TEAM REGION V Date JAN 27 1959

MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

DMF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

STAGE I

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

Month of Dec. 195 8 Docket No. DMEA 4907 Contract No. 1206

Operator's Name The New Jersey Zinc Company Minerals Fluorspar

Address 160 Front Street, New York 38, N. Y. Zinc & Lead

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
Incidental Allowance	Ft.	431.10	1437	1955.10	6517		7160	.30
Drifting								
Crosscutting								
Raising								
Shafts								
~~Winzes~~ Overburden	Ft.	38.35	13	342.20	116		100	2.95
Drilling: Core NX & BX	Ft.	109.15	37	867.30	294		150	2.95
~~Churn~~ AX	Ft.	3675.55	1387	16,183.55	6107		6910	2.65
~~Auger~~ Core Box	Box	114.00	38	501.00	167		175	3.00
~~Stripping~~ Reaming	Ft.	17.50	10	17.50	10		300	1.75
~~Trenching~~ Lost time	Hr	-----	0	-----	0		40	8.00
~~Test Pits~~ Assaying	Sample	18.00	3	18.00	3		32	6.00
Roads and Trails								
Cementing	Hr	-----	0	568.00	71		60	8.00
Total Distributed Costs		4403.65		20,452.65				Total Costs Authorized by Contract
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
Total Costs		4403.65		20,452.65				

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

Remarks: Holes W-9 & W-10

Date Jan. 2, 1959 Operator The New Jersey Zinc Co.

Per J. M. Stagner Title Geologist

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

(Instructions on reverse)

(For Government use only)

W. J. Lapuch
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

G 24M 12-55

COPY

THE NEW JERSEY ZINC COMPANY

EXPLORATION DEPARTMENT

January 9, 1959

P. O. Box 129
Harrisburg, Illinois

Mr. Harry L. Burmeister
U. S. Bureau of Mines
College Park, Maryland

Re: DMEA 4907 (Fluorspar, Zinc, Lead)
Idm-E 1206, The New Jersey Zinc Co.
Project II, Pope County, Illinois
Diamond Drill Logs- Hole W-8

Dear Mr. Burmeister,

We note that our report for December, dated Jan. 5, 1959, did not include the logs for hole W-8. Although this hole is to be extended in January, we are forwarding it's log to the present bottom of 619 feet in order to keep your information current.

It is good to be working with you again. Perhaps we will see you in Harrisburg in the near future.

Yours sincerely,

E. L. Weinberg

E. L. Weinberg

ELW/hwd
in quintuplicate
Enclosures (5)

THE NEW JERSEY ZINC COMPANY — DRILL RECORD — Harrisburg Illinois

Property: BARDSH
HOLE NUMBER: W-8
Location: NE¼ SW¼ SEC 28-12S-7E
Page 1 of 3
Coordinates: N629, E672'
Elevation: 508.59'
Bearing: N45°W
Began: 11/19/58
Finished: 12/5/58
Inclination: 45°
Total Depth: 11
Driller: LAMAR (Joy Mgf Co)
Logged by: RC Bing
Water Level:

Graphic Log: Soil; Hardinsburg Sandstone; Golconda Sh & Ls.; Cypress

FROM	TO	Ft Core	Description	Eff	Minerals
0	12	-	OVERBURDEN		
12	13	-1	F-GRD WHSS		
13	17	2+	F GRD WH SS		
17	22	4	F GRD WH SS		
22	25	2	F GRD WH SS		
25	28	2+	F GRD WHSS		
28	33	5	F GRD WH SS		
33	37	4	F GRD WH SS		
37	40	2	F GRD WH SS, OX, SI SHly @ bottom AX		
40	41	1	F GRD SHly SS		
41	51	6	gy CALC SH, BDG 30°	St	
51	57	6	gy LS, SI SHly @ bottom	St	
57	61	4	gy LS	St	
61	62	1	gy SH to 61½'. 61½-62', F xln gy Fos LS	St	
62	66	2+	gy F xln LS, Fos	St	
66	69½	3½	gy F xln Fos LS.	St	
69½	72	4	gy F xln Fos LS.	St	
72	77	3	gy SHly LS, Fos	St	
77	81	4	gy ly SH, BRY	St	
81	85	2+	gy Fos LS, 1' CAVity @ 84'.	St	
85	98½	13½	gy SHly LS, Fos.	St	
98½	105½	7	gy ly SH, Fos.	St	
105½	107	1+	gy SHly LS, Fos	St	
107	111½	4	gy SHly LS, Fos.	St	
111½	117½	5	gy SHly LS, Fos py	St	py
117½	120	2½	gy Fos LS.	St	
120	131	10+	gy SH Fos.	St	
131	144	13	gy SH to 185'. 135'-144', F xln gy Fos LS, SI SHly @ bottom	St	
144	151	7	gy SH SI ly @ bottom.	St	
151	153	2+	gy & RED SH becoming silty	-	
153	155	2	gy & RED SH w silts & pr Fos	-	
155	160	5	gy & RED SH w silts & pr Fos.	-	
160	170	10	gy SH, SI silty, py	-	py
170	172	-½	gy SH.	-	
172	185	13	gy SH, SI Fos. ly @ 178'-179', & 182'-184½'.	St	
185	190	5	gy SH SI ly	St	
190	193	3	gy ly SH	St	
193	203	10	gy SH, SI Fos.	St	
203	213	10	gy Fos LS, SI SHly	St	
213	223	10	213'-217', gy Fos LS. 217'-219', gy SH. 219'-223', gy SI SHly Fos LS.	St	
223	227	4	gy SH, SI ly.	St	
227	235	7	gy SHly LS, Fos Bd 43°	St	
235	237	2	gy SH	-	
237	245	7	gy SH.	-	
245	254	9	245'-249', gy SH. 249'-254', Fos LS. 253'-254', silty.	St	
254	264	10	grn SHly Silt, py	-	py
				-	py
264	274	10	grn SH, py	-	py
274	280	6	grn SH, py		
280	296	11	grn SH SI silty @ bottom		

THE NEW JERSEY ZINC COM[redacted] DRILL RECORD [redacted]rrisburg, Illinois

Property R. S. Barnett (O'Roark surface) HOLE NUMBER W-8

Location NE¼ SW¼ Sec. 28 T12S R7E Page 2 of 3

Coordinates N629, E672 Elevation 508.59 Bearing N45°W

Began 11/19/58 Finished 12/5/58 Inclination 45° Total Depth 619'

Driller Lamar (Joy Mfg. Co.) Logged by R. C. Bing Water Level

Graphic Log

FROM	TO	Ft Core	Description	Eff.	Minerals
296	298	2	Grn-gy siltstn.	No	
298	299	1	Grn-gy siltstn		
299	306	7	299-303 siltstn; 303-306 F grd wh ss.		
306	316	10	F grd. gy ss.		
316	336	20	F grd. lt. gy. ss.		
336	356	20	F grd wh ss; 341-344 sl. shly		
356	357	1	F grd wh ss.		
357	361	4	F grd wh ss		
361	371	10	F grd wh ss.		
371	380	9	F grd wh ss.		
380	385	4	F grd wh ss		
385	394	9	Dk gy sh to 385½; f. grd. wh ss to 386½. Dk gy siltstn to 394 Top P.C. 387		
394	395	1	Dk gy sh		
395	403	8	Dk gy sh.		
403	416	10	Dk gy sdy sh to 409; shly lt gy ss to 416'		
416	433	17	Lt gy f grd shly ss.		
433	453	20	Lt gy f. grd shly ss.		
453	473	20	Lt gy f. grd. shly ss.		
473	493	20	Lt gy f. grd. shly ss to 486. F. grd. lt. gy ss to 493. Top Bethel 486.		
493	513	20	Lt. gy. f. grd. ss.		
513	533	20	Lt gy f grd ss		
533	537	4	Lt gy f grd ss		
537	556	19	Lt gy f grd ss, sl. shly.		
556	561	5	Lt gy f. grd. ss.		

Cypress Sandstone

387

Paint Creek Shale.

486

Bethel Sandstone

2A 20 2-57

THE NEW JERSEY ZINC COMPANY — DRILL RECORD — Carrisburg, Illinois

Property Robert Barnett (O'Rourk surface) — HOLE NUMBER W-9

Location SE¼ NW¼ Sec. 28 T12S R7E — Page 1 of 3

Coordinates N-110 E-855 — Elevation 505.81 — Bearing N45°W

Scale, 1"=30' — Began 11/22/58 — Finished 12/8/58 — Inclination 60° — Total Depth 750

Driller Coy Mills (Joy Mfg. Co.) — Logged by R. C. Bing — Water Level

Graphic Log: 0 Soil; 13; Golconda Ls. and Sh.; 179; Cypress Sandstone

FROM	TO	Ft. Core	Description	Eff.	Minerals
0	13	–	Overburden		
13	15	2	Gy xln fos ls.	St.	
15	16	1	Gy xln fos ls	St.	
16	19	1	Gy xln fos ls	St.	
19	20	1	Gy xln fos ls	St.	
20	21		Cavity		
21	22	1	Gy xln fos ls, sl. shly.	St.	
22	25	2	Gy shly fos ls.	St.	
25	30	5	Gy shly fos ls.	St.	
30	40	10	Gy shly ls. to 34, gy ly sh to 38, gy fos ls to 40	St.	
40	47	7	Gy ly fos sh.	St.	
47	57	10	Gy ly sh, fos, bd 63° @ 47'	St.	
57	67	10	Gy shly fos ls.	St.	
67	77	10	Dk gy ly fos sh.	St.	
77	87	10	Drk gy ly sh to 81, gy xln fos ls. to 87	St.	
87	96	9	Gy xln fos ls to 91', gy ly sh, sl fos, to 96'	St.	
96	104	8	Gy grn sltstn.	Tr.	
104	114	10	Gy grn siltstone to 105, gy, sl. slty, sh to 114 Bd 64° @ 108'		
114	115	1	Gy sh		
115	124	9	Gy sh, sl. ly & fos.	Md	
124	134	10	Gy sh to 126, gy xln ls, fos, sl. shly to 134.	St	
134	142	8	Gy sh. sl. fos.		
142	152	10	Bd 64° @ 143'; Gy fos sh to 147, Gy xln ls, shly at end of run, to 152.	St	
152	162	10	Gy sh. Bd 65° @ 159'	Tr	
162	172	10	Gy sh.	Tr	
172	184	10	Gy sh to 175, gy fos ls to 179, gy grn sh, sl. silty to 184.	St.	
184	194	10	Gy grn siltstone		
194	204	10	Gy grn siltstone		
204	214	10	Gy grn sltstn to 207, int bd sh. & ss to 214.		
214	224	10	Int bd sh & ss.		
224	234	10	Shly ss to 228, thin cg @ 228, lt. gy. f. grd. ss to 234		
234	245	11	F grd lt gy ss.		
245	254	9	F grd lt gy ss, sl shly		
254	262	8	F grd lt gy ss, py.		py
262	272	8	F grd lt gy ss		
272	280	8	F grd. lt. gy. ss.		

THE NEW JERSEY ZINC COMPANY — DRILL RECORD — Harrisburg, Illinois

Property: Robt. Barnett — HOLE NUMBER: W-9

Location: SE¼ NW¼ Sec 28-12S-7E — Page 2 of 3

Coordinates: N110 E855 — Elevation: 505.81 — Bearing: N45°W

Began: 11/22/58 — Finished: 12/8/58 — Inclination: 60° — Total Depth: 750'

Driller: Milks (Way Mgf Co) — Logged by: R.C. King — Water Level:

Graphic Log	FROM	TO	Ft. Core	Description	Eff.	Minerals
286	~~280~~ 284	~~284~~ 294	~~4~~ 9+	~~Fgrd lt gy ss.~~ Fgrd wh ss to 286'. Dk gy sh to 294'.	–	top Paint Crk @ 286
Paint Crk. 85' SH	294	303	9	Dk gy sl sdy sh, sl Fos	–	
	303	312	9	Dk gy sl lt st to 306'. Dk gy sh ly ss to 312'.	–	
	312	317	4+	Dk gy sh ly ss.	–	
	317	318	1	lt gy Fgrd ss.	–	
	318	319	-1	lt gy sl sh ly Fgrd ss	–	
	319	320	-1	lt gy sl sh ly Fgrd ss	–	
	320	322	2	lt gy sl sh ly Fgrd ss	–	
	322	324	1	lt gy sl sh ly Fgrd ss	–	
	324	334	10	lt gy sh ly ss	–	
	334	337	3	lt gy sl sh ly ss	–	
	337	350	11	lt gy sh ly ss.	–	
	350	357	7	lt gy sh ly ss.	–	
	357	367	10	lt gy sh ly ss.	–	
370	367	377	10	lt gy sh ly ss to 370'. Fgrd lt gy ss to 377'.	–	top Bethel @ 370'
Bethel SS	377	387	10	Fgrd wh ss	–	
	387	397	10	Fgrd wh ss	–	
	397	407	10	Fgrd wh ss	–	
	407	417	9+	Fgrd wh ss	–	
	417	427	10	Fgrd wh ss.	–	
	427	437	10	Fgrd wh ss, sl sh ly @ 437'	–	
	437	447	10	Fgrd wh ss, sl sh ly @ 437'	–	
	447	457	10	Fgrd wh ss	–	
	457	464	7	Fgrd wh ss	–	
471'	464	474	10	Fgrd wh ss to 471'. Dk grn sh, sl sdy to 474'.	–	top Renault @ 471'
Renault 15' SH	474	484	10	Dk grn sh, sl sdy.	–	
	484	494	10	Dk grn sh to 490½'. Fos gy ls to 494'.	St	
	494	504	10	Fos gy ls	St	
	504	514	10	Fos gy ls. 508-509', Dk grn fos sh. sl sh ly @ 513'.	St	
	514	524	10	Fos gy ls.	St	
	524	534	10	Fos gy ls to 531. gy sh to 533'. Fos gy ls to 534'	St	
	534	544	10	Fos gy ls to 538'. Dk grn sh to 544'	St	
	544	554	10	Dk grn sh, sl ly, sl Fos.	St	
	554	564	10	Alt Dk grn sh & Fos gy ls.	St	

532A 20 2-57

THE NEW JERSEY ZINC COMPANY — DRILL RECORD — Harrisburg, Illinois

Property: Robt. Barnett
HOLE NUMBER: W-9
Location: SE¼ NW¼ SEC 28-12S-7E
Page 3 of 3
Coordinates: N110, E855'
Elevation: 505.81
Bearing: N45°W
Began: 11/22/58
Finished: 12/8/58
Inclination: 60°
Total Depth: 750'
Driller: Mills (Joy Mgf Co)
Logged by: RC BING
Water Level:

Graphic Log	FROM	TO	Ft. Core	Description	Eff.	Minerals
	564	565	1	gy SH		
	565	575	10	gy ly SH to 569' gy Fos ls to 575'		
	575	585	10	gy Fos ls, sl silty @ 582'		
	585	595	10	gy Fos ls		
	595	605	10	gy Fos ls, sl SHly to 599' wh Oo ls to 605'		top Levings @ 599
599' Levings ls	605	616	10	wh Oo ls to 609' gy Fos ls to 612' gy silty st to 616'		top RC @ 612'
612'	616	626	10	VF grd calc gy grn ss, sl SHly	mo	
Rosiclare	626	636	10	VF grd calc gy grn ss, SHly to 630'	mo	
	636	646	10	VF grd calc gy grn ss to 643' SHly @ 643½' gy Oo ls to 646.	mo	top Fredonia @ 643½'
643½	646	656	10	gy Fos ls.	st	
	656	666	10	gy Fos ls, sl SHly @ 660'	st	
	666	676	10	gy Fos ls, SHly @ 674'	st	
	676	686	10	gy Fos ls.	st	
	686	696	10	gy SHly Fos ls to 695' wh gy ls to 696'	st	
Fredonia	696	706	10	gy sil Fos ls, sl Oo to 702. wh Oo ls to 706'	st	
	706	716	10	wh Oo ls to 714' lt gy sil Oo, sl Fos ls to 716'	st	
	716	726	10	lt gy Fos ls	st	
	726	736	10	lt gy sil ls Fos.	st	
	736	746	10	gy sil ls, sl Fos	st	
	746	750	4	gy sil ls, sl Fos	st	

CORE RECOVERY 99%

AX5542A 20 1-57

THE NEW JERSEY ZINC COM[redacted] DRILL RECORD [redacted] Vasburg, Illinois

Property LAURA BAUMER HOLE NUMBER W-10

Location NW¼ SE¼ Sec 28 T11S-7E Page 1 of 3

Coordinates N718, E199 Elevation 460.76 Bearing N45°W

Began 12/5/58 Finished 12/19/58 Inclination 60° Total Depth 261'

Driller Mills (Way Mfg Co) Logged by RC Bing Water Level

Graphic Log	FROM	TO	Ft Core	Description	Ext	Minerals
Hardinsburg SS	0	10	9	OX FGRD SS		
	10	20	9	FGRD WH SHly SS.		
	20	25	5	FGRD WH SHly SS		
25	25	30	4	FX In gy Fos SHly ls		
	30	35	2	gy Fos SH.	St	
	35	45	10	gy SHly Fos ls	St	
	45	56	10+	gy SHly Fos ls. BD 72°@47½'	St	
	56	66	10	gy Fos SH. BD 60°@57'	St	
	66	76	10	gy Fos SH. BD 60°@72'	St	
	76	86	10	MD x In gy SHly ls, Fos.	St	
	86	96	10	MD x In gy SHly ls to 87'. gy SH to 96'. BD 63°@92'.	St	
	96	106	10	gy SH to 104'. MD x In gy Fos ls to 106.	St	
	106	107	1	MD x In gy Fos ls.	St	
	107	117	10	MD x In gy Fos ls to 111'. gy SH to 117'. BD 70°@111'.	St	
	117	127	10	gy grn SH to 118½'. siltst to 127'. BD 63°@124'	St	
	127	129	2	gy SH.	tr	
	129	137	8	gy SH. BD 70°@130'.	tr	
	137	147	10	gy ly SH		
	147	157	10	gy ly SH w ls bds, Fos. BD 70°@154'	St	
	157	167	10	gy sl Fos SH. BD 65°@164'	tr	
	167	177	10	gy sl Fos SH to 169'. MD x In gy Fos ls to 175½'. gy SH to 177'	St	
	177	180	3	gy SH.	tr	
	180	188	8	gy SH. BD 73°@182'	tr	
	188	195	7	gy SH.	tr	
	195	205	10	gy SH to 196'. MD x In gy Fos ls to 201'. gy SH to 205'.	St	BD 60°@195½'
	205	215	10	gy SH, SHly, sl silty @ bottom.	St	BD 60°@214'
215'	215	226	10+	gy siltstone	—	
	226	236	10	gy siltstone to 228'. FGRD WH SS, sl SHly to 236'.	—	
	236	246	10	FGRD WH SS. BD 63°@239'	—	
	246	256	10	FGRD WH SS, sl SHly	—	
	256	266	10	FGRD WH SS, sl SHly. 4" BR zone @ 265' (?a?) @ 52°.	—	
	266	268	2	FGRD WH SS.	—	
	268	277	9	FGRD WH SS. BD 73°@272'.	—	
	277	283	6	FGRD, WH SS, sl silty.	—	

Hardinsburg SS

Golconda ls & sh

Caseyville

THE NEW JERSEY ZINC COM[redacted] DRILL RECORD [redacted] Friesburg, Illinois

Property LAURA BAUMER — HOLE NUMBER W-10

Location NW¼ SE¼ SEC 28 T12S-7E — Page 2 of 3

Coordinates N718 E199 — Elevation 4[illegible] — Bearing N45°W

Began 12/5/58 — Finished 12/19/58 — Inclination 60° — Total Depth [illegible]

Driller Mills (Joy Mfg. Co.) — Logged by R.C. Bing — Water Level

FROM	TO	Ft Cor.	Description	Ex	Minerals
283	293	10	FGRD WHSS to 287'. gy SH to 293'. BD 66° @ 288'	—	Py
293	303	10	gy SH.	—	
303	313	10	gy SH to 304'. 304-307', SDY gy SH, Cg zone @ 306-307'. Intbd FGRD SS & gy SH to 313'.	—	
313	323	10	Intbd FGRD SS & gy SH.	—	
323	333	10	FGRD WHSS, SI SHly.	—	
333	344	11	FGRD WHSS to 338'. Intbd FGRD SS & gy SH to 344'. 333'-334' slip w bit mtl @ 10°	—	
344	354	10	Intbd FGRD SS & gy SH.	—	
354	364	10	FGRD WHSS SI SHly. @ 355' minor slip w calc tr Ba @ 90°. @ 363, 3/8" calc vnlt w minor Ba.	—	Ba, Calc, Py
364	374	10	FGRD WHSS.	—	
374	385	11	FGRD WHSS. BD 70° @ 381'	—	
385	395	10	FGRD WHSS. minor Ba vnlt @ 390' @ 10°.	—	Ba
395	400	5	FGRD WHSS.	—	
400	407	7	FGRD WHSS. BD 70° @ 403'	—	
407	417	10	FGRD WHSS. SI SHly @ 415' @ 411½" calc vnlt @ 15°	—	Calc
417	427	10	FGRD WHSS	—	
427	437	10	FGRD WHSS.		
437	438	1	FGRD WHSS.		
438	447	9	grn silty SH SI ly. BD 75° @ 445	P.D.	
447	457	10	grn silty SH SI ly. BD 80° @ 455'	PD	
457	467	10	Brn mo xln Fos ls. 465-467 Br 20 filled w calc & Ank @ 50°	St	Calc, Ank
467	477	10	467-468 calc Br. Brn mo xln SHly Fos ls	St	
477	487	10	gy brn F xln ls, sl sdy.	St	
487	497	10	gy mot SHly ls to 497'. grn SH to 494'. gy ly SH to 495'. grn SH SI ly to 497'. BD 80° @ 493'	St	
497	508	10	Dvs gy ls to 504'. gy grn ly SH to 508'	St	
508	518	10	grn ly SH	St	
518	527	9	grn ly SH to 522'. Fos gy ls to 527.	St	
527	537	10	gy mo xln Fos ls. Calc on SHy @ 528. Calc vnlt @ 531' @ 90°	St	Calc.
537	542	6	Dvs gy ls to 537½'. Brn Do & Fos ls to 542	St	
542	547	4	WH Do ls w pnk calc pits.	St	
547	557	10	Brn mo xln sl Do ls, Fos to 551' w H Cu ls to 557.	St	
557	567	10	Lt gy mo xln Fos ls to 561'. gy grn ly SH to 562'. Lt gy sl sdy ls Fos. to 567	St	

THE NEW JERSEY ZINC COMPANY — DRILL RECORD — Harrisburg, Illinois

Property LAURA BAUMER — HOLE NUMBER W-10

Location NW¼ SE¼ SEC 23 T12S-7E — Page 3 of 3

Coordinates N 718 E 199 — Elevation 460.76 — Bearing N45°W

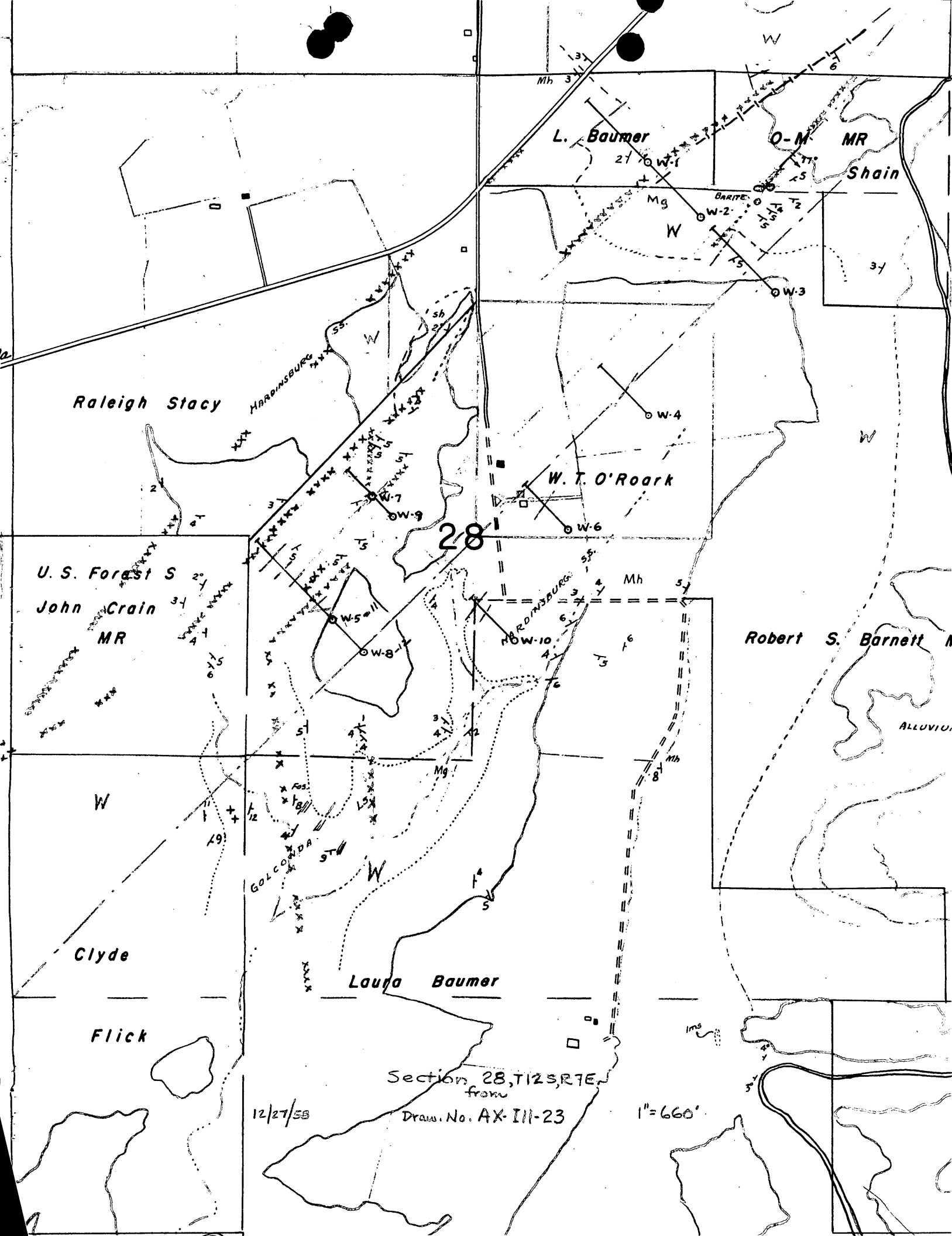
Began 12/5/58 — Finished 12/19/58 — Angle 60° — Total Feet 687

