UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Box 431
Joplin, Missouri
February 7, 1958

Official COPY
DMEA
RECEIVED FEB 1958
DATE
2/10
3/11 WRB
CODE
110
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 and one copy of the MF-104A and the Monthly Report by the cited Operator covering the December 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 January 16, 1958.

Sincerely yours,

CCK/id

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

encl. 4

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

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

Form MT-1
(April 1952)

2day - Wash

Budget Bureau No. 42-R1036

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S MONTHLY REPORT AND VOUCHER

RECEIVED FEB 10 1958

Month of December, 1957 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	15917.40	108051.84	123969.24	3/18/58	ADPR	
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	215.00	270.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	15972.40	108266.84	124239.24	✓	✓	✓

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

Date 1-14-58 *Payee St. Joseph Lead Company

Per L. M. Castel 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:

$ 7,986.20

Signature
(Authorized Certifying Officer)

Date 2/5/57 Vou. No. 4-25

(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. IdaE1068 in accordance with the terms of the contract.

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

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Clinton C. Knox Title Executive Officer Date January 28, 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.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Box 431
Joplin, Missouri
January 16, 1958

ORIGINAL FILE COPY
DMEA
RECEIVED JAN 20 1958

Date		Amount
1/20	C	220
1/20	WHG	110
	Klg	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 and one copy of the MF-104A and the Monthly Report by the cited Operator covering the November 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 December 16, 1957.

Also forwarded herewith for your advance information is one of your copies of the Operator's December report(excepting the MF-104 Voucher).

Sincerely yours,

Clinton C. Knox

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

encl. 5

cc: DMEA Op.Com.
Amos,USGS,Carbondale w/cy Dec.MF-104
4582 file

Form MF-104A
(April 1962)

Budget Bureau No. 42-R1151.2

Work (except MF104)

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

Month of December 1957 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.	12711.72	5726	91555.02	41241	$2.22		
Churn	Ft.	3205.68	1444	32414.22	14601	2.22	133420	$2.22
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Analytical Determinations	Ea	55.00	55	270.00	270	1.00	2370	1.00
TOTAL DISTRIBUTED COSTS		15972.40		124239.24				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		15972.40		124239.24				

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 1-14-58 Operator St. Joseph Lead Company

Per L. W. Castel Title

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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JAN 16 1958
BUREAU OF MINES
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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TECHNOLOGY

JAN 16 1958

BUREAU OF MINES
JOPLIN, MO.

MONTHLY REPORT FOR MONTH OF DECEMBER, 1957

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

Two churn drills were operating in the area at the end of the month. The holes in progress were Stage I, Stake No. C78 at a depth of 100 feet, and Stage I, Stake No. C77 at a depth of 20 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	C85	147	11-13-57
I	C47	245	11-23-57
I	C81	150	11-23-57
I	C88	230	11-26-57
I	C79	170	12- 3-57
I	C86	147	12- 4-57
I	C83	105	12- 5-57
I	C84	140	12-12-57
I	C80	110	12-10-57

One diamond drill was operating in the area at the end of the month. The hole in progress was Stage I, Stake No. C83, at a depth of 165 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.
I	91	57VC156	628	568	12- 4-57	Trace
I	87	57VC162	605	550	12-10-57	Pay
I	65	57VC157	725	540	12- 4-57	Pay
I	75	57VC159	599	542	12- 9-57	Sp.Trace
I	76	57VC169	691	561	12-17-57	Sp.Trace
I	54	57VC155	483	450	12- 3-57	Blank
I	48	57VC163	730	485	12-10-57	Ind.
I	47	57VC168	775	530	12-17-57	Sp.Trace
I	81	57VC177	670	520	12-30-57	Trace
I	88	57VC173	695	465	12-26-57	Ind.
I	89	57VC179	725	515	12-31-57	Pay

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:

57VC179	3 Pb		
57VC173	18 Pb	4 Zn	
57VC163	3 Pb		
57VC157	3 Pb		3 Cu
57VC162	12 Pb	5 Zn	
57VC156	3 Pb	1 Zn	

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JAN 16 1958

BUREAU OF MINES
JOPLIN, MO

WASHINGTON COUNTY

Courtois Area - In DMRA Project #4582

Week Ended December 9, 1957

3 diamond drills operating and 4 churn drills setting casing completed 1 pay, 1 trace and 1 blank hole.

57VC157, stake #C65, a pay hole, is located 6500 feet northeast of the village of Courtois and 1560 feet north-northeast of 57VC143, a pay hole. It bottomed at 725 feet depth in Lamotte sand. Lead and copper mineralization is present in the lower 5 zone in association with a thin algal reef. Estimates are 4.4 feet of 5.0% Pb and 5.0 feet of 1.9% Cu at 541 feet depth, 4.8 feet of 1.5% Cu at 554 feet depth. This hole extends the lower 5 zone mineralization farther to the north.

57VC156, stake #C91, a trace hole, is located at the southern edge of the project area, about 9500 feet southwest of the village of Courtois and 520 feet southeast of an indicative hole. It bottomed at 628 feet depth in Lamotte sand. Lead mineralization, estimated as 1.4 feet of 1.2% Pb, is present in the lower 5 zone at 456 feet depth in the same horizon as lead in the indicative hole.

57VC155, stake #C54, a blank hole, is located about 3500 feet northeast of the village of Courtois and 2700 feet southwest of the above reported pay hole. It bottomed at 483 feet depth in granite, which extends about 25 feet up into the Bonneterre horizon. Traces of copper were present in the conglomerate beds lying on the Precambrian. Presence of this high granite area was not previously known.

Week Ended December 16, 1957

2 diamond drills operating and 3 churn drills setting casing completed 1 pay, 1 indicative, and 1 speck trace hole for a total of 3 holes.

57VC162, stake #C87, a pay hole, is located about 9,000 feet southwest of the village of Courtois, near the southern edge of the project area, and 520 feet east of 56W73, an indicative hole. It bottomed at 605 feet depth in Lamotte sandstone. Pay run, estimated as 5.1 feet of 5.5% Pb and 2.0% Zn is at 422 feet depth in brown spotted oolite above the first 5 zone reef. An indicative run, estimated as 7.6 feet of 2.2% Pb is located at 450 feet depth in the top of the 7 reef.

57VC163, stake #C48, an indicative hole, is located about 1850 feet northwest of the above hole. It bottomed at 730 feet depth in 17 feet of dark rhyolite porphyry which extends up into the sandy transition zone of the Bonneterre formation. Mineralization in the mixed reef and oolite zone below the main 7 reef was estimated as 6.7 feet of 1.3% Pb, barely indicative in grade, at 644 feet depth.

57VC159, stake #C75, a speck trace hole, is located about 8,000 feet east of the village of Courtois and in the eastern edge of the project area. It bottomed at 599 feet depth in Lamotte sand. Bonneterre formations showed thin reefs in the 7 zone and considerable mottled crepe rock in the 12 zone. A few speck traces of lead were present in the 12 zone from 540 to 552 feet depths.

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Week Ended December 23, 1957

WASHINGTON COUNTY (Continued)

Courtois Area - In DMEA Project #4582 (Continued)

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

57VC169, stake #C76, a speck trace hole, is located about 6500 feet east of the village of Courtois, in the eastern edge of the project area, and is the last in a series of wide spaced holes located with the purpose of defining the boundaries of the mineralized area. These holes accomplished their purpose in apparently cutting off any northeast extension of the mineralization. This week's hole bottomed at 691 feet depth in Lamotte sandstone and showed a good 7 reef zone underlain by 12 mottled and crape rock and the only mineralization present was speck traces of lead at 617 feet depth in the lower 7 horizon.

57VC168, stake #C47, a trace hole, is located about 9500 feet southwest of the village of Courtois and 1300 feet west, northwest of 57VC163, stake #C48, an indicative hole reported last week. It bottomed at 775 feet depth in Lamotte sand. Bonneterre formation was normal for the area but showed only a few speck traces of lead at 726 feet depth in the mixed oolite and 12 mottled zone.

Week Ended December 30, 1957

2 diamond drills operating and 2 churn drills setting casing completed 1 indicative hole.

57VC173, stake #C88, an indicative hole, is located in the southwest part of the project area and 1500 feet west of 56W73, an indicative hole. It bottomed at 695 feet depth in dark rhyolite porphyry, the top of which is located just above the Lamotte sand horizon. Considerable lead mineralization was scattered through the 7 and 10 zones, best of which was estimated as 7.8 feet of 1.7% Pb at 378 feet depth and 6.8 feet of 1.8% Pb at 602 feet depth.

Period December 30 to 31, 1957, inclusive (2 operating days)

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

57VC179, stake #C89, a pay hole, is located near the southern edge of the project area, about 10,000 feet southwest of the village of Courtois and 520 feet west of 56W73, an indicative hole. It bottomed at 725 feet depth in Lamotte sand. Considerable lead and some zinc mineralization was present in the lower 5 zone, best of which was estimated as 5.5 feet of 5.9% Pb at 512 feet depth. This is the same horizon as lead in 2 holes to the east.

57VC177, stake #C81, a speck trace hole, is located in the southeastern part of the project area, about 6500 feet southeast of the village of Courtois. It bottomed at 670 feet depth in 36 feet of Lamotte sand. Complete absence of "white rock" in the Bonneterre section was surprising this far east and speck traces of lead in the 7 reef horizon are of interest.

20 STARTED 11-27-57

205

FORM 1173-2-54

DATE BOTTOMED 12-3-57
DESCRIBED BY C.A.
DATE ESTIMATED 12-5-57
BY C.A.

ST. NO. VC-54 ST. ELEV.
AREA COURTOIS
OPTION NO. CZ-100
TRACT JAS. SELLERS

CLASS BLANK HOLE NO. 57VC155
ELEVATION COLLAR 885.20
COORDINATES: N 120549.37 E 91185.90
200 FT. MAP NO. 36 NE¼-SW¼ SEC. 5 50 FT. MAP NO. 200M 200T

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 5' FT.
FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	30.0	855.2
SLEEVE BIT TO		
BEGAN CORING AT	45.0	840.2
SAVED CORES FROM	205.0	680.2
FORMATIONS:		
SOIL TO	5.0	880.2
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "	47.0	838.2
DAVIS (C.B.-S.B.) "	211.0	674.2
BONNE TERRE "	465.0	420.2
B. T. TRANS. "	—	
CONGLOMERATE "	466.0	419.2
LA MOTTE "	—	
GRAN. ~~OR POR.~~ "	483.0	402.2
PICTURES: FROM	205.0	680.2
TO	483.0	402.2
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 870'N 1900'E T35N-R1W

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% Cu ASSAY	% Cu EST.	FT. %	REMARKS
	460.0	460.3	424.9	0.3		—			Tr.		
	464.5	464.7	420.5	0.2		—			Tr.		

CORE REC. TO	CORES LOST
45	
65	—
205	DISCARDED
212	—
225	8.0
229	2.0
235	3.0
241	2.0
247	—
251	1.0
255	—
259	2.0
275	6.0
483	—

DMEA

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JAN 16 1958

BUREAU OF MINES
JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

PAGE 1

DESCRIBED BY [illegible] DATE 12-5-57 MINE Courtois STOPE STAKE NO. VC-54 HOLE NO. 57VC155

COLLAR ELEV. 886 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
45	841	BEGIN CORING	
47	839	Derby - THIN LEDGED	(47)
53	833	Derby-Davis - TRANSITION	(53)
65	821	Davis -	(65)
205	681	Cores [illegible] IN FIELD	(205)
211	675	Davis -	(211)
		BONNETERRE	
252	634	1	ELT>0 - > Dolo [illegible] FACT [illegible] TO 241 <E - [illegible]
			[illegible] 241 TO [illegible] - (252)
275	611	-	ELT=M [illegible] - Badly E - Faintly [illegible] - [illegible] M [illegible] - [illegible] - (275)
300	586	5	<ELT=0 IRREG [illegible] - [illegible] E - [illegible] - IRREG TRAIL & PATCHES -
			- [illegible] FAINTLY VISIBLE - 6" <TO LARGE [illegible] - (300)
333	553	-	ELT0>[illegible] MACERE - <E - FAIR [illegible] - 6" < E [illegible] - > [illegible] - [illegible]
			@ 312 - [illegible] TO [illegible] - IRREG [illegible] TO [illegible] - [illegible]
			ET > E [illegible] @ 321 - [illegible]
367	519		ELT F10 - [illegible]
377	487	7	F [illegible] - [illegible]
412	474	10-12-7	ELT>[illegible] MACERE - F - [illegible]
418	468	12	SEM - LIGHT EFFERVESCIBLE - MACERE [illegible] - (418)
429	457	11	GM [illegible] - EFFERV'T - [illegible] - (429)

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DIVISION OF MINERAL
TECHNOLOGY

JAN 16 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]

COLLAR ELEV. 886 PITCH ..... BEARING ..... COORD.: N ..... E .....

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
		BEGAN CORING	
465	421	12	GOGTM <~ 641 [illegible] >0 – [illegible]
			1' To [illegible] @ 1[illegible]6 + 440 – [illegible]
			>E 455 to 463 – <E [illegible]
			SAND 460 to BASE – [illegible] @ 461 – (465) [illegible]
			STRUCT 460 to BASE – (465) [illegible]
466	420	18	WEATHERED RED GRANITE BOULDER w/ 1" [illegible] ANGULAR
			SAND @ BASE – (466)
483	403	21	RED GRANITE – 1' WEATHERED @ [illegible]
			SiO_2 CONTENT – [illegible] MINERALS – (19[illegible])

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DIVISION OF MINERAL
TECHNOLOGY

JAN 16 1958

BUREAU OF MINES
JOPLIN, MO.

205

8 STARTED 11-27-57

FORM 1173 2-54

DATE BOTTOMED 12-4-57	ST. NO. VC-91	ST. ELEV.	CLASS TRACE HOLE NO. 57VC15Co
DESCRIBED BY J. A.	AREA COURTOIS		ELEVATION COLLAR 935.13
DATE ESTIMATED 12-6-57	OPTION NO. CZ-15		COORDINATES: N 108430.24 E 85598.74
BY	TRACT LEWIS MERRITT		200 FT. MAP NO. 55 50 FT. MAP NO. 200M 200T

SE¼-SW¼ SEC. 18 Q

GENERAL HOLE DATA — MINERALIZATION RECORD 230'N 1680'E T35N-R1W

HT. SLEEVE ABOVE GR .5 FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	60.0	875.1
SLEEVE BIT TO		
BEGAN CORING AT	61.0	874.1
SAVED CORES FROM	315.0	620.1
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "	163.0	772.1
DAVIS (C.B.-S.B.) "	332.0	603.1
BONNE TERRE "	573.0	362.1
B. T. TRANS. "	607.0	328.1
CONGLOMERATE "		
LA MOTTE "	628.0	307.1
GRAN. OR POR. "		
PICTURES: FROM	330.0	605.1
TO	628.0	307.1
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	CORE REC. TO	CORES LOST
	417.2	417.4	517.7	0.2		—			Tr.			61	
	419.0	419.7	515.4	0.7	0.0	—		0.9	0.5	0.6		67	1.0
	453.3	454.5	480.6	1.1		Tr.						70	1.0
	454.5	454.8	480.3	0.3	0.7	1.0	0.2					78	4.0
	454.8	455.3	479.8	0.5		Tr.						81	1.0
	455.3	455.9	479.2	0.6	1.6	1.5	1.0					89	4.0
	455.9	458.0	477.1	2.1		Tr.						149	—
	481.8	481.9	453.2	0.1		Tr.						169	2.0
	498.6	498.7	436.4	0.1		Tr.						185	SB
	500.4	500.5	434.6	0.1		Tr.						315	
	516.8	519.1	416.0	23		Tr.						355	—
	534.6	534.8	400.3	0.2		Tr.						364	1.0
	547.9	548.1	387.0	0.2		Tr.						485	—
	565.8	566.4	368.7	0.6		Tr.						495	1.0
	598.5	599.0	336.1	0.5		Tr.						515	
												525	2.0
												529	NO CORES
												569	
												579	1.0
												584	1.0
												595	0.4
												599	2.0
												609	8.0
												619	8.0
												628	4.4

477.1 - 4.6 - Tr.

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BUREAU OF MINES
JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

Page #1

DESCRIBED BY yP DATE 12-6-57 MINE Courtois STOPE STAKE NO. VC-91 HOLE NO. 57VC150

COLLAR ELEV. 936 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
61	875	BEGIN CORING	
109	827	Derby	Doe Run — Reef + oolites (109)
163	773	Derby	Doe Run — thin bedded (163)
168	768	Derby	Davis Transition (168)
332	604	Davis	Shale — S.B. 185-315 (332)
		Bonne Terre	
372	554	1	GTO thin bed faint oolites — > thin bedding — > pitting + small vugs — > porous patches — few thin Rbs — > dickite $ (372)
375	561	1	GT irregular bed — unusual appearance unusual appearance — + irregular bed — > thin Rbs — > pitting (375)
382	554	5-1	GT > porous B$ — dense Gb + lense Gbs scattered — > B$ + porous B$ — > pitting — few thin Rbs — > ca + dickite $s (382)
394	542	5	GT B$ thin bed few scattered B$ — thin Rbs — > pitting — > small dickite $ (394)
414	522	5	GB B$ GT GB w/ B$ top to 399 — GT w/ > B$ + porous B$ 399 to Base — > pitting + small vugs — > ca $ — few thin Rbs — > fracturing — > dense b — > faint oolites scattered — (414)
428	508	5	T irregular bed — i GTM > B$ > faint oolites interbedded T bedded + GTM — T slightly irregular bed top to 420 w/ > B$ @ 422 — 424, 426-428 3" @ Base w/ good B$ — GTM 6" @ 417, 420-422, 6" @ 426, 1" @ 426 — > dickite b — > pitting + small vugs — thin Rb — tr > N @ base (428)
451	485	5	F TM — TG$: porous 1' @ top < G$ > B$, 1' @ 438 porous, 1' LT G$ @ 441 — fair reef 429-438, 439-441, 442-445, 448 to Base — > pitting + small vugs — > dickite + ca $s (451)
458	478	5	GTO G$ > porous faint to mod oolites — small G$ — < pitting + small vugs thru out — TR Pb 453 to Base — > fracturing — few thin Rbs (458)

(cont)

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BUREAU OF MINES
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FORM 9002-R-5-55

ROCK CLASSIFICATION

✓ Page #2 (cont)

DESCRIBED BY J H DATE 12-6-57 MINE Courtois STOPE ____ STAKE NO. VC-71 HOLE NO. 57VC 156

COLLAR ELEV. 936 PITCH ____ BEARING ____ COORD.: N ____ E ____

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
		BEGAN CORING	
468	468	5	[illegible] banded [illegible] - [illegible] - 2" [illegible] lumpy [illegible] Fos [illegible] 461- > pitting - 1' @ Base [illegible] - [illegible] porous patches - (468)
499	437	7	F [illegible] slightly porous good roof rock - [illegible] porous - > [illegible] in Matrix - > G1 oolitic 495-497, [illegible] @ Base - [illegible] @ Base - > pitting - > [illegible] - few thin [illegible] - > fracturing (499)
513	423	10-7	[illegible] banded [illegible] F [illegible] top to 501, 506-509, 510 to Base - GTO massive bed 503-506 - [illegible] 501-503, 1' @ 509 - > thin [illegible] - > pitting [illegible] small vugs - (513)
524	412	10	TXO faint oolites - slightly crystalline - > thin [illegible] stylo - > fracturing - > pitting - fairly massive appearance - [illegible] 518 > [illegible] - (524)
548	388		F [illegible] good roof rock - many thin [illegible] - > [illegible] patches [illegible] - > [illegible] [illegible] in matrix - [illegible] 548 (548)
557	379		[illegible] slightly x small to med [illegible] - slightly x - > pitting > fracturing - > [illegible] sections - > [illegible] thin [illegible] (557)
573	363		F [illegible] good roof rock - small to large [illegible] 563 to Base [illegible] - many thin [illegible] - > pitting [illegible] fracturing - (573)
586	350	19-20	GWS [illegible] shale [illegible] top to 579 - [illegible] 579-586 - > grinding - (586)
588	348	19	[illegible] loose w/ sandy [illegible] - > [illegible] stains - > pitting (588)
597	337	19-20	[illegible] very sandy w/ [illegible] stains - > fos [illegible] (597)
598	336	19	LGSD w/ loose [illegible] sandy w/ > loose [illegible] - > grinding (598)
607	329	19	GDS very sandy - > grinding (607)
628	308	20	W.S. : G.S. med grain sand - 1' GS @ top - > fos [illegible] - > grinding - (628)

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DATE STARTED 11-29-57

FORM 1173-2-54

15

DATE BOTTOMED 12-4-57	ST. NO. VC-65 ST. ELEV.	CLASS PAY	HOLE NO. 57VC 157
DESCRIBED BY J.A.	AREA COURTOIS	ELEVATION COLLAR 1024.64	
DATE ESTIMATED 12-9-57	OPTION NO. CZ-76	COORDINATES: N 122451.73	E 93129.68
BY J.A	TRACT HALLIE G. TURNER	200 FT. MAP NO. 36	50 FT. MAP NO. 200 M 200 T

SW¼-NE¼ SEC. 5 T35N R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 1.0' FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	185.0	839.6
SLEEVE BIT TO		
BEGAN CORING AT		
SAVED CORES FROM	395.0	629.6
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "	239.0	785.6
DAVIS (C.B. ~~S.B.~~) "	411.0	613.6
BONNE TERRE "	690.0	334.6
B. T. TRANS. "	704.0	320.6
CONGLOMERATE "	—	
LA MOTTE "	725.0	299.6
GRAN. OR POR. "		
PICTURES: FROM		
TO		
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 1800'S 1700'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
X	534.6	535.5	489.1	0.9		Tr.			Tr			245	J.B.
✓	536.2	536.8	487.8	0.6	0.6	Tr.	0.4	1.8	1.0	1.08		395	
✓	536.8	541.2	483.4	4.4	5.8	50	25.5	0.64	2.0	2.81	Diss	515	—
X	541.2	542.7	481.9	1.5		Tr.			—			535	4.4
✓	549.3	554.1	470.5	4.8	0.0	—		0.65	1.5	3.12		547	0.5
												565	4.4
												581	3.3
												591	4.4
												599	3.0
												603	2.3
												611	1.3
												671	—
												685	3.0
												705	1.3
												725	14.3

202

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BUREAU OF MINES
JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY JA DATE 12-6-57 MINE Courtois STOPE STAKE NO. VC-65 HOLE NO. 57VC 157

COLLAR ELEV. 1025 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
285	790	BEGIN CORING	
239	786	Derby	Dee Run 1.5' @ top — (239)
245	780	Derby	Davis (245)
411	614	Davis	Shale Solid Bit 245-395 (411)
		Banner	Terre
459	566	1	GT > porous patches: snurly light GT fairly massive — > porous patches + sections — > pitting + small vugs — > thin bed — snurly appearance 448 to Base — appears to be slightly E (459)
466	559	1-5	Tw/dense Gb + B# - slightly E slightly E thru out — > dense Gb — > scattered B# — (466)
525	500	5	TB# > oolites — E blackish E thru out — slightly porous — scattered B# — > faint oolites — slightly Iish stained 481 to Base — > EHb — > Ca — > E# @ 521 (525)
539	486	5	GBM: E > O snurly appearance — E 527-531 — > K patches + Gb — > faint oolites — > pitting + small vugs — good Pb + Cu 536 to Base — > ca # — > Rbs — 1" EH @ 534 (539)
544	481	5	GBO > M faint oolites — 1" M snurly rock @ 541 — > thin Rbs — good Pb + Cu top to 542 (544)
550	475	5	FT/TM: # porous — good reef — > G# in matrix — > pitting (550)
556	469	5	GTO: Pw/ > Breccia fragments 1' GT faint oolitic, 1' @ Base — 1' F @ 553 — 1' small G# 552 — 1' @ top appears to be breccia fragments — 1' snurly appearance w/ dense Gb @ 554 — (556)
615	410	7	FT/TM > G# - G# good reef rock > small G# scattered thru out matrix — small G# sect. 572-575 — dense Gb w/ faint oolitic sect. 558-560 — 1' dense Bb @ 599 — > ca # + patches — < fracturing + grinding — thin Rb (615)
629	396	7-12	GTM > G# - : F — > slight + crepey — Kbs — : slightly crystaline — many thin Rbs — > pitting — 3' F 623-626 — > scattered small G# — > ca (629)
690	335	12	GTM > porous — : B# crepey w/ many P + Hb — : irregular bed + slightly porous — : appear almost KR — many B# 682-685 — > ca # — < K 1' 685-688 — > pitting — > fracturing (690)
704	321	19	GTM SD > S# Sandy b toward top — increasing sand toward Base — slightly crepey w/ < M — 1' E DS @ Base — > E# — > EN — thin Rbs (704)
725	300	20	WS med grain — < grinding — > E stain (725)

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JAN 16 1958

BUREAU OF MINES
JOPLIN, MO.

DATE STARTED 12-5-57

FORM 1173-2-54

15

DATE BOTTOMED 12-9-57	ST. NO. VC 75 ST. ELEV.	CLASS SPECK TRACE HOLE NO. 57VC159
DESCRIBED BY C.A.	AREA COURTOIS	ELEVATION COLLAR 925.12
DATE ESTIMATED 12-11-57	OPTION NO. CZ-141	COORDINATES: N 118984.76 E 97685.28
BY C.A.	TRACT BERNIE YOUNT	200 FT. MAP NO. 37 200M 200T SW¼-SE¼ SEC. 4 50 FT. MAP NO.

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 1.0 FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	57.0	868.1
SLEEVE BIT TO		
BEGAN CORING AT	115.0	810.1
SAWED CORES FROM	285.0	640.1
FORMATIONS:		
SOIL TO	11.0	914.1
"		
EMINENCE "		
POTOSI "	40.0	885.1
POTOSI-DERBY "		
DERBY DOE RUN "	117.0	808.1
DAVIS (C.B.-S.B.) "	293.0	632.1
BONNE TERRE " Sandy 12	577.0	348.1
B. T. TRANS. "	579.0	346.1
CONGLOMERATE "	—	
LA MOTTE "	599.0	326.1
GRAN. OR POR. "	—	
PICTURES: FROM	285.0	640.1
TO	599.0	326.1
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 360 N 2000 W T35N-R1W

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	%Cu ASSAY	%Cu EST.	FT. %	REMARKS
✓	543.4	543.7	381.4	0.3		Tr					SPECK
373.0 - 21-SRT ✓	550.0	550.2	374.9	0.2		Tr					"
	552.0	552.1	373.0	0.1		Tr					"
	561.9	562.0	363.1	0.1		0.0			Tr.		FRACT.

CORE REC.

TO	CORES LOST
115	
135	—
285	SB.
405	—
413	5.0
422	—
425	1.0
429	2.0
435	2.0
441	2.0
515	—
523	1.0
599	—

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BUREAU OF MINES
JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE 12-11-57 MINE Courtois STOPE STAKE NO. VC-75 HOLE NO. 57VC159

COLLAR ELEV. 925' PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
117	810		BEGIN CORING
117	808		DENSE – THIN BEDDED (117)
125	800		DENSE – [illegible] – TRANSITION (125)
135	790		[illegible] (135)
285	640		SOFT [illegible] (285)
293	632		[illegible] (293)
			BANDED DENSE
342	583	1	LT>0 – GT irreg DENSE – GT>0 – 2' DRUSY LT>0 @ 295 – 3' DENSE T THIN BEDDED & VUGGY @ 298 – T>0 299 to 301 – SNUGLY IRREG DENSE GT>0 VUGGY 301 to BASE – (342)
361	564	5	GB>0 – [illegible] & VUGGY>BA – >BA & [illegible] PATCHES & VUGS – SIRREG DENSE BLUE GREY PATCHES [illegible] – (361)
374	551	5	GB>0 – [illegible] – THIN BEDDED @ 361 to 365 – pz GB @ 365 to 369 – 3' IRREG DENSE BANDED VUGGY @ 371 – GB>0 THIN BEDDED 371 to 374 > DRUSY – (374)
407	518	5	F%GT>0>G1>M – FAIR TO DIM F – [illegible] – 5' GROUND 405 to 413 – (407)
442	483	7	<G1 DENSE WALLS w/: F%GT>0>G1>M – 5' GROUND 405 to 413 – 4' DENSE LW MASSIVE > VUGGY @ 417 to 417 (@ GRINDING) – 1' LG pz > G1 @ 418 – 2' pz F%GT>0>M @ 421 – 3' LT MASSIVE DENSE @ 424 – LG DENSE 435 to 439 – 6" pz GT>0 @ 439 – LG BANDED 439 to 440 DENSE – 3' GT pz > BANDED > 0 @ BASE – (442) (TOP OF 7 ZONE PROBABLY @ 417)
448	477	1	F%GT>G1>M VUGGY – FAIR TO DIM F – [illegible] & SMALL VUGS – THIN Rb @ BASE – (448)
456	469	7	LGT>0 – FAIRLY MASSIVE – F [illegible] – [illegible] – > FRACT – [illegible] – (456)
464	461	1	F%GT>G1>M DRUSY – ONLY F REF STRUCTURE – SMALL VUGS – (464)
480	445	7	F%GT>G1>M & GT>0 – GT>0 > DRUSY 464 to 467 – F pz 467 to 470 – GT>0 MASSIVE 470 to 476 – F pz & VUGGY 476 to 479 – 1' GT>0 @ BASE – (480)
516	409		F%GT>G1>G1M – FAIRLY DIM F SNUGLY DIM M & G1 480 to 503 (OFTEN > VUGGY) – 8' <G1 MED M MED LG X > DRUSY @ 513 – SNUGLY F 513 to 516 – (516)

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FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE 12-11-57 MINE [illegible] STOPE STAKE NO. VC-75 HOLE NO. 57VC159

COLLAR ELEV. 925. PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
		BEGAN CORING	
520	395		F %GTMG1 : GT>0 BANDED – 3' GT>0 BANDED AND @ 519 – 2" SOLID C4 @ 519 – 2' SNURLY M F @ 521 – 1' < G1 @ 522 – F [illegible] – 1' GT>0 BANDED @ 524 – SNURLY F 524 TO BASE – (530)
547	380	12	GTM CREPE – F %GTMG1 : GTOG1 – 3' GTM > CREPE & G1 @ 532 – 1' GT>G1 @ 533 – GTM < CREPE 532 TO 535 – 5' F %GTMG1 @ 538 – 2' @ 540 – GTM > CREPE & G1 540 TO 545 – TR 1' @ 541 – 1' F @ 546 – (545)
563	362	13	GTM-G1-P1 – MED. MEAN MICACEOUS – G1 + PRINT SMALL P1 – TR 1 @ 550 & 552 – TR GUT. @ 562 – (563)
577	348	14	GTM & GM CREPE – SANDY – GTM – 563 TO 570 – GM – 570 TO 575 – & LGM – 575 TO 577 – SAND GRAINS SCATTERED THRUOUT – (577)
579	346	19	ECLOGITE – IRREG. BEDDING – MED. DARK – < E > E THINNED 2" IN BASE – (579)
599	326	20	WS – MED. FINE GRAIN – THIN LAMINATING EQUALLY MICACEOUS – (599)

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BUREAU OF MINES
JOPLIN, MO.

DATE STARTED 12-4-57

FORM 1173-2-54

DATE BOTTOMED 12-10-57	ST. NO. VC-87 ST. ELEV.	CLASS PAY HOLE NO. 57VC162
DESCRIBED BY J. A.	AREA COURTOIS	ELEVATION COLLAR 931.93
DATE ESTIMATED 12-12-57	OPTION NO. CZ-15	COORDINATES: N 108890.85 E 85807.61
BY J. A.	TRACT LEWIS MERRITT	200 FT. MAP NO. 55 200M 200T 50 FT. MAP NO.

SE¼-SW¼ SEC. 18 T35N-R1W P

700'N 1880'E

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR .66 FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	55.0	876.9
SLEEVE BIT TO		
BEGAN CORING AT	55.0	876.9
SAVED CORES FROM	295.0	636.9
FORMATIONS:		
SOIL TO	10.0	921.9
"		
EMINENCE "		
POTOSI "	55.0	876.9
POTOSI-DERBY "		
DERBY DOE RUN "	158.0	773.9
DAVIS (C.B. ~~S.B.~~) "	334.0	597.9
BONNE TERRE "	570.0	361.9
B. T. TRANS. "	594.0	337.9
CONGLOMERATE "	—	
LA MOTTE "	605.0	326.9
GRAN. OR POR. "		
PICTURES: FROM		
TO	605.0	326.9
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
	378.0	378.4	553.5	0.4		Tr.							
	394.8	394.9	537.0	0.1		Tr.						55	
	399.8	400.0	531.9	0.2		Tr.						61	1.0
	404.0	404.1	527.8	0.1	12.0	12.0	1.2				Pb. Band	65	—
	410.0	410.1	521.8	0.1		Tr.						75	2.0
	416.9	422.0	509.9	5.1	4.0	5.5	20.4	2.8	2.0	14.3	band → FeS	80	1.0
	423.6	425.5	506.4	1.9		Tr.			Tr			89	4.0
503.2-3.2-0.9-1.6	425.5	426.9	505.0	1.4	1.6	2.5	2.2	1.0	0.5	1.4	d. ss	99	0.6
	427.9	428.7	503.2	0.8	0.8	1.0	0.6	4.5	4.0	3.6		104	4.0
	428.7	429.5	502.4	0.8		Tr.						145	—
	431.4	432.4	499.5	1.0	0.3	Tr.	0.3	1.5	4.0	1.5		158	8.0
	442.0	442.2	489.7	0.2	36.0	40.0	7.2	2.8	1.0	0.6	Band Pb.	178	S.B.
	445.6	445.8	486.1	0.2		Tr						295	
	445.8	446.6	485.3	0.8	3.6	7.5	2.9				< FeS	447	—
	448.7	449.6	482.3	0.9	2.5	2.5	2.2					455	1.0
474.7-15.2-0.9	450.5	452.8	479.1	2.3		Tr.						465	
	452.8	455.2	476.7	2.4	0.8	1.0	1.9					481	2.0
	455.2	456.9	475.0	1.7		Tr.						487	2.4
	456.9	457.2	474.7	0.3	0.6	1.0	0.2					495	1.0
	464.0	464.3	467.6	0.3	1.2	1.0	0.4					500	2.0
	543.2	543.3	388.6	0.1		Tr						510	0.5
375.5 3.8-Tr.	552.6	553.1	378.8	0.5	0.8	1.0	0.4					515	1.0
	553.1	556.4	375.5	3.3		Tr.						523	3.4
	578.1	579.8	352.1	1.7		Tr.					Speck	533	
	593.9	594.3	337.6	0.4		Tr.						541	2.0
												551	—
												555	0.8
												563	3.0
												567	0.1
												574	2.0
												578	2.5
												580	0.2
												595	1.3
												605	3.5

R.E.W. 200.

D.V.H.

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JAN 16 1958

BUREAU OF MINES
JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

Page # 1

DESCRIBED BY JP DATE 13-12-57 MINE Courtois STOPE STAKE NO. VC-57 HOLE NO. 57VC 162

COLLAR ELEV. 932 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
55	877	BEGAN CORING	
79	853		Q F - fairly dense - ≥ porous F - fairly dense F to pto G3 w/ ≥ pitting - Porous Q F G3 - 75 - fairly massive oolitic 75 to Base - small to med X - ≥ ca - (79)
158	774	Derby	Doe Run - Beds of thin bed, irregular bed, TO - all slightly E (158)
174	758		E thin bed ; porous ≤ fracturing (174)
334	598	Davis	Shale - E to pto 178 - SB 178 - 295 (334)
		Bonne	Terre
378	554	1	GTO massive ; thin bed ; slightly sugary 5' top to 339 - fairly massive - thin bed 339 - 369 - ≥ 5 m sugary 369 to Base - faint oolites - ≤ fracturing - thin Rbs - ≥ dickite ↑ (378)
385	547	1-5	GTO irregular bed ≥ dense ↓ ≥ B↑ ≤ cathedral dense GB - faint oolites - ≥ pitting - ≥ scattered B↑ - thin Rbs - tr Pb in top - (385)
396	536	5	GT irregular bed - B↑ ≥ Q many thin Rbs - ≥ M - scattered small B↑ - faint oolites - ≥ pitting - 2 No B↑ - tr Pb @ 319, 395 (396)
422	510	5	GDB↑ ≥ porous Q small to med B↑ - scattered porous oolitic patches - few thin Rbs - ≥ pitting + small vugs - ≥ fracturing - Pb b @ 404, med Pb + ZN 417 to Base - ≥ K patches - ≥ dickite ↑ - few breccia fragments @ 421 - (422)
429	503	5	GTM - F ≥ GTM - Porous Q + ≥ G↑ crepey GTM top to 424, 6" @ 425, 1' @ 427 - 1' F + porous oolites @ 424, 426 ↑ 6" @ Base - ≥ small G↑ scattered - tr s to fair Pb + ZN scattered thru out (429)
434	498	5	GTO massive : GTM + F ≥ G↑ faint oolites - massive bed - 1' GTM + F w/ ≥ G↑ @ 432 also few thin Rbs - fair ZN + Pb @ 431 - ≥ ca - ≥ pitting - (434)
457	475	7	F ≥ GTM ≥ G↑ ; G↑M good roof rock - scattered small G↑ - ≥ pitting + vugs - 1' G↑M @ 445 - few thin Rbs - 1" Pb b w/ ZN @ 444, 6" good Pb @ 446, tr s to fair Pb 449 - 455 (457)
473	459	7	GTO massive : F + thin bed : E 1' @ top E w - fairly massive - faint oolites - slightly thin bed 462 - 469 - 1' F @ 463 w/ tr Pb - (473)
501	431	7	F ≥ GTOM ≥ G↑ fair roof rock - ≤ pitting + vugs - many G↑ + O in Matrix - ≤ fracturing - thin Rbs - ≥ ca - ≥ grinding - (501)
511	421	10-7	GTO : F mostly GTO w/ faint oolites - fairly massive w/ ≥ thin Rbs - 2' F 507 to Base - ≥ pitting - ≥ fracturing - (511)
541	391	10	GTO banded faint oolites - ≤ K banding - ≥ fracturing + grinding - fairly massive 526 to Base - ≥ pitting - ca - ≥ grease on cores (541)

(cont)

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BUREAU OF MINES
JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

Page 2 (cont)

DESCRIBED BY JH DATE 12-12-57 MINE Courtois STOPE STAKE NO. YC-87 HOLE NO. 57VC162

COLLAR ELEV. 932 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
		BEGAN CORING	
557	375	12	GTM-F-GtO GTM>b+Gt top-545 - 1' F @ 545 - GTM Gt O 546 - 552 - F+O 552 - 556 - 6" Gt @ Base - few thin Rbs - >pitting - tr. Pb scattered (557)
566	366	12	TO>M faint to med oolites - scattered M - >pitting - few thin Rbs - (566)
570	362	16	Gt EBMN small Gts - mod to large Bt - <pitting + vugs (570)
574	358	19	GDS very little D - fine to med grain sand - <grinding - (574)
594	338	17	GW Sandy >E very sandy - many Gbs - >E stains scattered - spark tr. Pb scattered - (594)
605	327	20	W.S. w/ E+G 6" top E - 6" @ 695 E+Gb - fine to med grain - <grinding + fracturing (605)

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BUREAU OF MINES
JOPLIN, MO.

DATE STARTED 12-5-57

FORM 1173-2-54

20

DATE BOTTOMED 12-10-57	ST. NO. V.C.-48 ST. ELEV.	CLASS INDICATIVE	HOLE NO. 57VC163
DESCRIBED BY C.A.	AREA COURTOIS	ELEVATION COLLAR 1115.32	
DATE ESTIMATED 12-12-57	OPTION NO. CZ-50	COORDINATES: N 110076.89	E 84432.49
BY C.A.	TRACT E.R. LARAMORE	200 FT. MAP NO. 55 200M 200T	50 FT. MAP NO.
		NW1/4-SW1/4 SEC. 18	

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR .5 FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	249.0	866.3
SLEEVE BIT TO		
BEGAN CORING AT	289.0	826.3
SAVED CORES FROM	463.0	652.3
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "		
BONNE TERRE (16) "	711.0	404.3
B. T. TRANS. "	—	
CONGLOMERATE "	713.0	402.3
LA MOTTE "	—	
~~GRAN. OR~~ POR. "	730.0	385.3

PICTURES: FROM

TO

CHAR. SAMPLES: FROM

TO

INSOL. RES.: FROM

TO

OPENINGS AT

R.E.W. 200.

MINERALIZATION RECORD 1870'N 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
	504.5	504.6	610.7	0.1		Tr.						289	
	545.0	545.1	570.2	0.1		Tr.						305	—
	549.0	549.2	566.1	0.2		Tr.						445	S.B.
	598.4	598.5	516.8	0.1		Tr.						481	—
	616.0	617.4	497.9	1.4		Tr.						485	20
	631.0	637.2	478.1	6.2		Tr.						730	—
471.4-	637.2	640.5	474.8	3.3	1.6	2.0				5.3	Diss		
6.7-1.3	640.5	642.7	472.6	2.2		Tr.							
	642.7	643.9	471.4	1.9	1.7	1.0				3.2	> Diss		
	650.0	650.2	465.1	0.2		Tr.							
	653.7	653.8	461.5	0.1		Tr.							
	658.8	659.0	456.3	0.2		Tr.							
	662.2	662.3	453.0	0.1		Tr.							
	679.3	680.0	435.3	0.7		Tr.							
	684.5	685.3	430.0	0.8		Tr.							
	688.3	688.4	426.9	0.1		Tr.							
	690.8	691.1	424.2	0.3	1.1	1.0				0.3			
	696.0	701.0	414.3	5.0		Tr.							
	707.0	707.7	407.6	0.7		Tr.							

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BUREAU OF MINES
JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY G. DATE 12-12-57 MINE Coniston STOPE STAKE NO. V. 48 HOLE NO. 57VC163

COLLAR ELEV. 1116. PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
289	827	BEGAN CORING	
301	815	DERBY	– THIN BEDDED (301)
304	812	DERBY – JANIS	– TRANSITION (304)
305	811	JANIS	(305)
445	671	CORES	DISCARDED IN FIELD (445)
464	652	JANIS	(464)
		BONNETERRE	
506	610	1	T>0 – GT>0 – GT INTERC. – T>0 MASSIVE 464 TO 481 – GT>0 STYLO 481 TO 503 – GT INTERC. >DENSE 503 TO 506 – T [illegible] 482 & 505 – (506)
520	596	5-1	GB>0 B↓ w/ DENSE GT – [illegible] INTERC. – VUGGY – MED. B↓ – SCATT. DENSE GT – (520)
547	569	5	GB>0 pz B↓ – [illegible] ↓ – [illegible] STYLO – < 2ND LOLO / – 2' > INTERC. ↓ – [illegible] – (547)
556	560	5	GM ~ & GB & GT – 1' G[illegible] [illegible] G48 – 1' GLO w/ IRR. B & C49 – 1' GM ~ > G↓ & C50 – 1' GLO > M @ 551 – 1' GM & 5[illegible] [illegible] STYLO 5[illegible] TO 556 – (556)
585	531	5	BO: GTM > CREEP – [illegible] [illegible] – 3' GLO – M & ~ @ 578 – MED STYLO – 6" w/ K-E / @ LAKE (585)
631	485	7	F↑/GT & M ; GT > 10 – [illegible] & CHL LOLO ↓ – 2' G > 10 @ 607 – TR. TI @ 615 & 616 – (631)
659	457	10-7	GT > G↓ ; F↑/GTM G↓ – 4' [illegible] [illegible] – 1' F w/ IRR. IN G @ 636 – G↓ MED. @ 16 [illegible] TO 647 – C4 – 1' F @ 648 – 4" KEEFE @ 650 – GT > 0 STYLO & K↓ [illegible] FAIR PB 638 TO 640 – [illegible] 650 TO BASE w/ 6" IRR. (659)
671	445	—	F↑/GTM < SNURLY > B↓ & G[illegible] [illegible] SNURLY F STRUCT < M – MED B↓ & G↓ – 1' SNURLY GTM @ BASE (671)
696	420	10-12	GT > 0 : G↓ : > M ↓ ~ – 4' GT[illegible] K↓ & [illegible] @ 671 – GT > 0 G↓ STYLO 671 TO 692 w/ 6" < G↓ & IRR. @ 680 – 96" > M & CREEPE w/ > FINE [illegible] @ 686 – GT > 0 < STYLO < K↓ – K↓ – 685 TO 696 – (696)
702	414	12	GTM ~ – SCATT. PB TR. – MED. CREEP & M – > G↓ – 1' SNURLY < M @ BASE – (702)
711	405	16	N. F. REEF – TR. PB – FINE REEF N. HERE & NOW – FINE G↓ – > [illegible] ANDY LOWANDI BASE – > 2ND LOLO & [illegible] IN OPENINGS – (711)
713	403	18-19	> WEATHERED & COBBLES w/ GOLD MATRIX & SAND – (713)
730	386	21	DARK PURPLE & > BROWNISH HARDPAN – > FAULTING @ 717 – SCATT. PATCHES OF YE. MINERALS THROUGH – (730)

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JOPLIN, MO.

DATE STARTED 12-12-57

FORM 1173-2-54

20

DATE BOTTOMED 12-17-57
DESCRIBED BY J. A.
DATE ESTIMATED
BY J. A.

ST. NO. VC-A1 ST. ELEV.
AREA Courtois
OPTION NO. CZ-50
TRACT E. R. Larramore

CLASS Sperm Trace HOLE NO. SJVC16R
ELEVATION COLLAR 1113.73
COORDINATES: N 110323.21 E 83113.06
200 FT. MAP NO. 55 50 FT. MAP NO.
NE¼-SE¼ Sec. 13

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR. 3.0 FT.
FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	245.0	868.7
SLEEVE BIT TO		
BEGAN CORING AT	245.0	868.7
SAVED CORES FROM	465.0	648.7
FORMATIONS:		
SOIL TO		
EMINENCE		
POTOSI		
POTOSI-DERBY		
DERBY DOE RUN		
DAVIS (C.B.-S.B.)	488.0	625.7
BONNE TERRE		
B. T. TRANS.	—	
CONGLOMERATE TO	—	
LA MOTTE	775.0	338.7
GRAN. OR POR.	—	
PICTURES: FROM	359.0	754.7
TO	775.0	338.7
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

ROCK TYPE

MINERALIZATION RECORD 2,100'N 830'W T35N-R2W

DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS
514.9	515.0	598.7	0.1		Tr.					
554.8	555.0	558.7	0.2		Tr.					
583.6	583.7	530.0	0.1		Tr.					
604.9	605.1	508.6	0.2		Tr.					
620.1	620.2	493.5	0.1		Tr.					
627.7	627.8	485.9	0.1		Tr.					
720.7	721.0	392.7	0.3		Tr.					
725.0	726.1	387.6	1.1		Tr.					
733.6	734.1	379.6	0.5		Tr.					

CORE REC.

TO	CORES LOST
360	5.0
465	
485	Disc.
625	
645	1.1
725	
745	0.2
765	0.8
775	0.9

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BUREAU OF MINES
JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY JA DATE 12-23-57 MINE Courtois STOPE STAKE NO. VC 47 HOLE NO. 57VC 168

COLLAR ELEV. 1114 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
345	769	BEGAN CORING	
488	626	Davis Bonne Terre	Shale — S.B. 360 – 465 – 20.0 discord in field (488)
532	582	1	GTO massive – ∴ snurly faint oolites – fairly massive top to 504 – thin bedded slightly snurly 504 to Base – > porous patches – spt Pb @ 515 – > pitting – styles x Pb – > dense b – (532)
545	569	1-5	GBBt > dense b small to mod Bt – > dense b – > pitting – > ca t – few style x Pb – (545)
565	549	5	GBBt > porous O many Bt top to 555 – few Bt w/ > porous patches 555 to Base – many 2 ND t – > dense Gb – > pitting – > dickite – tR Pb @ 555 – (565)
574	540	5	GBO – T > M faint oolites – thin bedded top to 571 w/ > small Gt – T > M 571 to Base > snurly – > pitting x vugs – dickite t – (574)
583	531	5	GTM Gt ∴ TOM 1' @ top GTM w/ small Gt, 1' @ 577, 1' @ Base – TO > M 1' @ 575, 4' 578 – 582 – > Bt – Kb x patches – > pitting (583)
619	495	5	GTO > M fairly massive – > porous mod to large oolites – > thin Rbs – > porous patches – > pitting – > 2 ND t – scattered M (619)
660	454	7	F/GTM – GBO > porous good roof rock – slightly porous – small Gt x O in Matrix – < 2 ND t x patches – pitting x vugs – tr Pb – (660)
673	441	7	GTGt > O – F/GTGt alternating beds of GTGt > O + F about 1' in length – > M – > 2 ND t – slightly porous – (673)
685	429	7	GTO – Gt w/ F faint to mod oolites > Gt – thin Rbs – > pitting – 1' F @ 678 6" F @ Base – > Gt x Kb – (685)
691	423		GT thin bedded – F > Bt thin bed ∴ > snurly – 6" Bt @ 687 – thin Rbs – > K (691)
739	375	10-12	GTO > Gt > X ∴ F – GTM slightly crystline – faint to mod oolites – scattered Kb x patches – small Gt – 2' F 707 – 709 – slightly porous 710 – 725 – 2' GTM 725 – 727 w/ tr Pb – 2' GEM 730 – 732 – 6" F @ 720 – tr Pb @ 725, 738 – thin Rbs – (739)
760	354	12	GTGEM very crepey – many thin Rbs – > EKbs – 1' w/ > small oolites @ 747 – > Gt – (760)
775	339	20	W.S. mod grain – > grinding – 2" @ top G.S. – (775)

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JOPLIN, MO.

DATE STARTED 12-10-57

FORM 1173-2-54

15

DATE BOTTOMED 12-17-57	ST. NO. VC-76	ST. ELEV.	CLASS SPECK TRACE	HOLE NO. 57VC169	
DESCRIBED BY C.A.	AREA COURTOIS		ELEVATION COLLAR 1057.13		
DATE ESTIMATED 12-23-57	OPTION NO. CZ-74		COORDINATES: N 117726.33	E 96116.08	
BY C.A.	TRACT PAUL THOMPSON		200 FT. MAP NO. 47	50 FT. MAP NO.	

NE1/4 - NW1/4 SEC. 19

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 2.5 FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	130.0	927.1
SLEEVE BIT TO		
BEGAN CORING AT	219.0	838.1
SAVED CORES FROM	401.0	656.1
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "	229.0	828.1
DAVIS (C.B.-S.B.) "	402.0	655.1
BONNE TERRE "	658.0	399.1
B. T. TRANS. "	671.0	386.1
CONGLOMERATE "	—	
LA MOTTE "	691.0	366.1
GRAN. OR POR. "	—	
PICTURES: FROM	401.0	656.1
TO	691.0	366.1
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 1070'S 1590'E T35N-R1W

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% Cu. ASSAY	% Cu. EST.	FT. %	REMARKS
	504.3	504.4	552.7	0.1		Tr.					FRACT.
	562.5	563.0	494.1	0.5		Tr.					"
	616.3	617.1	440.0	0.8		Tr.					"
	657.9	658.0	399.1	0.1		Tr.			Tr.		SP. Tr.
	668.0	668.1	389.0	0.1		—			Tr.		"

CORE REC.

TO	CORES LOST
219	
239	—
390	S.B
405	—
413	1.0
417	2.0
425	—
429	1.0
439	1.0
503	—
514	1.0
554	—
557	1.0
565	—
575	1.0
584	1.0
604	—
616	2.0
619	1.0
691	—

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JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE [illegible] MINE Coughtal STOPE STAKE NO. VC-76 HOLE NO. 57VC169

COLLAR ELEV. 1056. PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
[illegible]	837	BEGAN CORING	
229	827	[illegible]	[illegible] (229)
[illegible]	821	[illegible]	[illegible] (235)
[illegible]	817	[illegible]	(239)
[illegible]	666	[illegible]	(391)
402	654	[illegible]	(402)
		[illegible]	
[illegible]	603	1	[illegible] (453)
[illegible]	564	[illegible]	[illegible]
[illegible]	533	[illegible]	[illegible] (523)
[illegible]	480	[illegible]	[illegible] (576)
[illegible]	466	7	[illegible]
[illegible]	433	7	[illegible] (623)
[illegible]	398	[illegible]	[illegible] (652)
[illegible]	385	[illegible]	[illegible]
691	365	[illegible]	[illegible] (691)

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JOPLIN, MO.

DATE STARTED 12-19-57

FORM 1173-2-54

20

DATE BOTTOMED 12-26-57	ST. NO. VC-88 ST. ELEV.	CLASS INDICATIVE	HOLE NO. 57VC173
DESCRIBED BY J. A.	AREA COURTOIS	ELEVATION COLLAR 1098.38	
DATE ESTIMATED 12-30-57	OPTION NO. 041128	COORDINATES: N 108691.04	E 83791.54
BY J. A.	TRACT U.S. FOREST LANDS	200 FT. MAP NO. 55 SE¼-SE¼ SEC. 13	50 FT. MAP NO.

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 1.16 FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	231.0	867.4
SLEEVE BIT TO		
BEGAN CORING AT	231.0	867.4
SAVED CORES FROM	447.0	651.4
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "	289.0	809.4
DAVIS (C.B. ~~O.B.~~) "	453.0	645.4
BONNE TERRE "	690.0	408.4
B. T. TRANS. "		
CONGLOMERATE "		
LA MOTTE "		
~~CRAN.~~ OR POR. "	695.0	403.4
PICTURES: FROM		
TO		
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 470' N 125' W T35N-R1VV

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
	459.2	459.5	638.9	0.3		Tr.						303	SB
	539.5	541.3	557.1	1.8		Tr.						447	
	569.8	570.8	527.6	1.0		Tr.						455	—
	570.8	573.2	525.2	2.4	4.5	3.5	10.8	0.5	0.5	1.2		469	5.0
	573.2	575.2	523.2	2.0		Tr.						485	1.0
	575.2	576.0	522.4	0.8	1.0	1.0	0.8					505	
	577.6	578.6	519.8	1.0	4.0	3.5	4.0					525	1.0
	578.6	579.2	519.2	0.6		Tr.						565	
	579.2	580.9	517.5	1.7	2.1	1.0	3.6	2.9	1.0	4.9	> FeS	571	1.0
	580.9	581.9	516.5	1.0		Tr.						675	
	581.9	582.7	515.7	0.8	2.5	2.0	2.0					691	2.0
	582.7	583.2	515.2	0.5		Tr.						695	—
	583.2	583.4	515.0	0.2	2.6	2.0	0.5						
	585.3	586.7	511.7	1.4		Tr.							
	587.1	591.5	506.9	3.6		Tr.							
	591.5	592.4	506.0	0.9	1.9	2.5	1.7						
	592.4	593.1	505.3	0.7		Tr.							
	593.1	593.2	505.2	0.1	1.3	1.5	0.1						
	593.2	595.1	503.3	1.9		Tr.							
	595.1	597.7	500.7	2.6	1.6	2.0	4.2	3.1	1.5	8.1	> FeS		
	597.7	599.0	499.4	1.3		Tr.							
	599.0	602.5	495.9	3.5	1.8	2.0	6.3	3.0	2.0	10.5			
	602.5	604.1	494.3	1.6		Tr.							
	604.1	604.6	493.8	0.5	1.7	1.0	0.8				> FeS		
	604.6	610.4	488.0	5.8		Tr.							
	611.6	612.5	485.9	0.9	0.8	1.0	0.7						
	612.5	613.8	484.6	1.3		Tr.							
	613.8	616.6	481.8	2.8	1.0	2.0	2.8				> Ca.		
	616.6	618.1	480.3	1.5		Tr.							
	619.1	619.5	478.9	0.4	0.6	1.0	0.2						

CONT.

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JAN 16 1958

BUREAU OF MINES
JOPLIN, MO.

FORM 1173-2-54

DATE BOTTOMED	ST. NO. ST. ELEV.	CLASS INDICATIVE HOLE NO. SJVC-13
DESCRIBED BY	AREA	ELEVATION COLLAR 1098.38
DATE ESTIMATED	OPTION NO.	COORDINATES: N 108691.04 E 83791.54
BY	TRACT	200 FT. MAP NO. SS 50 FT. MAP NO.

SE¼-SE¼ SEC. 18 T.35N-R1W

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 470'N 125'W

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS	CORE REC. TO	CORE REC. CORES LOST
	619.5	620.7	477.7	1.2		Tr.							
	620.7	621.9	476.5	1.2	0.9	1.0	1.1						
	621.9	622.9	475.5	1.0		Tr.							
	625.0	625.3	473.1	0.3		Tr.							
	627.3	628.8	469.6	1.5		Tr.							
	628.8	630.1	468.3	1.3	1.8	1.5	1.7						
	630.1	631.6	466.8	1.5		Tr.							
	631.6	632.3	466.1	0.7	1.2	2.0	0.8						
	632.3	633.0	465.4	0.7		Tr.							
	633.0	634.2	464.2	1.2	3.6	4.5	4.3				: Pb BAND		
	634.2	636.0	462.4	1.8		Tr.							
	642.9	643.5	454.9	0.6		Tr.							
	645.1	645.4	453.0	0.3		Tr.							
	651.5	651.7	446.7	0.2		Tr.							
	662.2	663.3	435.1	1.1		Tr.							
	666.2	667.2	431.2	1.0		Tr.							
	671.0	671.1	427.3	0.1		Tr.							
	673.3	673.8	424.6	0.5		Tr.							
	675.0	675.8	422.6	0.8		Tr.							
	676.9	678.2	420.2	1.3		Tr.							
	680.2	680.6	417.8	0.4		Tr.							
	682.6	683.6	414.8	1.0		Tr.							

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BUREAU OF MINES
JOPLIN, MO.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY J. H. DATE 12-30-57 MINE Courtois STOPE STAKE NO. VC-88 HOLE NO. 57VK 173

COLLAR ELEV. 1098 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
283	815	BEGAN CORING	
289	809	Derby	Doe Run — slightly E (289)
298	800	Derby	Davis Transition ? — E (298)
453	645	Davis	Shale — S.B. 303 - 447 (453)
		Bonne Terre	
496	602	1	GTO thin bed: > porous GTO thin bed top to 485 — faint oolites — thin Rbs — > porous 485 w/ oolitic patches to 496 — > ca + 2 Bt Be tr. Pb @ 459 (496)
505	593	1-5	GTO w/ > Bt faint oolites — > small Bte — > pitting — > ca — thin Rbs — (505)
535	563	5	GTM Bt > O small to mod Bte — > faint oolites — > porous oolitic patches — > M — ca patches — > pitting — Bt top to 511 — thin Rbs — > small Gte — (535)
542	556	5	GTM GTO > K 1' GTM Gt top to 536, 538-539 — TO 1' 537, 539, 2' 540 to Base — 1' K @ 539 — faint to mod oolites — > ca patches — small Gte — few thin Rbs — > K patches — (542)
570	528	5	GTO > M w/ Et mod to large oolites — > M scattered — many thin Rbs — > ca + 2 Bt Be — 1' ca Base w/ mod Ete — > tr. Pb @ top — (570)
579	519	5	TO > Gt — F Pb Tm TO > F top to 572 — F 572-579 — TO w/ > Gt 573 to Base — faint oolites — small Gt scattered — tr to fair Pb — (579)
609	489	7	F Pb Tm Gt good roof rock — scattered small Gte — thin Rbs — 5" Gt @ 601 — > ca scattered — tr to fair Pb + Zn — > tr. — > fracturing (609)
636	462	7-10	GTO — F Pb Tm GTO top to 611 — > section GTO appear to be faintly F — good roof 611-619, 621-623, 627 to Base — > ca tr + patches — tr. to fair Pb scattered — thin Rbs — > K patches (636)
666	432	12-16	GTM > Gt — NF Pb Tm good roof appears marbleized top to 645 — GTM > Gt 645-648 — F 648 to Base — Mostly roof rock — many thin Rbs — scattered M — > pitting — (666)
680	418	10-12	GTO > M faint to mod oolites — scattered M — few thin Rbs — tr. Pb — (680)
690	408	16	BIEN 1' @ top mod Bt — good roof rock 681 to Base — < M — > Gte — thin Rbs — 2" Pb @ Base — (690)
695	403	21	Porphyry — Dark purplish color — quartz veinlets — > magnetic — (695)

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BUREAU OF MINES
JOPLIN, MO.

FORM 1173-2-54

15

DATE BOTTOMED 12-30-57	ST. NO. VC-81 ST. ELEV.	CLASS TRACE HOLE NO. 57VC177
DESCRIBED BY C.A.	AREA COURTOIS	ELEVATION COLLAR 986.22
DATE ESTIMATED 12-31-57	OPTION NO. CZ-88	COORDINATES: N 111714.59 E 93041.29
BY C.A.	TRACT ALONZO SELLERS	200 FT. MAP NO. 56 50 FT. MAP NO.

SW¼-NE¼ SEC. 17 1660'S 1400'W T35N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 2.5 FT

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	150.0	836.2
SLEEVE BIT TO		
BEGAN CORING AT	150.0	836.2
SAVED CORES FROM	329.0	657.2
FORMATIONS:		
SOIL TO	17.0	969.2
"		
EMINENCE "		
POTOSI "	75.0	911.2
POTOSI-DERBY "		
DERBY DOE RUN "	152.0	834.2
DAVIS (C.B.-S.B.) "	329.0	657.2
BONNE TERRE "	632.0	354.2
B. T. TRANS. "	634.0	352.2
CONGLOMERATE "		
LA MOTTE "	670.0	316.2
GRAN. OR POR. "		
PICTURES: FROM	329.0	657.2
TO	670.0	316.2
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
	522.0	522.2	464.0	0.2		Tr.					∠FeS
	534.0	534.1	452.1	0.1		Tr.					SPECKS
	605.0	605.9	380.3	0.9		Tr.					"

CORE REC.

TO	CORES LOST
150	
165	10.0
320	SB
379	—
385	1.0
393	3.0
408	4.0
409	2.0
421	2.0
441	2.0
448	3.0
456	5.0
464	5.0
470	3.0
475	3.0
479	2.0
489	6.0
491	1.0
495	3.0
501	1.0
505	3.0
507	1.0
512	2.0
515	2.0
517	1.0
546	8.0
578	14.0
588	9.0
639	17.0
650	8.0
670	15.0

DMEA

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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 81 HOLE NO. [illegible]

COLLAR ELEV. 985 PITCH ..... BEARING ..... COORD.: N ..... E .....

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
[illegible]	835	BEGIN CORING	
1[illegible]	833	[illegible]	(1[illegible])
1[illegible]	820	[illegible]	(1[illegible])
3[illegible]	665	[illegible]	(3[illegible])
3[illegible]	656	[illegible]	(3[illegible])
		[illegible]	
231	604	1	[illegible]
113	572	[illegible]	[illegible]
431	554	[illegible]	[illegible] (431)
518	467	[illegible]	[illegible] (518)
615	370	1	[illegible]
652	353	[illegible]	[illegible]
[illegible]	351	[illegible]	[illegible]
670	315	[illegible]	[illegible]

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BUREAU OF MINES
JOPLIN, MO.

DATE STARTED 12-27-57

FORM 1173-2-54

DATE BOTTOMED 12-31-57
DESCRIBED BY C.A.
DATE ESTIMATED 1-6-58
BY C.A.

ST. NO. VC-89 ST. ELEV.
AREA COURTOIS
OPTION NO. CZ-15
TRACT LEWIS MERRITT

CLASS PAY HOLE NO. 57VC179
ELEVATION COLLAR 1067.33
COORDINATES: N 108796.27 E 84806.21
200 FT. MAP NO. 55 50 FT. MAP NO.
SW¼-SW¼ SEC. 18
MINERALIZATION RECORD 585'N 880'E T35N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 1.75 FT.
FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	222.0	845.3
SLEEVE BIT TO		
BEGAN CORING AT	435.0	632.3
SAVED CORES FROM		
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	440.0	627.3
BONNE TERRE "	685.0	382.3
B. T. TRANS. "	706.0	361.3
CONGLOMERATE "		
LA MOTTE "	725.0	342.3
GRAN. OR POR. "	—	
PICTURES: FROM	435.0	632.3
TO	725.0	342.3
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. %	% ASSAY	% EST.	FT. %	REMARKS	TO	CORES LOST
	489.0	489.2	578.1	0.2		Tr.					SPECK	435	
	507.0	510.2	557.1	3.2	13.5	9.0				43.2	DISS: CONCENTRATED	571	—
	510.2	511.4	555.9	1.2		Tr.					SPECK	575	1.0
	511.4	512.5	554.8	1.1	3.0	3.0				3.3	DISS	673	—
	517.0	520.3	547.0	3.3		Tr.						685	5.0
	540.0	542.7	524.6	2.7		Tr.					FRACT Pb	705	—
	542.7	543.2	524.1	0.5	2.6	1.0				1.3	DISS	725	10.0
	543.2	549.7	517.6	6.5		Tr.					SCATT. SPECKS		
	552.5	553.0	514.3	0.5		Tr.					FRACT		
	562.0	562.2	505.1	0.2		Tr.					"		
	593.7	594.0	473.3	0.3		Tr.					"		
	607.0	607.1	460.2	0.1		Tr.					"		
	615.0	615.1	452.2	0.1		Tr.					"		
	628.0	628.2	439.1	0.2		Tr.					"		
	632.9	633.0	434.3	0.1		Tr.					"		
	670.9	671.3	396.0	0.4		Tr.					"		
	687.0	687.1	380.2	0.1		Tr.					"		

CORE REC.

DIM E9

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BUREAU OF MINES
JOPLIN, MO.

FORM 9002-A-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE 1-16-57 MINE [illegible] STOPE ..... STAKE NO. [illegible] HOLE NO. 51VC179

COLLAR ELEV. 1067 PITCH ..... BEARING ..... COORD.: N ..... E .....

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
425	632	BEGAN CORING	
440	627	[illegible]	(440)
		HANNETERRE	
488	579	1	T>0 LGT>0 DEN. E| - CLEAN T MED. 0 140 TO 160 MED STYLO - < DENSE GT|b > 0| 160 TO BASE - PORUS 1 LG| 177 TO BASE - (488)
498	569	1-5	GT DENSE|b > p20 : B| - IRREG BEDDED < DENSE GT|b + GT p20 B| MIXED THROUT - (498)
525	542	5	GB>0 B| p2 - < POROUS 1 - STYLO p MED 0 193 TO 506 - FAIRLY DENSE GB>B| W/ SMALL VUGGS 506 TO 515 - PAY PL 507 TO 512.5 - > POROUS GB > 0 B| 515 TO BASE - 6" > E| @ 522 - 6" GM CREPE > G| @ 523 - (525)
535	532	5	G|TM IRREG|b - 1' GFM — @ 526 - 1' GT>m SNURLY @ 527 - 1' GM FINE G| @ 528 - 1' GT>m IRREG|b @ 529 - 2' SNURLY GM — : > G| @ 531 - 4' GT IRREG| > m @ 535 - (535)
540	527	5	GT0 : > E| - FAIRLY MASSIVE - MED 0 - > PINHOLE + VUGGY - 1' W/ E| @ BASE - (540)
567	500	—	F Y/GTMG| - GOOD SNURLY F STRUCT Y/ GTM MED G| MATRIX — 1' E @ 562 - FRACT 561 TO BASE - (567)
571	496	—	GT>0>G| : DENSE > THIN| - POROUS GT>0>G| 567 TO 569 - 1' DENSE > THIN|b @ 570 - 1' POROUS Y/MED G| @ BASE - 2" SHALE LAMINATED @ BASE - (571)
619	448	7	>+MED F Y/GTMG|a - FAIRLY GT>0>G| > REEFY APPEARANCE 571 TO 585 > POROUS — MED PROMINANT F SNURLY Y/ LGM FINE G| THROUT - 1' < POROUS + < G| @ 605 - TR PB @ 614 - > FRACT — [illegible] THIN K|b - (619)
633	434	7-10	F Y/GTM > G| : GT>0>G| - 3' GT0 > G| @ 622 - 3' F @ 624 - 2' GT0 > STYLO @ 626 - 3' F @ 629 - 4' > DENSE G > G| MASSIVE @ 633 - (633)
665	402	—	F Y/GTMG| : > GM CREPE - PROMINANT TAN F SNURLY - 1' R| @ 639 - MED M & G| MATRIX — > POROUS — 2' GM CREPE G| @ 645 AND 661 - 1' HEAVILY G| @ 662 46" @ BASE - (665)
674	393	—	GT>0>G| : > F - 1' GT>0>G| @ 666 - 1' F & G| M @ 667 - 3' GT>0>G| > THIN BEDDED @ 670 - 2' F Y/GTM G| @ 672 - TR PB @ 673 - 1' GT0 @ 673 - 1' SNURLY GT > REEFY @ 674 - (674)
685	382	—	GTx0 : G+B| - > POROUS > 0 > X > STYLO - > FRACT - 1' < G| > B| @ BASE - (685)
706	361	17-19-20	GSD : GES : GW SANDY TALM SAUK STRUCT - 3' LGSD @ 688 - LGW LAMOTTE TYPE 688 TO 692 - TR PB @ 688 — SANDY GWy > TALM SAUK STRUCT 692 TO 698 - GE THIN BEDDED LAMOTTE TYPE W/ : > DOLOMITIC 698 TO 706 — (706)
725	342	20	GS : W — 1' EW : AND @ 707 TR : FES — DARK GREY FE STAINED MED GRAIN 707 TO 724 - 1' WS W/ TRS FES @ BASE — (725)

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JOPLIN, MO.
RECEIVED DEC 23 1957

INTERIM REPORT

DMEA-4582, Idm-E1068

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

Location: Courtois Area, Washington County, Missouri

	CODE
C	220
23	100
5	OV-OVRS.

A project inspection of the subject contract was conducted on December 5, 1957. 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 October 31, 1957 is summarized as follows:

Drilling completed:

Footage in holes completed since last inspection. .	7,167
Footage in holes completed to date.	46,207
Number of holes completed since last inspection . .	10
Total number of holes completed to date	70
Number of holes showing commercial ore.	7
Number of holes showing indicative non-commercial mineralization.	6
Number of holes showing trace mineralization. . . .	42
Number of holes showing speck trace mineralization.	5
Number of barren holes.	10

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

Hole No.	Location	Depth	Remarks
VC-69	NE¼, NW¼, SE¼, sec. 33	805 ft.	Blank hole
VC-58	SE¼, SW¼, NW¼, sec. 8	555 ft.	Trace hole
VC-71	NE¼, NW¼, SW¼, sec. 34	930 ft.	Blank hole
VC-68	NE¼, NE¼, SW¼, sec. 33	755 ft.	Blank hole
VC-66	SE¼, SE¼, SE¼, sec. 32	625 ft.	Blank hole
VC-72	NE¼, NE¼, NE¼, sec. 4	759 ft.	Blank hole
VC-74	SE¼, NW¼, NW¼, sec. 3	635 ft.	Blank hole
VC-55	NW¼, NW¼, SE¼, sec. 5	705 ft.	Ore hole
VC-73	NE¼, NE¼, NE¼, sec. 4	705 ft.	Blank hole
VC-44	SW¼, SE¼, SW¼, sec. 5	693 ft.	Trace hole

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

Hole No.	Location	Present Depth	Estimated Total Depth	Remarks
VC-91	SW¼, SE¼, SW¼, sec. 18	449 ft.	600 ft.	Trace mineralization encountered.
VC-65	NE¼, SW¼, NE¼, sec. 5	565 ft.	700 ft.	Ore grade mineralization encountered.
VC-54	Center, NE¼, SW¼, sec. 5	455 ft.	500 ft.	-----

The churn drill portion of 14 holes have 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-68	NE¼, NE¼, SW¼, sec. 33	245 ft.
VC-44	SW¼, SE¼, SW¼, sec. 5	145 ft.
VC-72	NE¼, NE¼, NE¼, sec. 4	255 ft.
VC-73	NE¼, NE¼, NE¼, sec. 4	155 ft.
VC-65	NE¼, SW¼, NW¼, sec. 5	185 ft.
VC-66	SE¼, SE¼, SE¼, sec. 32	100 ft.
VC-75	SW¼, SW¼, SE¼, sec. 4	58 ft.
VC-96	NE¼, SE¼, SE¼, sec. 7	220 ft.
VC-87	center, SE¼, SW¼, sec. 18	55 ft.
VC-91	SW¼, SE¼, SW¼, sec. 18	60 ft.
VC-48	SW¼, NW¼, SW¼, sec. 18	245 ft.
VC-89	SE¼, SW¼, SW¼, sec. 18	210 ft.
VC-76	SW¼, NE¼, NW¼, sec. 9	130 ft.
VC-81	SW¼, SE¼, NE¼, sec. 17	150 ft.

