



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1178107
OIL & GAS CONSERVATION DIVISION

Form ACO-1
August 2013

Form must be Typed
Form must be Signed
All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

- New Well Re-Entry Workover
- Oil WSW SWD SIOW
- Gas D&A ENHR SIGW
- OG GSW Temp. Abd.
- CM (Coal Bed Methane)
- Cathodic Other (Core, Expl., etc.): _____

If Workover/Re-entry: Old Well Info as follows:

Operator: _____

Well Name: _____

Original Comp. Date: _____ Original Total Depth: _____

- Deepening Re-perf. Conv. to ENHR Conv. to SWD
- Plug Back Conv. to GSW Conv. to Producer
- Commingled Permit #: _____
- Dual Completion Permit #: _____
- SWD Permit #: _____
- ENHR Permit #: _____
- GSW Permit #: _____

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
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API No. 15 - _____

Spot Description: _____

_____ - _____ - _____ Sec. _____ Twp. _____ S. R. _____ East West

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE NW SE SW

GPS Location: Lat: _____, Long: _____
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite: _____

Operator Name: _____

Lease Name: _____ License #: _____

Quarter _____ Sec. _____ Twp. _____ S. R. _____ East West

County: _____ Permit #: _____

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

- Confidentiality Requested
Date: _____
- Confidential Release Date: _____
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT I II III Approved by: _____ Date: _____

1178107

Operator Name: _____ Lease Name: _____ Well #: _____

Sec. _____ Twp. _____ S. R. _____ East West County: _____

INSTRUCTIONS: Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i> Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No List All E. Logs Run: _____	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample Name Top Datum
--	---

CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*

Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? Yes No *(If No, fill out Page Three of the ACO-1)*

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD:	Size:	Set At:	Packer At:	Liner Run: <input type="checkbox"/> Yes <input type="checkbox"/> No
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Date of First, Resumed Production, SWD or ENHR.	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____
---	--

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
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SAMPLE TOPS

McCoy Petroleum
Patterson-O'Brate 'A' #1-17
N2 SW NW
1650'FNL & 660'FWL
Sec 17-30s-30w
KB: 2827'

	Depth	Datum
Heebner	4220	-1393
Toronto	4228	-1401
Lansing	4290	-1463
Stark	4730	-1903
Swope Pors.	4738	-1911
Hushpuckney	4795	-1968
Hertha Pors.	4806	-1979
Marmaton	4874	-2047
Pawnee	4980	-2153
Ft Scott	5019	-2192
Cherokee	5026	-2199
Atoka	5234	-2407
Morrow Sh.	5269	-2442
Chester	5298	-2471
St Genevieve	5468	-2641
St Louis	5589	-2762
RTD	5700	-2873

LOG TOPS

McCoy Petroleum
Patterson-O'Brate 'A' #1-17
N2 SW NW
1650'FNL & 660'FWL
Sec 17-30s-30w
KB: 2827'

	Depth	Datum
Heebner	4228	-1401
Toronto	4248	-1421
Lansing	4298	-1471
Lansing G	4576	-1749
Stark	4740	-1913
Swope Pors.	4748	-1921
Hushpuckney	4796	-1969
Hertha Pors.	4813	-1986
Marmaton	4884	-2057
Pawnee	4984	-2157
Ft Scott	5021	-2194
Cherokee	5030	-2203
Atoka	5240	-2413
Morrow Sh.	5288	-2461
Chester	5292	-2465
St Genevieve	5474	-2647
St Louis	5604	-2777
LTD	5708	-2873



DRILL STEM TEST REPORT

Prepared For: **McCoy Petroleum Corp.**

8080 E Central STE 300
Wichita, KS 67206

ATTN: Dave Williams

Patterson-O'Brate A

S17-30s-30w Meade, KS

Start Date: 2013.12.20 @ 17:10:00

End Date: 2013.12.21 @ 03:18:17

Job Ticket #: 55565 DST #: 1

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2013.12.31 @ 09:01:45

McCoy Petroleum Corp.