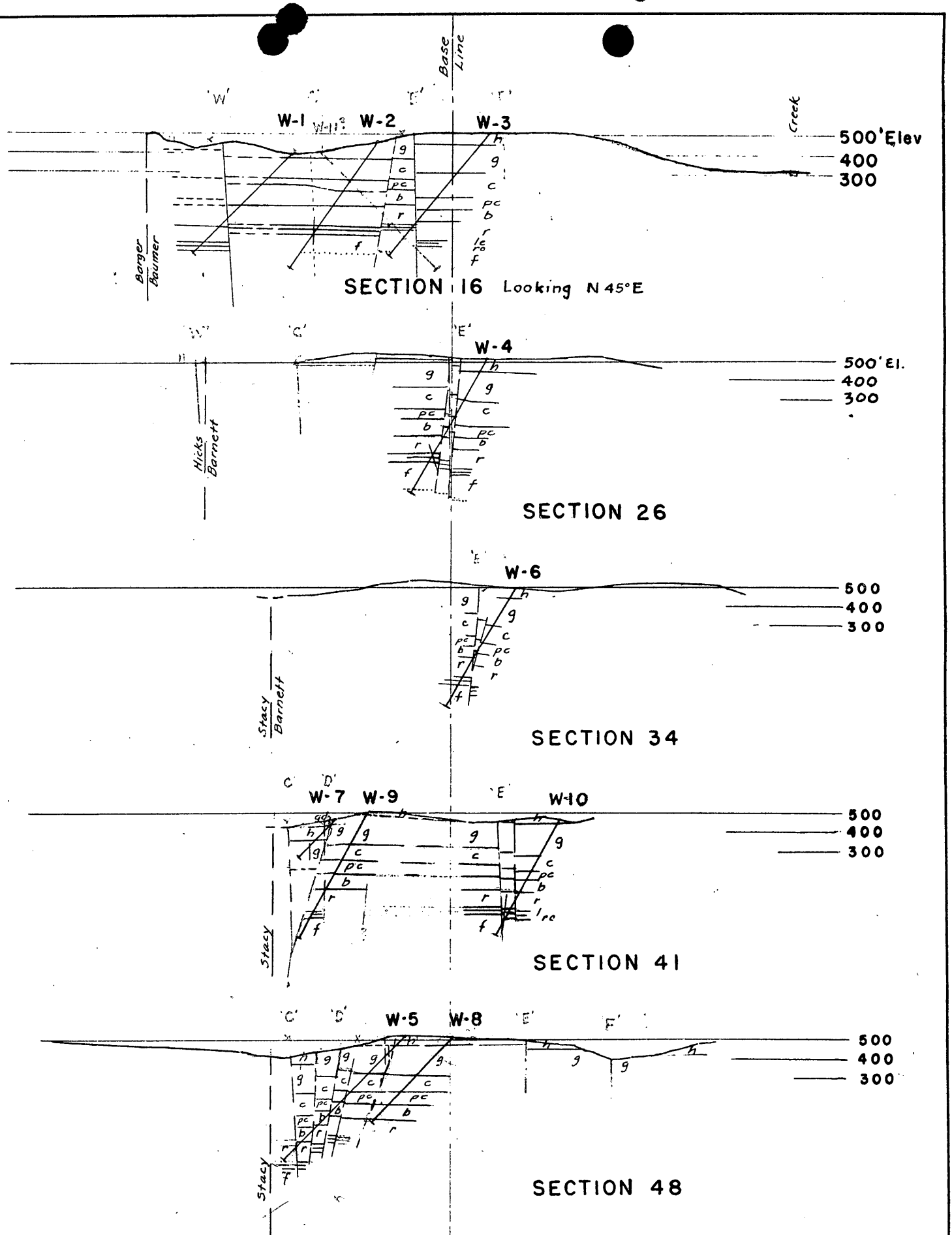
Driller Mills (Joy Mfg Co.) — Logged by R.C. BING — Water level

From	To	Ft Cor	Description	Ec	Minerals
567	576	9	VF grd grn gy calc ss. @ 574, 8" calc filled shear @ 20°	St	calc
576	586	8	VF grd grn gy calc ss. @ 576½, 3" br zo w calc & tr. flt @ 578, ¼ flt vnlt @ 30° @ 584½, 10 inch calc filled slip @ 20°	St	calc, flt
586	597	2+	VF grd grn gy calc ss to 596, shly @ bottom. 596'-597', lt gy Co ls.	St	
597	607	10	mo xln. lt gy Fos ls. @ 597½, 1½" calc vnlt @ 20° 599'-600', calc zone @ 602, sh gouge @ 20°	St	calc
607	617	10	mo xln lt gy Fos ls.		
617	627	10	wh Co ls to 622' lt gy Fos shly ls to 627' [illegible] @ 32° calc on sty @ 621' [illegible] @ 627' @ 5°	St	calc
627	637	10	F grd ls, gy-Fos. 627'-628', br filled w/ calc @ 20° w/ shly gouge.	St	calc
637	647	10	F xln gy Fos ls to 643' gy sh to 647' BD 77 @ 644'	St	
647	657	10	F xln gy Fos ls to 653' wh Co ls to 657' calc on sty @ 656'	St	calc
657	667	10	wh Co ls to 659' F xln gy ls to 660' wh Co ls to 667'	St	
667	677	10	F xln gy grn Fos ls. calc on sty @ 669'	St	calc
677	687	10	F xln gy sl shly Fos ls. 6" calc [illegible] @ 679, sl silicified ls @ 686-687'	St	calc

687

CORE LENGTH 77%


L. Baumer
O-M MR
Shain
BARITE
W-1
W-2
W-3
W-4
W-5
W-6
W-7
W-8
W-9
W-10
Raleigh Stacy
HARDINSBURG
W. T. O'Roark
28
U. S. Forest S
John Crain
MR
Robert S. Barnett
ALLUVIU
GOLCONDA
Clyde
Laura Baumer
Flick
Section 28, T12S, R7E
from
Draw. No. AX-III-23
12/27/58
1" = 660'



POSTED TO DATE 9/29/58 RCB 10/31/58 JMH 11/24/58 JMH 12/26/58 JMH	THE NEW JERSEY ZINC COMPANY Harrisburg, Illinois	DISTRICT Illinois
DRAWN RCB DATE 9/5/58 TRACED SCALE 1"=660	Cross Sections Section 28-T12S-R7E	FILE NO. AX-ILL-33

X 5407 C 1M 3-53

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

JAN 28 1959
STAGE I
OME

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

Budget Bureau No. 42-R1036.5

PAID ON VOUCHER & SCHEDULE OF PAYMENTS K- 40

Month of November, 1958 Docket No. DMEA 4907 Contract No. 1206
Operator's Name The New Jersey Zinc Company Minerals Fluorspar
Address 160 Front Street, New York 38, N. Y. Zinc & Lead
Contract Amount, $39,192.00 Government Participation: 50 % Amount, $ 19,596.00

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 Overburden	144.55	159.30	303.85			
~~Bulldozing~~ NX & BX	236.00	522.15	758.15			
~~Crosscutting~~ AX	4714.35	7,793.65	12,508.00			
Drifting						
Cementing	296.00	272.00	568.00			
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
Core Boxes	150.00	237.00	387.00			
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
Incidental Allowance	572.40	951.60	1,524.00			
(8) Contingencies (specify):						
TOTALS	6113.30	9,935.70	16,049.00	6,113.30	9935.70	16,049.00

I certify that the above bill is correct and just and that payment therefor has not been received.
Date 12-5-58 *Payee The New Jersey Zinc Company
Per Rupert C Bray 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:
$3,056.65
Signature Helen R. Miller
(Authorized Certifying Officer)
Date JAN 20 1959 Vou. No. 80
(See other side)

3

3056.65

(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 1206 in accordance with the terms of the contract.

Signature R. A. Burmeister Title Mining Engr. Date 1/12/59

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Robert A. Lawrence Title EXECUTIVE OFFICER OME FIELD TEAM REGION V Date JAN 19 1959

MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

STAGE I

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of November 1958 Docket No. DMEA 4907 Contract No. 1206

Operator's Name The New Jersey Zinc Company Minerals Fluorspar

Address 160 Front Street, New York 38, N. Y. Zinc & Lead

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~~ Incidental Allowance	Ft.	572.40	1908	1,524.00	5080		7160	.30
Crosscutting								
Raising								
Shafts								
~~Winzes~~ Overburden	Ft.	144.55	49	303.85	103		100	2.95
Drilling: Core N X&BX	Ft.	236.00	80	758.15	257		150	2.95
Core ~~Churn~~ AX	Ft.	4714.35	1779	12,508.00	4,720		6910	2.65
Core ~~Auger~~ boxes	Box	150.00	50	387.00	129		175	3.00
~~Stripping~~ Reaming	Ft.						300	1.75
~~Trenching~~ Lost time	Hr						40	8.00
~~Test Pits~~ Assaying	Sam.						32	6.00
Roads and Trails								
Cementing	Hr.	296.00	37	568.00	71		60	8.00
TOTAL DISTRIBUTED COSTS		6113.30		16,049.00				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		6113.30		16,049.00				

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

REMARKS: Holes W-5, W-6, & W-7

Date Dec. 5, 1958 Operator The New Jersey Zinc Co.

Per Rupert C. Bing Title Geologist

Rupert C. Bing

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

(Instructions on reverse)

(For Government use only)

W. A. Burmeister 1/12/59

HARRISBURG, ILL., Oct 20

Mrs Perrell Brooks
Box 129 Harrisburg Ill.

IN ACCOUNT WITH

BOB MITCHELL

33 WEST COLLEGE ST. TELEPHONE 1090-R

Year

50 Gal Barrel $212.50

Paid Nov 28. 58

Bob Mitchell

THE NEW JERSEY ZINC COMPANY

DRILL RECORD

Harrisburg, Illinois

Property Barnett - O'Roark
Location NE¼ SW¼ Sec. 28, T12S, R7E
Coordinates 814 N 490 E
Elevation 518 ±
Bearing N45°W
1"=30'
Began Oct. 20 1958 Finished
Inclination 45°
Total Depth 912
Driller C. Lamar (Joy Mfg. Co.) Logged by J.M. Hague
Water Level 200

HOLE NUMBER IV-5
Page 1 of 4

Formation	From	To	Ft Cor.	Description	Ef.	Minerals
Soil	0	13	—	Soil and overburden		
13 Hardinsburg Ss.	13	14	1	Wh. ss. Fnt. Fe stn. BX core.	No	
	14	16	2	Wh ss.		
	16	22	5	Wh ss., sps. lmt. spots @ 47°		
	22	23	1	Broken ss.		
	23	30	7	Wh. ss.		
	30	34	4	Wh. ss. Beds or stains overturn at 33. Oil stn. BX core.		
	34	37	3	Wh. ss. 1" Sh. layers at 36 & 37 @ 45°, 43° AX core.		
	37	40	2	F.g. dense wh. ss.	No	
	40	43	2	Wh. ss. @ 48°		
60	43	44	1	Wh ss. w. grn. sh. frags.		
	44	46	2	Wh ss., sh. frags, Fe stn.		
	46	48	1	Wh ss. Ss Brec. w. clay at 48.		
	48	49	1	Wh ss. - broken pcs. Variable bedding angles.		Fa.?
	49	52	1	Wh ss. partly gnd. core		
	52	55	3	Wh ss. lmt. spots		
	55	56	1	Wh ss. f.g. ss. changes to silt.	No	
	56	58	1	Wh. & dk gy. siltstone and shale		
	58	60	1	Waters of Mc siltstone. Top Golconda 60.	No	
1 Golconda Sh.	60	66	6	Dk gy ly. sh. @ 40° to 65. Gy fos. m.g. ls. to 66.	md.	
	66	73	7	2' Sh., 5' Ls.	St.	Last water at 70'
	73	82	9	Gy mot. ls., porous sh. beds at 74 & 80. Partly filled open fracture at 79'; 25° to core, strikes E-W dips S.	St.	
	82	89	7	Dk gy fos. sh. ls. @ 43°	St.	
	89	95	5	Ls. to 94, blk sh. to 95	St.	
	95	99	4	Int bdd. ls. & sh.	md.	
	99	101	2	Gy. ls.	St.	
	101	109	8	Int bdd. ls. & sh.	St.	
	109	121	12	Dk gy-blk. ly. sh. to 114. Fos. ls. to 117. Fos. ly. sh. to 121.		
	121	141	20	Dk gy sh. ls. @ 47° to 135. Opening @ 45° (across beds) at 129' w. 9" alt. zo. Dk gy sh. to 141.	Sl.	
	141	154	13	Dk. fos. sh. ls. w. brachs to 149. Gy mot. ls. to 154. Jnts w. alt. halos @ 40° to 50° at 149, 150' & 151'.	St.	
	154	165	10	Sh ls. to 158', Dk. gy. sh. to 162'. Sh. fos. ls. to 165'	md.	
	165	170	5	Grn. blk sh @ 45°	No	
	170	173	2	Grn. & blk sltstn & sh	md	
	173	179	6	Grn blk sh @ 49°	md	
	179	199	20	Blk sh. to 191 Dk gy fos. ly sh to 197. 2 alt. jnts @ 40° at 192. Dk gy ls. to 199.	md	
2	199	219	20	Dk gy sh to 201. Dk brn ls. w. fos. & pnk calc. frags to 205. Fos. sh. to 207. Gy ls to 209. Fos. sh. to 219 @ 50°	md.	
	219	233	14	Dk gy fos. sh. 228. Frag. ls. w. pnk. calc. plates to 233.	md	
	233	241	8	Gy. crin. ls. to 235 w. pnk stems. Dk gy sh. to 241. 2" crin ls. at 241 @ 46°.	St	
	241	252	11	Blk sh.		
	252	271	19	Blk sh. to 260, Gy ls. to 265, Grn & blk mot. sh. to 271	St	
	271	272	1	Blk sh.	no	
272	272	289	16	Grn-blk. sh. F. sdy. layers begin at 282 Top Cypress 272	no	

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THE NEW JERSEY ZINC CO.

THE NEW JERSEY ZINC COMPANY

DRILL RECORD

Harrisburg, Illinois

Property Barnett - O'Roark

HOLE NUMBER W-5

Location NE¼ SW¼ Sec. 28 T12S R7E

Page 2 of 4

Coordinates 814 N 490 E Elevation Bearing N 45° W

1" = 30'

Began Oct. 20, 1958 Finished Nov. 1958 Inclination -45° Total Depth 912

Driller C. Lamar (Joy Mfg. Co.) Logged by J. M. Hague Water Level 200

Depth	TO	Ft. Core	Description	Eff.	Minerals
280					
287	302	13	Int. lam. blk sh. & lt. gy. f. ss. x-bdd. and knotty	no	
			Drag fold or int @ 299'		
3					
302	322	20	Int bdd. ss & sh. to 313 (60% ss.). F. grn. & gy. ss. to 322	no	
			Bit. stn. in porous beds.		
322	342	20	M.g. ox. oil stn. ss, to 330. Dense wh. ss. to 342	no	
342	348	6	Wh. ss. to 345, Ss. w. sh. laminae to 348, x-bdd.	no	
348	358	10	Sh. ss. to 356, Wh. ss. to 358. Av. bd @ 45°	Sl.	
358	368	10	Wh. ss. to 364, ss. w. grn. sh. ptgs. to 368	no	
368	373	5	Wh ss. sh ptgs.	no	
373	383	10	Wh ss. to 380 Sh & ss. (50-50) to 383. Bd @ 50°	no	
383	402	19	Wh ss., massive	no	
4					
402	403	1	Wh ss. At 403 begin slt stn @ 38° Top P.C. 406'	no	
406 403	414	11	Sh. w. ls. frags & calc. pebbles to 406. Blk. sh. to 414	Md	
414	415	1	Blk. sh. - ½" py bed @ 414'	Sl.	Py
415	425	8	Blk sh. to 417, 4" Ls. cg. @ 417, mot. grn to wh. ss.	Sl	
			w. dk. gy. wavy sh. ptgs. to 425		
425	434	9	Knotty tb. ss w. sh. ptgs. to 433. Dk gy f ss.	No	
			to 434 w. Bit stn.		
434	441	6	Dk gy bnd. ss. to 438. Bd @ 45°. Int bd. wh. ss.	No	
			w. sh. ptgs. to 441		
441	448	7	Wh. tb. ss. to 444. At 444 begin br. zo. @ 30°; At 445		
			Fa 30° to 40°. 2" Vn w ½" sph. & 1½" Calc, Ank, Flt.		Calc, sph.
			Sh. ss. br. to 448		
448	452	4	Knotty tb. ss. @ 35°. Fa at 450 @ 35°	No	
452	456	4	Tb ss & sh @ 30°-40°	No	
456	464	8	Stn wh ss to 459, blk sh to ~60, Tb ss. to 464 Calc. vnlts.	No	Calc.
479 464	473	9	f. tb. ss. to 472, Br. zo 472-73 w. 2" Vn calc. Ank. Ba. at 459, 30° @ 20°	St	Calc, ank, ba
473	479	6	F ss w abdt sh ptgs.	No	
479	487	8	F. to. wh to grn-wh ss, 25% sh ptgs.	No	
487	507	20	Fn wh ss w. abdt sh ptgs. Ly from 505-507	Sl	
5					
507	520	13	Fn wh ss w abdt sh ptgs @ 48°.	No	
			More massive at 520.		
520	539	19	Wh ss bds @ 48° 3⅛" vnlts dl. at 527 90° to bd	No	
			1" Ba vn at 533 @ 20°		Ba
539	559	17	[illegible] ss w lmt spots, bd @ 50° Sh zo at 558	No	lmt
			[illegible] 25° [illegible] to beds		

Cypress Ss.

Paint Creek sh.

Bethel Ss.

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THE NEW JERSEY ZINC CO.

THE NEW JERSEY ZINC COMPANY

DRILL RECORD

Harrisburg, Illinois

Property Barnett-O'Roark

HOLE NUMBER W-5

Location NE¼SW¼ Sec. 28 T12S R7E

Page 3 of 4

Coordinates 814 N 490 E

Elevation 5[illegible]

Bearing N 45° W

Began Oct 20, 1958 Finished Nov. 17, 1958

Inclination -45°

Total Depth 912

Driller C. Lamar (Joy Mfg. Co.)

Logged by J. M. Hague & H. W. Davis

Water Level 200

Formation	FROM	TO	Ft Core	Description	Eff.	Minerals
	559	579	20	Wh ss w. oil stn @55° to 565'. Br. jnts in ss filled w. calc, spar, barite to 569 in ¼" to ½" seams. Heavy vein br. 569-571, 12" wide @ 33°. Jntd ss br to 579	No	12" Barite, spar, calc.
	579	591	12	Wh ss w sh ptgs @ 45°. ¼" Ba jnt strks E, dips St. So. ¾" Ba Vn strikes N77°E dips 80°N. 1" Ba vn strikes N80°E dips st. so. Ma along sh. ptgs.	No	Ba, Ma.
	591	607	16	Fn ss to 592. Cg ss to 598. ¼" Ba vn at 593 strikes N50°E, dips vert. 5 other ¼" to ½" Ba vns. Alt'd bd planes @ 45° to 597. 8-¼" to ½" Ba vns to 603. Shr at 603, 90° to bd. Minor fa at 605 N70°E dip 80°N - 6" Vn w. Ba, Ga	No	6" Ba, ga, calc
	607	610	3	Ss w. sps sh ptgs	No	
Bethel Ss.	610	620	10	Ss to 613, Br. zo to 618 w. Ba, sps ga, oil stn. Ss to 620.	No	Ba, Ga
	620	629	9	Ss to 622, opening w. Qxls at 622. Ss br, sps ga, to 629.	No	Q, ga
	629	639	10	Ss xbdd 40° to 50° ¼" calc vn. at 631	No	
	639	644	5	Qtz ss. Br. 641-643	No	
	644	649	4	Broken ss core.	No	
	649	655	6	Med ss. w. oil stn. ¼" calc vn at 650	St	
	655	668	13	Lt. gy. ss. to 658. Dk grn sh to 659. Ss to 660. Dk grn sh to 668. 40° @ 662, 20° @ 667. Slip @ 45° w. sps cpy at 660, sandy siltstn at 665	No	cpy
	668	672	3	Dk grn sh	No	
	672	678	6	Sh and sh br w. calc on jnts. 9" Calc vn. at 674 to 675, N75°E, dip st. N. Gy ls to 678	Sl St	9" calc
	678	690	12	Gy ls. to 682. Fa w. br. blk sh & gouge to 685. Sh. pll. to core. Lower cnt N22°E 90° against dns wh. ss. beds. 4" Br. at 686. ¼" spar. tdl. at 690.	St	3' Fa
	690	704	14	Fn wh ss. w. sh. frags & sh ptgs. @ 52°	No	
	704	712	8	Dns wh Ss. 3" Ba + br. vn at 705. Ma in sh at 711	No	Ba, Ma.
	712	713	1	Wh ss. Bit at 708.	No	
	713	718	5	Lt gy to wh. Ss. ⅛" vnlt pll. core, strike No., at 714	No	
	718	720	2	Broken Ss., oil in crevices.	No	
Bethel Ss.	720	730	10	Wh. ss. Start br. at 722. 18" Vn 726-728 @ 45° w. Ba, ank, calc, spar and ss. br. Ss. to 730.	No	18" Ba, ank, spar
	730	739	9	Fn dns wh ss. 5" Q vn at 733 @ 60°. 1" Dl-ank vn 734 @ 55°	No	5" Q., 1" Dl.
	739	747	8	Wh. ss to 743. Ly ss. Cg. to 747 w. sh. seams w. py. 12" Ss to 747	Sl	Py
	747	748	1	6" Dl.-calc br. zone @ 55°	Tr	6" Dl, Calc
	748	750	2	C. ss w. ly. jnts.	Sl	
	750	751	1	Med. gy. ss.	No	
	751	757	6	Gy ss. ½" calc. vn 45° at 751	No	½" calc
	757	765	8	Gy ss. Calc vnlt @ 24° at 758	No	
	765	769	4	Gy ss Bd 43°	No	
	769	774	5	Gy ss. w blk ptgs. ¼" Calc vnlt at 773	No	
	774	777	3	Gy ss frags. calc vnlts.	No	Calc
	777	781	3	Gy ss frags. Bd 46° at 778	No	
Renault Ls.	781	783	2	1" blk ss frag. Gy. ss. to 781.3 Sdy grn sh. to 782. Calc ss. to 782.2, grn sh to 782.7, Cg. to 783. Top Renault 783	St	Py, glauconite
	783	786	2	Gy sh to 783.6, Gy & brn ss to 784, Gy sh to 786	No	
	786	789	3	Gy sh w. calc ptgs & vnlts.		
	789	801	11	Gy sh w. calc ptgs & siltstn.	No	
	801	814	13	Gy sh w silt to 802.5 Gy fos. ls to 803.5 2" sh (gouge?) at 804. Gy fos ls to 805.5. Grn calc. ss. at 805.5. Gy ls., brn ptgs. to 811. Calc vn at 810 & 811 to 813 w. oil stn. Gy sh. w. wavy bands to 814.		
	814	817	3	Gy sh & silt to 815, ss to 816, Sh w silt to 817.		

THE NEW JERSEY ZINC COMPANY

DRILL RECORD

Harrisburg, Illinois

Property Barnett-O'Roark

HOLE NUMBER W-5

Location NE¼ SW¼ Sec. 28 T12S R7E

Page 4 of 4

Coordinates 814 N 490 E Elevation Bearing N 45° W

Began Oct. 20, 1958 Finished Nov. 17 1958 Inclination -45° Total Depth 912

Driller C. Lamar (Joy Mfg. Co.) Logged by H. W. Davis Water Level 200

Graphic Log	FROM	TO	Ft Core	Description	Eff.	Minerals
840	817	824	7	Gy sh 817-817½ Calc w. oil stn 817½-818. Gy fos. ls w. brn sh. prtgs. to 824. Calc at 819½, 2" Calc at 820, 1" Calc at 821.	St	Calc
	824	833	9	Brn/gy fos ls. 3" calc @ 825' 1" Calc @ 833'	St	Calc
	833	835	2	Gy sh & gy fos. ls.		
	835	845	9	Grn sh to 835½ Gy fos ls. to 844 Gy sh to 844½, siltstn to 845 1" Calc at 837.5 1" Calc at 839.		
	845	864	19	Gy ls., ½" calc vn 850, 1" calc. 853, 2" calc 858. Gy ls. w. grn mot. 862-864.	St	
	864	870	5	Gy fos ls to 868. Ls & sh to 869. Gy sh. to 870. Calc. at 865½ 866, 866½.		
9	870	878	9	Gy sh 870-72½, Gy fos ls 872½-78	Md	
	878	893	14	Gy fos ls to 878½, gy sh to 890, gy fos ls. w grn sh to 893.	No	Py
912	893	912	19	Gy sh & fos ls to 894, fos ls. to 896, sh to 896½, ls to 897, sh to 901½, brn/gy ls to 912. Calc vn/ls @ 904, 905, 906 Bottom.		Calc.

Core Recovery 97%

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THE NEW JERSEY ZINC CO.