Churn drilling was completed in Hole VC-54 to a depth of 33 feet during October but was erroneously omitted from the last interim report covering the inspection on October 31, 1957.

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

Hole No.	Location	Present Depth
VC-88	SE¼, SE¼, SE¼, sec. 13	120 ft.
VC-85	NE¼, SW¼, SW¼, sec. 18	125 ft.
VC-47	NW¼, NE¼, SE¼, sec. 13	200 ft.
VC-79	NE¼, NE¼, SE¼, sec. 18	Setting up.

Assay results of recently completed holes are given below:

Hole No.	Depth	Thickness	%Pb	%Zn	%Cu
VC-56	477.3 - 478.9 ft.	1.6 ft.	2.0	---	---
?	480.6 - 482.2 ft.	1.6 ft.	0.8	---	---
	492.7 - 494.5 ft.	1.8 ft.	10.0	2.3	---
	496.1 - 497.2 ft.	1.1 ft.	6.1	---	---
	507.3 - 508.0 ft.	0.7 ft.	4.7	---	---
	512.5 - 513.5 ft.	1.0 ft.	1.1	---	---
VC-57	510.5 - 511.3 ft.	0.8 ft.	4.5	---	---
?	517.1 - 518.1 ft.	1.0 ft.	2.6	---	---
	518.6 - 521.6 ft.	3.0 ft.	13.8	---	---
	533.6 - 534.3 ft.	0.7 ft.	2.4	---	---
	534.3 - 534.5 ft.	0.2 ft.	0.5	---	0.47
	538.0 - 538.4 ft.	0.4 ft.	4.8	---	1.5
VC-55	533.5 - 534.6 ft.	1.1 ft.	25.2	---	0.18
one hole	536.1 - 538.6 ft.	2.5 ft.	0.9	---	---
	538.6 - 539.1 ft.	0.5 ft.	11.3	---	---
	550.1 - 551.1 ft.	1.0 ft.	1.6	---	---

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

Dewey H. Amos
Geologist
U. S. Geological Survey

Division of
Administration

206 Federal Building
Bartlesville, Oklahoma

January 15, 1958

Memorandum

To: Clinton C. Knox

From: Cora A. Bailey

Subject: Payment of MF-104's for November 1957, Contracts IDM-E-1064, 1068, and 1073.

Payment was made January 14, 1958 on a joint voucher for November MF-104's for Contracts No. IDM-E-1064, 1068, and 1073. The Bureau Voucher was No. 4.-22, in the amount of $23,977.96. The breakdown is as follows:

IDM-E-1064	$2,522.16
IDM-E-1068	7,530.80
IDM-E-1073	13,925.00

Cora A. Bailey
Fiscal Officer

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

Budget Bureau No. 42-R1036.5

2 cy. DMEA, Wash.

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

Month of November, 1957 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	15,051.60	93,000.24	108,051.84	3/18/58	ANPK	
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	10.00	205.00	215.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	15,061.60	93,205.24	108,266.84	✓	✓	✓

RECEIVED
MINERALS TECHNOLOGY DIVISION
DEC 16 1957
BUREAU OF MINES
JOPLIN, MO.

I certify that the above bill is correct and just and that payment therefor has not been received.
Date 12-9-57 *Payee St. Joseph Lead Company
Per [signature] 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:

$ 7,530.80

Signature
(Authorized Certifying Officer)

Date 1-14-58 Vou. No. 4-22
(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. IdmE1068 in accordance with the terms of the contract.

Signature John W. Chesta Title Mining Engineer Date Jan 9, 1958

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Clinton C. Knox Title Executive Officer Date Jan. 9, 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.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Box 431
Joplin, Missouri
December 16, 1957

OFFICIAL FILE COPY
DMEA
RECEIVED DEC 23 1957

		CODE
12/23	C	220
12/23	wcy	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 three copies of the Interim Report received from Dewey Amos today on the joint Field inspection he and I made at this project December 5, 1957.

One of your copies of this Operator's November Report(excepting the MF-104 Voucher) received today, is also enclosed for your advanced information. The fifth copy is being sent to the Survey Member of the Field Team with a copy of this letter.

Sincerely yours,

Clinton C. Knox
id

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

encl. 4

cc: DMEA Op.Com.(2)
Amos,USGS,Carbondale w/2cy rpt
Chester,USBM,Joplin w/1cy rpt
4582 file

Form MF-104A
(April 1952)

2d cy. BM & A Washington
(Ex cept mining)

Budget Bureau No. 42-R1151.2

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

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

Month of November 1957 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.	10,467.30	4715	78,843.30	~~30800~~ 35,515	$2.22		
Churn	Ft.	4,584.30	2065	29,208.54	~~11092~~ 13157	2.22	133420	$2.22
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Analytical Determinations	Ea	10.00	10	215.00		1.00	2370	1.00
TOTAL DISTRIBUTED COSTS		15,061.60		108,266.84				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		15,061.60		108,266.84				

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

Date 12-13-57 Operator St. Joseph Lead Company

Per Ed Jones Title Asst 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)

(For Government use only)

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MINERALS TECHNOLOGY
DIVISION

DEC 16 1957

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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MINERALS TECHNOLOGY
DIVISION

DEC 16 1957

BUREAU OF MINES
JOPLIN, MO.

MONTHLY REPORT FOR MONTH OF NOVEMBER, 1957

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

Four churn drills were operating in the area at the end of the month. The following holes were in progress:

Stage No.	Stake No.	Feet Depth
I	C-88	95
I	C-85	110
I	C-47	185
I	C-81	145

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	C-44	143	10-24-57
I	C-48	245	11-13-57
I	C-65	185	11- 1-57
I	C-66	100	11- 1-57
I	C-68	245	9-27-57
I	C-72	255	10-21-57
I	C-73	160	10-25-57
I	C-75	57	11- 4-57
I	C-76	130	11-14-57
I	C-87	55	11- 8-57
I	C-89	210	11-15-57
I	C-91	60	11-13-57
II	C-96	220	11- 6-57

Three diamond drills were operating in the area at the end of the month. The holes in progress were Stage I, Stake No. C-91, at a depth of 206 feet, Stage I, Stake No. C-65, at a depth of 375 feet, and Stage I, Stake No. C-54, at a depth of 255 feet.

The following diamond drill holes were completed during the month:

Stage No.	Stake No.	Prospect Hole No.	Bottom Depth	Feet of Diamond Drilling	Date Completed	Class.
I	C-55	57VC143	705	516	10-20-57	Pay
I	C-71	57VC135	930	540	11- 7-57	Blank
I	C-69	57VC125	805	500	11- 1-57	Blank
I	C-74	57VC147	635	525	11-21-57	Blank
I	C-44	57VC149	693	550	11-26-57	Trace
I	C-66	57VC139	625	525	11-13-57	Blank
I	C-68	57VC134	755	510	11- 7-57	Blank
I	C-72	57VC141	759	504	11-14-57	Blank
I	C-73	57VC151	705	545	11-27-57	Blank

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

Ten analytical determinations were made during the month as follows:

57VC143	5 Pb	1 Cu
57VC149	2 Pb	2 Cu

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MINERALS TECHNOLOGY
DIVISION

DEC 18 1957

BUREAU OF MINES
JOPLIN, MO.

WASHINGTON COUNTY

Courtois Area - In DMRA Project #4582

Period November 1 to 4, 1957

2 diamond drills operating and 4 churn drills setting casing completed 1 trace and 1 blank hole.

57VC127, stake #58, a good trace hole, is located 520 feet north-northeast of 57VC114. It bottomed at 555 feet depth in Lamotte sand. Trace lead was scattered through the top reef of the 7 zone with best parts estimated as 0.5 feet of 3.0% Pb at 418 feet depth, 0.3 feet of 5.0% Pb at 426 feet depth, and 0.9 feet of 3.0% Pb at 449 feet depth. This mineralization is similar in nature to that of ore located 520 feet southwest.

57VC125, stake #69, a blank hole, is located 1700 feet west of the above hole. It bottomed at 805 feet depth in Lamotte sandstone. The Bonneterre formation was badly leached throughout.

Week Ended November 11, 1957

2 diamond drills operating and 4 churn drills setting casing completed 2 blank holes.

57VC134, stake #VC68, a blank hole, is located about 11,500 feet northeast of the village of Courtois. It bottomed at 726 feet depth in Lamotte sandstone.

57VC135, stake #VC71, a blank hole, is located 4,650 feet east of the above hole. It bottomed at 930 feet depth in Lamotte sandstone.

The above holes are the last in an east-west section of 5 holes on 1560-foot spacing designed to intersect any northeast extension of the general Viburnum-Courtois ore zone trend. The Bonneterre formation in these holes was not particularly favorable in appearance, with some basin type lithology mixed with thin reefs and with a great deal of leaching and minor fracturing. The only mineralization encountered consisted of a few speck traces of lead in the farthest west hole.

Week Ended November 18, 1957

2 diamond drills operating and 4 churn drills setting casing completed 2 blank holes.

57VC139, stake #VC66, a blank hole, is located about 9,000 feet northeast of the village of Courtois. It bottomed at 625 feet depth in Lamotte sand. Bonneterre formation was badly leached, showed a fair 7 reef section but no oolite in lower Bonneterre and, in general, was not very favorable appearing.

57VC141, stake #VC72, a blank hole, is located about 4500 feet east-southeast of the above hole. It bottomed at 759 feet depth in Lamotte sandstone. General character of rock was similar to that in above hole.

WASHINGTON COUNTY (Continued)

Courtois Area - In DMEA Project #4582 (Continued)

Week Ended November 25, 1957

2 diamond drills operating and 4 churn drills setting casing completed 1 pay and 1 blank hole.

57VC143, stake #C55, a pay hole, is located about 5,000 feet northeast of the village of Courtois and 1500 feet from the nearest completed hole. It bottomed at 705 feet depth in Lamotte sand. Pay grade mineralization is associated with a thin reef in the lower 5 zone and was estimated as 8.2 feet of 5.8% Pb at 542 feet depth. Some copper is associated with the lead. This mineralization is similar in horizon to that in 3 widely spaced indicative holes extending 4,000 feet to the southeast.

57VC147, stake #C74, a blank hole, is located about 2½ miles northeast of the village of Courtois and 1500 feet southeast of 57VC141, stake #C72, a blank hole. It bottomed at 635 feet depth in Lamotte sand. Bonneterre formation was badly leached and showed no sign of mineralization.

Period Ending November 30, 1957

2 diamond drills operating and 4 churn drills setting casing completed 1 trace and 1 blank hole.

57VC149, stake #VC44, a trace hole, is located about 2,000 feet northeast of the village of Courtois and 2700 feet southwest of last week's pay hole in this area. It bottomed at 693 feet depth in Lamotte sandstone. Lead and trace copper mineralization was present in association with a thin reef in the lower 5 zone, same as in last week's pay hole. Estimate of best part was 0.5 feet of 1.5% Pb at 529 feet depth.

57VC151, stake #VC73, a blank hole, is located about 10,000 feet northeast of the village of Courtois and 2500 feet southwest of VC74, a blank hole. It bottomed at 705 feet depth in Lamotte sand. Bonneterre formation was unfavorable appearing in regard to mineralization. This is the last of a group of 9 holes distributed over a 1½ x 1¼ mile area lying ahead of the general northeast trend of the Courtois-Viburnum ore zone and results seem to cut off any extension in this direction.

STARTED 10-29-57

15

FORM 1173-2-54

DATE BOTTOMED 11-1-57 (~~10-31-57~~)	ST. NO. VC-69 ST. ELEV.	CLASS BLANK	HOLE NO. 57VC125
DESCRIBED BY J. A	AREA COURTOIS	ELEVATION COLLAR 1009.62	
DATE ESTIMATED 11-4-57	OPTION NO. 043391	COORDINATES: N 126304.00	E 98617.63
BY J. A.	TRACT U. S. FOREST LANDS	200 FT. MAP NO. 27	50 FT. MAP NO.

NW¼-SE¼-Sec 33 T36N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 3.00 FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	312	698
SLEEVE BIT TO		
BEGAN CORING AT	312	698
SAVED CORES FROM	495	515
FORMATIONS:		
SOIL TO	19	
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "	321	689
DAVIS (C.B.) "	503	507
BONNE TERRE "	791	219
B. T. TRANS. "		
CONGLOMERATE "		
LA MOTTE "	805	205
GRAN. OR POR. "		
PICTURES: FROM		
TO		
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 1760 N 1520 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
350	S.B.
495	—
507	0.6
514	3.0
517	—
524	0.6
535	3.0
541	2.0
571	—
589	3.0
669	—
689	2.6
705	4.0
715	5.0
735	
755	3.0
765	3.0
785	—
805	5.0

20.5

Ran

Pl. & K.

DMEA

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY JA DATE 11-4-57 MINE Courtois STOPE STAKE NO. VC-69 HOLE NO. 57VC125

COLLAR ELEV. 1008 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
305	703	BEGIN CORING	
321	687	Derby	Doe Run (321)
336	672	Derby	Davis Transition (336)
503	505	Davis	Shale S.B. 350 - 495 (503)
		Bonne	Terre
555	453	1	E TO dense bedded: thin bedded E throughout — fairly massive dense bedded top to 533 — pitting thin bedded < fracturing 533 to 555 — > EHb > grinding — (555)
573	435	1-5	E TO > B$ > dense b — E thruout — small to med B$ scattered — pitting + small vugs thruout — < fracturing toward Base > dense b scattered — > greasy cores toward Base — (573)
599	409	5	E TO B$ p² E thruout — < pitting + small vugs — > fracturing — faint oolites — med B$a — > K patches — > ca $a (599)
603	405		E GEM > B$ E thruout — > B$a — > pitting — > EKb (603)
623	385	5	E TO > m faint to med oolites — E thru out — > pitting — has Iron stain thru out — > Kb — > ca + dickite $a — slightly m Gl to Base (623)
643	365	7	E LGM smury appearance E thruout — smury thruout — < pitting — > EHb < LK — > faint oolites — (643)
695	313	7-10	E TO dense fairly massive: F M dense TO top to 652 — dense Tcwl > pitting > EH 652-656, 658-660, — F 656-658, 660-674, 685-693 — M 674-685, 693 to Base w/ some B$a — > fracturing — > EHb > ca (695)
779	229	12	E TEM > E$ > x > B$ E thru out — > crappy — > EHb > tr J — > B$ — > ca stringers — > fracturing + grinding — > crystalline sect. — slightly porous 755 to Base — < K — last 4' not E — > ca $a (779)
791	217	12-15-16-17	GTM > J S N M thruout — > strs more toward Base — < Hb — 6" N @ 684 trs J @ top — > ca $ — > Bluish H — > Purplish stain @ Base >> 2% $a (791)
805	203	20	W.S. med to Large grain — > Iron stain — (805)

STARTED 11-4-57

20

FORM 1173-2-54

DATE BOTTOMED	11-7-57	ST. NO.	VC-68	ST. ELEV.	
DESCRIBED BY	J. A.	AREA	COURTOIS		
DATE ESTIMATED	11-12-57	OPTION NO.	043391		
BY	J. A.	TRACT	U. S. FOREST LANDS		

CLASS	BLANK	HOLE NO.	57VC134
ELEVATION COLLAR	1001.98		
COORDINATES: N	126217.17	E	97103.24
200 FT. MAP NO.	27	50 FT. MAP NO.	NE-SW-Sec 33 T31N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 3.00 FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	245	757
SLEEVE BIT TO		
BEGAN CORING AT	245	757
SAVED CORES FROM	445	557
FORMATIONS:		
SOIL TO		
"		
EMMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS. (C.B. [illegible]) "	456	546
BONNE TERRE "	732	270
B. T. TRANS. "	742	260
CONGLOMERATE "		
LA MOTTE "	755	247
GRAN. OR POR. "		
PICTURES: FROM	445	557
TO	755	247
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 1810 N 2260 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
305	S.B.
445	
460	2.0
465	3.0
472	1.0
601	—
621	2.0
641	7.0
655	10.0
665	2.0
743	
755	3.0

Pl. OK

DMEA

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY GH DATE 11-12-57 MINE Courtois STOPE STAKE NO. VC-68 HOLE NO. 57VC134

COLLAR ELEV. 1000 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
285	715	BEGIN CORING	
456	544	Devil Shale Kenne Terre	S.B. 305-445 (456)
509	491	1	TEO zones massive; thin bed; smooth - mainly massive & lamsa w/ fracturing & grinding to pt to 472 — thin bedded w/ pitting & fracturing; lense 472-474 — smooth appearance w/ pitting & few stylo. 484 to 509 — dickite 4x — ca seams (509)
517	483	1-5	TEO lense irregular bed - BS irregular bed - dense f - scattered BS - pitting - ca S - thin Rb (517)
567	433	5	GBOBS: E porous mod oolites - med BS - pitting - E 523-545, 548-560 - Fish stains in E sections - ca - Gb in E sections (567)
585	415	7	GTMO BS: E w/ breccia zone thin bed w/ BS & GS & scattered oolite patches dense 561-571 — GTOM w/ porous BS & pitting 571-575 — E Gw breccia zone GS 575-585 — 2' GS @ base - pitting - ca S thin Rb (585)
679	321		E Fe sections porous BS E thru out - E top to base w/ short oolitic section thru out - MWEM 673-675 - ca x @ 678 - pitting thru out - FMb - fracturing & grinding 621-655 - E 655 to base (679)
722	278	12	E - mul - E stains pitting O E thru out - E stains top to 689 - alternating sect of BOEM & thin FMb beds 689 to base - med sized BS - faint oolites - pitting thru out - creepy appearance - ca patches (722)
732	268		E - FMb - BS pitting w/ tr J E thru out - tr of fine J scattered thru out - pyr scattered - porous sections — short 6" FMb alternating w/ 1' of thin rock - sand grains toward base (732)
742	258	17	E - EIMSD E thru out - gets sandier toward base - I stains FM - scattered BS - pitting (742)
755	245	20	W.S. med grain - I stain - grinding (755)

STARTED 11-4-57

15

FORM 0070-0-01

DATE BOTTOMED 11-5-57
DESCRIBED BY D. A.
DATE ESTIMATED 11-12-57
BY D. A.

ST. NO. VC-71 ST. ELEV.
AREA COURTOIS
OPTION NO. 043391
TRACT U.S. FOREST LANDS

CLASS BLANK HOLE NO. 57VC135
ELEVATION COLLAR 1141.20
COORDINATES: N 12641.72 E 101830.83
200 FT. MAP NO. 27 50 FT. MAP NO.
NE¼ SW¼ Sec 34 T36N-R1W.

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 0.50 FT.
FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	390	751
SLEEVE BIT TO		
BEGAN CORING AT	390	751
SAVED CORES FROM	585	556
FORMATIONS:		
SOIL TO		
"		
EMINENCE "	60	1081
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-[redacted]) "	605	536
BONNE TERRE "	903	238
B. T. TRANS. "	907	234
CONGLOMERATE "		
LA MOTTE "	930	211
GRAN. OR POR. "		
PICTURES: FROM	594	547
TO	930	211
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 1720 N 1700 W.

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

T36N-R1W.

CORE REC.

TO	CORES LOST
445	S.B.
585	
605	
615	13.0
629	2.0
649	—
659	2.0
675	6.0
695	4.0
709	3.6
749	—
755	3.0
775	10.0
835	—
855	1.0
875	1.0
895	—
915	3.0
930	5.0

PL. OK DMEA

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY JA DATE 11-12-57 MINE Courtois STOPE STAKE NO. VC-71 HOLE NO. 57VC135

COLLAR ELEV. 1142 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
425	717	BEGAN	CORING
605	537	Davis Beaverlodge	Shale – SB. 445-585 (605)
642	500	1	GTO Dense-TO Massive-Smuxly – GTO Dense w/ > pitting & vugs & > grinding top to 625 – TO Massive 625-631 – Smuxly appearance 631 to Base w/ > pitting & small vugs – > ~ patches (642)
647	495	5	GTOB% faint calites > med B% – > pitting – > dickite % – few thin Rbs few stylo – (647)
675	467	5	E TO-IT-stains-vuggy E thru out – < vugs – > Fish stains – faint calites – 2' fairly massive 669, 2' fairly massive & dense @ Base – > grinding – (675)
699	443	5	TO Massive i E-> porous E top to 681 – faint to med calites – few stylo > porous – > banding toward Base – (699)
815	327		F% to > porous – TO i E 2' E 723-725, 727-729, 738-789 – F w/ > porosity F 699-701, 708-711, 713-723, 725-727, 727-729 and Breccia & fragments very porous, – porosity F 732-737, 745-749, 750 755, 770-774, 775-783, 786-790, 6" @ 895 – GTM 8 808, 811 to Base – TO 701-708, 711-713, 723-725, 727-806 – 743, 1' @ 749, 755-770, 1' @ 774, 1' 775-780, 770-885, 807-806 – oolitic sections are mostly Massive w/ > pitting – (815)
859	283	7	F% to 1% > porous good roof rock > appear to be > rotten – faint calites & small C% < in matrix – > pitting – GTM sections 1' @ 837, 2' 841-843, 3' 856 to Base – > C% – < pitting (859)
893	249	12	GTM > EH > G > B% fairly crapey – scattered < E% – < K – many thin Rbs – > C% % – 1" EHb @ top > pitting (893)
903	239	12	GTMud > Rl w/ sand crapey – Rbs w/ sand – < K – > pitting – > EH (903)
907	235	19	LEI3D'E fairly sandy – LE E top to 905 – > Fish stain 905-907 – > C% (907)
930	212	20	W.S. w/ Fish stain med grain – > Fish stain scattered > grinding – (930)

20

FORM 1070-D-54

DATE BOTTOMED 7/22/57
DESCRIBED BY J. A.
DATE ESTIMATED 7/22/57
BY J. A.

ST. NO. VC-66 ST. ELEV.
AREA COURTOIS
OPTION NO. CZ-82
TRACT MARY ALICE MOSES

CLASS BLANK. HOLE NO. 57VC139
ELEVATION COLLAR 867.81
COORDINATES: N 124873.73 E 94766.05
200 FT. MAP NO. 26 50 FT. MAP NO.
SE¼-SE¼-Sec 32 T36N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR [illegible].00 FT.
FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	100	768
SLEEVE BIT TO		
BEGAN CORING AT	285	583
SAVED CORES FROM	295	573
FORMATIONS:		
SOIL TO	15	853
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-[redacted]) "	305	563
BONNE TERRE "	596	272
B. T. TRANS. "	605	263
CONGLOMERATE "		
LA MOTTE "	625	243
GRAN. OR POR. "		
PICTURES: FROM	295	573
TO	625	243
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 550N 80W

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICK-NESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS
			BLANK								

CORE REC. TO	CORES LOST
295	—
309	2.0
315	
323	4.0
343	6.0
363	
375	2.0
435	—
450	1.0
545	—
565	2.0
602	—
605	1.0
625	—

2.05

RW

RP. GK DMEA

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY JA DATE 11-18-57 MINE Courtois STOPE STAKE NO. JC66 HOLE NO. 57VC139

COLLAR ELEV. 868 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
295	573	BEGIN CORING	
305	563	Davis Shale Bonne Terre	(305)
343	525	1	Dense TO Massive bed faint oolites — dense massive bed > E stain — > grinding & fracturing — (343)
363	505	1	Dense GTO thin bed thin irregular bed — fairly dense — faint oolites > ca $ > pitting — few scattered B$ (363)
375	493	5-1	GTO thin bed > B$ faint to med oolites — > dense & — ca $ — few thin Rb — > B$ — 1' E @ Base — (375)
403	465	5	TO B$ E > lenses faint oolites — > med B$ — > pitting & small vugs > B$ porous — 4' not E @ 397 - 341 — > ca $ — (403)
446	422		E TO > B$: M > E$ E thruout — 4" M & E $ @ top — 1' M @ 407, 415, 1' 422-426, 1' @ 433 — > scattered M thruout — > pitting — faint to med oolites — > ca $ & patches (446)
525	343	7	E F : Banded E thruout — thin dense bedded 457 - 460, 462 - 464, 6" @ 496, 502 - 506, 6" @ 509, 1' @ 519 — 1' G dense bed @ 502 — 1' I stain 502 — fairly good reef rock — > thin Rb > pitting — 2" ca @ 446 — > ca $ & seams (525)
579	289	12	E TEOM - EH - B$ E top to 579 — faint to med oolites — E Rb — < B$ > short crystalline sections (579)
596	272	12	GTM - B$N : sandy alternating sections of GTM & B$ about 6" long top to 592 — M & Rb 592 to Base — last 5' are increasing in sand — > ca $ — thin Rb — > tr J scattered — (596)
605	263	12 or 19	GTM sandy w/ 1/4" Rainbow Slate @ top — < K — > H — fairly sandy — 3' vertical sand seam — > B & G $ — > ca $ — 2' E @ Base & very sandy — (605)
625	243	20	W.S med to coarse grain — > I & Tan stain — (625)

STARTED 11-11-57

FORM 1173-2-54

DATE BOTTOMED 11-14-57	ST. NO. VC-72 ST. ELEV.	CLASS BLANK HOLE NO. 57VC141
DESCRIBED BY J. A.	AREA COURTOIS	ELEVATION COLLAR 1073.30
DATE ESTIMATED 11-19-57	OPTION NO. CZ-142	COORDINATES: N 674.28 E 99284.82
BY J. A.	TRACT ADOLPH MOSES	200 FT. MAP NO. 50 FT. MAP NO.

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 1.25 FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	225	848
SLEEVE BIT TO		
BEGAN CORING AT	255	818
SAVED CORES FROM	445	628
FORMATIONS:		
SOIL TO	60	1013
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "	277	796
DAVIS (C.B.-S.B.) "	454	619
BONNE TERRE "	742	331
B. T. TRANS. "	750	323
CONGLOMERATE "		
LA MOTTE "	759	314
GRAN. OR POR. "		
PICTURES: FROM	291	782
TO	759	314
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 890 S 650 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
225	8.0
445	
465	8.0
485	
498	5.0
515	
535	1.0
551	3.0
565	3.0
577	2.0
595	8.0
605	4.0
625	12.0
645	12.0
655	5.0
669	3.0
689	—
699	1.0
711	1.0
719	2.0
759	

205

RW

RL. O.K. DMEA

11-11-57

FORM 9002-R-5-55

Page #1

ROCK CLASSIFICATION

DESCRIBED BY JH DATE 11-19-57 MINE Courtois STOPE STAKE NO. VC 72 HOLE NO. 57VC141

COLLAR ELEV. 1077.05 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
275	797	BEGIN CORING	
277	795	Derby	Doe Run (277)
285	787	Derby	Doe Run + Davis Transition - 6" E 278, 281-284 (285)
454	619	Davis	Shale - S.B 295-445 (454)
		Lanna	Terra
501	571	1	TO fairly massive x fract - E TO - GTO - smooth faint TO - fract top to 467 - fairly massive w/ x pitting x small vugs 467-477 - E TO massive 477-485 w/ x stylo - GTO x thin bedding 485-495 w/ x grinding - smooth appearance 495-501 w/ x pitting + small vugs - x ca $ (501)
545	509	5	TO E $ x smooth x porous E faint TO w/ porous BS top to 509 - x pitting + small vugs - E 509-545, very porous - Iish stain - ca $ x grinding 515-535 - x dense Gb - E thru out (545)
559	513	5	E TO massive bed faint to mod oolites - massive bedded - E thruout - x grinding + fracturing - x pitting (559)
585	487		E E oolites x banding E thru out - 2' @ 565-567 - fair roof rock - x pitting - x fracturing x grinding - x ca (585)
607	465		E TO massive bed faint to mod oolites - E throughout - x grinding 575-605 - x fracturing - top 2' fairly dense (607)
661	411		E - TO x banded - E top to 655 - E 655 to Base - x fracturing x grinding - x ca - F top to 625, 641-654 - TO x Banded sections 625-641, 654 to Base (661)
697	375	7	F TO - x E x repoy fairly good roof rock - E 2' @ top - oolites x E x in Matrix - x repoy sections 6" @ 683, 685, 1' @ Base - x Kb - x ca $ - x pitting - (697)
703	369	[illegible]	F TO - x [illegible] - x repoy @ top + [illegible] 701 - rest F - x ca $ - thin Kb - x pitting (703)

FORM 9002-R-5-55

ROCK CLASSIFICATION

Pg #2 (cont)

DESCRIBED BY JH DATE 11-19-57 MINE Courtois STOPE STAKE NO. VC-72 HOLE NO. 57VC1H

COLLAR ELEV. 1072.05 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
[illegible]		BEGAN CORING	
742	330	12	GTMBL; E + R slightly cropey - thin Rb - R 706 - 714 - E 714 - 727, 729 - 734 - > scattered Bt - > pitting - > calc - slightly sandy toward Base - > N appearing struct 727-729 - 6" Banded @ 736 (742)
750	322	17	GTSD w/ K + H Banded sect K + H Banded top 746 - 1/8" Rainbow slate b @ 746 - GTSD getting sandier toward Base 746-748 - E + sandy 748 to Base - 1" @ Base R (750)
759	313	22	W.S. time to med grain sand - 6" R @ top - < fracturing good w.s. (759)

20

FORM 1173-2-84

DATE BOTTOMED 11-20-57	ST. NO. 55 ST. ELEV.	CLASS PAY	HOLE NO. 57VC143
DESCRIBED BY C.A.	AREA V-COURTOIS	ELEVATION COLLAR 1043.49	
DATE ESTIMATED 11-22-57	OPTION NO. CZ-100	COORDINATES: N 120892.92	E 92690.37
BY C.A	TRACT JAMES SELLERS	200 FT. MAP NO. 36 NW¼-SE¼	50 FT. MAP NO. 200M 200T SEC. 5 QUAD.

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 32" FT

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	189.0	854.5
SLEEVE BIT TO		
BEGAN CORING AT	225.0	818.5
SAVED CORES FROM	395.0	648.5
FORMATIONS:		
SOIL TO	30.0	1013.5
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "	237.0	806.5
DAVIS (C.B.-S.B.) "	405.0	638.5
BONNE TERRE "	680.0	363.5
B. T. TRANS. "	689.0	354.5
CONGLOMERATE "	—	
LA MOTTE "	705.0	338.5
GRAN. OR POR. "	—	
PICTURES: FROM	395.0	648.5
TO	705.0	338.5
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 2285'N 1800'W T35N-R1WP

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
	462.0	462.1	581.4	0.1		Tr.					SPECK	225	
	496.0	496.1	547.4	0.1		Tr.					"	245	—
	531.3	532.0	511.5	0.7		Tr.					"	395	5.8
	533.5	534.6	508.9	1.1	25.2	30.0	27.7	0.18	0.5	0.19	HEAVY — DISS	575	—
	534.6	536.1	507.4	1.5		Tr.						587	1.0
501.8 -5.6-1.5	536.1	538.6	504.9	2.5	0.9	2.5	2.2				DISS	595	—
	538.6	539.1	504.4	0.5	11.3	8.0	5.6				< DISS	605	4.0
	539.1	541.7	501.8	2.6	0.3	1.0	0.8				SCATT PATCHES	705	—
	541.7	550.1	493.4	8.4		Tr.					SCATT SPECK + FRMT.		
	550.1	551.1	492.4	1.0	1.6	1.0	1.6				> DISS		

R.E.W. 200

DMEA

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE 11-22-57 MINE COUNTOIS STOPE STAKE NO. VC 55 HOLE NO. 57VC143

COLLAR ELEV. 1029 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
22.5	804	BEGIN CORING	
237	792	PERRY	- THIN DEBRIS (237)
242	787	PERRY-DAVIS	TRANSITION (242)
247	782	DAVIS	SHALE (247)
305	634	SOLID	BLT (305)
405	624	DAVIS	SHALE (405)
		BONNETERRE	
449	580	1	T>O: MASSIVE IRREG DENSE GTL - > MASSIVE T>O > NUGGY 405 TO 421 - STYLOLITIC 421 TO 440 - IRREGULAR DENSE GTL SNURLY ! > O BANDED - > POROUS PATCHES - > LITTLE SMALL VUGS - (449)
455	574	1-5	GT SNURLY DENSE ↓ : B↓ > O - BASICALLY IRREG DENSE ↓ w/ - B↓ > pz O SCATTERED - (455)
475	554	5	GB > O < B↓ - - POROUS & NUGGY - B↓ & POROUS B↓ THROUGHOUT - > STYLO - > SCATT DENSE ↓ - 2ND DOLO ↓ - 2" S POROUS G↓ ↓ @ 467 - TR PB @ 463 - (475)
515	514	5	GBM-B↓ POROUS - B↓ & POROUS B PATCHES - > IRREG M & BANDED NATURE - MICKITE ↓ - TR PB @ 497 - (515)
534	495	-	GTG-EM-GB pz BANDED-GTG10 - 2' GEM CREPE @ 517 2' GB > BANDED & B↓ & Ca ↓ 519 - 1' GT > K↓ & B↓ > STYLO @ 520 - GB IRREG ↓ pz PATCHES, 2ND DOLO 520 TO 524 - 1' GT > G↓ O pz @ 525 - 1' GM CREPE @ 526 - 1' GTG10 pz @ 528 - 3" GM ↓ @ 528 - 1' GTO > G↓ @ 529 - 2' GL pz > M @ 531 - 1' > TO - G↓ @ 532 - 1' GT > M & STYLO @ 533 - 1' GTO > G↓ & TR PB @ 534 - (534)
539	490	-	FT/GTMG↓ - 1' HEAVILY MINERALIZED w/ PB > CuFeS IN REEF DEBRIS @ 535 - BROM. F TRUST w/ : GATT PB 535 TO BASE - (539) PB IN REEF DEBRIS @ BASE -
544	485	-	GTG BANDED > POROUS - > PB - > POROUS - BANDED & > STYLOLITIC - 1/2" RJ @ BASE - (544)
588	441	7	FT/GTMG↓ : pz G10 - 4' < POROUS GTG10 @ 548 - DIMLY F SNURLY > POROUS 548 TO 556 - TR PB 544 TO 551 - FAIRLY FRESH > G↓ FT/GTM 551 TO 587 - 1' > C @ 588 - (588)

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY GA DATE 11-2-57 MINE COURTOIS STOPE STAKE NO. VC-55 HOLE NO. 57VC143

COLLAR ELEV. 1029 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
		BEGAN CORING	
620	409	7-10	EF – GT0>G1 – GB>M SNURLY – 6' GT>0>G1 @ 594 – EF STRUCT 594 TO 605 – E>BANDED>M AND 605 TO 609 – GB SNURLY 609 TO 611 – F 611 TO 613 – GB>M SNURLY 613 TO BASE W/ 6" GM @ 615, 3" GM @ 617, & 619 – (620)
629	400	12	GTM – MED M & CREEK STRUCT – >IRREG H1 – >G+B1 – (629)
660	369	11	G&GTM>G1;>0 – <M< SCENE – HIGHLY EFFERVESENT >G1 – >0 @ 631, 635, AND 640 – >B1 – (660)
680	349	12	GTM>G1 – B1 – SNURLY – MED M – GIVES APPEARANCE OF STRUCTURE ASSOCIATED W/ REEF – >E1 – >G1 – >PITTED – FEW SCHIT SAND GRAINS – (680)
689	340	13	GCD>M – >E 680 TO 684 – MED DAILY INCLINING TOWARD BASE – >M+ IRREGULAR 684 TO 687 – 3" E TEXT @ 84 E – (689) (>BLUISH CLAY @ 684)
705	324	20	WS – CLEAN – MED FINE GRAIN – 3" >E STAINED @ TOP – (705)

205

FORM 0079 8-00

DATE BOTTOMED 11-21-57
DESCRIBED BY C.A.
DATE ESTIMATED 11-26-57
BY C.A.

ST. NO. VC 74 ST. ELEV.
AREA COURTOIS
OPTION NO. CZ-142
TRACT ADOLPH MOSES

CLASS BLANK HOLE NO. 57VC147
ELEVATION COLLAR 940.57
COORDINATES: N 122977.48 E 100688.30
200 FT. MAP NO. 37 50 FT. MAP NO. 200 M 200 T
S1/2 LOT 2 NW 1/4 SEC. 3 TW. QUAD

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 1.5 FT.
FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	115	825.6
SLEEVE BIT TO		
BEGAN CORING AT	135	805.6
SAVED CORES FROM	309	631.6
FORMATIONS:		
SOIL TO	60	880.6
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "	138	802.6
DAVIS (G.B.-S.B.) "	311	629.6
BONNE TERRE "	605	335.6
B. T. TRANS. "	606	334.6
CONGLOMERATE "		
LA MOTTE "	635	305.6
GRAN. OR POR. "	—	
PICTURES: FROM	309	631.6
TO	635	305.6
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 1640 S 760 E T35N-R1W

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

CORE REC. TO	CORES LOST
135	
155	—
295	S.B.
315	—
325	8.0
329	1.0
355	—
361	3.0
385	—
395	2.0
415	—
419	1.0
425	3.0
435	5.0
445	4.0
449	2.0
457	—
461	1.0
465	1.0
475	4.0
485	7.0
535	—
545	2.0
605	—
623	10.0
635	2.0

DMEA

FORM 9002-R-5-55

ROCK CLASSIFICATION

PAGE 1

DESCRIBED BY G DATE 11-26-57 MINE COURTOIS STOPE STAKE NO. VC 74 HOLE NO. 57VC147

COLLAR ELEV. 940 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
135	805	BEGIN CORING	
138	802	DERBY	- THIN BEDDED (138)
155	785	DAVIS	SHALE - (155)
295	645	SOLID BIT	(295)
311	629	DAVIS	SHALE (311)
		BONNE TERRE	
353	587	1	LT>0 - GT IRREG DENSE - LT>0 > MASSIVE 311 TO 336 - IRREG > SNURLY DENSE GT > VUGGY 336 TO 355 - (353)
367	573	1-5	DENSE GB>BI - ℰ - > VUGGY - IRREG DENSE - > BI > 0 - < ℰ 361 TO BASE - (367)
393	547	5	ℰ LT < POROUS - BADLY ℰ - POROUS > FRACT - FAIRLY MASSIVE - (393)
405	535	5	ℰ LT > DENSE - > MASSIVE > DENSER THAN ABOVE - BADLY ℰ - > SMALL VUGS - (405)
413	527		F-ℰ-POROUS - < POROUS < ℰ REEF STRUCT - (413)
450	490		ℰ DENSE: BANDED - < ℰ - > DENSE, MASSIVE 413 TO 416 - BANDED APP > I STAINS 416 TO 420 - > POROUS X > 0 420 TO 451 - 16' GROUND 415 TO 449 - (451)
491	449		ℰ POROUS REEF > I: DENSE - POROUS > VUGGY - > I STAINED < ℰ > FRACT - 3' < DENSE LG @ 485 - (491)
505	435		ℰ LT 0 - > MASSIVE - > 0 - > PITTING - > FRACT - (505) < ℰ
561	379	7	ℰ F POROUS - BADLY ℰ - POROUS REEF STRUCT - 2' 0 STRUCT > STYLO @ 509 - 1" RL @ 519, 523 & 526 - > CA & PATCHES - 1' W/ E & BLACK @ 544 - > LESS POROUS 547 TO BASE - (561)
594	346	12	ℰ M > CREPE - BI - < ℰ - 3' CREPE @ 564 - MED BI & M > CREPE 564 TO 575 - < POROUS MED CREPE 575 TO 580 - 1' GTM > G @ 585 - > Y SPLOTCHES & M & BI 585 TO 594 - (594)
605	335	12	GTM CREPE > BI < CREPE < M - > SMALL POROUS I - 1' @ BASE W/ > BAND GRAINS (605)

FORM 9002-R-5-55

ROCK CLASSIFICATION

PAGE 2

DESCRIBED BY R DATE 11-26-57 MINE Courtois STOPE STAKE NO. VC-74 HOLE NO. VC-145

COLLAR ELEV. 940 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
		BEGAN CORING	
606	334	19	ELT&I > SANDY D - < E - > ICH - VUGGY - > SANDY - (606)
635	305	20	WS - 2" I STAIN @ 607 - CLEAN - 10' GROUND 605 TO 628 & 2' GROUND TO 635 - (635)

DATE STARTED — 11-21-57 L.S.

FORM 1173-2-54

20

DATE BOTTOMED 11-26-57	ST. NO. VC-44 ST. ELEV.	CLASS TRACE HOLE NO. 57VC149
DESCRIBED BY J. A.	AREA COURTOIS	ELEVATION COLLAR 1034.22
DATE ESTIMATED 11-29-57	OPTION NO. CZ-100	COORDINATES: N 119030.94 E 90817.05
BY J. A.	TRACT JAS. SELLERS	200 FT. MAP NO. 36 SE¼-SW¼ 50 FT. MAP NO. SEC. 5

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 1.83 FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	145.0	889.2
SLEEVE BIT TO		
BEGAN CORING AT	145.0	889.2
SAVED CORES FROM	385.0	649.2
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "	229.0	805.2
DAVIS (C.B. ~~S.B.~~) "	399.0	635.2
BONNE TERRE "	669.0	365.2
B. T. TRANS. "	673.0	361.2
CONGLOMERATE "	—	
LA MOTTE "	693.0	341.2
GRAN. OR POR. "		
PICTURES: FROM	385.0	649.2
TO	693.0	341.2
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 350'N 1540'E T35N-R1W

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% Cu ASSAY	% Cu EST.	FT. %	REMARKS
	448.3	448.4	585.8	0.1		Tr.					
	458.8	458.9	575.3	0.1		Tr.					
	483.3	483.4	550.8	0.1		Tr.					
	508.8	508.9	525.3	0.1		Tr.					
	513.8	513.9	520.3	0.1		Tr.					
	521.3	521.5	512.7	0.2		Tr.					
	527.8	528.2	506.0	0.4		Tr.					
	528.2	528.7	505.5	0.5	2.1	1.5	1.1	0.36	0.5	0.18	
	534.5	534.7	499.5	0.2		Tr.					
	535.4	535.5	498.7	0.1		Tr.					
	537.7	537.8	496.4	0.1		Tr.					
	545.9	546.1	488.1	0.2	0.5	Tr.	0.1	0.18	0.5	0.03	
	547.2	547.9	486.3	0.7		Tr.					

CORE REC.

TO	CORES LOST
245	3.8
385	
575	—
595	3.0
675	
693	9.3

20

FORM 9002-R-5-55

ROCK CLASSIFICATION

L. S. ✓ Page 1

DESCRIBED BY J.A. DATE MINE Courtois STOPE STAKE NO. V.C. 44 HOLE NO. FOVC149

COLLAR ELEV. 1033 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
225	808	BEGAN	CORING
229	804	Derby	Dee Run – E (229)
235	798	Derby	Davis Transition – E (235)
399	634	Davis	Shale – E top to 245 – S.B. 245-385 (399)
		Bonne	Terre
432	601	1	GTO thin bed idem sed. faint oolites – > lense Gb – > stylo – > pitting – (432)
439	594	1	GTO smurly appear. faint-slightly porous oolites – smurly appearance > dense bt – > stylo (439)
463	570	1-5	GTO Bt slightly smurly > faint oolites – > Bt – smurly top to 445 – irregular bed w/< Bt 445 to Base – > pitting – > ca t – > Gt – few thin Rb + stylo – tr Pb @ 449, 459 (463)
508	525	5	GT>O Bt > Gb – slightly porous mod Bt – > porous oolitic patches – > pitting – > stylo – ca t – many scattered Gb – > K t patches – > scattered Gt – 1 (508)
521	512		GTb-thin bed – reef struct – GTO Gt – K M – GTb w/> Gt + M top to 514 – reef bed > porous 514 – 518 – GTO Gt 6" @ 516, 3" @ 518 – 1 TO @ 518 – GTO Gt w/> K 519 – 521 – thin Rb + stylo – > ca t > pitting (521)
529	504	5	GTO Gt > M + Bt faint to med oolites – > small Bt – scattered Gt – > ca t – trs Pb @ Base – > scattered M – > pitting – > Kb – (529)
534	499	5	F Bmed > vugs fair reef – vugs > pitting – > ca t – 6" @ Base porous – > stylo – (534)
539	494	5	GTGt > O GTG t w/> faint oolites top to 539 – 6" TO Gt @ 537 – > fracturing + grinding – > pitting – trs Pb @ top, 538 (539)
581	452	7	F Bmed > O > porous good reef rock – slightly porous top to 542, 546, 550 – 553 – Gt + oolites scattered in matrix – > Pb – > ca t > [illegible] (581)
		546	

(cont)

FORM 9002-R-5-55

ROCK CLASSIFICATION

L.S.

Page #2 (cont)

DESCRIBED BY JH DATE 11-29-57 MINE Courtois STOPE STAKE NO. VC-44 HOLE NO. 57VC149

COLLAR ELEV. 1033 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
		BEGAN CORING	
610	423	7-10	GTBanded - GTMG$ - porous - > F GTwl > faint oolites + banded to pto 587 - 1' very porous 590 - Kb 591 - 593 - GTMG$ wl > pitting 593 - 600 - T bedded 600 - 602 - MG$ w/ thin Rbs 602 - 606 - F 606 to Base - > fracturing + Grinding - thin Rbs (610)
616	417	10-12	GTMTx>O slightly crepe + Tx sections alternating - > pitting - thin Rbs - > Ca $ - > faint oolites (616)
644	389	12	GTGEMwl > TxO sect crepey - thin Rbs + EHb - > pitting - 1' TxO 633, 6" @ 637, 10" @ 639, 3" @ Base - > Ca $ - > Kb (644)
652	381	11	GTM > G + E$ LS crepey - many thin Rbs - fairly good L.S. - scattered G + B$a - < K - 8" Ca vertical seam @ 650 - > Ca $ + small seams - (652)
669	364	12	GTM < K > X ; N slightly crepey - < Kb + patches - > pitting - thin Rbs - > Crystaline sections - fairly good B$N section (669) Base - > Ca $a -
673	360	19	GTSD > M scattered sand grains - < K - 6" E @ base - thin Rbs - > EHb - (673)
693	340	20	W.S. fine to Med grain sand - i y stained @ 676, 678, 679 - > grinding - 8" E @ top - (693)

DATE STARTED 11-22-57

15

FORM 1173-2-84.

DATE BOTTOMED 11-27-57	ST. NO. VC-73 ST. ELEV.	CLASS BLANK HOLE NO. 57VC151
DESCRIBED BY J. A.	AREA COURTOIS	ELEVATION COLLAR 1036.74
DATE ESTIMATED 12-3-57	OPTION NO. CZ-153	COORDINATES: N 121003.90 E 99296.34
BY J. A.	TRACT OMA COMPTON	200 FT. MAP NO. 37 200 M 2007 50 FT. MAP NO. E½ LOT 1 - NE¼ SEC. 4 QUAD

GENERAL HOLE DATA	DEPTH	ELEV.
HT. SLEEVE ABOVE GR 1 FT.		
FORM BOTT. SL.		
DRILLED WITH:		
CHURN DRILL TO	160.0	876.7
SLEEVE BIT TO		
BEGAN CORING AT	160.0	876.7
SAVED CORES FROM	395.0	641.7
FORMATIONS:		
SOIL TO	54.0	982.7
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "	225.0	811.7
DAVIS (C.B.-~~S.B.~~) "	404.0	632.7
BONNE TERRE "	682.0	354.7
B. T. TRANS. "	693.0	343.7
CONGLOMERATE "	—	
LA MOTTE "	705.0	331.7
GRAN. OR POR. "		
PICTURES: FROM	395.0	641.7
TO	705.0	331.7
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 3540'S 860'W T35N-R1WP

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

CORE REC. TO	CORES LOST
215	
235	2.0
395	5.8
405	6.6
421	2.9
435	2.3
455	9.0
461	4.8
471	3.8
475	2.9
485	7.9
495	2.6
507	8.5
515	6.2
521	3.4
535	2.1
539	1.7
551	4.2
560	4.6
565	0.5
575	3.0
615	—
619	1.1
635	4.7
650	3.8
670	—
685	3.4
705	—

R.E.W. 200

DMEA

FORM 9002-R-5-55

ROCK CLASSIFICATION

Page #1

DESCRIBED BY JA DATE 12-3-57 MINE Courtois STOPE STAKE NO. VC-73 HOLE NO. 57VC 151

COLLAR ELEV. 1037 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
215	822	BEGIN CORING	
225	812	Derby	Doe Run – thin bedded & banded (225)
231	806	Derby	Davis Transition (233)
404	633	Davis	Shale – SB 235-395 – 6' core missing (404)
		Bonne Terre	
443	594	1	GTO: snurly: thin bedded 2' @ top thin bed w/ faint oolites – snurly appearance 406-421 w/ > fracturing – thin bed w/ faint to med oolites 421-428 – snurly w/ > pitting & small vugs & Gelenite b 428 to Base – many thin Rbs – > grinding (443)
471	566	5-1	GTO slightly porous – > dense Gb porous TO w/ dense Gb scattered thruout – 1' w/ small vugs 466 – < grinding (471)
543	494		TOGb: F w/ > E w/ inter bedded TOGb & F – E 489-535 – 6" F @ 476 2' 489-491, 513-515, 3' 518-521, 1' @ 521, 4' @ Base – < grinding thru out – > thin Rb – < pitting & porosity fingering – (543)
569	468		Dense GTO – porosity F w/ > E E top to 546, 1' @ Base – L GTO dense 543-546 – loose GTO 559-561, 3' 562-565, 3' 566 to Base – < grinding – porosity F 551-554, 1' @ 565 – < fracturing – few stylo (569)
591	446		GTO: E E top to 576 – faint to med oolites – 1' faint F @ 579 – fairly massive w/ > thin bed – few stylo – > pitting – (591)
615	422		Dense GTO: Roof fairly dense GTO w/ > Gb – faint oolites – 6" F @ top – 2' F 594-596, 1' @ 598 – < fracturing 600 to Base – > pitting > Ca – few stylo – (615)
640	397		TOGb > F 6" good Gb @ top, 1' @ 619, 2' 621-623 – F 2' @ 616-618 1' @ 620, 2' 624-626, 1' @ 635, 1' @ Base – 6" TO @ 623 – 2' GTO > Gb 636-638 – > pitting – fract & grinding – > Ca – few thin Rbs (640)

(cont)

FORM 9002-R-5-55

ROCK CLASSIFICATION

Rep 2 cont

DESCRIBED BY JA DATE 12-3-57 MINE Courtois STOPE STAKE NO. VC 73 HOLE NO. 57VC151

COLLAR ELEV. 1037 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
		BEGAN CORING	
682	355	12	GTMG&; banded fairly crepey — many thin Pbs — > EHb scattered — < pitting — scattered Ca$ — > short b sections — < K — > Ca $s — N appearance @ 68 to Base — last 6' has fairly sandy b's — 3'nd > B$ @ 672 (682)
693	344	19	GTSOM very crepey — many thin Pbs — < K — > Ca $ — > pitting — very thin Rainbow shale b @ 691 — 1' @ Base very sandy & also has Fish stain — (693)
705	332	20	W.S. med to coarse grain sand — 6" w/E stain @ 695 — > grinding — (705)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
Box 431
Joplin, Missouri
December 26, 1957

OFFICIAL FILE COPY
DMEA
RECEIVED DEC 30 1957

DATE	INITIALS	CODE
12/30	gb	220
		~~[illegible]~~
12/30	wlb.	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 October 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
4582 file

Dual copy - Wash.

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

Budget Bureau No. 42-R1036.5

RECEIVED DEC 30 D.M.E.A.

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

Month of October 1957 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	16,356.96	76,643.28	93,000.24	3/18/58	DEPK.	
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	39.00	166.00	205.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	16,395.96	76,809.28	93,205.24	✓	✓	✓

RECEIVED MINERALS TECHNOLOGY DIVISION NOV 18 1957 BUREAU OF MINES JOPLIN, MO.

I certify that the above bill is correct and just and that payment therefor has not been received.
Date NOV 15 1957 *Payee St. Joseph Lead Company
Per L. W. Castee 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:

$ 8,197.98

Signature
(Authorized Certifying Officer)

Date 12-17-57 Vou. No. 4-20
(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. Idn E 1068 in accordance with the terms of the contract.

Signature John W. Christer Title Mining Engineer Date Nov 19, 1957

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Clinton C. Kinsey Title Executive Officer Date Dec. 9, 1957

MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

RECEIVED DEC 30 1957 D.M.E.A.

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of October 1957 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.	12,405.36	5588	68,376.00	30800	$2.22		
Churn	Ft.	3,951.60	1780	24,624.24	11092	2.22	133420	$2.22
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Analytical Determinations	Ea.	39.00	39	205.00	205	1.00	2370	1.00
TOTAL DISTRIBUTED COSTS		16,395.96		93,205.24				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		16,395.96		93,205.24				

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 NOV 15 1957 Operator St. Joseph Lead Company

Per L. W. Castel Title Asst 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)

(For Government use only)

RECEIVED
MINERALS TECHNOLOGY
DIVISION

NOV 18 1957

BUREAU OF MINES
JOPLIN, MO.

CCK 12/9/57

INSTRUCTIONS

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

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

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

GPO 872894

MONTHLY REPORT FOR MONTH OF OCTOBER, 1957

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

NOV 1 1957
BUREAU OF MINES
PUBLIC ROOM

Four churn drills were operating in the area at the end of the month. The following holes were in progress:

Stage I	Stake	No.	C-66	at	a	depth	of	20	feet
"	"	"	C-44	"	"	"	"	85	"
"	"	"	C-72	"	"	"	"	245	"
"	"	"	C-73	"	"	"	"	145	"

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

Stage I	Stake	No.	C-52	- depth	237	feet	- starting	date	9/9/57
"	"	"	C-55A-	"	189	"	"	"	10/2/57
"	"	"	C-54	"	33	"	"	"	10/22/57
"	"	"	C-70	"	380	"	"	"	9/13/57
"	"	"	C-71	"	390	"	"	"	10/1/57
"	"	"	C-49	"	136	"	"	"	9/23/57
"	"	"	C-69	"	305	"	"	"	10/7/57
"	"	"	C-74	"	110	"	"	"	10/21/57

Two diamond drills were operating in the area at the end of the month. The holes in progress were Stage I Stake No. C-71 at a depth of 400 feet and Stage I Stake No. C-68 at a depth of 275 feet.

The following diamond drill holes were completed during the month:

Stake No.	Prospect Hole No.	Bottom Depth	Feet of Diamond Drilling	Date Completed	Class
C-64	57VC98	733	523	10/4/57	Sp. Trace
C-52	57VC104	769	532	10/11/57	Indicative
C-67	57VC111	741	551	10/17/57	Sp. Trace
C-41	57VC94	785	480	10/1/57	Sp. Trace
C-42	57VC99	765	490	10/7/57	Trace
C-50	57VC103	641	455	10/10/57	Trace
C-49	57VC109	591	455	10/16/57	Trace
C-70	57VC119	897	517	10/28/57	Blank
C-57	57VC114	655	500	10/22/57	Pay
C-56	57VC122	642	530	10/25/57	Pay
C-58	57VC127	555	555	10/31/57	Trace

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

39 analytical determinations were made during the month as follows:

57VC127	3 Pb		
57VC122	11 Pb	1 Zn	2 Cu
57VC114	9 Pb		2 Cu
57VC104	9 Pb		
57VC103	2 Pb		

We plan to continue operating in this area with 2 diamond drills and 4 churn drills until all Stage I holes are completed before drilling additional Stage II holes.

WASHINGTON COUNTY

Courtois Area - In DMRA Project #4582

Week Ended October 7, 1957

2 diamond drills operating and 4 churn drills setting casing completed 1 trace and 1 blank hole.

57VC93, a blank hole, is located about 1 mile east-northeast of the village of Courtois and 1500 feet north-northeast of 56W111, an indicative hole. It bottomed at 721 feet depth in Lamotte sand. Bonneterre formation was normal for the area but showed no sign of mineralization.

57VC94, a trace hole, is located 1560 feet south-southwest of 56W111. It bottomed at 785 feet depth in Lamotte sandstone. Reef development was poor in the 7 horizon and considerable crepe rock was present in the lower horizon. Speck traces of lead were located at 528 feet depth near the top of the Bonneterre, at 707 feet depth near the base of the 7 horizon and at 767 feet depth, just above the transition sand.

Week Ended October 14, 1957

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

57VC104, an indicative hole, is located 2800 feet north-northwest of 56W111, an indicative hole, and about 5,000 feet northeast of the village of Courtois. It bottomed at 769 feet depth in Lamotte sandstone. Lead mineralization was scattered throughout the upper 5 zone - best of which was estimated as 8.0 feet of 1.5% Pb at 520 feet depth. This is the same horizon as lead in the indicative hole.

57VC98, a speck trace hole, is located 1560 feet east-northeast of the above hole. It bottomed at 733 feet depth in Lamotte sandstone. Speck traces of lead were present in the upper 5 zone at 510 feet and 526 feet depth. Indications are that mineralization is fading out to the eastward in this area.

57VC103, a trace hole, is located 520 feet southeast of 56W111, an indicative hole. It bottomed at 641 feet depth in dark rhyolite porphyry which extends up about 40 feet into the Bonneterre horizon. Lead mineralization, estimated as 1.2 feet of 1.5% Pb, was present in the upper part of the 5 zone at 478 feet depth and another run estimated as 0.6 foot of 2.0% Pb was located at 610 feet depth in reef rock.

57VC99, a speck trace hole, is located 1,020 feet southeast of the above hole. It bottomed at 765 feet depth in Lamotte sandstone. Weak traces of lead were present at 689 feet and 709 feet depths in the lower oolite and reef zone. Results of the drilling to date in this part of the area indicate that the Precambrian high present in 56W111 and 57VC103 is small in dimension and nothing but indicative and trace grade lead has been found in its vicinity.

WASHINGTON COUNTY (Continued)

Courtois Area - In DMEA Project #4582 (Continued)

Week Ended October 21, 1957

2 diamond drills operating and 4 churn drills setting casing completed 2 trace holes.

57VC109, a trace hole, is located about 1 mile east of the village of Courtois and 520 feet east-northeast of 56W111, an indicative hole. It bottomed at 591 feet depth in 8 feet of dark rhyolite porphyry, which extends about 15 feet up into the Bonneterre horizon. Speck traces of lead were present in the 1 zone at 357 feet depth, and in the 7 reef zone at 506 and 524 feet depths. This completes the 520-foot spaced drilling around 56W111 hole. No indicative or pay ore was found at this spacing but the better grade mineralization was found on the north and west sides indicating the need for closer spaced drilling on this flank of the small Precambrian high.

57VC111, a speck trace hole, is located in the far northeast part of the area and is the first and farthest west hole in an east-west section of holes being drilled here. It bottomed at 741 feet depth in Lamotte sandstone. Speck traces of lead were present in the transition sand horizon at 719 feet depth. This hole is located north of and on the down-drop side of a west-southwest trending fault.

Week Ended October 28, 1957

2 diamond drills operating and 4 churn drills setting casing completed 1 pay hole.

57VC114, a pay hole, is located 1500 feet south of the village of Courtois and 520 feet east of 57VC19, a pay hole. It bottomed at 655 feet depth in Lamotte sandstone. Lead mineralization was present throughout the middle of the main 7 reef with a pay run at 522 feet depth estimated as 4.5 feet of 7.3% Pb.

Period Ended October 31, 1957 Inclusive

2 diamond drills operating and 4 churn drills setting casing completed 1 pay and 1 blank hole.

57VC122, stake #56, a pay hole, is located 1500 feet south of the village of Courtois and 520 feet south-southwest of 57VC114, a pay hole reported last week. It bottomed at 642 feet depth in Lamotte sand. Lead and copper mineralization, estimated as 7.2 feet of 1.4% Pb, is located at 484 feet depth on top of the top 7 reef. At 493 feet depth, in the upper part of the 7 reef, a run was estimated as 4.5 feet of 6.1% Pb with some zinc associated. This lead is at somewhat higher horizon than that in holes to the north and west and is nearer in horizon to ore occurring about 1500 feet southwest, with no holes drilled between.

57VC119, stake #70, a blank hole, is located about 2 miles northeast of the village of Courtois. It bottomed at 897 feet depth in Lamotte sand. Bonneterre section shows several good reef sections in the 7 zone but with very little oolite and much mottled crepe rock below.

FORM 1173-2-54

Started 9-26-57

20

X

DATE BOTTOMED 10-1-57	ST. NO. VC-41	ST. ELEV.	CLASS SPECK TRACE	HOLE NO. 57VC94	
DESCRIBED BY C.A.	AREA Courtois		ELEVATION COLLAR 1141.36		
DATE ESTIMATED 10-3-57	OPTION NO. CZ-81		COORDINATES: N 115701.78	E 94084.34	
BY C.A.	TRACT HERBERT GILLAM.		200 FT. MAP NO. 46	50 FT. MAP NO. NE-SE-Sec 8 T35N-R1W	

MINERALIZATION RECORD 2340 S 365 W.

GENERAL HOLE DATA	DEPTH	ELEV.
HT. SLEEVE ABOVE GR 0.67 FT.		
FORM BOTT. SL.		
DRILLED WITH:		
CHURN DRILL TO	305	836
SLEEVE BIT TO		
BEGAN CORING AT	305	836
SAVED CORES FROM	515	626
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "	340	801
DAVIS (C.B.-S.B.) "	518	623
BONNE TERRE "	768	373
B. T. TRANS. "	773	368
CONGLOMERATE "		
LA MOTTE "	785	356
GRAN. OR POR. "		
PICTURES: FROM	515	626
TO	785	356
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	CORE REC. TO	CORES LOST
												305	
	528.0	528.2	613.2	0.2		TR.					Frost Pb.	345	—
	707.0	707.2	434.2	0.2		TR	"				Speck	515	S.B
	767.0	767.2	374.2	0.2		TR	"				"	625	—
												627	1.0
												785	—

205

Rew

P.O.K

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE 19-3-57 MINE COURTOIS STOPE STAKE NO. VC-41 HOLE NO. 57VC94

COLLAR ELEV. 1142 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
305	837	BEGAN CORING	
340	802	DERBY DOLOMITE	(340)
518	624	DAVIS SHALE	(518)
		BANNER TERRE	
555	587	1	LT>0 LT IRREG, VUGGY - MASSIVE >0 - 518 TO 540 - IRREG, >VUGGY >DENSE, 540 TO 555 - >[illegible] 1 - (555) (TR PB @ 528)
604	538	5	GT>0 SVUGGY - D1, P3 - <VUGGY THRUOUT - >STYLO - DICKITE 1 - SPOROUS B1 - SCATT BLUISH GREY M - 0 INCREASING FOR TO BASE - (604)
610	532		F%TG1>M - POROUS - FROM F %/GT >1 P2 MATRIX - (610)
623	519		GTO>G1 P3 - >G1 <POROUS - >DENSE [illegible] - (623)
632	510		F%TG1 P2 - [illegible] - >MATRIX - DIMLY F - (632)
653	489		LG>DENSE 0 - [illegible] - >POROUS PATCHES SPOTS - (653)
667	475		TRANS REEF GT - SNURLY - REEFY HEAD - >POROUS - >G1 - SPOTS 1 - (667)
679	463		DENSE GT>0 - >FRACT - >0 - MASSIVE - >SMALL VUGS - (679)
683	459		POROUS REEF GT - SNURLY - REEFY HEAD >POROUS - >G1 - >FRACT - (683)
689	453		DENSE GT>0 - MASSIVE - >0 - FRACT - >SMALL VUGS - (689)
747	395		POROUS REEF GT & GTG1 0 >POROUS - POROUS REEF TYPE 689 TO 695 - GT>0 >G1 695 TO 707 - >G1 705 TO 710 - >REEF1 >POROUS 710 TO 715 - >DISCONTINUED >G1 715 TO 719 - >POROUS GTG1 719 TO 723 - F 723 TO 726 - <G1 726 TO 730 - FROM F 730 TO 740 - >POROUS GTG1 740 TO 745 - 2' DENSE F>M @ BASE - (747) (TR PB @ 707)
768	374	12?	GTM>CREPE - FRESH, TIGHT, >CREPE >M - >SCATT B1 - 6' <G1 @ 757 - >2ND DOLOMITE 1 - 1' >NAIL @ 761 AND 1' @ 765 - (TR PB @ 767) - (768)

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY CA DATE 10-3-57 MINE CURTOIS STOPE STAKE NO. VC-41 HOLE NO. 57VC94

COLLAR ELEV. 1142 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
		BEGAN CORING	
773	369	19	GTSD: LGDS - MED M & SAND CONTENT 768 TO 771 - 2' LGDS > BLUISH 771 TO 773
785	357	20	WS - CLEAN, MED FINE GRAIN - > SULFIDE PATCHES - 1" Pp @ 779 - 1' E STAINED @ 780 - (785)

Started 10-1-57

15

X

FORM 1173-2-54

DATE BOTTOMED 10-4-57	ST. NO. VC-64 ST. ELEV.	CLASS SPECK TRACE HOLE NO. 57VC98
DESCRIBED BY CA-JA.	AREA COURTOIS	ELEVATION COLLAR 1071.51
DATE ESTIMATED 10-9-57	OPTION NO. CZ-79	COORDINATES: N 120206.29 E 95320.77
BY CA-JA	TRACT W. J. TURNBAUGH.	200 FT. MAP NO. 36 50 FT. MAP NO. NW¼-SW¼-Sec 1 T35N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 3.00 FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	215	857
SLEEVE BIT TO		
BEGAN CORING AT	255	817
SAVED CORES FROM	425	647
FORMATIONS:		
SOIL TO	65	1007
"		
EMINENCE "		
POTOSI "	190?	882
POTOSI-DERBY "		
DERBY DOE RUN "	259	813
DAVIS (C.B.-S.B.) "	435	637
BONNE TERRE "	701	371
B. T. TRANS. "	713	359
CONGLOMERATE "		
LA MOTTE "	733	339
GRAN. OR POR. "		
PICTURES: FROM	425	647
TO	733	339
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
	510.4	510.5	561.0	0.1		TR.	✓				Speck.
	526.2	526.3	545.2	0.1		TR.	✓				"

CORE REC.

TO	CORES LOST
255	
275	
415	5.0
435	—
447	1.0
451	1.0
457	4.0
605	—
615	5.0
713	—
733	12.0

205

Rel

Rl. ok.

FORM 9002-A-5-56

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE 10-9-57 MINE COURTOIS STOPE ..... STAKE NO. VC-64 HOLE NO. 57VC98

COLLAR ELEV. 1070 PITCH ..... BEARING ..... COORD.: N ..... E .....

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
255	815		BEGAN CORING
359	711		DERBY DERBY (359)
435	635		DAVIS SWALE - 10' DERBY - DAVIS @ 269 - S.B. 275 TO 415 (435)
			BONNE TERRE
488	582		GTO DENSE GT - MED O > PITTED > THIN L 435 TO 465 - GT < DENSE L -> O 465 TO 485 - > VUGGY 465 TO 488 - - STYLO - (488)
493	577		GTO OOLITIC - BASICALLY S TYPE GT PRO W/ SEAM DENSE L - (493)
557	513	5	GTO PM - POROUS AND VUGGY -> O > STYLO - > POROUS B# - 6" > DENSE TO 510 - 4' > GTM APP @ 544 - 4' < POROUS & G# @ 550 - 2' DENSE GT @ 552 - 0' POROUS < G# @ BASE - (557) TR B @ 526 & 510 -)
[illegible]	505		E/GTM - > POROUS > FRACT - GOOD TERF - 2' GT > DENSE @ 564 - (565)
574	496		DENSE GT > O - MASSIVE - DENSE - LGT - -> O - (574)
616	454	7	F/GTGM - GTG# - GOOD REEF STRUCT - > POROUS - 2' DENSE LGT THIN BEDDED @ 579 - 4' GTG# > AMLD @ 597 - 2' > DENSE GT STYLO @ 606 - 5' GROUND 608 TO 615 - (616)
658	412	10-12	GTO - GTGEM - # > F - 3' GTO PRO @ 619 - 2' F # > POROUS @ 621 - GTM CREPE 621 TO 630 - GTO > THIN BEDDED 630 TO 645 - GTGEM CREPE 645 TO 648 - F 649 TO 651 - GEM CREPE 651 TO 657 - 6" F @ BASE - (658)
670	400	10-12	GTO > G# & GTGEM - GTO G# 658 TO 660 - GTM 660 TO 663 - GTO > G# > B# 663 TO 665 - GTM TO 666, GTO TO 667, LT > J THIN BEDDED 667 TO 670 - (670)
701	369	12	GTGEM - B# - MED M# CREPE - B# THROUGH - > C# - M DECREASING THIRD BASE - > N APP 697 TO BASE - (701)
713	357	15	GSD: SMALL CREPE - MED SAND CONTENT - G# > M > STYLO 701 TO 705 - < M# CREPE 705 TO THE EDGE < SANDY @ BASE - (713)
733	337	20	WS - CLEAN - MED FINE GRAIN - 12' GROUND - (723)

FORM 1173-2-54 started 10-2-57 20 X

DATE BOTTOMED 10-7-57	ST. NO. VC-42 ST. ELEV.	CLASS TRACE	HOLE NO. 57VC99
DESCRIBED BY C.A.	AREA Courtois	ELEVATION COLLAR 1120.31	
DATE ESTIMATED 10-10-57	OPTION NO. CZ-74	COORDINATES: N 116212.62	E 95608.07
BY C.A.	TRACT PAUL THOMPSON	200 FT. MAP NO. 46 PL	50 FT. MAP NO.

SW¼-NW¼-Sec 9 T35N-R1W.

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 0.83 FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	275	845
SLEEVE BIT TO		
BEGAN CORING AT	275	845
SAVED CORES FROM	483	637
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "	314	806
DAVIS (C.B.-S.B.) "	483	637
BONNE TERRE "	743	377
B. T. TRANS. "		
CONGLOMERATE "		
LA MOTTE "	765	355
GRAN. OR POR. "		
PICTURES: FROM	483	637
TO	765	355
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 2580 S 1150 E

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
												275	
	515.7	515.9	604.4	0.2		TR						315	—
	533.9	534.0	586.3	0.1		TR						475	S.B.
	687.0	689.0	431.3	2.0		TR.	✓					603	—
	690.5	690.7	429.6	0.2		TR.						623	4.0
	693.4	693.6	426.7	0.2		TR.						635	2.0
	698.7	699.0	421.3	0.3		TR.						645	
	701.3	701.5	418.8	0.2		TR.						665	2.0
	706.3	706.9	413.4	0.6		TR.						765	—
	708.4	709.4	410.9	1.0		TR.	✓						
	724.0	724.2	396.1	0.2		0.0			TR		Speck tr.		

