UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
Box 431
Joplin, Missouri
December 9, 1958

OFFICIAL FILE COPY
O. M. E.
RECEIVED DEC 12 1958

DATE	INITIALS	CODE
12/12	C	220
"		110
12/16		500

OME Operating Committee
Department of the Interior
Washington 25, D. C.

Re: DMEA-4582 (lead-zinc-copper)
St. Joseph Lead Co.
Courtois Area
Washington County, Mo.
Contract Idm-E1068

Dear Sirs:

Submitted herewith are your two copies of the MF-104 Monthly Voucher, MF-104A and the Operator's Monthly Report covering the October work on the cited project. The voucher data received today from the Finance Officer is posted on both MF-104s.

Sincerely yours,

Clinton C. Knox

Clinton C. Knox *id*
Executive Officer
OME Field Team, Region IV

encls. 6

cc: OME Op.Com.
King, USGS, Denver
Amos, USGS, Carbondale
4582 file

pd cy-OMB Washington

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

Budget Bureau No. 42-R1036.5

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

RECEIVED DEC 12 1958 O.M.E.

Month of October, 1958 Docket No. DMEA-EC-4122 Contract No. Idm-E 1008
Operator's Name St. Joseph Lead Company Minerals Pb - Zn - Cu
Address Bonne Terre, Missouri
Contract Amount, $ 298,560.00 Government Participation: 50 % Amount, $ 149,280.00

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:				12/24/58 OMB		
Drilling	17509.14	236996.10	254505.24	✓	✓	✓
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	62.00	796.00	858.00	✓	✓	✓
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	17571.14	237792.10	255363.24	✓	✓	✓

RECEIVED DIVISION OF MINERAL TECHNOLOGY NOV 17 1958 BUREAU OF MINES JOPLIN, MO.

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

Date 11-14-58 *Payee St. Joseph Lead Company

Per E. B. Jones Title MINING ENGINEER

*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: CCK 11/24/58

$ 8785.57

Signature (Authorized Certifying Officer)

Date 12-3-58 Vou. No. 4-15

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Idm-E1068 in accordance with the terms of the contract.

Signature Henry H. Amos Title Geologist-USGS Date Nov. 18, 1958

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Clinton C. Knox Title Executive Officer Date Nov. 24, 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)

2d cy

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

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OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of October 195 8 Docket No. DMEA 4582 Contract No. Idm-E 1068

Operator's Name St. Joseph Lead Company Minerals Pb - Zn - Cu

Address Bonne Terre, Missouri

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core	Ft.	15306.90	6895	197837.52	89116	$2.22)		
Churn	Ft.	2202.24	992	56667.72	25526	2.22)	133420	$2.22
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Analytical Determinations	Ea.	62.00	62	858.00	858	1.00	2370	1.00
TOTAL DISTRIBUTED COSTS		17571.14		255363.24				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		17571.14		255363.24				

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

Date 11-14-58 Operator St. Joseph Lead Company

Per E. L. Jones Title DIVISION MANAGER

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)

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JOPLIN, MO.

C.C.K.
11/24/58

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

MONTHLY REPORT FOR MONTH OF OCTOBER, 1958

D.M.E.A. Project #4582 - Contract #IDM-E 1068

One churn drill was operating in the area at the end of the month. The hole in progress was Stage II, Stake No. VC-175 at a depth of 140 feet.

The following churn drill holes were completed through overburden and chert-bearing formations and cased preparatory to diamond drilling during the month:

Stage No.	Stake No.	Feet Depth	Starting Date
II	VC-161	160	9-26-58
II	VC-162	100	10- 1-58
II	VC-163	157	9-16-58
II	VC-164	270	9-24-58
II	VC-165	115	9-28-58
II	VC-172	125	9-23-58
II	VC-178	65	9-23-58

Three diamond drills were operating in the area at the end of the month. The holes in progress were as follows:

Stage No.	Stake No.	Feet Depth
II	VC-160	400
II	VC-174	500
II	VC-163	400

The following diamond drill holes were completed during the month:

Stage No.	Stake No.	Prospect Hole No.	Bottom Depth	Feet of Dia. Drilling	Date Completed	Class.
II	VC-159	58VC239	761	546	10-22-58	Pay
II	VC-166	58VC244	745	575	10-27-58	Pay
II	VC-167	58VC238	665	575	10-17-58	Speck Trace
II	VC-173	58VC243	695	520	10-24-58	Trace
II	VC-176	58VC233	665	530	10- 2-58	Trace
II	VC-177	58VC235	705	550	10- 9-58	Trace
II	VC-161	58VC241	650	490	10-22-58	Pay
II	VC-162	58VC240	635	535	10-21-58	Speck Trace
II	VC-164	58VC247	717	447	10-31-58	Pay
II	VC-172	58VC246	645	520	10-31-58	Blank
II	VC-178	58VC248	605	540	10-31-58	Pay
II	VC-169	58VC231	525	525	10- 1-58	Trace
II	VC-168	58VC234	542	542	10- 2-58	Trace

Analysis of results gained by drilling is shown in abstracts of our weekly reports to St. Joseph Lead Company, which are enclosed.

62 analytical determinations were made during the month as follows:

58VC239	6 Pb		1 Cu
58VC244	9 Pb	1 Zn	3 Cu
58VC233	2 Pb		
58VC241	11 Pb		1 Cu
58VC247	15 Pb		1 Cu
58VC246	2 Pb		2 Cu
58VC248	6 Pb		
58VC231	1 Pb		1Cu

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BUREAU OF MINES
JOPLIN, MO

WASHINGTON COUNTY

Courtois Area - In DMEA Project #4582

Week Ended October 6, 1958

3 diamond drills operating and 5 churn drills setting casing completed 3 trace holes.

58VC231, stake C169, a speck trace hole, is located about 700 feet north-northeast of the Courtois post office and 520 feet southwest of a pay hole. It bottomed at 525 feet depth in Lamotte sand. A few speck traces of lead were present in the 1 zone and at the base of the main 7 reef.

58VC234, stake C168, a speck trace hole, is located 520 feet northwest of the above hole. It bottomed at 542 feet depth in Lamotte sand. A few speck traces of lead were present at the top and bottom of the 7 reef.

58VC233, stake C176, a trace hole, is located about 3500 feet northeast of the village of Courtois and 900 feet southeast of an indicative hole. It bottomed at 665 feet depth in Lamotte sand. Trace lead in the lower 5 zone was estimated as 0.7 foot of 1.0% Pb at 496 feet depth and 0.4 foot of 1.0% Pb at 500 feet depth.

Week Ended October 13, 1958

1 diamond drill operating and 1 churn drill setting casing completed 1 trace hole.

58VC235, stake C177, a speck trace hole, is located about 3500 feet northeast of the village of Courtois and 520 feet northwest of a good trace hole. It bottomed at 705 feet depth in Lamotte sand. Speck traces of lead were present in the brown-spotted 5 zone and at the base of the main 7 zone reef.

Week Ended October 20, 1958

1 diamond drill operating completed 1 trace hole.

58VC238, stake C167, a speck trace hole, is located about 1500 feet north-northwest of the village of Courtois and 1100 feet west of an indicative hole. It bottomed at 665 feet depth in Lamotte sand. Speck traces of lead were present at 565 feet depth in the 7/10 zone. A 70-foot reef section is located in the 7 zone.

Week Ended October 27, 1958

3 diamond drills operating and 1 churn drill setting casing completed 2 pay and 2 trace holes for a total of 4 holes.

58VC241, stake C161, a pay hole, is located about 3500 feet west of the village of Courtois and 520 feet southeast of a pay hole. It bottomed at 650 feet depth in granite cobble conglomerate which is located in the 10 zone. Mineralization in the middle of the 7 zone is estimated as 7.8 feet of 3.2% Pb at 580 feet depth.

58VC239, stake C159, a pay hole, is located in the western edge of the project area, about 8,000 feet west of the village of Courtois and 2,000 feet southwest of a pay hole. It bottomed at 761 feet depth in Lamotte sand. Mineralization was estimated as 8.2 feet of 4.1% Pb at 653 feet depth in the middle of the 7 zone reef, 4.8 feet of 3.6% Pb at 707 feet depth at the base of the 7/10 zone, and 1.7 feet of 0.5% Cu at 704 feet depth. This hole extends the mineralization in this area considerable distance westward and apparently it will continue into the eastern part of the Czar Knob DMEA Project area.

WASHINGTON COUNTY - Courtois Area - In DMEA Project #4582 (Continued)

Week Ended October 27, 1958 (Continued)

58VC240, stake C162, a speck trace hole, is located about 1500 feet southeast of the village of Courtois and 520 feet east of a high grade pay hole. It bottomed at 635 feet depth in Lamotte sand. Speck traces of lead were present at 403 feet depth in the 1 zone and at 488 feet depth in the lower 5 zone. Lack of mineralization in this hole points up the necessity for close drilling in this area.

58VC243, stake C173, a speck trace hole, is located about 1500 feet northeast of the village of Courtois and 520 feet east-northeast of a high-grade pay hole. It bottomed at 695 feet depth in Lamotte sand. Speck traces of lead were present in the lower 5 and upper 7 zones.

Week Ended November 3, 1958

3 diamond drills operating and 1 churn drill setting casing completed 3 pay and 1 blank hole for a total of 4 holes.

58VC244, stake C166, a pay hole, is located about 3,000 feet west of Courtois and 520 feet northeast of a pay hole. It bottomed at 745 feet depth in 31 feet of Lamotte sand. Mineralization at the 5/7 contact was estimated as 19.5 feet of 6.1% Pb at 577 feet depth.

58VC247, stake C164, a pay hole, is located about 4500 feet west of Courtois and 520 feet northwest of a pay hole. It bottomed at 717 feet depth in granite which was encountered in the sandy transition zone of the Bonneterre. Mineralization in the middle 7 zone was estimated as 17.1 feet of 2.7% Pb at 598 feet depth.

58VC248, stake C178, a pay hole, is located about 4,000 feet northeast of Courtois and 520 feet southwest of a pay hole. It bottomed at 605 feet depth in Lamotte sand. Mineralization in the lower 5 zone was estimated as 4.7 feet of 10.0% Pb.

58VC246, stake C172, a blank hole, is located about 1500 feet northeast of Courtois and 520 feet north-northeast of a pay hole. It bottomed at 645 feet depth in Lamotte sand. Lower portion of the Bonneterre showed considerable leaching and brecciation.

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JOPLIN, MO

FORM 1173 1-57 [illegible]

4

DATE BOTTOMED [illegible] ST. NO. VC169 ST. ELEV. _____ CLASS TRACE HOLE NO. [illegible]

DESCRIBED BY [illegible] AREA COURTOIS ELEVATION COLLAR 889.24

DATE ESTIMATED [illegible] OPTION NO. CZ-284 COORDINATES: N 118223.64 E 89672.96

BY [illegible] TRACT EMMA PAYNE 200 FT. MAP NO. 36 50 FT. MAP NO. 621

NW¼-NW¼ SEC. 8

MINERALIZATION RECORD 475'S 420'E T35N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 6" FT.

FORM BOTT. SL. _____

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO		
SLEEVE BIT TO	15.	874.2
BEGAN CORING AT	17	872.2
SAVED CORES FROM	235	654.2
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	243	656.2
BONNE TERRE "	504	385.2
B. T. TRANS. "	515	374.2
CONGLOMERATE "	—	
LA MOTTE "	525	364.2
GRAN. OR POR. "	—	
PICTURES: FROM	343	546.2
TO	461	428.2
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% Cu ASSAY	% Cu EST.	FT. %	REMARKS	TO	CORES LOST
												235	
1 [illegible]	284.2	284.4	604.8	0.2		TR						255	
5-1 [illegible]	288.7	288.8	600.4	0.1		TR						267	0.5
7 Cd	418.5	419.1	470.1	0.6		—						305	
7 F	419.1	419.5	469.7	0.4	0.1	—	0.1	0.55	0.70	[illegible]		325	2.6
7 F	421.2	421.4	467.8	0.2		TR						345	1.0
7 F &	422.6	422.7	466.5	0.1		TR						425	
7 F &	427.6	427.7	461.5	0.1		TR						445	1.3
												520	
461.5 - 8.2 - Tr. - Tr Cu.												525	0.6

270'

TR

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JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY JA DATE 10-2-58 MINE Courtois STOPE STAKE NO. VC 169 HOLE NO. 58VC 231

COLLAR ELEV. 890 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
17	873	BEGAN CORING	
235	655	Solid	Bit 17 - 215 - Discord 215 - 235
243	647	Davis	Shale - (243)
285	605	1	TO faint oolite - thin bedded & banded top to 279 - ≤ murky 279 to Base - thin Rbs - > pitting + small vugs - (285)
305	585	5-1	GTO > Bta faint oolite - Bta scattered - > porous oolitic patches - few thin Rbs - > pitting & small vugs - tr Pb @ 289 - tr fes - > dense bands - (305)
351	539	5	GTO Bta > M. Gta med oolite - < Bta - > dense Gbs - > M 330 - 337 - dense Tbs 345 - 350 - few thin Rbs - 6" Gta 337 - 2" Bta @ 340 - > 2½ Bta (351)
368	522	8	GTM : GTO > Bta slightly crepey GTM w/ few Rbs - GTM top to 353, 1' @ Base - > M scattered thru out - > ca + 2½ Bta - > pitting (368)
385	505	5	GTO - F Tam med oolite - F 375 - 381 - Tbs 4" @ 371, 382 - 383 - 2' Gta 380 - 382 - > 2½ Bta 1' 382 - > pitting & vugs - few thin Rbs - (385)
431	459	7	F Tam : E > Gta TXO good reef rock - E 1' 388, 6" @ 390, 4' 392 - 396 5' 422 - 427 - Gt 415 - 417, 6" @ 419 - TXO 417 - 419 - > fracturing tr Pb - > pitting & small vugs - TR Ca (431)
454	436	7-10	F Tam - GTO banded fair reef rock w/ Gta - GTO dense b top to 437, 441 - 446, 447 - 453 - many thin Rbs - > pitting - 2½ Bta (454)
483	407	12-10	GTM > TO > Kb crepey appearance - many thin Rbs - > E 11 bs - few Kbs scattered - > short sections of TO thru out - (483)
504	386	12	GTM > O : E > Bta crepey appearance - many thin Rbs - > Ca Bta E w/ Bt & M 495 to Base - > short sections - slightly crystalline - > pitting - (504)
515	375	19	GTS Dth : E Bt sandy increasing toward Base - Bt & E > top to 509 - 6" slightly brecciated @ 513 - 4" Rainbow slate @ 512 1' E @ Base - (515)
525	365	20	W. Sand med grain - > fes @ 522 - > 6 stain b - (525)

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NOV 17 1958

BUREAU OF MINES
JOPLIN, MO.

17

6

FORM 1173 1-57 DATE STARTED: 9-26-58

205

DATE BOTTOMED 10/7/58	ST. NO. VC-176	ST. ELEV.	CLASS TRACE HOLE NO. 58VC233
DESCRIBED BY	AREA Cousteau		ELEVATION COLLAR 995.75
DATE ESTIMATED 10/6/58	OPTION NO. CZ-85		COORDINATES: N 118551.19 E 92543.18
BY	TRACT CURTIS HENSLEE		200 FT. MAP NO. 36 50 FT. MAP NO. 623
			NW/4-NE/4 SEC. 8

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 15" FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	139.8	868
SLEEVE BIT TO		
BEGAN CORING AT	365	630.8
SAVED CORES FROM	[illegible]	630.8
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	379	616.8
BONNE TERRE "	643	352.8
B. T. TRANS. "	655	340.8
CONGLOMERATE "		
LA MOTTE "	665	330.8
GRAN. OR POR. "	—	
PICTURES: FROM	485	510.8
TO		
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 120'S 1920'W T35N-R1W

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS	TO	CORES LOST
R	495.4	496.1	499.7	[illegible]	1.1	1.0	0.8	✓			Dis[illegible]	365	
"	497.5	497.9	495.9	[illegible]	6.4	1.0	2.6	✓			"	375	—
Sch.	504.8	504.7	490.9	[illegible]		Tr					[illegible]	371	2.0
"	[illegible]	[illegible]	488.9	[illegible]		Tr		✓				[illegible]	—
												655	—
												665	2.0

Tr

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TECHNOLOGY

NOV 17 1958

BUREAU OF MINES
JOPLIN, MO.

FORM 9002-A-5-55

ROCK CLASSIFICATION

DESCRIBED BY G DATE 10-6-58 MINE COURTOIS STOPE STAKE NO. 176 HOLE NO 58VC233

COLLAR ELEV. 996 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
365	631	BEGAN CORING	
379	617	DAVIS BANNE TEISKE	(379
435	561	1	LT>b, ↓ GT b DENSE ↓ - b, LT>o 379 TO 417 - b, GT DENSE ↓ 417 TO 435 - (435)
488	508	5	GB PROUS & VUGGY ↓ > SNURLY B ↓ - < VUGGY < PROUS PATCHES - IRREG DENSE BLUE BANDING > DICKITE ↓ > C ↓ - (488)
501	495	8	GM - > C ↓ : GB, B ↓ - 1' GM, > C ↓ @ 489 - 3' GB, B ↓ @ 492 - 1' GM C ↓ @ 493 - 3' VUGGY @ 496 PASSING @ 496 - 2' GM C ↓ > - 3 @ 498 - 1' GB, > C ↓ @ 499 - 1' GM @ 500 = GB, > SNURLY. 501 - (501)
519	477	5	GT, : ↓ GB > VUGGY - GB ↓ > VUGGY DENSE 501 TO 507 - 2' GT, b, @ 509 - 1' b, VUGGY GB DENSE ↓ TR PB @ 510 - 4' GT, > C ↓ @ 514 - 2' > F > FRACT @ 516 - 1' GT, G ↓ @ 517 - 2' DENSE ↓ b, > VUGGY = 0 - @ 519 - (519)
553	443	7	FT/GTMG ↓ p : GT ↓ b, - GOOD F STRUCT - p, - MED M > C ↓ MATRIX - (553)
584	412	7-10	FT/GTMG ↓ : T, p, b, - BRECCIALLY F p, MED M > C ↓ w/ 2' T, b, > p @ 555 - 4' GT, p, b, @ 563 - 2' < C ↓ p, b, @ 569 - 1' T, @ 571 - 3' T, b, @ 577 - (584)
622	374	10-12	GTMw : T, ↓ - BRECCIALLY GTMw > C ↓ w/ 2' T, > b, @ 592 - 1' @ 603, 607, 611, 615, 617 & 623 BASE - (622)
643	353	12	GTMw > C ↓ - p, - MED HEAVY M ↓ w - > C ↓ - = SPACE AND INNER 643 TO BASE - (643)
655	341	19	GSDM - SPARSE SAND INCREASING TO MED TOWARD BASE - THIN "RAINBOW" SLATE ↓ @ 645 - > M : > b, - 2' ↓ - SANDY @ BASE - (655)
665	331	20	WS - CLEAN, MED FINE GRAIN WS - 2' GT ↓ 655 TO 665 - (665)

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BUREAU OF MINES
JOPLIN, MO.

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FORM 1173 1-57 DATE STARTED - 10-1-58

DATE BOTTOMED 10/7/58	ST. NO. VC/68	ST. ELEV.	CLASS TRACE HOLE NO. 5[illegible]
DESCRIBED BY G	AREA Courtois		ELEVATION COLLAR 896.97
DATE ESTIMATED 10/7/58	OPTION NO. CZ-284		COORDINATES: N 118574.34 E 89302.91
BY G	TRACT EMMA PAYNE		200 FT. MAP NO. 36 50 FT. MAP NO. 621
			NW¼-NW¼ SEC. 8

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 6" FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO		
SLEEVE BIT TO	22	875.0
BEGAN CORING AT	225	672.0
SAVED CORES FROM	225	672.0
FORMATIONS:		
SOIL TO		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	232	664.0
BONNE TERRE "	494	403.0
B. T. TRANS. "	507	390.0
CONGLOMERATE "	—	
LA MOTTE "	542	355.0
GRAN. OR POR. "	—	
PICTURES: FROM	271	568.0
TO	419	448.0
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 120'S 45'E T35N-R1W

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS	CORE REC. TO	CORES LOST
SH	312.0	312.1	584.9	0.1		TR					[illegible]	225	
7	372.3	373.8	523.2	1.5		TR	—				"	[illegible]	—
"	373.8	377.0	520.0	0.2		TR					"	[illegible]	11.0
1 10	421.0	421.2	475.8	0.2		TR					"	[illegible]	12.0

TR

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BUREAU OF MINES
JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY CA DATE 10-7-58 MINE COURTOIS STOPE STAKE NO. [illegible]-168 HOLE NO. F8VC234

COLLAR ELEV. 897 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
225	672	BEGAN CORING	
233	664	DAVIS DONNETERRE	
276	621	1	LT$_o$b, + GTb DENSE b - b, LT$_o$ 233 TO 261 - GTb$_2$ DENSE b > P$_2$ 261 TO BASE - (276)
340	557	5	GB$_{to}$ Bt b - 1$_v$ - > P$_v$ - b, GTXL o - < B & BRNUS B & - D & - > FRACT - TR PB @ 312 - 1' GM ~ - G & @ 323 & 1' GT$_o$ K & @ 326 - 3' b$_3$ GT DENSE b @ 338 - 2' GT$_o$ > G & @ 340 - (340)
347	550	R	GM ~ > G & + GT$_o$ - G b - 2' GM ~ > G & @ 342 - 4' GT$_o$ > G & > Ca & VEINLETS @ 346 - 2' GT$_o$ K & > G & @ BASE - (347)
367	530	5	GT$_o$ > G & 1' GB b DENSE b - 2' GB b DENSE b @ 349 - 2' GT$_o$ > G & b Ca VEINING 351 - 1' GB b DENSE b$_3$ 352 - GT$_o$ > G & b$_1$ > K & D & Ca & 352 TO 366 - 1' GT b$_3$ > DENSE b @ 367 - (367)
421	476	7	FT/GTMG & : GT$_o$ G & - BASICALLY GOOD SUURLY F STRUCT W/ MED M > G & MATRIX - TR PB @ 377 - Ca & - 3' GT$_o$ G & @ 417 - (421)
441	456	7-10	FT/GTMG & : T$_o$ b > G & - SUURLY REEF Ca & M > G & - W/ 3' T$_o$ b$_1$ > G & @ 424 - 1' T$_o$ b$_2$ @ 434 & 3' T$_o$ b$_2$ @ 439 - (441)
471	426	12-10: F	GTM ~ : T$_o$ b : > F - < M & ~ > N b W/ 6" T$_o$ @ 447 - 6" F + O @ 460 - 1' T$_o$ @ 465 - F' O W/ > M @ 471 - (471)
494	403	12	GTM ~ - D & - MED HEAVY M & ~ . > G & > Ca & - > SANDY BANDS 490 TO BASE - (494)
508	389	19	GTMSD - SPARCE SAND INCREASING TO MED TOWARD BASE > D & - > M & ~ - 2' > L @ BASE - (508)
542	355	20	WS - CLEAN - MED FINE GRAIN - SCATT FeS$_2$ PATCHES & - > GRINDING - (542)

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BUREAU OF MINES
JOPLIN, MO.

FORM 1173 1-57 DATE STARTED [illegible]

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205

DATE BOTTOMED 10-9-58 ST. NO. VC-177 ST. ELEV. _____ CLASS TRACE HOLE NO. 58VC235

DESCRIBED BY [illegible] AREA COURTOIS ELEVATION COLLAR 1027.28

DATE ESTIMATED 10-9-58 OPTION NO. CZ-100 COORDINATES: N 119816.24 E 91935.81

BY [illegible] TRACT JAS. SELLERS 200 FT. MAP NO. 36 50 FT. MAP NO. 582

SW¼-SE¼ SEC. 5

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 22" FT.

FORM BOTT. SL. _____

DRILLED WITH:

CHURN DRILL TO

SLEEVE BIT TO

BEGAN CORING AT

SAVED CORES FROM

FORMATIONS:

	DEPTH	ELEV.
SOIL	TO	
	"	
EMINENCE	"	
POTOSI	"	
POTOSI-DERBY	"	
DERBY DOE RUN	"	
DAVIS (C.B.-~~S.B.~~)	"	414613.3
BONNE TERRE	"	415352.3
B. T. TRANS.	"	417333.3
CONGLOMERATE	"	
LA MOTTE WS	"	705322.3
GRAN. OR POR.	"	

PICTURES: FROM 456571.3 TO 636391.3

CHAR. SAMPLES: FROM TO

INSOL. RES.: FROM TO

OPENINGS AT

MINERALIZATION RECORD 140'N. 258'S.W. T35N-R1W

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS	TO	CORES LOST
												395	
.5 Bx. Bx	473.3	474.2	553.1	0.9		TR					Speck TR	415	1.0
"	478.5	481.5	548.8	3.0		TR					" "	495	—
PR	530.3	530.4	496.9	0.1		TR					Patches	506	1.0
7F	573.0	573.6	453.7	0.6		TR					Specks	545	—
7/F	584.0	584.3	443.0	0.3		TR					"	555	0.5
7/10 TGb	595.8	596.2	431.1	0.4		TR					[illegible]	595+	—
												601	1.5
												605	—
												617	1.0
												683	—
												695+	0.2
												705+	0.8

765

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BUREAU OF MINES
JOPLIN, MO.

#17

FORM 9002-A-5-55

ROCK CLASSIFICATION

DESCRIBED BY X H DATE 10-10-58 MINE Courtois STOPE STAKE NO. VC 177 HOLE NO. 58VC235

COLLAR ELEV. 1026 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
158	868	~~BEGAN CORING~~	Sleeve
161	865		2 1/2" Casing -
365	661		Solid Bit
365	661	Began	Coring
395	631	Saved	Cores
414	612	DAVIS	(414)
		Bennaterre -	
449	577	1	Dense TBb - vugs > fractures - moderately ℓ upper half (449)
461	565	1-5	Interbedded dense TBb, And BM porous Bf sandy. (461)
525	501	5	BxOM porous Bf - ℓ 474 - 478.5, 481.5 - 525 - TR Pb 473.3-474.2 478.5-481.5 (525)
538	488	PR	Dense mostly ℓ ETM crepe b. : GM, : ℓ porous Bf, 1' FBGM Reef @ 536 TR Pb @ 530.4. (538)
556	470	5	ℓ TO p2 massive - 1-6" BO @ 542 - : ℓ dense TGb 552-556 (556)
595	431	7	FTGM Dense Reef porous dull, ℓ Sections 556-570, 578-583, 586-592, TR Pb 573-573.6, 584.0-584.3, (595)
624	402	7/10	Interbedded FTGM Reef, GTO mostly ℓ - Some Scattered ℓ Dense TGb lenses - 6" GFM @ 609 - most of Reef ℓ Rotten Vuggy - TR Pb in vugs dense Tb 575.8-576.2. (624)
632	394	10/12	Interbedded banded TO p2, And GTM + GEM crepe b dense (632)
638	388	12	GEM irregular Hb - crepey dense (638)
675	351	12-19	Rotten porous vuggy GTM crepe b, And KR Breccia, Later type predominant - ℓ WEM from 669-675. (675)
693	333	19	ℓ dense TEM Bf > sandy Dolomite mostly crepe b - : fractured (693)
694	332	19	ℓ ITEM DS - Sparse diss. feldspar grits - (694) Granite pebble @ base.
705	321	20	La Motte WS medium grain Sugary porous - mostly > ≯ fine bedded. Clean - (705)

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BUREAU OF MINES
JOPLIN, MO.

FORM 1173 1-57 DATE STARTED - 10-14-58

205

DATE BOTTOMED 10-17-58	ST. NO. VC167	ST. ELEV.	CLASS TRACE (SPECK) HOLE NO. 58VC238
DESCRIBED BY JA	AREA COURTOIS		ELEVATION COLLAR 1016.89
DATE ESTIMATED 10-21-58	OPTION NO. 044857		COORDINATES: N 119140.18 E 88783.51
BY JA	TRACT U.S. FOREST LAND		200 FT. MAP NO. 36 50 FT. MAP NO.
			SE/4 SE/4 SEC. 6

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 24" FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	90.	926.9
SLEEVE BIT TO		
BEGAN CORING AT	90	926.9
SAVED CORES FROM	345	671.9
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	355	661.9
BONNE TERRE "	635	381.9
B. T. TRANS. "	652	364.9
CONGLOMERATE "	—	
LA MOTTE "	665	351.9
GRAN. OR POR. "	—	
PICTURES: FROM	434	582.9
TO	568	448.9
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO	—	
OPENINGS AT		

MINERALIZATION RECORD 466'N 475'W T35N-R1W

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS
Z F	565.2	565.3	451.6	0.1		TR					

320'

CORE REC.

TO	CORES LOST
345	—
513	—
520	0.7
532	1.0
640	—
655	3.0
665	6.0

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BUREAU OF MINES
JOPLIN, MO.

FORM 9002-A-5-55

ROCK CLASSIFICATION

DESCRIBED BY JA DATE 10-21-58 MINE Courtois STOPE STAKE NO. VC 167 HOLE NO. 58VC238

COLLAR ELEV. 1016 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
90	926	BEGAN CORING	
345	671	Solid	Bit 95-305 - Discard 305-345
355	661	Davis Bonne Terre	Shale - (355)
397	619	1	TO faint oolite - thin bedded & banded top to 384 - smurly 384 to Base - few thin Rbs top to 384 - many Rbs 384 to Base - > ca patches > dense bs toward Base - (397)
417	599	1-5	GTOB# < dense Cbs faint oolite - E#s scattered thru out - few thin Rbs - > pitting - many dense Cbs - (417)
447	569	5	GTOB# med oolite - < E#s - > porous oolitic patches - < pitting < small vugs - many 2 MD #s - > dickite #s - thin bed & band 425 to Base - few thin Rbs (447)
459	557	8	GTM-TO & Cts med oolite - TO banded 448-450, 452 to Base - 6" Cts @ Top - few thin Rbs - < porous oolitic patches - few E#s > ca #s - (459)
499	517	5	GTO > dense Cbs med to large oolite - few thin Rbs - > 2 MD #s - few dense Tbs - < pitting - > M patches - few E#s - (499)
569	447	7	FTM > Cbs good reef rock - many thin Rbs - < Cts scattered TO banded 554-558 - C# 558-562 - tr PKs 566 - < 2 MD #s - < pitting & small vugs - > fracturing - (569)
597	419	7-10-12	GTOM:F slightly crepey - med oolite - 1' F @ 570, 8" @ 594, 2 @ Base - many thin Rbs - > E Nbs - < pitting - ca & 2 MD #s > E# Cts - (597)
635	381	12	GTM > O:E very crepey - many thin Rbs - E' E 602-604, 2' 606-608, 1' 610, 2' 615-617 - < E# Cts 626 to Base w/few sandy bands - > ca #s & seams (635)
652	364	19	GTSDM:E fairly sandy - many thin Rbs - < M patches - 1' E @ 638 5' 647 to Base - > E substance Base - 1' @ Base DS - tr fes - > E#s > dickite #s - (652)
665	351	20	W. Sand med grain - fes #s - > grinding - (665)

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BUREAU OF MINES
JOPLIN, MO.

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FORM 1173 1-57 DATE STARTED.

DATE BOTTOMED 10-22-58	ST. NO. VC/59 ST. ELEV.	CLASS PAY HOLE NO. 58VC 239
DESCRIBED BY G	AREA Courtois	ELEVATION COLLAR 1138.94
DATE ESTIMATED 10-24-58	OPTION NO. 044857	COORDINATES: N 117011.95 E 81759.32
BY G	TRACT U. S. FOREST LAND	200 FT. MAP NO. 4S 50 FT. MAP NO.
		SW 1/4 - NE 1/4 SEC. 12

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 24" FT.
FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	221.	9179
SLEEVE BIT TO		
BEGAN CORING AT	455	6839
SAVED CORES FROM	455	6839
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	471	6674
BONNE TERRE "	735	4039
B. T. TRANS. "	747	3911
CONGLOMERATE "	—	
LA MOTTE "	761	3779
GRAN. OR POR. "		
PICTURES: FROM	410	6661
TO	761	3779
CHAR. SAMPLES: FROM		
" TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 1810'S 2350'W T35N-R2W

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	%Cu ASSAY	%Cu EST.	FT. %	REMARKS	CORE REC. TO	CORES LOST
SCM-Cm	568.0	568.5	5704	0.5		TR					SPECK	455	
"	571.0	572.0	5669	1.0		TR					FRACT	615	—
TC & Fr	645.0	647.0	4919	2.0	10.8	12.0	21.6				DISS	627	2.0
"	647.0	650.7	4882	3.7	1.5	2.0	5.6				"	702	—
"	650.7	653.2	4857	2.5	2.0	1.0	5.0				"	712	1.0
F	667.5	668.4	4705	0.9	0.8	1.0	0.7				"	721	2.0
"	671.7	672.3	4666	0.6		TR					SPECKS	749	—
T-10	702.0	702.5	4364	0.5		TR					"	761	1.0
T-10 Chert	702.5	704.2	4347	1.7	6.3	6.0	10.7	0.17	0.5	0.28	FRACT. DISS		
"	704.2	706.4	4325	2.2		TR					FLECKS		
10-12-Cd	706.4	707.3	4316	0.9	4.9	8.0	4.4				DISS		
10-12	707.3	708.1	4308	0.8		TR					SPECKS		

485.7 - 8.2 - 3.9
431.6 - 4.8 - 3.2

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JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE 10-22-58 MINE Courtois STOPE STAKE NO. VC 159 HOLE NO. 58VC1239

COLLAR ELEV. 1138 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
455	[illegible]	BEGAN CORING	
471	[illegible]	DAVIS BANNETERRE	(471)
524	[illegible]	1	LT>b; GT Dense - b, LT>b, STYLO 471 TO 485 - GT Dense 485 TO 524 - (524)
571	[illegible]	5	GB, Bd p2; GM - b, STYLO - Bd Broad Bd Patches > FRACT. < Small Df - Tr Pb @ 550. GT, Faintly M Bd, Faintly Bf 552 TO BASE - Tr Pb 568 - (571)
605	[illegible]	5	T b - MED O - > Df - > FRACT - ; p2 - STYLO b, - > Gd @ BASE - (605)
692	[illegible]	7	FT/GTMC; GdGT p2 - Prom F - SNURLY 676 TO 633 - > Gd FRACT 617 TO 625 - p b < Gd b 625 TO 633 - FeS @ 633 - F > p2 < M 633 TO 646 - 5' GT < Gd p2 Good Disc Pb 651 - F SNURLY 651 TO 672 - > Pb Tr 667 TO 672 - 1' Dense GT > Gd FRACT 673 - 1' GT - Bd INCREASING 676 - F SNURLY < M 676 TO BASE - 2' @ 687 - 6" < Bd @ BASE - (692)
704	[illegible]	7-10	GFC b, Gd FT/GTM - 1' GT - C b, STYLO @ 696 - F 696 TO BASE - 2' IND b @ BASE - (704)
735	[illegible]	10-12	> C GFACTM - > C GT b, STYLO FRACT TO 714 - 1' F @ 712 - > C GTM 714 TO 714 - F GT > Kd 714 TO BASE > FRACT - 1' IND Pb @ 707 - (735)
747		19	GT DM - > FRACT - MED M - MED SANDY INCREASING TOWARD BASE - > Df 1' > C @ 737 - Gd > C @ BASE - (747)
761	[illegible]	20	W - 1' > E TAINED @ TOP - W 741 TO BASE - FeS2 Gd THROUGH - (761)

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BUREAU OF MINES
JOPLIN, MO.

FORM 1173 1-57 DATE STARTED 10-17-58

DATE BOTTOMED [illegible] ST. NO. VC/62 ST. ELEV. _____

DESCRIBED BY Ca AREA Courtois

DATE ESTIMATED 10-24-58 OPTION NO. CZ-284

BY Ca TRACT EMMA PAYNE

CLASS SPECK TRACE HOLE NO. 58-[illegible]

ELEVATION COLLAR 994.66

COORDINATES: N 117152.31 E 90768.19

200 FT. MAP NO. 46 50 FT. MAP NO. 662

SE¼-NW¼ SEC. 8

MINERALIZATION RECORD 1520'S 1535'E T35N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 23" FT.

FORM BOTT. SL. _____

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	104	890.7
SLEEVE BIT TO		
BEGAN CORING AT	355	639.7
SAVED CORES FROM	355	639.7
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "	—	
DERBY DOE RUN "	—	
DAVIS (C.B.-S.B.) "	369	625.7
BONNE TERRE "	613	381.7
B. T. TRANS. "	618	376.7
CONGLOMERATE "	—	
LA MOTTE "	635	359.7
GRAN. OR POR. "		
PICTURES: FROM	460	534.7
TO	560	434.7
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS
1 CG Lm	402.5	402.1	591.6	0.1		TR	—				SPECK
5 Cf	48[illegible]	4[illegible].1	506.6	0.1		TR	—				"

CORE REC. TO	CORES LOST
355	
515	—
521	1.0
523	1.0
525	1.0
531	1.0
635	—

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NOV 17 1958

BUREAU OF MINES
JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE [illegible] MINE [illegible] STOPE STAKE NO. VC 162 HOLE NO. 58VC240

COLLAR ELEV. 774 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
[illegible]	[illegible]	BEGAN CORING	
367	[illegible]	DAVIS TUNNEL	(367)
41[illegible]	[illegible]	1	LT>b, & GT, DENSE b - LT>b, STYLO 364 TO 395 - GT, DENSE b, >VUGGY 395 TO 41[illegible] - TR Pb @ 402 - 1' (41[illegible])
416	[illegible]	[illegible]-1	GD, b, b>DENSE b - BRECKILLY GD>a b b >2ND D w/ SCATT DENSE GT b - (416)
473	[illegible]	[illegible]	GT, B b, b - DOMINANT B b <POROUS b - >FRACT - >IRREG b BEDDING >POROUS PATCHES >D b 444 TO 473 - 2' b, T₀ @ 468 - 1' G b @ BASE - (473)
481	[illegible]	R	GM w GP b, GT D, b>G b - 1' GM w @ 474 - 1' GB b, @ 475 - 1' GM w >G b @ 476 - 3' GB b, >D b @ 479 - 2' GT₀ b, >G b & G b - (481)
492	[illegible]	[illegible]	T₀ p b, & GT DENSE >b, - 3' GT DENSE >b, @ 484 - 1' >F @ 485 - 2' GT DENSE b, @ 487 - - GT₀ G b, p, @ 492 - TR Pb @ 489 - 2" Ca @ BASE - (492)
533	[illegible]	7	F/GTM >G b, >p, GT DENSE — GOOD F p, >NURLY, FRACT - 1' DENSE GT @ 527 - (533)
557	[illegible]	7-10	F/GTM p, & GT₀ b, — 3' GT₀ b, STYLO 526 - 3' F @ 533 - 1' GT₀ b, @ 533 - F 537 TO 542 - 1' T₀ @ 543 - SNURLY, REF F 543 TO 549 - 2' T₀ b, @ 551 - GT₀ >M 551 TO 555 - >REFEX 555 TO BASE - (557)
592	[illegible]	10-12	GT & GT GEM: H b - T₀ >b, >K b >FRACT 557 TO 566 - GT GEM >H b 576 - 1' T₀ b, STYLO @ 577 - 2' GTM w @ 580 - 2' T₀ b, STYLO @ 582 - GTM w/ SCATT T b 582 TO 584 - 1' T₀ @ 585 - 1' GTM w @ 586 - 1' T₀ @ 587 - GTM w >G b >SCATT T₀ b >Ca & D b 587 TO 592 - (592)
578	[illegible]	12	GTM w - MED M & w - >Ca & D b - (578)
601	[illegible]	11	GEM w LS₃ - MED M & w - <Ca b - LS₃ - >G b - (601)
613	[illegible]	12	GTM w - MED HEAVY M & w - >G b - >SANDY @ 609 - >FRACT - (613)
618	[illegible]	19	GS D >M >B b & G b - MED SAND CONTENT - >M - G b & B b - >D b - 2' @ BASE - (618)
635	[illegible]	20	WS - CLEAN - MED FINE GRAIN - >SCATT FeS₂ b - (635)

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BUREAU OF MINES
JOPLIN, MO.

FORM 1173 1-57 DATE STARTED 10-17-58

205

DATE BOTTOMED 10-22-58	ST. NO. 161	ST. ELEV.	CLASS PAY
DESCRIBED BY JA	AREA (Courtois)		HOLE NO. 58 VC 241
DATE ESTIMATED 10-24-58	OPTION NO. CZ-67		ELEVATION COLLAR 1118.79
BY JA	TRACT G.D. EVANS		COORDINATES: N 117485.77 E 86032.59
			200 FT. MAP NO. 45 50 FT. MAP NO. 660
			NE¼-NW¼ SEC. 7

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 18" FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	160	958.8
SLEEVE BIT TO		
BEGAN CORING AT	160	958.8
SAVED CORES FROM	395	723.8
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	406	712.8
BONNE TERRE "	630	488.8
B. T. TRANS. "	—	
CONGLOMERATE "	650	468.8
LA MOTTE "	—	
GRAN. OR POR. "	—	
PICTURES: FROM	499	619.8
TO	650	468.8
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 1260'S 1875'E T35N-R1W

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% Zn ASSAY	% Zn EST.	FT. %	REMARKS	CORE REC. TO	CORES LOST
5 TO	525.5	525.6	593.2	0.1		TR						395	
" "	529.0	529.1	589.7	0.1		TR						525	
5 TO	535.0	535.6	583.2	0.6	0.2	1.0	0.1				diss.	545	0.5
" "	535.6	537.9	580.9	2.3		TR						557	2.0
7 F + TO	537.9	538.5	580.5	0.4	1.2	2.0	0.5				diss	569	
7 TO + 6	540.0	542.2	576.6	2.2		TR						587	1.2
" "	542.2	542.7	576.1	0.5	0.1	TR	0.1	0.05	0.3	0.02	diss cm	627	
7 F + TO 6	542.7	543.7	575.1	1.0	2.9	1.5	2.9		TR		diss.	641	1.7
" "	543.7	544.1	574.7	0.4		TR			TR			650	1.9
7 F	557.0	560.2	558.6	3.2	1.5	1.0	4.8				diss		
" "	561.6	562.9	555.9	1.3	4.3	3.0	5.6	555.9-5.9-1.8			< fo = Pb cm sulf		
" "	564.1	564.4	554.4	0.3		TR							
" "	569.7	570.1	548.7	0.4		TR							
" "	571.9	574.0	544.8	2.1	0.6	1.0	1.3				banded diss		
" "	574.0	575.1	543.7	1.1		TR		539.1-7.8-2.9					
" "	575.1	579.7	539.1	4.6	4.6	5.0	21.2				cement cube diss		
" "	579.7	580.9	537.9	1.2		TR							
" "	581.4	581.6	537.2	0.2		TR							
" "	583.1	583.3	535.5	0.2		TR							
" "	584.2	585.4	533.4	1.2		TR							
" "	588.9	589.9	528.9	1.0		TR						255	
" "	591.8	592.8	526.0	1.0	2.4	1.0	2.4				cm cube diss		
" "	597.7	601.0	517.8	3.3		TR							
" "	604.0	604.5	514.3	0.5	2.1	1.0	1.1				cube & diss		
" "	615.0	615.2	503.6	0.2		TR							
" "	616.0	616.1	502.7	0.1		TR							
" "	620.6	622.4	496.4	1.8		TR							
" "	623.7	624.7	494.1	1.0	0.3	1.0	0.3				diss		
" "	627.7	628.4	490.4	0.7		TR							
" "	630.3	630.7	488.1	0.4		TR							

PAY

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BUREAU OF MINES
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FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY JA DATE 10-24-58 MINE Courtois STOPE STAKE NO. VC 161 HOLE NO. 58VC241

COLLAR ELEV. 1118 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
160	959	BEGAN CORING	
395	723	Discard 160-165	— Solid Bit 165-375 — Discard 375-395
406	712	Davis Shale — Bonne Terre	(406)
445	673	1	TO-GTO thin bed & band faint oolite - fairly massive TO top to 420 w/ few thin Rba - GTO thin bed & banded 420-437 - smurly 437 to Base - > ca seams & bands - > pitting (445)
461	657	1-5	GTO > Bta slightly smurly faint oolite - many thin Rba - short Bta sections - > ca tr - > pitting (461)
496	622	5	GTO Bt > M med oolite - < Bta - few thin Rba - scattered M increasing toward Base - porous oolitic patches - ca tr > dickite — (496)
538	580	5	GTO > Gta med to large oolite - few thin Rba - ca tr - > Gta scattered - > M patches - 1" ca band @ 529 - Bt > Gta 529-532 1' w/ Gta @ Base — (538)
630	488	7	Flaxseed Gt good roof rock - many thin Rba - 3' Gta 541-544 — 4' w/ < LG M 610-614 — N appearing roof 621 to Base — ca tr & seams — Tr Pb scattered - fair Pb 575-580 - fracturing tr ca (630)
650	468	18	Red Granite Cobbles & pebbles w/ LG & N matrix — Good N matrix - > LG D - 6" Red Granite Cobble @ top, 4" @ 635, 3" @ 639, 8" @ 640 6" @ 641 cobbles & pebbles w/ LG D matrix 642 to Base - tr Pb - > grinding — (650)

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BUREAU OF MINES
JOPLIN, MO.

FORM 1173 1-87 DATE STARTED 10-22-58

DATE BOTTOMED 10-24-58	ST. NO. VC 173 ST. ELEV.	CLASS TRACE HOLE NO. 5-3 VC 213
DESCRIBED BY Q	AREA COURTOIS	ELEVATION COLLAR 1050.05
DATE ESTIMATED 10-28-58	OPTION NO. CZ-284	COORDINATES: N 118517.44 E 906602.41
BY Q	TRACT Emma Payne	200 FT. MAP NO. 36 50 FT. MAP NO. 622
		NE1/4-NW1/4 SEC. 8

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 24" FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	178	872.1
SLEEVE BIT TO		
BEGAN CORING AT	375	675.1
SAVED CORES FROM	375	675.1
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "	—	
DAVIS (C.B.-S.B.) "	413	637.1
BONNE TERRE "	667	383.1
B. T. TRANS. "	682	368.1
CONGLOMERATE "	—	
LA MOTTE "	695	355.1
GRAN. OR POR. "	—	
PICTURES: FROM		
TO		
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 170'S 1405'E T35N-R1W

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS	TO	CORES LOST
5 To	537.5	541.0	509.1	1.5		TR	—				Fence	375	
5 F	551.0	551.1	499.0	0.1		TR					Specks	511	—
7 F	577.3	577.4	472.7	0.1		TR					"	555	4.0
"	588.8	589.0	461.1	0.2		TR					"	695	—
"	591.5	593.5	456.6	2.0		TR	—				Fence		
7-10	603.0	603.1	447.0	0.1		TR					Specks		
10-12	620.0	620.1	430.0	0.1		TR					"		

CORE REC.

TR

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BUREAU OF MINES
JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE [illegible] MINE [illegible] STOPE STAKE NO. [illegible] 173 HOLE NO. [illegible]

COLLAR ELEV. 1049. PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
375	674	BEGAN CORING	
413	636	DAVIS BONNETERRE	(413)
464	585	1	LT>b, & GT, DENSE b - b, LT>b STYLO 413 TO 451 - GT, DENSE b, 451 TO 464 - (464)
521	528	5	GB, Bt: STYLO - >SUURLY - Bt & BROWN Bt PATCHES - >VUGGY - >Dt - >Py - (521)
534	515	R	GM~~ & GB, b, Bt - 2' GM~~ & Bt 523 - GB, b, STYLO - Bt 531 - GM~~ 532 - GT, >Bt 533 - GM>~~ @ 534 - (534)
541	508	5	T, >Bt - b, STYLO - >Py - >FINE Bt - TR Pb @ 540 - (541)
562	487	5F	F+/GTM & Py - GT, - FORMS LEEF STRUCTURE - FRACT - TR Pb 551 - 2' GB, >COLOR BANDED >VUGGY @ 562 - (562)
596	453	7	F+/GTM & >Py - SURLY - FROM F - TR Pb @ 577, 581, & 593 - 1' T, b, Py @ 592 - (596)
620	429	7-10	F+/GTM & Bt: T, b - BASICALLY F W/ GM & Bt MATRIX >Py, FRACT W/ 4' GT, & Bt @ 604 - 1' @ 607 - F 609 - T, b, 611 - F 613 - T, b, 619 - Bt & GT 620 - (620)
651	398	10-12	GTM~~ >Hl: T, b STYLO - T, & GT, b >m 620 TO 628 - GTM~~ >Hl 628 TO 631 - GT, 632 - GTM~~ 644 - T, 645 - GTM~~ 648 - GT, 649 - GTM~~ 650 - T, 651 - (651)
667	382	12	GTM~~ >T, b - MED HEAVY m & ~~ - >Bt - Ca & Dt - SCATT T, b - (667)
682	367	14	GTM 3D: F b - SPARCE S INCREASING TO MED - >M - FAINTLY Bt 675 TO BASE - >FRACT >Ca VEINLETS - 1' LGE @ BASE - (682)
695	354	20	WS - CLEAN - MED FINE GRAIN - >FRACT - TR FeS, - (695)

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BUREAU OF MINES
JOPLIN, MO.

FORM 1173 1-57 DATE STARTED - 10-23-58

DATE BOTTOMED 10-27-58	ST. NO. 166 ST. ELEV.	CLASS PAY HOLE NO. 58VC 244
DESCRIBED BY JA	AREA VC (Courtois)	ELEVATION COLLAR 1119.27
DATE ESTIMATED 10-29-58	OPTION NO. CZ-67	COORDINATES: N 117611.94 E 86528.75
BY JA	TRACT G. D. EVANS	200 FT. MAP NO. 35 50 FT. MAP NO.
		NE¼-NW¼ SEC. 7

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 18" FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	170	949.3
SLEEVE BIT TO		
BEGAN CORING AT	170	949.3
SAVED CORES FROM	425	694.3
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	433	686.3
BONNE TERRE "	711	408.3
B. T. TRANS. "	714	405.3
CONGLOMERATE "	—	
LA MOTTE "	745	374.3
GRAN. OR POR. "		
PICTURES: FROM	537	587.3
TO	464	455.3
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 1120'S 2380'E T35N-R1W

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ZN ASSAY	% ZN EST.	FT. %	REMARKS	CORE REC. TO	CORES LOST
5 GTO	556.5	557.7	561.6	1.2		TR						425	—
" "	557.7	558.2	561.1	0.5	2.2	1.0	1.1	10.0	20	5.0	diss	445	—
5 TO	558.2	559.8	559.5	1.6	2.8	1.0	4.5				scam diss	455	1.0
" "	559.8	560.6	558.7	0.8		TR		SA2.1 - 19.5 - 8.0				486	—
5 GTO:E	560.6	564.5	558.8	3.9	3.5	2.5	13.6				cube diss	498	1.8
5 GTO:7F	564.5	569.5	549.8	5.0	28.1	20.0	140.5				concentrated diss	502	2.2
7 F	569.5	571.1	548.2	1.6	5.6	2.5	9.0				diss	582	—
" "	572.8	573.8	545.5	1.0	1.6	1.5	1.6				cube	593	1.0
" "	573.8	574.7	544.6	0.9		TR						611	1.0
" "	574.7	577.2	542.1	2.5	1.0	1.0	2.5				diss	625	—
7 TOG &	577.2	578.5	540.8	1.3		TR						639	1.0
7 F	587.2	587.7	531.6	0.5	1.8	1.0	0.9				diss	649	1.3
" "	599.3	599.7	529.6	0.4		TR						709	—
7 7xOG&	625.2	625.3	494.0	0.1		TR						725	4.4
7 7xOG&vF	632.6	634.3	485.0	1.7		TR						734	1.0
	722.3	722.7	396.6	0.4	0.1	TR	0.1					745	3.0

Cu

	Assay	Est	
564.5 569.5 549.8 5.0	0.28	1.0	1.40
569.5 571.1 548.2 1.6	0.29	0.3	0.46

7 1 W.S.	718.9	719.8	399.5	0.9		TR						320'	
	722.3	722.7	396.6	0.4	2.8	1.5	1.12						

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FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY JA DATE 10-29-58 MINE Courtois STOPE STAKE NO. VC 164 HOLE NO. 58VC244

COLLAR ELEV. 1119. PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
170	949	BEGAN CORING	
425	694	Discard 170-173 - Solid Bit 173 - 385 - Discard 385-425	
433	686	Davis Shale - Bonne Terre	(433)
474	645	1	GTO faint to med oolite - fairly massive top to 448 - thin bedded & banded 448-465 - slightly smurly 465 to Base - many thin Rbs - > porous oolitic patches - > pitting - (474)
493	626	1-5	GTO > Bts - slightly smurly faint to med oolite - slightly smurly - many thin Rbs - > pitting - > Bts scattered - & dense Co bands - (493)
533	586	5	GTOBtiE - med oolite - < Bts - E 502-516 - thin bed & band 516-526 - GTO Bts wl > M 526 to Base - > pitting & small vugs - > dickite & ca tr - (533)
569	550	5	GTO:E med to large oolite - few thin Rbs - < ca tr - few Bts - E 552-555 - 1" fes band @ 554, 3" @ 556 - tr Pb 556-564 - good Pb 564 to Base - > pitting - > N patches - TR > N & Cu (569)
601	516	7	E Bm - TR Gt iE good reef rock - few thin Rbs - tr to fair Pb top to 579 - & 571-573 - TR Gt 577-585, faint to med oolite & X - > ca tr - > pitting (601)
633	486	7	GTXGt faint to med oolite - slightly crystalline - few thin Rbs - < Gt tr - > pitting - > Kb - < grit 624 to Base - tr Pb - (633)
654	465	7	E Bm Gt - oolitic good reef rock - many thin Rbs - > Gt tr scattered - < oolite thru out - > pitting - > fracturing - (654)
676	443	12-10	GTOm > E H fairly crepey - many thin Rbs - faint Hb med oolite > E Hb < 667-670 - > Gt Bts - (676)
711	408	12	GTm > Gt Bts very crepey - many thin Rbs - > pitting - > Gt Bts scattered - > ca tr & patches - (711)
714	405	19	GT > DM > E fairly sandy increasing toward Base - 1' E @ Base - few thin Rbs - > grit - (714)
745	374	20	L.U. Sand med grain - < fes tr top to 724 - > " wl cu @ 722 - > Gt bs - (745)

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BUREAU OF MINES
JOPLIN, MO.

FORM 1173 1-57

DATE BOTTOMED

DESCRIBED BY

DATE ESTIMATED

BY

ST. NO. 177

ST. ELEV.

AREA

OPTION NO. CZ-100

TRACT JAS. SELLERS

CLASS BLANK

HOLE NO.

ELEVATION COLLAR 1024.48

COORDINATES: N 118810.56 E 30224.12

200 FT. MAP NO 36

SW1/4-SW1/4 SEC. 5

MINERALIZATION RECORD 180'N-1030'E T35N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 18" FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	1?1 895.5	
SLEEVE BIT TO		
BEGAN CORING AT	1? 895.5	
SAVED CORES FROM	669.5	
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	653.5	
BONNE TERRE "	389.5	
B. T. TRANS. "		
CONGLOMERATE "		
LA MOTTE "	379.5	
GRAN. OR POR. "		
PICTURES: FROM	556.5	
TO	445.5	
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST	FT. % ASSAY	FT % EST	REMARKS
			515.7						
			478.6						
			478.3						
			477.2						
			477.0						

477.0 - 1.6 - 2.4 Cu.

CORE REC

CORES LOST

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JOPLIN, MO.

FORM 9002-R-5-55

ROCK [illegible]

DESCRIBED BY [illegible] DATE [illegible] MINE [illegible] STOPE [illegible] STAKE NO. [illegible] HOLE NO. [illegible]

COLLAR ELEV. [illegible] PITCH [illegible] BEARING [illegible] COORD.: N [illegible] E [illegible]

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
[illegible]	[illegible]	BEGAN CORING	
[illegible]		[illegible]	
2.71		Lower Slate	(2.71)
		Lower Tenre	
4.12		1	[illegible]
			[illegible]
			[illegible] (4.12)
4.21		1-5	[illegible]
			[illegible] (4.21)
4.77		5	[illegible]
			[illegible] (4.77)
4.80		6	[illegible]
			[illegible] (4.80)
5.00		5	[illegible]
			[illegible] (5.00)
5.58		7	[illegible]
			[illegible] (5.58)
5.82		7-10	[illegible]
			[illegible] (5.82)
6.15		10-12	[illegible]
			[illegible] (6.15)
6.25		12	[illegible]
			[illegible] (6.25)
6.45		20	[illegible] (6.45)

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BUREAU OF MINES
JOPLIN, MO.

FORM 1173 1-57 DATE STARTED 10-28-58

DATE BOTTOMED 10-31-58 | ST. NO. VC 164 | ST. ELEV. | CLASS PAY | HOLE NO. 58 VC 247

DESCRIBED BY [illegible] | AREA Cowgrove | ELEVATION COLLAR 1123.01

DATE ESTIMATED 10-31-58 | OPTION NO. CZ-67 | COORDINATES: N 118178.37 E 85279.95

BY [illegible] | TRACT G. D. EVANS | 200 FT. MAP NO. 35 | 50 FT. MAP NO.

NW¼-NW¼ SEC. 7

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 18" FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	270	853.0
SLEEVE BIT TO		
BEGAN CORING AT	405	718.0
SAVED CORES FROM	405	718.0
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "	—	
DAVIS (C.B.-S.B.) "	411	712.0
BONNE TERRE "	621	492.0
16-18		440.0
B. T. TRANS. "		
CONGLOMERATE "		
LA MOTTE "	—	
GRAN. ~~OR POR.~~ "		
PICTURES: FROM	577	586.0
TO	640	483.0
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 570'S 1140'E T35N-R1W

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% Zn ASSAY	% Zn EST.	FT. %	REMARKS	CORE REC. TO	CORES LOST
TF	[illegible]	[illegible]	578.4	[illegible]		TR.					[illegible]	405	
"	[illegible]	[illegible]	574.9	[illegible]		TR.					" "	664	—
"	559.7	560.[illegible]	562.5	[illegible]	0.7	1.0	0.6				[illegible]	6[illegible]	1.0
"	[illegible]	564.9	558.2	[illegible]		TR.					[illegible]	6[illegible]	—
"	564.[illegible]	[illegible]	557.9	[illegible]	3.5	1.0	1.1				[illegible]	6[illegible]	[illegible]
"	[illegible]	[illegible]	556.9	1.0		TR.					[illegible]	7[illegible]	—
"	566.1	561.6	555.4	[illegible]	1.7	1.0	2.6				[illegible]		
"	571.4	572.4	550.6	1.0	1.6	1.0	1.6				[illegible]		
"	574.6	576.5	546.5	1.7		TR.					[illegible]		
"	[illegible]	578.4	544.6	1.9	0.8	1.0	1.5				[illegible]		
"	579.9	[illegible]	542.5	0.6		TR.					[illegible]		
"	[illegible]	581.3	541.7	0.8	4.8	10.0	3.8				[illegible]		
"	581.6	[illegible]	539.5	1.9	4.5	2.0	10.4				[illegible]		
"	[illegible]	[illegible]	539.1	[illegible]		TR.					"		
"	[illegible]	[illegible]	535.7	[illegible]	0.8	1.0	2.7				" "		
"	[illegible]	576.0	527.0	[illegible]	[illegible]	[illegible]	[illegible]				" "		
"	596.5	597.6	525.4	1.1	8.3	[illegible]	9.1				" "		
"	599.1	[illegible]	516.4	1.5		TR.					[illegible]		
"	[illegible]	607.2	515.8	0.6	1.7	1.0	1.0				" "		
"	[illegible]	607.6	513.4	[illegible]	0.7	[illegible]	[illegible]				" "		
"	611.4	[illegible]	511.4	[illegible]	1.8	[illegible]	[illegible]				[illegible]		
"	[illegible]	[illegible]	509.6	[illegible]	4.1	2.0	1.2				[illegible]		
"	619.4	[illegible]	503.0	[illegible]		TR.					[illegible]		
16-[illegible]	[illegible]	[illegible]	483.7	[illegible]		—					[illegible]		
"	[illegible]	[illegible]	456.1	[illegible]	0.3		0.1	0.40		0.16	"		
"	[illegible]	[illegible]	418.3	[illegible]		—					"		

550.6-7.6-0.7

535.7-10.8-1.7

525.4-6.1-9.2

509.6-6.8-0.5

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DIVISION OF MINERAL
TECHNOLOGY

NOV 17 1958

BUREAU OF MINES
JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE [illegible] MINE [illegible] STOPE STAKE NO. VC 164 HOLE NO. [illegible]

COLLAR ELEV. 1123 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
[illegible]	718	BEGAN CORING	
[illegible]	712	[illegible]	
		[illegible]	
[illegible]	624	1	[illegible]
[illegible]	618	[illegible]	[illegible]
[illegible]	579	[illegible]	[illegible] (549)
631	492	[illegible]	[illegible] (631)
613	[illegible]	[illegible]	[illegible] (613)
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible] (617)

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BUREAU OF MINES
JOPLIN, MO.

FORM 1173 1-57 DATE STARTED 11-27-58

DATE BOTTOMED 10-31-58 ST. NO. 178 ST. ELEV. _____ CLASS DAY HOLE NO. [illegible] 248

DESCRIBED BY [illegible] AREA VC [illegible] ELEVATION COLLAR 944.19

DATE ESTIMATED [illegible] OPTION NO. CZ-100 COORDINATES: N 120383.72 E [illegible]37.62

BY [illegible] TRACT JAS. SELLERS 200 FT. MAP NO. 36 50 FT. MAP NO. _____

NW 1/4 - SE 1/4 SEC. 5

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 15" FT.

FORM BOTT. SL. _____

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	69.	875.2
SLEEVE BIT TO		
BEGAN CORING AT	69	875.2
SAVED CORES FROM	305	639.2
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	315	629.2
BONNE TERRE "	570	374.2
B. T. TRANS. "	[illegible]	362.2
CONGLOMERATE "	—	
LA MOTTE "	605	339.2
GRAN. OR POR. "		
PICTURES: FROM	[illegible]	521.2
TO	[illegible]	420.2
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 1710'N 1960'W T35N-R1W

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LFAD ASSAY	% LFAD EST.	FT. %	% Zn ASSAY	% Zn EST.	FT. %	REMARKS
[illegible]	437.7	437.8	506.4	0.1		TR					
" "	439.2	439.3	504.9	0.1		TR					
[illegible]	446.2	446.4	497.3	0.7		TR					
" "	446.9	451.8	492.4	4.9	6.0	10.0	79.4				—
" "	452.1	452.4	491.2	0.3		TR					
[illegible]	473.7	473.8	470.4	[illegible]		TR					
[illegible]	476.5	476.8	467.4	0.3	2.9	1.0	0.9				Δ6$5-2.2-0.7
[illegible]	478.6	478.7	465.5	0.1	6.6	1.0	2.6				
"	484.2	484.1	459.3	0.7	2.8	1.0	2.0				
" "	485.4	486.0	458.2	0.6		TR					
[illegible]	486.0	486.4	457.8	0.4	3.3	1.0	1.3				TR
[illegible]	488.4	[illegible]	456.0	1.8		TR					Δ53.6-6.4-0.8
[illegible]	489.7	491.0	455.2	0.1							TR
" "	491.0	491.6	453.6	1.6	1.0	3.0	1.6				
[illegible]	[illegible]	[illegible]	453.1	0.1		TR					

CORE REC.

TO	CORES LOST
305'	
485	
493	0.4
513	0.8
515'	
[illegible]	1.0

305'

RECEIVED
DIVISION OF MINERAL
TECHNOLOGY

NOV 17 1958

BUREAU OF MINES
JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE [illegible] MINE [illegible] STOPE [illegible] STAKE NO. [illegible] HOLE NO. [illegible]

COLLAR ELEV. [illegible] PITCH [illegible] BEARING [illegible] COORD.: N [illegible] E [illegible]

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
67	[illegible]	BEGAN CORING	
305	[illegible]	[illegible]	[illegible]
315	[illegible]	[illegible]	[illegible]
		[illegible]	[illegible]
360	[illegible]	1	[illegible]
396	[illegible]	1-5	[illegible]
424	[illegible]	5	[illegible]
436	[illegible]	5	[illegible]
444	[illegible]	5	[illegible]
461	483	5	[illegible]
487	[illegible]	7	[illegible]
518	[illegible]	7-12	[illegible]
549	[illegible]	12-12	[illegible]
570	[illegible]	12	[illegible]
588	364	12	[illegible]
605	[illegible]	[illegible]	[illegible]

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DIVISION OF MINERAL
TECHNOLOGY

NOV 17 1958

BUREAU OF MINES
JOPLIN, MO.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
Box 431
Joplin, Missouri

October 9, 1958

FILE COPY
O. M. E.
RECEIVED OCT 13 1958

DATE	INITIALS	CODE
10/13	C	220
		~~100~~
"	JG	110
10/21	[illegible]	800
10/21	[illegible]	~~500~~

OME Operating Committee
Office of Minerals Exploration
Department of the Interior
Washington 25, D. C.

Re: DMEA-4582(lead-zinc-copper)
St. Joseph Lead Co.
Courtois Area
Washington County, Mo.
Contract Idm-E1068

Dear Sirs:

Submitted herewith are four copies of the Interim Report received today from Dewey Amos, USGS, Carbondale, covering the Field inspection of the subject project which he made on October 2, 1958.

Sincerely yours,

Clinton C Knox
cd

Clinton C. Knox
Executive Officer
OME Field Team, Region IV

encl.
cc: OME Op.Com.(3)
King,USGS,Denver
Amos,USGS,Carbondale w/2 cy encl.
4582 file

RECEIVED
DIVISION OF MINERAL TECHNOLOGY
OCT 9 1958
BUREAU OF MINES
JOPLIN, MO.

INTERIM REPORT

DMEA-4582, Idm-E1068

Operator: St. Joseph Lead Company, Bonne Terre, Missouri

Location: Courtois Area, Washington County, Missouri

A project inspection of the subject contract was conducted on October 2, 1958. Results obtained to date and contemplated future work were discussed with Mr. R. E. Wagner, Head of Exploration, and Mr. G. Klostermann, Geologist.

Drilling completed on the Courtois project to date and since the inspection on September 4, 1958 is summarized as follows:

Drilling Completed

Footage in holes completed since last inspection. . .	1,848
Footage in holes completed to date.	105,370
Number of holes completed since last inspection . . .	3
Total number of holes completed to date	160
Number of holes showing commercial ore.	33
Number of holes showing indicative non-commercial . . mineralization	23
Number of holes showing trace mineralization.	74
Number of holes showing speck trace mineralization. .	13
Number of barren holes.	17

A summary of the three holes completed since the last inspection is as follows:

Hole No.	Location	Depth	Remarks
VC-158	NE¼, NW¼, NE¼, sec. 5	791 Ft.	Trace hole
VC-171	NW¼, SW¼, NW¼, sec. 8	525 Ft.	Trace hole
VC-170	SE¼, SW¼, SW¼, sec. 5	532 Ft.	Ore hole

Hole VC-170 contains 12 feet of estimated 8 per cent lead at a depth of 356-368 feet and 14 feet of estimated 2 per cent copper at a depth of 363-377 feet.

Diamond drilling is in progress in two holes summarized as follows:

Hole No.	Location	Present Depth	Estimated Total Depth
VC-169	NW¼, NW¼, NW¼, sec. 8	505 ft.	600 ft.
VC-176	NW¼, NW¼, NE¼, sec. 8	451 ft.	750 ft.

The churn drill portion of 10 holes has been completed since the date of the last inspection. A summary for these holes is as follows:

Hole No.	Location	Depth of bottom of churn drilling
VC-160	SW¼, SW¼, SE¼, sec. 1	315 ft.
VC-176	NW¼, NW¼, NE¼, sec. 8	135 ft.
VC-163	SW¼, NW¼, NW¼, sec. 7	157 ft.
VC-159	NW¼, SW¼, NE¼, sec. 12	215 ft.
VC-174	SE¼, SW¼, NE¼, sec. 5	110 ft.
VC-167	SE¼, SW¼, SW¼, sec. 6	65 ft.
VC-173	NW¼, NE¼, NW¼, sec. 8	170 ft.
VC-177	NW¼, SW¼, SE¼, sec. 5	155 ft.
VC-172	SE¼, NE¼, NW¼, sec. 5	125 ft.
VC-166	SE¼, NE¼, NW¼, sec. 7	170 ft.

Churn drilling is in progress in 6 holes summarized as follows:

Hole No.	Location	Present Depth
VC-164	NE¼, NW¼, NW¼, sec. 7	130 ft.
VC-178	SE¼? NW¼? SE¼, sec. 5	Setting up
VC-175	SE¼, NW¼, NE¼, sec. 8	70 ft.
VC-165	SE¼, NW¼, NW¼, sec. 7	Setting up
VC-162	NW¼, SE¼, NW¼, sec. 8	Setting up
VC-161	SW¼, NE¼, NW¼, sec. 7	Setting up

Dewey H. Amos
Geologist
U. S. Geologist Survey

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
Box 431
Joplin, Missouri
November 12, 1958

OME

OFFICIAL FILE COPY
O. M. E.
RECEIVED NOV 14 1958

DATE	INITIALS	CODE
11/14	C	220
11/17	[illegible]	110
11/17	[illegible]	500

OME Operating Committee
Department of the Interior
Washington 25, D. C.

Re: DMEA-4582(lead-zinc-copper)
St. Joseph Lead Co.
Courtois Area
Washington County, Mo.
Contract Idm-E1068

Dear Sirs:

Transmitted herewith are your two copies of the MF-104 Monthly Voucher, MF-104A and the Operator's Monthly Report covering the September work on the cited project. The voucher data received today from the Finance Officer is posted on both MF-104s.

Sincerely yours,

Clinton C. Knox
Clinton C. Knox
Executive Officer
OME Field Team, Region IV

encls. 6

cc: OME Op.Com.
King,USGS,Denver
Amos,USGS,Carbondale
4582 file

3 d cy - [redacted] Com.

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

Budget Bureau No. 42-R1036.5

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

RECEIVED NOV 1958

Month of September 1958 Docket No. DMEA 4562 Contract No. Idm-B 1068
Operator's Name St. Joseph Lead Company Minerals Pb - Zn - Cu
Address Bonne Terre, Missouri
Contract Amount, $ 298,660.00 Government Participation: 50 % Amount, $ 149,280.00

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	7647.70	229148.40	236996.10	12/19/58		✓
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	36.00	760.00	796.00	✓	✓	✓
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	7683.70	229908.40	237792.10	✓	✓	✓

RECEIVED DIVISION OF MINERAL TECHNOLOGY OCT 15 1958 BUREAU OF MINES JOPLIN, MO.

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

Date 10-13-58 *Payee St. Joseph Lead Company

Per [signature] Title ASS. DIVISION MANAGER

Tel. No. CASTLE

*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:

$ 3,941.85

Signature
(Authorized Certifying Officer)

Date Nov. 6, 1958 Vou. No. 4-14

(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. Tdm-E1068 in accordance with the terms of the contract.

Signature Henry H. Ramos Title Geologist-USGS Date Oct. 31, 1958

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Clinton C. Knox Title Executive Officer Date Nov. 3, 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)

3 d cy

Budget Bureau No. 42-R1151.2

RECEIVED
NOV 14 1958
O.M.E.

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

Month of September 1958 Docket No. DMEA 4582 Contract No. Idm-E 1068
Operator's Name St. Joseph Lead Company Minerals Pb - Zn - Cu
Address Bonne Terre, Missouri

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core	Ft.	4806.30	2165	182630.62	82221	(2.22)		
Churn	Ft.	3041.40	1370	54465.48	24984	2.22)	133420	(2.22
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Analytical Determinations	Ea.	56.00	56	796.00	796	1.00	2570	1.00
TOTAL DISTRIBUTED COSTS		7903.70		237792.10				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		7903.70		237792.10				

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

REMARKS:

Date 10-13-58 Operator St. Joseph Lead Company

Per L. W. Castell Title ASSL DIVISION MANAGER

L. W. CASTEEL

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)

RECEIVED
DIVISION OF MINERAL TECHNOLOGY
OCT 15 1958
BUREAU OF MINES
JOPLIN, MO.