THE NEW JERSEY ZINC COMPANY

DRILL RECORD

Harrisburg, Illinois

Property W. T. O'Roark

HOLE NUMBER W-6

Location SW¼ NE¼ SEC. 28 T12S R7E

Page 1 of 3

Coordinates _____ Elevation 493.24 Bearing N45°W

Began October 31, 1958 Finished Nov. 11, 1958 Inclination -59° Total Depth 716

Driller Coy Mills (Joy Mfg. Co.) Logged by J. M. Hague Water Level 40

Graphic Log

FROM	TO	Ft. Core	Description	Eff.	Minerals
0	9	0	Overburden		
9	11	1	Broken ss. NX core	No	
11	13	1	Broken ss. NX		
13	16	2	c. ss. w. lmt, grn sh. bds @ 58° NX		
16	22	6	Mass wh ss @ 54° NX		
22	30	8	Wht ss. w. sps. sh. ptgs. NX	No	
30	40	10	Wh ss. w. ptgs @ 62° BXWL = AX core		
40	42	1	Ss chips & pcs.		
42	52	10	Wh. ss.	No	
52	58	6	Wh. ss. to 54 Ss cg w ls & sh frags to 58	Sl	Top Gol. 58
58	64	6	Frag. ls & sh to 59, grn gy ls w. brachs to 63 Sh and clay to 64.	St	
64	74	10	Grn gy ls, narrow sh bands	St	
74	84	10	Dk gy and grn fos sh w 1" ls beds	St	
84	94	10	Dk gy & grn fos sh, narrow silt layers at 88'	St	
94	105	11	Dk gy grn fos sh	St	
105	115	10	Gy grn fos sh @ 60° to 108, Ls & sh to 115	St	
115	123	8	Gy grn fos sh. w. ls. frags.	St	
123	133	10	Grn sh w. abdt. calc. fos.	St	
133	141	8	Gy ls. to 139 Grn sh to 141	St	
141	150	9	Soft dk grn sh to 145, Sh fos ls to 148, Sh to 150	Md	
150	160	10	Grn & gy streaked sh	Md	
160	170	10	Sh to 168, Ls to 170	Md	
170	180	10	Sh & Ls to 174, Sh to 176, Ls to 178, Sh to 180	Md	
180	190	10	Ls to 183, Sh to 190	St	
190	201	11	Dk gy-grn sh to 196, 1/8" spar Vn w. py @ 10° at 199, gy ls w. pink calc xls to 201	Md	
201	203	2	Dk gy ls.	St	
203	208	4	Fis gy grn sh	No	
208	218	10	Fis dk sh @ 70°	No	
218	226	8	Dk grn sh to 224, C. gy. frag. fos. ls. to 226	St	
226	236	10	Lt & dk gy-grn siltstone to 230, Dk grn sh to 236.	No	Top Cy 226
236	244	8	Sh to 241 x-bdd sh & ss to 244	No	
244	246	2	Dk grn sh	No	
246	256	10	Siltstone to 250, f.g. sh & ss to 256	No	
256	266	10	f.g. silty ss @ 68°, Oil stn 259-260	No	
266	269	3	Silty ss.	No	
269	274	5	Ss w. silt ptgs @ 68° Minor slip jnts @ 20°	No	
274	275	1	C. ss. w. oil stn	No	

Hardinsburg Ss.

58

Golconda Fm.

Cypress Ss.

226

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THE NEW JERSEY ZINC COMPANY

DRILL RECORD

Harrisburg, Illinois

HOLE NUMBER W-6

Property W. T. O'Roark

Location SW¼ NE¼ Sec. 28 T12S R7E

Page 2 of 3

Coordinates _____ Elevation 493.24 Bearing N45°W

Began October 31, 1958 Finished Nov. 11, 1958 Inclination -59° Total Depth 716

Driller Coy Mills (Joy Mfg. Co.) Logged by J. M. Hague Water Level 40

FROM	TO	Ft Cor.	Description	Eff.	Minerals
275	285	10	Mass. ss. w. oil stns @ 70°	No	
285	295	10	Wh. ss. to 295, 6" Gy silt & sh @ 295	No	
295	305	10	Silt w. Mc. to 297, wh. ss to 305, Oil stn. 297-300	No	
305	315	10	Mass. wh. ss., Slip at 311 @ 50°, 8" trash bed at 312	No	
315	324	9	Wh ss. Br. slip at 317 @ 10°, strike approx N. dip 75° W	Sl	
324	334	10	Wh. mass. ss. 2~¼" calc vnlts @ 15° approx strike N. dip 90°, assuming beds @ 70° dip SE	No	
334	338	4	Ss to 336, blk sdy sh to 338	No	Top P.C. 336
338	348	10	Dk grn & blk sdy sh @ 62°. Ly jnts @ 344, ⅛" Py seam @ 345 30°	No	
348	358	10	Dk sh. sps. silty beds	No	
358	366	8	Dk silty sh. to 362, sh. ls. to 363, sh to 366	Sl.	
366	368	2	Dk sl. ly sh.	Sl.	
368	376	8	Blk sh w. py, calc & silica on beds & jnts. Bds 75°, jnts 17°	Sl	Py. calc.
376	386	10	Blk jntd sh to 383, distorted sh to 384. 1½" Br. Vn @ 12° 384 to 385 W. calc, py, ank. F. ss. w sh ptgs to 386 @ 70°, x-bedded. Vn crosses beds, at high angle.		Calc. py. ank. Top Beth. 385
386	396	10	Thin x-bdd ss w sh ptgs.	No	
396	399	3	Mass. Ss. w. oil stn.	No	
399	409	10	Mass. wh. ss w. sh. frags. & ptgs. 1/16" Flt vnlts 12° at 400 & 22° at 406	No	Flt
409	417	8	Mass ss w. oil stn to 415. Br zo begins 415. Dis flt along br. jnts. Main jnt at 415 @ 24°	No	Flt
417	420	3	Br zone ends 419 @ 27° Ss to 420	No	
420	430	10	Mass. ss to 429. 3" Ls-ss. cg. at 429. Silt, sh, ls in tn bd sh to 430 @ 68°. Py on bd planes.	Md	Py Top Renault 429
430	440	10	Dk grn sh w. silt beds @ 70° Py plates on beds	Sl	Py
440	450	10	Sh to 446. M. g. ls w pnk calc grs to 450 w. sh. seams	St	
450	460	10	F. g. pnk & gy. ls to 455. Fos sh. ls. to 460	St	
460	471	11	Gy ls. w. fos sh layers.	St	
471	481	10	Dns gy ls.	St	
481	486	5	Gy grn fos ls to 484. Gy dol. to 486.	Sl	
486	496	10	Sh to 487, Gy ls to 493 Grn sh & foss ls. to 496	St	
496	507	11	Sh & fos ls. to 503, Gy ls to 504, fos sh to 507	St	
507	517	10	Fos grn ly sh to 516, Gy ls to 517	St	
517	527	10	Gy ls. w. thin sh beds.	St	
527	537	10	c. to m. gy ls.	St	
537	548	11	Gy ls. to 539. Sh @ 62°-70° to 541. Gy ls. to 543. Sh-ls. fm. br. to 545 w. grn sh & pnk ls frags. Lt. gy ls to 548.	St	Top Levias 545
548	558	10	Grn-gy ls to 551, Lt gy to wht Oo ls to 558.	St	

280 Cypress Ss. 3 336 Paint Creek Sh. 385 Bethel Ss. 4 417 429 Renault Ls. 5 545 Levias Ls.

THE NEW JERSEY ZINC CO.

THE NEW JERSEY ZINC COMPANY

DRILL RECORD

Harrisburg, Illinois

HOLE NUMBER W-6

Property W. T. O'Roark

Location SW¼NE¼ Sec. 28 T12S R7E

Page 3 of 3

Coordinates

Elevation 492.24 Bearing N45° W

Began Oct. 31, 1958 Finished Nov. 11, 1958 Inclination -59° Total Depth 716

Driller Coy Mills (Joy Mfg. Co.) Logged by J. M. Hague Water Level 40

Graphic Log

564 Rosiclare Sandstone

592

6

Fredonia Ls.

7

716

FROM	TO	Ft. Core	Description	Elev.	Minerals
558	568	10	Oö ls to 560. Grn-gy ls to 564. 3" sh at 563. Dk gy-grn f.g. x-bdd ss to 568.	Md	Top Ro. 564
568	578	10	F.g. x-bd ss. w. abdt oil stn & Q & glauc.	Md	
578	588	10	F.g. x-bd ss, fos. rich to 579, dol. bed 585-586.	Sl.	
588	598	10	F.g ss & sh to 590, Ls to 591, Silt & sh to 592 @ 65°. Lt gy ls., sps Oö to 598	St.	Top Fred. 592
598	608	10	Ls. w. calc. repl. to 600, lt. gy. ls. w. sty. & sh. lam. to 608.	St.	
608	618	10	Lt gy ls to 616. Gy-grn mot. sh. ls. to 618	St.	
618	628	10	M.g. & frag. ls. to 621, sh ls to 623, lt gy partly Oö ls to 628.	St.	
628	638	10	Dns. gy ls to 631, Mot sh ls to 638, abdt, fos.	St.	
638	649	11	Dns f.g. gy. ls. to 644. M.g. Oö wht. ls, leached, to 649	St	
649	658	9	Oö ls, alt'd or leached & porous to 655, solid to 658	St	
658	668	10	M.g. Oö. fos. lt. gy. to wht. ls.	St	
668	679	11	Oö ls to 670, Lt gy ls, sps Oö, partly frag. to 679	St	
679	689	10	Gy grn frag. fos. ls. to 684. Oö m. gy. ls. to 689.	St	
689	699	10	Dk gy ls. w. sps. Oö	St	
699	708	9	Lt gy sl Oö ls to 703. Sil. dol. to 704. Grn sh. w. dis flt, py to 704½. Sil dol. to 708	Sl	6" Flt, py
708	716	8	F.g. ls. to 709 c. gy, grn fos ls to 712, 6" grn sh at 712. F.g. gy & tan gy ls to 716. Bottom.	St	

Core Recovery 99.3% (BXWL)

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THE NEW JERSEY ZINC CO.

THE NEW JERSEY ZINC COMPANY

DRILL RECORD

Harrisburg, Illinois

Property R. S. Barnett (O'Roark-surface)

HOLE NUMBER W-7

Location SE¼ NW¼ Sec. 28 T12S, R7E

Page 1 of 1

Coordinates 228 N 740 E Elevation 470.93 Bearing N45°W

Began Nov. 15 1958 Finished Nov. 20 1958 Inclination -45° Total Depth 280

Driller Coy Mills (Joy Mfg. Co.) Logged by H. W. Davis Water Level 200±

Formations: Glen Dean Ls. (0–27); Hardinsburg Ss. (27–149); Gelconda Fm. (149–280)

FROM	TO	Ft. Core	Description	Ef	Minerals
0	27	0	Overburden		
27	32	4.0	Brn gy fos ls to 28, 0.1 Bu clay, 0.6 Ox ls, brn-gy cl to 31½, gy cl to 32	Med	Lmt.
32	36	4.0	Med. gy. sh frag.	–	
36	41	4.0	Med gy sh (pulverized)	–	
41	42	1.5	Med gy sh frags.	–	
42	45	1.0	Ox ss.	–	
45	48	3.0	Gy sh & shaly ss to 46½; partly ox. gy ss frag to 48	No	Lmt
48	51	2.0	Partially ox. ss. frag. Bd 35° @ 48½	No	
51	56	2.0	Gy ss frag.	No	
56	66	10.0	Gy ss Bd 48° @ 58, ¼" calc vnlt. @ 56.4	No	Py @ 62.3
66	76	10.0	Gy ss Bd 55° @ 67	No	
76	86	10.7	Gy ss. Bd 45° @ 79, Calc @ 80.6	No	
86	89	3.0	Gy ss Br @ 88.8 – 89.0	No	
89	90	1.0	Br 89.0-89.1; Gy sh ss 89.1-89.5; Dk gy sdy sh 89.5-90	No	
90	91	1.0	Gy ss. w. dk gy ptgs.	No	
91	92	1.0	Gy ss w dk gy ptgs.	No	
92	93	0.6	Gy ss frag.	No	
93	97	4.0	Gy ss w. dk gy ptgs.	No	
97	102	5.1	Gy ss. partially ox.	No	
102	104	2.0	Gy ss sl. ox. Bd 42° @ 103'.	No	
104	108	4.4	Gy ss. sl. ox. Dk gy wavy ptgs.	–	
108	110	2.3	Gy ss. w. dk. gy. ptgs.	–	
110	113	2.8	Gy ss. to 110.3, Ox ss. to 113.0	–	
113	120	8.3	Gy ss. Bkn & ox at 115	–	
120	123	2.5	Gy ss	–	
123	125	1.8			
125	126	1.3	Gy ss sl. Ox at 125.5	–	
126	128	1.4			
128	137	8.5	Gy ss. ox ss 133-134.5	–	
137	147	10.0	Gy. fn. grd. mav. ss.	–	
147	150	2.5	Gy ss to 148.8; blk sh to 148.9; Dk gy siltst, st eff., to 149.3; Dk gy sh. to 150.	St	
150	156	6.6	Dk. gy. calc. sh to 155; Gy fos. oö ls. to 156	St	
156	164	8.0	Gy oö ls to 160; Dk gy sh at 160; 0.2 Gy ls, gy calc sh to 162.5; gy ls to 164.	St	
164	174	10.3	Gy. fos. ls.	St	
174	183	9.3	Drk gy fos. ls. to 177; lt. gy ls to 183	St	
183	190	6.5	Lt gy ls 183-185.5; Drk gy ly sh 185.5-190	St	
190	200	10.3	Drk gy limey sh w. few 3" beds gy ls.	St	
200	201	1.0	Drk gy limey sh Lost water at 200½	St	Opening 201
201	208	6.0	Drk gy fos. ls. w. cons. gy sh.	St	
208	213	5.0	Drk gy fos ls.	St	
213	221	6.8	Gy fos ls to 217.5; dk gy ly. sh to 221	St	
221	226	5.8	Gy limey sh & gy ls at 224-225.3	St	
226	236	10.0	Gy fos sh. ls. to 231, gy. fos. ls to 236.	St	
236	245	8.3	Gy fos ls to 242; Gy sh to 245	St	
245	246	1.0	Drk gy calc. sh.	Sl	
246	248	2.0	Gy shy. ls w few fossils	St	
248	250	1.7	Gy & grn sh.	No	
250	253	1.5	Gy siltstn w calc vnlts	Sl.	
253	255	1.3	Gy siltstn, ¼" calc vnlt at 255.	Sl	
255	256	0.2	Gy siltstn	Sl	
256	257	0.9	" "	Sl	
257	258	0.7	" "	Sl	
258	259	0.7	" "	Sl	
259	263	2.8	Gy siltstn	Sl	Core Recovery =
263	271	6.8	Gy silty ss.	Sl	94.5%
271	280	9.7	Gy siltstn to 274½, silty fos ls. to 279, Gy ls to 280	St	Bottom

While we believe this information to be correct, we make no representation with respect to, nor do we assume any responsibility for, the correctness thereof.

THE NEW JERSEY ZINC CO.

DMEA FORM 6 REFERENCE SLIP

REV. 12-56 DEFENSE MINERALS E[illegible]ORA[illegible]N ADMINISTRATION

TO:	INITIALS	DATE
1. 600		
2.		
3.		
4.		
5.		
FROM:		

FOR: Check items for action desired

____ Action ____ Reply for signature of ____

____ Approval ____ Investigate ____ Surname

____ Comment ____ Recommendations ____ Signature

____ Conference ____ Rewrite ____ File

____ Instructions ____ Your information

REMARKS: Question? Contract does not allow contribution to uncompleted hole; therefore hole W-8 must either be considered complete at depth of original target (with addtl footage disallowed) or incomplete at 619' (with entire footage disallowed).

Talbut 1/23/59

T.-DUP. SEC., WASH., D.C. M25803

INTERIM REPORT
DMEA-4907 Idm-E1206

OFFICIAL FILE COPY
O. M. E.
RECEIVED JAN 23 1959

DATE	INITIALS	CODE
1/23	C	220
"		110
		800
		600

Operator: New Jersey Zinc Company, Harrisburg, Illinois

Location: Project II, Pope County, Illinois

A project inspection of the subject contract was made on January 13, 1959. Results obtained to date and contemplated future work were discussed with Mr. Fred Main, Head of Exploration from the New York office; Mr. Jack Hague, Regional Geologist from the Platteville office; and Mr. Weinberg, Geologist from the Harrisburg office.

Drilling completed under the contract to date and since the last project inspection is summarized as follows:

Number of holes completed to date	10
Number of holes completed since last inspection	1
Footage in holes completed to date	7,043 7042'
Footage in holes completed since last inspection	619
Number of indicative holes	1
Number of trace holes	2
Number of speck trace holes	3
Number of barren holes	4

The 10 holes provided for in Stage I of the contract have been completed. Only one hole (contract location No. 6 which was designated as Hole No. W-3) encountered indicative mineralization. A Stage II hole is now in progress to further explore this mineralization as Hole No. W-3 did not intersect the main structure at the most favorable stratigraphic position.

In the last interim report which covered an inspection made on December 30, 1958 Hole No. W-8 was reported as incomplete at a depth of 619 feet. The original target planned for this hole was cut above this depth (see attached cross section). Results obtained from Hole No. W-5 indicated a second target could be explored by deepening Hole No. W-8 about 400 feet. The writer gave verbal permission to use the footage

remaining in Stage I of the contract (about 222 feet) to continue this hole to the second target. The additional footage required beyond the 222 feet was to be done entirely at the Operator's expense. Shortly after this decision the hole was lost a few feet beyond a depth of 619 feet and had to be abandoned. The nature of the second target as revealed by Hole No. W-5 would not warrant drilling an entirely new hole (about 1000 feet as compared to 400 feet if it had been possible to deepen W-8). Hole No. W-8 should be regarded as completed at a depth of 619 feet under the contract.

A summary log of incomplete Hole No. W-11 is as follows:

Depth in Feet	Lithology
0-15	Overburden.
15-60	Golconda limestone and shale.
60-183	Cypress sandstone.
183-197	Paint Creek shale.

Dewey H. Amos
Geologist
U. S. Geological Survey

No reserves of fluorspar are known in the area of proposed exploration nor can any be inferred. Mining operations are currently being conducted by the Ozark-Mahoning Company on the Van Cleve property about one-half mile northeast of the area of proposed exploration. The mineralization is along the Wolrab Mill fault zone. Considerable reserves are believed to exist on the propert .

GEOLOGY

The western part of the southern Illinois fluorspar district is underlain by flat-lying sedimentary beds of Mississippian age which are displaced by numerous normal faults. The faults commonly have steep dips and the major ones have a northeasterly strike. Many minor faults of limited displacement and extent occur traverse to the regional structural trend. Mineralization consists of fluorite with subordinate sphalerite and galena in a gangue of calcite and barite. It occurs as cavity-filling deposits along the faults and is accompanied by minor replacement.

Stratigraphic units present inthe vicinity of the area of proposed exploration are as follows:

	Stratigraphic Unit	Thickness
Chester series	Tar Springs sandstone	90 ft.
	Glen Dean Limestone and shale	60 ft.
	Hardinsburg sandstone	90 ft.
	Golconda limestone and shale	145 ft.
	Cypress sandstone	110 ft.
	Paint Creek shale	25 ft.
	Bethel sandstone	25 ft.
	Renault limestone and shale	90 ft.
Meramac series	Ste. Genevieve formation	
	Levias limestone member	20 ft.
	Rosiclare sandstone member	20 ft.
	Fredonia limestone member	205 ft.
	St. Louis limestone	500 ft.

Since the deposits are predominately of cavity-filling origin, major mineralization is restricted along the faults to places where both walls consist of competent rock units (massive limestone and/or sandstone). Significant mineralization occurs at certain favored stratigraphic positions along the faults; namely, (1) the middle and upper part of the Fredonia limestone member, (2) the upper part of the Renault limestone, and (3) the upper part of the Levias limestone member and the basal portion of the Renault limestone. The largest deposits and the major production of the western part of the southern Illinois district occur where at least one wall of the faults consist of the Fredonia limestone member of the Ste. Genevieve formation. Individual ore bodies commonly have a strike extent of 500 to 1000 feet and may have a dip extent up to 250 feet. Such bodies are generally most productive at or near fault intersections.

The area of proposed exploration lies along the Wolrab Mill fault, one of the important producing units of the district. In the vicinity of the properties under consideration the Wolrab Mill fault zone is 950 to 1250 feet wide and trends in a N.45°E. direction. This zone is bounded by two major faults which are approximately parallel; "Fault E" on the southeast side and an unnamed fault on the northwest side (see attached map). Several cross-faults traverse the fault zone on or near the Baumer, Barnett and O'Roark properties. As exposures of bedrock are poor in the area, several other cross-faults probably exist.

ABBREVIATIONS FOR WISCONSIN-ILLINOIS DRILL LOGS

abun - abundant
act - actinolite
agg - agglomerate
ab - albite
altn - alteration
alt - altered
amp - amphibole
ang - angular
ank - ankerite
an - anorthite
apa- apatite
ap - aplite
aren - arenaceous
arg - argillaceous
ark - arkose
asp - arsenopyrite
asph - asphalt
aug - augite
avg - average

bnd - band
Ba - barite
bas - basalt
bd - bed
bdd - bedded
blw - below
ben - bentonite
btw - between
bio - biotite
bit - bitumen
blk - black
blu - blue
bot - bottom
br - breccia
brt - bright
bkn - broken
brn - brown
bu - buff

cala - calamine
calc - calcite
crb - carbonaceous
cel - celestite
cmt - cement
ce - cerrusite
cc - chalcocite
cpy - chalcopyrite
ch - chert
chl - chlorite
choc - chocolate
chr - chromite
clr - clear
clvg - cleavage
c. - coarse (1-2cm)
cpt - compact
concr - concretion
cg - conglomerate
cons - considerable
cnt - contact
cr - cream colored
xb - crossbedded
crd - crushed
xln - crystalline

d - dark
decalcified
dec - decomposed
dns - dense
db - diabase
dk - dike
dis - disseminated
dol - dolomite
dold - dolomitized
drab - drab

ed - edgewise
eff - effervescence
encr - encrusted
enr - enriched
ens - enstatite
epi - epidote
fa - fault
fd - feldspar
ferr - ferruginous
fn - fine
fsl - fissile
Flt - fluorite
fol - foliated
f.w. - foot wall
fm - formation
fos - fossiliferous
fr - fracture
frag - fragments
Ft - franklinite
fri - friable

gb - gabbro
ga - galena
gar - garnet
gn - gneiss
gos - gossan
gg - gouge
grd - grained
gr - granite
gd - granodiorite
gran - granular
graph - graphite
gy - gray
gw - graywacke
grn - green
gs - greenstone
gnd - ground
gyp - gypsum

h.w. - hanging wall
hvy - heavy
hmt - hematite
h.g. - high grade
h. - horizontal
hb - hornblende
hbt - hornblendite
ig - igneous
il - ilmenite
incl - inclined
int - intense
intbd - interbedded
intr - intrusive
irreg - irregular

jar - jarosite
jas - jasper
jnt - joint
kao - kaolinite
lab - labradorite
lam - laminated (tion)
lamp - lamprophyre
lt - light
ls - limestone
lmt - limonite
lin - lineation
loc - local
lol - loellingite
l.g. - low grade

mag - magnetic
mt - magnetite
mal - malachite
ma - marcasite
msv - massive
mtl - material
mtx - matrix
med - medium
mdg - medium grained
met - metamorphic
mc - mica
min - mineral
md - moderate
mo - molybdenite
mobr - mosaic breccia
mot - mottled
mus - muscovite

nod - nodule
ol - oligoclase
ov - olivine
Oo - oolite (-ic)
orn - orange
or - orthoclase
ox - oxidized
pll - parallel
peb - pebble
pt - pegmatite
pnk - pink
phen - phenocryst
phos - phosphate(nods)
phy - phyllite
por - porphyritic
pu - pumice
purp - purple
py - pyrite
px - pyroxene
po - pyrrhotite

Q - quartz
qd - quartz diorite
qte - quartzite
recep - receptaculites
red - red
res - residue
rct - rhodochrosite
rhy - rhyolite
rby - ribbony
rk - rock

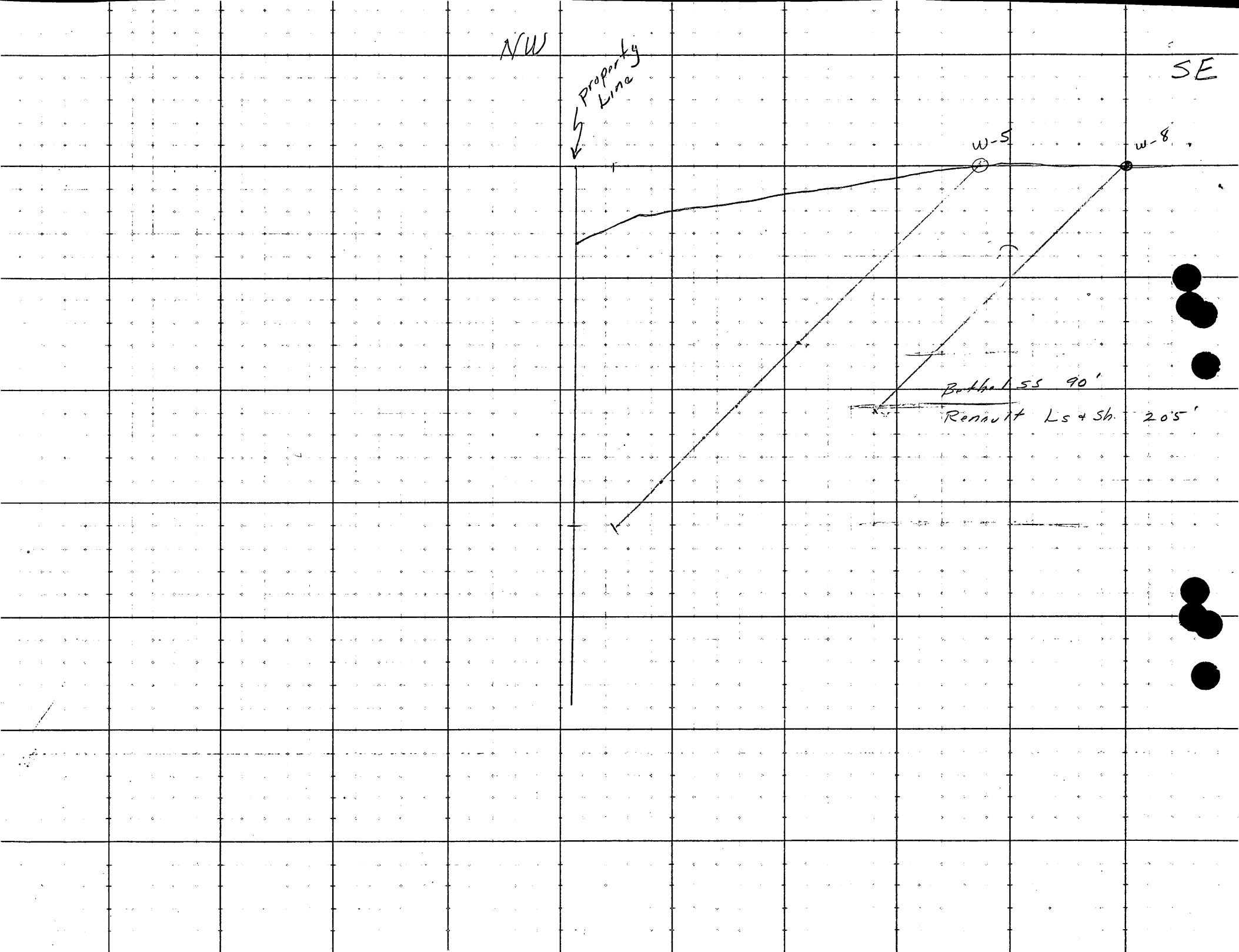
rnd - round
rt - rutile

sach - saccharoidal
s.g. - sand grain(s)
ss - sandstone
sdy - sandy
sch - schist
sms - seams (to 0.1')
ser - sericite
srp - serpentine
sh - shale
shrd - sheared
sid - siderite
sil - siliceous
sl - slight
smt - smithsonite
sps - sparse
spk - speckled
sph - sphalerite
spn - sphene
spl - spinel
stn - stain
stl - steel
st - strong
str - strontianite
sty - stylolites
sul - sulfides
sy - syenite

tc - talc
tx - texture
tk - thick
tn - thin
tnt - titanite
und - undulating
unox - unoxidized
vn - vein
vnlt - veinlet
v. - vertical
vy - very
vc - very coarse
vf - very fine
vio - violet
vol - volcanic
vug - vuggy

wk -weak
wht - white
wt - willemite
w. - with
wit - witherite
wlst - wollostonite
xc - crosscut(ting)
yel - yellow
zeo - zeolite
zt - zincite
zr - zircon
zo - zone

Use chemical symbols for metals.