205

RCW

RC. 01

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE 10-10-57 MINE COURTOIS STOPE STAKE NO. VC-42 HOLE NO. 57 VC 99

COLLAR ELEV. 1120 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
275	843	BEGAN CORING	
314	806	DERBY DOE RUN	(314)
483	637	DAVIS SHALE - (WOULD BIT 315 TO 475)	(483)
		BONNE TERRE	
524	596	1	LENSE 150 W LENSE GT1 & >Ta - FAIRLY MASSIVE T >0 > Ca VIENLETS 483 TO 497 - IRREG DENSE GT1 STYLO - T >0 - > VUGGY 515 TO BASE - TR Pb @ 516 - (524)
534	586	1-5	GT >0 & DENSE GT1 - BASICALLY S TYPE LITHO'Y W/ DENSE GT1 - > STYLO - (534)
551	569	5	<ELT - 4' NOT E GB W/ POROUS B & PATCHES & >0 @ 538 - BADLY E 538 TO BASE W/ 2' GR >0 < POROUS B & < VUGGY > Ca @ 547 - (551)
560	551	5	<ELT >0 - MED O - POROUS - 1' W/ SPOTTED APPEARANCE @ 560 - 4' MOTTED AND BANDED APP @ 567 - 2' PL MED COARSE X @ BASE - (560)
648	472	7?	<ELT F+O PL: DENSE - BADLY E THRUOUT - BASICALLY REEF STRUCT W/ 3' > POROUS O @ BASE DENSE >0 585 TO 587 - REEFY 587 TO 589 - 1' DENSE O 590 - REEFY W/ O MATRIX 590 TO 596 - DENSE 596 TO 598 - POROUS O 598 TO 601 - > DENSE O > FRACT 601 TO 607 POROUS REEF 607 TO 610 - O APP > PITTED 610 TO 634 → DENSE 634 TO 643 - POROUS REEF 643 TO 645 - DENSE W/ > BANDED APP 645 TO 648 - (648)
719	401	7	F T/GTM CREPE: E - POROUS REEF STRUCT < E 648 TO 667 - BROWNISH F & B1 STRUCT - POROUS PATCHES & > M 667 TO 684 - SNURLY, CREPE M & XG1 REEF STRUCT 684 TO 704 - GOOD REEF W/ GTG1 - M > O MATRIX 704 TO 715 - F W/ > CREPE M MATRIX 715 TO BASE - (719) (TR S Pb 695 TO 710)
736	384	1	GTM CREPE > B1 - MED M & CREPE - - SCATT B1 - 1' E @ 727 - > G1 > Ca 1 - (736) (TR CU @ 734)
743	377	12	E > M N+B1 - < FAINT B1 - > N APP - > M - > Ca 1 AND VIENTS - > E THRUOUT - (743)
765	355	20	W: ELGEDS - CLEAN W MED FINE GRAIN SAND W/ 4' E LGEDS > M @ 751 & 6" GDS @ 755 - Pp @ 757 AND 759 - (765)

FORM 1173-2-54

Started 10-8-57

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X

DATE BOTTOMED 10-9-57	ST. NO. VC-50	ST. ELEV.	CLASS TRACE
DESCRIBED BY C.A.	AREA COURTOIS		HOLE NO. 57VC103
DATE ESTIMATED 10-14-57	OPTION NO. C2-7d		ELEVATION COLLAR 1094.90
BY C.A.	TRACT PAUL THOMPSON		COORDINATES: N 116807.53 E 94893.99
			200 FT. MAP NO. 46 PL 50 FT. MAP NO.

SWk-NWk-Sec 9 T35N-R1W.

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 2.08 FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	186	909
SLEEVE BIT TO		
BEGAN CORING AT	375	720
SAVED CORES FROM	389	706
FORMATIONS:		
SOIL TO	50	1045
"		
EMINENCE "		
POTOSI "	165?	930
POTOSI-DERBY "		
DERBY DOE RUN "	S.B.	
DAVIS (C.B.-S.B.) "	393	702
BONNE TERRE "	622	473
B. T. TRANS. "	636	459
CONGLOMERATE "		
LA MOTTE "		
[redacted] POR. "	641	454
PICTURES: FROM	389	706
TO	641	454
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 1810 S 440 E

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS	CORE REC. TO	CORES LOST
												375	
	477.3	478.5	616.4	1.2	0.2	1.5	✓			0.2	diss.	495	—
	529.0	529.1	565.8	0.1		TR.					Speck.	505	5.0
	530.2	530.3	564.6	0.1		TR					"	525	—
	609.0	609.6	485.3	0.6	1.0	2.0	✓			0.6	diss	524	2.0
												619	—
												624	2.0
												641	—

205

PEW

PL, CK

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY GA DATE 10-14-57 MINE COURTOIS STOPE STAKE NO. VC-50 HOLE NO. 57VC103

COLLAR ELEV. 1094 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
37.5	719	BEGAN CORING	
393	701	DAVIS SHALE - BONNETERRE	(393)
436	658	1	GT>O & DENSE SWIRLY/GT - FAIRLY NUMEROUS >STYLO 393 TO 423 >Ca & VIENLETS - IRREG & DENSE SWIRLY Ca & PATCHES & VIENLETS 423 TO BASE - >CREPE & M APP 430 TO BASE - (436)
445	649	5-1	GB>O B & DENSE GT & - GOOD B & >O > STYLO W/ SCATT DENSE & TYPE & - >Ca & VIENLETS - (445)
481	613	5	GB>O pr B & >DENSE & - <POROUS B & PATCHES - <SMALL VUGS - SCATT DENSE IRREG BLUE GREY BANDING - > FRACT - O BECOMING >STRONGER TOWARD BASE - 1' W/ <VUGGY REEF APP @ 470 - 2' GOOD GB>O B & pr W/ TRACES PB 479 - 2' >G & @ BASE - (481)
508	586	—	F T/GTG & O>M - >POROUS - DIM TO FAIR F - 1' GTG & O>M>POROUS @ 485 - >Ca & VIENLETS - >FRACT - 2' <POROUS @ 505 - >E @ BASE - (508)
524	570	—	E LT₀ : GT₀>G & - <E LT₀ >POROUS >FRACT 508 TO 518 - GT₀>G & 518 TO 524 - (524)
560	534	—	GT>O>G & : F T/GTG & >M - BASICALLY GT>O - FRACT >Ca & VIENLETS W/ 2' FC=526, 532, 6" F @ 535, & 537 - TR PB @ 537 - 6" F & <G & @ 550 - DIMLY F 552 TO 554 - >FINE G & 554 TO BASE - (560)
614	480	—	>F T/GTG & >M : Pp & Pq - DIMLY F GT>G & >M > CREPE STRUCT THRUOUT - 6" W/ Pp & Pq @ 577, 580, 3' W/ Pp & Pq @ 585 - SCATT Pp & Pq 590 TO 594 - Ca >ISH @ 601 - >FRACT & Ca VIENLETS 600 TO 610 - TR PB @ 610 - >VERY FINE PG GRIT 610 TO BASE - (614)
622	472	16-18	>N & P & / Pp & Pq - GREY COLO W/ >N & P & STRUCT W/ CONSIDERABLE Pp & Pq - (622)
636	458	18	GSD DENSE W/ Pp & Pq - DARK GREY >SD W/ SCATT Pp & Pq 622 TO 625 - CLOSELY CEMENTED Pp & Pq W/ LGSD MATRIX 625 TO 633 - VERY CLOSE Pp & Pq 633 TO 636 - (636)
641	453	21	DARK >PURPLE PORPHYRY - SOLID PORPHYRY : >PURPLE : >RED - (641)

Started 10-7-57

15

X

FORM 1173-2-54

DATE BOTTOMED 10-11-57	ST. NO. VC-52	ST. ELEV.	CLASS INDICATIVE HOLE NO. 57VC104
DESCRIBED BY J. A.	AREA Courtois		ELEVATION COLLAR 1085.58
DATE ESTIMATED 10-16-57	OPTION NO. C2-75		COORDINATES: N 119838.88 E 93812.81
BY J. A	TRACT J. F. TURNBAUGH.		200 FT. MAP NO. 36 SE¼-SE¼-Sec 5 50 FT. MAP NO.

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 2.00 FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	238	848
SLEEVE BIT TO		
BEGAN CORING AT	255	831
SAVED CORES FROM	455	631
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	474	612
BONNE TERRE "	736	350
B. T. TRANS. "	758	333
CONGLOMERATE "		
LA MOTTE "	769	317
GRAN. OR POR. "		
PICTURES: FROM	459	627
TO	769	317
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 1160N 680W. 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
	525.3	525.8	559.0	0.5	0.4	1.0				0.5		266	S.B.
	525.8	526.3	559.3	0.5		TR						455	
	530.5	530.6	555.0	0.1		TR						475	
	531.5	532.5	553.1	1.0		TR.						478	2.0
	536.6	537.2	548.4	0.6		TR						485	—
	537.6	538.3	547.3	0.7	1.8	3.0				1.3	: Banded	489	1.6
	538.8	539.1	546.5	0.3		TR						545	—
	541.5	542.3	543.3	0.8		TR.						549	3.0
	543.2	545.1	540.5	1.9	1.9	1.0				3.6	: Band > grinding	749	
	550.9	551.0	534.6	0.1		TR						769	14.0
	552.3	552.6	533.0	0.3	5.7	2.5				1.7	: Band		
	553.2	554.0	531.6	0.8	1.8	2.0				1.4			
	554.4	554.6	531.0	0.2		TR	7.9-1.2						
	556.4	557.8	527.8	1.4	2.1	1.0				2.9	> 7es.		
	558.8	560.2	525.4	1.4	2.9	3.0				4.1			
	560.2	560.5	525.1	0.3		TR							
	571.5	571.7	513.9	0.2		TR							
	572.2	572.4	513.2	0.2		TR							
	576.4	577.2	508.4	0.8		TR.							
	582.7	582.8	502.8	0.1		TR							
	585.8	586.3	499.3	0.5	1.8	1.5				0.9			
	589.4	591.4	494.5	1.7	1.1	2.0				1.9			
	592.0	593.7	491.9	1.7		TR.							
	594.7	595.6	490.0	0.9		TR							
	630.5	630.8	454.8	0.3		TR.							

205

KEW

Rl. OK

FORM 9002-R-5-55

ROCK CLASSIFICATION

Page # 1

DESCRIBED BY JA DATE 10-15-57 MINE Courtois STOPE STAKE NO. VC 52 HOLE NO. 57VC104

COLLAR ELEV. 1085 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
255	830	BEGIN CORING	
266	819	Derby	Doe Run (266)
455	630	Core	Discarded in field. Derby Davis contact depth unknown (455)
474	611	Davis	Shale (474)
		Bonne	Terre
511	574	1	Dense Gb – LTO; porous – GT irregular b – lense Gb & small vugs & pinding 474-483 – LTO massive w/ & style 483-506 – GT irregular b w/ TOb vuggy appearance & B$ & style & pitting 506-511 (511)
531	554	1-5	GT & TO & Dense b – & scattered B$ – GT & TO & lense b & vuggy appearance – & B$ @ top & 521 to base – & pitting – tr. Pb @ 525 & style (531)
600	485	5	GBO B$ p² & dense b – & porous B$ & irregular lense Gb – & vugs & chert & grinding 531-556 – very porous w/ irregular lense Gb & TOb 556-578 – lense b MG$ w/few style 578-580 – porous & vuggy reef appearing rock 580-593 – blue W Bleaching w/ & G$ & dense G$a; vuggy 593-600 – tr to fair Pb scattered throughout 531-600 (600)
641	444	7	F Tr to O & p3 – fairly fresh reef w/ & G$ & O matrix – & small vugs & porous sections – 2' porous @ 628-627, 635-637 – & O & 2 B$ G$O rest 623-628, 631-634 – tr Pb @ 631 (641)
675	410	7-10	TO & G$ – F – TO & G$ few Dense b Top to 643, 1' @ 647-651-657 – 1' G$ @ 662 – F 643-647, 1' @ 650, 657-660, 663 to Base faint to med reef rock (675)
697	388	7-10-12	GTO – GTGEM – F – GTO w/ & Ob & style top to 681, 1' @ 689, 2" @ 692, 6" @ Base – GTM w/ & EHb 681-685, 687 to 696 – 8" F @ 685 – many thin Pbs & style (697)
731	354	11	GTGEM w/ & O LS. – GTO – highly effer – GTGEM w/ small G$s 697-703 1' OLS @ 699 – 2' GTO & porous 705-707 – dead white w/ & EHb 707 729 w/ & med B$s – GTM w/ G$ 729 to base – all has an appearance (731)

(cont)

L5

Fig # 2

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY JA DATE 10-15-57 MINE Courtois STOPE STAKE NO. VC-52 HOLE NO. 57VC 104

COLLAR ELEV. 1085 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
		BEGIN CORING	
736	349	12	GTMG Bul > EH — M. grain, w/ small Gts — > Ks > pitting — > weathered fine grain — (736)
749	336	19	GTMG Bul sandy b — sandy b 12 Type 19 — ex pstlus — > weathered small Gts > pitting — (749)
753	332	19	TIEDS very sandy w/ L E stains > crushing — (753)
769	316	20	W.S. fine to med grain — < grinding — (769)

Started 10-11-57

FORM 1173-2-84

20

X

DATE BOTTOMED 10-17-57	ST. NO. VC-49 ST. ELEV.	CLASS TRACE	HOLE NO. 57VC109
DESCRIBED BY C.A	AREA COURTOIS	ELEVATION COLLAR 1028.27	
DATE ESTIMATED 10-18-57	OPTION NO. C2-74	COORDINATES: N 117324.30	E 95037.94
BY C.A.	TRACT PAUL THOMPSON	200 FT. MAP NO. 46 PL	50 FT. MAP NO. SW¼ NW¼ Sec 9

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 0.83 FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	136	892
SLEEVE BIT TO		
BEGAN CORING AT	155	873
SAVED CORES FROM	314	714
FORMATIONS:		
SOIL TO	27	1001
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "	157	871
DAVIS (C.B.-S.B.) " 16-18	323	705
BONNE TERRE "	573	455
B. T. TRANS. "		
CONGLOMERATE "	583	445
LA MOTTE "		
~~G[illegible]OR~~ POR. "	591	437
PICTURES: FROM	314	714
TO	591	437
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 1300 S 590 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
												155	
	339.0	339.1	689.2	0.1		TR						175	—
	357.0	357.1	671.2	0.1		TR						305	S.B.
	405.0	405.1	623.2	0.1		TR						405	—
	430.0	430.1	598.2	0.1		TR						425	1.0
	431.7	431.8	596.5	0.1		TR						539	—
	437.0	437.1	591.2	0.1		TR						545	3.0
	445.0	445.1	583.2	0.1		TR					Scatt traces in B.T, top thru part of T zone	591	—
	446.4	446.5	581.8	0.1		TR							
	485.0	485.1	543.2	0.1		TR							
	505.5	505.7	522.6	0.2		TR							
	509.7	510.0	518.3	0.1		TR							
	524.0	524.1	504.2	0.1		TR							

205

PLW

PL. 1R

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY GR DATE 10-17-57 MINE COURTOIS STOPE STAKE NO. VC-49 HOLE NO. 57 VC 109

COLLAR ELEV. 1029 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
155	874	BEGAN CORING	
157	872	DERBY	DEER RUN (157)
175	854	DAVIS	SHALE - (DERBY - DAVIS TRANSITION 157 TO 167 -) (175)
305	724	SOLID	BIT — (305)
323	706	DAVIS	SHALE - (323)
		BONNE	TERRE
369	660	1	LT>O & DENSE GT - LT>O MASSIVE > CA VIENLETS 323 TO 331 - DENSE GT > IRREG 331 343 - TR PB @ 339 - TO > POROUS PATCHES 339 TO 357 > SHYLO - TR 357 - DENSE GT IRREG > CA & PATCHES > SCATT B & 357 TO 369 - (369)
380	649	1-5	GT>O > B & GT DENSE - > O > B & SCATT DENSE GT - 2" < POROUS @ BASE - (380)
415	614	5	GDOOR B & - POROUS & VUGGY - B & - CA & VIENLETS > FeS @ 394 & 396 - 2' @ BASE P 1>6 & - (415)
440	587	5	F/GT>O & M - FAIR F REEF STRUCT W/ > POROUS CA & MATRIX 415 TO 434 - DIMLY F 434 TO 437 - 2' GT > G & @ 439 - 1' F @ 440 — (440)
465	564	5	DENSE GT>O > - MASSIVE 440 TO 449 - > BANDED & CA VIENLED 449 TO BASE - (465)
485	544		GT>O > REEFY - 3" > POROUS & REEFY @ 468 - > MASSIVE GT > G & - PITTED 468 BASE W/ 1' REEFY @ 475 - & 3' REEFY APP @ 483 - TR PB @ 485 - (485)
541	488	7	F/GT>O & - FAIRLY FRESH & TIGHT F STRUCT - < CA @ 499, & 508 - 1" PP W/ TR PB @ 507 - SPECK TR PB @ 510 - 1" > POROUS @ 519 - 1' W/ < PORPHYRY GRIT @ 523 - SPECK TR PB @ 524 - DIMLY F 527 TO 537 - FAIR F > N 537 TO BASE - (541)
573	456	16-18	PORPHYRY COBS W/ N/STM - N W/ > COBBLES & PEBBLES 541 TO 548 - BOULDERS W/ > N PORPHYRY COBS - N W/ > COBS & PEBS 550 TO 554 - BOULDER W/ > N 554 TO 556 - N W/ > COBS & PEBS 556 TO 562 — < COBS & PEBS W/ > N 562 TO 568 - N W/ SCATT PEBS & COBS 568 TO 573 - (573)
583	446	18	COBBLE & BOULDER W/ GSD - GSD & PEBS & COBS 573 TO 580 - COBS & BOULDERS W/ > GSD 580 TO 583 - SCATTERED CHAS > WEATHERED APPEARANCE - (583)
591	438	21	PACKED COBBLE PORPHYRY > FRACT. 583 TO 588 — > SANDY DOLO FILLING FRACT & BAND @ 588 - FINE GRAIN - (591) TR PB @ 590.5 —

FORM 1173-2-54

STARTED 10-14-57

15

X

DATE BOTTOMED 10-17-57	ST. NO. V.C-67	ST. ELEV.	CLASS SPECK TRACE	HOLE NO. 57VC111	
DESCRIBED BY J.A.	AREA COURTOIS		ELEVATION COLLAR 967.96		
DATE ESTIMATED 10-21-57	OPTION NO. 043391		COORDINATES: N 126170.55	E 95647.73	
BY J.A.	TRACT U.S. FOREST LANDS		200 FT. MAP NO. 26	50 FT. MAP NO.	

NW¼-SW¼-Sec 33 T36N-R1W.

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 3.00 FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	193	775
SLEEVE BIT TO		
BEGAN CORING AT		
SAVED CORES FROM	421	547
FORMATIONS:		
SOIL TO	15	959
"		
EMINENCE "		
POTOSI "	190?	778
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	429	539
BONNE TERRE "	713	255
B. T. TRANS. "	727	241
CONGLOMERATE "		
LA MOTTE "	741	227
GRAN. OR POR. "		
PICTURES: FROM	421	547
TO	741	227
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
	718.4	719.3	248.7	0.9		TR		✓			Fract. Pb.

CORE REC. TO	CORES LOST
455	—
465	2.0
485	—
505	2.0
509	0.6
565	—
575	4.0
585	4.0
741	—

205

Field

Pg #1

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY JA DATE 10-21-57 MINE Courtois STOPE STAKE NO. VC-67 HOLE NO. 57VC111

COLLAR ELEV. 966 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
421	545	BEGAN CORING	
429	537	Davis Shale	-3" lss @ 427 (429)
		Bonne Terre	
478	488	1	TO: Dense — irregular bedded — TO irregular bedded & dense, w/ faint calcite top to 467 — TO irregular bedded dolomite, pitting & small range 467 to base — thin KBs & stylo (478)
491	475	1-5	TO irregular bedded — i GBBB — TO irregular bedding top to 483, 1' @ 487 — GBOB 483-487, 1' @ Base — → pitting — thin KBs & stylo (491)
542	424	5	GBOB p² → dense Gb — faint calcite — small to med BBs — porous & dense Gb 503-506, 517-522 — & dickite spots scattered 4" GM w/ Gb @ 525, 8" @ 527 — 6" Gb @ 535 — → grinding (542)
549	417		GTb irregular bed — TOB — F to → E — GTb irregular bed top to 544 — 1' TOB @ 545, 2' 547 to Base — F to → E 2' 545-547 — → fracturing — → porous (549)
563	403	5	GTO → Gb → dense Kb i → porous — GTO w/ → med Gb & → Kb top to 553, 1' @ 555, 6" @ 556, 4' 559 to Base — TO porous — 2' 553-555, 557-559 — med O (563)
621	345	7	F Gm → O i TO w/ dense Gb i Black & Bleached — TO → M w/ → dense Gb top 567 — Black & Bleached 575-576 — F Gm → O 582 to Base → porous — 2' TO Gb 577-579 — thin KBs — 2 BB b — fresh fingers (621)
652	314	10-7:12	F to E — TO → X — GTMO E — 8" TO w/ dense b @ top — TO w/ → K w/ 1' E 621-625, 8" @ 628-631 — F E 3' 625-628, 6" @ 634, 635, 1' @ Base — GTMO → Gb 631-652 — → fracturing (652)
678	288	12	GTG EM → Gb → O i E — → crepey — thin KBs → Kb — → E w/ b — scattered small Gb → pitting — 1' E @ 665, 6" @ 672 — few short calcite veins & calcite (678)
713	253	12	GTM w/ → Bb → E veins E i Napp — E throughout — thin E w/ bands — → scattered Bb — 8" bed dis J @ 687, 697, 2' @ 706 — Bb Napp 691-703 — → sand scattered to end base — → pitting (713)

(cont)

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY JA DATE 10-21-57 MINE Courtois STOPE STAKE NO. VC-67 HOLE NO. 57VC 111

COLLAR ELEV. 966 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
		BEGIN CORING	
720	246	19	GTSDMW/ZN — [illegible] sand — fine, weathered — [illegible] appearance — ≥ Thin Hb — tr Pb @ 719 — 1' EHR top — [illegible] (720)
727	239	19	ESGM < BH > N — E throughout — I & E stained — very sandy — [illegible] BH : N appearance — (727)
741	225	20	W.S. [illegible] to coarse grain — slight Fe stain — (741)

FORM 1173-2-64

Started 10-17-57

20

DATE BOTTOMED 10-24-57	ST. NO. VC-57	ST. ELEV.	CLASS PAY
DESCRIBED BY C.A.	AREA COURTOIS		HOLE NO. 57VC114
DATE ESTIMATED 10-23-57	OPTION NO. C2-164		ELEVATION COLLAR 1029.22
BY C.A.	TRACT EVERETT WOODS		COORDINATES: N 116211.52 E 89705.64
			200 FT. MAP NO. 46 50 FT. MAP NO.

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 2.00 FT.

FORM BOTT. SL.

MINERALIZATION RECORD 24805 500E SW¼-NW¼-Sec8 T33N R1W

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	155	874
SLEEVE BIT TO		
BEGAN CORING AT	375	654
SAVED CORES FROM	375	654
FORMATIONS:		
SOIL TO	27	1002
"		
EMINENCE "		
POTOSI "	112	917
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	382	647
BONNE TERRE "	640	389
B. T. TRANS. "	644	385
CONGLOMERATE "		
LA MOTTE "	655	374
GRAN. OR POR. "		
PICTURES: FROM	375	654
TO	655	374
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	CORE REC. TO	CORES LOST
												375	
	419.0	419.1	610.1	0.1		TR					SPECK W/CA &	655	—
	510.5	511.3	517.9	0.8	4.5	5.0	3.6						
	513.7	514.1	515.1	0.4	0.3	1.0	0.1						
	516.6	517.1	512.1	0.5		TR.			TR				
	517.1	518.1	511.1	1.0	2.6	3.0	2.6				< DISS.		
	518.6	521.6	507.6	3.0	13.8	10.0	41.4				"		
	521.6	521.9	507.3	0.3		TR							
	530.0	530.6	498.6	0.6	1.0	1.0	0.6				DISS.		
	532.3	532.5	496.7	0.2		TR							
	533.6	534.3	494.9	0.7	2.4	2.0	1.7				DISS		
	534.3	534.5	494.7	0.2	0.5	TR	0.1	0.47	0.5	0.09			
	538.0	538.4	490.8	0.4	4.8	1.0	1.9	1.5	0.5	0.60	DISS		
	549.4	550.0	479.2	0.6		TR							
	550.0	550.2	479.0	0.2	0.4	1.0	0.1				FRACT.		

205

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY GA DATE 10-23-57 MINE COURTOIS STOPE STAKE NO. VC-57 HOLE NO. 57VC114

COLLAR ELEV. 1028 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
375	653	BEGAN CORING	
382	646	DAVIS SHALE BANNER TERR.	(382)
429	599	1	LT > O MASSIVE + DENSE IRREG LT - MASSIVE > 1 388 - TO 419 - 1 ENDIF LT INSE > > Ca ↓ 419 TO 429 - TR Pb w/ Ca ↓ @ 419 - (419)
444	584	1-5	DENSE ↓ GT IRREG: > B ↓ > O - < IRREG 1 ENDIF ↓ > FAINT P ↓ 429 TO 4[illegible] - > SCATT B ↓ 440 w/ DENSE ↓ 435 TO 444 - > Ca ↓ - > STYLO - (444)
469	559	5	GB > O pr B ↓ - CONSIDERABLE MROUS B ↓ - > O - 2ND DOLO ↓ - > SMALL VUGS - > DENSE IRREG BLUE GREY BANDING 438 TO 441 - > STYLO - > PURPLE PATCHES 446 TO 469 - (469)
494	534	5	BANDED GB > pr O - THIN BEDDED > CREPE OOLITIC STRUCT - FAINTLY B ↓ - Ca ↓ - 2" G ↓ & G ↓ @ 488 - 2' GT > M CREPE @ 489 - 2' CLEAN O > B ↓ @ 491 - (494) > F - GTM ~ GTO > G ↓ - 1' F @ 495 - GTM CREPE > FINE ↓ 495 TO 499 - GB O > BANDED 499 TO 501 - GTO > G ↓ 501 TO 503 -
557	471	7	F % GTO G ↓ > M - GOOD REEF STRUCTURE > POROUS 6" GOOD TISS Pb @ 509 - 4 517 TO 521 - > G ↓ THRUOUT - 3/8" SCATT Pb 530 TO 535 - 4" > X < FINE G ↓ @ 548 & 2' > X < FINE G ↓ @ 552 - (557) TR Pb @ 557 - (> Cu & Pb @ 539)
582	446	7-10	F % GTG ↓ > O > M & GT > G ↓ - GTO - G ↓ 557 TO 566 - F SWURLY 561 TO 567 > POROUS - GTO > G ↓ > MROUS > BANDED 567 TO 570 - > CREPE G ↓ REEFY STRUCT 570 TO 572 - 1" Pb @ 572 - GT SCATT STYLO + THIN Pb 572 TO BUTTE w/ 3" REEF STRUCT CASE — (582)
619	411	10-12	GTO > G ↓ & GTM CREPE - GTO > THIN ↓ > K ↓ 582 TO 595 - > CREPE GTM [illegible] 595 TO 605 - GTO > G ↓ > THIN ↓ > K ↓ 605 TO 612 - GTM CREPE 612 TO 615 - GTO STYLO 615 TO (617)
630	398	11	GTM LS - EFFEVESENCE; 1 & 2 617 TO 622 - 3 622 TO 624 - 1 & 2 624 TO BUTTE — CREPE, - g Ca ↓ 619 TO 624 - > FINE G ↓ - (630)

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY GA DATE 10-23-57 MINE CONNETOLS STOPE STAKE NO. HOLE NO. 57VC 114

COLLAR ELEV. 1028 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
		BEGAN CORING	
640	388	12	GTM > CREPE G+B ↓ - MED CREPE + M - G ↓ > FAINT B ↓ > Ca ↓ - > SCHIT SAND GRAINS - (640)
644	384	19	GSD - > IRREG THIN Rps - FINE SAND - > Ca ↓ > SMALL VUG - 1' ELGE @ BASE - (644)
655	373	20	WS - FINE GRAIN - CLEAN - SCHIT - Rps ↓ - (656)

FORM 1173-2-54

DATE STARTED - 10-18-57

15

DATE BOTTOMED 10-28-57	ST. NO. VC-70 ST. ELEV.	CLASS BLANK HOLE NO. 57-VC-119
DESCRIBED BY C.A.	AREA COURTOIS	ELEVATION COLLAR 1102.46
DATE ESTIMATED 10- -57	OPTION NO. 043391	COORDINATES: N 126357.25 E 100[illegible]
BY C.A.	TRACT U.S. FOREST	200 FT. MAP NO. 27 NW 1/4 - SW 1/4 - SEC 34 50 FT. MAP NO. [illegible]

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 15" FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	385	718
SLEEVE BIT TO	385	718
BEGAN CORING AT	419	684
SAVED CORES FROM	589	514
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "	419	684
DAVIS (C.B.-S.B.) "	594	509
BONNE TERRE "	877	226
B. T. TRANS. "	882	221
CONGLOMERATE "		
LA MOTTE "	897	206
GRAN. OR POR. "	—	
PICTURES: FROM	589	514
TO	897	206
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	CORES LOST
415	
475	
575	S.B.
595	—
601	2.0
605	2.0
615	6.0
623	5.0
631	4.0
669	—
679	5.0
685	4.0
713	—
729	2.0
733	1.0
740	3.0
745	3.0
751	—
765	2.0
775	5.0
790	3.0
793	—
790	1.0
801	1.0
811	—
811	6.0
817	2.0

205

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE 10-23-57 MINE Courtois STOPE STAKE NO VC-70 HOLE NO. 57VC119

COLLAR ELEV. 1102 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
419	683	BEGAN CORING	
419	683	DERRY	DERRY RUN – 2" DERRY THIN ≈ TOP – (419)
594	508	DAVIS	SHALE – CORE DISCARDED IN FIELD 437 TO 575 – (594)
		BONNE TERRE	
655	447	1	GT>O MASSIVE & GT IRREG DENSE – MASSIVE > O > FRACT 594 TO 631 – IRREG BEDDING – DENSE > VUGGY – 631 TO BASE – > POROUS IRREG PATCHES 645 TO BASE – (655)
665	437	5-1	GB>O>DENSE – > P 1 – POROUS P 1 & PATCHES – SCATT DENSE – (665)
603	409	5	GP>OB & – POROUS B & PATCHES – P2 – > STYLO > DENSE BLUE G (669) TO 579 – 1' > G & @ 680 – > GRINDING – (603)
705	397	5	GT>O BANDED >M – BANDED O – PITED 693 TO 702 > M & CREPE 702 TO 704 – 1' ALTERED AND VUGGY @ BASE – (705)
718	384		F/GTG&M – > POROUS, SNURLY, DIMLY F STRUCT – (718)
781	321		GTO: DENSE: E: BANDED – 2' E LG > DENSE @ 720 – > E GTO > POROUS, FAIRLY MASSIVE 720 TO 740 – E LG DENSE THIN 740 TO 745 – GTO @ 746 – E LG > DENSE 746 TO 750 – GTO > BANDED > STYLO 750 TO 781 – > GRINDING 733 TO BASE – (781)
799	303		F/GTG&M & GTO – 1' SNURLY F @ 782 – GT>O > STYLO 782 TO 785 – 1' F @ 786 & GTO > BANDED 786 TO 799 – > G & 797 TO 799 – (799)
830	272		F/GTM & GTM CREPE – HEAVILY M REEFY CREPE APP 799 TO 807 – CREPE GTM ¼" G & SEC 807 TO 809 – SNURLY F & CREPE M & C & 809 TO 813 – GTM CREPE > B & 2ND DELG & 813 TO 818 – PROM F 818 TO 822 – REEFY APP 822 TO 830 > POROUS – (830)
877	225		GTM: SNURLY CREPE > G & B & – GTM CREPE > FINE G & 830 TO 849 – GT > G & ¼" < IRREG M SNURLY APPEARANCE & > FAINT B & 849 TO BASE – (877)
882	220	19	GTM IRREG SD – SLIGHT TO MED SANDY – 1' E LTY & @ BASE – (882)
895	205	20	WS – CLEAN – MED FINE GRAIN – (895)

Started -10-23-57

20

FORM 1117-1-E-C

DATE BOTTOMED 10-28-57
DESCRIBED BY C.A.
DATE ESTIMATED 10-31-57
BY C.A.

ST. NO. VC-56 ST. ELEV.
AREA COURTOIS
OPTION NO. C2-164
TRACT EVERETT WOODS

CLASS PAY HOLE NO. 57VC122
ELEVATION COLLAR 980.15
COORDINATES: N 115781.13 E 89435.21
200 FT. MAP NO. 46 50 FT. MAP NO.
NW¼-SW¼-Sec. 8 T35N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 2.25 FT.
FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	112	868
SLEEVE BIT TO		
BEGAN CORING AT	305	675
SAVED CORES FROM	345	635
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	359	621
BONNE TERRE "	615	365
B. T. TRANS. "	619	361
CONGLOMERATE "		
LA MOTTE "	642	338
GRAN. OR POR. "		
PICTURES: FROM	345	635
TO	642	338
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 2380 N 235 E

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
												345	
	367.0	367.1	613.1	0.1		TR					HORIZ. SEAM.	516	—
	464.9	465.0	515.2	0.1		TR					SPECK	530	1.0
	473.6	474.6	505.6	1.0	0.9	1.0	0.9				FINE DISS.	542	1.0
	476.2	476.3	503.9	0.1		TR					FRACT.	622	—
	477.3	478.9	501.3	1.6	2.0	4.0	3.2				DISS.	642	6.0
	478.9	480.6	499.6	1.7		TR							
	480.6	482.2	498.0	1.6	0.8	1.0	1.3	1.7	3.0	2.7	"		
	482.2	484.5	495.7	2.3	0.3	1.0	0.7		TR.		"		
	485.9	489.9	490.3	4.0		TR			TR		"		
	492.7	494.5	485.7	1.8	10.0	12.0	18.0				HEAVY DISS. & Zn.		
	494.5	496.1	484.1	1.6	0.2	1.0	0.3				DISS.		
	496.1	497.2	483.0	1.1	6.1	3.0	6.7				"		
	507.3	508.0	472.2	0.7	4.7	4.0	3.3				"		
	508.5	508.7	471.5	0.2		TR.							
	511.7	512.0	468.2	0.3		TR							
	512.5	513.5	466.7	1.0	1.1	1.5	1.1				"		
	515.3	516.0	464.2	0.7		TR							
	516.0	516.2	464.0	0.2	1.3	1.0	0.3	1.2	1.0	0.2	DISS.		
	517.5	517.8	462.4	0.3		TR.							
	525.7	526.0	454.2	0.3	2.0	2.0	0.6				VERT. SEAM.		
	552.0	552.1	428.1	0.1		TR							
			Zn.										
	492.7	494.5	485.7	1.8	2.3	1.0	5.0						

205

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE 10-31-57 MINE Courtois STOPE STAKE NO. VC-56 HOLE NO. 57VC122

COLLAR ELEV. 979 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
345	634	BEGIN CORING	
359	620	1 AVIL. BONNE TIESSE	WALE (359)
412	567	1	LT.O + GT INREG. DENSE ↓ - > ↓ MIN. INC LT > O - TO 377 - TR PB @ 367 - LT > O < STYLO [illegible] TO [illegible] - GT > O STYLO [illegible] TO 399 - GT IRREG > DENSE ↓ SLIGHTLY > FRACTED [illegible] TO BASE - (412)
423	556	5-1	GP > O - B 1 % > DENSE GT ↓ - > LIMITED, FAINTLY B ↓ > FRACT > O - OCCASIONAL 1 FM E GT ↓ - > [illegible] DOLO ↓ - (423)
459	520	5	GB: O B ↓ > GT ↓ - > FRACT, POROUS 1" ↓ PATCHES, > 2ND DOLO ↓, 2" GMG ↓ 451 AND 453 - [illegible] % INREG DENSE BLUE GREY BANDING @ BASE - (459)
471	508	5	FO - BANDED & STYLO - MED O - THIN GT ↓ > STYLO - > DICKITE & 2ND DOLO ↓ - > B ↓ BANDS @ 460, 465 & 470 - TR PB @ 467 - > G ↓ @ BASE - (471)
482	497		GM CREPE - GT > M - CONGL: GTG ↓ O - 2' GM CREPE > H ↓ @ 473 - GT > M > G ↓ B ↓ TO 475 - 1' CONGLOMERATE W/ TR PB @ 476 - GEM CREPE TO 478 - 6" G ↓ O, 6" GEM -, 1' G ↓ O 478 TO 480 W/ DISS PB & [illegible] % CUFES - (482)
531	448	7	F % GTG ↓ M: G ↓ M - BASICALLY DIMLY F W/ G ↓ M MATRIX > POROUS 482 TO 507 W/ 1' S FINE G ↓ > M @ 487, & 506 - GOOD DISS PB > ZNS 493 TO 498 > VVG GY - FROM F 506 TO BASE W/ MED G ↓ M MATRIX - TR PB @ [illegible] - FRACT PB & FES @ 526 - (> CUFES & PB @ 516) - > FRACT - (531)
556	423	7-10	> F % GTG ↓ M - GTG ↓ - 2' GT > G ↓ @ 533 - 2' F @ 535 - GT > POROUS 535 TO 542 - G ↓ O 542 TO 544 - SLIGHTLY - F > CREPE > FRACT 544 TO 550 - G ↓ O > FRACT 550 TO 558 TR 1 BIT PB @ 552 - TROWNISH > IRREG M APP 558 TO BASE - (556)
594	385	10-1-16	GT - GTGEM: H ↓ - FN - GTM - 556 TO 562 - GT > K ↓ 562 TO 567 - GTGEM > H ↓ 567 TO 573 - FN THE KEEP W/ TR G ↓ MATRIX > POROUS 573 TO 580 - GT > M > CREPE 580 TO 594 - (594)
617	364	12	GM CREPE > G ↓ - HEAVILY M CREPE - > C ↓ - > G ↓ - > FRACT - INCREASE DECREASING > 611 TO BASE - (617)
619	360	19	GO: ELT - MED SANDY - FAIRLY CLEAN & DENSE - > FRACT - 2' ELT @ BASE - (619)
642	337	20	WS - CLEAN, MED FINE GRAIN WS - SCATT. FES & PATCHES - (642)

FORM 1173-2-56

Started 10-29-57

20

DATE BOTTOMED		ST. NO. VC-58 ST. ELEV.	CLASS TRACE HOLE NO. 57VC127
DESCRIBED BY RMR		AREA COURTOIS	ELEVATION COLLAR 944.01
DATE ESTIMATED 11-4-57		OPTION NO. CZ-164	COORDINATES: N 116626.04 E 89967.29
BY R.M.R.		TRACT EVERETT WOODS	200 FT. MAP NO. 46 50 FT. MAP NO. SW¼-NW¼-Sec.8

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 3.42 FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO		
SLEEVE BIT TO	70	874
BEGAN CORING AT	275	669
SAVED CORES FROM	275	669
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-[redacted].) "	294	650
BONNE TERRE "	541	403
B. T. TRANS. "	545	399
CONGLOMERATE "		
LA MOTTE "	555	389
GRAN. OR POR. "		
PICTURES: FROM	275	669
TO	555	389
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 2140 S 765 E T.35N-R1W

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS	CORE REC. TO	CORES LOST
												555	—
	318.9	319.6	624.4	0.7		TR					Seam.		
	409.0	409.2	534.8	0.2		TR							
	411.4	411.6	532.4	0.2		TR							
	417.6	418.1	525.9	0.5	4.0	3.0				2.0			
	422.9	425.7	518.3	2.8		TR							
	425.7	426.0	518.0	0.3	5.5	5.0				1.6			
	428.5	433.0	511.0	4.5		TR							
	435.7	440.5	503.5	4.8		TR.							
	447.9	448.2	495.8	0.3		TR							
	448.2	449.1	494.9	0.9	4.8	3.0				4.3			
	450.0	452.8	491.2	2.8		TR							
	543.0	543.1	400.9	0.1		TR							

205

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY R.M.R. DATE 11-4-57 MINE STOPE STAKE NO VC-58 HOLE NO 57VC 129

COLLAR ELEV. 942 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
275	667	BEGIN CORING	
294	648	DAVIS SHALE.	
333	609	1	LTO - > BB DENSE w/ < VERT. ANGL. FRACT., SCATT. VUGS, > CALC. VEINS, > PYRITES. BECOMING MORE BB AND SNURLY 321 TO BASE. (333)
352	590	1-5	GBO - > MM THIN RB, < CR + 2nd Dolo. ±, : > CREPEY + SNURLY, > SCATT G + BB. (352)
373	569	5	BB - > MM Good BB section w/ > MM and very little O, > THIN RB, > SCATT GB. (373)
387	555	5	BB - IRRGL GMO - > CREPEY THIN RB, : > CREPEY, > GB IN GMM w/ TO. (387)
409	533	5	BO MM - > TO - GMM - : SNURLY + CREPEY BOM 367 - 395 w/ > TO and > BB, GMM w/ SNURLY + CREPEY. R 395 - 409, > GB IN GMM w/ 2 SCATT GBBds. (409)
461	481	7	F GFM < GB 409-11, > GB throughout, THIN RB, CR + 2nd Dolo. TR. Ph 417-53. (461)
485	457	7-10	F - TO - > MM + GB. TO 461-66 w/ > M, F 466-75 w/ < TO > GB, TO 475-77, F 477-79, TO 479-84, F 484-85. > SNURLY + CREPEY 471-83. (485)
509	433	10-12	TO - GT - GFM. > B - : < CREPEY TO w/ > M + > B 485-93, GT + GFM 493-97, GTM CREPEY BNDS 497-509. > GB BB. (509)
541	401	12-16 (11)	GT - GFM - N - LS BN 509-11, GTM w/ > N 511-16, LS 516-35, GTM 535-41 w/ > N AT BASE. > G + BB THRU OUT. (541)
545	397	19	G.T.S.D. > B and > Pg, > MM. (545)
555	387	20	W. SAND MED GRAIN, > B, Pg tr. (555)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
Box 431
Joplin, Missouri
November 4, 1957

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DATE	INITIALS	COPIES
11/7	gb	220
11/8	~~[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:

Submitted herewith are three copies of the Interim Report received from Dewey Amos today on the joint field inspection he and Chester made at this project October 31, 1957.

Sincerely yours,

Clinton C. Knox

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

encl. 3

cc: DMEA Op.Com.
Amos,USGS,Carbondale w/2cy rpt
Chester,USBM,Joplin w/1 " "
4582 file

Rpts

RECEIVED
MINERALS TECHNOLOGY
DIVISION

NOV 4 1957

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

Recently completed holes have extended the ore previously discovered ~~to the~~ south of Courtois. A total of seven holes have encountered ore grade mineralization in this area and five have revealed indicative mineralization. All of these holes were widely-spaced indicating the presence of a very large body or several small ones.

A project inspection of the subject contract was conducted on October 31, 1957. Results obtained to date and 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 September 26, 1957 is summarized as follows:

Drilling Completed

Footage in holes completed since last inspection. . .	7,940
Footage in holes completed to date.	39,000
Number of holes completed since last inspection . . .	11
Total number of holes completed to date	60
Number of holes showing commercial ore.	6
Number of holes showing indicative non-commercial mineralization.	6
Number of holes showing trace mineralization.	40
Number of holes showing speck trace mineralization. .	5
Number of barren holes.	3

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

Hole No.	Location	Depth	Remarks
VC-51	SW¼, SW¼, SW¼, sec. 4	721 ft.	Blank hole
VC-64	SE¼, NW¼, SW¼, sec. 4	733 ft.	Speck trace hole
VC-41	NE¼, NE¼, SE¼, sec. 8	785 ft.	Speck trace hole
VC-42	SE¼, SW¼, NW¼, sec. 9	765 ft.	Trace hole
VC-52	NE¼, SE¼, SE¼, sec. 5	769 ft.	Indicative hole
VC-50	NW¼, SW¼, NW¼, sec. 9	641 ft.	Trace hole
VC-49	SE¼, NW¼, NW¼, sec. 9	591 ft.	Trace hole
VC-67	SE¼, NW¼, SW¼, sec. 33	741 ft.	Speck trace hole
VC-57	SW¼, SW¼, NWP, sec. 8	655 ft.	Ore hole
VC-70	NW¼, NW¼, SW¼, sec. 34	897 ft.	Blank hole
VC-56	NW¼, NW¼, SW¼, sec. 8	642 ft.	Indicative hole

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

Hole No.	Location	Present Depth	Estimated Total Depth
VC-58	SE¼, SW¼, NW¼, sec. 8	135 ft.	700 ft.
VC-69	NE¼, NW¼, SE¼, sec. 33	517 ft.	750 ft.

The churn drill portions of ten holes have 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-67	SE¼, NW¼, SW¼, sec. 33	190 ft.
VC-70	NW¼, NW¼, SW¼, sec. 34	380 ft.
VC-49	SW¼, NW¼, NW¼, sec. 9	136 ft.
VC-52	NW¼, SE¼, SE¼, sec. 5	237 ft.
VC-50	NW¼, SW¼, NW¼, sec. 9	186 ft.
VC-71	NE¼, NW¼, SW¼, sec. 34	390 ft.
VC-69	NE¼, NW¼, SE¼, sec. 33	305 ft.
VC-55	NW¼, NW¼, SE¼, sec. 5	189 ft.
VC-74	SE¼, NW¼, NW¼, sec. 3	110 ft.
VC-64	SE¼, NW¼, SW¼, sec. 4	210 ft.

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

Hole No.	Location	Present Depth
VC-44	SW¼, SE¼, SW¼, sec. 5	55 ft.
VC-68	NE¼, NE¼, SW¼, sec. 33	210 ft.
VC-72	NE¼, NE¼, NE¼, sec. 4	200 ft.
VC-73	NE¼, NE¼, SE¼, sec. 4	95 ft.

Assay results of Hole VC-52 are given below:

Hole No.	Depth	%Pb
VC-52	537.6 - 538.3 ft.	1.8
	543.2 - 545.1 ft.	1.9
	552.3 - 552.6 ft.	5.7
	553.2 - 554.0 ft.	1.8

Hole No.	Depth	%Pb
	556.4 - 557.8 ft.	2.1
	558.8 - 560.2 ft.	2.9
	585.8 - 586.3 ft.	1.8
	589.4 - 591.1 ft.	1.1

Assasy have not been completed of Holes VC-56 and VC-57.

Hole VC-55 was lost during churn drilling and is currently being redrilled at the Operator's expense.

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

Dewey H. Amos
Geologist
U. S. Geological Survey

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

Budget Bureau No. 42-R1036.5

3rd copy Washington

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

RECEIVED NOV 15

Month of September, 1957 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	13528.68	63114.60	76643.28	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	32.00	134.00	166.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	13560.68	63248.60	76809.28	13,560.68	✓	✓

RECEIVED MINERALS TECHNOLOGY DIVISION OCT 15 1957 BUREAU OF MINES JOPLIN, MO.

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

Date 10-14-57 *Payee St. Joseph Lead Company

Per L. G. Costello 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:

$ 6,780.34

Signature (Authorized Certifying Officer)

Date 11-13-57 Vou. No. 4-16

(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 John W. Chester Title Mining Engineer Date Oct 16, 1957

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Clinton C. Knox Title Executive Officer Date November 7, 1957

MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

RECEIVED
MINERALS TECHNOLOGY DIVISION
OCT 15 1957
BUREAU OF MINES
JOPLIN, MO.

RECEIVED
NOV 18 1957
DMEA

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of September 1957 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.	10174.26	4583	55970.64	25212	$2.22		
Churn	Ft.	3354.42	1511	20672.64	9312	2.22	133420	$2.22
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Analytical Determinations	Ea	32.00	32	166.00	166	1.00	2370	1.00
TOTAL DISTRIBUTED COSTS		13560.68		76809.28				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		13560.68		76809.28				

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

Date 10-14-57 Operator St. Joseph Lead Company

Per L. N. Castel Title Asst 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)

(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

MONTHLY REPORT FOR MONTH OF SEPTEMBER, 1957

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

4 churn drills were operating in the area at the end of the month. The following holes were in progress:

Stage	I	Stake	No.	C-49	-	at	a	depth	of	0 feet
"	"	"	"	C-52	-	"	"	"	"	225 "
"	"	"	"	C-68	-	"	"	"	"	0 "
"	"	"	"	C-70	-	"	"	"	"	370 "

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

Stage	I	Stake	No.	C-41	-	depth	305	feet	-	starting	date 8-24-57
"	"	"	"	C-42	-	"	275	"	-	"	" 9- 3-57
"	"	"	"	C-50	-	"	186	"	-	"	" 9-12-57
"	"	"	"	C-51	-	"	200	"	-	"	" 8-26-57
"	"	"	"	C-53	-	"	145	"	-	"	" 8-26-57
"	"	"	"	C-64	-	"	210	"	-	"	" 9- 5-57
"	"	"	"	C-67	-	"	190	"	-	"	" 9- 9-57

2 diamond drills were operating in the area at the end of the month. The holes in progress were Stage I Stake No. C-64 at a depth of 220 feet and Stage I Stake No. C-41 at a depth of 545 feet.

The following diamond drill holes were completed during the month:

Stake No.	Prospect Hole No.	Bottom Depth	Feet of Diamond Drilling	Date Completed	Class.
C-38	57VC88	681	511	9-26-57	Trace
C-39	57VC74	628	483	9- 5-57	Trace
C-40	57VC79	685	500	9-12-57	Trace
C-46	57VC90	765	503	9-24-57	Sp.Trace
C-51	57VC93	721	521	9-30-57	Blank
C-53	57VC81	705	560	9-18-57	Ind.
C-61	57VC77	640	490	9- 9-57	Sp.Trace
C-62	57VC80	625	500	9-12-57	Trace
C-63	57VC83	615	515	9-18-57	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:

57VC74	6 Pb
57VC79	14 Pb
57VC81	9 Pb
57VC83	1 Pb
57VC88	2 Pb

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 #OZ-223

C. A. Crabtree and Emma Crabtree (wife), executed July 12, 1957.

Option to purchase all underground and mining rights on an aggregate of 488.79 acres, more or less, with 7 acres excepted, as indicated.

Option runs for 1 year and is renewable twice.

WASHINGTON COUNTY

Courtois Area - In DMRA Project #4582

Week Ended September 9, 1957

2 diamond drills operating and 4 churn drills setting casing completed 1 trace hole.

57VC74, a trace hole, is located about 1 mile east of the village of Courtois and 520 feet south of an indicative hole. It bottomed at 628 feet depth in 9 feet of dark rhyolite porphyry which extends about 15 feet up into the Bonneterre horizon. Mineralization was present in the brown-spotted 5 zone - same horizon as in the indicative hole - and best parts were estimated as 0.8 feet of 3.0% Pb at 411 feet depth, 5.1 feet of 1.2% Pb at 422 feet depth, 0.2 feet of 1.5% Pb at 427 feet depth, and 0.4 feet of 1.5% Pb at 433 feet depth.

Week Ended September 16, 1957

2 diamond drills operating and 4 churn drills setting casing completed 1 trace hole.

57VC77, a trace hole, is located about 1500 feet southwest of the village of Courtois and 520 feet north-northeast of an indicative hole. It bottomed at 640 feet depth in 5 feet of granite which extends up to about the Bonneterre-Lamotte contact. Speck traces of lead were present in the top of the Bonneterre at 388 feet depth, at the base of the 7 zone at 559 and 564 feet depths. Bonneterre horizon was mostly dense and unaltered appearing and rather unfavorable for mineral possibilities. Presence of this Precambrian high was unsuspected and its relationship to surrounding structural feature and mineralization will have to be determined by additional drilling.

Week Ended September 23, 1957

2 diamond drills operating and 4 churn drills setting casing completed 1 indicative and 3 trace holes.

57VC81, an indicative hole, is located about 4,000 feet east-northeast of the village of Courtois and 1560 feet northwest of 56W111, an indicative hole. It bottomed at 705 feet depth in Lamotte sand. Mineralization in the upper 5 zone was estimated as 7.9 feet of 1.2% Pb at 511 feet depth.

57VC79, a trace hole, is located 520 feet north-northeast of 56W111. It bottomed at 685 feet depth in rhyolite porphyry which extends up about 20 feet into the Bonneterre horizon. Mineralization was estimated as 1.0 foot of 2.5% Pb at 468 feet depth at the top of the 5 zone, 2.6 feet of 1.0% Pb at 599 feet depth in upper part of the 7 horizon, 1.9 feet of 1.5% Pb at 611 feet depth in the 7 horizon and 2.0 feet of 1.0% Pb at 630 feet depth in fingered rock in the lower 7 zone.

57VC80, a speck trace hole, is located about 1700 feet southwest of the village of Courtois and 520 feet northwest of 57VC22, an indicative hole. It bottomed at 625 feet depth in red granite which is overlain by 2 feet of Lamotte sand. Speck traces of lead were present in the top of the Bonneterre, at the top of the 5 zone, and at the base of the 7/10 horizon.

57VC83, a trace hole, is located 520 feet southwest of the above hole. It bottomed at 615 feet depth in Lamotte sand. Trace lead estimated as 0.5 foot of 1.0% Pb was located at 526 feet depth in the lower part of the main 7 reef.

WASHINGTON COUNTY (Continued)

Courtois Area - In DMEA Project #4582 (Continued)

Week Ended September 30, 1957

2 diamond drills operating and 4 churn drills setting casing completed 2 trace holes.

57VC88, a trace hole, is located 520 feet northwest of 56W111, an indicative hole and about 5,000 feet east of the village of Courtois. It bottomed at 681 feet depth in 23 feet of dark rhyolite porphyry which extends up about 20 feet into the Bonneterre horizon. Mineralization, which is on the same horizon as that in the indicative hole, was estimated as 0.2 foot of 2.0% Pb at 467 feet depth and 1.8 feet of 2.0% Pb at 471 feet depth - all in the upper 5 zone.

57VC90, a speck trace hole, is located about 9,000 feet southwest of the village of Courtois and 2800 feet southeast of a trace hole. It bottomed at 765 feet depth in 14 feet of Lamotte sand. Speck traces of lead were present in the upper 5 zone. Mineralization is of little significance but the 7 zone showed a full thickness of fairly well altered reef rock which encourages some additional drilling toward the north where high granite is present.

15

FORM 1173-2-54

DATE BOTTOMED 9-26-57	ST. NO. VC-38 ST. ELEV.	CLASS TRACE HOLE NO. 57VC88
DESCRIBED BY C.A.	AREA Courtois	ELEVATION COLLAR 1082.05
DATE ESTIMATED 9-26-57	OPTION NO. CZ-74	COORDINATES: N 117566.05 E 94161.38
BY C. A.	TRACT PAUL THOMPSON	200 FT. MAP NO. 46 50 FT. MAP NO.

NE¼-NE¼-Sec 8

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 1.00 FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	169	913
SLEEVE BIT TO		
BEGAN CORING AT	170	912
SAVED CORES FROM	383	699
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "	229	853
DAVIS (C.B.-S.B.) "	395	687
BONNE TERRE "	643	439
B. T. TRANS. "		
CONGLOMERATE "	658	424
LA MOTTE "		
~~GRAN. OR~~ POR. "	681	401
PICTURES: FROM	383	699
TO	681	401
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

205

MINERALIZATION RECORD 1060 S 280W. T35N-R1W

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS
	466.5	466.7	615.4	0.2	0.5	2.0				0.1	FRACT.
	469.0	470.8	611.3	1.8	1.0	2.0	✓			1.8	DISS.
	473.5	473.7	608.4	0.2		TR.					SPECK
	484.8	485.0	597.1	0.2		TR.					"
	541.4	541.6	540.5	0.2		TR.					"
	548.0	548.2	533.9	0.2		TR					"
	568.7	569.0	513.1	0.3		TR.	✓				
	590.8	591.0	491.1	0.2		TR.					"

CORE REC.

TO	CORES LOST
170	
399	—
405	1.0
409	2.0
416	1.0
455	—
465	6.0
469	2.0
477	1.0
487	—
497	2.0
507	1.0
517	1.0
644	—
660	4.0
664	1.0
671	3.0
681	—

Pl. OK

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE 9-26-57 MINE Courtenay STOPE STAKE NO. VC-38 HOLE NO. 57VC88

COLLAR ELEV. 1082 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
170	912	BEGIN	CORING
229	853	1 Berry	Dike Run (229)
305	687	Davis	Shale (305)
		Bonne Terre	
442	633	1	[illegible] TO 435 - IRREG DENSE [illegible] 437 TO MASS - (442)
489	593		GB pz: Blue Grey M - pz - B.[illegible] - porous B.[illegible] & patches - > Bluish G M 455 to 460 - > Pp 466 to 471 - - [illegible] med O - (489)
497	585		F%T>M>G[illegible] - > C reef struct - > porous - (497)
507	575		C&GTO - Heavy C.[illegible] GTO - > pitted - > Cc veining - (507)
512	570		F%GTC[illegible]>M - Fair F - > Snarly - > pitted - > Cc [illegible] & veinlets - (512)
534	548		GT, Dense - small 0 - 2' thin repe struct @ 514 - 6" reef > porous @ 518 & 522 - (534)
546	536		F%GTC 10>M: Dense GT - Snarly, Dimly F reef - 1' Dense GT @ 538 - (546)
588	494		GT, Dense - small 0 - Fairly massive - - stylo - 1' snarly > reefy app @ 566 - 2' - reefy > pitted @ 573 & 1' @ 577 - 2' > reefy @ 582 w/ > Pb - (588)
606	476		GT>M Crepe - Resembles above lightly, but snarlier > M & crepe increasing toward base > Cc [illegible] & veinlets - > Pc tr @ 591 - > fine G[illegible] toward base - (606)
643	439	16-18	Pp Cob & Peb w/ GTN reef - GTN reef w/ scatt Pp 606-611 - closely cemented Pp 611 to 620 - GTN reef struct 620 to 6[illegible] closely cemented Pp Cob & Pp 632 to 642 - 1' N reef @ base - (643)
678	424	18	Pp Cob & Peb w/ GSD matrix - Closely cemented Pp Cob & Pp - matrix > to med sandy - (678)
691	401	21	Dark Purple Fine Grain Igneous - > High angle fract - 3' > weathered light purple > 677 - very dark 677 to base - (691)

FORM 1173-2-54

Started 8-30-57

X

DATE BOTTOMED 9-5-57	ST. NO. VC-39 ST. ELEV.	CLASS TRACE	HOLE NO. 57VC74
DESCRIBED BY C.A.	AREA Courtois	ELEVATION COLLAR 1067.99	
DATE ESTIMATED 9-9-57	OPTION NO. CZ-74	COORDINATES: N 116678.47	E 94374.98
BY C.A.	TRACT Paul Thompson	200 FT. MAP NO. 46	50 FT. MAP NO.

SE¼ NE¼ Sec. 8 T35N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 2.00 FT.

FORM BOTT. SL.

		DEPTH	ELEV.
DRILLED WITH:			
CHURN DRILL TO		145	923
SLEEVE BIT TO			
BEGAN CORING AT		315	753
SAVED CORES FROM		361	707
FORMATIONS:			
SOIL	TO	40	1028
	"		
EMINENCE	"		
POTOSI	"	130	938
POTOSI-DERBY	"		
DERBY DOE RUN	"		
DAVIS (C.B.-S.B.)	"	362	706
BONNE TERRE	"	562	506
B. T. TRANS.	"		
CONGLOMERATE	"	618	450
LA MOTTE	"		
~~CHAMP OR~~ POR.	"	628	440
PICTURES:	FROM	361	707
	TO	628	440
CHAR. SAMPLES:	FROM		
	TO		
INSOL. RES.:	FROM		
	TO		
OPENINGS AT			

MINERALIZATION RECORD 1940 S 75 W.

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS	CORE REC. TO	CORES LOST
												315	—
	410.6	411.4	656.6	0.8	1.8	3.0	✓			1.4	DISS.	529	
	414.4	414.6	653.4	0.2		TR						532	1.0
	416.0	417.1	650.9	1.1	1.3	1.0	✓			1.4		555	—
	418.2	420.4	647.6	2.2	0.6	2.0	✓			1.3		560	1.0
	421.4	422.1	645.9	0.7	0.3	1.0				0.2		620	—
	427.2	427.4	640.6	0.2	1.7	1.5				0.3		622	1.0
	427.4	427.7	640.3	0.3		TR						628	—
	433.0	433.4	634.6	0.4	1.6	1.5	✓			0.6			
	447.8	448.0	620.0	0.2		TR							

Pl. OK

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE 9-9-57 MINE COURTOIS STOPE STAKE NO. VC-39 HOLE NO. 57VC74

COLLAR ELEV. 1067 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
315	752	BEGAN CORING	
362	705	DAVIS SHALE BONNETERRE	(362)
408	659	1	T>O: GT Dense - fairly massive T>O - frost - >Cu & 362 to 397 - [illegible] bedded: Dense: >O - >porous patches - >small vugs [illegible] base - Cu & and patches - (408)
418	649	1-5	GT Dense: GT>O - South tve Pb 412 and 416 and 418 - [illegible] bedded stylolitic w/ scattered 5 type patches - [illegible] 2" [illegible] patches - (418)
451	616	-5	GT pr O Bd - thin bedded - [illegible] Bd - [illegible] w/ fair disc. Pb - scattered dark blue gray m - [illegible] O missing 432 to base - 2' [illegible] (451)
472	595		F T/GT G1>M - Zone F replaced w/ GT fine G1>M [illegible] - [illegible] - >frost - (472)
533	534	—	GT>O Dense: porous: Reefy - Dense GT>O fairly massive [illegible] 519 - >E 476 to 479 - 1" >reefy opp C 489 - [illegible] GTO 519 to base - frost 531 to base - Cu [illegible]
562	505	—	F T/GT G1>M - Density F w/ GT fine G1>M matrix 533 to 547 - [illegible] F>N opp 547 to 562 - >frost - 2" Pb @ 539 - [illegible] 542 (562)
619	448	18	PURPLE PORPHYRY COBBLES & PEBBLES / G & LGSD matrix - [illegible] to 574 - LGSD w/ some [illegible] porphyry fragments 574 to 586 - closely cemented Cobs & pebs 586 to base - (619)
628	439	21	DARK PURPLE PORPHYRY — >[illegible] - - yellow green [illegible] (628)

started 9-6-57

FORM 1173-2-84

15

X

DATE BOTTOMED 9-12-57	ST. NO. VC-40 ST. ELEV.	CLASS TRACE	HOLE NO. 57VC79
DESCRIBED BY C.A	AREA Courtois	ELEVATION COLLAR 1108.46	
DATE ESTIMATED 9-17-57	OPTION NO. CZ-74	COORDINATES: N 117690.72	E 94676.63
BY C.A.	TRACT PAUL THOMPSON	200 FT. MAP NO. 36	50 FT. MAP NO. NW¼-NW¼-Sec 9 T35N-R1W.

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 2.00 FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	185	923
SLEEVE BIT TO		
BEGAN CORING AT	185	923
SAVED CORES FROM	413	695
FORMATIONS:		
SOIL TO	60	1048
"		
EMINENCE "		
POTOSI "	180?	928
POTOSI-DERBY "		
DERBY DOE RUN "	248	860
DAVIS (C.B.-S.B.) "	413	695
BONNE TERRE "	660	448
B. T. TRANS. "		
CONGLOMERATE "	679	429
LA MOTTE "		
~~CAMB. OR.~~ POR. "	685	423
PICTURES: FROM	413	695
TO	685	423
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 930 S 270 E

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
	467.0	468.0	640.5	1.0	2.4	2.5	2.4	-				185	
	474.7	475.0	633.5	0.3	8.9	6.0	2.7	-			Seam w/Pb + FeS	443	-
	475.0	475.7	632.8	0.7		TR						449	1.0
	477.9	478.2	630.3	0.3	1.6	1.0	0.5					521	—
	487.5	487.7	620.8	0.2		TR.						531	1.0
	502.8	503.0	605.5	0.2		TR.						576	—
	504.2	504.7	603.8	0.1		TR						585	3.0
	525.0	525.1	583.4	0.1		TR.						597	—
	547.7	548.0	560.5	0.3		TR.						685	—
	555.9	556.0	552.5	0.1		TR.							
	565.3	565.5	543.0	0.2		TR							
	568.5	568.7	539.8	0.2		TR							
	590.8	591.0	517.5	0.2	0.6	2.0	0.1				Seam.		
	591.7	591.8	516.7	0.1	0.7	1.5	0.1						
	596.0	598.6	509.9	2.6	0.3	1.0	0.8						
	605.0	605.8	502.7	0.8	2.5	1.5	2.0	/					
	606.4	606.9	501.6	0.5	0.5	1.0	0.2						
	607.7	607.9	500.6	0.2	2.0	1.0	0.4						
	607.9	609.1	499.4	1.2		TR							
	609.1	611.0	497.5	1.9	1.2	1.5	2.3	/					
	615.0	615.6	492.9	0.6	1.0	1.5	0.6						
	617.5	628.0	480.5	10.5		TR							
	628.0	630.0	478.5	2.0	0.9	1.0	1.8						
	633.0	634.0	474.5	1.0		TR.							
	634.0	634.3	474.2	0.3	2.4	2.0	0.7				Frac. Staino		
	635.8	636.0	472.5	0.2	6.8	8.0	1.4						
	636.0	638.7	469.8	2.7		TR.							
	679.0	682.5	426.0	3.5		0.0			TR.				

gc 5

Rcw

Pl. ck

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY A DATE 9-16-57 MINE Courtois STOPE STAKE NO. VC-40 HOLE NO. BNC79

COLLAR ELEV. 1107 PITCH BEARING COORD.: N

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
135	922	BEGAN CORING	
248	859	DERBY DOE RUN	
413	694	DAVIS SHALE - 6' DERBY-DAVIS TRANSITION @ 254	(413)
		BONNE TERRE	
461	646	1	F-VF FINE TAGT - FAIRLY MASSIVE STYLO > SM VUGS 413 TO 445 - 50% T > 50% TAGT DENSE IRREG BANDING > SM VUGS > FRACT 445 TO 457 > SNURLY - (461)
467	640	F-1	To > B% DENSE GT - To - STYLO > B% > SCATT DENSE 461 TO 466 - 6" < B% To < Ca% @ 466.5 - To > STYLO - PITTED > B% - 466.5 TO BASE - (467)
505	602	5	GB p-n P%: BLU GM - < POROUS B% 467 TO 501 - > Pb FILLING VUGS & FRACT SCATT 467 TO BASE - MED O - THIN REGULAR GT BANDING 487 TO 501 - (> DENSE BLUE GREY M 467 TO 475 - 2' w/ pz BO & RED ARGEO @ 503 - GTO > THIN > K 503 TO BASE - (505)
[illegible]	502	—	GTG: DENSE GT: F - [illegible] > FAMOUS [illegible] 2 GT > O 530 - POROUS F 530 TO 535 - DENSE GT > O 535 TO 545 - SNURLY REEF 545 TO 549 - DENSE GT 549 TO 567 - 2' > SNURLY FAIR @ 569 - DENSE GT FAIRLY MASSIVE 569 TO 605 - (605)
617	490		GT-M - BRECCIATED - SNURLEY IRREG BANDING - BRECCIATED AND SCATT Pb - FAIRLY LOOSE GT PROFESSIONAL 5% SEG - > DOLOMITE @ 613 - > CALCITE @ BASE - (617)
630	477	—	F%GTG10 - DIM TO FAIR F STRUCT w/ GTG10 FAIRLY DENSE MATRIX - TRS Pb - (630)
660	447	16-18	BASAL NREEF w/ PERIPHERY PEBBLES & COBBLES - FAIRLY MASSIVE REEF w/ SCATT Pp 630 To 647 - 1' CLOSELY CEMENTED COB @ 648 - 1' REEF MATERIAL w/ Pp @ 649 - 1' P COB @ 650 To - REEF & GT w/ Pp 650 TO 652 - F COBS & GT MATRIX 652 TO 657 - F%GT > G% w/ - Pp 657 TO BASE - (660)
678	429	18	PERIPHERY COBBLES w/ G-D% - DARK PURPLE PER COBS CLOSELY CEMENTED w/ GSL GNTLY MATRIX 660 TO 672 - FINAL 7' MOSTLY SOLID BOULDER (678)
679	428	19-20	G & PERIPHERY PEBBLES - MED FINE GRAIN SAND w/ Pp & Pq - (679)
685	422	21	PURPLE & RED PERIPHERY - 4' RED TO 683 - PURPLE P 683 TO BASE - > PASS THRU TECHNICAL MINERAL (ZN?) 679 TO BASE (685)

FORM 1173-2-84

20

SPECK

DATE BOTTOMED 9-24-57	ST. NO. VC-46 ST. ELEV.	CLASS TRACE	HOLE NO. 57VC90
DESCRIBED BY C.A.	AREA Courtois	ELEVATION COLLAR 1094.90	
DATE ESTIMATED 9-27-57	OPTION NO. CZ-60	COORDINATES: N 112450.40	E 81836.86
BY C.A.	TRACT LOTTIE BAYS	200 FT. MAP NO. 45	50 FT. MAP NO.

NW¼-NE¼-Sec.13 T35N-R2W

1120 S 2170 W.

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 2.17 FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	262	833
SLEEVE BIT TO		
BEGAN CORING AT	295	800
SAVED CORES FROM	463	632
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "	305	790
DAVIS (C.B.-S.B.) "	469	626
BONNE TERRE "	738	357
B. T. TRANS. "	751	344
CONGLOMERATE "		
LA MOTTE "	765	330
GRAN. OR POR. "		
PICTURES: FROM	463	632
TO	765	330
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
	534.3	534.5	560.4	0.2		TR	1				
	557.2	557.4	537.5	0.2		TR	1				
	558.7	558.9	536.0	0.2		TR.	1				

CORE REC.