(For Government use only)

C.C.K.
10/30/58

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

MONTHLY REPORT FOR MONTH OF SEPTEMBER, 1958

D.M.E.A. Project #4582 - Contract #IDM-E 1068

Twenty Stage II locations, approved by the DMEA field team as of September 4, 1958, have been assigned numbers as shown on the map. The Stage II stake numbers and locations are as follows:

Stake No.	Location	
VC-159	1560' N65°W of VC-142	NW¼ SW¼ NE¼, Sec. 12, T35N, R2W
VC-160	2080' N75°W of VC-144	SW¼ SW¼ SE¼, Sec. 1, T35N, R2W
VC-161	520' S35°E of VC-135	SW¼ NE¼ NW¼, Sec. 7, T35N, R2W
VC-162	520' N80°E of VC-146	NW¼ SE¼ NW¼, Sec. 8, T35N, R2W
VC-163	520' S35°E of 56W158	SW¼ NW¼ NW¼, Sec. 7, T35N, R2W
VC-164	520' N55°W of VC-135	NE¼ NW¼ NW¼, Sec. 7, T35N, R2W
VC-165	520' S65°W of VC-135	SE¼ NW¼ NW¼, Sec. 7, T35N, R2W
VC-166	520' S80°W of VC-133	SE¼ NE¼ NW¼, Sec. 7, T35N, R2W
VC-167	1040' West of VC-150	SE¼ SE¼ SE¼, Sec. 6, T35N, R2W
VC-168	400' N35°E of 56W118	NW¼ NW¼ NW¼, Sec. 8, T35N, R2W
VC-169	520' East of 56W118	NW¼ NW¼ NW¼, Sec. 8, T35N, R2W
VC-170	520' S10°W of VC-147	SE¼ NW¼ NW¼, Sec. 8, T35N, R2W
VC-171	520' West of VC-146	NW¼ SW¼ NW¼, Sec. 8, T35N, R2W
VC-172	520' S50°E of VC-150	SE¼ SW¼ SW¼, Sec. 5, T35N, R2W
VC-173	520' S15°W of VC-44	NW¼ NE¼ NW¼, Sec. 8, T35N, R2W
VC-174	520' S15°W of VC-151	SE¼ SE¼ SW¼, Sec. 5, T35N, R2W
VC-175	900' S75°E of 57VC62	SE¼ NW¼ NE¼, Sec. 8, T35N, R2W
VC-176	900' S75°E of VC-149	NW¼ NW¼ NE¼, Sec. 8, T35N, R2W
VC-177	520' N65°E of VC-151	NW¼ SW¼ SE¼, Sec. 5, T35N, R2W
VC-178	520' N75°E of VC-152	SW¼ NW¼ SE¼, Sec. 5, T35N, R2W

Seven churn drills were operating in the area at the end of the month. The holes in progress were as follows:

Stage No.	Stake No.	Feet Depth
II	VC-164	130
II	VC-175	70
II	VC-163	140
II	VC-172	100
II	VC-165	20
II	VC-178	10
II	VC-161	80

The following churn drill holes were completed through overburden and chert-bearing formations and cased preparatory to diamond drilling during the month:

Stage No.	Stake No.	Feet Depth	Starting Date
II	VC-159	215	9-18-58
II	VC-160	315	9-12-58
II	VC-166	170	9-24-58
II	VC-167	90	9-18-58
II	VC-173	175	9-12-58
II	VC-174	115	9-16-58
II	VC-176	135	9- 8-58
II	VC-177	155	9-18-58

Two diamond drills were operating in the area at the end of the month. The holes in progress were as follows:

Stage No.	Stake No.	Feet Depth
II	VC-169	505
II	VC-176	451

The following diamond drill holes were completed during the month:

Stage No.	Stake No.	Prospect Hole No.	Bottom Depth	Feet of Dia. Drilling	Date Completed	Class.
II	VC-171	58VC227	525	525	9-23-58	Trace
II	VC-170	58VC229	532	532	9-25-58	Pay
II	VC-158	58VC218	791	556	9- 3-58	Trace
II	VC-157	58VC217	655	552	9- 2-58	Pay

Analysis of results gained by drilling is shown in abstracts of our weekly reports to St. Joseph Lead Company, which are enclosed.

36 analytical determinations were made during the month as follows:

58VC217	8 Pb	4 Cu
58VC218	1 Pb	
58VC229	12 Pb	10 Cu
58VC227	1 Pb	

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WASHINGTON COUNTY

Courtois Area - In DMRA Project #4582

Week Ended September 8, 1958

2 diamond drills operating completed 1 pay and 1 trace hole.

58VC217, stake C157, a pay hole, is located about 6500 feet northeast of the village of Courtois and 900 feet east of 57VC157, a pay hole. It bottomed at 655 feet depth in Lamotte sandstone. Mineralization in the lower 5 zone was estimated as 10.3 feet of 5.7% Pb at 490 feet depth and 7.6 feet of 1.3% Pb at 499 feet depth. This is the farthest northeast ore hole in the area and lead is in the same horizon as lead in the pay hole to the west.

58VC218, stake C158, a trace hole, is located 1500 feet northwest of the above hole and 900 feet north of 57VC157, a pay hole. It bottomed at 791 feet depth in Lamotte sand. Mineralization in the upper part of the 7 zone was estimated as 1.0 feet of 1.5% Pb. This hole is on the north or down-dropped side of the fault zone which crosses the north end of the Courtois area in an east-west direction. Formation elevations are about 70 feet lower than in hole 900 feet south.

This completes the number of holes estimated in Stage II of this contract. As there is about 14,000 feet of allowed footage remaining in this stage, the DMRA field team has approved locations for an additional 20 holes to be drilled and work will begin on these in the near future.

Week Ended September 15, 1958

2 churn drills setting casing.

Week Ended September 22, 1958

7 churn drills setting casing.

Week Ended September 29, 1958

2 diamond drills operating and 8 churn drills setting casing completed 1 pay and 1 trace hole.

58VC229, stake C170, a pay hole, is located about 700 feet northeast of the Courtois post office and 520 feet south of a pay hole. It bottomed at 532 feet depth in Lamotte sand. Mineralization in the lower 5 zone was estimated as 17.6 feet of 5.1% Pb at 373 feet depth and 13.8 feet of 2.3% Cu at 377 feet depth.

58VC227, stake C171, a trace hole, is located about 300 feet south of the Courtois post office and 520 feet west of a pay hole. It bottomed at 525 feet depth in Lamotte sand. Trace mineralization was present in the lower 5 zone, best of which was estimated as 1.1 feet of 4.0% Pb at 379 feet depth.

Period Ended September 30, 1958

3 diamond drills operating and 5 churn drills setting casing completed no holes.

11

FORM 1173 1-87

Started 8-26-58

208

DATE BOTTOMED 9-2-58	ST. NO. 151 ST. ELEV.	CLASS PA1 HOLE NO. 58 VC 217
DESCRIBED BY JA	AREA VC (Courtois)	ELEVATION COLLAR 987.65
DATE ESTIMATED 9-4-58	OPTION NO. CZ-79	COORDINATES: N 122239.65 E 94023.06
BY JA	TRACT Wm. TURNBOUGH	200 FT. MAP NO. 36 50 FT. MAP NO. 504
		SE¼-NE¼ - SEC. 5 1720'S - 360'W T35N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 14" FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	104	8837
SLEEVE BIT TO		
BEGAN CORING AT	109	8787
SAVED CORES FROM	335	6527
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "		
BONNE TERRE "	352	6357
	609	3787
B. T. TRANS. "		
	640	3477
CONGLOMERATE "	—	
LA MOTTE "	655	3327
GRAN. OR POR. "		
PICTURES: FROM	455	5327
TO	556	4317
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% Cu ASSAY	% Cu EST.	FT. %	REMARKS
5 GTOB &	448.2	448.3	5394	0.1		TR					
5 TOM	463.6	463.7	5240	0.1		TR					
5 GTOB &	466.8	467.2	5205	0.4		TR					
5 TOM	476.9	477.0	5107	0.1		TR					
5 TOB & dolo F	479.7	484.7	5030	5.0	9.6	7.0	18.0				diss & veins
5 F	484.7	487.7	5000	3.0	3.4	5.0	10.2				diss
5 F dolo &	487.7	490.0	4977	2.3	2.4	4.0	12.4	0.28	0.50	0.64	diss
5 F	490.0	491.9	4968	1.9		TR					
5 dolo & F	491.9	496.9	4908	5.0	3.1	1.5	12.2	0.38	1.0	1.90	diss
7 F	496.9	497.3	4904	0.4	0.9	1.0	0.4	0.03	0.30	0.01	diss
7 F	497.3	498.2	4895	0.9		TR					
7 F	498.2	499.5	4882	1.3	1.2	1.5	2.0	0.14	0.30	0.18	diss & veins
" "	508.4	509.0	4787	0.6		TR					
" "	512.2	513.7	4740	1.5		TR					
" "	513.7	514.1	4736	0.4	5.6	2.0	2.2				diss & veins
" "	516.1	516.5	4712	0.4	9.9	5.0	4.0				diss

CORE REC.

TO	CORES LOST
335	—
355	0.6
361	4.0
526	—
532	2.5
545	0.6
564	—
569	1.0
609	—
616	0.8
624	—
641	2.5
655	7.0

488.2 - 19.8 - 4.5
471.2 - 2.8 - 2.2

PA1

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FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE 9-4-58 MINE Courtois STOPE STAKE NO. 1/2-157 HOLE NO. 58VC217

COLLAR ELEV. [illegible] PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
109	717	BEGAN CORING	
335	252	Discorded 109-183 - Solid Bit 183-305 - Discord 305-335	
352	635	Dave Shale - Bonne Terre	(352)
404	583	1	TO massive thinbedd, snurly faint oolite - fairly massive w/ > fracturing top to 364 - thin bedded 364 - 387 w/ > bonds - snurly 387 to Base - > Bt @ Base - (404)
435	552	5-1	GTO Bt < dense Gbs faint to med oolite - < Bt - scattered dense Gbs - < pitting & small vugs - few thin Rbs - > clickitte tr - (435)
462	525	5	GTOBt med oolite - < Bt - > pitting - few thin Rbs - tr Pb - > ca + 2 ND Bt - few dense Gbs - (462)
480	507	5	GTM-GTOBt-TM - GTM top to 465, 1" @ 472, 4" @ 475 - TO mi 465-467-472, 1" @ 477 - GTOBt 1" @ 466, 478 to Base also > short sections interbedded - many thin Rbs - > pitting - > 2 ND Bt - > Kbs - > tr Pb - (480)
497	490	5	FTKTM L dense bs - good roof rock - 1' dense slightly brecciated @ top - 4" L dense bs @ 488, 2' 492-494 - 1' Kb + GT @ Base - > pitting + small vugs - many thin Rbs - good Pbr fair ca top to Base - > ca tr - GT tr scattered L (497)
529	451	7	FTKTM > L dense bs good roof rock - few thin Rbs - > L dense bs - > pitting - > GT tr scattered - > slight fracturing - tr Pb scattered 4" fair @ 516 - > ca + 2 ND tr - (529)
553	434	7-10	FTKTM - TO Kt fair roof faintly F - faint oolite fairly dense top to 535, 538-543 - GT tr 543-547 - > ca tr + patches - few Rbs - > fracturing m - > M patches (553)
577	410	10-12	GTOM faint oolite - > porous oolitic patches - slightly cropey - many thin Rbs - > Kbs + patches - > pitting - < porosity 571 to Base ca bs + patches - (577)
609	378	12	GTM: slightly porous cropey appearance - > Kbs - fairly porous 585 to Base - many thin Rbs - > ca tr - > small vugs - < R' - slightly toward KR type - (609)
640	347	19	GTSDM: sandy increasing toward Base - cropey - many thin Rbs - > porous patches - > ca bs - > fracturing - + pitting - E 637 to Base - (640)
655	332	20	W. Sand med grain - > grinding - > G patches - (655)

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FORM 1173 1-57

Started 8-27-58

205

DATE BOTTOMED 9-3-58	ST. NO. 158 ST. ELEV.	CLASS TRACE HOLE NO. [illegible]
DESCRIBED BY JA	AREA VC (Courtois)	ELEVATION COLLAR 1052.73
DATE ESTIMATED 9-5-58	OPTION NO. CZ-74	COORDINATES: N 123301.72 E [illegible]
BY JA	TRACT HALLIE TURNER	200 FT. MAP NO. 26 50 FT. MAP NO. N/A

NW¼-NE¼ - SEC 5 640'S - 1750'W T35N - R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 6" FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	240	7927
SLEEVE BIT TO		
BEGAN CORING AT	245	7877
SAVED CORES FROM	465	5677
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	315	7177
BONNE TERRE "	483	5497
	764	2687
B. T. TRANS. "	781	2517
CONGLOMERATE "	—	
LA MOTTE "	791	2417
GRAN. OR POR. "	—	
PICTURES: FROM	586	4467
TO	703	3247
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS
7 F	632.8	633.8	3989	1.0	1.2	1.5	1.2				dua
7-10 TXob	678.4	678.5	3542	0.1		TR					spark

CORE REC.

TO	CORES LOST
225	—
285	1.0
325	SB
365	
465	D.S.
565	—
585	1.0
605	—
625	1.0
694	—
714	0.6
774	—
783	0.5
797	—

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FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY JR DATE 9-5-58 MINE Courtois STOPE STAKE NO. HOLE NO. 58VC218

COLLAR ELEV. 1033. PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
245	788	BEGAN CORING	
265	768	Discard 245 - 265	
315	718	Derby Doe Run — TO & top to 274 - thin bed 274 to Base	(315)
319	714	Derby Davis Transition	(319)
483	550	Davis Shale — Solid Bit 325 - 365 - Discard 365 - 465	(483)
		Bonne Terre	
531	502	1	TO thinbed - smurly faint oolite - fairly massive w/ > porous patches & fracturing to 493 - slightly thin bed 493 to 519 - smurly 519 to Base - thin Rbs > pitting - (531)
537	496	1-5	GTO > Bt - smurly - faint oolite - smurly appearance - few Bta scattered - > pitting (537)
596	437	5	GTOBt > dense Gb GTM faint oolite - > porous oolitic patches - many Bta - scattered dense Gbs - > pitting & small vugs - 1' GTM @ 577 - 1' Gt mca 581 - 1" Et @ 589 - many thin Rbs - > cal & Ni Ba - > dick. thru - (596)
608	425	5	GTOBt GTM mostly GTOBt - GTM top to 598 - TOM 602-603 1' @ 605 - med oolite & Bta - many thin Rbs - > porous oolitic patches - Kb @ Base - (608)
621	412	5	GTOBtOM faint to med oolite - few thin Rbs - TOM 1" @ 610, 6" @ 613, 6" @ 615 - 1" Tb @ Base - few Bta - (621)
679	354	7	FTGTM - > TO : Gt good reef rock - many thin Rbs - TOb 3" @ top 623, 631, 2' 642-644, 2" @ 658 - Gt 1' @ 630, 632, 661 - few scattered Gta - > pitting - tr fes - > e Ni Ba - tr Pb @ 633 (679)
694	339	7-10	FTGTM - TO : Gt fair reef rock - TO > band top to 688, 1' @ 685 1' w/ > Gt @ 688 - 1' Gta @ 684 - many thin Rbs - > pitting & > fracturing - > e Ni Ba - tr Pb @ top - (694)
732	301	10-12	TXOSM : E faint oolite - slightly crystalline - > K & EHbs - many thin Rbs - 1' E @ 708, 20' 712 to Base - slightly porous 712 to 729 - > ca seams & patches - > Bta @ Base - (732)
764	269	12	TEM = Bt E GTM - E top to 758 - > oolite - many Bta - many thin EHbs - > pitting - > fracturing - GTM slightly crystalline 758 to Base - many Rbs - (764)
781	252	19	GTSDM : E sandy increasing toward Base - many thin Rbs > EHbs - < K - 1' E @ 772 - 6" purplish stain @ 780 (781)
791	242	20	W. sand med grain - shattered - > E stain @ top (791)

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FORM 1173 1-57 DATE STARTED 9-22-58 #4

DATE BOTTOMED 9-24-58	ST. NO. VC 171 ST. ELEV.	CLASS TRACE HOLE NO. 58 VC 227
DESCRIBED BY CA	AREA COURTOIS	ELEVATION COLLAR 891.48
DATE ESTIMATED 9-25-58	OPTION NO.	COORDINATES: N 117177.91 E 89584.24
BY CA	TRACT ST. JOE - WOODS	200 FT. MAP NO. 46 50 FT. MAP NO.
		SW¼-NW¼ SEC. 8

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 8" FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO		
SLEEVE BIT TO	11	8805
BEGAN CORING AT	238	6535
SAVED CORES FROM	238	6535
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "	—	
DERBY DOE RUN "	—	
DAVIS (C.B.-S.B.) "	241	6505
BONNE TERRE "	500	3915
B. T. TRANS. "	511	3805
CONGLOMERATE "	—	
LA MOTTE "	525	3765
GRAN. OR POR. "	—	
PICTURES: FROM	315	5465
TO	448	4435
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 1590'S 480'E T35N-R1W

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS	CORE REC. TO	CORES LOST
9 F	362.8	363.0	5285	0.2		TR					Fault	238	
5 F	374.8	377.6	5139	2.8		TR					Cherts	515	—
"	377.6	378.7	5128	1.1	1.7	4.0	1.9				Dissi. Fault	525	2.0
7 F	413.0	413.1	4784	0.1		TR					Fault		
"	414.5	414.8	4767	0.3		TR					"		
12	496.2	496.4	3951	0.2		TR					"		

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FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE 9-25-58 MINE Courtois STOPE STAKE NO. VC-171 HOLE NO. 58VC227

COLLAR ELEV. [illegible] PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
238	[illegible]	BEGAN CORING	
241	[illegible]	DAVIS BONNETERRE	— (241)
296	[illegible]	1	LT$_{x_0}$b$_1$ & GT DENSE b$_1$ p$_1$ — b$_1$ T$_{x_0}$ 241 TO 270 — GT b$_2$ DENSE b 270 TO BASE — p$_2$ 280 TO 284 — (296)
303	[illegible]	1-5	GT DENSE b$_1$ & GB$_{x_0}$ B$_1$ — BASICALLY GT DENSE b w/ GB$_{x_0}$ B$_1$ b THRUOUT — (303)
349	[illegible]	5	GB$_{x_0}$ B$_1$ p$_2$ & GB$_1$ BRN THRUS — GB$_{x_0}$ B$_1$ p$_2$ b — FRACT 303 TO 313 — GB$_1$ < POROUS THICKNESS > SCATT DENSE b — B$_1$ 313 TO 337 — GT$_0$ b$_1$ > B$_1$ > D$_1$ 337 TO 349 — (349)
361	[illegible]	R	GM ~~> G$_1$ — GB$_x$ B$_1$ p$_2$ — 2' GM ~~> G$_1$ @ 351 — 1' b$_3$ GB$_{x_0}$ 352 — T$_0$ > p$_2$ STMO @ 353 — 3' BM b$_2$ > B$_1$ @ 356 — GM ~~> G$_1$ 356 TO 361 — (361)
369	[illegible]	5	GT$_0$ > G$_1$ b$_1$ — MED M — b$_1$ — > G$_1$ — 2" GB b$_3$ @ 369 — (369)
381	[illegible]	RF	F'/GTMG$_1$; GT DENSE b$_1$; GT G$_1$ — > p$_2$ F SNUBLY > D$_1$ 369 TO 375 — 2' GT DENSE b$_1$ @ 377 — 1' F & G$_1$ w/ D$_2$ & Pb @ 378 — 2' GT$_0$ > G$_1$ b$_1$ @ 381 — (381)
421	[illegible]	1	F'/GTMG$_1$ > D$_1$ — GOOD SNUBLY EFF STRUCT w/ 1' < G$_1$ @ 393, 396, 399, — SCATT D$_1$ — 6" < C$_1$ @ BASE — (421)
444	[illegible]	7-10	F'/GTMG$_1$; GT$_0$ — BASICALLY SNUBLY F > p$_2$ = FRACT — w/ 2' GT$_0$ b$_2$ @ 423 — 2' T$_0$ b$_1$ @ 430 — 3' < G$_1$ b$_1$ @ 433 — 1' T$_0$ > b$_1$ @ 438 & 1' @ 442 — (444)
475	—	10-12	T$_0$ & GTM ~~> G$_1$ — T$_0$ > b$_2$ > M$_1$ 444 TO 450 — GT GEM > M$_1$ b ~~ w/ > SCATT T$_0$ b$_1$ 450 TO 466 — 1' T$_0$ b$_2$ @ 467 — 1' GTM ~~ < 468 — 2' T$_0$ STMO @ 470 — T$_0$ b$_2$ w/ > M$_1$ b 470 TO 475 — (475)
500	[illegible]	12	GTM ~~ G$_1$ — MEL HEAVY M & ~~ G$_1$: > FRACT — > 1 & C$_a$ $_1$ — TE FRACT Pb @ 497 — (500)
511		19	GTM SCATT — SINGLE SAND MED M ~~ 500 TO 505 — 2' GT b$_1$ — D MED SOLID @ 511 — (511)
[illegible]	[illegible]	[illegible]	[illegible] — 1' — EXAMINED — [illegible] — [illegible] w/ MILLING [illegible] — 512 TO 522 — 3' > E [illegible] — ([illegible])

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OCT 15 1958

BUREAU OF MINES
JOPLIN, MO.

205

FORM 1173 1-57 DATE STARTED 9-24-58

4

DATE BOTTOMED 9-25-58	ST. NO. 170	ST. ELEV.	CLASS D.D.Y. HOLE NO. 58VC 229
DESCRIBED BY JA	AREA VC (Courtois)		ELEVATION COLLAR 886.96
DATE ESTIMATED 9-30-58	OPTION NO. CZ-284		COORDINATES: N 115868.76 E 90040.90
BY JA	TRACT EMMA PAYNE		200 FT. MAP NO. 36 50 FT. MAP NO. 422
			NW¼ NW¼ Sec 8

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 8" FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO		
SLEEVE BIT TO	16,	870 9
BEGAN CORING AT	19	867 9
SAVED CORES FROM	235	651 9
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	257.	629 9
BONNE TERRE "	513	373 9
B. T. TRANS. "	520	366 9
CONGLOMERATE "	—	
LA MOTTE "	532	354 9
GRAN. OR POR. "	—	
PICTURES: FROM	341	545 9
TO	430	456 9
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 930 S 590 E T38N-R1W

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ZN ASSAY	% ZN EST.	FT. %	REMARKS	CORE REC. TO	CORES LOST
5 GTOM	352.1	355.7	531.2	3.6		TR						235	—
5GTOM; R	355.7	360.4	526.5	4.7	5.3	8.0	2.19				cuber, bmd, dim	395	—
R GTM, Breccia	360.4	363.7	523.2	3.3	6.2	6.0	0.50	0.69	0.7	2.27	" " " "	415	3.0
R GTM band	363.7	368.7	518.2	5.0	3.9	4.0	19.5	2.7	3.0	13.50	" " " "	512	
" " "	368.7	373.3	513.6	4.6	0.9	2.5	4.1	2.0	1.5	9.26	dss	534	2.0
5 TO: F	373.3	377.5	509.4	4.2	0.1	TR	0.4	2.6	4.2	0.92	bands dss cm		
5 F	377.5	379.0	507.9	1.5	0.0			0.13	0.7	0.19	" " "		
5 F	381.4	382.8	504.1	1.4		TR			TR				
5 F	382.8	383.2	503.7	0.4	0.0	TR		0.30	0.3	0.12	dss Pb		
5 TO thin bed	385.7	388.0	498.9	2.3	0.0	—		0.24	0.7	0.55	dss cm		
7 F	389.5	390.8	496.1	1.3	0.3	1.0	0.4	0.26	0.3	0.33	dss		
7 G & O	390.8	392.1	494.8	1.3	0.0	—		0.22	0.7	0.28			
7 F	392.1	394.1	492.8	2.0	0.2	1.0	0.4	0.9	0.7	0.38			
7 F	394.1	397.7	489.2	3.6		TR			TR				
7 F	423.0	423.1	463.8	0.1		TR							
7 F	425.6	426.0	460.9	0.4	2.6	2.0	1.0				dss		
7 F	429.0	429.1	457.8	0.1		—			TR				

518.2 - 13.0 - 5.0

513.6 - 4.6 - 0.9

509.4 - 17.1 - 0.0 - 2.1 cm

460.9 - 0.4 - 2.6

297

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BUREAU OF MINES
JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY JA DATE 9-30-58 MINE Courtois STOPE STAKE NO. VC 170 HOLE NO. 58VC229

COLLAR ELEV. 887 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
19	868	BEGAN CORING	
235	652	Solid	Bit 19-215 Discord 215-235
257	630	Davis Bonne Terre	Shale - (257)
304	583	1	TO faint oolite - thin bedded & banded top to 293 - smooth 293 to Base - many thin Rbs - > pitting & small vugs - (304)
321	566	1-5	GTO > Pta faint oolite - > PS sections - > pitting - many thin Rbs - > bs - (321)
360	527	5	GTOP & M faint to med oolite - < Pta - slightly smooth 328 to Base - few thin Rbs - 1' Brecciated @ 358' - fair Rb 356 to Base - > pitting & small vugs - (360)
373	514	5	GTM: Brecciated crepey - many thin Rbs - appears brecciated top to 366 - > Rbs - good Rb & Ca thru out - > dickite Pta - > faint oolite - (373)
386	501	5	GTO: thin bedded > F - faint to med oolite - > Rbs - F 377-383 thin bed 383 to Base - > ca seams & bs - good ca top to 378 - > few ca to Base (386)
433	454	7	FT GTM: Gt fair reef rock - Gted 2' 391-393, 4' 397-401, 408-409 - 413 - < fracturing - tr Rb & ca - few thin Rbs - > ca Pta - > bs - > pitting (433)
456	431	7-10	FT GTM: TOb fair reef rock - 1 ca top to 437, 2' 446-448 - few thin Rbs - > pitting & vugs - > Rb & patches - slightly X (456)
488	399	12-10	GTOM crepey - many thin Rbs - faint oolite scattered - > X & EM bs - few Gta - > ca Pta & seams - (488)
513	374	12	GTM > Pta very crepey - many thin Rbs - 2 4/8 Pta - few oolites > Pta EOZ to Base - (513)
520	367	19	GT: D: E DS fairly sandy - few thin Rbs - > < 4/8 Pta - 1' to Base E D.S. - few Pta - (520)
532	355	20	W Sand med to coarse sand grain - > grinding - (532)

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BUREAU OF MINES
JOPLIN, MO.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
Box 431
Joplin, Missouri
September 10, 1958

OFFICIAL FILE COPY
DMEA
RECEIVED SEP 12 1958

DATE	INITIALS	CODE
9/12	C	220
12	Com	100
"	RJ	110
9/15	~~[illegible]~~	~~800~~
		500

DMEA Operating Committee
Department of the Interior
Washington 25, D. C.

Re: DMEA-4582(lead-zinc-copper)
St. Joseph Lead Co.
Courtois Area
Washington County, Mo.
Contract Idm-E1068

Dear Sirs:

Submitted herewith are four copies of the Interim Report received today from Dewey Amos, USGS, Carbondale, covering the joint Field inspection of the subject project which he and I made on September 4, 1958.

An estimate of the completion depths of the four holes listed as in progress indicated that probably only about 22 additional holes yet may be approved under the allowable maximum for drilling set in Stage II of the Contract, 20 of which were approved during this inspection. Thus, with many of the drills in this project area operating entirely on the Operator's account, completion of the Contract work cannot be expected until possibly mid-November.

No mining development yet actually has been started in this Courtois project area.

Sincerely yours,

Clinton C. Knox

Clinton C. Knox
Executive Officer
DMEA Field Team, Region IV

encls. 4

cc: DMEA Op.Com.(3)
King,USGS,Denver w/cy encl.
Amos,USGS,Carbondale w/cy encl.
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DMEA DIVISION OF MINERAL TECHNOLOGY
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DATE INITIALS CODE
SEP 10 1958
BUREAU OF MINES
JOPLIN, MO.

INTERIM REPORT

DMEA-4582, Idm-E1068

Operator: St. Joseph Lead Company, Bonne Terre, Missouri

Location: Courtois Area, Washington County, Missouri

A project inspection of the subject contract was conducted on September 4, 1958. Results obtained to date and contemplated future work were discussed with Mr. R. E. Wagner, Head of Exploration, and Mr. G. Klostermann, Geologist.

Drilling completed on the Courtois project to date and since the inspection on August 5, 1958 is summarized as follows:

Drilling Completed

Footage in holes completed since last inspection	11,509
Footage in holes completed to date	103,522
Number of holes completed since last inspection	18
Total number of holes completed to date	157
Number of holes showing commercial ore	32
Number of holes showing indicative non-commercial mineralization	23
Number of holes showing trace mineralization	72
Number of holes showing speck trace mineralization	13
Number of barren holes	17

A summary of the 18 holes completed since the last interim inspection is as follows:

Hole No.	Location	Depth	Remarks
VC-138	SE¼, SW¼, SE¼, sec. 6	595 ft.	Blank hole.
VC-134	NW¼, NW¼, NE¼, sec. 7	632 ft.	Trace hole.
VC-154	NW¼, NE¼, SE¼, sec. 5	703 ft.	Indicative hole.
VC-146	NE¼, SW¼, NW¼, sec. 8	525 ft.	Ore hole.
VC-135	SW¼, NE¼, NW¼, sec. 7	574 ft.	Ore hole.
VC-149	SE¼, SE¼, SW¼, sec. 5	675 ft.	Indicative hole.
VC-128	SW¼, NE¼, NE¼, sec. 7	635 ft.	Ore hole.

Hole No.	Location	Depth	Remarks
VC-152	SW¼, NW¼, SE¼, sec. 5	685 ft.	Indicative hole.
VC-150	SE¼, SW¼, SW¼, sec. 5	432 ft.	Indicative hole.
VC-153	SE¼, NW¼, SE¼, sec. 5	665 ft.	Ore hole.
VC-147	NE¼, NW¼, NW¼, sec. 8	655 ft.	Ore hole.
VC-148	NW¼, NE¼, NW¼, sec. 8	715 ft.	Ore hole.
VC-103	SE¼, SE¼, NW¼, sec. 5	715 ft.	Indicative hole.
VC-156	SW¼, SE¼, NE¼, sec. 5	640 ft.	Indicative hole.
VC-141	NW¼, SW¼, SE¼, sec. 12	755 ft.	Blank hole.
VC-151	NE¼, SE¼, SW¼, sec. 5	578 ft.	Blank hole.
VC-155	SE¼, SW¼, NE¼, sec. 5	675 ft.	Trace hole.
VC-157	NE¼, SE¼, NE¼, sec. 5	655 ft.	Ore hole.

Diamond drilling is in progress in one hole summarized as follows:

Hole No.	Location	Present Depth	Estimated Depth
VC-158	NE¼, NW¼, NE¼, sec. 5	645 ft.	770 ft.

The churn drill portion of three holes has been completed since the date of the last inspection. A summary of these holes is as follows:

Hole No.	Location	Depth to Bottom of Churn Drilling
VC-158	NE¼, NW¼, NE¼, sec. 5	235 ft.
VC-153	SE¼, NW¼, SE¼, sec. 5	138 ft.
VC-157	NE¼, SE¼, NE¼, sec. 5	100 ft.

No churn drilling is in progress in the project area under the contract.

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JOPLIN, MO.

Significant assays of recently completed holes are as follows:

Hole No.	Depth	Thickness	%Pb	%Zn	%Cu
VC-103	546.0-547.3 ft.	1.3 ft.	4.4	-	-
	549.7-550.3 ft.	0.6 ft.	6.2	-	-
VC-153	463.1-467.5 ft.	4.4 ft.	1.6	-	-
	469.2-471.4 ft.	2.2 ft.	1.4	-	-
	494.0-496.2 ft.	2.2 ft.	1.7	-	-
	505.0-505.4 ft.	0.4 ft.	9.3	-	-
	529.0-531.3 ft.	2.3 ft.	7.1	-	-
	533.2-535.4 ft.	2.2 ft.	6.5	-	-
VC-148	551.8-554.3 ft.	2.5 ft.	11.9	1.0	-
VC-150	363.0-367.1 ft.	4.1 ft.	2.7	-	-
	387.3-389.0 ft.	1.7 ft.	2.6	-	-
VC-152	572.8-574.6 ft.	1.8 ft.	5.0	-	-
VC-128	497.5-498.0 ft.	0.5 ft.	25.0	-	2.9
	500.1-501.1 ft.	1.0 ft.	9.6	-	1.4
VC-149	504.4-508.3 ft.	3.9 ft.	2.1	-	-
	510.5-512.4 ft.	1.9 ft.	3.5	-	-
	526.0-527.6 ft.	1.6 ft.	1.2	-	-
VC-154	528.2-530.5 ft.	2.3 ft.	2.4	1.7	-
	542.2-544.5 ft.	2.3 ft.	2.1	-	-
	570.7-571.4 ft.	0.7 ft.	10.6	-	-
VC-135	473.3-478.3 ft.	5.0 ft.	3.7	-	-
	478.3-482.9 ft.	4.6 ft.	4.7	-	-
	501.7-505.9 ft.	4.2 ft.	1.2	-	-
VC-146	339.1-342.8 ft.	3.7 ft.	1.6	-	-
	342.8-346.6 ft.	3.8 ft.	4.7	3.4	-
	346.6-349.5 ft.	2.9 ft.	29.5	-	-
	350.5-355.1 ft.	4.6 ft.	24.7	-	-
	355.1-360.6 ft.	5.5 ft.	5.9	-	-
	360.6-362.8 ft.	2.2 ft.	56.2	-	1.7
	362.8-367.7 ft.	4.9 ft.	2.5	-	2.5
VC-147	454.8-456.7 ft.	1.9 ft.	30.1	-	-
	458.7-461.7 ft.	3.0 ft.	31.0	-	-
	462.8-463.4 ft.	0.6 ft.	10.9	-	-
	464.9-466.6 ft.	1.7 ft.	2.0	-	-
	468.0-469.7 ft.	1.7 ft.	4.7	6.8	-
	470.7-474.4 ft.	3.7 ft.	23.9	16.8	-
	487.4-489.4 ft.	2.0 ft.	0.2	8.9	-

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SEP 10 1958

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JOPLIN, MO.

Assays of Hole Nos. VC-156 and VC-157 have not been completed. Hole No. VC-156 contains 4.2 feet of estimated 2 per cent lead at a depth of 489-491 feet and Hole No. VC-157 14.0 feet of estimated 4 per cent lead at a depth of 480-494 feet.

Extensive drilling at the Operator's expense is currently underway in the contract area. This drilling is of an exploratory nature and is necessitated because the contract does not provide adequate exploration.

Verbal approval was given by the field examiners to locate the following Stage II holes:

Hole No.	Location
VC-159	T35N - R2W - Sec. 12 - NW¼ SW¼ NE¼
VC-160	" " " 1 - SW¼ SW¼ SE¼
VC-166	" " " 7 - SE¼ NE¼ NW¼
VC-167	" " " 6 - SE¼ SE¼ SE¼
VC-168	" " " 8 - NW¼ NW¼ NW¼
VC-169	" " " 8 - NW¼ NW¼ NW¼
VC-170	" " " 8 - SE¼ NW¼ NW¼
VC-171	" " " 8 - NW¼ SW¼ NW¼
VC-172	" " " 5 - SE¼ SW¼ SW¼
VC-173	" " " 8 - NW¼ NE¼ NW¼
VC-174	" " " 5 - SE¼ SE¼ SW¼
VC-175	" " " 8 - SE¼ NW¼ NE¼
VC-176	" " " 8 - NW¼ NW¼ NE¼
VC-177	" " " 5 - NW¼ SW¼ SE¼
VC-178	" " " 5 - SW¼ NW¼ SE¼
VC-161	" " " 7 - SW¼ NE¼ NW¼
VC-162	" " " 8 - NW¼ SE¼ NW¼
VC-163	" " " 7 - SW¼ NW¼ NW¼
VC-164	" " " 7 - NE¼ NW¼ NW¼
VC-165	" " " 7 - SE¼ NW¼ NW¼

Dewey H. Amos
Geologist
U.S. Geological Survey

Clinton C. Knox
Mining Engineer
U.S. Bureau of Mines

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SEP 10 1958
BUREAU OF MINES
JOPLIN, MO.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Box 431
Joplin, Missouri
October 16, 1958

OME Operating Committee
Department of the Interior
Washington 25, D. C.

Re: DMEA-4582(lead-zinc-copper)
St. Joseph Lead Co.
Courtois Area
Washington County, Mo.
Contract Idm-E1068

Dear Sirs:

Transmitted herewith are your two copies of the MF-104 Monthly Voucher, MF-104A and the Operator's Monthly Report covering the August work on the cited project. The voucher data received today from the Finance Officer is posted on both MF-104s.

Sincerely yours,

Clinton C. Knox

Clinton C. Knox
Executive Officer
OME Field Team, Region IV

encls. 6

cc: OME Op.Com.
King,USGS,Denver
Amos,USGS,Carbondale
4582 file

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O. M. E.
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DATE		
10/20		
10/20		220
		110
		500

2d cy - DMEA Washington

Form MF-164 (Rev.)
(April 1952)

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Budget Bureau No. 42-R1036.5

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

Month of August 1958 Docket No. DMEA 4582 Contract No. Idm-E 1068
Operator's Name St. Joseph Lead Company Minerals Pb - Zn - Cu
Address Bonne Terre, Missouri
Contract Amount, $ 298,560.00 Government Participation: 50 % Amount, $ 149,280.00

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	20721.48	208426.92	229148.40	12/19/58		
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	154.00	606.00	760.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	20875.48	209032.92	229908.40			

RECEIVED DIVISION OF MINERAL TECHNOLOGY SEP 15 1958 BUREAU OF MINES JOPLIN, MO.

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

Date 9-12-58 *Payee St. Joseph Lead Company

Per E. A. Jones Title MANAGER

*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:

$ 10,437.74

Signature (Authorized Certifying Officer)

Date Oct. 14, 1958 Vou. No. 4-11

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Idm-1068 in accordance with the terms of the contract.

Signature Henry H. Amos Title Geologist-USGS Date Oct. 1, 1958

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Clinton C. Knox Title Executive Officer Date Oct. 6, 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.

GPO 872893

Form MF-104A
(April 1962)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of August 1958 Docket No. DMEA 4582 Contract No. Idm-E 1068

Operator's Name St. Joseph Lead Company Minerals Pb - Zn - Cu

Address BonneTerre, Missouri

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core	Ft.	19660.32	8856	177724.32	80056	$2.22		
Churn	Ft.	1061.16	478	51424.08	23164	2.22	133420	$2.22
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Analytical Determinations	Ea.	154.00	154	760.00	760	1.00	2370	1.00
TOTAL DISTRIBUTED COSTS		20875.48		229908.40				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		20875.48		229908.40				

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

Date 9-12-58 Operator St. Joseph Lead Company

Per E. B. James Title DIVISION MANAGER

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)

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CCK 9/30/58

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

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MONTHLY REPORT FOR MONTH OF AUGUST, 1958

D.M.E.A. Project #4582 - Contract #IDM-E 1068

No shurn drills were operating in the area at the end of the month.

The following shurn drill holes were completed through overburden and chert-bearing formations and cased preparatory to diamond drilling during the month:

Stage No.	Stake No.	Feet Depth	Starting Date
II	VC-153	140	7-28-58
II	VC-157	103	8- 4-58
II	VC-158	235	7-21-58

Two diamond drills were operating in the area at the end of the month. The holes in progress were Stage II, Stake No. VC-158 at a depth of 485 feet and Stage II, Stake No. VC-157 at a depth of 624 feet.

The following diamond drill holes were completed during the month:

Stage No.	Stake No.	Prospect Hole No.	Bottom Depth	Feet of Dia. Drilling	Completed	Class.
II	VC-138	58VC179	595	595	8- 1-58	Blank
II	VC-146	58VC185	525	525	8- 6-58	Pay
II	VC-149	58VC192	675	510	8-11-58	Indicative
II	VC-148	58VC198	715	515	8-15-58	Pay
II	VC-147	58VC203	665	535	8-21-58	Pay
II	VC-151	58VC216	578	578	8-28-58	Blank
II	VC-141	58VC211	755	545	8-26-58	Blank
II	VC-134	58VC180	632	512	8- 1-58	Trace
II	VC-135	58VC187	574	454	8- 6-58	Pay
II	VC-128	58VC193	635	514	8-12-58	Pay
II	VC-150	58VC200	432	432	8-18-58	Indicative
I	VC-103	58VC206	715	590	8-22-58	Indicative
II	VC-155	58VC212	675	483	8-27-58	Speck Trace
II	VC-154	58VC188	703	548	8- 8-58	Indicative
II	VC-152	58VC195	685	510	8-13-58	Indicative
II	VC-153	58VC201	665	525	8-19-58	Pay
II	VC-156	58VC208	640	485	8-25-58	Trace

Analysis of results gained by drilling is shown in abstracts of our weekly reports to St. Joseph Lead Company, which are enclosed.

154 analytical determinations were made during the month as follows:

58VC179	1 Pb		1 Cu	58VC200	6 Pb		1 Cu
58VC185	12 Pb	4 Zn	6 Cu	58VC206	4 Pb		
58VC192	8 Pb		4 Cu	58VC188	7 Pb	1 Zn	
58VC198	5 Pb	2 Zn	1 Cu	58VC195	2 Pb		
58VC203	15 Pb	9 Zn	6 Cu	58VC201	10 Pb		
58VC180	3 Pb		2 Cu	58VC208	3 Pb		
58VC187	15 Pb		5 Cu	58VC212	1 Pb		1 Cu
58VC193	11 Pb		8 Cu				

WASHINGTON COUNTY

Courtois Area - In DMEA Project #4582

Period Ended August 4, 1958

3 diamond drills operating and 2 churn drills setting casing completed 1 trace and 1 blank hole.

58VC180, stake C134, a trace hole, is located 520 feet east of 57VC68. It bottomed at 632 feet depth in 8 feet of granite which extends up about to the top of the sandy transition zone. Good trace mineralization in the middle of the 7 reef zone was estimated as 1.3 feet of 2.0% Pb at 501 feet depth and 2.1 feet of 2.0% Pb at 515 feet depth.

58VC179, stake C138, a blank hole, is located 900 feet southeast of Hole 58VC181. It bottomed at 595 feet depth in Lamotte sand. It showed a good 7 reef section underlain by 12 crepe rock.

Week Ended August 11, 1958

3 diamond drills operating completed 1 pay and 1 indicative hole.

58VC185, stake C146, a pay hole, is located about 700 feet east-southeast of the Courtois post office and, on 520-foot spacing, midway between 2 good trace holes. It bottomed at 525 feet depth in Lamotte sand. Mineralization in the lower 5 zone was estimated as 23.7 feet of 18.1% Pb at 363 feet depth and 9.2 feet of 2.0% Cu at 370 feet depth. This hole is in line with the general trend of ore running through the Courtois area in a northeasterly direction.

58VC188, stake C154, an indicative hole, is located about 5,000 feet northeast of the village of Courtois and 900 feet southeast of a pay hole. It bottomed at 703 feet depth in Lamotte sand. Mineralization in the upper 7 zone was estimated as 6.4 feet of 1.3% Pb.

Week Ended August 18, 1958

3 diamond drills operating completed 3 pay, 1 indicative, and 1 trace hole for a total of 5 holes.

58VC187, stake C135, a pay hole, is located about 4,000 feet west of the village of Courtois and 520 feet west of an indicative hole. It bottomed at 574 feet depth in granite which extends up about 30 feet into the Bonneterre horizon. Mineralization in the 7 and 7/10 zones assayed 0.2 foot of 4.5% Pb at 462 feet depth, 9.6 feet of 3.2% Pb at 483 feet depth, 1.2 feet of 1.4% Pb at 496 feet depth and 4.2 feet of 1.2% Pb at 506 feet depth.

58VC193, stake C128, an indicative hole, is located about 1500 feet northwest of the village of Courtois and 520 feet north-northeast of a pay hole. It bottomed at 635 feet depth in Lamotte sand. Mineralization in the upper part of the 7 reef zone was estimated as 0.8 foot of 1.5% Pb at 495 feet depth, 3.6 feet of 3.3% Pb at 501 feet depth and 0.3 foot of 1.0% Pb at 508 feet depth.

58VC198, stake C148, a pay hole, is located about 1500 feet northeast of the village of Courtois and 900 feet northeast of a trace hole. It bottomed at 715 feet depth in Lamotte sand. Mineralization in the lower 5 zone was estimated as 7.1 feet of 3.3% Pb.

Week Ended August 18, 1958 (Continued)

58VC192, stake C149, a pay hole, is located 900 feet northeast of the above hole. It bottomed at 675 feet depth in Lamotte sand. Mineralization in the lower 5 zone was estimated as 8.0 feet of 2.5% Pb at 512 feet depth, 2.1 feet of 2.5% Pb at 520 feet depth and 1.6 feet of 2.5% Pb at 528 feet depth.

58VC195, stake C152, a trace hole, is located 4,000 feet northeast of the village of Courtois and 900 feet southwest of a pay hole. It bottomed at 685 feet depth in Lamotte sand. Mineralization at the top of the 7 reef zone was estimated as 3.4 feet of 2.1% Pb at 576 feet depth.

Week Ended August 25, 1958

3 diamond drills operating completed 2 pay, 1 indicative, and 1 trace hole for a total of 4 holes.

58VC203, stake C147, a pay hole, is located about 1,000 feet northeast of the village of Courtois and 1200 feet north of a pay hole. It bottomed at 666 feet depth in Lamotte sand. Mineralization in the lower 5 zone was estimated as 20.2 feet of 9.2% Pb at 474 feet depth and 20.4 feet of 3.0% Zn at 489 feet depth.

58VC201, stake C153, a pay hole, is located about 4500 feet northeast of the village of Courtois and 900 feet south of a pay hole. It bottomed at 665 feet depth in Lamotte sand. Considerable scattered mineralization was present in the lower 5 and upper 7 zones, best of which was estimated as 8.3 feet of 1.6% Pb at 471 feet depth, 2.2 feet of 2.0% Pb at 496 feet depth, 0.4 feet of 2.0% Pb at 505 feet depth and 6.4 feet of 3.2% Pb at 535 feet depth.

58VC206, stake C103, an indicative hole, is located about 5,000 feet north-northeast of the village of Courtois and 1500 feet northwest of a pay hole. It bottomed at 715 feet depth in Lamotte sand. Mineralization at the base of the 5 zone was estimated as 5.4 feet of 1.8% Pb. This hole shows a northwest extension of the mineralization along the northeast termination of an underlying granite ridge.

58VC200, stake C150, a trace hole, is located about 2,000 feet north-northeast of the village of Courtois and 900 feet north of 58VC203 described above. It bottomed at 432 feet depth in granite which extends up about 40 feet into the Bonneterre horizon. Considerable trace mineralization was present from 363 to 420 feet depth in the 7 and 7/10 zones, best of which was estimated as 7.2 feet of 1.1% Pb at 370 feet depth.

Period Ended August 31, 1958

4 diamond drills operating completed 2 trace and 2 blank holes for a total of 4 holes.

58VC216, stake C151, a blank hole, is located about 3,000 feet northeast of the village of Courtois and 1800 feet southwest of a pay hole. It bottomed at 578 feet depth in Lamotte sand. Bonneterre lithology was normal for the area.

58VC212, stake C155, a speck trace hole, is located 2400 feet northeast of the above hole and 900 feet southwest of a pay hole. It bottomed at 675 feet depth in Lamotte sand. Speck traces of lead were present in the lower 5 zone.

58VC208, stake C156, a trace hole, is located 900 feet east of the above hole and 900 feet southeast of a pay hole. It bottomed at 640 feet depth in Lamotte sand. Mineralization near the top and bottom of the 7 reef zone was estimated as 4.2 feet of 1.4% Pb at 491 feet depth and 1.3 feet of 2.0% Pb at 525 feet depth.

58VC211, stake C141, a blank hole, is located about 8,000 feet southwest of the village of Courtois and in the western edge of the project area. It bottomed at 755 feet depth in Lamotte sand. Bonneterre section showed a 90-foot 7 reef zone underlain by oolite and 12 crepe rock and with no sign of mineralization.

205

FORM 1173 1-57

Started 7-29-58

DATE BOTTOMED 8-1-58	ST. NO. 138 ST. ELEV.	CLASS BLANK HOLE NO. 58 VAC 779
DESCRIBED BY H T	AREA UC COURTOIS	ELEVATION COLLAR 946.80
DATE ESTIMATED 8-5-58	OPTION NO. 046857	COORDINATES: N 118879.13 E 87803.61
BY H T	TRACT U.S. FOREST LAND	200 FT. MAP NO. 35 50 FT. MAP NO. 120

SW1/4-SE1/4 SEC 6 150'N 3650'E T35N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 8" FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO		
SLEEVE BIT TO	15.	9318
BEGAN CORING AT	33.0	9138
SAVED CORES FROM	255.0	6918
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "	37.0	9098
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	117.0	8298
BONNE TERRE "	286.0	6608
	562.0	3848
B. T. TRANS. "	576.0	3708
CONGLOMERATE "		
LA MOTTE "	595.0	3518
GRAN. OR POR. "		
PICTURES: FROM	356.0	5908
TO		
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS
7-10-F	494.9	496.0	4508	1.1	0.0	0.0		1.5	1.0	1.65	[illegible]

CORE REC.

TO	CORES LOST
45	2.3
55	2.2
59	2.3
95	SOLID
105	1.0
113	0.2
115	-
155	0.3
155	SOLID
535	-
555	0.2
575	-
595	6.4

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FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY H T DATE 8-5-58 MINE COURTOIS STOPE STAKE NO [illegible] HOLE NO 58VC179

COLLAR ELEV. 947 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
3.3	914	BEGAN CORING	
3.7	910	POTOSI	QUARTZ @ 3.7 (3.7)
5.9	888	DERBY	DOERUN OOLITES (5.9)
9.3	854	SOLID	BIT (9.3)
11.7	830	DERBY	DOERUN THIN BEDED (11.7)
12.1	826	DERBY	DAVIS TRANSITION (12.1)
15.5	792	DAVIS	(15.5)
25.5	692	SOLID	BIT (25.5)
28.6	661	DAVIS	S'LXJ 28.1-28.5, FeC @ 28.1 (28.6)
			BONNE TERRE
30.0	647	1	TO - > STYOLITES FAINT TOMED OOLITES - > SMALL VUGS - > POROUS ↓ - (30.0)
32.2	625	1	TO DENSE CT - < TO 30.0-31.1 - > MOTT NEAR BASE - SMALL VUGS - 1' LGE GRY PATCHES @ 31.6 - > THIN RB - DENSE CT 31.1-32.2 (32.2)
33.9	608	5-1	GB X DENSE TO USUALLY BASICALLY STONE - > POROUS ↓ - USUALLY 32.2-33.1 - > GTO 33.1-33.2, 33.1-33.4 - FINELY X - > TO SECT - (33.9)
36.7	580	5	GB X-BB-TO-M - < POROUS B ↓ 34.6-35.5 - FINELY X - > POROUS B DOWN ABOVE 35.7-36.5 - > SMALL VUGS - > P2 SECT - > MOTT 33.3-33.4, SECT - 36.4 - > GB NEAR BASE - > SHORT TO SECT - (36.7)
38.1	556	R	GM-GB-GB-B↓ 1' GB @ 37.3, 37.5 - > SMALL VUGS - P4 36.7-36.9 - > SMALL GB 37.4-37.6 37.3-37.4 - > SHORT MOTTS ECT - > MED OOLITE SECT - > THIN RB - (38.1)
42.6	521	5	GTO: B↓ BASICALLY OOLITIC W/ > POROUS B ↓ 38.3-39.2 - > PITTING ↓ - MED TO LARGE OOLITES - > STYOLITES - 6" GB @ 40.5 - > LGE OOLITES [illegible]
48.1	466	7	F GT/STM: GB - > THIN RO - 1' TO X @ 43.9 - PROMINANT F - > GM PAT - > SHORT GB SECT - > 2ND ↓ - > SCATT SMALL VUGS - (48.1)
50.9	438	7-10	F GT/STM TO GB-MKB - > THIN RO - TO 48.1-48.4, 50.3, 50.5, 50.9 - 1' LGE @ 48.1 - DENSE GB 49.3-49.6 - 1' [illegible] TRI @ 49.6 - F 48.4-48.8, 49.0-49.3, 50.0-50.1 - > GBM 49.6-50.0 (50.9)
55.5	392	12	GTM - > TO - > F - HEAVY CREPE - > SHORT TO SECT - 1' F @ 52.3 - < HB 51.1-51.4 - > GM ↓ - > SCATT KB - (55.5)
56.2	385	12	GM - > B↓ - > SMALL TO MED B↓ - > THIN RS HB - < C↓ - < K PATCHES - : DENSE T (56.2)
57.6	371	19	GTMSD - > THIN RB - > HEAVY K SECT - F PATCH @ 57.3 - 2' GBM OS W/ FIN TO MED GRAIN 57.4-57.6 - > DENSE SECT - (57.6)
59.5	352	20	W.S. MED TO COARSE GRAIN - < GRAN - > SCATT FeS ↓ & PATCHES - (59.5)

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FORM 1173 1-87

Started 7-30-58

DATE BOTTOMED 8-1-58	ST. NO. 134 ST. ELEV.	CLASS TRACE HOLE NO. 58VC 180
DESCRIBED BY JA	AREA VC (Courtois)	ELEVATION COLLAR 1040.40
DATE ESTIMATED 8-5-58	OPTION NO. CZ-67	COORDINATES: N 118087.10 E 86650.87
BY JA	TRACT GEO. EVANS	200 FT. MAP NO. 35 50 FT. MAP NO. 620

NE¼-NW¼ SEC 7 T35N-R1W 650'S - 2500'E

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 24" FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	120.	9204
SLEEVE BIT TO		
BEGAN CORING AT	135.0	9054
SAVED CORES FROM	325.0	7154
FORMATIONS:		
SOIL TO "		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "	179.0	8614
DAVIS (C.B.-S.B.) "	350.0	6904
BONNE TERRE "	615.0	4254
B. T. TRANS. "	—	
CONGLOMERATE "	624.0	4164
LA MOTTE "	—	
GRAN. ~~GR. POR.~~ "	632.0	4084
PICTURES: FROM	428.0	6124
TO	572.0	4684
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% Cu ASSAY	% Cu EST.	FT. %	REMARKS	CORE REC. TO	CORES LOST
5 Tom	460.7	461.4	579.0	0.4		TR					cube	135	
7 F	498.5	498.6	541.8	0.1		TR						195	SB
7 F+O	499.1	500.1	540.3	1.0		TR						325	
7 F	500.1	501.4	539.0	1.3	1.9	2.0	2.5	1.5	1.0	1.95	disse	435	—
" "	501.9	502.7	537.7	0.8	0.3	TR	0.2	1.2	0.7	0.96	2.6-1.0-1.1 cu	455	1.4
" "	511.2	511.4	529.0	0.2		TR						563	
" "	513.1	515.2	525.2	2.1	1.6	2.0	3.4	-			> fos, ca-dol	583	1.8
												603	
												623	0.7
												626	0.2
												632	0.8

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JOPLIN, MO.

FORM 9002-8-5-55

ROCK CLASSIFICATION

DESCRIBED BY J.A. DATE 8-5-58 MINE Courtois STOPE STAKE NO. UG 134 HOLE NO. 58VC180

COLLAR ELEV. 1039 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
135	904	BEGAN CORING	
175	864	Discard cores	
179	860	Derby	Doe Run - thin bed - (179)
187	852	Derby	Davis Transition - (187)
350	689	Davis	Shale - Solid Bit 195 - 325 (350)
		Bonne Terre	
394	645	1	TO, massive, thinbed, snurly faint oolite - massive top to 365 - thin bed & band 365 - 382 - snurly 382 to Base —> porous patches - many thin Rbs - (394)
408	631	1-5	TO dense & > Bta faint oolite - < dense bs - > Bta - many thin Rbs - > pitting - (408)
432	607	5	GTOBt; snurly faint to med oolite - < Bta - snurly appearance 417-430 —> porous patches —> pitting - few thin Rbs - 2 wp x dickite ta x patches - (432)
445	594	R	TO > Bt - GTOM = Et faint oolite - 6" GTOM @ top - 1' @ 437, 1' @ Base - slightly snurly TO > Bta top to 437 - Ca ta, patches, & seams - few thin Rbs - > small Eta scattered - (445)
483	556	5	TO > M x small Gta faint to med oolite - few thin Rbs - > small Gta Ca ta - > M patches - tvs Pb - oolites increasing in size toward Base - (483)
561	478	7	FT GTM & TO good reef fairly fresh - many thin Rbs - > Ca - 2' < oolite 495-497 - Pb & Ca 499-505 - Pb @ 513-515 - 2" Ca @ 515 - > pitting - 1' @ Base w/ < Gta - (561)
582	457	12:7	GEM; E > Gt very crepey appearance - 6" F @ 563, 569 - > Gta - > Kbs - < EH - many thin Rbs - small Reef @ Base - (582)
615	424	12	GTM > O; Bt crepey appearance - many thin Rbs - > oolite scattered - < Et in last 1' @ Base - > grit scattered - > Ca ta - > 2 wp x - (615)
624	415	18	Pebble granite Boulders Cobbles Pebbles & grit w/ GDS matrix 1' Boulder @ top. 617, 619, 621 - > cobbles & pebbles w/ GDS matrix - last 2' appear slightly weathered - (624)
632	407	21	Solid Granite 1' @ top slightly weathered - 3' @ Base dark weathered Granite - mostly solid Red Granite - (632)

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7

12 - CU
6 - PB
4 - ZN

FORM 1173 1-57

Started 8-4-58

DATE BOTTOMED	ST. NO. 146	ST. ELEV.	CLASS PAY HOLE NO. 58TC 183
DESCRIBED BY H. T	AREA UC COURTOIS		ELEVATION COLLAR 895.29
DATE ESTIMATED 8-8 58	OPTION NO. CZ-284		COORDINATES: N 117064.76 E 90223.63
BY H. T.	TRACT EMMA PAYNE		200 FT. MAP NO. 46 50 FT. MAP NO. L6E

SW1/4 - NW1/4 SEC 8 1620' S - 1000' W T35N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 16" FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO		
SLEEVE BIT TO	19.	876.3
BEGAN CORING AT	25.0	870.3
SAVED CORES FROM	25.0	870.3
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-~~G.B.~~) "		
BONNE TERRE "	252.0	643.3
	504.0	391.3
B. T. TRANS. "		
	510.0	385.3
CONGLOMERATE "		
LA MOTTE "	525.0	370.3
GRAN. OR POR. "		
PICTURES: FROM	244.0	651.3
TO	525.0	370.3
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% CU ASSAY	% CU EST.	FT. %	REMARKS
2 TO.	281.1	281.2	6141	0.1		TR					FACE PB
5 BS SN	338.2	338.6	5567	0.4		TR					" "
"	339.1	342.8	5525	3.7	1.6	2.0	5.9				DISSM CUBES.
"	342.8	346.6	5487	3.8	4.7	4.0	17.9				DISSM CUBES & HIM. PB.
"	346.6	349.5	5458	2.9	29.5	32.0	80.6				" " "
"	349.5	350.5	5448	1.0	1.0	1.0	1.0				" " "
5 BS SN	350.5	355.1	5402	4.6	24.7	35.0	113.6	0.28	0.5	1.28	DISSM CUBES BANDS PB.
"	355.1	360.6	5347	5.5	5.9	4.0	32.4				DISSM CUBES PB
R	360.6	362.8	5325	2.2	56.2	60.0	123.6	1.7	2.0	3.74	BANDS COLOR PB CUBES
"	362.8	367.7	5276	4.9	2.5	1.0	12.2	2.5	2.5	12.25	DISSM PB
5 TO GB	367.7	369.8	5255	2.1	0.1	0.1	0.2	0.35	1.0	0.73	" "
"	372.6	373.6	5217	1.0		TR			TR		" "
"	375.4	375.6	5197	0.2	0.5	1.0	0.1				" "
5 TO-GB	376.8	376.9	5184	0.1	0.1	4.0	0.1	0.38	1.0	0.03	
7 F	385.1	385.6	5097	0.5	0.3	0.2	0.2	0.81	1.0	0.40	DISSM PB.
"	386.1	386.4	5089	0.3		TR					" "
"	395.3	396.0	4993	0.7		TR					Fe " "
"	409.9	411.3	4840	0.4		TR					Fe.
7 F	418.4	418.5	4768	0.1		TR					
					ZN A	ZN EST					540.2 - 12.3 - 0.0 - 1.4 ZN.
	342.8	346.6	5487	3.8	3.4	1.0	12.9				527.6 - 28.6 - 13.7 PB.
	346.6	349.5	5458	2.9	0.5	1.0	1.4				525.5 - 19.3 - 0.0 - 0.9 CU.
	347.5	350.5	5448	1.0	0.5	0.5	0.5				
	350.5	355.1	5402	4.6	0.5	1.0	2.3				

CORE REC.

TO	CORES LOST
45	1.1
65	0.9
105	-
235	SOLID
515	-
525	0.2

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BUREAU OF MINES
JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY H. T DATE 8-8-58 MINE COURTOIS STOCE STAKE W.C. 1 HOLE NO. 58 V.C.-185

COLLAR ELEV. 895 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
25'	870	BEGAN CORING	
77	818	DERBY	DOE RUN - THIN BEDDED - 1 Fe @ 51 (77)
89	806	DERBY	DAVIS TRANSITION (89)
105	790	DAVIS	SHALE (105)
235	660	SOLID	BIT (235)
252	643	DAVIS	SHALE - Fe @ 250 (XMED) 250-254 (254)
			BONE TERRE
289	606	I	TOTAL FAINTLY OOLITIC 252 - 276 - TO w/> TOB 276 - 281 - TOB 281 - BASE PATR @ 281 - > SMALL VUGS - > THIN BEDDED @ - : DENSE - (289)
305	590	I-5	TO - DENSE - SNURLY - B$ - FAINTLY OOLITIC - > DENSE B. > SNURLY SECT THROUGHOUT - > B$ - > SMALL VUGS - > THIN RB - (305)
339	556	5	B$ - GTO - SNURLY FAINTLY OOLITIC - < B$ - > POROUS - SECT - > SNURLY SECT 313 - 315 - 322 - 326 - > THIN RB - > GTCB MOTT SECT - > VUGS - (337)
355	540	5	GB - SNURLY POROUS GTO - VUGGY - B$ - > B$ - 2" GTB @ 341 - 2" GMOTT w/> HB @ 345 < VUGS - MOSTLY SNURLY - > FAINTLY OOLITIC SECT - SORT OF A BRECCIA APPEARANCE - FAIR TO GOOD DISSEMCUBES + BANDS OF FRB w/> ZN + CU TRS 339 - 355 (355)
366	529	R	GM - TO GB$ - > KB - > KR - 2' THIN BEDDED w/> THIN HB 355 - 357 - 1' KR @ BASE - FAINTLY OOLITIC - TRS TO FAIR PB w/> CU TRS 355 - 361 - VERY GOOD PB w/ TR TO FAIR CU 361 - 362 - 8" SOLID PB @ 362 - 4' - PB + CU TRS 362 - 366 - 6" GOOD CU @ 362 (366)
382	513	5	TO - GB : F - > RITT w/ G MED TO LARGE OOLITES - PB + CU TRS 366 - 379 - 2" @ 375.6 - 1" @ 377 - 2' F 368 - 370 - > FRACT - MOSTLY GB TO WATER BASE - (382)
422	473	7	F GTM - > THIN RB GOOD REF 4" PATR w/ FE @ 396 - 411' - > GB$ - > FRACTURED & TOTAL 415 WS (422)
445	450	7-10	F GTM TO - GB : M - > THIN RB - : E - MED TO LARGE OOLITES - MOSTLY TO w/> KB 336 - 344 - GOOD REF SECT - > SHORT GB$ SET - (445)
477	418	10-12	TO - GTM - > GEM - MOSTLY HEAVY CREE - w/> TO SECT - MED TO LARGE OOLITES - > GEM 455 - 460 - 2' FRACT w/ HEAVY CU FILL 465 - 467 - > CU$ - > SMALL GB$ - (477)
482	413	12	GTM > SMALL GB$ - HEAVY CREE - 1' KB @ 480 - < SMALL CU$ - (482)
497	398	11	GEM LSS > GB$ - > HB - HEAVY CREE - > CU$ - > SCATT HB - > MED B$ 492 - 494 - (497)
504	391	12	GTM > GB$ - > CU$ HEAVY CREE - 2" IN B$ @ BASE - > SCATT KB - (504)
510	385	19	GSD > MOTT > THIN RB - > SMALL VUGS 507 - 508 - > MOTT SECT - 1' DS w/> KB + > PP @ BASE - (510)
525	370	20	VS MED TO COARSE GRAIN - < FE > PECKS w/> FE PATCHES 512 - 515 - POROUS - (525)

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BUREAU OF MINES
JOPLIN, MO.

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FORM 4173 1-57

Started 8-4-58

205

DATE BOTTOMED 8-6-58	ST. NO. 135 ST. ELEV.	CLASS PAY HOLE NO. 58VC187
DESCRIBED BY [illegible]	AREA VC (Courtois)	ELEVATION COLLAR 1035.56
DATE ESTIMATED 8-8-58	OPTION NO. CZ-67	COORDINATES: N 117815.62 E 85646.88
BY [illegible]	TRACT GEO. EVANS	200 FT. MAP NO. 35 50 FT. MAP NO. 619

NE¼-NW¼ - SEC 7

930'S - 1500'E T35N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 24" FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	124.	911.6
SLEEVE BIT TO		
BEGAN CORING AT	126.0	909.6
SAVED CORES FROM	315.0	720.6
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	321.0	714.6
BONNE TERRE "	549.0	486.6
B. T. TRANS. "	—	
CONGLOMERATE "	564.0	471.6
LA MOTTE "	—	
GRAN. ~~OR POR.~~ "	574.0	461.6
PICTURES: FROM	374.0	661.6
TO	574.0	461.6
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% Cu ASSAY	% Cu EST.	FT. %	REMARKS	CORE REC. TO	CORES LOST
7 F	447.7	447.8	5878	0.1	0.3	1.5	0.1				seam	315	
7 TXO	456.0	459.2	5764	3.2	0.5	1.5	1.6				diss	490	
7 F	462.1	462.3	5733	0.2	4.5	2.0	0.9				cubs	510	0.5
" "	464.1	466.4	5692	2.3		TR						566	
" "	466.4	467.4	5682	1.0	0.6	1.0	0.6				fract Pb	574	0.7
" "	467.4	471.6	5640	4.2		TR			TR				
" "	473.3	478.3	5573	5.0	3.7	3.5	18.5				seam diss		
" "	478.3	482.9	5527	4.6	4.7	4.5	21.6	9.6	3.2		" "		
" "	482.9	485.5	5501	2.6		TR							
10-7 TXO	490.1	491.4	5442	1.3		TR							
10-7TXO:F	491.4	492.7	5429	1.3	0.6	1.5	0.8				seam		
10-7-TXO	492.7	494.5	5411	1.8		TR							
" "	494.5	495.7	5399	1.2	1.4	2.5	1.7				seam		
" "	496.5	498.5	5371	2.0	0.2	1.0	0.4				diss		
" "	498.5	501.7	5339	3.2		TR							
" "	501.7	505.9	5297	4.2	1.2	2.5	5.0				diss ; ~~seam~~		
" "	505.9	506.3	5293	0.4		—			TR				
12 F	524.9	525.7	5099	0.8	0.0			0.13	0.3	0.10			
" "	526.8	527.2	5084	0.4	1.1	TR.	0.4	0.18	0.7	0.07			
" "	527.8	530.0	5056	2.2	0.0			0.11	0.3	0.24			
" "	530.9	532.3	5033	1.4		TR			TR				
" "	540.5	542.7	4929	2.2	0.0	—		0.44	0.7	0.96			
18 conglom	562.8	564.1	4715	1.3	0.0			0.47	0.7	0.51			

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BUREAU OF MINES
JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY JA DATE 8-8-58 MINE Courtois STOPE STAKE NO. VC 13 HOLE NO. 58VC187

COLLAR ELEV. 1035 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
126	909	BEGAN CORING	
315	720	Discarded 126-183, 275-315	(315)
321	714	Davis —	(321)
		Banne Terre	
363	672	1	To thin bed x band: snurly faint oolite - fairly massive top to 338 - thin bed x band 338-355 - snurly 355 to Base - many thin Rbs - >porous patches toward Base - >fracturing - (363)
375	660	1-5	TO>Bx faint oolite L Bx - slight snurly appearance few thin Rbs - >pitting - (375)
414	621	5	GTO Bx med oolite - V< Bx - <pitting >small vugs - slightly snurly w/ many porous patches 388-398 - few thin Rbs - >G x scattered - >M toward Base - (414)
442	593	5	TO>G med oolite - few thin Rbs - >scattered G x - >pitting - >Cu - 1' G x @ 437 - >small M patches - (442)
485	550	7	E Term: TxG x good reef rock - 1' TxG x @ 446, 5 G x - 459 - >pitting >small vugs - few Rbs - >Cu - fair Pb - 474-483 - <fracturing - (485)
507	528	10-7	GTxO>G x: F faint to mod oolite - small x - >small G x - few thin Rbs - trs to fair Pb - 6" F @ 492 - >pitting >small vugs - (507)
549	486	12	F Term: IN dimly F - < oolite - few thin Rbs - 1" R @ - >pitting - 6' @ Base appear N - trCu - >Cu seams - >G x scattered - (549)
564	471	18:16	Conglomerate IN 2' Red Granite boulder 552-554, 1' @ 561 < pebbles x grit w/ LGD mantrix - 1' M @ top, 1' @ 551, 558 - 6" weathered Granite @ 560 - trCu (564)
574	461	21	Solid Granite solid Red Granite - w/ < quartz - large M 1' @ Base mod x - (574)

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BUREAU OF MINES
JOPLIN, MO.

FORM 1173 1-57

Stm. f. 8-1-58

DATE BOTTOMED 8-8-58	ST. NO. 154	ST. ELEV.	CLASS IND. HOLE NO. 58UC188
DESCRIBED BY H.T	AREA UC COURTOIS		ELEVATION COLLAR 1055.19
DATE ESTIMATED 8-11-59	OPTION NO. CZ-283		COORDINATES: N 120683.18 E 93564.01
BY H.T	TRACT JOHN TURNBOUGH		200 FT. MAP NO. 36 50 FT. MAP NO. 543

NE¼-SE¼ SEC 5 T35N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 26" FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	158	895 Z
SLEEVE BIT TO		
BEGAN CORING AT	391.0	662 Z
SAVED CORES FROM	391.0	662 Z
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B. ~~G.B.~~) "	412.0	641 Z
BONNE TERRE "	665.0	388 Z
B. T. TRANS. "	688.0	365 Z
CONGLOMERATE "		
LA MOTTE "	703.0	350 Z
GRAN. OR POR. "		
PICTURES: FROM	495.0	558 Z
TO	616.0	437 Z
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	ZN % ASSAY	ZN % EST.	FT. %	REMARKS	CORE REC. TO	CORES LOST
												411	-
												419	1.4
												429	-
												489	1.1
5 BB	504.3	504.4	5488	0.1		TR						529	-
R	521.8	522.8	5304	1.0	2.8	3.0	2.8				DISSM PB	543	1.4
"	522.8	524.3	5289	1.5		TR					" "	555	0.5
"	525.9	527.1	5261	1.2		TR					HEAVY FE.	575	-
"	527.1	527.4	5258	0.3	5.9	2.0	1.8				HEAVY FE.	583	1.4
R	528.2	530.5	5227	2.3	2.4	2.0	2.2	1.7	1.0	3.9	PB + ZN + FE.	683	-
5F	540.0	540.7	5125	0.7		TR					DISSM PB	703	1.0
"	541.7	542.2	5110	0.5		TR					" "		
"	542.2	544.5	5087	2.3	2.1	3.0	4.8				> GRN O. DISSM PB.		
5F	545.6	546.0	5072	0.4		TR					DISSM PB		
7F	557.9	559.1	4941	0.2		TR					" "		
"	565.0	565.8	4874	0.8	0.9	1.0	0.7				" "		
"	565.8	566.6	4866	0.8		TR					" "		
"	567.6	568.1	4851	0.5	2.8	3.0	1.4				" "		
7F	570.7	571.4	4818	0.7	10.6	9.0	7.4				> HEAVY FE.		
"	571.4	572.4	4808	1.0		TR					DISSM. PB		
"	573.6	573.9	4793	0.3		TR					" "		
"	574.6	575.0	4782	0.4		TR					" "		
7F	577.3	578.0	4752	0.7		TR					" "		

522.7 - 8.7 - 1.2 - 0.5 ZN.
508.7 - 2.3 - 2.1
481.8 - 3.8 - 2.3

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JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY H.T. DATE 8-11-58 MINE COURTOIS STOPE ..... STAKE NO. C-154 HOLE NO. 38VC188

COLLAR ELEV. 1052 PITCH ..... BEARING ..... COORD.: N ..... E .....

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
391	661	BEGAN CORING	
412	640	DAVIS SHALE	(412)
		BONNETERRE	
449	603	I	TO GTD DENSE → FAINTLY OOLITIC → SMALL VUGS → POROUS SECT → THIN
			IRREG BANDING 431 TO BASE → TO GTD 412-431 → DENSE SECT (449)
463	589	I-5	GT SNURLY TO GTD MOTTLY SNURLY → FAINTLY OOLITIC SECT → GTD → MOT
			L VUGS 449-451 → THIN RB → BF TOWARDS BASE (463)
517	535	5	BF GBX TO → MOTT → POROUS BF → P SECT → POROUS PATCHES → MOTT
			PB SPC 504-4 → DENSE SECT → SHORT GB SECT FINELY X (517)
531	521	6	GTM TO BF → KA → GF 1' SILTY W/THIN GB @ 518 PATRS 522-524 PATRS
			HEAVY FR 526-530 → IN 528-530 → MOTT FAINTLY OOLITIC → BF TOWARDS BASE → BF (531)
555	497	5	FF TO GF → THIN RB PATRS 540-546 GOOD REEF ROCK → BF → GF
			MED OOLITES W/ THIN GB @ 546 → SMALL VUGS → FRACT (555)
587	465	7	FF TM → SMALL GF 2" PB TR 556.1 TR TO FAIR RB 565-566 SCATT HEAVY FR
			@ 571 GOOD REEF ROCK → SCATT TRACE OF RB 571-578 → FRACT → PB → RB (587)
612	440	7-10	FF TO GF → THIN RB 1' GF W/ → KB @ 596, 599 → FRACT SECT OF
			REEF & TO W/ FAINT TO MED OOLITES (612)
619	433	10-12	TO GTM SECT OF TO & MOTTO REEF FAINT TO MED OOLITE → SCATT KB → GF (619)
628	424	12	GT GEM HEAVY CREEP → H & KB → GF (628)
649	403	11	GEM 633 - HEAVY CREEP 1' TO @ 636, 642 → GF → H & KB → TO @ 631 → GF 633,
			644 (649)
665	387	12	GT GEM → F → SCATT H & KB HEAVY CREEP 1' F @ 646 & 656 665
			6" L HB @ 657, 657 → SCATT BF TOWARDS BASE (665)
688	364	19	GSD-M T THIN FE BAND @ 676 PAPER THIN RAINBOW SLATE @ 683 → DENSE THIN
			S.O 685-688 → HEAVY K SECT → PATCHED → SMALL VUGS & 6" EDGE WITH GF @ 684 -
			F 685-688 (688)
703	349	20	W.S MED TO COARSE GRAIN 1' THIN HB @ 689 CLEAN SAND POROUS (703)

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BUREAU OF MINES
JOPLIN, MO.