NW
SE
Property Line
W-5
W-8
Bottle Ls 90'
Rennuit Ls & Sh 20'5'

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

DATE	INITIALS	CODE
1/15	C	220
"	[illegible]	110
1/15	[illegible]	800
		600

INTERIM REPORT
DMEA-4907, Idm-E1206

Operator: New Jersey Zinc Company, Harrisburg, Illinois

Location: Project II, Pope County, Illinois

A project inspection of the subject contract was made on December 30, 1958. Results obtained to date and contemplated future work were discussed with Mr. Jack Hague, the Operator's regional geologist.

Drilling completed under the contract to date and since the last project inspection is summarized as follows:

Number of holes completed to date	9
Number of holes completed since last inspection	2
Footage in holes completed to date	6,423
Footage in holes completed since last inspection	1,437
Number of indicative holes	1
Number of trace holes	2
Number of speck trace holes	3
Number of barren holes	3

Two holes (Contract Hole Nos. 16 and 17) have been completed since the last project inspection. Traces of fluorite-barite mineralization was encountered in one of the holes (Contract Hole No. 17) and the other one (Contract Hole No. 16) was blank. Summary logs of the two holes are as follows:

Contract Hole No. 16 (W-9)

Depth in Feet	Lithology
0-13	Overburden.
13-179	Golconda limestone and shale.
179-286	Cypress sandstone.
286-370	Paint Creek shale.
370-471	Bethel sandstone.
471-599	Renault limestone and shale.
599-612	Levias limestone.
612-643½	Rosiclare sandstone.
643½-750	Fredonia limestone.
750	Bottom.

Inclination -60°
Bearing N.45°W.

3143 1.05

Mr. Sülsgaard

2532

6 2 2 6
4 5

31 1 1 0
3 3
4 6 6 0

Contract Hole No. 17 (W-10)

Depth in feet	Lithology
0-10	Overburden.
10-25	Hardinsburg sandstone.
25-215	Golconda limestone and shale.
215-307	Cypress sandstone.
307-354	Paint Creek shale.
354-438	Bethel sandstone; traces of barite at 363 feet and 390 feet.
438-537½	Renault limestone and shale.
537½-567	Levias limestone.
567-596	Rosiclare sandstone; traces of fluorite at 578 feet.
596-	Fault.
596-687	Fredonia limestone.
687	Bottom.

Inclination -60°
Bearing N.45°W.

Drilling is in progress in one hole (Contract Location No. 12 which has been designated W-8 by the Operator) and was at a depth of 619 feet at the time of the inspection. Stage I of the contract will be finished upon completion of this hole. It is estimated that an additional 400 feet of drilling will be required to complete this hole. Only about 222 feet of Ax drilling remains unused under Stage I of the contract but the Operator plans to complete the hole at his expense. A summary log of the incompleted hole is as follows:

Depth in feet	Lithology
0-12	Overburden.
12-41	Hardinsburg sandstone.
41-254	Golconda limestone and shale.
254-387	Cypress sandstone.
387-486	Paint Creek shale.
486-604	Bethel sandstone.
604-619	Renault limestone and shale.

Inclination -45°
Bearing N.45°W.

Verbal approval was given by the examiner to drill a hole under Stage II of the contract. This hole is to be designated W-11 and is to be collared about 260 feet N.45°W. of W-2 (contract location No. 4). The hole will be drilled at an inclination of -45° in a S.45°W. direction. It is located to further explore the indicative mineralization encountered in Hole No. W-3 at a more favorable stratigraphic position.

Property line near

Dewey H. Amos
Geologist
U.S. Geological Survey

Walter
Check this with Harry
There is no narrative accompanying
MF104 - Amos says W-3 as
- 60 - operator says - 50' - Correct
Amos says bottom at 748
operator says bottom at 842 Correct

DMEA FORM 6 REFERENCE SLIP
REV. 12-56 DEFENSE MINERALS EXPLORATION ADMINISTRATION

TO:	INITIALS	DATE
1. 600		
2.		
3.		
4.		
5.		
FROM: 800 (Fasbert)		

FOR: Check items for action desired

____ Action ____ Reply for signature of ____
____ Approval ____ Investigate ____ Surname
____ Comment ____ Recommendations ____ Signature
____ Conference ____ Rewrite ____ File
____ Instructions ____ Your information

REMARKS: Footage completed to date understated because Field Team report of inspection 10/16/58 shows hole No. 6 (W-3) as 748', whereas log attached to Oct MF-104 indicates 842' depth.
correct

INT.-DUP. SEC., WASH., D.C. M25803

OFFICIAL FILE COPY
O. M. E.
RECEIVED DEC 10 1958

DATE	INITIALS	CODE
12/12	C	220
11		110
10/10		800
		600

INTERIM REPORT
DMEA-4907, Idm-E1206

Operator: New Jersey Zinc Company, Harrisburg, Illinois

Location: Project II, Pope County, Illinois

A project inspection of the subject contract was made on November 25, 1958. Results obtained to date and contemplated future work were discussed with Mr. Rupert Bing, the Operator's geologist. Cores from recently completed holes were examined.

Drilling completed under the contract to date and since the last project inspection is summarized as follows:

Number of holes completed to date.	7
Number of holes completed since last imspection. . . .	4
Footage in holes completed to date	4,986
Footage in holes completed since last inspection . . .	2,713
Number of ore holes.	0
Number pf trace holes.	3
Number of speck traced holes.	2
Number of barren holes	2

Four holes (Contract Hole Nos. 11, 15, 19, and 20) have been completed since the last project inspection. Traces of fluorspar-lead-zinc mineralization were encountered in three of the holes (Hole Nos. 11, 19, and 20) and the remaining hole (Hole No. 15) was blank. Results obtained from Contract Hole Nos. 11, 15, and 19 indicate that Fault E is 50-150 southeast of the location shown on the contract map. Summary logs of the four holes are as follows:

Contract Hole No. 11 (W-5)

Depth in Feet	Lithology
0-13	Overburden.
13-60	Hardinsburg sandstone.
60-282	Golconda limestone and shale.
282-406	Cypress sandstone.
406-450	Paint Creek shale. Trace of sphalerite at 448 feet.

Depth in Feet	Lithology
450	Fault.
450-460	Paint Creek shale.
460-658	Bethel sandstone. Barite veinlet (2") at 570 feet and trace of galena at 607 feet.
658-682	Renault limestone and shale.
682-685	Fault.
685-782	Bethel sandstone. Trace of fluorite at 690 feet.
782-912	Renault limestone and shale.
912	Bottom.

Inclination -45°

Contract Hole No. 15 (W-7)

Depth in Feet	Lithology
0-27	Overburden.
27-42	Glen Dean limestone.
42-149	Hardinsburg sandstone.
149-280	Golconda limestone and shale.
280	Bottom.

Inclination -45°

Contract Hole No. 19 (W-4)

Depth in Feet	Lithology
0-6	Overburden.
6-72	Hardinsburg sandstone.
72-265	Golconda limestone and shale.
265-334	Cypress sandstone.
334-377	Paint Creek shale.
377	Fault.
377-401	Paint Creek shale.
401-462	Bethel sandstone.
462-571	Renault limestone and shale.
571-595	Levias limestone.
595-623	Rosiclare sandstone. Traces of fluorspar at 603 feet.
623-805	Fredonia limestone. Traces of fluorspar at 751-752 and 790-793 feet.
805	Bottom.

Inclination -60°

Contract Hole No. 20 (W-6)

Depth in Feet	Lithology
0-9	Overburden.
9-58	Hardinsburg sandstone.
58-226	Golconda limestone and shale.
226-332	Cypress sandstone.
332-384	Paint Creek shale.
384-385	Fault.
385-429	Bethel sandstone. Traces of fluorspar at 400, 406, 415 feet.
429-545	Renault limestone and shale.
545-564	Levias limestone.
564-592	Rosiclare sandstone.
592-716	Fredonia limestone.
716	Bottom.

Inclination -60°

Drilling was in progress in two holes at the time of the inspection. Contract Hole No. 12 (W-8) was at a depth of 223 feet and Contract Hole No. 16 (W-9) was at a depth of 152 feet.

Dewey H. Amos

Geologist

U. S. Geological Survey

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

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

PAID ON VOUCHER & SCHEDULE OF PAYMENTS K-30

RECEIVED NOV 26 1958 O.M.E.

STAGE I

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of October, 1958 Docket No. DMEA 4907 Contract No. 1206
Operator's Name The New Jersey Zinc Company Minerals Fluorspar, Zinc
Address 160 Front Street, New York 38, New York
Contract Amount, $ 39,192.00 Government Participation 50% Amount, $ 19,596.00

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 BX	368.75	312.70	681.45			
~~Bulldozing~~ AX	4033.30	3760.35	7,793.65			
Crosscutting						
Drifting						
Cementing	96.00	176.00	272.00			
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
Core Boxes	123.00	114.00	237.00			
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
Initial Rehabilitation and Repairs						
New Bldgs., Improvements, etc.						
Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
Incidental Allow.	494.10	457.50	951.60			
Contingencies (specify):						
TOTALS	5115.15	4,820.55	9,935.70	5,115.15	4,820.55	9,935.70

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

Date Nov. 12, 1958 Payee The New Jersey Zinc Company

Per John M. Hague Title Chief Geologist

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

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

(Instructions on reverse)

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

$ 2,557.58

Signature Helen R. Miller
(Authorized Certifying Officer)

Date NOV 24 1958 Vou. No. 61
(See other side)

2557.57

(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 1206 in accordance with the terms of the contract.

Signature [illegible] Burmeister Title Mining Engr. Date 11/19/58

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Robert A Lawrence Title EXECUTIVE OFFICER OME FIELD TEAM REGION V Date NOV 23 1958

MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

RECEIVED NOV 26 1958

STAGE I

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of October 8 Dock No. 4907 Contract 1206

Operator's Name The New Jersey Zinc Company DMEA Minerals Fluorspar, zinc

Address 160 Front Street, New York 38, New York

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
Incidental Allow.	Ft.	494.10	1647	951.60	3172		7160	.30
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core BX	Ft.	368.75	125	681.45	231		150	2.95
Drilling: Core AX	Ft.	4033.30	1522	7,793.65	2941		6910	2.65
Core Boxes	Box	123.00	41	237.00	79		175	3.00
Auger								
Stripping								
Trenching								
Test Pits								
Cementing	Hr.	96.00	12	272.00	34		60	8.00
TOTAL DISTRIBUTED COSTS		5115.15		9,935.70				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		5115.15		9,935.70				

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.

Nov. 12, 1958 The New Jersey Zinc Co.

Date Operator

Per John M. Hague Title Chief Geologist

REMARKS W-3 and W-4

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

(Instructions on reverse)

(For Government use only)

H. S. Burmeister 11/19/58

INSTRUCTIONS

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

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

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

GPO 872894

X 10869 24M 12-55

COPY

THE NEW JERSEY ZINC COMPANY

EXPLORATION DEPARTMENT

November 12, 1958

P. O. Box 129
Harrisburg, Illinois

Mr. Harry L. Burmeister
Mine Examination & Exploration Engineer
U. S. Bureau of Mines
College Park, Maryland

Re: DMEA 4907 (Fluorspar, zinc, lead)
Idm-E 1206, The New Jersey Zinc Co.
Project II, Pope County, Illinois

Dear Mr. Burmeister:

Two diamond core drill holes, namely W-3 and W-4, were completed under this contract during October. Enclosed herewith you will find the original and four (4) copies of Form MF-104 and Form MF 104A. Also, five (5) copies of each of the logs of hole W-3 and W-4 are included with this report. A list of abbreviations used in logging is included. One copy of the statement from Joy Manufacturing Co. for each of the holes W-3 and W-4 and a bill for forty-one (41) core boxes are enclosed.

Two samples were taken in hole W-3 and sent to the laboratory for analyses. The results are reported as follows:

Hole No.	Interval		Analysis		
	From	To	Fluoride	Zinc	Lead
W-3	728	729	1.95	0.10	0.01
W-3	729	736	2.71	0.16	0.31

The statement from the assay laboratory is not available at this time, hence, the cost is not included this month.

Mr. Rupert C. Bing stated in his letter dated Oct. 20, 1958 that a plan map showing hole locations would accompany the report for October. A print of our map is enclosed herewith. The scale is 1" equals 200'. You will note that the proposed locations for stage I are indicated with blue ink. The actual drill sites are indicated with black ink with the prefix "W-".

Mr. Bing has been unable to perform his duties at his office, due to sickness. Mr. J. Hague prepared Form MF 104 and MF 104A and I am completing this report to the best of my ability. If there are any essential portions that I have overlooked of omitted, please inform me and I will try to provide that which is lacking.

Very truly yours,
H. W. Davis
H. W. Davis

THE NEW JERSEY ZINC COMPANY — DRILL RECORD — Harrisburg, Illinois

Property: BARNETT - Min Rts; O'Roark surface — HOLE NUMBER: W-3

Location: NE¼ NE¼ SEC 28 T12S R7E — Page 1 of ~~2~~ 3

Coordinates: N71 E360 — Elevation: 514.40' — Bearing: N45°W

Began: 10/2/58 — Finished: 10/13/58 — Inclination: 50° — Total Depth: 842'

Driller: Miles (Joy) — Logged by: ZC Bing — Water Level: 500+

Graphic Log	FROM	TO	Ft Core	Description	Ex	Minerals
Soil	0	7	-	OVERBURDEN		
7	7	10	3	WH FGRD SS, S/OX	Ir	
	10	16	4+	WH FGRD SS, OX	"	
	16	18	-1	WH FGRD SS OX	"	
	18	22	1+	WH FGRD SS S/OX	"	
	22	30	1	WH FGRD SS, S/OX	"	
Hardinsburg Ss.	30	40	4	WH FGRD SS, S/OX	"	
	40	46	2	WH FGRD SS, S/OX	"	
	46	48	1+	WH FGRD SS, S/OX	"	
	48	50	-1	WH FGRD SS, S/OX	"	
	50	53	-1	WH FGRD SS, S/OX	"	
	53	55	1	WH FGRD SS, S/OX, S/SHly	"	
	55	60	2	WH FGRD SS, S/OX, S/SHly	"	
	60	64	2	60-61' WH FGRD SS S/OX. 61'-64' gy VFGRD SS, Py	"	Py
	64	69	4+	64'-67' gy VFGRD SS, Py. 67'-69' FGRD WH SS, OX.	"	Py
80	69	72	2	FGRD WH SS, OX.	"	
	72	79	7	FGRD WH SS. 78'-79' OX.	"	
	79	81	1+	79'-80' OX FGRD SS. 80'-81' gy SI FOS SH.	"	
	81	91	8	81'-85' DK gy FOS SH. BD 51° @ 83'. 85'-91' MD xln gy FOS SHly	ls. st	CFF.
1	91	111	20	91'-101' MD xln gy FOS SHly ls. minor slip @ 98' w CALC.	st	calc
				101'-108' MD xln gy FOS ls. 104½'-106' BKN, CAL. 108'-111' gy SH, S/FOS		
	111	131	20	gy CAL FOS SH. @ 116' FRAC 30° w CALC. BD 55° @ 118'	st	
	131	143	12	gy MD xln FOS ls, S/SHly. 137'3"-138' CAVITY.	st	
	143	163	20	143'-159' gy FOS SHly ls. 159'-163' gy MD xln FOS ls, OX	st	
	163	180	17	163'-170' gy MD xln FOS ls. 170'-179' gy FOS SH. 179'-180' GRN SH, SDY @ 180'. BD 58° @ 179'	st	
	180	189	9	180'-181½' GRN VFGRD SS. 181½'-189' GRN SH W VFGRD SS stringers	-	
Golconda fm.	189	209	20	189'-192' gy GRN SH. 197'-203' gy FOS CAL SH. 203'-205' lt gy MD xln vy FOS ls. 205'-209' gy FOS CALC SH. BD 52° @ 190' BD 52° @ 194'	st	
2	209	214	5	209'-212' gy MD xln SHly FOS ls. 212'-213½' gy FOS SH. 213½'-214' MD xln gy FOS ls.		
	214	224	10	gy FOS CALC SH. 222'-224' gy FOS ls bd.	st	
	224	243	19	gy SI FOS SH. BD 57° @ 233'	MD	
	243	248	5	gy SH		
	248	256	8	gy SH		
	256	269	13	gy SH. BD 50° @ 261'		
	269	281	12	269'-273½' gy SH. 273½'-276½' gy MD xln FOS ls. 276½'-278½' lt gy FGRD SS. 278½'-281' gy GRN SH, Py	st	Py

AX5532A-2L

THE NEW JERSEY ZINC COMPANY

DRILL RECORD

Harrisburg, Illinois

Property BARNETT

HOLE NUMBER W-3

Location NE¼ NE¼ Sec. 28 T12S R7E

Page 2 of 3

Coordinates N71, E360

Elevation 514.40'

Bearing N 45° W

Began 10/2/58

Finished 10/13/58

Inclination 50°

Total Depth 842'

Driller MILES (JOY)

Logged by R.C. BING

Water Level 500+

Graphic Log	FROM	TO	Ft Cor.	Description	Eff.	Minerals
	281	289	8	gy-grn SH w py.		py
	289	304	15	289'-293', gy SH. 293'-294', lt gy FGRD SH/y SS. 294'-304', gy SH w lt gy FGRD SS STRINGERS.		
3	304	312	6+	304'-311', grn Silt st. 311'-312', lt gy FGRD SS.		
	312	322	5	FGRD lt gy Sl SH/y SS.		
	322	329	7	FGRD lt gy Sl SH/y SS.		
	329	336	7	FGRD lt gy Sl SH/y SS.		
Cypress Sandstone	336	356	20	336'-351', FGRD lt gy SS. 351'-356', lt gy FGRD SS, Sl SH/y. BD 53° @ 352'		
	356	363	7	FGRD lt gy SS, bit stn.		
	363	383	20	FGRD lt gy SS, bit stn. BD 52° @ 368'		
	383	388	5	FGRD lt gy SS.		
	388	393	5	FGRD lt gy SS.		
	393	413	20	FGRD lt gy SS.		
4						
	413	425	12	FGRD lt gy SS. @ 419', 421', Sl cg		
	425	441	16	425'-432', FGRD lt gy SS. 432'-441', lt gy FGRD SH/y SS.		
441	441	461	20	gy SH, Sl SDy @ 460'-461' BD 52° @ 455'		
Paint Creek Shale	461	473	12	gy SH. Sl SDy. 471'-473', lt gy FGRD SH/y SS bd.		
	473	481	8	gy SH, Sl SDy		
	481	491	9+	gy SH.		
	491	501	9	gy SH.		
5	501	512	11	gy SH, Sl SDy.		
512	512	530	18	512'-527', gy SDy SH. 527'-530', lt gy FGRD SS.		
Bethel Ss.	530	539	8	FGRD lt gy SS.		
	539	548	9	FGRD lt gy SS. 545'-548, CORE BKN.		
	548	565	17	548'-555', FGRD lt gy SS. 555'-557', FGRD lt gy SS w gy SH FRAGS. 557'-565', FGRD lt gy SS.		

THE NEW JERSEY ZINC COMPANY

DRILL RECORD

Harrisburg, Illinois

Property Barneth

HOLE NUMBER W-3

Location NE¼ NE¼, Sec. 28 T12S R7E

Page 3 of 3

Coordinates N71, E360

Elevation 514.40'

Bearing N45°W

Began 10/2/58

Finished 10/13/58

Inclination 50

Total Depth 842'

Driller Miles (Joy)

Logged by R.C. Bing

Water Level 500'

Graphic Log	FROM	TO	Ft. Core	Description	Eff.	Minerals
	565	585	20	F grd lt gy ss.		
Bethel Ss.	585	605	20	585'-597', lt gy F grd ss. 597'-599', lt gy calc ss, slcg. 599'-605', gy grn sh, sl sdy.		
6	605	615	10	605'-608', gy grn sh. 608'-610½', gy md xln lt gy fos ls w calc. 610½-613½', F zo, calc. shear 35° @ 612'. 613½-615', cx in gy fos ls w calc vnlts.	st	calc
608 612 Fault						
619 Levias Renault Ls.	615	625	10	615'-619'3", md xln gy fos ls w pnk calc plts. 615'-615'8", calc. 619'3"-625', w h oo ls. ½" calc vnlt @ 623'.	st	
	625	635	10	625'-628', w h oo ls. 628'-632½', gy grn calc v f grd ss. 632½-635', sdy lt gy oo ls, fos.	st	
637 Rosiclare Ss.	635	645	10	635'-637', sdy lt gy fos ls, w pnk calc plts. 637'-645', gy grn calc v f grd ss.	st	
655	645	655	10	calc v f grd lt gy grn ss.	st	
Fredonia Ls.	655	665	10	655'-655'3", grn sdy sh. 655'3", 3" calc / sty. 655'5"-661', w h oo ls, fos. @ 658½', calc vnlt spk w flt & qa. 658½'-661', spk w sph. 661'-665', f xln lt gy fos ls. tr flt @ 663½' w calc.	st	flt, sph, qa, calc
	665	675	10	f xln lt gy fos ls. @ 668½', sph / sty. 659', calc vnlt w flt & sph. @ 672½', calc vnlt w flt, tr qa. @ 673', tr sph	st	flt, sph, qa, calc
7	675	685	10	675'-676', f xln gy ls, sl fos. 676'-678', lt gy f xln fos ls. 678'-685', lt gy oo ls.	st	
	685	692	7	685'-697', lt gy oo ls, fos. @ 687', 6" calc vnlt @ 28°. 687'6"-692' lt gy sl oo fos ls. dns gy ls bd @ 689'	st	
	692	702	10	692'-697½', lt gy md xln fos sh / ly ls. 697½'-702', lt gy md xln fos ls.	st	
	702	722	20	702'-709', md xln lt gy fos ls. 709'-711', dk gy fos sh. bd 54° @ 710'. 711'-720', md xln gy vy fos ls, bit stn. 720'-722', w h oo ls.	st	
	722	742	20	722'-730½', w h oo ls. 730½'-732', lt gy f xln fos ls. 732'-742', w h oo ls. 728½'-729'4" spk w sph. 731', ½ calc vnlt, w tr sph, qa, flt. 731', 732', calc vnlts w tr flt & sph. 733'-734', tr sph. 734'3" 1½" zo flt, calc, qa sph. @ 735', tr flt & sph w calc. 736', calc vnlt w tr flt & sph. 738', calc vnlt w tr flt & sph.	st	sph (1%) L2N, qa, flt
	742	762	20	742'-744½', gy oo ls. 744½'-762', md xln gy fos ls. 743', calc vnlt w tr flt. 747', 1" calc vnlt. @ 748', calc vnlt w tr flt. @ 760', 2" calc vnlt @ 35°.	st	flt, calc
	762	782	20	762'-773', md xln gy fos ls. 773'-775', gy oo fos ls. 775'-782', gy md xln fos ls.	st	
	782	792	9'	782'-784', md xln gy fos ls. 784'-786', grn sh. 786'-790', f xln gy ls. 790'-792', md xln gy fos ls.	st	
8	792	812	20	gy oo ls. calc vnlt @ 795', tr flt. calc @ 797', tr flt	st	flt, calc
822	812	832	20	812'-813', gy oo ls. 813'-822', md xln gy brn sl oo ls. @ 820' & 821', calc vnlts w tr flt. 822'-829', gy brn sdy ls. 829'-832', md xln gy brn ls.	st	flt, calc
829	832	842	10	832'-833½', md xln gy brn fos ls. 833½'-839', f xln gy brn ls. @ 835½', calc vnlt w tr flt. 839'-842', w h oo ls, sl fos.	st	calc, flt