TO	CORES LOST
295	
315	—
455	S.B.
765	—

205

FAW

Back

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE 9-27-57 MINE COUNTOLS STOPE STAKE NO. VC-46 HOLE NO. 57VC90

COLLAR ELEV. 1094 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
295	799	BEGIN CORING	
305	789	DERBY	DEPUN (305)
469	625	DAVIS	SHALE - 6' DERBY - DAVIS TRANSITION @ 311 - (469)
		BONNETERRE	
515	579	1	LT>0 MASSIVE GT IRREG DENSE - LT>0 MASSIVE 460 TO 492 - GT IRREG DENSE 492 TO 515 (515)
567	527	5	GB0 B1>POROUS - <L1 PORO. C1 - P2 - 528 TO 530 E - >FRACT - MED 0 - TR FE S 534,1 - 559 - >C1 1 - (567)
599	495	5	GT0 P2 - MED 0 567 TO 589 - LARGE 0 - 1 - POROUS - STYLO - >K1 - P2 - TR FE S (599)
684	410	7	F/GTG 10 2M - GOOD FREEF STRUCTURE - POROUS - 2' GTG 10 @ 66 - 1' @ 663 - SNURLY APP - >C1 1 AND VIOLETS - (684)
695	399		GTG 10 & GTGEM - GTM W/ GTG 10 BAND 684 TO 689 - GTG 10 W/ >K1 689 TO 692 - GTM >THIN H1 >GT0 G1 692 TO BASE - (695)
705	389		GTG1 P2 >M - <POROUS - >M - <THIN R1 - FINELY G1 >C1 1 - (705)
713	381	-	GT0 - >STYLO - >POROUS B1 - MED 0 - >STYLO - (713)
720	374	-	GTM CREPE - >PITTED - MED M4 CREPE - 6" W/ SOLID DOLOMITE @ 716 - >POROUS C CIRCULAR 1 - >LARGE C1 1 - (720)
738	356	-	DENSE GT>0 - >STYLO - >K1 & BANDS - FAIRLY DENSE - >C1 VIOLET - >SMALL VUGS - >CAL GRAINS TOWARD BASE - >FINE DISC SULFIDES - (738)
746	348	19	GSD IRREG - <SANDY 738 TO 742 - >SANDY IRREG BANDING >PITTED 742 TO 746 - >(746)
751	343	19	LGDS - TIGHT, SLIGHTLY DOLOMITIC - SCATT FeS TR - (751)
765	329	20	WS - MED FINE GRAIN - TR FeS 751 TO 765 - CLEAN - (765)

FORM 1173-2-54

Started 9-26-57

15

DATE BOTTOMED 9-30-57	ST. NO. VC-51	ST. ELEV.	CLASS BLANK	HOLE NO. 57VC93	
DESCRIBED BY C.A.	AREA COURTOIS		ELEVATION COLLAR 1065.87		
DATE ESTIMATED 10-3-57	OPTION NO. CZ-74		COORDINATES: N 118702.86	E 94935.40	
BY C.A.	TRACT PAUL THOMPSON		200 FT. MAP NO. 36	50 FT. MAP NO. SW¼-SW¼ Sec. 4	

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 2.00 FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	100	866
SLEEVE BIT TO		
BEGAN CORING AT	265	801
SAVED CORES FROM	429	637
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "	273	793
DAVIS (C.B.-S.B.) "	442	624
BONNE TERRE "	705	361
B. T. TRANS. "	717	349
CONGLOMERATE "		
LA MOTTE "	721	345
GRAN. OR POR. "		
PICTURES: FROM	429	637
TO	721	345
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 30N 470E T35N-R1W

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

CORE REC. TO	CORES LOST
265	
285	—
395	S.B.
582	—
591	1.0
721	—

205

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE 10-1-57 MINE Courtois STOPE STAKE NO. C-51 HOLE NO. 57VC 93

COLLAR ELEV. 1065 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
265	800	BEGAN CORING	
273	792	Decox	Doe Run (273)
442	623	Davis	Shale (442)
		Bonne	Terre
492	573	1	LT>O; Vugg; Dense - [illegible] (492)
505	560	5-1	GT>O; Dense GT - [illegible] (505)
552	513	5	GBOR; L - [illegible] (552)
567	498		FX; Fc; Im; Bno - [illegible] (567)
595	472		GT>O; Dense; >E - [illegible] (595)
606	459	7	Porous; FX; Fg; >M; Dense; LT - [illegible] (606)
619	416	7-10	GT>O; F - [illegible] (619)
677	386	10-12	GT>O; Dense; LT>O - [illegible] (677)
707	366	12	GTM - [illegible]
714	351	[illegible]	[illegible] (714)
717	348	[illegible]	[illegible] (717)
721	344	[illegible]	W - [illegible] (721)

Started 9-13-57

FORM 1173-2-54

15

DATE BOTTOMED 9-18-57	ST. NO. VC-53	ST. ELEV.	CLASS INDICATIVE HOLE NO. 57VC81
DESCRIBED BY C.A.	AREA Courtois		ELEVATION COLLAR 1047.88
DATE ESTIMATED 9-19-57	OPTION NO. CZ-74		COORDINATES: N 118269.61 E 93472.71
BY C.A.	TRACT Paul Thompson		200 FT. MAP NO. 36 50 FT. MAP NO.

NE¼-NE¼-Sec 8

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 3.17 FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	146	902
SLEEVE BIT TO		
BEGAN CORING AT	419	629
SAVED CORES FROM	419	629
FORMATIONS:		
SOIL TO	25	1023
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	423	625
BONNE TERRE "	690	358
B. T. TRANS. "	694	354
CONGLOMERATE "		
LA MOTTE "	705	343
GRAN. OR POR. "		
PICTURES: FROM	419	629
TO	705	343
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 340 S 1060 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
												419	
	487.7	488.1	559.8	0.4		TR						425	–
	488.1	489.2	558.7	1.1	0.7	2.0	✓			0.8		435	7.0
	489.2	490.2	557.7	1.0		TR						545	–
	490.2	491.8	556.1	1.6	1.0	1.0				1.6		555	2.0
	491.8	492.6	555.3	0.8		TR					3.8-0.8	695	–
	492.6	494.0	553.9	1.4	1.0	1.0				1.4		705	5.0
	494.0	495.0	552.9	1.0		TR							
	495.0	495.2	552.7	0.2	0.6	1.0				0.1			
	498.0	499.5	548.4	1.5	0.4	1.0	✓			0.6			
	503.2	504.6	543.3	1.4	2.2	2.0				3.1			
	506.8	507.0	540.9	0.2	3.7	1.0				0.7	7.9-1.4		
	508.8	511.1	536.8	2.3	3.0	3.0				6.9			
	511.1	512.4	535.5	1.3		TR							
	512.4	512.7	535.2	0.3	0.3	1.0				0.1			
	512.7	516.0	531.9	3.3		TR.							
	536.0	536.3	511.6	0.3		TR							
	620.0	626.1	421.8	0.1		TR.							

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Rev

Pl. OK

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE 9-19-57 MINE Courtois STOPE STAKE NO. VC-53 HOLE NO. 57VC81

COLLAR ELEV. 1046 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
419	627	BEGIN CORING	
423	623	DAVIS BONNE TERRE	SHALE (423)
476	570	1	LT>1: DENSE TIGT/ - >MASSIVE >0 423 TO 448 - <STYLO 448 TO 455 - MASSIVE >POROUS 455 TO 462 - STYLO +VUGGY >DENSE SNURLY 462 TO 472 - >IRREG DENSE/ 472 TO BASE - (476)
483	563	5-1	GT>POROUS >DENSE/ - >B/ >0 - >THIN B/ - >INCRITE / - (483)
535	511	5	GBoB/ p2/VUGGY - <1' /POROUS B/ & PATCHES - <VUGGY - 1/ IN VUGS 489 TO 415 - 1' >GT>M @ 529 AND BASE - (535)
553	493		F %GTG/ >M - FAIR F STRUCT %/ POROUS GT/ >M MATRIX - <1' W/ GT BANDING @ BASE - (553)
563	483	-	DENSE LG >0 - >MASSIVE >0 - >FINE / - STYLO - SMALL VUG - (563)
591	455	7	F %GTG/ >M: DENSE/ - <POROUS FREEF 563 TO [illegible] - W/ 1' DENSE LG - DULL @ 570 - FROM F STRUCT 575 TO 591 - (591)
613	433	10-7	GTO - POROUS: REEFY GT/ >: DENSE LG - 1' GT>O [illegible] - REEFY [illegible] TO 595 - GTO>POROUS IRONED 597 TO 607 - SNURLY REEFY G/ >M 607 TO 611 - 2' LG DENSE 611 - 2' >POROUS REEFY G/ @ BASE - (613)
635	411	10-12	GTO: GTM>CREPE - GTO>PITTED >STYLO 613 TO 621 - GT>M>CREPE 621 TO 625 - GTO: >G/ >THIN LEDGED 627 TO 630 - TR B/ @ 628 - GT>M>CREPE 630 TO 635 - (635)
648	398	12	GTM - >G/: LxH/ - 1' >REEFY @ 638 - 1' BASICALLY GTM - [illegible] G/ - 6" LxTHIN H/ @ 640 AND 645 - POROUS - >Ca / - >SMALL VUGGY - (648)
672	374	11	LG - M LS %: Ta - HIGHLY EFFERVESCENT - >LGM CREPE >[illegible] %/ 1' [illegible] - SOLID (672)
690	356	12	GTM - >B/ & G/ - MED M - >CREPE - >B/ [illegible] - M [illegible] >POR IN & SMALL VUG - POSSIBILITY OF [illegible] - (690)
694	352	19	GSD>M - MED ANLY - >M >IRREG/ 1' [illegible] LG @ BASE - (694)
705	341	20	W - CLEAN - MED FINE GRAIN - (705)

Started 9-3-57

20

FORM 1173-2-54

DATE BOTTOMED 9-9-57	ST. NO. VC-61	ST. ELEV.	CLASS TRACE HOLE NO. 57VC77
DESCRIBED BY C.A.	AREA COURTOIS		ELEVATION COLLAR 1069.29
DATE ESTIMATED 9-12-57	OPTION NO. CZ-67		COORDINATES: N 116685.02 E 88421.61
BY C.A.	TRACT G.D. EVANS		200 FT. MAP NO. 46 50 FT. MAP NO.

SEC-NE4-Sec7 T35N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 3.33 FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	150	919
SLEEVE BIT TO		
BEGAN CORING AT	155	914
SAVED CORES FROM	381	688
FORMATIONS:		
SOIL TO	45	1024
"		
EMINENCE "		
POTOSI "	150	919
POTOSI-DERBY "		
DERBY DOE RUN "	237	832
DAVIS (C.B.-S.B.) "	383	686
BONNE TERRE "	632	437
B. T. TRANS. "		
CONGLOMERATE "	635	434
LA MOTTE "		
GRAN. ~~OR TOR.~~ "	640	429
PICTURES: FROM	381	688
TO	640	429
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 1950S 780W.

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS
	388.2	388.4	680.9	0.2		TR.					
	559.0	559.2	510.1	0.2		TR.					
	564.2	564.6	504.7	0.4		TR.					

CORE REC.

TO	CORES LOST
155	
425	–
439	1.0
455	5.0
640	–

205

Pl. OK.

FORM 9002-A-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE 7-12-57 MINE COURTOIS STOPE ..... STAKE NO. VC-61 HOLE NO. 57VC77

COLLAR ELEV. 1067 PITCH ..... BEARING ..... COORD.: N ..... E .....

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
[illegible]	912	BEGAN CORING	
237	830	[illegible]	(237)
383	684	PAUL SHALE	(383)
		ANNE TERRE	
429	638	1	LT>O: DENSE - TR FRACT W/ @ 388 - Jasically LT>O W/ scat lens - TR W/ @ 416 - - stylolitic - [illegible] W/ S & base - (429)
439	628	1-5	GT>O: Dense - GT - L & DENSE W/ irreg L > FRACT - > Ca & & VIENLETS - (439)
460	607	5	GBO-B & > POROUS - [illegible] - [illegible] B & some POROUS - > Ca & & VIENLETS - > FRACT @ [illegible] (460)
473	574	5	GTO thin bedd: > M - Jasically GT MED O thin bedd - 1" M G & > CREPE @ 470 - > M CREPE 482 & 484 - 1" GT>O > M CREPE @ 470 - BANDING DECREASING TWARD BASE - (473)
510	557	5	GTO > G & - MED STYLOLITIC - MED LARGE O - > Ca & - > FRACT 496 TO 500 - > G & - (510)
560	507	7	F W/ GTO & O > M - FAIR F FRACT W/ GTO & O MATRIX 10 TO 535 W/ 4" POROUS GTO & O @ 521 - FRESH FROM F W/ GTO & O MATRIX - < Ca & SCATT THIN IRREG RB - TR PB @ BASE - (560)
581	486	7-10	F W/ GTO & O > M: GTO G & - F GTO W/ FINE G & > Ca & & VIENLETS @ 562 - FAIRLY FRESH F STRUCT GNURLY > M FINELY G & > Ca & 565 TO BASE - TR PB IN 1" RB @ 566 - HEAVY Ca IN BASE - (581)
632	435	10-12	GTO - GTM > CREPE: > F - GTO > [illegible] 581 TO 583 - GTM > ~ 583 TO 595 > G & & > B & - GTO STYLO > K & & Ca & 595 TO 610 W/ 2" GNURLY F STRUCT @ 598 - GTM ~ > SMALL G & B & 595 TO 621 - GTO STYLO FINELY G & > K & > Ca & 621 TO 626 - GTM > ~ > G & B & W/ > SCAT GRANITE GRIT 626 TO 630 - > E > DENSE LTY & E W/ > B & 630 TO 632 - (632)
635	432	18	WEATHERED GRANITE COBB W/ET SAND MATRIX - FLESH COLORED GRANITE COBBLES LOOSELY CEMENTED 632 TO 633 - 1" FINE SAND W/ > FLESH COBB 633 TO 635 - (635)
640	427	21	RED GRANITE - 1" DARK GREY WEATHERED @ TOP (636) FRESH RED GRANITE MEDIUM TiO_2 CONTENT - TR DARK GREEN MINERALS - (640)

Started — 9-10-57

FORM 1173-2-54

20

DATE BOTTOMED 9-12-57	ST. NO. VC-62	ST. ELEV.	CLASS TRACE	HOLE NO. 57VC-80	
DESCRIBED BY C.A.	AREA Courtois		ELEVATION COLLAR 1035.71		
DATE ESTIMATED 9-18-57	OPTION NO. C2-67		COORDINATES: N 116735.89	E 87933.06	
BY C.A.	TRACT G.D. EVANS		200 FT. MAP NO. 45	50 FT. MAP NO. SE¼-NE¼-Sec 7	

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 2.50 FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	125	911
SLEEVE BIT TO		
BEGAN CORING AT	333	703
SAVED CORES FROM	349	687
FORMATIONS:		
SOIL TO	20	1016
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	351	685
BONNE TERRE "	605	431
B. T. TRANS. "	612	424
CONGLOMERATE "		
LA MOTTE "	614	422
GRAN. [redacted] "	625	411
PICTURES: FROM	349	687
TO	625	411
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 1925 S 1290 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
												333	
	360.4	360.6	675.1	0.2		TR.	1					625	—
	417.0	417.2	618.5	0.2		TR.	1						
	594.5	594.7	441.0	0.2		TR.	1						
	596.2	596.4	439.3	0.2		TR.	1						
	606.2	606.3	429.4	0.1		TR.							

205

KAW

Pl. 61C.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE 9-18-57 MINE Courtois STOPE STAKE NO. VC-62 HOLE NO. 57VC20

COLLAR ELEV. 1034 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
333	701	BEGAN CORING	
351	683	DAVIS SHALE BONNE TERRE	(351)
387	647	1	LT>O: THIN, DENSE - FAIRLY MASSIVE > FRACT LT>O > STYLO TR PB 351 TO 370 = > THIN BEDDED STYLOLITIC w/ > DENSE T & GT 370 TO BASE - > Ca VEINLETS - (387)
394	640	1-5?	LT IRREG : > DENSE - O LT w/ IRREG BEDDING, Ca PATCHES > FAINT B & TWOND MEG (394)
469	565	5	GBO B & - FRESH UNALTERED APPEARANCE - < Ca & - FAINTLY B & THROUGHOUT - > STYLO - > PITTING 415 TO 425 - TR PB @ 417 - 1' GT < FINE G & > K @ 436 - 2' GT < FINE G & @ 441 - 10' p 2 w/ POROUS B & & PATCHES > Ca VEINING 453 - OOLITES INCREASING 453 TO BASE (469)
480	554	5	GTO : > FINE G & - MED LARGE O - > Ca & > STYLO - 2' w/ FINE G & @ BASE - (480)
			F T/GTO > G & - FAIR F STRUCT w/ GTO > G & MATRIX > THIN Rb - < Ca & - (488)
550	484	7	F T/GT > M G & - FRESH TIGHT STRUCT, SNURLY - < FINE G & IN MATRIX - < Ca VEINING 515 TO 540 - 1' LG DENSE STYLO @ 530 - (550)
568	466	7-10	F T/GT > O G & > M : T > G & - GTO > G & STYLO > M 550 TO 554 - 1' FR 555 TO STYLO 556 TO 558 - < G & > M & CREPE 558 TO 560 - 2' GTM > SNURLY @ 562 > STYLO STYLO > G & @ 564 - SNURLY F STRUCT 564 TO BASE - (568)
605	429	10-12	GTO - GTM > G & B & - GTO < STYLO > FINE G & > K & 568 TO 575 - 1' < G & > K & STRUCT @ 576 - GTO > G & > K & 576 TO 582 - GT > M > CREPE 582 TO 59[illegible] w/ OCCASSIONAL B & & G & - 2' DENSE GT > M & BANDED @ 593 - GTO > G & 593 TO BASE AND BECOMING MORE MASSIVE - SPECK PB TR 605 & 607 - (605)
612	422	19	GSD CREPE > M > G & > B & - MED SAND CONTENT - GREY TO BLUE GREY SHOR - (612)
614	420	20	LGS - MED FINE GRAIN - CLEAN - (614) 3" DARK GREY @ BASE -
625	409	21?	RED GRANITE WEATHERED G - 3' DARK GREY @ 617 w/ < QUARTZ 618 > @ BASE - 619, 620 < WEATHERED - (625)
			[illegible] - 2' TYP w/ GREY CA. 1 - 66 620 [illegible]

Started 9-13-57

20

FORM 1173-2-54

DATE BOTTOMED 9-18-57	ST. NO. VC-63	ST. ELEV.	CLASS TRACE	HOLE NO. 57VC83	
DESCRIBED BY C.A.	AREA Courtois		ELEVATION COLLAR 1000.12		
DATE ESTIMATED 9-20-57	OPTION NO. CZ-67		COORDINATES: N 116309.88	E 87657.92	
BY C.A.	TRACT G.D. Evans		200 FT. MAP NO. 45	50 FT. MAP NO.	

SW¼-NE¼-Sec 7

GENERAL HOLE DATA — MINERALIZATION RECORD 2380 S 1550 W. T35N-R1W — CORE REC.

HT. SLEEVE ABOVE GR 1.67 FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	100	900
SLEEVE BIT TO		
BEGAN CORING AT	325	675
SAVED CORES FROM		
FORMATIONS:		
SOIL TO	35	965
"		
EMINENCE "		
POTOSI "	100?	900
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	337	663
BONNE TERRE "	598	402
B. T. TRANS. "	603	397
CONGLOMERATE "		
LA MOTTE "	615	385
GRAN. OR POR. "		
PICTURES: FROM	325	675
TO	615	385
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	CORE REC. TO	CORES LOST
												325	–
	526.0	526.5	473.6	0.5	0.5	1.0				0.5	W/shining R.b.	345	–
	595.0	595.5	404.9	0.5		TR					Speck.	353	3.0
												368	2.0
												615	–

205

KW

Pl. OK

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE [illegible] MINE Coquitlam STOPE STAKE NO. VC-63 HOLE NO. 57VC83

COLLAR ELEV. 999 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
325	674	BEGIN CORING	
337	662	Davis Shale - Bonneterre	(337)
381	618	1	LT>0: Dense GT Snurly - Fairly massive LT>0 337 to 374 - Snurly: Dense GT 374 to 381 - (381)
397	602	5-1	GT>0: Dense [illegible] - >Pitted - >Stylo - Faintly [illegible] - Scatt Dense G (GT) - >Ca [illegible] - (397)
443	556	5	GD>0 B[illegible] - GM - [illegible] - >Dense B[illegible] < Porous B[illegible] & patches - >0 - Ca [illegible] - 1' GM>- @ 431 - 2' G>K[illegible] Fine G[illegible] @ 434 - 0' increasing 434 to base - (443)
477	522	5	GT<0 K[illegible] 61 -> Porous - <K[illegible] and thin 443 to 453 - 50 - - Ca [illegible] - > Fract 455 to base - Med G[illegible] 470 to 477 - (477)
536	463	7	FT/GT>MG[illegible]: GTG[illegible] - Good F Reef struct throughout w/ 2' GTG[illegible] @ 498, 507, 2' Heavily G[illegible]>M @ 517, 521, @ 3' @ 533 - (536) (1' G Dense K struct @ 532 - Trace @ 526)
578	441	7-10	GT0-G[illegible]: FT/GTG[illegible]M - GT 0 - G[illegible] 0 to 530 - GTMG[illegible] 530 to 541 - GT>0 Dense 541 to 543 - GT - M> [illegible] 543 to 549 - [illegible] Reefy 549 to 552 - GTMG[illegible] 552 to 554 - Reefy to 554 to base - (578)
575	424	10	GT>0 (1' FT/GTG[illegible]) - Porous - > Fine [illegible] - > Stylo - > X - 2' F @ 566 - > K[illegible] - (575)
598	401	10-12	GTM [illegible] GT>X>0 - GTM Crepe - G[illegible] 575 to 581 - GT>0: >G[illegible] Porous 581 to 591 - GT>M> - > B[illegible] - 591 to 593 - Dark GT - X > Pitted 593 to 598 - Possibly > Land Gerius rounded base - (598)
603	396	12	GSD>M - > Crete - M - Med Sand content - > Ca [illegible] - 1' E @ base - (603)
615	384	12	G>0 - Med Fine G Rhin - 2" Stained Green @ top - Clean - (615)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
Box 431
Joplin, Missouri
October 25, 1957

10/28 copy 500

DMEA Operating Committee
Room 4459
Department of the Interior
Washington 25, D. C.

Re: DMEA-4581, -4582 and -4583
St. Joseph Lead Company
Czar Knob, Courtois and Viburnum Projects
Contracts Idm-E1064, -E1068, &-E1073

Dear Sirs:

Forwarded herewith are your two copies of the MF-104 Monthly Voucher, MF-104A and the Operator's Monthly Report covering the August work approved October 14, 1957 on each of the three captioned Project Contracts. The voucher data received from the Finance Officer is posted on all six enclosed MF-104 copies.

Sincerely yours,

CCK/jd

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

encls. 12

cc: DMEA Op.Com.(3)
Amos,USGS,Carbondale
4581 file
4582 file
4583 file

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

3rd Copy - Wash

Budget Bureau No. 42-R1036.5

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

RECEIVED OCT 28 1957 DMEA

Month of August, 1957 Docket No. DMEA 4582 Contract No. 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	16232.64	46881.96	63114.60	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	31.00	103.00	134.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	16263.64	46984.00	63240.60			

RECEIVED MINERALS TECHNOLOGY DIVISION SEP 16 1957 BUREAU OF MINES JOPLIN, MO.

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

Date 9-13-57 *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:

$ 8,131.82

Signature
(Authorized Certifying Officer)

Date 10/18/57 Vou. No. 4-13

(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-EM69 in accordance with the terms of the contract.

Signature Jamall W. Chester Title Mining Engineer Date Sept 16, 1957

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Clinton C. Knox Title Executive Officer Date October 18, 1957

MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

RECEIVED OCT 28 1957 D.M.E.A.

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

Month of August 1957 Docket No. DMEA 4582 Contract No. 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.	11934.72	5376	46796.38	20629	$2.22		
Churn	Ft.	4297.92	1936	17318.22	7801	2.22	133420	$2.22
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Analytical Determinations	Ea	31.00	31	134.00		1.00	2370	1.00
TOTAL DISTRIBUTED COSTS		16263.64		63248.60				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		16263.64		63248.60				

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 9-13-57 Operator St. Joseph Lead Company

Per E. A. 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)

RECEIVED
MINERALS TECHNOLOGY
DIVISION

SEP 16 1957

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

MONTHLY REPORT FOR MONTH OF AUGUST, 1957

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

3 churn drills were operating in the area at the end of the month. The following holes were in progress:

Stage I Stake No. VC-41 at a depth of 270 feet.
" " " " VC-51 " " " " 100 "
" " " " VC-53 " " " " 110 "

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

Stage	I	Stake	No.	VC-30	- depth	137	feet	-	starting	date	7-29-57.
"	"	"	"	VC-46	- "	262	"	-	"	"	7-18-57.
"	II	"	"	VC-56	- "	112	"	-	"	"	7-27-57.
"	"	"	"	VC-57	- "	155	"	-	"	"	8- 2-57.
"	"	"	"	VC-92	- "	230	"	-	"	"	8- 7-57.
"	"	"	"	VC-94	- "	185	"	-	"	"	8-15-57.
"	"	"	"	VC-97	- "	80	"	-	"	"	8-13-57.
"	"	"	"	VC-98	- "	90	"	-	"	"	8-19-57.
"	"	"	"	VC-99	- "	250	"	-	"	"	8-20-57.
"	"	"	"	VC-101	- "	225	"	-	"	"	8- 4-57.
"	"	"	"	VC-102	- "	210	"	-	"	"	8-12-57.

2 diamond drills were operating in the area at the end of the month. The holes in progress were Stage I Stake No. VC-39 at a depth of 415 feet and Stage II Stake No. VC-61 at a depth of 170 feet.

The following diamond drill holes were completed during the month:

Stake No.	Prospect Hole No.	Bottom Depth	Feet of Diamond Drilling	Date Completed	Class.
VC-26	57VC67	745	490	8-21-57	Blank
VC-27	57VC60	625	510	8- 1-57	Trace
VC-29	57VC70	785	560	8-29-57	Trace
VC-30	57VC63	644	507	8-12-57	Trace
VC-32	57VC61	635	520	8- 7-57	Speck Trace
VC-33	57VC65	785	530	8-15-57	Trace
VC-34	57VC66	485	359	8-19-57	Trace
VC-35	57VC71	695	495	8-30-57	Pay
VC-37	57VC64	539	409	8-15-57	Trace
VC-43	57VC68	681	516	8-27-57	Indicative
VC-45	57VC62	705	480	8- 7-57	Trace

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:

57VC60	4 Pb ✓	1 Cu ✓
57VC62	1 Pb ✓	
57VC63	1 Pb ✓	
57VC64	2 Pb ✓	
57VC65	1 Pb ✓	
57VC66	2 Pb ✓	
57VC68	6 Pb ✓	
57VC71	11 Pb ✓	1 Cu

31

WASHINGTON COUNTY - Courtois Area - DMRA Project #4582

Week Ended 7 a. m., Monday, August 5, 1957

2 diamond drills operating and 4 churn drills setting casing completed 1 trace hole.

57V060, a trace hole, is located about 1,000 feet east of the village of Courtois. It bottomed at 625 feet depth in Lamotte sand. Lead estimated as 6.5 feet of nearly 1.0% is present at 513 feet depth in the lower part of the main 7 reef. This mineralization is in the same horizon as ore in holes 1500 feet to the southwest.

Week Ended 7 a.m., Monday, August 12, 1957

2 diamond drills operating and 4 churn drills setting casing completed 2 trace holes.

57V061, a trace hole, is located about 1 mile southwest of the village of Courtois and 1500 feet south of 56W101, an indicative hole. It bottomed at 635 feet depth in Lamotte sand. Speck traces of lead were present at 473 feet depth in the upper 5 zone and at 617 feet depth in the lower 12 zone.

57V062, a trace hole, is located about 1/2 mile east of the village of Courtois. It bottomed at 705 feet depth in Lamotte sandstone. Trace lead estimated as 0.9 foot of 1.5% Pb is located at 567 feet depth in reef rock in the lower 5 horizon.

Week Ended 7 a. m., Monday, August 19, 1957

2 diamond drills operating and 4 churn drills setting casing completed 3 trace holes.

57V063, a trace hole, is located about 3200 feet east of the village of Courtois and 1500 feet west-southwest of 56W111, an indicative hole. It bottomed at 644 feet depth in Lamotte sandstone. Traces of lead were present in the 5 zone, best of which was estimated as 1.8 feet of 2.0% Pb at 448 feet depth. This is the same elevation as ore in the indicative hole.

57V064, a trace hole, is located 520 feet west-southwest of the above mentioned indicative grade hole. It bottomed at 539 feet depth in felsite porphyry. Weak traces of lead were present in the 5 zone, best of which was estimated as 0.8 feet of 1.0% Pb at 420 feet depth and 0.1 foot of 1.5% Pb at 422 feet depth.

57V065, a trace hole, is located about 1 mile west-southwest of the village of Courtois and 1500 feet west-southwest of 56W101, an indicative grade hole. It bottomed at 785 feet depth in Lamotte sand. Traces of lead, estimated as 0.2 foot of 4.0% Pb, were present at 715 feet depth, at the base of the main 7 zone reef.

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

Week Ended 7 a. m., Monday, August 26, 1957

2 diamond drills operating and 4 churn drills setting casing completed 1 trace and 1 blank hole.

57VC66, a trace hole, is located about 5,000 feet west of the village of Courtois and 1500 feet northwest of an indicative hole. It bottomed at 485 feet depth in 13 feet of granite which extends about 145 feet up into the Bonneterre horizon. Traces of lead were present high in the Bonneterre about 45 feet below the Davis shale, best of which was estimated as 0.5 feet of 1.0% Pb at 374 feet depth and 0.6 feet of 2.0% Pb at 376 feet depth. Results from this hole tend to enlarge the known area of high granite here and indicate the need for additional drilling in the flank zone.

57VC67, a blank hole, is located in the eastern part of the area and about 3500 feet southeast of the village of Courtois. It bottomed at 745 feet depth in 14 feet of Lamotte sandstone. Most of the Bonneterre section in this hole was badly leached and rock classification is difficult.

Week Ended 7 a. m., Monday, September 2, 1957

2 diamond drills operating and 4 churn drills setting casing completed 1 pay, 1 indicative, and 1 trace hole.

57VC71, a pay hole, is located about 1700 feet west of the village of Courtois and 1400 feet southwest of an old indicative hole. It bottomed at a depth of 695 feet in 6 feet of Lamotte sandstone. The pay run of an estimated 11.9 feet of 3.7% Pb at a 578 feet depth was in the 5 tan oolitic zone; and an indicative run of 23.1 feet of 1.8% Pb at a 603 depth was in the 7 reef zone. The results of this hole indicate a possibility of ore associated with a granite high to the north and west, and further indicate a necessity for prospecting in these directions.

57VC68, an indicative hole, is located 1800 feet west and slightly north of the above pay hole. It bottomed at a depth of 681 feet in 18 feet of granite which is approximately at the base of the Bonneterre horizon. This hole further enlarges known area of high granite and enhances the possibility of associated ore. The mineralized run was estimated at 3.2 feet of 3.0% Pb at a 525 feet depth, and was in the upper 7 reef zone.

57VC70, a trace hole, is located 5,000 feet southeast of the village of Courtois. It bottomed at a depth of 785 feet in 8 feet of Lamotte sandstone. The traces of mineralization were scattered through the lower 5 brown-spotted, oolite zone and the upper 7 reef zone; 0.1 feet of trace lead at 574 feet depth, 0.1 feet of trace lead at 591, 0.2 feet of trace lead at 614 feet depth were the estimates of the best of the mineralization.

Started 7-30-57

FORM 1173-2-54

1

DATE BOTTOMED 8-1-57	ST. NO. VC-27	ST. ELEV.	CLASS TRACE
DESCRIBED BY C. A.	AREA COURTOIS		HOLE NO. 57VC 60
DATE ESTIMATED 8-6-57	OPTION NO. CZ-93		ELEVATION COLLAR 978.99
BY C. A.	TRACT Emma Payne		COORDINATES: N 117592.39 E 90405.99
			200 FT. MAP NO. 46 PV 50 FT. MAP NO. NW¼-NW¼-Sec 8

MINERALIZATION RECORD 1100S 1170E T35N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 2.0 FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	115	864
SLEEVE BIT TO		
BEGAN CORING AT	115	864
SAVED CORES FROM	340	639
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "	168	811
DAVIS (C.B.-S.B.) "	340	639
BONNE TERRE "	606	373
B. T. TRANS. "	608	371
CONGLOMERATE "		
LA MOTTE "	625	354
GRAN. OR POR. "		
PICTURES: FROM	340	639
TO	625	354
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	CORE REC. TO	CORES LOST
												345	
	437.0	437.3	541.7	0.3		TR						369	—
	439.6	439.9	539.1	0.3		TR						375	2.0
	466.3	466.4	512.6	0.1		TR						545	—
	503.8	504.0	475.0	0.2		TR					Frost - : FeS	549	1.0
	506.8	507.0	472.0	0.2	19.6	6.0	3.9	0.37	1.0	0.07	Seam	625	—
	507.0	508.6	470.4	1.6		TR							
	508.6	509.8	469.2	1.2	1.3	1.0	1.6		TR		dis.		
	511.1	511.3	467.7	0.2	5.1	4.0	1.0		TR		< THIN RB'S		
	513.1	513.3	465.7	0.2	5.7	3.0	1.1				: FeS2		

205

RW

PC.OK

FORM 9002-R-5-55

ROCK CLASSIFICATION

LS PAGE No. 1

DESCRIBED BY [illegible] DATE [illegible] MINE [illegible] STOPE STAKE NO. VC 27 HOLE NO. 57VC 60

COLLAR ELEV. 978. PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
115	863	BEGAN CORING	
169	810	DENLY LIMESTONE	(168)
340	638	LANSING SHALE - 1' DENLY [illegible]	(340)
		LANNE FERRE	
391	587	1	LT>0: Dense ll => [illegible] patches >0: base TGT/GT/F - tight >pits & [illegible] >fract 347 to 351 - [illegible] style >0 F < [illegible] patches > [illegible] 375 to base - also > dense / [illegible] - (391)
423	575	1-1	GT>0 [illegible] - [illegible] style - [illegible] - p2 > [illegible] - 1' alt dense / - (423)
449	529	5	GT>0 [illegible] - LGM - [illegible] - [illegible] - style - >0 - > [illegible] & Ca - 2' [illegible] LGM [illegible] @ 439 - 4' [illegible] 2' [illegible] finish GM @ base - (449)
463	515		GTGEM [illegible] - > [illegible] patches - [illegible] fract - 2" 0 app @ 459 & 463 - (463)
476	502		GTp2 0: Dense - basically p2 0 - 2' base LGTE 469 & 11' @ 472 - 1' GT > dense @ 475 - [illegible] Ca - (476)
522	456	7	F GT MG: GTG [illegible] F - M > G & to 477 - 1' base GT w/ 1" PL & top 500 - p2 GT [illegible] p2 < 0 to 505 w/ 6" dense GT = 503 - [illegible] F [illegible] p2 w/ < G & matrix [illegible] base > fract - [illegible] 4 to 513 - (522)
545	433	12-7	TGGTMG: F - T & GT > G & top to 529 - 1' F [illegible] G & @ 530 - GT > G & 530 to 534 - [illegible] F [illegible] 4 to 537 - fract 533 to 539 - GT > 0 539 to 541 - 1' F @ 542 - GT > 0 < th [illegible] = [illegible] app [illegible] M 542 & 544 - 1' [illegible] F @ base - (545)
578	400	12-10	GTGEM: F - Basically GTGEM [illegible] w/ 2' p2 Thin / T @ 551, 555, 6" @ 558, 564, 2' @ 570, 2' @ 574 - 1' clean > pit G & GTO @ 576 & 1' @ base - (578)
595	383	11	LGM [illegible] LS: GTo - Basically LGM [illegible] highly [illegible] w/ 1' style & GTO @ 599 & 581 - [illegible] / [illegible] to 583 - Ca & [illegible] (595)

FORM 9002-W-5-55

ROCK CLASSIFICATION

Page No. [illegible]

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

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

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
		BEGAN CORING	
606	372	18	GTM — [illegible]
615	370	19	GTD — [illegible]
625	353	20	WS — [illegible]

FORM 1173-2-54 Date Started 8-1-57 20 SPECK

DATE BOTTOMED 8-7-57	ST. NO. VC-32 ST. ELEV.	CLASS TRACE	HOLE NO. 57VC61
DESCRIBED BY C. A.	AREA COURTOIS	ELEVATION COLLAR 981.79	
DATE ESTIMATED 8-8-57	OPTION NO. CZ-66	COORDINATES: N 114963.07	E 85406.67
BY C. A.	TRACT HASKELL MASON	200 FT. MAP NO. 45	50 FT. MAP NO.

NE¼-SW¼-SEC 7

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 24" FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	155	827
SLEEVE BIT TO		
BEGAN CORING AT	115	867
SAVED CORES FROM FORMATIONS:		
SOIL TO	6	976
EMINENCE "		
POTOSI "	105	877
POTOSI-DERBY "		
DERBY DOE RUN "	193	789
DAVIS (C.B.-S.B.) "	361	621
BONNE TERRE "	627	355
B. T. TRANS. "	—	
CONGLOMERATE "		
LA MOTTE "	635	347
GRAN. OR POR. "		
PICTURES: FROM	357	625
TO	635	347
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 1460'N 1270'E T35N-R1W

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS
SGTO	472.9	473.0	508.8	0.1		TR	✓				
10:12	617.0	617.3	364.5	0.3		TR	✓				

CORE REC.

TO	CORES LOST
<FRACTURING 115	
SPECK TRS. 195	
345	PLUG
475	—
495	3.0
515	5.0
535	9.0
545	5.0
565	2.0
575	6.0
595	14.0
635	—

205

RCW

PL. 6 K

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE [illegible] ~~MINE~~ Consumer STOPE STAKE NO. VC-32 HOLE NO. 57VC61

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] (113) (361)
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	1	[illegible]
[illegible]	[illegible]	[illegible]	[illegible] (418)
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible] (479)
[illegible]	[illegible]	7	[illegible] (595)
627	354	10:12	[illegible] (627)
[illegible]	346	20	[illegible] (635)

FORM 1173-2-84

15

DATE STARTED - 8-5-57

DATE BOTTOMED 8-7-57 | ST. NO. VC-45 | ST. ELEV. | CLASS TRACE | HOLE NO. 57VC62

DESCRIBED BY C.A. | AREA Courtois | ELEVATION COLLAR 1076.41

DATE ESTIMATED 8-12-57 | OPTION NO. CZ-85 | COORDINATES: N 117940.36 E 91909.48

BY C.A. | TRACT Curtis Hensley | 200 FT. MAP NO. 36 | 50 FT. MAP NO.

NW¼-NE¼-SEC 8

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 18" FT.

FORM BOTT. SL.

		DEPTH	ELEV.
DRILLED WITH:			
CHURN DRILL TO		225	851
SLEEVE BIT TO			
BEGAN CORING AT		225	851
SAVED CORES FROM FORMATIONS:			
SOIL	TO	53	1023
	"		
EMINENCE	"		
POTOSI	"	210	866
POTOSI-DERBY	"		
DERBY DOE RUN	"	276	800
DAVIS (C.B.-S.B.)	"	444	632
BONNE TERRE	"	696	380
B. T. TRANS.	"	701	375
CONGLOMERATE	"		
LA MOTTE	"	705	371
GRAN. OR POR.	"		
PICTURES:	FROM	439	637
	TO	705	371
CHAR. SAMPLES:	FROM		
	TO		
INSOL. RES.:	FROM		
	TO		
OPENINGS AT			

MINERALIZATION RECORD 735'S 2570'W T35N-R1W

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS	TO	CORES LOST
5	527.0	527.1	549.3	0.1		TR						225	
GT7M	565.0	565.1	511.3	0.1		TR						285	—
"	566.1	567.0	509.4	0.9	1.3	1.5	✓			1.2		425	PLUG
F	572.0	572.2	504.2	0.2		TR	✓					705	—
"	580.9	581.0	495.4	0.1		TR							

205

RGW

OK

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE [illegible] MINE [illegible] STOPE ..... STAKE NO. [illegible]-45 HOLE NO. 57VC [illegible]

COLLAR ELEV. 1076 [illegible] PITCH ..... BEARING ..... COORD.: N ..... E .....

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
225	[illegible]		BEGAN CORING
276	[illegible]		DERBY (276)
414	[illegible]		DAVIS HILLE - [illegible] (414)
			BONNEVILLE
476	[illegible]	1	[illegible] (476)
[illegible]	[illegible]	[illegible]	[illegible] (575)
547	[illegible]	[illegible]	[illegible] (547)
561	597		GT. MH - [illegible] - 4' [illegible] - [illegible] - GT [illegible] - [illegible] - 6" [illegible] (561)
575	481		FXT-MC1 [illegible] - F w/ GT [illegible] - 1' [illegible] - [illegible] - (575)
602	474		GTG10 - [illegible] - [illegible] - 1' [illegible] - (602)
617	459	7	FT/GT-10-M - GT>0 - [illegible] F w/ G10 matrix 602 to 611 - 2' [illegible] GT>0 @ 611 - 2" very smoky w/ bright F > fragmental [illegible] 613 - lightly F w/ >0 w/ G1 matrix to 617 w/ scale 1/2 RQD - (617)
632	444	7-10	FT/GT-MC1 & T&GT0 - [illegible] to 625 - F w/ GTC1 >M matrix 625 to 627 - GT>0 629 631 - F & C1 632 - (632)
671	435	10-12	[illegible] & GTGEM - GT [illegible] 632 to 647 - GTGEM - >H 647 to 665 - [illegible] 662 - GTM - 662-665 - [illegible] 665 to [illegible] - (671)

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE 8-[illegible]-57 MINE Courtenay STOPE STAKE NO. VC #4 HOLE NO. 57 VC 62

COLLAR ELEV. 1076 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
		BEGAN CORING	
676	380	12	GTGEM — [illegible] highly [illegible] — [illegible] — [illegible] effervescent 682 ft. 6 ft — [illegible] Ca f — 1/16" lines. Gabbroid Bottom @ 674 — < fine Ca spotting 682 ft base — (676)
701	375	13	SGT — NYI & Rock fract — fine sand & silt inclus — h. v. NAC & [illegible] appearance — this hole — Ca 1 — 1" & [illegible] & base — (701)
705	371	20	WS — clean fine grain — [illegible] of VC 702 — (705)

Started 8-8-57

15

FORM 1173-2-54

DATE BOTTOMED 8-12-57	ST. NO. VC-30 ST. ELEV.	CLASS TRACE	HOLE NO. 57VC63
DESCRIBED BY C.A.	AREA Courtois	ELEVATION COLLAR 1002.80	
DATE ESTIMATED 8-15-57	OPTION NO. CZ-85	COORDINATES: N 116836.87	E 93012.14
BY C.A.	TRACT CURTIS HENSLEE	200 FT. MAP NO. 46 Pl	50 FT. MAP NO.

SE¼-NE¼-Sec 8 T35N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 2.0 FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	137	866
SLEEVE BIT TO		
BEGAN CORING AT	155	848
SAVED CORES FROM	365	638
FORMATIONS:		
SOIL TO	10	993
"		
EMINENCE "		
POTOSI "	130	873
POTOSI-DERBY "		
DERBY DOE RUN "	198	805
DAVIS (C.B.-S.B.) "	370	633
BONNE TERRE "	625	378
B. T. TRANS. "	632	371
CONGLOMERATE "		
LA MOTTE "	644	359
GRAN. OR POR. "		
PICTURES: FROM	359	644
TO	644	359
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 1800 S 1440 W

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS Pl
	430.7	431.7	571.1	1.0		TR.	✓				
	434.0	435.2	567.6	1.2		TR	✓				
	436.4	436.7	566.1	0.3		TR.					
	438.6	438.7	564.1	0.1		TR.					
	446.7	448.5	554.3	1.8	3.4	2.0	✓			6.1	< FeS2
	464.0	464.1	538.7	0.1		TR					
	469.6	469.8	533.0	0.2		TR					

CORE REC. TO	CORES LOST
155	
215	—
365	Plug
435	—
445	4.0
452	1.0
644	—

205

PLW

Pl. OK.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY GA DATE 3-13-57 MINE COURTOIS STOPE STAKE NO. VC-30 HOLE NO. 57 VC-3

COLLAR ELEV. 1002. PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
155	867	BEGAN CORING	
198	804	DERBY DOE RUN	(198)
360	632	DAVIS SHALE — 1' Derby Davis transition @ 203 —	(360)
		BONNE TERRE	
421	581	1	T-O: Dense/ - T-> massive 370 to 397 - wing/ and muggy 397 to 409 - dense/ - 1' wing and muggy 409 to 419 - > M/ opp 415 (421)
431	571	5-1	GT>O dense/ -> B/ - > porous - > small porous B/ - stp - > [illegible] 1' > clear the [illegible] opp 4' > Blank G/ muggy @ base L > M/ [illegible] (431)
475	527	5	LGBO<B/ > Blk GM - Porous & muggy - > Brownish cast Blank - < porous B/ and pot. h. - Fe S @ 443 - 2" G/ [illegible] > fractured > [illegible] 447 to 449 - O increasing slightly [illegible] - GT > [illegible] opp 469 to 473 - 2' < porous O/ Brownish G/ base - Tr. Pb @ 470 - (475) (4' 9" 435 to 445 - 1' 9" 445 to 452)
493	509		F/LFG/ > M/ p2GTG/ : GB — M -> E porous ref/ stained 475 to 483 - [illegible] GT < G/ > K/ 483 to 487 - F/GTpGG/ 487 to 491 - GB crepe > M [illegible] (493)
507	495		Dense LGT>O : Thin/ T - Dense massive LGT>O > fr. set 493 to 504 [illegible] 1' increasing slightly toward base also > Thin Blank GM/ [illegible] 504 - p/ to thin GT/ 504 to 507 - (507)
538	464	7	>Fp2GT>G/ tp2G/ - Dimly F sparsely ref/ stained porous and [illegible] F slightly stronger 515 to 523 - very porous G/ [illegible] 1' brecciated opp possibly ref/ debris 530 - 1' [illegible] porous and muggy entirely dimly F opp 531 to [illegible] 1' thin/ T. opp > muggy @ 534 (538)
576	426	7-10	T&GTO : F - T&GTO 538 to 546 - F > porous G/ 546 to 550 - GT > [illegible] and massive 550 to 561 - F sparsely 561 to 564 - GT [illegible] 2' T thin/ > crepe stained < 574 - 2' > F sparsely @ base - (576)
603	399	10-12	GTM — T. - Dominantly GTM crepe w/ 6" T. sections @ 584, 590, 594, 598, 600, 603 (603)

FORM 9002-R-5-55

ROCK CLASSIFICATION

PAGE No. 2

DESCRIBED BY [illegible] DATE 3-15-57 Courtois STOPE STAKE NO. VC-30 HOLE NO. 57VC63

COLLAR ELEV. 1002 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
		BEGAN CORING	
625	377	12	CTM — red heavily M & crepe — > pitted — > G & faint B & — M decreasing 616 to base — fissel 2' only > M & crepe — (625)
632	370	19	LGMB — slightly sand lay to 628 — Mel 630 — ED 630 to base — Buggy — > F.S pitted 630 to base — (632)
644	358	20	W — clean med fine grain — > scattered shale partings — (644)

15

FORM 1173-2-54

DATE BOTTOMED 8-15-57	ST. NO. VC-37 ST. ELEV.	CLASS TRACE	HOLE NO. 57VC64
DESCRIBED BY CA.	AREA COURTOIS	ELEVATION COLLAR 1056.01	
DATE ESTIMATED 8-19-57	OPTION NO. CZ-85	COORDINATES: N 117073.65	E 94039.98
BY CA.	TRACT PAUL THOMPSON	200 FT. MAP NO. 46	50 FT. MAP NO.

MINERALIZATION RECORD 1550 S 415 W. SE¼-NE¼-Sec 8 T35N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 2.67 FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	130	926
SLEEVE BIT TO		
BEGAN CORING AT	175	881
SAVED CORES FROM	345	711
FORMATIONS:		
SOIL TO	20	1036
"		
EMINENCE "		
POTOSI "	120	936
POTOSI-DERBY "		
DERBY DOE RUN "	180	868
DAVIS (C.B.-S.B.) "	345	711
BONNE TERRE "	531	525
B. T. TRANS. "		
CONGLOMERATE "		
LA MOTTE "		
~~GR-24, GR~~ POR. "	538	518
PICTURES: FROM	345	711
TO	53[illegible]	51[illegible]
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	CORE REC. TO	CORES LOST
												175	
	402.0	402.7	653.3	0.7		TR	✓					195	–
	414.0	414.2	641.8	0.2		TR						335	PLUG
	419.0	419.8	636.2	0.8	1.4	1.0	✓			1.1	Very filling	531	–
	421.6	421.7	634.3	0.1	2.3	1.5	✓			0.2		532	0.4
	436.0	436.1	619.9	0.1		TR						533	0.4
	456.0	456.2	599.8	0.2		TR.						534	–
	458.2	458.4	497.6	0.2		TR						538	–
	459.7	459.8	496.2	0.1		TR							
	476.0	476.2	579.8	0.2		TR							

205

RGW

Pl. OK

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE 8-17-57 MINE Coniston STOPE STAKE NO. VC 37 HOLE NO. 59 VC 64

COLLAR ELEV. 1054 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
175	879	BEGAN CORING	
188	866	DERBY DIKE RUN	(188)
345	709	DAVIS SHALE	(347)
		BONNETERRE	
393	661	1	GT>O Dens GT Styl - Styl GT>O - a [illegible] 347 to 377 - dense GT mostly < styl 377 to base Ca 1 [illegible] patches - (393)
401	653	5-1	GT>O Bg: Dens [illegible] - [illegible] - (401)
441	613	-	GB>O w/ [illegible] GM>[illegible] 1-21 [illegible] - [illegible] 1½ [illegible] - > [illegible] - [illegible] 1½ [illegible] 1 to [illegible] @ 420 - [illegible] 420 to base [illegible] - (441)
463	591		GTG>O: Dens GT > Brecc - [illegible] 441 to 451 - [illegible] 451 to 453 - GTG [illegible] > [illegible] 453 to 458 - [illegible] 458 to 461 - 2' [illegible] base - (463)
513	541		GTO: Dens [illegible] > F [illegible] - [illegible] styl GT > Ca [illegible] patches [illegible] to 477 - [illegible] F [illegible] 477 to 487 - [illegible] styl 487 to 513 w/ 1' [illegible] @ 504 - (513)
531	523		F > GTG > M: [illegible] F 513 to 521 w/ dense GT - GT [illegible] F w/ GT [illegible] 521 to base - appears to be [illegible] 527 to base - (531)
534	510	21	DARK PORPHYRY > PURPLE - high angle fracturing - > [illegible] 531 to 534 - (538)

FORM 1173-2-54

20

DATE BOTTOMED 8-15-57	ST. NO. VC-33 ST. ELEV.	CLASS TRACE	HOLE NO. 57VC65
DESCRIBED BY C.A.	AREA Courtois	ELEVATION COLLAR 1132.53	
DATE ESTIMATED 8-19-57	OPTION NO. CZ-63	COORDINATES: N 116060.92	E 84265.22
BY C.A.	TRACT G[redacted]s C.H. WILLHITE	200 FT. MAP NO. 45	50 FT. MAP NO. NW¼-SW¼-Sec 7
		2530 N 125E	T35N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 2.17 FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	255	878
SLEEVE BIT TO		
BEGAN CORING AT	485	648
SAVED CORES FROM	485	648
FORMATIONS:		
SOIL TO	50	1083
"		
EMINENCE "		
POTOSI "	230	903
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	488	645
BONNE TERRE "	752	381
B. T. TRANS. "	766	367
CONGLOMERATE "		
LA MOTTE "	785	348
GRAN. OR POR. "		
PICTURES: FROM	485	648
TO	785	348
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

205

Run

MINERALIZATION RECORD

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS	TO	CORES LOST
												485	
	523.2	524.0	608.5	0.3		TR					fract.	525	—
	540.2	540.7	591.8	0.5		TR.					"	535	2.0
	594.0	594.1	538.4	0.1		TR						555	—
	626.0	626.3	506.2	0.3		TR						571	4.0
	643.8	644.0	488.5	0.2		TR						645	—
	712.5	713.5	419.0	1.0		TR ✓						655	6.0
	714.4	714.6	417.9	0.2	3.4	4.0 ✓				0.7	diss.	765	—
	715.4	716.6	415.9	1.2		TR ✓						785	4.0
	737.3	742.8	389.7	5.5		TR ✓							
	755.0	755.3	377.2	0.3		TR							

CORE REC.

Ck.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE [illegible]-11-57 MINE COURTOIS STOPE STAKE NO. UC 33 HOLE NO. 7UC65

COLLAR ELEV. 1131 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
485	646	BEGAN CORING	
538	643	DAVIS SHALE BONNETERRE	
543	588	1	[illegible]
555	576	1-5	[illegible]
591	550	5	[illegible]
623	508	5	[illegible]
710	421	7	[illegible]
723	408	7-10	[illegible]
732	379	10-11	[illegible]
757	374	19	[illegible]
766	365	19-20	[illegible]
785	346	20	[illegible]

20

FORM 1173-2-54

DATE BOTTOMED	ST. NO. VC-34 ST. ELEV.	CLASS TRACE	HOLE NO. 57VC 66
DESCRIBED BY C.A.	AREA COURTOIS	ELEVATION COLLAR 1096.41	
DATE ESTIMATED 8-22-57	OPTION NO. CZ-67	COORDINATES: N 117565.53	E 84653.55
BY C.A.	TRACT G. D. EVANS	200 FT. MAP NO. 45	50 FT. MAP NO. NW¼-NW¼-Sec. 7

GENERAL HOLE DATA — MINERALIZATION RECORD 1190 S 510 E T35N-R1W

HT. SLEEVE ABOVE GR 1.0 FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	126	970
SLEEVE BIT TO		
BEGAN CORING AT	325	771
SAVED CORES FROM	336	760
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "	173	923
DAVIS (C.B.-S.B.) "	336	760
BONNE TERRE "	428	668
B. T. TRANS. "		
CONGLOMERATE "	446	650
REEF	472	624
LA MOTTE "		
GRAN. ~~GR. POR.~~ "	485	611
PICTURES: FROM	325	771
TO	485	611
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
												325	
	370.2	370.9	725.5	0.7		TR.					Fract. Pb	355	—
	373.4	373.9	722.5	0.5	1.2	1.0	✓			0.6	" "	369	1.0
	373.9	375.9	720.5	1.0		TR	✓				Scat. Specks	377	1.0
	375.9	376.5	719.9	0.6	2.0	2.0	✓			1.2	Fract Pb.	385	2.0
	396.0	398.1	698.3	2.1		TR	✓				" "	392	1.6
												405	5.0
												485	—

205

Kwl

Pl. OK

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE 5-22-57 MINE [illegible] STOPE ..... STAKE NO. JC 34 HOLE NO. 57JC66

COLLAR ELEV. 1096 PITCH ..... BEARING ..... COORD.: N ..... E .....

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
3.25	771		BEGAN CORING
336	760		BLUE SHALE (336)
			INTERBED
371	725	1	TUFF [illegible] - 2 pieces 336 to 355 - broken GT 355 to 371 - 2 pieces - (371)
387	709	1-2	GRAPHITIC [illegible] - 5 types w/ [illegible] - 1 piece [illegible] - 2 pieces - 2 pieces 373 [illegible] 377 - 2 pieces 377 to base - (387)
415	681	2	GD & BX - 2 pieces - small [illegible] - 2 pieces + broken - 2 [illegible]
428	668	5	TUFF - med [illegible] styles - 2 pieces - 3' - GD & base - 2 pieces - (428)
446	650	1-3	Pol GRANITE COBBLES & GRIT / Med & G & mottling - 2 pieces ref - G & W - grit @ 430 - cobbles, grit & ref @ 434 - 1 ref @ 435 - cobbles, grit & ref 435 to 441 - cobbles & grit w/ 2nd date 441 to [illegible] - ref and grit 443 to 446 - (446)
472	624	1-3	NIBA [illegible] - grit - + ref w/ GT G & mottled - 2 BX - empty - grit 0447, 450, 457, and 471 - 2 Ba & - (472)
485	611	2-1	Pol GRANITE - Slight Pyrite content - Thin G dolomite band @ 45° to core axis - Thin [illegible] & 180 - (485)

Started 8-16-57

15

FORM 1173-2-54

DATE BOTTOMED	ST. NO. VC-26	ST. ELEV.	CLASS BLANK HOLE NO. 57VC67
DESCRIBED BY C.A.	AREA Courtois		ELEVATION COLLAR 1054.89
DATE ESTIMATED 8-26-57	OPTION NO: CZ-98		COORDINATES: N 115343.05 E 92550.05
BY CA	TRACT Ed. Heath.		200 FT. MAP NO. 46 PO 50 FT. MAP NO. NW¼-SE¼-Sec 8

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 2.50 FT.

FORM BOTT. SL.

MINERALIZATION RECORD 1950 N 1890 W, T35N-R1W

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	255	800
SLEEVE BIT TO		
BEGAN CORING AT	255	800
SAVED CORES FROM	469	586
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "	298	757
DAVIS (C.B.-S.B.) "	469	586
BONNE TERRE "	726	329
B. T. TRANS. "	731	324
CONGLOMERATE "		
LA MOTTE "	745	310
GRAN. OR POR. "		
PICTURES: FROM	460	595
TO	745	310
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
460	
465	—
475	2.0
495	16.0
505	6.0
511	2.0
523	—
543	5.0
548	1.0
551	2.0
745	—

205

Pl. OK

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE 2-22-57 MINE VIRTOLA STOPE STAKE NO. UC-26 HOLE NO. 57VC67

COLLAR ELEV. 1053 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
[illegible]	798	BEGAN CORING	
[illegible]	755	[illegible]	(298)
461	584	[illegible]	(469)
		[illegible]	
[illegible]	530	1	[illegible]
[illegible]	510	[illegible]	[illegible]
[illegible]	484	[illegible]	[illegible]
[illegible]	456		[illegible]
611	442		[illegible]
628	425		[illegible]
658	395		[illegible]
675	378		[illegible]
706	347	10-12	[illegible]
726	327	12	[illegible]
731	322	19	[illegible]
745	308	[illegible]	[illegible]

FORM 1173-2-54

Started 8-20-57

20

DATE BOTTOMED 8-	ST. NO. VC-43	ST. ELEV.	CLASS INDICATIVE HOLE NO. 57VC68
DESCRIBED BY C.A.	AREA COURTOIS		ELEVATION COLLAR 1078.31
DATE ESTIMATED 8-28-57	OPTION NO. CZ-67		COORDINATES: N 117966.52 E 86147.68
BY C.A.	TRACT G.D. EVANS		200 FT. MAP NO. 35 50 FT. MAP NO.

NE¼-NW¼-Sec 7 T35N-R1W.

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 3.0 FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	165	913
SLEEVE BIT TO		
BEGAN CORING AT	165	913
SAVED CORES FROM	379	699
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	379	699
BONNE TERRE "	635	443
B. T. TRANS. "		
CONGLOMERATE "	651	427
LA MOTTE "		
IGNEOUS GRIT.	663	415
GRAN. [redacted]. "	681	397
PICTURES: FROM	379	699
TO	681	397
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 770 S 201 S E

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS	CORE REC. TO	CORES LOST
												165	-
	522.0	525.2	553.1	3.2	4.5	3.0	✓			14.4		225	-
	527.2	527.6	550.7	0.4	0.1	1.0				0.1		375	Plug
	532.5	533.3	545.0	0.8	0.2	1.0				0.2	Fract.	385	-
	537.7	540.6	537.7	2.9	4.0	2.5	✓			11.6		395	5.0
	541.0	541.6	536.7	0.6		TR						663	-
	544.2	544.7	533.6	0.5		TR						681	4.0
	547.0	547.3	531.0	0.3		TR							
	580.5	580.8	497.5	0.3		TR							
	588.0	589.3	489.0	1.3	0.6	2.0	✓			0.8			
	589.7	591.1	487.2	1.4	1.1	1.0				1.5			

205

Rev

RL. OK

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE 5-27-57 MINE COURTOIS STOPE STAKE NO. VC-42 HOLE NO. 57 VC 62

COLLAR ELEV. 1076 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
165	911	BEGAN CORING	
220	856	DERBY	DOE RUN (220)
379	697	DAVIS	SHALE (379)
		BOONE	CHERT
423	653	1	LT>O: Dense [illegible] (423)
434	642	1-5	GT>O [illegible] (434)
471	605	5	GROUT [illegible] 5' to [illegible] (471)
509	567	5	GTO>Gt [illegible] (509)
519	557	5-7	F/GtOtT [illegible] (517)
593	483	7	F/GtOtO>M:GTOGt [illegible] (593)
615	461	7	F/GtM [illegible] (615)
635	441	10-12	GTO>M->GRANITE grit [illegible] (635)
651	425	18	RED GRANITE BOULDER & Co. [illegible] (651)
663	413	—	BROWNISH GREY GRIT [illegible] (663)
681	395	21	RED GRANITE [illegible] (681)

FORM 1173 X 54

Started 8-22-57

15

X

DATE BOTTOMED _____ ST. NO. VC-29 ST. ELEV. _____ CLASS TRACE HOLE NO. 57VC70

DESCRIBED BY C.A. AREA Courtois ELEVATION COLLAR 1105.22

DATE ESTIMATED 8-30-57 OPTION NO. C2-98 COORDINATES: N 114208.30 E 93617.50

BY C.A. TRACT Ed. Heath. 200 FT. MAP NO. 46 50 FT. MAP NO. _____

840N 830W SE¼-SE¼-Sec8 T35N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 0.83 FT.

FORM BOTT. SL. _____

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	230	875
SLEEVE BIT TO		
BEGAN CORING AT	230	875
SAVED CORES FROM	495	610
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "	345	760
DAVIS (C.B.-S.B.) "	511	594
BONNE TERRE "	773	332
B. T. TRANS. "	777	328
CONGLOMERATE "		
LA MOTTE "	785	320
GRAN. OR POR. "		
PICTURES: FROM	511	594
TO	785	320
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

205

MINERALIZATION RECORD

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS
	574.0	574.1	531.1	0.1		TR					Vug Filling
	591.0	591.1	514.1	0.1		TR					
	594.5	594.7	510.5	0.2		TR					
	614.0	614.2	491.0	0.2		TR					

CORE REC.

TO	CORES LOST
230	–
621	–
627	1.0
687	..
691	2.0
785	–

Kell

Clark

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE [illegible]-57 MINE Courtois STOPE ..... STAKE NO. VC-[illegible] HOLE NO. 57VC TO

COLLAR ELEV. 1105 PITCH ..... BEARING ..... COORD.: N ..... E .....

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
220	875	BEGAN CORING	
275	766	DERBY DREAM	[illegible] @ 267, 275, 290, (345)
311	594	[illegible]	
		[illegible]	
562	543	1	[illegible]
573	532	[illegible]	[illegible]
595	510	[illegible]	[illegible]
621	484	[illegible]	[illegible]
694	411	[illegible]	[illegible]
747	358	7	[illegible]
773	332	[illegible]	[illegible]
777	[illegible]	[illegible]	[illegible]
785	[illegible]	[illegible]	[illegible]

Started 8-27-57

20

FORM 1173-2-58

DATE BOTTOMED 8-30-57 | ST. NO. VC-35 | ST. ELEV. | CLASS Pay | HOLE NO. 57VC71

DESCRIBED BY C.A. | AREA Courtois | ELEVATION COLLAR 1097.21

DATE ESTIMATED 9-3-57 | OPTION NO. CZ67 | COORDINATES: N 117517.66 E 87902.09

BY C.A. | TRACT G. D. Evans | 200 FT. MAP NO. | 50 FT. MAP NO. NW¼-NE¼-Sec 7

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 1.50 FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	200	897
SLEEVE BIT TO		
BEGAN CORING AT	245	852
SAVED CORES FROM	419	678
FORMATIONS:		
SOIL TO	75	1022
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "	170	927
DERBY DOE RUN "	253	844
DAVIS (C.B.-S.B.) "	419	678
BONNE TERRE "	687	410
B. T. TRANS. "	689	408
CONGLOMERATE "		
LA MOTTE "	695	402
GRAN. OR POR. "		
PICTURES: FROM	419	678
TO	695	402
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

205

MINERALIZATION RECORD 1150 S 1240 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
	498.0	448.1	649.1	0.1		TR						245	
	462.8	463.0	634.2	0.2		TR					Frost.	275	=
	560.8	561.0	536.2	0.2		TR					Speck.	419	PLUG
	564.7	565.2	532.0	0.5	13.7	8.0	6.8				< diss.	695	—
	565.2	566.6	530.6	1.4	0.6	1.0	0.8				> diss.		
	569.0	571.3	525.9	2.3		TR							
	571.3	574.7	522.5	3.4	9.1	7.0	30.9		11.9-4.3		< diss.		
	574.7	575.3	521.9	0.6		TR							
	575.3	576.6	520.6	1.3	10.0	12.0	13.0		14.1-2.7				
	576.6	579.8	517.4	3.2		TR							
	579.8	580.4	516.8	0.6	4.9	6.0	2.9						
	580.4	585.6	511.6	5.2	1.6	1.0	8.3		8.6-1.6				
	585.6	588.4	508.8	2.8	0.8	2.5	2.2	0.14	0.5	0.39			
	589.6	594.1	503.1	4.5	0.3	1.0	1.4						
	594.1	597.6	499.6	3.5	1.2	2.0	4.2		13.3-0.6				
	598.4	599.4	497.8	1.0	1.9	3.0	1.9	0.0	0.5				
	600.7	602.9	494.3	2.2	0.5	2.0	1.1						

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE [illegible] MINE [illegible] STOPE [illegible] STAKE NO. VC [illegible] HOLE NO. 57VC T[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]	[illegible]	[illegible] (253)
111	[illegible]	[illegible]	(119)
[illegible]	[illegible]	1	[illegible]
111	[illegible]	[illegible]	[illegible] (474)
[illegible]	[illegible]	[illegible]	[illegible] (525)
[illegible]	[illegible]	[illegible]	[illegible] (561)
[illegible]	[illegible]	7	[illegible]
[illegible]	[illegible]	7-10	[illegible]
656	[illegible]	7-12	[illegible]
667	478	11	[illegible]
[illegible]	410	12	[illegible] (687)
689	408	11	[illegible] (689)
[illegible]	402	20	[illegible] (695)

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DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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15	Com	100
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P. O. Box 431
Joplin, Missouri
October 10, 1957

DMEA Operating Committee
Department of the Interior
Room 4459
Washington 25, D. C.

Re: DMEA-4582
St. Joseph Lead Co.
Courtois, Washington County, Mo.
Project Contract Idm-E1068

Dear Sirs:

Submitted herewith are three copies of the Interim Report from Dewey Amos October 4 on the joint Field inspection he and I made at this project September 26.

This project is still in the preliminary phase in so far as reasonably indicating an ore deposit that would be mineable, particularly under the present lead price. The ore discovered in the widely separated five pay holes and four indicative holes under the Contract drilling to date, however, appears to assure that eventual certification will be warranted when those discoveries reasonably have been delineated and sampled.

Since starting that Stage II drilling on parts of the now inferred large deposit one-half mile south of the village of Courtois, the Operator has found sufficient exploration encouragement so that some of its short-term options there have been exercised.

Little difficulty has been experienced in any of the drilling on this or the adjacent two projects of this Operator (DMEA Contracts Idm-E1064 and -E1073) but the project work has been slowed, with the Field Team's endorsement, because priority was given the past two months for use of much of the available drilling equipment on development of the Operator's best-appearing ore deposit in the Czar Knob area. No doubt this project work will be speeded up in the near future, particularly after data from sufficient preliminary holes become available for preparation of a reasonably accurate subsurface structure map.

Sincerely yours,

Clinton C. Knox

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

Pete

encl.(3)

cc: DMEA Op.Com.(2)
Amos,USGS,w/2 copies of Interim
Chester,USBM,w/2 copies of Interim
4582 file w/2 copies of Interim

Orig. - Works.

RECEIVED
MINERALS TECHNOLOGY
DIVISION

BUREAU OF MINES
JOPLIN, MO.

CCA.

INTERIM REPORT

DMEA-4502, Idm-E1068

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

Location: Courtois Area, Washington County, Missouri

A project inspection of the subject contract was made on September 26, 1957. Results obtained to date and future work plans were discussed with Mr. Marvin Winkel, Geologist.

Diamond drilling completed on the Courtois project to date and since the last inspection on August 29, 1957, is summarized as follows:

Footage in holes completed since last inspection.	6,624
Total footage in holes completed to date	31,100 ✓
Number of holes completed since last inspection. .	10
Total number of holes completed to date	49 ✓
Number of holes showing commercial ore	5 ✓
Number of holes showing non-commercial indicative mineralization.	4
Number of holes showing trace mineralization . . .	37
Number of holes showing speck trace mineralization	2
Number of barren holes	1

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The ten holes completed since the date of the last inspection are summarized as follows:

Hole No.	Location	Depth	Remarks
VC-29	NW¼, SE¼, NE¼, sec. 8	785 ft.	Trace hole
VC-35	SE¼, NW, NE¼, sec. 7	695 ft.	Ore hole (see assay results)
VC-39	NE¼, SE¼, NE¼, sec. 8	628 ft.	Trace hole
VC-40	SW¼, NE¼, NW¼, sec. 8	685 ft.	Trace hole
VC-53	NW¼, NE¼, NE¼, sec. 8	705 ft.	Indicative hole
VC-61	NW¼, SE¼, NE¼, sec. 7	640 ft.	Trace hole
VC-62	NE¼, SW¼, NE¼, sec. 7	625 ft.	Trace hole
VC-63	NE¼, SW¼, NE¼, sec. 7	615 ft.	Trace hole
VC-46	SW¼, NW¼, NE¼, sec. 13	765 ft.	Estimated trace hole
VC-38	NE¼, SE¼, NE¼, sec. 8	681 ft.	Trace hole

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

Hole No.	Location	Present Depth	Estimated Total Depth
VC-51	SW¼, SW¼, SW¼, sec. 4	285 ft.	750 ft.

The churn drill portions of 6 holes has been completed since the last interim inspection. A summary of these holes is as follows:

Hole No.	Location	Depth to Bottom of Churn Drilling
VC-41	NE¼, NE¼, SE¼, sec. 8	305 ft.
VC-42	SE¼, SW¼, NW¼, sec. 9	275 ft.
VC-50	NW¼, SW¼, NW¼, sec. 9	185 ft.
VC-51	SW¼, SW¼, SW¼, sec. 4	200 ft.
VC-53	NW¼, NE¼, NE¼, sec. 8	145 ft.
VC-64	SE¼, NW¼, SW¼, sec. 4	210 ft.

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

Hole No.	Location	Present Depth
VC-49	SW¼, NW¼, NW¼, sec. 9	45 ft.
VC-52	NW¼, SE¼, SE¼, sec. 5	135 ft.
VC-67	SW¼, NW¼, SW¼, sec. 33	170 ft.
VC-70	NW¼, NW¼, SW¼, sec. 34	330 ft.

Assay results of recently completed holes are given below:

Hole No.	Depth	%Pb
VC-35	564.7-576.6 ft.	4.3
	579.8-588.4 ft.	1.6
	589.6-602.9 ft.	0.6
VC-53	503.2-504.6 ft.	2.2
	506.8-507.0 ft.	3.7
	508.8-511.1 ft.	3.0

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

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

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DATE	INITIALS	CODE
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INTERIM REPORT

DMEA-4582, Contract Idm-E1068(lead, zinc, copper)

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

Location: Courtois Area, Washington County, Missouri

A project inspection of the subject contract was made on August 29, 1957. Results obtained to date and future work plans were discussed with Mr. Marvin Winkel, Geologist.