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205

FORM 1173 1-57

Started 8-7-58

DATE BOTTOMED 8-11-58	ST. NO. 149	ST. ELEV.	CLASS IND. HOLE NO. 58VC192
DESCRIBED BY JP	AREA VC (Courtois)		ELEVATION COLLAR 1002.13
DATE ESTIMATED 8-13-58	OPTION NO. CZ 100		COORDINATES: N 118789.21 E 91672.05
BY JP	TRACT JAMES E SELLERS		200 FT. MAP NO. 36 50 FT. MAP NO. 622
			SE¼-SW¼-SEC 5

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 12" FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	168	834
SLEEVE BIT TO		
BEGAN CORING AT	168.0	834
SAVED CORES FROM	375.0	627
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	213.0	789
BONNE TERRE "	385.0	617
	643.0	359
B. T. TRANS. "	655.0	346
CONGLOMERATE "	—	
LA MOTTE "	675.0	327
GRAN. OR POR. "	—	
PICTURES: FROM	419.0	583
TO	593.0	409
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 115'N - 2615'W T35N-R1W

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% Cu ASSAY	% Cu EST.	FT. %	REMARKS	CORE REC. TO	CORES LOST
1 To shale	422.9	423.1	579.0	0.2		TR						168	
5 To B4	458.9	459.1	543.0	0.2	0.2	1.0	0.1				cubo	225	SB
R GTOM>B6	492.6	492.8	509.3	0.2		TR						355	Disc
" "	497.3	497.4	504.7	0.1		TR						375	
5 To>B4	504.4	508.3	493.8	3.9	2.1	3.5	8.2	0.15	0.5	0.58	cubo + diss	655	—
5 To>B4; F	508.3	510.1	492.0	1.8	0.2	1.0	0.4					675	60
" "	510.5	512.4	489.7	1.9	3.5	3.5	6.6	0.21	0.3	0.39	cubo + diss		
" "	512.4	512.9	489.2	0.5		TR							
" "	516.3	517.7	484.4	1.4		TR							
5 To Dove b	517.7	518.5	483.6	0.8	3.0	5.0	2.4	-	TR		cubo		
" " ; 7F	518.5	519.8	482.3	1.3	0.4	1.0	0.5	0.0	0.3		diss		
7 F porous	519.8	520.7	481.4	0.9		TR							
" "	522.7	523.8	478.3	1.1		TR							
" "	525.5	526.0	476.1	0.5		TR							
" "	526.0	527.6	474.5	1.6	1.2	2.5	1.9	0.09	0.7	0.14	cubo		
" "	527.6	529.3	472.8	1.7		TR							
7 F	546.2	546.6	455.5	0.4	6.8	6.0	2.7	-			cubo + diss		
	489.7			8.0	1.9								

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BUREAU OF MINES
JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY JP DATE 8-13-58 MINE Countain STOPE STAKE NO. V-149 HOLE NO. 58VC192

COLLAR ELEV. 1002 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
168	834	BEGAN CORING	
213	789	Derby	Doe Run — Thin bed top to 173, 184 to Base — ℓ oolite 173 — 184 (213)
218	784	Derby	Davis Transition — (218)
385	617	Davis Bonne Terre	Shale — Solid Bit 225-355 — Discord 355-375 (385)
430	572	1	To thin bed > band: snurly faint to med oolite — many thin Rbs — > dense banding scattered — snurly appearance 419 to Base — > pitting (430)
449	553	1-5	GTO > Bt dense ℓ slight snurly appearance — many thin Rbs — > scattered Bta — > short Bt sections — > pitting — > dickite ta — (449)
492	510	5	TO Bt snurly appearance faint to med oolite — < Bt — snurly appearance thru out — few thin Rbs — > pitting — tr Pb — > Ca + ℓ^MB (492)
505	497	5	GTOM > Bt Cta — thin bed + band: snurly faint oolite — scattered Bta > Gt alternating sections thin bed + banded and snurly appearing structure — > Ca + ℓ^MB — > pitting — tr Pb — 6" Gt @ Base (505)
517	485	5	TO > Bt; F faint to med oolite > Gta — few Bta — Pb — F 507 to Base — > pitting — Ca ta — (517)
519	483	5	TO dense ℓ Gb faint to med oolite — < dense ℓ — fair Pb — (519)
564	438	7	F/GTM porous > Gta good porosity F — few thin Rbs — > Gta tr to fair Pb + Cu — > Ca — denser F 541 to Base — (564)
578	424	7-10	F + TXO fair reef rock — med oolite — med X — alternating beds of F + TXO thru out — thin Rbs — > pitting + vugs — (578)
595	407	7-10-12	TXO > banding: F faint to med oolite — few thin Rbs — > Kbs + Mpatches — 2' F 586-588 — ≈ ℓ^MB ta (595)
643	359	12	GTM > Q slightly crepey — > Hbs — < Kbs + patches — > short oolite sections — many thin Rbs — > Ca ta — (643)
655	347	19	GTSDM: E slightly crepey — few thin Rbs — > pitting — fairly sandy 1' @ Base & DS very sandy — (655)
675	327	20	W Sand med grain — > F stained bands — (675)

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BUREAU OF MINES
JOPLIN, MO.

FORM 1173 1-57

Started 8-7-58

DATE BOTTOMED 8-12-58	ST. NO. 128 ST. ELEV.	CLASS PAY HOLE NO. 58VC 193
DESCRIBED BY	AREA VC (Courtois)	ELEVATION COLLAR 1019.76
DATE ESTIMATED 8-14-58	OPTION NO. CZ 67	COORDINATES: N 118016.18 E 88027.15
BY	TRACT GEO. EVANS	200 FT. MAP NO. 36 50 FT. MAP NO. 621

NE¼-NE¼-SEC7 700'S-1225'W T35N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 18" FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	123	8968
SLEEVE BIT TO		
BEGAN CORING AT	129	8908
SAVED CORES FROM	335.0	6848
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "	186.0	8338
DAVIS (C.B.-S.B.) "	354.0	6658
BONNE TERRE "	619.0	4008
B. T. TRANS. "	626.0	3938
CONGLOMERATE "	—	
LA MOTTE "	635.0	3848
GRAN. OR POR. "	—	
PICTURES: FROM	429.0	5908
TO	564.0	4558
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% Cu ASSAY	% Cu EST.	FT. %	REMARKS
STOE	448.0	448.9	5709	0.9	0.0	—		0.03	0.7	0.02	fault fill
	481.8	483.2	5366	1.4		TR					
7 F E	491.7	492.4	5274	0.7	1.3	1.0	0.9				
" "	494.1	494.9	5249	0.8	1.7	1.5	1.4				
" "	494.9	496.6	5232	1.7	0.0	TR		0.27	0.5	0.45	
" " >0	497.0	497.5	5223	0.5	0.9	TR		4.6	2.0	2.30	
7 F E	497.5	498.0	5218	0.5	25.0	12.0	12.5	2.9	0.7	0.14	band + disc
" "	498.0	500.1	5197	2.1		TR			TR		
" "	500.1	501.1	5187	1.0	9.6	6.0	9.6	1.4	0.3	1.40	cubo disc
" "	501.1	502.5	5173	1.4		TR			TR		
" "	502.5	503.0	5168	0.5	0.6	1.0	0.3				
" "	507.5	507.8	5120	0.3	1.3	1.0	0.4	0.18	0.3	0.05	
" "	510.8	515.5	5043	4.7	0.0	—		0.93	0.7	4.37	
" "	515.5	516.0	5038	0.5		—			TR		
" "	516.0	516.9	5029	0.9	0.0			1.2	1.0	1.08	

518.7 - 7.0 - 3.4 - 0.6 cu.
502.9 - 6.1 - 0.0 - 0.9 cu.

CORE REC.

TO	CORES LOST
178	—
198	58
335	
355	5.7
411	—
425	1.7
445	0.3
455	3.8
487	—
491	1.0
526	—
532	0.8
603	—
612	2.1
618	—
622	1.7
635	1.5

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FORM 9002-A-5-55

ROCK CLASSIFICATION

DESCRIBED BY JA DATE 8-14-58 MINE Courtois STOPE STAKE NO. VC-128 HOLE NO. 58VC193

COLLAR ELEV. 1019 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
129	890	BEGAN CORING	
178	841	Discarded 129-178	
186	833	Derby Doe Run - thin bedded	(186)
191	828	Derby Davis Transition	(191)
354	665	Davis Shale - Solid Bit 198-335	(354)
		Bonne Terre	
397	622	1	TO thin pad band snurly faint oolite - thin bed top to 375 - thin bed & band 375-384 - snurly 384 to Base - slightly E 363-368 - many thin Rbs - >pitting - (397)
414	605	5-1	TO Bt >dense ba faint oolite - <Bta - >dense bs thru out - >pitting - >ca tr - thin Rbs - > fracturing (414)
444	575	5	TO Bt i E faint oolite - <Bta > porous - >pitting - few thin Rbs - E 421-435, 438 base - >grinding - 3" Gta @ Base (444)
448?	571	8	TO m>Gta i E faint to med - 6" @ top Kbs & Gta - 1' @ Base E - >m scattered - appears red @ Base - few Rbs - >ca - (448)?
491	528	5	TO >Gt i E - faint to mod oolite - appear faulted @ top w/ Breccia fragments - tr ca - E top to 467, 482 to Base - > ca - few thin Rbs - > M patches - (491)
554	465	7	EE: Ftm>Gta fair roof rock E top to 538 - appears faulted - >filling w/ breccia fill - <pitting & small vugs - fair Pb 497-501 - fair ca - few Rbs - fracturing thru out top to 538 - good roof Ftm>Gt 538 to Base - <M - 1' Gta @ 553 - >fos - (554)
564	455	7&10	E Ftm>Gta & TXO i E fair roof rock w/ short sections of TXO - E 559 to Base (564)
596	423	12-10	TEM - TXO E i F - slightly crepy w/ EHbs - 1' TXO @ 568, 588, 592 - F 579-582 - E thru out - >pitting - > ca bs & patches - 2' slightly porous 589-591 - (596)
619	400	12	LTEM E > Bt E thru out - crepey appearance - <EHbs - >pitting appear faulted @ 608 w/ < ca - Bta toward Base - (619)
626	393	19	GSD i E fairly sandy - E 623-625 - few thin Rbs - tr fos - >grinding - (626)
635	384	20	W Sand med grain - > fos - >grinding - (635)

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BUREAU OF MINES
JOPLIN, MO.

FORM 1173 1-57

Started 8-8-58

17

205

DATE BOTTOMED 8-13-58	ST. NO. 157	ST. ELEV.	CLASS IND HOLE NO. 58VC195
DESCRIBED BY JP	AREA VC Courtois		ELEVATION COLLAR 1031.65
DATE ESTIMATED 8-15-58	OPTION NO. CZ100		COORDINATES: N 120295.85 E 92005.67
BY JP	TRACT JAMES E SELLERS		200 FT. MAP NO. 36 50 FT. MAP NO. 583

NW¼-SE¼-SEC 5 T35N-R1W 1630'N-2470'W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 21" FT.

FORM BOTT. SL. 1

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	177.	8347
SLEEVE BIT TO		
BEGAN CORING AT		
SAVED CORES FROM	375.0	6567
FORMATIONS:		
SOIL TO "		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	397.0	6347
BONNE TERRE "	659.0	3727
B. T. TRANS. "	677.0	3547
CONGLOMERATE "	—	
LA MOTTE "	685.0	3467
GRAN. OR POR. "	—	
PICTURES: FROM	477	5547
TO	609	4227
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% Cu ASSAY	% Cu EST.	FT. %	REMARKS	CORE REC. TO	CORES LOST
5-1 C to > B# dense b	483.6	484.7	5470	1.1		TR						375	
5 TO B#	513.1	513.3	5184	0.2		TR						665	—
" "	515.7	515.8	5159	0.1		TR						685	1.5
" "	517.2	517.6	5141	0.4		TR							
B C to < B# sandy	519.3	519.9	5118	0.6		TR							
" "	521.8	522.2	5095	0.4		TR							
" "	524.1	525.2	5065	1.1		TR							
5F: dense to b	529.8	5329	4988	3.1		TR							
5 F	535.5	535.8	4959	0.3		TR							
7 F > C#	561.2	561.4	4703	0.2		TR							
" "	570.6	570.7	4610	0.1		TR							
" "	572.8	574.6	4571	1.8	5.0	3.0	9.0				dense & w cam		
7-10 F + TRO	574.6	576.2	4555	1.6	0.6	1.0	1.0		TR		3.4 - 2.9		
" "	587.2	588.3	4434	1.1		TR							
" "	589.4	593.3	4384	3.9		TR			TR				
" "	595.3	597.7	4340	1.4		TR			TR				

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FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY JA DATE 8-15-58 MINE Courtois STOPE STAKE NO. VC 152 HOLE NO. 58VC195

COLLAR ELEV. 1031 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
375	656	BEGAN CORING	
397	634	Davis Shale — Bonne Terre	(397)
449	582	1	TO thinbed smurly f.E faint oolite — fairly massive top to 413 — thin bed 413-433 — smurly appearance 433 to Base — E 3' 403-406 — many thin Rbs — >pitting + small vugs — (449)
478	553	5-1	GTO>Bbal dense bit E faint oolite — >Bta — thin Rbs — many dense bands — <pitting — >ca ta — E 1' @ 451, 454 to Base — >porous patches — (478)
506	525	5	TO Bt Kb + Gt — slightly smurly f.E med oolite — >Bta — few kbs + Gta — E top to 480, 481-484 — many porous patches + has smurly appearance — >dickite — tr Pb — (506)
518	513	R	GTO>Gt ribbed banded + smurly med oolite — thin bed + banded to pto 509 — slightly smurly 511-515 — kb + TO 515 to Base — >M patches >ca — few thin Rbs — (518)
525	506	5	GTO>Bt: Banded med oolite — >M patches — 6" Banded @ 520, 522 — few Bta scattered — >ca ta — (525)
545	486	5	FE Tim>Gt: dense TOul kbs med good ref rock w/ good F — few thin Rbs ca ta + patches — <Gta in matrix — 8" dense TOul kbs + patches @ 533, 3' @ Base — tr Pb (545)
574	457	7	FE Tim>Gt good reef rock w/ fair F — many thin Rbs — >pitting + small vugs — <Gta scattered thru matrix — F appear Dark Brown 568 to Base — >ca + 2 ND ta — fair Pb @ Base — (574)
602	429	7-10	FE Tim>Gt — TXOM fair reef rock — >Gta thru matrix — TXO w/ >M top to 576, 580-587, 1' @ 593, 1' @ Base — 2' Gta 587-589 — many thin Rbs — tr Pb w/ >fair @ top — >porous patches — (602)
637	394	12-10	GTM — TXOM crepey appearance — many thin Rbs — >E Rbs — 1' TXOM @ 608, 625, 630, 632 — <pitting — >Gta scattered slightly porous 616-625 (637)
659	372	12	GTM: E very crepey — many thin Rbs — <pitting — E 655 to Base — >Gta — <K — (659)
677	354	19	GTSDM: E slightly crepey — fairly sandy — many thin Rbs — E top to 662, 665-668, 2' 669-671, 675 to Base — >Granite pebbles @ Base — 2' DS @ Base — ca b @ 664 — (677)
685	346	20	W. Sand — med grain — appear slight angular bedding — (685)

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1 L.S.

FORM 1173 1-57

STARTED - 8-12-58

DATE BOTTOMED 8-15-58	ST. NO. C-148	ST. ELEV.	CLASS PAY — HOLE NO. SBVC 148
DESCRIBED BY JA	AREA COURTOIS - DMEA - #2		ELEVATION COLLAR 1057.90
DATE ESTIMATED 8-19-58	OPTION NO. C2-284		COORDINATES: N 118149.55 E 91028.20
BY JA	TRACT Emma Payne		200 FT. MAP NO. 36 — 50 FT. MAP NO. 622
			NE¼ NW¼ Sec. 8 - T35N - R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 12" FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	200.	857.9
SLEEVE BIT TO		
BEGAN CORING AT	200.0	857.9
SAVED CORES FROM	415.0	642.9
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	434.0	623.9
BONNE TERRE "	692.0	365.9
B. T. TRANS. "	698.0	359.9
CONGLOMERATE "	—	
LA MOTTE "	715.0	342.9
GRAN. OR POR. "	—	
PICTURES: FROM	540.0	517.9
TO	626.0	431.9
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 525S 175E

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ZN ASSAY	% ZN EST.	FT. %	REMARKS	CORE REC. TO	CORES LOST
R To thin bed Band	547.2	547.8	510.1	0.6	0.3	1	0.2					265	—
" "	548.4	548.6	509.3	0.2	2.2	3.0	0.4	4.4	0.7	0.9		285	S.B.
" "	548.6	550.2	507.7	1.6	1	TR						415	
" "	550.2	550.6	507.3	0.4	6.4	3.0	2.0					495	—
" "	551.0	551.2	506.7	0.2	8.7	4.0	1.7					515	0.3
" "	551.8	554.3	503.6	2.5	11.9	8.0	26.8	1.0	0.7	2.5		695	—
5 To Band	556.4	556.6	501.3	0.2		TR						715	0.9
7-10 F	604.9	605.0	452.9	0.1		TR							
							31.7						
	551.8	554.3	503.6	2.5	0.11	0.3	0.27						

503.6 - 4.1 - 7.6 - 0.6 ZN.

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JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

L.S.

DESCRIBED BY JA DATE 8-19-58 MINE Courtois STOPE STAKE NO. VC 148 HOLE NO. 58VC198

COLLAR ELEV. 1058 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
200	858	BEGAN CORING	
265	793	Discarded 200-265	
267	791	Derby Davis Transition —	(267)
434	624	Davis Shale — Solid Bit 285-415	(434)
		Banno Terre -	
481	577	1	TO thin bed+band-snurly faint oolite — thin bedded + banded top to 467 — snurly appearance 467 to Base — >pitting + small vugs — many thin Rbs — > porous patches — (481)
497	561	1-5	TO>Bt >dense Gbs faint oolite — > short sections Gta — many thin Rbs — >pitting — >dense Gbs — >small vugs — (497)
541	517	5	TOB<snurly faint to med oolite — <pitting — + Bta — snurly 501 to Base — few dense bands — <porous patches — few thin Rbs — >2 NB ta — (541)
554	504	R	TO thin bed+band>M faint oolite — <Banding — many thin Rbs — >Bta + M toward Base — >pitting + small vugs — good Pb 549 to Base — tr. Cu + ZN — >sections snurly — (554)
557	501	5	TO Gt med oolite — <small Gta — >M patches — few Rbs (557)
574	484	5	F TM>Gta good reef rock — good F — >pitting — few thin Rbs — >Gta in matrix — (574)
576	482	5	TO dense Gbs med oolite — <dense Gbs + patches — few thin Rbs — >pitting — (576)
605	453	7	F TM>Gt:Gt fair reef rock — slightly porous — >Gta in matrix — Gt sections 594-601 — (605)
625	433	7-10	F TM>Gt — TO L fair reef rock w/>Gta in matrix — TO Banded top to 609, 611-615 slightly porous — >Gta — many thin Rbs — tr Pb (625)
642	416	10+12	GTOM med oolite, slightly crystalline — many thin Rbs — >Rbs — 2' fault w/ Breccia fill 633-635 — >2 NB ta — >ca — (642)
655	403	12	GTM>O+Gt crepey appearance — many thin Rbs — >EN — few short sections w/ oolite + Gta — >ca ta — >ca — (655)
686	372	11	GTMLS>O crepey appearance — many thin Rbs — good L.S. TOP 658, 661, 663, 665 — >Bta toward Base >Cta (686)
692	366	12	GTM>Bt crepey — <M — large Bta toward Base — many thin Rbs — >ca ta — (692)
698	360	19	GTSDM:E fairly sandy — few thin Rbs — >pitting — 8" @ Base & — >ca ta — (698)
715	343	20	W. Sand med grain — very clean — >grinding — (715)

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FORM 1173 1-57

Started 8-13-58

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202

DATE BOTTOMED 8-18-58	ST. NO. VC-150	ST. ELEV.	CLASS INDICATIVE HOLE NO. 58VC200
DESCRIBED BY GA	AREA Courtois - DMEA #2		ELEVATION COLLAR 885.19
DATE ESTIMATED 8-20-58	OPTION NO. CZ-100		COORDINATES: N 119220.75 E 89901.77
BY GA	TRACT Jas. E. Sellers		200 FT. MAP NO. 36 50 FT. MAP NO. 581
			SW¼-SW¼-Sec. 5-T35N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 8" FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO		
SLEEVE BIT TO	13.	872.2
BEGAN CORING AT	45	840.2
SAVED CORES FROM	183	702.2
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "		
DERBY-[illegible]	45	836.2
DAVIS (C.B.-S.B.) "	196	689.2
BONNE TERRE "	423	462.2
B. T. TRANS. "	—	
CONGLOMERATE "	425	460.2
LA MOTTE "	—	
GRAN. ~~CR POR.~~ "	432	453.2
PICTURES: FROM		
TO	431	453.2
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 525'N 670'E

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% Cu ASSAY	% Cu EST.	FT. %	Zn	REMARKS	CORE REC. TO	CORES LOST
TF	319.5	319.6	565.6	0.1		TR							183	
"	324.5	324.9	560.3	0.4		TR							363	—
"	328.9	329.4	555.8	0.5		TR							393	2.0
"	355.0	356.6	528.6	1.6	0.0	—		0.47	1.0	0.75		[illegible]	412	—
"	357.0	362.3	522.9	5.3		[illegible]			TR				411	1.0
"	363.0	367.1	518.1	4.1	2.7	1.5	11.1					"	432	—
"	369.0	370.2	515.[illegible]	1.2	0.9	1.0	1.1					"		
"	370.2	378.5	506.7	8.3		TR								
7-10	387.3	389.0	496.2	1.7	2.6	1.0	4.4				TR	[illegible]		
"	405.0	40[illegible]	477.2	[illegible]		TR								
"	40[illegible]	40[illegible]	476.8	0.4	0.7	1.0	0.3					[illegible]		
"	405.4	4[illegible]	475.8	1.0		TR								
"	414.[illegible]	415.4	466.8	4.4		[illegible]								
1bM	412.4	42[illegible]	465.2	1.[illegible]	0.5	1.0	0.8					[illegible]		

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JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATI

DESCRIBED BY [illegible] DATE 8-20-58 MINE COURTOIS STOPE HOLE NO. 58VC200

COLLAR ELEV. 886 PITCH BEARING

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KINI (Depth
15	841	BEGIN CORING	
49	837	DERBY-DAVIS – 2' SANDY GE W/THIN SHALE b.e	– (49)
60	826	DAVIS –	(60)
183	703	SOLID BIT	(183)
196	690	DAVIS –	(196)
		PANNE TERRE	
240	646	1	LT>o b1 ε:LGT b2 – ε LT' 230 – GT>o > ε b2 > FRACT 230 TO 238 – 2' ε LT>o b1 @ 240 – (240)
250	636	5-1	ε LG > m B1 – ε TH INSE b – B1 THRUOUT – FRACT 245 TO 250 – (250)
282	603	5	ε LT>o b – < ε THRUO 12 – 6" > ε GEM – E1 @ 276 – 1' < OOLITIC > m G1 @ 280 (282)
314	572	5	ε LT>o LG1 GEM – ε @ 286 – BASICALLY GOOD OOLITIC b – 2' < DENSE @ 291 –
			OOLITES INCREASING IN SIZE SE – 1' ε GEM > m > G1 @ 293 – > ε LT < o – G1 VEINING
			293 TO 303 – DARK TAN < o b : FRACT 308 TO BASE – (314) (> G1 TOWARD BASE)
386	500	7	F%m > G1 : G1 b – MED F SNURLY > FRACT 314 TO 330 – 2' SEC OR b : b GT>o W/ < DENSE BLUE GREY
			@ 332 – SCATT Pb TRS – 1' < G1 @ 342 – 3' < G1 GT b1 @ 347 – 1.5' Cu ASSAY @ 351 – Pb Cu TRS
			357 TO 360 – Pb ASSAY 360 TO 361.5 & 363 TO 367 – MATRIX OF F WAS MED G1 357 TO BASE –
			1' T>o b1 @ 367 – (386)
418	468	7-10:12	F%m G1 – GT>o G1 – GEM – 1' GEM – @ 387 – 4' GT>o > REEFY @ 391 – GEM > m 391 TO 394 – 1' < G1 >
			REEFY @ 395 – 1' SNURLY F @ 396 – SMOOTH SECTION F%G1 396 TO 400 – 3' GOOD F SNURLY @ 403 –
			4' GT>o : > M @ 407 – 2' F @ 409 – GT>o – G1 b1 409 TO 415 W/ 4" REEFY SECTION @ 415 – Pb TRS 414 TO
			INSE – > FRACT THRUOUT – (418)
423	463	16	F%m N – FRESH F – N APP – > M – SNURLY – 2' Pb ASSAY : FRACT Pb @ 420 – (423)
425	461	18	WEATHERED GRAN COBBLES W/ GD MATRIX – WEATHERED ORANGE IGNEOUS COBS W/ GD MATRIX – (425)
432	454	21	RED GRANITE – FRESH RED GRANITE – MED SiO2 – DISS DARK E MINERALS – THIN ANGULAR DOLOMITE
			VEINS @ 431 – (432)

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FORM 1173 1-57

Started 8-14-58

DATE BOTTOMED 8-19-58	ST. NO. C-153	ST. ELEV.	CLASS PAY / HOLE NO. 58VC 201
DESCRIBED BY [illegible]	AREA COURTOIS - DMEA #2		ELEVATION COLLAR 985.28
DATE ESTIMATED 9-21-58	OPTION NO. CZ-283		COORDINATES: N 120022.11 E 92902.83
BY [illegible]	TRACT Jno. Turnbough		200 FT. MAP NO. 36 / 50 FT. MAP NO. 583

NW¼-SE¼-Sec 5-T35N R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 21" FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	140	845.3
SLEEVE BIT TO		
BEGAN CORING AT	144	841.3
SAVED CORES FROM	355	630.3
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "		
BONNE TERRE "	368.0	617.3
	632.0	353.3
B. T. TRANS. "		
	650.0	335.3
CONGLOMERATE "	—	
LA MOTTE "	665.0	320.3
GRAN. OR POR. "	—	
PICTURES: FROM	415	570.3
TO	580	405.3
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 1350' N 1580' W

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% Cu ASSAY	% Cu EST.	FT. %	REMARKS	CORE REC. TO	CORES LOST
shows b 1-5 GTOB#	427.2	427.3	558.0	0.1		TR						355	—
" "	432.5	432.6	552.7	0.1		TR						374	2.1
" "	437.3	437.4	547.9	0.1		TR						389	—
" "	441.7	442.0	543.3	0.3		TR						409	1.1
" "	443.3	444.3	541.0	1.0		TR						425	—
" "	446.4	447.2	538.1	0.8		TR						445	0.3
5 GTOB#	452.3	453.0	532.3	0.7		TR						453	0.5
breccia 5 GTOB#	461.0	463.1	522.2	2.1		TR						461	2.9
" "	463.1	467.5	517.8	4.4	1.6	2.0	7.0				diss	501	—
" "	467.5	469.2	516.1	1.7		TR						505	1.0
" "	469.2	471.4	513.9	2.2	1.4	2.0	3.1	513.9-8.3-1.2			diss	514	0.6
" "	471.4	472.1	513.2	0.7		TR						533	—
8 GTOB	477.8	478.0	507.3	0.2		TR						545	1.0
5 TO >F	491.3	491.5	493.8	0.2		TR						555	—
" "	494.0	496.2	489.1	2.2	1.7	2.0	3.7				diss	565	0.4
5 F	497.5	499.2	486.1	1.7		TR						645	—
5 TO shows b	499.7	499.9	485.4	0.2	0.2	1.0	0.1				diss	665	1.5
5 TO F	499.9	500.8	484.5	0.9		TR							
" "	500.8	501.3	484.0	0.5	0.8	1.0	0.4				diss		
5 shows b	505.0	505.4	479.9	0.4	9.3	2.0	3.7				cubo		
" "	507.0	508.1	477.2	1.1		TR							
5 TO > F	514.4	514.5	470.8	0.1		TR							
7 F	521.8	521.9	463.4	0.1		TR							
" "	523.4	523.5	461.8	0.1		TR							
" "	529.0	531.3	454.0	2.3	7.1	4.0	16.3	449.9-6.4-4.8			diss & band		
" "	533.2	535.4	449.9	2.2	6.5	5.0	14.3		TR				
" "	541.8	542.2	443.1	0.4	2.9	3.0	1.2				diss		
" "	545.0	545.2	440.1	0.2		TR							
" "	558.5	559.4	425.9	0.9		TR							
" "	573.9	574.3	411.0	0.4	0.5	1.5	0.2				diss		

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FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY JP DATE 8-21-58 MINE Courtois STOPE STAKE NO. VC 153 HOLE NO. 58VC201

COLLAR ELEV. 985 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
144	841	BEGAN	CORING
355	630		Discord 144-204, Solid Bit 204-325, Discord 325-355
368	617	Davis Bonne Terre	Shale - (368)
418	567	1	To thin bed band: snurly - > dense TW - very dense TW w/ > vugs top to 374 - faint oolite thin bed & band 374-405 - snurly 405 to Base - few thin Rbs - > pitting & small vugs - (418)
451	534	1-5	GTO > Bt < dense bi:E faint to med oolite - scattered Bt & a - many thin Rbs - > pitting & porous patches - 1' E @ 442 - many dense Gbs & patches - tr Pb - (451)
460	525	5	GTO Bt med oolite - < Bt & a & porous Bt & a - tr Pb (460)
472	513	5	GTO Bt w/ < Breccia or Debre faint to med oolite - Bt & a - few dense Gbs - < Breccia or Debre 463 to Base - fair Pb - > porous patches - (472)
476	509	5	GTO Slightly snurly faint oolite - > Bt & a - snurly appearance - > porous patches - few thin Rbs - > ca - tr Pb - (476)
486	499	8	GTOM - irregular bed faint oolite - many thin Rbs - irregular bed 480 to Base - > ca & a - > pitting - few Bt & a - (486)
516	469	5	GTO thin beds band: F faint to med oolite - thin bed & band slightly crepey top to 493 - F 496-500 slightly 507-510, 513-514, - TO dense Gbs 505-507, 2' @ Base - 1' Gb 511 - 1" Cab @ 498 - 6" LG @ 489 - many thin Rbs - > pitting - tr to fair Pb - (516)
546	439	7	F GTO > Gbs good reef rock - fair F - < pitting - many thin Rbs - Gbs & oolite scattered - 2 1/2" & a - tr to fair Pb - > fes - (546)
584	401	7-10	F GTM - TW thin beds band mostly F rock - 2' thin beds band TW @ top - TW Gb 560-567 dense Gbs - interbedded F & TW thin beds band 567 to Base - many thin Rbs - > pitting & small vugs - > fracturing - tr Pb (584)
609	376	12-10	GTM w/ > TW & F crepey w/ many thin Rbs & M - > short sections TW interbedded - few Bt & a - > kbs - (609)
632	353	12	GTM very crepe - many thin Rbs - > ca & a - > pitting - < M - few Bt & a - (632)
650	335	19	GSDM: N & E fairly sandy - E top to 643 - slight N structure 645 to Base - < M - few Bt & a - 1' @ Base E DS very sandy w/ > thin E Rbs (650)
665	320	20	W. Sand - med grain - very clean - > E stain @ top - (665)

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205

FORM 1173 1-57

STARTED - 8-18-58

DATE BOTTOMED 8-21-58	ST. NO. VC147 ST. ELEV.	CLASS PAY	HOLE NO. 58VC 205
DESCRIBED BY Q	AREA Courtois - DMEA # 2	ELEVATION COLLAR 1011.75	
DATE ESTIMATED 8-21-58	OPTION NO. C2-284	COORDINATES: N 118364.62	E 90202.71
BY Q	TRACT Emma Payne	200 FT. MAP NO. 36	50 FT. MAP NO. 622

NW¼ - NW¼ - Sec 8 - T35N R1W

320'S. 920'E.

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 24" FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	135	8768
SLEEVE BIT TO		
BEGAN CORING AT	135	8768
SAVED CORES FROM	135	8768
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "	609	8048
DAVIS (C.B.-S.B.) "	372	6398
BONNE TERRE "	635	3768
B. T. TRANS. "	653	3588
CONGLOMERATE "	—	
LA MOTTE "	665	3468
GRAN. OR POR. "	—	
PICTURES: FROM	438	5738
TO	476	4358
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ≥ N ASSAY	% ≥ N EST.	FT. %	REMARKS
LGSD	454.2	454.8	557.0	0.6	2.0	1.0	1.2	0.2	0.5	0.1	[illegible]
"	454.8	456.7	5551	1.9	30.1	20.0	57.2	0.3	0.5	0.6	Conglomerate
"	456.7	458.7	5531	2.0	1.0	1.0	2.0	0.2	0.5	0.4	Conglomerate
"	458.7	461.7	5501	3.0	31.0	[illegible]	93.0	0.5	0.5	1.5	Conglomerate
"	461.7	462.8	5490	1.1		TR					
"	462.8	463.4	5484	0.6	10.9	12.0	6.5	0.3	0.5	0.2	"
"	463.4	464.9	5469	1.5		TR					
"	464.9	466.6	5452	1.7	2.0	1.0	3.4	0.3	0.5	0.5	Conglomerate
	466.6	468.0	5438	1.4		TR					
	468.0	469.7	5421	1.7	1.7	5.0	8.0	6.8	3.0	11.6	[illegible]
	469.7	470.7	5411	1.0		TR					
"	470.7	474.4	5374	3.7	23.9	15.0	88.4	16.8	10.0	62.2	Conglomerate
	487.4	487.4	5224	2.0	0.2	TR	0.4	8.7	10.0	17.3	[illegible]
	499.2	501.2	5106	2.0		TR					
"	501.2	502.3	5095	1.1	0.9	TR	1.0				
5[illegible]	507.0	509.0	5028	2.0		TR					
"	509.0	509.7	5021	0.7	0.0	TR					"
"	509.7	510.9	5009	1.2		TR					
"	510.9	511.3	5005	0.4	0.0	TR					"
"	536.2	536.8	4750	0.6	0.0	TR					"
"	539.8	540.6	4710	0.8	3.9	2.0	3.2				"
"	543.0	543.9	4680	[illegible]	0.0	TR					"
[illegible]	562.[illegible]	[illegible]	4488	0.5		TR					
"	566.[illegible]	566.2	4456	0.2		TR					
"	572.8	573.0	4389	0.1		TR					
	582.5	582.7	4291	0.2		TR					

CORE REC.

TO	CORES LOST
365	
395	—
399	2.0
403	1.0
409	2.0
416	—
426	1.0
445	—
455	5.0
475	—
483	1.0
655	—
665	8.0

537.4 - 20.2 - 12.6 - 3.0 - ZN.
542.4 - 2.0 - 0.2 - 8.9 - ZN.
509.5 - 1.1 - 0.9 - 1.9 - Cu
471.2 - 0.8 - 3.9

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PAGE II

CU ASSAYS

FORM 1173 1-57

DATE BOTTOMED _____

DESCRIBED BY Q

DATE ESTIMATED 3-21-55

BY Q

ST. NO. VC-147 ST. ELEV. _____

AREA Cookstown

OPTION NO. _____

TRACT _____

CLASS _____ HOLE NO. 58VC208

ELEVATION COLLAR _____

COORDINATES: N _____ E _____

200 FT. MAP NO. _____ 50 FT. MAP NO. _____

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR _____ FT.

FORM BOTT. SL. _____

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO		
SLEEVE BIT TO		
BEGAN CORING AT		
SAVED CORES FROM		
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "		
BONNE TERRE "		
B. T. TRANS. "		
CONGLOMERATE "		
LA MOTTE "		
GRAN. OR POR. "		
PICTURES: FROM		
TO		
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	%Cu ASSAY	%Cu EST.	FT. %	REMARKS	CORE REC. TO	CORES LOST
	501.2	502.3	5095	1.1				1.9	0.52.09				
	509.0	509.7	5021	0.7				0.19	0.50.13				
	510.9	511.3	5005	0.4				0.47	0.50.18				
	536.2	536.8	4750	0.6				0.52	0.50.31				
	539.8	540.6	4712	0.8				0.10	2.00.08				
	543.0	543.8	4680	0.8				0.09	0.50.07				

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FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE 8-[illegible]-58 MINE [illegible] STOPE STAKE NO. [illegible] HOLE NO. 5AVC203

COLLAR ELEV. 1011 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)	
135	876	BEGAN CORING		
155	856	DERBY	– [illegible]	(155)
207	804	DERBY	– THIN BEDDED [illegible]	(207)
213	798	DERBY	– DAVIS – ALTERNATING SECTIONS OF DERBY [illegible] + DAVIS TUFFS –	(213)
215	796	DAVIS	– [illegible] SANDY [illegible]	(215)
365	646	SOLID BOT		(365)
372	639	DAVIS		(372)
		BANNER TUFFS		
430	571	1	[illegible] 372 TO 416 [illegible] – [illegible] w/ DENSE [illegible] 416 TO 426 – 5' GT [illegible] DENSE [illegible] @ 430 – (430)	
446	555	5	GB [illegible] – 2' [illegible] @ 432 – 1' GT [illegible] @ 436 – [illegible] 436 TO 446 – (446)	
482	529	5	[illegible] GB [illegible] SNURLY – [illegible] SNURLY DENSE [illegible] @ 451 – 5' gr'l 445 TO 455 – [illegible] 459 – [illegible] 459 TO 462 – SCATT [illegible] 462 TO 468 – [illegible] 468 TO 470 – [illegible] 471 TO 474.4 – 1' > [illegible] > COLOR [illegible] @ 482 – (482)	
491	520	R	GM [illegible] – 3' GM [illegible] – 3' [illegible] w/ DENSE [illegible] @ 488 – 1' B [illegible] @ 490 – 1' GT [illegible] @ 490 – 1' GM [illegible] @ 491 – (491)	
502	509	5	GT – MED OOLITES – [illegible] – [illegible] STRG – SCATT [illegible] – > 3" D FILLING – TR PB 499 TO 501 – CU ASSAY 501 TO 502 – (502)	
520	491	5?F	FT/GTM > G : GTG [illegible] – FAIR F STRUCT > VUGGY w/ 2' [illegible] GTG [illegible] @ 505 – 2' [illegible] GTG [illegible] @ 514 – 3" [illegible] GT > COLOR [illegible] & THIN [illegible] @ 520 – (520) (> MED OOLITES 507 TO 511 –)	
559	452	7	FT/GTM G : GTG – GOOD SNURLY REEF STRUCTURES MED F [illegible] > FRACT – 2" CU D [illegible] – 6" CU ASSAY @ 537 – CU PB ASSAY 538 TO 540.6 – > CU @ 543 TO 544 – 4' GTG [illegible] @ 548 – & 2' [illegible] GTG [illegible] @ 555 – (559)	
582	429	7-10	FT/GTM : C : GT [illegible] – 2' GT [illegible] @ 561 – 2' [illegible] > VUGGY @ 563 – F 563 TO 573 – 2' GT [illegible] 575 – 1' F FRACT @ 576 – GT [illegible] > C [illegible] 576 TO 582 – (582)	
613	398	10-12	GTM w/ : GT [illegible] – BASICALLY GTM > M [illegible] – G [illegible] w/ 1' SNURLY REEF @ 581 – TR PB @ 581 – > OOLITIC BANDED 590 TO 593 – 6" T [illegible] @ 601 & 602 – 2' T [illegible] 609 & 1' T [illegible] 611 – (613)	
626	385	11	GM – G [illegible] – LS – < [illegible] < M – – C [illegible] – C [illegible] – SCATT ISOLATED OOLITES IN DENSE MATERIAL – (626)	
635	376	12	GTM > G + B1 – < M1 w/ 626 TO 634 > C1 > B1 – – M1 w/ > [illegible] B1 > NAPPEARANCE [illegible] TO 635 – (635)	
653	358	19	GTSD > M1 [illegible] – SANDY INCLINE LINE TOWARD BASE [illegible] – > B1 [illegible] M1 : > w/ – 1' [illegible] > [illegible] (653)	
665	346	20	WS – CLEAN WS – MED FINE GRAIN – 8' GROUND 655 TO 665 – (665)	

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L. S.

205

FORM 1173 1-87

STARTED - 8-18-58

DATE BOTTOMED 8-22-58	ST. NO. C-103 ST. ELEV.	CLASS IND. HOLE NO. SE VC 206
DESCRIBED BY JA	AREA DMEA #2 - COURTOIS	ELEVATION COLLAR 1006.64
DATE ESTIMATED 8-26-58	OPTION NO. CZ-223	COORDINATES: N 122008.30 E 91596.92
BY JA	TRACT C. A. Crabdree	200 FT. MAP NO. 36 50 FT. MAP NO. 50 Z
		SE¼-NW¼-Sec.5-T.35N.-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 24" FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	125'	881.6
SLEEVE BIT TO		
BEGAN CORING AT	130.0	876.6
SAVED CORES FROM	385.0	621.6
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	396.0	610.6
BONNE TERRE "	676.0	330.6
B. T. TRANS. "	696.0	310.6
CONGLOMERATE "	—	
LA MOTTE "	715.0	291.6
GRAN. OR POR. "		
PICTURES: FROM	503.0	503.6
TO	619.0	387.6
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 334.0'N. 238.0'E.

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS	CORE REC. TO	CORES LOST
? F	542.0	542.3	464.5	0.3		TR						215	—
" "	544.9	545.6	461.0	0.7	1.3	1.0	0.9				dis	235	5.8
" "	546.0	547.3	459.3	1.3	1.4	1.0	1.3				dis	365	5.8
" "	547.3	548.0	458.6	0.7	0.6	1.0	0.7				"	385	Disc
To thin bed	549.7	550.3	456.3	0.6	0.2	3.5	3.7	5.4	5.0	2.0	"	400	—
? ⊥ ϕ	550.3	550.9	455.7	0.6		TR						405	1.4
												415	0.3
												425	0.3
												445	—
												460	1.4
												469	0.3
												480	1.3
												539	—
												546	1.0
												573	—
												590	1.7
												598	0.6
												638	—
												658	2.0
												675	14.6
												695	—
												705	7.0
												715	8.3

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FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY JA DATE 8-26-58 MINE Courtois STOPE STAKE NO. VC 103 HOLE NO. 58VC 206

COLLAR ELEV. 1006 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
130	876	BEGAN CORING	
215	791	Discarded 130-215	
231	775	Derby Davis Transition -	(231)
396	610	Davis Shale - Solid Bit 23 365 - Discarded 365-385 - Bonne Terre	(396)
444	562	1	TO massive thinbedded & snurly fairly massive w/few thin Rbs top to 420 - thin bedded 420-433 - snurly 433 to Base - 4" w/Bte @ 431 - faint oolite - > fracturing - > pitting & small vugs - > dickite & ca te - (444)
463	543	1-5	TO dense & Bte faint oolite - < dense bs - < pitting - few thin Rbs - > Bte scattered - (463)
509	497	5	TO Bte - thin bedded & snurly - > GTO2M faint to med oolite - < Bte - thin bedding - slightly snurly - > dense bs - < pitting - > porous patches - many thin Rbs - 6" GTOM < K @ 491 - 1' GTO2M @ 495 - thin bedded & banded 500 to Base - 3" w/ > Ete @ 504 - > ca patches & vugs - (509)
520	486	R	TOM > Ete med oolite < M thin bed & band top to 511, 1' @ Base - > thin Rbs - > porous patches - > pitting & small vugs - (520)
537	469	5	GTO > M & Bte banded - med oolite - few thin Rbs - scattered M & Bte > Banding 2' @ 523, 4' @ 527, 3" 530 - 2" Bte > pitting - 2' w/ Gte @ Base (537)
552	454	7	F Etm - T banding - TO Gte good reef rock top to 547, T banding & thin bedding 547-550 - 2' TO Gte @ Base - tr to fair Pb 542-551 (552)
593	413	7	F Etm > Gte good reef rock - good F - > Gte scattered thru matrix - many thin Rbs - > porous patches - > M patches - > fracturing - (593)
614	392	7-10	F Etm - TO good reef rock w/ > Gte in matrix - thin bed TO top to 597 - 1' Gte 598 - > pitting - > porous patches - many thin Rbs - > ca (614)
626	380	12-10	GTM > O crepey - many thin Rbs - > short oolite sections - > pitting & porous patches - (626)
659?	347	11	GTM > E H TO very crepey - many Rbs - > E H @ top - good L.S. > ca patches & seams - 14.6 ground 658-675 (659?)
676	330	12	GTM > N slightly crepey - > N - < grinding (676)
696	310	19	GTS DM > DS fairly sandy increasing toward Base - many Rbs - < M - > Bte > Kbs - < DS > @ Base - (696)
715	291	20	w/ Sand & E stain - med grain - > E stain @ top - < grinding - (715)

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205

FORM 1173 1-57

STARTED- 8-20-58

DATE BOTTOMED 8-25-58	ST. NO. C-156 ST. ELEV.	CLASS TRACE HOLE NO. 58VC 208
DESCRIBED BY GA	AREA DMEA #2 - COURTOIS	ELEVATION COLLAR 1010.07
DATE ESTIMATED 8-27-58	OPTION NO. C2-79	COORDINATES: N 121552.22 E 93382.84
BY GA	TRACT W. J. Turnbough	200 FT. MAP NO. 36 50 FT. MAP NO. 543
		SE¼-NE¼-SEC. 5 T35N R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 30" FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	159.	851
SLEEVE BIT TO		
BEGAN CORING AT	345	665
SAVED CORES FROM	345	665
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	355	655
BONNE TERRE "	623	387
B. T. TRANS. "	634	376
CONGLOMERATE "	—	
LA MOTTE "	640	370
GRAN. OR POR. "	—	
PICTURES: FROM	461	549
TO	640	370
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 2370'S 1150'W

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS	CORE REC. TO	CORES LOST
50% b_2	443.0	443.1	5670	0.1		TR					SPK	345	
7 F	486.8	488.1	5220	1.3	4.2	2.5	5.5				DISS	535	—
"	488.1	489.6	5205	1.5		TR					SPK	545	1.0
"	489.6	491.0	5191	1.4	1.3	2.0	1.8	4.2	-	1.7	DISS	565	—
"	496.0	496.1	5140	0.1		TR					SPK	577	7.0
"	513.0	513.1	4970	0.1		TR					"	587	10.0
"	515.0	515.1	4950	0.1		TR					"	591	3.0
"	523.5	524.8	4853	1.3	3.6	2.0	4.7	—			DISS	628	—
"	542.0	524.2	4859	0.2		TR					SPK	640	1.0
10% > 12	552.0	552.1	4580	0.1		TR					"		
12 N	620.0	620.1	3900	0.1		TR					"		

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BUREAU OF MINES
JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE 8-26-58 ~~MINE~~ DIGEA #2 COURTOIS ~~STOPE~~ STAKE NO. VC-156 HOLE NO. 58VC 208

COLLAR ELEV. 1009. PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
345	664	BEGAN CORING	
355	654	DAVIS BONNETERRE	(355)
401	608	1	>ELT$_{o1}$ ↓GT>$_{n}$ b$_{2}$ DENSE↓ - 4' DENSE < FRACT CEMENTED w/Ca @ 363 - T$_{o}$ b$_{1}$ >FRACT > SMALL VUGS 363 TO 387 (BECOMING INCREASINGLY STYLOLITIC 377 TO 387) - b$_{2}$ GT>$_{o}$ > DENSE↓ > p$_{2}$ 387 TO 401 (401)
461	548	5	GB>$_{n}$ >B↓ - FAINT TO MED O - p$_{2}$ - b$_{2}$ - Ca VEINLETS - FAINTLY B↓ - 10' POROUS B PATCHES & VUGGY 438 TO 448 - Ca ↓ 435 TO BASE - SPK TR Pb @ 443 - (461)
472	537	R	GM~AGB↓$_{n}$ - 2' GM~ @ 463 - 2' GB>b$_{2}$ @ 465 - 1' GT$_{o}$ G↓ @ 466 - 3' B$_{o}$ b$_{2}$ @ 468 - 2' GT$_{o}$ b$_{2}$ >G↓ @ 470 - 2' GM~ @ 472 - (472)
482	527	5	T$_{o}$: >G↓ - MED$_{o}$ - b$_{1}$ STYLO - >G↓ - p$_{1}$ - 1' >SNURLY @ 481 - (482)
548	461	7	F/GTM: G↓ - SNURLY MED F: > FRACT - 6" GT THIN BEDDED > COLOR BANDED w/Pb ABOVE & BELOW 488 - HEAVY Ca POCKET @ 492 - 1' < G↓ @ 500 & 514 & 516 - > Pb TRS 441 TO 515 - 1.3" Pb ASSAYS 525 - (548)
561	448	10: >12	GT: ↓GT>M - BASICALLY GT$_{o}$ > b$_{2}$ ~ / 1' GT > m b$_{2}$ @ 557 - TR Pb @ 552 - (561)
568	441	12	GTM > ~ - MED M ~ - - >G↓ - > L$_{s1}$ > H↓ < ~ 565 TO BASE - (568)
594	415	11	LGM~L$_{s3}$ - - H↓ - MED M < ~ - L$_{s3}$ > G↓ : > DOLOMITIZED & DECOMPOSED 577 TO 588 - (9' CORES L$_{o}$ S↓ 577 TO 587) - 3' LOST 587 TO 591 -) (594)
605	404	12	GM~p$_{2}$ - > DECOMPOSED p$_{2}$ ~ < m - > K-K STRUCTURE @ 599 TO 603 - 1' FRESH GM > B↓ @ 604 - 1' p$_{2}$ > DECOMPOSED @ BASE - (605)
618	391	12>N	GTM>N↓B↓ - CREPE - MED M - 2ND U↓ - >FRACT - > N APPEARANCE & B↓ - (618) (GRAY PEAR @ 616)
623	386	12?	>SANDY GTM~ - TR Pb @ 619 - MED HEAVY M↓ ~ - > STEM FRAG - >G↓ - FAINTLY B↓ - [illegible] SMARCE FINE SAND G[illegible] (623)
634	[illegible]	19	GSDM - MED HEAVY M↓ ~ MED SANDY - 2' ↓ T↓ @ BASE - (634)
640	369	20	WS - MED FINE G[illegible] - 2' U 629 TO 640 - (640)

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205

8

FORM 1173 1-57

STARTED - 8-21-58

DATE BOTTOMED 8-26-58	ST. NO. VC141 ST. ELEV.	CLASS BLANK HOLE NO. 58VC211
DESCRIBED BY Gp	AREA Courtois - DMEA #2	ELEVATION COLLAR 1083.55
DATE ESTIMATED 8-28-58	OPTION NO. CZ-95	COORDINATES: N 114516.20 E 82011.84
BY Gp	TRACT Lon Laramore	200 FT. MAP NO. 45 50 FT. MAP NO. 738
		SW¼-SE¼ Sec 12 - T35N R2W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 12" FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	207	876 6
SLEEVE BIT TO		
BEGAN CORING AT	435	6486
SAVED CORES FROM	435	6486
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	448	6356
BONNE TERRE "	712	3716
B. T. TRANS. "	732	3516
CONGLOMERATE "	-	
LA MOTTE "	755	3286
GRAN. OR POR. "		
PICTURES: FROM	5[illegible]	5596
TO	6[illegible]	3986
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 970'N 2040'W

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS
						BLANK					

CORE REC.

TO	CORES LOST
435	
452	2.0
117	—
737	4.0
748	11.0
755	6.0

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FORM 9002-A-5-55

ROCK CLASSIFICATION

DESCRIBED BY A DATE 8-28-58 MINE Courtois STOPE STAKE NO. V-.41 HOLE NO. 58VC211

COLLAR ELEV. 1084 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
435	649	BEGAN CORING	
448	636	DAVIS – BRUNETERRE	(448)
500	584	1	{LT1 p1 + {LT1 b2 p2 – < E THRUOUT – LT0 b1 p1 448 TO 475 – LT1 b2 p2 > VUGGY DENSE b2 475 TO 493 – GT0 DENSE b2 p2 FRACT 493 TO BASE – (500)
540	544	5	{LT1 p2 b1 – E THRUOUT 500 TO 533; p2 b1 FAINTLY B/ OCCASIONAL DENSE b1 > E/ @ 520 TO 524 – < STRONGLY C > m GT0 p2 > B/ 533 TO BASE – (540)
577	507	5	{LT0 b1 p2 – {THRUOUT 570 MED O > WD FILLING – : > p2 b1 – > FRACT 565 TO 570 – GT0 w/ WD FILLING 570 TO 577 – (577)
667	417	7	{p2 F – < E – GOOD PRIMO REEF STRUCTURE – 3' @ TOP GTm F > C/ – F+/GTm C/ p2 640 TO BASE – 3' CM ~ 664 – 1' < C/ GTm @ 654 – (667)
712	372	10:12	GT0 > y : CM ~ – BASICALLY GT0 > g2 > C/ : > p2 b1 w/ 2' E LT p2 @ 690 – 1' CM ~ @ 691 – GRAIN SIZE & O BECOMING FINER 695 TO BASE – FRACT @ 697, 700, & 709 TO 712 – (712)
732	352	19	GTSD : E LGT — : > J – SPARSELY DISS J 712 TO 715 – SPARSE & GRADING TO MED 712 TO 724 – < SANDY E LT 724 TO 729 – > E GT < SANDY 729 TO 732 – (732)
		20	WS – CLEAN WS – MED FINE GRAIN – 11' GROUND 732 TO 745 & 6' GR'D 745 TO 755 – < FeS2 & THRUOUT – (755)
755	329		

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205

FORM 1173 1-57

STARTED- 8-22-58

DATE BOTTOMED [illegible]	ST. NO. 155 ST. ELEV.	CLASS TRACE HOLE NO. [illegible]
DESCRIBED BY [illegible]	AREA [illegible]	ELEVATION COLLAR 1013.36
DATE ESTIMATED [illegible]	OPTION NO. CZ-283	COORDINATES: N 121739.55 E 92533.06
BY [illegible]	TRACT JOHN TURNBOUGH	200 FT. MAP NO. 36 50 FT. MAP NO. 543

SW¼ - NE¼ - SEC 5

2170'S - 2030'W T35N - R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 12" FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	192	8214
SLEEVE BIT TO		
BEGAN CORING AT	200	8134
SAVED CORES FROM	355	6584
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	370	6374
BONNE TERRE "	641	3664
B. T. TRANS. "	659	3544
CONGLOMERATE "	—	
LA MOTTE "	675	3384
GRAN. OR POR. "	—	
PICTURES: FROM	471	5424
TO	590	4234
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% Zn ASSAY	% Zn EST.	FT. %	REMARKS
[illegible]	515.0	513.0	4954	[illegible]	0.2	TR.	0.6	0.67	0.5	2.01	[illegible]

CORE REC.

TO	CORES LOST
[illegible]	
455	[illegible]
475	[illegible]
675	—

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BUREAU OF MINES
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FORM

DESCRIBED BY ..... DATE 8-2 STAKE NO. VC 1[illegible] HOLE NO. 58VC212

COLLAR ELEV. 1[illegible] PITCH ..... COORD.: N ..... E .....

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	(Com)
200	813	BEGAN CORING	
211	802	DERBY - b_3 TAN	(211)
220	1[illegible]	DERBY-DAVIS -	(220)
355	[illegible]	SOLID BIT	(355)
376	637	DAVIS - SANDY 355 TO 366 - SOLID SHALE 366 TO 373 - SIMILAR LYV 373 TO 376 -	(376)
		BONNETERRE	
427	586	1	LT$_0$ b_1 p_1 & GT$_1$: M DENSE b_2 - q LT$_0$ b_1 p_1 STYLO 376 TO 407 > THINNER b_1 TOWARD 407 - GT$_1$ b_2 DENSE b_1 : p 407 TO 422 - GTM > ~ 422 TO 427 - (427)
439	574	5-1	GB$_0$ p_2 > DENSE GT > B$_1$ - BASICALLY S CB$_0$ q_2 w/ SCAN DENSE b_2 - > C$_a$ b_1 - 2' SNURL B$_p$ @ BASE - (439)
483	530	5	GB$_0$ B$_1$: SNURLY BT - 4' < B$_1$: [illegible] @ 483 - BAT SNURLY DENSE b_2 PROUS PATCHES, 2ND D b_1 443 TO 483 - 2" GMC$_1$ ~ @ 470 ... C$_1$ @ 473 - 3" GM ~ C$_1$ 477 - (483) (CORES DROPPED FROM BARREL 455-475)
494	519	R	GM ~ B$_0$ x b_1 - p_2 b_1 p_2 > B$_0$ - 2' GM ~ ... 485 - 3' B$_0$ > x b_2 D/@ 488 - GT$_0$ > M STYLO 488 TO 489 - 3' B$_p$ p_2 SNURLY, PROUS PATCHES > D/@ 492 - 2' GM > ~ > GT$_0$ b_1 @ 494 - (494)
523	440	5: F	GT$_0$ C$_1$ - GB b_2 p_2 : F - GT$_0$ C$_1$ b_1 p_1 D$_1$ 494 TO 505 w/ 6" B b_1 @ 498 - 2' > ε LB b_2 p_2 - D/@ 500 - GT$_0$ C$_1$ b_1 p_1 500 TO 511 - 3' C$_{000}$ F/GTMC$_1$ @ 514 - 1' < C$_1$ @ 515 - 3' GB b_2 p_2 + p PATCHES > NUCLY - CUFES b_2 & VUG FILLINGS 518 & SOFT TR Hb - 3' GT$_0$ C$_1$ PEFF APPEARANCE @ 521 - 1' F @ 522 - 1' T$_0$ w/ COLOR b_1 @ 523 - (523)
560	453	7	FT/GTMC$_1$: GT C$_1$ - FAIRLY FRESH F STRUCT > PITTED ; D & C$_a$ b_1 w/ 4' GT$_0$ C$_1$ b_1 @ 540 - 1' < C$_1$ - m @ 553 - 558 - (560)
582	431	7-10	FT/GTMC$_1$: T$_0$ b_1 - Group SNURLY F STRUCT M & C$_1$ w/ 1' T$_0$ > COAL b_1 @ 562 - 2" T$_0$ b_1 @ 567 - 1' GT$_0$ b_2 @ 575 - 4' @ 580 - (582)
611	402	12-10	GTM ~ : GT$_0$ b_1 : > C$_1$ - GT$_0$ b_2 : > M 582 TO 588 - < M GT ~ 588 TO 602 - 1' GT$_0$ b_2 > m @ 603 - 3' GTM ~ @ 606 - 1' GT$_0$ @ 607 - GTM ~ w/ SMART GT$_0$ b_1 607 TO 610 - 1' GT$_0$ > b_2 @ BASE - (611)
647	3[illegible]	12	GTM ~ p_2 - p_1 > C$_1$ NB$_1$ - GTM p_2 APPROACHING K-R 611 TO 638 w/ 2' ε @ 638 - GTM ~ > C$_1$ & FAINTLY B$_1$ > N APPEARANCE 638 TO 647 - (647)
659	[illegible]	19	GTMSD: ε IN - SPARCE SAND & TOP INCREASING TO MEDIUM TOWARD BASE - 6' > ε > N & B$_1$ NATURE @ BASE - 1' ε Y @ BASE - (659)
675	[illegible]	20	WS - MED FINE GRAIN - 3" > E @ TOP - < FeS$_2$ b_1 & THINS 662 TO 667 - > COLOR b_1 - (675)

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205

7

FORM 1173 1-57

Started. 8-26-58 C-151

DATE BOTTOMED 8-28-58	ST. NO. C-151 ST. ELEV.	CLASS BLANK HOLE NO. 58 VC 216
DESCRIBED BY [illegible]	AREA DMEA #2 - (Courtois)	ELEVATION COLLAR 916.34
DATE ESTIMATED 9-3-58	OPTION NO. C2-100	COORDINATES: N 119683.63 E 91415.87
BY [illegible]	TRACT Jas. Sellers	200 FT. MAP NO. 36 50 FT. MAP NO. 582
		SE¼ - SW¼ - Sec. 5 - T35N R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 24" FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO		
SLEEVE BIT TO	7½'	9088
BEGAN CORING AT	200	8963
SAVED CORES FROM	2650	6513
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	116	8003
BONNE TERRE "	286	6303
	549	3673
B. T. TRANS. "	564	3523
CONGLOMERATE "	—	
LA MOTTE "	578	3383
GRAN. OR POR. "		
PICTURES: FROM	385	5313
TO	499	4173
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 1010'N 2160' E

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS
			Blank								

CORE REC.

TO	CORES LOST
25	—
35	4.7
45	17.5
55	6.0
125	S. B.
225	
265	Disc
545	—
565	2.9
578	0.6

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JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY JA DATE 9-3-58 MINE Courtois STOPE STAKE NO. 1 ... 15! HOLE NO. 58 VC 216

COLLAR ELEV. 915 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
20	895	BEGAN CORING	
25	890	Discard 20-25	
116	799	Derby	Doe Run – E TO + F top to 57 – thin bed + band 57-61 – slightly snurly 61 to Base – many thin Rbs – > pitting + small vugs – > dickite &c – (116)
121	794	Derby	Davis Transition – (121)
286	629	Davis	Shale – Solid Bit 125-225 – Discard 225-265 – (286)
		Bonne Terre	
335	580	1	TO slightly E faint oolite – slightly E thru out – > thin Rbs – > pitting + small vugs – (335)
350	565	1-5	GTO > Bta – E – E 338 to Base – > Bt scattered – > pitting – few thin Rbs – > dense Kbs – (350)
396	519	5	TO Bt E – faint to med oolite – < Bta – E thru out – > pitting + small vugs – > porous patches – few thin Rbs – (396)
409	506	5	TO Bt EHbs – E slightly E – med to large oolite – > Bta – scattered EHbs – (409)
417	498	5	TO > m-f – med to large oolites – > Kbs + m patches – slightly E > EHbs – (417)
423	492	5	FTxo E fair reef rock – E – < pitting > vugs – E (423)
427	488	5	TO porous med to large oolite – E – < pitting (427)
467	448	7	FTxmo E fair reef rock – E thru out – < pitting top to w/ > oolite – few thin Rbs – > EHbs – 1' TXO @ 485 – > ca – > fracturing – (467)
489	426	7-10	FTxm – TXO slightly E alternating sections F + TXO – many thin Rbs – slightly E – > fracturing – > ca patches – (489)
496	419	10	TXO med oolite – med K – few thin Rbs – > Iron stain – 1' Breccia fragments @ Base – (496)
525	390	12-10	TOM > EH slightly E med oolite – < K + EHbs – many thin Rbs 6" fault w/ slip @ 498 – > ca &c – slightly E thru out – slightly porous 511-524 – 1' good TO @ Base – > short sect of TO thru out – (525)
549	366	12	GTM < E crepey – E top to 542 – many thin Rbs – > Kbs – porous top to 542 – > oolite – 1' slightly E @ Base – (549)
564	351	19	GTSDM : DSE sandy increasing toward Base – > Bt &c – slightly crepey – E 561 to Base – few thin Rbs – > ca – very sandy 1' @ Base (564)
578	337	20	W. Sand med grain sand – fairly clean (578)

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BUREAU OF MINES
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UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
Box 431
Joplin, Missouri
August 13, 1958

OFFICIAL FILE COPY
DMEA
RECEIVED AUG 15 1958

DATE	INITIALS	CODE
8/15/58	H.G.	825
	Com	100
"		110
8/19	Talbot	800
		500

DMEA Operating Committee
Department of the Interior
Washington 25, D. C.

Re: DMEA 4582(lead-zinc-copper)
St. Joseph Lead Co.
Courtois Area
Washington County, Mo.
Contract Idm-E1068

Dear Sirs:

Submitted herewith are four copies of the Interim Report received today from Dewey Amos, USGS, Knoxville covering the joint Field inspection of the subject project which he and I made on August 5, 1958.

No mining development work has been done on this project, but sinking of two shafts is being planned. The Operator's Quarterly Report recently published, announced that $22 million had been borrowed from insurance companies to afford the development of this and its several other projects in eastern Missouri.

Sincerely yours,

Clinton C. Knox

Clinton C. Knox
Executive Officer
DMEA Field Team, Region IV

encls. 4

cc: DMEA Op.Com.(3)
King,USGS,Denver
Amos,USGS,Knoxville w/cy encl.
4582 file

DMEA
RECEIVED AUG 15 1958
DATE | INITIALS | CODE

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AUG 13 1958
BUREAU OF MINES
JOPLIN, MO.

INTERIM REPORT

DMEA-4582, Idm-E1068 (Lead-Zinc)

Operator: St. Joseph Lead Company, Bonne Terre, Missouri

Location: Courtois Area, Washington County, Missouri

A project inspection of the subject contract was conducted on August 5, 1958. Results obtained to date and contemplated future work were discussed with Mr. R. E. Wagner, Head of Exploration, and Mr. G. Klostermann, Geologist.

Drilling completed on the Courtois project to date and since the inspection on July 8, 1958 is summarized as follows:

Drilling Completed

Footage in holes completed since last inspection . . .	9,818
Footage in holes completed to date	92,013
Number of holes completed since last inspection . . .	14
Total number of holes completed to date	139
Number of holes showing commercial ore	25
Number of holes showing indicative non-commercial mineralization	17
Number of holes showing trace mineralization	70
Number of holes showing speck trace mineralization . .	13
Number of barren holes	14

92,018' (difference of 5' between log + report on hole 106) Jackson

A summary of the 14 holes completed since the last interim inspection is as follows:

Hole No.	Location	Depth	Remarks
VB-130	NW¼, SE¼, NE¼, Sec. 7	718 ft	Speck trace hole
VB-143	SE¼, NE¼, NE¼, Sec. 12	475 ft	Speck trace hole
VB-131	NE¼, SW¼, NE¼, Sec. 7	665 ft	Speck trace hole
VB-144	NE¼, NE¼, NE¼, Sec. 12	751 ft	Ore hole

Hole No.	Location	Depth	Remarks
VB-129	SW¼, NE¼, NE¼, Sec. 7	665 ft	Trace hole
VB-127	SE¼, NW¼, NE¼, Sec. 7	725 ft	Trace hole
VB-145	SW¼, SW¼, SW¼, Sec. 6	864 ft	Trace hole
VB-142	SW¼, SE¼, NE¼, Sec. 12	745 ft	Speck trace hole
VB-139	NE¼, SW¼, SW¼, Sec. 6	715 ft	Blank hole
VB-132	NE¼, SW¼, NE¼, Sec. 7	685 ft	Trace hole
VB-136	NW¼, NE¼, NW¼, Sec. 7	741 ft	Blank hole
VB-133	NW¼, NW¼, NE¼, Sec. 7	709 ft	Speck trace hole
VB-140	SE¼, NE¼, SW¼, Sec. 6	669 ft	Trace hole
VB-137	SW¼, SW¼, SE¼, Sec. 6	691 ft	Blank hole

Diamond drilling is in progress in three holes summarized as follows:

Hole No.	Location	Present Depth	Estimated Depth
VC-138	SE¼, SW¼, SE¼, Sec. 6	555 ft	600 ft
VC-134	NW¼, NW¼, NE¼, Sec. 7	523 ft	650 ft
VC-154	NW¼, NE¼, SE¼, Sec. 5	Setting up	700 ft

The churn drill portion of 12 holes has been completed since the date of the last inspection. A summary of these holes is as follows:

Hole No.	Location	Depth to Bottom of Churn Drilling
VC-145	SW¼, SW¼, SW¼, Sec. 6	355 ft
VC-144	NE¼, NE¼, NE¼, Sec. 12	290 ft
VC-142	SW¼, SE¼, NE¼, Sec. 12	200 ft
VC-155	SE¼, SW¼, NE¼, Sec. 5	192 ft
VC-149	SE¼, SE¼, SW¼, Sec. 5	165 ft

Hole No.	Location	Depth to Bottom of Churn Drilling
VC-141	NW¼, SW¼, SE¼, Sec. 12	210 ft
VC-148	NW¼, NE¼, NW¼, Sec. 8	200 ft
VC-152	SW¼, NW¼, SE¼, Sec. 5	175 ft
VC-154	NW¼, NE¼, SE¼, Sec. 5	155 ft
VC-156	SW¼, SE¼, NE¼, Sec. 5	155 ft
VC-147	NE¼, NW¼, NW¼, Sec. 8	130 ft
VC-103	SE¼, SE¼, NW¼, Sec. 5	125 ft

Churn drilling is in progress in two holes summarized as follows:

Hole No.	Location	Depth to Bottom of Churn Drilling
VC-158	NE¼, NW¼, NE¼, Sec. 5	190 ft
VC-153	SE¼, NW¼, SE¼, Sec. 5	25 ft

Significant assay results of completed Hole No. VC-144 are as follows:

Depth	Thickness	% Pb	% Cu
650.5 - 651.9 ft	1.4 ft	-	3.9
653.0 - 658.0 ft	5.0 ft	14.3	-
658.0 - 658.4 ft	0.4 ft	10.5	-
659.3 - 662.8 ft	3.5 ft	4.1	-
680.2 - 682.4 ft	2.2 ft	3.4	-

Dewey H. Amos
Geologist
Geological Survey

Clinton C. Knox
Mining Engineer
Bureau of Mines

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
Box 431
Joplin, Missouri
September 17, 1958

DATE	INITIALS	CODE
9-22	C	220
		110
9/24		500

DMEA Operating Committee
Department of the Interior
Washington 25, D. C.

Re: DMEA-4582(lead-zinc-copper)
St. Joseph Lead Co.
Courtois Area
Washington County, Mo.
Contract Idm-E1068

Dear Sirs:

Forwarded herewith are your two copies of the MF-104 Monthly Voucher, MF-104A and the Operator's Monthly Report covering the July work on the cited project. The voucher data received from the Finance Officer is posted on both MF-104s.

Sincerely yours,

Clinton C. Knox

Clinton C. Knox
Executive Officer
DMEA Field Team, Region IV

encls. 6

cc: DMEA Op.Com.
Amos,USGS,Carbondale
King,USGS,Denver
4582 file

2d cy - DMEA Washington

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

Budget Bureau No. 42-R1036.5

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

RECEIVED SEP 26 1958

Month of July, 1958 Docket No. DMEA 4582 Contract No. Idm-E 1068

Operator's Name St. Joseph Lead Company Minerals Pb - Zn - Cu

Address Bonne Terre, Missouri

Contract Amount, $ 298,560.00 Government Participation: 50 % Amount, $ 149,280.00

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:				12/19/58		
Drilling	21471.84	186955.08	208426.92	✓	✓	✓
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	31.00	575.00	606.00	✓	✓	✓
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	21502.84	187530.08	209032.92	✓	✓	✓

RECEIVED DIVISION OF MINERAL TECHNOLOGY AUG 18 1958 BUREAU OF MINES JOPLIN, MO.

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

Date 8-14-58 *Payee St. Joseph Lead Company

Per [signature] Title DIVISION MANAGER

*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:

$ 10,751.42

CCH 9/28/58

Signature (Authorized Certifying Officer)

Date Sept 15, 1958 Vou. No. 4-10

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Idm-E1068 in accordance with the terms of the contract.

Signature Henry H. Cross Title Geologist - USGS Date Sept. 3, 1958

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Clinton C. Knox Title Executive Officer Date Sept. 4, 1958

MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

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

Month of July 1958 Docket No. DMEA 4582 Contract No. Idm-E 1068
Operator's Name St. Joseph Lead Company Minerals Pb - Zn - Cu
Address Bonne Terre, Missouri

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core	Ft.	15808.62	7121	158064.00	71200	$2.22		
Churn	Ft.	5663.22	2551	50362.92	22686	2.22	133420	$2.22
Auger								
Stripping							(62,530	on Stage II)
Trenching								
Test Pits								
Roads and Trails								
Analytical Determinations	Ea.	31.00	31	606.00	606	1.00	2370	1.00
TOTAL DISTRIBUTED COSTS		21502.84		209032.92	Stage I - 55,435 (84 holes) II - 38,451 (42 ") 93,886			TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		21502.84		209032.92				

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

Date 8-14-58 Operator St. Joseph Lead Company

Per [signature] Title DIVISION MANAGER

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)

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JOPLIN, MO.

(For Government use only)

C.C.R. 8/28/58

42 stage II holes completed to date = 38,451 claimed
2 ~~D.D.~~ C.D. in prog.
4 " " C.D. appvd but yet to start } 900
13 " " D.D. in prog. 7,150
Est. total for 61 hole completion 46,501

62,530
46,501
700 | 16008
23

∴ about 23 holes yet may be appvd

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

MONTHLY REPORT FOR MONTH OF JULY, 1958

D.M.E.A. Project #4582 - Contract #IDM-E 1068

Two churn drills were operating in the area at the end of the month. The holes in progress were as follows:

Stage No.	Stake No.	Feet Depth
II	158	190
II	153	25

The following churn drill holes were completed through overburden and chert-bearing formations and cased preparatory to diamond drilling during the month.