- Core Recovery 92% -

AR55324 20 1-57

THE NEW JERSEY ZINC COMPANY

DRILL RECORD

Harrisburg, Illinois

Property W.T. O'Roark

HOLE NUMBER W-4

Location SW¼ NE¼ Sec. 28 T12S R7E

Page 1 of 3

Coordinates 719 N 987 E Elevation 512.0 Bearing N45°W

Began Oct. 16 1958 Finished Oct. 30 1958 Inclination 60° Total Depth 805

Driller Coy Mills (Joy Mfg. Co.) Logged by J. M. Hague Water Level

Fm	Graphic Log	FROM	TO	Ft. Core	Description	Eff.	Minerals
Hardinsburg Ss.		0	6	0	Soil		
		6	10	4	Wh. ss. NX core	No	
		10	12	2	f.g. wh. ss. BX core		
		12	21	7	wh. ss. 55°-60° BX core		
		21	29	7	Wh ss.		
		29	33	2	wh. ss, sh. ptgs.		
		33	34	0	ss. chips		
		34	39	5	Spotted wh. ss., porous, spotted w. oil. AX core		
		39	41	2	Ss. w. sh. frags.		
		41	45	4	Wh ss.		
		45	55	10	Wh ss., thm sh. ptgs. @ 55°		
		55	60	5+	Ss. w. oil stains @ 65° 3" sh at 58'		
		60	70	10	Wh. ss. Blk. mica. sh. ss. 64'-66'		
72		70	81	10	Ss. to 72, Blk sh to 79, Ls. to 81; Top Golconda 72'	St.	
		81	99	18	Dk gy to blk int bdd. ls. and sh. @ 65°	Sl.	
1		99	115	17	Mostly sh., a few 2"-3" ls. beds	Sl.	
Golconda Fm.		115	135	20	Blk ly. sh.; Ls 118'-120' and 123'-126'	md	
		135	155	20	Blk ly. sh.; Ls. 144-150	md	
		155	175	20	Mc. ly. sh. to 161', Blk sh. to 175; Bd @ 67°	Sl.	
		175	195	20	Sh. w. ls. frags. to 183', dk. gy. ls. to 186', fos. sh. w. ls. frags. to 191; Ls. to 193; Sh. to 195'	St.	
2		195	208	13	Blk. sh. w. ls. & fos. frags. Bd. @ 67°	Sl.	
		208	228	18	Blk. fis. sh., a few sandy-silty layers ½" to 1" thick.	No	
		228	245	16	Blk sh. to 235, Dk gy. ls. to 241, Blk sh. to 245 Top Cypress 241	St	
241		245	265	19	Blk. sh.	no	
Cypress		265	273	7	Silty sh. to 266', silty ss. to 273, Bd @ 72°	no	
		273	292	19	f.g. wh. ss., sps. glauconite, sh ptgs., oil stn. 284-290	no	

AX5532A 2C 1-57

THE NEW JERSEY ZINC COMPANY — DRILL RECORD — Harrisburg, Illinois

Property W.T. O'Roark — HOLE NUMBER W-4

Location SW¼ NE¼ Sec. 28, T12S, R7E — Page 2 of 3

Coordinates N 719' E 987' — Elevation 512.0 — Bearing N45°W

Began Oct. 16 — Finished Oct. 30, 1958 — Inclination 60° — Total Depth 805

Driller Coy Mills (Joy Mfg. Co.) — Logged by J.M. Hague — Water Level

Fm.	Graphic Log	FROM	TO	Ft. Core	Description	Eff.	Minerals
280							
		292	307	15	f.g. x bedded wh. ss.	No	
		307	315	8	Wh. ss., ~~bit. stn.~~ 307-308	No	
		315	326	11	Wh. ss., sps. sh. frags.	No	
		326	332	6	F.g. dense wh. ss.		
334		332	345	13	Br'd. wh. ss. to 334', serp'd. slip 22° at 334', Blk. sh br. to 340, sh & silt to 341, ss. w. abdt sh ptgs. to 345. 1/4" calc. seams @ 30° at 340' and 345'. Top P.C. 334'	No	Fa. w. serp, calc. - 334'
		345	360	14	Grn blk. fis. sh w. SiO_2 filled jnt lines.	No	
		360	361	2	Blk sh.	No	
		361	375	13	Blk sh to 365. Dk gy sh/ls. w. py. to 368, sh to 375		Py
		375	393	14	Blk. sh. w. sps thin silty layers. 3" Br. zone filled w. calc. 377' @ 18° to 20°		
		393	403	9	Blk sh., abdt. cross fractures & jnts. to 399. Dk gy clay 399 to 401; oil stn'd, shr'd ss. 401 to 403 Top Bethel 401. Poss. fa. at 400		Clay gouge?
401		403	410	5	M.g. ss. oil stn. to 405 1/8" calc. seam 2° to core.	No	
		410	424	14	M.g. wh. ss.		
		424	429	5	Wh. ss., stn'd along 0° jnts.		
		429	432	3	f.g. wh. ss.		
		432	444	12	f.g. wh. ss. @ 75° ±		
		444	452	6	Dense wh. ss.	No	
		452	455	1	Wh. ss.		
464		455	458	3	Wh. ss.		
		458	464	6	Wh. ss. to 462 ls. cg. to 464 Top D.B. 464	Sl.	
		464	471	5	Grn blk. & gy. banded sh @ 80°. Slip w. calc. @ 471 @ 20°		Calc.
477		471	472	1	Sh. @ 50°	no	
		472	475	3	Sh. to 474, c. ls. to 475	St.	
		475	479	4	Gy det. ls. w. ls. pebs, gy ly. sh. @ 60° to 477. Slip @ 26°, and 3" Calc. vein 20° to 14° @ 477', brn ls. @ 70° w/ 19° shr jnts to 479.	St	Calc.
		479	489	10	Brn ls., sh. ptgs. @ 65° to 486. Gy det. mc. ls. & sh. to 489.	St.	
		489	510	20+	Dk. gy. ls., part det., part f.g.; 504-505 grn gy red spotted ly. sh 505-510 grn gy ls. w. red ls. frags.	St.	
		510	524	13	Spotted ls. to 512, Sh @ 57° to 513, ls. w. brachs & ls. br. to 518, Sh @ 65° to 519 (524?)	St.	
		524	537	12	Gy grn sh. & brn ls. in alt. 1/2" bands @ 60° to 65°	St.	
		537	540	1	Dk gy sh.	md	
		540	541	1-	Dk gy sh. & ls.	st.	
		541	551	10	Gy & brn gy. sh & ls., abdt. fos.		
		551	571	20	Fos. det. ls., dk brn spots to 570 Blk. sh. to 571 ls. @ 65°, Sh @ 62°		

Cypress Ss. — Paint Creek Sh. — Bethel Ss. — Downey's Bluff Ls. — Shetlerville Sh.

AX5532A 2C 1-57

THE NEW JERSEY ZINC COMPANY — DRILL RECORD — Harrisburg, Illinois

Property W. T. O'Roark — HOLE NUMBER W-4

Location SW¼NE¼ Sec. 28, T12S, R7E — Page 3 of 3

Coordinates N 719' E 987' — Elevation 512.0 — Bearing N45°W

Began Oct. 16 1958 — Finished Oct. 30, 1958 — Inclination 60° — Total Depth 805

Driller Coy Mills (Joy Mfg. Co.) — Logged by J. M. Hague — Water Level

Graphic Log: Sco Shet. sh. 571 — Levias Ls. 595 — Rosiclare Ss. 625 — Fredonia Ls. 7 — 8 — 805

FROM	TO	Ft. Core	Description	Eff.	Minerals
			Blk sh. to 571 Top Levias 571		
571	591	20	Gy ls. to 575. Pnk ls. & grn sh. bk. to 579. Slips @ 45° @ 577. Lt. gy. dl. ls. to 583. Dk. gy & lt. tan gy. ls. to 591.	Sl.	
591	611	20+	Lt. gy. ls., dk gy sh ls. to 595. Dk gy calc f.g. ss. to 605. Dk. sh w. sdy layers to 612. 1/8" Ca-Flt Vn. @ 30° at 608. Top Ro. Ss. 595	Sl.	Calc, Flt.
611	631	20	Calc. ss. to 623. Sh. w. sandy ls. frag. lenses to 625. Lt. gy. to tan ls. to 631 Top Fredonia 625		
631	651	20	Lt. gy. ls., sh. ptgs. @ 62°; 3" Sh. 59° @ 644	St	
651	657	6	Lt. gy. ls.	St	
657	677	20+	Ls. w. abdt. sh. ptgs. @ 60° to 663. Lt gy ls., sps Oö to 675. 2" and 3" blk sh. @ 59° at 676. Mot. det. ls. to 677	St	
677	694	17	C. mot. ls. w. sh. ptgs. to 682. Dk. gy. m.g. ls to 685 Lt. tan-gy. f. ls. to 694	St	
694	714	20	Lt. gy. & wht. Oö ls. to 704. Mot. m.g. tan ls. to 714. Bit. on seams.	St.	
714	734	20	Tan to brn ls. w. abdt. fos. frags. to 734. 1/4" Calc. Vn. @ 40° at 730.	St.	Calc.
734	753	19	Tan & gy mot. ls. to 743. F.g. brn-gy. ls. to 753. 1/16" to 1/4" Flt. vn lts. @ 23° (across beds) at 751 & 752 Siliceous spots 748 to 758. (Spar Mtn. horizon?)	St	Flt
753	773	19	Tan & gy crin. ls. 6" Sh. at 753. F.g. dense tan dl. ls. from 757 to 762. Gy. fos. Oö ls. to 773	St Sl.	
773	793	20	Tan to gy. Oö ls. to 780 @ 58°. Lt. tan f.g. dl. to 786 1" Sh. @ 62° at 786. Tan gy. Oö ls. to 793. 2 vnlts. 1/8" Flt. at 792 @ 40° & 30° Sps. s. grs. 790-793	St Sl.	Flt.
793	805	13	Tan gy Oö ls. to 799. Lt. tan sil. dl. to 801. Fos. Oö ls. @ 60° to 805. Sil. spots along stylolites. Bottom.	St	
			96% Core Recovery. No loss of water.		

OFFICIAL FILE COPY
O. M. E.
RECEIVED OCT 27 1958

INTERIM REPORT
DMEA-4907, Idm-E1206

Operator: New Jersey Zinc Company, Harrisburg, Illinois

Location: Project II, Pope County, Illinois

A project inspection of the subject contract was made on October 16, 1958. Results obtained to date and contemplated future work were discussed with Mr. Rupert Bing, the Operator's geologist. Cores from recently completed holes were examined.

Drilling completed under the contract to date and since the last project inspection is summarized as follows:

Number of holes completed.	3
Number of holes completed since last inspection. .	2
Footage in holes completed to date	2,273
Footage in holes completed since last inspection .	1,552
Number of ore holes.	0
Number of trace holes.	1
Number of speck trace holes.	1
Number of barren holes	1

Two-holes (Contract Hole No. 4 and Contract Hole No. 6) have been completed since the last project inspection. Weak traces of mineralization were encountered in Contract Hole No. 4 (designated W-2 by Operator) although a favorable geologic target (fault) was not penetrated. A fault containing abundant gangue mineralization was intersected by Contract Hole No. 6 (designated W-3 by Operator) but the intersection was about 40 feet stratigraphically above a favorable horizon. Strong traces of disseminated mineralization, especially sphalerite, were encountered in several favorable horizons but these intersections were several feet from the fault. Summary logs of the two holes are summarized as follows:

Contract Hole No. 4 (W-2)

Depth	Lithology
0-20 ft.	Overburden.
20-118 ft.	Golconda limestone and shale.
118-246½ ft.	Cypress sandstone.
246½-313 ft.	Paint Creek shale.
313-407 ft.	Bethel snadstone.
407-534 ft.	Renault limestone and shale.
534-555 ft.	Levias limestone.
555-581½ ft.	Rosiclare sandstone.
581½-804 ft.	Fredonia limestone.
(369-407) ft.	Scattered traces of galena and fluorite.
804	Bottom.

Inclination-55°
Bearing N.45°W.

Contract Hole No. 6 (W-3)

Depth	Lithology
0-7 ft.	Overburden.
7-80 ft.	Hardinsburg sandstone.
80-276½ ft.	Golconda limestone and shale.
276½-441 ft.	Cypress sandstone.
441-512 ft.	Paint Creek shale.
512-608 ft.	Bethel sandstone.
608-610½ ft.	Renault limestone.
610½-613 ft.	Fault. Crystalline calcite.
613-619 ft.	Renault limestone.
619-637 ft.	Levias Limestone.
637-655 ft.	Rosiclare sandstone.
655-842 ft.	Fredonia limestone.
(658½-748) ft.	Scattered traces of sphalerite, fluorite and galena.
748 ft.	Bottom.

Inclination-60°
Bearing N.45°W.

A second drill rig has recently been employeed by the Operator for work on this contract. One of the rigs is being set up as Contract Hole No. 11. As Contract Hole No. 12 should not be drilled until Hole

No. 11 has been completed, verbal approval was given by the field examiner to locate the second drill rig at Contract Hole Location No. 19. Approval was also given to collar this hole about 90 feet southeast of the site shown on the contract map. Results from the adjacent Contract Hole No. 6 (W-3) indicate that Hole No. 19 should intersect Fault E at a lower elevation than originally planned. The inclination, bearing, and the geologic target of Contract Hole No. 19 remain the same.

Dewey H. Amos
Geologist
U. S. Geological Survey

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
REGION V

ELECTROTECHNICAL
EXPERIMENT STATION

P. O. BOX 217
NORRIS, TENNESSEE

October 29, 1958

Memorandum

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

From: Administrative Assistant, Norris, Tennessee

Subject: Monthly report and voucher

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

Idm-E1206 The New Jersey Zinc Company
Docket No. DMEA-4907
1st payment - month of September
Amount $2410.27

Helen Miller
Helen R. Miller

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

OFFICIAL FILE COPY
O. M. E.
RECEIVED 1958

DATE		
10/31	C	220
"	Fy	110
11/17	Hmk	600

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

STAGE I

RECEIVED OCT 31 1958 O.M.E.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Budget Bureau No. 42-R1036.5

PAID ON VOUCHER & SCHEDULE OF PAYMENTS K-

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of September, 1958 Docket No. DMEA 4907 Contract No. 1206
Operator's Name The New Jersey Zinc Company Minerals Fluorspar
Address 160 Front Street New York 38, New York
Contract Amount, $ 39,192.00 Government Participation: 50 % Amount, $ 19,596.00

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:						
Core Drilling BX	312.70	0	312.70			
~~Bulldozing~~ AX	3760.35	0	3760.35			
Crosscutting						
Drifting						
Cementing	176.00	0	176.00			
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
Core boxes	114.00	0	114.00			
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
Incidental allowance	457.50	0	457.50			
(8) Contingencies (specify):						
TOTALS	4820.55	0	4820.55	4820.55	-	4820.55

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

Date 10/13/58 *Payee The New Jersey Zinc Company

Per Rupert C. Bing 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:

$ 2410.27

Signature Peter R. Mellen
(Authorized Certifying Officer)

Date OCT 29 1958 Vou. No. 53

(See other side)

2410.28

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. E1206 in accordance with the terms of the contract.

Signature [illegible] Title Mining Eng'r. Date 10/23/58

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Robert A. [illegible] Title EXECUTIVE OFFICER ONE FIELD TEAM REGION V Date OCT 27 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

STAGE I

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of September 8 1958 Docket No. DMEA 4907 Contract No. 1206

Operator's Name The New Jersey Zinc Company Minerals Fluorspar

Address 160 Front Street, New York 38, New York

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 BX	Ft.	312.70	106	312.70	106			2.95
Drilling: Core AX	Ft.	3760.35	1419	3760.35	1419			2.65
Churn								
Auger								
Core boxes	1	114.00	38	114.00	38		175	3.00
Stripping Cementing	Hr.	176.00	22	176.00	22			8.00
Trenching								
Test Pits								
Roads and Trails								
Incidental allow.	Ft.	457.50	1525	457.50	1525		7160	0.30
TOTAL DISTRIBUTED COSTS		4820.55						TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		4820.55						

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

Date 10/13/58 Operator The New Jersey Zinc Co.

Rupert C. Bing

Prepared Rupert C. Bing 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)

W. D. Burmeister 10/23/58 (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

STA[illegible]ENT

HARRISBURG ILL

M

IN ACCOUNT WITH

BOB MITCHELL

33 WEST COLLEGE ST

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.
AX 410						
CONTRACT	CODE 52			DATE	AT SHIP POINT	

SOLD TO
New Jersey Zinc Company
160 Front Street
New York 38, New York

~~TERMS NET 30 DAYS~~
NO CASH DISCOUNT

INVOICE NO. 97401

INVOICE DATE 9-12-58

SHIPPED TO
Golconda, Illinois

PLEASE REMIT TO PITTSBURGH, PA.

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.' Core Drilling at Golconda, Illinois as per agreement.					
		Prospect #	From To		Total Feet	Unit Cost		Total Cost
		W 1 BX	0. 30.		30.	$2.95		$ 88.50
		AX	30. 721.		691.	2.65		1,831.15
								$1,919.65
		Cementing						
		W 1	August 27 8 hrs.					
			28 11 hrs.					
			29 3 hrs.					
			Sept. 5 1 hrs. (capping)					176.00
			22 hrs. @ $8.00 hr.					~~184.00~~
		4	Bags Luminite Cement @ $4.05					16.20
		Casing left in place at your request						
		10'	BX Casing			2.16 ft.		21.60
		Capping hole						$2,141.45
		1 hr @ 450/HR						-8.00
								2133.45
								4.50
								$ 2137.95

F. O. B. SHIPPING POINT UNLESS OTHERWISE SPECIFIED

NO RETURNS ALLOWED UNLESS AUTHORIZED BY THIS OFFICE

FORM P133A

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).

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	52 CODE			DATE	AT SHIP POINT	

SOLD TO: The New Jersey Zinc Company
160 FrontStreet
New York 38, New York

[redacted] NO CASH DISCOUNT

PLEASE REMIT TO PITTSBURGH, PA.

INVOICE NO. 97430

INVOICE DATE 9-25-58

DATE SHIPPED

SHIPPED VIA

SHIPPED TO: Pope County, Illinois

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 804.' Core Drilling at Pope County, Illinois as per agreement.					
			Prospect # / From / To		Total Feet	Unit Cost		Total Cost
			W 2 BX 0. 76.		76.	$2.95		$ 224.20
			AX 76. 804.		728.	2.65		1,929.20
								$2,153.40
			Capping Hole					
			1 hr. @ $4.50 hr.					4.50
			1 Bag Cement					4.05
			Casing Left in Hole at Your request					
			20 ' BX Casing @ $2.16 ft.					43.20
								$2,205.15

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

ABBREVIATIONS FOR WISCONSIN-ILLINOIS DRILL LOGS

abun - abundant
act - actinolite
agg - agglomerate
ab - albite
altn - alteration
alt - altered
amp - amphibole
ang - angular
ank - ankerite
an - anorthite
apa- apatite
ap - aplite
aren - arenaceous
arg - argillaceous
ark - arkose
asp - arsenopyrite
asph - asphalt
aug - augite
avg - average

bnd - band
Ba - barite
bas - basalt
bd - bed
bdd - bedded
blw - below
ben - bentonite
btw - between
bio - biotite
bit - bitumen
blk - black
blu - blue
bot - bottom
br - breccia
brt - bright
bkn - broken
brn - brown
bu - buff

cala - calamine
calc - calcite
crb - carbonaceous
cel - celestite
cmt - cement
ce - cerrusite
cc - chalcocite
cpy - chalcopyrite
ch - chert
chl - chlorite
choc - chocolate
chr - chromite
clr - clear
clvg - cleavage
c. - coarse (1-2cm)
cpt - compact
concr - concretion
cg - conglomerate
cons - considerable
cnt - contact
cr - cream colored
xb - crossbedded
crd - crushed
xln - crystalline

drk - dark
deca - decalcified
dec - decomposed
dns - dense
db - diabase
dk - dike
dis - disseminated
dol - dolomite
dold - dolomitized
drab - drab

ed - edgewise
eff - effervescence
encr - encrusted
enr - enriched
ens - enstatite
epi - epidote
fa - fault
fd - feldspar
ferr - ferruginous
fn - fine
fsl - fissile
Flt - fluorite
fol - foliated
f.w. - foot wall
fm - formation
fos - fossiliferous
fr - fracture
frag - fragments
Ft - franklinite
fri - friable

gb - gabbro
ga - galena
gar - garnet
gn - gneiss
gos - gossan
gg - gouge
grd - grained
gr - granite
gd - granodiorite
gran - granular
graph - graphite
gy - gray
gw - graywacke
grn - green
gs - greenstone
gnd - ground
gyp - gypsum

h.w. - hanging wall
hvy - heavy
hmt - hematite
h.g. - high grade
h. - horizontal
hb - hornblende
hbt - hornblendite
ig - igneous
il - ilmenite
incl - inclined
int - intense
intbd - interbedded
intr - intrusive
irreg - irregular

jar - jarosite
jas - jasper
jnt - joint
kao - kaolinite
lab - labradorite
lam - laminated (tion)
lamp - lamprophyre
lt - light
ls - limestone
lmt - limonite
lin - lineation
loc - local
lol - loellingite
l.g. - low grade

mag - magnetic
mt - magnetite
mal - malachite
ma - marcasite
msv - massive
mtl - material
mtx - matrix
med - medium
mdg - medium grained
met - metamorphic
mc - mica
min - mineral
md - moderate
mo - molybdenite
mobr - mosaic breccia
mot - mottled
mus - muscovite

nod - nodule
ol - oligoclase
ov - olivine
Oo - oolite (-ic)
orn - orange
or - orthoclase
ox - oxidized
pll - parallel
peb - pebble
pt - pegmatite
pnk - pink
phen - phenocryst
phos - phosphate(nods)
phy - phyllite
por - porphyritic
pu - pumice
purp - purple
py - pyrite
px - pyroxene
po - pyrrhotite

Q - quartz
qd - quartz diorite
qte - quartzite
recep - receptaculites
red - red
res - residue
rct - rhodochrosite
rhy - rhyolite
rby - ribbony
rk - rock

rnd - round
rt - rutile

sach - saccharoidal
s.g. - sand grain(s)
ss - sandstone
sdy - sandy
sch - schist
sms - seams (to 0.1')
ser - sericite
srp - serpentine
sh - shale
shrd - sheared
sid - siderite
sil - siliceous
sl - slight
smt - smithsonite
sps - sparse
spk - speckled
sph - sphalerite
spn - sphene
spl - spinel
stn - stain
stl - steel
st - strong
str - strontianite
sty - stylolites
sul - sulfides
sy - syenite

tc - talc
tx - texture
tk - thick
tn - thin
tnt - titanite
und - undulating
unox - unoxidized
vn - vein
vnlt - veinlet
v. - vertical
vy - very
vc - very coarse
vf - very fine
vio - violet
vol - volcanic
vug - vuggy

wk - weak
wht - white
wt - willemite
w. - with
wit - witherite
wlst - wollostonite
xc - crosscut(ting)
yel - yellow
zeo - zeolite
zt - zincite
zr - zircon
zo - zone

Use chemical symbols for metals.

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DMEA
RECEIVED SEP 5 1958

DATE	INIT.	CODE
9/15	C	220
9/15	[illegible]	100
~~9/15~~	~~[illegible]~~	~~[illegible]~~
9/15	[illegible]	900
9/15	[illegible]	600

INTERIM REPORT
DMEA-4907, Idm-E1206

Operator: New Jersey Zinc Company, Harrisburg, Illinois

Location: Project II, Pope County, Illinois

A project inspection of the subject contract was made on September 9, 1958. Results obtained to date and future work plans were discussed with Mr. Rupert Bing, the Operator's geologist.

Drilling completed under the contract is summarized as follows:

Number of holes completed	1
Number of holes in progress	1
Footage in completed holes	721
Number of ore holes	0
Number of trace holes	0
Number of barren holes	1

Contract Hole No. 2 was completed on September 5, 1958. Fluorspar-lead-zinc mineralization was not encountered but a favorable structure (fault) was intersected by the hole. Weak gangue mineralization is present along the fault. A summary log of the hole is as follows:

Depth	Lithology
0-20 ft.	Overburden.
20-22 ft.	Golconda shale.
22-171½ ft.	Cypress sandstone.
171½-220 ft.	Paint Creek shale and sandstone.
220-377 ft.	Bethel sandstone.
377-475 ft.	Renault limestone.
475-481½ ft.	Fault breccia with secondary calcite.
481½-535 ft.	Bethel sandstone.
535-664 ft.	Renault limestone.
664-682 ft.	Levias limestone.
682-718½ ft.	Rosiclare sandstone.
718½-721 ft.	Fredonia limestone.

Inclination -45°
Bearing N.45°W.

Contract Hole No. 4 is in progress and was at a depth of 20 feet at the time of the project inspection. It is being drilled at the location shown on the contract map.

Dewey H. Amos
Geologist
U.S. Geological Survey

RECEIVED AUG 14 1956

DATE	INITIALS	COST
8/14	[illegible]	225
14	[illegible]	100
11	[illegible]	110
8/15	[illegible]	800
8/15	[illegible]	600

INTERIM REPORT

1206

DVEA-4907, Idm-(121) - Fluorspar

Operator: New Jersey Zinc Company, [illegible], Illinois

Location: Project II, Hope County, Illinois

A project inspection of the subject [illegible] was made on August 6, 1956. Provisions of the contract and exploration plans were discussed with Mr. Rupert Hine, the operator's geologist.

Work under the contract began on July 16, 1956. A total of [illegible] drill sites were been prepared and survey stakes for [illegible] were recovered/marked. Actual drilling [illegible] was expected by [illegible] 1956.

[illegible]
Geologist
U. S. Geological Survey

While we believe this information to be correct, We make no representation with respect to, nor do we assume any responsibility for, the correctness thereof.

THE NEW JERSEY ZINC CO.