Diamond drilling completed on the Courtois project to date and since the last inspection on July 30, 1957 is summarized as follows:

Drilling Completed:

Footage in holes completed since last inspection....	7,161
Total footage in holes completed to date.....	24,276
Number of holes completed since last inspection.....	11
Total number of holes completed to date.....	39
Number of holes showing commercial ore.....	4
Number of holes showing non-commercial indicative mineralization.....	3
Number of holes showing trace mineralization.....	29
Number of holes showing speck trace mineralization..	2
Number of barren holes.....	1

The eleven holes completed since the date of the last inspection are summarized as follows:

Hole No.	Location	Total Depth	Remarks
VC-25	NW¼, NE¼, SE¼, sec. 7	689 ft.	Trace hole
VC-36	SW¼, NW¼, NE¼, sec. 18	628	Trace hole
VC-32	NW¼, SE¼, SW¼, sec. 7	635	Trace hole
VC-33	NW¼, NW¼, SW¼, sec. 7	785	Trace hole
VC-27	SW¼, SW¼, NE¼, sec. 8	625	Trace hole
VC-45	NW¼, NW¼, NE¼, sec. 8	705	Trace hole
VC-30	NE¼, SW¼, NE¼, sec. 8	644	Trace hole
VC-37	NE¼, SE¼, NE¼, sec. 8	539	Trace hole
VC-34	SW¼, NW¼, NW¼, sec. 7	485	Trace hole
VC-43	SE¼, NE¼, NW¼, sec. 7	681	3.2 ft of est 3% Pb at 521.8 to 525 ft.
VC-26	NE¼, NW¼, SE¼, sec. 8	745	Blank

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

Hole No.	Location	Present Depth	Estimated Total Depth
VC-29	NW¼, SE¼, SE¼, sec. 8	680 ft.	810 ft.
VC-35	SE¼, NW¼, NE¼, sec. 7	330	690

The churn drill portions of 11 holes had been completed since the last interim inspection. A summary of these holes is as follows:

Hole No.	Location	Depth	Remarks
VC-30	NE¼, SW¼, NE¼, sec. 8	137 ft.	-
VC-46	SW¼, NW¼, NE¼, sec. 13	262	-
VC-56	NW¼, NW¼, SW¼, sec. 8	112	Stage II hole
VC-57	SE¼, SW¼, NW¼, sec. 8	155	" " "
VC-92	SW¼, NW¼, SW¼, sec. 8	230	" " "
VC-94	SW¼, NW¼, SW¼, sec. 8	185	" " "
VC-97	NE¼, SE¼, SE¼, sec. 7	85	" " "
VC-98	SE¼, NE¼, SE¼, sec. 7	80	" " "
VC-99	SE¼, SE¼, SE¼, sec. 7	250	" " "
VC-101	NW¼, NW¼, NW¼, sec. 17	245	" " "
VC-102	NE¼, NE¼, NE¼, sec. 18	210	" " "

Churn drilling was in progress in three holes summarized as follows:

Hole No.	Location	Depth	Remarks
VC-41	NE¼, NE¼, SE¼, sec. 8	100 ft.	-
VC-51	SW¼, SW¼, SW¼, sec. 4	40	-
VC-53	NW¼, NE¼, NE¼, sec. 8	30	-

Four approved Stage II holes remain undrilled. These are holes VC-58, 93, 95, and 96. They will probably not be drilled at the present time. Holes drilled under Stage II approvals, and those in progress will probably give sufficient justification for the Operator to exercise his options. More effort will now be placed on testing other favorable areas. No further Stage II holes were requested.

John W. Chester

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

3rd Copy - Wash.

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

Budget Bureau No. 42-R1036.5

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

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

Month of July, 1957 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	17964.24	28917.72	46881.96	3/18/58	OK	
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	49.00	54.00	103.00	✓		
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	18013.24	28971.72	46984.96	✓	✓	✓

RECEIVED MINERALS TECHNOLOGY DIVISION AUG 15 1957 BUREAU OF MINES JOPLIN, MO.

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

Date 8-14-57 *Payee St. Joseph Lead Company

Per L. H. Castle 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:

$ 9,006.62

Signature (Authorized Certifying Officer)

Date 9/11/56 Vou. No. 4-9

(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 Sept 6, 1957

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Clinton C. Knox Title Executive Officer Date September 6, 1957

MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1512

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

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of July 1957 Docket No. DMEA 4582 Contract No. Idm-E 1068

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

Address Bonne Terre, Missouri

RECEIVED MINERALS TECHNOLOGY DIVISION AUG 16 1957 BUREAU OF MINES JOPLIN, MO.

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.	13026.96	5868	33861.66	15253	)		
Churn	Ft.	4937.28	2224	13020.30	5865	$2.22)	133420	$2.22
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Analytical Determinations	Ea	49.00	49	103.00	103	1.00	2370	1.00
Total Distributed Costs		18013.24		46984.96				Total Costs Authorized by Contract
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
Total Costs		18013.24		46984.96				

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 8-14-57 Operator St. Joseph Lead Company

Per L. W. Rieke Title Asst. 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)

(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

MONTHLY REPORT FOR MONTH OF JULY, 1957

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

11 Stage II locations, approved by the DMEA field team as of July 30, 1957, have been assigned numbers as shown on map. The Stage II stake numbers and locations are as follows:

VC-92 -	located	approximately	520	feet	S 30° E	of	Stage	II	Stake	VC-56
VC-93 -	"	"	520	"	N	of	Stage	I	Stake	VC-10
VC-94 -	"	"	520	"	N 60° E	of	"	I	"	VC-10
VC-95 -	"	"	520	"	S 60° E	"	"	I	"	VC-10
VC-96 -	"	"	520	"	S	"	"	I	"	VC-10
VC-97 -	"	"	520	"	S 60° W	"	"	I	"	VC-10
VC-98 -	"	"	520	"	N 60° W	"	"	I	"	VC-10
VC-99 -	"	"	520	"	N 30° E	"	"	I	"	VC-8
VC-100 -	"	"	520	"	N	"	"	I	"	VC-28
VC-101 -	"	"	520	"	W	"	"	I	"	VC-28
VC-102 -	"	"	520	"	S 30° E	"	"	I	"	VC-8

3 churn drills were operating in the area at the end of the month. The holes in progress were Stage I Stake VC-46 at a depth of 125 feet, Stage I Stake VC-30 at a depth of 20 feet, and Stage II Stake VC-56 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	I -	Stake	No.	VC-28 -	depth	238	feet -	starting	date	6-26-57
"	I -	"	"	VC-29	"	225	"	"	"	6-17-57
"	I	"	"	VC-32	"	115	"	"	"	6-26-57
"	I	"	"	VC-33	"	255	"	"	"	7- 3-57
"	I	"	"	VC-34	"	126	"	"	"	6-28-57
"	I	"	"	VC-35	"	200	"	"	"	7-10-57
"	I	"	"	VC-37	"	130	"	"	"	6-28-57
"	I	"	"	VC-38	"	170	"	"	"	6-25-57
"	I	"	"	VC-43	"	165	"	"	"	7-16-57
"	I	"	"	VC-45	"	225	"	"	"	7-11-57
"	II	"	"	VC-61	"	150	"	"	"	7-24-57
"	II	"	"	VC-62	"	125	"	"	"	7-19-57
"	II	"	"	VC-63	"	100	"	"	"	7-15-57

2 diamond drills were operating in the area at the end of the month. The holes in progress were Stage I Stake No. VC-27 at a depth of 225 feet and Stage I Stake No. VC-32 at a depth of 115 feet.

The following diamond drill holes were completed during the month:

Stake No.	Prospect Hole No.	Bottom Depth	Diamond Drilling	Date Completed	Class.
VC-6	57VC50	584	514	7-19-57	Pay
VC-8	57VC47	625	475	7-16-57	Pay
VC-9	57VC52	547	477	7-24-57	Indicative
VC-10	57VC48	673	493	7-12-57	Pay
VC-18	57VC38	625	490	7- 3-57	Trace

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DATE	INITIALS	CODE

Stake No.	Prospect Hole No.	Bottom Depth	Diamond Drilling	Date Completed	Class.
VC-22	57VC40	685	485	7- 8-57	Sp. Trace
VC-25	57VC55	689	473	7-29-57	Trace
VC-28	57VC54	725	487	7-23-57	Trace
VC-31	57VC42	615	500	7-11-57	Sp. Trace
VC-36	57VC57	628	448	7-30-57	Trace
VC-59	57VC41	528	528	7- 9-57	Trace
VC-60	57VC43	498	498	7-11-57	Trace

Note: VC-59 and VC-60 are Stage II locations.

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

49 analytical determinations were made during the month, as follows:

57VC38	1 Pb		
57VC41	1 Pb		1 Cu
57VC43	5 Pb		2 Cu
57VC47	5 Pb		
57VC48	9 Pb	4 Zn	2 Cu
57VC50	6 Pb		1 Cu
57VC52	5 Pb		
57VC54	1 Pb		
57VC57	6 Pb		

WASHINGTON COUNTY

Courtois Area - In DMRA Project #4582 -

Week Ended July 8, 1957

2 Company-owned diamond drills and 5 churn drills setting casing completed 1 trace hole.

57VC38, a trace hole, is located in the northwest part of the area and 520 feet northwest of 56W101, an indicative hole. It bottomed at 625 feet depth in Lamotte sandstone. Trace lead estimated as 1.5 feet of 1.0% Pb is present at the base of the main 7 reef at 525 feet depth. This hole completes a circle of 6 holes on 520-foot spacing around 56W101, all of which show trace lead on about the same horizon but give no clue as to location of possible concentrations. Formation elevations are rising to the north toward a buried knob and considerably closer spaced drilling will be necessary here to determine whether minable concentrations are present in this widespread blanket of mineralization.

Week Ended July 15, 1957

2 Company-owned diamond drills operating and 4 churn drills setting casing completed 4 trace holes.

57VC40, a speck trace hole, is located in the central part of the project area and 1500 feet southwest of 56W93, a pay hole. It bottomed at 685 feet depth in Lamotte sand. Speck traces of lead were present at 553 feet depth in the upper part of the 5 zone.

57VC41, a trace hole, is located in the central part of the area and 520 feet north-northeast of 57VC19, a pay hole. It bottomed at 528 feet depth in Lamotte sand. Weak traces of lead, estimated as 0.3 feet of 1.0% Pb, were present at 426 feet depth near the base of the 7 zone. 11 feet of limestone was present in the 12 zone.

57VC43, a trace hole, is located 520 feet north-northwest of 57VC19. It bottomed at 498 feet depth in Lamotte sand. Traces of lead were present in the 7 zone and were estimated as 0.7 feet of 1.0% at 390 feet depth, 2.0 feet of 1.0% at 397 feet depth, 1.0 foot of 1.0% at 399 feet depth, and 1.4 feet of 1.5% at 403 feet depth. This section is very similar in appearance and at the same horizon as ore in nearby pay hole. 8 feet of limestone is present in the 12 zone.

57VC42, a trace hole, is located in the central part of the area and 1500 feet west of 56W69, an indicative hole. It bottomed at 615 feet depth in Lamotte sand. Weak traces of lead were present at 461 feet depth in the upper part of the 5 zone, at 519 feet depth at the top of the 7 zone, at 535 feet depth in the 7 zone, and at 600 feet depth near the base of the 12 zone.

Week Ended July 22, 1957

2 Company-owned diamond drills operating and 4 churn drills setting casing completed 3 pay holes.

57VC47, a pay hole, is located about 3/4 mile south of the village of Courtois and 520 feet east of 56W69, an old indicative hole. It bottomed at 625 feet depth in Lamotte sandstone. Ore horizon is at 466 feet depth at the 5/7 contact and was estimated as 5.7 feet of 6.4% Pb.

Week Ended July 22, 1957 (Continued)

57VC50, a pay hole, is located 520 feet north-northwest of the above hole. It bottomed at 584 feet depth in Lamotte sandstone. Ore horizon is at 442 feet depth at the 5/7 contact and was estimated as 10.1 feet of 8.2% Pb. A higher run, at 413 feet depth, estimated as 2.5 feet of 5.0%, is associated with fairly heavy zinc mineralization.

57VC48, a pay hole, is located 900 feet north-northeast of the above hole. It bottomed at 673 feet depth in Lamotte sand. Ore horizon is at 529 feet depth at the 5/7 contact and was estimated as 11.6 feet of 5.3% Pb. A higher run, at 499 feet depth, is associated with zinc mineralization and was estimated as 3.8 feet of 3.0% Pb.

Ore in these holes is all of the same nature, in the same horizon, and about the same elevation and promises to develop an ore body of considerable size when additional drilling is done.

Week Ended July 29, 1957

2 Company-owned diamond drills operating and 4 churn drills setting casing completed 1 indicative and 1 trace hole.

57VC54, a trace hole, is located 3/4 mile south of the village of Courtois and 1100 feet east of 57VC47, a pay hole. It bottomed at 725 feet depth in Lamotte sand. Lead estimated as 2.0 feet of 3.5% Pb is located at 567 feet depth at the 5/7 contact and in the same horizon as ore in the pay hole.

57VC52, an indicative hole, is located 520 feet south-southwest of 57VC47. It bottomed at 547 feet depth in Lamotte sand. Lead estimated as 9.3 feet of 1.7% Pb is located at 413 feet depth, near the 5/7 contact and in the same horizon as ore in 57VC47.

For period of July 29-30-31, 1957

2 diamond drills operating and 4 churn drills setting casing completed 2 trace holes.

57VC55, a trace hole, is located about 3,000 feet south of the village of Courtois and 1500 feet east of a group of 3 pay holes recently drilled. It bottomed at 689 feet depth in Lamotte sand. Minor traces of lead were present in the 5 zone and at the top of the 7 zone.

57VC57, a trace hole, is located about 1 mile south-southwest of the village of Courtois and 1400 feet southwest of the above mentioned group of pay and indicative holes. It bottomed at 628 feet depth in 8 feet of rhyolite porphyry which extends about 60 feet up into the Bonneterre horizon. Lead mineralization is present in the 7/10 horizon from 566 to 608 feet depth with estimates of 1.0% Pb at the following depths: 0.5 foot at 566, 0.1 feet at 577, 1.0 foot at 584, 2.5 feet at 590, 4.5 feet at 600, and 0.3 foot at 608. High Precambrian in this hole represents a knob not previously known in this area although the sharp rise in the sand in holes to the northeast indicated its probable presence.

FORM 1173 2 54

Started 7-18-57 #20

DATE BOTTOMED 7-19-57 ST. NO. VC #6 ST. ELEV. _____ CLASS Pay HOLE NO. 57VC50

DESCRIBED BY CA AREA Courtois ELEVATION COLLAR 904.82

DATE ESTIMATED 7-23-57 OPTION NO. CZ-54 COORDINATES: N 113777.02 E 88542.29

BY C.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. 0.83 FT.

FORM BOTT. SL. _____

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	70	835
SLEEVE BIT TO		
BEGAN CORING AT	305	600
SAVED CORES FROM	324	581
FORMATIONS:		
SOIL TO	13	892
"		
EMINENCE "		
POTOSI "	50	855
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	324	581
BONNE TERRE "	572	333
B. T. TRANS. "	573	332
CONGLOMERATE "		
LA MOTTE "	584	321
GRAN. OR POR. "		
PICTURES: FROM	324	581
TO	584	321
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 365N 610 W

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	%Zn ASSAY	%Zn EST.	FT. %	% Cu ASSAY	% Cu EST	REMARKS
	354.0	354.1	550.7	0.1		TR							
	374.8	375.0	529.8	0.2		TR.							
	385.1	385.3	519.5	0.2		TR.							
	401.2	401.4	503.4	0.2		TR							
	406.0	406.1	498.7	0.1		TR							
	407.3	407.4	497.4	0.1		TR							
	410.4	412.9	491.9	2.5	4.7	5.0	11.8	✓	1.0				
	414.2	415.0	489.8	0.8		TR							
	415.5	415.7	489.1	0.2		TR							
	417.4	417.8	487.0	0.4	0.8	1.0	0.3						
	419.6	419.8	485.0	0.2		TR							
	427.6	427.7	477.1	0.1		TR							
	431.8	435.1	469.7	3.3	30.0	19.0	99.0		1.0		0.38	1.0	
	435.1	438.4	466.4	3.3	6.6	4.5	21.8		TR				
	440.7	441.9	462.9	1.2	4.8	5.0	5.8		10.1-12.5-TR Zn+				
	441.9	443.0	461.8	1.1		TR							
	443.0	444.3	460.5	1.3	1.3	2.0	1.7	✓					
	566.0	566.1	338.7	0.1		TR							

CORE REC.

TO	CORES LOST
305	
385	—
405	6.0
549	—
564	1.0
584	—

Fract.
Speck
"
Res Fract.
"
Speck
< diss
Fract.
Speck
diss.
Fract.
Speck
< diss
diss.
large XLs
Specks
diss.
Small XL

204

FORM 9002-R-5-55

ROCK CLASSIFICATION

PAGE 1

DESCRIBED BY [illegible] DATE 7-22-57 MINE [illegible] STOPE ________ STAKE NO. 1. #[illegible] HOLE NO. [illegible]

COLLAR ELEV. 905 PITCH ________ BEARING ________ COORD.: N ________ E ________

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
30[illegible]	600	BEGAN CORING	
324	581	DAVIS SHALE	
		BONNETERRE	
375	530	1	T[illegible] - Dense [illegible] stylo struct [illegible] pitted [illegible] porous patches (375)
386	519	1-5	GT>O: Dense [illegible] pitted stylo porous patches [illegible] scatt [illegible] 385 - (386) scatt [illegible] (386)
423	482	5	GDO-L[illegible] - pz < small porous [illegible] stylo [illegible] @ 402 - [illegible] @ 405 [illegible] 406 [illegible] dense [illegible] stylo struct [illegible] 415 - Scatt [illegible] 419 [illegible] 421 - 2' T [illegible] dense GT [illegible] - (423)
434	471	7	GTM: Reefy - Reefy [illegible] 423 to 425 - [illegible] 425 to 431 - >MST [illegible] porous [illegible] 431 to 433 - [illegible] 2N 4[illegible] to 434, struct [illegible] and patches [illegible] (434)
487	418	7	F T/GTMG[illegible] - GT₀ G[illegible] - Med [illegible] pz matrix - [illegible] scatt 434 to 4[illegible] - 1' GT>G [illegible] @ 450 - 1' pz GTG[illegible] @ 454 - GT>O - G[illegible] 456 to 457 [illegible] porous [illegible] Fes 475 to 487 - (487)
505	400	7-10	F T/GTMG[illegible] - T₀ - dense GT M @ 488 [illegible] @ 487 to 488 - 2' [illegible] @ 490 - 2' F[illegible] @ 493 - T₀ to 495 - F[illegible] to 496 - GT> to 499 - F[illegible] to 501 - T₀ > G[illegible] to 50[illegible] - [illegible] (505)
547	358	12-10	GTM GE[illegible]: T₀: F - Basically GTGEM [illegible] T₀ @ [illegible] 509, 1' @ 512, 1' @ 517 - 1' F @ 526 - GEM [illegible] 526 to 530 - F T/GTM: >KR [illegible] - 1' KR [illegible] >F @ 536 - > [illegible] 536 to 540 - 1' T₀ > M @ 541 - G1GEM [illegible] 541 to 544 - [illegible] 544 to 547 - (547)
572	333	12	GTGEM [illegible] > G[illegible] - > fract - < M [illegible] 566 - > M[illegible] pitted [illegible] - 2" [illegible] [illegible] @ 570 to 572 - (T. [illegible] @ 566) (572)

FORM 9002-R-5-55

ROCK CLASSIFICATION

PAGE 2

DESCRIBED BY GP DATE 7-22-51 ~~MINE~~ Cuestas STOPE STAKE NO. VC #6 HOLE NO. 57VC 50

COLLAR ELEV. PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
		BEGAN CORING	
573	332	19	ELGTYISD - Slightly sandy - 2% pink splotches - Tr Fe @ top - (573)
584	321	20	W:G - Clean - med fine grain - Scatt Tr s to 575 - 2 fract 574 to 576 - : G top to 575 - (584)

FORM 1173-2-54

20 ✓

DATE BOTTOMED 7-16-57 | ST. NO. VC-8 | ST. ELEV. | CLASS Pay | HOLE NO. 57VC47

DESCRIBED BY C. A. | AREA Courtois | ELEVATION COLLAR 956.17

DATE ESTIMATED 7-18-57 | OPTION NO. CZ-64 | COORDINATES: N 113292.32 E 88797.43

BY C. A. | TRACT Jesse Breakfield | 200 FT. MAP NO. 46 NE¼-NE¼-SEC 18 | 50 FT. MAP NO. T35N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 18" FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	150	806
SLEEVE BIT TO		
BEGAN CORING AT	355	601
SAVED CORES FROM		
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	356	600
BONNE TERRE "	605	351
B. T. TRANS. "	607	349
CONGLOMERATE "		
LA MOTTE "	625	331
GRAN. OR POR. "		
PICTURES: FROM	355	601
TO	625	331
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
1	367.0	367.2	589.0	0.2		TR					
"	377.0	377.1	579.1	0.1		TR					
"	379.0	379.2	577.0	0.2		TR					
"	381.4	381.6	574.6	0.2		TR					
5	439.0	439.3	516.9	0.3		TR					
5/7	460.2	464.6	491.6	4.4	9.7	8.0			✓	42.7	XLS IN VUGGY STRUCTURE
7	464.6	465.9	490.3	1.3	0.2	1.0				0.3	Diss
"	465.9	466.8	489.4	0.9		TR					
"	466.8	467.3	488.9	0.5	0.5	1.0				0.2	Diss
"	468.1	468.5	487.7	0.4	1.5	1.0			✓	0.6	Diss
	471.1	471.7	484.5	0.6		TR.					
	474.0	475.0	481.2	1.0		TR					
	475.0	475.9	480.3	0.9	0.9	1.0			✓	0.8	Diss
	475.9	478.2	478.0	2.3		TR					

CORE REC. TO	CORES LOST
355	
475	—
495	2.0
507	2.0
625	—

205

P.O.K.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE 7-18-57 ~~TIME~~ Courtesy STOPE STAKE NO. VC-3 HOLE NO. 57VC47

COLLAR ELEV. 956 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
355	601	BEGAN CORING	
356	600	DAVIS SHALE	
		BONNE TERRE	
403	553	1	LT>O: dense T - faintly O > persons patches 356 to 415 - Thin T lense with 377 to 315 - very f < persons patches 375 to base - Tr Pb @ 365 & 377 to 379 - (403)
413	543	1-5	GT>O > dense - < thin vug shale partings - > pitted - faintly B1 @ 412 - (413)
453	503	5	BO-B1 - B - < persons B1 and patches in vuggy - Tr Pb @ 431 - 2" GM @ 431 - < Thin B1 @ 437 - 2" GM @ 431 - > bluish gray M & f scatt 432 to 453 - (453)
461	495	5	To - < med c - > style - < persons c-g to base - < fract @ base - (461)
540	416	7	F & GTMG1: GT>O - Heavily mineralized w/ Pb 461 to 465 - tentively good F roof - 6" GTM rope < Pb @ 463 - 2' < persons patches > Pb @ 465 - Polished vuggy > fract roof w/ scatt Pb 465 to 480 - some GT > rope 480 to 492 - roof > fract 492 to 500 - GM & 500 to 507 - med fresh F roof 507 to 521 - 5" lense T > f @ 527 - GM & F 527 to 531 - GT & O 532 - 2' persons GT @ 535 - F1 fract 535 to 540 - (540)
564	392	7-10-12	T & GT - F GT & GM - T & GT - 40 to 543 - F to 545 - T to 546 - GTM to 553 - To & T to 555 - < M & GTM to 558 - F to 561 - GTM - GT to 563 - F to 564 - (564)
585	371	12:10	GTGEM: To - GTGEM rope > Thin H/top to 576 - 1' F @ 577 - GTM - GT 577 to 581 - 3' T to 584 - 1' F @ 585 - (585)
605	351	12	GTM - Pitted - med rope and M - > lickit f - (605)
607	349	19	GLD > M - med sand content - > E @ base - (607)
625	331	20	WS - - Bluish gray stain top to 618 - med fine grain - clean - (625)

Started 7-22-57

FORM 1173-2-54

20 ✓

DATE BOTTOMED 7-24-57 ST. NO. VC-9 ST. ELEV. _____ CLASS INDICATIVE HOLE NO. 57VC52

DESCRIBED BY C.A. AREA Courtois ELEVATION COLLAR 911.00

DATE ESTIMATED 7-25-57 OPTION NO. C2-53 COORDINATES: N 112884.10 E 88503.44

BY C.A. TRACT E. R. LARAMORE 200 FT. MAP NO. 46 50 FT. MAP NO. _____

NE¼-NE¼-Sec18 T35N-R1W

MINERALIZATION RECORD 530 S 640 W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 0.83 FT.

FORM BOTT. SL. _____

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	70	841
SLEEVE BIT TO		
BEGAN CORING AT	285	626
SAVED CORES FROM		
FORMATIONS:		
SOIL TO	15	896
"		
EMINENCE "		
POTOSI "	55	856
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	296	615
BONNE TERRE "	535	376
R. T. TRANS. "	539	372
CONGLOMERATE "		
LA MOTTE "	547	364
GRAN. OR POR. "		
PICTURES: FROM	285	626
TO	547	364
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	CORE REC. TO	CORES LOST
	399.2	399.7	511.3	0.5		TR					fracture	296	–
	404.0	406.4	504.6	2.4	0.3	1.0	0.7	✓			diss.	305	–
	406.4	407.4	503.6	1.0		TR					Specks.	315	5.0
	407.4	411.0	500.0	3.6	1.5	3.0	6.8				diss.	515	–
	411.0	412.2	498.8	1.2		TR					Specks.	535	8.0
	412.2	413.3	497.7	1.1	0.2	1.5	0.2	2.2	1.1		diss.	547	–
	413.3	415.2	495.8	1.9		TR.					: fracture		
	415.2	415.6	495.4	0.4	6.5	6.0	2.6		TR.		: Rb : Fract.		
	418.5	419.5	491.5	1.0		TR					Specks.		
	438.8	439.1	471.9	0.3		TR					Fracture		
	455.7	458.7	452.3	3.0		TR.	✓				Fract. + specks		
	458.7	458.9	452.1	0.2	0.2	1.0	0.1				diss.		
	479.0	479.3	431.7	0.3		TR					Speck.		
	483.3	483.6	427.4	0.3		TR.					"		
	537.0	537.2	373.8	0.2		TR					Small XL's		

Pl. O.K.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE 7-26-55 MINE [illegible] STOPE STAKE NO. VC-9 HOLE NO. 5-VC-5

COLLAR ELEV. 911 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
29.7	626	BEGAN CORING	
216	615	DAVIS	SHALE
		BONNE	TERRE
347	562	1	[illegible]
354	557	1-5	[illegible]
403	508	5	[illegible]
421	490		[illegible]
434	477		[illegible]
460	451	7	[illegible]
476	425	7-10	[illegible]
519	392	1-810	[illegible]

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE 1-26-57 MINE Pauita STOPE STAKE NO. VC-#9 HOLE NO. 57VC 52

COLLAR ELEV. 911 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
		BEGAN CORING	
[illegible]	376	12	GM Greywacke - [illegible] (535)
539	372	19	GM - [illegible] (537)
547	364	20	WS - [illegible] @ 542 - (547)

FORM 1173-2-54

Started 7-12-57

15

DATE BOTTOMED 7-17-57 ST. NO. VC-10 ST. ELEV. _____ CLASS Pay HOLE NO. 57VC48

DESCRIBED BY C.A. AREA COURTOIS ELEVATION COLLAR 986.02

~~DATE ESTIMATED~~ 7-22-57 OPTION NO. CZ-62 COORDINATES: N 114534.88 E 89043.52

BY C.A. TRACT H. COLE ~~200 FT.~~ MAP NO. 46 SE ¼ - SE ¼ - SEC 7 50 FT. MAP NO. T35N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 30" FT.

FORM BOTT. SL. _____

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	180	806
SLEEVE BIT TO		
BEGAN CORING AT	405	581
SAVED CORES FROM		
FORMATIONS:		
SOIL TO	50	936
"		
EMINENCE "		
POTOSI "	165	821
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	425	561
BONNE TERRE "	667	319
B. T. TRANS. "	668	318
CONGLOMERATE "		
LA MOTTE "	673	313
GRAN. OR POR. "		
PICTURES: FROM	405	581
TO	668	318
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. %	% CU	REMARKS	CORE REC. TO	CORES LOST
	450.0	450.1	535.9	0.1		TR								
1	471.8	472.0	514.0	0.2		TR							405	
5	477.0	477.1	508.9	0.1		TR							418	—
"	483.5	483.7	502.3	0.2	11.9	6.0	2.4	✓					421	1.0
"	484.3	484.8	501.2	0.5	1.1	1.0	0.6						457	—
"	488.5	488.7	497.3	0.2		TR							459	1.0
"	490.0	490.1	495.9	0.1		TR							464	2.0
"	493.3	493.9	492.1	0.6		TR							484	—
"	495.2	499.0	487.0	3.8	3.1	3.0	11.8	4.0	10.0	15.2		5.8 - 2.1-3.9 Zn.	489	1.0
"	499.0	501.0	485.0	2.0	0.3	0.5	0.6	2.4	3.0	4.8			494	1.0
"	501.0	504.3	481.7	3.3		TR			TR			FINE SULFIDES	653	—
7	517.2	522.0	464.0	4.8	1.9	3.0	9.1	1.7	2.0	8.2		11.6-5.5-1.0 Zn	673	4.0
"	522.9	528.8	457.2	5.9	9.3	8.0	54.9	0.5	2.0	3.0	0.36 as			
"	529.3	529.9	456.1	0.6	0.0	0.0			0.0		0.0 as			
"	559.2	559.4	426.6	0.2		TR			0.0		TR			
"	561.2	561.4	424.6	0.2	0.8	1.0	0.2		0.0		TR			
"	564.2	565.4	420.6	1.2	1.5	2.0	1.8	✓	0.0		ao			
"	579.0	579.1	406.9	0.1		TR								
12	659.8	661.3	324.7	1.5		TR								

205

Rec.

Pl. OK.

FORM 9002-R-5-55

ROCK CLASSIFICATION

PAGE #1 ✓

DESCRIBED BY R. DATE 7-19-56 ~~TIME~~ Courtesy STOPE STAKE NO. VC-10 HOLE NO. 57VC48

COLLAR ELEV. 985 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
418	567	BEGAN CORING	
425	560	DAVIS SUBLE BONNE TERRE	- Heavy concentration of FeS @ base. (425)
471	514	1	LT>O: Dense] - c appearance - style 425 to 451 w/ occasional dense T] - 1" vug thin stylolite strut w/ persons B patches 450 to base - Tr. Pb @ 450 - (471)
476	509	1-5	PqGB>O >dense T] - faintly O B&GB spp - Persons B&G patches - (476)
517	468	5	PqGB=O-B] - p2 - Pb Tr. @ 477 - >wet fract 477 to 494 - <persons P&G patches - Lotts 1" to 483.5 to 495 - persons alteration < style strut containing >1" Pb and < ZN 495 to 501 - LB w/ < persons patches containing fine bullfides 504 to base - > bluish gray M&G < style 501 to 509 - 1" = T = M >O @ 511 - GM = crepe 514 to 515 - 1" < G&O @ 516 - GT = M to 517 - (517)
529	456	7	GTGEM: Rocky - thinly spp persons possibly ruf debris w/ considerable K&R patches w/ good Pb and > ZN 517 to 521 - GTGEM thin 521 to 523 - persons G&O > M 523 to 528.5 w/ > Pb & Cu - GM: 1" of G and K&R w/ Pb 528 to 529 - persons fine G&O 529 to base w/ 2" thin K&R/G 528.5 - (529)
579	406	7	F/GTMG&O - Mainly F top to base w/ GT = M > G&O @ 537 to 539, 553 to 555 and 577 to 579 - = 1" fract thrust - Lotts Pb 559 to 565 - (579)
602	383	7-10	F/GTMG&O + T - 1" T @ 580 - F > M 94, 580 to 584 - T - 4" 584 to 590 - GTG&O 590 to 592 - F 592 to 594 - MG&O persons 594 to 596 - F 596 to 598 - GT = M > persons patches 598 to 601 - 1" F @ base - (602)
641	344	12-10	GEM + T - Barren - GEM crepe w/ T in @: 602 to 608, 612 to 613, 615 to 616, GTG&O 624 to 625, 627 to 631 - 1" > w/ small T patches @ 639 - 1" T 632, 635, 637, and 2" GT>O @ base - (641)
667	318	12	GTM - and Heavy M - crepe R&H - > patch G&O - > G&O - T Pb @ 666 - 666 - style & inc > M > patches 665 to base - (667)

FORM 9002-R-5-55

ROCK CLASSIFICATION

PAGE # —

DESCRIBED BY [illegible] DATE 7-19-57 ~~TIME~~ [illegible] STOPE STAKE NO. VC #10 HOLE NO. 57VC 118

COLLAR ELEV. PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
		BEGAN CORING	
668	317	19	ELGSD - > pitte - > m - > tomed sandy - (668)
673	312	20	WS - Tr, FeS@ 669 - med fine grain - 4' grade to 672 to 673 - probably grade in Li matte - (673)

Started 7-1-57

FORM 1173-2-54

15

DATE BOTTOMED 7-3-57 ST. NO. VC-18 ST. ELEV. _____ CLASS TRACE HOLE NO. 57VC38

DESCRIBED BY W.M. + C.A. AREA COURTOIS ELEVATION COLLAR 1021.85

~~DATE ESTIMATED~~ 7-9-57 ~~OPTION NO.~~ C267 COORDINATES: N 116841.23 E 85395.01

BY C.A. TRACT G. O. EVANS 200 FT. MAP NO. 45 SE¼-NW¼-Sec 7 50 FT. MAP NO. T35N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 1.00 FT.

FORM BOTT. SL. _____

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	1370	885
SLEEVE BIT TO		
BEGAN CORING AT	345	677
SAVED CORES FROM	345	677
FORMATIONS:		
SOIL TO	12	1010
EMINENCE "		
POTOSI "	95	927
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	345?	677
BONNE TERRE "	595	427
B. T. TRANS. "	599	423
CONGLOMERATE "		
LA MOTTE "	625	397
GRAN. OR POR. "		
PICTURES: FROM	345	677
TO	625	397
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 1910 S 1250 E PL PL

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% Cu. ASSAY	% Cu. EST.	FT. %	REMARKS
	495.2	497.0	524.9	1.8		TR			TR.		
	505.2	505.5	516.4	0.3		TR					
	523.9	525.4	496.5	1.5	1.2	1.0	1.8				disw : fract.
	536.1	536.3	485.6	0.2		TR					
	590.8	590.9	431.0	0.1		TR					specks
	588.9	599.0	422.9	0.1		TR					Small XL.

CORE REC.

TO	CORES LOST
345	
625	—

205

Raw

PC-OK

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY HM & Gp DATE 7-9-57 MINE Courtois STOPE STAKE NO. VC-18 HOLE NO. 57VC38

COLLAR ELEV. 1022 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
305	677	BEGAN CORING	
373	649	1	DENSE BROWN Dolo Dense with > Porous Sect. LT TAN To Brown colored. > Brown banding toward base. > Lrge Vugs. (373.
431	591	1-5	LT Brown - To Mostly 1 bed with > Brown banding. > Shtt. To. Sect. > Bq > Vugs. > Dense sections. Lrge Vugs with dickite @ 378. (431)
455	567	5	To > Bq Med to Lrge oolites. > thin Ca seams. > Rb. Mostly 1 bed with > faint Bq. (455)
459	563	5-7	F & To 1' Reef Rock @ 456 & 1' @ 458. Rest of Hole To Med To Lrge. > Ca. Sp. (459)
515	507	7	F G/C.T.M Good Reef Rock 1" Gp @ bed. > Rb > Vugs. Ph Trs 4952 - 4970 with > Fe. 3" Ph Trs @ 5055 > short oolitic patches.
529	493	7	K.M & C Slimy Matt from 515-520 & To Med to Lrge to base > K banding with To sections. > Rb Ph Trs 5239 - 5255. IN Seams > Vugs. (529)
562	460	10-7	To & F To Lrge oolites from 529 - 536. F Reef Rock 536 - 554 bgs 1" Rb @ 538. - Th Ph @ 538 - [illegible] - F 556 to 560 - F 560 to 562 - (562)
575	427	10	GT: GM - pz - [illegible] - Med fine xaln - 2.3M [illegible] - [illegible] Thin Bj - [illegible] - Th. Ph @ 571 & 595 - (575)
599	423	17	[illegible] - [illegible] - [illegible] - [illegible] - [illegible] - (599)
625	397	20	G & U S - [illegible] - Th Ph @ 617 - [illegible] - [illegible] 617 - [illegible] & Top to 610 - [illegible] Seams 607 to [illegible] - (625)

FORM 1173-2-54

Started-7-1-57

20

SPECK

DATE BOTTOMED 7-8-57 ST. NO. VC-22 ST. ELEV. CLASS TRACE HOLE NO. 57VC40

DESCRIBED BY C.A. AREA Courtois ELEVATION COLLAR 1012.07

DATE ~~ESTIMATED~~ 7-11-57 ~~OPTION NO.~~ CZ-54 ~~COORDINATES:~~ N 114616.53 E 87628.64

BY C.A. TRACT RICO MASON 200 FT. MAP NO. 45 NW¼-SE¼-Sec7 50 FT. MAP NO. T35N-R1W

12.10 N 1560 W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 28" FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	200	812
SLEEVE BIT TO		
BEGAN CORING AT	415	597
SAVED CORES FROM		
FORMATIONS:		
SOIL TO	20	992
"		
EMINENCE "		
POTOSI "	170	842
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	419	593
BONNE TERRE "	673	339
B. T. TRANS. "	674	338
CONGLOMERATE "		
LA MOTTE "	685	327
GRAN. OR POR. "		
PICTURES: FROM	415	597
TO	685	327
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	546.2	546.4	465.7	0.2		—			TR	✓		415	
"	548.3	548.5	463.6	0.2		—			TR	✓		685	—
"	552.5	552.9	459.2	0.4		TR			TR	✓			

205

Rec

RL.OK

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE 7-1-5[illegible] MINE [illegible] STOPE STAKE NO. [illegible] HOLE NO. 57V-40

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

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
415	696	BEGAN CORING	
419	692	1 HUIS SHALE BANDEFERRE	(419)
467	644	1	LT - [illegible] (467)
476	635	5-1	T>O - [illegible] - (476)
549	562	5	B>O - [illegible] (549)
595	516	7	FT/GTM - [illegible] (595)
609	502	7-10	FT:GTG - [illegible] (609)
651	460	10-12	GT>O-GTmM-GEM - [illegible] (651)
673	438	12	GTmGEM - [illegible] (673)
674	437	19	ELGEED - [illegible] (674)
685	426	20	WS - [illegible] (685)

FORM 1173-2-54 Started 7-25-57 15 ✓

DATE BOTTOMED 7-29-57 ST. NO. VC-25 ST. ELEV. _____ CLASS TRACE HOLE NO. 57VC55

DESCRIBED BY C.A. AREA Courtois ELEVATION COLLAR 1015.33

DATE ESTIMATED 7-31-57 OPTION NO. CZ-65 COORDINATES: N 114332.45 E 90660.85

BY C.A. TRACT Kelsey Carl 200 FT. MAP NO. 46 50 FT. MAP NO. _____

GENERAL HOLE DATA — MINERALIZATION RECORD 955N-1500E SE¼-SW¼-Sec.8 T35N-R1W

HT. SLEEVE ABOVE GR 3.0 FT.

FORM BOTT. SL. _____

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	216	799
SLEEVE BIT TO		
BEGAN CORING AT	415	600
SAVED CORES FROM	434	581
FORMATIONS:		
SOIL TO	22	993
"		
EMINENCE "		
POTOSI "	215	800
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	434	581
BONNE TERRE "	683	332
B. T. TRANS. "	686	329
CONGLOMERATE "		
LA MOTTE "	689	326
GRAN. OR POR. "		
PICTURES: FROM	429	586
TO	689	326
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	CORE REC. TO	CORES LOST
												415	
	441.0	441.1	574.2	0.1		TR.						689	—
	506.5	506.7	508.6	0.2		TR.							
	508.5	509.0	506.3	0.5		TR.							
	517.3	517.8	497.5	0.5		TR.							
	531.3	531.5	483.8	0.2		TR.							
	528.8	583.0	432.3	0.2		TR.							
	591.4	592.0	423.3	0.6		TR.							

205

PC. CK

FORM 9002-R-5-55

ROCK CLASSIFICATION

PK-E 1

DESCRIBED BY [illegible] DATE 7-30-57 ~~MINE~~ Construction STOPE STAKE NO. VC-25 HOLE NO. 57VC55

COLLAR ELEV. 1013 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	~~KIND OF ROCK~~ (Depth at Bottom)
415	598	BEGAN CORING	
434	579	DAVIS SHALE	(434)
		BONNETERRE	
482	531	1	T>0 [illegible] – [illegible] 4.4 to 4.16 – [illegible] dense 4.46 to 450 – Tr Pb @ 442 – [illegible] T>0 442 to 473 – [illegible] – [illegible] – [illegible] and dense 473 to base – (482)
494	519	5-1	GT>0 p2:Dense T] – basically GT p2 >0 w/ > style [illegible] dense 1 [illegible] – (494)
541	472	5	GBp2Bt – > 0 – < porous B & T throughout – > style – > flow G M app @ 416 – 503 [illegible] 507 – 2' [illegible] w/ fine to med crystallization 507 – Tr Pb w/ > FeS2 @ 506.5 – only slight p2 Bt 507 to 516 – [illegible] 515 to 518 – Tr Pb @ 517.5 – < small [illegible] porous Bt 517 to base – Tr Pb @ 531.5 – (541)
559	454		F ~~GT~~>MG p0 – 4' > E [illegible] < [illegible] reef appearance 545 – gnc F ref w/ GT & – M matrix > porous – > pl Ut – (559)
572	441		GT>0 > Dense: > E – > < tight to 565 – fairly massive – – style – > fract – 6" < porous w/ reef appearance @ 567 – 3" < porous 0 @ 571 – (572)
606	407	7	F ~~GT~~>M > [illegible] p2:GT>0:p2G0 – Porous F ref w/ GT & > M matrix 572 to 583 – 2' GT>0 – [illegible] 585 – 2' < G & @ 587 – porous F ref 587 to 591 – porous G & 0 591 to 601 – dense F ref structure 601 to base > porous – [illegible] @ 606)
6[illegible]	380	1	GT>0 & GT-M – Basically GT>0 Thin f style – 6" GT>M – Frequently @ 601, 2' @ 613, 2' @ 618, < thin f < GT – 0 618 to 621 – 2' G & @ 623 – GT > thin f 623 to 628 – > 0 628 to 631 > fract – GT 0 631 to 633 –
661	349	1-12	~~T & GT~~ – GT>M [illegible] 649 – [illegible] 661 – GT>M [illegible] 631 [illegible] – 6 reef @ 649 – [illegible] 663 [illegible] 2 1/2 base – (664)
683	330	1 –	GTM [illegible] – < [illegible] < M – [illegible] frequently Bt [illegible] – (683)

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE [illegible] ~~MINE~~ [illegible] STOPE STAKE NO. [illegible] HOLE NO. 57VC55

COLLAR ELEV. 1013 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
		BEGAN CORING	
1[illegible]6	327	1[illegible]	[illegible]
6[illegible]1	324	[illegible]	[illegible]

Started - 7-19-57

FORM 1221 2 84

15

DATE BOTTOMED 7-23-57 ST. NO. VC-28 ST. ELEV. _____ CLASS TRACE HOLE NO. 57VC54

DESCRIBED BY C.A. AREA Courtois ELEVATION COLLAR 1066.25

DATE ESTIMATED 7-29-57 OPTION NO. CZ-65 COORDINATES: N 113243.90 E 89839.46

BY C.A. TRACT Kelsey Carl. 200 FT. MAP NO. 46 50 FT. MAP NO. _____

1605 = 690E NW¼-NW¼-Sec 19 T35N-R1W

GENERAL HOLE DATA

FT. SLEEVE ABOVE GR. 2.5 FT.

FORM BOTT. SL. _____

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	235	831
SLEEVE BIT TO		
BEGAN CORING AT	445	621
SAVED CORES FROM	461	605
FORMATIONS:		
SOIL TO	40	1026
EMINENCE "		
POTOSI "	220	846
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	469	597
BONNE TERRE "	715	351
B. T. TRANS. "		
CONGLOMERATE "		
LA MOTTE "	725	341
GRAN. OR POR. "		
PICTURES: FROM	461	605
TO	725	341
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
												445	
	479.7	480.0	586.3	0.3		TR					large XL in vug.	461	—
	565.3	567.3	499.0	2.0	2.0	3.9					4.0 diss.	481	2.0
	711.3	712.7	353.6	1.4		TR					frost.	725	—

70'

NOK

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE 6-29-57 MINE Courtis STOPE STAKE NO. VC-28 HOLE NO. 57VC54

COLLAR ELEV. 1065. PITCH BEARING COORD.: N E

~~BOTTOM~~ DEPTH	~~BOTTOM~~ ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
115	620	BEGAN CORING	
169	596	DRILL HOLE CONTINUED HERE -	6" [illegible] transition i [illegible] T [illegible] 4x [illegible] [illegible] - (469)
507	558	1	T>0:[illegible] T - [illegible] 7 - [illegible] to 479 - [illegible] T - [illegible] 479 to 484 - [illegible] 484 to 479 - [illegible] T 479 to [illegible] - [illegible] to [illegible] - (507)
531	534	1-[illegible]	[illegible] - [illegible] 5 [illegible] type w/ < [illegible] [illegible] - (531)
572	493	[illegible]	[illegible] - [illegible] - [illegible] - [illegible] - [illegible] - [illegible] G M 537 to 545 - [illegible] [illegible] - [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] 565 to 567 - slightly larger 567 to [illegible] - (572)
593	472		F [illegible] - [illegible] F [illegible] GT [illegible] - M [illegible] - [illegible] R [illegible] - (593)
619	446		T>0 - [illegible] - [illegible] - 2' [illegible] @ 615 - [illegible] 595 to 599 - [illegible] [illegible] [illegible] 615 to [illegible] - (619)
635	430	2	F/GT>MGL - 1' F @ 620 - GTC [illegible] > M to 623 - 1' [illegible] GT - [illegible] @ 624 - [illegible] [illegible] to 625 - F to 630 - GTCL: [illegible] to 633 - 1' GT [illegible] - [illegible] @ 634 - 1' [illegible] [illegible] F @ [illegible] - (635)
653	412	10-7	T/GT>0:F - [illegible] T/GT - 0 - [illegible] - [illegible] - 1' - M [illegible] @ 645 - 1' [illegible] @ 648, [illegible] 2' [illegible] @ [illegible] - [illegible] @ 639 [illegible] 651 - (653)
675	390	10-12	T>0 & GTM - F - [illegible] - [illegible] > [illegible] [illegible] to 665 - 2' GTM - [illegible] @ 667 - [illegible] 667 to 669 - GTM - [illegible] 669 to 674 - 2" [illegible] @ 673 - 1' F [illegible] w/ > [illegible] [illegible] - 675
714	351	12	GTGEM - T:F - [illegible] M < [illegible] - [illegible] G [illegible] - 8" T>0 > G [illegible] @ 695 - 1' F @ 634 - 6" w/ [illegible] GB [illegible] @ 710 - GT > M [illegible] > PB T [illegible] 711 to [illegible] - (714)
715	350	19	GTSD - Slightly [illegible] - [illegible] - [illegible] - (715)
725	340	20	WS:TG&E - Mod fine grain - Tint [illegible] TG&E to [illegible] 722 - WS 722 to [illegible] - 6" [illegible] @ 724 - (725)

DATE STARTED 7-9-57

20

FORM 1173-2-84

DATE BOTTOMED 7-11-57	ST. NO. VC-31	ST. ELEV.	CLASS TRACE
DESCRIBED BY C. A.	AREA Courtois		HOLE NO. 57VC42
DATE ESTIMATED 7-15-57	OPTION NO. C2-53		ELEVATION COLLAR 951.20
BY C. A.	TRACT E.R. LARAMORE		COORDINATES: N 113380.13 E 86716.46
			200 FT. ~~MAP NO.~~ 45 NW¼-NE¼-Sec8 50 FT. MAP NO. T35N-R4W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 2.17 FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	115	836
SLEEVE BIT TO		
BEGAN CORING AT	335	616
SAVED CORES FROM	335	616
FORMATIONS:		
SOIL TO	8	943
EMINENCE "		
POTOSI "	100	851
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	342	609
BONNE TERRE "	604	347
B. T. TRANS. "	605	346
CONGLOMERATE "		
LA MOTTE "	615	336
GRAN. OR POR. "		
PICTURES: FROM	335	616
TO	615	336
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
	461.0	461.2	490.2	0.2	TR						Speck.
	480.0	480.2	471.0	0.2	TR						"
	518.7	518.9	432.3	0.2	TR.						Fract.
	535.0	535.2	416.0	0.2	TR						Speck.
	599.7	599.9	351.3	0.2	TR						
	599.9	600.0	351.2	0.1	TR						

CORE REC.

TO	CORES LOST
335	
595	—
615	6.0

205

RGW

O.K.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY A DATE 7-15-57 ~~TIME~~ Curtis STOPE STAKE NO VC-31 HOLE NO 57VC42

COLLAR ELEV. 950 PITCH ~~BEARING~~ COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
335	615	BEGAN CORING	
342	608	DAVIS SHALE / BONNE TERRE	(342)
383	567	1	LT>O:LT - fairly dense, struct > style 342 to 367 - > hard & pitted & rugg. 367 to base - (383)
389	561	1-5	BO pz:LT - pr BO style w/ seam 1/2 pcf - (389)
466	484	5	pz BO:LT - Porous BO & Thrust - pr - med style - > seam BO sec w/ 2nd dels matrix - 1' GM Gt > crops @ 433, 436, ELT pz 442 to 455 - 2' w/ - base to 3450 - 1" > EGM @ 454 - Open w/ - seam BO base - > BO - 2' GM crops @ base - Tr Pb @ 461 - (466)
471	479	5	GTGqO - > porous < gneiss Gt - med O - > style - > Gt - (471)
522	428	7	FTGTMGt - 1½' GTGt > seam @ 473 & 1' @ 481 - good F hard - Pb Tr Q 481 - 2" sec dels @ 479 - thin wing BO seam - Tr Pb @ 519 - (522)
554	396	7-10:12	FTGTM-Tp-GTGEM - 3' Tp - / @ top > F & Gt 525 to 535 - GE > M Thin 535 to 537 - Tp w/ > b to 538 - 1' heavily @ 539 - GT > Gt > M Thin b 539 to 547 - GT > O Thin b > Kt 547 to 552 - 1' GM w/ @ 553 - 1' F rugy @ base - (554)
583	367	10-12	Tp pz - GTGEM - Basically pz Tp w/ > K & some patches & < style - 6" GEM w/ @ 555 - 2' GT & GEM @ 567 - > porous patches - Tr S tr @ 577 - (583)
604	346	12	GTGEM - Crops struct - > pitting - heavily M - > Gt & - Tr Pb @ 599 w/ & 597 to assembly, few sulfide grains 597 to base - 1' frost @ base - (604)
605	345	17	GE-D - Slightly sandy - > Tr S patches - > Pz - (605
615	335	20	WS - med fine grain - > grit - 6' ground 595 to 615 - fairly clean - (615)

FORM 1173-2-54

20

DATE BOTTOMED 7-30-57	ST. NO. VC-36 ST. ELEV.	CLASS TRACE	HOLE NO. 57VC57
DESCRIBED BY C.A.	AREA COURTOIS	ELEVATION COLLAR 1071.44	
DATE ESTIMATED 8-2-57	OPTION NO. C2-53	COORDINATES: N 112031.12	E 87446.92
BY C.A.	TRACT E.R. LARAMORE	200 FT. MAP NO. 45	50 FT. MAP NO.

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 1.03 FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	180	891
SLEEVE BIT TO		
BEGAN CORING AT	385	686
SAVED CORES FROM		
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	398	673
BONNE TERRE "	618	453
B. T. TRANS. "		
CONGLOMERATE "	620	451
LA MOTTE "		
~~[illegible]~~ OR POR.. "	628	443
PICTURES: FROM	385	686
TO	628	443
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION ~~RECORD~~ 1425 S 1705 W SW¼-NE¼-Sec 18 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
												385	
	444.3	444.4	627.0	0.1		TR.						465	—
	461.3	461.5	609.9	0.2		TR.						471	3.0
	470.9	471.0	600.4	0.1		TR						628	—
	552.0	555.0	516.4	3.0		TR			TR		Zn. in thin Pb's		
	559.6	560.0	511.4	0.4		TR							
	565.8	566.3	505.1	0.5	0.7	1.0	0.4				DISS		
	568.1	568.5	502.9	0.5		TR							
	569.5	570.3	501.1	0.8		TR							
	575.1	577.1	494.3	2.0		TR							
	577.1	577.2	494.2	0.1	1.9	1.5	0.2				DISS		
	579.6	581.4	490.0	1.8		TR							
	582.7	583.7	487.7	1.0	1.1	1.0	1.1				Pb veinlets		
	583.7	587.2	484.2	3.5		TR							
	587.2	589.7	481.7	2.5	1.1	1.0	2.8				diss. + veinlets		
	589.7	594.4	477.0	4.7		TR							
	594.4	599.9	471.5	4.5	1.3	1.0	5.8				diss. + veinlets		
	604.4	608.1	463.8	3.7		TR							
	608.1	608.4	463.0	0.3	0.6	1.0	0.2				DISS.		
	608.4	610.4	461.0	2.0		TR							

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FORM 9002-R-5-55

ROCK CLASSIFICATION

PAGE No 1

DESCRIBED BY [illegible] DATE 8-2-57 MINE Courtois STOPE STAKE NO. VC-36 HOLE NO. 57VC57

COLLAR ELEV. 1071 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
385	686	BEGAN CORING	
398	673	DRILL HOLE CONNETTE	(398)
441	630	1	T>O: DENSE GT/ -> ELT 409 to 415 - thin f styl 416 to 430 -> irreg dense GT/ & styl 430 to base -> Ca & pet base 435 to base - 2" B pette @ 427 - (441)
448	623	5-1	GT>O: irreg dense GT/ - < styl - crape app. w/ scatt irreg dense GT/ - < small Ca f - Tr. Pb @ 445 - 4" w/ B & @ 441 - (448)
487	584	5	GB&B>O: ELT - 6" ELT > fract @ 457 - Small to med B & Thruout - < small Cg f - > fract 464, 471, - 1' GEM fine G/ @ 480 & 484 - > irreg GB/ 480 to base - 6" w/ Quick GM app @ 487 - (487)
499	572	5	BO: BO w/ irreg GT/ - good styl & struct 487 to 493 - BO w/ irreg GB dense f 493 to 499 - 1' GT>O, crape to 497 - GO 497 to 499 - (499)
514	557		F T/GTG/ >O>M - Good Fruf 499 to 514 -> ELT 507 to 514 > styl - (514)
521	550		GTG/O & GT DENSE>O - 2' GT < fine G/ & O @ 516 - Dense GT>O - med styl 516 to 521 - > G/ @ base (521)
557	514	7	F T/GT>M>G/; GTG/O - Prom Fruf top to base w/ 1' GTO > G/ @ 525, 1' GTO < G/ w/ Tr. ZN @ 555 - (557)
606	465	7-10	GT>O G/; F T/GT>M G/ - GT>O>G/ dense > styl 557 to 563 - F struct > M F 563 to 567 - GT>O < styl w/ trace Pb 569 to 579 - Good smooth F struct 579 to 597 w/ scatt Pb & 3" angular RB @ 593 - 4' GT < G/ > M 583 to 587 - GM > ruf. app @ 587 to 606 w/ Tr. Pb - 1' irregy w/ Ca & marcasite @ 605 - 1" angular RB @ 606 - (606)
618	453	10	GTG/ & G/ - Dense - fine G/ thruout - 4" Ca @ 614 - > irreg w/ dolo & m - > fract - 1' irregy app @ 615 - 1' w/ < small to med B/G base - (618)

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY G. DATE 8-2-57 ~~MTHE~~ COURTOIS STOPE STAKE NO. VC-36 HOLE NO. 57VC57

COLLAR ELEV. 1071 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
		BEGAN CORING	
620	451	18?	PORPHYRY FRAGMENTS w/GD - 6" @ top igneous fragments w/GD matrix - weathered > fragmental appearance 619.5 to 619.5 - 6" porphyry frag w/GD & FeS matrix @ base - (620)
628	443	20	PORPHYRY - Reddish B > purple - w/< YE hard mineral throughout (628)

Date Started 7-5-57

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FORM 1173-2-54

DATE BOTTOMED 7-9-57	ST. NO. VC-59	ST. ELEV.	CLASS TRACE HOLE NO. 57VC41
DESCRIBED BY C.A.	AREA Courtois		ELEVATION COLLAR 916.97
DATE ESTIMATED 7-12-57	OPTION NO. C2-67		COORDINATES: N 116669.78 E 89461.80
BY CA	TRACT Everett Woods		200 FT. MAP NO. 46 SW¼-NW¼-Sec8 50 FT. MAP NO. T35N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 1.17 FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	PADDLED HOLE	
SLEEVE BIT TO	11	906
BEGAN CORING AT	251	666
SAVED CORES FROM		
FORMATIONS:		
SOIL TO		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	257	660
BONNE TERRE "	515	402
B. T. TRANS. "	519	398
CONGLOMERATE "		
LA MOTTE "	528	389
GRAN. OR POR. "		
PICTURES: FROM	251	666
TO	528	389
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
												251	
	296.0	296.2	620.8	0.2		TR					>Pb XL	258	
	395.8	396.1	520.9	0.3		TR							
	424.4	424.6	492.4	0.1		TR							
	426.0	426.3	490.7	0.3	0.4	1.0	0.1	0.40	0.5	0.12	DISS.		
	511.9	512.0	405.0	0.1		TR.							

205

RGW

BLOK

FORM 9002-R-5-55

ROCK CLASSIFICATION

LS

DESCRIBED BY [illegible] DATE 7-12-57 MINE Santa Ana STOPE STAKE NO. VC-59 HOLE NO. 57VC41

COLLAR ELEV. 917 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
251	666	BEGAN	CORING
257	660	DAVIS BONNE	SHALE IERRE (257)
300	617	1	LT>O:LT/ - Funtly O, sty & > dense b 257 to 291 - bnds/struct 291 to base - Pb XL @ 296 - (300)
321	596	1-5	GT-M>dense/ - Irreg sty struct - >M appearance - < Ca f 307 to 315 - > sndt defs LT/ - funtly Bf 35, 317 & 319 - (321)
366	551	5	O>O Bf - < porous B.S top to 347 - > sty & - pr - > sectured flush w/ 330 to 335 - becoming less porous 347 to base also small lenses tr. Bf - (366)
383	534	5	GTO-GEM - GT-med fine O 366 to 367, GEM 367 to 369, GTO > G f 369 to 371 - GT>M>O thin/ 371 to 373 - GTO & GEM 373 to 375 - GEM 375 to 377 - GTO finely G f 377 to 378 - GEM - G f 378 to 379 - GT<O>G f 379 to 383 - (383)
440	477	7	FT/GTM - Fine F roof struct - 4' GTO G f @ 396 - Tr Pb @ 396, 426, Tr. Pb & Cu @ 428 - 2' m < G f @ 433 - 1' TO @ 435 and 437 - 3" TO/ 438 - (440)
458	459	7	GTG f > M : > F : > TO - GT > M < G f 440 to 444 - 6' sandy dirty F 444 to 450 w/ 1' TO @ 447 - GTM thin irreg/ 450 to 456 - 1' F base (458)
493	424	12-10	GTM-GEM : TO - sty & TO 458 to 460 - GTM thin/ > O 460 to 466 - GEM > G f w/ short sndt TO sec 466 to 474 - TO/ thin bedded sty & struct 474 to 488 w/ 1' GTM crepe @ 485 - dark grey crepe M funtly Bf 488 to 493 - (493)
504	413	11	GEM LS - Dead white cast - highly effervescent - crepe - scatt Hf - (504)
515	402	12	LGTM m - funtly Bf - med M - Ca f - spk Tr Pb @ 512 - (515)
519	398	19	LG-SD - slight to mod sandy - scatt FeS tr - > funt Bf - (519)
528	389	20	WS - clean - > scatt FeS traces - (528)

FORM 1173-2-54 Started 7-9-57

15 ✓

DATE BOTTOMED		ST. NO. VC-60	ST. ELEV.
DESCRIBED BY C.A.		AREA Courtois	
DATE ESTIMATED 7-16-57		OPTION NO. CZ-67	
BY C.A.		TRACT G.D. EVANS	

CLASS TRACE HOLE NO. 57VC43

ELEVATION COLLAR 891.95

COORDINATES: N 116683.18 E 88962.52

200 FT. MAP NO. 46 50 FT. MAP NO. SE¼-NE¼-Sec 7

~~GENERAL~~ HOLE DATA

HT. SLEEVE ABOVE GR 0.83 FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO		
SLEEVE BIT TO	210	871
BEGAN CORING AT	225	667
SAVED CORES FROM FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	231	661
BONNE TERRE "	490	402
B. T. TRANS. "	492	400
CONGLOMERATE "		
LA MOTTE "	498	394
GRAN. OR POR. "		
PICTURES: FROM	225	667
TO	498	394
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 1965 S 265 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
												498	—
	323.8	324.0	568.0	0.2		TR.					Speck.		
	330.3	330.9	561.1	0.6		TR					"		
	378.8	379.0	513.0	0.2		TR					"		
	389.7	390.4	501.6	0.7	1.4	1.0	1.0	✓			diss.		
	393.4	393.5	498.5	0.1		TR.					Speck.		
	394.7	396.7	495.3	2.0	0.7	1.0	1.4	✓			diss.		
	396.7	398.0	494.0	1.3		TR					Speck.		
	398.0	399.0	493.0	1.0	0.6	1.0	0.6	0.25	0.5	0.25	diss.		
	399.0	401.3	490.7	2.3	0.2	TR	0.5	0.56	1.0	1.28	Speck.		
	402.0	403.4	488.6	1.4	1.1	1.5	1.5	✓			DISS.		
	403.4	406.0	486.0	2.6		TR.					speck.		
	415.0	415.2	476.8	0.2		TR					"		
	424.8	425.0	467.0	0.2		TR					"		
	427.9	428.1	463.9	0.2		TR					"		
	446.8	447.0	445.0	0.2		TR					"		

205

RC 1K

FORM 9002-R-5-55

ROCK CLASSIFICATION

LS

DESCRIBED BY [illegible] DATE 7-16-57 ~~MINE~~ Countain STOPE STAKE NO. VC-60 HOLE NO. 57VC43

COLLAR ELEV. 892 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
225	667	BEGAN CORING	
231	661	DAVIS SHALE —	
		BONNE TERRE	
282	610	1	LT>O:T — > O dense — style 231 to 261 — Tf: > O [illegible] of 261 to base > [illegible] patches & [illegible] — > most fractured — 6" [illegible] G 1x @ 279 — (282)
293	599	5-1	T>O>Bf:>Dense — > [illegible] — fairly O — most fract — Ca t — [illegible] — > scattered [illegible] — (293)
351	541	5	Bo>Bf — fair to med O — [illegible] patches — style — 6" G [illegible] w/ L f @ 321 — 1' GM > Cf > T @ 319 — O becoming more [illegible] few and G banding [illegible] 327 to base — 2' GM [illegible] @ 341 — 2" dense [illegible] w/ Tr [illegible] @ 342 — 1" w/ < Ca patches @ 347 — 1' dense G strat @ 347 — & 6" @ 351 — [illegible] 345 to base — (351)
357	533	5	To>Gf — fair to med O — > fine Gf — — style — [illegible] — (357)
425	467	7	F/GTMGf — fair to med F [illegible] — [illegible] — [illegible] — [illegible] 387 to 406 — [illegible] fract — 2' > dense T w/ Gf @ 412 — [illegible] @ 415, 425, [illegible] 2' @ 417 w/ > CuFeS — (425)
437	455	7-10	GT>O->F:>GTM — GTM > [illegible] 425 to 428 — GT>O < [illegible] — 428 to 432 — 6" F @ 432.5 — GTO — Gf [illegible] style 432.5 to 434 — GTO Thin f 434 to 436 — 1' F @ base — (437)
470	422	10-12	T&GT>O — G&GTM [illegible] — 2' To > f & style @ 439 — 6" alternating GMa & GTo [illegible] 437 to 449 — < To & style: > M 449 to 457 — 1' GM [illegible] @ 458 — > ET > O 458 to 463 — EGT > O > [illegible] 463 to [illegible] frequently L f — (470)
478	414	11	GGEM [illegible] L — To — Highly effervescent — [illegible] GM [illegible] — 1' To @ 475 > f — (478)
490	402	12	GTM [illegible] — med O — med [illegible] — > Gf — [illegible] Pp @ 482 — 1' > C [illegible] — (490)
492	400	19	ELG > Hf — > to med [illegible] — > [illegible] Hf — (492)
498	394	20	WS — med fine grain — [illegible] FeS patches — (498)

EXTRA COPY
D M E A
RECEIVED SEP 18 1957

DATE	INITIALS	CODE

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
~~WASHINGTON 25, D.C.~~
Box 431
Joplin, Missouri
September 6, 1957

OFFICIAL FILE COPY DMEA RECEIVED SEP 9 1957		
DATE	INITIALS	CODE
9/9	C	220
"	FEJ	110
9/9	WEH	500

Mrs. Cora A. Bailey, Fiscal Officer
U. S. Bureau of Mines, Region IV
206 Federal Building
Bartlesville, Oklahoma

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

Dear Mrs. Bailey:

Transmitted herewith to be certified for the Government's 50 percent participation payment is the original of the MF-104 reports for July. As indicated thereon, I have approved it in the claimed amount of $18,013.24.

One copy of this report is being sent to the Survey Member of the Field Team; the two Washington copies is being retained here awaiting your voucher data to be posted thereon.

Sincerely yours,

CCK/jd

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

encl.

cc: DMEA Op.Com.(2)
Amos,USGS,Knoxville w/cy MF-104
4582 file

5th Copy - Amend. 1065

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

Month of July, 1957 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	17964.24	28917.72	46881.96	3/18/58		
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Materials and Supplies:						
Fuel						
Explosives						
Pipe						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis	49.00	54.00	103.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	18013.24	28971.72	46984.96			

RECEIVED AUG 16 1957 BUREAU OF MINES TECHNOLOGY DIVISION JOPLIN, MO.

RECEIVED SEP 9 1957 D.M.E.A.

I certify that the above bill is correct and just and that payment therefor has not been received.
Date 8-14-57 *Payee St. Joseph Lead Company
Per L. W. Cashee Asst. 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:

$

Signature
(Authorized Certifying Officer)

Date Vou. No.
(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

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

Signature John W. Alexander Title Mining Engineer Date Sept 6, 1957

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

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

MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of July 1957 Docket No. DMEA 4582 Contract No. Idm-E 1068

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

Address Bonne Terre, Missouri

RECEIVED
MINERAL TECHNOLOGY
DIVISION
AUG 16 1957
BUREAU OF MINES
JOPLIN, MO.

	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.	13026.96	5868	33861.66	15253	)		
Churn	Ft.	4937.28	2224	13020.30	5865	$2.22)	133420	$2.22
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Analytical Determinations	Ea	49.00	49	103.00	103	1.00	2370	1.00
Total Distributed Costs		18013.24		46984.96				Total Costs Authorized by Contract
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
Total Costs		18013.24		46984.96				

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 8-14-57 Operator St. Joseph Lead Company

Per L. W. Castle Title Asst. Division Manager

Remarks:

RECEIVED SEP 9 1957 D.M.E.A.

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

(Instructions on reverse)

(For Government use only)

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, 1957

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

11 Stage II locations, approved by the DMEA field team as of July 30, 1957, have been assigned numbers as shown on map. The Stage II stake numbers and locations are as follows:

VC-92 -	located	approximately	520	feet	S 30° E	of	Stage	II	Stake	VC-56
VC-93 -	"	"	520	"	E	of	Stage	I	Stake	VC-10
VC-94 -	"	"	520	"	N 60° E	of	"	I	"	VC-10
VC-95 -	"	"	520	"	S 60° E	"	"	I	"	VC-10
VC-96 -	"	"	520	"	S	"	"	I	"	VC-10
VC-97 -	"	"	520	"	S 60° W	"	"	I	"	VC-10
VC-98 -	"	"	520	"	N 60° W	"	"	I	"	VC-10
VC-99 -	"	"	520	"	N 30° E	"	"	I	"	VC-3
VC-100 -	"	"	520	"	N	"	"	I	"	VC-28
VC-101 -	"	"	520	"	W	"	"	I	"	VC-28
VC-102 -	"	"	520	"	S 30° E	"	"	I	"	VC-3

3 churn drills were operating in the area at the end of the month. The holes in progress were Stage I Stake VC-46 at a depth of 125 feet, Stage I Stake VC-30 at a depth of 20 feet, and Stage II Stake VC-56 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	I -	Stake	No.	VC-28 -	depth	238	feet -	starting	date	6-26-57
"	I -	"	"	VC-29	"	225	"	"	"	6-17-57
"	I	"	"	VC-32	"	115	"	"	"	6-26-57
"	I	"	"	VC-33	"	255	"	"	"	7- 3-57
"	I	"	"	VC-34	"	126	"	"	"	6-28-57
"	I	"	"	VC-35	"	200	"	"	"	7-10-57
"	I	"	"	VC-37	"	130	"	"	"	6-28-57
"	I	"	"	VC-38	"	170	"	"	"	6-25-57
"	I	"	"	VC-43	"	165	"	"	"	7-16-57
"	I	"	"	VC-45	"	225	"	"	"	7-11-57
"	II	"	"	VC-61	"	150	"	"	"	7-24-57
"	II	"	"	VC-62	"	125	"	"	"	7-19-57
"	II	"	"	VC-63	"	100	"	"	"	7-15-57

2 diamond drills were operating in the area at the end of the month. The holes in progress were Stage I Stake No. VC-27 at a depth of 225 feet and Stage I Stake No. VC-32 at a depth of 115 feet.

The following diamond drill holes were completed during the month:

Stake No.	Prospect Hole No.	Bottom Depth	Diamond Drilling	Date Completed	Class.
VC-6	57VC50	584	514	7-19-57	Pay ✓
VC-8	57VC47	625	475	7-16-57	Pay ✓
VC-9	57VC52	547	477	7-24-57	Indicative
VC-10	57VC48	673	493	7-17-57	Pay ✓
VC-18	57VC38	625	490	7- 3-57	Trace

Stake No.	Prospect Hole No.	Bottom Depth	Diamond Drilling	Date Completed	Class.
VC-22	57VC40	685	485	7- 8-57	Sp. Trace
VC-25	57VC55	689	473	7-29-57	Trace
VC-28	57VC54	725	487	7-23-57	Trace
VC-31	57VC42	615	500	7-11-57	Sp. Trace
VC-36	57VC57	628	448	7-30-57	Trace
VC-59	57VC41	528	528	7- 9-57	Trace
VC-60	57VC43	498	498	7-11-57	Trace

Note: VC-59 and VC-60 are Stage II locations.

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

49 analytical determinations were made during the month, as follows:

57VC38	1 Pb		
57VC41	1 Pb		1 Cu
57VC43	5 Pb		2 Cu
57VC47	5 Pb		
57VC48	9 Pb	4 Zn	2 Cu
57VC50	6 Pb		1 Cu
57VC52	5 Pb		
57VC54	1 Pb		
57VC57	6 Pb		

WASHINGTON COUNTY

Courtois Area - In DMRA Project #4582 -

Week Ended July 8, 1957

2 Company-owned diamond drills and 5 churn drills setting casing completed 1 trace hole.

57VC38, a trace hole, is located in the northwest part of the area and 520 feet northwest of 56W101, an indicative hole. It bottomed at 625 feet depth in Lamotte sandstone. Trace lead estimated as 1.5 feet of 1.0% Pb is present at the base of the main 7 reef at 525 feet depth. This hole completes a circle of 6 holes on 520-foot spacing around 56W101, all of which show trace lead on about the same horizon but give no clue as to location of possible concentrations. Formation elevations are rising to the north toward a buried knob and considerably closer spaced drilling will be necessary here to determine whether minable concentrations are present in this widespread blanket of mineralization.

Week Ended July 15, 1957

2 Company-owned diamond drills operating and 4 churn drills setting casing completed 4 trace holes.

57VC40, a speck trace hole, is located in the central part of the project area and 1500 feet southwest of 56W93, a pay hole. It bottomed at 685 feet depth in Lamotte sand. Speck traces of lead were present at 553 feet depth in the upper part of the 5 zone.