Stage No.	Stake No.	Feet Depth	Starting Date
I	VC-103	125	7-25-58
II	VC-139	202	6-13-58
II	VC-141	210	7- 8-58
II	VC-142	200	6-23-58
II	VC-144	290	6-11-58
II	VC-145	352	6- 3-58
II	VC-147	130	7-14-58
II	VC-148	200	7- 3-58
II	VC-149	165	7- 1-58
II	VC-152	175	6-28-58
II	VC-154	155	7-10-58
II	VC-155	192	7-10-58
II	VC-156	155	7-14-58

Three diamond drills were operating in the area at the end of the month. The holes in progress were as follows:

Stage No.	Stake No.	Feet Depth
II	VC-138	555
II	VC-134	523
II	VC-154	Setting up

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The following diamond drill holes were completed during the month:

Stage No.	Stake No.	Prospect Hole No.	Bottom Depth	Feet of Dia. Drilling	Completed	Class.
II	VC-143	58VC160	475	360	7-10-58	Sp. Trace
II	VC-144	58VC164	751	461	7-15-58	Pay
II	VC-142	58VC169	745	545	7-22-58	Sp. Trace
II	VC-136	58VC177	741	538	7-29-58	Blank
II	VC-130	58VC156	718	493	7- 1-58	Sp. Trace
II	VC-131	58VC159	665	545	7-10-58	" "
II	VC-129	58VC162	665	520	7-14-58	Trace
II	VC-127	58VC166	725	510	7-18-58	"
II	VC-132	58VC171	685	545	7-24-58	"
II	VC-133	58VC176	709	504	7-29-58	"
II	VC-145	58VC165	864	512	7-16-58	"
II	VC-139	58VC168	715	513	7-22-58	Blank
II	VC-140	58VC173	669	519	7-28-58	Trace
II	VC-137	58VC181	691	556	7-29-58	Blank

Analysis of results gained by drilling is shown in abstracts of our weekly reports to St. Joseph Lead Company, which are enclosed.

31 analytical determinations were made during the month as follows:

58VC164	15 Pb	8 Cu
58VC162	1 Pb	
58VC166	1 Pb	
58VC171	2 Pb	
58VC165	1 Pb	1 Cu
58VC173	1 Pb	1 Cu

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Courtois Area - In DMEA Project #4582

Week Ended July 7, 1958

1 diamond drill operating and 6 churn drills setting casing completed 1 trace hole.

58VC156, stake #C130, a speck trace hole, is located about 1300 feet west of the village of Courtois and 520 feet southeast of a pay hole. It bottomed at 718 feet depth in Lamotte sand. Speck traces of lead were present in the lower 5 zone at 524 feet depth.

Week Ended July 14, 1958

2 diamond drills operating and 6 churn drills setting casing completed 2 trace holes.

58VC159, stake #C131, a speck trace hole, is located about 2,000 feet west of the village of Courtois and 520 feet south-southeast of a pay hole. It bottomed at 665 feet depth in Lamotte sand. A few speck traces of lead were present at 546 feet depth in the 7 zone.

58VC160, stake #C143, a speck trace hole, is located about 6,000 feet west of the village of Courtois and 900 feet west of a trace hole. It bottomed at 475 feet depth in red granite which extends up into the lower part of the 5 zone. A few speck traces of lead were present at 353 feet depth, 12 feet below the Davis shale.

Week Ended July 21, 1958

3 diamond drills operating and 6 churn drills setting casing completed 1 pay and 3 trace holes for a total of 4 holes.

58VC164, stake #C144, a pay hole, is located about 6,000 feet west-northwest of the village of Courtois and 1,000 feet west of a trace hole which bottomed in high granite. This week's hole shows good lead and some copper mineralization in the 7 reef zone with estimates of 9.8 feet of 4.6% Pb at 663 feet depth and 2.4 feet of 4.0% Pb at 682 feet depth. It bottomed at 751 feet depth in granite which extends about 15 feet up into the Bonneterre horizon. This hole opens up the possibility of a considerable increase in ore tonnage for this area as it is located about 3,000 feet west of previously known ore and is the first hole drilled on the northwest flank of a granite high.

58VC165, stake #C145, a speck trace hole, is located 900 feet northeast of the above hole. It bottomed at 864 feet depth in Lamotte sand. Considerable reef rock was present in the 7 zone but much mottled crepe rock in and below the reef zone is indicative of basin conditions to the north. Speck traces of seam lead were located in the 1 zone, 30 feet below the Davis shale.

58VC162, stake #C129, a trace hole, is located about 1,000 feet west-northwest of the village of Courtois and 520 feet northeast of a pay hole. It bottomed at 665 feet depth in Lamotte sand. Lead assaying 1.2 feet of 1.1% Pb is located at 551 feet depth in the 7 reef zone.

58VC166, stake #C127, a weak trace hole, is located about 900 feet west of the above hole and 520 feet northwest of a pay hole. It bottomed at 725 feet depth in Lamotte sand. Mineralization in the 7 reef zone was estimated as 0.5 foot of 1.0% Pb.

Week Ended July 28, 1958

3 diamond drills operating and 6 churn drills setting casing completed 2 trace and 1 blank hole for a total of 3 holes.

58VC168, stake #C139, a blank hole, is located about 5500 feet northwest of the village of Courtois and 900 feet northeast of a speck trace hole. It bottomed at 715 feet depth in Lamotte sand. 7 zone showed about 45 feet of reef rock but lower portion of the Bonneterre consisted of much 12 crepe rock and included 46 feet of limestone indicating basin conditions to the north.

58VC169, stake #C142, a speck trace hole, is located about 6500 feet west-southwest of the village of Courtois and 1300 feet west-northwest of a trace hole. It bottomed at 745 feet depth in Lamotte sand. Bonneterre formation showed normal 7-10-12 zones and slight amounts of lead mineralization were present at 505 feet depth in the 1-5 transition zone and at 688 feet depth in the 10-12 zone.

58VC171, stake #C132, a trace hole, is located about 2,000 feet west of the village of Courtois and 520 feet southwest of a pay hole. It bottomed at 685 feet depth in Lamotte sand. Mineralization near the base of the 7 reef was estimated as 0.7 feet of 2.5% Pb at 606 feet depth and 0.6 feet of 1.5% Pb at 610 feet depth.

Period Ended July 31, 1958

3 diamond drills operating and 2 churn drills setting casing completed 3 trace and 3 blank holes.

58VC176, stake #C133, a speck trace hole, is located about 2500 feet west-northwest of the village of Courtois and 900 feet east-southeast of 57VC68, an indicative hole. It bottomed at 709 feet depth in Lamotte sand. Considerable 12 crepe rock was present in the lower Bonneterre. Speck traces of lead were present at the top of the 5 zone and in the middle of the 7 reef zone.

58VC177, stake #C136, a blank hole, is located 900 feet northwest of 57VC68. It bottomed at 741 feet depth in Lamotte sand. Bonneterre section showed a good 7 reef zone and 12 crepe rock below.

58VC181, stake #C137, a blank hole, is located 1350 feet northeast of 57VC68. It bottomed at 691 feet depth in Lamotte sand. A thick 7 reef section was present and lower portion of Bonneterre consisted of 12 crepe rock.

58VC173, stake #C140, a speck trace hole, is located about 4500 feet northwest of the village of Courtois and 1500 feet northeast of a blank hole. It is the farthest north hole drilled to date in this part of the area. It bottomed at 669 feet depth in Lamotte sand. 70 feet of reef was present in the 7 zone underlain by 60 feet of crepey shaly limestone. Speck traces of lead were present in a short 12 zone below the limestone at the base of the Bonneterre. This hole is a basin type hole and, in conjunction with other recent holes, indicates a rather large basin area lying to the north.

205

STARTED 6-26-58

LOGGED BY C.A.

COMPLETED 7-7-58

BY C.A.

PROJ. NO. 130

PROJ. YC (COURTOIS)

CIT ON NO CE-67

TRACT GEO. EVANS

CORES TRACE (SPECK) HOLE NO. 58YC156

ELEVATION COLLAR 1118.70

COORDINATES: N 117146.68 E 88265.30

200 FT. MAP NO. 46 50 FT. MAP NO. 661

SE¼-NE¼ SEC. 7
3750' N 950' W T35N-R1W

GENERAL HOLE DATA

H.T. SLEEVE ABOVE GR 1 FT

FORM BOTT SL

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	225.0	893.7
SLEEVE BIT TO		
BEGAN CORING AT	275.0	843.7
SAVED CORES FROM	425.0	693.7

FORMATIONS:

SOIL	TO	
EMINENCE	"	
POTOSI	"	
POTOSI-DERBY	"	
DERBY DOE RUN	"	290.0 828.7
DAVIS (C.B.-S.B.)	"	436.0 682.7
BONNE TERRE	"	701.0 417.7
B. T. TRANS.	"	703.0 415.7
CONGLOMERATE	"	— —
LA MOTTE	"	718.0 400.7
GRAN. OR POR.	"	—

PICTURES: FROM 425.0 693.7
TO 718.0 400.7

CHAR. SAMPLES: FROM
TO

INSOL. RES.: FROM
TO

OPENINGS AT

MINERALIZATION RECORD

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICK-NESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS
	474.7	474.8	643.9	0.1		TR					SPECKS
	495.5	495.6	623.1	0.1		TR.					"
	519.6	524.5	594.2	4.9		TR.					"
	615.0	615.2	503.5	0.2		TR.					"

CORE REC.

TO	CORES LOST
425	.
445	3.0
449	1.5
452	0.5
705	—
718	3.0

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FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE [illegible] MINE [illegible] STOPE ..... STAKE NO. VC-130 HOLE NO. [illegible]

COLLAR ELEV. ..... PITCH ..... BEARING ..... COORD.: N ..... E .....

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
[illegible]	844.0	BEGAN CORING	
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	8240	[illegible]	[illegible]
[illegible]	7340	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]	
4[illegible]	6[illegible]	1	LT [illegible] / GT [illegible] / BRECC [illegible] – SEDIMENT [illegible] MOLIVE [illegible] – 2' LT [illegible] TO 473 w/ 3' E @ 473 – Tel [illegible] 475
			GT [illegible] / BRECC [illegible] 471 TO 475 – 1' [illegible] @ BASE – (475)
522	597.0	5	GB [illegible] / DENSE [illegible] – 1' [illegible] @ [illegible] – [illegible] – PITTED – MED BEDDED – [illegible] –
			1' FUSE [illegible] / LIGHT GREY BANDED 505 TO 515 – 1' GT THIN [illegible] @ 516 – 6' GB w/ < [illegible] PATCHES
			@ BASE – Tel [illegible] @ [illegible] – (522)
529	590.0	5	GM [illegible] – LT / GT M – 3" GM – > [illegible] @ [illegible] – LT [illegible] @ 524 – 1' GM – [illegible] @ 528 – 2' T [illegible] > M
			@ 527 – 1' GT > M @ 528 – 1' T – DENSE [illegible] @ 529) (529)
567	552.0	5	T > [illegible] – M – GT – 6" @ TOP w/ – DARK E [illegible] – BASICALLY MOLIVE T [illegible] > [illegible] / 3" D [illegible] – > [illegible] T –
			6' GT – CLEAR > K [illegible] @ 546 – 4" GB THIN [illegible] UPPER 5 – FAULTED @ 549 – 2' C [illegible] VEINLET @ 554 –
			1' > G [illegible] @ BASE – (567)
574	545.0	5F	F / GTMG [illegible] – GOOD SNURLY DENSE STRUCT w/ MED M + G [illegible] MATRIX – > FRACT – > C [illegible] – 1' < GT [illegible] @ 574
577	542.0	5	GT – > COLOR BANDED – COMPARABLE TO DENSE LGBED LOGGED IN PREVIOUS (YG [illegible]) BUT HAS FRACT
			OOLITIC NATURE – FAINT COLOR BANDING – MASSIVE BEDDING – > G [illegible] @ BASE – (577)
619	500.0	7	F / GTMG [illegible] – GOOD SNURLY DENSE STRUCTURE – > FRACT – [illegible] – [illegible] – 2' BRANCH [illegible] @ 609 –
			TR H [illegible] @ 615 – MATRIX MED M > C [illegible] – (619)
630	489.0	7-10	GT – G [illegible] : > F – BASICALLY GT – C [illegible] – K [illegible] w/ 1' > F @ 626 – > SO_2 [illegible] @ 626 – > THIN [illegible] – > STYLO – (630)
659	460.0	–	F / GTM : GTMC [illegible] : T – 5' GTM > [illegible] @ 636 – 1' > HEAVY [illegible] @ 637 – 2' GTM : > [illegible] @ 639 – 2' F @ 641 –
			1' T > C [illegible] @ 642 – GTM – [illegible] 642 TO 648 – SNURLY F 648 TO 652 – 2' GTM SNURLY w/ > T [illegible]
			@ 655 – 1' F @ 656 – 1' GT – STYLO – CLEAR @ 657 – 2' – C [illegible] GT > K [illegible] @ 659 – (659)
669	450.0	10 SF	T [illegible] > F – < STYLOLITIC – > K [illegible] – MED O – > PIROUS – 1' F SNURLY @ 666 – (669)
695	424.0	10-12	T [illegible] + GTM – 660 TO 673 BASICALLY T [illegible] – STYLO – K [illegible] w/ 6" GTM @ 671 – GTM > [illegible] 673 TO 681 – 3' T [illegible]
			STYLO @ 684 – GTM > [illegible] w/ > SHORT T [illegible] 684 TO 688 – T [illegible] STYLO > K [illegible] 688 TO 695 – (695)
703	418.0	12	GTM [illegible] > K [illegible] : FINE GRAIN > [illegible] – GTM > [illegible] > [illegible] 695 TO 698 – 3' GT FINE GRAIN STYLOLITIC
			> [illegible] 698 TO 701 – 1' VERT FRACT @ BASE – (701)
703	460	19	GSD – SCARCE SAND – FINE GRAIN SOIL – > STYLO – (703)
718	401.0	20	WS – CLEAN – MED FINE GRAIN – > FRACT – (718)

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BUREAU OF MINES
JOPLIN, MO.

FORM 1173-2-54

7-2-58

205

DATE BOTTOMED 7-10-58 ST. NO. 131 ST. ELEV. _____ CLASS TRACE (SPECK) HOLE NO. 58YC 159

DESCRIBED BY CA AREA VC (COURTOIS) ELEVATION COLLAR 1056.04

DATE ESTIMATED 7-14-58 OPTION NO. CZ 67 COORDINATES: N 117013.24 E 87774.39

BY CA TRACT GEO. EVANS 200 FT. MAP NO. 45 ? 50 FT. MAP NO. 660

SE¼-NE¼ SEC 7
3550'N-3650'E T35N-R1W
PL

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 2 FT.

FORM BOTT. SL. _____

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	119.0	937.0
SLEEVE BIT TO		
BEGAN CORING AT	365.0	691.0
SAVED CORES FROM	365.0	691.0

FORMATIONS:

SOIL	TO	
	"	
EMINENCE	"	
POTOSI	"	—
POTOSI-DERBY	"	—
DERBY DOE RUN	"	—
DAVIS (C.B.-S.B.)	"	373.0 683.0
BONNE TERRE	"	643.0 413.0
B. T. TRANS.	"	646.0 410.0
CONGLOMERATE	"	—
LA MOTTE	"	665.0 391.0
GRAN. OR POR.	"	—

PICTURES: FROM 365.0 691.0
TO 665.0 391.0

CHAR. SAMPLES: FROM
TO

INSOL. RES.: FROM
TO

OPENINGS AT

MINERALIZATION RECORD

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS
	439.0	439.1	616.9	0.1		TR					SPKS.
	450.0	450.1	605.9	0.1		TR					"
	513.1	513.2	542.8	0.1		TR					"
	546.0	546.2	509.8	0.2		TR					"
	625.1	625.2	438.8	0.1		TR					"

CORE REC.

TO	CORE LOST
365	
394	—
398	1.0
403	1.0
409	—
418	2.0
427	—
436	1.0
442	1.0
512	—
521	1.0
645	—
655	6.0
665	7.0

REV 200

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BUREAU OF MINES
JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE [illegible] MINE [illegible] STOPE STAKE NO. UC 131 HOLE NO. [illegible]

COLLAR ELEV. 1055 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
65	990	BEGAN CORING	
278	622	[illegible]	(278)
		[illegible]	
423	622	1	[illegible]
			[illegible] (423)
461	594	5	[illegible]
			[illegible] (461)
467	588	K	[illegible]
			[illegible] (467)
512	543	5	[illegible]
			[illegible] (512)
562	493	7	[illegible]
			[illegible] (562)
582	473	7	[illegible]
			[illegible]
603	452	7	[illegible] (603)
616	439	10	[illegible]
627	428	12	[illegible] (627)
643	412	16.5 ?	[illegible] (643)
646	409	19	[illegible] (646)
665	390	20	[illegible]
			[illegible] (665)

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BUREAU OF MINES
JOPLIN, MO.

FORM 1120-2-54

Started 7-8-58

DATE BOTTOMED 7-10-58 ST. NO. VC-143 ST. ELEV. _____ CLASS SPECK TRACE HOLE NO 58YC160

DESCRIBED BY C.A. AREA COURTOIS ELEVATION COLLAR 1105.05

DATE ESTIMATED 7-14-58 OPTION NO. 044857 COORDINATES: N 117677.14 E 83704.69

BY C.A TRACT U.S. FOREST LAND 200 FT. MAP NO. 35 NE¼-NE¼ SEC. 12 50 FT. MAP NO. T35N-R2W

MINERALIZATION RECORD 1070'S 430'W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 2.5 FT.

FORM BOTT. SL. _____

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	EST.	FT. %	REMARKS	CORE RLC. TO	CORES LOST
	353.0	353.1	752.0	0.1		Tr.						325	
												475	—

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	117.0988.1	
SLEEVE BIT TO		
BEGAN CORING AT	117.0988.1	
SAVED CORES FROM	325.0780.1	
FORMATIONS:		
SOIL	TO 25.0	
EMINENCE	"	
POTOSI	"	
POTOSI-DERBY	"	
DERBY DOE RUN	" 155.0950.1	
SOLID BIT	325.0780.1	
DAVIS (C.B.-S.B.)	" 341.0764.1	
BONNE TERRE	" 437.0668.1	
B. T. TRANS.	"	
CONGLOMERATE	"	
16-18 LA MOTTE	" 464.0641.1	
GRAN. ~~OR POR.~~	" 475.0630.1	

PICTURES: FROM 333.0772.1 TO 475.0630.1

CHAR. SAMPLES: FROM _____ TO _____

INSOL. RES.: FROM _____ TO _____

OPENINGS AT

REW 2.00

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JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE 7-14-58 MINE Courtois STOPE STAKE NO. VC143 HOLE NO. 58VC160

COLLAR ELEV. 1104 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
117	897	BEGAN CORING	
155	949	Dere[illegible] T [illegible]	(155)
325	779	Spring Bit	(325)
341	763	Davis	(341)
		Bonnie Tebbe	
390	714	1	LT=a massive & GT [illegible] — massive LT > 0 > fract — > Ca veining 341 to 373 — GT [illegible] dense b > fract Ca veinlets 373 to 390 — (390) (Tr Hb @ 373)
426	678	5	GB, Bi: ELT-p.3 — ELT pr 390 to 393 & 397 to 403 + 406 to 413 — [illegible] > [illegible] — [illegible] 413 to 421 — 5' GT to > [illegible] > K/ @ 426 — (426)
431	673	5	Tale — 3" > Ed @ top — mod [illegible] — [illegible] — Ca [illegible] — (431)
437	667	F	> [illegible] — Good F [illegible] — mod m — Cl matrix — (437)
464	640	16-18	Red Granite Boulders & Cobs w/ F matrix — 1' Boulder @ 441 — 3' Pebs & Grit w/ LG matrix @ 444 — 2' F Reef @ 446 — 2' Boulder @ 448 & Cobs & Grit w/ Gl matrix @ 450 — [illegible] F Reef @ 453 w/ < 2" Dd — 2' Cobs & Grit w/ LG matrix @ 455 — 1' Reef w/ [illegible] Grit lens @ 464 — (464)
475	629	21	Red Granite — Fresh — mod SiO2 content — Dec Green mineral — (475)

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FORM 1173-2-54

STARTED 7-10-58

DATE BOTTOMED 7-14-58 ST. NO. VC-129 ST. ELEV.

DESCRIBED BY L.H.H. AREA COURTOIS

DATE ESTIMATED 7-16-58 OPTION NO. CZ-67

BY L.H.H TRACT GEO. EVANS

CLASS TRACE HOLE NO. 58VC162

ELEVATION COLLAR 1051.16

COORDINATES: N 117652.92 E 88418.15

200 FT. MAP NO. 36 m 50 FT. MAP NO.

NE¼ NE¼ SEC. 4 T35N-R1W

4250' N 825' W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 2.0 FT.

FORM BOTT. SL. ?

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO		
SLEEVE BIT TO	145.0	906.2
BEGAN CORING AT	365.0	686.2
SAVED CORES FROM		
FORMATIONS:		
SOIL	TO	
	"	
EMINENCE	"	
POTOSI	"	
POTOSI-DERBY	"	
DERBY DOE RUN	"	
DAVIS (C.B.-~~B.B.~~)	"	381.0 670.2
BONNE TERRE	"	649.0 402.2
B. T. TRANS.	"	655.0 386.2
CONGLOMERATE	"	
LA MOTTE W.S.	"	665.0 386.2
GRAN. OR POR.	"	

PICTURES: FROM 365.0686.2 TO 665.0386.2

CHAR. SAMPLES: FROM TO

INSOL. RES.: FROM TO

OPENINGS AT

MINERALIZATION RECORD

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS	CORE REC. TO	CORES LOST
	389.6	389.9	661.3	0.3		Tr.					SEAMS	365	
	400.6	401.0	650.2	0.4		Tr.					"	665	—
	462.2	462.8	588.4	0.6		Tr.					"		
	469.5	469.6	581.6	0.1		Tr.					SPECK		
	549.8	551.0	500.2	1.2	1.1	1.0	1.3				DISS		
	551.8	551.9	499.3	0.1		Tr.					SPECK		

REC'D 2-20-75

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BUREAU OF MINES
JOPLIN, MO.

#15 Drill

ROCK CLASSIFICATION

FORM 9002-R-5-55

DESCRIBED BY X Hy DATE 7-16-58 MINE Courtois STOPE STAKE NO. UC-129 HOLE NO. 58 VC 162

COLLAR ELEV. 1050 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
325	685	BEGAN CORING	
381	669	DAVIS	(381)
		BANNETERRE	
426	624	1	Dense TBb > vugs - TR Sam Pb @ 359.9, 4 461.6, (426)
441	609	5-1	Interbedded dense TBb, And Bx on porous Bx Last most dominant (441)
462.6	587.4	5	Bx o m porous Bx dense Bb in last 3' TR Pb Seam in last 4" (462.6)
479	571	PR	Interbedded dense GEM crep b, and BGM porous Bx - Lime dense & slime b's TR Pb @ to contact and @ 476.6. (479)
487	563	5	TG p2 massive (487)
489	561	5	GTO > m crep banded (489)
516	534	5	TC p1:2 massive i slightly m - Sparse Gx in last 3' - few dense Bb @ 526 & 561. (516)
545	505	7	F Ern dense Reef mostly fresh i rubb vuggy 114-122 i crep b (545)
551	499	7	TC (546) F-Ern Reef (547) TO (548) F Ern (549) C-Sm (551) TR Pb diss 549.8-550.0 (551)
568	482	7	F Ern fresh bright Reef i w/ V Seams - Pl speck @ 551.9. (568)
583	467	7-10	TO Sparse by Gx massive Pl (574) F Ern (575) banded GTOM (576) Porous vuggy F Ern Reef (577) banded dense T calcite seams (578) heavy Gx filled (580) dark F Ern Reef (583)
616	440	10-12	Basically GEM dense crep b - Scattered TO, 4 F Ern Reef Lenses throughout of 4" to 2' in thickness 3 F Ern Reef @ base (616)
621	429	10-12	TGM irregular lo crep banded - 1' F Ern @ 618 followed by 6" C-Sm 618.5 (621)
638	412	10-12	GTM + GEM dense crep banded w/ good 12 zone type - Bx @ 635. (638)
644	406	10-12	GTGM + V bands irregular lo crep b (644)
649	401	12	GEM + GTM dense crep b - Faint Bx (649)
655	395	12	C-MSD crep b - dense Bx & Slime @ 650 - Last 2' & 05 (655)
665	385	20	Lamotte V Sand - Lam Dolomite - Scattered Fe2 Spots. (665)

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JOPLIN, MO.

FORM 1173-2-54

STARTED 7-11-58

DATE BOTTOMED 7-15-58 ST. NO. VC-144 ST. ELEV. _____ CLASS PAY HOLE NO 58VC164

DESCRIBED BY J.A. AREA COURTOIS ELEVATION COLLAR 1202.27

DATE ESTIMATED 7-17-58 OPTION NO. 044857 COORDINATES: N 118569.74 E 83509.73

BY J.A. TRACT U.S. FOREST LAND 200 FT. MAP NO 35 50 FT. MAP NO 618 T

NE¼-NE¼ SEC. 12 T35N-R2W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 2.0 FT.

FORM BOTT. SL. _____

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	290.0	912.3
SLEEVE BIT TO		
BEGAN CORING AT		
SAVED CORES FROM	475.0	727.3
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "	319.0	883.3
DAVIS (C.B.-S.B.) "	485.0	717.3
BONNE TERRE "	724.0	478.3
B. T. TRANS. "		
CONGLOMERATE "	743.0	459.3
LA MOTTE "		
GRAN. ~~OR POR.~~ "	751.0	451.3

PICTURES: FROM 475.0 727.3 TO 751.0 451.3

CHAR. SAMPLES: FROM TO

INSOL. RES.: FROM TO

OPENINGS AT

MINERALIZATION RECORD 150'S 620'W

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% CU. ASSAY	% CU. EST.	FT. %	REMARKS	TO	CORE RLC. CORES LOST
	644.5	644.6	557.7	0.1	2.1	2.0	0.2				CUBE	290	
	644.6	646.6	555.7	2.0	0.0	Tr.		0.79	20	1.58 L.		319	Disc.
	647.0	647.2	555.1	0.2		—			Tr.			330	
	649.2	649.8	552.5	0.6	0.0	—		0.67	0.7	0.40		455	S.B.
	649.8	650.5	551.8	0.7		—			Tr.			475	Disc.
	650.5	651.9	550.4	1.4	0.2	—	0.3	3.90	2.5	5.46 L.		495	4.0
	651.9	652.0	550.3	0.1	1.5	2.0	0.2				Diss	515	2.0
	653.0	658.0	544.3	5.0	14.3	5.5	71.5				Diss, BAND & SEAM	535	--
	658.0	658.4	543.9	0.4	10.5	18.0	4.2				SEAM	555	4.0
	659.0	659.3	543.0	0.3	1.0	1.0	0.3	4.70	2.5	1.41		568	0.4
	659.3	662.8	539.5	3.5	4.1	3.0	14.4				Diss & SEAM	625	--
	663.1	664.5	537.8	1.4	0.0	—		0.39	1.0	0.54		639	1.4
	666.1	667.0	535.3	0.9	0.0	—		0.40	1.0	0.36		647	
	668.1	669.4	532.9	1.3	0.0	Tr.		0.17	0.5	0.22		683	1.0
	673.5	675.7	526.6	2.2	0.3	1.0	0.7				Diss & SEAM	745	
	680.2	682.4	519.9	2.2	3.4	4.0	7.5 L.				Diss & SEAM	751	0.9
	682.4	683.2	519.1	0.8		Tr.							
	684.3	684.6	517.7	0.3		—			Tr.				
	689.6	689.8	512.5	0.2		—			Tr.				
	721.3	721.7	480.6	0.4	0.0	—		0.24	0.5				

555.7 2.0 - [illegible] Cu.
580.4 1.4 - 0.2 - 3.7 Cu.
534.5 - 1.8 - 1.2
519.1 - 2.2 - 3.4

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JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY JH DATE 7-17-58 MINE Contact STOPE STAKE NO. VC 144 HOLE NO. 58VC164

COLLAR ELEV. 1201 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
290	911	BEGAN CORING	
319?	882	Derby	Doe Run — thin bedded — contact discorded (319)
485	716	Davis	Shale — Discard 319-330, 455-475 — Solid Bit 330-455 — (485)
		Bonne Terre	
542	659	1	GTO — thin bedded in only faint to med oolite — fairly massive top to 500 w/ few thin Rbs — thin bedded & Banded 500-523 — sm only appearance 523 to Base — > porous patches — > fracturing — > pitting & small vugs — (542)
563	638	5-1	GTO > Bt few dense pbs faint to med oolite — few Bta — slightly sm only appearance — few dense pbs — > porous patches — > ca tbe — few thin Rbs > grinding (563)
576	625	5	GTO > Bta faint to med oolite — small Bta — few thin Rbs — > pitting > ca tbe — > grinding — (576)
582	619	8	GTOM med oolite — > M patches scattered — few thin Rbs — > pitting — few Bta — (582)
631	570	5	GTO > M med to large oolite — few thin Rbs — > M patches — > pitting & vugs — (631)
677	524	7	FTGTM thin bed & Gt good reef rock — 3' thin bed 632-635 — 1' Gt @ 636 — > fracturing & grinding — few thin Rbs — tr. to Base ca 645-653 — good Pb 652-662 — 2" w/ pebbles @ 667 — > pitting & > vugs — > Gt — (677)
690	511		GTMGt & pebbles & grit — TM > Gt — < pebbles & grit top to 685 w/ < Gt — > M & K matrix — TM > Gt 685 to Base — few thin Rbs — > pitting — 1' fair Pb @ 682 (690)
710	491		FTGTM > Gt good reef rock — few thin Rbs — > Gt — > pitting (710)
724	477	18-16	Granite Cobbles & pebbles — NF Granite Cobbles & Pebbles w/ GM matrix top to 714, 719-722 — NF 714-719, 722 to Base — > pitting > black fill — few thin Rbs — tr ca (724)
743	458	18	Granite Cobbles & Boulders > Pebbles w/ GSD matrix 1' Red Granite Boulder @ top, 726, 6" @ 728, 2' 728-730, 1' @ 731, 8" @ 735, 739, 740 — < Cobbles & Pebbles w/ GSD matrix (743)
751	450	20	Red Granite, Solid good solid granite — > fracturing @ 744 (751)

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JOPLIN, MO.

STARTED 7-11-58

7-16-58 YC 145

C.A. COURTOIS

7-18-58 C44857

C.A. U.S. FOREST LANDS

(LALE (SPECK)

54173.23

S.S.

GENERAL HOLE DATA

ELEVATION ABOVE SEA LEVEL 1.0 FT.

FROM LATT. SEC.

BLOCK TYPE	DEPTH FROM	DEPTH TO						
	541.2	511.3	0511	01				SSS
	634.5	634.7	0075	04	0.0	0.0	0.5	

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	355.0887.4	
SLEEVE BIT TO	"	
BEGAN CORING AT	555.0687.4	
SAVED CORES FROM	555.0687.4	
FORMATIONS:		
SOIL TO	"	
EMINENCE	"	
POTOSI	"	
POTOSI-DERBY	"	
DERBY DOE RUN	"	
DAVIS (C.B.-S.B.)	" 564.0678.4	
BONNE TERRE	" 840.0402.4	
B. T. TRANS.	" 850.0392.4	
CONGLOMERATE	"	
LA MOTTE	" 864.0378.4	
GRAN. OR POR.	"	
PICTURES: FROM	555.0687.4	
TO	864.0378.4	
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

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JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE [illegible] MINE [illegible] STOPE STAKE NO. [illegible] HOLE NO. [illegible] VC 165

COLLAR ELEV. [illegible] PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
[illegible]	617	BEGAN CORING	
[illegible]	672	[illegible]	(564)
		[illegible]	
622	639	1	[illegible] (TOP [illegible] 591)
629	632	[illegible]	[illegible] (629)
655	577	[illegible]	[illegible]
714	531	[illegible]	[illegible]
718	524	7	[illegible]
753	479	7	[illegible]
811	431	7	[illegible]
840	402	12	[illegible]
850	392	19	[illegible]
864	378	20	WS — [illegible]

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JOPLIN, MO.

STARTED 5 58

127

VC

GEO. EVANS

GENERAL HOLE DATA

HIT SLEEVE VALVE OR 2 FT

FROM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	215.0	880.9
SLEEVE BIT TO		
DIAMOND CORING AT	255.0	840.9
SAVED CORES FROM		
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "	263.0	832.9
DERBY DAVIS		
DAVIS (C.B.-S.B.) "	430.0	665.9
BONNE TERRE "	708.0	387.9
B. T. TRANS. "	712.0	383.9
CONGLOMERATE "	—	
LA MOTTE "	725.0	370.9
GRAN. OR POR. "	—	
PICTURES: FROM	518.0	577.9
TO	725.0	370.9
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS				REMARKS	
	536.0	536.1	5598	0.1		TR			3'3
	548.0	541.0	546.9	1.0		TR			443
	556.8	556.1	539.0	0.1		TR			0.51
	511.0	511.1	544.8	0.1		TR		"	401
	600.0	602.0	443.9	2.0		TR		"	1.5
	602.0	602.5	4434	0.5	39	1.0	20	FRACT	
	611.6	611.7	484.2	0.1		TR		SPEX	

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AUG 18 1958
BUREAU OF MINES
JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE 7-21-58 MINE [illegible] STOPE ..... STAKE NO. [illegible] HOLE NO. [illegible] NC 1666

COLLAR ELEV. [illegible] PITCH ..... BEARING ..... COORD.: N ..... E .....

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
255	821		BEGAN CORING
263	[illegible]	1	[illegible] (263)
275	820	1	[illegible] (275)
415	[illegible]	[illegible]	[illegible] (415)
430	[illegible]	1	[illegible] (430)
			[illegible]
181	606	1	[illegible]
537	557	5	[illegible]
566	529	5	[illegible] (566)
576	519	5-7	[illegible] (576)
611	484	7	[illegible] (611)
649	446	7-10	[illegible]
676	419	10-12	[illegible] (676)
708	387	12	[illegible] (708)
712	383	19	[illegible] (712)
725	370	20	[illegible] (725)

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AUG 18 1958

BUREAU OF MINES
JOPLIN, MO.

FORM 1173-2-54

STARTED 7-17-58

DATE BOTTOMED 7-22-58 ST. NO. VC-139 ST. ELEV. _____ CLASS BLANK HOLE NO. 58VC168

DESCRIBED BY C.A. AREA COURTOIS ELEVATION COLLAR 1086.12

DATE ESTIMATED 7-24-58 OPTION NO. 044857 COORDINATES: N 119928.34 E 84823.58

BY C.A. TRACT U.S. FOREST LAND 200 FT. MAP NO. 35 50 FT. MAP NO. T[redacted]S7

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 2.25' FT. SW¼-SW¼ SEC. 6 1200'N 700'E T35N-R1W

FORM BOTT. SL. _____

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	206	880
SLEEVE BIT TO		
BEGAN CORING AT	375	711
SAVED CORES FROM	375	711
FORMATIONS:		
SOIL TO		
EMINENCE		
POTOSI		
POTOSI-DERBY		
DERBY DOE RUN		
DAVIS (C.B.-S.B.)	412	674
BONNE TERRE	693	393
B. T. TRANS.	705	381
CONGLOMERATE		
LA MOTTE	715	371
GRAN. OR POR.		
PICTURES: FROM	513	573
TO	612	474
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS
BLANK											

CORE REC.

TO	CORE LOST
375	
715	—

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AUG 18 1958

BUREAU OF MINES
JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE 7-24-58 MINE CRYSTAL STOPE ..... STAKE NO. [illegible] HOLE NO. 58VC-168

COLLAR ELEV. 1085 PITCH ..... BEARING ..... COORD.: N ..... E .....

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
375	710	BEGAN CORING	
412	673	DAVIS FOUND THERE	(412)
458	627	1	LT massive AGT Dense [illegible] — LT [illegible] > [illegible] 412 to 437 — GT [illegible] 437 to 458 — [illegible] 444 to base — (458)
468	617	1-5	GT [illegible] — GT [illegible] 459 to 463 — [illegible] 463 to 468 — (468)
513	[illegible]	5	[illegible] 468 to base — [illegible] (513)
561	524	5	[illegible] — [illegible] 517 — [illegible] — 1' GT — Gd @ base — (561)
564	521	7	GT @ [illegible] — 2' [illegible] GT @ 563 — 1' Gd [illegible] @ 564 — (564)
603	482	7	F GTM Gd — [illegible] Good Sandy F [illegible] w/ p [illegible] M [illegible] Gd [illegible] — 2' Ca & 2ND D & — 1' Gd [illegible] @ 570, 576, — 2' [illegible] M. 12 type @ 599 & [illegible] — (603)
639	446	7-10	F GT<M-Gd & Tn — 3' Tn w/ Hl @ [illegible] — 2' GTM — Gd @ 604 — 1' [illegible] — 1' [illegible] Good Sandy F [illegible] w/ M-Gd [illegible] 606 to base w/ 2' [illegible] @ 620 — 2' GTM [illegible] @ 631 — 2ND D & — (639)
643	442	12	GM-Gd [illegible] — [illegible] — Gd — (643)
689	396	11	LT GM-Gd — [illegible] Hl — > B & 680 to base — Gd [illegible] (689)
693	392	12	GTM-Gd Ca & — [illegible] — Ca & 2ND D & — (693)
[illegible]	[illegible]	10	GTM Sil Gd — Space [illegible] increasing [illegible] base — 3" Tn w/ [illegible] @ pitch @ 693.3 — 5' M [illegible] 696 [illegible] — 4' [illegible] Clean [illegible] @ base — (705)
715	[illegible]	20	WS — [illegible] Fine Grain, Clean W. — [illegible] FeS2 & — [illegible] — (715)

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AUG 18 1958

BUREAU OF MINES
JOPLIN, MO.

STARTED 7-17-58

COMPLETED 7-22-58 DRILL NO VC-142 DRILL ELEV. PECK TRACT HOLE NO. SEVC169

REPORTED BY J.A. AREA COURTOIS ELEVATION COLLAR 1CDD.47

DATE PLOTTED 7-24-58 DRILL ON NO CAA857 COORDINATES: N 116432.65 E 82897.62

BY J.A. OWNER U.S. FOREST LAND 200 FT. MAP NO. A5 50 FT. MAP NO. 658

SEV4-NE1/4 SEC. 12

GENERAL HOLE DATA

HT. SLEEVE ABOVE OR BELOW GL 3.5 FT

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	202	898
SLEEVE BIT TO		
BEGAN CORING AT	215	885
SAVED CORES FROM	425	675
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "	284	816
DAVIS (C.B.-S.B.) "	453	647
BONNE TERRE "	718	382
B. T. TRANS. "	734	366
CONGLOMERATE "		
LA MOTTE "	745	355
GRAN. OR POR. "		
PICTURES: FROM	450	650
TO	745	355
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 2420'S - 1170'N T35N-R2W

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS	CORE REC. TO	CORES LOST
	489.9	490.0	609.5	0.1		Tr.					CUBE	215	
	504.1	505.0	594.5	0.9		Tr.					FRACT Pb	305	
	681.9	682.0	417.5	0.1		Tr.						322	
	686.1	688.4	411.1	2.3		Tr.						425	
												445	.0
												485	
												505	0.8
												745	—

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AUG 18 1958

BUREAU OF MINES
JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE [illegible] MINE [illegible] STOPE STAKE NO. [illegible] HOLE NO. [illegible] 169

COLLAR ELEV. PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
[illegible]	[illegible]	BEGAN CORING	
284	818	Derby	Doe Run — [illegible] oolite & [illegible] — 36 — [illegible] bed [illegible] F 236 - 240 E — thin bed 250 to Base — (284)
289	813	Derby	Davis Transition — (289)
453	644	Davis	Shale — Solid Bit 332 - 425 (453)
		Bonne Terre	
498	[illegible]	1	TO - thin bed, [illegible] & fine formed oolite — slightly & 456 - 464 - fairly massive top to 469 = thin bed w/ [illegible] 469 - 484 — fairly 484 to Base — many thin Rbs = pitting — tr Pb — (498)
519	578	5-1	TO > Bx = [illegible] fine to med oolite — many Bx — [illegible] thru out — pitting — = thin Rbs — (519)
546	551	5	GTOBX E med oolite — [illegible] & [illegible] 7 to Base — fairly porous — increasing M toward Base — (546)
589	509	5	TO - lightly E F - med oolite = slightly & thru out — > M patches — pitting > fracturing — 2' F 575 - 577 — [illegible] Base — (589)
643	454	7	F Gtmxob E good roof rock — < pitting — many thin Rbs — & top to 662 > fracturing — (643)
664	433	7-10	F - TXO E & thru out — Txo top to 653 w/ med oolite + X - F 653 to Base — pitting — (664)
680	417	10	GTXO > M E fine to med oolite — small to med X — & top to 671 — few thin Rbs — > M = scattered — > Gtx — (680)
718	379	10-12	GTXOM - F fine to med oolite — small X — > M = scattered thru out — many thin Rbs — 1" F @ top, 1" @ 681, 3' 689 - 692 — M increases toward Base — > pitting — tr Pb — (718)
734	363	19	GTSOM fairly sandy increasing toward base — > pitting — few thin Rbs — 1' slightly & @ Base — > J scattered (734)
745	352	20	W Sand med grain — > fos patches — > L Gtx — (745)

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BUREAU OF MINES
JOPLIN, MO.

FORM 1173-2-54

STARTED 7-21-58

DATE BOTTOMED 7-24-58 ST. NO. VC 132 ST. ELEV. _____ CLASS TRACE HOLE NO 58VC171

DESCRIBED BY C.A. AREA COURTOIS ELEVATION COLLAR 1088.75

DATE ESTIMATED 7-25-58 OPTION NO. CZ67 COORDINATES: N 117400.71 E 81411.46

BY C.A TRACT GEO. EVANS 200 FT. MAP NO A5 50 FT. MAP NO 660 T

NW¼-NE¼ 3600 N 3300 E T35N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 3.0 FT.

FORM BOTT. SL. _____

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	131	958
2" SLEEVE BIT TO	140	949
BEGAN CORING AT 58 -105-3'15	140	949
SAVED CORES FROM	395	694

FORMATIONS:

	TO
SOIL	"
EMINENCE	"
POTOSI	"
POTOSI-DERBY	"
DERBY DOE RUN	"
DAVIS (C.B. ~~S.B.~~)	412 677
BONNE TERRE	678 411
B. T. TRANS.	"
CONGLOMERATE	"
LA MOTTE	685 404
GRAN. OR POR.	"

PICTURES: FROM 452 637 TO 655 434

CHAR. SAMPLES: FROM TO

INSOL RES: FROM TO

OPENINGS AT

MINERALIZATION RECORD

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS	TO	CORE REC. CORES LOST
	456.5	457.0	631.8	.5		Tr.					SPECKS IN VUGS	410	
	480.0	480.2	608.6	0.2		Tr.					FINE DISS b	550	-
	533.3	533.4	555.4	0.1		Tr.					SPECK	556	5.0
	548.9	549.0	539.8	0.1		Tr.					"	577	-
	595.0	595.1	493.7	0.1		Tr.					"	585	2.0
	605.0	605.7	483.1	0.7	1.5	.25	1.1				DISS IRREG. Kb	685	-
	609.7	610.3	478.5	0.6	0.6	1.5	0.4				> FES - DISS tb		
	610.3	610.4	478.4	0.1		Tr.					SPECK		

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AUG 18 1958
BUREAU OF MINES
JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY R.L. LHII DATE 7-25-58 MINE Courcelois STOPE STAKE NO. VC/32 HOLE NO. 58VC171

COLLAR ELEV. 1087 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
140	947	BEGAN CORING	
		J.B.	65 – 275
395	692	NVED	CORES from 395
412	675	DAVIS	(412)
		BONNETERRE	
456	631	1	Dense TBb > Vugs & fractures (456)
470	617	1:5	mostly dense TBb; GTM sparsely. Scattered dense Bxom porous Bb Pb speck @ 457' (470)
497	590	5	Bxom porous Bb – > vugs – massive stylolitic (497)
500	578	R	[illegible] (500)
529	568	[illegible]	[illegible] (529)
547	540	5-	[illegible] (547)
565	522	5-7	[illegible]
581	506	7	[illegible] (581)
603	484	7	[illegible] (603)
614	473	7	[illegible] (614)
675	412	7-10-1	[illegible]
678	409	[illegible]	[illegible]
685	402	20	[illegible]

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AUG 18 1958

BUREAU OF MINES
JOPLIN, MO.

FORM 1173-2-54

STARTED 1-23-58

DATE BOTTOMED 7-28-58 | ST. NO. 140 | ST. ELEV.

DESCRIBED BY H.T. | AREA VC

DATE ESTIMATED 7-29-58 | OPTION NO. 044857

BY H.T. | TRACT U.S. FORESTLAND

CLASS TRACE | HOLE NO. 58VC 173

ELEVATION COLLAR 1049.63

COORDINATES: N 120372.18 E 86335.60

200 FT. MAP NO. 35 | 50 FT. MAP NO. 580

NE¼ - SW¼ SEC. 4
1650' N - 2200' E T35N R1W

.05

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR [redacted] FT.

FORM BOTT. SL. 2.67

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	152.0	897.6
2½" SLEEVE BIT TO	158.0	891.6
BEGAN CORING AT	158.0	891.6
SAVED CORES FROM	345.0	704.6
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY ".		
DERBY DOE RUN "		
DAVIS (C.B.-[redacted]) "	371.0	678.6
BONNE TERRE "	648.0	401.6
B. T. TRANS. "	651.0	392.6
CONGLOMERATE "		
LA MOTTE "	664.0	380.6
GRAN. OR POR. "		
PICTURES: FROM	360.0	689.6
TO	669.0	380.6
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% CU ASSAY	% CU EST.	FT. %	REMARKS
	449.0	449.5	600.1	0.5	0.4	0.0	0.2	0.0	1.0		cu + fe
	642.1	642.5	407.1	0.4		TR					
	643.7	644.1	405.5	0.4		TR					
	653.1	653.4	396.2	0.3		TR					
	654.0	654.3	395.3	0.3		TR					
	655.0	655.3	394.3	0.3		TR			TR		zf + cu.
	656.0	656.1	393.5	0.1		TR					zn + fe.

CORE REC.

TO	CORES LOST
465	–
485	0.2
495	–
515	0.3
525	0.3
605	–
625	0.1
645	–
662	0.1
669	0.1

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BUREAU OF MINES
JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

L.S.

DESCRIBED BY H.T DATE 7-27-58 MINE COURTOIS STOPE STAKE NO. UC140 HOLE NO. 58VC173

COLLAR ELEV. 1048. PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
158	890	BEGAN CORING	
345	703	SAVED CORE:	
371	677	DAVIS SHALE D.CORED 160-215, 235-345 SOLID BIT 215-235 (371)	
		BONNE TERRE	
388	660	1	TO - > STYOLITES FAINT TO MED. OOLITES - > FRACT. - 2' DENSE TBB 385-387 - (388)
415	633	1	DENSE TBB - > FRACT 393-396, 401-404 - > DICKITE & C. 404 - > SOFT THIN RB (415)
427	621	1-5	TBB-BS:M - MOSTLY DENSE TBB - > THIN RB - > SMALL VUGS - ; GTM -
			> PITTING (427)
454	594	5	BX TO BS:M - MED. OOLITES - FINELY CRYSTALINE - > DICKITE & 443-444 -
			> POROUS PATCHES 438-442 - > POROUS BS 432 - FAIRLY BS 432-433, 442
			443 - > MOTT SECT - > TBB 433-441, 443-445 - 5' HEAVY TC w/ > cm @ 443.5 - (454)
459	589	8	GTM - > GMB - FAINT TO MED. OOLITES - 4" GMB @ 452 - > SMALL VUGS 454-455
			6" SMALL GB @ BASE - > TBB @ 456 - (459)
467	571	5	BS TO: CREPEY - MOSTLY OOLITIC - MED. OOLITES - E. 464 TO BASE: 3' SAME
			TO 467 - L STYOLITES - > SHORT CREPE SECT. (467)
487	551	5	TO DENSE TB-BS:F - MOSTLY OOLITIC - > PITTING - MED TO LARGE OOLITES -
			1' L SMALL GB @ 472 - > HEAVY STYOLITIC SECT. E. 467-473, 478-480 (487)
512	526	5-7	TO - GEN. & E. - ALTERNATING SECT OF TB + GEN. - MED TO LARGE OOLITES -
			E. 501-512 - > SMALL GB 505-502 - MOSTLY OOLITIC - > MOTT CREPE SECT.
			487-492, 501-505 - 2' TBO w/ > TB 510-512 - (512)
583	455	7	F. FINISH GOOD REEF 1' TBO @ 515.5 - 2' TO 515 - 512 - 1' L SMALL GB @ 514 - 4' 512-516 -
			2' 554-556, 1' @ 550 - 5" GE SHALE @ 549 - > THIN RB - > cm & PATCHES (583)
642	406	11	GEN/GSD HEAVY CREPE - L REG'T IARES' HB - 1. COLO @ TOP - 6" L SMALL GB
			555 - > SCATT SMALL PATCH GB 607-615, 610-629. E 637-641 - > cm & - (642)
645	403	12	TO ALIT CREPEY - > HB - > SCATT PATCH 641.1-644.1 - 1.5' SOFT PATCH @ 643 - (645)
657	391	19	GSD-AL & - E 648-653 - 3 PATCH @ 653.4, 3" 654.5, 655.3, 1" w/ HEAVY TC @ 656.1
			NIZED APPEARANCE 652-655 - > HEAVY K SECT. 1' DS w/ TC @ BASE SLIGHTLY
			SANDY @ TOP. INCREASING IN SAND CONTENT TOWARDS BASE - (657)
667	381	20	W.S. FINE TO MED GRAIN: TIGHTLY CEMENTED. > FCS & PATCHES THROUGH-
			OUT > THIN HB 667-668 (667)

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BUREAU OF MINES
JOPLIN, MO.

STARTED [illegible]

BY [illegible] AREA VC [illegible] HOLE NO [illegible]

BY [illegible] OPTION NO [illegible] ELEVATION COLLAR [illegible]

BY [illegible] TRACT JEG [illegible] COORDINATES [illegible] E [illegible]

200 FT. MAP NO [illegible] 50 FT. MAP NO. [illegible]

NW¼ [illegible] SEC 7

1000'S 1000 E [illegible]

GENERAL HOLE DATA

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	205.0	899.0
SLEEVE BIT TO		
BEGAN CORING AT		
SAVED CORES FROM	382.0	109.0
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "	245.0	849.0
DAVIS (C.B.-S.B.) "	420.0	674.0
BONNE TERRE "	694.0	4000
B. T. TRANS. "	696.0	398.0
CONGLOMERATE "	—	
LA MOTTE "	709.0	385.0
GRAN. OR POR. "	—	
PICTURES: FROM	476.0	618.0
TO	631.0	463.0
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS
	417.3	411.1	414.9	[illegible]		TR					
	482.4	482.5	411.5	0.1		TR					
	507.7	507.8	386.2	0.1		TR					
	586.5	586.9	411.1	0.4		TR					
	887.2	810.5	803.5	1.3		TR.					
	621.2	621.3	466.7	0.1		TR					

CORE REC.

TO	CORES LOST
235	
[illegible]	[illegible]
[illegible]	[illegible]
416	
4[illegible]	[illegible]
455	[illegible]
44[illegible]	[illegible]
567	
579	0.7
577	
611	0.3
627	3.6
627	—
611	—
617	
101	5.0

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AUG 18 1958

BUREAU OF MINES
JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY _____ DATE _____ MINE _____ STOPE _____ STAKE NO. _____ HOLE NO. _____

COLLAR ELEV. _____ PITCH _____ BEARING _____ COORD.: N _____ E _____

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
	[illegible]	BEGAN CORING	
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]

RECEIVED
DIVISION OF MINERAL
TECHNOLOGY

AUG 18 1958

BUREAU OF MINES
JOPLIN, MO.

FORM 1173-2-54

205

STARTED 7-23-58

DATE BOTTOMED 7-24-58

DESCRIBED BY H.T.

DATE ESTIMATED 7-31-58

BY H.T.

ST. NO. 136 ST. ELEV.

AREA VC COURTOIS

OPTION NO. CZ-67

TRACT GEO. EVANS

CLASS BLANK HOLE NO. 58VC177

ELEVATION COLLAR 1101.21

COORDINATES: N 118728.15 E 85416.82

200 FT. MAP NO. 35 50 FT. MAP NO. 619

NW1/4-NW1/4 SEC7 T35N-R1W 50'S-1270'E

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR. 3 FT.

FORM-BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	208.0	893.2
SLEEVE BIT TO		
BEGAN CORING AT	208.0	893.2
SAVED CORES FROM	405.0	696.2
FORMATIONS:		
SOIL TO		
EMINENCE		
POTOSI		
POTOSI-DERBY		
DERBY-DOE RUN		
DAVIS (C.B. Sec)	415.0	686.2
BONNE TERRE	700.0	401.2
B. T. TRANS.	720.0	381.2
CONGLOMERATE		
LA MOTTE	725.0	376.2
	741.0	358.0
GRAN. OR POR.		
PICTURES: FROM		
TO		
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS	CORE REC. TO	CORES LOST
												655	-
												675	0.2
												695	-
												705	1.2
												725	4.5

BLANK HOLE

BIT STUCK 12' OF BTM. 320' RODS + BIT LEFT IN HOLE

DRILLED TO 741 NO CORES RECOVERED

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TECHNOLOGY

AUG 18 1958

BUREAU OF MINES
JOPLIN, MO.

FORM 3002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY A-H T DATE 7-28-58 MINE Courtois STOPE STAKE NO. 1C 126 HOLE NO. 58VC-177

COLLAR ELEV. 1099 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
208	891		BEGAN CORING
218	881		DERBY - [illegible] & KEEP (218)
245	854		DERBY - THIN LEDGED (245)
253	846		DERBY DAVIS - ALTERNATING 2' SECTIONS OF DERBY & DAVIS (253)
305	794		DAVIS - (305)
405	694		SOLID BIT (405)
415	684		DAVIS (415)
			BENNETT TURNS
460	639	1	LT>0b, & GT DENSE - LT>0b, 4'C TO 443 - GT DENSE >PROG. PATCHES 452 TO BASE - (460)
474	625	1-5	GT DENSE, GB, Bf - RASKALLY 1 BANDING DENSE GT w/SCATT GB, pr Bf THRUOUT - (474)
481	618	5-1	GB, w/DENSE GT, - RASKALLY 5 ZONE GB, Bf pr w/SCATT DENSE - > 2ND Df - (481)
502	597	5	GB, pr - SURREC POROUS PATCHES Df - >, - 2ND Df - STYLOLITIC - (502)
516	583	R	GM - C/-GB, Bf: GT>Kf - 1' GM - >Cf @ 503 - 7' GB pr Bf STYLO @ 510 - pr GT, Bf > Kf 510 TO BASE - (516)
541	558	5	GT, Bf - FAIRLY MASSIVE - 2ND Df - MED O-CAVOUS Bf THRUOUT - STYLOLITIC - (541)
558	541	5	[illegible] - MASSIVE - POROUS - MED O - STYLO - 2" GM SEC @ 552 - 2' Cf @ BASE (558)
563	536	5-7	F [illegible] GT Cf - 1' F @ 559 - 1' GT, Cf @ 560 - 1' F @ 561 - 2' GT, Cf pr > Kf @ 563 - (563)
664	435	7	F/GTM Cf, Cf pr - > FRACT > POROUS SNURLY F 563 TO 569 - 3' Cf pr @ 572 - SNURLY F 572 TO 592 - < Cf pr 592 TO 597 - pr SNURLY F/GT M 597 TO 638 - > Cf 605 TO 620 - Cf / SEAMLETS 626 TO 638 - 4' < Cf - m @ 641 - 2' pr F @ 643 - 1' Cf > Kf pr @ 647 - 2' F m @ 649 - 4' pr Cf Kf @ 653 - M F SNURLY 653 TO 657 - 6' < Cf > m @ 663 - 1' F - m Cf @ 664 - (664)
686	413	12	GTM > GT [illegible] - Cf 664 TO 670 - 1' FAINTLY REEFY MED M @ 671 - 1' GTM @ 672 - 3' F @ 672 - GTM pr 672 TO 678 - GTM FAINTLY OOLITIC @ 678 TO 680 - GTM @ 680 TO BASE - > FRACT - Cf & 2ND Df - (686)
700	399	13	GTM Bf - Cf - < Bf - > Cf - MED @ M - 1' FRACT @ 697 - 2' F > FRACT BASE - (700)
720	374	13	LESD - [illegible] > FRACT [illegible] FOS @ 706 & 710 - FAINTLY Bf - SPARCE WAND TOP INCREASING TOWARD BASE - IGNEOUS PEBBLE @ 700 - 5' SEAMED 705 TO 720 - (720)
725	374	20	WS - SUGARY CLEAN SAND MED GRAIN - L GRND - (725)
741	358		Drilled to 741 — No cores recovered

BIT STUCK 11' OFF BOTTOM 320' RODS & BIT LEFT IN HOLE

RECEIVED
DIVISION OF MINERAL
TECHNOLOGY

AUG 18 1958

BUREAU OF MINES
JOPLIN, MO.

FORM 1173-2-54

205

STARTED 7-29-58
DATE BOTTOMED 7-31-58
DESCRIBED BY J.A.
DATE ESTIMATED 8-5-58
BY J.A.

ST. NO. 137 ST. ELEV.
AREA YC - COURTOIS
OPTION NO. 044857
TRACT U.S. FORESTLAND

CLASS BLANK HOLE NO. 58YC 181
ELEVATION COLLAR 1049.58
COORDINATES: N 119131.07 E 86922.75
200 FT. MAP NO. 35 50 FT. MAP NO. 580
SW1/4-SE1/4 SEC 6
MINERALIZATION RECORD 400'N 2750'E T35N R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 3 FT.
FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	135.0	914.6
SLEEVE BIT TO		
BEGAN CORING AT	305.0	744.6
SAVED CORES FROM		
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	381.0	668.6
BONNE TERRE "	664.0	385.6
B. T. TRANS. "	679.0	370.6
CONGLOMERATE "	—	
LA MOTTE "	691.0	358.6
GRAN. OR POR. "		
PICTURES: FROM	452.0	597.6
TO	630.0	419.6
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS

BLANK

CORE REC. TO	CORES LOST
305	Disc
365	
485	
503	1.4
543	
563	0.5
615	—
635	1.3
691	—

RECEIVED
DIVISION OF MINERAL
TECHNOLOGY

AUG 18 1958

BUREAU OF MINES
JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE [illegible] MINE [illegible] STOPE ..... STAKE NO. 1C 137 HOLE NO. [illegible]

COLLAR ELEV. 1051 PITCH ..... BEARING ..... COORD.: N ..... E .....

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
205	[illegible]	BEGAN CORING	
265	[illegible]	[illegible]	[illegible]
381	[illegible]	[illegible]	[illegible]
402	628	1	[illegible]
439	[illegible]	5	[illegible]
463	[illegible]	5	[illegible]
477	[illegible]	5	[illegible]
500	551	5	[illegible]
612	434	7	[illegible]
669	[illegible]	10	[illegible]
729	[illegible]	10	[illegible]
791	[illegible]	[illegible]	[illegible]

RECEIVED
DIVISION OF MINERAL
TECHNOLOGY

AUG 18 1958

BUREAU OF MINES
JOPLIN, MO.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
Box 431
Joplin, Missouri
July 21, 1958

ORIGINAL FILE COPY
DMEA
RECEIVED JUL 23 1958

DATE	INITIALS	CODE
7-23	C	220
23	COM	100
"	JG	110
7/24	450	800
		500

DMEA Operating Committee
Department of the Interior
Room 4457 - Interior Building
Washington 25, D. C.

Re: DMEA-4582(lead-zinc-copper)
St. Joseph Lead Co.
Courtois Area
Washington County, Mo.
Contract Idm-E1068

Dear Sirs:

Transmitted herewith are four copies of the Interim Report received from Dewey Amos, USGS, Knoxville, covering the joint Field inspection he and Chester,USBM, Joplin, made at the subject project on July 8, 1958.

Sincerely yours,

Robert U. King
Robert U. King
Acting Executive Officer
DMEA Field Team, Region IV

encls. 4

cc: DMEA Op.Com.(3)
King,USGS,Denver w/cy encl.
Amos,USGS,Knoxville " "
4582 file

RECEIVED
DIVISION OF MINERAL TECHNOLOGY
JUL 17 1958 RWK
BUREAU OF MINES
JOPLIN, MO.

FILE COPY
DMEA
RECEIVED JUL 23 1958

DATE	INITIALS	CODE

INTERIM REPORT

DMEA-4582, Idm-E1068

Operator: St. Joseph Lead Company, Boone Terre, Missouri

Location: Courtois Area, Washington County, Missouri

A project inspection of the subject contract was conducted on July 8, 1958. Results obtained to date and contemplated future work were discussed with Mr. R. E. Wagner, Head of Exploration, and Mr. G. Klostermann, Geologist.

Drilling completed on the Courtois project to date and since the inspection on June 11-12, 1958 is summarized as follows:

Drilling Completed

Footage in holes completed since last inspection	2,645
Footage in holes completed to date	82,195 X 82,200
Number of holes completed since last inspection	4
Total number of holes completed to date	125
Number of holes showing commercial ore	24
Number of holes showing indicative non-commercial mineralization	17
Number of holes showing trace mineralization	65
Number of holes showing speck trace mineralization	8
Number of barren holes	11

A summary of the four holes completed since the last interim inspection is as follows:

Hole No.	Location	Depth	Remarks
VC-121	SE¼, SE¼, NW¼, sec. 18	694 ft	Trace hole
VC-124	SW¼, SE¼, NE¼, sec. 18	585 ft	Indicative hole
VC-126	NW¼, NW¼, NW¼, sec. 17	721 ft	Trace hole
VC-93	SE¼, NE¼, SE¼, sec. 7	645 ft	" "

Diamond core drilling is in progress in one hole summarized as follows:

Hole No.	Location	Present Depth	Estimated Total Depth
VC-130	NW¼, SE¼, NE¼, sec. 7	610 ft	700 ft

The churn drill portion of six holes has been completed since the date of the last inspection. A summary of these holes is as follows:

Hole No.	Location	Depth to Bottom of Churn Drilling
VC-129	SW¼, NE¼, NE¼, sec. 7	145 ft
VC-137	SW¼, SW¼, SE¼, sec. 6	130 ft
VC-136	NW¼, NE¼, NW¼, sec. 7	203 ft
VC-143	SE¼, NE¼, NE¼, sec. 12	120 ft
VC-140	SE¼, NE¼, SW¼, sec. 6	152 ft
VC-139	NE¼, SW¼, SW¼, sec. 6	202 ft

Churn drilling is in progress in five holes summarized as follows:

Hole No.	Location	Present Depth
VC-145	SW¼, SW¼, SW¼, sec. 6	235 ft
VC-144	NE¼, NE¼, NE¼, sec. 12	235 ft
VC-142	SW¼, SE¼, NE¼, sec. 12	150 ft
VC-152	SW¼, NW¼, SE¼, sec. 5	Setting up
VC-149	SE¼, SE¼, SW¼, sec. 5	Setting up

Hole VZ-124 revealed 2.2 feet of 6.0 per cent lead and 2.7 per cent zinc at a depth of 426.9 - 429.1 feet.

Dewey H. Amos
Geologist
U. S. Geological Survey

Jack W. Chester
Mining Engineer
U. S. Bureau of Mines

g

Cy to: 100 + 800

ORIGINAL FILE COPY
DMEA
RECEIVED AUG 4 1958

INITIALS	CODE
S.J.	226
	110
	500

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
Box 431
Joplin, Missouri
August 1, 1958

DMEA Operating Committee
Department of the Interior
Washington 25, D. C.

Re: DMEA-4582(lead-zinc-copper)
St. Joseph Lead Co.
Courtois Area
Washington County, Mo.
Contract Idm-E1068

Dear Sirs:

Forwarded herewith are your two copies of the MF-104 Monthly Voucher, MF-104A and the Operator's Monthly Report covering the June work on the cited project. The voucher data received from the Finance Officer is posted on both MF-104s.

Sincerely yours,

Clinton C. Knox

Clinton C. Knox
Executive Officer
DMEA Field Team, Region IV

encls. 6

cc: DMEA Op.Com.
Amos,USGS,Knoxville
King,USGS,Denver
4582 file

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

DMEA Washington

RECEIVED AUG 4 1958 DMEA

Budget Bureau No. 42-R1036.5

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

Month of June, 1958 Docket No. DMEA 4582 Contract No. Idm-E 1068
Operator's Name St. Joseph Lead Company Minerals Pb - Zn - Cu
Address Bonne Terre, Missouri
Contract Amount, $ 298,560.00 Government Participation: 50 % Amount, $ 149,280.00

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	8649.12	178305.96	186955.08	9/5/58	AWPH	
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	32.00	543.00	575.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	8681.12	178848.96	187530.08			

RECEIVED DIVISION OF MINERAL TECHNOLOGY JUL 16 1958 BUREAU OF MINES JOPLIN, MO.

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

Date 7-15-58 *Payee St. Joseph Lead Company

Per E. A. Jones Title DIVISION MANAGER

*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:

$ 4,340.56

Signature
(Authorized Certifying Officer)

Date July 28 1958 Vou. No. 4-05

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Idm-E1068 in accordance with the terms of the contract.

Signature John W. Chester Title Mining Engineer Date July 21, 1958

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Robert U. King Title Acting Executive Officer Date July 21, 1958

MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

RECEIVED AUG 4 1958 D.M.E.A.

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

Month of June 1958 Docket No. DMEA 4582 Contract No. Idn-B 1068
Operator's Name St. Joseph Lead Company Minerals Pb - Zn - Cu
Address Bonne Terre, Missouri

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core	Ft.	5789.76	2608	142255.36	64079	2.22		
Churn	Ft.	2859.36	1288	44699.70	20135	2.22	133420	2.22
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Analytical Determinations	Ea.	32.00	32	575.00	575	1.00	2370	1.00
TOTAL DISTRIBUTED COSTS		8681.12		187530.08				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		8681.12		187530.08				

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

Date 7-15-58 Operator St. Joseph Lead Company

Per [signature] Title DIVISION MANAGER

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

REMARKS:

(Instructions on reverse)

(For Government use only)

RECEIVED
DIVISION OF MINERAL TECHNOLOGY
JUL 16 1958
BUREAU OF MINES
JOPLIN, MO.

INSTRUCTIONS

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

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

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

GPO 872894

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DIVISION OF MINERAL
TECHNOLOGY

JUL 16 1958

BUREAU OF MINES
JOPLIN, MO.

MONTHLY REPORT FOR MONTH OF JUNE, 1958

D.M.E.A. Project #4582 - Contract #IDM-E 1068

Five churn drills were operating in the area at the end of the month. The holes in progress were as follows:

Stage No.	Stake No.	Feet Depth
II	VC-144	225
II	VC-142	140
II	VC-145	225
II	VC-149	15
II	VC-152	15

The following churn drill holes were completed through overburden and chert-bearing formations and cased preparatory to diamond drilling during the month:

Stage No.	Stake No.	Feet Depth	Starting Date
II	VC-127	215	5-27-58
II	VC-129	145	5-15-58
II	VC-133	205	5-19-58
II	VC-135	120	5-28-58
II	VC-136	203	5-29-58
II	VC-137	135	5-28-58
II	VC-140	150	6-12-58
II	VC-143	115	6-13-58

One diamond drill was operating in the area at the end of the month. The hole in progress was Stage II, Stake No. VC-130 at a depth of 610 feet.

The following diamond drill holes were completed during the month:

Stage No.	Stake No.	Prospect Hole No.	Bottom Depth	Feet of Dia. Drilling	Date Completed	Class.
II	VC-118	58VC128	588	503	6- 4-58	Ind.
II	VC-121	58VC135	694	554	6-10-58	Trace
II	VC-124	58VC141	585	525	6-16-58	Ind.
II	VC-126	58VC146	721	491	6-19-58	Trace
II	VC-93	58VC152	645	535	6-26-58	Trace

Analysis of results gained by drilling is shown in abstracts of our weekly reports to St. Joseph Lead Company which are enclosed.

32 analytical determinations were made during the month as follows:

58VC128	6 Pb		
58VC135	2 Pb		
58VC141	6 Pb	1 Zn	
58VC146	4 Pb	1 Zn	
58VC152	9 Pb	2 Zn	1 Cu

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JUL 18 1958

BUREAU OF MINES
ROLLA, MO.

WASHINGTON COUNTY

Courtois Area - In DMEA Project #4582

Week Ended June 9, 1958

1 diamond drill operating and 5 churn drills setting casing completed 1 trace holes.

58VC123, stake #C105, a trace hole, is located about 7500 feet southwest of the village of Courtois and 520 feet northeast of a pay hole. It bottomed at 595 feet depth in dark rhyolite porphyry which extends up into the base of the 12 zone. Trace lead mineralization was present in the 7 zone at 489 and 506 feet depths and in the 12 zone at 578 feet depth.

58VC128, stake #C118, a strong trace hole, is located 900 feet northeast of the above hole and 520 feet west of a good trace hole. It bottomed at 588 feet depth in dark rhyolite porphyry which extends up into the middle of the 12 zone. Considerable mineralization was present in the lower 5, 7 and 7/10 zones, best of which was estimated as 5.9 feet of 1.0% Pb at 468 feet depth, 0.7 feet of 4.0% Pb at 475 feet depth, 0.2 foot of 2.0% Pb at 503 feet depth, and 0.2 foot of 1.0% Pb at 531 feet depth.

The above holes are located on the northwest flank of a buried porphyry ridge which is quite heavily mineralized on the opposite, or southeast flank.

Week Ended June 16, 1958

1 diamond drill operating and 5 churn drills setting casing completed 1 trace hole.

58VC135, stake #C121, a weak trace hole, is located about 7,000 feet southwest of the village of Courtois and 900 feet northeast of a pay hole. It bottomed at 694 feet depth in dark rhyolite porphyry which extends up to about the top of the Lamotte sand horizon. Traces of lead, estimated as 0.2 feet of 2.0% Pb were located at 435 feet depth, 15 feet below the Davis shale and an estimate of 0.4 foot of 1.5% Pb was made at 593 feet depth in the 7/10 zone.

Week Ended June 23, 1958

1 diamond drill operating and 5 churn drills setting casing completed 1 indicative and 1 trace hole.

58VC141, stake #C124, an indicative hole, is located about 6,000 feet south of the village of Courtois and 520 feet east of an indicative hole. It bottomed at 585 feet depth in Lamotte sand. Mineralization in the lower 5 zone was estimated as 2.2 feet of 4.5% Pb and 1.0% Zn at 429 feet depth.

58VC146, stake #C126, a trace hole, is located 2,000 feet northeast of the above hole and 520 feet east of a pay hole. It bottomed at 721 feet depth in Lamotte sand. Mineralization was estimated as 0.3 foot of 1.0% Pb at 519 feet depth in the 1 zone, 0.6 feet of 1.0% Pb at 566 feet depth and 0.8 foot of 1.0% Pb at 578 feet depth, both in the lower 5 zone. This hole apparently is located in the eastern edge of the main Courtois ore run.

WASHINGTON COUNTY - Courtois Area - In DMEA Project #4582 (Continued)

Week Ended June 30, 1958

1 diamond drill operating and 6 churn drills setting casing completed 1 indicative hole.

58VC152, stake #093, an indicative hole, is located about 2300 feet south of the village of Courtois and 520 feet north of a pay hole. It bottomed at 645 feet depth in Lamotte sand. Trace lead mineralization was present in the lower 5, 7, and 7/10 zones with an indicative run estimated as 3.0 feet of 3.7% Pb at 482 feet depth in lower 5 zone reef rock.