THE NEW JERSEY ZINC CO. — DRILL RECORD — Harrisburg, Illinois

Property: BARNETT
HOLE NUMBER: W-2 (4)
Location: NW¼ NE¼ Sec 20 T13S R7E
Page 2 of 3
Coordinates: N 504', E 1295'
Elevation: 468.52'
Bearing: N45°W
Began: 9/3/56
Finished: 9/24/58
Inclination: 55°
Total Depth: 604
Driller: Miles (Vex)
Logged by: R.C. Bing
Water Level: 120'

Ft.	Graphic Log	FROM	TO	Ft. Core	Description	Eff.	Minerals
		284	297	11'	gy-grn SH. to CAK. @296½'		CAK
		297	301	4	gy-grn SH.	–	
313'		301	321	20	301'-313' gy-grn SH 313'-321' F grn H gy Sly SS, Py	–	Py
		321	341	20	F grn gy SS, Sl SHly. Bit stn, 337'-341'.		
		341	352	11	F grn lt gy SS. py & to ga @342'		Py, GA
		352	364	12	F grn wh SS, Py, Sl bit stn		Py
		364	369	5	364'-369' F grn wh SS, Sl SHly, Py		Py
		369	377	8	F grn lt gy SS. @371', 375½', to FH. py @377 mineral cat veins		Py, FH
		377	382	3'	F grn H gy SS, Py		Py
		382	391	9	F grn. H gy SS, Py. 385'-387', CAK. 20, MD FEE.	–	Py
		391	400	9	F grn H gy SS, Py	to	Py
407'		400	415	15	400'-405½' F grn H gy S. @404' FRAC w to FH & GA. 405½'-407' gy CAK SS, Eq. 407'-410' H gy-grn SDY LS w H grn SH partgs. 410'-415' grn SH mot RED, Sl SDY		FH, GA
		415	422	4	grn SH, mot RED, Sl SDY. BD 33° @ 415'		
		422	432	10	422'-428½' grn SH, Sl mot RED Sl SDY, Sl CAK @428½'. 428½'-430' MD xln vy Fos LS. 430'-432' F xln gy Fos LS. BD 37° @ 425'	St	
		432	435	2'	MD xln H gy Fos LS	St	
		435	445	10	435'-438½' MD xln gy Fos LS. 438½'-445' H gy MD xln Fos LS		
		445	455	10	445'-447' grn SH w gy Fos LS partgs. 447'-452' H gy vy Fos LS, Sl SHly. 452'-455' F xln gy-grn LS, Sl Fos.	St	
		455	465	10	455'-457' F xln H grn-gy LS, Sl Fos. 457'-462' MD xln Fos grn-gy LS mot w RED SH @ 460'. 462'-465' gy-grn SHly Fos LS mot RED	St	
		465	475	10	465'-473' gy grn SHly LS, mot RED. 473'-475' H gy MD xln Fos LS	St	
		475	495	20	475'-476' H gy MD xln Fos LS. 476'-478' H gray gy F xln Sl Fos LS, Sl mot RED. 478'-495' gy-grn Fos CAK SH w Fos LS partgs mot RED @ 478', 482'. BD 58° @ 483'	St	
		495	513	18	495'-512' gy CALC Fos SH w gy Fos LS partgs. 508'-512' vy Fos.	St	
534'		513	533	19'	513'-520' gy brn MD xln Fos LS. 520'-520'5" DK grn SH. 520'5"-523' H gy brn vy Fos Sl Oo LS. 523'-526½' H gy C xln vy Fos LS. 526½'-529' H gy C xln vy Fos LS. 529'-530½' DK grn CAK Sl Hy. BD 55° @ 531'. 530½'-531½' MD xln brn Fos LS. 531½'-533' H brn F xln Sl Fos LS	St	
535'		533	549	16	533'-534' brn MD xln Fos LS. 534'-537' H gy Oo LS. 537'-538' F xln gy LS. 538'-542' MD xln H gy vy Fos LS. 542' SH partgs & DNK CAK ehs. 542'-546½' [illegible]	St	

Sonnet LS

Kimmswick LS & SH

Levias LS

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THE NEW JERSEY ZINC CO.

THE NEW JERSEY ZINC COMPANY

DRILL RECORD

Harrisburg, Illinois

Property Borrenth
HOLE NUMBER W-2 (4)
Location NW¼ NE¼ Sec 28 T12S R2E
Page 1 of 3
Coordinates N509', E1295'
Elevation 460.52'
Bearing N 45° W
Began 9/18/58
Finished 9/24/58
Inclination 55°
Total Depth 204'
Driller Miles (Vox)
Logged by R.C. Bing
Water Level 120'

Fm	Graphic Log	FROM	TO	Ft. Core	Description	Eff.	Minerals
		0	20	–	OVERBURDEN		
		20	30	4+	Calc. gy SH, sl Fos. Bd 58° @ 21	Sl	
		30	40	9	30'-31' Calc. gy SH, sl Fos. 31'-40' Fxln sl shty Fos gy ls. Bd 30° @ 34'. Bd 50° @ 40'	Sl	
		40	47	5	40'-44' gy ox calc. SH, sl Fos. 44'-46' gy ox mod xln Fos ls. 46'-47' gy ox calc. SH, sl Fos, Bry	Sl	
		47	51	3	gy calc. Fos SH, Bry	Sl	
		51	60	5	51'-52' gy Fxln Fos ls. 52'-60' gy calc. Fos SH, Bry.	Sl	
		60	67	7	60'-66½' gy calc. Fos SH, Bry. 66½'-67' gy shty Fos ls.	Sl	
		67	72	4	67'-67½' Fxln gy ox Fos ls. 67½'-72' gy SH.	Sl	
		72	76	2+	gy SH. Bd 53° @ 75'.		
		76	83	7	gy SH.		
		83	90	6+	gy SH. Bd 55° @ 86'.		
Jokonda ls & SH		90	94	3	gy SH. Bd 57° @ 91'.		
		94	100	6	94'-99½', gy SH. @ 97'2" = " py. 33 fo. 99½'-100', gy ls xln Fos ls, sl Efr.		
		100	107	6+	100'-105' Dk gy sl soy Fxln gy ls, sl Fos 105'-107', med xln gy ls.	Sl	
		107	111	2+	107'-108' Dk gy SH, sl. 108'-111' Dk gy SH.		
		111	120	9	111'-118', Dk gy SH. 118'-120' lt gy vf grd ss w gy SH partings		
		120	121	1	lt gy vf grd ss, w gy SH partings.		
		121	131	10	121'-125' Dk gy-grn SH. 125'-131', Dk gy-grn SH w vf grd lt gy ss partings.		
		131	140	8+	131'-135½', gy-grn SH w vf grd lt gy ss partings. 135½'-140' x bd f grd lt gy-grn ss. Py		Py
		140	146	5+	x bd f grd lt gy-grn ss. Py. Bd 53° @ 145'.		Py
		146	156	10	f grd lt gy ss, Py		Py
		156	166	10	f grd lt gy ss, Py		Py
		166	174	7+	f grd lt gy ss, Py. Bd 67° @ 168'		Py
		174	180	3+	f grd lt gy ss, Py.		Py
		180	190	10	f grd lt gy ss, Py. @ 185' number calc vein		Py, calc
Cypress ss		190	200	9+	f grd lt gy ss, Py		Py
		200	209	9	f grd lt gy ss, Py.		
		209	218	11	209'-211' int bd dk gy SH & f grd lt gy ss. 211'-218', lt gy f grd ss, sh py @ 215'. Py @ 217 to ss.		Py
		218	225	4	lt gy f grd ss, Py		Py
		225	227	1	lt gy f grd ss		
		227	247	20	227'-233' lt gy f grd ss. 233'-241', Dk gy-grn SH int w vf grd lt gy ss partings. 241'-246½', lt gy ss w Dk gy SH partings. Py. 246½'-247' gy SH. Bd 47° @ 247'.		
Mt Erk ss & SH		247	265	10	Dk grn SH w vf grd lt gy ss stringers. Bd 58° @ 255'.		Py
		265	284	18+	gy-grn SH w vf grd lt gy ss stringers. @ 277' calc. ss, sl Fos @ 278½', 3" calc. Fos ss, Py. Bd 56° @ 269'. Py		Py

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THE NEW JERSEY ZINC CO.

THE NEW JERSEY ZINC COMPANY

DRILL RECORD

Harrisburg, Illinois

Property LAURA BAUMER

HOLE NUMBER W-1

Location NW¼ NE¼ SEC 28-12S-7E

Page 1 of 3

Coordinates N 818 E 991

Elevation 397.69'

Bearing N 45° W

Began 8/19/58

Finished 9/5/58

Inclination 45°

Total Depth 721'

Driller C. Miles (Joy)

Logged by R.C. BING

Water Level –

Graphic Log

Ma 20'

Cypress SS

Paint Creek SS & SH

171½

220'

FROM	TO	Ft. Core	Description	Eff.	Minerals
0	20	–	OVERBURDEN		
20	30	8	20-22½', gy SH, S/Slty. 22½'-29', grn-gy silt st. 29'-30', grn SH. BD 45° @ 23'.		
30	37	6	30'-34', gy SH, S/Slty. 34'-37', lt gy F grd SS w gy SH prtgs.		
37	47	9+	lt gy F grd SS w gy SH prtgs. BD 47° @ 42'. BD 44° @ 43'. tr py		py
47	57	9+	lt gy F grd SS, tr py, minor gy SH prtgs. BD 45° @ 55'.		py
57	58	1	lt gy F grd SS, tr py. BD 45° @ 57'.		py
58	59	1	lt gy F grd SS tr py.		py
59	69	9+	lt gy F grd SS, tr py, lmt. BD 45° @ 61.		py, lmt
69	79	10	gy F grd SS, tr py, lmt. BD 46° @ 75'		py, lmt
79	89	10	gy F grd SS, tr py, lmt. BD 43° @ 84½'.		py, lmt
89	93	4	gy F grd SS tr py, lmt. BD 45° @ 90'.		py, lmt
93	101	7	93'-94', F grd gy SS, w gy SH prtgs. 94'-101', gy F grd SS w tr py, lmt. BD 43° @ 98'.		py, lmt
101	110	8	lt gy F grd SS, tr py. 104-105, gy SH prtgs.		py, lmt
110	130	20	lt gy F grd SS, w SH prtgs @ 111' & 124'. tr py lmt. BD 47° @ 118'. BD 43° @ 116'.		py, lmt
130	150	20	lt gy F grd SS, tr py, lmt. BD 46° @ 144'.		py, lmt
150	154	4	lt gy F grd SS, tr py		py
154	162	8	gy SH w F grd lt gy SS prtgs. BD 43° @ 155½.		
162	172	8	162'-171½', lt gy F grd SS w gy SH prtgs. 171½'-172', gy SH. BD 46° @ 171½'.		
172	177	5	gy SH w F grd lt gy SS prtgs. BD 47° @ 173'.		
177	179	2	gy SH w F grd lt gy SS prtgs. BD 48° @ 178'		
179	199	20	gy SH w lt gy VF grd SS prtgs. BD 52° @ 183'. BD 53° @ 191'.		
199	211	12	199'-205½', gy SH w lt gy VF grd SS prtgs. 205½'-208', gy carb fos SH. 208'-211', gy SH. BD 47° @ 210½'.		
211	219	8	211'-215½', gy SH. 215½'-219', lt gy F grd SS w gy SH prtgs, x-bd.		
219	221	2	lt gy F grd SS w gy SH prtgs, x bd.		
221	241	20	lt gy F grd SS w gy SH prtgs, x bd.		
241	261	20	241'-249', lt gy F grd SS w gy SH prtgs, x bd. 249'-261', lt gy F grd SS, minor gy SH prtgs, x bd		
261	279	18	lt gy F grd SS w gy SH prtgs, x bd		
279	300	21	279'-288', lt gy F grd SS w gy SH prtgs, x bd. 288'		

THE NEW JERSEY ZINC COMPANY

DRILL RECORD

Harrisburg, Illinois

Property LAURA BAUMER — HOLE NUMBER W-1

Location NW¼ NE¼ SEC 28-12S-7E — Page 2 of 3

Coordinates N818, E991' — Elevation 397.69' — Bearing N45°W

Began 8/19/58 — Finished 9/5/58 — Inclination 45° — Total Depth 721'

Driller C. Miles (Joy) — Logged by R.C. Bing — Water Level –

Graphic Log	FROM	TO	Ft. Co.	Description	Eff	Minerals
				300', lt gy FgrdSS. 289½-291', S/cg w gy SH pebs. Py		Py
	300	311	11	lt gy FgrdSS, Py		Py
	311	324	12	lt gy FgrdSS, Py. BD 46° @ 316'		Py
BETHEL SS.	324	330	6	lt gy FgrdSS, Py		Py
BA	330	350	18	lt gy FgrdSS, Py. @ 341', 1" Barite zo. @ 343', ½" Barite zo. minor calc vnlts.		Calc, Py, Barite
	350	370	20	lt gy FgrdSS, Py. minor calc vnlts @ 359', 363', 365'. BD 53° @ 363'; BD 52° @ 371'		Calc, Py
372'	370	378	8	370'-377', lt gy FgrdSS, tr EFF. 377'-378', MD xln w grn SH prtgs & calc lt gy SS stringers	SH	
	378	391	13	gy grn SH w calc lt gy FgrdSS stringers.	MD	
	391	411	20	391'-400', gy grn SH w calc lt gy SS stringers. 399'-400', lt gy Fos ls bd. 400'-404', c xln vy Fos lt gy ls, w thin grn SH prtgs. 404'-411', MD xln gy Fos ls, sl shly 404'-407'	SH	
RENAULT LS & SH	411	422	11	411'-420', lt gy MD xln Fos ls, sl shly. 420'-422', gy grn calc SH, Fos w thin gy ls bds.	SH	
	422	442	20	422'-423' gy Fos SH, calc. BD 43° @ 422'. 423'-425' gy grn Fos ls. 425'-426½', gy grn Fos calc SH. BD 45° @ 426½'. 426½'-432', gy Fos ls. 432'-442', f xln gy ls.	SH	
	442	461	19	442'-445', lt gy vy Fos ls. 445'-445½', calc vn @ 43°. 445½'-455', f xln gy ls, sl shly. 455'-460', vy Fos gy MD xln Fos ls. w 6" shly zo @ 459½'. 460'-461', DNS gy ls w grn SH laminations.	SH	
	461	470	8+	461'-464' DNS gy ls w grn SH laminations. 464'-468', gy SH, tr EFF. 468'-470', f xln grn gy Fos ls.	MD → SH	
475'	470	478	7	470'-472', DNS gy s/Fos ls. 472', grn SH zo @ 27°. 472½'-473', lt gy Oo ls. 473'-475', calc gy SH & DNS ls. @ 475' blk SH gouge. 475'-478', f Breccia, calc, qtz, & lt gy qtc SS.		472' shear @ 25°; 474' shear @ 9°; 475' shear
481½	478	481	3+ (1½)	f Breccia: calc, qtz, & lt gy qtc SS. 30° ∡		calc, qtz @ 17° to 25°
	481	484	3+ (1½)	f Breccia: calc, qtz, & lt gy qtc SS to 481½'. 481½'-484', lt gy qtc SS w calc filled fracs.		calc, qtz; calc
BETHEL J.J.	484	485	1	lt gy qtc SS, w bit stn, Py		Py
	485	488	3	lt gy qtc SS, w bit stn, Py. minor calc @ 487½'		calc, Py
	488	491	1+	lt gy qtc SS, Py		Py
	491	500	7	lt gy FgrdSS, Py, bit stn.		Py
	500	510	10	lt gy FgrdSS, Py, bit stn		Py
	510	518	8	lt gy FgrdSS, Py, bit stn		Py
5'	518	536	18	518'-535', lt gy FgrdSS, Py, bit stn. 535'-536', c xln vy Fos gy grn ls. ¼" SH band @ 535'.		Py
	536	542	4+	grn-gy SH w calc. vf grd SS prtgs, Py. BD 43° @ 540'	MD	Py
	542	548	3+	grn-gy SH w calc vf grd SS prtgs, Py.		Py
	548	553	5	grn-gy SH w calc vf grd SS prtgs, Py. BD 41° @ 549'	MD	Py
	553	573	20	553'-560', grn-gy SH w calc vf grd SS prtgs, Py. 560'-563½', c xln gy-brn vy Fos ls, s/shly. 563½'-568', f xln sl Fos gy ls.		

THE NEW JERSEY ZINC COMPANY — DRILL RECORD — Harrisburg, Illinois

Property: LAURA BAUMER — HOLE NUMBER: W-1

Location: NW¼ NE¼ SEC 28-12S-7E — Page 3 of 3

Coordinates: N818, E991 — Elevation: 397.69' — Bearing: N45°W

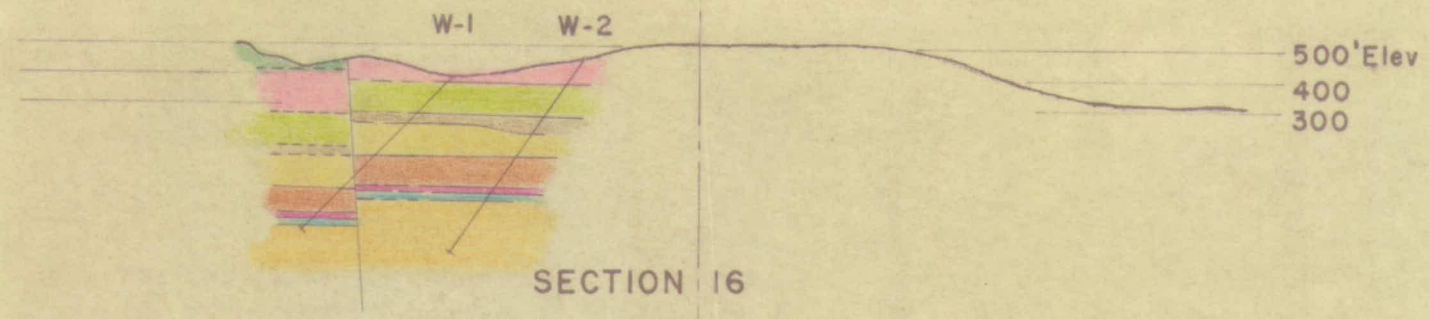
Began: 8/19/58 — Finished: 9/5/58 — Inclination: 45° — Total Depth: 721'

Driller: C. Miles (Joy) — Logged by: R.C. Bing — Water Level: –

Graphic Log: RENAULT LS; LEVAS LS; ROSICLARE; FREDONIA LS.

FROM	TO	Ft. Core	Description	Ft.	Minerals
			568'-573', MD xln gy Fos ls. BD 42° @ 567'.	St	
573	583	9	573'-575', gy shly Fos ls. 575'-582', MD xln gy Fos ls. BD 45° @ 582'. 582'-583', gy-grn shly Fos ls.	St	
583	599	15	583'-586', Dk grn sl calc sh. 586'-588', Fxln gy sl Fos ls. 588'-591½', lt gy cxln vy Fos ls. 591½'-592', sl cg 20, sl sdy. 592'-599', Fxln gy sl Fos ls, sl shly @ 595'.	St	
599	614	15	599'-601', Fxln gy sl Fos ls. 601'-606', gy-grn sl sdy Fos ls. 606'-609', MD xln vy Fos ls w grn sh partgs. 609'-611½', Fxln lt gy ls w grn mot. 611½'-614', cxln lt gy vy Fos ls, sl Co.	St	
614	616	2	614'-615', lt gy cxln vy Fos ls w pnk calc pits. 3" calc vnlt @ 615'. 615'-616', Dk gy sh.	St	
616	632	16	616'-620', Fxln gy brn ls, sl Fos, sl shly @ 618'. BD 46° @ 618'. 620'-624', Dk gy calc Fos sh. 624'-630', lt gy-brn Fxln Fos ls. 630'-632', cxln vy Fos sl Co lt gy ls.	St	
632	652	20	632'-645', lt gy cxln vy Fos ls. 645'-646', brn Oo ls. 646'-646½', Fxln gy ls. 646½-652', gy-brn Oo ls.	St	
652	665	13	652'-658', lt gy Oo ls, sl shly @ 653'. 658'-664', DNS lt gy ls. 664'-665', wh vy Fos sl Co ls.	St	
665	685	20	665'-671', wh vy Fos sl Oo shly ls. 671'-682', wh Oo ls, w minor sh sms @ 672', 679', & 681½'. 682'-685', calc Dk grn vf grd ss, sl Fos.	St	
685	700	15	grn vf grd calc ss, sl Fos. BD 44° @ 694'. @ 691', ½" calc. vnlt. @ 695', ½" calc vnlt. @ 699½', th cg 20.	St	calc
700	702	2	700'-702', int bd grn vf grd calc ss & gy sh. 702'-702½', lt brn Oo ls.	St	
702	709	5	702½'-702'8", lt brn Oo ls. 702'8"-709', int bd lt gy vf grd calc ss & gy sh. BD 45° @ 708'.	St	
709	721	12	709'-713', Dk grn sh w vf grd calc ss partgs. 713'-718½', sdy gy-brn Oo ls, Fos. 3" calc vnlt @ 717½'. 718½'-720', lt gy Oo ls w calc 20/st y. 720'-721', MD xln lt gy Fos ls.	St	calc

Core Recovery 90%



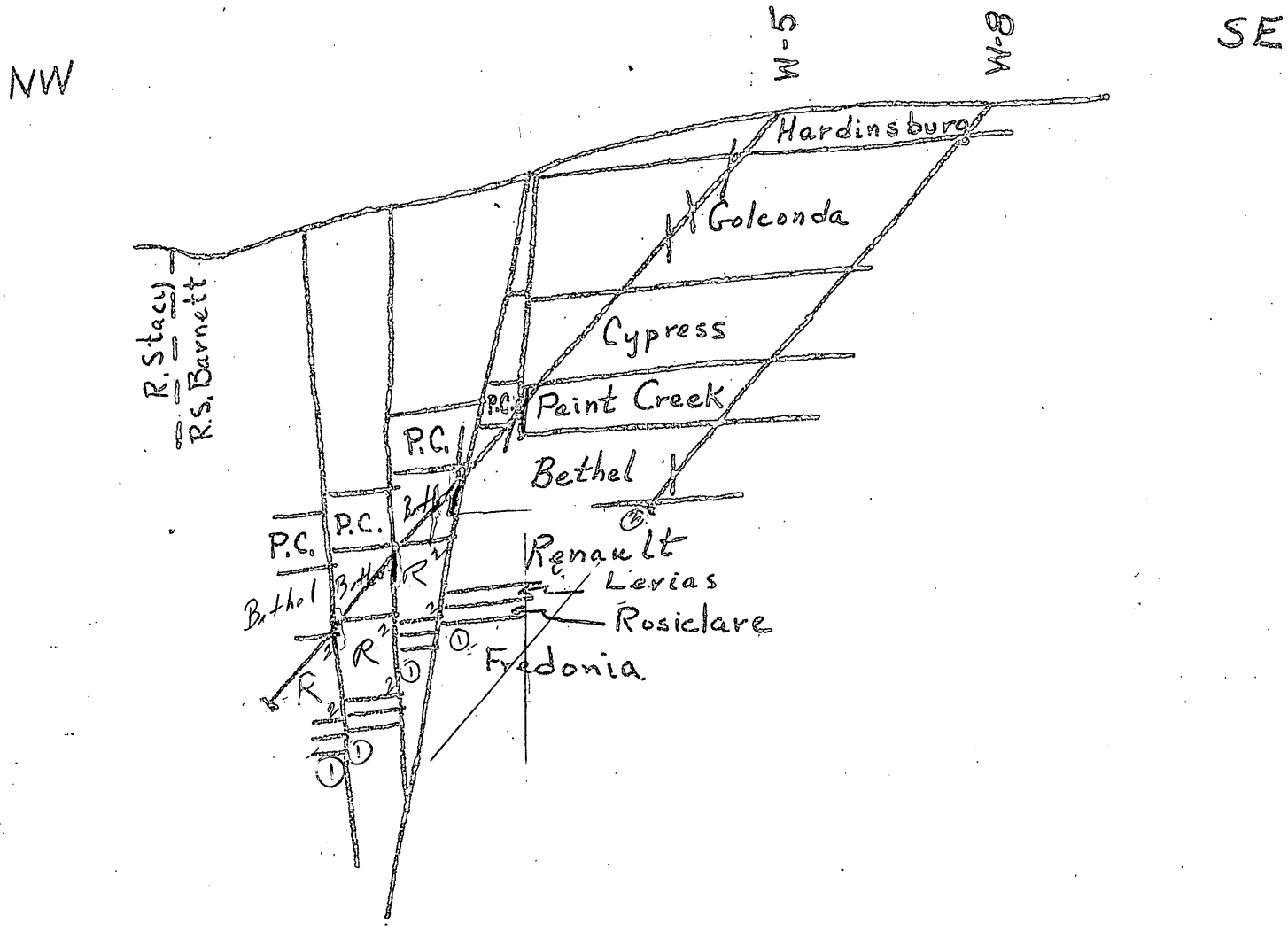
SECTION 16

While we believe this information to be correct, We make no representation with respect to, nor do we assume any responsibility for, the correctness thereof.
THE NEW JERSEY ZINC CO.

POSTED TO DATE 9/22/58	THE NEW JERSEY ZINC COMPANY Harrisburg, Illinois	DISTRICT Illinois
DRAWN RCB DATE 9/5/58 TRACED SCALE 1"=660	Cross Sections Section 28-T12S-R7E	FILE NO. AX-ILL-33

X 5407 C 1M 3-53

① Middle & Upper Fredonia
② Upper Renault & Lower
③ Upper Levias



CROSS SECTION

Scale 1" = 200'

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AX55324 2(-57

THE NEW JERSEY ZINC COMPANY

DRILL RECORD

Harrisburg, Illinois

Property Barnett, R.S.