57VC41, a trace hole, is located in the central part of the area and 520 feet north-northeast of 57VC19, a pay hole. It bottomed at 528 feet depth in Lamotte sand. Weak traces of lead, estimated as 0.3 feet of 1.0% Pb, were present at 426 feet depth near the base of the 7 zone. 11 feet of limestone was present in the 12 zone.

57VC43, a trace hole, is located 520 feet north-northwest of 57VC19. It bottomed at 498 feet depth in Lamotte sand. Traces of lead were present in the 7 zone and were estimated as 0.7 feet of 1.0% at 390 feet depth, 2.0 feet of 1.0% at 397 feet depth, 1.0 feet of 1.0% at 399 feet depth, and 1.4 feet of 1.5% at 403 feet depth. This section is very similar in appearance and at the same horizon as ore in nearby pay hole. 8 feet of limestone is present in the 12 zone.

57VC42, a trace hole, is located in the central part of the area and 1500 feet west of 56W69, an indicative hole. It bottomed at 615 feet depth in Lamotte sand. Weak traces of lead were present at 461 feet depth in the upper part of the 5 zone, at 519 feet depth at the top of the 7 zone, at 535 feet depth in the 7 zone, and at 600 feet depth near the base of the 12 zone.

Week Ended July 22, 1957

2 Company-owned diamond drills operating and 4 churn drills setting casing completed 3 pay holes.

57VC47, a pay hole, is located about 3/4 mile south of the village of Courtois and 520 feet east of 56W69, an old indicative hole. It bottomed at 625 feet depth in Lamotte sandstone. Ore horizon is at 466 feet depth at the 5/7 contact and was estimated as 5.7 feet of 6.4% Pb.

Week Ended July 22, 1957 (Continued)

57VC50, a pay hole, is located 520 feet north-northwest of the above hole. It bottomed at 584 feet depth in Lamotte sandstone. Ore horizon is at 442 feet depth at the 5/7 contact and was estimated as 10.1 feet of 8.2% Pb. A higher run, at 413 feet depth, estimated as 2.5 feet of 5.0%, is associated with fairly heavy zinc mineralization.

57VC48, a pay hole, is located 900 feet north-northeast of the above hole. It bottomed at 673 feet depth in Lamotte sand. Ore horizon is at 529 feet depth at the 5/7 contact and was estimated as 11.6 feet of 5.3% Pb. A higher run, at 499 feet depth, is associated with zinc mineralization and was estimated as 3.8 feet of 3.0% Pb.

Ore in these holes is all of the same nature, in the same horizon, and about the same elevation and promises to develop an ore body of considerable size when additional drilling is done.

Week Ended July 29, 1957

2 Company-owned diamond drills operating and 4 churn drills setting casing completed 1 indicative and 1 trace hole.

57VC54, a trace hole, is located 3/4 mile south of the village of Courtois and 1100 feet east of 57VC47, a pay hole. It bottomed at 725 feet depth in Lamotte sand. Lead estimated as 2.0 feet of 3.5% Pb is located at 567 feet depth at the 5/7 contact and in the same horizon as ore in the pay hole.

57VC52, an indicative hole, is located 520 feet south-southwest of 57VC47. It bottomed at 547 feet depth in Lamotte sand. Lead estimated as 9.3 feet of 1.7% Pb is located at 413 feet depth, near the 5/7 contact and in the same horizon as ore in 57VC47.

For period of July 29-30-31, 1957

2 diamond drills operating and 4 churn drills setting casing completed 2 trace holes.

57VC55, a trace hole, is located about 3,000 feet south of the village of Courtois and 1500 feet east of a group of 3 pay holes recently drilled. It bottomed at 689 feet depth in Lamotte sand. Minor traces of lead were present in the 5 zone and at the top of the 7 zone.

57VC57, a trace hole, is located about 1 mile south-southwest of the village of Courtois and 1400 feet southwest of the above mentioned group of pay and indicative holes. It bottomed at 628 feet depth in 8 feet of rhyolite porphyry which extends about 60 feet up into the Bonneterre horizon. Lead mineralization is present in the 7/10 horizon from 566 to 608 feet depth with estimates of 1.0% Pb at the following depths: 0.5 feet at 566, 0.1 feet at 577, 1.0 feet at 584, 2.5 feet at 590, 4.5 feet at 600, and 0.3 feet at 608. High Precambrian in this hole represents a knob not previously known in this area although the sharp rise in the sand in holes to the northeast indicated its probable presence.

FORM 1173-2-54

Started 7-18-57 #20

DATE BOTTOMED 7-19-57 ST. NO. VC #6 ST. ELEV. _____ CLASS Pay HOLE NO. 57VC50

DESCRIBED BY CA AREA Courtois ELEVATION COLLAR 904.82

DATE ESTIMATED 7-23-57 OPTION NO. CZ-54 COORDINATES: N 113777.02 E 88542.29

BY O.A. TRACT Rico Mason 200 FT. MAP NO. 46 50 FT. MAP NO. SE¼-SE¼-Sec 7 T35N-R1W

MINERALIZATION RECORD 365N 610W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 0.83 FT.

FORM BOTT. SL. _____

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	70	835
SLEEVE BIT TO		
BEGAN CORING AT	305	600
SAVED CORES FROM	324	581
FORMATIONS:		
SOIL TO	13	892
"		
EMINENCE "		
POTOSI "	50	855
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	324	581
BONNE TERRE "	572	333
B. T. TRANS. "	573	332
CONGLOMERATE "		
LA MOTTE "	584	321
GRAN. OR POR. "		
PICTURES: FROM	324	581
TO	584	321
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. %	% Cu ASSAY	% Cu EST	REMARKS	TO	CORES LOST
														305	
354.0	354.1	550.7	0.1		TR								Fract.	385	—
374.8	375.0	529.8	0.2		TR.								Speck	405	6.0
385.1	385.3	519.5	0.2		TR.								"	549	—
401.2	401.4	503.4	0.2		TR								>Tes Fract.	564	1.0
406.0	406.1	498.7	0.1		TR								"	584	—
407.3	407.4	497.4	0.1		TR								Speck		
410.4	412.9	491.9	2.5	4.7	5.0	11.8 ✓		1.0					<diss		
414.2	415.0	489.8	0.8		TR								Fract.		
415.5	415.7	489.1	0.2		TR								Speck		
417.4	417.8	487.0	0.4	0.8	1.0	0.3							diss.		
419.6	419.8	485.0	0.2		TR								Fract.		
427.6	427.7	477.1	0.1		TR								Speck		
431.8	435.1	469.7	3.3	30.0	19.0	99.0		1.0			0.38	1.0	<diss		
435.1	438.4	466.4	3.3	6.6	4.5	21.8		TR					diss.		
440.7	441.9	462.9	1.2	4.8	5.0	5.8		10.1-12.5-TR Zn+					large XLs		
441.9	443.0	461.8	1.1		TR								Specks		
443.0	444.3	460.5	1.3	1.3	2.0	1.7 ✓							diss.		
566.0	566.1	338.7	0.1		TR								Small XL		

204

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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. 905 PITCH [illegible] BEARING [illegible] COORD.: N [illegible] E [illegible]

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
[illegible]	600	BEGAN CORING	
324	581	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]
375	530	1	[illegible]
386	519	1-5	[illegible] (386)
423	482	5	[illegible] (423)
434	471	7	[illegible] (434)
487	418	7	[illegible]
[illegible]	499	7-10	[illegible]
547	358	12-10	[illegible]
572	333	12	[illegible] (572)

FORM 9002-R-5-55

ROCK CLASSIFICATION

PAGE 2

DESCRIBED BY [illegible] DATE [illegible] MINE [illegible] STOPE STAKE NO. VC #6 HOLE NO. 57VC 50

COLLAR ELEV. PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
		BEGAN CORING	
[illegible]	[illegible]	12	[illegible] D. Slightly sandy -- Y8 pink splotches - Tr Fe @ [illegible] (573)
[illegible]	[illegible]	[illegible]	W. G. - Clean - med grain - with Tr to [illegible] - [illegible] feet [illegible] 574 to 576 - : G. top to [illegible] - (574)

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ICRM 1173 2 84

20 / 1

DATE BOTTOMED 7-16-57 ST. NO. VC-8 ST. ELEV. _____ CLASS PAY HOLE NO. 57VC47

DESCRIBED BY C. A. AREA COURTOIS ELEVATION COLLAR 956.17

DATE ESTIMATED 7-18-57 OPTION NO. CZ-64 COORDINATES: N 113292.32 E 88797.43

BY C. A. TRACT JESSE BREAKFIELD 200 FT. MAP NO. 46 NE¼-NE¼-SEC 18 50 FT. MAP NO. T35N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR. 18" FT.

FORM BOTT. SL. _____

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	150	806
SLEEVE BIT TO		
BEGAN CORING AT	355	601
SAVED CORES FROM		
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	356	600
BONNE TERRE "	605	351
B. T. TRANS. "	607	349
CONGLOMERATE "		
LA MOTTE "	625	331
GRAN. OR POR. "		
PICTURES: FROM	355	601
TO	625	331
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD

ROCK TYPE	~~DEPTH~~ FROM	TO	~~ELEV.~~ BOTT.	~~THICK.~~ NESS	% LEAD ASSAY	EST.	FT. %	% ASSAY	EST.	FT. %	REMARKS	CORE REC. TO	CORES ~~LOST~~
1	367.0	367.2	589.0	0.2		TR						355	
"	377.0	377.1	579.1	0.1		TR						475	—
"	379.0	379.2	577.0	0.2		TR						495	2.0
"	381.4	381.6	574.6	0.2		TR						507	2.0
5	439.0	439.3	516.9	0.3		TR						625	—
5/7	460.2	464.6	491.6	4.4	9.7	80		✓		42.7	XLS IN VUGGY STRUCTURE		
7	464.6	465.9	490.3	1.3	0.2	1.0				0.3	Diss		
"	465.9	466.8	489.4	0.9		TR							
"	466.8	467.3	488.9	0.5	0.5	1.0				0.2	Diss		
"	468.1	468.5	487.7	0.4	1.5	1.0		✓		0.6	Diss		
	471.1	471.7	484.5	0.6		TR.							
	474.0	475.6	481.2	1.0		TR							
	475.0	475.9	480.3	0.9	0.9	1.0		✓		0.8	Diss		
	475.9	478.2	478.0	2.3		TR							

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FEW

P.O.K.

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OMEA

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE 7-18-57 ~~MINE~~ [illegible] STOPE .... STAKE NO. VC-3 HOLE NO. 57VC47

COLLAR ELEV. 956 PITCH .... BEARING .... COORD.: N .... E ....

~~BOTTOM~~ DEPTH	~~BOTTOM~~ ELEV.	~~ZONE~~ NUMBER	~~KIND OF ROCK~~ (Depth at Bottom)
[illegible]	[illegible]	BEGAN CORING	
356	[illegible]	DAVIS SHALE	
		BONNE TERRE	
403	553	1	LT>[illegible] [illegible] - faintly [illegible] porous patches [illegible] to 395 - Then [illegible] dense [illegible] 377 to 315 [illegible] sparse patches 375 to base - Tr Pb @ 365 & 377 & 379 - (403)
413	543	1-[illegible]	[illegible] - [illegible] shale partings - > pitted - faintly B [illegible] @ 411 - (413)
453	503	5	Bo-[illegible] - [illegible] - [illegible] patches in vuggy - Tr Pb 421 - 2" GM w/ < Thin [illegible] 427 - 3" GM @ 431 - [illegible] bluish grey [illegible] scatt. 432 to 453 - (453)
461	495	5	Tn - < [illegible] [illegible] - [illegible] porous [illegible] to [illegible] - fract @ base - (461)
540	416	7	F [illegible] TMC [illegible] GT>[illegible] - Heavily mineralized [illegible] Pb 461 to 465 - locally [illegible] F [illegible] - 6" [illegible] < Pb @ 463 - 3' < porous [illegible] > Pb @ 465 - [illegible] vuggy > fract [illegible] scatt. Pb 465 to 4[illegible] - [illegible] GT > [illegible] 480 to 492 - [illegible] fract 492 to 500 - G [illegible] 500 to 507 - med [illegible] F [illegible] 517 to 524 - [illegible] T [illegible] @ 527 - GM [illegible] 527 to 531 GT [illegible] 532 [illegible] GT @ 535 - F [illegible] to 540 - (540)
564	392	7-10 [illegible]	T GT - F - GT+GM - [illegible] 540 to 543 - F to 545 - T to 546 - GTM to 553 - T [illegible] to 555 - M+GTM to 558 - F to 561 - GTM - E [illegible] to 563 - F to 564 - (564)
585	371	10-11 [illegible]	GT GEM: T - GTGEM [illegible] - Then [illegible] top to 576 - 1' F @ 577 - GTM - B [illegible] 577 to 581 - 3' T to 584 - 1' F @ 585 - (585)
605	351	12	GTM - Pitted - med [illegible] M -> [illegible] - (605)
607	349	1[illegible]	G [illegible] D > M - [illegible] content - > E @ base - (607)
625	331	20	W[illegible] - bluish grey stain top to 618 - med fine grain - clean - (625)

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D.M.E.A.

Started 7-22-57

20 ✓

FORM 1173-2-54

DATE BOTTOMED 7-24-57 ST. NO. VC-9 ST. ELEV.

DESCRIBED BY C.A. AREA Courtois

DATE ESTIMATED 7-25-57 OPTION NO. C2-53

BY C.A. TRACT E. R. LARAMORE

CLASS INDICATIVE HOLE NO. 57VC52

ELEVATION COLLAR 911.00

COORDINATES: N 112884.10 E 88503.44

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

NW¼-NE¼-Sec18 T35N-R1W

530 S 640 W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 0.83 FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	70	841
SLEEVE BIT TO		
BEGAN CORING AT	285	626
SAVED CORES FROM		
FORMATIONS:		
SOIL TO	15	896
"		
EMINENCE "		
POTOSI "	55	856
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	296	615
BONNE TERRE "	535	376
B. T. TRANS. "	539	372
CONGLOMERATE "		
LA MOTTE "	547	364
GRAN. OR POR. "		
PICTURES: FROM	285	626
TO	547	364
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
	399.2	399.7	511.3	0.5		TR					fracture	296	–
	404.0	406.4	504.6	2.4	0.3	1.0	0.7	✓			diss.	305	–
	406.4	407.4	503.6	1.0		TR					Specks.	315	5.0
	407.4	411.0	500.0	3.6	1.9	3.0	6.8				diss.	515	–
	411.0	412.2	498.8	1.2		TR					Specks.	535	8.0
	412.2	413.3	497.7	1.1	0.2	1.5	0.2	2.2	1.1		diss.	547	–
	413.3	415.2	495.8	1.9		TR.					: fracture		
	415.2	415.6	495.4	0.4	6.5	6.0	2.6		TR.		: Rb : Fract.		
	418.5	419.5	491.5	1.0		TR					Specks.		
	438.8	439.1	471.9	0.3		TR					Fracture		
	455.7	458.7	452.3	3.0		TR.	✓				Fract. + specks		
	458.7	458.9	452.1	0.2	0.2	1.0	0.1				diss.		
	479.0	479.3	431.7	0.3		TR					Speck.		
	483.3	483.6	427.4	0.3		TR.					"		
	537.0	537.2	373.8	0.2		TR					Small XL'S		

PL C.R.

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D.M.E.A.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE [illegible] MINE [illegible] STOPE STAKE NO. VC-9 HOLE NO. 57VC52

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

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
[illegible]	626	BEGAN CORING	
16	615	[illegible]	[illegible]
[illegible]	562	1	[illegible]
[illegible]	557	1-5	[illegible]
[illegible]	508	5	[illegible]
[illegible]	490		[illegible]
[illegible]	477		[illegible]
[illegible]	451	7	[illegible]
[illegible]	425	7-10	[illegible]
[illegible]	392	[illegible]	[illegible]

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FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE 6-26-57 MINE Cowtown STOPE STAKE NO. VC-#9 HOLE NO. 57VC 52

COLLAR ELEV. 911 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
		BEGAN CORING	
[illegible]	376	[illegible]	[illegible]
[illegible]	372	[illegible]	[illegible]
117	364	[illegible]	[illegible]

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FORM 1173-2-54

Started 7-12-57

15

DATE BOTTOMED 7-17-57 ST. NO. VC-10 ST. ELEV.

DESCRIBED BY C. A. AREA COURTOIS

DATE ESTIMATED 7-22-57 OPTION NO. CZ-62

BY C. A. TRACT H. COLE

CLASS Pay HOLE NO. 57VC48

ELEVATION COLLAR 986.02

COORDINATES: N 114534.88 E 89043.52

200 FT. MAP NO. 46 SE ¼ - SE ¼ - SEC 7 50 FT. MAP NO. T35N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 30" FT.

FORM BOTT. SL.

		DEPTH	ELEV.
DRILLED WITH:			
CHURN DRILL TO		180	806
SLEEVE BIT TO			
BEGAN CORING AT		405	581
SAVED CORES FROM			
FORMATIONS:			
SOIL	TO	50	936
	"		
EMINENCE	"		
POTOSI	"	165	821
POTOSI-DERBY	"		
DERBY DOE RUN	"		
DAVIS (C.B.-S.B.)	"	425	561
BONNE TERRE	"	667	319
B. T. TRANS.	"	668	318
CONGLOMERATE	"		
LA MOTTE	"	673	313
GRAN. OR POR.	"		
PICTURES:	FROM	405	581
	TO	668	318
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. %	% CU	REMARKS
	450.0	450.1	535.9	0.1		TR						
1	471.8	472.0	514.0	0.2		TR						
5	477.0	477.1	508.9	0.1		TR						
"	483.5	483.7	502.3	0.2	11.9	6.0	2.4	✓				
"	484.3	484.8	501.2	0.5	1.1	1.0	0.6					
"	488.5	488.7	497.3	0.2		TR						
"	490.0	490.1	495.9	0.1		TR						
"	493.3	493.9	492.1	0.6		TR						
"	495.2	499.0	487.0	3.8	3.1	3.0	11.8	4.0	10.0	15.2		5.8-2.1-3.9 Zn.
"	499.0	501.0	485.0	2.0	0.3	0.5	0.6	2.4	3.0	4.8		
"	501.0	504.3	481.7	3.3		TR			TR			Fine sulfides
7	517.2	522.0	464.0	4.8	1.9	3.0	9.1	1.7	2.0	8.2		11.6-5.5-1.0 Zn.
"	522.9	528.8	457.2	5.9	9.3	8.0	54.9	0.5	2.0	3.0	0.36	0.5
"	529.3	529.9	456.1	0.6	0.0	0.0			0.0		0.0	0.5
"	559.2	559.4	426.6	0.2		TR			0.0			TR
"	561.2	561.4	424.6	0.2	0.8	1.0	0.2		0.0			TR
"	564.2	565.4	420.6	1.2	1.5	2.0	1.8	✓	0.0			
"	579.0	579.1	406.9	0.1		TR						
12	659.8	661.3	324.7	1.5		TR						

CORE REC.

TO	CORES LOST
405	
418	—
421	1.0
457	—
459	1.0
464	2.0
484	—
489	1.0
494	1.0
653	—
673	4.0

205

P.C.K.

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FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE 6-17-56 ~~TIME~~ [illegible] STOPE STAKE NO. VC-10 HOLE NO. [illegible]

COLLAR ELEV. 975 PITCH ~~BEARING~~ COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
418	567	BEGAN CORING	
425	560	DAVIL SHALE - Heavy concentration of [illegible] (425)	
		BANNETERRE -	
471	514	1	LT>20 (Dense) - [illegible] (471)
476	509	1-[illegible]	BGB>20 - dense [illegible] - (476)
517	468	[illegible]	[illegible] - (517)
527	456	7	GTGEM: Rocky - [illegible] (527)
571	406	7	F/GTM - [illegible] (571)
602	383	7-10	F/GTMG+T - [illegible] (602)
611	344	12-10	GEM - + T - [illegible] (611)
667	318	1[illegible]	GTM - [illegible] (667)

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FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE 7-[illegible] ~~MINE~~ [illegible] STOPE STAKE NO. [illegible] #10 HOLE NO. 57V[illegible]48

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

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
		BEGAN CORING	
668	317	11	[illegible] - (668)
673	312	20	WS - [illegible] - 4' [illegible] - 668 - probably [illegible] in [illegible] - (673)

SEP 3 1987
DATE

Started 7-1-57

FORM 1173-2-54

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DATE BOTTOMED 7-3-57	ST. NO. VC-18 ST. ELEV.	CLASS TRACE	HOLE NO. 57VC38
DESCRIBED BY W.M. + C.A.	AREA COURTOIS	ELEVATION COLLAR 1021.85	
DATE ESTIMATED 7-9-57	OPTION NO. CZ67	COORDINATES: N 116841.23	E 85395.01
BY C.A.	TRACT G. D. EVANS	200 FT. MAP NO. 45 SE¼-NW¼-Sec7	50 FT. MAP NO. T35N-R1W

GENERAL HOLE DATA — MINERALIZATION RECORD 1910 S 1250 E PL — PL CORE REC.

HT. SLEEVE ABOVE GR 1.00 FT.

FORM BOTT. SL.

		DEPTH	ELEV.
DRILLED WITH:			
CHURN DRILL TO		1370	885
SLEEVE BIT TO			
BEGAN CORING AT		345	677
SAVED CORES FROM		345	677
FORMATIONS:			
SOIL	TO	12	1010
	"		
EMINENCE	"		
POTOSI	"	95	927
POTOSI-DERBY	"		
DERBY DOE RUN	"		
DAVIS (C.B.-S.B.)	? "	345?	677
BONNE TERRE	"	595	427
B. T. TRANS.	"	599	423
CONGLOMERATE	"		
LA MOTTE	"	625	397
GRAN. OR POR.	"		
PICTURES:	FROM	345	677
	TO	625	397
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
												345	
	495.2	497.0	524.9	1.8		TR			TR.			625	—
	505.2	505.5	516.4	0.3		TR							
	523.9	525.4	496.5	1.5	1.2	1.0	1.8				diss : fract.		
	536.1	536.3	485.6	0.2		TR							
	590.8	590.9	431.0	0.1		TR					specks		
	588.9	599.0	422.9	0.1		TR					Small XL.		

205

RGW

PC-5K

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FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE 7-9-57 MINE [illegible] STOPE ..... STAKE NO. [illegible] HOLE NO. 57VC38

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

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
365		BEGAN CORING	
373	[illegible]	1	DENSE BROWN Dolo Dense with > Porous sect. LT Tan to Brown colored > Brown banding toward base. > Lrge Vugs. (373)
381	[illegible]	1-5	LT Brown-Tc Mostly 1 bed [illegible] > Brown banding > Shtt. Tc sect. Bg > Vugs. > Dense sections. Lrge vugs with dickite @ 378. (381)
385	[illegible]	5	Tc > Bg [illegible] Lrge calcites [illegible] seams. > Rb. Mostly [illegible] with > faint Bg. (385)
389	[illegible]	5-7	F Tc 1" Reef Rock @ 386 & 1" @ 388 Rest of Hole To Med to Lrge [illegible] (389)
415	[illegible]	7	F Tan Good Reef Rock 1" Gp @ bed. > Rg > Vugs. [illegible] 1152 - 1175 with > Tc. 3" Pb Tis @ 5.65.5 Short calcite pockets.
539	[illegible]	7	R-Mac [illegible] Mott [illegible] 515-[illegible] & Tc Med to Lrge to base > [illegible] with [illegible] > Rb. Pb Tis. 523.9 - 525.0. IN Seams [illegible] (539)
562		10-[illegible]	Tc F Tc Lrge calcites from 527 - 536. F Reef Rock 536 - base 1" Pb @ 538. - [illegible] (562)
[illegible]	[illegible]	10	[illegible] (575)
599	[illegible]	11	[illegible]
	311		[illegible]

FORM 1173-2-54

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Started-7-1-57

DATE BOTTOMED 7-8-57 | ST. NO. VC-22 | ST. ELEV. | CLASS ~~SPECK~~ TRACE | HOLE NO. 57VC40

DESCRIBED BY C. A. | AREA Courtois | ELEVATION COLLAR 1012.07

DATE ESTIMATED 7-11-57 | OPTION NO. CZ-54 | COORDINATES: N 114616.53 E 87628.64

BY C. A. | TRACT RICO MASON | 200 FT. MAP NO. 45 NW¼-SE¼-Sec7 | 50 FT. MAP NO. T35N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 28" FT.

FORM BOTT. SL.

		DEPTH	ELEV.
DRILLED WITH:			
CHURN DRILL TO		200	812
SLEEVE BIT TO			
BEGAN CORING AT		415	597
SAVED CORES FROM FORMATIONS:			
SOIL	TO	20	992
	"		
EMINENCE	"		
POTOSI	"	170	842
POTOSI-DERBY	"		
DERBY DOE RUN	"		
DAVIS (C.B.-S.B.)	"	419	593
BONNE TERRE	"	673	339
B. T. TRANS.	"	674	338
CONGLOMERATE	"		
LA MOTTE	"	685	327
GRAN. OR POR.	"		
PICTURES:	FROM	415	597
	TO	685	327
CHAR. SAMPLES:	FROM		
	TO		
INSOL. RES.:	FROM		
	TO		
OPENINGS AT			

MINERALIZATION RECORD 12 10 N 15 60 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
7	546.2	546.4	465.7	0.2		—			TR	✓		415	
"	548.3	548.5	463.6	0.2		—			TR	✓		685	—
"	552.5	552.9	459.2	0.4		TR			TR	✓			

205

R.C.K

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FORM 9002-R-5-55

ROCK CLASSIFICATION

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

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

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
415	696	BEGAN CORING	
411	692	[illegible]	[illegible]
451	644	1	[illegible]
470	635	[illegible]	[illegible]
549	562	[illegible]	[illegible]
[illegible]	516	7	[illegible]
607	502	[illegible]	[illegible]
651	460	[illegible]	[illegible]
673	438	[illegible]	[illegible]
674	437	19	[illegible]
695	426	[illegible]	[illegible]

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FORM 1173-2-54 Started 7-25-57 15 1

DATE BOTTOMED 7-29-57 ST. NO. VC-25 ST. ELEV. _____ CLASS TRACE HOLE NO. 57VC55

DESCRIBED BY C.A. AREA Courtois ELEVATION COLLAR 1015.33

DATE ESTIMATED 7-31-57 OPTION NO. CZ-65 COORDINATES: N 114332.45 E 90660.85

BY C.A. TRACT Kelsey Carl 200 FT. MAP NO. 46 50 FT. MAP NO. _____

SE¼-SW¼-Sec.8 T35N-R1W

~~GENERAL~~ HOLE DATA

HT. SLEEVE ABOVE GR 3.0 FT.

FORM BOTT. SL. _____

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	216	799
SLEEVE BIT TO		
BEGAN CORING AT	415	600
SAVED CORES FROM	434	581
FORMATIONS:		
SOIL TO	22	993
EMINENCE "		
POTOSI "	215	800
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	434	581
BONNE TERRE "	683	332
B. T. TRANS. "	686	329
CONGLOMERATE "		
LA MOTTE "	689	326
GRAN. OR POR. "		
PICTURES: FROM	429	586
TO	689	326
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 955N-1500E

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS
	441.0	441.1	574.2	0.1		TR.					
	506.5	506.7	508.6	0.2		TR.					
	508.5	509.0	506.3	0.5		TR.					
	517.3	517.8	497.5	0.5		TR.					
	531.3	531.5	483.8	0.2		TR.					
	528.8	583.0	432.3	0.2		TR.					
	591.4	592.0	423.3	0.6		TR.					

CORE REC.

TO	CORES LOST
415	
689	—

205

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FORM 9002-R-5-55

ROCK CLASSIFICATION

HOLE 1

DESCRIBED BY [illegible] DATE [illegible] ~~MINE~~ [illegible] STOPE [illegible] STAKE NO. VC & 5 HOLE NO. 57VC55

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]	599	BEGAN CORING	
[illegible]	[illegible]	[illegible]	SHALE (414)
			[illegible]
432	531	1	[illegible]
[illegible]	519	[illegible]	[illegible] (414)
441	472	5	[illegible]
[illegible]	454		[illegible]
[illegible]	441		[illegible]
[illegible]	407	[illegible]	[illegible]
[illegible]	380		[illegible]
[illegible]	349	[illegible]	[illegible]
[illegible]	330	[illegible]	[illegible]

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FORM 9002-R-5-55

ROCK CLASSIFICATION

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

COLLAR ELEV. 1018 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
		BEGAN CORING	
[illegible]	327	[illegible]	[illegible]
[illegible]	324	[illegible]	[illegible]

Started - 7-19-57

15

FORM 1173-2-54

DATE BOTTOMED 7-23-57 ST. NO. VC-28 ST. ELEV. CLASS TRACE HOLE NO. 57VC54

DESCRIBED BY C.A. AREA COURTOIS ELEVATION COLLAR 1066.25

DATE ESTIMATED 7-29-57 OPTION NO. C2-65 COORDINATES: N 113243.90 E 89839.46

BY C.A. TRACT KELSEY CARL. 200 FT. MAP NO. 46 50 FT. MAP NO.

NW¼-NW¼-Sec 19 T35N-R1W

1605 - 690E

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 2.5 FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	235	831
SLEEVE BIT TO		
BEGAN CORING AT	445	621
SAVED CORES FROM	461	605
FORMATIONS:		
SOIL TO	40	1026
"		
EMINENCE "		
POTOSI "	220	846
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	469	597
BONNE TERRE "	715	351
B. T. TRANS. "		
CONGLOMERATE "		
LA MOTTE "	725	341
GRAN. OR POR. "		
PICTURES: FROM	461	605
TO	725	341
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	CORES LOST
												445	
	479.7	480.0	586.3	0.3		TR	✓				large XL in vug.	461	—
	565.3	567.3	499.0	2.0	2.0	3.9	✓				4.0 diss.	481	2.0
	711.3	712.7	353.6	1.4		TR	✓				frost.	725	—

CORE REC.

205

1114

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FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE [illegible] MINE [illegible] STOPE STAKE NO. VC 28 HOLE NO. 7-1054

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

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
[illegible]	520	BEGAN CORING	
[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	558	1	[illegible]
[illegible]	534	[illegible]	[illegible]
[illegible]	493	[illegible]	[illegible]
[illegible]	472		[illegible]
[illegible]	446		[illegible]
685	430	[illegible]	[illegible]
[illegible]	412	10-7	[illegible]
675	390	10-12	[illegible]
714	351	12	[illegible]
715	350	19	[illegible]
725	340	20	[illegible]

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DALLAS

DATE STARTED 7-9-57

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FORM 1173-2-54

DATE BOTTOMED 7-11-57 ST. NO. VC-31 ST. ELEV. _____ CLASS TRACE HOLE NO. 57VC42

DESCRIBED BY C. A. AREA COURTOIS ELEVATION COLLAR 951.20

DATE ESTIMATED 7-15-57 OPTION NO. C2-53 COORDINATES: N 113380.13 E 86716.46

BY C. A. TRACT E.R. LARAMORE 200 FT. MAP NO. 45 NW¼-NE¼-Sec 8 50 FT. MAP NO. T35N-R1W

~~GENERAL HOLE DATA~~

HT. SLEEVE ABOVE GR 2.17 FT.

FORM BOTT. SL. _____

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	115	836
SLEEVE BIT TO		
BEGAN CORING AT	335	616
SAVED CORES FROM	335	616
FORMATIONS:		
SOIL TO	8	943
"		
EMINENCE "		
POTOSI "	100	851
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	342	609
BONNE TERRE "	604	347
B. T. TRANS. "	605	346
CONGLOMERATE "		
LA MOTTE "	615	336
GRAN. OR POR. "		
PICTURES: FROM	335	616
TO	615	336
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
												335	
	461.0	461.2	490.2	0.2		TR					Speck.	595	—
	480.0	480.2	471.0	0.2		TR					"	615	6.0
	518.7	518.9	432.3	0.2		TR.					Fract.		
	535.0	535.2	416.0	0.2		TR					Speck.		
	599.7	599.9	351.3	0.2		TR							
	599.9	600.0	351.2	0.1		TR							

205

Pl.

P.L. K

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FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE 7-15-57 ~~TIME~~ [illegible] STOPE ..... STAKE NO VC-31 HOLE NO 57VC42

~~COLLAR ELEV.~~ 950 PITCH ..... BEARING ..... COORD.: N ..... E .....

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
3[illegible]5	615	BEGAN CORING	
342	608	DAVIS - HOLE DONNIE IERBE	(342)
373	567	1	LT>D:LT - fairly dense [illegible] - style 342 to 367 - > [illegible] [illegible] - 367 to [illegible] - (383)
387	561	1-5	B>p:LT - p> to style [illegible] - (387)
466	484	5	p>LT - [illegible] - p> - med style - > [illegible] [illegible] 2nd [illegible] - 1' GM [illegible] > [illegible] 2433, 436, Ex p> 442 to 455 - 2' [illegible] [illegible] 2450 - 1" > Ex m @ 459 - [illegible] [illegible] - Ex - 2' GM [illegible] @ [illegible] - Tr Pb @ 461 - (466)
471	479	5	GTGD - [illegible] < [illegible] mod [illegible] - > style - > Cu - (471)
522	428	7	FT/GTMG - 1½' [illegible] > [illegible] 2 173 41' @ 451 - [illegible] F [illegible] - 1 to [illegible] @ 481 - 2" [illegible] 479 - [illegible] [illegible] - Tr Pb @ 519 - (522)
[illegible]	396	7-10:12	FT/GTM - [illegible] - GTGLM - [illegible] > F [illegible] 525 to 535 - GE>M Thin 535 to 537 - [illegible] > L to 538 - 1' [illegible] @ 539 - GT - G1 > M Thin 539 to 547 - GT [illegible] Thin - K1 547 to 552 - GM [illegible] @ 553 - 1' F [illegible] @ [illegible] - (554)
583	367	10-12	Tc [illegible] - GTGLM - [illegible] - 6" GEM [illegible] @ [illegible] - 2' GT/GEM @ 567 - [illegible] - Tr S Tr @ 577 - (583)
601	346	12	GTGLM - [illegible] - > [illegible] - [illegible] - > Cu - Tr Pb @ 599 [illegible] 597 to [illegible] [illegible] 597 to [illegible] - 1' [illegible] [illegible] - (604)
605	345	11	GE-D - [illegible] - [illegible] - Pz - (605
615	335	20	W - med fine grain - [illegible] - 6' [illegible] @ 615 to 615 - fairly clean - (615)

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FORM 1173-2-54

20

DATE BOTTOMED 7-30-57 ST. NO. VC-36 ST. ELEV. _____ CLASS TRACE HOLE NO. 57VC57

DESCRIBED BY C.A. AREA COURTOIS ELEVATION COLLAR 1071.44

DATE ESTIMATED 8-2-57 OPTION NO. C2-53 COORDINATES: N 112031.12 E 87446.92

BY C.A. TRACT E.R. LARAMORE 200 FT. MAP NO. 45 50 FT. MAP NO. _____

GENERAL HOLE DATA — MINERALIZATION RECORD 1425 S 1705 W SW¼-NE¼-Sec 18 T35N-R1W — CORE REC.

HT. SLEEVE ABOVE GR 1.83 FT.

FORM BOTT. SL. _____

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	180	891
SLEEVE BIT TO		
BEGAN CORING AT	385	686
SAVED CORES FROM		
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	398	673
BONNE TERRE "	618	453
B. T. TRANS. "		
CONGLOMERATE "	620	451
LA MOTTE "		
~~CAMB.~~ OR POR. "	628	443

PICTURES: FROM 385 686 TO ~~385~~ 628 443

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
												385	
	444.3	444.4	627.0	0.1		TR.						465	—
	461.3	461.5	609.9	0.2		TR.						471	3.0
	470.9	471.0	600.4	0.1		TR.						628	—
	552.0	555.0	516.4	3.0		TR			TR		Zn. in thin Pbs		
	559.6	560.0	511.4	0.4		TR							
	565.8	566.3	505.1	0.5	0.7	1.0	0.4				DISS		
	568.1	568.5	502.9	0.5		TR							
	569.5	570.3	501.1	0.8		TR							
	575.1	577.1	494.3	2.0		TR							
	577.1	577.2	494.2	0.1	1.9	1.5	0.2				DISS		
	579.6	581.4	490.0	1.8		TR							
	582.7	583.7	487.7	1.0	1.1	1.0	1.1	✓			Pb veinlets		
	583.7	587.2	484.2	3.5		TR							
	587.2	589.7	481.7	2.5	1.1	1.0	2.8	✓			diss. + veinlets		
	589.7	594.4	477.0	4.7		TR							
	594.4	599.9	471.5	4.5	1.3	1.0	5.8	✓			diss. + veinlets		
	604.4	608.1	463.3	3.7		TR							
	608.1	608.4	463.0	0.3	0.6	1.0	0.2				DISS.		
	608.4	610.4	461.0	2.0		TR							

205

RW

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FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE 8-2-57 MINE Courtois STOPE STAKE NO. VC-36 HOLE NO. 57VC57

COLLAR ELEV. 1071 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
395	686	BEGAN CORING	
398	673	Drill Hole Lonne Tenre	(398)
441	630	1	T>0: Den. E GT] -> E L.T. 409 to 41[illegible] - thin f. style 416 to 430 -> [illegible] dense GT/ & style 430 to [illegible] -> Ca & pot-hex 4[illegible] to [illegible] - 2" B spotted 427 - (441)
448	623	5-1	GT>0: [illegible] GT] -< style - [illegible] app. w/ scattering dense GT/ -< small Ca & - T. & L @ 445 - 4" w/ L & 441 - (448)
487	584	5	GB&B>0: E L.T. - 6" E L.T. -> fract @ 457 - small to med B & thrust -< small Ca & -> fract 464, 471, - 1' GEN fine G & @ 480, 484 -> [illegible] GB & 480 to [illegible] - 6" w/ bleach GM app @ 487 - (487)
497	572	5	DO: 10" w/ [illegible] GB] - good style contact 487 to 493 - 20" w/ [illegible] GB dense & 493 to 497 - 1' GT>0, [illegible] to 497 - G & O 497 to 497 - (497)
511	557		F T/GT G & >0 > M - good F [illegible] & 497 to 511 -> E L.T. 507 to 514 > style - (514)
521	550		GT G & O & GT DEN. E > 0 - 2' GT < fine G & & O @ 516 - dense GT > 0 - med style 516 to 521 - > G & @ base (521)
557	514	7	F T/GT > M > G &; GT G & O - Prom F [illegible] & top to base w/ 1' GTO > G & @ 525, 1' GTO < G & w/ the END 555 - (557)
606	465	7-10	GT>0 G &; F T/GT > M G & - GT>0 > G & dense - style 557 to 563 - F struct > M 563 to 567 - GT>0 < style w/ [illegible] HL 569 to 579 - good smooth F struct 579 to 597 w/ poor HL - 3" angular RL @ 583 - 4' GT < G & > M 583 to 587 - GM - [illegible] app @ 587 to 606 w/ [illegible] HL - 1' [illegible] w/ Ca & [illegible] @ 605 - 1" angular RL @ 606 - (606)
618	453	10	GT G & L] - [illegible] - fine G & thrust - 4" Ca @ 614 -> [illegible] w/ dolo x-L -> fract - 1' [illegible] app @ 617 - 1' w/ < small to med S & base - (618)

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FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE 8-2-51 MINE [illegible] STOPE STAKE NO. [illegible] HOLE NO. [illegible]

COLLAR ELEV. 1071 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
		BEGAN CORING	
620	451	18	Porphyry fragments [illegible]
628	443	20	Porphyry - Reddish purple - [illegible]

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D.M.E.A.

Date Started 7-5-57

15

FORM 1173-2-54

DATE BOTTOMED 7-9-57 ST. NO. VC-59 ST. ELEV. _____ CLASS TRACE HOLE NO. 57VC41

DESCRIBED BY C.A. AREA COURTOIS ELEVATION COLLAR 916.97

DATE ESTIMATED 7-12-57 OPTION NO. CZ-67 COORDINATES: N 116669.78 E 89461.80

BY CA TRACT EVERETT WOODS 200 FT. MAP NO. 46 SW¼-NW¼-Sec 8 50 FT. MAP NO. T35N-R1W

GENERAL HOLE DATA

HT SLEEVE ABOVE GR 1.17 FT.

FORM BOTT. SL. _____

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	PADDLED HOLE	
SLEEVE BIT TO	11	906
BEGAN CORING AT	251	666
SAVED CORES FROM		
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	257	660
BONNE TERRE "	515	402
B. T. TRANS. "	519	398
CONGLOMERATE "		
LA MOTTE "	528	389
GRAN. OR POR. "		
PICTURES: FROM	251	666
TO	528	389
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
												151	
	296.0	296.2	620.8	0.2		TR					>Pb XL	158	
	395.8	396.1	520.9	0.3		TR							
	424.4	424.6	492.4	0.1		TR							
	426.0	426.3	490.7	0.3	0.4	1.0	0.1	0.40	0.5	0.12	DISS.		
	511.9	512.0	405.0	0.1		TR.							

205

RGW

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FORM 9002-R-5-55

ROCK CLASSIFICATION

LS

DESCRIBED BY [illegible] DATE 7-12-57 MINE [illegible] STOPE STAKE NO. [illegible]-59 HOLE NO. [illegible] VC, 41

COLLAR ELEV. 717 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
251	566	BEGAN CORING	
257	660	Dark SHALE Bonne TERRE	(257)
300	617	1	LT>MLT/ [illegible] (300)
331	596	1-5	GT M [illegible] (331)
366	551	5	[illegible] (366)
383	534	[illegible]	[illegible] GEM [illegible] (383)
440	477	7	FT/GTM [illegible] (440)
458	459	7	GTG/--M:>F:>T [illegible] (458)
472	424	12-10	GTM-GEM:T [illegible] (472)
504	413	11	GEM LS - [illegible] (504)
515	402	12	LGTM [illegible] (515)
519	398	13	LG-D [illegible] (519)
528	389	20	WG - [illegible] (528)

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D.M.E.A.

Started 7-9-57

15

DATE BOTTOMED _____ ST. NO. VC-60 ST. ELEV. _____ CLASS TRACE HOLE NO. 57VC43

DESCRIBED BY C.A. AREA Courtois ELEVATION COLLAR 891.95

DATE ESTIMATED 7-16-57 OPTION NO. CZ-67 COORDINATES: N 116683.18 E 88962.52

BY C.A. TRACT G.D. EVANS 200 FT. MAP NO. 46 50 FT. MAP NO. _____

SE¼-NE¼-Sec 7 T35N-R1W

GENERAL ~~HOLE DATA~~

HT. SLEEVE ABOVE GR 0.83 FT.

FORM BOTT. SL. _____

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO		
SLEEVE BIT TO	210	871
BEGAN CORING AT	225	667
SAVED CORES FROM		
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	231	661
BONNE TERRE "	490	402
B. T. TRANS. "	492	400
CONGLOMERATE "		
LA MOTTE "	498	394
GRAN. OR POR. "		
PICTURES: FROM	225	667
TO	498	394
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 1965 S 265 W

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% Cu ASSAY	% Cu EST.	FT. %	REMARKS
	323.8	324.0	568.0	0.2		TR.					Speck.
	330.3	330.9	561.1	0.6		TR					"
	378.8	379.0	513.0	0.2		TR					"
	389.7	390.4	501.6	0.7	1.4	1.0	1.0 ✓				diss.
	393.4	393.5	498.5	0.1		TR.					Speck.
	394.7	396.7	495.3	2.0	0.7	1.0	1.4 ✓				diss.
	396.7	398.0	494.0	1.3		TR					Speck.
	398.0	399.0	493.0	1.0	0.6	1.0	0.6	0.25	0.5	0.25	diss.
	399.0	401.3	490.7	2.3	0.2	TR	0.5	0.56	1.0	1.28	Speck.
	402.0	403.4	488.6	1.4	1.1	1.5	1.5 ✓				DISS.
	403.4	406.0	486.0	2.6		TR.					speck.
	415.0	415.2	476.8	0.2		TR					"
	424.8	425.0	467.0	0.2		TR					"
	427.9	428.1	463.9	0.2		TR					"
	446.8	447.0	445.0	0.2		TR					"

CORE REC.

TO	~~CORES~~ LOST
498	—

205

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FORM 9002-R-5-55

ROCK CLASSIFICATION

LS

DESCRIBED BY [illegible] DATE [illegible] ~~TIME~~ [illegible] STOPE ..... STAKE NO. VC-60 HOLE NO. VC-43

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

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
225	627	BEGAN CORING	
231	[illegible]	Dark Shale	
		Tonnere	Iebre
282	610	1	LT>0:Tj - [illegible] 261 - Tj:>[illegible] 2[illegible] 6" [illegible] 271 - (282)
313	599	-1	T-0-Tj:>Dense - [illegible] - [illegible] - [illegible] - (313)
351	541	5	[illegible] - [illegible] - [illegible] - 6" [illegible] w/ [illegible] 321 - 1' GM>Cu [illegible] @ [illegible] - [illegible] 327 to [illegible] - 2' GM [illegible] @ 341 - 2" [illegible] 342 - 1' w/ [illegible] @ 347 - 1' [illegible] 6" 351 - [illegible] 345 to [illegible] - (351)
371	533	5	[illegible] - [illegible] - [illegible] - (359)
425	467	7	[illegible] - [illegible] - [illegible] - [illegible] - [illegible] 412 - [illegible] @ 415, 425, [illegible] 2' @ 417 w/ > CuFeS - (425)
437	455	7-1	[illegible] - [illegible] - [illegible] 425 to 428 - [illegible] - 428 to 432 - 6" F @ 432.5 - [illegible] 434 - [illegible] 434 to 436 - 1' F @ [illegible] - (437)
470	422	10-12	[illegible] - 2' [illegible] @ 439 - 6" alternating [illegible] 439 to 449 [illegible] 447 to 457 - 1' GM [illegible] @ 453 - > E [illegible] 458 to 463 - E [illegible] [illegible] - (470)
478	414	11	[illegible] - Highly [illegible] - 1' [illegible] @ 475 [illegible] - (478)
490	402	1	[illegible] - [illegible] - [illegible] - Small Pp @ 482 - 2' [illegible] - (490)
492	400	10	[illegible] - [illegible] - [illegible] - [illegible] - (492)
498	394	20	[illegible] - Med grain - [illegible] - (498)

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SEP 9 1957
D.M.E.A.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

~~WASHINGTON 25, D.C.~~
Box 431
Joplin, Missouri
August 9, 1957

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DATE	INITIALS	CODE
8/13	Com	100
8/14	~~UPY~~	500

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

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

Dear Sirs:

Transmitted herewith are the original and two copies of the Interim Report received from Amos, USGS, yesterday covering the July 30 joint Field Team inspection of the cited project.

Sincerely yours,

Clinton C. Knox

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

encl. 3

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

Rep to

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DATE | INITIALS

INTERIM REPORT
4582
~~DMEA-4582~~ Idm-E1068 (Lead, Zinc, Copper)

RECEIVED
MINERALS TECHNOLOGY
DIVISION
AUG 8 1957
BUREAU OF MINES
JOPLIN, MO.

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

Location: Courtois Area, Washington County, Missouri

A project inspection of the subject contract was conducted on July 30, 1957. Results obtained to date and future work were discussed with Mr. R. E. Wagner, Head of Exploration and Mr. Marvin Winkler, Geologist.

Diamond drilling completed on the Courtois project to date and since the last inspection on June 28, 1957 is summarized as follows:

Drilling completed:

Footage in holes completed since last inspection	8,147
Total footage in holes completed to date	17,115
Number of holes completed since last inspection	13
Total number of holes completed to date	28
Number of holes showing commercial ore	4
Number of holes showing non-commercial indicative mineralization	2
Number of holes showing trace mineralization	20
Number of holes showing speck trace mineralization . . .	2
Number of barren holes	0

The 13 holes completed since the date of the last inspection are summarized as follows:

Hole No.	Location	Total Depth	Remarks
VC-6	SE¼, SE¼, SE¼, sec. 7	584 ft.	2.5 ft of 4.7 % Pb at 405.3 - 410 ft. 10.1 ft. of 12.5 % Pb at 428.9 - 439 ft.
VC-8	NE¼, NE¼, NE¼, sec. 18	625 ft.	4.4 ft. of 9.7 % Pb at 478.6 - 483 ft.

Hole No.	Location	Total Depth	Remarks
VC-9	NW¼, NE¼, NE¼, sec. 18	547 ft.	Indicative mineralization. Assays not completed.
VC-10	NE¼, SE¼, SE¼, sec. 7	673 ft.	5.8 ft of 2.1 % Pb at 491.2 - 497 ft. 11.6 ft. of 12.5 % Pb at 513.4 ft - 525 ft.
VC-16	NW¼, NE¼, SW¼, sec. 7	727 ft.	Trace hole.
VC-18	SW¼, SE¼, NW¼, sec. 7	625 ft.	" "
VC-19	SE¼, SE¼, NW¼, sec. 7	635 ft.	" "
VC-20	SE¼, SE¼, NW¼, sec. 7	680 ft.	" "
VC-22	SE¼, NW¼, SE¼, sec. 7	685 ft.	" "
VC-28	NW¼, NW¼, NW¼, sec. 17	725 ft.	" " (?). Assays not completed.
VC-31	SE¼, SE¼, SW¼, sec. 7	615 ft.	Trace hole.
VC-59	NW¼, SW¼, NW¼, sec. 8	528 ft.	Stage II Trace hole. No churn drilling required.
VC-60	NW¼, SW¼, NW¼, sec. 8	498 ft.	Stage II Trace hole. No churn drilling required.

Diamond drilling is in progress at two locations summarized as follows:

Hole No.	Location	Present Depth	Estimated Total Depth
VC-25	NW¼, NE¼, SE¼, sec. 7	629 ft.	710 ft.
VC-36	SW¼, NW¼, NE¼, sec. 18	485 ft.	690 ft.

The churn drill portion of 15 holes has been completed since the last interim inspection on June 28, 1957. A summary of these holes is as follows:

Hole No.	Location	Depth to Bottom of Churn Drilling	Remarks
VC-10	NE$\frac{1}{4}$, SE$\frac{1}{4}$, SE$\frac{1}{4}$, sec. 7	180 ft.	--
VC-28	NW$\frac{1}{4}$, NW$\frac{1}{4}$, NW$\frac{1}{4}$, sec. 17	235 ft.	--
VC-29	NW$\frac{1}{4}$, SE$\frac{1}{4}$, SE$\frac{1}{4}$, sec. 8	225 ft.	--
VC-32	NW$\frac{1}{4}$, SE$\frac{1}{4}$, SW$\frac{1}{4}$, sec. 7	115 ft.	--
VC-33	NW$\frac{1}{4}$, NW$\frac{1}{4}$, SW$\frac{1}{4}$, sec. 7	255 ft.	--
VC-34	SW$\frac{1}{4}$, NW$\frac{1}{4}$, NW$\frac{1}{4}$, sec. 7	125 ft.	--
VC-35	SE$\frac{1}{4}$, NW$\frac{1}{4}$, NE$\frac{1}{4}$, sec. 7	200 ft.	--
VC-37	NE$\frac{1}{4}$, SE$\frac{1}{4}$, NE$\frac{1}{4}$, sec. 8	130 ft.	--
VC-38	SE$\frac{1}{4}$, NE$\frac{1}{4}$, NE$\frac{1}{4}$, sec. 8	170 ft.	--
VC-45	NW$\frac{1}{4}$, NW$\frac{1}{4}$, NE$\frac{1}{4}$, sec. 8	225 ft.	--
VC-61	NE$\frac{1}{4}$, SE$\frac{1}{4}$, NE$\frac{1}{4}$, sec. 7	150 ft.	Stage II hole
VC-62	NW$\frac{1}{4}$, SE$\frac{1}{4}$, NE$\frac{1}{4}$, sec. 7	120 ft.	Stage II hole
VC-63	SW$\frac{1}{4}$, SE$\frac{1}{4}$, NE$\frac{1}{4}$, sec. 7	100 ft.	Stage II hole

Churn drilling is in progress at three hole locations as follows:

Hole No.	Location	Present Depth	Remarks
VC-30	NE$\frac{1}{4}$, SW$\frac{1}{4}$, NE$\frac{1}{4}$, sec. 8	0 ft.	Setting up drill.
VC-46	SW$\frac{1}{4}$, NW$\frac{1}{4}$, NE$\frac{1}{4}$, sec. 13	125 ft.	--
VC-56	NW$\frac{1}{4}$, NW$\frac{1}{4}$, SW$\frac{1}{4}$, sec. 8	30 ft.	Stage II hole

Verbal approval was given by the field examiners to do exploratory drilling under Stage II of the contract at 11 locations to further explore the ore-grade mineralization encountered in Holes VC-6, VC-8 and VC-10. These 11 hole locations are as follows:

Hole No.	Location
VC-92	520 ft. S. 30° E. of VC-56
VC-93	520 ft. N. of VC-10
VC-94	520 ft. N. 60° E. of VC-10
VC-95	520 ft. S. 60° E. of VC-10
VC-96	520 ft. S. of VC-10
VC-97	520 ft. S. 60° W. of VC-10
VC-98	520 ft. N. 60° W. of VC-10
VC-99	520 ft. N. 30° E. of VC-8
VC-100	520 ft. S. 30° E. of VC-95
VC-101	520 ft. W. of VC-28
VC-102	520 ft. S. 30° E. of VC-8

John W. Chester
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

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DATE	INITIALS	CODE
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16	Com	100
8/19	Talbert	800
~~No other copies came to.~~		110
		500
8/19	~~[illegible]~~	500

P. O. Box 431
Joplin, Missouri
August 13, 1957

DMEA Operating Committee
Room 4459
Department of the Interior
Washington 25, D. C.

Re: DMEA-4581, -4582 and -4583
St. Joseph Lead Company
Czar Knob, Courtois and Viburnum Projects
Contracts Idm-E1064, -E1068 and -E1073

Dear Sirs:

Forwarded herewith are your two copies of the MF-104 Monthly Voucher, one copy of the MF-104A and the Operator's Monthly Report covering the June work approved August 5 on each of the three captioned Project Contracts. The voucher data received today from the Finance Officer is posted on all six enclosed MF-104 copies.

Your other copies of each of these three MF-104A and Monthly Reports were furnished for your advance information with a copy of my July 15 memo to Dewey Amos concerning these cited projects.

Sincerely yours,

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

Encl.(13)
cc: DMEA Op.Com.(3)
Amos, USGS, Knoxville
4581 file
4582 file
4583 file

3rd Copy - [illegible]

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

Month of June, 1957 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	18743.46	10174.46	28917.72			
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	38.00	16.00	54.00			
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	18781.46	10190.26	28971.72	✓	✓	✓

RECEIVED MINERALS TECHNOLOGY DIVISION JUL 15 1957

RECEIVED BUREAU OF MINES JOPLIN, MO.

DMEA

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

Date 7-12-57 *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:

$ 9,390.73

Signature (Authorized Certifying Officer)

Date 8/9/57 Vou. No. 4-5

(See other side)

SOR 8/16/57

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. IdmE1068 in accordance with the terms of the contract.

Signature John W. Ohlestus Title Mining Engineer Date Aug 1, 1957

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Clinton C. Knox Title Executive Officer Date Aug. 5, 1957

MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

RECEIVED
MINERALS TECHNOLOGY
DIVISION

JUL 15 1957

BUREAU OF MINES
JOPLIN, MO.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of June 195 7 Docket No. DMEA 4582 Contract No. IdME 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				8/9/57 awpk				
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core	Ft.	13502.04	6082	20834.70	9385	$2.22)		
Churn	Ft.	5241.42	2361	8083.02	3641	2.22)	133420	$2.22
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Analytical Determinations	Ea.	38.00	38	54.00	54	1.00	2370	1.00
TOTAL DISTRIBUTED COSTS		18781.46		28971.72				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		18781.46		28971.72				

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 7-12-57 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.

(Instructions on reverse)

REMARKS:

OFFICIAL FILE COPY
D.M.E.A.
RECEIVED JUL 17 1957

DATE	INITIALS	CODE
7/17	[illegible]	220
"	[illegible]	110
7/17	WKB	500

(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

MONTHLY REPORT FOR MONTH OF JUNE, 1957

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

All approved Stage I locations have been assigned numbers as shown on map.

8 Stage II locations, approved by the D.M.E.A. field team as of June 28, 1957, have been assigned numbers as also shown on map. The Stage II stake numbers and locations are as follows:

VC-56 -	located	approximately	520	feet	east	of	Stage	I	Stake	VC-2.	
57 -	"	"	520	"	"	"	"	"	"	VC-1.	
58 -	"	"	900	"	northeast	of	"	"	"	"	
59 -	"	"	520	"	north-northeast	of	Stage	I	Stake	VC-1.	
60 -	"	"	520	"	north-northwest	"	"	"	"	"	
61 -	"	"	520	"	"	"	"	"	"	"	VC-4.
62 -	"	"	520	"	"	"	"	"	"	"	VC-13.
63 -	"	"	520	"	west	of	Stage	I	Stake	VC-13.	

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

Stake	VC-28	- started	6-26-57	- drilling	at	110	feet	depth.
"	VC-29	"	6-17-57	"	"	205	"	"
"	VC-32	"	6-26-57	"	"	75	"	"
"	VC-37	"	6-28-57	- starting hole.				
"	VC-38	"	6-25-57	- drilling	at	110	feet	depth.

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

Stake	VC-6	- depth	70	feet	- starting	date	6-12-57.
"	VC-8	"	150	"	"	"	6-13-57.
"	VC-9	"	70	"	"	"	6- 7-57.
"	VC-10	"	180	"	"	"	6-18-57.
"	VC-11	"	75	"	"	"	5-28-57.
"	VC-13	"	110	"	"	"	5-28-57.
"	VC-19	"	120	"	"	"	6- 3-57.
"	VC-21	"	175	"	"	"	6- 1-57.
"	VC-22	"	200	"	"	"	6- 8-57.
"	VC-25	"	216	"	"	"	5-14-57.
"	VC-26	"	255	"	"	"	6-10-57.
"	VC-27	"	115	"	"	"	6- 6-57.
"	VC-31	"	115	"	"	"	6-14-57.
"	VC-36	"	180	"	"	"	6-20-57.
"	VC-39	"	145	"	"	"	6-17-57.
"	VC-40	"	185	"	"	"	6-24-57.

2 diamond drills were operating in the area during the month. At the end of the month they were located on Stakes VC-18 and VC-22.

BUREAU OF MINES
BERLIN, MD.

The following diamond drill holes were completed:

Stake No.	Prospect Hole No.	Bottom Depth	Feet of Diamond Drilling	Date Completed	Class.
VC-1	57VC-19	555	555	6-11-57	Pay
11	57VC-17	575	500	6- 7-57	Sp. Trace
12	57VC-14	615	490	6- 3-57	Trace
13	57VC-22	605	495	6-14-57	Ind.
14	57VC-23	595	473	6-12-57	Trace
15	57VC-27	605	505	6-18-57	Trace
16	57VC-35	727	507	6-27-57	Trace
17	57VC-29	665	480	6-24-57	Sp. Trace
19	57VC-31	635	515	6-25-57	Trace
20	57VC-36	680	512	6-28-57	Trace
21	57VC-26	665	490	6-19-57	Trace
24	57VC-15	685	560	6- 5-57	Trace

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

38 analytical determinations were made during the month, as follows:

57VC-14	2 Pb	
57VC-15	1 Pb	
57VC-19	10 Pb	4 Cu
57VC-22	3 Pb	
57VC-23	2 Pb	
57VC-26	5 Pb	
57VC-27	3 Pb	
57VC-31	4 Pb	
57VC-35	1 Pb	
57VC-36	3 Pb	
TOTAL	34 Pb	4 Cu

Abstract of Report for Week Ending 7 a.m., Monday, June 10, 1957:

WASHINGTON COUNTY

Courtois Area - DMEA Project #4582 -

2 Company-owned diamond drills operating and 5 churn drills setting casing completed 1 speck trace hole. 2 other holes have been bottomed, both with trace lead, but were not brought in from the field in time to be included in this week's report.

57VC17, a speck trace hole, is located about 4,000 feet southwest of the village of Courtois and 520 feet west of an indicative hole. It bottomed at 575 feet depth in Lamotte sandstone. Speck traces of lead were present in the same horizon as that of lead in the indicative hole.

Abstract of Report for Week Ending 7 a.m., Monday, June 17, 1957:

WASHINGTON COUNTY

Courtois Area - DMEA Project #4582 -

2 Company-owned diamond drills operating and 5 churn drills setting casing completed 1 pay, 1 indicative, and 3 trace holes.

57VC19, a pay hole, is located south of the village of Courtois and 900 feet northeast of a pay hole. It bottomed at 555 feet depth in Lamotte sand. Ore is located in the lower part of the top 7 reef - the same as in the old pay hole - and is estimated as 7.1 feet of 9.9% Pb at 444 feet depth and 0.8 foot of 4.0% Pb at 447 feet depth. Included is a run of chalcopyrite estimated as 5.8 feet of 1.3% Cu at 442 feet depth.

57VC22, an indicative hole, is located 520 feet northwest of the old pay hole mentioned above. It bottomed at 605 feet depth in Lamotte sandstone. Indicative run is at 511 feet depth, at same horizon as ore in pay holes, and is estimated as 3.9 feet of 2.2% Pb. All holes in this area are on 520 feet spacing and show persistent mineralization in the same horizon and, with 2 pay holes and 1 indicative hole showing, it is evident that much closer spaced drilling will have to be done here.

57VC23, a trace hole, is located 520 feet southwest of the old pay hole mentioned above. It bottomed at 595 feet depth and lead was estimated as 0.3 foot of 3.0% at 508 feet depth and 0.8 foot of 1.0% Pb at 514 feet depth.

57VC15, a trace hole, is located about 1800 feet southeast of the above group of holes. It bottomed at 685 feet depth in Lamotte sandstone. Traces of lead were present in the 5 zone, best of which was estimated as 0.2 foot of 1.0% at 532 feet depth. This hole was in a badly fractured and leached zone and core recovery was very poor.

57VC14, a trace hole, is located about 2500 feet south of the pay hole area and 520 feet southwest of an indicative hole. It bottomed at 615 feet depth in Lamotte sandstone. Lead was estimated as 0.7 foot of 1.0% Pb at 505 feet depth and 1.3 feet of 1.5% Pb at 509 feet depth. This is at the top of the 7 zone at the same horizon as lead in the indicative hole.

Abstract of Report for Week Ending 7 a.m., Monday, June 24, 1957:

WASHINGTON COUNTY

Courtois Area - DMEA Project #4582 -

2 Company-owned diamond drills operating and 5 churn drills setting casing completed 1 indicative and 1 trace hole.

57VC26, an indicative hole, is located about 2500 feet southwest of the village of Courtois and 1,000 feet west of 57VC22, an indicative hole reported last week. It bottomed at 665 feet depth in Lamotte sand. Lead mineralization was present below the main 7 reef zone in the same horizon as that of ore in other pay and indicative holes in this area. Lead estimate was 2.9 feet of 4.7% Pb at 604 feet depth.

57VC27, a trace hole, is located 1,000 feet west-southwest of the above hole and 520 feet southeast of an older indicative hole (56W101). It bottomed at 605 feet depth in Lamotte sand. Good trace lead was located below the main 7 reef and best parts were estimated as 2.2 feet of 2.1% Pb at 530 feet depth and 0.9 foot of 3.5% Pb at 535 feet depth.

Abstract of Report for Week Ending 7 a.m., Monday, July 1, 1957:

Courtois Area - DMEA Project #4582 -

2 Company-owned diamond drills operating and 5 churn drills setting casing completed 4 trace holes.

57VC31, a trace hole, in the northwest part of the project area, is located 520 feet north of 56W101, an old indicative hole. It bottomed at 635 feet depth in Lamotte sand. Trace lead estimated as 3.2 feet of 1.0% Pb was present at 497 feet depth in the 5 zone and, just above the transition sand zone, 0.6 foot of 1.0% Pb at 621 feet depth.

57VC29, a speck trace hole, located 520 feet southwest of 56W101, bottomed at 665 feet depth in Lamotte sand. Speck traces of lead were located at 527 feet depth in the top of the 7 zone.

57VC35, a trace hole, located 520 feet south of 56W101, bottomed at 727 feet depth in Lamotte sand. Weak traces of lead were present at the base of the 7 zone, best of which was estimated as 0.1 foot of 1.0% Pb at 633 feet depth.

57VC36, a trace hole, located 520 feet northeast of 56W101, bottomed at 680 feet depth in Lamotte sand. Traces of lead were present in the lower part of the 7 zone, best of which was estimated as 0.5 foot of 2.0% Pb at 566 feet depth, 0.2 foot of 1.5% Pb at 590 feet depth, and 0.9 foot of 1.0% Pb at 597 feet depth.

Last week's hole (57VC26), estimated as indicative in grade, was found, on assay, to be over-estimated and was reduced in classification from indicative to trace.

FORM 1173-2-54

20

DATE BOTTOMED 6-3-57 | ST. NO. VC-12 | ST. ELEV. | CLASS TRACE | HOLE NO. 57VC14

DESCRIBED BY C.A. | AREA Courtois | ELEVATION COLLAR 975.91

DATE ESTIMATED | OPTION NO. C2-53 | COORDINATES: N 112912.77 E 87998.62

BY C.A. | TRACT E.R. LARAMORE | 200 FT. MAP NO. 45 NE¼-NE¼ Sec18 | 50 FT. MAP NO. T35N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 1.75 FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	125	851
SLEEVE BIT TO		
BEGAN CORING AT		
SAVED CORES FROM	125	851
FORMATIONS:		
SOIL TO	15	961
"		
EMINENCE "		
POTOSI "	115	861
POTOSI-DERBY "		
DERBY DOE RUN "	190	786
DAVIS (C.B.-S.B.) "	352	624
BONNE TERRE "	603	373
B. T. TRANS. "	605	371
CONGLOMERATE "		
LA MOTTE "	615	361
GRAN. OR POR. "		
PICTURES: FROM	352	624
TO	615	361
CHAR. SAMPLES: FROM	352	624
TO	615	361
INSOL. RES.: FROM		
TO		
OPENINGS AT		

205

MINERALIZATION RECORD 515 S 1160 W

ROCK TYPE	DEPTH FROM	DEPTH TO	~~ELEV.~~ BOTT.	~~THICK-~~ NESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS
	380.3	380.4	595.5	0.1		TR.					
	504.3	505.0	470.9	0.7	1.8	1.0					1.3 VERT. SEAM <FeS
	508.0	509.3	466.6	1.3	1.0	1.5					1.3 : " : DISS.
	515.0	515.2	460.7	0.2		TR					SMALL XL W/ FeS.
	519.5	519.7	456.2	0.2		TR					SPK. TR. IN STYLO
	541.0	541.2	434.7	0.2		TR					SMALL XL IN VUG.

CORE REC.

TO	CORES LOST
125	
605	—
615	3.5

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE 6-12-[illegible] MINE [illegible] STOPE ..... STAKE NO. VC 12 HOLE NO. F-7 VC 14

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] (352)
			[illegible]
387		1	LT [illegible] - [illegible] - [illegible] - [illegible] - [illegible] to [illegible] (387)
413		F-1	P-B 10" [illegible] - [illegible] - [illegible] - [illegible] T & B [illegible] (413)
466		F	12 1/2 O:GEM - [illegible] - [illegible] > [illegible] B & 435 to 443 - 6" GEM - [illegible] 441 - 6" GEM [illegible] 445 - > [illegible] GB [illegible] 448 to 458 - [illegible] > [illegible] & [illegible] 461 and 465 - (466)
505		1	GTG 10 - F T/GT > MO 1/2 - 1/2 GT < [illegible] GT 10 Tuff 466 to 476 - F w/ GTG 10 matrix - [illegible] 476 to 483, w/ 3" [illegible] 19 [illegible] GB 482 - 2' GT [illegible] 484 - 1' [illegible] 485 - 1/2 GT - [illegible] 485 to 495 - < GT 10 > [illegible] 495 to 505 w/ 6" [illegible] w/ > PL & FeS @ base (505)
587		7	F T/GT > MGT - [illegible] - [illegible] - GT > MGT matrix - [illegible] - 1' [illegible] w/ [illegible] 9 - 1/2 PL w/ FeS @ 515 - 2' T [illegible] L & GB @ 523 - 1 1/2 [illegible] w/ 1" RB 528 - (587)
603		10-12	GT to M: T/F - [illegible] top to 550 - [illegible] @ 558 - [illegible] M [illegible] GB 558 to 573 - 5" FG 569 - 1/2" T [illegible] 570, 2' [illegible] @ 579 & 2" T > KB @ 583 - BT [illegible] M [illegible] 583 to 603 - 1' [illegible] (603)
605		10	GT > MGT - [illegible] > [illegible] - [illegible] - (605)
615		20	WS - Gotan - [illegible] - [illegible] GB - blue grey stain & [illegible] < [illegible] 608 - [illegible] WS w/ Tr FeS 608 to 615 - (615)

FORM 1173-2 54

15 ✓

DATE BOTTOMED 6-5-57 ST. NO. VC-24 ST. ELEV. _____ CLASS TRACE HOLE NO. 57VC15

DESCRIBED BY C.A. AREA COURTOIS ELEVATION COLLAR 983.50

DATE ESTIMATED 6-6-57 OPTION NO. CZ-164 COORDINATES: N 115273.90 E 90173.08

BY C.A. TRACT EVERETT WOODS 200 FT. MAP NO. 46 NW¼-SW¼-Sec 8 50 FT. MAP NO. T35N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR ? FT.

FORM BOTT. SL. _____

		DEPTH	ELEV.
DRILLED WITH:			
CHURN DRILL TO		125	859
SLEEVE BIT TO			
BEGAN CORING AT		127	857
SAVED CORES FROM		403	581
FORMATIONS:			
SOIL	TO	36	948
EMINENCE	"		
POTOSI	"	125	859
POTOSI-DERBY	"		
DERBY DOE RUN	"	229	755
DAVIS (C.B.-S.B.)	"	403	581
BONNE TERRE	"	658	326
B. T. TRANS.	"	660	324
CONGLOMERATE	"		
LA MOTTE	"	685	299
GRAN. OR POR.	"		
PICTURES:	FROM	403	581
	TO	685	299
CHAR. SAMPLES:	FROM	403	581
	TO	685	299
INSOL. RES.:	FROM		
	TO		
OPENINGS AT			

MINERALIZATION RECORD 1880N 1000E

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS
	406.0	406.2	577.3	0.2		TR.					SPECK. TRS.
	417.7	418.2	565.3	0.5		TR	✓				"
	428.0	428.1	555.4	0.1		TR					"
	523.8	524.0	459.5	0.2		TR					
	531.7	531.9	451.6	0.2	2.4	1.0	✓				0.5 DISS. XLS
	589.9	590.0	393.5	0.1		TR					SPECK TR.

CORE REC.

TO	CORES LOST
145	4.0
155	2.0
175	—
185	4.0
395	—
405	1.0
415	7.0
425	2.0
433	1.0
445	7.5
455	7.0
458	2.5
462	2.5
464	1.5
469	1.5
478	6.0
488	4.0
494	4.5
504	6.0
514	2.5
518	2.5
525	2.0
577	44.1
580	1.4
586	3.0
590	3.7
595	4.3
601	4.0
685	49.6

205

21.01C

FORM 9002-R-5-55

ROCK CLASSIFICATION

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

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

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
127	[illegible]	BEGAN CORING	
221	[illegible]	LENNY	
231	[illegible]	LENNY - [illegible]	
403	[illegible]	LAWS SHALE	
		LONNE [illegible]	
433	[illegible]	1	Lt [illegible]
467	[illegible]	1-[illegible]	Lt [illegible]
541	[illegible]	[illegible]	[illegible]
570	[illegible]	7	F [illegible]
620	[illegible]	7-10	[illegible]
658	[illegible]	12	[illegible]
660	[illegible]	13	[illegible]
685	[illegible]	20	[illegible]

Contacts are approximate, w/ 22° log corrections.