FORM 1173-2-54

15

STARTED 6-2-58

DATE BOTTOMED 6-4-58	ST. NO. VC-118 ST. ELEV.	CLASS INDICATIVE HOLE NO. 58VC128
DESCRIBED BY C. A.	AREA COURTOIS	ELEVATION COLLAR 1007.4
DATE ESTIMATED 6-6-58	OPTION NO. C2-15	COORDINATES: N 111205.46 E 86894.56
BY C. A.	TRACT LEWIS MERRIT	200 FT. MAP NO. 55 50 FT. MAP NO. SW¼-NE¼-SEC. 18

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 24" FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	85	922.4
SLEEVE BIT TO		
BEGAN CORING AT	185	822.4
SAVED CORES FROM	335	672.4
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "	193	814.4
S.B.	335	672.4
DAVIS (C.B.-S.B.) "	342	665.4
BONNE TERRE "	581	426.4
B. T. TRANS. "		
CONGLOMERATE "	583	424.4
LA MOTTE "		
~~GRAN.~~ OR POR. "	588	419.4
PICTURES: FROM	335	672.4
TO	588	419.4
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 2250'S 2160'W T35N-R1W

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS	CORE REC. TO	CORES LOST
1	367.0	367.2	640.2	0.2		TR							
5	412.0	412.1	595.3	0.1		TR							
"	431.0	431.1	576.3	0.1		TR					FRACT	335	
5F	461.0	461.1	546.3	0.1		TR						588	✓
"	461.7	462.9	544.5	1.2	0.5	1.0	0.6				DISS		
"	462.9	463.8	543.6	0.9	8.4	3.0	7.6				"		
"	465.5	467.0	540.4	1.5		TR							
5F+5GTo	467.0	467.6	539.8	0.6	2.0	4.0	1.2	539.8-5.9-1.6			"		
5GTo	467.6	468.0	539.4	0.4		TR							
7F	474.3	475.0	532.4	0.7	3.9	4.0	2.7	✓			"		
	475.3	475.7	531.7	0.4		TR							
	477.7	477.9	529.5	0.2		TR							
	481.6	481.7	525.7	0.1		TR							
	501.0	501.3	506.1	0.3		TR							
	502.5	502.7	504.7	0.2	2.5	2.0	0.5	✓					
	503.4	503.5	503.9	0.1		TR							
"	505.0	506.1	501.3	1.1		TR							
	517.0	517.2	490.2	0.2		TR							
7-10	523.0	526.7	480.7	3.7		TR							
"	530.8	531.0	476.4	0.2	3.3	1.0	0.7	✓					
12	576.3	576.4	431.0	0.1		TR							

205

REW

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BUREAU OF MINES
JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY A DATE 6-6-58 MINE Coniagas STOPE STAKE NO. VC 118 HOLE NO. 58VC 128

COLLAR ELEV. 1006 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
185	821	BEGAN CORING	
193	813	PERRY	(193)
335	671	SOLID BIT	(335)
342	664	DAVIS	(342)
		BANNETERE	
393	613	1	LT>0 <GT>0 - MASSIVE LT>0 >COLOR BANDED :>FRACT - >STYLO 342 TO 373 - <DENSE >THIN BEDDED 373 TO BASE - >Ca VEINLETS - Tr Pb @ 367 - (393)
407	599	1-5	GT>0 DENSE w/ B↓ - BASICALLY 1 ZONE TYPE DENSE w/ GB>0 B↓ BANDS THRUOUT - (407)
433	573	5	GB>0 B↓ - B↓ & POROUS B↓ - >X>0 - STYLOLITIC - Ca 2ND D↓ - Tr Pb @ 412 - Tr Pb @ 431 - (433)
440	566	R	GM - G↓ & B>0 B↓ - 2' GM - >G↓ @ 435 - B>0 B↓ 435 TO 437 - 1' GM - G↓ @ 438 - 2' B>0 >SNURLY G↓ G↓ - THIN R6 - (440)
451	555	5	T>0 E↓ - 1' MASSIVE @ 444 - 6" SNURLY E↓ @ 444.6 - T>0 SNURLY >Ca ↓ 445 TO BASE - (451)
467	537	5F	FT/GTMG↓ - GOOD SNURLY F STRUCT w/ MED M & G↓ MATRIX - 6" <G↓ @ 457 - 3" DENSE K @ 464 - FAIR Pb 461 TO BASE - (467)
474	[illegible]	5	GT>0 DENSE - E - 3' E @ TOP & 2' @ BASE - MASSIVE - FINE GRAIN >STYLO - (474)
511	[illegible]	7	FT/GTMG↓ : E - 7' E >FRACT FAIR Pb 481 - GOOD SNURLY REEF STRUCT 481 TO BASE w/ 1' GT>0 @ 502 - Tr Pb 501 TO 506 - (511)
535	471	7-10	GT>0 G↓ & FT/GTMG↓ - 7' MASSIVE GT>0 >Tr Pb 518 - 3' F @ 521 w/ >GT>0 @ 520 - 2' GT>0 G↓ @ 523 - 1' GT DENSE >COLOR BANDED @ 524 - 1' REEFY @ 525 - Tr Pb 523 TO 531 - GT>0 >SNURLY ↓ >M 525 TO 535 - (535)
543	[illegible]	10-12	T>0 CREPE M - CREPE T>0 w/ >M THRUOUT :>G↓ - (543)
570	[illegible]	12 F	FT/GT<MG↓ - GOOD SNURLY REEF STRUCT - HEAVILY M↓ <FINE G↓ MATRIX - 1' GEM ~ @ 547 - 6" <G↓ @ 549 - 1' GT>0 MG↓ @ 550 & 555 - 4' GTM< ~ @ 559 - 6" GT DENSE @ 561 - (570)
58[illegible]	[illegible]	12	GTM ~ >G↓ : B↓ - <M & CREPE >G↓ 570 TO 578 - 3' GT>M<B↓ >Pp @ 58[illegible] - (58[illegible])
583	[illegible]	18	WEATHERED Pp w/ GSD MATRIX - 1' GSD>B↓ w/ >Pp @ TOP - 1' CLOSELY CEMENTED Pp>0 @ BASE - (583)
588	[illegible]	21	PURPLE PORPHYRY - FAIRLY FRESH - FRAGMENTAL & FLOW BANDED - >LIGHT E MINERALS - 588

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JOPLIN, MO.

15

FORM 1173-2-54

STARTED 6-5-58

205

DATE BOTTOMED 6-10-58	ST. NO. VC-121 ST. ELEV.	CLASS TRACE	HOLE NO. 58VC135
DESCRIBED BY J.A.	AREA COURTOIS	ELEVATION COLLAR 1075.0	
DATE ESTIMATED 6-12-58	OPTION NO. CZ-54	COORDINATES: N 111166.31	E 86369.36
BY J.A.	TRACT RICO MASON	200 FT. MAP NO. 55 M T SE¼-NW¼ SEC. 18	50 FT. MAP NO.

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 2.0' FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	140.0	935.0
SLEEVE BIT TO		
BEGAN CORING AT	225.0	850.0
SAVED CORES FROM	412.0	663.0
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "	? 245	0830.0
DAVIS (C.B.-S.B.) "	420.0	655.0
BONNE TERRE "	671.0	404.0
B. T. TRANS. "	681.0	394.0
CONGLOMERATE "	—	
LA MOTTE "	—	
[redacted] OR POR. "	694.0	381.0
PICTURES: FROM	412.0	663.0
TO	694.0	381.0
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

REW

MINERALIZATION RECORD 2350'S 2400'E T35N-R1W

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS
	434.4	434.6	640.4	0.2	2.9	2.0	0.6				FRACT Pb.
	592.6	593.0	482.0	0.4	1.3	1.5	0.5				DISS.
	593.0	594.4	480.6	1.4		Tr.		480	-1.8-	Tr.	SPK.

CORE REC. TO	CORES LOST
225	
245	S.B.
375	
412	Disc.
432	6.3
452	0.8
472	—
492	0.4
505	—
515	0.3
575	—
595	1.0
675	—
694	1.4

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BUREAU OF MINES
JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY JA DATE 6-12-58 MINE Courtois STOPE STAKE NO. UC 121 HOLE NO. 58VC135

COLLAR ELEV. 1074 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
225	849	BEGAN CORING	
245?	829	Derby Doe Run –	(245)
420	654	Davis Shale – Solid Bit 245-375 – Discarded 375-412 – Derby Davis contact S.B. or Disc.	420
		Bonne Terre	
475	[illegible]	1	TO>Banding: reefy faint oolite – >dense Gbs top to 434 – fairly massive w/ few thin Rbs 434-452 – >Banding & slight reefy appearance 452 to Base – >porous oolitic patches – E thru out – >pitting – fracture Pb @ 435 – >fracturing & grinding – (475)
487	587	1-5	TO>Bt>dense Gbs E faint oolite – scattered Bta – >M & dense Gbs – >pitting – few thin Rbs – E thru out (487)
515	559	5	TOBt>M E med oolite – <Bta top to 498 – some dense patches 498 to Base – >pitting – few stylo – >fracturing – E thru out (515)
523	551	5	TO: GEM>Et-E med oolite – 1' GEM @ top, 518 w/>Eta – 1" EHbs @ Base – few thin EHbs – >pitting & small vugs – E thru out (523)
535	539	5	TO>Et>dense Gbs: E med oolite – scattered dense Gbs – few thin EHbs – 1' <Eta @ 529 – >pitting – E thru out – (535)
546	52[illegible]	5	GTOM: E>EH faint oolite – slight crepey appearance – E top to 538, 543 to Base – >thin EHbs in E sections – many thin Rbs – >Ca & 2 NP Bta – (546)
563	511	5	TO: F-E med to large oolite – reef top to 548 – slightly reefy 550-551 – >Banding 555-558 – E thru out – >pitting – few EHbs – (563)
587	487	7	FTOM>E-Gt good reef rock – 2' 570-572 not E – >EHbs – <oolite in matrix – >pitting & small vugs – not Ed 582 to Base – 2' good Gt @ Base – >2 NP Bta – (587)
609	465	7-10	FTOM>Gt – TO>Gta: E E 590-593, 597-600, 603 to Base – TO>Gta top to 590, 597-605 – fair reef – few thin Rbs – spec k Pb @ 593 (609)
623	451	10-12	TO>M E faint to med oolite – >M scattered – >EHbs – E thru out to 621 >pitting & small vugs – few thin Rbs – (623)
671	[illegible]	12	GTM>O&Gt: GTO slightly X crepey GTM>O&Gta – 6" GTO @ 629, 1' @ 649, 5' 650-655, 1' @ 656 – >Bta toward Base – many thin Rbs – >pitting – (671)
673	401	19	TSD: DS: E 1' slightly sandy @ top 1' E & very sandy @ Base – >grit – (673)
681	[illegible]	17-20	ELTX[illegible]: GTS: E 2' @ top E – E 675-679 – 17 type structure – >mod X – 6" GT sand @ 680 – >E skin – few thin Rbs – Porphyry pebble @ Base – (681)
694	[illegible]	21	Porphyry flow Banded – Dark Bluish Purple top to 689 – light purple slightly fractured 689 to Base – (694)

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FORM 1173-2-54

STARTED 6-11-58

DATE BOTTOMED 6-16-58	ST. NO. 124 ST. ELEV.	CLASS IND. HOLE NO. 58YC141
DESCRIBED BY J.A.	AREA VC (Courtois)	ELEVATION COLLAR 946.67
DATE ESTIMATED 6-17-58	OPTION NO. CZ 64	COORDINATES: N 111342.40 E 88464.54
BY J.A.	TRACT J. BREAKFIELD	200 FT. MAP NO. 56 M. 50 FT. MAP NO.

SE 1/4 - NE 1/4 SEC. 18 2095 S 650 W T35N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 2.0 FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	60.0	886.7
SLEEVE BIT TO		
BEGAN CORING AT		
SAVED CORES FROM	325.0	621.7
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "	166.0	780.7
DAVIS (C.B.-S.B.) "	335.0	611.7
BONNE TERRE "	571.0	375.7
B. T. TRANS. "	583.0	363.7
CONGLOMERATE "		
LA MOTTE "	585.0	361.7
GRAN. OR POR. "		
PICTURES: FROM	325.0	621.7
TO	585.0	361.7
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ZN. ASSAY	% ZN. EST.	FT. %	REMARKS	CORE REC. TO	CORES LOST
	357.4	357.5	589.2	0.1		TR					SPECK	165	—
	359.0	359.3	587.4	0.3		TR					"	185	1.1
	393.1	393.3	553.4	0.2		TR					"	305	5.8
	395.8	395.9	550.8	0.1		TR						325	0.56
	396.7	396.9	549.8	0.2		TR						345	1.4
	401.9	403.0	543.7	1.1		TR						355	5.6
	406.7	407.0	539.7	0.3	3.2	1.5	1.0				DISS TR. CU	395	—
	407.4	407.7	539.0	0.3	0.9	1.0	0.3					415	0.5
	415.7	416.3	530.4	0.6	0.3	1.0	0.2	14.4	-TR.		SEAM	433	0.3
	426.9	429.1	517.6	2.2	6.0	4.5	13.2	2.7	1.0	5.9	- DISS	447	—
	430.4	433.3	513.4	2.9		TR						464	2.4
	438.4	438.7	508.0	0.3	0.5	1.0	0.2					480	0.9
	442.1	442.7	504.0	0.6	2.0	1.5	1.2	4.3	- 0.3			500	—
	442.7	444.0	502.7	1.3		TR						520	0.3
	525.6	525.8	420.9	0.2		TR						540	0.3
	526.8	526.9	419.8	0.1		TR						551	1.1
												567	2.2
												585	1.0

R.E.W. 2.00 Tun

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FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY JP DATE 6-17-58 MINE Courtois STOPE STAKE NO. VC124 HOLE NO. 58VC141

COLLAR ELEV. 784 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
165	781	BEGAN CORING	
166	780	Derby	Doe Run (166)
170	[illegible]	Derby	Davis Transition (170)
335	[illegible]	Davis	Shale Solid Bit 185-305 Discarded 305-325 (335)
		Bonne Terre	
385	[illegible]	1	TO dense Gb - thin bedded & snurly faint oolite - dense bs 341-360 - & 355-359 - thin bedded & Banded 359-371 - snurly appearance ≥ 71 to Base - many thin Rbs - > pitting & vugs - > fracturing & grinding - (385)
397	[illegible]	1-5	GTO > Bb > dense bs faint oolite - > scattered Bba - slight snurly appearance - > pitting - many thin Rbs - > dense Gbs (397)
421	[illegible]	5	GTO Bb slightly porous faint to med oolite - < pitting & small vugs - many Bba - few thin Rbs > 2 1/2" ba - few dense bs (421)
430	[illegible]	8	TO > Gb - GTM 2" GTM @ top, 1 @ 424 - > M scattered thru TO - faint to med oolite - > pitting & small vugs - ca ba - many thin Rbs - trs to fair Pb - TR 2N (430)
458	[illegible]	5	FGTM > Gba good reef rock - 1' @ top slightly E - < pitting - > fracturing many Gba scattered thru matrix - few thin Rbs - 3' Bleached wlfos seam @ Base - > M patches - > trs Pb - (458)
468	[illegible]	5	TO Banded med oolite - 3' @ top GTO - few stylo - many thin Gbs - > fracturing toward Base - (468)
490	456	7	FTM > Gba - TO 3" F @ top, 6" @ 470, slightly FAR - 474, good reef 480 to Base - > Kbs - 8" Gba @ 486 - faint to med oolite w/ > pitting - few thin Rbs - > fracturing - (490)
522	424	10-7	GTXO; F faint to med oolite - small X - > pitting & small vugs - > Kbs - 6" F @ 494, 3' 506-509, 517 to Base - many thin Rbs - > fracturing - > dickite & ≥ 1/8 ba - (522)
530	416	10-12	GTOM > Banding faint to med oolite - > dense bs - few thin Rbs - M patches scattered - > pitting - trs Pb - (530)
571	[illegible]	12	GTM > O & Gba crepoy appearance - many thin Rbs - scattered oolite sections - > small Gba - 1' @ Base E - > Bbs toward Base - > pitting > Kbs & patches - (571)
583	[illegible]	19-20-11	LTDS - TS - BXEN 2' DS @ top, 1' @ 574, 4' @ 579 - 1' @ Base 17 type slightly crystalline - Mostly LT sand - few ba & pa patches - (583)
585	[illegible]	20	w/sand med grain - > few ba - 1' @ Base Estimed (585)

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JOPLIN, MO.

FORM 1173-2-54

STARTED 6-16-58

DATE BOTTOMED 6-19-58	ST. NO. 126 ST. ELEV.	CLASS TRACE	HOLE NO. 58VC146
DESCRIBED BY J. A.	AREA VC (COURTOIS)	ELEVATION COLLAR 1081.57	
DATE ESTIMATED 6-23-58	OPTION NO. CZ 65	COORDINATES: N 112814.32	E 89550.58
BY J. A.	TRACT KELSEY CARL	200 FT. MAP NO. 46	50 FT. MAP NO. 781

NW1/4 NW1/4 SEC. 17 T. 35 N. R. 1 W. (M.)

580'S 400'E

GENERAL HOLE DATA			MINERALIZATION RECORD														CORE REC.	
HT. SLEEVE ABOVE GR 1.50 FT.			ROCK TYPE	DEPTH		ELEV. BOTT.	THICK-NESS	% LEAD		FT. %	% ZN.		FT. %	REMARKS PL	TO	CORES LOST
FORM BOTT. SL.				FROM	TO			ASSAY	EST.		ASSAY	EST.				
	DEPTH	ELEV.														
DRILLED WITH:				518.6	518.9	562.7	0.3	3.7	1.0	1.1	—			SEAM	425	—
CHURN DRILL TO	231.0	850.6		518.9	519.5	562.1	0.6		TR.						445	—
SLEEVE BIT TO				554.6	555.3	526.3	0.7		TR.						465	0.5
BEGAN CORING AT				555.3	555.4	526.2	0.1	0.7	—	0.1	3.4	0.3	0.3	ZN. BAND	481	1.4
SAVED CORES FROM	425.0	656.0		555.4	555.7	525.9	0.3		TR.						495	0.4
FORMATIONS:				565.9	566.5	515.1	0.6	1.6	1.0	1.0	—			DISS & FES.	535	—
SOIL TO				577.6	578.4	503.2	0.8	0.4	1.0	0.3				DISS	545	0.3
"				700.5	700.7	380.9	0.2		TR.					SACK	603	—
EMINENCE "				703.7	705.7	375.9	2.0		TR.					DISS & COBE	614	1.4
POTOSI "															705	—
POTOSI-DERBY "															721	2.5
DERBY DOE RUN "																
DAVIS (C.B.-S.B.) "	469.0	612.6														
BONNE TERRE "	704.0	377.6														
B. T. TRANS. "	711.0	370.6														
CONGLOMERATE "	—															
LA MOTTE "	721.0	360.6														
GRAN. OR POR. "	—															
PICTURES: FROM	455.0	626.6														
TO	721.0	360.6														
CHAR. SAMPLES: FROM																
TO																
INSOL. RES.: FROM																
TO																
OPENINGS AT																

REW 200 Twn

RECEIVED
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TECHNOLOGY
JUL 16 1958
BUREAU OF MINES
JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY JA DATE 6-23-58 MINE Courtois STOPE STAKE NO. VC 146 HOLE NO. 58VC 146

COLLAR ELEV. 1081 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
425	656	BEGAN CORING	
469	612	Dovi- Bonna	Shale (469)
			Terre
515	566	1	TO thin bed, band: smurly faint to med oolite – few thin Rbs x stylo top to 501 thin bed & banded – > pitting – smurly appearance 501 to Base – > ca x dickite ta – > perous oolite patches – (515)
529	552	1-5	GTO > Ebt > Bands faint oolites – few thin Rbs – > pitting – few Bta – > Banding – 1" ca base very porous – 8" ca seam w/ Pb inclus @ 519 (529)
556	525	5	GTOBt: porous faint to med oolite – small to med Bta – > dens bs scattered – < pitting x vugs – slight smurly appearance 547 to Base – slightly crystalline – > ca ta – tr sZNPb – cores dropped x mixed 535 – 545 (556)
557	[illegible]	5	GTO > M faint oolite – > M – few thin Rbs – (557)
567	514	5	TO > dense patches faint to med oolite – > pitting – ca ta – > dense G patches – tr Pb – tr fes – (567)
586	415	5	F/GTM > Gt good reef rock – > Gta scattered – > pitting – few thin Rbs – > 2 ND B ta – > fracturing – tr Pb – > ca – (586)
588	[illegible]	5	TO: Bleached faint oolite – 1" Bleached @ top – (588)
607	[illegible]	7	TO > thin bed x Band – : F faint oolite – > thin bed x Banding – many thin Rbs – F top to 591, 597 – 599 – > ca ta – reef has pitting & small vugs – > fracturing – (607)
629	[illegible]	7	F/GTO > Gta – TO > b fair reef rock – oolite x Gt matrix – > fracturing 1" TO @ top, 1" @ 614, TO > Banding 616 – 621, 625 – 628 – many thin Rbs – ca seams – > fracturing – > pitting – (629)
654	[illegible]		GTO thin bed x banding: F faint oolite – < bands – many thin Rbs – ca patches – 6" F @ 635, 3" @ 643, 8" @ 651 – > G patches – (654)
663	418	10-12	TOM-GTM faint to med oolite – many thin Rbs – M scattered thru out – crepey GTM 1" @ 658 – > pitting – > Rbs – (663)
704	[illegible]	12	GTM > O > Gta very crepey appearance – many thin Rbs – > oolite > Gta scattered throughout – ca x ND B ta – > sections slightly crystalline – > ca seams – > Bta toward Base – tr Pb – (704)
706	[illegible]	19	TMSD sandy – > M – few thin Rbs – 2" @ Base E – (706)
711	[illegible]	17-19-20	LT[illegible] – IE > x DS – WS 6" LTB @ top, 6" @ 640 – IE > x DS 6" @ 707, 6" @ Base – 4" WS @ 709, 4" @ 710 – (711)
721	[illegible]	20	W Sand > E Stain – med grain sand – thin E stain bs – tr s ta – > grinding (721)

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JUL 16 1958
BUREAU OF MINES
JOPLIN, MO.

FORM 1173-2-54

STARTED 6-20-58

DATE BOTTOMED 6-26-58	ST. NO. 93 ST. ELEV.	CLASS TRACE HOLE NO. 58VC152
DESCRIBED BY J. A.	AREA VC (COURTOIS)	ELEVATION COLLAR 941.00
DATE ESTIMATED 6-30-58	OPTION NO. CZ-289	COORDINATES: N 115069.88 E 89067.39
BY J. A.	TRACT RALPH BADGLEY	200 FT. MAP NO. 46 50 FT. MAP NO. 701

NE¼-SE¼ SEC 7 1660'N-110'W T35N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 1.50 FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	111.0	830.0
SLEEVE BIT TO		
BEGAN CORING AT		
SAVED CORES FROM	315.0	626.0
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	350.0	591.0
BONNE TERRE "	607.0	334.0
B. T. TRANS. "	611.0	330.0
CONGLOMERATE "	—	
LA MOTTE "	645.0	296.0
GRAN. OR POR. "		
PICTURES: FROM		
TO		
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ZN. ASSAY	% ZN. EST.	FT. %	REMARKS	CORE REC. TO	CORES LOST
	370.0	370.4	570.6	0.4		TR.						175	—
	409.9	410.2	530.8	0.3		TR.						195	5.4
	478.6	479.2	461.8	0.6	3.8	8.0	2.3		TR.		CUBE + DISS	215	DISC
	479.8	481.6	459.4	1.8	1.5	3.5	2.7	3.0	-1.7		DISS Pb + CU.	315	5.8
	486.7	487.1	453.9	0.4	0.6	1.0	0.2				DISS	373	—
	490.3	490.9	450.1	0.6	0.6	1.0	0.4	4.2	-0.2		DISS	380	1.0
	492.5	493.6	447.4	1.1		TR						388	—
	496.2	496.3	444.7	0.1		TR						399	1.0
	498.4	498.7	442.3	0.3		TR.						415	1.5
	499.8	501.2	439.8	1.4		TR						466	
	501.2	501.8	439.2	0.6	0.4	1.0	0.2	0.3	0.7	0.2	DISS	481	0.9
	508.0	508.6	432.4	0.6	1.3	1.5	0.8				DISS	485	
	508.6	510.0	431.0	1.4		TR							
	510.0	513.6	427.4	3.6	1.7	1.5	6.1				DISS	494	0.5
	513.6	514.4	426.6	0.8		TR.						500	
	518.8	519.1	421.9	0.3	1.9	2.5	0.6	0.4	0.5	0.1	CUBE + DISS	505	1.0
	525.8	525.9	415.1	0.1	1.7	1.0	0.2				CUBE	510	0.5
	527.3	527.5	413.5	0.2		TR						605	
	605.7	605.8	335.2	0.1		TR.						625	12.9
	607.8	608.1	332.9	0.3		TR.						645	14.4
	479.8	481.6	459.4	1.8	CU. 0.13	1.0	0.23						

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JUL 16 1958
BUREAU OF MINES
JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY JA DATE 6-30-58 MINE Courtois STOPE STAKE NO. - 15 HOLE NO. 58VC 152

COLLAR ELEV. 941. PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
175	[illegible]	BEGAN CORING	
181	[illegible]	Derby Davis Transition –	(181)
350	[illegible]	Davis Shale – Core – Discorded 195 – 215 – Solid Bit 215 – 315	(350)
		Bonne Terre	
398	543	1	TO > dense ba – irregular bedded faint to med oolite – thin Rbs – > dense Gbs top to 380 – irregular bedded 380 – 398 – many thin Rbs > pitting – > fracturing – tr Pb (398)
414	[illegible]	5-1	GTO > Bta = dense bs med oolite – many Bta – > dense Gta – many thin Rbs – < pitting – many 2 NB ta – tr Pb (414)
419	[illegible]	5	GTOBta med oolite – < Bta – few thin Rbs – > pitting – > 2 NB ta – > K – (419)
443	477	5	TO > Bta > bar irregular bed med oolite – scattered Bta – > pitting – > 2 NB ta – > banding – slightly irregular bed – > porous – O pa ta – > dickite – (443)
444	497	R	GTM > Gta > scattered Gta – < K – few thin Rbs – (444)
460	[illegible]	5	TOM slightly smurly med oolite – smurly appearance – > bands – thin Rbs – > 2 NB ta – few Bta – (460)
479	[illegible]	5	GTOM > Gta thin bed + banded – slight crepe appearance – many thin Rbs – 2 NB ta – > pitting – GTM > O top to 462, 468 – 470 – > Kbs – 6" 1 type @ 476 – tr Pb @ Base – (479)
486	[illegible]	5	FTMO fair roof rock – faint to med oolite – > pitting – tr Pb + Ca – > fracturing – (486)
487	454	5	Dense TO faint oolite – dense appearance – (487)
530	[illegible]	7	FTGTM > Gta good roof rock – > fracturing – > pitting – few thin Rbs – > Pb 510 – 514 – > 2 NB ta – > Gta scattered – tr > 2 N (530)
546	392	7-10	FTGTM : TO > TO > M top to 537 – good roof rock 537 to Base – thin Rbs – > pitting – tr PL – (546)
563	[illegible]	10-12	GTOM faint to med oolite – M scattered thru out – many thin Rbs – > > small Gta – > Kbs – > Ca (563)
588	352	12-10	GTM : TOM crepey GTM – many thin Rbs – > Gta – TOM 571 – 575 1' @ 583, 2' 577 – 579 – > Kbs + patches – (588)
607	334	12	GTM crepey appearance – many thin Rbs – Ca ta + patches – > pitting – (607)
611	330	19	GT > DM : E increasing sand toward Base – 1' @ Base E – tr Pb – > pitting – < M – > dickite ta – (611)
645	[illegible]	20	W sand w/Gta med grain – > Gbs – < grinding – (645)

RECEIVED
DIVISION OF MINERAL
TECHNOLOGY
JUL 16 1958
BUREAU OF MINES
JOPLIN, MO.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
Box 431
Joplin, Missouri
June 20, 1958

OFFICIAL FILE COPY
DMEA
RECEIVED JUN 23 1958

DATE		CODE
6/23	C	220
23	Comm	100
"	FH	110
6/24	[illegible]	800
		~~500~~

DMEA Operating Committee
Department of the Interior
Room 4457 - Interior Building
Washington 25, D. C.

Re: DMEA-4582(lead-zinc-copper)
St. Joseph Lead Co.
Courtois Area
Washington County, Mo.
Contract Idm-E1068

Dear Sirs:

Transmitted herewith are four copies of the Interim Report received today from Dewey Amos, USGS, Knoxville, covering the joint Field inspection he and I made at the subject project on June 11-12.

Sincerely yours,

Clinton C. Knox

Clinton C. Knox
Executive Officer
DMEA Field Team, Region IV

encls. 4

cc: DMEA Op.Com.(3)
King,USGS,Denver
Amos,USGS,Knoxville w/cy encl.
4582 file

RECEIVED
DIVISION OF MINERAL
TECHNOLOGY

JUN 20 1958

BUREAU OF MINES
JOPLIN, MO

RECEIVED JUN 23 1958

INTERIM REPORT

DMEA-4582, Idm-E1068

Operator: St. Joseph Lead Company, Bonne Terre, Missouri

Location: Courtois Area, Washington County, Missouri

A project inspection of the subject contract was conducted on June 11 - 12, 1958. Results obtained to date and contemplated future work were discussed with Mr. R. E. Wagner, Head of Exploration, and Mr. G. Klosterman, Geologist.

Drilling completed on the Courtois project to date and since the inspection on May 8, 1958 is summarized as follows:

Drilling Completed

Footage in holes completed since last inspection . . .	6,983
Footage in holes completed to date	79,550
Number of holes completed since last inspection . . .	11
Total number of holes completed to date	121
Number of holes showing commercial ore	24
Number of holes showing indicative non-commercial mineralization	16
Number of holes showing trace mineralization	62
Number of holes showing speck tract mineralization . .	8
Number of barren holes	11

A summary of the 11 holes completed since the last interim inspection is as follows:

Hole No.	Location	Depth	Remarks
VC-116	SE¼, SW¼, SW¼, sec. 18	745 ft	Trace hole
VC-117	NW¼, NW¼, SE¼, sec. 18	575 ft	Ore hole
VC-113	SW¼, SW¼, SW¼, sec. 18	697 ft	Indicative hole
VC-115	SW¼, SW¼, SW¼, sec. 18	695 ft	Trace hole
VC-120	NW¼, SW¼, SE¼, sec. 18	672 ft	Ore hole

Hole No.	Location	Depth	Remarks
VC-125	NE¼, SE¼, NE¼, sec. 18	535 ft	Ore hole
VC-111	NW¼, SW¼, SW¼, sec. 18	621 ft	Indicative hole
VC-104	SW¼, SE¼, NW¼, sec. 18	755 ft	Trace hole
VC-123	NW¼, SE¼, NE¼, sec. 18	505 ft	Ore hole
VC-105	NE¼, NE¼, SW¼, sec. 18	595 ft	Speck trace hole
VC-118	SW¼, SW¼, NE¼, sec. 18	588 ft	Trace hole

Diamond core drilling is in progress in one hole summarized as follows:

Hole No.	Location	Present Depth	Estimated Total Depth
VC-121	SE¼, SE¼, NW¼, sec. 18	535 ft	700 ft

The churn drill portion of 12 holes has been completed since the date of the last inspection. A summary of these holes is as follows:

Hole No.	Location	Depth to Bottom of Churn Drilling
VC-105	NE¼, NE¼, SW¼, sec. 18	80 ft
VC-126	NW¼, NW¼, NW¼, sec. 17	230 ft
VC-118	SW¼, SW¼, NE¼, sec. 18	85 ft
VC-130	NW¼, SE¼, NE¼, sec. 7	225 ft
VC-111	NW¼, SW¼, SW¼, sec. 18	135 ft
VC-128	SW¼, NE¼, NE¼, sec. 7	120 ft
VC-131	NE¼, SW¼, NE¼, sec. 7	120 ft
VC-132	NE¼, SW¼, NE¼, sec. 7	140 ft
VC-133	SW¼, NW¼, NE¼, sec. 7	205 ft
VC-134	NW¼, NW¼, NE¼, sec. 7	120 ft
VC-127	SE¼, NW¼, NE¼, sec. 7	210 ft
VC-135	SW¼, NE¼, NW¼, sec. 7	105 ft

Churn drilling is in progress in five holes summarized as follows:

Hole No.	Location	Present Depth
VC-129	SW¼, NE¼, NE¼, sec. 7	75 ft
VC-137	SW¼, SW¼, SE¼, sec. 6	100 ft
VC-136	NW¼, NE¼, NW¼, sec. 7	125 ft
VC-145	SW¼, SW¼, SW¼, sec. 6	125 ft
VC-144	NE¼, NE¼, NE¼, sec. 12	15 ft

Significant assays of recently completed holes are as follows:

Hole No.	Depth	Thickness	% Pb	% Zn	% Cu
VZ-123	380.2 - 383.8 ft	3.6 ft	19.2	0.9	-
VZ-111	515.2 - 515.6 ft	0.4 ft	26.4	-	-
	530.4 - 533.6 ft	3.2 ft	5.0	0.8	-
	539.0 - 540.6 ft	1.6 ft	2.1	-	-
VZ-125	346.3 - 347.4 ft	1.1 ft	4.0	-	-
	354.4 - 359.4 ft	5.0 ft	33.8	3.2	1.3
	359.4 - 364.4 ft	5.0 ft	8.6	1.5	0.33
	364.4 - 365.7 ft	1.3 ft	18.6	-	-
	367.0 - 370.1 ft	3.1 ft	11.2	-	-
VZ-120	444.2 - 445.8 ft	1.6 ft	12.7	3.5	-
	553.9 - 554.4 ft	0.5 ft	11.1	-	-
	469.3 - 470.1 ft	0.8 ft	12.9	-	-
VZ-113	589.5 - 590.4 ft	0.9 ft	7.8	-	-
	596.2 - 596.3 ft	0.1 ft	4.2	11.5	-
	599.6 - 600.6ft	1.0 ft	6.6	2.0	-

Dewey H. Amos
Geologist
U. S. Geological Survey

Clinton C. Knox
Mining Engineer
U. S. Bureau of Mines

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
Box 431
Joplin, Missouri
July 16, 1958

OFFICIAL FILE COPY
DMEA
RECEIVED JUL 18 1958

DATE	INITIALS	CODE
7/18	C	220
4	[illegible]	110
7/21	[illegible]	500

DMEA Operating Committee
Department of the Interior
Washington 25, D. C.

Re: DMEA-4582(lead-zinc-copper)
St. Joseph Lead Co.
Courtois Area
Washington County, Mo.
Contract Idm-E1068

Dear Sirs:

Forwarded herewith are your two copies of the MF-104 Monthly Voucher, MF-104A and the Operator's Monthly Report covering the May work on the cited project. The voucher data received from the Finance Officer is posted on both MF-104s.

Sincerely yours,

Robert U. King

Robert U. King
Acting Executive Officer
DMEA Field Team, Region IV

encls. 6

cc: DMEA Op.Com.
Amos,USGS,Knoxville
King,USGS,Denver
4582 file

Form ME 104 (Rev.)
(April 1952)

Budget Bureau No. 42-R1036.5

Copy - Washington

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

RECEIVED JUL 18 1958 D.M.E.A.

Month of May 1958 Docket No. DMEA 4582 Contract No. Idm-E 1068
Operator's Name St. Joseph Lead Company Minerals Pb - Zn - Cu
Address Bonne Terre, Missouri
Contract Amount, $ 298,560.00 Government Participation: 50/50 Amount, $ 149,280.00

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	16940.82	161365.14	178305.96	9/5/58		
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	82.00	461.00	543.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	17022.82	161826.14	178848.96			

RECEIVED DIVISION OF MINERAL TECHNOLOGY JUN 16 1958 BUREAU OF MINES JOPLIN, MO.

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

Date 6-13-58 *Payee St. Joseph Lead Company

Per E. Jones Title DIVISION MANAGER

*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:

$ 8,511.41

Signature
(Authorized Certifying Officer)

Date July 10 1958 Vou. No. 4-03

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Idm-E1068 in accordance with the terms of the contract.

Signature Henry H. Cross Title Geologist USGS Date June 20, 1958

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Clinton C. Knox Title Executive Officer Date July 2, 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-194A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of May 195 8 Docket No. DMEA 4582 Contract No. Idm-E 1068
Operator's Name St. Joseph Lead Company Minerals Pb - Zn - Cu
Address Bonne Terre, Missouri

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	Ft.	12787.20	5760	136465.62	61471	02.22		
Churn	Ft.	4153.62	1871	41840.34	18847	2.22	133420	2.22
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Analytical Determinations	Ea.	82.00	82	643.00	643	1.00	2370	1.00
TOTAL DISTRIBUTED COSTS		17022.82		178848.96				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		17022.82		178848.96				

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

Date 6-13-58 Operator St. Joseph Lead Company

Per [signature] Title DIVISION MANAGER

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)

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JOPLIN, MO.

(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

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MONTHLY REPORT FOR MONTH OF MAY, 1958

D.M.E.A. Project #4582 -- Contract #IDM-E 1068

Eighteen Stage II locations, approved by the D.M.E.A. field team as of May 8, 1958, have been assigned numbers as shown on the map. The Stage II stake numbers and locations are as follows:

Stake	C141	- 1500	feet	S60°W	of 56W160	- NW¼	SW¼	SE¼	- Sec.	12 - 35N 2W
"	C142	- 1200	"	N18°W	of 56W160	- SW¼	SE¼	NE¼	- "	12 - 35N 2W
"	C143	- 1150	"	S43°W	of 56W158	- SE¼	NE¼	NE¼	- "	12 - 35N 2W
"	C144	- 975	"	N85°W	of 56W158	- NE¼	NE¼	NE¼	- "	12 - 35N 2W
"	C145	- 850	"	N22°W	of 56W158	- SW¼	SW¼	SW¼	- "	6 - 35N 1W
"	C146	- 520	"	N30°E	of VC58	- NE¼	SW¼	NW¼	- "	8 - 35N 1W
"	C147	- 900	"	S45°W	of VC44	- NE¼	NW¼	NW¼	- "	8 - 35N 1W
"	C148	- 900	"	S15°E	of VC44	- NW¼	NE¼	NW¼	- "	8 - 35N 1W
"	C149	- 900	"	S75°E	of VC44	- SE¼	SE¼	SW¼	- "	5 - 35N 1W
"	C150	- 900	"	N75°W	of VC44	- SE¼	SW¼	SW¼	- "	5 - 35N 1W
"	C151	- 900	"	N45°E	of VC44	- NE¼	SE¼	SW¼	- "	5 - 35N 1W
"	C152	- 900	"	S45°W	of VC55	- SW¼	NW¼	SE¼	- "	5 - 35N 1W
"	C153	- 900	"	S15°E	of VC55	- SE¼	NW¼	SE¼	- "	5 - 35N 1W
"	C154	- 900	"	S75°E	of VC55	- NW¼	NE¼	SE¼	- "	5 - 35N 1W
"	C155	- 900	"	N15°W	of VC55	- SE¼	SW¼	NE¼	- "	5 - 35N 1W
"	C156	- 900	"	N45°E	of VC55	- SW¼	SE¼	NE¼	- "	5 - 35N 1W
"	C157	- 900	"	S75°E	of VC65	- NE¼	SE¼	NE¼	- "	5 - 35N 1W
"	C158	- 900	"	N15°W	of VC65	- NE¼	NW¼	NE¼	- "	5 - 35N 1W

Five churn drills were operating in the area at the end of the month. The holes in progress were as follows:

Stage No.	Stake No.	Feet Depth
II	VC-127	100
II	VC-129	75
II	VC-137	15
II	VC-135	100
II	VC-136	40

The following churn drill holes were completed through overburden and chert-bearing formations and cased preparatory to diamond drilling during the month:

Stage No.	Stake No.	Feet Depth	Starting Date
II	VC-105	80	4-17-58
II	VC-111	135	5- 2-58
II	VC-113	200	4-11-58
II	VC-115	155	4-25-58
II	VC-118	85	5- 2-58
II	VC-120	120	4-24-58
II	VC-121	140	4-22-58
II	VC-126	230	4-30-58
II	VC-128	121	5-15-58
II	VC-130	225	5- 6-58
II	VC-131	120	5- 9-58
II	VC-132	140	5-15-58
II	VC-134	120	5-21-58

One diamond drill was operating in the area at the end of the month. The hole in progress was Stage II, Stake No. VC-118, at a depth of 100 feet.

The following diamond drill holes were completed during the month:

Stage No.	Stake No.	Prospect Hole No.	Bottom Depth	Feet of Dia. Drilling	Date Completed	Class.
II	VC-116	58VC96	745	545	5-6-58	Trace
II	VC-113	58VC101	697	497	5-8-58	Indicative
II	VC-115	58VC105	695	540	5-14-58	Trace
II	VC-111	58VC109	621	486	5-19-58	Indicative
II	VC-118	58VC[illegible]	755	555	5-27-58	Trace
II	VC-105	58VC123	595	515	5-29-58	Sp. Trace
II	VC-122	58VC95	515	515	5- 5-58	Trace
II	VC-117	58VC99	575	515	5- 7-58	Pay
II	VC-120	58VC102	672	552	5-12-58	Pay
II	VC-125	58VC106	535	535	5-15-58	Pay
II	VC-123	58VC111	505	505	5-20-58	Pay

Analysis of results gained by drilling is shown in abstracts of our weekly reports to St. Joseph Lead Company, which are enclosed.

82 analytical determinations were made during the month as follows:

58VC96	1 Pb		
58VC95	3 Pb		
58VC99	18 Pb	2 Zn	
58VC101	12 Pb	2 Zn	
58VC102	8 Pb	2 Zn	1 Cu
58VC105	2 Pb	1 Zn	
58VC106	10 Pb	2 Zn	2 Cu
58VC109	8 Pb	1 Zn	
58VC111	5 Pb	1 Zn	
58VC123	1 Pb		

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WASHINGTON COUNTY

Courtois Area - In DMEA Project #4582

Week Ended May 5, 1958

2 diamond drills operating and 5 churn drills setting casing completed no holes.

Week Ended May 12, 1958

2 diamond drills operating and 5 churn drills setting casing completed 1 pay and 3 trace holes.

58VC99, stake #C117, a pay hole, is located 7500 feet southwest of the village of Courtois and is part of an east-west section on 520-foot spacing across a buried Precambrian ridge. It bottomed at 575 feet depth in Lamotte sand. Lead and zinc mineralization, estimated as 12.6 feet of 3.6% Pb at 398 feet depth, is located in the lower 5 zone.

58VC95, stake #C122, a trace hole, is located 1,000 feet north-northeast of the above hole. It bottomed at 515 feet depth in Lamotte sand. Trace lead, assaying 3.9 feet of 1.0% Pb at 383 feet depth, is located in the lower 5 zone. Speck traces of lead are present in the 7 and 7/10 zones.

58VC96, stake #C116, a trace hole, is located near the southern edge of the project area, 10,000 feet southwest of the village of Courtois, and 520 feet west of a pay hole. It bottomed at 745 feet depth in Lamotte sand. Trace mineralization, estimated as 0.5 foot of 2.0% Pb at 566 feet depth, is located in the lower 5 zone.

58VC101, stake #C113, a trace hole, is located 520 feet northwest of the above hole. It bottomed at 697 feet depth in rhyolite porphyry, overlain by 23 feet of sand and porphyry boulders which are located in the 12 zone. Trace mineralization is located in the lower 5 zone, best of which was estimated as 0.9 foot of 4.0% Pb at 590 feet depth and 1.0 foot of 4.0% Pb at 601 feet depth.

Week Ended May 19, 1958

2 diamond drills operating and 5 churn drills setting casing completed 1 pay, 1 indicative, and 1 trace hole for a total of 3 holes.

58VC106, stake #C125, a pay hole, is located about 1 mile southwest of the village of Courtois and 1,000 feet south-southwest of a pay hole. It bottomed at 535 feet depth in Lamotte sand. Mineralization in the lower 5 zone was estimated as 16.5 feet of 16.7% Pb with traces of copper and zinc at 370 feet depth.

58VC102, stake #C120, an indicative hole, is located near the southern edge of the project area, about 8500 feet southwest of the village of Courtois and 520 feet east of a pay hole. It bottomed at 672 feet depth in Lamotte sand. Lead and zinc mineralization is located in the lower 5 zone, best of which was estimated as 1.6 feet of 5.0% Pb at 446 feet depth.

58VC105, stake #C115, a trace hole, is located 2700 feet southwest of the above hole and 520 feet southeast of an indicative hole. It bottomed at 695 feet depth in Lamotte sand. Best of trace lead in the lower 5 zone was estimated as 1.0 foot of 1.0% Pb at 522 feet depth.

WASHINGTON COUNTY - Courtois Area - In DMEA Project #4582 (continued)

Week Ended May 26, 1958

2 diamond drills operating and 5 churn drills setting casing completed 1 pay and 1 indicative hole.

58VC111, stake #C123, a pay hole, is located about 1 mile south of the village of Courtois and 520 feet west of a pay hole. It bottomed at 505 feet depth in basal conglomerate beds located in the transition sand zone. Mineralization in the lower 5 zone was estimated as 5.3 feet of 6.4% Pb.

58VC109, stake #C111, an indicative hole, is located about 9500 feet southwest of the village of Courtois and 520 feet east and west respectively from 2 pay holes. It bottomed at 621 feet depth in 9 feet of dark rhyolite porphyry which extends about 35 feet up into the Bonneterre horizon. Mineralization in the 7 zone was estimated as 4.0 feet of 1.4% Pb at 516 feet depth, 0.6 foot of 2.0% Pb at 523 feet depth, 3.2 feet of 5.0% Pb at 534 feet depth and 1.6 feet of 1.0% Pb at 540 feet depth.

Week Ended June 2, 1958

1 diamond drill operating and 5 churn drills setting casing completed 1 trace hole.

58VC117, stake #C104, a weak trace hole, is located about 5,000 feet southwest of the village of Courtois and 900 feet north of a pay hole. It bottomed at 755 feet depth in Lamotte sand. Speck traces of lead were present in the 1 zone and in the 7/10 zone. This hole is located on the northwest flank of a buried porphyry ridge and on the opposite flank from the main ore trend in this area.

FORM 1173-2-54

20

205

STARTED 5-1-58

DATE BOTTOMED 5-2-58 ST. NO. VC-122 ST. ELEV.

DESCRIBED BY J.A. AREA COURTOIS

DATE ESTIMATED 5-6-58 OPTION NO. CZ-15

BY J.A. TRACT LEWIS MERRIT

CLASS TRACE HOLE NO. 58VC95

ELEVATION COLLAR 919.4

COORDINATES: N 111246.79 E 87443.45

200 FT. MAP NO. 55 M 50 FT. MAP NO.

SW¼-NE¼-SEC.18

MINERALIZATION RECORD 2220'S 1685'W T35N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 6" FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO		
SLEEVE BIT TO	10	909.4
BEGAN CORING AT		
SAVED CORES FROM	265.0	654.4
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	292.0	627.4
BONNE TERRE "	508.0	411.4
B. T. TRANS. "		
CONGLOMERATE "	510.0	409.4
LA MOTTE "	515.0	404.4
GRAN. OR POR. "		

PICTURES: FROM 265.0654.4 TO 515.0404.4

CHAR. SAMPLES: FROM TO

INSOL. RES.: FROM TO

OPENINGS AT

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS	TO	CORES LOST
	284.0	284.1	635.3	0.1		TR						105	✓
5 TO > POROUS	373.9	374.7	544.7	0.8		TR						125	DISC.
" " "	374.7	377.8	541.6	3.1	0.9	1.5	2.8				cube diss	225	SB
5 TO	378.1	379.2	540.2	1.1		TR					536.1-9.4-0.7	265	
5 F TO	379.2	379.8	539.6	0.6	2.3	1.0	1.4				diss	285	6.0
" "	381.1	381.3	538.1	0.2		TR						295	6.9
5 G TO	381.3	383.1	536.3	1.8	1.4	2.0	2.5				diss	335	
5 F	383.1	383.3	536.1	0.2		TR						355	1.4
7-10 TO	453.1	453.4	466.0	0.3		TR						375	1.8
12 G TO G S	487.1	487.7	431.7	0.6		TR						395	11.2
12 T B S	488.8	488.9	430.5	0.1		TR						415	0.9
												515	✓

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JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY A DATE 7-6-58 MINE Courtenay STOPE STAKE NO. JC 122 HOLE NO. 58VK 75

COLLAR ELEV. 914.5 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
105	810	BEGAN CORING	
110	805	Derby	Davis Transition — (110)
272	643	Davis	Shale — Discord 125-225 — SB 225-265 (272)
			Bennie lava
321	594	1	GTO-thin bed — mostly faint to med oolite — fairly massive tops 275 — thin bed 295-303 — mostly 303 to Base — few thin Pb — < fracturing & grinding — > pitting — > lickite — tr Pb — > porous oolite (321)
333	582	1-5	GTO irreg bed ≤ Bt faint oolite — Bt scattered — > irreg Pb — lickite Bt — > pitting & small vugs — (333)
354	561	5	GTO Bt med oolite — many Bt — few tension Pb — > pitting & small vugs — > ca tr — (354)
368	547	5	GTO Bt — ≤ m faint to med oolite — few Bt scattered — 4" GTO 358, 358, 362 — few thin Pb — ca tr — (368)
375	540	5	GTO thin bed faint to med oolite — thin bed w/ few Pb & > Pb — > ca tr — < pitting — (375)
395	520	5	F Porous — GTO Bt porous F to 380 w/ lt few Pb — GTO Bt ≥ 380 to Base — < grinding 11.2 from 375 to 395 — 1" CB (395)
405	510	5	GTO thin bed F faint oolite — > Pb — few Pb — 2" F @ 397 — 3" Bleaching @ 400 (405)
429	486	7	F GTO m ≤ Bt ≤ E good reef rock — many thin Pb — > small GTO — 1' E 424 — 1' GTO 425 — Bt patches — < pitting — > Pb — tr Pb — (429)
455	460	7-10	F Bennie — m ≤ E F 434-437, 441-448 — GTO top to 434, 437-441 448 to Base slightly thin bed — 6" sugar E 430, 431, 3' 435-438 1' @ 450 — few thin Pb — > pitting — > small GTO — ca tr — tr Pb (455)
465	451	10-12	GTO > m ≤ E faint oolite — many thin Pb — > Al — E 458 to Base — > EHL — > pitting — ca — (465)
508	407	12	Bennie F Bennie — ≤ GTO — every GTO > Bt top to 473, 1' @ 475, 477 1' @ 470, 494-505 — tr m 470-494 — F Bennie 473-475, 477 480, 492-493, 3' @ Base — many thin Pb — < pitting — ca — 2'E 468-470, 495-497 (508)
510	405	10-20	[illegible] Cordierite matrix — [illegible] (510)
			[illegible] matrix — (515)
515	395	20	W. Sand med grain — [illegible] appearance —

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BUREAU OF MINES
JOPLIN, MO.

205

STARTED 4-29-58

DATE BOTTOMED 5-5-58 ST. NO. VC-116 ST. ELEV. _____ CLASS TRACE HOLE NO. 58VC96

DESCRIBED BY C. A. AREA COURTOIS ELEVATION COLLAR 1063.5

DATE ESTIMATED 5-7-58 OPTION NO. UZ-15 COORDINATES: N 108326.05 E 84586.23

BY C. A. TRACT LEWIS MERRITT 200 FT. MAP NO. 55 M T 50 FT. MAP NO. 899

SW¼-SW¼-SEC.18 T35N-R1W 110'N 675'E

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 16" FT.

FORM BOTT. SL. _____

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	198.0	865.5
SLEEVE BIT TO		
BEGAN CORING AT	275	788.5
SAVED CORES FROM	435	628.5
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "	285	778.5
DAVIS (C.B.-S.B.) "	452	611.5
BONNE TERRE "	699	364.5
B. T. TRANS. "	715	348.5
CONGLOMERATE "		
LA MOTTE "	745	318.5
GRAN. OR POR. "		
PICTURES: FROM	450	613.5
TO	745	318.5
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS	CORE REC. TO	CORES LOST
5-1	512.0	512.1	551.4	0.1		TR					SPECK	435	
5F	566.0	566.5	497.0	0.5	1.7	2.0	0.8				DISS	605	✓
"	568.8	568.9	494.6	0.1		TR					SPECK	611	1.0
7F&GTo	590.3	590.4	473.1	0.1		TR					"	685	✓
7F	597.7	598.0	465.5	0.3		TR					FRACT	695	1.0
7-10F&O	622.4	622.5	441.0	0.1		TR					SPECK	715	12.0
												731	11.0
												745	9.0

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JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE [illegible] MINE [illegible] STOPE STAKE NO. HOLE NO. [illegible]-VC 96

COLLAR ELEV. PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
[illegible]		BEGAN CORING	
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	1	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
549	[illegible]	R	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
572	[illegible]	[illegible]	[illegible]
580	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	7	[illegible]
[illegible]	[illegible]	7	[illegible]
640	[illegible]	7-10	[illegible]
685	[illegible]	10-7	[illegible]
695	[illegible]	10	[illegible]
699	[illegible]	10	[illegible]
715	[illegible]	19	[illegible]
745	[illegible]	20	[illegible]

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JOPLIN, MO.

FORM 1173-2-54

20

DATE BOTTOMED 5-7-58	ST. NO. VC117	ST. ELEV.	CLASS PAY HOLE NO. 58VC99
DESCRIBED BY J. A.	AREA COURTOIS		ELEVATION COLLAR 951.03
DATE ESTIMATED 5-9-58	OPTION NO. CZ-15		COORDINATES: N 110316.92 E 86997.39
BY J. A.	TRACT LEWIS MERRITT		200 FT. MAP NO. 55 M.T. 50 FT. MAP NO. 860 T

NW¼-SE¼-SEC.18

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 36" FT.

FORM BOTT. SL.

DRILLED WITH:

CHURN DRILL TO

SLEEVE BIT TO

BEGAN CORING AT

SAVED CORES FROM 305.0 646.0

FORMATIONS:

		DEPTH	ELEV.
SOIL	TO		
	"		
EMINENCE	"		
POTOSI	"		
POTOSI-DERBY	"		
DERBY DOE RUN	"	155.0	796.0
DAVIS (C.B.-S.B.)	"	323.0	628.0
BONNE TERRE	"	554.0	397.0
B. T. TRANS.	"	558.0	393.0
CONGLOMERATE	"		
LA MOTTE 20:17	"	575.0	376.0
GRAN. OR POR.	"		

PICTURES: FROM 305.0 646.0 TO 575.0 376.0

CHAR. SAMPLES: FROM TO

INSOL. RES.: FROM TO

OPENINGS AT

MINERALIZATION RECORD 2140'N 2080'W T35N-R1W

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ZN ASSAY	% ZN EST.	FT. %	REMARKS	CORE REC. TO	CORES LOST
5-1 GTOB$	376.8	377.8	573.2	1.0		TR						145	
5 GTOB$	377.8	378.1	572.9	0.3	6.0	3.0	1.8	2.5	0.5	0.8	SEAM	155	SB
	378.1	379.2	571.8	1.1		TR						305	
	382.8	384.1	566.9	1.3		TR						325	4.0
	384.9	388.2	562.8	3.3	11.8	15.0	38.9	3.0	1.0	9.9	BAND diss	345	10.0
	388.2	390.7	560.3	2.5		TR						541	
	390.7	391.4	559.6	0.7	18.8	25.0	13.2				BAND diss	555	3.0
	391.4	392.3	558.7	0.9		TR						575	4.0
	392.3	392.8	558.2	0.5	0.8	1.0	0.4						
	393.1	395.1	555.9	2.0	1.9	4.0	3.8				band + diss		
	395.1	396.1	554.9	1.0		TR							
	396.1	397.5	553.5	1.4	7.2	2.0	10.1						
	398.3	402.3	548.7	4.0		TR							
R GTM-GTO	403.2	403.4	547.6	0.2		TR							
	405.6	406.3	544.7	0.7		TR							
	406.3	407.4	543.6	1.1	0.9	1.0	1.0						
	407.4	408.3	542.7	0.9		TR							
	408.3	408.6	542.4	0.3	1.0	1.0	0.3						
	408.6	410.0	541.0	1.4		TR							
5 FT/GTMO	410.0	410.7	540.3	0.7	2.4	1.0	1.7						
	410.7	411.4	539.6	0.7		TR							
	423.2	425.4	526.6	2.2	1.1	1.0	2.4						
	426.6	427.1	523.9	0.5	4.3	1.0	2.2						
	427.5	428.2	522.8	0.7	1.1	1.0	0.8						
	429.3	430.0	521.0	0.7	0.2	1.0	0.1						
	432.4	432.9	518.1	0.5	1.7	1.0	0.8						
7 FT/GTM	451.9	452.0	499.0	0.1		TR							
	461.9	462.1	488.9	0.2	0.7	1.0	0.1						
	465.7	465.9	485.1	0.2		TR							
	475.5	475.8	475.2	0.3		TR							

(CONT)

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JUN 16 1958

BUREAU OF MINES
JOPLIN, MO.

FORM 1170 2-54

DATE BOTTOMED _____ ST. NO. VC 117 ST. ELEV. _____ CLASS _____ HOLE NO. 58VC99

DESCRIBED BY J.A. AREA COURTOIS ELEVATION COLLAR _____

DATE ESTIMATED _____ OPTION NO. _____ COORDINATES: N _____ E _____

BY J.A. TRACT _____ 200 FT. MAP NO. _____ 50 FT. MAP NO. _____

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR _____ FT.

FORM BOTT. SL. _____

DEPTH ELEV.

DRILLED WITH:

CHURN DRILL TO

SLEEVE BIT TO

BEGAN CORING AT

SAVED CORES FROM

FORMATIONS:

SOIL TO

"

EMINENCE "

POTOSI "

POTOSI-DERBY "

DERBY DOE RUN "

DAVIS (C.B.-S.B.) "

BONNE TERRE "

B. T. TRANS. "

CONGLOMERATE "

LA MOTTE "

GRAN. OR POR. "

PICTURES: FROM

TO

CHAR. SAMPLES: FROM

TO

INSOL. RES.: FROM

TO

OPENINGS AT

MINERALIZATION RECORD

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ZN ASSAY	% ZN EST.	FT. %	REMARKS	CORE REC. TO	CORES LOST
7 F	477.9	478.3	472.7	0.4	0.8	1.0	0.3						
7-10 GTO	492.2	492.5	458.5	0.3	0.6	1.0	0.2				diss.		
12 F	519.7	519.8	431.2	0.1		TR							
" "	522.1	522.5	428.5	0.4		TR							
" "	523.9	524.3	426.7	0.4	0.5	1.0	0.2						
12 G$	531.1	531.2	419.8	0.1		TR							
12 GTO	535.6	535.7	415.3	0.1		TR							
12 F	536.6	537.4	413.6	0.8		TR							
12 GTO	539.9	541.0	410.0	1.1		TR							
20-17 G3+D	555.0	555.7	395.3	0.7		TR							
						CU							
	384.9	388.2	562.8	3.3		TR							

571.8 - 2.4 - 0.8 - Tr. ZN
566.9 - 1.3 - Tr.
553.5 - 12.6 - 5.1
547.6 - 5.1 - Tr.
539.6 - 5.8 - 0.5
518.1 - 9.7 - 0.7

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JUN 16 1958

BUREAU OF MINES
JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE 5-1-58 MINE Courtois STOPE STAKE NO. UC 117 HOLE NO. 52 VC 77

COLLAR ELEV. 948.23 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
145	803	BEGAN CORING	
155?	793	Derby	Lor Run — [illegible] — 25 155-305 (155)
323	625	Devis	Shale — [illegible] — (323)
		Bonne Terre	
365	583	1	GTO massive thin bedded sandy — faint to mod oolite — massive to top — thin bed w/ porous patches 325-353 — sandy 353 to base — [illegible] (365)
377	571	5-1	GTO2E1 dense — faint to mod oolite — many thin Rbs — [illegible] — few dense Cbs — [illegible] — pitting — few small Cbs — (377)
402	546	5	GTO E1 faint to mod E1 — med oolite — pitting — small vugs — rusty appearance 385-388 — [illegible] patches — good Pb 385-399 — fair ZN — [illegible] (402)
410	538	8	GTA1-GTO: slightly rusty. 1' GTA no top, [illegible] 405, 407 — slightly rusty 404-407 — GTO faint to mod oolite 1' in 403, GTA 407, 1' in Base — tr Pb — [illegible] dickite — few thin Rbs — (410)
433	515	5	F Vam — good rock — [illegible] oolite thru matrix — [illegible] — pitting — few thin Rbs — [illegible] small Cbs — [illegible] dickite — [illegible] — [illegible] band Base — tr Pb — (433)
439	509	3-5	Blow to Run — F O — dense white [illegible] — [illegible] top to 436 — F O 436 to Base — pitting — fracturing — (439)
450	498	5	GTO-T faint oolite — fairly massive — few thin Rbs — GTO top to 444 — TO 444 to Base — (450)
479	469	7	F Vam — good rock — [illegible] oolite in matrix — pitting — [illegible] small Cbs scattered — [illegible] 465-476 — tr Pb (479)
505	443	10:7	GTO:F faint to mod oolite — 1' rock [illegible] 461, 1' [illegible] 464, GTO 436, 489 — thin bed [illegible] banded — few Rbs — pitting — tr Pb (505)
554	394	12	F Vam-GTO — good rock [illegible] — [illegible] — many thin Rbs — tr Pb 1' GTO to 531 — GTO 534-541 — [illegible] — RF 541-554 — [illegible] (554)
558	390	14	[illegible] — very sandy — [illegible] — pebbles — [illegible] — tr Pb — (558)
575	[illegible]	[illegible]	[illegible] appearance — [illegible] — [illegible] — [illegible] base — (575)

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JUN 16 1958

BUREAU OF MINES
JOPLIN, MO.

15

205

FORM 1173-2-54

STARTED 5-6-58

DATE BOTTOMED 5-9-58 ST. NO. VC-113 ST. ELEV. _____ CLASS INDICATIVE HOLE NO. 58VC101

DESCRIBED BY J.A. AREA COURTOIS ELEVATION COLLAR 1095.0

DATE ESTIMATED 5-13-58 OPTION NO. CZ-15 COORDINATES: N 108740.35 E 84297.28

BY J.A. TRACT LEWIS MERRITT 200 FT. MAP NO. 55 M T 50 FT. MAP NO. 899

SW¼-SW¼-SEC 18 T35N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 12" FT.

FORM BOTT. SL. _____

DRILLED WITH:

CHURN DRILL TO 200 895.0

SLEEVE BIT TO

BEGAN CORING AT

SAVED CORES FROM 425.0 670.0

FORMATIONS:

SOIL TO

" EMINENCE "

POTOSI "

POTOSI-DERBY "

DERBY DOE RUN " 284.0 811.0

DAVIS (C.B.-S.B.) " 444.0 651.0

BONNE TERRE " 673.0 422.0

B. T. TRANS. "

CONGLOMERATE " 697.0 398.0

LA MOTTE "

GRAN. OR POR. "

PICTURES: FROM 435.0 660.0 TO 697.0 398.0

CHAR. SAMPLES: FROM TO

INSOL. RES.: FROM TO

OPENINGS AT

MINERALIZATION RECORD 520'N 380'E

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ZN ASSAY	% ZN EST.	FT. %	REMARKS	TO	CORES LOST
~~1GTO~~													
1GTO	454.5	454.8	640.2	0.3		TR						265	✓
1GTOthinBRO	475.0	475.2	619.8	0.2		TR						285	2.0
1-5GTO>B$	485.2	489.7	605.3	4.5		TR					✓	415	S.B.
" "	492.1	492.2	602.8	0.1		TR						435	DISC.
5GTOB$	515.1	515.3	479.7	0.2		TR						451	4.3
" "	518.6	518.9	576.1	0.3		TR						457	2.7
" "	520.3	520.6	574.4	0.3		TR						553	✓
5GTOB$	558.6	559.4	535.6	0.8	2.5	1.0	2.0				diss	566	0.4
" "	559.4	564.5	530.5	5.1		TR					530.5-5.9-Tv.	585	5.0
5F	566.0	566.1	528.9	0.1		TR						665	✓
5FTO	573.1	573.7	521.3	0.6	0.7	1.0	0.4				diss	676	0.2
" "	573.7	576.6	518.4	2.9		TR						682	0.2
" "	579.1	583.4	511.6	4.3		TR						697	5.3
" "	585.0	585.1	509.9	0.1		TR							
" F	589.5	590.4	504.6	0.9	7.8	3.0	7.0				BAND		
" "	593.3	593.8	501.2	0.5	2.1	1.0	1.1				494.4-11.1-1.4-Tv. ZN		
" "	594.4	596.2	498.8	1.8		TR			TR				
5GTO	596.2	596.3	498.7	0.1	4.2	—	0.4	11.5	0.5	1.2			
" "	596.3	599.6	495.4	3.3		TR			TR				
" "	599.6	600.6	494.4	1.0	6.6	4.0	6.6	2.0	1.0	2.0	diss		
7F	601.5	603.6	491.4	2.1		TR							
" "	603.6	604.3	490.7	0.7	0.4	1.0	0.3						
" "	604.3	607.5	487.5	3.2		TR					478.4-15.1-Tv		
" "	607.5	607.7	487.3	0.2	3.4	1.5	0.7				RB W/PB		
" "	607.7	609.2	485.8	1.5		TR							
" "	609.2	609.9	485.1	0.7	0.8	1.0	0.6				diss IN SEAM		
" "	609.9	611.6	483.4	1.7		TR							
" "	611.6	612.0	483.0	0.4	1.4	1.0	0.6				SEAM		
" "	612.0	615.0	480.0	3.0		TR							
" "	615.0	615.5	479.5	0.5	1.3	1.5	0.6				diss.		

(CONT.)

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BUREAU OF MINES
JOPLIN, MO.

FORM 1173-2-54

DATE BOTTOMED	ST. NO. VC-113 ST. ELEV.	CLASS	HOLE NO. 58VC101
DESCRIBED BY J.A.	AREA COURTOIS	ELEVATION COLLAR 1095.0	
DATE ESTIMATED	OPTION NO.	COORDINATES: N	E
BY	TRACT	200 FT. MAP NO.	50 FT. MAP NO.

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR _____ FT.

FORM BOTT. SL. _____

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO		
SLEEVE BIT TO		
BEGAN CORING AT		
SAVED CORES FROM		
FORMATIONS:		
SOIL	TO	
	"	
EMINENCE	"	
POTOSI	"	
POTOSI-DERBY	"	
DERBY DOE RUN	"	
DAVIS (C.B.-S.B.)	"	
BONNE TERRE	"	
B. T. TRANS.	"	
CONGLOMERATE	"	
LA MOTTE	"	
GRAN. OR POR.	"	
PICTURES:	FROM	
	TO	
CHAR. SAMPLES:	FROM	
	TO	
INSOL. RES.:	FROM	
	TO	
OPENINGS AT		

MINERALIZATION RECORD

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS	CORE REC. TO	CORES LOST
7 F	615.5	616.6	478.4	1.1		TR							
" "	625.1	631.7	463.3	6.6		TR							
" "	633.1	633.6	461.4	0.5		TR							
" "	640.6	641.3	453.7	0.7	1.4	1.5	1.0				SEAM		
" "	641.3	641.5	453.5	0.1		TR							

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JUN 16 1958

BUREAU OF MINES
JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE [illegible] MINE [illegible] STOPE [illegible] STAKE NO. UC 113 HOLE NO. SDVS 101

COLLAR ELEV. [illegible] PITCH [illegible] BEARING [illegible] COORD.: N [illegible] E [illegible]

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
6.5		BEGAN CORING	
284		[illegible]	[illegible] thin bedded (284)
285		[illegible]	[illegible] transition [illegible] contact [illegible] 285-425 [illegible] 425-435 (285)
444		[illegible]	[illegible] (444)
		[illegible]	
488		1	GTO massive thin bedded fine calcite — fairly massive < fracturing & grinding to 459 — thin bedded many bfs 459 to Base — & pitting & small vugs — tr = Pb — (488)
500		1-5	GTOBK fine calcite — scattered Kbs — many thin Kbs — ca tr — tr Pb — & pitting — (500)
526		5	GTOBK fine to med calcite — small to med Kbs — & pitting — few thin Kbs — & bands — & ca tr — tr = Pb (526)
533		5	GTOMBK 1' GTM on top, 529, 1' in Base — < K — many thin Kbs — ca tr — scattered Kbs — (533)
543		5	TOBK fine to med calcite — few Kbs scattered — & pitting — > porous patches — (543)
551		8	GTOMBK fine to med calcite Kbs thru out — small Gtz — > ca tr — few thin Kbs — 6" GTM in base (551)
564		5	TOBK med calite — small to med Gtz few thin Kbs — tr = Pb — & fracturing toward base — ca tr — (564)
597		5	FTOTE good reef rock — < calite in Matrix — < ca tr — few thin Kbs — ca tr — [illegible] 568-572 — Drop core @ 585 — tr = to few Pb 585 to Base — & fracturing & grinding — tr ZN (597)
602		5	GTOBKTE fine to med calite — small Gtz — 6" Fa 598 — few thin Kbs — & fracturing — ca tr — tr Pb & ZN (602)
657		7	FTOMBKTE good reef rock brecc appearance — < M — small Gtz — many thin Kbs — ca tr & pitted — 1' Ca cam @ 625 — tr Pb thru out — (657)
668		7-10	FTOMBKTGTO 2' F 658-660, 1' @ 664 — fine calite — few thin Kbs — ca tr — 2" X @ 665 — few Kbs — tr = Pb — (668)
673		12	FTOM reef rock — small Gtz — < M — few Kbs — (673)
697		18	Conglomerate [illegible] porphyry [illegible] w/ matrix [illegible] top — [illegible] matrix 674-688 — [illegible] porphyry [illegible] w/ sand matrix 688 to Base — 6" appears solid to Base — (697)

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JUN 16 1958

BUREAU OF MINES
JOPLIN, MO.

20

205

STARTED 5-8-58

DATE BOTTOMED 5-12-58 ST. NO. VC-120 ST. ELEV. _____ CLASS PAY HOLE NO. 58VC102

DESCRIBED BY J.A AREA COURTOIS ELEVATION COLLAR 978.2

DATE ESTIMATED 5-14-58 OPTION NO. CZ-56 COORDINATES: N 109376.46 E 86534.24

BY J.A. TRACT SIMON BREAKFIELD 200 FT. MAP NO. 55 50 FT. MAP NO. 860

SW¼-SE¼-SEC.18 T35N-R1W 1210'N 2590'E

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 6" FT.

FORM BOTT. SL. _____

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	120	858.2
SLEEVE BIT TO		
BEGAN CORING AT		
SAVED CORES FROM	355.0	623.2
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-[illegible]B.) "	373.0	605.2
BONNE TERRE "	610.0	368.2
B. T. TRANS. "	634.0	344.2
CONGLOMERATE "		
LA MOTTE "	672.0	306.2
GRAN. OR POR. "		

PICTURES: FROM 369.0 609.2
TO 672.0 306.2

CHAR. SAMPLES: FROM
TO

INSOL. RES.: FROM
TO

OPENINGS AT

MINERALIZATION RECORD

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ZN ASSAY	% ZN EST.	FT. %	REMARKS	TO	CORES LOST
5 GTO B$	443.1	443.5	534.7	0.4		TR						355	
" "	444.2	445.8	532.4	1.6	12.7	5.0	20.3	3.5	1.0	5.6	BAND	475	
5 GTO	448.4	448.6	529.6	0.2	0.2	—	0.1	1.0	0.5	0.2		495	2.2
5 GTO B$	452.0	452.6	525.6	0.6		TR						515	1.0
R GTOM	453.6	453.9	524.3	0.3		TR						535	0.2
" TOM SNURLY	453.9	454.4	523.8	0.5	11.1	3.5	5.6				diss	632	
" "	454.4	455.3	522.9	0.9	0.3	1.0	0.3					655	11.9
" TO	455.3	456.2	522.0	0.9	0.5	1.0	0.4					672	9.7
	464.3	464.8	513.4	0.5		TR							
" TOM SNURLY	467.1	468.6	509.6	1.5	1.3	1.0	2.0						
" GTO	469.3	470.1	508.1	0.8	12.9	4.0	10.3				diss	>CU	
5 F	484.8	485.4	492.8	0.6		TR							
" "	485.4	485.6	492.6	0.2	0.7	1.0	0.1				diss		
" "	486.9	487.6	490.6	0.7		TR							

Cu.

469.3	470.1	508.1	0.8	0.0	0.2	

532.4 - 1.6 - 12.7 - 3.5 ZN
522.0 - 2.3 - 2.7
508.1 - 3.0 - 4.1
490.6 - 2.8 - Tr.

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JUN 16 1958

BUREAU OF MINES
JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE [illegible] MINE [illegible] STOPE STAKE NO. UC 120 HOLE NO. 58 VC 102

COLLAR ELEV. [illegible] PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
[illegible]	[illegible]	BEGAN CORING	
373	[illegible]	Davis Bonne Terre	Shale (373)
420	[illegible]	1	[illegible] (420)
435	[illegible]	[illegible]	[illegible] (435)
452	[illegible]	5	[illegible] (452)
470	[illegible]	[illegible]	[illegible] (470)
496	[illegible]	5	[illegible] (496)
507	[illegible]	5	[illegible] (507)
543	[illegible]	7	[illegible] (543)
565	[illegible]	[illegible]	[illegible] (565)
575	[illegible]	10	[illegible] (575)
604	[illegible]	[illegible]	[illegible] (604)
610	[illegible]	12	[illegible] (610)
615	[illegible]	[illegible]	[illegible] (615)
634	[illegible]	[illegible]	[illegible] (634)
655	[illegible]	[illegible]	[illegible] (655)
672	[illegible]	[illegible]	[illegible] (672)

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JUN 16 1958

BUREAU OF MINES
JOPLIN, MO.

205

15

STARTED 5-9-58

DATE BOTTOMED 5-14-58 ST. NO. VC-115 ST. ELEV. _____ CLASS TRACE HOLE NO. 58VC105

DESCRIBED BY C.A. AREA COURTOIS ELEVATION COLLAR 1029.0

DATE ESTIMATED 5-16-58 OPTION NO. CZ-15 COORDINATES: N 108294.68 E 84057.72

BY C.A. TRACT LEWIS MERRIT 200 FT. MAP NO. 55 50 FT. MAP NO. 899

SW¼-SW¼-SEC.18. T35N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 12" FT.