HOLE NUMBER W-11

Location

Page 4 of 4

Coordinates

Elevation

Bearing

Began

Finished

Inclination

Total Depth

Driller

Logged by E. L. Weinberg

Water Level

Graphic Log	FROM	TO	Ft. Core	Description	Eff.	Minerals
Fr				837-837½ est. 2% flt, Tr Zn,		Tr Pb,
				837½ -3" msv calc vn,		
				842½ 2" " calc vn w.	Tr	flt,
				846 est 5% flt in	¼"	calc vnlt, 871-872-
				vn calc, 873 est 15% flt, 5%	Zn,	Tr Pb in 2" vn,
				877 est 5% flt, 2%	Zn,	— in 6" vn
				Bd'g 60° @ 853		
r	877	883	6	Brn. gy-lt gy, fn grd ls & wht-brn msv calc	St	Msv calc vns @ 880-881, 881½-882½
	883	905½	22½	Wht & gy, porous, mot, msv calc vn w. loc ls bds.	St	
e				885-887 est 6% Zn, 2%	Pb,	Tr flt @ 884, Tr flt,
				894½-895 est 15% Zn, nil	Pb	—
				900½-901½ est 3% Zn, nil	Pb,	— ,
				902 -903 est 2% Zn, nil	Pb,	—
d	905½	1023	117½	Med gy & brn, fn grd-med grd, msv ls & dol, loc'y sty'ic, loc'y bnd'd, loc'y br; ch @ 912-913, 948-949; lt brn sts @ 944-948, 949-954	St-Md	
o				Trace Zn @ 907-907½, 1" calc vn @ 907½, msv calc @ 909-910, three 2" calc vnlt's @ 910½-911¼, 2" calc vn @ 911½, 3" calc vn @ 912, msv calc vn & ls br w. oil stn @ 913-915; scatt flt vnlts @ 916-916½, Tr Zn @ 918, msv calc @ 920-920½, msv calc w. Tr Zn @ 921-922; est 1% Zn & ¼% Pb @ 925-927, est 1% Zn & Tr Pb @ 931-932; msv calc in br zo w. Tr Zn @ 933-936; Tr flt @ 936½; msv calc & ls in br zo @ 941-943; msv calc in br zo @ 956½-959; est 2% zn in dis sph @ 959-963; msv calc vn in br zo w. est 4% Zn, 1% Pb, 1% flt @ 978½-981; calc vnlt in br zo @ 987; 2" calc vnlt in br zo @ 990½; 4" calc vn @ 996; 6" min zo w. est 5% Zn, ½% Pb @ 997; Tr Zn @ 998½; msv calc w. Tr Zn & Tr Pb @ 1009-1009½; 1" calc vnlt w. Tr Zn @ 1020½; 2" calc vnlt @ 1022½		Calc @ 906½-907
n				Bd'g 58° @ 1014'		
i	1023	1043½	20½	Porous & msv calc vn w. loc ls frag's & Bd's	St.	
				2% Zn @ 1024, est 9% Zn, 4% Pb @ 1038-1042, of calc w. Tr Zn in br zo @ 1042½-1043½		3" of est 3% Pb, scattered vn's
				Top(?) of St Louis @ 1043½		
-1043½ St.	1043½	1105	61½	Med drK gy & brn, fn grd ls w. increasing ch towards bottom	St.	
a				Bd'g 65° @ 1086		Scattered calc vnlt's @ 1058, 1066, 1068, 1069, 1071, 1082, 1086, 1092, 1094, 1104½
L o(?) u i s						
-1105		1105		Bottom		

THE NEW JERSEY ZINC COMPANY — DRILL RECORD — Harrisburg, Illinois

Property Barne[illegible] R.S. — HOLE NUMBER W-11

Location — Page 3 of 4

Coordinates — Elevation — Bearing

Began — Finished — Inclination — Total Depth

Driller — Logged by E. L. Weinberg — Water Level

Graphic Log	From	To	Ft Cor.	Description	Eff.	Minerals
				in 6" bnd's; ls med grd & md fos @ 565-579		
F						
r	579	586	7	Med gy-drK grn, med-c. grd, vy fos ls & sh w. highly contorted bnd'g	Sl-St	
				Bd'g 55° @ 586		
e	586	595	9	Lt med gy, med grd ls; loc'y sh'ly	St	
	595	606	11	Med drK gy-drK gy, c. grd, fos ls & sh	St	
d	606	672	66	Lt-med gy, med-c. grd, msv, sty'ic ls; loc'y fos. Color generally drK'r (gy) 671-672.	St	Calc Vns @ 643, 661, 662, 663½, 665, 666½ & 670
o						
n						
i						
a						
-673- Fa Zo	672	674	2	DrK gy, fn grd sh; fa in center of run @ 10° to core Bd'g 50° @ 672? " 40° @ 674? (Fredonia @ 674)		
F	674	701	27	Brn-lt med gy, fn-medly med grd ls. Tx loc'y msv but generally oo'ic, faintly bnd'd. Qt brn, msv dol, sl eff @ 674-678) Bd'g 45° @ 697'	Sl-St	Calc Vnlt's @ 679, 693
	701	721	20	Lt brn'ish gy, fn grd, fn'ly bnd'd dol (?)	Sl	
r				{Scattered calc vnlt's @ 702-705, 706, 713, w. est. 5% flt @ 717-718, est 70% flt @ 719½-719¾		
				Bd'g 65° @ 713		
e	721	735	14	Lt med gy, med grd, oo'ic, faintly bnd'd, sty'ic ls 1" calc vn w. est. 25% flt @ 724½, ½" calc vnlt @ 731½	St	
	735	749	14	Med drK gy & lt brn gy, fn grd ls & dol	St-Sl	
				{Scattered small calc vnlt's generally cross-cutting bd's		
				Bd'g 55° @ 740		
d	749	877	128	Med gy & brn gy, fn gro & c. grd ls & dol Tx gen msv, loc'y faintly bnd'd, loc'y sty'ic, loc'y foss; Med grd, fos ls beds @ 749-755, 804-813, 830-848.	Md-St	
o				{calc vn @ 767-768 (in mylonite zo); 2" calc vn @ 773½ w. trace petroleum; 4" vn calc w. est. 20% flt; 2% Zn in center of zo. from 786-787 containing est. 2% dis Zn in lt brn sph; 788-791 is br zo in fn grd ls w. 4" vn in center, entire zo containing est. 3% Zn & trace flt; 791-793 trace Zn; 803-804 scattered calc vnlt's; 810-811 msv calc in br zo w. trace Zn; 811-815 trace Zn in dis sph; 833-834 est 15% flt, 2% Zn, Nil Pb; 834½-835 est. 10% flt, 2% Zn, Tr. Pb;		2" vn calc @ 764½;
n						
i						
a				Bd'g 55° @ 781		

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THE NEW JERSEY ZINC COMPANY

DRILL RECORD

Harrisburg, Illinois

Property Barnett, [illegible] S.

HOLE NUMBER W-11

Location

Page 2 of 4

Coordinates

Elevation

Bearing

Began

Finished

Inclination

Total Depth

Driller

Logged by E. L. Weinberg

Water Level

Graphic Log Fm.	FROM	TO	Ft. Core	Description	Eff.	Minerals
				Top of Bethel @ 286		
-286 B	286	377	91	Med lt gy & drK gy, med grd, locally mot, locally bnd'd ss. DrK gy ss @ 294-300 grading into lt gy ss from 300-310. Cg zo w. some lime from 375-377 Bd'g 45° @ 293 " 45° @ 335 " 63° @ 357	No	
e						
t						
h						
e						
l						
				Top of Renault @ 377		
-377 R	377	396	19	Gy-grn, fn grd, evenly bnd'd sh Bd'g 50° @ 382'	No	
e	396	425	29	Lt med gy, med grd, fos ls w. loc drK grn sh. Ls loc'y sty'ic, loc'y bnd'd. Sh @ 414-418 Bd'g 55° @ 423'	St	
n	425	450	24	Med gy-drK gy & grn, fn-med grd, ls & cal sh. Loc fos @ 434-438. Sh @ 438-444 Bd'g 55° @ 436'	Sl	
a	450	474	24	Med gy-grn cal sh & md fos ls. Sh & ls loc'y intbd in tn bd's. Min zo porous, apparently concordant, w. loc oil stn, c. calc xl's. Bd'g 60° @ 460'	Md St	Py & calc @ 469½-471½
u	474	513	39	Med gy & lt med gy, med-c. grd, sub-mgr, sty'ic, fos ls w. loc contorted bnd'g & sh partings. Stn'd + st odor bit @ 478½. PnK calc inclusions abun @ 499-505. Sh partings abun 499-506 & 510-513 Bd'g 55° @ 490'	St.	
l				Top Levias @ 513		
-513 Levias	513	530	17	Med gy-grn, fn-c. grd, loc'y fos ls & sh. Loc'y has abun pnK calc xl's.	Md-St	
				Top of Rosiclare @ 530		
-530 Rosiclare	530	544	14	Lt med gy-drK grn, loc'y bnd'd, loc'y sty'ic, loc'y intbd, cal ss & sh. No sh from 535-541. Intbd, evenly bnd'd ss & sh from 541-544. Sharp cnt w. ls @ 544 Bd'g 60° @ 539 Top of Fredonia @ 544	Sl-St	
-544 Fredonia	544	579	35	Med lt gy, loc'y mot, loc'y sty'ic, fn-med grd ls w. rare sh partings. Sh @ 562, 573, 578	Md	½" calc vnlt 560-561½

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THE NEW JERSEY ZINC CO[redacted] DRILL RECORD [redacted] Harrisburg, Illinois

Property Barnett, R.S. HOLE NUMBER W-11

Location Page 4 of 4

Coordinates Elevation Bearing

Began Finished Inclination Total Depth

Driller Logged by E.L. Weinberg Water Level

Graphic Log	FROM	TO	Ft. Core	Description	Eff.	Minerals
Fr				837-837½ est. 2% flt, Tr Zn,		Tr Pb,
				837½ -3" msv calc vn,		
				842½ 2" " calc vn w.	Tr	flt,
				846 est 5% flt in	¼"	calc vnlt, 871-872
				vn calc, 873 est 15% flt, 5%	Zn,	Tr Pb in 2" vn,
				877 est 5% flt, 2%	Zn,	— in 6" vn
				Bd'g 60° @ 853		
	877	883	6	Brn gy - lt gy, fn grd ls & wht-brn msv calc	St	Msv calc vns @ 880-881, 881½-882½
	883	905½	22½	Wht & gy, porous, mot, msv calc vn w. loc ls bds.	St	
				885-887 est 6% Zn, 2%	Pb,	Tr flt @ 884, Tr flt,
				894½-895 est 15% Zn, nil	Pb,	—
				900½-901½ est 3% Zn, nil	Pb,	—
				902 -903 est 2% Zn, nil	Pb,	—
	905½	1023	117½	Med gy & brn, fn grd-med grd, msv ls & dol, loc'y sty'lic, loc'y bnd'd, loc'y br; ch @ 912-913, 948-949; lt brn sts @ 944-948, 949-954	St-Md	
				Trace Zn @ 907-907½, 1" calc vn @ 907½, msv calc @ 909-910, three 2" calc vnlt's @ 910½-911¼, 2" calc vn @ 911½, 3" calc vn @ 912, msv calc vn & ls br w. oil stn @ 913-915; scatt flt vnlts @ 916-916½, Tr Zn @ 918, msv calc @ 920-920½, msv calc w. Tr Zn @ 921-922; est 1% Zn & ¼% Pb @ 925-927, est 1% Zn & Tr Pb @ 931-932; msv calc in br zo w. Tr Zn @ 933-936; Tr flt @ 936½; msv calc & ls in br zo @ 941-943; msv calc in br zo @ 956½-959; est 2% zn in dis sph @ 959-963; msv calc vn in br zo w. est 4% Zn, 1% Pb, 1% flt @ 978½-981; calc vnlt in br zo @ 987; 2" calc vnlt in br zo @ 990½; 4" calc vn @ 996; 6" min zo w. est 5% Zn, ½% Pb @ 997; Tr Zn @ 998½; msv calc w. Tr Zn & Tr Pb @ 1009-1009½; 1" calc vnlt w. Tr Zn @ 1020½; 2" calc vnlt @ 1022½		Calc @ 906½-907
				Bd'g 58° @ 1014'		
	1023	1043½	20½	Porous & msv calc vn w. loc ls frag's & Bd's	St.	
				2% Zn @ 1024, est 9% Zn, 4% Pb @ 1038-1042, of calc w. Tr Zn in br zo @ 1042½-1043½		3" of est 3% Pb, scattered vn's
1043½				Top(?) of St Louis @ 1043½		
St. Louis (?)	1043½	1105	61½	Med drK gy & brn, fn grd ls w. increasing ch towards bottom	St.	
				Bd'g 65° @ 1086		Scattered calc vnlts @ 1058, 1066, 1068, 1069, 1071, 1082, 1086, 1092, 1094, 1104½
1105		1105		Bottom		

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THE NEW JERSEY ZINC COMPANY — DRILL RECORD — Harrisburg, Illinois

Property Barnett, R.S. — HOLE NUMBER W-11

Location — Page 3 of 4

Coordinates — Elevation — Bearing

Began — Finished — Inclination — Total Depth

Driller — Logged by E. L. Weinberg — Water Level

Graphic Log	FROM	TO	Ft. Core	Description	Eff.	Minerals
Fredonia				in 6" bnd's; ls med grd & md fos @ 565-579		
	579	586	7	Med gy-drK grn, med-c. grd, vy fos ls & sh. w. highly contorted bnd'g. Bd'g 55° @ 586	Sl-St	
	586	595	9	Lt med gy, med grd ls; loc'y sh'ly	St	
	595	606	11	Med drK gy-drK gy, c. grd, fos ls & sh.	St	
	606	672	66	Lt-med gy, med-c. grd, msv, sty'ic ls; loc'y fos. Color generally drK'r (gy) 671-672.	St	Calc Vns @ 643, 661, 662, 663½, 665, 666½ & 670
-673- Fa zo	672	674	2	DrK gy, fn grd sh; fa in center of run @10° to core. Bd'g 50° @ 672? " 40° @ 674? (Fredonia @ 674)		
Fredonia	674	701	27	Brn-lt med gy, fn-medly med grd ls. Tx loc'y msv, but generally oo'ic, faintly bnd'd. Lt brn, msv dol, sl eff @ 674-678) Bd'g 45° @ 697'	Sl-St	Calc Vnlt's @ 679, 693
	701	721	20	Lt brn'ish gy, fn grd, fn'ly bnd'd dol (?) {Scattered calc vnlt's @ 702-705, 706, 713, w. est. 5% flt @ 717-718, est. 70% flt @ 719½-719¾} Bd'g 65° @ 713	Sl	
	721	735	14	Lt med gy, med grd, oo'ic, faintly bnd'd, lsty'ic ls 1" calc vn w. est. 25% flt @ 724½, ½" calc vnlt @ 731½	St	
	735	749	14	Med drK gy & lt brn gy, fn grd ls & dol {Scattered small calc vnlt's generally cross-cutting bd's} Bd'g 55° @ 740	St+Sl	
Fredonia	749	877	128	Med gy & brn gy, fn grd & c. grd ls & dol Tx gen msv, loc'y faintly bnd'd, loc'y sty'ic, loc'y foss; Med grd, fos ls beds @ 749-755, 804-813, 830-848. {calc vn @ 767-768 (in myloite zo); 2" calc vn @ 773½ w. trace petroleum; 4" vn calc w. est. 20% flt; 2% Zn in center of zo from 786-787 containing est. 2% dis Zn in lt brn sph; 788-791 is br zo in fn grd ls w. 4" vn in center; entire zo containing est. 3% Zn & trace flt; 791-793 trace Zn; 803-804 scattered calc vnlt's; 810-811 msv calc in br zo w. trace Zn; 811-815 trace Zn in dis sph; 833-834 est 15% flt, 2% Zn, Nil Pb; 834½-835 est. 10% flt, 2% Zn, Tr. Pb;} Bd'g 55° @ 781	Md-St	2" vn calc @ 766½

THE NEW JERSEY ZINC COMP[illegible] DRILL RECORD [illegible]arrisburg, Illinois

Property Barnett, R.S. HOLE NUMBER W-11

Location Page 2 of 4

Coordinates Elevation Bearing

Began Finished Inclination Total Depth

Driller Logged by E. L. Weinberg Water Level

Fm	Graphic Log	FROM	TO	Ft. Core	Description	Eff.	Minerals
					Top of Bethel @ 286		
286 Bethel		286	377	91	Med lt gy & drK gy, med grd, locally mot, locally bnd'd ss. DrK gy ss @ 294-300 grading into lt gy ss from 300-310. Cg zo w. some lime from 375-377 Bd'g 45° @ 293 " 45° @ 335 " 63° @ 357	No	
					Top of Renault @ 377		
377 Renault		377	396	19	Gy-grn, fn grd, evenly bnd'd sh Bd'g 50° @ 382'	No	
		396	425	29	Lt med gy, med grd, fos ls w. loc drK grn sh. Ls loc'y sty'ic, loc'y bnd'd. Sh @ 414-418 Bd'g 55° @ 423'	St	
		425	450	24	Med gy-drK gy & grn, fn-med grd, ls & cal sh. Loc fos @ 434-438. Sh @ 438-444 Bd'g 55° @ 436'	Sl	
		450	474	24	Med gy-grn cal sh & md fos ls. Sh & ls loc'y intbd in tn bd's. Min zo porous, apparently concordant, w. loc oil stn, c. calc xl's. Bd'g 60° @ 460'	Md St	Py & calc @ 469½-471½
		474	513	39	Med gy & lt med gy, med-c. grd, sub-vost, sty'ic, fos ls w. loc contorted bnd'g & sh partings. Stn'd & st odor bit @ 478½. PnK calc inclusions abun @ 499-505. Sh partings abun 499-506 & 510-513 Bd'g 55° @ 490'	St.	
					Top Levias @ 513		
513 Levias		513	530	17	Med gy-grn, fn-c. grd, loc'y fos ls & sh. Loc'y has abun pnK calc xl's.	Md St	
					Top of Rosiclare @ 530		
530 Rosiclare		530	544	14	Lt med gy-drK grn, loc'y bnd'd, loc'y sty'ic, loc'y intbd, cal ss & sh. No sh from 535-541. Intbd, evenly bnd'd ss & sh from 541-544. Sharp cnt w. ls @ 544 Bd'g 60° @ 539	Sl-St	
					Top of Fredonia @ 544		
544 Fredonia		544	579	35	Med lt gy, loc'y mot, loc'y sty'ic, fn-med grd ls w. rare sh partings. Sh @ 562, 573, 578	Md	½" calc vnl 560-561½

AX5532A 2C 1-57

THE NEW JERSEY ZINC COMPANY — DRILL RECORD — Harrisburg, Illinois

Property Barnett, R. S. — HOLE NUMBER W-12

Location — Page 4 of 4

Coordinates — Elevation — Bearing

Began — Finished — Inclination — Total Depth

Driller — Logged by E. L. Weinberg — Water Level

Geographic Fm.	Log	FROM	TO	Ft. Core	Description	Eff.	Minerals % CaFe	% Zn	% Pb
Fredonia		693	1057	cont'd	Footage Calc? Other Est.				
					778-778½ ---		Tr	1	-
					932-936 msv		-	12	4
					936-942 msv 4½'recov		Tr	4	1
					946 vnlt		Tr	-	-
					949 ---		-	Tr	Tr
					953 ---		Tr	-	-
					1015-1019 ---		-	Tr	-
					1019-1021 vn 2' recov		-	1½	½
					1021-1024 msv		-1	14	4
					1024-1027 msv		Tr	1	Tr
					1027-1031 msv		Tr	4	2
					1031-1036 vnlts disseminated		Tr	Tr	Tr
					1044-1045 vnlt		-	Tr	-
					Bd'g 55° @ 744'				
					60° @ 918'				
					at				
					Contact w. St. Louis gradional & diffi-				
					cult to place accurately-may even be @ 830'				
					Top of St. Louis @ 1057?				
1057 St. Louis		1057	1115	49 (9' lost from 1075-1085)	Med gy, fn grd, gen msv, loc mot, loc sty'c, loc ch'ty ls. Ch @ 1066-1072. Vn calc @ 1061,1068,1072-1073,1085-1086½, 1093-1096,1105-1105½,1112. Base metal min'n is as follows:				
					1075-1085 ?? 1' recov.		-	1-10??	-
					1085-1086½ vn		-	10	-
					1089-1090½ --- disseminated		-	Tr	-
					1093-1096½ msv		-	10	Tr
					1103 --- Disseminated		-	Tr	-
					1114-1115 --- disseminated		-	Tr	-
1115		1115			Bottom				

AX55321 20'1-57

THE NEW JERSEY ZINC COMPA[illegible] DRILL RECORD [illegible]risburg, Illinois

Property Barnett, R. S. HOLE NUMBER W-12

Location Page 3 of 4

Coordinates Elevation Bearing

Began Finished Inclination Total Depth

Driller Logged by E. L. Weinberg Water Level

Graphic Log	FROM	TO	Ft Core	Description	Eff.	Minerals
Fredonia	554	691	137	Lt & drk gy, fn-c.grd, gen msx, loc fos sty'ic, loc br'd ls. Drk gy, sh'ly ls @ 597-600, 614-621(fos). Sl movement @ 601. Highly oolitic zo @ 635-642. Calc vn's abun from 602 & found @ 602-603(1",porous,w.bit), 604½(½"), 621½(½"), 622-623(½"), 626-628(scattered), 651(¼"), 659-659½, 662½-662 3/4(¼"), 663½-664, 666-668(scattered), 669½-671½(scattered); scattered vns @ 674-674, 675-675½, 678-680, 688-690. Base metal min'n as follows:	St-sl	
				Footage Calc? Other Est.		%CaF_2 %Zn %Pb
				622-623 ½"vn		5 - -
				626-628 vnlts		3 - Tr
				659-659½ vns		3 15 -
				662½-662 3/4 ¼"vnlt		- Tr 5
				663½-664 6"vn		3 - -
				666-668 vnlts		3 - -
				669½-671½vnlts		3 - -
				673-674 vnlts		Tr - -
				678-680 vnlts		6 Tr -
				682½-682½ 2"vn		10 - -
				685½-686 3"vn		8 3
				688-690 vnlts		5 2
				Bd'g 50° @ 621		
691 693	691	693	2	Gy grn, fn grd, fn'ly bnd'd ls & sh, loc br'd, possibly Rosiclare. Bd'g 55° @ 691½ Fredonia from 693		
Fredonia	693	1057	364	Lt gy-lt med gy & brn, fn grd-med grd, gen msv, loc faintly bnd'd, loc br'd, loc oo, loc sty'ic ls & dol. Dol zo's @ 693-696, 702-704,719-720, 721-735,800-804,828-833½,942-942½; Oo zo's @ 756-762, 817½-828. Ch @ 786-787,830-847,868-873,885-887,898,919-925, 999. Calc vns abun & found @ 694,695, 698½-699½, 701-701½,703-703½, 705, 706½, 708½,711,714,715,716,719-719½,721,723, 724,734-735,750,763½,765,766-767, 768, 769,770-770½,772-773,775½,779-779½, 782,784,790½,817-817½,838,853,854,855, 872, 886,923½-943,946½-948,951-951½, 955-956,963-965,968½-970,971-974,993-1001,1019-1031,1032-1036,1039,1040-1041, 1045,1050,1052.	Md-st	
				Base metal min'n is as follows:		
				Footage Calc? Other		%CaF_2 %Zn %Pb
				698½-699½ vnlts		Tr - -
				701-701½ vnlts		Tr - -
				703-706 vnlts		Tr - -
				719 vn		Tr - -
				767-769 vnlts		Tr - -
				773 vnlt		Tr - -
				775½ vnlt		Tr - -

THE NEW JERSEY ZINC COMPANY

DRILL RECORD

Harrisburg, Illinois

Property Barnett, R. S.

HOLE NUMBER W-12

Location

Page 2 of 4

Coordinates

Elevation

Bearing

Began

Finished

Inclination

Total Depth

Driller

Logged by E. L. Weinberg

Water Level

Fm	Graphic Log	FROM	TO	Ft. Core	Description	Eff.	Minerals
Paint Creek							
					Top of Bethel @ 314		
314 Bethel		314	399	85	Lt & drk gy, med grd, gen bdd, loc mot ss. Drk ss @ 319-328. Cal & fos ss & ls @ 395-399. Fa(sl displacement) @ 345, 364, 365, 367-368, 378, 391 Bd'g 52° @ 390½'	No	
					Top of Renault @ 399		
399 Renault		399	417	18	Gy grn, fn grd, fn'ly & evenly bdd sh. Bd'g 50° @ 410'	No	
		417	467	50	Med gy & brnish gy, med-c.grd, loc fos, loc sty'ic, Loc sh'ly ls. Brn'ish gy sh @ 454½-460. Sl br'n & fa'g @ 465-467 Bd'g 55° @ 439	St-sl	
		467	479	12	Grn gy, fn grd, gen msv, loc fos, sh & ls. Ls @ 476-478	Sl-st	
		479	518½	39½	Med drk gy-med gy, med-c.grd, bdd, loc msv, loc sty'ic, ls w. sh partings more abun @ top. Discordant, porous, ½" calc vn @ 502-503 w. st odor bit. Bd'g 55° @ 497'	St	
					Top of Levias @ 518½		
518½ Levias		518½	534	15½	Med gy & grn gy, med grd-c.grd, bnd'd & fos ls & sh. Contains abun pnk calc frag's loc. Top of Rosiclare @ 534	St-sl	
534 Rosiclare		534	554	20	Med drk gy-med gy, med grd, evenly bdd, loc msv, loc fos, cal ss & sh Bd'g 60° @ 538'	Md	
554					Top of Fredonia @ 554		

AX5532A 2C 1-57

THE NEW JERSEY ZINC COMPANY

DRILL RECORD

Harrisburg, Illinois

Property Barnett, R. S.