FORM 1173-2-54 Started 6-4-57

20 ✓

DATE BOTTOMED 6-7-57 | ST. NO. VC-11 | ST. ELEV. | CLASS SPECK TRACE | HOLE NO. 57VC17

DESCRIBED BY C.A | AREA COURTOIS | ELEVATION COLLAR 926.51

DATE ESTIMATED 6-11-57 | OPTION NO. CZ-53 | COORDINATES: N 113348.55 E 87733.42

BY C.A. | TRACT E. R. LARAMORE | 200 FT. MAP NO. 45 NE¼-NE¼-Sec18 | 50 FT. MAP NO. T35N-R1W

GENERAL HOLE DATA | MINERALIZATION RECORD 80 S 1420 W Pt | CORE REC.

HT. SLEEVE ABOVE GR 3.0 FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	75	852
SLEEVE BIT TO		
BEGAN CORING AT	75	852
SAVED CORES FROM		
FORMATIONS:		
SOIL TO	10	917
"		
EMINENCE "		
POTOSI "	70	857
POTOSI-DERBY "		
DERBY DOE RUN "	144	783
DAVIS (C.B.-S.B.) "	313	614
BONNE TERRE "	571	356
B. T. TRANS. "	NONE	
CONGLOMERATE "		
LA MOTTE "	575	352
GRAN. OR POR. "		
PICTURES: FROM	313	614
TO	575	352
CHAR. SAMPLES: FROM	313	614
TO	575	352
INSOL. RES.: FROM		
TO		
OPENINGS AT		

205

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS	TO	CORES LOST
												555	—
	463.7	463.9	462.6	0.2	TR						XL in vug.	575	4.0
	471.4	471.5	455.0	0.1	TR						"		

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE [illegible]-11-57 MINE STOPE STAKE NO V-C-11 HOLE NO 57 VC 17

COLLAR ELEV. 926.51 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
[illegible]	852	BEGAN CORING	
144	783	[illegible]ERBY	
[illegible]	614	[illegible]	[illegible] - (113)
		BONNETERRE	
[illegible]	584	1	[illegible] - (234.3)
[illegible]	567	[illegible]	[illegible] - (360)
411	516	[illegible]	[illegible] - (411)
[illegible]	504	[illegible]	[illegible] - (423)
[illegible]	477	[illegible]	[illegible] - (450)
[illegible]	439	[illegible]	[illegible] - (488)
417	430	10	[illegible] - (477)
[illegible]	382	10-12	[illegible] - (515)
[illegible]	356	12	[illegible] - (571)
[illegible]	352	[illegible]	[illegible] - (575)

FORM 1173-2-54

15

DATE BOTTOMED 6-11-57	ST. NO. VC-1 ST. ELEV.	CLASS PAY	HOLE NO. 57VC19
DESCRIBED BY C.A.	AREA Courtois	ELEVATION COLLAR 915.95	
DATE ESTIMATED 6- -57	OPTION NO. CZ-164	COORDINATES: N 116236.35	E 89185.49
BY C.A.	TRACT Everett Woods	200 FT. MAP NO. 46 SE¼-NE¼-Sec 7	50 FT. MAP NO. T35N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 1.00 FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO		
SLEEVE BIT TO		
BEGAN CORING AT	12	904
SAVED CORES FROM	12	904
FORMATIONS:		
SOIL TO		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "	113	803
DAVIS (C.B.-S.B.) "	279	637
BONNE TERRE "	532	384
B. T. TRANS. "	535	381
CONGLOMERATE "		
LA MOTTE "	555	361
GRAN. OR POR. "		
PICTURES: FROM	279	637
TO	555	361
CHAR. SAMPLES: FROM	279	637
TO	555	361
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 2840N 15W

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% Cu ASSAY	% Cu EST.	FT. %	REMARKS	TO	CORES LOST
	392.5	392.8	523.2	0.3		TR.						555	—
	407.4	407.9	508.1	0.5	2.7	3.0	1.4	✓					
	407.9	411.1	504.9	3.2		TR							
	411.1	411.9	504.1	0.8	1.1	1.5	0.9	0.45	0.6	0.36			
	413.4	413.9	502.1	0.5		TR.			TR.				
	414.6	414.7	501.3	0.1		TR							
	419.0	419.2	496.8	0.2		TR							
	420.7	421.0	495.0	0.3		TR.							
	422.7	422.9	493.1	0.2		TR.							
	423.9	424.6	491.4	0.3		TR							
	424.6	424.9	491.1	0.3	2.7	1.0	0.8	0.58	1.0	0.17			
	426.6	427.6	488.4	1.0	1.5	1.5	1.5	✓					
	429.6	429.8	486.2	0.2		TR.							
	431.1	431.6	484.4	0.5	1.8	1.0	0.9		TR.		RL		
	432.3	433.7	482.3	1.4		TR.							
	433.7	434.4	481.6	0.7	2.4	1.0	1.7	✓					
	435.0	436.6	479.4	1.6		TR.							
	436.6	439.7	476.3	3.1	15.2	15.0	47.1	0.82	2.0	2.54			
	439.7	442.4	473.6	2.7	6.3	8.0	17.0	0.26	0.5	0.70			
	442.4	443.1	472.9	0.7		TR.		7.1-10.2+0.5 Cu		✓			
	443.1	443.7	472.3	0.6	13.5	6.0	8.1						
	446.2	447.0	469.0	0.8	1.6	4.0	1.3	✓					
	525.5	525.7	390.3	0.2		TR.							

205

PGN

PC.r K.

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY "A" DATE 6-13-57 MINE [illegible] STOPE STAKE NO. VC-1 HOLE NO. 57VC19

COLLAR ELEV. 916 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (~~Depth at Bottom~~)
12	904	BEGAN CORING	
113	803	DERBY-DOE RUN	
279	637	DAVIS SHALE	
		BONNETERRE	
311	602	1	DENSE LT- [illegible] to 317 [illegible] to 311 to [illegible] - (314)
335	581	5-1	BO Bx: Lt Dense Gy- [illegible] to 323 [illegible] 2' [illegible] C [illegible] 325 - [illegible] 335)
395	521	5	BO Bx: Dk Gy- [illegible] 367, 369 & 371 - 1" RI @ 367 - 2" w/ > Black GM @ 371 - 3" w/ fine LT @ 376 - GEM [illegible] 2' @ 384, 2' [illegible] @ 386, 2' [illegible] @ 388 - 4" GT [illegible] 388.4 - 2' GEM [illegible] 393 w/ > Pb [illegible] @ 393 - 1' heavily GT [illegible] @ 394 - 1' GEM [illegible] - (395)
401	515	5	BO - [illegible] - (401)
451	465	7	FX GTM - [illegible] 408 - [illegible] w/ > Pb @ 412 - 4" [illegible] Pb @ 437 - 1' heavily [illegible] w/ Pb > [illegible] to [illegible] - (451)
467	449	7-10	FX GTM - [illegible] to 462 - [illegible] - Reefy app GT [illegible] to [illegible] (467) - [illegible]
511	405	10-12	To-GTM-GEM - To > [illegible] to 476 - To [illegible] to 480 - GTM > [illegible] to 482 - To > [illegible] to 484 - GEM Pb 484 to 488 - [illegible] of To @ GTM [illegible] 419 - To [illegible] 417 [illegible] - GTM [illegible] 507 to 507 - To [illegible] 507 to 511 - (511)
515	401	12	GTM - [illegible] - > [illegible] - (515)

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE 6-13-57 ~~TIME~~ [illegible] STOPE ..... STAKE NO. VC-1 HOLE NO. 57VC19

COLLAR ELEV. 916 PITCH ..... BEARING ..... COORD.: N ..... E .....

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	~~KIND OF ROCK~~ (Depth at Bottom)
		~~BEGIN CORING~~	
522	394	11	1 GLGTM - Highly affected - < mu - > in 1 - G 1 - > dense Tan fine pitchs — (522)
532	384	12	GTM - 6" > black at top - med mu & m - > dark dk 1 - 6" GT fine G 1 w/ Tr Pb 527 - > 1 LG 528 to base - 6" next sent @ 531 - > pitch 1 to base - (532)
535	381	19	>ELGSD - Slightly sandy - [illegible] Rb w/ > Pg @ 533 - < E 534 to base - (535)
555	361	20	WS - Fine sulfide 1 to pt to 541 - [illegible] from 546 to base - [illegible] highly fractured - > Cu mineral - (555)

FORM 1178-2-54

Started 6-12-57

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DATE BOTTOMED 6-14-57 | ST. NO. VC-13 | ST. ELEV. | CLASS INDICATIVE | HOLE NO. 57VC22

DESCRIBED BY C.A. | AREA Courtois | ELEVATION COLLAR 991.05

DATE ESTIMATED 6-18-57 | OPTION NO. CZ-67 | COORDINATES: N 116 276.67 E 88178.11

BY C.A. | TRACT G.D. Evans | 200 FT. MAP NO. 46 SE¼-NE¼ Sec 7 | 50 FT. MAP NO. T35N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 2.00 FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	113	878
SLEEVE BIT TO		
BEGAN CORING AT	113	878
SAVED CORES FROM		
FORMATIONS:		
SOIL TO	15	976
"		
EMINENCE "		
POTOSI C.D. "	90	901
POTOSI-DERBY "		
DERBY DOE RUN "	161	830
DAVIS (C.B.-S.B.) "	328	663
BONNE TERRE "	597	394
B. T. TRANS. "		
CONGLOMERATE "		
LA MOTTE "	605	386
GRAN. OR POR. "		
PICTURES: FROM	328	663
TO	605	386
CHAR. SAMPLES: FROM	328	663
TO	605	386
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 2880 N 1060 W

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS
	420.8	421.0	570.1	0.2		TR					> Seam
	485.9	486.0	505.1	0.1		TR.					frack.
	507.0	508.6	482.5	1.6	6.2	4.5				9.9	diss. 3.9-3.3 ✓
	508.6	510.6	480.5	1.0		TR.					
	510.6	510.9	480.2	0.3	9.7	4.0				2.9	concentrated
	516.7	517.2	473.9	0.5	1.4	2.0		✓		0.7	diss.
	527.3	527.4	463.7	0.1		TR.					

CORE REC.

TO	CORES LOST
585	–
605	5.0

205

241

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE 6-18-57 MINE Contact STOPE STAKE NO. VC #13 HOLE NO. 57 VC 22

COLLAR ELEV. 990 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
113	877	BEGAN CORING	
90	900	POTOSI - from C.O. samples	(90)
161	829	DERBY-DOE RUN	(161)
328	662	DAVIS	(328)
		BONNE TERRE	
373	617	1	LT DENSE ≥ b:O - > small ranges - > vert fract - fine O app 338 to 346 - cross styl 361 to base - > Cal & patches (373)
388	602	5-1	GT>O>BY:LT b - South K f & patches; south dense 1 type f - > pitted - styl - numerous BY 383 to base - faintly O - (388)
435	555	5	BY GBO < PBROWS BY - P2 - Lyl blue - < BY pass as BY - > ave fract - 398, 400, 405 & 407 - south K f - Ca & dickite & - 1' heavy K f & > G f 419 - 1' < fine G f < O w/ > K f filled fract 422 - 2' T > O w/ < blurish G f 424 - Barite increasing 424 to base - 1' GM ~ @ 433 - - (435)
464	526	5	GT O K f: > G f - Mod O - styl - > BY f faintly mottled - > K f & small patches - 1' < M > PL w/ > reefy app @ 443 - 1' Tan w/ M f & < M @ 446 - gradually increasing 451 to base - > fine G f top 457 - < G f 459 to base - (464)
501	489	7	F/GTMG f: < G f - Rhom F 464 to 471 - G f O P2 472 to 484 - < reef w/ G f matrix 484 to 501 - > vert fract throughout (501)
527	463	7?	G f O: To: F: GTM ~ - < G f O 501 to 503 - 1' Fe 504 - > O G f O 504 to 508 - > F & M - 2 508 to 511 - To > thin f 511 to 513 - < G f O 513 to 515 - 6" LGT dense @ 516 - - TG f > M - 1.6 to 524 - PL 507.0 to 508.6, 510.6 to 510.9 & 516.7 to 517.2 - 3" LGT dense @ 522 - GTM ~ 524 to 526 - > reefy M G f 526 to base - TR PL 527 (527)
578	412	10-12	GTM: G dense: GTo - 3' dense G > Y h f @ 530 - To 530 to 537 w/ > short M ~ acc - GTGEM w/ > short To acc 537 to 545 - 2' F @ 547 - gradual GTo w/ occasional K f & G f & lt to 547 to 578 w/ 2' GTM ~ @ 568, 572 & 1' GTM ~ @ 575 - > SiO2 ↑ in ranges 573 to base (578)
597	393	12	GTM ~ - heavy M - ~ - > scattered G f - sandy f to 589 & 591 - fine 2' > E (597) > H/c base -
605	385	20	WS - clean - > scattered FeS to - sugary tex (605)

FORM 4172-2-54 Started 6-10-57

20 ✓

DATE BOTTOMED 6-12-57 | ST. NO. VC-14 | ST. ELEV. | CLASS TRACE | HOLE NO. 57VC23

DESCRIBED BY C.A. | AREA COURTOIS | ELEVATION COLLAR 961.26

DATE ESTIMATED 6-19-57 | OPTION NO. CZ-66 | COORDINATES: N 115858.92 E 87872.89

BY C.A. | TRACT HASKELL MASON | 200 FT. MAP NO. 45 (NW¼-SE¼-Sec 7) | 50 FT. MAP NO. T35N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 0.67 FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	125	836
SLEEVE BIT TO		
BEGAN CORING AT	125	836
SAVED CORES FROM		
FORMATIONS:		
SOIL TO	14	947
"		
EMINENCE "		
POTOSI C.D. "	90	871
POTOSI-DERBY "		
DERBY DOE RUN "	?	
DAVIS (C.B.-S.B.) "	324	637
BONNE TERRE "	588	373
B. T. TRANS. "	589	372
CONGLOMERATE "		
LA MOTTE "	595	366
GRAN. OR POR. "		
PICTURES: FROM	324	637
TO	595	366
CHAR. SAMPLES: FROM	324	637
TO	595	366
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 2450N 1330N

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS	TO	CORES LOST
												319	—
	433.8	434.0	527.3	0.2	●	TR.					Speck Traces	595	—
	475.3	475.4	485.9	0.1		TR					Frost.		
	508.5	508.8	452.5	0.3	3.5	2.5	1.1	✓			w/> FeS.		
	508.8	509.8	451.5	1.0		TR					Scat. Specks.		
	512.7	513.7	447.6	1.0		TR					Spk trs.		
	513.7	514.5	446.8	0.8	1.8	1.0	1.4	✓	TR.				
	583.4	584.2	377.1	0.8		TR.					Spk. Tr.		
	586.7	587.1	374.2	0.4		TR					Tr. Cu FeS		
	588.5	589.2	372.1	0.7		0.0					Tr. Cu. FeS.		

CORE REC.

80%

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE 6-11-57 MINE [illegible] STOPE ____ STAKE NO. VC 14 HOLE NO. 57VC23

COLLAR ELEV. 962 PITCH ____ BEARING ____ COORD.: N ____ E ____

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
125	837	BEGAN CORING	
158	804	DERBY DIE RUN	(158)
324	638	DAVIS	6' Derby Davis transition @ 164 (324)
		BANNE TENBE	
371	591	1	LT DENSE > EIO - > Ethmont < fract 324 to 330, 341 to 348 - fine 332 - to 341 - [illegible] (371)
386	576	5-1	ELT P2 P1 Q1 > LT DENSE - [illegible] (386)
435	527	5	ELT P0 P1 GEM - 2" [illegible] @ 387 - 1' [illegible] @ 415 - 6" [illegible] @ 419 - 3' [illegible] @ 432 & 3' [illegible] @ 424 (435)
455	507	5	B<0> E1 - Spk [illegible] @ 435 - [illegible] (455)
524	438	7	F [illegible] - G10 - [illegible] (524)
582	380	10-12	T0 > G1 - G&GTM - [illegible] (582)
588	[illegible]	12	GTM - > [illegible] (588)
587	373	19	ETYIE > H1 - [illegible] (591)
595	367	20	WS - [illegible] (595)

FORM 1173-2-54 Started 6-17-57

DATE BOTTOMED 6-19-57 ST. NO. VC-21 ST. ELEV. _____ CLASS TRACE HOLE NO. 57VC26

DESCRIBED BY C.A. AREA COURTOIS ELEVATION COLLAR 1045.27

DATE ESTIMATED 6-24-57 OPTION NO. CZ-66 COORDINATES: N 116376.93 E 87142.41

BY C.A. TRACT HASKELL MASON 200 FT. MAP NO. 45 50 FT. MAP NO. SEC 7 T35N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 36" FT.

FORM BOTT. SL. _____

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL	78.0	867
SLEEVE		
BEGAN CO	118.0	867
SAVED	489.0	64
FO:		
SOIL	25	1020
EMINENCE "		
POTOSI "	160	885
POTOSI-DERBY "		
DERBY DOE RUN "	217	8[illegible]
DAVIS (C.B.-[redacted].) "	384	6[illegible]
BONNE TERRE "	647	3[illegible]
B. T. TRANS. "	649	3[illegible]
CONGLOMERATE "		
LA MOTTE "	665	380
GRAN. OR POR. "		

PICTURES: FROM 384 6[illegible] TO 665 3[illegible]

CHAR. SAMPLES: FROM 38[illegible] 6[illegible] TO 665 3[illegible]

INSOL. RES.: FROM _____ TO _____

OPENINGS AT

MINERALIZATION RECORD 2340'S 2020'W

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS	TO	CORES LOST
S	444.3	444.5	600.8	0.2		TR					Spk	615	—
"	448.1	448.3	597.0	0.2		TR					"	625	2.0
"	453.4	453.5	591.8	0.1		TR					"	645	—
"	463.0	463.2	582.1	0.2		TR					Fract Pb	665	10.0
"	541.4	54[illegible]	3[illegible]	1.4		TR					Scatt Spks		
"	542.8	54[illegible]	3[illegible]	0.7	2.2	4.5				1.5	w/thin Rbs & Fract		
"	579.0	579.[illegible]	4[illegible]	0.7	1.9	1.5				1.1	Diss		
"	581.6	58[illegible]	463.3	0.4		TR					Spk		
"	582.0	58[illegible]	462.2	0.2		TR					Spk		
7-10	595.8	59[illegible]	449.3	0.2	0.2	1.0				0.1	Diss		
"	600.6	60[illegible]	344.0	0.7	2.0	6.0				1.4	Diss		
"	601.3	601.9	443.4	0.6		TR					Spk		
"	601.9	603.5	441.8	1.6	2.4	6.0				3.8	Diss		
"	605.4	605.9	439.4	0.5		TR					Spk		
"	610.1	610.3	435.0	0.2		TR					"		
"	638.9	639.0	406.3	0.1		TR					"		

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FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE [illegible] MINE [illegible] STOPE STAKE NO. VC #21 HOLE NO. [illegible]

COLLAR ELEV. 1043 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
175	865	BEGAN CORING	
317	826	1	FRCY: DIE NUN (317)
384	659	DAVIS	- [illegible] (384)
		BONNEVIERRE	
428	615	1	LT: [illegible] (428)
437	604	1-1	GT: LT [illegible]
470	553	2	[illegible]
515	528	5	[illegible]
556	457	7	[illegible]
607	436	7-10	[illegible]
625	418	10	[illegible]
647	396	10	[illegible]
647	394	10	[illegible]
665	378	20	[illegible]

FORM 1173-2-54 Date Started - 6-13-57

20

DATE BOTTOMED 6-18-57	ST. NO. VC-15	ST. ELEV.	CLASS TRACE
DESCRIBED BY C.A.	AREA COURTOIS		HOLE NO. 57 VC 27
DATE ESTIMATED 6-25-57	OPTION NO. CZ-66		ELEVATION COLLAR 957.82
BY C.A.	TRACT HASKELL MASON		COORDINATES: N 116123.96 E 86145.41
			200 FT. MAP NO. 45 50 FT. MAP NO. SEC 7 T35N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 18" FT.

FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	100.0	858
SLEEVE BIT TO		
BEGAN CORING AT	100	858
SAVED CORES FROM		
FORMATIONS:		
SOIL TO	?	
"		
EMINENCE "		
POTOSI "	?	
POTOSI-DERBY "		
DERBY DOE RUN "	155	803
DAVIS (C.B.-S.B.) "	323	635
BONNE TERRE "	589	369
B. T. TRANS. "	591	367
CONGLOMERATE "		
LA MOTTE "	605	353
GRAN. OR POR. "		

PICTURES: FROM
TO

CHAR. SAMPLES: FROM
TO

INSOL. RES.: FROM
TO

OPENINGS AT

MINERALIZATION RECORD 2590'S 2015'E

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS	CORE REC. TO	CORES LOST
7	518.0	518.8	439.0	0.8	0.5	3.5				0.4		435	✓
"	529.2	530.2	427.6	1.0	2.0	2.0				2.0		445	1.0
"	534.6	535.5	422.3	0.9	0.9	3.0				0.8		465	✓
7-10	540.1	541.0	416.8	0.9		TR						471	1.0
10	545.0	545.2	412.6	0.2		TR						605	✓
"	550.8	551.0	406.8	0.2		TR							
"	561.8	562.0	395.8	0.2		TR							

205

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE 6-25-57 MINE [illegible] STOPE [illegible] STAKE NO. VC-15 HOLE NO. 57V:27

COLLAR ELEV. 957 PITCH [illegible] BEARING [illegible] COORD.: N [illegible] E [illegible]

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
100	857	BEGAN CORING	
[illegible]	802	PERCY DIRUN	(155)
323	634	DAVIS	Clearly Davis transition to 162. (323)
		BONNEVERE	
368	589	1	[illegible] (368)
382	575	[illegible]	[illegible] (382)
417	540	[illegible]	[illegible] (417)
447	510	[illegible]	[illegible] (447)
536	421	7	[illegible] (536)
542	415	7-10	[illegible] (542)
[illegible]	[illegible]	10	[illegible]
[illegible]	366	[illegible]	[illegible]
[illegible]	352	[illegible]	[illegible]

FORM 1173-2-54

Started - 6-19-57

20

DATE BOTTOMED 6-24-57 ST. NO. VC-17 ST. ELEV.

DESCRIBED BY L.H.S. AREA Courtois

DATE ESTIMATED 6-26-57 OPTION NO. CZ-66

BY L.H.S. TRACT HASKELL MASON

CLASS TRACE HOLE NO. 57VC-29

ELEVATION COLLAR 1046.39

COORDINATES: N 116329.36 E 85262.92

200 FT. MAP NO. 45 SE¼-NW¼ SEC 7 50 FT. MAP NO. T35N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 34" FT.

FORM BOTT. SL. DERBY

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	185.0	861
SLEEVE BIT TO		
BEGAN CORING AT	185	861
SAVED CORES FROM	383	663
FORMATIONS:		
SOIL TO	22	1024
"		
EMINENCE "		
POTOSI "	150	896
POTOSI-DERBY "		
DERBY DOE RUN "	233	813
DAVIS (C.B.[redacted].) "	400	646
BONNE TERRE "	651	395
B. T. TRANS. "	661	385
CONGLOMERATE "		
LA MOTTE WS "	665	381
GRAN. OR POR. "		
PICTURES: FROM	383	663
TO	665	381
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

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MINERALIZATION RECORD 2420'S 1120'E

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	%CU ASSAY	%CU EST.	FT. %	REMARKS
	526.8	527.0	519.4	0.2		TR		TR	CU+ZN		in vug-
	628.6	632.1	414.3	3.5		—			TR		seams & bands

CORE REC.

TO	CORES LOST
185	
385	—
405	—
407	0.5
425	—
429	0.7
443	—
447	2.7
465	—
485	—
505	—
525	—
545	—
565	—
585	—
592	—
596	0.6
603	2.0
615	1.0
628	3.2
645	2.0
665	—

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE 6-26-57 MINE Courtois STOPE STAKE NO. VC-17 HOLE NO. 57VC-29

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

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
185	[illegible]	BEGAN CORING	
233	[illegible]	Dry	Doe Run (233)
400	[illegible]	DAVIS	(400)
		Barne	tree
439	[illegible]	1	℄ dense light T Bf ; massive finely oolitic pa from [illegible] - 419. - V fractured (439)
454	[illegible]	1-5	℄ interbedded dense light Tf & ℄ T C porous Bf massive - frat. (454)
501	[illegible]	5	BOX porous Bf > m ; Crepe banded mostly massive - ; GEM Crepey 485-488. (501)
525	[illegible]	5	TO pitz massive - prominent oolite - 6" Gf @ 521. (525)
534	[illegible]	5-7	F TB/GBOPZ groundmass - ℄ vuggy 528-530 - ; massive C-TOPZ w/ diss PQ throughout vvg lined w/ white bearing fine deposits of Pb+Zn+Cu @ 527.0. (534)
603	[illegible]	7	F GTM Rut mostly fresh Bright ; Rotten vuggy to 577, ℄ out 577-603 (603)
626	[illegible]	10:7	℄ light TO pitz massive pale E thin Stylolitic Hf ; Sparse J speckled - 1 Rusty @ 608, F [illegible] - 13, 6" F @ 621. (626)
647	[illegible]	12	dark GTM mostly finely oolitic appearing, massive to crepe. heaviest mottling @ top - ℄ 632-647, Cu seams 628.6-632.1. (647)
651	[illegible]	sandy 12	℄ TM dense ; crepey, fractured, thin Sandy pale E H partings - Little or no disseminated Sand - (651)
661	[illegible]	19	℄ TO pitz massive SD - Sparse disseminated Sand from top increasing toward base. > vugs - ; Vertical fractured - FeS_2 seam 658-660 ; Speck FeS_2 throughout - 4" ℄ m N appearing, SD w/ 1" grit band @ base (661)
665	[illegible]	20	Wapelle WS Sugary texture ; few fine Sulfide specks - Areas of Bluish G DS in first 1' @ top - (665)

FORM 1173-2-54 Started 6-20-57

15

DATE BOTTOMED 6-25-57 ST. NO. VC-19 ST. ELEV. _____ CLASS TRACE HOLE NO. 57VC31

DESCRIBED BY C.A. AREA Courtois ELEVATION COLLAR 1046.66

DATE ESTIMATED 6-28-57 OPTION NO. CZ-67 COORDINATES: N 116969.99 E 85894.12

BY C.A. TRACT G.D. EVANS 200 FT. MAP NO. 45 SE¼-NW¼ SEC 7 50 FT. MAP NO. T35N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 36" FT.

FORM BOTT. SL. _____

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	1200	927
SLEEVE BIT TO		
BEGAN CORING AT	120	927
SAVED CORES FROM	355	692
FORMATIONS:		
SOIL TO	25	1022
"		
EMINENCE "		
POTOSI "	115	932
POTOSI-DERBY "		
DERBY DOE RUN "	193	854
DAVIS (C.B.-S.B.) "	361	686
BONNE TERRE "	615	432
B. T. TRANS. "	622	425
CONGLOMERATE "		
LA MOTTE "	635	412
GRAN. OR POR. "		

PICTURES: FROM ——
TO

CHAR. SAMPLES: FROM ——
TO

INSOL. RES.: FROM
TO

OPENINGS AT

MINERALIZATION RECORD 1790'S 1750'E

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS	CORE REC. TO	CORES LOST
S-1	405.0	405.2	641.5	0.2		TR					FACE Pb	355	
7	493.4	494.1	552.6	0.7		TR					Specks	635	—
"	494.1	494.5	552.2	0.4	0.4	3.0				02	Diss		
"	495.4	497.3	549.4	1.9	0.2	1.0				0.4	"		
19	619.5	620.5	426.2	1.0		TR					Specks		
"	620.5	620.8	425.9	0.3	1.1	1.0				0.3			
"	620.8	621.4	425.3	0.6		TR.							
19/20	621.4	621.7	425.0	0.3	2.1	1.0				0.6			

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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.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
120	[illegible]	BEGAN CORING	
361	[illegible]	[illegible]	( )
411	[illegible]	1	[illegible]
413	[illegible]	1-5	[illegible]
471	[illegible]	[illegible]	[illegible]
511	[illegible]	[illegible]	[illegible]
541	[illegible]	7	[illegible]
566	479	1	[illegible]
615	430	10:10	[illegible]
622	[illegible]	19	[illegible]
635	410	20	[illegible]

DATE STARTED - 6-24-57

FORM 1173-2-54

20

DATE BOTTOMED 6-27-57
DESCRIBED BY REW - RMR
DATE ESTIMATED 7-2-57
BY

ST. NO. VC-16 ST. ELEV.
AREA COURTOIS
OPTION NO. CZ-66
TRACT H. MASON

CLASS TRACE HOLE NO. 57 VC 35
ELEVATION COLLAR 1092.35
COORDINATES: N 115966.65 E 85623.89
200 FT. MAP NO. 45 NE¼-SW¼-SEC.7 50 FT. MAP NO. T35N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 32" FT.
FORM BOTT. SL.

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	220.0	872
SLEEVE BIT TO		
BEGAN CORING AT	395.0	697
SAVED CORES FROM		
FORMATIONS:		
SOIL TO	36.0	1056
"		
EMINENCE "		
POTOSI "	200.0	892
POTOSI-DERBY "		
DERBY DOE RUN "	?	
DAVIS (C.B.-~~SB.~~) "	451.0	641
BONNE TERRE "	714.0	378
B. T. TRANS. "	717.0	375
CONGLOMERATE "		
LA MOTTE "	727.0	365
GRAN. OR POR. "		
PICTURES: FROM	450.0	642
TO	727.0	365
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 2520'N 1490' E

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS	CORE REC. TO	CORES LOST
	496.2	496.8	595.5	0.6		TR					FACE PB	715	0
	506.8	507.0	585.3	0.2		TR					" "	727	2.6
	579.3	579.4	512.9	0.1		TR					SEAM		
	632.9	633.4	458.9	0.5	0.4	1.0				0.2			
	648.3	648.6	443.7	0.3		TR							
	701.3	701.4	390.9	0.1		TR							

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FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY REM-RMR DATE 7-2-57 MINE CURTIS STOPE STAKE NO. VC-16 HOLE NO. 57VC35

COLLAR ELEV. 1091 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
385	696	BEGAN CORING	
451	640	[illegible] SHALE	L x w/ x J 444-51
490	601	1	DENSE & BROWN PYR - Bd LT TO BROWN IN COLOR, RATHER DENSE w/ > POROUS, (490)
509	583	1-5	LT B - TO mostly 1 Type w/ > TO - AA Beds, Bx, DENSE, (508)
547	534	5	Bd - O - AA RATHER DENSE, w/ POROUS PATCHES (547)
579	512	5	TO > KAA w/ > Bd, med to HEAVY O
667	424	7	REF = Good Thin F SECTION, > Gd, Pl 33, TO 658-660
714	377	10	TO - > AA FINELY > LN, BECOMING MORE GT. w/ AA 700-14
717	374	14	GTSD > AA, > TO
727	364	20	W SAND FINE TO MED GRAIN

DATE STARTED 6-26-57

FORM 1173-2-54

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DATE BOTTOMED 6-28-57 ST. NO. VC-20 ST. ELEV. _____ CLASS TRACE HOLE NO. 57VC 36

DESCRIBED BY H. M. AREA COURTOIS ELEVATION COLLAR 1039.42

DATE ESTIMATED 7-2-57 OPTION NO. CZ-66 COORDINATES: N 116614.24 E 86268.28

BY _____ TRACT H. MASON 200 FT. MAP NO. 45 SE¼-NW¼ SEC.7 50 FT. MAP NO. T35N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 24" FT.

FORM BOTT. SL. _____

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO	168	871
SLEEVE BIT TO		
BEGAN CORING AT	305	734
SAVED CORES FROM	305	734
FORMATIONS:		
SOIL TO	29	1010
"		
EMINENCE "		
POTOSI "	125	914
POTOSI-DERBY "		
DERBY DOE RUN "		
DAVIS (C.B.-S.B.) "	374	665
BONNE TERRE "	639	400
B. T. TRANS. "	642	397
CONGLOMERATE "		
LA MOTTE "	680	359
GRAN. OR POR. "		
PICTURES: FROM	409	630
TO	680	359
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

MINERALIZATION RECORD 2170' S 2150' E

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS	CORE REC. TO	CORES LOST
7	565.3	566.0	473.4	0.7		TR						305	
"	566.0	566.5	472.9	0.5	4.2	2.5				2.1		680	—
"	590.3	590.5	448.9	0.2	1.2	1.0				0.4			
"	594.3	594.5	444.9	0.2		TR							
"	596.0	596.9	442.5	0.9	0.7	1.5				0.6			

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FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY HM DATE 7-2-57 MINE STOPE STAKE NO. VC 20 HOLE NO. 57 VC 36

COLLAR ELEV. 1039 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
305		BEGAN CORING	
310		Davis Shale	
409		1	DENSE BANDED. Heavy oolites in upper portion & from 393-396 > Pitting small Vugs. Med oolites. (409)
433	605	1-5	Bg & To & from 409-417. small Vugs > scatt To patches. [illegible] porous Bg. [illegible] > Pitts. (433)
463	575	5	Bg & O > L Porous. Med o. < Bg patches. > cg & dickite. > K band Vg Nodules base. & from 445-448. > Vugs. (463)
500	539	5	To Med. to heavy oolites. Gg from 478-480 & 483-486. > Ro. — Pitts. (500)
525	513	7	FGM & Reef Rock & throughout. Dimly F. > Vugs. > Ro. (525)
597	441	7	FGM Good Reef Rock. > cg 9 > Ro > scatt Gg sect. 538-560. Pb Trs 565.3-566.6. Fair 566.0-566.5. To sect. 370-376. [illegible] from 376-380. 2 Pb Trs @ 594.5 & 2 @ 595.5 & 596.0-596.9. (597)
639		10	To GRX Med xls. < cg & & seams. < Ro. > scatt short sections & 12. throughout > Vugs with dickite. > oolitic sect. > K bands from 612 & 618. (639)
682		19	ESD > Ro. Med sandy, slightly & Bluish colored. (682)
680			WS Coarse gr. Sugary Text. with Fe & from 660-664. (680)

ACTION ON INTERIM
OR FINAL FIELD TEAM REPORT

Date 4-9

Referred to:

1. ~~Mr. Mittendorf~~
2. ~~Mr. Johnson~~
3. ~~Mr. Chambers~~
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
~~WASHINGTON 25, D.C.~~
Box 431
Joplin, Missouri
July 5, 1957

OFFICIAL FILE COPY
DMEA
RECEIVED JUL 8 1957

DATE	INITIALS	CODE
7-9	C	
7-9	Copy	220
7-12	~~WRH~~	100
		500

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

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

Dear Sirs:

Transmitted herewith are the original and two copies of the Interim Report received from Amos, USGS, today covering the June 27-28 joint Field Team inspection of the cited project.

I and the other four mentioned DMEA visitors from Washington, Region III, and Region V accompanied the Field Team examiners and discussed the project at length with Messrs. Wagner, Winkle and Jewell, the Operator's representatives.

A key to the geologic symbols and abbreviations used on the logs of completed drill holes, submitted with the Operator's MF-104 Reports under the subject Contract, was furnished you with the July 2 memorandum from Amos, Geological Survey Member of the Field Team.

Sincerely yours,

Clinton C. Knox

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

encl. 3

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

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DMEA
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INTERIM REPORT

DMEA-4582, Idm-E1068 (lead, zinc, copper)

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 27 - 28, 1957. Several operating drills were visited in the field and discussions were held with the Operator's representatives concerning results obtained to date and future work. Messrs. Thor H. Kiilsgaard and Frank D. Lamb, members of the DMEA Operating Committee, Mr. Robert A. Laurence, Executive Officer of Region V, and Mr. Robert U. King, Assistant Executive Officer of Region IV, accompanied the examiners on the inspection.

A total of ten holes have been completed since the last interim inspection (May 28, 1957). Mineralization of ore grade and mineable thickness was encountered in one hole, two revealed indicative non-commercial mineralization and the remainder contained traces. A summary of the ten holes is as follows:

Hole No.	Location	Depth	Remarks
VC-1	SW¼, SW¼, NW¼, sec. 8	555 feet	Ore hole (see assay results) No churn drilling required.
VC-7	SW¼, SE¼, SE¼, sec. 7	613 feet	Trace hole. No churn drilling required
VC-11	SE¼, SW¼, SE¼, sec. 18	575 feet	Speck trace hole.
VC-12	NW¼, NE¼, NE¼, sec. 18	615 feet	Trace hole.
VC-13	SW¼, SE¼, NE¼, sec. 7	605 feet	Indicative hole (see assay results)
VC-14	NW¼, NE¼, SW¼, sec. 7	595 feet	Trace hole.
VC-15	SE¼, SE¼, NW¼, sec. 7	605 feet	Trace hole.

Hole No.	Location	Depth	Remarks
VC-17	SW¼, SE¼, NW¼, sec. 7	665 feet	Trace hole.
VC-21	SE¼, SW¼, NE¼, sec. 7	665 feet	Indicative hole. Mineralization at 542-544 ft., 580-585 ft. and 600-604 ft.
VC-24	SE¼, NW¼, SW¼, sec. 8	685 feet	Trace hole.

Diamond drilling is in progress at two locations summarized as follows:

Hole No.	Location	Present Depth	Est. total Depth	Remarks
VC-16	NW¼, NE¼, SW¼, sec. 7	220 ft	650 ft.	In Derby Formation.
VC-19	SE¼, SE¼, NW¼, sec. 7	200 ft	675 ft	In Derby formation.

The churn drill portion of 17 holes has been completed since the last interim inspection (May 28, 1957). A summary of these holes is as follows:

Hole No.	Location	Depth to bottom of churn drilling	Remarks
VC-6	SE¼, SE¼, SE¼, sec. 7	70 feet	———
VC-8	NE¼, NE¼, NE¼, sec. 18	150 feet	———
VC-9	NW¼, NE¼, NE¼, sec. 18	70 feet	———
VC-11	SE¼, SW¼, SE¼, sec. 7	75 feet	Diamond drilling also completed.
VC-12	NW¼, NE¼, NE¼, sec. 18	125 feet	do
VC-13	SW¼, SE¼, NE¼, sec. 7	110 feet	do
VC-14	NW¼, NE¼, SW¼, sec. 7	123 feet	do
VC-18	SW¼, SE¼, NW¼, sec. 7	135 feet	———
VC-19	SE¼, SE¼, NW¼, sec. 7	120 feet	Diamond drilling in progress.
VC-21	SE¼, SW¼, NE¼, sec. 7	175 feet	Diamond drilling also completed.
VC-22	SE¼, NW¼, SE¼, sec. 7	290 feet	———
VC-25	NW¼, NE¼, SE¼, sec. 7	215 feet	———

Hole No.	Location	Depth to bottom of churn drilling	Remarks
VC- 26	NE¼, NW¼, SE¼, sec. 8	255 feet	———
VC-27	SW¼, SW¼, NE¼, sec. 8	115 feet	———
VC-31	SE¼, SE¼, SW¼, sec. 7	115 feet	———
VC-36	SW¼, NW¼, NE¼, sec. 18	180 feet	———
VC-39	NE¼, SE¼, NE¼, sec. 8	145 feet	———

Churn drilling is in progress at five hole locations summarized as follows:

Hole No.	Location	Present Depth
VC-10	NE¼, SE¼, SE¼, sec. 7	150 feet
VC-28	NW¼, NW¼, NW¼, sec. 17	Setting up drill.
VC-29	NW¼, SE¼, SE¼, sec. 8	140 feet
VC-32	NW¼, SE¼, SW¼, sec. 7	Setting up drill.
VC-40	SW¼, NW¼, NW¼, sec. 9	Setting up drill.

Assay results of Holes VC-1 and VC-13 are:

Hole No.	Depth	% Pb	% Cu
VC-1	436½ - 443½ ft	10.2	0.5
VC-13	420 - 421 ft	tr	--
	486 ft	tr	--
	507 - 508½ ft	6.2	--
	508½ - 510½ ft	tr	--
	510½ - 511 ft	9.7	--
	516½ - 517 ft	1.4	--
	527 ft	tr	--

Assays of the other holes have not been completed.

The ore grade mineralization discovered in Hole VC-1 is about 900 feet northeast of the ore hole 56 W 93 (see contract map) which was drilled prior to the contract. Other holes completed in the vicinity revealed either indicative or trace mineralization. Based on results in this area, verbal permission was given by the field examiners to do exploratory drilling under Stage II of the contract as follows:

Hole No.	Location	Property
VC-56	NW¼, NW¼, SW¼, sec. 8	CZ-164
VC-57	SE¼, SW¼, NW¼, sec. 8	CZ-164
VC-58	NE¼, SW¼, NW¼, sec. 8	CZ-164
VC-59	NW¼, SW¼, NW¼, sec. 8	CZ-164
VC-60	NW¼, SW¼, NW¼, sec. 8	CZ-164
VC-61	NE¼, SE¼. NE¼, sec. 7	CZ-67
VC-62	NW¼, SE¼, NE¼, sec. 7	CZ-67
VC-63	SW¼, SE¼, NE¼, sec. 7	CZ-67

Of the 15 holes completed on this contract one has encountered mineralization of ore grade and mineable thickness, two revealed indicative non-commercial mineralization and the remaining 12 holes contained traces.

Hole locations are shown on the map attached to Operator's Monthly Voucher for June 1957.

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

John W. Chester
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

~~WASHINGTON 25, D.C.~~
Box 431
Joplin, Missouri
July 15, 1957

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

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

Dear Sirs:

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

Your other copy of the MF-104A and the Monthly Report was furnished for your advance information with a copy of my letter of July 5, 1957 to Finance Officer, Bartlesville, Oklahoma.

Sincerely yours,

CCK/jd

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

encl.

cc: DMEA Op. Com. ✓
4582 file

EXTRA COPY
DMEA
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DATE		CODE
7/17		110
7/17		500

2nd copy - Wash.

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

Budget Bureau No. 42-R1036.5

MF104 to Wash 7/5/57

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of May, 1957 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	10174.26	-	10174.26	8/9/57		
Bulldozing						
Crosscutting						
Drifting						
Analytical Determinations	16.00	-	16.00			
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	10190.26	-	10190.26	✓	—	✓

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MINERALS TECHNOLOGY DIVISION
JUN 17 1957
BUREAU OF MINES
JOPLIN, MO.

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

Date 6-13-57 *Payee St. Joseph Lead Company

Per E. B. James 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:

$5,095.13

Signature
(Authorized Certifying Officer)

Date 7-11-57 Vou. No. 4-2

(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 1, 1957

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Clinton C. Knox Title Executive Officer Date July 3, 1957

MONTHLY REPORT OF OPERATOR

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151.2

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of May 195 7 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.	7332.66	3303	7332.66	3303	$2.22		
Churn	Ft.	2841.60	1280	2841.60	1280	2.22	133420	$2.22
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Analytical Determinations	Ea.	16.00	16	16.00			2370	1.00
TOTAL DISTRIBUTED COSTS		10190.26		10190.26				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		10190.26		10190.26				

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 6-13-57 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)

(For Government use only)

RECEIVED JUL 8 1957 D.M.E.A.

RECEIVED MINERALS TECHNOLOGY DIVISION JUN 17 1957 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

MONTHLY REPORT FOR MONTH OF MAY, 1957

DMEA PROJECT #4582 - CONTRACT #IDM-E 1068

11 additional Stage 1 approved locations have been surveyed, staked and numbered in the field as shown on map.

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

Stake #VC11 - started 5-28-57 - drilling at 75 feet depth

Stake #VC13 - started 5-28-57 - drilling at 30 feet depth

Stake #VC19 - started 5-31-57 - starting hole

Stake #VC21 - started 5-31-57 - starting hole

Stake #VC25 - started 5-14-57 - drilling at 140 feet depth

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

Stake #VC12 - depth 125 feet - starting date 5-16-57

Stake #VC14 - depth 122 feet - starting date 5-27-57

Stake #VC15 - depth 100 feet - starting date 4-25-57

Stake #VC16 - depth 220 feet - starting date 5- 2-57

Stake #VC17 - depth 185 feet - starting date 5-16-57

Stake #VC18 - depth 135 feet - starting date 5-27-57

Stake #VC20 - depth 168 feet - starting date 4-26-57

Stake #VC23 - depth 100 feet - starting date 5-11-57

Stake #VC24 - depth 125 feet - starting date 5-16-57

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JUL 8 1957
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DIVISION
1957
OF MINES
MO.

2 diamond drills were moved into the area during the month. At the end of the month one was drilling Stake #VC-12 at a depth of 245 feet, and the other was drilling Stake #VC-24 at a depth of 433 feet.

The following diamond drill holes were completed:

Stake No.	Prospect Hole No.	Bottom Depth	Feet of Diamond Drilling	Date Completed	Class.
VC-23	57VC9	565	465	5-27-57	Trace
VC-2	57VC6	545	545	5-21-57	Trace
VC-3	57VC2	595	595	5-15-57	Trace
VC-4	57VC1	520	520	5-13-57	Trace
VC-5	57VC5	565	565	5-20-57	Trace
VC-7	57VC11	613	613	5-28-57	Trace

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DIVISION
JUN 17 1957
BUREAU OF MINES
DENVER, COLO.

Prospect Holes 57VC1 (Stake VC-4), 57VC6 (Stake VC-2), 57VC2 (Stake VC-3), 57VC5 (Stake VC-5) are located 520 feet northeast, east, southeast and southwest respectively from hole #56W93, a low-grade pay hole. Excepting 57VC6, which was moved 90 feet west because the original location fell on the face of a series of bluffs with Indian Creek lying at the base. All of these holes showed significant amounts of trace lead mineralization in the same horizon as the lead in the pay hole and the lithology of the section is similar. It appears that any possible ore body at this point may be narrow in dimension and may require much closer drilling for its discovery.

57VC9 (Stake VC23), located about 2,000 feet east of the above group of holes, showed normal Bonneterre lithology and contained weak traces of lead in the 5 zone with best run assaying 0.2 foot of 1.1% Pb.

57VC11 (Stake VC7), located about 1500 feet south of the above group of holes and 520 feet northwest of 56W69, an indicative hole, showed significant traces of lead at slightly lower horizon than that of lead in the indicative hole.

18 analytical determinations were made during the month as follows:

57VC1 - 2 Pb
57VC2 - 1 Pb
57VC5 - 1 Pb
57VC6 - 3 Pb - 1 Cu
57VC9 - 4 Pb
57VC11 - 6 Pb
18

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-158

Ira Turnbaugh and Bertha Turnbaugh (wife), executed 12-24-56. Option to purchase all underground and mining rights excepting coal, oil, and gas on 80 acres, more or less. Option runs for 1 year and is renewable twice.

Copies of option contracts are included and location of lands is shown on the report map.

15

DATE BOTTOMED _____ ST. NO. VC-23 ST. ELEV. _____ CLASS TRACE HOLE NO. 57VC9

DESCRIBED BY C.A. AREA CZAR KNOB. ELEVATION COLLAR 906.36

DATE ESTIMATED 5-28-57 OPTION NO. CZ-93 COORDINATES: N 116256.85 E 90960.22

BY C.A. TRACT EMMA PAYNE 200 FT. MAP NO. 46 SE¼-NW¼-Sec8 50 FT. MAP NO. T35N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 2.67 FT.

FORM BOTT. SL. _____

		DEPTH	ELEV.
DRILLED WITH:			
CHURN DRILL TO		100	806
SLEEVE BIT TO			
BEGAN CORING AT		100	806
SAVED CORES FROM		285	621
FORMATIONS:			
SOIL	TO	14	892
	"		
EMINENCE	"		
POTOSI	"	25	881
POTOSI-DERBY	"		
DERBY DOE RUN	"	124	782
DAVIS (C.B.-S.B.)	"	291	615
BONNE TERRE	"	547	359
B. T. TRANS.	"	550	356
CONGLOMERATE	"		
LA MOTTE	"	565	341
GRAN. OR POR.	"		
PICTURES:	FROM	285	621
	TO	565	341
CHAR. SAMPLES:	FROM	100	806
	TO	565	341
INSOL. RES.:	FROM		
	TO		
OPENINGS AT			

205

MINERALIZATION RECORD

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	% ASSAY	% EST.	FT. %	REMARKS
	355.0	355.1	551.3	0.1		TR					speck.
	400.2	400.5	505.9	0.3	0.1	1.0		0.03			>XLS
	400.5	401.5	504.9	1.0		TR					speck.
	401.5	401.9	504.5	0.4	0.3	1.0		0.1			speck.
	401.9	402.6	503.8	0.7		TR					speck.
	405.0	406.1	500.3	1.1	0.1	1.0		0.1			"
	406.9	408.2	498.2	1.3		TR					fracture
	408.9	410.3	496.1	1.4		Tr					speck.
	410.3	410.5	495.9	0.2	1.1	1.0		0.2			"
	426.7	426.8	479.6	0.1		TR					"
	428.5	428.7	477.7	0.2		TR					"
	496.7	496.8	409.6	0.1		TR					fract.
	528.1	528.3	378.1	0.2		TR					speck

CORE REC.

TO	CORES LOST
100	
115	1.0
135	
165	PLUG
520	—
530	1.0
540	2.0
548	2.0
550	1.0
565	7.0

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE 5-28-57 MINE ..... STOPE ..... STAKE NO. V.C. 23 HOLE NO. 57VC09

COLLAR ELEV. 904.7 PITCH ..... BEARING ..... COORD.: N ..... E .....

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
100	805	BEGAN CORING	
124	781	DERBY - Thin bedded T&GT - > Gt (124)	
291	614	DAVIS SHALE - 1' GT > G & MA x 12/6 @ 1:00 - 1' L&J - parallel @ base - (291)	
		BONNETERRE	
325	580	1	Lt dense dolo - Lots small vugs - > banded - > fract 290 to 295 - most well fract - > very few parallel patched with - (325)
393	512	5	Brown BT&GTGEM - Basically T&GT parallel & strict w/ GT GEM 3' @ 341, - 1' w/ < small [illegible] BT > [illegible] w/ Tr Pb 356 - BT increasing 375 to base - (393)
413	492	5	T&GTM > G&BT - GT > M thin to bdd 373 to 378 - T > K - mottled 378 to 401 - 1' smoky GTM w/ > Pb @ 401 and 403 - GTM thin bedded 403 to 405 - 1' w/ prom O and I Pb x ma 406 - GTM: I @ 407 - T parallel w/ fract 407 to base w/ fract w/ > dis Pb 408 to 409 - 3" smoky GB strict @ base - (413)
456	449	7	FSGTGTM > MG - 1' G & 414 - P2 F 418 - P2 G & to 420 - F to 422 - dense thin bdd fine G & strict 422 to 426 - fond F w/ GT > M G & parallel strict 426 to base - considerable fract - F appearance height 443 to base (456)
481	424	7-10	FSXTM: T - Basically good rock w/ > T & M; GT 456 to 460, T 463 to 465 & GT P2 @ 479 - and 6" @ 480 - 6" P2 < vd @ 461 - > fract @ 457, 479 - (481)
518	387	10-12	GTGEM - > T - GTM 481 to 482 - T 482-483 - GEM with H 483 to 485 - GTM - > G & > B & 485 to 486 - 6" < L & [illegible] 486 to 488 - T > G w/ 2" C inclusion 487 to 489 - T > G > M > thin & 489 to 502 - T > parallel to 503 - fract Pb @ 497 - GEM 503 to 518 w/ 6" G & B & strict @ 505 - 2' prominent GT w/ to 7cS 514 - 1' T < fract 517 - 6" T @ base - Tr Cd @ 517 - (518)
549	[illegible]	12	GTGEMw - med heavy M - < w - C and 2nd dolo & - spark to Pb @ 532 - > fine G & - fairly B & 540 to base - (549)
550	[illegible]	19	GODILLE - [illegible] - > fract - 1' L E @ base - 3' gr 540 to 548 - 1' gr 548 to 550 - (550)
565	[illegible]	20	WS - < FeS - fine grain - very clean - 8' gr 550 to 565 - (565)

FORM 1175 2 54

13

DATE BOTTOMED _____ ST. NO. VC 2 ST. ELEV. _____ CLASS TRACE HOLE NO. 57VC6

DESCRIBED BY C.A. AREA Courtois ELEVATION COLLAR 895.57

DATE ESTIMATED 5-24-57 OPTION NO. CZ-66 COORDINATES: N 115801.53 E 88819.57

BY C.A. TRACT H. MASON 200 FT. MAP NO. 46 NE¼-SE¼-Sec17 50 FT. MAP NO. T35N-R14

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR ? FT.

FORM BOTT. SL. _____

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO		
SLEEVE BIT TO	18	879
BEGAN CORING AT	32	865
SAVED CORES FROM		
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "	95	802
DAVIS (C.B.-S.B.) "	270	627
BONNE TERRE "	528	369
B. T. TRANS. "	531	366
CONGLOMERATE "		
LA MOTTE "	545	352
GRAN. OR POR. "		
PICTURES: FROM	270	627
TO	545	352
CHAR. SAMPLES: FROM		
TO		
INSOL. RES.: FROM		
TO		
OPENINGS AT		

205

MINERALIZATION RECORD

ROCK TYPE	DEPTH FROM	DEPTH TO	ELEV. BOTT.	THICKNESS	% LEAD ASSAY	% LEAD EST.	FT. %	%Cu. ASSAY	%Cu. EST.	FT. %	REMARKS
	304.5	304.7	591.9	0.2		TR					
	307.2	307.5	589.1	0.3		TR.					fract filling
	313.0	313.7	582.9	0.7		TR					"
	373.0	373.2	523.4	0.2		TR.					Spk.
	383.1	383.2	513.4	0.1		TR					"
	395.0	396.9	499.7	1.9		TR.					
	403.5	407.2	489.4	3.7		TR					fract. filling
	445.0	446.7	449.9	1.7	1.0	2.5	1.7	0.26	1.0	0.44	diss
	446.7	447.1	449.5	0.4		TR.					Speck.
	450.0	450.3	446.3	0.3	3.4	8.0	1.0				diss
	450.3	450.7	445.9	0.4		TR.					diss in R.b.
	455.0	455.6	441.0	0.6	0.9	1.0	0.5				spk.
	462.9	463.1	433.5	0.2		TR.					"
	529.0	529.2	367.4	0.2		TR.					"

CORE REC.

TO	CORE LOST
32	
65	—
Plug.	
165	
195	6.0
270	—
275	—
283	2.0
295	6.0
335	—
337	1.0
343	1.0
350	2.0
354	—
364	3.0
370	1.0
375	1.0
535	—
545	6.0

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE [illegible]-4-57 MINE ..... STOPE ..... STAKE NO. V[illegible] HOLE NO. 57V-[illegible]

COLLAR ELEV. 89[illegible] PITCH ..... BEARING ..... COORD.: N ..... E .....

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
[illegible]	[illegible]	BEGAN CORING	
65	[illegible]	[illegible]	[illegible]
15	[illegible]	[illegible]	thin [illegible]
[illegible]	[illegible]	[illegible]	[illegible] (270)
		[illegible]	
319	[illegible]	1	[illegible] (319)
364	524	5	GB>M-[illegible] (364)
377	[illegible]	5	[illegible] (377)
450	[illegible]	7	[illegible] (450)
464	[illegible]	7-10	[illegible] (464)
508	[illegible]	10-12	[illegible] (508)
528	379	12	[illegible] (528)
531	367	19	[illegible] (531)
545	353	20	WS-2" [illegible] (545)

20

DATE BOTTOMED _____ ST. NO. VC-3 ST. ELEV. _____ CLASS TRACE HOLE NO. 57VC2

DESCRIBED BY L.N.N. AREA Courtois ELEVATION COLLAR 900.37

DATE ESTIMATED 5-17-57 OPTION NO. C2-57 COORDINATES: N 115367.39 E 88615.11

BY L.N.N. TRACT K. MASON 200 FT. MAP NO. V46 NE¼-SE¼-Sec 7 50 FT. MAP NO. T35N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 1.00 FT.

FORM BOTT. SL. _____

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO		
SLEEVE BIT TO	21	879
BEGAN CORING AT	25	875
SAVED CORES FROM		
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI DERBY "		
DERBY DOE RUN "	132	768
DAVIS (C.B.-S.B.) "	300	600
BONNE TERRE "	558	342
B T TRANS. "	568	332
CONGLOMERATE "		
LA MOTTE "	595	305
GRAN OR POR. "		
PICTURES: FROM	NONE	
TO		
CHAR. SAMPLES: FROM	300	600
TO	595	305
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
	469.0	471.0	429.4	2.0		TR					Scatt. Specks
	471.0	472.2	428.2	1.2	0.8	1.0				1.0	
	473.2	473.7	426.7	0.5		TR					

CORE REC.

TO	CORES LOST
25	
75	20.0
95	2.0
135	—
145	4.0
165	6.0
205	10.0
240	10.0
260	4.0
281	2.0
291	2.0
301	1.5
311	10.0
345	10.0
361	8.0
394	5.0
409	3.0
429	2.0
449	2.0
469	4.0
487	1.0
505	—
555	—
565	6.0
575	7.0
595	8.0

20

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY LHH DATE [illegible]-17-57 MINE Courtois STOPE STAKE NO. VC-3 HOLE NO. 57 VC 2

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

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
[illegible]	875	BEGAN CORING	
132	[illegible]	DERRY	E - [illegible] thin bedded [illegible] - shaley - (132)
300		DAVIS	(300)
		BONNE TERRE	
340	[illegible]	1	E Lt, dense lab - < chert nod (340)
[illegible]	[illegible]	5	E chert nod Lt to lain Bt - i > M banded to 360 - 1' LtETM w/ sparse Tr @ 393 - most E ETM dense w/ wrp shale banding 410 to 423 (423)
428	572	5	E massive To Bz - Tr specks 423, 427 & 428 - fract (428)
440	470	7	F LtETM - porous, pound mass - unleached To/Gm w/ > Pb 468 to 472.2 - speck Tr 472.2-473.7 in E portion - (440)
[illegible]	399	10:12	E Lt to massive unleached w/ E ETM wrp, dense - vert fract - ([illegible])
537	[illegible]	10/12	Lt to ETM Fnl shelded - 3' unE GTM Gd wrp shaley @ 504-517 - 2' unE Gm Bz 525-[illegible] Tr Tr specked 517-521 - fract throut - > faulting @ 534-535 - (537) parts Lt sh toward base
553	[illegible]	12	GT GEM Dense - Slope - i vert fract & E; 537 to 539, 552 to 558 - ([illegible])
568	[illegible]	19	ETIE Y GD - i vuggy > FeSpatches - Shaley E 5/6 (568)
595	305	20	L MATTHEWS - med coarse grain banded - [illegible] to represent full thickness - (595)

FORM 1173-2-54

15

DATE BOTTOMED

DESCRIBED BY L.H.N + CA.

DATE ESTIMATED 5-17-57

BY L. N. H. + CA

ST. NO. VC-4 ST. ELEV.

AREA COURTOIS

OPTION NO. CZ-67

TRACT G. D. EVANS

CLASS TRACE HOLE NO. 57VC1

ELEVATION COLLAR 895.26

COORDINATES: N 116251.86 E 88683.81

200 FT. MAP NO. 46 SE¼-NE¼-Sec 7 50 FT. MAP NO. T35N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GP 1.00 FT.

FORM BOTT. SL. DERBY

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO		
SLEEVE BIT TO	21	874
BEGAN CORING AT	21	874
SAVED CORES FROM	21	874
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "		
POTOSI-DERBY "		
DERBY DOE RUN "	77	818
DAVIS (C.B.-S.B.) "	243	652
BONNE TERRE "	505	390
B. T. TRANS. "	506	389
CONGLOMERATE "		
LA MOTTE "	520	375
GRAN. OR POR. "		
PICTURES: FROM	NONE	
TO		
CHAR. SAMPLES: FROM	243	652
TO	520	375
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
	292.6	292.7	602.6	0.1		TR.					Speck tr.
	294.5	294.6	600.7	0.1		TR					" "
	384.8	384.9	510.4	0.1		TR					" "
	411.8	411.9	483.4	0.1		TR					— —
	415.0	417.6	477.7	2.6	0.2	1.0				0.5	
	420.6	422.2	473.1	1.6	2.3	2.0				3.7	
	422.5	422.8	472.5	0.3		TR					Speck traces
	426.0	427.2	468.1	1.2		TR					" "
	430.4	430.8	464.5	0.4		TR.					" "

CORE REC.

TO	CORES LOST
235	
245	—
255	—
265	3.2
495	—
510	2.6
520	—

205

Pl. OK

12"

FORM 900: R-5-55

ROCK CLASSIFICATION

DESCRIBE BY X HH DATE 5-17-57 AREA Courtois STOPE STAKE NO. VC-4 HOLE NO. 57 VC 1

COLLAR EV. 8[illegible] PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
21	[illegible]	BEGAN CORING	
47	[illegible]	Derby	F FGTM dense Rue f ; crappy GM in mid section (49)
77	[illegible]	Derby	Doe Run thin bedded dense TBf (77)
81	[illegible]	Derby	Davis TRANSITION (81)
243	[illegible]	Davis	Shale and Dolomites g'Jlp G base (243)
		Bonneterre-	
283	[illegible]	1	Dense TBf - ; vert frac thruout - (283)
300	[illegible]	1-5	Alternating dense TBf & P>M porous Bf - ; ww 297 to 297 - (300)
362	[illegible]	5	BO porous Bf - finely or massive bedded ; >M >vuggy - GEM crape 1'@ 333, 347 to 352, GTM crape 357 to 362 - (362)
370	[illegible]	5	BO Massive Pf - Prominent Cq - (370)
4206	[illegible]	7	F FGTM>OGf - Fresh ; dull F - Mineralized from 415.8 to 417.6 Pb - (4206)
444	[illegible]	7:10:12	Basically F FGTM - Enterbedded banded Tf to 427 - ; GTM crape ; dense TBf from 435 to 443 - (444) Pb 420-[illegible]
474	[illegible]	12:10	Basically GT:GEM H:KLmw - intermittent Tf lenses becoming dominant 461 to base - (474)
505	[illegible]	12	GTM:GEmw - Scatt 1" to 2" Bf f thruout - considerable Qand Cq dolo f - final 25' sandy ; >Bf - (505)
506	[illegible]	19	LEWIS - D - thin shale band - and increasing toward base - <Fes patch @ base - (506)
520	[illegible]	20	LaMotte W.S. - tan and sugary - m & f grained - gravel - most banded - l'GE stained @ top - (520)

20

DATE BOTTOMED ____ ST NO. 16-5 ST ELEV. ____ CLASS TRACE HOLE NO. 57VC05

DESCRIBED BY C.H. AREA Courtois ELEVATION COLLAR 905.21

DATE ESTIMATED 5-24-57 OPTION NO. CZ-66 COORDINATES: N 115371.80 E 88127.63

BY C.H. TRACT H. Wilson 200 FT. MAP NO. 76 NE¼-SE¼-Sec7 50 FT. MAP NO. T35N-R1W

GENERAL HOLE DATA

HT. SLEEVE ABOVE GR 0.50 FT.

FORM BOTT. SL. ____

	DEPTH	ELEV.
DRILLED WITH:		
CHURN DRILL TO		
SLEEVE BIT TO	12	893
BEGAN CORING AT	12	893
SAVED CORES FROM	12	893
FORMATIONS:		
SOIL TO		
"		
EMINENCE "		
POTOSI "	55	850
POTOSI-DERBY "		
DERBY DOE RUN "	131	774
DAVIS (S.B.) "	295	610
BONNE TERRE "	557	345
B. T. TRANS. "	560	345
CONGLOMERATE "		
LA MOTTE "	565	340
GRAN. OR POR. "		

PICTURES: FROM 295 610
TO 565 340

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
	409.8	410.0	495.2	0.2		TR.					Specks Fract.
	416.3	416.4	488.8	0.1		TR.					"
	440.0	440.3	464.9	0.3		TR					"
	458.3	461.3	443.9	3.0		TR.					"
	472.2	472.4	432.8	0.2		TR.					"
	490.3	490.4	414.0	0.1	1.1	1.5				0.1	DISS PB.
	511.5	511.6	393.6	0.1		TR.					Specks Fract.
	552.8	553.0	352.2	0.2		TR					"
	556.0	556.2	349.0	0.2		TR.					"

CORE REC.

TO	CORES LOST	REC. CORES LOST
12		
15	—	7.0
25	7.0	6.0
35	—	8.5
45	6.0	9.0
55	1.0	2.5
57	1.0	0.5
67	—	—
75	1.0	PLUG
145	—	—
295	—	2.0
303	8.5	—
313	6.0	—
320	—	12.0
324	3.0	
330	2.0	
334	1.0	
395	—	
445	2.0	
455	--	
465	2.0	
565	--	

FORM 9002-R-5-55

ROCK CLASSIFICATION

DESCRIBED BY [illegible] DATE 5-29-57 ~~MINE~~ Contract STOPE STAKE NO. VC 7 HOLE NO. 57 VC 11

COLLAR ELEV. 930.0 PITCH BEARING COORD.: N E

BOTTOM DEPTH	BOTTOM ELEV.	ZONE NUMBER	KIND OF ROCK (Depth at Bottom)
72.0	859	BEGAN CORING	
112.0	818	DERBY - Lt. Pitted - Frgt < grinding - < E - fruit surf app. 72 to 92 - O app. 92-102 (112)	
175.0	796	DERBY - THIN BEDDED - 1' Sandy Gt. app. @ 126 - with dikite Gt - 2' Lewis type @ 172 - (175)	
341.0	594	DAVIS SHALE - 1' S O @ 184 - 3" L, 2" I @ 191, 1' @ 172 - < Sandy, 173 to 321 - 2' L, I @ base - Plug 195-315 (341)	
		BONNE TERRE	
370	541	1	LT dense -> Parallel B patches - to Spotted @ 342 & 344 - pitted - > parallel B patches 375 to base, irregular - Tr Pk 362.4 - 362.6 — 383.5 - 383.6 (370)
458	473	5	BROWN O-B Gt: GEM - Pk < B parallel patches increasing towards base - 1' GEM Gt 432 and 435 - Med O -> vert frac - < GTM ~ 1/4" Gt O sec 450 & 458 (458)
467	464	5	GTGEM; Tb > Gt - GTGEM ~ 1/6" good O sec 459, 463, 464, & 465 - 6" Gt 465 to 467 (467)
536	395	7	F GTM Gt O - Dark Gy F - parallel - > vert frac 503 to 513 - > Pk 507 to 513 - 6" Tb @ 515, 2' Tb @ 519 & 1' Tb @ 529 & 532 (536)
573	358	10-12	Tb - GTGEM - M ~ 56. to 538 - Tb stylo - 538 to 542 - GTM ~ 542 to 548 - GM ~ 548 to 553 -> vert frac - GT > M > F 553 to 562 - Tb - K & spotted ~ 562 to 572 - GT > M 572 to base - Tr Pk 1/4" Ca XL @ 562 - (573)
592	[illegible]	12	GTM > Gt - ~ 1, scattered Gt - Med M - ~ Ca & 2nd dolo f -> dichloite f - 1/4 to base (592)
593	[illegible]	19	GSD: EIE - Med sand content - spotted - 6" E IEC base - (593)
613	317	20	T-G-WS - E T Tb to 515 - G 515 to 597 - WS 597 to base - 12' gs in first run - Med fine grain (613)

RECEIVED
MINERALS TECHNOLOGY
DIVISION

JUN 17 1957

BUREAU OF MINES
JOPLIN, MO.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

~~WASHINGTON 25, D.C.~~
Box 431
Joplin, Missouri

June 13, 1957

OFFICIAL FILE COPY
DMEA
RECEIVED JUN 17 1957

DATE	REMARKS	CODE
6/17	✓	220
18	Com	100
6/19	~~[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.
Project Contract Idm-E1068

Dear Sirs:

Transmitted herewith are the original and three copies of Interim Report received from Amos, USGS, June 6 covering the May 28 joint Field Team inspection of the cited project on which Chester and I of this Bureau Office accompanied him.

Sincerely yours,

Clinton C. Knox

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

encl. 4

cc: DMEA Op.Com.(3)
Laurence,USGS,Knxoville
Amos, " "
4582 file

Reports

OFFICIAL FILE COPY
DMEA
RECEIVED JUN 17 1957

DATE	INITIALS	CODE

RECEIVED
MINERALS TECHNOLOGY
DIVISION
JUN 4 1957
BUREAU OF MINES
JOPLIN, MO.

INTERIM REPORT
DMEA-4582, Idm-E1068 (lead, zinc, copper)

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

Location: Courtois Area, Washington County, Missouri

A project inspection of the subject contract was made on May 28,1957. Several operating drills were visited in the field and company core logging methods were observed and studied. Results obtained to date and future work were discussed with the Operator's representatives.

A total of five holes have been completed on this project. All contained weak to significant traces of mineralization. No churn drilling was required on these five holes. Assays of the mineralized portions of the holes have not been completed. A summary of the five holes is as follows:

No.	Location	Approximate Depth
VC-2	NE¼, NE¼, SE¼, sec.7	545 ft.
VC-3	SE¼, NE¼, SE¼, sec.7	593 ft.
VC-4	SE¼, SE¼, NE¼, sec.7	520 ft.
VC-5	SW¼, NE¼, SE¼, sec.7	565 ft.
VC-23	SW¼, SE¼, NW¼, sec.8	565 ft.

Diamond drilling is in progress at two locations summarized as follows:

No.	Location	Present Depth	Estimated Total Depth	Remarks
VC-24	SE¼, NW¼, SW¼, Sec.8	125 ft.	630 ft.	Setting up diamond drill.
VC-7	SW¼, SE¼, SE¼, sec.7	535 ft.	630 ft.	In Bonneterre. No churn drilling required.

The churn drill portion of 7 holes has been completed since the date of the last interim report (April 30, 1957). A summary of these holes is as follows:

No.	Location	Depth to Bottom of Churn Drilling	Remarks
VC-12	NW¼, NE¼, NE¼, sec.18	125 ft.	-----
VC-15	SE¼, SE¼, NW¼, sec.7	100 ft.	-----
VC-16	NW¼, NE¼, SW¼, sec.7	220 ft.	-----
VC-17	SW¼, SE¼, NW¼, sec.7	185 ft.	-----
VC-20	SE¼, SE¼, NW¼, sec.7	165 ft.	-----
VC-23	SW¼, SE¼, NW¼, sec.8	100 ft.	-----
VC-24	SE¼, NW¼, SW¼, sec.8	125 ft.	Diamond drilling in progress.

Churn drilling is in progress at four hole sites summarized as follows:

No.	Location	Present Depth	Remarks
VC-11	NE¼, NW¼, NE¼, sec.18	---	Setting up drill.
VC-13	SW¼, SE¼, NE¼, sec. 7	---	Setting up drill.
VC-14	NW¼, NE¼, SE¼, sec.7	30 ft.	---
VC-25	NW¼, SE¼, SW¼, sec. 8	120 ft.	---

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

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

Dewey H. Amos
Geologist
U.S. Geol. Survey

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.
XXXXXXXXXXXXXXXXXX
Box 431
Joplin, Missouri

Official

~~EXTRA~~ COPY DMEA RECEIVED 15 1957		
DATE	INITIALS	CODE
5/15	[illegible]	110
5/16	~~[illegible]~~	500

May 13, 1957

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 for your immediate information are two copies of the first progress report by the cited Operator covering start of the project work in April, with extra maps revised on the basis of project surveying. No claim was made, however, for Government participation in the drilling costs last month.