FORM BOTT. SL. _____

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	167	862.0
SLEEVE BIT TO		
BEGAN CORING AT	233	796.0
SAVED CORES FROM	415	614.0
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "	246	783.0
DAVIS (C.B.-S.B.) "		
CONTACT NOT CORED		
BONNE TERRE "	658	371.0
B. T. TRANS. "	666	363.0
CONGLOMERATE "		
LA MOTTE "	695	334.0
GRAN. OR POR. "		

PICTURES: FROM 415 614.0
TO 695 334.0

CHAR. SAMPLES: FROM
TO

INSOL. RES.: FROM
TO

OPENINGS AT

MINERALIZATION RECORD 80'N 170'E

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ZN ASSAY	% ZN EST.	FT. %	REMARKS	TO	CORES LOST
1	446.8	447.0	582.0	0.3		TR						415	
"	451.5	451.6	577.4	0.1		TR						695	
1-5	488.7	489.0	540.0	0.3		TR							
R45To	507.0	508.0	521.0	1.0		TR		✓			:DISS: FRACT		
5	520.0	520.2	508.8	0.2		TR							
"	521.2	522.2	506.8	1.0	0.5	1.0	0.5	1.7	1.0	1.7			
"	523.0	523.6	505.4	0.6	0.8	1.0	0.5				505.4-2.4-0.4-0.7ZN		
"	527.0	528.0	501.0	0.3		TR							
"	529.8	530.0	499.0	0.2		TR							
10-7	586.0	586.1	442.9	0.1		TR							
"	588.1	588.2	440.8	0.1		TR							
"	588.5	589.4	439.6	0.9		TR							
"	592.7	595.0	434.0	2.3		TR		✓					
F	606.0	608.0	421.0	2.0		TR		✓					
10-12	640.5	640.7	388.3	0.2		TR							
"	649.9	650.0	379.0	0.1		TR							
20	666.5	670.0	359.0	3.5		TR		✓					
"	692.5	695.0	334.0	2.5		TR		✓					

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BUREAU OF MINES
JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE [illegible] MINE [illegible] STOPE ..... STAKE NO. VC 115 HOLE NO. [illegible] VC 105

COLLAR ELEV. 1029 PITCH ..... BEARING ..... COORD.: N ..... E .....

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
[illegible]	[illegible]		BEGAN CORING
[illegible]	732		[illegible] (246)
[illegible]	775		[illegible] (253)
415	613		[illegible] (415)
			SOIL PIT
			AUTO — [illegible] NOT CORED —
			MINE TRACE
459	569	1	[illegible] (459)
469	559	[illegible]	[illegible]
499	529	5	[illegible] (499)
507	521	[illegible]	[illegible] (507)
541	487	5	[illegible] (541)
579	449	7	[illegible] (579)
[illegible]	425	[illegible]	[illegible] (603)
[illegible]	393	F	[illegible]
651	377	[illegible]	[illegible] (651)
678	370	12	[illegible]
666	362	19-17	[illegible] (666)
695	333	20	[illegible] (695)

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BUREAU OF MINES
JOPLIN, MO.

20

205

FORM 1173-2-54

STARTED 5-13-58

DATE BOTTOMED 5-15-58 ST. NO. VC-125 ST. ELEV. _____ CLASS PAY HOLE NO. 58VC106

DESCRIBED BY J.A. AREA COURTOIS ELEVATION COLLAR 913.5

DATE ESTIMATED 5-16-58 OPTION NO. CZ-64 COORDINATES: N 111932.26 E 88508.81

BY J.A. TRACT J. BREAKFIELD 200 FT. MAP NO. 56 M T 50 FT. MAP NO. _____

SE¼-NE¼-SEC.18

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 6" FT.

FORM BOTT. SL. _____

MINERALIZATION RECORD 1470'S 610'W T35N-R1W

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO		
SLEEVE BIT TO	9	904.5
BEGAN CORING AT		
SAVED CORES FROM	275.0	638.5
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "	110.0?	803.5
DAVIS (C.B.-S.B.) "	277.0	636.5
BONNE TERRE "	510.0	403.5
B. T. TRANS. "	513.0	400.5
CONGLOMERATE "		
LA MOTTE "	535.0	378.5
GRAN. OR POR. "		
PICTURES: FROM	275.0	638.5
TO	535.0	378.5
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ZN ASSAY	% ZN EST.	FT. %	REMARKS	TO	CORES LOST
5 GTO B$	341.9	342.1	571.4	0.2		TR						105	✓
" "	344.2	344.3	569.2	0.1		TR						125	S.B.
" "	345.3	345.5	568.0	0.2		TR						215	DISC
" "	346.3	347.4	566.1	1.1	4.0	3.5	4.4				diss	275	
" "	348.6	349.3	564.2	0.7	3.7	4.0	2.6				diss	295	3.1
5 GTO	349.3	350.5	563.0	1.2		TR						389	✓
5 GTO > B$	352.1	352.4	561.1	0.3	1.3	1.0	0.4				: SEAM	395	2.9
R GTO M	353.6	354.4	559.1	0.8	1.4	2.0	1.0				diss	435	✓
" "	354.4	359.4	554.1	5.0	33.8	30.0	169.0	3.2	0.5	6.0	0.5% Pb BAND + DISS	455	0.4
" "	359.4	364.4	549.1	5.0	8.6	15.0	43.0	1.5	0.5	7.5	BAND + DISS	475	0.3
" "	364.4	365.7	547.8	1.3	18.6	1.00	24.2				diss + BAND	495	0.4
R + 5 GTO	365.7	367.0	546.5	1.3		TR						515	0.5
5 GTO + F	367.0	370.1	543.4	3.1	11.2	12.0	34.7				diss + BAND	535	3.3
" "	370.1	371.1	542.4	1.0		TR							
" "	374.3	374.8	538.7	0.5		TR							
5 F + BAND	379.4	380.0	533.5	0.6	3.4	1.0	2.0				diss		
" "	381.5	381.7	531.8	0.2		TR							
" "	385.7	386.2	527.3	0.5		TR							
" "	388.2	388.8	524.7	0.6		TR							
" "	388.8	389.2	524.3	0.4	7.1	2.0	2.8				diss		
7 F	430.9	432.1	481.4	1.2		TR					543.4 - 23.8 - 11.7 - 1.0 ZN - 0.3 CU.		
" "	434.0	434.1	479.4	0.1		TR					533.5 - 0.6 - 3.4		
" "	438.5	438.8	474.7	0.3		TR					524.3 - 0.4 - 7.1		
" "	443.4	443.8	469.7	0.4		TR							
12 GTM > DGSF	492.4	492.5	421.0	0.1		TR							
" "	498.6	498.7	414.8	0.1		TR							
				CU									
	354.4	359.4	554.1	5.0	1.3	1.0	6.5						
	559.4	364.4	549.1	5.0	0.33	0.5	1.65						

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FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY JH DATE 5-16-58 MINE Cowtown STOPE STAKE NO. 125 HOLE NO. 58 VC 106

COLLAR ELEV. 914 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
105	809	BEGAN CORING	
110?	804	Derby	?— & rio sand (110)
115	799	Derby	Davis Transition?— (115)
277	637	Davis	Shale — SE 125-215 — Discarded 215-275 (277)
		Bonna	Terre
312	602	1	TO thin bed & banded faint oolite — slightly crystalline — ≈ fracturing — ≈ grinding — Banding & thin Pb's — ≈ cal & dickite — ≈ porous patches — ≈ pitting — (312)
328	296	5-1	GTO ≈ Pb & lense b's faint oolite — many thin Pb's — ≈ Pb's — ≈ pitting & small vugs — ≈ porous patches — appears irregular bedded — ≈ lense b's — ≈ ca — (328)
352	562	5	GTO B & ≈ porous patches faint to med oolite — appears thin bedded & banded to to 335 — reefy appearance w/ porous patches 335 to 349 — Good to 349 to Base — ≈ pitting & small vugs — ≈ ca tu — trs Pb 345 to Base (352)
368	546	R	TO Reefy appearance ≈ M faint oolite ≈ M scattered — Reefy appearance — ≈ Encrina fragments — very good Pb thru out — 0.5 solid Band @ 355 — few cal 355-364 — ≈ ZN — ≈ pitting & small vugs — many Pb's — (368)
378	536	5	GTO & F faint to med oolite — ≈ F alternating — oolite matrix for F — ≈ pitting — ≈ Cal — to to few Pb's top — (378)
395	519	5	F ~~Zone~~ w/ Banded good reef rock — oolite & ≈ Cal in Matrix — 3' w Banded 389-392 — ≈ ca — Pb 389 — ≈ fract & grinding (395)
405	509	5	GTO thin bedded faint oolite — thin bedded — few Pb's — pitting — ≈ stylo — (405)
444	470	7	F Zone — GTO thin bed Reef & GTO w/ alternating beds thru out — ≈ pitting — ≈ ca tu — few thin Pb's — small GTO — 4 Pb — ≈ banding in GTO beds (444)
455	459	10-12	GTO Banded ≈ M faint oolite — ≈ Kb — ≈ M patches — few thin Pb's — ca tu — (455)
510	404	12	GTO ~~oolite~~ F reef many thin Pb's — ≈ M — oolite scattered — 1' F @ 471, 1' 479-483, 1' 495 — ≈ Pb scattered — to Pb — 1' GTO 461, 493 — few cand veins lower & Base — (510)
511	403	19	LSD candy — ≈ Pb x top — ≈ to ≈ patches — ≈ pebbles & grit (511)
513	401	1720	GTD — 11 type — very candy — grit — [illegible] (513)
535	379	20	W.S. med grain — grit — [illegible] stains — slight [illegible] (535)

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JOPLIN, MO.

FORM 1173-2-54

205

STARTED 5-15-58

DATE BOTTOMED _____ ST. NO. VC-111 ST. ELEV. _____ CLASS INDICATIVE HOLE NO. 58VC109

DESCRIBED BY C.A. AREA COURTOIS ELEVATION COLLAR 1034.2

DATE ESTIMATED 5-21-58 OPTION NO. CZ-15 COORDINATES: N 109219.07 E 84527.19

BY C.A. TRACT LEWIS MERRITT 200 FT. MAP NO. 55 M 50 FT. MAP NO. 859

SW¼-SW¼-SEC 18

GENERAL HOLE DATA — MINERALIZATION RECORD 985'N 580'E T35N-R1VV

HT. SLEEVE ABOVE GR 30" FT.

FORM BOTT. SL. _____

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	131	903.2
SLEEVE BIT TO		
BEGAN CORING AT	185	849.2
SAVED CORES FROM	365	669.2
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "	185	849.2
DAVIS (C.B.-S.B.) "	375	659.2
BONNE TERRE "	611	423.2
B. T. TRANS. "		
CONGLOMERATE "	612	422.2
LA MOTTE "		
~~GRAN. OR~~ POR. "	621	413.2
PICTURES: FROM	365	669.2
TO	621	413.2
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ZN ASSAY	% ZN EST.	FT. %	REMARKS	TO	CORES LOST
5 BS	470.0	470.1	564.1	0.1		TR					XL IN VUG	365	
"	477.1	477.6	556.6	0.5	1.0	1.0	0.5				: DISS	376	2.0
5-7 T & F	502.0	502.2	532.0	0.2		TR					FRACT	385	2.0
7 F	504.2	504.5	529.7	0.3		TR					SPECKS	395	1.0
"	508.8	505.9	528.3	0.1		TR					"	621	✓
"	509.2	511.6	522.6	1.8		TR					"		
"	511.6	512.0	522.2	0.4	5.9	4.0	2.4				FRACT FILLING		
"	514.4	514.5	519.7	0.1		TR					518.6-58-2.2 > FRACT		
"	515.2	515.6	518.6	0.4	26.4	10.0	10.6				: BAND + : DISS		
"	515.8	515.9	518.3	0.1		TR					SPECK		
"	517.7	517.8	516.4	0.1		TR					"		
"	522.8	523.4	510.8	0.6	2.4	2.0	1.4				DISS		
"	528.9	529.0	505.2	0.1		—			TR		SPECKS		
"	530.4	533.6	500.6	3.2	50	5.0	16.0	0.8	2.0	2.6	< DISS		
"	537.0	537.1	497.1	0.1		TR					SPECKS		
7 : 10	537.9	538.0	496.2	0.1		TR					"		
"	539.0	540.6	493.6	1.6	2.1	1.0	3.4				> DISS		
"	540.6	544.9	489.3	4.3		TR					482.2-13.0-.043 SPECKS		
"	547.5	548.7	485.5	1.2	0.4	1.0	0.5				> DISS		
"	551.1	552.0	482.2	0.9	1.9	1.0	1.7				"		
"	553.0	554.7	479.5	1.7		TR					SPECKS		
7 F 112	580.0	580.2	454.0	0.2		TR					"		
"	584.8	587.6	446.6	2.8		TR					"		
"	596.5	596.7	437.5	0.2		TR					"		
"	598.7	598.8	435.4	0.1		TR					"		

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FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY G. DATE 5-21-58 MINE Courtois STOPE STAKE NO. HOLE NO. 53VC 109

COLLAR ELEV. 1033 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
185	848	BEGAN CORING	
205	828	DERBY - THIN BEDDED	(205)
365	668	SOLID BUT	(365)
375	658	DAVIS -	(375)
		BONNE TERRE	
419	614	1	LT$_0$ massive & GT$_0$ (Dense) - massive LT$_0$, 37 to 333 - 1 inch lining [illegible] to 340 to 409 - irregular 1 foot stylolites - [illegible] 409 to 415 - 4' T$_0$ [illegible] @ 419 (419)
430	603	1-5	GT:BL:Dense - alternating sections of 1 foot [illegible] - (430)
456	577	5	GB>$_0$ B/D3 - B/D [illegible] & thin [illegible] - G & 2nd D - mel bedding - > [illegible] - (456)
462	571	5	GM - G & B$_0$B - 1' GM - G @ 457 - 1' B$_0$B & 2nd D @ 459 - 2' GM > - G @ 460 - 1' GB$_0$ > B/D & D @ 461 - 1' GM > G/D w/ < K/D @ 462 - (462)
479	554	5	GT$_0$:E:GTM - Fairly massive - mel [illegible] - 6" E @ 465 - [illegible] @ 470 - 6" > frac [illegible] @ 473 - 1' GTM @ 475 - > thin [illegible] & > fine G @ 475 to base - (479) (Fair [illegible] @ 475 -)
485	548	5F	F/GTM G - Good snurly F [illegible] - fine G & > 2nd D - (485)
504	529	5-7	GT$_0$ - G & F/GTM - 1' GT$_0$ - G @ 486 - 1' F/GT @ 491 - 2' GT G @ 493 - 2' F @ 495 - 6' GT$_0$ G @ 501 - 1' F @ 502 - 2' GT$_0$ - G @ base - (504)
537	496	7	F/GT - M - G - Good snurly Reef w/ GT > G > G & > M matrix - Tr H @ 506 - > frac 512 to 515 - 1" small PL band @ 515 - Diss H @ 523 - Diss PL + Zn 528 to 533 - 2" NL @ 537 - (537)
559	474	7-10	F/GTMG & GT$_0$ - 2' GT$_0$ massive @ 539 - Diss H 539 to 540 - F 539 to 545 - 2' GT$_0$ massive @ 547 - Dimmy F 547 to 552 w/ > diss H - Fair F snurly 556 to 558 - 1' GT$_0$ - stylo @ 559
611	422	7/12	F/GTM > G & - Good snurly F w/ mel heavy M > G & matrix w/ : - [illegible] matrix - Tr H @ 581, 586 - 1' - frac @ 587 - 1' GTM > - @ 593 - fingering - [illegible] 594 to base GTM > fine G & matrix - (611)
612	421	18	Tokepyr/Cobalt/Fe Ox w/ Legal matrix - Closely cemented [illegible] - (612)
621	412	21	Turtle formation weathered brown - 1' < frac & weathered brown [illegible] - 616 - 1 nek turtle - Flow lamel & fragmental 616 to base - > Fe_2O_3 fragments - (621)

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JOPLIN, MO.

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FORM 1173-2-54

STARTED 5/15/58

DATE BOTTOMED 5-20-58	ST. NO. VC-123	ST. ELEV.	CLASS PAY HOLE NO. 58VC111
DESCRIBED BY J. A.	AREA COURTOIS		ELEVATION COLLAR 934.6
DATE ESTIMATED 5-23-58	OPTION NO. CZ-64		COORDINATES: N 111982.56 E 87999.05
BY J. A.	TRACT J. BREAKFIELD		200 FT. MAP NO. 55 M T 50 FT. MAP NO.
			SE¼-NE¼ - SEC. 18

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 5 FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO		
SLEEVE BIT TO	90	925.6
BEGAN CORING AT		
SAVED CORES FROM	275	659.6
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	?	
CONTACT GROUND	275	659.6
BONNE TERRE "	489.0	445.6
B. T. TRANS. "		
CONGLOMERATE "	505.0	429.6
LA MOTTE "		
GRAN. OR POR. "		
PICTURES: FROM	275.0	659.6
TO	505.0	429.6
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 1440'S 1150'W T35N-R1W

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ZN ASSAY	% ZN EST.	FT. %	REMARKS	CORE REC. TO	CORES LOST
	321.0	321.6	613.0	0.6		Tr						135	
	350.4	350.5	584.1	0.1		Tr						155	5.7
	378.5	378.7	555.9	0.2		Tr						275	S.B.
	379.8	380.2	554.4	0.4		Tr						291	1.7
	380.2	383.8	550.8	3.6	19.2	9.0	69.1	0.9	0.7	3.2	CUBE & SEAM	331	—
	383.8	384.5	550.1	0.7		Tr						345	3.0
	384.5	385.5	549.1	1.0	0.9	1.0	0.9				DISS	385	—
	385.5	387.4	547.2	1.9		Tr						389	1.6
	389.0	389.5	545.1	0.5		Tr		543.0-7.8-0.4				401	1.3
	390.6	390.9	543.7	0.3		Tr						492	—
	390.9	391.6	543.0	0.7	3.3	3.0	2.3				DISS : Rb Pb	505	0.5
	401.5	401.6	533.0	0.1		Tr							
	424.2	425.1	509.5	0.9		Tr		509.1-1.3-1.8					
	425.1	425.5	509.1	0.4	5.7	3.0	2.3				DISS : SEAM Rb		
	433.7	434.2	500.4	0.5	1.0	1.0	0.5						
	448.6	449.3	485.3	0.7		Tr							
	452.3	452.4	482.2	0.1		Tr.							
	454.9	455.6	479.0	0.7		Tr.							
	458.8	459.4	475.2	0.6		Tr.							
	477.9	479.7	454.9	1.8		Tr.							
	481.6	481.7	452.9	0.1		Tr.							

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FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE 5-23-58 MINE Courtois STOPE

STAKE NO. [illegible] HOLE NO. 58VC 111

COLLAR ELEV. 935. PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
135	800	BEGAN CORING	
275	660	Davis	Shale — [illegible] 155 – 275 — Davis B.T. contact ground (275)
		Bonne	Terre
318	617	1	[illegible] sandy — fairly massive [illegible] thin bedding top to 293, [illegible] fill 283 – 284 — thin bed & banded 273 – 309 — snurly appearance 309 to base — many thin Rbs — spitting — [illegible] patches [illegible] (318)
331	604	1–5	[illegible] faint oolite — scattered [illegible] — many thin Rbs [illegible] large Gbs — [illegible] to the top — (331)
356	579	5	[illegible] faint to med. oolite — small to med. BT top to 340 – [illegible] 339, 340 – 352 — [illegible] & patches — [illegible] fracturing [illegible] 344 — EHb [illegible] 351 — (356)
362	573	5	[illegible] faint to med. oolite — M scattered thruout — 6" GTM [illegible] top, 4" [illegible] 359 — many thin Rbs — [illegible] & patches — small [illegible] (362)
371	564	5	[illegible] faint oolite [illegible] thruout — [illegible] thin Rbs — [illegible] (371)
388	547	5	[illegible] small Gbs in Matrix — [illegible] 380 – 384 [illegible] patches [illegible] many thin Rbs — (388)
397	538	5	[illegible] 391 — [illegible] thin Rbs [illegible] crystalline — small [illegible] — [illegible] Pb — (397)
431	504	1	[illegible] oolite & Gbs in Matrix — 1' [illegible] 417 [illegible] pitting — [illegible] Pb — (431)
443	492	1	[illegible] crystalline [illegible] oolite — small Gbs — [illegible] & patches [illegible] 435 [illegible] Pb — (443)
457	478	1 and 2	[illegible] oolite — small [illegible] — many thin Rbs & M scattered — [illegible] patches — [illegible] Pb — (457)
489	446	12	[illegible] slightly [illegible] 461, [illegible] 465 [illegible] 467 – 474, 481 to base [illegible] thruout — many thin Rbs — [illegible] — [illegible] Pb — (489)
505	430	[illegible]	[illegible] pebbles & cobbles [illegible] matrix 471 [illegible] to base [illegible] slightly [illegible] banded — (505)

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JOPLIN, MO.

DATE BOTTOMED 5-26-58 ST. NO. VC-104 ST. ELEV. _____ CLASS TRACE HOLE NO. 58VC117

DESCRIBED BY J. A. AREA COURTOIS ELEVATION COLLAR 1115.16

DATE ESTIMATED 5-29-58 OPTION NO. CZ-54 COORDINATES: N 111097.53 E 85861.26

BY J. A. TRACT RICO MASON 200 FT. MAP NO. 55 50 FT. MAP NO. _____

SE¼-NW¼ SEC. 18

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 1.0' FT.

FORM BOTT. SL. _____

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO		
SLEEVE BIT TO		
BEGAN CORING AT		
SAVED CORES FROM	465.0	650.2
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN " SOLID BIT	305.0	810.2
DAVIS (C.B.-S.B.) "	472.0	643.2
BONNE TERRE "	724.0	391.2
B. T. TRANS. "	735.0	380.2
CONGLOMERATE "		
LA MOTTE "	755.0	360.2
GRAN. OR POR. "		
PICTURES: FROM	465.0	650.2
TO	755.0	360.2
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 2340' S. 1890' E. T35N-R1W

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS
	534.1	534.2	581.0	0.1		Tr.					SPECK
	611.4	611.5	503.7	0.1		Tr.					"
	681.5	681.6	433.6	0.1		Tr.					"
	709.9	713.6	401.6	3.7		Tr.					"

CORE REC.

TO	CORES LOST
285	—
305	SB
445	
465	Disc
485	—
500	1.1
540	—
560	0.5
580	—
585	0.5
655	—
669	0.2
735	—
755	8.7

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TECHNOLOGY

JUN 16 1958

BUREAU OF MINES
JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY JA DATE 5-29-58 MINE Courtois STOPE STAKE NO. VC 104 HOLE NO. 58VC117

COLLAR ELEV. 1115 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
285	830	BEGAN CORING	
305?	810	Derby	Doe Run — thin bedded & banded — thin Pb — spitting — (305)
472	643	Davis	Shale — Derby Davis contact ground 305-445, 445-465 Discarded (472)
		Bonne Terre	
524	591	1	TO thin bed, sandy banding & faint oolite, thin bed & band to 502 — slightly sandy & banded 502 to base — & 490-509, 513 to base — spitting & small vugs — sparous oolitic patches — thin Pb — (524)
564	551	5	GTOB & faint oolite small Eta — spitting — & 534 to base sparous oolitic patches — sandy appearance 543 [illegible] oolitic patches — tr Pb (564)
571	544	5	GTLENI TOE [illegible] top, 1" base — GTM [illegible] 1" 567 — EHL — & TO interbedded w/ M section — spitting (571)
582	533	5	TOE & faint to med oolite — & thru out — 1" small Eta 576 sparous oolitic patches — (582)
598	517		TOE GTM banded — Gt TO banded & & top to 586 — GTM Gt & banded 586 to base & slightly crystalline — & 590-593 (598)
650	465	7	FTOBNE & & reef rock — many thin Pb — oolite [illegible] matrix — & 604, 612-617, 621-634, 645 to base — 1" [illegible] 6" @ 634 — [illegible] to patches — Eta scattered — (650)
660	455	10-1	TOE & & thru out — med oolite & X — 6" @ 652 — spitting — (660)
710	405	10-7-12	GTOM & top 678 — & top to 687 — banding — F 678-690 — banded [illegible] to base — med oolite & many thin Pb — spitting — tr Pb — [illegible] X (710)
724	391	12	GTM [illegible] appearance — many thin Pb — spitting — [illegible] Gt — small Gt — (724)
733	382	19	TOE & NEHD & thru out — fairly sandy — 2" D [illegible] 728 — M NEH [illegible] 728 to base — spitting & vugs — [illegible] (733)
735	380	17-19-20	[illegible] EHL DE interbedded [illegible] sand, thin EHL — R — pebbles — (735)
755	360	20	[illegible] faint to med [illegible] — Eta — [illegible] top & [illegible] — spinding — (755)

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JUN 16 1958

BUREAU OF MINES
JOPLIN, MO.

205

15

FORM 1173-2-54

STARTED - 5-26-58

DATE BOTTOMED 5-29-58	ST. NO. YC-105 ST. ELEV.	CLASS TRACE HOLE NO. 58YC123
DESCRIBED BY J. A.	AREA COURTOIS	ELEVATION COLLAR 1016.17
DATE ESTIMATED 6-4-58	OPTION NO. CZ-15	COORDINATES: N 110677.03 E 86157.85
BY J. A.	TRACT LEWIS MERRITT	200 FT. MAP NO. 55 50 FT. MAP NO.

NE¼ - SW¼ SEC. 18

2510'N 2190'E T35N-R2W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 1.5' FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	80.0	936.2
SLEEVE BIT TO		
BEGAN CORING AT		
SAVED CORES FROM	345.0	671.2
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "	187.0	829.2
DAVIS (C.B.-S.B.) "	353.0	663.2
BONNE TERRE "	591.0	425.2
B. T. TRANS. "		
CONGLOMERATE "		
LA MOTTE "		
GRAN. OR POR. "	595.0	421.2
PICTURES: FROM	345.0	671.2
TO	595.0	421.2
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS
	433.1	433.2	583.0	0.1		Tr.					
	487.9	489.3	526.9	1.4		Tr.					
	502.3	502.6	513.6	0.3		Tr.					
	505.6	505.7	510.5	0.1	0.4	1.0	0.1				
	518.5	518.6	497.6	0.1		Tr.					
	577.7	578.3	437.9	0.6		Tr.					
	585.6	585.7	430.5	0.1		Tr.					

CORE REC.

TO	CORES LOST
185	—
196	2.1 SB
325	Disc.
345	
355	0.4
363	—
367	0.3
405	—
420	0.9
455	—
475	0.1
495	—
515	4.1
543	—
559	0.4
575	—
595	0.2

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TECHNOLOGY

JUN 16 1958

BUREAU OF MINES
JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE 6-4-58 MINE Courtois STOPE STAKE NO. 1C 105 HOLE NO. 58VC123

COLLAR ELEV. 1016 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
185	831	BEGAN CORING	
1[illegible]1	820	Lower	Dog Run — (4.07)
1[illegible]	820	Lower	Devil Transition — [illegible] (1.96)
208	663	Lower	Shale — solid at 1[illegible] [illegible] 3-345 (20.23)
		Bonne Terre	
218	618	1	10 [illegible] shattered — [illegible] dolo — [illegible] to top 367 — thin bedded 367-379 — [illegible] to base — [illegible] thin bds — [illegible] — [illegible] — [illegible] (8.[illegible])
412	604	1-2	[illegible] — [illegible] dolo — [illegible] — [illegible] thin bds — [illegible] — [illegible] (8.12)
431	577	2	[illegible] dolo — [illegible] — [illegible] thin bds — [illegible] (4.39)
451	557	2	[illegible] — [illegible] — [illegible] — [illegible] thin bds — [illegible] (4.39)
481	535	2	[illegible] — [illegible] — [illegible] thin bds — [illegible] (6.21)
[illegible]7	521	2	10 [illegible] dolo — [illegible] — [illegible] (9.[illegible])
522	494	7	[illegible] — [illegible] dolo — [illegible] 515 — [illegible] thin bds — [illegible] (5.22)
532	484	10	[illegible] dolo — [illegible] thin bds — [illegible] (5.22)
542	474	10	[illegible] dolo — [illegible] thin bds — [illegible] (5.23)
558	458	10	[illegible] — [illegible] thin bds — [illegible] (5.52)
569	447	10	[illegible] — [illegible] (5.69)
591	425	10	[illegible] — [illegible] thin bds — [illegible] (5.71)
595	421	1	[illegible] (5.15)

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DIVISION OF MINERAL
TECHNOLOGY
JUN 16 1958
BUREAU OF MINES
JOPLIN, MO.

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DMEA
RECEIVED 24 1958

DATE		CODE
5/23	H.J.	720
26	Conn	100
"	JEJ	110
5/26	Conn	800
5/26		500

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
Box 431
Joplin, Missouri
May 19, 1958

DMEA Operating Committee
Department of the Interior
Washington 25, D. C.

Re: DMEA-4582(lead-zinc-copper)
St. Joseph Lead Co.
Courtois Area
Washington County, Mo.
Contract Idm-E1068

Dear Sirs:

With reference to my May 15 letter to you on the Field justification report and recommendations being prepared for this Operator's new application, enclosed are the original and three copies of the Interim Report received this morning covering the inspection of the cited project by Amos and King of the Survey on May 8.

One copy of the Interim Report, initialed by me, is returned with a copy of this for the files of Amos.

Sincerely yours,

Clinton C. Knox

Clinton C. Knox
Executive Officer
DMEA Field Team, Region IV

encls. 4

cc: DMEA Op.Com.(3)
King,USGS,Denver
Amos,USGS,Carbondale w/cy encl.
4582 file

Let rest

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
Defense Minerals Exploration Administration
Denver Federal Center
Denver, Colorado

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DIVISION OF MINERAL
TECHNOLOGY

MAY 19 1958

BUREAU OF MINES
JOPLIN, MO.

May 15, 1958

OFFICIAL FILE COPY
DMEA
RECEIVED 24 1958
DATE

Memorandum

To: Executive Officer, DMEA Field Team, Region IV

From: R. U. King

Subject: DMEA Docket 4582 (Lead-zinc-copper), Contract Idm-E 1068, St. Joseph Lead Company (Courtois area), Washington County, Missouri. INTERIM GEOLOGIC REPORT

Enclosed are the original and five copies of an Interim Geologic Report covering the inspection of the subject contract project made on May 8, 1958.

One copy has been retained for my files.

R. U. King

Copy to: Operating Committee (2)

RUKing:arh

RECEIVED
DIVISION OF MINERAL TECHNOLOGY
MAY 19 1958
BUREAU OF MINES
JOPLIN, MO.

INTERIN REPORT

DMEA-4582, Idm-E1068

Operator: St. Joseph Lead Company, Bonne Terre, Missouri

Location: Courtois Area, Washington County, Missouri

A project inspection of the subject contract was conducted on May 8, 1958. Results obtained to date and contemplated future work were discussed with Mr. R. E. Wagner, Head of Exploration; and Mr. G. Klosterman, Geologist.

Drilling completed on the Courtois project to date and since the inspection on April 10, 1958 is summarized as follows:

Drilling Completed

Footage in holes completed since last inspection	4,420
Footage in holes completed to date	72,567
Number of holes completed since last inspection	7
Total number of holes completed to date	110
Number of holes showing commercial ore	20
Number of holes showing indicative non-commercial mineralization	14
Number of holes showing trace mineralization	58
Number of holes showing speck trace mineralization	7
Number of barren holes	11

A summary of the seven holes completed since the last interim inspection is as follows:

Hole No.	Location	Depth	Remarks
VC-112	NE¼, SE¼, SW¼, sec. 18	611 ft.	Ore hole.
VC-107	SE¼, NW¼, SW¼, sec. 18	656 ft.	Trace hole.
VC-109	SE¼, NE¼, SW¼, sec. 18	653 ft.	Ore hole.
VC-108	SE¼, NE¼, SW¼, sec. 18	583 ft.	Indicative hole.
VC-114	SE¼, SE¼, SW¼, sec. 18	655 ft.	Trace hole.
VC-110	NW¼, SW¼, SW¼, sec. 18	747 ft.	Ore hole.
VC-122	SE¼, SW¼, NE¼, sec. 18	515 ft.	Trace hole.

Diamond drilling is in progress in two holes summarized as follows:

Hole No.	Location	Present Depth	Estimated Total Depth
VC-116	SE¼, SW¼, SW¼, sec. 18	745 ft.	750 ft.
VC-117	NW¼, NW¼, SE¼, sec. 18	185 ft.	625 ft.

The churn drill portions of nine holes have been completed since the date of the last inspection. A summary of these holes is as follows:

Hole No.	Location	Depth to Bottom of Churn Drilling
VC-110	NW¼, SW¼, SW¼, sec. 18	240 ft.
VC-104	SW¼, SE¼, NW¼, sec. 18	200 ft.
VC-116	SE¼, SW¼, SW¼, sec. 18	195 ft.
VC-113	SW¼, SW¼, SW¼, sec. 18	200 ft.
VC-93	SE¼, NE¼, SE¼, sec. 7	110 ft.
VC-124	SW¼, SE¼, NE¼, sec. 18	60 ft.
VC-120	NW¼, SW¼, SE¼, sec. 18	120 ft.
VC-121	SE¼, SE¼, NW¼, sec. 18	140 ft.
VC-115	SW¼, SW¼, SW¼, sec. 18	155 ft.

Churn drilling is in progress in five holes summarized as follows:

Hole No.	Location	Present Depth
VC-105	NE¼, NE¼, SW¼, sec. 18	65 ft.
VC-126	NW¼, NW¼, NW¼, sec. 17	145 ft.
VC-118	SW¼, SW¼, NE¼, sec. 18	20 ft.
VC-130	NW¼, SE¼, NE¼, sec. 7	10 ft.
VC-111	NW¼, SW¼, SW¼, sec. 18	25 ft.

Significant assays of recently completed holes are as follows:

Hole No.	Depth	Thickness	%Pb	%Zn
VC-108	467.8-468.6 ft.	0.8 ft.	1.9	----
	477.4-478.4 ft.	1.0 ft.	3.6	----
	486.8-488.4 ft.	1.8 ft.	1.1	----
	494.4-495.8 ft.	1.4 ft.	3.8	----
	501.3-504.0 ft.	2.7 ft.	2.0	----
VC-109	540.4-541.7 ft.	1.3 ft.	18.0	----
	545.2-546.3 ft.	1.1 ft.	1.5	----
	576.5-577.1 ft.	0.6 ft.	12.3	----
VC-112	386.3-387.1 ft.	0.8 ft.	15.0	----
	387.9-389.3 ft.	1.4 ft.	4.2	----
	390.3-391.2 ft.	0.9 ft.	3.9	----
	391.8-394.8 ft.	3.0 ft.	1.9	----
	401.4-406.4 ft.	5.0 ft.	6.4	6.8
	406.4-411.7 ft.	5.3 ft.	5.4	5.3
	412.4-415.4 ft.	3.0 ft.	0.1	2.2
VC-110	646.8-650.5 ft.	3.7 ft.	8.4	----
	650.5-653.1 ft.	2.6 ft.	18.2	2.3
	653.7-655.0 ft.	1.3 ft.	15.7	----
	655.3-658.7 ft.	3.4 ft.	6.7	----
	659.5-665.0 ft.	5.5 ft.	2.2	----

Verbal approval was given by the field examiners to locate the following Stage II holes:

Hole No.	Location
VC-141	NW¼, SW¼, SE¼, sec. 12
VC-142	SW¼, SE¼, NE¼, sec. 12
VC-143	SE¼, NE¼, NE¼, sec. 12
VC-144	NE¼, NE¼, NE¼, sec. 12
VC-145	SW¼, SW¼, SW¼, sec. 6
VC-146	NE¼, SW¼, NW¼, sec. 8
VC-147	NE¼, NW¼, NW¼, sec. 8
VC-148	NW¼, NE¼, NW¼, sec. 8

Hole No.	Location
VC-149	SE¼, SE¼, SW¼, sec. 5
VC-150	SE¼, SW¼, SW¼, sec. 5
VC-151	NE¼, SE¼, SW¼, sec. 5
VC-152	SW¼, NW¼, SE¼, sec. 5
VC-153	SE¼, NW¼, SE¼, sec. 5
VC-154	NW¼, NE¼, SE¼, sec. 5
VC-155	SE¼, SW¼, NE¼, sec. 5
VC-156	SW¼, SE¼, NE¼, sec. 5
VC-157	NE¼, SE¼, NE¼, sec. 5
VC-158	NE¼, NW¼, NE¼, sec. 5

Robert U. King
Geologist
U. S. Geological Survey

Dewey H. Amos
Geologist
U. S. Geological Survey

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
Box 431
Joplin, Missouri
June 26, 1958

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DMEA
RECEIVED JUN 30 1958

DATE		
6/30	C	220
		110
6/30	copies	500

DMEA Operating Committee
Department of the Interior
Washington 25, D. C.

Re: DMEA-4582(lead-zinc-copper)
St. Joseph Lead Co.
Courtois Area
Washington County, Mo.
Contract Idm-E1068

Dear Sirs:

Forwarded herewith are your two copies of the MF-104 Monthly Voucher and one copy of the MF-104A and the Monthly Report by the cited Operator covering the April project work. The voucher data received from the Finance Officer is posted on both copies of the MF-104s.

Your other copy of the MF-104A and the Monthly Report was furnished for your advance information May 16, 1958.

Sincerely yours,

Clinton C. Knox

Clinton C. Knox
Executive Officer
DMEA Field Team, Region IV

encl. 4

cc: DMEA Op.Com.
Amos,USGS,Knoxville
King,USGS,Denver
4582 file

2nd Copy - DMEA

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

Budget Bureau No. 42-R1036.5

MF-104A + Reports fwd to Wash 5/16/58

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

Month of April, 1958 Docket No. DMEA 4582 Contract No. Idm-E 1068

Operator's Name St. Joseph Lead Company Minerals Pb - Zn - Cu

Address Bonne Terre, Missouri

Contract Amount, $ 298,560.00 Government Participation: 50 % Amount, $ 149,280.00

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	10675.98	150689.16	161365.14	7/17/58		
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	55.00	406.00	461.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	10730.98	151095.16	161826.14	✓	✓	✓

RECEIVED
DIVISION OF MINERAL TECHNOLOGY
MAY 15 1958
BUREAU OF MINES
JOPLIN, MO.

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

Date 5/14/58 *Payee St. Joseph Lead Company

Per L. W. Foster, Title ASST. DIVISION MANAGER

*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:

$ 5,365.49

Signature
(Authorized Certifying Officer)

Date 6/20/58 Vou. No. 4-35

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Idm-E1068 in accordance with the terms of the contract.

Signature Henry H. Amos Title Geologist-USGS Date June 11, 1958

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Clinton C. Knox Title Executive Officer Date June 16, 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

2nd Copy - DMEA
(MF-104 withheld by F.T. until checked & paid and sent for CCK. 5/16/58)

RECEIVED MAY 19 1958 D.M.E.A.

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

Month of April 1958 Docket No. DMEA 4582 Contract No. Idm-E 1068

Operator's Name St. Joseph Lead Company Minerals Pb - Zn - Cu

Address Bonne Terre, Missouri

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core	Ft.	8877.78	3999	123678.42	55711	$2.22		
Churn	Ft.	1798.20	810	37686.72	16976	2.22	133420	$2.22
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Analytical Determinations	Ea	55.00	55	461.00	461	1.00	2370	1.00
TOTAL DISTRIBUTED COSTS		10730.98		161826.14				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		10730.98		161826.14				

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

Date 5/14/58 Operator St. Joseph Lead Company

Per [signature] Title ASST. DIVISION MANAGER

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:

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(Instructions on reverse)

(For Government use only)

MAY 15 1958

BUREAU OF MINES JOPLIN, MO.

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

THE MINES
DIVISION OF MINERAL
TECHNOLOGY

MAY 15 1958

BUREAU OF MINES
JOPLIN, MO.

Monthly Report for Month of April, 1958

D.M.E.A. Project #4582 - Contract #IDM-E 1068

Twenty-one Stage II locations, approved by the DMEA field team as of April 10, 1958, have been assigned numbers as shown on the map. The Stage II stake numbers and locations are as follows:

Stake No.	Location	
C-120	500' East of C-112	NW¼ SW¼ SE¼, Sec. 18, T35N, R1W
C-121	500' East of C-104	SE¼ SE¼ NW¼, Sec. 18, T35N, R1W
C-122	500' West of C-119	SE¼ SW¼ NE¼, Sec. 18, T35N, R1W
C-123	500' East of 57VC57	NW¼ SE¼ NE¼, Sec. 18, T35N, R1W
C-124	600' East of C-119	SW¼ SE¼ NE¼, Sec. 18, T35N, R1W
C-125	500' West of C-77	NE¼ SE¼ NE¼, Sec. 18, T35N, R1W
C-126	500' West of C-102	NW¼ NW¼ NW¼, Sec. 17, T35N, R1W
C-127	520' N45°W of VC35	SE¼ NW¼ NE¼, Sec. 7, T35N, R1W
C-128	520' N15°E of VC35	SW¼ NE¼ NE¼, Sec. 7, T35N, R1W
C-129	520' N75°E of VC35	SW¼ NE¼ NE¼, Sec. 7, T35N, R1W
C-130	520' S45°E of VC35	NW¼ SE¼ NE¼, Sec. 7, T35N, R1W
C-131	520' S15°W of VC35	NE¼ SW¼ NE¼, Sec. 7, T35N, R1W
C-132	520' S75°W of VC35	NE¼ SW¼ NE¼, Sec. 7, T35N, R1W
C-133	520' N45°W of C132	SW¼ NW¼ NE¼, Sec. 7, T35N, R1W
C-134	520' N45°W of C133	NW¼ NW¼ NE¼, Sec. 7, T35N, R1W
C-135	520' S75°W ofVC43	SW¼ NE¼ NW¼, Sec. 7, T35N, R1W
C-136	1040' N45°W of VC43	NW¼ NE¼ NW¼, Sec. 7, T35N, R1W
C-137	1560' N75°E of C136	SW¼ SW¼ SE¼, Sec. 6, T35N, R1W
C-138	1040' N15°E of C127	SE¼ SW¼ SE¼, Sec. 6, T35N, R1W
C-139	1380' N25°W of C136	NE¼ SW¼ SW¼, Sec. 6, T35N, R1W
C-140	1560' N75°E of C139	SE¼ NE¼ SW¼, Sec. 6, T35N, R1W

Five churn drills were operating in the area at the end of the month. The holes in progress were as follows:

Stage No.	Stake No.	Feet Depth
II	VC-115	95
II	VC-113	155
II	VC-105	40
II	VC-126	60
II	VC-121	120

The following churn drill holes were completed through overburden and chert-bearing formations and cased preparatory to diamond drilling during the month:

Stage No.	Stake No.	Feet Depth	Starting Date
II	VC-104	200	3-11-58
II	VC-110	240	4- 2-58
II	VC-124	60	4-21-58
II	VC-93	110	4-15-58
II	VC-116	200	4-15-58

Two diamond drills were operating in the area at the end of the month. The holes in progress were Stage II, Stake No. VC-122 at a depth of 100 feet and Stage II, Stake No. VC-116 at a depth of 515 feet.

The following diamond drill holes were completed during the month:

Stage No.	Stake No.	Prospect Hole No.	Bottom Depth	Feet of Dia. Drilling	Date Completed	Class.
II	VC-106	58VC63	529	529	4- 2-58	Trace
II	VC-112	58VC69	611	541	4- 9-58	Pay
II	VC-107	58VC75	656	456	4-14-58	Trace
II	VC-109	58VC81	653	473	4-18-58	Pay
II	VC-108	58VC85	583	478	4-23-58	Ind.
II	VC-110	58VC89	747	507	4-28-58	Pay
II	VC-102	58VC65	695	485	4- 3-58	Pay
II	VC-114	58VC86	655	530	4-24-58	Trace

Analysis of results gained by drilling is shown in abstracts of our weekly reports to St. Joseph Lead Company, which are enclosed.

55 analytical determinations were made during the month as follows:

58VC63	1 Pb	
58VC69	8 Pb	3 Zn
58VC81	11 Pb	
58VC85	9 Pb	
58VC89	10 Pb	1 Zn
58VC65	4 Pb	2 Zn
58VC86	4 Pb	2 Zn

Pursuant to the provisions contained in Annex I, we are requesting that an amendment be executed to include in the contract the following listed contiguous lands:

Option Contract #CZ-283

John E. Turnbough and Nettie Turnbough (wife), executed 1-15-58. Option to purchase all underground and mining rights on 175 acres, more or less. Option runs for 1 year and is renewable twice. This is a revised option replacing CZ-75 and includes 24 acres omitted in the original 151-acre option.

Option Contract #CZ-288

Marvin G. Turnbough and Loraine Turnbough (wife), executed 3-6-58. Option to purchase entire rights on 60.5 acres, more or less. Option runs for 1 year.

Copies of option contracts are included and location of lands are shown on the report map.

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JOPLIN, MO.

WASHINGTON COUNTY

Courtois Area - In DMRA Project #4582

Week Ended April 7, 1958

2 diamond drills operating and 2 churn drills setting casing completed 1 pay and 1 trace hole.

58VC65, stake #C102, a pay hole, is located about 4500 feet south of the village of Courtois and 520 feet southeast and southwest respectively from 2 pay holes. It bottomed at 695 feet depth in Lamotte sand. Good mineralization was present in the mottled zone at the base of the brown spotted section of the 5 zone. Best of this was estimated as 7.2 feet of 28.0% Pb and 2.0% Zn at 533 feet depth.

58VC63, stake #C106, a trace hole, is located about 8,000 feet southwest of the village of Courtois and 520 feet east of a pay hole. It bottomed at 529 feet depth in rhyolite porphyry which extends about 30 feet up into the Bonneterre horizon. Traces of lead were present in the lower 5 and 7 zones, best of which was estimated as 1.4 feet of 2.0% Pb at 383 feet depth above the lower 5 zone reef.

Week Ended April 14, 1958

1 diamond drill operating and 2 churn drills setting casing completed 1 pay hole.

58VC69, stake #C112, a pay hole, is located in the southern part of the project area, about 8500 feet south-southwest of the village of Courtois and 520 feet north-northeast of a pay hole. It bottomed at 611 feet depth in Lamotte sand. Lead and zinc mineralization is located in the lower part of the 5 zone with estimates of 8.5 feet of 1.1% Pb at 395 feet depth, 10.3 feet of 3.4% Pb at 412 feet depth and 14.0 feet of 3.9% Zn at 415 feet depth.

Week Ended April 21, 1958

1 diamond drill operating and 4 churn drills setting casing completed 1 indicative and 1 trace hole.

58VC81, stake #C109, an indicative hole, is located about 9,000 feet southwest of the village of Courtois and 520 feet north-northeast of a pay hole. It bottomed at 653 feet depth in dark rhyolite porphyry which extends about 10 feet up into the Bonneterre horizon. Lead mineralization, matching that in holes to the southwest and northeast, is present in the 7 zone, best of which was estimated as 6.9 feet of 2.8% Pb.

58VC75, stake #C107, a speck trace hole, is located about 8500 feet southwest of the village of Courtois and 520 feet northwest of the above hole. It bottomed at 655 feet depth in dark rhyolite porphyry which extends about 40 feet up into the Bonneterre horizon. Speck traces of lead were present near the top of the Bonneterre and in the 7 zone. This hole is apparently on the northwest slope of the buried porphyry ridge and on the opposite side from known mineralization.

WASHINGTON COUNTY (Continued)

Courtois Area - In DMEA Project #4582 (Continued)

Week Ended April 28, 1958

2 diamond drills operating and 5 churn drills setting casing completed 1 pay and 1 trace hole.

58VC85, stake #C108, a pay hole, is located about 8,000 feet southwest of the village of Courtois and 520 feet west of a pay hole. It bottomed at 583 feet depth in dark rhyolite porphyry which extends about 50 feet up into the Bonneterre horizon. Lead mineralization near the base of the main 7 zone reef at 504 feet depth was estimated as 9.6 feet of 2.6% Pb. This matches lead in the pay hole to the east.

58VC86, stake #C114, a trace hole, is located 1500 feet southeast of the above hole and 520 feet east and southeast respectively from 2 pay holes. It bottomed at 655 feet depth in Lamotte sand. Lead and zinc mineralization in the lower 5 zone was estimated as 2.2 feet of 1.0% Zn at 454 feet depth, 0.3 foot of 1.0% Zn at 463 feet depth, 1.0 foot of 1.0% Pb at 484 feet depth, and 0.4 feet of 1.0% Pb at 494 feet depth. This mineralization matches ore in the pay holes to the west.

Period Ended April 30, 1958 inclusive

2 diamond drills operating and 5 churn drills setting casing completed 1 pay hole.

58VC89, stake #C110, a pay hole, is located about 9800 feet southwest of the village of Courtois and 520 feet north-northeast of an indicative hole. It bottomed at 747 feet depth in dark rhyolite porphyry which was encountered in the sandy transition zone. Good lead and fair zinc mineralization, estimated as 18.2 feet of 6.5% Pb and 1.0% Zn, is located in the lower part of the top reef in the 7 zone at 665 feet depth.

STARTED 3-7-58

FORM 1173-2-54

DATE BOTTOMED 4-2-58	ST. NO. VC-106 ST. ELEV.	CLASS TRACE HOLE NO. 58VC63
DESCRIBED BY C.A.	AREA COURTOIS	ELEVATION COLLAR 926.3
DATE ESTIMATED 4-7-58	OPTION NO. CZ-15	COORDINATES: N 110252.64 E 86456.85
BY C.A.	TRACT LEWIS MERRIT	200 FT. MAP NO. 55 200M 200T 50 FT. MAP NO. NW¼-SE¼-SEC.18

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 6" FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO		
SLEEVE BIT TO	12.0	914.3
BEGAN CORING AT	115	811.3
SAVED CORES FROM	255	671.3
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	267	659.3
BONNE TERRE "	487	439.3
B. T. TRANS. "		
CONGLOMERATE " 18-19-20	515	411.3
LA MOTTE "		
~~BRAN~~. OR POR. "	529	397.3
PICTURES: FROM	255	671.3
TO	529	397.3
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 2100'N 2600'W T35N-R1W

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS	CORE REC. TO	CORES LOST
1	275.0	275.2	651.1	0.2		TR					FRACT	255	
"	284.5	285.0	641.3	0.5		TR		✓			"	275	—
"	322.0	322.6	603.7	0.6		TR					"	278	2.0
5 B$	323.2	323.4	602.9	0.2		TR		602	9-1.4	-Tr.	SPECK	483	—
"	336.5	336.7	589.6	0.2		TR					"	495	—
5F	381.6	383.0	543.3	1.4	3.2	2.0	4.5		TR	✓	HORZ'L SEAMS: DISS PL	515	1.00
7F&G$	420.0	420.8	505.5	0.8		TR				✓	SPECKS	529	—

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REW 200 TWN

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BUREAU OF MINES
JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY G DATE 4-4-58 MINE Courtois STOPE STAKE NO. C-106 HOLE NO. 53VC63

COLLAR ELEV. 927 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
115	812	BEGIN CORING	
135	792	Davis	(135)
255	672	Solid Bit	(255)
267	660	Davis Bonne Terre	(267)
323	604	1	LT>0 Massive; Irreg GT Dense/ – Massive LT>0 267 to 295 –> Irreg GT: Dense/ 295 to base – >Creeps Struct > G/ 314 to base – Tr Pb @ 323 – (323) (Fract Pb @ 275)
348	579	5	SB–0 B/ – <B/ – > Vesic B/ – >Stylo – <2nd Dolo / – Smack Tr Pb @ 328 – 6" >MG/ Creeps @ 342 – 1' @ 346 – (348)
355	572	Pr	GEM–MGB>0 B/ – 1' GEM –>G/ @ 349 – GB>0>B/ Stylolitic @ 351 – 1' GEM –– @ 352 3' GB >–– >B/ @ 354 – 6" GEM –– >G/ @ base – (355)
364	563	5	GT>0; E/; >M – Slightly O – Stylo – >M/ w/ b @ 357 / 359 – 6" G>0 E/ >K/ @ 361 – (364)
383	544	5F	FT/GTMG/ – Snurly – Fairly Fresh – Fine G/ / >M in matrix – 1' w/ Pb in bedding plane + >Diss Pb @ Base – (383)
394	533	5	Dense GT>0 Massive; >E – 2' E LG Massive @ 385 – Fairly Massive GT>0 385 to 390 – 1' >MaG/ @ 391 – 3' >Massive GT>0 @ base – (394)
423	504	7	F/GTMG/; GTG/>0 – Dmly F w/ >M GT>G/ matrix – 4' GT>M <Fine G/ @ 413 – 2' Massive GT @ 416 – 2' <G/ GT>0 @ 418 – From F w/ Tr Pb 418 to base – (423)
441	486	7-10	To–FT/GTG/–GT>0 – 2' To >Stylo @ 425 – 1' >F @ 426 – GT0>G/ 426 to 434 – 2' Snurly >F @ 436 – >Massive GT>G/ 436 to 441 – (441)
487	440	16	FT/GTMG/ – Fresh Prominant F w/ GT<M Mod G/ matrix – >Cq Patches @ 457 / 472 – 3' Massive Reef @ base – (487)
515	412	18-19-20	Permit Boulders & Cob: LGSD: LG S – >Weathered Pisolite Boulder 487 to 491 – 6" LGSD @ 492 – Cob & Pebs 493 to 494 – 1' LG Dolo Sand @ 495 – 1' Pebs & >Gnbl w/ D matrix @ 496 – 2' Lamite Type Sandstone @ 498 – 1' Cobbles & Pebs @ 499 – 2' Lamite Type @ 501 – 2' Boulder & Cobs w/ >Sandy matrix To Sand Base – 10' Ground 505 to 515 – (515)
529	398	21	Dark Purple Porphyry – Weathered – 6" Weathered & Fract w/ <Fine Sulfides @ 521 Dark Purple >Flow/ Banded >Scat Light Colored Minerals 521 to base – (529)

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JOPLIN, MO.

STARTED 3-31-58

FORM 1173-2-54

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205

DATE BOTTOMED 4-3-58	ST. NO. VC-102 ST. ELEV.	CLASS PAY HOLE NO. 58VC65
DESCRIBED BY J. A.	AREA COURTOIS	ELEVATION COLLAR 1052.49
DATE ESTIMATED 4-7-58	OPTION NO. CZ-64	COORDINATES: N 112841.77 E 89040.78
BY J. A.	TRACT J. BREAKFIELD	200 FT. MAP NO. 46 M 50 FT. MAP NO. 781
		NE¼-NE¼-SEC.18

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 42" FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	210.0	842.5
SLEEVE BIT TO		
BEGAN CORING AT		
SAVED CORES FROM	435.0	617.5
FORMATIONS:		
SOIL TO	68.0	984.5
"		
EMINENCE "		
POTOSI "	195.0	857.5
POTOSI-DERBY "		
DERBY DOE RUN "	S.B.	
DAVIS (C.B.-S.B.) "	441.0	611.5
BONNE TERRE "	677.0	375.5
B. T. TRANS. "	683.0	369.5
CONGLOMERATE "	—	
LA MOTTE "	695.0	357.5
GRAN. OR POR. "	—	
PICTURES: FROM	435.0	617.5
TO	695.0	357.5
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 560'S 120'W T35N-R1W

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ZN ASSAY	% ZN EST.	FT. %	REMARKS	CORE REC. TO	CORES LOST
	452.3	452.4	600.1	0.1		Tr.					SPECK	255	
	459.3	459.6	592.9	0.3		Tr.					: SEAM	275	SB
	501.4	501.5	551.0	0.1		Tr.					SPECK	435	
	521.6	522.3	530.2	0.7		Tr.					"	451	0.7
	524.2	525.0	527.5	0.8	0.6	1.0	0.5				Diss	465	0.5
	525.5	530.5	522.0	5.0	24.0	30.0	120.0	2.0	2.0	10.0	Band + Diss	485	0.6
	530.5	532.7	519.8	2.2	18.8	25.0	41.4	0.9	2.0	2.0	" "	505	—
	532.7	533.2	519.3	0.5		Tr.			Tr.		SPECK > FeS	525	0.2
	534.6	535.3	517.2	0.7		Tr.					"	545	0.3
	535.3	535.7	516.8	0.4	1.3	1.5	0.5		Tr.		Diss	605	
	676.2	678.9	373.6	2.7		Tr.					Diss	619	0.7
												695	—

519.8 - 8.5 - 20.2 - 1.4 ZN
516.8 - 3.0 - Tr.
373.6 - 2.7 - Tr.

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MAY 15 1958

BUREAU OF MINES
JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY A DATE 4-7-58 MINE Courtois STOPE STAKE NO. VC102 HOLE NO. 58VC65

COLLAR ELEV. 1050. PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
255	795	BEGAN CORING	
271	779	Derby	Doe Run — alternating oolite & thin bedded — slightly sandy — (271)
		Derby	Davis Transition — start solid Bit @ 275 contact ground
441	609	Davis	Shale — Solid Bit 275 - 435 (441)
		Bonne Terre	
491	559	1	GTO massive — thin bed — sandy faint to med oolite — massive appearance top to 444 — thin bedded & banded 444 - 473 — sandy 473 to base — 4' N16 Base — ≥ porous oolitic patches — ≥ pitting & small vugs — thin Rbs — ≥ dickite patches — tr Pb — (491)
503	547	5-1	GTOBB ≥ loose ≥ faint oolit — med Bta — ≥ dense Bands — few thin Rbs — ca patches & bands — ≥ pitting & small vugs — tr Pb (503)
528	522	5	GTOBB slightly porous faint to med oolite — med Bta — < pitting & vugs — ≥ porous oolitic patches — few thin Rbs — ≥ dense Ca patches — ca dickite ta — tr Pb toward Base — (528)
538	512	8	GT slightly sandy ≥ N1 GT slightly sandy — N1 increasing toward Base — few thin Rbs — good Pb & ZN to pt 534 — tr Pb 534 to Base ≥ pitting — few vugs — (538)
560	490	5	GTOGBBF faint to med oolite — med Gta increasing toward Base — ≥ pitting & fracturing — few thin Rbs — ≥ ca ta — (560)
573	477	5	GTO thin bedded ilio faint to med oolite — 1' GTO top — few thin Rbs (573) ≥ pitting — thin bed throughout —
599	451	7	F GTO N1 = thin bed thin roof rock — faint oolite top to 585 — good roof rock 585 to base — ≥ short sections thin bed ≥ Gta ≥ ca Hard — few thin Rbs — ≥ pitting — (599)
618	432	10-7	GTO thin bed — F Zonal faint oolite ≥ thin bed & fracturing top to 605 — 605 - 616 — F 605 - 618 616 - 618 — ≥ fracturing — ca patches ≥ pitting — (618)
637	413	12-10	GTO ≥ oolites slightly sepy — short oolite sections — thin Rbs — fracturing — ca ta — ≥ small Gta — (637)
677	373	12	GTN1 = Gta — = F stained sepy GTN1 small Gta — many thin Rbs — F 647 - 651 — 3' GTO 660 - 663 — tr Pb @ Base — (677)
683	367	19	GT = B - GD = slightly sepy & thin Rbs & tr Pb top to 680 — GD3 very sandy 680 - 683 — ≥ ca ta — (683)
695	355	20	GD sand good sand med grain — sandy — clean — ≥ fos — ≥ thin FHbs — (695)

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BUREAU OF MINES
JOPLIN, MO.

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FORM 1173-2-84

STARTED 4-3-58

DATE BOTTOMED	ST. NO. VC-112 ST. ELEV.	CLASS PAY HOLE NO. 58VC60
DESCRIBED BY C.A.	AREA COURTOIS	ELEVATION COLLAR 931.31
DATE ESTIMATED 4-10-58	OPTION NO. CZ-15	COORDINATES: N 109342.61 E 86023.70
BY C.A.	TRACT LEWIS MERRITT	200 FT. MAP NO. 55 MT 50 FT. MAP NO. 860
		SE¼-SW¼ SEC. 18

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 0.5' FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	70.0	861.3
SLEEVE BIT TO		
BEGAN CORING AT	305.0	626.3
SAVED CORES FROM	305.0	626.3
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	318.0	613.3
BONNE TERRE "	551.0	380.3
B. T. TRANS. "	588.0	343.3
CONGLOMERATE "	—	
LA MOTTE "	611.0	320.3
GRAN. OR POR. "	—	
PICTURES: FROM	305.0	626.3
TO	611.0	320.3
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 1150'N 2090'E T35N-R1W

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ZN ASSAY	% ZN EST.	FT. %	REMARKS	CORE REC. TO	CORES LOST
	381.0	381.2	550.1	0.2	6.0	20	1.2				Pb IN STYLO	305	
	384.7	384.8	546.5	0.1		Tr.					SPECK	611	—
	386.3	387.1	544.2	0.8	15.0	12.0	12.0						
	387.1	387.9	543.4	0.8		Tr.					SPECKS		
	387.9	389.3	542.0	1.4	4.2	3.0	5.9						
	389.3	390.3	541.0	1.0		Tr.					SPECKS		
	390.3	391.2	540.1	0.9	3.9	3.0	3.5						
	391.8	394.8	536.5	3.0	1.9	2.0	5.7						
	394.8	396.1	535.2	1.3		Tr.							
	401.4	406.4	524.9	5.0	6.4	4.0	32.0	6.8	4.0	34.0			
	406.4	411.7	519.6	5.3	5.4	3.0	28.6	5.3	5.0	28.1			
	412.4	415.4	515.9	3.0	0.1	Tr.	0.3	2.2	3.0	6.6			
	445.5	445.6	485.7	0.1		Tr.					SPECK		
	505.4	505.5	425.8	0.1		Tr.					FRACT		
	588.9	589.0	342.3	0.1		Tr.							
	590.4	590.5	340.8	0.1		Tr.							

536.5 - 13.8 - 2.1

515.9 - 14.0 - 4.4 - 4.9 ZN.

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BUREAU OF MINES
JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE 9-10-58 MINE Consolidated STOPE STAKE NO. VC 112 HOLE NO. 58VC69

COLLAR ELEV. 931.4 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
305	626	BEGAN CORING	
318	613	DAVIS	(318)
		BOUNDARY	
364	567	1	LT>0 MASSIVE & GT irreg DENSE - FAIRLY MASSIVE LT>0 318 TO 346 - STYLO - >irreg DENSE b GT - FIRED 346 TO BASE - (364)
377	554	1-5	GL -> BL DENSE b - > irreg b FINE b > POROUS - > BL THROUGH - (377)
404	527	5	GB>0 BL pz - > STYLO - pz - BL - > 2ND D L - 3" Pb @ 387 & 6" DISS Pb @ 390 - 1' > VUGGY w/ GOOD Pb & Pz IN @ 403 - Z IN 403 TO 404 - (404)
412	519	PR	GM > GB irreg & POROUS - SCATTERED Pb & Z IN 404 TO 411 - > M GT 404 TO 406 - 1' POROUS irreg GB @ 407 - GM > 407 TO 409 - POROUS irreg GB 409 TO 410.5 - 5" GM > GL @ 411 - 6" GB pz @ 411.5 - 6" GL STYLO & @ BASE - (412)
443	488	5	GT>0 > X GL pz - > POROUS & PATCHES - SMALL VUGS - FAIR Z IN 413 TO 415 - MED GL 422 TO BASE - > TO MED ? > X - (443)
452	479	5	MASSIVE GT > DENSE - > COLOR BANDED - TR Pb @ 446 - > STYLO - > DENSE - > FINE GL - (452)
482	448	7	F/GTMGL pz - < POROUS > FRACT - CONSIDERABLE FINE GL MATRIX - GOOD REPL STRUCT - (483)
510	421	7-10	F/GTMGT - 5' GT>0 > GL @ 492 - 1' SNUBL F @ 493 - GT>0 MASSIVE > GL 493 TO 508 - 1' > F SNUBL TO 509 - 1' GT > GL @ 510 - (510) (> FRACT Pb @ 505 -)
551	380	16	F/GTMGL irr GT - FROM F w/ MED HEAVY M > GL MATRIX 510 TO 538 - 2' GT @ 540 & 547 - FRACT - POROUS - (551)
588	343	17-19	LGT : GL D. - VERY SANDY - BANDED LGT 551 TO 556 - GL > EDS - SANDY > 17 ZONE APPEARANCE - BANDING & COLOR BANDING - ∗ FINE SULFIDES - (588)
611	320	20	W GT - 1' GS w/ SULFIDE INTERES & CONCENTRIC SULFIDE MARKINGS @ 590 - TR L @ 590 - CLEAN W 590 TO BASE - (611)

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JOPLIN, MO.

FORM 1173-2-54

15

4-10-58

DATE BOTTOMED		ST. NO. VC-107	ST. ELEV.
DESCRIBED BY	C.A.	AREA	COURTOIS
DATE ESTIMATED	4-17-58	OPTION NO.	CZ-50
BY	C.A.	TRACT	E.R. LARAMORE

CLASS TRACE HOLE NO. 58VC75

ELEVATION COLLAR 1110.80

COORDINATES: N 110113.33 E 84944.86

200 FT. MAP NO. 55 M T 50 FT. MAP NO. 859

NW¼-SW¼-SEC. 18.

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 12" FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	200	910.8
SLEEVE BIT TO		
BEGAN CORING AT	273	837.8
SAVED CORES FROM	425	685.8
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "	280	830.8
DAVIS (C.B.-S.B.) "	441	669.8
BONNE TERRE "	651	459.8
B. T. TRANS. "		
CONGLOMERATE "		
LA MOTTE "		
[redacted] OR POR. "	655	455.8
PICTURES: FROM	437	673.8
TO	656	454.8
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 1910'N 990'E T35N-R1W

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS	CORE REC. TO	CORES LOST
1	458.0	458.2	652.6	0.2		TR						425	
"	461.0	461.1	649.7	0.1		TR						495	—
58	506.4	506.5	604.3	0.1		TR						507	1.0
50	533.0	533.1	577.7	0.1		TR						656	—
5GM~	554.9	556.0	555.8	0.1		TR							
"	558.9	559.0	551.8	0.1		TR							
7	644.0	645.0	465.8	1.0		TR	✓				VERT FRACT w/ CaO		

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JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE 4-17-58 MIN Courtois STOPE STAKE NO. VC-107 HOLE NO. 58VC75

COLLAR ELEV. 1107.2 / 1110 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
273	837	BEGAN CORING	
280	830	Derby	
283	827	Derby-Davis	
293	817	Davis	
425	685	Sonic Bit	
441	669	Davis	
		Bonne Terre	
487	623	1	T>Massive & Strong Dense L - >0 massive 441 to 470 - > Irreg. Dense L 470 to base - (487) (Tr Pb @ 458)
499	611	1-5	GB>M>B↓ - > Crepe M. > Dense L > B↓ - Ca ↓ 1 & 2nd Dolo ↓ - (499)
526	584	5	GB, B↓ - > Fine < B↓ - 2nd Dolo ↓ - > Stylo - Ca ↓ - (526)
532	578	Pr	GM ~ > G↓ & GB, B↓ - 1' GM < ~ > G↓ @ 527 - 1' GB, B↓ @ 528 - 6" GM @ 528.5 & 6" B, B↓ @ 529 - 1' GM ~ > G↓ @ 530 - 1' B, B↓ @ 531 - 1' GM ~ G↓ @ 532 - Tr Pb @ 532 - (532)
546	564	5	GB > B↓ - > 0 - > Dense B ↓ w/ patches: fairly massive - (546)
559	551	5	GM > G↓ ~ & GT, G↓ - 2' GM - - 2nd D ↓ @ 548 - 4' GT, G↓ @ 552 - 7' GM ~ G↓ > Ca veinlets @ 559 - 2' GT, G↓ > E ↓ @ base - (559) > Speck Trs Pb 554 to base -
651	459	7	F ↓ > TG↓ > M Tr fair F struct - w/ 3' GT > 0 G↓ @ 568 - 2' T, @ 573 - 1' < fine G↓ @ 585 - 2' GT < fine G↓ @ 604 - 3' T > 0 w/ fine G↓ @ 610 - < Snurly 610 to base - 4' < M & Coarse G↓ > F @ 632 - Fresh Prominent F 632 to base - 3' sec Dolo veinlet w/ Trs Pb @ 645 (651)
656	454	21	Purple Porphyry - Solid Porphyry w/ < L.E. minerals Tarnish - > High angle Dolo veining @ 652 + 655 - (655)

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FORM 1173-2-54

DATE BOTTOMED 4-18-58	ST. NO. VC-109 ST. ELEV.	CLASS PAY HOLE NO. 58VC81
DESCRIBED BY J.A.	AREA COURTOIS	ELEVATION COLLAR 1081.25
DATE ESTIMATED 4-22-58	OPTION NO. CZ-15	COORDINATES: N 109710.99 E 85234.00
BY J.A.	TRACT LEWIS MERRITT	200 FT. MAP NO. 55 M I 50 FT. MAP NO. 859 NW¼-SW¼ SEC. 18

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 12" FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	180	901.3
SLEEVE BIT TO		
BEGAN CORING AT		
SAVED CORES FROM	415.0	666.3
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "	256.0	825.3
DAVIS (C.B.-S.B.) "	418.0	663.3
BONNE TERRE "	632.0	449.3
B. T. TRANS. "		
CONGLOMERATE "	652.0	429.3
LA MOTTE "		
[redacted]. OR POR. "	653.0	428.3
PICTURES: FROM	415.0	666.3
TO	653.0	428.3
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 1510'N 1285'E T35N-R1W

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS	CORE REC. TO	CORES LOST
1 GTO THINDOL	438.2	440.2	641.1	2.0		TR						26.5	SB
" "	448.5	448.6	632.7	0.1		TR						38.5	
" "	454.6	454.7	626.6	0.1		TR						41.6	disc.
" ? SNURLY	460.7	461.8	619.5	1.1		TR						42.5	2.2
5 GTO ? SNURLY	485.5	486.5	594.8	1.0		TR						43.1	0.9
" "	486.5	486.7	594.6	0.2	1.0	1.5	0.2	594.6-1.2-Tr.			: CUBE	43.7	0.8
5 BTO ? BB	492.4	492.6	588.7	0.2		TR						50.3	—
" "	496.0	496.2	585.1	0.2		TR						51.4	2.5
5 GTO	518.7	518.8	562.5	0.1		TR						52.4	1.4
? F	538.6	538.8	542.5	0.2		TR						59.7	—
" "	539.5	539.7	541.6	0.2		TR						61.5	1.0
" "	540.4	541.7	539.6	1.3	18.0	13.0	23.4				diss: BAND PB	63.5	—
" "	543.6	544.4	536.9	0.8	2.1	1.0	1.7				: SEAM PB	64.3	7.5
" "	544.8	545.2	536.1	0.4		TR						64.8	1.0
" "	545.2	546.3	535.0	1.1	1.5	1.0	1.6				diss: fract	65.3	0.3
" "	546.3	547.0	534.3	0.7		TR							
" "	547.0	547.3	534.0	0.3	1.4	1.0	0.4	526.7-11.0-0.3			diss		
" "	547.3	549.9	531.4	2.6		TR							
" "	551.7	551.8	529.5	0.1		TR							
" "	553.7	554.6	526.7	0.9		TR							
10 TXDOG$	570.7	571.3	510.0	0.6		TR							
" "	529.7	575.4	505.9	1.7		TR							
" "	575.6	576.0	505.3	0.4	2.3	1.0	0.9				SEAM PB		
10-7TX0:F	576.5	577.1	504.2	0.6	12.3	8.0	7.4				<diss		
10-7TX0:F	579.3	580.1	501.2	0.8	0.7	1.0	0.6	490.7-16.9-0.7			diss.		
10-7FO	580.6	580.7	500.6	0.1	1.1	1.0	0.1				diss.		
" "	582.9	583.3	498.0	0.4		TR							
" "	583.3	584.0	497.3	0.7	2.5	2.0	1.8						
" "	584.0	585.4	495.9	1.4		TR							
10-7GTO	586.0	586.3	495.0	0.3		TR							

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FORM 1173-2-54

DATE BOTTOMED	ST. NO. VC-109 ST. ELEV.	CLASS PAY HOLE NO. 58VC81
DESCRIBED BY	AREA COURTOIS	ELEVATION COLLAR 1081.25
DATE ESTIMATED	OPTION NO.	COORDINATES: N E
BY	TRACT	200 FT. MAP NO. 50 FT. MAP NO.

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO		
SLEEVE BIT TO		
BEGAN CORING AT		
SAVED CORES FROM		
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "		
BONNE TERRE "		
B. T. TRANS. "		
CONGLOMERATE "		
LA MOTTE "		
GRAN. OR POR. "		
PICTURES: FROM		
TO		
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS	CORE REC. TO	CORES LOST
10 GTxo	587.3	587.5	493.8	0.2		TR							
" "	588.8	590.6	490.7	1.8	0.8	1.0	1.4				diss		
12 F7 POROUS	590.6	596.7	484.6	6.1		TR							

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BUREAU OF MINES
JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY H DATE 7-22-58 MINE [illegible] STOPE STAKE NO. [illegible] HOLE NO. 58VC81

COLLAR ELEV. 1080 25 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
252	827	BEGAN CORING	
250	824	[illegible]	(256)
262	818	[illegible] transition	(262)
418	662	[illegible] Shale — [illegible] 285 — [illegible] 415	(418)
		Gamma Terra	
466	614	1	Cto [illegible] medium-thumbed fount to med solite — [illegible] massive to to 440 [illegible] than Rb — thin bed 90° to Base — [illegible] — [illegible] — tr Rb — spilling & vug — (466)
500	580	2	Cto [illegible] thumbed fount to med solite — [illegible] & scattered — many thin Rb — [illegible] — spilling — tr Rb — spilling (500)
504	576	2	Cto [illegible] fothumbed [illegible] slightly crapey many thin Rb — small Cto [illegible] — [illegible] thumbed — [illegible] & patches — (504)
519	561	2	Cto [illegible] fount to med solite — [illegible] thin Rb — small Cto [illegible] — [illegible] fracturing — [illegible] — tr Rb (519)
570	510	7	Elvanset [illegible] wet rock — [illegible] fount to med solite & Cto in matrix — many thin Rb — many [illegible] & patches — tr [illegible] Rb 540-550 [illegible] 563 [illegible] (570)
590	490	10-7	[illegible] — med solite — small [illegible] & scattered — [illegible] — [illegible] — many thin Rb — fracturing — [illegible] (590)
632	448	10	Elvanset [illegible] wet rock — Cto in matrix — many thin Rb — [illegible] fracturing [illegible] highly [illegible] (632)
638	428	10	[illegible]
653	427	11	[illegible]

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BUREAU OF MINES
JOPLIN, MO.