HOLE NUMBER W-12

Location

Page 4 of 4

Coordinates

Elevation

Bearing

Began

Finished

Inclination

Total Depth

Driller

Logged by E. L. Weinberg

Water Level

Fm.	Graphic Log	FROM	TO	Ft. Core	Description	Eff.	Minerals %CaF_2	%Zn	%Pb
Fredonia		693	1057	cont'd	Footage Calc? Other Est.				
					778-778½ ---		Tr	1	-
					932-936 msv		-	12	4
					936-942 msv 4½'recov		Tr	4	1
					946 vnlt		Tr	-	-
					949 ---		-	Tr	Tr
					953 ---		Tr	-	-
					1015-1019 ---		-	Tr	-
					1019-1021 vn 2' recov		-	1½	½
					1021-1024 msv		-1	14	4
					1024-1027 msv		Tr	1	Tr
					1027-1031 msv		Tr	4	2
					1031-1036 vnlts disseminated		Tr	Tr	Tr
					1044-1045 vnlt		-	Tr	-
					Bd'g 55° @ 744'				
					60° @ 918'				
					at				
					Contact w. St. Louis gradional & diffi-				
					cult to place accurately-may even be @ 830'				
					Top of St. Louis @ 1057?				
1057 St. Louis		1057	1115	49 (9' lost from 1075-1085)	Med gy, fn grd, gen msv, loc mot, loc sty'c, loc ch'ty ls. Ch @ 1066-1072. Vn calc @ 1061,1068,1072-1073,1085-1086½, 1093-1096,1105-1105½,1112. Base metal min'n is as follows:				
					1075-1085 ?? 1' recov.		-	1-10??	-
					1085-1086½ vn		-	10	-
					1089-1090½ --- disseminated		-	Tr	-
					1093-1096½ msv		-	10	Tr
					1103 --- Disseminated		-	Tr	-
					1114-1115 --- disseminated		-	Tr	-
1115		1115			Bottom				

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THE NEW JERSEY ZINC COMPANY — DRILL RECORD — Harrisburg, Illinois

Property Barnett, R. S. — HOLE NUMBER W-12

Location — Page 3 of 4

Coordinates — Elevation — Bearing

Began — Finished — Inclination — Total Depth

Driller — Logged by E. L. Weinberg — Water Level

Fm	Graphic Log	FROM	TO	Ft. Core	Description	Eff.	Minerals
Fredonia		554	691	137	Lt & drk gy, fn-c.grd, gen msx, loc fos St-loc sty'ic, loc br'd ls. Drk gy, sh'ly sl ls @ 597-600, 614-621(fos). Sl movement @ 601. Highly oolitic zo @ 635-642. Calc vn's abun from 602 & found @ 602-603(1",porous,w.bit), 604½(½"), 621½(½"), 622-623(½"), 626-628(scattered), 651(¼"), 659-659½, 662½-662 3/4(¼"), 663½-664, 666-668(scattered), 669½-671½(scattered); scattered vns @ 674-674, 675-675½, 678-680, 688-690. Base metal min'n as follows:		
					Footage Calc? Other Est.		%CaF_2 %Zn %Pb
					622-623 ½"vn		5 - -
					626-628 vnlts		3 - Tr
					659-659½ vns		3 15 -
					662½-662 3/4 ¼"vnlt		- Tr 5
					663½-664 6"vn		3 - -
					666-668 vnlts		3 - -
					669½-671½vnlts		3 - -
					673-674 vnlts		Tr - -
					678-680 vnlts		6 Tr -
					682½-682½ 2"vn		10 - -
					685½-686 3"vn		8 3
					688-690 vnlts		5 2
					Bd'g 50° @ 621		
691 693		691	693	2	Gy grn, fn grd, fn'ly bnd'd ls & sh, loc br'd, possibly Rosiclare. Bd'g 55° @ 691½		
					Fredonia from 693		
Fredonia		693	1057	364	Lt gy-lt med gy & brn, fn grd-med grd, gen msv, loc faintly bnd'd, loc br'd, loc oo, Loc sty'ic ls & dol. Dol zo's @ 693-696, 702-704,719-720, 721-735,800-804,828-833½,942-942½; Oo zo's @ 756-762, 817½-828. Ch @ 786-787,830-847,868-873,885-887,898,919-925, 999. Calc vns abun & found @ 694,695, 698½-699½, 701-701½,703-703½, 705, 706½, 708½,711,714,715,716,719-719½,721,723, 724,734-735,750,763½,765,766-767, 768, 769,770-770½,772-773,775½,779-779½, 782,784,790½,817-817½,838,853,854,855, 872, 886,928½-943,946½-948,951-951½, 955-956,963-965,968½-970,971-974,993-1001,1019-1031,1032-1036,1039,1040-1041, 1045,1050,1052.	Md-st	
					Base metal min'n is as follows:		
					Footage Calc? Other		%CaF_2 %Zn %Pb
					698½-699½ vnlts		Tr - -
					701-701½ vnlts		Tr - -
					703-706 vnlts		Tr - -
					719 vn		Tr - -
					767-769 vnlts		Tr - -
					773 vnlt		Tr - -
					775½ vnlt		Tr - -

AX5532A 2C 1-57

THE NEW JERSEY ZINC COMPANY

DRILL RECORD

Harrisburg, Illinois

Property Barnett, R. S.

HOLE NUMBER W-12

Location

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Coordinates

Elevation

Bearing

Began

Finished

Inclination

Total Depth

Driller

Logged by E. L. Weinberg

Water Level

Fm.	Graphic Log	FROM	TO	Ft. Core	Description	Eff.	Minerals
Paint Creek							
					Top of B ethel @ 314		
314 B e t h e l		314	399	85	Lt & drk gy, med grd, gen bdd, loc mot ss. Drk ss @ 319-328. Cal & fos ss & ls @ 395-399. Fa(sl displacement) @ 345, 364, 365, 367-368, 378, 391 Bd'g 52° @ 390½'	No	
					Top of Renault @ 399		
399 R e n a u l t		399	417	18	Gy grn, fn grd, fn'ly & evenly bdd sh. Bd'g 50° @ 410'	No	
		417	467	50	Med gy & brnish gy, med-c.grd, loc fos, loc sty'ic, loc sh'ly ls. Brn'ish gy sh @ 454½-460. Sl br'n & fa'g @ 465-467 Bd'g 55° @ 439	St-sl	
		467	479	12	Grn gy, fn grd, gen msv, loc fos, sh & ls. Ls @ 476-478	Sl-st	
		479	518½	39½	Med drk gy-med gy, med-c.grd, bdd, loc msv, loc sty'ic, ls w. sh partings more abun @ top. Discordant, porous, ½" calc vn @ 502-503 w. st odor bit. Bd'g 55° @ 497'	St	
					Top of Levias @ 518½		
518½ Levias		518½	534	15½	Med gy & grn gy, med grd-c.grd, bnd'd & fos ls & sh. Contains abun pnk calc frag's loc. Top of Rosiclare @ 534	St-sl	
534 Rosiclare		534	554	20	Med drk gy-med gy, med grd, evenly bdd, loc msv, loc fos, cal ss & sh Bd'g 60° @ 538'	Md	
554					Top of Fredonia @ 554		

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THE NEW JERSEY ZINC COMPANY

DRILL RECORD

Harrisburg, Illinois

Property Barnett, R. S.

HOLE NUMBER W-14

Location

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Coordinates

Elevation

Bearing

Began

Finished

Inclination -59°@700'

Total Depth

Driller

Logged by E. L. Weinberg

Water Level

Fm.	Graphic Log	FROM	TO	Ft. Core	Description	Eff.	Minerals
Frederick Formation							
946½		946½			Bottom		

AX5532A 2C 1-57

THE NEW JERSEY ZINC COMPANY — DRILL RECORD — Harrisburg, Illinois

Property Barnett, R. S. — HOLE NUMBER W-14

Location — Page 3 of 4

Coordinates — Elevation — Bearing

Began — Finished — Inclination -53°@500' — Total Depth

Driller — Logged by E. L. Weinberg — Water Level

Graphic Fm. Log	FROM	TO	Ft. Core	Description	Eff.	Minerals
				Top of Renault @ 578'		
578-	578	600½	17	Drk gy & med brn, fn grd, fn'ly bn'd sh.	Sl	
	(591½-599		3½)	Fos ls @ 599-599½. Sl fs @ 587½		
				Bd'g 70° @ 588'		
R						
	600½	650	49½	Lt med gy-med gy & grn, fn-med grd, bn'd, sty'ic & fos ls w. sh prtgs. More than avg sh @ 610-611½, 616-620, 622½-624, 630-632½, 638-642. Faulting @ 638'.	Md	
				Bd'g 60° @ 649'		
e						
n						
a						
	650	681½	31½	Grn'ish gy & med drk gy, fn-med grd, fos, bn'd, spk, cal sh & ls.	Sl-Md	Tr py.
u						
l						
t	681½	709	27½	Med gy, med grd, gen msv & sty'ic, fos ls w. sh prtgs. Sh @ 704-707.	St	
				Bd'g 55° @ 701'		
				Top of Levias @ 709		
709-	709	724	15	Lt-med gy, med grd, bn'd, sty'ic ls w. loc sh & abun pink calc frags. Numerous small, drk gy, calc vnlts @ right angles to banding @ 719-720		
Levias						
724-				Top of Rosiclare @ 724'		
Rosiclare	724	752	28	Grn'ish gy & med gy, med grd, bn'd cal ss w. loc sh. Fn'ly bn'd sh @ 750-752.		
				Bd'g 70° @ 747'.		
				Top of Fredonia @ 752'		
752-	752	781	29	Lt med gy & med gy, med grd-c.grd, c.ly mot & sty'ic, fos ls. Vn calc @760-760½.	Md-St	
F						
r						
e	781	807	26	Med drk gy & pinkish gy, fn grd & med grd, bn'd & msv, gen fos, intbd ls & sh. Cal sh @ 781-787, 797-801.	Md	Tr flt @ 806' Tr Pb @ 807'
d				Bd'g 65° @ 802'		
o						
n	807	946½	139½	Lt gy & lt med gy & brn, med grd, gen msv, sty'ic ls & dol. Oo'ic @ 811-837, 853-871, 886½-899, 911-923. Ch @ 877. Sh @873-875. Dol @887-888½, 899-911. Vn calc @936-936½.	St	Tr flt in calc @823. Scattered tr Pb in mtx of fm. Tr flt 928½-929, 940.
i				Bd'g 70° @ 941'		
Oo.						
a						

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THE NEW JERSEY ZINC COMPANY

DRILL RECORD

Harrisburg, Illinois

Property Barnett, [redacted]

[redacted] NUMBER W-14

Location

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Coordinates

Elevation

Bearing

Began

Finished

Inclination -51° @300'

Total Depth

Driller

Logged by E. L. Weinberg

Water Level

Fm.	Graphic Log	FROM	TO	Ft. Core	Description	Eff.	Minerals
Cypress							
		333	340	7	Lt & drk gy, fn grd & med grd, mot cg.	No	
					Top of Paint Creek @ 340'		
340 Paint Creek		340	391	51	Med drk gy, fn grd, fsl sh. Vn calc @ 370.	Sl-Md	
		391	405	14	Lt gy & med drk gy, fn grd & med grd, br'd & mot ss & sh. Probable fa zo. Sh @ 391-396 has numerous calc vnlts thru-out. Ss @ 396-403 gen mot w. br & cons sh. Resembles cg at base of Cypress.		
		405	496	91	Mad drk gy, fn grd, fsl, sl'ly fos sh.	Sl-Md	
					Bd'g 45° @ 424'		
					Top of Bethel @ 496'		
496 Bethel		496	578	76½	Lt gy & med drk gy, med grd, mot & bn'd	No;	
		(545-555		4)	ss w. loc sh prtgs. Cal ss 576-578;	loc	
					porous 576-576½. Blk sh @ 555 in zo of	St	
					core loss.		
					Bd'g 50° @ 506'		
					Bd'g 55° @ 572'		

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THE NEW JERSEY ZINC COMPANY

DRILL RECORD

Harrisburg, Illinois

Section Coordinates 4,313.29'N, 3,792.29'E

Property Barnett, [illegible] S.

HOLE NUMBER W-14

Location NW¼, NE¼, Sec. 28, 12-7

Page 1 of 4

Coordinates 315'N, 1065'E

Elevation 489

Bearing S41°E @ Collar

Began 3/7/59

Finished 3/20/59

Inclination -43° @ col.

Total Depth 946½

Driller Mills, Lamar, Moore

Logged by E. L. Weinberg

Water Level

Joy Mfg. Co.

Fm.	Graphic Log	FROM	TO	Ft. Core	Description	Eff.	Minerals
		0	20		Overburden		NX core 20-29,
OB							No core 29-43,
							BXWL core 43-
20					Golconda fm @ 20'		946½. Reamed
		20	59	16	Med gy & drk gy, fn grd & med grd, spk,	St	40 - 140.
		(no core 29-43)			sty'ic, fos ls & sh w. loc weathering.		
G					Bd'g 50° @ 44'		
					Bd'g 50° @ 50'		
		59	196	80	Med gy & drk gy, fn grd & med grd fsl &	St	Scattered py
o		(1' cavity @ 72')			fos shaly ls & ls. Ls w. little sh @		in ls.
		(65	72	5)	72-74, 85-87, 92-94, 111-112, 143-144, 160-		
		(72	84	5)	178. Vn calc @ 143, 161½-162, 170, 171 (w.		
		(84	88	3)	bit), 174, 177, 178, 186. Vns apparently		
		(111	113	1½)	discordant w. banding & may indicate fa		
		(113	114½	0½)	zo. Ls @ 177 & 187 has abun pink calc		
1		(114½	116	1½)	frags.		
		(116	120	2)	Bd'g 40° @ 113'		
		(125	129	1½)			
		(129	132	1½)			
		(132	144	1½)			
		(145½	155	0½)			
c		(155	160	1)			
		(160	165	2)			
		(165	172	3½)			
		(174	177	1½)			
		(177	182	2)			
o		(182	187	2)			
n							
d		196	205	9	Med gy, med grd, c.ly mot ss w. loc sh.	No	Scattered vnlts
					Sh @ 203-204. Mot lineated pll to core.		py.
		205	215	10	Drk gy, fn grd, fsl sh.		
		215	226½	11½	Med gy, med grd, fos ls w. ss @ bottom.	St	
a					Ss @ 225-226½. Calc vns (discordant) @		
					220, 221, 224-225, 226.		
					Bd'g 50° @ 223'		
		226½	257	26	Med drk gy, fn grd sh & intbd ss. Ss @	No	
					242-244, 245-248. Calc vn @ 245½		
					Top of Cypress @ 257		
257		257	333	76	Lt gy, med grd, gen msv ss w. sh prtgs.	No	
					Includes more than avg sh 302-305, 317-		
					317½, 317 3/4-318.		

AX5532A 2C 1-57

THE NEW JERSEY ZINC COMPANY

DRILL RECORD

Harrisburg, Illinois

Property Barnett, [illegible] S.

HOLE NUMBER W-13

Location

Page 4 of 4

Coordinates

Elevation

Bearing

Began

Finished

Inclination -64° @ 800'

Total Depth

Driller

Logged by E. L. Weinberg

Water Level

Fm.	Graphic Log	FROM	TO	Ft. Core	Description	Eff.	Minerals
					Footage / Calc / %Ba / Other Est		%CaF2, % Zn, %Pb
					794-798 Tr Tr		85 2 -1
Fredonia		798	897	99	Med gy, brn'ish gy & wht, fn & c grd, fn'ly bn'd, gen br'd, loc'ly sty'lic ls, dol & msv min'zd vns. Dol @822-828. Calc & Ba vns abun thru-out msv vns @ 819-820, 835½-837, 848½-849, 854-855, 857-857½, 865-868, 871-888½.	Md-St	
					798-803 vnlts 5		2 Tr Tr
					809½-812 vnlts 15		5 Tr Tr
					819-822½ vnlts 15		6 3 1
897					823-825 vnlts 10		5 1 1
St.					834-838 Tr in msv vn 35		6 4 -1
					840-842½ vnlts 2		5 7 nil
Louis					847-852 3% in vnlts 10		3 Tr Tr
					864-865 Tr Tr		4 3 Tr
					865-868 dis 65 mot tx, loc bit		Tr 1 Tr
					871-874 dis 30 mot replacement tx		nil Tr nil
					874-877 dis 40		8 3 Tr
952					877-888½ 15% in vn 60 mot replacement tx		nil nil nil
					Bd'g 65° @ 893'		
		897 (cavity @ 925-926½)	952	53½	Med drk gy & med gy, fn-med grd, faintly bn'd, loc'ly cherty ls. Ch @ 897-898, 903½-903 3/4, 911-914, 914½, 938, 950, 951, 952. Ba & calc vns @ 898½, 900½, 905, 907½, 949, 950, 951.	St	
					Bd'g 65° @ 942'		
		952			Bottom		

AX5532A 2C 1-57

THE NEW JERSEY ZINC COMPANY — DRILL RECORD — Harrisburg, Illinois

Property Barnett, R. S.
Location
Coordinates
Began — Finished
Driller
Logged by E. L. Weinberg

HOLE NUMBER W-13
Page 3 of 4
Elevation
Bearing
Inclination -62¼° @ 600'
Total Depth
Water Level

Graphic Log	FROM	TO	Ft. Core	Description	Eff.	Minerals
561½ Fr				Bd'g 65° @ 556		
				Top of Fredonia @ 561½		
	561½	722	160½	Lt med gy & med drk gy, gen msv, loc'ly bn'd, loc'ly sty'ic ls w. loc sh prtgs & loc dol. Sh prtgs more abun @563-563½, 578-578½, 593-599, 606-612. Dol @708-722. Vn calc & Ba @ 572-572½, 573-573½, 600½-601½, 636, 639-639½, 654-654½, 666½, 668½, 669, 670, 671, 672, 673, 674, 676, 677, 678, 678½, 679½, 680, 681; thin vns calc scattered evenly approx @ ½' intervals 700-722 all calc vns apparently discordant w. bd'g.	Md-St	
				Footage — Calc — %Ba — Other Est — %CaF2, %Zn, %Pb		
				572-572½ — vnlt — 50		- - -
				600½-601½ — Tr — 90		5 - -
				620 — vnlt — Tr		Tr Tr Tr
				621-624 — dis vnlts — Tr		5 -1 1
				630 — nil — nil		Tr nil nil
				633½-634½ — nil — nil		nil Tr nil
				664 — 1" vnlt — Tr		20 Tr nil
				690½ — ½" vnlt — Tr		Tr nil nil
				706½ — Tr vnlt — 95		nil nil nil
				708½ — Tr in 1" vnlt — 95		nil nil nil
				Oo'ic zo @ 617-677, 685-691, 693-708.		
				Bd'g 60° @ 608'		
				Bd'g 60° @ 655'		
				Bd'g 65° @ 709'		
722	722	764	42	Wht, med gy & drk gy, med grd-c.grd, mot & br'd, gen msv min zo. Vn approx pll w. hole @ 722 & @ right angle to bnd'g @ 764. Tx suggests msv filling & replacement in br zo of ls.	Sl-Md	
				722-730 — Tr — 90		5 nil nil
				730-734 — Tr — 50		40 Tr 5
				734-742 — Tr — 6		80 4 1
764				742-747 — Tr — 20		30 10 4
				747-752 — Tr — 15		35 2 -1
				752-757½ — 3 — 5		15 12 1
				757½-764 — Tr — 5		65 6 8
Fredonia	764	783	19	Lt med gy, fn grd-med grd, gen br'd ls. Vn calc & Ba scattered thru fm.	St	
				775-776 — Tr — 60		5 Tr nil
				778-778½ — vnlt — 5		nil 2 Tr
				779 — nil — 1" of 75%		20 nil nil
				780-781½ — Tr — Tr		60 1 nil
	783	798	15	Med gy, wht, purp & brn, med-c.grd, loc sty'ic, gen br'd ls & msv min'zd vn.		
				783-787 — Tr — 5		40 4 1
				787-790½ — Tr — 3		50 20 10
				790½-794 — 10% in vnlts — 25 — mostly barren ls		3 nil nil

THE NEW JERSEY ZINC COMPANY

DRILL RECORD

Harrisburg, Illinois

Property Barnett [redacted]

[redacted] E NUMBER W-13

Location

Page 2 of 4

Coordinates

Elevation

Bearing

Began

Finished

Inclination -56½° @ 400'

Total Depth

Driller

Logged by E. L. Weinberg

Water Level

Graphic Fm.	Log	FROM	TO	Ft. Core	Description	Eff.	Minerals
Paint Creek							
					Top of Bethel @ 324'		
-324 Bethel		324	388	64	Med drk gy & med lt gy, med grd, mot & bnd ss, w. loc fos ls & sh. Fos ls 385-388 w. grn sh prtgs. Fa zo @ 351-351¼, 353½-353 3/4, (ss c.ly bnd above Fa; fn'ly bnd below Fa). Ba vn @ 351 approx @ right angle to bd and 50° to the core. Drk gy, gen msv ss 324-344; lt & drk gy, c.ly bnd ss 344-354	No	Tr Flt in msv Ba @ 351 Tr Flt @ 353¼ Tr Ba @ 353¼, & 354½
					Bd'g 50° @ 350'		
					Bdg 53° @ 360'		
					Top of Renault @ 388'		
-388 Renault		388	405½	17½	Grn & brn, fn grd, fn'ly bnd sh.		
					Bd'g 56° @ 405½'		
		405½	459	54	Lt med gy & grn, med-c.grd ls w. sh partgs, loc fos, gen sty'ic, gen bnd. Sh more abun @ 414-414½, 419-420, 425-429, 439-441, 445-450.	Md-st	½" vn calc 420½ @ right angle to bd'g.
					Bd'g 60° @ 455'		
		459	489	30	Drk grn & med drk gy, fn grd-med grd, fos & bnd shaly ls. 471-473 msv, fos ls w. little sh.	Md	
		489	520½	31½	Med gy, med-c.grd, fn'ly bn'd oo'ic ls w. loc sh prtgs. Vn calc @ 498 3/4, 508½. Bd'g 55° @ 499		Tr py in scattered grains in mtx Ba(?) vn@489½
					Top of Levias @ 520½		
-520½ Levias		520½	534	13½	Grn & lt med gy, med-c.grd, loc'ly shaly, loc'ly msv, loc'ly sty'ic, loc'ly bn'd ls w. pink calc frags. ½" calc vnlt @ 531½-531 3/4	St	
-534 Rosiclare		534	561½	27½	Top of Rosiclare @ 534		
					Grn'ish gy, med grd, c.'ly & fn'ly bn'd cal ss w. loc sh bds. Sh @ 558-559, 560-561½, ½" calc @ 543-543½ (St odor bit)		½" Ba vnlt @556 (approx. right angle to bd'g)

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THE NEW JERSEY ZINC COMPANY — DRILL RECORD — Harrisburg, Illinois

Property Barnett, [illegible] S. — Section Coordinates 4519.64N 3870.15E — HOLE NUMBER W-13

Location NW¼ NE¼ Sec. 28, 12-7 — Page 1 of 4

Sec. Coordinates 522'N, 1143'E — Elevation 444.58 — Bearing S 42° E @Collar

Began 2/14/59 — Finished 3/4/59 — Inclination -45° @Col. — Total Depth 952

Driller C.Mills;C.Lamar(Joy) — Logged by E. L. Weinberg — Water Level

Graphic Log	FROM	TO	Ft. Core	Description	Eff.	Minerals
OB	0	10	0	Overburden		
-10- Golconda	10	98	76	Golconda from 10' Drk gy, fn-med grd, msv, spk & fos sh & ls. Ls @ 10-42, 76-86. Bd'g 50° @ 20' Bd'g 50° @ 86'	No & St	NX 10-20; BXWL 20-952; Reamed to 82'
-98- Cypress	98	243	145	Top of Cypress @ 98' Lt gy & med drk gy, med grd, bnd, xbd, cg'lc ss w. loc sh prtgs. Med drk gy ss @ 98-116, 141-149, 230-239. Cg @ 239-243 Bd'g 55° @ 145 Bd'g 45° @ 228 Possible faulting @ 132-133, 142, 156.	No	Loc ma or py(?) @ 119, 133.
243- Paint Creek	243	324	81	Top of Paint Creek @ 243 Med drk gy, fn grd, bnd sh w. loc ss. Loc ss @ 279, 322½-323. Sl ly limey @ 316-322 Bd'g 55° @ 268' Bd'g 60° @ 314'	No; loc sl	

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THE NEW JERSEY ZINC COMPANY

DRILL RECORD

Harrisburg, Illinois

Property Barnett, R. B.

HOLE NUMBER W-15

Location

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Coordinates

Elevation

Bearing

Began

Finished

Inclination 60½° @ 500'

Total Depth

Driller

Logged by E. L. Weinberg

Water Level

Fm.	Graphic Log	FROM	TO	Ft. Core	Description	Eff.	Minerals
563½		563½	583	19	Top of Renault @563½'		
R					Grn & brn, fn grd, fn'ly bn'd sh.	Loc Sl.	
		583	631	48	Grn'ish gy & red, fn grd-med grd, loc sty'ic, loc fos, loc fsl ls & sh. Sh @ 613-614, 619-620, 622-624, 627-628. Bd'g 60° @ 601'	St	
e							
n							
a							
		631	665	33	Grn, red & med gy, fn grd & med grd, bn'd, spk, fos, shaly ls & sh. Sh @ 631-639.	St	
u							
l							
		665	682	17	Med lt gy, med grd, oo ls. Bd'g 60° @ 680'	St	
t							
		682	691	8	Grn & lt brn, fn grd, br'd & cal sh. Fa zo Top of Levias 691'?	Loc St	
F. Zo. 691							
Levias		691	712½	21½	Med lt gy, grn & pink, fn grd & med grd, fos, bn'd & mot ls w. sh prtgs. Many sub-pll calc cracks @ right angles to bd'g @ 706-706½. Bd'g 65° @ 712'	St	
712½					Top of Rosiclare 712½'		
Rosiclare		712½	732	19½	Grn'ish gy & med gy, med grd, bn'd, cal ss. Loc sh @ 731-732. Calc vnlts @ 721½, 725½, 730. Top of Fredonia 732'	Md	
732		732	950	218	Lt med gy, med grd & fn grd, loc bn'd, sty'ic, fos, gen msv ls w. loc sh & dol. Sh @ 769-775, 782-789, 855-858, 862-863. Dol @ 889-896. Most of fm, excepting sh & dol, is oo'ic. Calc vns @ 733-734 (multiple sub pll hairlike vns), 745, 819, 823½-824, 832, 845, 846, 847-847½, 848½, 849½, 850½, 851½, 852, 852½, 909, 914, 916, 927½-930, 931, 932½, 936, 943, 943½, 949. Bd'g 70° @ 771' Bd'g 65° @ 862' Bd'g 65° @ 895'	St	Tr flt 923, 927½-928.
F							
r							
e							
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i							
a							

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THE NEW JERSEY ZINC COMPANY

DRILL RECORD

Harrisburg, Illinois

Property Barnett, R. S.

HOLE NUMBER W-15

Location

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Coordinates

Inclin. -65° @ 700 Bearing

Began Finished Inclination -67° @ 900 Total Depth

Driller Logged by E. L. Weinberg Water Level

Graphic Log	FROM	TO	Ft. Core	Description	Eff.	Minerals
Fredonia						
950 St. Louis	950	1105	155	Top of St. Louis @ 950' Med gy, gen fn grd, faintly bn'd, fos, sty'ic, cherty ls. Ch @950-950½, 952-954, 955, 994, 997, 998, 993½, 1034, 1035½, 1048, 1054, 1057, 1069, 1080, 1031, 1082, 1088. Vn calc @965, 965½, 969, 970, 981-982, 983, 1001, 1002, 1003½, 1006½, 1007, 1012, 1016, 1017, 1019½, 1020, 1042, 1043, 1043½, 1044½, 1046, 1061-1061½, 1063-1063½, 1071-1072, 1089-1089½, 1100½-1101, 1104-1104½. Vugs @ 1052-1053 w. Q & calc crystals. Bd'g 65° @ 1086'	St	Tr flt @965, 965½, 966, 967, 970, 976½, 977, 1059-1059½, 1100½-1101, 1104-1104½. Tr Zn @1100½-1101.
Louis						
1105	1105			Bottom		