The fifth copy of this complete report and an extra map is sent for review by the Survey Member of the Field Team.

The Field Team understood when there April 30, that drilling on this project was started April 25, 1957. The Operator's report does not mention the date as it was requested to do. Evidently, surveying, access road building and drilling site ~~operations~~ preparation must have started earlier in April.

Sincerely yours,

CCK/jd

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

encl. 2 of report complete
w/2 extra maps

cc: DMEA Op.Com.
Amos, USGS, Carbondale w/cy rpt
Mr. E. A. Jones, St. Joe Lead
4582 file

Rept

2nd copy Wash

RECEIVED
MINERALS TECHNOLOGY
DIVISION
MAY 13 1957
BUREAU OF MINES

MONTHLY REPORT FOR MONTH OF APRIL, 1957

D.M.E.A. Project #4582 - Contract #IDM-E1068

16 Stage 1 approved locations have been surveyed, staked and flagged in the field as shown on map.

2 churn drills have been moved into the area to set casing through overburden and chert-bearing formations. Status of churn drill operations is as follows:

Stake #VC-15 - Drilling at 70 feet depth

Stake #VC-20 - Starting hole

No diamond drills have been moved into the area.

It will be noted that the positions of approved locations on the report map are somewhat different than on the map furnished with the original application. This is due to the fact that the original locations were laid out in relationship to approximate locations of drilled holes. Since then a coordinate system has been set up for the area and actual locations of drilled holes have been tied and plotted. The original relationship between drilled holes and approved locations has been maintained but, since map locations of drilled holes has changed, the position of approved locations on the map also is changed. Extra copies of the report map are included to replace the original maps, if desired.

EXTRA COPY
D M E A
RECEIVED [illegible] 1957

DATE	INITIALS	CODE

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

~~WASHINGTON 25, D. C.~~
Box 431
Joplin, Missouri

May 10, 1957

Reports

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.
Project Contract Idm-E1068

Dear Sirs:

Enclosed are the original and three copies of the Field Team's Interim report received May 7 covering inspection of the cited project on April 30, 1957.

The Field Team's written approval for the Operator's failure to start the project work under the contract until a week after the deadline date of April 18 was given retroactively in a May 8 letter to Mr. E. A. Jones, District Manager, St. Joseph Lead Company.

Sincerely yours,

Clinton C. Knox

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

OFFICIAL FILE COPY
DMEA
RECEIVED MAY 13 1957

DATE	INITIALS	CODE
5/13	C	220
"	COM	100
5/13	[illegible]	500

encl. 4

cc: DMEA Op.Com.(3)
Laurence, USGS, Knoxville w/cy report
Amos, USGS, Carbondale
Chester, USBM, Joplin
4582 file

Interim Report

DMEA - 4582, Idm - E1068 (lead-zinc-copper)

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 30, 1957. Discussions were held with company representatives concerning administration of the contract and the sequence of drilling the holes of Stage I.

The holes drilled prior to the contract and shown on the contract map were plotted without benefit of an accurate survey. Proposed locations for Stage I holes were made from geological information obtained from these holes. Subsequent surveying has changed the location of certain completed holes as shown on the contract map and hence has shifted the proposed map sites of some of the Stage I holes. The Operator is making a new map showing these changes.

Work under the contract began April 25, 1957 when a churn drill was moved to a drill site in section 7. Two holes are being churned drilled summarized as follows:

No.	Location	Present Depth in Feet	Remarks
VC-15	SE¼, SE¼, NW¼, sec. 7	70	In Potosi dolomite
VC-20	NE¼, NE¼, SW¼, sec. 7	--	Setting up drill

Hole locations are shown on the attached maps.

OFFICIAL FILE COPY
DMEA
RECEIVED MAY 13 1957
DATE | INITIALS | CODE

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

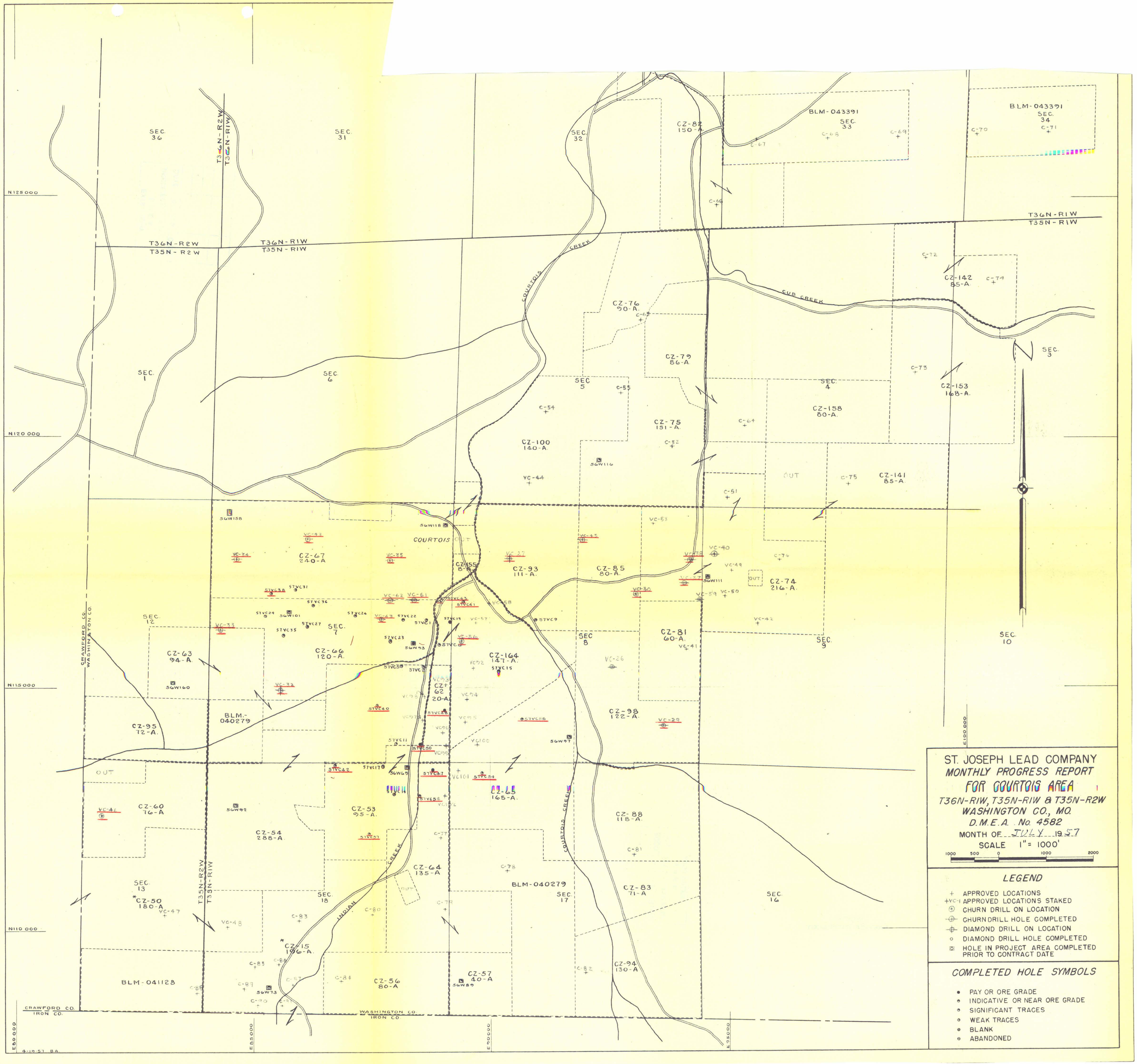
Dewey H. Amos
Geologist
U. S. Geological Survey

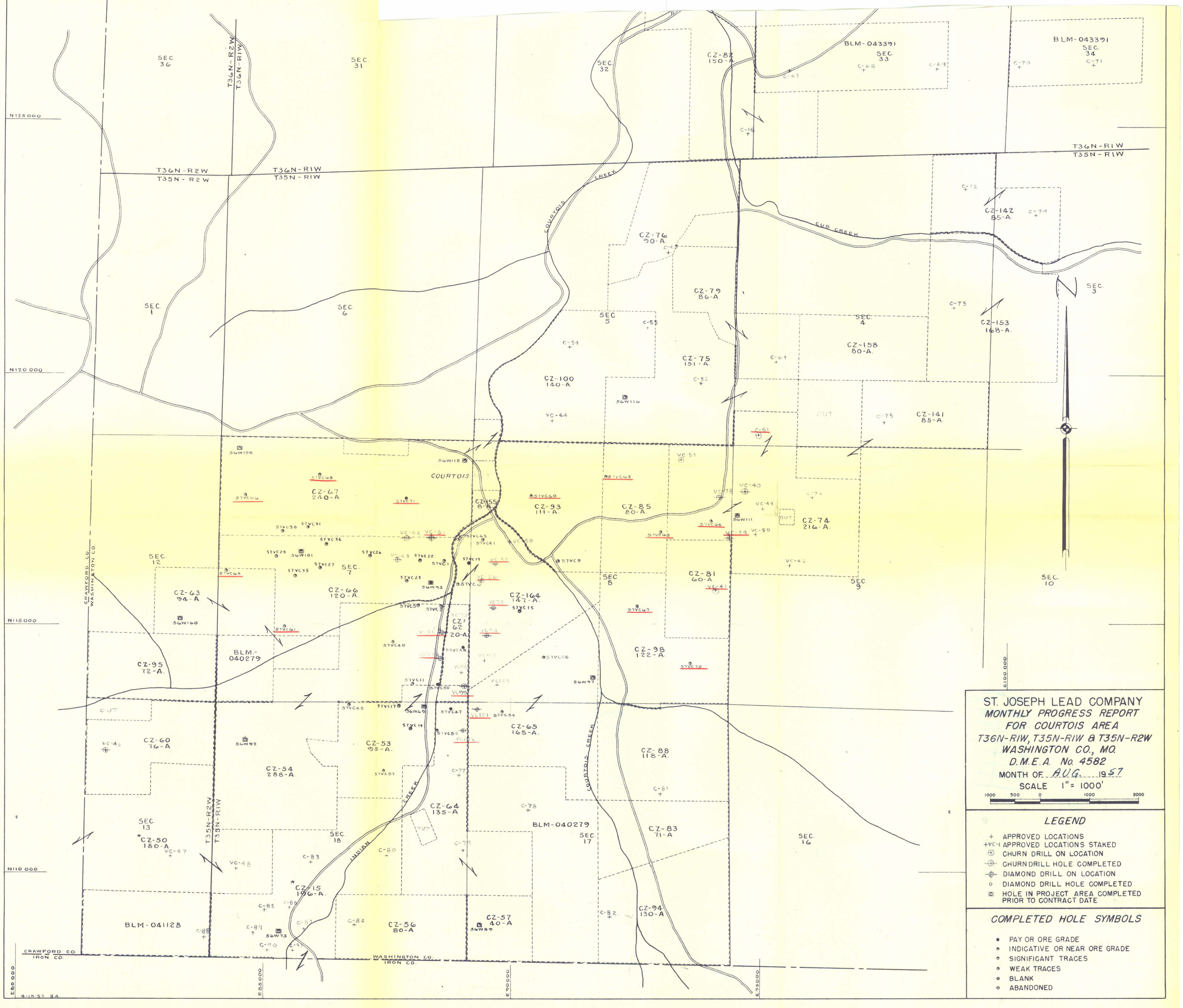
map for
MF 104
Sept '57

EXHIBIT NO.

2

KAROLTON KLASP
MADE BY
THE AMERICAN ENVELOPE CO.
WEST CARROLLTON OHIO


ST. JOSEPH LEAD COMPANY
MONTHLY PROGRESS REPORT
FOR COURTOIS AREA
T36N-R1W, T35N-R1W & T35N-R2W
WASHINGTON CO., MO.
D.M.E.A. No. 4582
MONTH OF JULY 1957
SCALE 1" = 1000'
1000 500 0 1000 2000
LEGEND
APPROVED LOCATIONS
APPROVED LOCATIONS STAKED
CHURN DRILL ON LOCATION
CHURN DRILL HOLE COMPLETED
DIAMOND DRILL ON LOCATION
DIAMOND DRILL HOLE COMPLETED
HOLE IN PROJECT AREA COMPLETED PRIOR TO CONTRACT DATE
COMPLETED HOLE SYMBOLS
PAY OR ORE GRADE
INDICATIVE OR NEAR ORE GRADE
SIGNIFICANT TRACES
WEAK TRACES
BLANK
ABANDONED
T36N-R2W
T35N-R2W
T36N-R1W
T35N-R1W
T35N-R2W
T35N-R1W
SEC. 36
SEC. 31
SEC. 32
SEC. 33
SEC. 34
SEC. 1
SEC. 6
SEC. 5
SEC. 4
SEC. 3
SEC. 12
SEC. 7
SEC. 8
SEC. 9
SEC. 10
SEC. 13
SEC. 18
SEC. 17
SEC. 16
N125000
N120000
N115000
N110000
E100000
E95000
E90000
E85000
E80000
CRAWFORD CO.
WASHINGTON CO.
CRAWFORD CO.
IRON CO.
WASHINGTON CO.
IRON CO.
COURTOIS CREEK
CUB CREEK
INDIAN CREEK
BLM-043391
BLM-040279
BLM-041128
CZ-82 150-A.
CZ-142 85-A.
CZ-76 90-A.
CZ-79 86-A.
CZ-153 168-A.
CZ-158 80-A.
CZ-75 151-A.
CZ-100 140-A.
CZ-141 85-A.
CZ-67 240-A
CZ-93 111-A.
CZ-85 80-A.
CZ-74 216-A.
CZ-81 60-A.
CZ-63 94-A
CZ-66 120-A.
CZ-164 147-A.
CZ-98 122-A.
CZ-95 72-A.
CZ-60 76-A
CZ-53 95-A.
CZ-54 288-A.
CZ-65 165-A.
CZ-88 118-A.
CZ-64 135-A
CZ-83 71-A
*CZ-50 180-A
*CZ-15 196-A.
CZ-56 80-A
CZ-57 40-A
CZ-94 130-A
COURTOIS OUT
OUT
4-19-57 BA


ST. JOSEPH LEAD COMPANY
MONTHLY PROGRESS REPORT
FOR COURTOIS AREA
T36N-R1W, T35N-R1W & T35N-R2W
WASHINGTON CO., MO.
D.M.E.A. No. 4582
MONTH OF AUG. 1957
SCALE 1" = 1000'
1000 500 0 1000 2000
LEGEND
APPROVED LOCATIONS
APPROVED LOCATIONS STAKED
CHURN DRILL ON LOCATION
CHURN DRILL HOLE COMPLETED
DIAMOND DRILL ON LOCATION
DIAMOND DRILL HOLE COMPLETED
HOLE IN PROJECT AREA COMPLETED PRIOR TO CONTRACT DATE
COMPLETED HOLE SYMBOLS
PAY OR ORE GRADE
INDICATIVE OR NEAR ORE GRADE
SIGNIFICANT TRACES
WEAK TRACES
BLANK
ABANDONED
T36N-R2W
T35N-R2W
T36N-R1W
T35N-R1W
SEC. 36
SEC. 31
SEC. 32
SEC. 33
SEC. 34
SEC. 1
SEC. 6
SEC. 5
SEC. 4
SEC. 3
SEC. 12
SEC. 7
SEC. 8
SEC. 9
SEC. 10
SEC. 13
SEC. 18
SEC. 17
SEC. 16
COURTOIS CREEK
CUB CREEK
INDIAN CREEK
CRAWFORD CO.
WASHINGTON CO.
IRON CO.
BLM-043391
BLM-040279
BLM-041128
CZ-82 150-A
CZ-76 90-A
CZ-79 86-A
CZ-142 85-A
CZ-153 168-A
CZ-158 80-A
CZ-75 151-A
CZ-100 140-A
CZ-141 85-A
CZ-67 240-A
CZ-155 8-A
CZ-93 111-A
CZ-85 80-A
CZ-74 216-A
CZ-63 94-A
CZ-66 120-A
CZ-164 147-A
CZ-81 60-A
CZ-95 72-A
CZ-62 20-A
CZ-98 122-A
CZ-60 76-A
CZ-53 95-A
CZ-65 165-A
CZ-54 288-A
CZ-88 118-A
CZ-64 135-A
CZ-50 180-A
CZ-83 71-A
CZ-15 196-A
CZ-94 130-A
CZ-56 80-A
CZ-57 40-A
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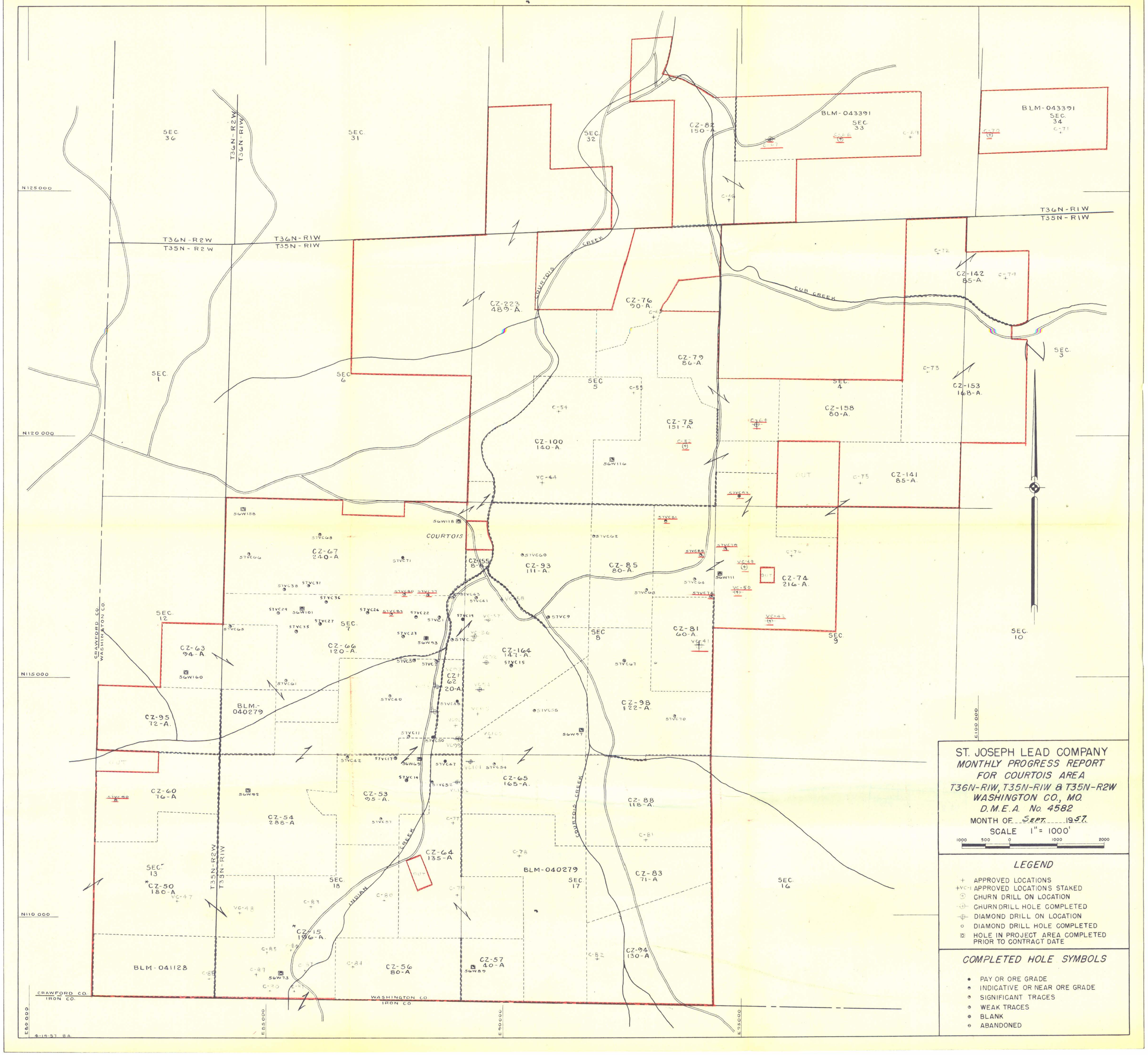
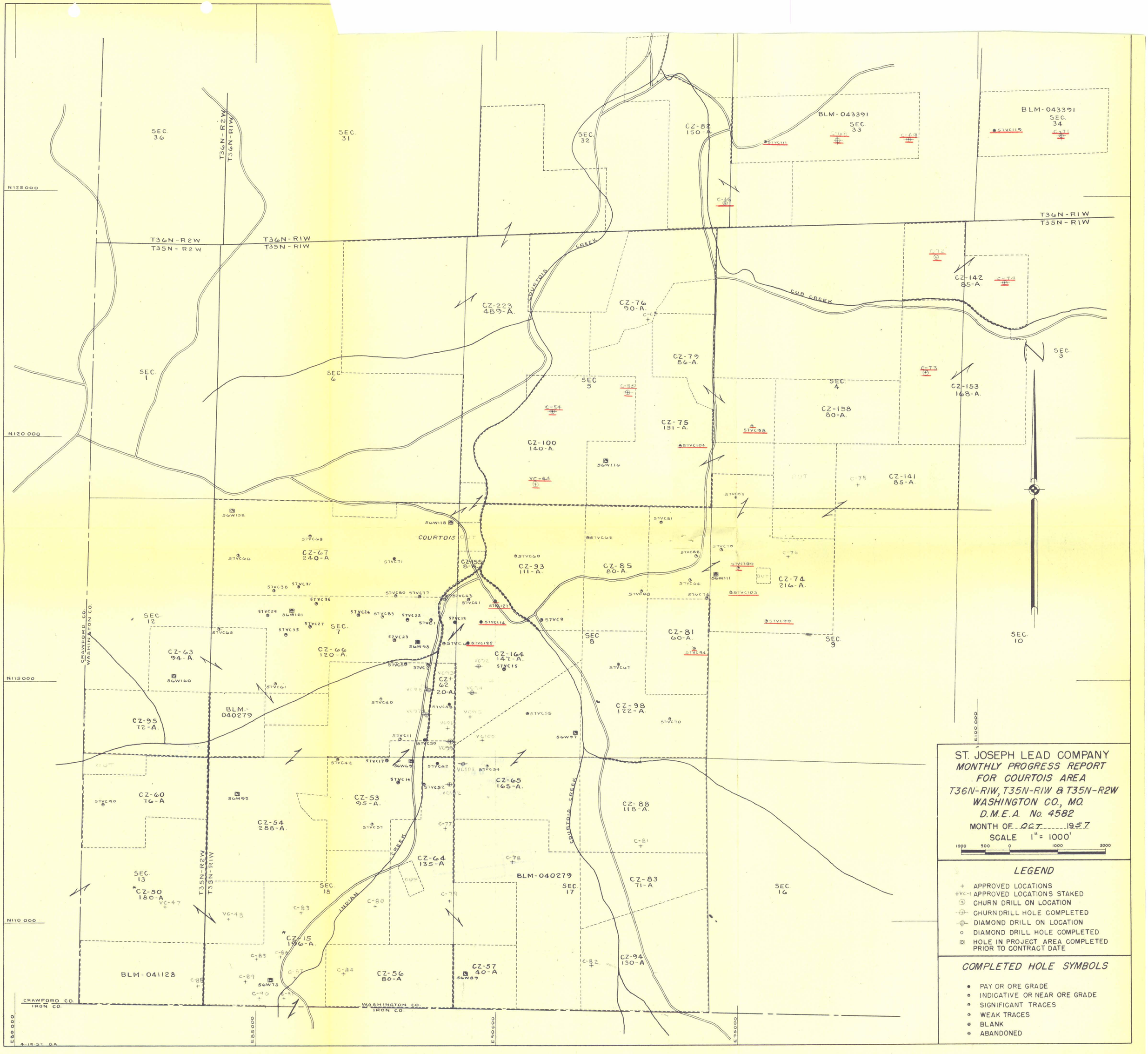
N110000
E80000
E85000
E90000
E95000
E100000
4-19-57 BA


ST. JOSEPH LEAD COMPANY
MONTHLY PROGRESS REPORT
FOR COURTOIS AREA
T36N-R1W, T35N-R1W & T35N-R2W
WASHINGTON CO., MO.
D.M.E.A. No. 4582
MONTH OF SEPT. 1957
SCALE 1" = 1000'
1000 500 0 1000 2000
LEGEND
APPROVED LOCATIONS
APPROVED LOCATIONS STAKED
CHURN DRILL ON LOCATION
CHURN DRILL HOLE COMPLETED
DIAMOND DRILL ON LOCATION
DIAMOND DRILL HOLE COMPLETED
HOLE IN PROJECT AREA COMPLETED PRIOR TO CONTRACT DATE
COMPLETED HOLE SYMBOLS
PAY OR ORE GRADE
INDICATIVE OR NEAR ORE GRADE
SIGNIFICANT TRACES
WEAK TRACES
BLANK
ABANDONED
T36N-R2W
T35N-R2W
T36N-R1W
T35N-R1W
T35N-R2W
T35N-R1W
SEC. 36
SEC. 31
SEC. 32
SEC. 33
SEC. 34
SEC. 1
SEC. 6
SEC. 5
SEC. 4
SEC. 3
SEC. 12
SEC. 7
SEC. 8
SEC. 9
SEC. 10
SEC. 13
SEC. 18
SEC. 17
SEC. 16
N125000
N120000
N115000
N110000
E80000
E85000
E90000
E95000
E100000
CZ-82 150-A.
BLM-043391
BLM-043391
CZ-223 489-A.
CZ-76 90-A.
CZ-142 85-A.
CZ-79 86-A.
CZ-153 168-A.
CZ-158 80-A.
CZ-100 140-A.
CZ-75 151-A.
CZ-141 85-A.
CZ-67 240-A
CZ-155 8-A.
CZ-93 111-A.
CZ-85 80-A.
CZ-74 216-A.
CZ-63 94-A.
CZ-66 120-A.
CZ-164 147-A.
CZ-62 20-A.
CZ-81 60-A.
CZ-98 122-A.
CZ-95 72-A.
BLM.-040279
CZ-60 76-A
CZ-53 95-A.
CZ-65 165-A.
CZ-88 118-A.
CZ-54 288-A
CZ-64 135-A
BLM-040279
CZ-83 71-A
CZ-50 180-A
CZ-15 196-A.
CZ-94 130-A
BLM-041128
CZ-56 80-A
CZ-57 40-A
COURTOIS CREEK
CUB CREEK
INDIAN CREEK
COURTOIS
CRAWFORD CO.
WASHINGTON CO.
CRAWFORD CO.
IRON CO.
WASHINGTON CO.
IRON CO
4-19-57 B.A.


ST. JOSEPH LEAD COMPANY
MONTHLY PROGRESS REPORT
FOR COURTOIS AREA
T36N-R1W, T35N-R1W & T35N-R2W
WASHINGTON CO., MO.
D.M.E.A. No. 4582
MONTH OF OCT. 1957
SCALE 1" = 1000'
1000 500 0 1000 2000
LEGEND
APPROVED LOCATIONS
APPROVED LOCATIONS STAKED
CHURN DRILL ON LOCATION
CHURN DRILL HOLE COMPLETED
DIAMOND DRILL ON LOCATION
DIAMOND DRILL HOLE COMPLETED
HOLE IN PROJECT AREA COMPLETED PRIOR TO CONTRACT DATE
COMPLETED HOLE SYMBOLS
PAY OR ORE GRADE
INDICATIVE OR NEAR ORE GRADE
SIGNIFICANT TRACES
WEAK TRACES
BLANK
ABANDONED
T36N-R2W
T35N-R2W
T36N-R1W
T35N-R1W
T35N-R2W
T35N-R1W
SEC. 36
SEC. 31
SEC. 32
SEC. 33
SEC. 34
SEC. 1
SEC. 6
SEC. 5
SEC. 4
SEC. 3
SEC. 12
SEC. 7
SEC. 8
SEC. 9
SEC. 10
SEC. 13
SEC. 18
SEC. 17
SEC. 16
N125000
N120000
N115000
N110000
E100000
E85000
E90000
E95000
CRAWFORD CO.
WASHINGTON CO.
CRAWFORD CO.
IRON CO.
WASHINGTON CO.
IRON CO.
COURTOIS CREEK
CUB CREEK
INDIAN CREEK
COURTOIS CUT
CZ-82 150-A
BLM-043391
BLM-043391
CZ-223 489-A.
CZ-76 90-A.
CZ-79 86-A.
CZ-142 85-A.
CZ-153 168-A.
CZ-158 80-A.
CZ-75 151-A.
CZ-100 140-A.
CZ-141 85-A.
CZ-67 240-A
CZ-155 8-A.
CZ-93 111-A.
CZ-85 80-A.
CZ-74 216-A.
CZ-63 94-A
CZ-66 120-A.
CZ-164 147-A.
CZ-62 20-A.
CZ-81 60-A.
CZ-98 122-A.
CZ-95 72-A.
BLM.-040279
CZ-60 76-A
CZ-53 95-A.
CZ-65 165-A.
CZ-88 118-A.
CZ-54 288-A.
CZ-64 135-A
BLM-040279
CZ-83 71-A
CZ-50 180-A
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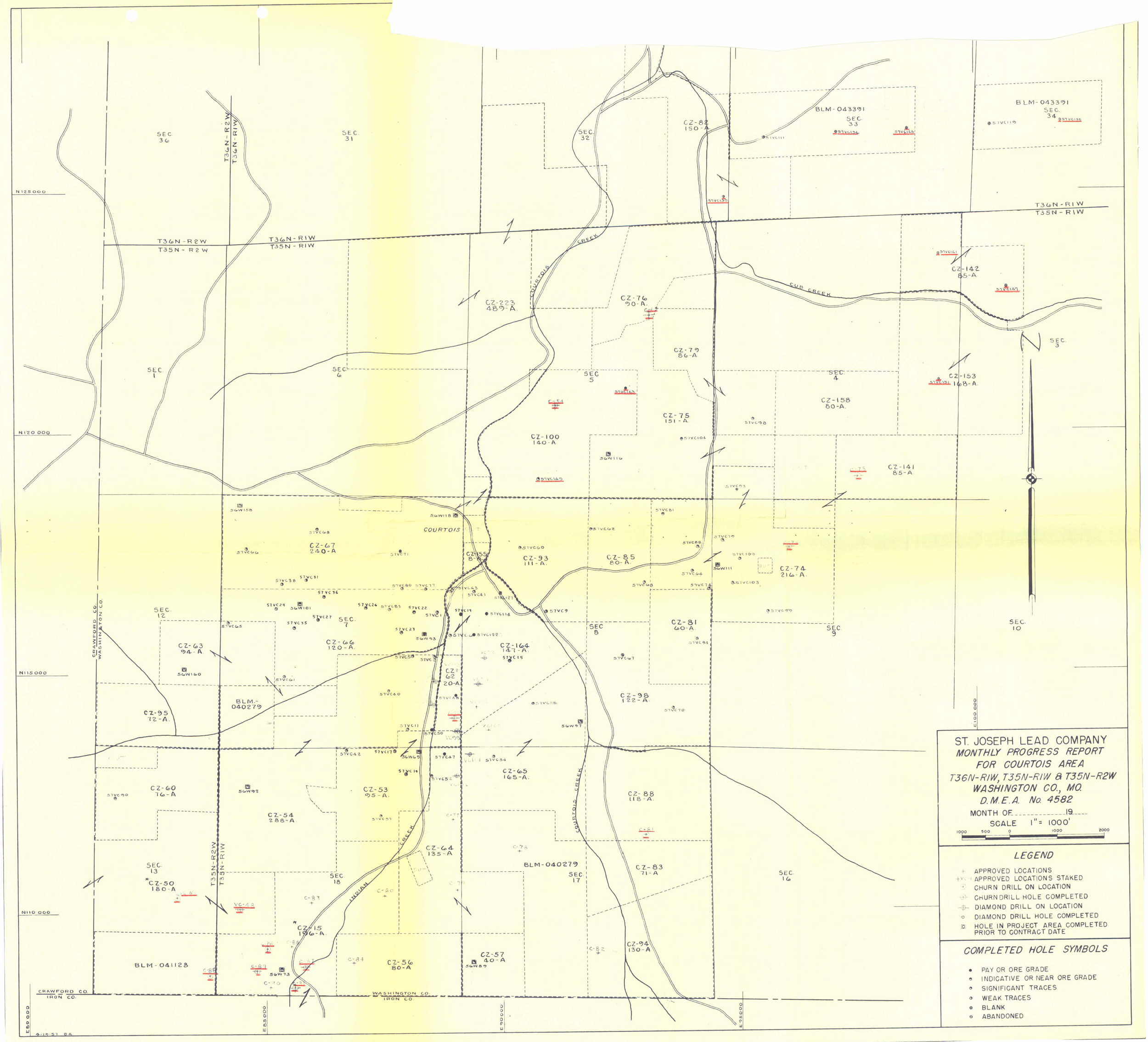
CZ-94 130-A
BLM-041128
CZ-56 80-A
CZ-57 40-A


ST. JOSEPH LEAD COMPANY
MONTHLY PROGRESS REPORT
FOR COURTOIS AREA
T36N-R1W, T35N-R1W & T35N-R2W
WASHINGTON CO., MO.
D.M.E.A. No. 4582
MONTH OF _____ 19____
SCALE 1" = 1000'
1000 500 0 1000 2000
LEGEND
APPROVED LOCATIONS
APPROVED LOCATIONS STAKED
CHURN DRILL ON LOCATION
CHURN DRILL HOLE COMPLETED
DIAMOND DRILL ON LOCATION
DIAMOND DRILL HOLE COMPLETED
HOLE IN PROJECT AREA COMPLETED PRIOR TO CONTRACT DATE
COMPLETED HOLE SYMBOLS
PAY OR ORE GRADE
INDICATIVE OR NEAR ORE GRADE
SIGNIFICANT TRACES
WEAK TRACES
BLANK
ABANDONED
T36N-R2W
T35N-R2W
T36N-R1W
T35N-R1W
SEC. 36
SEC. 31
SEC. 32
SEC. 1
SEC. 6
SEC. 5
SEC. 4
SEC. 3
SEC. 12
SEC. 7
SEC. 8
SEC. 9
SEC. 10
SEC. 13
SEC. 18
SEC. 17
SEC. 16
N125000
N120000
N115000
N110000
E80000
E85000
E90000
E95000
E100000
CRAWFORD CO.
WASHINGTON CO.
IRON CO.
COURTOIS CREEK
CUB CREEK
INDIAN CREEK
COURTOIS
BLM-043391
BLM-040279
BLM-041128
CZ-82 150-A
CZ-223 489-A
CZ-76 90-A
CZ-79 86-A
CZ-142 85-A
CZ-153 168-A
CZ-158 80-A
CZ-75 151-A
CZ-100 140-A
CZ-141 85-A
CZ-67 240-A
CZ-155 8-A
CZ-93 111-A
CZ-85 80-A
CZ-74 216-A
CZ-63 94-A
CZ-66 120-A
CZ-164 147-A
CZ-81 60-A
CZ-62 20-A
CZ-98 122-A
CZ-95 12-A
CZ-65 165-A
CZ-60 76-A
CZ-53 95-A
CZ-88 118-A
CZ-54 288-A
CZ-64 135-A
CZ-83 71-A
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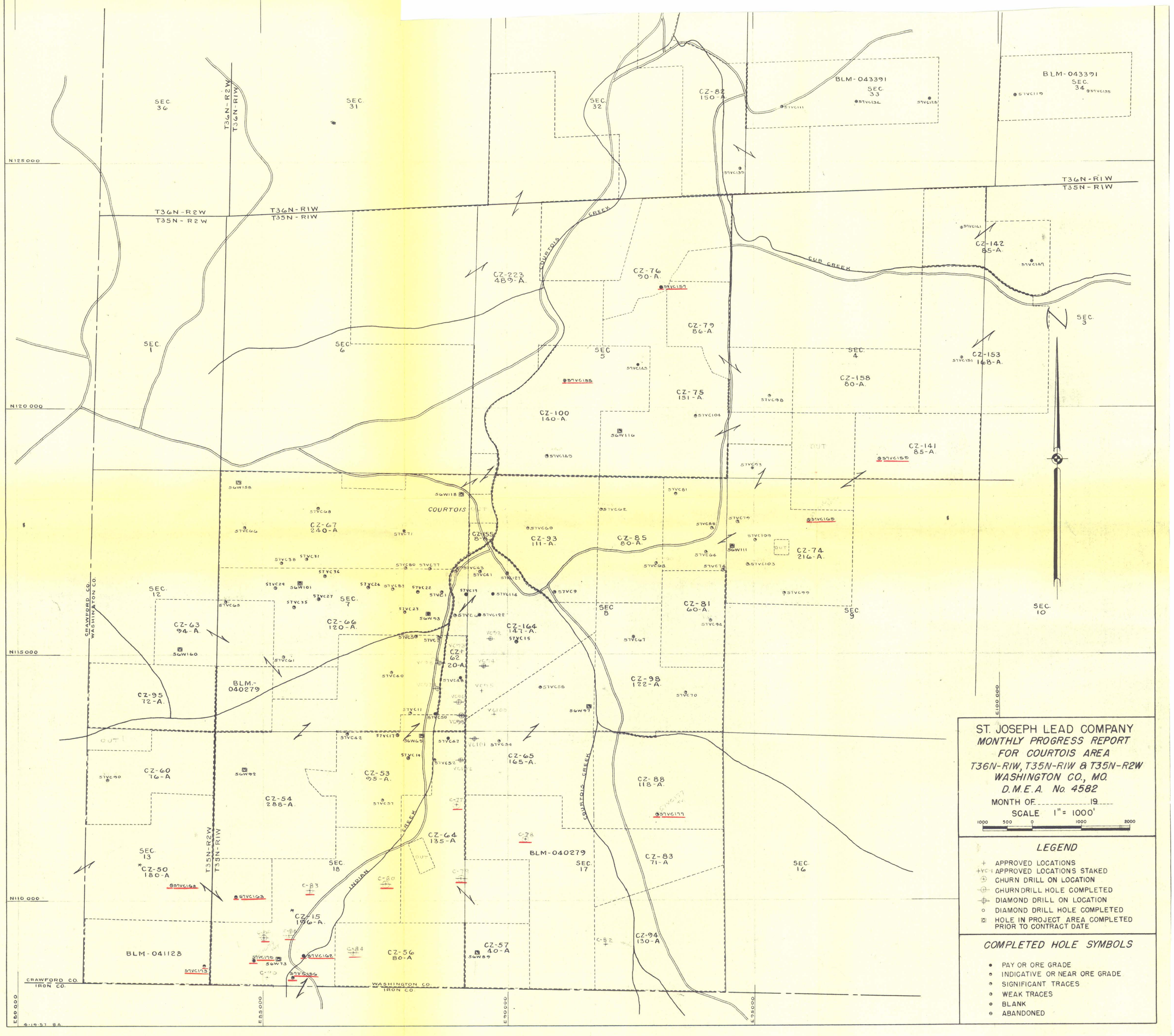
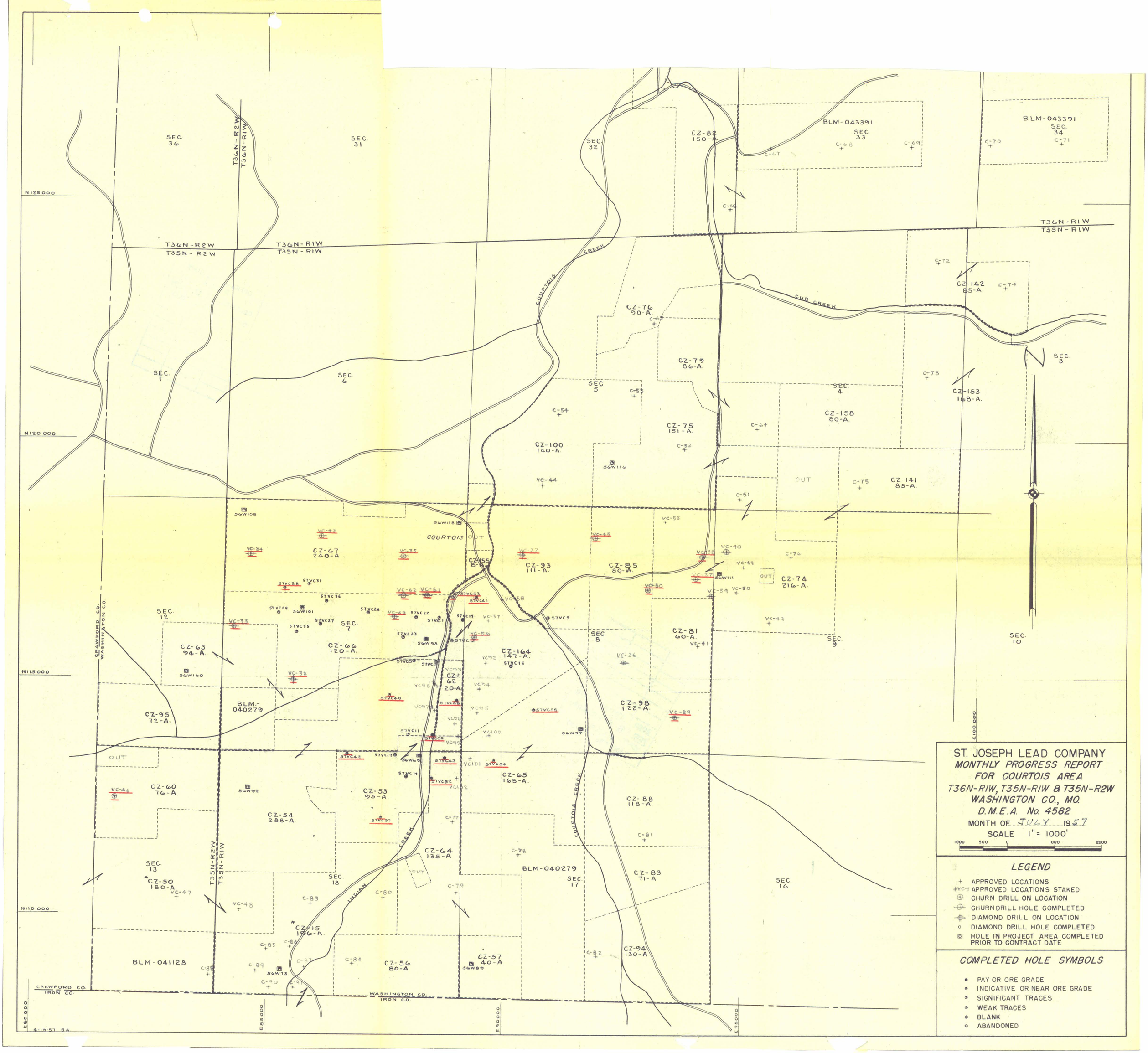
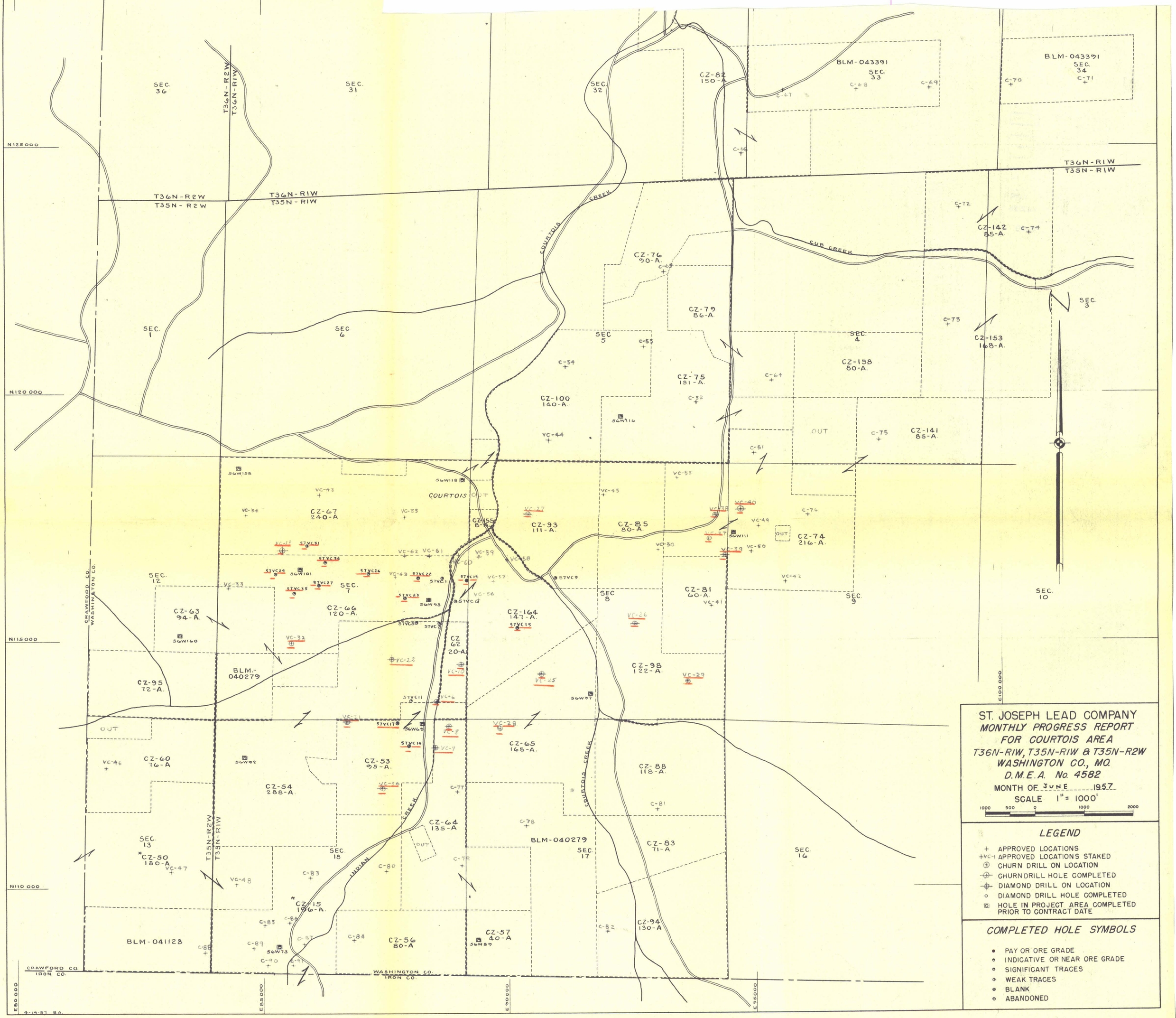
4-19-57 BA


ST. JOSEPH LEAD COMPANY
MONTHLY PROGRESS REPORT
FOR COURTOIS AREA
T36N-R1W, T35N-R1W & T35N-R2W
WASHINGTON CO., MO.
D.M.E.A. No. 4582
MONTH OF _____ 19____
SCALE 1" = 1000'
1000 500 0 1000 2000
LEGEND
APPROVED LOCATIONS
APPROVED LOCATIONS STAKED
CHURN DRILL ON LOCATION
CHURN DRILL HOLE COMPLETED
DIAMOND DRILL ON LOCATION
DIAMOND DRILL HOLE COMPLETED
HOLE IN PROJECT AREA COMPLETED PRIOR TO CONTRACT DATE
COMPLETED HOLE SYMBOLS
PAY OR ORE GRADE
INDICATIVE OR NEAR ORE GRADE
SIGNIFICANT TRACES
WEAK TRACES
BLANK
ABANDONED
T36N-R2W
T35N-R2W
T36N-R1W
T35N-R1W
T35N-R2W
T35N-R1W
SEC. 36
SEC. 31
SEC. 32
SEC. 33
SEC. 34
SEC. 1
SEC. 6
SEC. 5
SEC. 4
SEC. 3
SEC. 12
SEC. 7
SEC. 8
SEC. 9
SEC. 10
SEC. 13
SEC. 18
SEC. 17
SEC. 16
N125000
N120000
N115000
N110000
E100000
E85000
E90000
E95000
CRAWFORD CO.
WASHINGTON CO.
CRAWFORD CO.
IRON CO.
WASHINGTON CO.
IRON CO.
COURTOIS CREEK
CUB CREEK
INDIAN CREEK
COURTOIS
BLM-043391
BLM-040279
BLM-041128
CZ-82 150-A.
CZ-223 489-A.
CZ-76 90-A.
CZ-79 86-A.
CZ-142 85-A.
CZ-153 168-A.
CZ-158 80-A.
CZ-75 151-A.
CZ-100 140-A.
CZ-141 85-A.
CZ-67 240-A
CZ-55 8-A.
CZ-93 111-A.
CZ-85 80-A.
CZ-74 216-A.
CZ-63 94-A.
CZ-66 120-A.
CZ-164 147-A.
CZ-62 20-A.
CZ-81 60-A.
CZ-98 122-A.
CZ-95 72-A.
CZ-60 76-A
CZ-53 95-A.
CZ-65 165-A.
CZ-88 118-A.
CZ-54 288-A.
CZ-64 135-A
CZ-50 180-A
CZ-15 196-A.
CZ-83 71-A
CZ-94 130-A
CZ-56 80-A
CZ-57 40-A
OUT


ST. JOSEPH LEAD COMPANY
MONTHLY PROGRESS REPORT
FOR COURTOIS AREA
T36N-R1W, T35N-R1W & T35N-R2W
WASHINGTON CO., MO.
D.M.E.A. No. 4582
MONTH OF JULY 1957
SCALE 1" = 1000'
1000 500 0 1000 2000
LEGEND
APPROVED LOCATIONS
APPROVED LOCATIONS STAKED
CHURN DRILL ON LOCATION
CHURN DRILL HOLE COMPLETED
DIAMOND DRILL ON LOCATION
DIAMOND DRILL HOLE COMPLETED
HOLE IN PROJECT AREA COMPLETED PRIOR TO CONTRACT DATE
COMPLETED HOLE SYMBOLS
PAY OR ORE GRADE
INDICATIVE OR NEAR ORE GRADE
SIGNIFICANT TRACES
WEAK TRACES
BLANK
ABANDONED
T36N-R2W
T35N-R2W
T36N-R1W
T35N-R1W
SEC. 36
SEC. 31
SEC. 32
SEC. 33
SEC. 34
SEC. 1
SEC. 6
SEC. 5
SEC. 4
SEC. 3
SEC. 12
SEC. 7
SEC. 8
SEC. 9
SEC. 10
SEC. 13
SEC. 18
SEC. 17
SEC. 16
N125000
N120000
N115000
N110000
E80000
E85000
E90000
E95000
E100000
CRAWFORD CO.
WASHINGTON CO.
IRON CO.
COURTOIS CREEK
CUB CREEK
INDIAN CREEK
BLM-043391
BLM-040279
BLM-041128
CZ-82 150-A.
CZ-76 90-A.
CZ-79 86-A.
CZ-142 85-A.
CZ-153 168-A.
CZ-158 80-A.
CZ-75 151-A.
CZ-100 140-A.
CZ-141 85-A.
CZ-155 8-A.
CZ-93 111-A.
CZ-85 80-A.
CZ-74 216-A.
CZ-67 240-A.
CZ-81 60-A.
CZ-63 94-A.
CZ-66 120-A.
CZ-164 147-A.
CZ-62 20-A.
CZ-98 122-A.
CZ-95 72-A.
CZ-60 16-A.
CZ-53 95-A.
CZ-65 165-A.
CZ-88 118-A.
CZ-54 288-A.
CZ-64 135-A.
CZ-50 180-A.
CZ-83 71-A.
CZ-15 196-A.
CZ-94 130-A.
CZ-56 80-A.
CZ-57 40-A.
OUT
COURTOIS OUT
4-19-57 BA


ST. JOSEPH LEAD COMPANY
MONTHLY PROGRESS REPORT
FOR COURTOIS AREA
T36N-R1W, T35N-R1W & T35N-R2W
WASHINGTON CO., MO.
D.M.E.A. No. 4582
MONTH OF JUNE 1957
SCALE 1" = 1000'
1000 500 0 1000 2000
LEGEND
APPROVED LOCATIONS
APPROVED LOCATIONS STAKED
CHURN DRILL ON LOCATION
CHURN DRILL HOLE COMPLETED
DIAMOND DRILL ON LOCATION
DIAMOND DRILL HOLE COMPLETED
HOLE IN PROJECT AREA COMPLETED PRIOR TO CONTRACT DATE
COMPLETED HOLE SYMBOLS
PAY OR ORE GRADE
INDICATIVE OR NEAR ORE GRADE
SIGNIFICANT TRACES
WEAK TRACES
BLANK
ABANDONED
T36N-R2W
T35N-R2W
T36N-R1W
T35N-R1W
T35N-R2W
T35N-R1W
SEC. 36
SEC. 31
SEC. 32
SEC. 1
SEC. 6
SEC. 5
SEC. 4
SEC. 3
SEC. 12
SEC. 7
SEC. 8
SEC. 9
SEC. 10
SEC. 13
SEC. 18
SEC. 17
SEC. 16
CZ-82 150-A
BLM-043391 SEC. 33
BLM-043391 SEC. 34
CZ-76 90-A.
CZ-79 86-A.
CZ-142 85-A.
CZ-153 168-A.
CZ-158 80-A.
CZ-75 151-A.
CZ-100 140-A.
CZ-141 85-A.
CZ-67 240-A
CZ-155 8-A.
CZ-93 111-A.
CZ-85 80-A.
CZ-74 216-A.
CZ-63 94-A.
CZ-66 120-A.
CZ-164 147-A.
CZ-81 60-A.
CZ-95 72-A.
BLM-040279
CZ-62 20-A.
CZ-98 122-A.
CZ-60 76-A
CZ-54 288-A.
CZ-53 95-A.
CZ-65 165-A.
CZ-88 118-A.
CZ-64 135-A
BLM-040279
CZ-83 71-A
CZ-50 180-A
CZ-15 196-A.
CZ-94 130-A
BLM-041128
CZ-56 80-A
CZ-57 40-A
COURTOIS CREEK
SUB CREEK
INDIAN CREEK
COURTOIS OUT
OUT
CRAWFORD CO.
WASHINGTON CO.
IRON CO.
N125000
N120000
N115000
N110000
E80000
E85000
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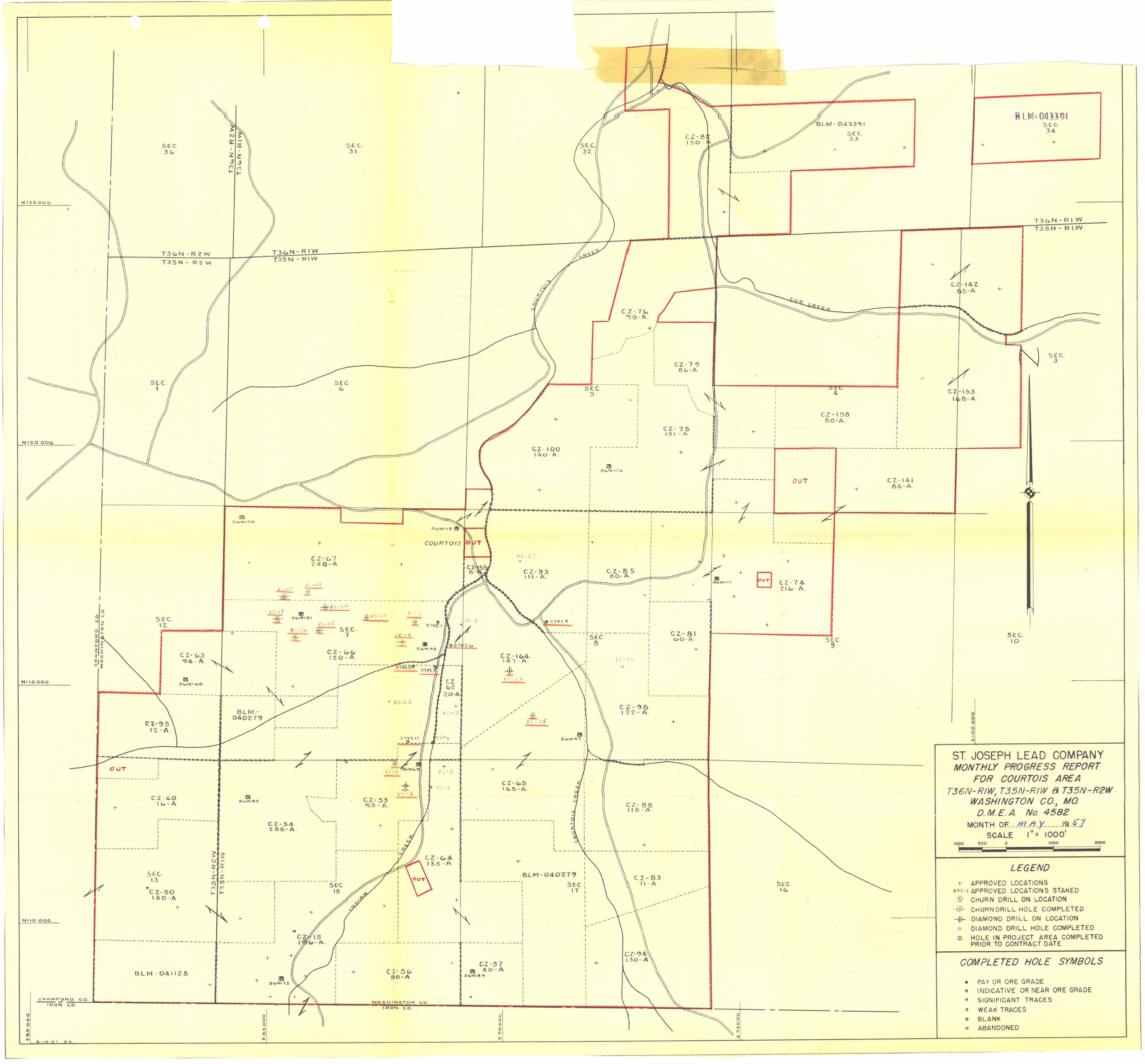
E95000
E100000
4-19-57 B.A.


ST. JOSEPH LEAD COMPANY
MONTHLY PROGRESS REPORT
FOR COURTOIS AREA
T36N-R1W, T35N-R1W & T35N-R2W
WASHINGTON CO., MO.
D.M.E.A. No. 4582
MONTH OF MAY 1957
SCALE 1" = 1000'
1000 500 0 1000 2000
LEGEND
APPROVED LOCATIONS
APPROVED LOCATIONS STAKED
CHURN DRILL ON LOCATION
CHURN DRILL HOLE COMPLETED
DIAMOND DRILL ON LOCATION
DIAMOND DRILL HOLE COMPLETED
HOLE IN PROJECT AREA COMPLETED PRIOR TO CONTRACT DATE
COMPLETED HOLE SYMBOLS
PAY OR ORE GRADE
INDICATIVE OR NEAR ORE GRADE
SIGNIFICANT TRACES
WEAK TRACES
BLANK
ABANDONED
T36N-R2W
T35N-R2W
T36N-R1W
T35N-R1W
T35N-R2W
T35N-R1W
SEC. 36
SEC. 31
SEC. 32
SEC. 33
SEC. 34
SEC. 1
SEC. 6
SEC. 5
SEC. 4
SEC. 3
SEC. 12
SEC. 7
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SEC. 9
SEC. 10
SEC. 13
SEC. 18
SEC. 17
SEC. 16
N125000
N120000
N115000
N110000
E60000
E65000
E70000
E75000
E80000
E85000
E90000
E95000
E100000
CRAWFORD CO.
WASHINGTON CO.
CRAWFORD CO.
IRON CO.
WASHINGTON CO.
IRON CO.
COURTOIS CREEK
CUB CREEK
INDIAN CREEK
BLM-043391
BLM-040279
BLM-041128
CZ-82 150-A
CZ-76 90-A
CZ-79 86-A
CZ-75 151-A
CZ-100 140-A
CZ-142 85-A
CZ-153 168-A
CZ-158 80-A
CZ-141 85-A
CZ-74 216-A
CZ-67 240-A
CZ-155 8-A
CZ-93 111-A
CZ-85 80-A
CZ-81 60-A
CZ-63 94-A
CZ-66 120-A
CZ-164 147-A
CZ 62 20-A
CZ-98 122-A
CZ-95 72-A
CZ-60 76-A
CZ-53 95-A
CZ-65 165-A
CZ-88 118-A
CZ-54 288-A
CZ-64 135-A
CZ-50 180-A
CZ-83 71-A
CZ-15 196-A
CZ-94 130-A
CZ-56 80-A
CZ-57 40-A
OUT
COURTOIS OUT
56W158
56W118
56W116
56W111
56W101
56W160
56W93
56W97
56W69
56W92
56W73
56W89
STVC1
STVC6
STVC9
STVC11
VC-1
VC-2
VC-4
VC-6
VC-8
VC-10
VC-11
VC-12
VC-14
VC-15
VC-16
VC-17
VC-18
VC-19
VC-20
VC-21
VC-22
VC-24
VC-25
VC-26
VC-27
4-19-57 BA

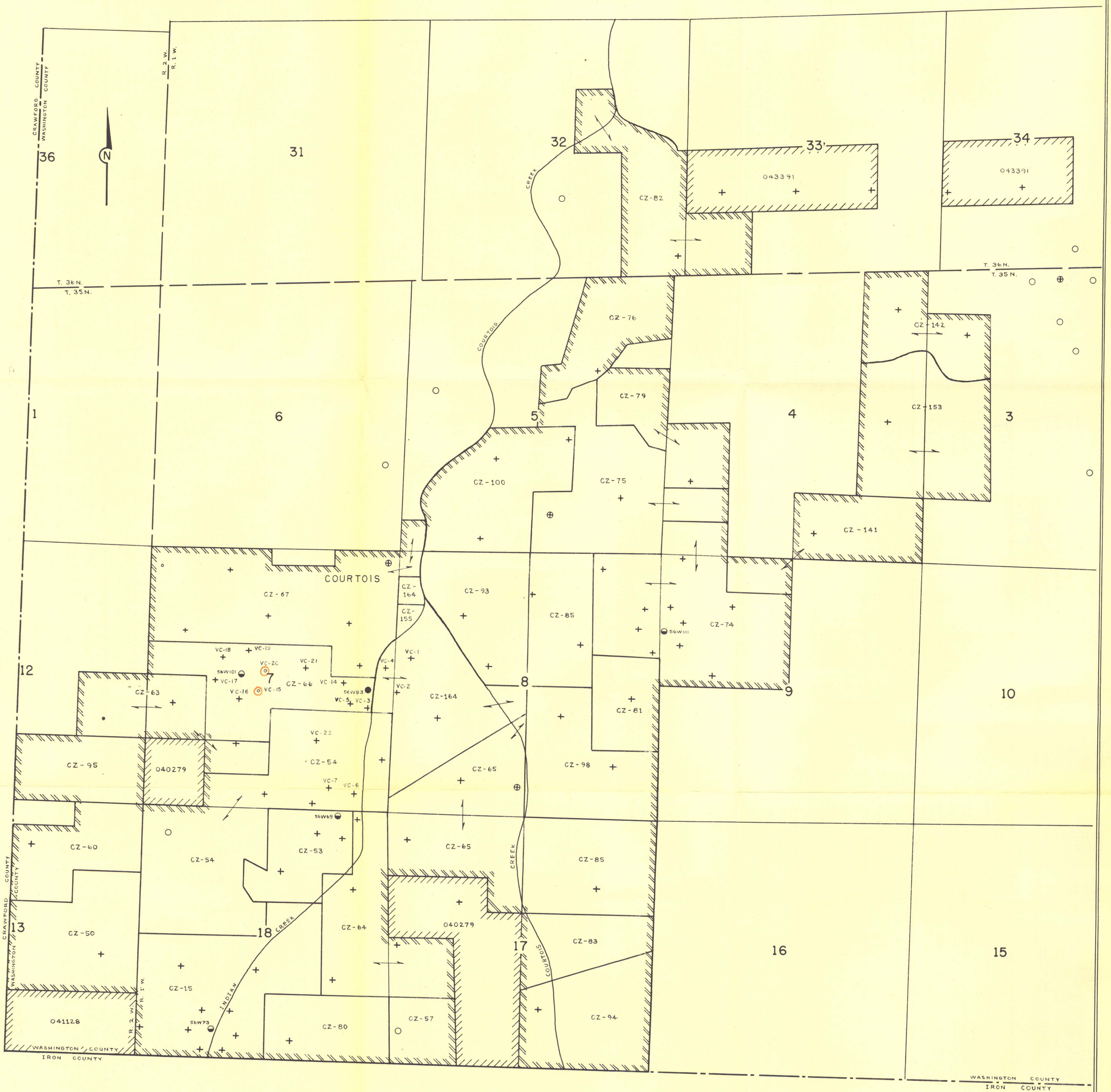


FIGURE 1- COURTOIS AREA, MISSOURI

WASHINGTON, COUNTY

DMEA 4582 (LEAD, ZINC & COPPER) Project Contract Adm-E1068 ST. JOSEPH LEAD COMPANY

—LEGEND—

- ● HOLE INDICATING ORE
- ◒ SUBMARGINAL ORE
- ⊕ SIGNIFICANT ORE TRACE
- ⊖ WEAK TRACE
- ○ BLANK HOLE
- ⊙ HOLES IN PROGRESS – DMEA
- + PROPOSED HOLES – STAGE I

⊙ Completed DMEA holes – None

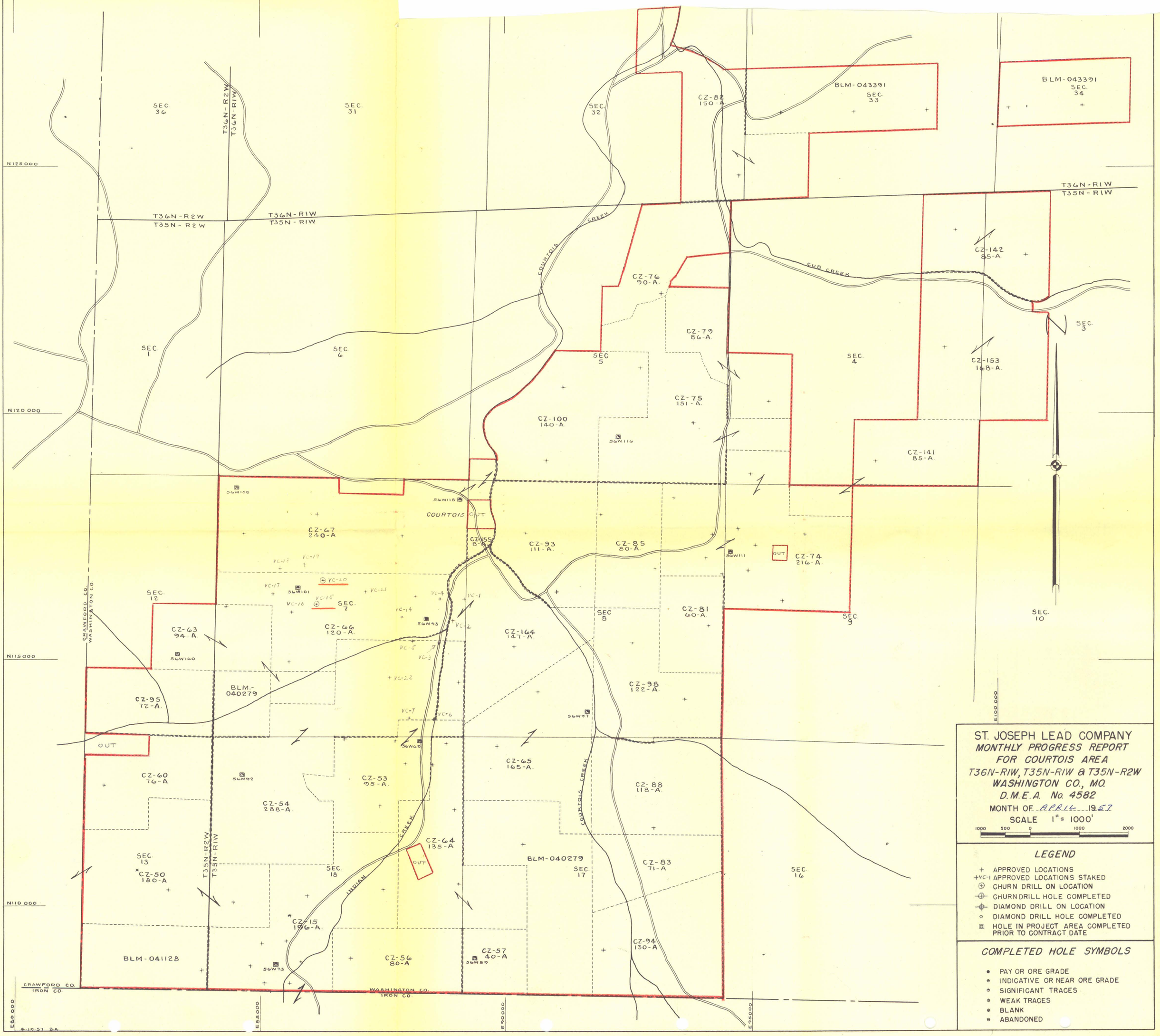
750 250
1000 500 0 1000 2000 3000 4000
SCALE IN FEET

SCALE 1" = 1000'

—LEGEND—

- OPTIONED PRIVATE LAND
- U.S. FOREST SERVICE PROSPECTING PERMITS

AMOS-KNOX ~~2-27-57~~ 5-10-57


ST. JOSEPH LEAD COMPANY
MONTHLY PROGRESS REPORT
FOR COURTOIS AREA
T36N-R1W, T35N-R1W & T35N-R2W
WASHINGTON CO., MO.
D.M.E.A. No. 4582
MONTH OF APRIL 1957
SCALE 1" = 1000'
1000 500 0 1000 2000
LEGEND
+ APPROVED LOCATIONS
+VC-1 APPROVED LOCATIONS STAKED
CHURN DRILL ON LOCATION
CHURN DRILL HOLE COMPLETED
DIAMOND DRILL ON LOCATION
DIAMOND DRILL HOLE COMPLETED
HOLE IN PROJECT AREA COMPLETED PRIOR TO CONTRACT DATE
COMPLETED HOLE SYMBOLS
PAY OR ORE GRADE
INDICATIVE OR NEAR ORE GRADE
SIGNIFICANT TRACES
WEAK TRACES
BLANK
ABANDONED
T36N-R2W
T35N-R2W
T36N-R1W
T35N-R1W
SEC. 36
SEC. 31
SEC. 32
SEC. 33
SEC. 34
SEC. 1
SEC. 6
SEC. 5
SEC. 4
SEC. 3
SEC. 12
SEC. 7
SEC. 8
SEC. 9
SEC. 10
SEC. 13
SEC. 18
SEC. 17
SEC. 16
COURTOIS CREEK
CUB CREEK
INDIAN CREEK
CRAWFORD CO.
WASHINGTON CO.
IRON CO.
BLM-043391
BLM-040279
BLM-041128
CZ-82 150-A
CZ-76 90-A
CZ-79 86-A
CZ-75 151-A
CZ-100 140-A
CZ-142 85-A
CZ-153 168-A
CZ-141 85-A
CZ-74 216-A
CZ-67 240-A
CZ-155 8-A
CZ-93 111-A
CZ-85 80-A
CZ-63 94-A
CZ-66 120-A
CZ-164 147-A
CZ-81 60-A
CZ-98 122-A
CZ-95 72-A
CZ-60 76-A
CZ-53 95-A
CZ-65 165-A
CZ-88 118-A
CZ-54 288-A
CZ-64 135-A
CZ-50 180-A
CZ-83 71-A
CZ-15 196-A
CZ-94 130-A
CZ-56 80-A
CZ-57 40-A
OUT
COURTOIS OUT
N125000
N120000
N115000
N110000
E80000
E85000
E90000
E95000
E100000
4-19-57 B.A.