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Page 1.

FORM 1173-2-54

STARTED 4-18-58

DATE BOTTOMED 4-23-58	ST. NO. VC-108 ST. ELEV.	CLASS INDICATIVE HOLE NO. 58VC85
DESCRIBED BY J.A.	AREA COURTOIS	ELEVATION COLLAR 1018.18
DATE ESTIMATED 4-28-58	OPTION NO. CZ-15	COORDINATES: N 110133.53 E 85430.70
BY J.A.	TRACT LEWIS MERRITT	200 FT. MAP NO. 55 50 FT. MAP NO.

NE¼-SW¼ SEC. 18 T35N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 3.0' FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	108.0	910.2
SLEEVE BIT TO		
BEGAN CORING AT		
SAVED CORES FROM	285.0	733.2
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "	145.0 ?	873.2
DAVIS (C.B.-S.B.) "	347.0	671.2
BONNE TERRE "	576.0	443.2
B. T. TRANS. "	—	
CONGLOMERATE "	—	
LA MOTTE "		
[redacted] OR POR. "	583.0	435.2
PICTURES: FROM	347.0	671.2
TO	583.0	435.2
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS	CORE REC. TO	CORES LOST
	352.8	352.9	665.3	0.1		Tr.						145	SB
	366.5	366.6	651.6	0.1		Tr.						245	Disc.
	374.5	374.7	643.5	0.2		Tr.						285	
	378.8	378.9	639.3	0.1		Tr.						345	—
	382.8	382.9	635.3	0.1		Tr.						363	0.3
	421.0	421.2	597.0	0.2		Tr.						523	—
	422.0	422.1	596.1	0.1		Tr.						543	1.2
	438.5	439.0	579.2	0.5		Tr.						545	0.7
	466.3	467.8	550.4	1.5		Tr.						563	—
	467.8	468.6	549.6	0.8	1.9	1.0	1.5				Diss	577	0.6
	468.6	469.5	548.7	0.9		Tr.						583	0.6
	471.4	471.7	546.5	0.3		Tr.							
	472.5	472.9	545.3	0.4		Tr.							
	474.4	475.0	543.2	0.6	0.3	2.0	0.2				Diss		
	475.7	477.0	541.2	1.3		Tr.							
	477.0	477.1	541.1	0.1	1.4	2.0	0.1				Diss		
	477.4	478.4	539.8	1.0	3.6	5.0	3.6				Diss: SEAM		
	486.6	488.4	529.8	1.8	1.1	1.5	2.0				Diss		
	489.0	490.1	528.1	1.1		Tr.							
	492.2	493.3	524.9	1.1		Tr.							
	494.4	495.8	522.4	1.4	3.8	7.0	2.0				Diss + BAND		
	495.8	496.3	521.9	0.5		Tr.							
	497.8	498.8	519.4	1.0		Tr.							
	499.7	500.2	518.0	0.5		Tr.							
	500.2	500.5	517.7	0.3	8.4	7.0	2.5						
	500.5	500.8	517.4	0.3		Tr.							
	501.3	504.0	514.2	2.7	2.0	5.0	5.4				BAND + SEAM		
	508.2	508.3	509.9	0.1		Tr.							
	517.3	517.8	500.4	0.5		Tr.							
	517.8	518.7	499.5	0.9	1.6	1.0	1.4						

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JOPLIN, MO.

FORM 1173-2-54

DATE BOTTOMED	ST. NO. ST. ELEV.	CLASS HOLE NO. 58VC85
DESCRIBED BY	AREA	ELEVATION COLLAR
DATE ESTIMATED	OPTION NO.	COORDINATES: N E
BY	TRACT	200 FT. MAP NO. 50 FT. MAP NO.

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO		
SLEEVE BIT TO		
BEGAN CORING AT		
SAVED CORES FROM		
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "		
BONNE TERRE "		
B. T. TRANS. "		
CONGLOMERATE "		
LA MOTTE "		
GRAN. OR PGR. "		
PICTURES: FROM		
TO		
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS	CORE REC. TO	CORES LOST
	525.2	525.7	492.5	0.5		Tr.							
	527.5	527.8	490.4	0.3		Tr.							
	530.2	531.0	487.2	0.8		Tr.							
	532.8	532.9	485.3	0.1		Tr.							
	535.7	536.7	481.5	1.0		Tr.							
	539.6	540.0	478.2	0.4		Tr.							
	542.0	542.1	476.1	0.1		Tr.							
	543.9	545.1	473.1	1.2		Tr.							
	547.7	548.0	470.2	0.3		Tr.							
	562.0	562.1	456.1	0.1		Tr.							
	574.6	583.0	435.2	8.4		—					HEMATITE SEAM + BAND > DISS		

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JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE [illegible] MINE Cowdale STOPE STAKE NO. JC 103 HOLE NO. 58VC 85

COLLAR ELEV. 1015.18 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
128	887	BEGAN CORING	
142	870	[illegible]	Line Run — 3' to top — 4' & root [illegible] 131-135 — thin bedded [illegible] thin lbs — [illegible] 5.5, 145 — 5.85 (145)
347	665	Lower	Shale — [illegible] 293, 299, 303, 1'@ 307 4"@ 314 (347)
		Banner	Terra
315	670	1	[illegible] thin lbs top to 363 — thin bed [illegible] (315)
[illegible]	[illegible]	1-2	[illegible] thin lbs — [illegible] (406)
432	[illegible]	2	[illegible] thin lbs — [illegible] (432)
438	577	2	[illegible] top [illegible] — [illegible] thin lbs — [illegible] (438)
441	566	2	[illegible] thin lbs — [illegible] top (441)
452	563	2	[illegible] thin lbs — [illegible] (452)
512	[illegible]	1	[illegible] thin lbs — [illegible] 507 — [illegible] (512)
525	416	1-10	[illegible] thin lbs — [illegible] (525)
528	477	10	[illegible] thin lbs — [illegible] (528)
548	457	10	[illegible] (548)
[illegible]	[illegible]	10	[illegible] (570)
575	[illegible]	10	[illegible] (575)
583	[illegible]	11	[illegible] (583)

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MAY 15 1958

BUREAU OF MINES
JOPLIN, MO.

20

205

FORM 1173-2-84

STARTED 4-21-58

DATE BOTTOMED	ST. NO. VC 114 ST. ELEV.	CLASS TRACE HOLE NO. 58VC86
DESCRIBED BY C.A.	AREA COURTOIS	ELEVATION COLLAR 967.34
DATE ESTIMATED 4-28-58	OPTION NO. CZ-15	COORDINATES: N 108915.39 E 86316.06
BY C.A.	TRACT LEWIS MERRITT	200 FT. MAP NO. 55 SE¼-SW¼ 50 FT. MAP NO. SEC 18

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 2.5' FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	125.0	842.3
SLEEVE BIT TO		
BEGAN CORING AT	185.0	782.3
SAVED CORES FROM	345.0	622.3
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "	201.0	766.3
DAVIS (C.B.-S.B.) "	367.0	600.3
BONNE TERRE "	605.0	362.3
B. T. TRANS. "	634.0	333.3
CONGLOMERATE "	—	
LA MOTTE "	655.0	312.3
GRAN. OR POR. "	—	
PICTURES: FROM	367.0	600.3
TO	655.0	312.3
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 750'N 2390'E T35N-R1W

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ZN ASSAY	% ZN EST.	FT. %	REMARKS
	442.3	442.5	524.8	0.3		Tr.					
	451.5	453.7	513.6	2.2	0.0	Tr.		0.8	1.0	1.8	
	453.7	455.0	512.3	1.3	0.0	Tr.			Tr.		Gr. 2' 447 to 455
	462.5	462.8	504.5	0.3		—		3.4	1.0	1.0	
	463.6	464.1	503.2	0.5		—			Tr.		
	483.2	484.2	483.1	1.0	0.2	1.0	0.1				FINE DISS
	491.5	493.9	473.4	2.4	0.3	1.0	0.7				"
	586.9	587.0	380.3	0.1		Tr.					FRACT
	603.0	607.0	360.3	4.0		Tr.					"

CORE REC.

TO	CORES LOST
345	
365	—
375	4.0
425	—
435	3.5
442	1.0
447	2.5
452	2.0
485	—
495	8.5
555	—
575	5.0
595	—
615	—
635	6.0
655	10.0

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JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE 1-25-58 MTN COURTOIS STOPE STAKE NO. VC 114 HOLE NO. 58VC86

COLLAR ELEV. 964 84 965 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
1[illegible]	780	BEGAN CORING	
2[illegible]	764	1 FERRY	(201)
2[illegible]	760	1 FERRY - DOUBLE	(205)
345	620	SOLID BOT	(345)
567	598	1 DOUBLE	
		1 DOUBLE TREE	
419	546	1	T. MASSIVE & GT DENSE & IRREG - MASSIVE > 0 367 TO 391 - DENSE > IRREG L 30' TO BASE W/ > B THRU'S THRU'S > 195 TO BASE - (419)
433	532	1-5	GD > 0 B↓ W/ DENSE L - BASICALLY B↓ > 0 > POROUS W/ SCATT 1 ZONE DENSE L -> (POR) L - (433)
449	516	5	B > 0 B↓ - PZ - C↓ THRU'OUT -> STYLO - OCCASSIONAL DENSE GT L - > 2ND D↓ - 1' GR'D 435 TO 440 - 2½' GR'D 442 TO 447 - (449)
463	502	5R	GM > ~ > G↓ & GB > B↓ > 0 - 1' GM > ~ @ 450 - 3' GBM > B↓ @ 453 - 2' G > M > ~ > G↓ @ 455 - 2' GR'D TO 455 - GB > 0 B↓ > POROUS 455 TO 457 - 1' GM ~ > G↓ @ 458 - 2' PZ GB B↓ > 0 @ 460 - 1' GM @ 461 - 1' C > 0 BANDED @ 462 - 1' GM > ~ > E↓ @ BASE - TRACES Pb & Zn THRU'OUT - (463)
494	471	5	T. DENSE & GT. - G↓ & POROUS - 7' FAIRLY DENSE T. MASSIVE @ 470 - < POROUS > G↓ > X GT. MASSIVE 470 TO 494 - 2' > FRACT 485 - (494)
501	464	5-7	FINE GRAIN REEF? - 3' GOOD TAN MEL 0 > COLOR BANDED @ 497 - 2' < VUGGY REEF APPEARANCE W/ > FeS TRACES @ 499 - 2' MASSIVE TAN 0 > COLOR BANDED @ 501 - (501)
536	433	7-10	PZ F/ & GTM > G↓ - GT. G↓ - DENSE FINE GD - 5' PZ > F @ 506 - 1' GT > 0 @ 507 - 3' > F > POROUS @ 510 - 1' GT. PZ > G↓ @ 511 - 3' F @ 514 - 3' GT. > POROUS > G↓ @ 517 - 1' > F @ 518 - 2' < POROUS G↓ @ 520 - > 1' F & C↓ @ 522 - 5' GT. PZ > G↓ @ 527 - 2' DENSE FINE GRAIN D W/ > THIN Pb @ 529 - 1' VUGGY GT @ 530 - 1' PZ GT. G↓ @ 531 - 1' GT > IRREG W/ > REEF DEBRIS 532 - (532)
565	400	10-7:12	GT. F: GTM > CREPE - 5' MASSIVE GT > 0 > STYLO > COLOR BANDING @ 537 - 2' > REEFY @ 539 - 4' GT. > COLOR BANDING @ 543 - 1' F @ 544 - 1' GT. @ 545 - 4' > REEFY > VUGGY @ 549 - FAIRLY MASSIVE GT. 549 TO 560 - 1' > GT. > THIN BEDDED > K↓ @ 561 - 1' > REEFY @ 562 - 2' GTM > CREPE 12 TYPE @ 564 - 1' GT. > K↓ & THIN BEDDED @ 565 - (565)
605	360	16-10	F/ & GTMG↓: B↓: T. ——— PROMINANT F STRUCT W/ MED HEAVY M↓ > G↓ MATRIX 565 TO 586 - 5' GT. @ 591 - 6' GT. > G↓ & B↓ > K↓ @ 597 - 4' MASSIVE GT. G↓ @ 601 - TR FRACT Pb @ 587 - 4' N F & B↓ W/ > G↓ & LT FILLING @ 605 - 2' W/ TRS Pb @ BASE ALSO FeS - (605)
634	331	19-20	G: 1 & BANDED CALCITIC LAMAMMA TYPE - 2 TRS Pb @ 607 - 5' < SANDY D↓ > IGNEOUS PEBBLES @ 610 - 4' LAMMA TYPE - BANDED > F↓ & CALCITIC @ 614 - G & D↓ 14 TO 616 - 2' BANDED CALCITIC LAMMA @ 618 - G↓ W/ BANDED CALCITIC LAMMA TYPE W/ SCATT DRAMITIC BANDED TRS FeS 618 TO BASE - (634)
655	310	20	W - CLEAN MEL FINE GRAIN - FeS ↓ - 10' GR'D 635 TO 655 - (655)

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BUREAU OF MINES
JOPLIN, MO.

205

15

FORM 1179-8-54

STARTED 4-23-58

DATE BOTTOMED 4-28-58	ST. NO. VC-110	ST. ELEV.	CLASS PAY
DESCRIBED BY J. A.	AREA COURTOIS		HOLE NO. 58VC89
DATE ESTIMATED	OPTION NO. CZ-15		ELEVATION COLLAR 1137.66
BY J. A.	TRACT LEWIS MERRITT		COORDINATES: N 109150.29 E 84021.01
			200 FT. MAP NO. 55 50 FT. MAP NO.

SW1/4 - SW1/4 SEC. 18

T35N-R1W

930'N 80'E

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 2.0 FT.

FORM. BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH		
CHURN DRILL TO	240.0	897.7
SLEEVE BIT TO		
BEGAN CORING AT		
SAVED CORES FROM	479.0	658.7
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "	275.0	862.7
DAVIS (C.B.-S.B.) "	488.0	649.7
BONNE TERRE "	733.0	404.7
B. T. TRANS. "	735.0	402.7
CONGLOMERATE "	737.0	400.7
LA MOTTE "	—	
~~CRAN.~~ OR POR. "	747.0	390.7
PICTURES: FROM	479.0	658.7
TO	747.0	390.7
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ZN ASSAY	% ZN EST.	FT. %	REMARKS	CORE REC. TO	CORES LOST
	503.4	503.7	634.0	0.3		Tr.					seam	275	SB
	645.6	645.7	492.0	0.1		Tr.						315	Disc
	646.8	650.5	487.2	3.7	8.4	7.0	31.1				diss band	479	
	650.5	653.1	484.6	2.6	18.2	16.0	47.3	2.3	1.5	6.0	" "	495	2.4
	653.7	655.0	482.7	1.3	15.7	14.0	20.4				Tr. Mico, Sandb	515	
	655.3	658.7	479.0	3.4	6.7	10.0	22.8				diss	517	0.7
	658.7	659.5	478.2	0.7		Tr.		472.7-18.2-7.4				655	
	659.5	665.0	472.7	5.5	2.2	3.0	12.3				diss	675	0.3
	665.0	665.7	472.0	0.7		Tr.						695	
	665.7	666.1	471.6	0.4	0.9	2.0	0.4				diss	715	0.4
	666.1	667.4	470.3	1.3		Tr.						739	
	668.8	669.9	467.8	1.1		Tr.						747	0.9
	669.9	670.2	467.5	0.3	4.4	3.0	1.3				diss		
	670.2	672.8	464.9	2.6		Tr.							
	674.0	680.0	457.7	6.0		Tr.					diss		
	680.0	681.0	456.7	1.0	0.7	1.0	0.7						
	681.0	681.6	456.1	0.6		Tr.							
	681.6	683.9	453.8	2.3	0.6	2.0	1.4						
	684.9	685.4	452.3	0.5		Tr.							
	687.3	688.1	449.6	0.8		Tr.							
	689.1	689.4	448.3	0.3		Tr.					band		
	690.9	695.7	442.0	4.8		Tr.							
	697.3	706.9	430.8	9.6		Tr.							
	709.9	710.0	427.7	0.1	14.8	8.0	1.5						
	710.9	711.0	426.7	0.1		Tr.							
	712.1	712.6	425.1	0.5		Tr.							
	714.8	715.0	422.7	0.2		Tr.							
	716.1	716.3	421.4	0.2		Tr.							
	717.6	719.5	418.2	1.9		Tr.							
	726.4	729.0	408.7	2.6		Tr.							

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BUREAU OF MINES
JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY J.H. DATE 4-30-58 MINE Courtois STOPE STAKE NO. VC HOLE NO. 58 VC 27

COLLAR ELEV. 1135.[illegible] PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
240	896	BEGIN CORING	
275?	861	Derby	Dec Run — Dest to to 242 — thin bed calite 242-262 — massive calite 262-266 — slightly sandy GTO 266-270 — E 240-249 & 249-[illegible] 269 — contact SR — GTO 270-315 — Decided 315-479 — 2% x (275)
488	648	Davis	Shale — (488)
		Bonne Terre	
535	601	1	GTO thin bed — sandy — fairly massive w/ few thin Pb — spaces calite patches top to 501 — thin bedded 501-515 — sandy appearance 515-535 — pitting & small vugs — tr Pb — [illegible] (535)
547	589	5-1	GTO > Bt > Dense, tight calite — > Bt scattered — [illegible] few thin Pb's — pitting & small vugs — [illegible] (547)
574	5[illegible]	5	GTO Bt irregular bed — faint to med calite — > Bt — many thin Pb's — pitting & small vugs — tr Fe — [illegible] patches — [illegible] (574)
580	556	8	GTM > Gt = TO 1 GTM > Gt @ top 577, [illegible] Base — 7.0 in 575, 578 — thin Pb's — faint to med calite — pitting — [illegible] (580)
618	518	5	GTO > Bt in med calite — fairly massive top to 570 — slightly thin bed 570 to Base — > M & Bt scattered — many thin Pb's — [illegible] — [illegible] > M & Bt @ 613 (618)
667	469	7	FTGTM — good fresh appearing rock — > small Gt scattered — many thin Pb's — [illegible] — calite 656 to Base — good Pb & faint ZN 676 to Base — > pitting — tr [illegible] (667)
674	462	10-7	GTO — rock appearance 670-674 — med calite — fairly massive tr Pb — (674)
691	445	10	GTO > M thin bed — med calite — thin Pb's — > Pb's — tr Pb — pitting tr Fe's — (691)
704	432	12	GTM fairly crappy — many thin Pb's — < M — tr Pb — 4" Fe val — short rock to Base — (704)
718	416	12	GTRO > M faint to med calite — small x — scattered M — few thin Pb's — pitting & small vugs — (718)
733	403	12	FTGTM > Gt fair rock — appears Marbleized — > small Gt 727-729 — > pitting — few thin Pb's — > dickite tr — (733)
735	401	20?	LGS-D med grain — < grit & pebbles — tr Fe — dirty appearance — (735)
737	399	18	Conglomerate purple porphyry pebbles & grit w/ Dc matrix (737)
747	389	21	solid Porphyry purple color — < fracturing — [illegible] — flow Banded (747)

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MAY 15 1958

BUREAU OF MINES
JOPLIN, MO.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
Box 431
Joplin, Missouri
May 13, 1958

OFFICIAL FILE COPY
DMEA
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DATE	INITIALS	[illegible]
5/15	C	220
"	[illegible]	110
5/16	[illegible]	500

DMEA Operating Committee
Department of the Interior
Washington 25, D. C.

Re: DMEA-4582(lead-zinc-copper)
St. Joseph Lead Co.
Courtois Area
Washington County, Mo.
Contract Idm-E1068

Dear Sirs:

Forwarded herewith are your two copies of the MF-104 Monthly Voucher, MF-104A and the Operator's Monthly Report covering the March work on the cited project. The voucher data received from the Finance Officer is posted on both MF-104s.

Sincerely yours,

Clinton C. Knox

Clinton C. Knox
Executive Officer
DMEA Field Team, Region IV

encl. 6

cc: DMEA Op.Com.
Amos,USGS,Carbondale
King,USGS,Denver
4582 file

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

Budget Bureau No. 42-R1036.5

DMEA-Washington

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

Month of March, 1958 Docket No. DMEA 4582 Contract No. Idm-E 1068
Operator's Name St. Joseph Lead Company Minerals Pb - Zn - Cu
Address Bonne Terre, Missouri
Contract Amount, $ 298,560.00 Government Participation: 50 % Amount, $ 149,280.00

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	5001.66	145687.50	150689.16	7/17/58		
Bulldozing						
Grasscutting						
Drilling						
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	54.00	352.00	406.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	5055.66	146039.50	151095.16			

RECEIVED DIVISION OF MINERAL TECHNOLOGY APR 23 1958 BUREAU OF MINES JOPLIN, MO.

RECEIVED DIVISION OF MINERAL TECHNOLOGY APR 16 1958 BUREAU OF MINES JOPLIN, MO.

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

Date 4-15-58 *Payee St. Joseph Lead Company

Per E. A. Jones Title DIVISION MANAGER

*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:

$ 2,527.83

Signature
(Authorized Certifying Officer)

Date 5-8-58 Vou. No. 4-32

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Idm-E1068 in accordance with the terms of the contract.

Signature Henry H. Amos Title Geologist-USGS Date Apr. 21, 1958

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Clinton C. Knox Title Executive Officer Date May 5, 1958

MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of March 1958 Docket No. DMEA 4582 Contract No. Idm-E 1068

Operator's Name St. Joseph Lead Company Minerals Pb - Zn - Cu

Address Bonne Terre, Missouri

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core	Ft.	3614.26	1583	114600.64	51712	$2.22		
Churn	Ft.	1487.40	670	35838.52	16166	2.22	133420	$2.22
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Analytical Determinations	En.	54.00	54	406.00	406	1.00	2370	1.00
TOTAL DISTRIBUTED COSTS		5055.66		151095.16				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		5055.66		151095.16				

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 4-15-58 Operator St. Joseph Lead Company

Per E. Jones Title DIVISION MANAGER

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)

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APR 16 1958
BUREAU OF MINES
JOPLIN, MO.

INSTRUCTIONS

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

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

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

GPO 872894

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MONTHLY REPORT FOR MONTH OF MARCH, 1958

D.M.E.A. Project #4582 - Contract #IDM-E 1068

Two churn drills were operating in the area at the end of the month. The holes in progress was Stage II, Stake No. C-110 at a depth of 10 feet and Stage II, Stake No. C-104 at a depth of 50 feet.

The following churn drill holes were completed through overburden and chert-bearing formations and cased preparatory to diamond drilling during the month:

Stage No.	Stake No.	Feet Depth	Starting Date
II	VC-107	200	3-12-58
II	VC-108	105	3-24-58
II	VC-109	180	3- 4-58
II	VC-114	125	2-24-58
II	VC-117	60	2-19-58

Two diamond drills were operating in the area at the end of the month. The holes in progress were Stage II, Stake No. C-106 at a depth of 235 feet and Stage II, Stake No. C-102 at a depth of 275 feet.

The following diamond drill holes were completed during the month:

Stage No.	Stake No.	Prospect Hole No.	Bottom Depth	Feet of Diam. Drilling	Date Completed	Class.
II	VC-119	58VC57	538	538	3- 6-58	Indic.
II	VC-94	58VC54	725	540	3- 3-58	Trace
II	VC-92	58VC58	735	505	3- 7-58	Trace

Analysis of results gained by drilling is shown in abstracts of our weekly reports to St. Joseph Lead Company, which are enclosed.

Included in this report are photostats of Rock Classification and Mineralization sheets and the number of analytical determinations omitted in the previous monthly report.

54 analytical determinations were made during the last two months.

Analytical determinations made during February 1958 are as follows:

58VC30	-	4 Pb	
58VC31	-	1 Pb	
58VC32	-	3 Pb	
58VC36	-	4 Pb	1 Zn
58VC39	-	6 Pb	4 Zn
58VC43	-	5 Pb	3 Zn
58VC47	-	6 Pb	4 Zn
58VC48	-	3 Pb	
58VC51	-	2 Pb	

Analytical determinations made during March 1958 are as follows:

58VC54	-	2 Pb	
58VC57	-	3 Pb	
58VC58	-	2 Pb	1 Zn

WASHINGTON COUNTY

Courtois Area - In DMEA Project #4582

Week Ended March 10, 1958

2 diamond drills operating and 2 churn drills setting casing completed 1 trace hole.

58VC54, stake #VC94, a trace hole, is located 2500 feet south of the village of Courtois and 520 feet northeast of a pay hole. It bottomed at 725 feet depth in Lamotte sand. Trace lead was present in the lower 5 zone, best of which was estimated as 0.7 foot of 2.0% Pb at 559 feet depth and 0.1 foot of 1.5% Pb at 579 feet depth. This hole is apparently on the east edge of the ore trend.

Period Ended March 31, 1958

2 diamond drills operating and 2 churn drills setting casing completed 2 trace holes.

58VC57, stake #C119, a trace hole, is located about 6,000 feet south-southwest of the village of Courtois and in the general Courtois ore trend. It bottomed at 538 feet depth in Lamotte sand. Mineralization was present in the lower 5 zone above the lower 5 reef, best of which was estimated as 0.4 foot of 15.0% Pb at 379 feet depth and 3.6 feet of 1.5% Pb at 390 feet depth.

58VC58, stake #C92, a trace hole, is located about 2,000 feet south of the village of Courtois and 520 feet south-southeast of a pay hole. It bottomed at 735 feet depth in Lamotte sand. Lead and zinc mineralization was present in the 5 zone above the lower 5 reef, best of which was estimated as 0.4 foot of 3.0% Pb at 578 feet depth and 0.7 foot of 1.0% Pb and 1.9% Zn at 579 feet depth.

Date Started - 3-3-58

15

FORM 1173-2-54

DATE BOTTOMED 3-7-58 ST. NO. VC-119 ST. ELEV. _____ CLASS INDICATIVE HOLE NO. 58VC57

DESCRIBED BY C.A. AREA COURTOIS ELEVATION COLLAR 916.4

DATE ESTIMATED 4-1-58 OPTION NO. CZ-64 COORDINATES: N 111283.35 E 87851.63

BY C.A. TRACT J. BREAKFIELD 200 FT. MAP NO. 55 50 FT. MAP NO. _____

SE¼-NE¼-SEC. 18 T35N-R1W 2150'S 1130'W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 6" FT.

FORM BOTT. SL. _____

		DEPTH	ELEV.
DRILLED WITH:			
CHURN DRILL TO			
SLEEVE BIT TO		7.0	909.4
BEGAN CORING AT		115	801.4
SAVED CORES FROM		265	651.4
FORMATIONS:			
SOIL	TO		
	"		
EMINENCE	"		
POTOSI	"		
POTOSI-DERBY	"		
DERBY DOE RUN	"		
DAVIS (C.B.-S.B.)	"	283	633.4
BONNE TERRE	"	514	402.4
B. T. TRANS.	"	515	401.4
CONGLOMERATE	"		
LA MOTTE	"	538	378.4
GRAN. OR POR.	"		
PICTURES:	FROM	273	643.4
	TO	538	378.4
CHAR. SAMPLES:	FROM		
	TO		
INSOL. RES.:	FROM		
	TO		
OPENINGS AT			

MINERALIZATION RECORD

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS	CORE REC. TO	CORES LOST
5GBo	378.6	379.0	537.4	0.4	19.0	15.0	7.6				: CONCENTRATED	265	
5F	379.0	383.0	533.4	4.0		TR					SPECKS	518	—
"	386.8	388.2	528.2	1.4	2.0	1.0	2.8				DISS	538	14.0
"	388.2	389.1	527.3	0.9		TR					SPECKS		
"	389.1	390.4	526.0	1.3	4.7	3.0	6.1				: < DISS		
"	393.0	399.0	517.4	6.0		TR					SPECK		
5To	413.0	413.1	503.3	0.1		TR					"		
7-10	443.8	444.0	472.4	0.2		TR					"		
"	448.0	448.1	468.3	0.1		TR					"		
10-12	466.9	467.0	449.4	0.1		TR					"		
"	469.0	469.1	447.3	0.1		TR					"		
"	484.0	484.1	432.3	0.1		TR					"		

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BUREAU OF MINES
JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE [illegible] ~~MINE~~ [illegible] STOPE ..... STAKE NO. HC-119 HOLE NO. [illegible]

COLLAR ELEV. [illegible] PITCH ..... BEARING ..... COORD.: N ..... E .....

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
[illegible]	[illegible]	BEGAN CORING	
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]

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BUREAU OF MINES
JOPLIN, MO.

Date Started 2-26-58

20

FORM 1173-2-54

DATE BOTTOMED 3-3-58 ST. NO. VC-94 ST. ELEV. _____ CLASS TRACE HOLE NO. 58VC54

DESCRIBED BY J.A. AREA COURTOIS ELEVATION COLLAR 1013.3

DATE ESTIMATED 3-5-58 OPTION NO. CZ-164 COORDINATES: N 114782.18 E 89509.17

BY J.A. TRACT EV. WOODS 200 FT. MAP NO. 46 200M 200T 50 FT. MAP NO. NW¼-SW¼-SEC.8

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 30" FT.

FORM BOTT. SL. _____

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	185.0	828.3
SLEEVE BIT TO		
BEGAN CORING AT	185.0	828.3
SAVED CORES FROM	415.0	598.3
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-[redacted].) "	435.0	578.3
BONNE TERRE "	689.0	324.3
B. T. TRANS. "	699.0	314.3
CONGLOMERATE "		
LA MOTTE "	725.0	288.3
GRAN. OR POR. "		
PICTURES: FROM	430.0	583.3
TO	725.0	288.3
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 1380'N 330'E T35N-R1W

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS	TO	CORE REC. CORES LOST
5GTOB$>M	489.4	493.0	520.3	3.6		TR					CUBE	285	CORES disc.
5GTMO>G$	553.4	553.5	459.8	0.1		TR					SPECK	415	
" "	556.9	558.4	454.9	1.5		TR					CUBE	435	—
" "	558.4	559.1	454.2	0.7	4.4	2.0	3.1				CUBE + diss	455	16.0
" "	559.6	560.3	453.0	0.7		TR				453.0-3.4-0.9		475	10.0
7 F$GTM>0	577.8	578.0	435.3	0.2		TR					FRACT Pb	495	—
" "	579.3	579.4	433.9	0.1	1.9	1.5	0.2					515	16.0
" "	585	586.0	427.3	0.3		TR					SPECK	595	—
" "	587.0	587.2	426.1	0.2		TR					FRACT PB	608	6.0
10 GTX0>M	629.6	629.7	383.6	0.1		TR					SPECK	628	2.0
												640	—
												668	1.6
												688	—
												708	13.5
												725	13.1

205

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BUREAU OF MINES
JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY H DATE 3-5-58 MINE Courtois STOPE STAKE NO. V.C.-94 HOLE NO. 58VC54

COLLAR ELEV. 1012 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
265	747	BEGAN CORING	
269	743	Derby	Drift Transition (269)
435	577	Dawn Bonne Terre	Shale — cores recorded 285-415 (435)
461	531	1	[illegible] — [illegible] thin bedded to 415 — [illegible] [illegible] — [illegible] — thin Pb — [illegible] (461)
524	488	5	[illegible] irregular bedded [illegible] — [illegible] — thin Pb — [illegible] [illegible] (524)
527	485	8	[illegible] — [illegible] — [illegible] — [illegible] — [illegible] (527)
542	470	8	[illegible] — [illegible] — [illegible] — [illegible] — [illegible] (542)
560	452	5	[illegible] — [illegible] — [illegible] — [illegible] — [illegible] (560)
573	439	5	[illegible] — [illegible] — [illegible] — [illegible] — thin Pb (573)
609	403	7	[illegible] — [illegible] — [illegible] — [illegible] — [illegible] (609)
620	392	[illegible]	[illegible] (620)
634	378	10	[illegible] — [illegible] — [illegible] — [illegible] (634)
643	[illegible]	[illegible]	[illegible] — [illegible] — [illegible] (643)
681	333	10	[illegible] — [illegible] — [illegible] — [illegible] — [illegible] (689)
691	[illegible]	11	[illegible] — [illegible] — [illegible] — thin Pb (691)
699	[illegible]	[illegible]	[illegible] (699)
725	[illegible]	[illegible]	[illegible] (725)

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APR 16 1958

BUREAU OF MINES
JOPLIN, MO.

Date Started - 3-4-58

20.

FORM 1173-2-54

DATE BOTTOMED 3-7-58 ST. NO. VC-92 ST. ELEV. _____ CLASS TRACE HOLE NO. 58VC58

DESCRIBED BY C.A. AREA COURTOIS ELEVATION COLLAR 1041.6

DATE ESTIMATED 4-2-58 OPTION NO. CZ-164 COORDINATES: N 115303.56 E 89668.83

BY C.A. TRACT EV. WOODS 200 FT. MAP NO. 46 50 FT. MAP NO. _____

NW¼-SW¼-SEC.8 T35N-R1W

1920'N 480'E

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 12" FT.

FORM BOTT. SL. _____

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	230.0	811.6
SLEEVE BIT TO		
BEGAN CORING AT	230.0	811.6
SAVED CORES FROM	445	596.6

FORMATIONS:

SOIL	TO		
	"		
EMINENCE	"		
POTOSI	"		
POTOSI-DERBY	"		
DERBY DOE RUN	"		
DAVIS (C.B.-S.B.)	"	453	588.6
BONNE TERRE	"	711	330.6
B. T. TRANS.	"	715	326.6
CONGLOMERATE	"		
LA MOTTE	"	735	306.6
GRAN. OR POR.	"		

PICTURES: FROM 445 596.6
TO 735 306.6

CHAR. SAMPLES: FROM
TO

INSOL. RES.: FROM
TO

OPENINGS AT

MINERALIZATION RECORD

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ZN ASSAY	% ZN EST.	FT. %	REMARKS
1	478.0	478.2	563.4	0.2		TR					
5GEM	570.0	570.1	471.5	0.1		TR					
"	576.0	577.3	464.3	1.3		TR					
"	577.3	577.7	463.9	0.4	3.3	3.0	1.3				DISS
"	578.7	579.4	462.2	0.7	1.6	1.0	1.1	1.9	1.0	1.3	"
7-10	624.0	624.2	417.4	0.2		TR					

CORE REC.

TO	CORES LOST
445	
465	6.0
525	—
545	4.0
585	—
597	9.0
617	2.0
637	2.0
695	—
715	5.0
735	17.0

205

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APR 16 1958

BUREAU OF MINES
JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY ____ DATE ____ MINE ____ STOPE ____ STAKE NO. 1C 92 HOLE NO. [illegible]

COLLAR ELEV. [illegible] PITCH ____ BEARING ____ COORD.: N ____ E ____

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
	[illegible]	BEGAN CORING	
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]

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APR 16 1958

BUREAU OF MINES
JOPLIN, MO.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
Box 431
Joplin, Missouri
April 25, 1958

4/30	C	226
"		116
5/1		.500

DMEA Operating Committee
Department of the Interior
Washington 25, D. C.

Re: DMEA-4582(lead-zinc-copper)
St. Joseph Lead Company
Courtois Area
Washington County, Mo.
Contract Idm-E1068

Dear Sirs:

Forwarded herewith are your two copies of the MF-104 Monthly Voucher, MF-104A and the Operator's Monthly Report covering the February work on the cited project. The voucher data received from the Finance Officer is posted on both MF-104s.

Sincerely yours,

Clinton C. Knox

Clinton C. Knox
Executive Officer
DMEA Field Team, Region IV

encl. 6

cc: DMEA Op.Com.
Amos,USGS,Carbondale
King,USGS,Denver
4582 file

3rd cy - DMEA Washington

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

Budget Bureau No. 42-R1036.5

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

RECEIVED MAR 20 1958 D.M.E.A.

Month of February 1958 Docket No. DMEA 4582 Contract No. Idm-E 1068
Operator's Name St. Joseph Lead Company Minerals Pb - Zn - Cu
Address Bonne Terre, Missouri
Contract Amount, $ 298,560.00 Government Participation: 50% Amount, $ 149,280.00

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	10946.82	134740.68	145687.50	7/17/58		
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis		352.00	352.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	10946.82	135092.68	146039.50	✓	✓	✓

RECEIVED DIVISION OF MINERAL TECHNOLOGY MAR 11 1958 BUREAU OF MINES JOPLIN, MO.

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

Date 3-10-58 *Payee St. Joseph Lead Company

Per E. A. Jones Title DIVISION MANAGER

*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:

$ 5,473.41

Signature
(Authorized Certifying Officer)

Date 4-22-58 Vou. No. 4-31

(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. Film E-1068 in accordance with the terms of the contract.

Signature Dewey H. Amos Title Geologist USGS Date Apr. 10, 1958

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Clinton C. Kinney Title Executive Officer Date April 12, 1958

MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Form MF-104A
(April 1962)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

RECEIVED MAR 30 1958 DMEA

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of February 195 8 Docket No. DMEA 4588 Contract No. Idm-E 1068
Operator's Name St. Joseph Lead Company Minerals Pb - Zn - Cu
Address Bonne Terre, Missouri

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core	Ft.	10425.12	4696	111286.38	50129	2.22		
Churn	Ft.	521.70	235	34401.12	15496	2.22	133420	2.22
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Analytical Determinations	Ea			352.00	352	1.00	2370	1.00
TOTAL DISTRIBUTED COSTS		10946.82		146039.50				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		10946.82		146039.50				

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 3-10-58 Operator St. Joseph Lead Company

Per E. Jones Title DIVISION MANAGER

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)

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MAR 11 1958
BUREAU OF MINES
JOPLIN, MO.

(For Government use only)

C.C.R
4/17/58

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

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MAR 11 1958

BUREAU OF MINES
JOPLIN, MO.

MONTHLY REPORT FOR MONTH OF FEBRUARY, 1958

D.M.E.A. Project #4582 - Contract #IDM-E 1068

This report is complete with the exception of photostats of Rock Classification and Mineralization sheets and number of analytical determinations which will be included in the March 1958 monthly project report. This is due to a three week shut-down of operations by St. Joseph Lead Company beginning March 10, 1958.

Only churn drills will continue to operate in the DMEA Project area during the shut-down period.

Significant mineralized holes with incomplete assays have been estimated in this report.

One Stage I location and sixteen Stage II locations, approved by the DMEA field team as of February 6, 1958, have been assigned numbers as shown on the map. The Stage I and Stage II stake numbers and locations are as follows:

Stage I

C103 - 1560 feet N50°W of C55 - SE¼ SE¼ NW¼ - Sec. 5 - 35 N - 1 W

Stage II

C104 -	900	feet	N5°W of C83 -	SW¼	SE¼	NW¼	- Sec.	18	- 35 N	- 1 W
C105 -	520	"	N25°E of C83 -	NE¼	NE¼	SW¼	- "	"	"	"
C106 -	520	"	N85°E of C83 -	"	"	"	"	"	"	"
C107 -	520	"	N85°E of C48 -	SE¼	NW¼	SW¼	- "	"	"	"
C108 -	520	"	S85°W of C83 -	SE¼	NE¼	SW¼	- "	"	"	"
C109 -	900	"	S55°W of C83 -	"	"	"	"	"	"	"
C110 -	520	"	N25°E of C88 -	NW¼	SW¼	SW¼	"	"	"	"
C111 -	520	"	N35°W of C89 -	"	"	"	"	"	"	"
C112 -	520	"	N25°E of C87 -	NE¼	SE¼	SW¼	"	"	"	"
C113 -	520	"	S85°W of C89 -	SW¼	SW¼	SW¼	"	"	"	"
C114 -	520	"	N85°E of C87 -	SE¼	SE¼	SW¼	"	"	"	"
C115 -	490	"	S35°E of C88 -	SW¼	SW¼	SW¼	"	"	"	"
C116 -	520	"	S25°W of C89 -	SE¼	SW¼	SW¼	"	"	"	"
C117 -	520	"	S85°W of C80 -	NW¼	NW¼	SE¼	"	"	"	"
C118 -	1040	"	N35°W of C80 -	SW¼	SW¼	NE¼	"	"	"	"
C119 -	1040	"	N25°E of C80 -	SW¼	SE¼	NE¼	"	"	"	"

Two churn drills were operating in the area at the end of the month. The holes in progress were Stage II, Stake No. C114 at a depth of 70 feet and Stage II, Stake No. C117 at a depth of 15 feet.

The following churn drill holes were completed through overburden and chert-bearing formations and cased preparatory to diamond drilling during the month.

Stage No.	Stake No.	Feet Depth	Starting Date
II	VC-100	165	1-17-58
II	VC-112	70	2-19-58
		235'	

Two diamond drills were operating in the area at the end of the month. The holes in progress were Stage II, Stake No. C-95 at a depth of 549 feet and Stage II, Stake No. C-94 at a depth of 240 feet.

The following diamond drill holes were completed during the month.

Stage No.	Stake No.	Prospect Hole No.	Bottom Depth	Feet of Dia. Drilling	Date Completed	Class.
II	98	58VC30	607	517	2- 4-58	Pay
II	97	58VC32	605	525	2-10-58	Ind.
II	96	58VC39	763	543	2-14-58	Pay
II	99	58VC47	747	497	2-21-58	Pay(est.)
I	78	58VC31	759	539	2- 3-58	Trace
I	77	58VC36	675	495	2-12-58	Ind.
II	101	58VC43	755	530	2-19-58	Pay
II	95	58VC51	690	520	2-28-58	Ind.(est.
II	100	58VC48	695	530	2-25-58	Trace
				4696		

Analysis of results gained by drilling is shown in abstracts of our weekly reports to St. Joseph Lead Company, which are enclosed.

Photocopies of above holes and 46 assays (34 Pb, 12 Zn) rec'd 4/4/58 w/ Mar. MF-104

ack

WASHINGTON COUNTY

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MAR 11 1958
BUREAU OF MINES
ROLLA, MO.

Courtois Area - In DMEA Project #4582

Week Ended February 10, 1958

2 diamond drills operating completed 1 pay and 1 trace hole.

58VC30, stake #C98, a pay hole, is located about 2500 feet south of the village of Courtois and 520 feet northwest of 57VC48, a pay hole. It bottomed at 607 feet depth in Lamotte sand. Lead mineralization was present at the base of the main 7 reef and was estimated as 6.5 feet of 5.4% Pb at 489 feet depth. This lead is at a lower horizon than lead in 57VC48 and matches lead in a hole about 1,000 feet to the north.

58VC31, stake #C78, a trace hole, is located about 6,000 feet south of the village of Courtois and 1560 feet northeast of a speck trace hole. It bottomed at 759 feet depth in Lamotte sand. Traces of lead were present in the brown spotted 5 zone with an estimate of 1.5 feet of 2.0% Pb at 556 feet depth.

Week Ended February 17, 1958

2 diamond drills operating completed 1 pay, 1 indicative, and 1 trace hole for a total of 3 holes.

58VC39, stake #C96, a pay hole, is located about 3500 feet south of the village of Courtois and 520 feet northeast of 57VC50, a pay hole. It bottomed at 763 feet depth in Lamotte sand. Good lead and zinc mineralization is located at 590 feet depth at the top of a lower 5 zone reef and was estimated as 10.1 feet of 9.2% Pb and 5.8% Zn. This matches the lead horizon in 57VC50.

58VC32, stake #C97, an indicative hole, is located 520 feet northwest of the above hole. It bottomed at 605 feet depth in Lamotte sand. Lead assays of best mineralization were: 0.2 foot of 1.8% Pb at 413 feet depth in the middle 5 zone, 0.8 foot of 12.3% Pb at 452 feet depth at the top of the 7 reef and 0.2 foot of 1.3% Pb at 492 feet depth at the base of the main 7 reef.

58VC36, stake #C77, a trace lead and pay zinc hole, is located about 2,000 feet south of the above holes and 900 feet south-southeast of an indicative hole. It bottomed at 675 feet depth in Lamotte sand. Best mineralization is located at the top of the lower 5 reef zone and was estimated as 6.4 feet of 1.1% Pb and 2.6 feet of 20.0% Zn at 518 feet depth. This hole, on 1560-foot spacing, indicates the probability of a continuous mineral trend connecting the ore situated 2,000 feet to the north with the group of ore holes located 3,000 feet to the southwest.

Week Ended February 24, 1958

2 diamond drills operating and 2 churn drills setting casing completed 2 pay holes.

58VC43, stake #C101, a pay hole, is located about 4,000 feet south of the village of Courtois and 520 feet east of a pay hole. It bottomed at 755 feet depth in Lamotte sand. Lead and zinc mineralization was present above the lower 5 zone reef and was estimated as 6.2 feet of 16.2% Pb and 2.9% Zn at 498 feet depth.

WASHINGTON COUNTY

Courtois Area - In DMEA Project #4582 (Continued)

Week Ended February 24, 1958 (Continued)

58VC47, stake #C99, a pay hole, is located 520 feet northwest of the above hole. It bottomed at 747 feet depth in Lamotte sand. Mineralization was present in the same horizon as in above hole and was estimated as 12.9 feet of 3.2% Pb at 600 feet depth and 3.2 feet of 2.0% Zn at 591 feet depth.

Lead in this week's holes matches the horizon of lead in 4 pay holes adjacent to these holes on 520-foot spacing.

Assay returns on 58VC36, reported last week, changes its classification to indicative grade with an assay of 6.4 feet of 1.5% Pb and 5.8% Zn at 518 feet depth.

Week Ended March 3, 1958

2 diamond drills operating and 2 churn drills setting casing completed 1 indicative and 1 trace hole.

58VC51, stake #C95, an indicative hole, is located about 3,000 feet south of the village of Courtois and 520 feet southeast of a pay hole. It bottomed at 690 feet depth in 14 feet of Lamotte sand. Mineralization above the lower 5 zone reef was estimated as 1.9 feet of 6.0% Pb and matches lead in pay holes to the west.

58VC48, stake #C100, a trace hole, is located about 900 feet south of the above hole and 520 feet east of a pay hole. It bottomed at 695 feet depth in 16 feet of Lamotte sand. Trace lead mineralization was present above the lower 5 zone reef, best of which was estimated as 0.1 foot of 2.0% Pb at 510 feet depth, 1.7 feet of 1.5% Pb at 525 feet depth and 0.3 foot of 1.0% Pb at 538 feet depth.

DATE STARTED-1-30-58

7/

FORM 1173-2-54

DATE BOTTOMED 2-4-58 ST. NO. VC-98 ST. ELEV. _____ CLASS PAY HOLE NO. 58VC30

DESCRIBED BY J.A. AREA COURTOIS-WASH. CO. ELEVATION COLLAR 903.66

DATE ESTIMATED 2-6-58 OPTION NO. CZ-54 COORDINATES: N 114844.11 E 88604.62

BY J.A. TRACT RICO MASON 200 FT. MAP NO. 46 200' 50 FT. MAP NO. _____

NE¼-SE¼-SEC.7-T35N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 6" FT.

FORM BOTT. SL. _____

MINERALIZATION RECORD 1410'N 570'W

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	91.0	813.0
SLEEVE BIT TO		
BEGAN CORING AT	91.0	813.0
SAVED CORES FROM	293.0	611.0
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "	144.0	760.0
DAVIS (C.B.-S.B.) "	314.0	590.0
BONNE TERRE "	571.0	333.0
B. T. TRANS. "		
CONGLOMERATE "		
LA MOTTE "	607.0	297.0
GRAN. OR POR. "		
PICTURES: FROM	307.0	597.0
TO	607.0	297.0
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS
5GTO	417.5	417.7	486.0	0.2		TR					
7FT/GTM	482.2	482.9	420.8	0.7		TR					
" "	482.9	483.5	420.2	0.6	1.4	1.0				0.8	
" "	484.5	484.8	418.9	0.3	2.1	1.0				0.6	
" "	484.8	486.1	417.6	1.3		TR					416.2 - 5.3 - 0.3
" "	486.1	486.2	417.5	0.1	3.8	2.5				0.4	
" "	486.2	487.5	416.2	1.3		TR					
" "	487.5	489.4	414.3	1.9	19.6	18.0				37.4	
7:10FG&TO	490.8	494.7	409.0	3.9		TR					

CORE REC. TO	CORES LOST
130	—
150	6.2
195	S.B.
293	DISC
313	
319	0.9
333	2.6
338	2.9
349	3.0
361	2.8
370	1.8
376	
382	2.8
387	2.0
394	1.0
405	4.7
445	
461	2.9
475	4.0
487	0.7
567	
587	10.0
607	11.4

205

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APR 16 1958

BUREAU OF MINES
JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE 2-6-58 MINE [illegible] STOPE ..... STAKE NO. VC-78 HOLE NO. [illegible]

COLLAR ELEV. 904 PITCH ..... BEARING ..... COORD.: N ..... E .....

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
[illegible]	[illegible]	BEGAN CORING	
144	[illegible]	[illegible]	[illegible] (144)
147	[illegible]	[illegible]	[illegible] (147)
314	[illegible]	[illegible]	[illegible] (314)
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	1	[illegible] (361)
[illegible]	[illegible]	[illegible]	[illegible] (405)
[illegible]	[illegible]	[illegible]	[illegible] (411)
[illegible]	[illegible]	[illegible]	[illegible] (431)
[illegible]	[illegible]	[illegible]	[illegible] (492)
[illegible]	[illegible]	[illegible]	[illegible] (512)
[illegible]	[illegible]	[illegible]	[illegible] (500)
[illegible]	[illegible]	[illegible]	[illegible] (534)
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible] (574)
[illegible]	[illegible]	[illegible]	[illegible] (600)

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BUREAU OF MINES
JOPLIN, MO.

DATE STARTED 2-5-58

FCPM 1173-2-54

15

DATE BOTTOMED 2-10-58 ST. NO. VC-97 ST. ELEV _____ CLASS INDICATIVE HOLE NO. 58VC32

DESCRIBED BY J. A. AREA COURTOIS ELEVATION COLLAR 901.06

DATE ESTIMATED 2-11-58 OPTION NO. CZ-54 COORDINATES: N 114299.49 E 88587.05

BY J. A. TRACT RICO MASON 200 FT. MAP NO. 46 50 FT. MAP NO. _____

SE¼-SE¼ SEC. 7 T35N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR .5 FT.

FORM BOTT. SL. _____

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	80.0	821.1
SLEEVE BIT TO		
BEGAN CORING AT	80.0	821.1
SAVED CORES FROM	305.0	596.1
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "	147.0	754.1
DAVIS (C.B.-S.B.) "	321.0	580.1
BONNE TERRE "	577.0	324.1
B. T. TRANS. "	—	
CONGLOMERATE "	—	
LA MOTTE "	605.0	296.1
GRAN. OR POR. "		
PICTURES: FROM	313.0	588.1
TO	605.0	296.1
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 900'N 590'W

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS
	395.2	395.4	505.7	0.2		Tr.					
	400.7	400.9	500.2	0.2		Tr.					
	412.5	417.7	483.4	0.2	1.8	1.0	0.4				
	450.6	451.0	450.1	0.4		Tr.					
	451.5	452.3	448.8	0.8	12.3	12.0	9.8				
	491.5	491.7	409.4	0.2	1.3	1.0	0.3				

CORE REC.

TO	CORES LOST
165	SB
305	
325	
331	2.2
335	2.0
415	
431	6.0
437	2.6
451	
463	3.5
503	
507	2.0
585	
605	12.5

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APR 16 1958

BUREAU OF MINES
JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY H DATE 2-11-55 MINE [illegible] STOPE STAKE NO. [illegible] HOLE NO. [illegible]

COLLAR ELEV. 902 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
145	757	BEGAN CORING	
141	755	Lucky	Use Run [illegible]
155	747	Lucky	Down [illegible]
321	581	Lucky	Chute [illegible]
		Lucky	Zone [illegible]
367	535	[illegible]	[illegible]
			[illegible]
			[illegible]
			321
383	511	1-5	[illegible]
			[illegible]
412	410	5	[illegible]
			[illegible]
			[illegible]
415	407	5	[illegible]
			[illegible]
431	471	5	[illegible]
			[illegible]
445	457		[illegible]
			[illegible]
495	407	7	[illegible]
			[illegible]
510	[illegible]	[illegible]	[illegible]
			[illegible]
			[illegible]
531	371	[illegible]	[illegible]
			[illegible]
541	[illegible]	12	[illegible]
			[illegible]
			[illegible]
605			

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APR 16 1958

BUREAU OF MINES
JOPLIN, MO.

DATE STARTED-2-10-58

15

FCR'S 1173-2-54

DATE BOTTOMED 2-14-58 ST. NO. VC-96 ST. ELEV. CLASS PAY HOLE NO. 58VC39

DESCRIBED BY C.A. AREA COURTOIS ELEVATION COLLAR 1050.18

DATE ESTIMATED 2-18-58 OPTION NO. CZ-62 COORDINATES: N 114031.96 E 89013.70

BY C.A. TRACT H. COLE 200 FT. MAP NO. 46 ZOOM 200T 50 FT. MAP NO.

SE¼-SE¼-SEC.7-T35N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 12" FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	220.0	830.2
SLEEVE BIT TO		
BEGAN CORING AT	220.0	830.2
SAVED CORES FROM	296	754.2
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "	?	
DAVIS (C.B.-S.B.) "	474	576.2
BONNE TERRE "	725	325.2
B. T. TRANS. "	727	323.2
CONGLOMERATE "	—	
LA MOTTE "	763	287.2
GRAN. OR POR. "		

PICTURES: FROM 467 583.2
TO 763 287.2

CHAR. SAMPLES: FROM
TO

INSOL. RES.: FROM
TO

OPENINGS AT

205

MINERALIZATION RECORD 620'N 150'W

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ZN ASSAY	% ZN EST.	FT. %	REMARKS	TO	CORES LOST
1	502.0	502.1	548.1	0.1		TR					SPECK	296	
5 > O	575.4	576.4	473.8	1.0	0.2	1.0	0.1				DISS.	302	2.0
"	576.4	580.0	470.2	3.6		TR					SPECKS	467	S.B
5>M+CREPE	580.0	583.0	467.2	3.0	37.8	28.0	13.4	7.0	7.0	21.0	<Pb+Zn BANDS	482	—
"	583.0	585.4	464.8	2.4	0.4	0.5	1.0	17.3	14.0	41.5	<CONCENTRATED ZN	487	3.0
5 F	585.4	590.1	460.1	4.7	5.4	2.0	25.4	2.3	2.0	10.8	DISS.	703	—
"	590.1	591.1	459.1	1.0		TR					SPECKS		
"	592.8	593.1	457.1	0.3		TR					"		
"	594.8	595.0	455.2	0.2		TR					"		
"	595.6	596.1	454.1	0.5	0.2	1.0	0.1	2.0	1.0		DISS.		
"	596.1	597.0	453.2	0.9		TR					SPECKS		
5 GTO G$	597.0	598.2	452.0	1.2	1.7	1.5	2.0				: FeS		
5To	605.3	605.4	444.8	0.1		TR					SPECK		

470.2 – 4.6 – Tr.
460.1 – 10.1 – 13.8 – 7.3 ZN
452.0 – 8.1 – Tr.

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BUREAU OF MINES
JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE [illegible] MINE [illegible] STOPE

STAKE NO. VC 96 HOLE NO. 58VC [illegible]

COLLAR ELEV. [illegible] PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
	[illegible]	BEGAN CORING	
[illegible]	746	[illegible]	(392)
	[illegible]	[illegible]	(417)
111	[illegible]	[illegible]	(479)
		[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
			[illegible]
[illegible]	515	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible] (563)
[illegible]	[illegible]		[illegible]
			[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	T	[illegible] (651)
[illegible]	[illegible]	1-10	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	221	[illegible]	[illegible]

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BUREAU OF MINES
JOPLIN, MO.

Date Started - 2-17-58

FORM 1173-2-54

15

DATE BOTTOMED 2-21-58 | ST. NO. VC-99 | ST. ELEV. | CLASS PAY | HOLE NO. 58VC47

DESCRIBED BY J. A. | AREA COURTOIS | ELEVATION COLLAR 1063.4

DATE ESTIMATED 2-25-58 | OPTION NO. CZ-62 | COORDINATES: N 113739.20 E 89082.73

BY J. A. | TRACT H. COLE | 200 FT. MAP NO. 46 200M 200T 50 FT. MAP NO. SE¼-SE¼-SEC.7

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 8" FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	250.0	813.4
SLEEVE BIT TO		
BEGAN CORING AT	250.0	813.4
SAVED CORES FROM	455.0	608.4
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	481.0	582.4
BONNE TERRE "	737.0	326.4
B. T. TRANS. "		
CONGLOMERATE "		
LA MOTTE "	747.0	316.4
GRAN. OR POR. "		

PICTURES: FROM 305.0 758.4 TO 747.0 316.4

CHAR. SAMPLES: FROM TO

INSOL. RES.: FROM TO

OPENINGS AT

MINERALIZATION RECORD 340'N 70'W T35N-R1W

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ZN ASSAY	% ZN EST.	FT. %	REMARKS	CORE REC. TO	CORES LOST
PR GTM	587.2	587.5	475.9	0.3		TR						310	SB
PR-5GTMGTO	587.5	588.4	475.0	0.9	24.2	25.0	21.8	1.6	1.0	1.4	Pb heavy dios & cube	455	
5GTO	588.4	589.0	474.4	0.6	0.8	1.0	0.5	3.9	4.5	2.3		475	DISC.
" "	589.0	589.3	474.1	0.3		TR			TR			489	2.0
" "	589.3	590.7	472.7	1.4	6.6	5.0	9.2	0.5	2.0	0.7		685	—
5F	590.7	593.4	470.0	2.7		TR						705	1.8
" "	593.4	596.0	467.4	2.6	4.4	3.0	11.4				: SEAM	707	1.0
" "	596.0	597.1	466.3	1.1		TR						727	—
" "	597.1	599.1	464.3	2.0	1.2	1.5	2.4					747	3.0
" "	599.1	599.8	463.6	0.7		TR			TR				
" "	599.8	600.4	463.0	0.6	0.4	1.5	0.2	0.8	1.0	0.5			
" "	601.4	601.9	461.5	0.5		TR							
" "	603.3	603.4	460.0	0.1		TR					SMALL COBE		
5GTO BAND	607.6	609.0	454.4	1.5		TR					: VERT SEAM		

467.4 - 8.5 - 5.1 - 0.5 ZN
460.0 - 7.4 - 0.4 - Tr. ZN
454.4 - 1.5 - Tr.

205

Rec'd 1-00

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FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY ______ DATE ______ MINE ______ STOPE ______ STAKE NO. ______ HOLE NO. ______

COLLAR ELEV. ______ PITCH ______ BEARING ______ COORD.: N ______ E ______

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
		BEGAN CORING	

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DATE STARTED 1-31-58

FORM 1173-2-54

20

DATE BOTTOMED 2-3-58 ST. NO. VC-78 ST. ELEV. CLASS TRACE HOLE NO. 58VC31

DESCRIBED BY C.A. AREA COURTOIS ELEVATION COLLAR 1064.82

DATE ESTIMATED 2-10-58 OPTION NO. 040219 COORDINATES: N 111197.09 E 90328.29

BY C.A. TRACT U.S. FOREST LAND 200 FT. MAP NO. 56 200M 200I 50 FT. MAP NO.

SW¼-NW¼ SEC 17

GENERAL HOLE DATA

MINERALIZATION RECORD 2150'S 1200'E T35N-R1W

HT. SLEEVE ABOVE GR 3.0 FT.

FORM BOTT. SL.

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS	TO	CORES LOST
	553.8	534.6	530.2	0.8		Tr.					STREAK	485	
529.2 -	534.6	535.2	529.6	0.6	3.5	2.0	2.1				: DISS	585	—
1.8-1.2	535.2	535.6	529.2	0.4		Tr.						595	1.0
												605	4.0
												623	2.0
												759	—

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	220.0	844.8
SLEEVE BIT TO		
BEGAN CORING AT	221.0	843.8
SAVED CORES FROM	485.0	579.8
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	489.0	575.8
BONNE TERRE "	737.0	327.8
B. T. TRANS. 19+20 "	751.0	313.8
CONGLOMERATE "		
LA MOTTE "	759.0	305.8
GRAN. OR POR. "		
PICTURES: FROM	485.0	579.8
TO	759.0	305.8
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

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BUREAU OF MINES
JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY ..... DATE ..... MINE ..... STOPE ..... STAKE NO. VO 78 HOLE NO. [illegible]

COLLAR ELEV. ..... PITCH ..... BEARING ..... COORD.: N ..... E .....

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
[illegible]	[illegible]	BEGAN CORING	
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	1	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
576	49[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	423	[illegible]	[illegible]
[illegible]	43	[illegible]	[illegible]
[illegible]	4[illegible]	[illegible]	[illegible]
[illegible]	415	[illegible]	[illegible]
[illegible]	40[illegible]	[illegible]	[illegible]
[illegible]	384	1	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	377	[illegible]	[illegible]
[illegible]	32[illegible]	1	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	3[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]

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APR 16 1958

BUREAU OF MINES
JOPLIN, MO.

DATE STARTED 2-7-58

20

FORM 1173-2-54

DATE BOTTOMED 2-12-58 ST NO. VC-77 ST. ELEV. _____ CLASS INDICATIVE HOLE NO. 58VC36

DESCRIBED BY C.A. AREA COURTOIS ELEVATION COLLAR 1057.67

DATE ESTIMATED 2-13-58 OPTION NO. CZ-64 COORDINATES: N 111914.90 E 89056.27

BY C.A. TRACT JESSE H. BREAKFIELD 200 FT. MAP NO. 56 50 FT. MAP NO. _____

SE¼ - NE¼ SEC. 18

MINERALIZATION RECORD 1470'S 65'W T35N - R1W

CENERAL HOLE DATA

HT. SLEEVE ABOVE GR 2.0 FT.

FORM BOTT. SL. _____

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	180.0	877.7
SLEEVE BIT TO		
BEGAN CORING AT	265.0	792.7
SAVED CORES FROM	415.0	642.7
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "	267.0	790.7
DAVIS (C.B.-S.B.) "	428.0	629.7
BONNE TERRE "	657.0	400.7
B. T. TRANS. 19+20 "	663.0	394.7
CONGLOMERATE "		
LA MOTTE "	675.0	382.7
GRAN. OR POR. "		

PICTURES: FROM 415.0642.7 TO 675.0382.7

CHAR. SAMPLES: FROM _____ TO _____

INSOL. RES.: FROM _____ TO _____

OPENINGS AT _____

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ZN ASSAY	% ZN EST.	FT. %	REMARKS	TO	CORES LOST
	507.2	507.3	550.4	0.1		Tr.					SPECKS	265	
	510.8	510.9	546.8	0.1		Tr.					"	285	—
	511.3	511.5	546.2	0.2	2.0	1.0	0.4				"	415	SB
	511.5	513.6	544.1	2.1		Tr.			Tr.		"	575	—
	513.6	515.1	542.6	1.5	4.0	3.0	6.0		Tr.		CONCENTRATED PB	675	—
	515.1	517.7	540.0	2.6	1.1	1.0	2.9	43.0	20.0	37.2	" ZN		
	517.7	520.5	537.2	2.8		Tr.			Tr.		SPECKS		
	548.0	548.1	509.6	0.1		Tr.					"		
	604.0	604.2	453.5	0.2	0.7	1.0	0.1				DISS		
	605.0	605.1	452.6	0.1		Tr.					SPECKS		
	654.9	655.0	402.7	0.1		Tr.					"		
	656.0	656.1	401.6	0.1		Tr.					"		

544.1-64

540.0-

FE

11.00M.

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FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE [illegible] MINE [illegible] STOPE [illegible] STAKE NO. [illegible] HOLE NO. [illegible]

COLLAR ELEV. 1057 PITCH [illegible] BEARING [illegible] COORD.: R [illegible] E [illegible]

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
[illegible]	792	BEGAN CORING	
[illegible]	790	[illegible]	
[illegible]	772	[illegible]	
[illegible]	642	[illegible]	
[illegible]	629	DAVIS	
		[illegible]	
[illegible]	578	[illegible]	
[illegible]	568	[illegible]	5
[illegible]	544	[illegible]	
[illegible]	539	[illegible]	
[illegible]	536	[illegible]	
[illegible]	511	[illegible]	
[illegible]	514	[illegible]	
[illegible]	478	[illegible]	
[illegible]	444	[illegible]	
[illegible]	415	[illegible]	
[illegible]	[illegible]	[illegible]	
[illegible]	394	[illegible]	
[illegible]	[illegible]	[illegible]	

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BUREAU OF MINES
JOPLIN, MO.

DATE STARTED - 2-13-57

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FORM 1173-2-54

DATE BOTTOMED 2-19-58 ST. NO. VC 101 ST. ELEV.

DESCRIBED BY C.A. AREA COURTOIS

DATE ESTIMATED 2-20-58 OPTION NO. CZ-65

BY C.A. TRACT KELSEY CARL

CLASS PAY HOLE NO. 58VC43

ELEVATION COLLAR 1065.62

COORDINATES: N 113272.86 E 89321.70

200 FT. MAP NO. 46 200M 2007 50 FT. MAP NO.

NW¼-NW¼ SEC. 17 T35N-R1W

MINERALIZATION RECORD 130'S 170'E

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 1' FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	225.0	840.6
SLEEVE BIT TO		
BEGAN CORING AT	297	768.6
SAVED CORES FROM	465	600.6
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "	299	766.6
DAVIS (C.B.-S.B.) "	470	595.6
BONNE TERRE "	714	351.6
B. T. TRANS. "	715	350.6
CONGLOMERATE "		
LA MOTTE "	755	310.6
GRAN. OR POR. "		
PICTURES: FROM	465	600.6
TO	755	310.6
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ZN ASSAY	% ZN EST.	FT. %	REMARKS	TO	CORES LOST
1	517.9	518.0	547.6	0.1		TR						297	
5B$	542.5	542.6	523.0	0.1		TR						315	—
BANDED B$	558.6	560.6	505.0	2.0		TR						465	S.B
"	560.6	561.5	504.1	0.9	1.2	1.0	1.1	0.7	1.0	0.6		715	—
"	562.4	565.6	500.0	3.2	23.6	30.0	75.5	6.1	5.0	19.5	HEAVY DISS	735	10.0
"	565.6	566.8	498.8	1.2	3.6	3.0	4.3	1.3	1.0	1.6	DISS	755	12.0
"	568.2	569.7	495.9	1.5		TR							
"	569.7	570.3	495.3	0.6	1.7	2.0	1.0				"		
5F	570.3	573.3	492.3	3.3		TR							
"	576.3	576.4	489.2	0.1		TR							
"	578.1	578.4	487.2	0.3	1.9	2.0	0.6				"		
7-10	633.9	634.0	431.6	0.1		TR							

505.0-2.0-Tr.
498.8-6.2-13.9-3.5ZN
495.3-0.6-1.7
487.2-0.3-1.9

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FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE [illegible] MINE [illegible] STOPE [illegible] STAKE NO. [illegible] HOLE NO. [illegible]

COLLAR ELEV. [illegible] PITCH [illegible] BEARING [illegible] COORD.: N [illegible] E [illegible]

BOTTOM DEPTH	BOTTOM ELEV.	[illegible]	KIND OF ROCK (Depth at Bottom)
[illegible]	[illegible]	[illegible]	ROCK CORING
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]

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JOPLIN, MO.

Date Started - 2-24-58

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FORM 1173-2-54

DATE BOTTOMED 2-28-58 ST. NO. VC-95 ST. ELEV. _____ CLASS INDICATIVE HOLE NO. 58VC51

DESCRIBED BY C.A. AREA C COURTOIS ELEVATION COLLAR 999.1

DATE ESTIMATED 3-4-58 OPTION NO. C2-164 COORDINATES: N 114253.77 E 89483.75

BY C.A. TRACT EVERETT WOODS 200 FT. MAP NO. 46 200 M 200 T 50 FT. MAP NO. _____

SW¼-SW¼-SEC.8 T35N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 30" FT.

FORM BOTT. SL. _____

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	170.0	829.1
SLEEVE BIT TO	170.0	829.1
BEGAN CORING AT	245	754.1
SAVED CORES FROM	405	594.1
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	419	580.1
BONNE TERRE "	672	327.1
B. T. TRANS. "	676	323.1
CONGLOMERATE "		
LA MOTTE "	690	309.1
GRAN. OR POR. "		
PICTURES: FROM	405	594.1
TO	690	309.1
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 860'N 310'E

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS	CORE REC. TO	CORES LOST
5 Ꝑ	530.8	532.0	467.1	1.2		TR	✓				7 DISS	405	
"	532.4	534.3	464.8	1.9	6.5	6.0	12.4	✓			<DISS	491	—
℄ F VUGGY	542.2	543.0	456.1	0.8	2.7	2.0	2.2	✓			WG + FRACT PB	501	1.0
												545	—
												549	1.0
												561	—
												571	2.0
												670	—
												690	5.0

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JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE [illegible] MINE [illegible] STOPE [illegible] STAKE NO. [illegible] HOLE NO. [illegible]

COLLAR ELEV. [illegible] PITCH [illegible] BEARING [illegible] COORD.: N [illegible] E [illegible]

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
[illegible]	[illegible]	BEGAN CORING	
4	[illegible]		
[illegible]	[illegible]		
[illegible]	[illegible]		
[illegible]	[illegible]		
[illegible]	[illegible]	THIS	
[illegible]	[illegible]		
[illegible]	[illegible]	1	[illegible]
17	51[illegible]	[illegible]	[illegible]
[illegible]	4[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	4	[illegible]
10	[illegible]	5	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	4[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	7	[illegible]
6[illegible]	[illegible]	[illegible]	[illegible]
672	[illegible]	[illegible]	[illegible]
676	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]

RECEIVED
DIVISION OF MINERAL
TECHNOLOGY
APR 16 1958
BUREAU OF MINES
JOPLIN, MO.

Date Started-2-20-58

20

FORM 1173-2-54

DATE BOTTOMED 2-25-58 ST. NO. VC-100 ST. ELEV. _____ CLASS TRACE HOLE NO. 58VC48

DESCRIBED BY J.A. AREA COURTOIS ELEVATION COLLAR 1006.42

DATE ESTIMATED 2-28-58 OPTION NO. CZ-65 COORDINATES: N 113792.54 E 89716.94

BY J.A. TRACT KELSEY CARL 200 FT. MAP NO. 46 50 FT. MAP NO. _____

SW¼-SW¼ SEC.8 T35N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 8" FT.

FORM BOTT. SL. _____

DEPTH ELEV.

DRILLED WITH:

CHURN DRILL TO 160.0 846.4

SLEEVE BIT TO

BEGAN CORING AT 160.0 846.4

SAVED CORES FROM 415.0 591.4

FORMATIONS:

	TO
SOIL	
	"
EMINENCE	"
POTOSI	"
POTOSI-DERBY	"
DERBY DOE RUN	"
DAVIS (C.B.-S.B.)	443.0 563.4
BONNE TERRE	674.0 332.4
B. T. TRANS.	679.0 327.4
CONGLOMERATE	"
LA MOTTE	695.0 311.4
GRAN. OR POR.	"

PICTURES: FROM 415 0591.4 TO 695.0311.4

CHAR. SAMPLES: FROM TO

INSOL. RES.: FROM TO

OPENINGS AT

MINERALIZATION RECORD 390'N 560'E

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS	CORE REC. TO	CORES LOST
5GTo B$	510.1	510.2	496.2	0.1	0.9		2.0			0.1 ✓	BAND	425	
" "	515.4	515.6	490.8	0.2			TR					435	0.4
" "	523.4	525.1	481.3	1.7	1.7		1.5			2.9 ✓	diss	595	—
5 G$	537.9	538.2	468.2	0.3	1.3		1.0			0.4 ✓	VERT SEAM	615	0.4
7FTGTM	597.6	597.8	408.6	0.2			TR					675	—
												695	5.3

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APR 16 1958
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JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE [illegible] MINE [illegible] STOPE [illegible] STAKE NO. [illegible] HOLE NO. [illegible]

COLLAR ELEV. 1007 PITCH [illegible] BEARING [illegible] COORD.: N [illegible] E [illegible]

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
415	[illegible]	BEGAN CORING	
443	[illegible]	[illegible]	[illegible]
		[illegible]	[illegible]
474	[illegible]	1	[illegible]
			[illegible]
			[illegible]
			[illegible]
487	[illegible]	[illegible]	[illegible]
			[illegible]
[illegible]	[illegible]	5	[illegible]
			[illegible]
527	[illegible]	[illegible]	[illegible]
			[illegible]
			515, 517 [illegible]
			[illegible]
531	[illegible]	[illegible]	[illegible]
536	[illegible]	[illegible]	[illegible]
			[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
			540 [illegible]
[illegible]	[illegible]	[illegible]	[illegible]
			[illegible]
			[illegible]
572	[illegible]	1	[illegible]
			[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
			[illegible]
630	[illegible]	[illegible]	[illegible]
			[illegible]
639	[illegible]	[illegible]	[illegible]
			[illegible]
			[illegible]
641	[illegible]	[illegible]	[illegible]
645	[illegible]	[illegible]	[illegible]

RECEIVED
DIVISION OF MINERAL
TECHNOLOGY
APR 16 1958
BUREAU OF MINES
JOPLIN, MO.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
Box 431
Joplin, Missouri
April 18, 1958

OFFICIAL FILE COPY
DMEA
RECEIVED APR 21 1958

DATE	INITIAL	CODE
4/21	C	120
4/21	Conn	100
"	[illegible]	110
4/22	[illegible]	310
4/22	[illegible]	340

DMEA Operating Committee
Department of the Interior
Room 4457 - Interior Building
Washington 25, D. C.

Re: DMEA-4582(lead-zinc-copper)
St. Joseph Lead Co.
Courtois Area
Washington County, Mo.
Contract Idm-E1068

Dear Sirs:

Transmitted herewith are three copies of the Interim Report received April 15 from Dewey Amos, USGS, Carbondale, covering the joint Field inspection he and I made at the subject project on April 10, 1958.

Sincerely yours,

Clinton C. Knox

Clinton C. Knox
Executive Officer
DMEA Field Team, Region IV

cc: DMEA Op.Com.(2)
King,USGS,Denver
Amos,USGS,Carbondale
4582 file

orig + 2 cc to Wash.

RECEIVED APR 21 1958
DATE

RECEIVED
DIVISION OF MINERAL TECHNOLOGY
APR 15 1958
BUREAU OF MINES
JOPLIN, MO.

cc K.

INTERIM REPORT

DMEA-4582, Idm-E1068

Operator: St. Joseph Lead Company, Bonne Terre, Missouri

Location: Courtois Area, Washington County, Missouri

A project inspection of the subject contract was conducted on April 10, 1958. Results obtained to date and contemplated future work were discussed with Mr. R. E. Wagner, Head of Exploration, and Mr. G. Klosterman, Geologist.

Drilling completed on the Courtois project to date and since the inspection on March 6, 1958 is summarized as follows:

Drilling Completed

Footage in holes completed since last inspection.	3,217
Footage in holes completed to date.	68,147
Number of holes completed since last inspection	5
Total number of holes completed to date	103
Number of holes showing commercial ore.	17 ✓16%
Number of holes showing indicative non-commercial mineralization.	13 ✓12%
Number of holes showing trace mineralization.	55
Number of holes showing speck trace mineralization.	7
Number of barren holes.	11

A summary of the five holes completed since the last interim inspection is as follows:

Hole No.	Location	Depth	Remarks
VC-94	NW¼,SW¼,SW¼,sec.8	725 ft. ✓	Trace hole.
VC-119	SW¼,SE¼,NE¼,sec.18	538 ft. ✓	Indicative hole.
VC-92	SW¼,NW¼,SW¼,sec.8	735 ft. ✓	Trace hole.
VC-106	NE¼,NE¼,SW¼,sec.18	524 ft. ✓	Trace hole.
VC-102	NE¼,NE¼,NE¼,sec.18	695 ft. ✓	Ore hole.

Diamond drilling is in progress in one hole summarized as follows:

Hole No.	Location	Present Depth	Estimated Total Depth
VC-112	NE$\frac{1}{4}$,SE$\frac{1}{4}$,SW$\frac{1}{4}$,sec.18	411 ft.	600 ft.

The churn drill portion of five holes has been completed since the date of the last inspection. A summary of these holes is as follows:

Hole No.	Location	Depth to Bottom of Churn Drilling
VC-117	NW$\frac{1}{4}$,NW$\frac{1}{4}$,SE$\frac{1}{4}$,sec.18	60 ft.
VC-114	SE$\frac{1}{4}$,SE$\frac{1}{4}$,SW$\frac{1}{4}$,sec.18	125 ft.
VC-107	SE$\frac{1}{4}$,NW$\frac{1}{4}$,SW$\frac{1}{4}$,sec.18	200 ft.
VC-108	SE$\frac{1}{4}$,NE$\frac{1}{4}$,SW$\frac{1}{4}$,sec.18	105 ft.
VC-109	SE$\frac{1}{4}$,NE$\frac{1}{4}$,SW$\frac{1}{4}$,sec.18	180 ft.

Churn drilling is in progress in two holes summarized as follows:

Hole No.	Location	Present Depth
VC-110	NW$\frac{1}{4}$,SW$\frac{1}{4}$,SW$\frac{1}{4}$,sec.18	110 ft.
VC-104	SW$\frac{1}{4}$,SE$\frac{1}{4}$,NW$\frac{1}{4}$,sec.18	160 ft.

Assay results of Hole VC-119 are given below:

Depth	Thickness	Per cent Pb
378.6-379.0 ft.	0.4 ft.	19.0
386.8-388.2 ft.	1.4 ft.	2.0
389.1-390.4 ft.	1.3 ft.	4.7

Assays have not been completed of Hole VC-102 but it contains 7.2 feet of estimated 28 per cent lead and 2 per cent zinc at a depth of 525.8-533 feet.

Verbal approval was given by the field examiners to locate the following Stage II holes:

Hole No.	Location
VC-120	NW¼,SW¼,SE¼,sec.18
VC-121	SE¼,SE¼,NW¼,sec18
VC-122	SE¼,SW¼,NE¼,sec.18
VC-123	NW¼,SE¼,NE¼,sec.18
VC-124	SW¼,SE¼,NE¼,sec.18
VC-125	NE¼,SE¼,NE¼,sec.18
VC-126	NW¼,NW¼,NW¼,sec.17
VC-127	SE¼,NW¼,NE¼,sec.7
VC-128	SW¼,NE¼,NE¼,sec.7
VC-129	SW¼,NE¼,NE¼,sec.7
VC-130	NW¼,SE¼,NE¼,sec.7
VC-131	NE¼,SW¼,NE¼,sec.7
VC-132	NE¼,SW¼,NE¼,sec.7
VC-133	SW¼,NW¼,NE¼,sec.7
VC-134	NW¼,NW¼,NE¼,sec.7
VC-135	SW¼,NE¼,NW¼,sec.7
VC-136	NW¼,NE¼,NW¼,sec.7
VC-137	SW¼,SW¼,SE¼,sec.6
VC-138	SE¼,SW¼,SE¼,sec.6
VC-139	NE¼,SW¼,SW¼,sec.6
VC-140	SE¼,NE¼,SW¼,sec.6

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

Clinton C. Knox, Mining Engr.
U.S. Bureau of Mines

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
Box 431
Joplin, Missouri
March 14, 1958

OFFICIAL FILE COPY
DMEA
RECEIVED MAR 17 1958

DATE	INITIALS	CODE
3/17	C	220
/17	COM	100
		110
3/18		800
3/19		500

DMEA Operating Committee
Department of the Interior
Washington 25, D. C.

Re: DMEA-4582(lead-zinc-copper)
St. Joseph Lead Co.
Courtois Area
Washington County, Mo.
Contract Idm-E1068

Dear Sirs:

Transmitted herewith are three copies of the Interim Report received March 11 from Dewey Amos, USGS, Carbondale, Illinois, covering joint Field inspection he and I made at the subject project on March 6, 1958.

Sincerely yours,

Clinton C. Knox

Clinton C. Knox
Executive Officer
DMEA Field Team, Region IV

encls. 3

cc: DMEA Op.Com.(2)
Amos,USGS,Carbondale w/2 cy Interim Rpt
4582 file

DMEA
RECEIVED 17 1958

RECEIVED
DIVISION OF MINERAL
TECHNOLOGY
MAR 11 1958
BUREAU OF MINES
JOPLIN, MO.

Interim Report

DMEA-4582, Idm-E1068

Operator: St. Joseph Lead Co., Bonne Terre, Missouri

Location: Courtois Area, Washington County, Missouri

A project inspection of the subject contract was conducted on March 6, 1958. Results obtained to date and contemplated future work were discussed with Mr. R. E. Wagner, Head of Exploration and Mr. Klosterman, Geologist.

Drilling completed on the Courtois project to date and since the inspection on February 6, 1958 is summarized as follows:

Drilling Completed

Footage in holes completed since last inspection. . . .	5,689
Footage in holes completed to date.	64,930
Number of holes completed since last inspection	8
Total number of holes completed to date	98
Number of holes showing commercial ore.	16
Number of holes showing indicative non-commercial mineralization	12
Number of holes showing trace mineralization.	52
Number of holes showing speck trace mineralization. . .	7
Number of barren holes.	11

A summary of the eight holes completed since the last interim inspection is as follows:

Hole No.	Location	Depth	Remarks
VC-78	SW¼, SW¼, NW¼, sec. 17	759 ft.	Trace hole.
VC-97	NW¼, SE¼, SE¼, sec. 7	605 ft.	Indicative hole.
VC-77	NE¼, SE¼, NE¼, sec. 18	675 ft.	Indicative hole.
VC-96	SE¼, SE¼, SE¼, sec. 7	763 ft.	Ore hole.

Hole No.	Location	Depth	Remarks
VC-101	NW¼, NW¼, NW¼, sec. 17	755 ft.	Ore hole.
VC-99	SE¼, SE¼, SE¼, sec. 7	747 ft.	Ore hole.
VC-95	NW¼, SW¼, SW¼, sec. 8	690 ft.	Indicative hole.
VC-100	SW¼, SW¼, SW¼, sec. 8	695 ft.	Trace hole.

Diamond drilling is in progress in two holes summarized as follows:

Hole No.	Location	Present Depth	Estimated Total Depth
VC-94	NW¼, SW¼, SW¼, sec. 8	710 ft.	750 ft.
VC-119	SW¼, SE¼, NE¼, sec. 18	12 ft.	525 ft.

Churn drilling was not required in Hole VC-119 as it was collared in the sub-Potosi (Derby formation).

The churn drill portion of two holes has been completed since the date of the last interim inspection. A summary of these holes is as follows:

Hole No.	Location	Depth to Bottom of Churn Drilling
VC-100	SW¼, SW¼, SW¼, sec. 8	175 ft.
VC-112	NE¼, SE¼, SW¼, sec. 18	70 ft.

Churn drilling is in progress in two holes summarized as follows:

Hole No.	Location	Present Depth
VC-117	NW¼, NW¼, SE¼, sec. 18	15 ft.
VC-114	SE¼, SE¼, SW¼, sec. 18	110 ft.

Significant assay results of recently completed holes are given below:

Hole No.	Depth	Thickness	%Pb	%Zn
VC-97	451.5-452.3 ft.	0.8 ft.	12.3	---
VC-77	513.6-515.1 ft.	1.5 ft.	4.0	---
	515.1-517.7 ft.	2.6 ft.	1.1	14.3
VC-101	562.4-565.6 ft.	3.2 ft.	23.6	6.1
	565.6-566.8 ft.	1.2 ft.	3.6	1.3
VC-96	580.0-583.0 ft.	3.0 ft.	37.8	7.0
	583.0-585.4 ft.	2.4 ft.	0.4	17.3
	585.4-590.1 ft.	4.7 ft.	5.4	2.3

Assay have not been completed for Holes VC-99 and VC-95. Hole VC-99 contains 8 feet of estimated 3.0 percent lead and 1.0 percent zinc at 587-595 feet in depth and Hole VC-95 3 feet of estimated 4.0 percent lead at 531-534 feet in depth.

Dewey H. Amos
Geologist
U. S. Geological Survey

Clinton C. Knox
Mining Engineer
U. S. Bureau of Mines

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
Box 431
Joplin, Missouri
February 14, 1958

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DMEA
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DATE	INITIALS	CODE
2/18	C	220
19	[illegible]	100
"	[illegible]	110
2/21	[illegible]	800
2/21	[illegible]	500

DMEA Operating Committee
Department of the Interior
Washington 25, D. C.

Re: DMEA-4582(lead-zinc-copper)
St. Joseph Lead Co.
Courtois Area
Washington County, Mo.
Contract Idm-E1068

Dear Sirs:

Transmitted herewith are three copies of the Interim Report received from Dewey Amos, USGS, Carbondale, Illinois, covering the joint Field Team inspection he and I made at the subject project on February 6.

Sincerely yours,

Clinton C. Knox

Clinton C. Knox
Executive Officer
DMEA Field Team, Region IV

encls. 3

cc: DMEA Op.Com.(2)
Amos,USGS,Carbondale
4582 file

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DIVISION OF MINERAL
TECHNOLOGY

FEB 12 1958

BUREAU OF MINES
JOPLIN, MO.

Interim Report

DMEA-4582, Idm-E1068

Operator: St. Joseph Lead Company, Bonne Terre, Missouri

Location: Courtois Area, Washington County, Missouri

A project inspection of the subject contract was conducted on February 6, 1958. Results obtained to date and contemplated future work were discussed with Mr. R. E. Wagner, Head of Exploration and Mr. G. Klosterman, Geologist.

Drilling completed on the Courtois project to date and since the inspection on January 2, 1958 is summarized as follows:

Drilling Completed

Footage in holes completed since last inspection. .	6,433
Footage in holes completed to date.	59,241
Number of holes completed since last inspection . .	10
Total number of holes completed to date	90
Number of holes showing commercial ore.	13
Number of holes showing indicative non-commercial mineralization	9
Number of holes showing trace mineralization. . . .	50
Number of holes showing speck trace mineralization.	7
Number of barren holes.	11

A summary of the ten holes completed since the last interim inspection is as follows:

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RECEIVED FEB 17 1958

DATE	INITIALS	CODE

Hole No.	Location	Depth	Remarks
VC-83	Center NE¼, SW¼, sec. 18	563 ft.	Ore hole.
VC-86	500 ft. N.15°E. of Hole 56W73	675 ft.	Trace hole.
VC-89	SE¼, SW¼, SW¼, sec. 18	725 ft.	Ore hole.
VC-85	NE¼, SW¼, SW¼, sec. 18	645 ft.	Ore hole.
VC-79	NE¼, NE¼, SE¼, sec. 18	681 ft.	Trace hole.
VC-84	NW¼, SW¼, SE¼, sec. 18	689 ft.	Trace hole.
VC-90	500 ft. S.25°W. of Hole 56W73	651 ft.	Ore hole.
VC-82	NW¼, SW¼, SE¼, sec. 17	535 ft.	Trace hole.
VC-80	NE¼, NW¼, SE¼, sec. 18	662 ft.	Trace hole.
VC-98	Center NE¼, SE¼, sec. 7	607 ft.	Indicative hole.

Diamond drilling is in progress in two holes summarized as follows:

Hole No.	Location	Present Depth	Estimated Total Depth
VC-78	SW¼, SW¼, NW¼, sec. 17	350 ft.	700 ft.
VC-97	NW¼, SE¼, SE¼, sec. 7	150 ft.	600 ft.

The churn drill portion of three holes has been completed since the date of the last interim inspection. A summary of these holes ia as follows:

Hole No.	Location	Depth to Bottom of Churn Drilling
VC-78	SW¼, SW¼, NW¼, sec. 17	220 ft.
VC-77	NE¼, SE¼, NE¼, sec. 18	180 ft.
VC-95	NW¼, SW¼, SW¼, sec. 8	170 ft.

Churn drilling is in progress in one hole summarized as follows:

Hole No.	Location	Present Depth
VC-100	SW¼, SW¼, SW¼, sec. 8	150 ft.

Assay results of recently completed holes are given below:

Hole No.	Depth	Thickness	%Pb	%Zn
VC-85	477.0-480.0 ft.	3.0 ft.	17.8	---
	482.1-484.1 ft.	2.0 ft.	7.4	---
	487.0-488.9 ft.	1.9 ft.	17.4	2.4
	534.6-536.6 ft.	2.0 ft.	10.2	---
VC-83	418.8-420.6 ft.	1.8 ft.	24.4	9.6
	423.1-424.6 ft.	1.5 ft.	15.4	3.3
	426.9-432.1 ft.	5.2 ft.	19.0	1.8
	434.1-436.4 ft.	2.3 ft.	13.6	14.2
	443.0-443.2 ft.	0.2 ft.	11.9	---
	465.0-465.8 ft.	0.8 ft.	6.2	3.8
	470.6-475.3 ft.	4.7 ft.	6.5	1.9
		16.5		

Assays have not been completed of Holes VC-90 and VC-98 but Hole VC-90 contains approximately 4 feet of estimated 11 percent lead at about 440-444 feet in depth and VC-98 has 8.2 feet of estimated 10 percent lead at 489.0-497.2 feet in depth. Assay results of Hole VC-89 were given in the Operator's Monthly report for December, 1957.

Approval was given for 17 hole locations summarized as follows:

Hole No.	Location
VC-103	1560 feet N.50°W. of VC-55 - SE¼, SE¼, NW¼, section 5
VC-104	900 feet N.5° W. of VC-83 - SW¼, SE¼, NW¼, section 18
VC-105	520 feet N.25°E. of VC-83 - NE¼, NE¼, SW¼, section 18
VC-106	520 feet N.85°E. of VC-83 - NE¼, NE¼, SW¼, section 18
VC-107	520 feet N.85°E. of VC-48 - SE¼, NW¼, SW¼, section 18
VC-108	520 feet S.85° W. of VC-83 - SE¼, NE¼, SW¼, section 18
VC-109	900 feet S.55°W. of VC-83 - SE¼, NE¼, SW¼, section 18
VC-110	520 feet N.25° E. of VC-88 - NW¼, SW¼, SW¼, section 18
VC-111	520 feet N.35°W. of VC-89 - NW¼, SW¼, SW¼, section 18
VC-112	520 feet N.25° W. of VC-87 - NE¼, SE¼, SW¼, section 18
VC-113	520 feet S.85°W. of VC-89 - SW¼, SW¼, SW¼, section 18
VC-114	520 feet N.85°E. of VC-87 - SE¼, SE¼, SW¼, section 18
VC-115	490 feet S.35°E. of VC-88 - SW¼, SW¼, SW¼, section 18
VC-116	520 feet S.25°W. of VC-89 - SE¼, SW¼, SW¼, section 18
VC-117	520 feet S.85°W. of VC-80 - NW¼, NW¼, SE¼, section 18
VC-118	1040 feet N.35°W. of VC-80 - SW¼, SW¼, NE¼, section 18
VC-119	1040 feet N.25°E. of VC-80 - SW¼, SE¼, NE¼, section 18

All of these are Stage II locations except Hole VC-103 which is a Stage I location. The latter replaces another Stage I location which was found during a property line survey not to be on land held by the Operator. All locations are designed to explore for extensions of mineralization encounted in completed holes.

Results of recently completed holes indicates a newly discovered ore body in the SW$\frac{1}{4}$ of section 18. Widely-spaced, preliminary drilling suggests that the body is of considerable tonnage.

Clinton C. Knox
Mining Engineer
U. S. Bureau of Mines

Dewey H. Amos
Geologist
U. S. Geological Survey

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
Box 431
Joplin, Missouri
March 20, 1958

DMEA
RECEIVED 24 1958

DATE		CODE
3/24	C	220
"	Ty	110
3/24	words	500

DMEA Operating Committee
Department of the Interior
Washington 25, D. C.

Re: DMEA-4582(lead-zinc-copper)
St. Joseph Lead Co.
Courtois Area
Washington County, Mo.
Contract Idm-E1068

Dear Sirs:

Forwarded herewith are your two copies of the MF-104 Monthly Voucher and one copy of the MF-104A and the Monthly Report by the cited Operator covering the January project work. The voucher data received from the Finance Officer today is posted on both copies of the MF-104s.

Your other copy of the MF-104A and the Monthly Report was furnished for your advance information February 18, 1958.

Sincerely yours,

Clinton C. Knox

Clinton C. Knox
Executive Officer
DMEA Field Team, Region IV

encl. 4

cc: DMEA Op.Com.
Amos,USGS,Carbondale
4582 file

2d cy - DMEA Washington

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

Budget Bureau No. 42-R1036.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Lto Wash 2/18

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of January, 1958 Docket No. DMEA 4582 Contract No. Idm-E 1068

Operator's Name St. Joseph Lead Company Minerals Pb - Zn - Cu

Address Bonne Terre, Missouri

Contract Amount, $ 298560.00 Government Participation: 50 % Amount, $ 149,280.00

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	10771.44	123969.24	134740.68	3/18/58		
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	82.00	270.00	352.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	10853.44	124239.24	135092.68			

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JOPLIN, MO.

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

Date 2-14-58 *Payee St. Joseph Lead Company

Per [signature] Title [illegible]

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

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

(Instructions on reverse)

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

$ 5,426.72

Signature
(Authorized Certifying Officer)

Date 3-18-58 Vou. No. 4.28

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Idm-E1068 in accordance with the terms of the contract.

Signature Henry H. Cross Title Geologist-USGS Date Mar. 5, 1958

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Clinton C. Knox Title Executive Officer Date March 10, 1958

MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Official

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
Box 431
Joplin, Missouri
February 18, 1958

DATE		CODE
2/20	C	220
"		110
2/21		500

4582

Memorandum

To: Dewey H. Amos, USGS, Carbondale, Illinois

From: C. C. Knox

Subject: ~~January~~ MF-104 Reports - St. Joseph Lead Company Projects Idm-E1064, -E1068 and -E1073

Forwarded herewith are your copies of the cited reports received yesterday on the three St. Joe projects. At first glance they appear to be substantially in accord with our Interim Reports on the February 6 Field inspections when work completed from February 1 to 6 is taken into account. The log for Hole 58VC19 on site C-84 of the Courtois project appears to be missing and that for VB-84(Hole 58VB21) which evidently was attached by error instead has been reattached here to the report on Project Idm-E1073. Also no mention was made in the Operator's report of diamond drilling being in progress on site C-89 which was mentioned in our Interim Report as being completed as of February 6. I find that churn drilling on that site was completed a couple of months ago, so possibly mention of diamond drilling there was inadvertently omitted in the Operator's report; likewise not mentioned was the hole at site VB-15A on Idm-E1073.

As soon as we can thoroughly check all three reports, I will request any missing data in a letter to the Operator. Then I will bring all copies on our next inspection trip in Eastern Missouri so that we can sign them together if found satisfactory, as you suggested a couple of months ago.

For the advance information of DMEA, one of its copies of each report(excepting the MF-104 Vouchers) are being forwarded to Washington with copies of this memo.

CCK/id

C. C. Knox

encl. 3

cc: DMEA Op.Com.(3) w/cy encls
4581 file
4582 "
4583 "

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

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

Month of January 1958 Docket No. DMEA 4582 Contract No. Idm-B 1068

Operator's Name St. Joseph Lead Company Minerals Pb - Zn - Cu

Address Bonne Terre, Missouri

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core	Ft.	9306.24	4192	100861.26	45433	$2.22)		
Churn	Ft.	1465.20	660	33879.42	15261	2.22)	133420	$2.22
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Analytical Determinations	Ea	82.00	82	352.00	352	1.00	2370	1.00
TOTAL DISTRIBUTED COSTS		10853.44		135092.68				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		10853.44		135092.68				

3/18/58

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 2-14-58 Operator St. Joseph Lead Company

Per E. Jones Title

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)

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JOPLIN, MO.

INSTRUCTIONS

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

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

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

GPO 872894

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ROLLA, MO.

MONTHLY REPORT FOR MONTH OF JANUARY, 1958

D.M.E.A. Project #4582 - Contract #IDM-E 1068

One churn drill was operating in the area at the end of the month. The hole in progress was Stage II, Stake No. C-100 at a depth of 100 feet.

The following churn drill holes were completed through overburden and chert-bearing formations and cased preparatory to diamond drilling during the month:

Stage No.	Stake No.	Feet Depth	Starting Date
I	VC77	180	1- 1-58
I	VC78	220	12-24-57
I	VC90	90	12-18-57
II	VC95	170	1-10-58

Two diamond drills were operating in the area at the end of the month. The holes in progress were Stage I, Stake No. C-78 at a depth of 300 feet and Stage II, Stake No. C98 at a depth of 195 feet.

The following diamond drill holes were completed during the month:

Stage No.	Stake No.	Prospect Hole No.	Bottom Depth	Feet of Dia. Drilling	Date Completed	Class.
I	VC83	58VC2	563	458	1- 3-58	Pay
I	VC86	58VC7	675	528	1-10-58	Trace
I	VC85	58VC15	645	498	1-17-58	Pay
I	VC90	58VC20	651	561	1-23-58	Pay
I	VC79	58VC13	681	511	1-16-58	Trace
I	VC84	58VC19	689	549	1-22-58	Ind.
I	VC82	58VC25	535	535	1-30-58	Sp. Trace
I	VC80	58VC26	662	552	1-29-58	Ind.

Analysis of results gained by drilling is shown in abstracts of our weekly reports to St. Joseph Lead Company, which are enclosed.

82 analytical determinations were made during the month as follows:

58VC2	12 Pb	6 Zn	
58VC15	21 Pb	2 Zn	
58VC19	6 Pb	1 Zn	
58VC26	6 Pb	1 Zn	
58VC25	2 Pb		2 Cu
58VC20	10 Pb	6 Zn	
58VC13	2 Pb		
58VC7	5 Pb		

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FEB 17 1958
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JOPLIN, MO.

WASHINGTON COUNTY

Courtois Area - In BMEA Project #4582

Period Ending January 6, 1958 (2 operating days)

2 diamond drills operating and 2 churn drills setting casing completed 1 pay hole.

58VC2, stake #C83, a pay hole, is located in the southern part of the project area about 8,000 feet southwest of the village of Courtois and 1560 feet north-northeast of 56W73, an indicative hole. It bottomed at 563 feet depth in dark rhyolite porphyry which extends about 35 feet up into the Bonneterre horizon. Heavy lead and zinc mineralization is present in the lower 5 reef and the 7 reef zone. Best of this was estimated as 17.8 feet of 11.1% Pb and 3.0% Zn at 436 feet depth, 1.0 feet of 8.0% Pb and 2.0% Zn at 465 feet depth, 7.0 feet of 4.0% Pb at 475 feet depth, and 2.0 feet of 1.0% Pb at 481 feet depth.

This is the first hole to show an appreciable amount of lead in the 7 horizon between the St. Joe-Conway tract and the vicinity of Courtois and indicates proximity to a center of mineralization which should help the general picture in this area.

Week Ending January 13, 1958

1 diamond drill operating and 2 churn drills setting casing completed 1 trace hole.

58VC7, stake #C86, a trace hole, is located in the southern part of the project area about 9,000 feet southwest of the village of Courtois and 520 feet north-northeast of 56W73, an indicative hole. Small amounts of mineralization were scattered through the 7 and 7/10 zones, best of which was estimated as 0.6 foot of 3.0% Pb at 503 feet depth, 0.8 foot of 1.0% Pb at 557 feet depth, 0.4 foot of 1.0% Pb at 587 feet depth, and 0.2 foot of 2.0% Pb at 601 feet depth.

Week Ending January 20, 1958

2 diamond drills operating and 2 churn drills setting casing completed 1 trace hole.

58VC13, stake #C79, a trace hole, is located 6500 feet south of the village of Courtois and 3,000 feet east of a pay hole. It bottomed at 681 feet depth in 39 feet of Lamotte sand. Weak traces of lead were present high in the 5 zone in brown spotted dolomite, best of which was estimated as 0.3 foot of 1.0% Pb at 478 feet depth and 0.4 foot of 1.0% Pb at 483 feet depth.

Week Ending January 27, 1958

2 diamond drills operating and 1 churn drill setting casing completed 2 pay and 1 trace hole.

58VC15, stake #C85, a pay hole, is located near the southern edge of the project area and 520 feet northwest of 56W73, an indicative hole. It bottomed at 645 feet depth in 9 feet of Lamotte sand. Good lead and zinc mineralization is present in the lower 5 zone and in the 7 zone with estimates of 11.9 feet of 8.4% Pb and 1.9 feet of 2.0% Zn at 489 feet depth, and 2.0 feet of 20.0% Pb at 537 feet depth.

Week Ending January 27, 1958 (Continued)

58VC20, stake #C90, a pay hole, is located 900 feet south of the above hole and 520 feet southwest of 56W73. It bottomed at 651 feet depth in 45 feet of Lamotte sand which was specked with traces of lead. Good lead and zinc mineralization was present in the middle of the 5 zone with an estimate of 13.6 feet of 6.6% Pb at 444 feet depth and 10.6 feet of 4.7% zinc at 450 feet depth.

58VC19, stake #C84, a trace hole, is located about 1800 feet east of the above holes and 1,000 feet east of a pay hole. Considerable lead and zinc mineralization is scattered through the ore horizon of the above holes with estimates of 0.3 foot of 1.0% Pb at 488 feet depth, 0.4 foot of 1.5% Pb at 493 feet depth, 3.9 feet of 1.0% Pb at 507 feet depth, 0.4 foot of 1.0% Pb at 509 feet depth, and 1.0 foot of 1.0% Zn at 504 feet depth.

Week Ending February 3, 1958

2 diamond drills operating and 1 churn drill setting casing completed 2 trace holes.

58VC26, stake #C80, a trace hole, is located near the southern edge of the project area and 1560 feet east of 58VC2, a high grade pay hole. It bottomed at 662 feet depth in Lamotte sand. Trace lead and zinc mineralization was present in the 5 zone, best of which is located just above a lower 5 zone reef and was estimated as 6.3 feet of 1.0% Pb at 505 feet depth and 2.9 feet of 2.5% Zn at 502 feet depth.

58VC25, stake #C82, a speck trace hole, is located in the far southeastern part of the project area. It bottomed at 535 feet depth in 34 feet of Lamotte sand. The Bonneterre section contained about 100 feet of "white rock" in the 5 and 7 zones with a few speck traces of lead at 409 feet depth. Traces of chalcopyrite were present near the top and base of the Bonneterre. General appearance of this hole does not warrant additional drilling in this part of the project area.

DATE STARTED 12-30

FORM 1172-2-54

15

DATE BOTTOMED 1-3-58
DESCRIBED BY C.A.
DATE ESTIMATED 1-7-58
BY C.A

ST. NO. VC-83 ST. ELEV.
AREA COURTOIS
OPTION NO. CZ-15
TRACT LEWIS MERRITT

CLASS PAY HOLE NO. 58VC2
ELEVATION COLLAR 987.80
COORDINATES: N 110218.66 E 85945.06
200 FT. MAP NO. 55 50 FT. MAP NO.
NE¼-SW¼ SEC. 18
2300'N 1900'E T35N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 1.0 FT.
FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	105	882.8
SLEEVE BIT TO		
BEGAN CORING AT	145	842.8
SAVED CORES FROM	315	672.8
FORMATIONS:		
SO.L TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "	? S.B.	
DAVIS (C.B.-S.B.) "	319	668.8
BONNE TERRE "	546	441.8
B. T. TRANS. "	—	
CONGLOMERATE "	547	440.8
LA MOTTE "		
~~GRAN~~ OR POR. "	568	419.8
PICTURES: FROM	315	672.8
TO	563	424.8
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ZN ASSAY	% ZN EST.	FT. %	REMARKS	TO	CORES LOST
	342.4	342.5	645.3	0.1		Tr.						145	
	367.4	369.6	618.2	2.2		Tr.						165	14.0
	379.0	379.2	608.6	0.2		Tr.						315	S.B.
	418.2	418.4	569.4	0.2	1.2	1.0	0.2					375	—
	418.4	418.8	569.0	0.4		Tr.						380	1.0
	418.8	420.6	567.2	1.8	24.4	25.0	43.9	9.6	1.0	17.3		445	—
	420.6	421.2	566.6	0.6		Tr.						455	1.0
	423.1	424.6	563.2	1.5	15.4	15.0	23.1	3.3	1.0	5.0	Cu-0.5	475	—
	424.6	425.5	562.3	0.9		Tr.						491	1.0
	425.5	426.9	560.9	0.4		Tr.					Cu-0.5	563	—
	426.9	432.1	555.7	5.2	19.0	18.0	98.8	1.8	1.0	9.4	Cu-0.5		
	432.1	434.1	553.7	2.0		Tr.							
	434.1	436.4	551.4	2.3	13.6	12.0	31.3	14.2	2.0	32.7	∠ZN VISABLE		
	441.3	441.7	546.1	0.4		Tr.							
	443.0	443.2	544.6	0.2	11.9	11.0	2.4						
	449.8	450.0	537.8	0.2		Tr.							
	455.0	455.3	532.5	0.3	2.0	1.0	0.6						
	458.5	458.7	529.1	0.2		Tr.							
	465.0	465.8	522.0	0.8	6.2	10.0	5.0	3.8	1.0	3.0			
	465.8	468.0	519.8	2.2		Tr.							
	469.5	469.7	518.1	0.2	2.6	1.0	0.5						
	469.7	470.6	517.2	0.9		Tr							
	470.6	475.3	512.5	4.7	6.5	8.0	30.6	1.9	2.0	8.9	∠ZN VISABLE		
	478.0	478.7	509.1	0.7		Tr.							
	478.7	480.0	507.8	1.3	0.7	1.0	0.9						
	481.0	482.3	505.5	1.3	3.9	2.0	5.1						
	490.7	491.0	496.8	0.3		Tr.							
	495.0	495.2	492.6	0.2		Tr.							
	502.0	503.4	484.4	1.4		Tr.							

DMEA

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE [illegible] MINE Courtaire STOPE STAKE NO. [illegible] HOLE NO. [illegible]

COLLAR ELEV. 988 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
145	843		BEGAN CORING
165	823		[illegible]
317	669		Dark Shale [illegible]
377	611	1	[illegible]
406	582	5	[illegible]
413	575	5	[illegible]
420	568	5	[illegible]
435	553	5	[illegible]
440	548	5	[illegible]
491	497	7	[illegible]
[illegible]	479	7-10	[illegible]
[illegible]	456	—	[illegible]
[illegible]	445	—	[illegible]
446	44[illegible]	—	[illegible]
447	441	[illegible]	[illegible]
[illegible]	430	[illegible]	[illegible]

562

DATE STARTED 1-6-58

FORM 1173-2-54

DATE BOTTOMED 1-10-58
DESCRIBED BY C.A.
DATE ESTIMATED 1-13-58
BY C.A

ST. NO. VC-86 ST. ELEV.
AREA COURTOIS
OPTION NO. CZ-15
TRACT LEWIS MERRIT

CLASS TRACE HOLE NO. 58VC7
ELEVATION COLLAR 1007.65
COORDINATES: N 109305.49 E 85515.59
200 FT. MAP NO. 55 50 FT. MAP NO.
SE¼ - SW¼ SEC. 18

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 3.0 FT.
FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	145	862.7
SLEEVE BIT TO		
BEGAN CORING AT	165.0	842.7
SAVED CORES FROM	369.0	638.7
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN	SOLID BIT CONTACT	
DAVIS (C.B.-S.B.) "	375.0	632.7
BONNE TERRE "	619.0	388.7
B. T. TRANS. "	641.0	366.7
CONGLOMERATE "	—	
LA MOTTE "	675.0	332.7
GRAN. OR POR. "	—	
PICTURES: FROM	369.0	638.7
TO	675.0	332.7
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 1100'N 1580'E T35N-R1W

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS	CORE REC. TO	CORES LOST
	459.0	459.1	548.6	0.1		Tr.					SPECK	185	
	472.5	472.6	535.1	0.1		Tr.					"	315	S.B NO CORES
	473.8	474.5	533.2	0.7		Tr.					"	355	
	476.0	476.2	531.5	0.2		Tr.					"	375	—
	500.5	500.6	507.1	0.1		Tr.					"	381	2.0
	501.6	501.7	506.0	0.1		Tr.					"	446	—
	502.5	503.1	504.6	0.6	3.2	3.0				1.9	DISS	449	1.0
	505.6	505.8	501.9	0.2		Tr.					SPECK	472	—
	511.0	511.2	496.5	0.2		Tr.					"	479	1.0
	512.5	512.6	495.1	0.1		Tr.					"	497	—
	529.0	531.3	476.4	2.3		Tr.					"	509	1.0
	538.0	538.3	469.4	0.3		Tr.					"	520	—
	540.8	541.3	466.4	0.5	0.9	Tr.				0.4	"	525	2.0
	553.0	553.1	454.6	0.1		Tr.					"	585	—
	555.4	556.2	451.5	0.8		Tr.					"	605	—
	556.2	557.0	450.7	0.8	0.2	1.0				0.2	DISS	621	5.0
	557.0	561.0	446.7	4.0		Tr.					SPECK	635	2.0
	564.3	564.5	443.2	0.2		Tr.					"	655	10.0
	568.0	568.1	439.6	0.1		Tr.					"	675	10.0
	583.6	586.3	421.4	2.7		Tr.					"		
	586.3	586.7	421.0	0.4	0.2	1.0				0.1	FRACT.		
	586.7	587.3	420.4	0.6		Tr.					SPECK		
	588.5	588.6	419.1	0.1		Tr.					"		
	591.1	591.2	416.5	0.1		Tr.					"		
	600.6	600.8	406.9	0.2		Tr.					"		
	600.8	601.0	406.7	0.2	1.5	2.0				0.3	FRACT. DISS		
	604.0	605.0	402.7	1.0		Tr.					SPECK		
	609.5	609.7	398.0	0.2		Tr.					"		
	640.0	645.7	362.0	5.7		Tr.					SCATT SPECKS		
	673.5	674.5	333.2	1.0		Tr.					AND STAINS		

DMEH

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE [illegible] MINE [illegible] STOPE ..... STAKE NO. 1C-86 HOLE NO. [illegible]

COLLAR ELEV. 1006 PITCH ..... BEARING ..... COORD.: R ..... E .....

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
[illegible]	841	BEGAN CORING	
[illegible]	321	[illegible]	[illegible]
[illegible]	691	[illegible]	[illegible]
[illegible]	651	[illegible]	[illegible]
[illegible]	631	[illegible]	[illegible]
		[illegible]	
[illegible]	583	1	[illegible]
136	570	[illegible]	[illegible]
159	548	5	[illegible]
171	535	5	[illegible]
174	532	[illegible]	[illegible]
[illegible]	511	[illegible]	[illegible]
[illegible]	509	[illegible]	[illegible]
211	462	7	[illegible]
[illegible]	438	[illegible]	[illegible]
[illegible]	387	[illegible]	[illegible]
[illegible]	383	19	[illegible]
[illegible]	365	17	[illegible]
[illegible]	331	[illegible]	[illegible]

DATE STARTED 1-13-58 PAGE 1.

FCR'I 1173-2-54

15

DATE BOTTOMED 1-17-58 | ST. NO. VC-85 | ST ELEV. | CLASS PAY | HOLE NO. 58VC15

DESCRIBED BY J. A. | AREA COURTOIS | ELEVATION COLLAR 1017.98

DATE ESTIMATED 1-22-58 | OPTION NO. CZ-15 | COORDINATES: N 109291.88 E 85024.46

BY J. A. | TRACT LEWIS MERRITT | 200 FT. MAP NO. 55 | 50 FT. MAP NO.

SW/4 - SW/4 SEC. 18

GENERAL HOLE DATA

MINERALIZATION RECORD 1050'N 1080'E T35N-R1W

HT. SLEEVE ABOVE GR 3.0 FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	150.0	868.0
SLEEVE BIT TO		
BEGAN CORING AT	150.0	868.0
SAVED CORES FROM	355.0	663.0
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "	207.0	811.0
DAVIS (C.B.-S.B.) "	369.0	649.0
BONNE TERRE "	612.0	406.0
CONGLOMERATE	616.0	402.0
B. T. TRANS. "	636.0	382.0
~~CONGLOMERATE~~ "		
LA MOTTE "	645.0	373.0
GRAN. OR POR. "		
PICTURES: FROM	355.0	663.0
TO	645.0	373.0
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ZN ASSAY	% ZN EST.	FT. %	REMARKS	TO	CORES LOST
	394.1	394.2	623.8	0.1		Tr.						205	
	428.2	428.3	589.7	0.1		Tr.						225	6.0
	476.5	477.0	541.0	0.5		Tr.						355	5.8
	477.0	480.0	538.0	3.0	17.8	17.0	53.4					375	—
	482.1	484.1	533.9	2.0	1.4	10.0	14.8					383	1.0
	484.5	485.1	532.9	0.6	0.8	1.0	0.5					390	1.0
	485.4	485.7	532.3	0.3	1.0	1.5	0.3					430	—
	485.7	487.0	531.0	1.3		Tr.						440	1.0
	487.0	488.9	529.1	1.9	17.4	15.0	33.1	2.4	2.0	4.6		455	0.9
	492.1	492.6	525.4	0.5	1.7	1.0	0.8					465	1.0
	493.5	494.4	523.6	0.9		Tr.						474	2.9
	503.1	503.7	514.3	0.6	0.2	Tr.	0.1	2.6	0.5	1.6		487	1.3
	525.8	527.0	491.0	1.2		Tr.						495	1.8
	528.3	528.5	489.5	0.2		Tr.						508	1.1
	528.5	530.2	487.8	1.7	0.3	1.0	0.5					568	—
	532.6	532.9	485.1	0.3		Tr.						588	0.5
	534.6	536.6	481.4	2.0	10.2	20.0	20.4					625	—
	536.6	538.1	479.9	1.5		Tr.						645	4.3
	542.0	546.3	471.7	4.3		Tr.							
	546.3	546.6	471.4	0.3	3.1	2.0	0.9						
	546.6	547.4	470.6	0.8		Tr.							
	547.4	548.5	469.5	1.1	1.2	2.0	1.3						
	548.5	550.4	467.6	1.9		Tr.							
	550.4	551.0	467.0	0.6	1.4	2.5	0.8						
	551.0	552.1	465.9	1.1		Tr.							
	555.1	557.4	460.6	2.3		Tr.							
	559.3	560.3	457.7	1.0	1.6	1.0	1.6						
	560.3	560.8	457.2	0.5		Tr.							
	561.8	562.7	455.3	0.9		Tr.							
	564.9	565.0	453.0	0.1		Tr.							

— CONT. —

FORM 1173-2-54

DATE BOTTOMED	ST. NO.	ST. ELEV.
DESCRIBED BY	AREA	
DATE ESTIMATED	OPTION NO.	
BY	TRACT	

CLASS PAY HOLE NO. 58VC15
ELEVATION COLLAR 1017.98
COORDINATES: N 109291.88 E 85024.46
200 FT. MAP NO. 55 50 FT. MAP NO.

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR FT.
FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO		
SLEEVE BIT TO		
BEGAN CORING AT		
SAVED CORES FROM		
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "		
BONNE TERRE "		
B. T. TRANS. "		
CONGLOMERATE "		
LA MOTTE "		
GRAN. OR POR. "		
PICTURES: FROM		
TO		
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS	CORE REC. TO	CORES LOST
	589.5	590.0	428.0	0.5	0.5	1.0				0.2			
	591.6	591.7	426.3	0.1	0.5	2.0				0.1			
	594.5	594.7	423.3	0.2		Tr.							
	595.5	596.3	421.7	0.8		Tr.							
	599.0	599.4	418.6	0.4	1.2	1.5				0.5			
	618.3	618.5	399.5	0.2	0.5	2.0				0.1			
	622.0	623.1	394.9	1.1	0.4	1.0				0.4			
	623.1	624.7	393.3	1.6		Tr.							
	625.3	625.6	392.4	0.3	4.0	4.0				4.2			
	626.0	626.5	391.5	0.5	4.6	1.5				2.1			
	626.5	627.4	390.6	0.9		Tr.							
	627.4	628.5	389.5	1.1	1.0	1.0				1.1			
	628.5	629.8	388.2	1.3		Tr.							

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY H DATE 1-22-58 MINE Courtois STOPE STAKE NO. VC-85 HOLE NO. 58VC15

COLLAR ELEV. 1016. PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
205	811	BEGAN CORING	
207	809	Derby	Lace Run (207)
211	805	Derby	Davis transition — (211)
369	647	Davis Bound	Shale — Solid Bit 225-355 (369)
419	597	1	GTO & smoky tant solites — massive appearance top to 396 — thin bedded 396-403 = smoky 403 to Base — < fracturing > pitting — to Rb 314 — ? porous calcite patches — thin Rbs (419)
428	588	1-5	GTO-GT-lenses tant to med solites — ? scattered Bb — ? dense bs — ? pitting — thin Rbs — (428)
456	560	5	GTOBB med solites — med Gts — pitting — ? 2 MP Bs — ? fracturing — few thin Rbs — ? lickite Gts — (456)
464	552	5	GTO-rotunded tant solites — fine in top, 1'@ 459, 1'@ Base — thin Rbs — calcite — ? small Gts — (464)
488	528	5	GTOBB med solites — med Gts — 467 — few thin Rbs — ? ZN — ? ca — good Rb 477-484, 1'@ Base — fair ZN @ Base — ? fracturing — (488)
516	500	5-7	Fo-Fo-Tonalite — med reef rock top to 496, 497-501, 503-508, 512 to Base — Tonal tant solites 496, ? 501-503, 4' 508-512 — thin Rbs — ? fracturing — few Rbs top — fair ZN @ 505 — ? pitting — ? MP Bs — (516)
525	491		GTO-smoky massive appearance tant to med solites top to 523 — Gts ? 523-525 — small Gts — ck — ? pitting — few thin Rbs — (525)
538	478	7	Fo-Tonalite med reef rock — tant solites & Gts in matrix — trace to few Bb — Hard — ? pitting (538)
540	476		TGO tant solites — med Gts — few thin Rbs — ? pitting — (540)
612	404	13-16	Fo-Tonalite massive tant Base = N med reef rock — ZN increases to lower Base — many thin Rbs — ? pitting — ? fracturing — small Gts — few to few Rb — ? ca — (612)
616	400	16	Porphyry — black pebbles in dol matrix — purple porphyry pebbles — solites — [illegible] (616)
636	380	[illegible]	[illegible] top — very smoky 617-623 & 624-626 — 17 approx. [illegible] — trace to few Pb — pebbles — (636)
645	371	20	[illegible] — [illegible] — pending — (645)

DATE STARTED 1-20-58

FORM 1173-2-54

15

DATE BOTTOMED 1-23-58
DESCRIBED BY C.A.
DATE ESTIMATED 1-24-58
BY C.A.

ST. NO. VC-90 ST. ELEV.
AREA COURTOIS
OPTION NO. CZ-15
TRACT LEWIS MERRITT

CLASS PAY HOLE NO. 58VC20
ELEVATION COLLAR 952.44
COORDINATES: N 108354.49 E 85084.03
200 FT. MAP NO. 55 50 FT. MAP NO.
SW1/4 - SW1/4 SEC. 18 170'N 1180'E T35N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 1.50 FT.
FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	89.0	863.4
SLEEVE BIT TO	~~125.0~~	
BEGAN CORING AT	125.0	827.4
SAVED CORES FROM	350.0	602.4
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "	?	
DAVIS (C.B.-S.B.) "	353.0	599.4
BONNE TERRE "	592.0	360.4
B. T. TRANS. (17 GW SD7 X)	606.0	346.4
CONGLOMERATE "	—	
LA MOTTE "		
GRAN. OR POR. "		
PICTURES: FROM	350.0	602.4
TO	651.0	301.4
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ZN ASSAY	% ZN EST.	FT. %	REMARKS	CORE REC. TO	CORES LOST
	411.5	411.6	540.8	0.1		Tr.					SPECK	125	
	412.6	412.7	539.7	0.1		Tr.					"	145	✓
	414.1	414.4	538.0	0.3	7.1	6.0	2.1	2.5	1.0	0.7	DISS	335	DISCARD
	422.5	422.7	529.7	0.2		Tr.					SPECK	355	—
	424.2	424.3	528.1	0.1	4.4	3.0	0.4				HORIZ. SEAM	365	2.0
	424.3	427.0	525.4	2.7		Tr.					SPECKS	415	—
	430.2	431.0	521.4	0.8	4.3	6.0	3.4				DISS	425	—
	439.0	440.1	512.3	1.1	9.4	20.0	10.3	7.2	8.0	7.9	SCATT. CONCENTRAT.	427	—
	440.6	441.7	510.7	1.1	0.5	1.0	0.6				DISS	441	1.0
	441.7	443.8	508.6	2.1	15.2	20.0	31.9	14.9	12.0	31.3	SCATT. CONCENTRAT	455	—
	446.0	446.4	506.0	0.4	1.2	1.0	0.5	1.1	1.0	0.4	DISS	460	1.0
	446.8	447.8	504.6	1.0	1.0	1.0	1.0	20.5	15.0	20.5	"	568	—
	449.0	449.6	502.8	0.6	0.2	Tr.	0.1	2.0	1.0	1.2	"	578	—
	455.0	456.5	498.9	1.5		Tr.					SPECKS	591	1.0
	457.7	457.9	494.5	0.2		Tr.					"	611	—
	472.0	472.1	480.3	0.1		Tr.					"	631	5.0
	475.0	475.1	477.3	0.1		Tr.					"	651	1.0
	480.0	481.0	471.4	1.0	1.0	1.0	1.0				DISS		
	481.2	481.4	471.0	0.2		Tr.					SPECKS		
	488.7	490.0	462.4	1.3		Tr.					"		
	497.9	498.0	454.4	0.1		Tr.					"		
	501.0	501.1	451.3	0.1		Tr.					"		
	521.0	521.1	431.3	0.1		Tr.					"		
	534.8	535.0	417.4	0.2		Tr.					FRACT.		
	546.0	546.2	406.2	0.2		Tr.					SPECKS		
	547.0	547.1	405.3	0.1		Tr.					"		
	581.0	581.1	371.3	0.1		Tr.					"		
	582.0	582.2	370.2	0.2		Tr.					"		
	605.0	605.7	346.7	0.7		Tr.					"		
	607.1	607.2	345.2	0.1		Tr.					"		
	628.3	632.2	320.2	3.9		Tr.					"		

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE [illegible] MINE [illegible] STOPE ..... STAKE NO. VC-90 HOLE NO. FAVC 20

COLLAR ELEV. 952 PITCH ..... BEARING ..... COORD.: N ..... E .....

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
[illegible]	[illegible]	BEGAN CORING	
[illegible]	[illegible]	[illegible]	[illegible] (145)
[illegible]	617	[illegible]	[illegible]
[illegible]	599	[illegible]	[illegible] (353)
		[illegible]	
[illegible]	548	1	[illegible] (424)
[illegible]	538	[illegible]	[illegible] (414)
[illegible]	513	[illegible]	[illegible] (439)
[illegible]	499	[illegible]	[illegible]
[illegible]	475	[illegible]	[illegible] (477)
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]

DATE STARTED 1-13-58

FORM 1172-2-54

20

DATE BOTTOMED 1-16-57
DESCRIBED BY C.A.
DATE ESTIMATED 1-20-58
BY C.A.

ST. NO. VC-79 ST. ELEV.
AREA COURTOIS
OPTION NO. CZ-64
TRACT JESSE H. BREAKFIELD

CLASS TRACE HOLE NO. 58VC13
ELEVATION COLLAR 976.74
COORDINATES: N 110428.91 E 89052.79
200 FT. MAP NO. 56 50 FT. MAP NO.
NE/4 - SE/4 SEC. 18

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 2.08 FT.
FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	170.0	806.7
SLEEVE BIT TO		
BEGAN CORING AT	395.0	581.7
SAVED CORES FROM	395.0	581.7
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "	—	
DAVIS (C.B.-S.B.) "	398.0	578.7
BONNE TERRE "	642.0	334.7
B. T. TRANS. "	—	
CONGLOMERATE "	—	
LA MOTTE "	681.0	295.7
GRAN. OR POR. "		
PICTURES: FROM	395.0	581.7
TO	681.0	295.7
CHAR. SAMPLES: FROM		
TO		
INSOL. RES. FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 2300'N 100'W T35N-R1W

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS	CORE REC. TO	CORES LOST
	477.5	477.8	498.9	0.3	0.7	1.0				0.2	DISS	395	
	478.3	478.5	498.2	0.2		Tr.					SPECK	621	—
	482.7	483.1	493.6	0.4	0.7	1.0				0.3	DISS	641	4.0
	509.9	510.0	466.7	0.1		Tr.					FRACT	661	2.0
	557.0	557.2	419.5	0.2		Tr.					SPECK	681	5.0
	558.0	558.1	418.6	0.1		Tr.					"		
	639.5	641.5	335.2	2.0		Tr.					SCATT FINE SPECKS		

DMEA

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE 1-[illegible]-[illegible] MINE [illegible] STOPE ..... STAKE NO. VC-79 HOLE NO. 58VC13

COLLAR ELEV. 976 PITCH ..... BEARING ..... COORD.: N ..... E .....

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
398	581	BEGAN CORING	
398	578	[illegible]	SHALE (398)
		[illegible]	FENCE
143	528	1	GT>0>massive GT [illegible] — IRREG GT: DENSE
			[illegible] VUGGY [illegible] TO BASE — (443)
175	521	1-5	GT FENCE w/ GT>B1 — [illegible] FENCE GT [illegible] w/ occasional GB>B1 [illegible] (465)
439	487	5	GB>0 B1 — <B1 [illegible] — 1' VUGGY @ 465 — >2ND DOLO [illegible]
			FENCE [illegible] GREY M @ 475-465 — 6" massive GT>0 w/ FINE [illegible] @ 475 —
			TR PY @ 484 — [illegible] — 1' SM>FENCE [illegible] @ 486 — (489)
515	461	5	FT/GT>MASS — [illegible] w/ TR PY BELOW @ 510 — 1" KL
			@ 512 — [illegible] (515)
519	457	5	GT>1 [illegible] — [illegible] FINE [illegible] — 6" GT>0 @ 516 — FINELY X>FRACT (519)
531	445	7	FT/GT>MASS — FINELY [illegible] FT w/ [illegible] MATRIX>TR PY [illegible] VUGGY — 2' BROKEN [illegible] F @ 531 — (531)
535	441	7	GT FENCE — E — MASSIVE [illegible] — FRACT — (535)
537	379	7	GT>0 [illegible] — 1' >FENCE [illegible] — 1' DENSE @ 538 — DRIL @ 539 — DENSE 540 —
			1' [illegible] @ 541 — 2' GT>THIN [illegible] — FINELY MASSIVE [illegible] TR PY @ 557 — 2' [illegible] F
			[illegible] — MASSIVE [illegible] @ 587 +/ THIN [illegible] @ 537 & 544 & 537 — MED BEDDED>KL 587
			[illegible] — (591)
626	350	—	FT/GT MASSIVE FENCE — [illegible] MED [illegible] M SEEP 597 TO 603 — [illegible] FT/SM MATRIX>FRACT 603
			TO 608 — 1' [illegible] FENCE [illegible] — F>[illegible] M 610 TO 618 — 2' [illegible] SM>CREEP @ 622 —
			FROM F w/ [illegible] MATRIX 623 TO 626 — (626)
641	334	1-5	GTM>0 [illegible] FENCE — MED [illegible] & M — [illegible] FINE [illegible] — [illegible] CUTTING — [illegible] CHECK [illegible] TRS 640 TO
			641 — 2' FAINTLY [illegible] @ 641 — 1' [illegible] >[illegible] M CREEP w/ PRACTICALLY NO SAND
			GRAINS — (642)
681	295	20	I, E, & WS — 5' [illegible] 1611 — W [illegible] / E 611 TO 657 — W [illegible] / GI & [illegible] FENCE PATCHES
			[illegible] — 2' E [illegible] 661 — W [illegible] / GI & PATCHES & SULFIDE PATCHES & [illegible] 661 TO (681)

DATE STARTED 1-17-58

FORM 1173-2-54

20

DATE BOTTOMED	ST. NO. VC-84	ST. ELEV.	CLASS INDICATIVE HOLE NO. 58VC19
DESCRIBED BY J. A.	AREA COURTOIS		ELEVATION COLLAR 1008.99
DATE ESTIMATED 1-27-58	OPTION NO. CZ-56		COORDINATES: N 109000.98 E 86810.25
BY R. M. R.	TRACT SIMON BREAKFIELD		200 FT. MAP NO. 55 50 FT. MAP NO.

SW1/4 SE1/4 SEC. 18 800'N 2250'W T35N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 2.33 FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	140.0	869.0
SLEEVE BIT TO		
BEGAN CORING AT	140.0	869.0
SAVED CORES FROM	415.0	594.0
FORMATIONS:		
SOIL .. TO		
..		
EMINENCE ..		
POTOSI ..		
POTOSI-DERBY ..		
DERBY DOE RUN ..		
DAVIS (C.B.-S.B.) ..	416.0	593.0
BONNE TERRE ..	652.0	357.0
B. T. TRANS. ..	686.0	323.0
CONGLOMERATE ..		
LA MOTTE ..	689.0	320.0
GRAN. OR POR. ..		
PICTURES: FROM	415.0	594.0
TO	689.0	320.0
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ZN ASSAY	% ZN EST.	FT. %	REMARKS	CORE REC. TO	CORES LOST
	480.3	480.5	528.5	0.2		Tr.						689	0
	485.0	485.4	523.6	0.4		Tr.							
	487.4	488.1	520.9	0.7		Tr.							
	488.1	488.4	520.6	0.3	1.0	1.0	0.3						
	488.4	490.3	518.7	1.9		Tr.							
	492.3	492.7	516.3	0.4	2.4	1.5	1.0						
	502.4	503.6	505.4	1.2		Tr.							
	503.6	504.6	504.4	1.0	52	3.0	52	3.1	1.0	3.1			
	505.4	505.9	503.1	0.5		Tr.							
	505.9	506.5	502.5	0.6	0.8	1.0	0.5						
	507.1	507.5	501.5	0.4	2.1	1.0	0.8						
	507.5	508.5	500.5	1.0		Tr.							
	508.5	508.9	500.1	0.4	4.5	1.5	1.8						
	510.2	510.3	498.7	0.1		Tr.							
	650.3	653.0	356.0	2.7		Tr.							

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE ..... MINE [illegible] STOPE ..... STAKE NO. VC-84 HOLE NO. BVC 19

COLLAR ELEV. [illegible] PITCH ..... BEARING ..... COORD.: N ..... E .....

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
415	[illegible]	BEGAN CORING	
416	[illegible]	[illegible]	[illegible] (416)
412	[illegible]	1	[illegible] thin bedded 435-453 [illegible] appearance 453 to base [illegible] (472)
477	[illegible]	5-1	[illegible] (477)
502	[illegible]	5	[illegible] (502)
511	477	5	[illegible] (511)
536	472		[illegible] (536)
[illegible]	452	-?	[illegible]
541	[illegible]	?	[illegible] (541)
552	[illegible]	16	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]

DATE STARTED 1-24-58

FCRM 1173-2-54

20

DATE BOTTOMED 1-30-58	ST. NO. VC-82 ST. ELEV.	CLASS TRACE HOLE NO. 58VC25
DESCRIBED BY J. A.	AREA COURTOIS	ELEVATION COLLAR 968.52
DATE ESTIMATED 2-3-58	OPTION NO. CZ-94	COORDINATES: N 109204.24 E 92042.89
BY J. A.	TRACT PERCY CARL	200 FT. MAP NO. 56 50 FT. MAP NO.

SW¼-SE¼ SEC. 17

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 2.0 FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO		
SLEEVE BIT TO	12.0	956.5
BEGAN CORING AT		
SAVED CORES FROM	235.0	733.5
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "	81.0	887.5
DAVIS (C.B.-S.B.) "	250.0	718.5
BONNE TERRE "	493.0	475.5
B. T. TRANS. "	495.0	473.5
CONGLOMERATE "	—	
LA MOTTE "	535.0	433.5
GRAN. OR POR. "		
PICTURES: FROM	235.0	733.5
TO	535.0	433.5
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 1090'N 2330'W T35N-R1W

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% Cu. ASSAY	% Cu. EST.	FT. %	REMARKS
	296.7	297.5	671.0	0.8	0.0	—		1.8	0.5	1.44	
	408.2	408.6	559.9	0.4		Tr.					
	488.4	489.1	479.4	0.7	0.0	—		0.52	0.5	0.36	

CORE REC.

TO	CORES LOST
75	—
95	5.5
235	Disc.
255	6.0
275	14.0
295	4.0
315	9.0
325	6.0
345	18.0
355	9.0
365	9.0
375	7.0
379	—
385	4.0
393	7.0
405	6.0
411	1.5
425	12.0
445	6.0
459	2.0
475	1.5
495	1.0
515	12.0
535	—

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY JA DATE 2-3-58 MINE Courtois STOPE STAKE NO. VC-82 HOLE NO. 83VC25

COLLAR ELEV. 968.5 PITCH BEARING COORD.: N 109204.24 E 920.4289

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
75	893.5	BEGAN CORING	
81	887.5	Derby	Doe Run — 1' E @ top — (81)
92	876.5	Derby	Davis Transition — (92)
250	718.5	Davis	Shale — cores discarded 95 - 235 (250)
		Bonne Terre	
296	672.5	1	TO slightly E > snuvly E thru out — faint oolites — ; wl snuvly appearance — > pitting & small vugs — > fracturing & grinding — few thin Rbs — (296)
327	641.5	5	GTO Rs ; E wl > F faint to Med oolite — small Rs — E 300 to Base — > pitting & small vugs — < fracturing & grinding — > E Rbs — 2' Reef 323 - 325 — 2' TO w/ Breccia fragments @ Base — > sand top — thin Rbs — (327)
430	534.5	3	Blu. white dense ; porous — > E slightly porous 1' @ 373, 3' top - 409 2' 425 - 427 — < fracturing & grinding — E 427 to Base — thin Rbs — > fos — (430)
448	516.5	7	F to TO > M fair reef rock — faint to med oolite in Matrix — > fracturing > ca patches — > pitting — few thin Rbs — (448)
460	504.5	10	GTO > Gt & E faint oolites — small Gts — E 450 to Base — 1' wl Breccia fragments @ Base — > M patches — > fracturing — (460)
493	471.5		F to M — TO > M ; E good reef top to 465 — TO wl dim F 465 - 475 — TO wl > M 475 - 491 — irregular bed 491 to Base — E 465 to Base — > fracturing & grinding — slight Iron stain 491 - 493 — > pitting & small vugs — (493)
495	473.5	19	E EI SD E thru out — fairly sandy — > E & I stains — (495)
501	467.5	17-20	EI & G > X sandy — ; W sand 2' W sand @ top — E I & G slightly crystalline 297 to Base — > E H (501)
535	433.5	20	W Sand med grain — > G fs — fos spks — (535)

FORM 1173-2-54

DATE BOTTOMED 1-29-58
DESCRIBED BY J.A.
DATE ESTIMATED 2-4-58
BY J.A

ST. NO. VC-80 ST. ELEV.
AREA COURTOIS
OPTION NO. CZ-15
TRACT LEWIS MERRITT

CLASS INDICATIVE HOLE NO. 58VC26
ELEVATION COLLAR 1023.08
COORDINATES: N 110365.92 E 87503.04
200 FT. MAP NO. 55 50 FT. MAP NO.
NW1/4-SE1/4 SEC. 18

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 3.0 FT.
FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	112.0	911.1
SLEEVE BIT TO		
BEGAN CORING AT	115.0	908.1
SAVED CORES FROM	395.0	628.1
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "	CONTACT	GROUND
DAVIS (C.B.-S.B.) "	409.0	614.1
BONNE TERRE "	638.0	385.1
B. T. TRANS. "	652.0	371.1
CONGLOMERATE "		
LA MOTTE "	662.0	361.1
GRAN. OR POR. "		
PICTURES: FROM	404.0	619.1
TO	662.0	361.1
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 2200'N 1560'W T35N-R1W

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ZN ASSAY	% ZN EST.	FT. %	REMARKS	CORE REC. TO	CORES LOST
	464.5	464.6	558.5	0.1		Tr.						203	SB
	468.2	468.3	554.8	0.1		Tr.						295	
	473.3	473.5	549.6	0.2		Tr.						395	DISS
	476.2	476.3	546.8	0.1		Tr.						415	—
	478.3	478.4	544.7	0.1	5.7	1.0	0.6					428	2.0
	480.7	481.0	542.1	0.3	0.8	1.0	0.2					508	—
	487.1	487.6	535.5	0.5		Tr.						522	1.0
	492.0	492.6	530.5	0.4		Tr.						662	—
	498.6	499.2	523.9	0.6		Tr.							
	499.2	502.1	521.0	2.9	2.3	1.0	6.7	5.0	2.5	14.5			
	502.9	505.5	517.6	2.6	0.7	1.5	1.8						
	505.5	506.0	517.1	0.5		Tr.							
	507.2	509.3	513.8	2.1		Tr.							
	512.7	512.8	510.3	0.1		Tr.							
	552.4	552.5	470.6	0.1	3.0	1.0	0.3				CUBE PB		
	582.0	582.7	440.4	0.7		Tr.							
	582.7	582.9	440.2	0.2	4.5	1.0	0.9						
	594.4	594.5	428.6	0.1		Tr.							

DMEA

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY JA DATE 2-3-58 MINE Courtois STOPE STAKE NO. VC-65 HOLE NO. 58VC26

COLLAR ELEV. 1021 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
183	838	BEGAN CORING	
203	818	Derby	Doe Run — Derby Davis contact ground (203)
409	612	Davis	Shale — SB 203-295 — Discarded 215-395 (409)
		Bonne Terre	
455	566	1	TO — irregular bedded & smurly faint oolites — many porous oolitic patches — < fracturing 415-428 — irregular thin bedded 428-442 — smurly appearance 442 to Base — many thin Rbs — > pitting — 3" Bt @ 438 — > dickite — (455)
468	553	5-1	TO Bt dense bs irregular bedded faint to med oolite — many thin Rbs — small Bta — > dense bs — irregular bedded — few ca patches — > dickite — spk pb — (468)
493	528	5	GTO Bt faint to med oolites — small Bta — < pitting — few small vugs — few thin Rbs — > ca & dickite ta — few dense Gbs & patches — 1' slightly crystaline @ 479 — > tr. Pb — (493)
497	524	R	GTM & TO > M 1' GTM @ top 1' @ Base — TO > M 494-496 — thin Rbs — > pitting — few vugs — > dickite — > small Gta — (497)
		5	TO > Bt med oolites — few small Bta — few thin Rbs — good > N tr Pb — > pitting — > K —
528	493		F TM Gt fair reef rock — slightly E — 3 porous > Gt 510-513 — > fracturing — 6" Gt @ 522 — tr. Pb — > oolites (528)
542	479		GTO Gt fairly massive — 3' Gt 530-533 — faint oolites — few thin Rbs — > pitting (542)
568	453	7	F TM & TO bedded fair reef — 2' TO bedded 544-546, 1' @ 555, 3' 559-562 — faint to med oolites — thin Rbs — Pb @ 553 — > pitting — > K — (568)
606	415	10-7	GTO bedded > F faint oolite — fairly massive bedded — few thin Rbs — 1' F @ 572, 578, 2' 587-589 — oolites increase in size toward Base — > ca — tr. Pb — > pitting — > K (606)
636	385	12	GTM > OGt — GTO Gt slightly crepe GTM > OGt to 612 w/ < K — GTO Gt w/ faint to med oolite & small Gt 612-630 — GTM Gt few thin Rbs 630 to Base — > pitting — > fracturing — ca seams — few Bt toward Base — tr. Pb — > X sect. (636)
638	383	16	F > M N fair N — fair reef — > M — > pitting — few thin Rbs — (638)
652	369	19-20	LG D3 < sand 1' top D3 6" @ Base — fairly good sand w/ Gbs — med grain > fos — (652)
662	359	20	W.S. w/ > E stain med grain — > fos — 1' top E stain — > short E sect. (662)

ACTION ON INTER
OR FINAL FIELD TEAM REPORT

Date 1-13-58

Referred to:

1. ~~Mr. Mittendorf~~
2. ~~Mr. Johnson~~
3. ~~Mr. Gentner~~
4. Docket Control Mails and Files
5. Division
6. Docket Control Mails and Files
7. ~~500~~

Note comments in report regarding:

1.

2.

3.

4.

and take appropriate action.

- - - - - - - -

Action taken by Division:

Robert E. Adams

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
Box 431
Joplin, Missouri
January 8, 1958

DMEA
RECEIVED JAN 13 1958

DATE		CODE
1/13	gr	220
1/2	[illegible]	100
1/5	WKS	500

DMEA Operating Committee
Department of the Interior
Washington 25, D. C.

Re: DMEA-4582(lead-zinc-copper)
St. Joseph Lead Co.
Courtois Area
Washington County, Mo.
Contract Idm-E1068

Dear Sirs:

Transmitted herewith are three copies of the Interim Report received from Dewey Amos, USGS, Carbondale, Illinois, covering the joint Field Team inspection he and I made at the subject project on January 2.

Sincerely yours,

Clinton C. Knox
Executive Officer
DMEA Field Team, Region IV

encl. 3

cc: DMEA Op.Com.(2)
Amos,USGS,Carbondale w/2 cys encl.
4582 file

RECEIVED
DIVISION OF MINERAL
TECHNOLOGY

JAN 6 1958

BUREAU OF MINES
JOPLIN, MO.

OFFICIAL FILE COPY
DMEA
RECEIVED JAN 13 1958

DATE	INITIALS	CODE

Interim Report

DMEA-4582, Idm-E1068

Operator: St. Joseph Lead Co., Bonne Terre, Missouri

Location: Courtois Area, Washington County, Missouri

A project inspection of the subject contract was conducted on January 2, 1958. Results obtained to date and contemplated future work were discussed with Mr. R. E. Wagner, Head of Exploration and Mr. Klosterman, Geologist.

Drilling completed on the Courtois project to date and since the inspection on December 5, 1957 is summarized as follows:

Drilling Completed

Footage in holes completed since last inspection.	6,601
Footage in holes completed to date.	52,808
Number of holes completed since last inspection	10
Total number of holes completed to date	80
Number of holes showing commercial ore.	9
Number of holes showing indicative non-commercial . . . . mineralization.	8
Number of holes showing trace mineralization.	45
Number of holes showing speck trace mineralization. . . .	7
Number of barren holes.	11

A summary of the ten holes completed since the last interim inspection is as follows:

Hole No.	Location	Depth	Remarks
VC-54	Center NE¼, SW¼, sec. 5	483 ft.	Blank hole.
VC-65	NE¼, SW¼, NE¼, sec. 5	725 ft.	Ore hole.
VC-91	SW¼, SE¼, SW¼, sec. 18	628 ft.	Trace hole.
VC-48	SW¼, NW¼, SW¼, sec. 18	730 ft.	Indicative hole.
VC-87	Center SE¼, SW¼, sec. 18	605 ft.	Ore hole.

Hole No.	Location	Depth	Remarks
VC-75	SW¼, SW¼, SE¼, sec. 4	599 ft.	Speck trace hole.
VC-76	SW¼, NE¼, NW¼, sec. 9	691 ft.	Speck trace hole.
VC-47	NW¼, NE¼, SE¼, sec. 13	775 ft.	Trace hole.
VC-81	SW¼, SE¼, NE¼, sec. 17	670 ft.	Trace hole.
VC-88	SW¼, SE¼, SE¼, sec. 13	695 ft.	Indicative hole.

Diamond drilling is in progress in two holes summarized as follows:

Hole No.	Location	Present Depth	Estimated Total Depth
VC-89	SE¼, SW¼, SW¼, sec. 18	615 ft.	650 ft.
VC-83	Center NE¼, SW¼, sec. 18	165 ft.	700 ft.

Thr churn drill portion of 10 holes has been completed since the date of the last interim inspection. A summary of these holes is as follows:

Hole No.	Location	Depth to Bottom of Churn Drilling
VC-85	NE¼, SW¼, SW¼, sec. 18	147 ft.
VC-47	NW¼, NE¼, SE¼, sec. 13	245 ft.
VC-81	SW¼, SE¼, NE¼, sec. 17	150 ft.
VC-88	SE¼, SE¼, SE¼, sec. 13	230 ft.
VC-79	NE¼, NE¼, SE¼, sec. 18	170 ft.
VC-86	500 feet N.15°E. of Hole 56W73	140 ft.
VC-83	Center NE¼, SW¼, sec. 18	105 ft.
VC-84	NW¼, SW¼, SE¼, sec. 18	140 ft.

Hole No.	Location	Depth to Bottom of Churn Drilling
VC-80	NE¼, NW¼, SE¼, sec. 18	140 ft.
VC-90	500 feet S.25°W. of Hole 56W73	90 ft.

Churn drilling is in progress in two holes summarized as follows:

Hole No.	Location	Present Depth
VC-78	SE¼, SW¼, NW¼, sec. 17	100 ft.
VC-77	NE¼, SE¼, NE¼, sec. 18	Setting up.

Assay results of recently completed holes are given below:

Hole no.	Depth	Thickness	%Pb	%Zn	%Cu
VC-65	536.8 - 541.2 ft.	4.4 ft.	5.8	---	0.64
VC-48	637.2 - 640.5 ft.	3.3 ft.	1.6	---	---
	642.0 - 643.9 ft.	1.9 ft.	1.7	---	---
VC-87	404.0 - 404.1 ft.	0.1 ft.	12.0	---	---
	416.9 - 422.0 ft.	5.1 ft.	4.0	2.8	---
	425.5 - 426.9 ft.	1.4 ft.	1.6	1.0	---
	427.9 - 428.7 ft.	0.8 ft.	0.8	4.5	---
	442.0 - 442.2 ft.	0.2 ft.	36.0	2.8	---
	445.8 - 446.6 ft.	0.8 ft.	3.6	---	---
	448.7 - 449.6 ft.	0.9 ft.	2.5	---	---

Assay results have not been received for Hole No. VC-88. It contains 7.8 feet of estimated 1.7 percent lead at about 380.2 - 388 feet in depth and 6.8 feet of estimated 1.8 percent lead at approximately 595.2 - 602 feet in depth.

Clinton C. Knox
Mining Engineer
U. S. Bureau of Mines

Dewey H. Amos
Geologist
U. S. Geological Survey