S17-30s-30w Meade, KS

Patterson-O'Brate A

DST # 1

LKC 'Swope' (K)

2013.12.20



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

McCoy Petroleum Corp.
 8080 E Central STE 300
 Wichita, KS 67206
 ATTN: Dave Williams

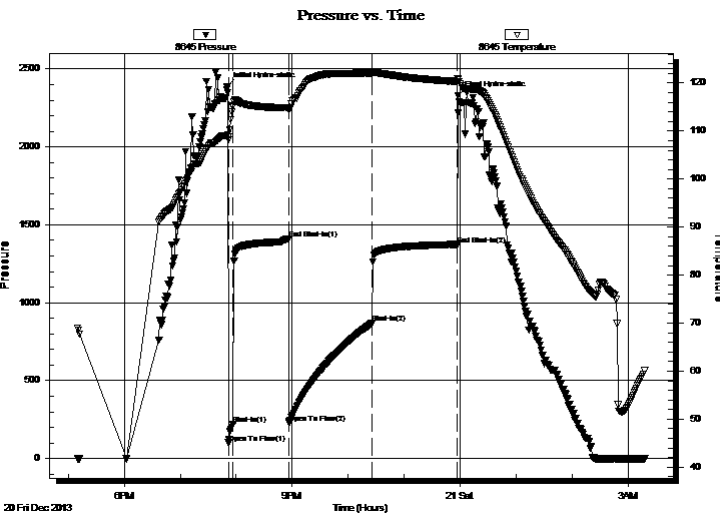
S17-30s-30w Meade, KS
Patterson-O'Brate A
 Job Ticket: 55565 **DST#: 1**
 Test Start: 2013.12.20 @ 17:10:00

GENERAL INFORMATION:

Formation: **LKC 'Swope' (K)**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 19:51:36
 Time Test Ended: 03:18:17
 Interval: **4736.00 ft (KB) To 4770.00 ft (KB) (TVD)**
 Total Depth: 4872.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Straddle (Initial)
 Tester: Chuck Smith
 Unit No: 62
 Reference Elevations: 2827.00 ft (KB)
 2816.00 ft (CF)
 KB to GR/CF: 11.00 ft

Serial #: 8645 Outside
 Press@RunDepth: 867.49 psig @ 4741.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.12.20 End Date: 2013.12.21 Last Calib.: 2013.12.21
 Start Time: 17:10:05 End Time: 03:18:18 Time On Btm: 2013.12.20 @ 19:50:12
 Time Off Btm: 2013.12.20 @ 23:57:54

TEST COMMENT: B.O.B. @ 3 min.
 No return.
 B.O.B. @ 4 1/2 min.
 No return.



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2384.00	109.10	Initial Hydro-static
2	99.65	108.27	Open To Flow (1)
7	222.52	115.27	Shut-In(1)
67	1411.70	114.87	End Shut-In(1)
67	228.91	114.39	Open To Flow (2)
156	867.49	122.11	Shut-In(2)
248	1373.80	120.34	End Shut-In(2)
248	2330.08	120.69	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1003.00	GMW 5g 3m 92w	11.82
189.00	GMW 5g 15m 80w	2.65
252.00	MW 35m 65w	3.53
268.00	OSWM 40w 60m	3.76

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

McCoy Petroleum Corp.
8080 E Central STE 300
Wichita, KS 67206
ATTN: Dave Williams

S17-30s-30w Meade, KS
Patterson-O'Brate A
Job Ticket: 55565 **DST#: 1**
Test Start: 2013.12.20 @ 17:10:00

Tool Information

Drill Pipe:	Length: 4490.00 ft	Diameter: 3.80 inches	Volume: 62.98 bbl	Tool Weight: 3500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 bbl	Weight set on Packer: 32000.00 lb
Drill Collar:	Length: 247.00 ft	Diameter: 2.25 inches	Volume: 1.21 bbl	Weight to Pull Loose: 95000.00 lb
			<u>Total Volume: 64.19 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	28.50 ft			String Weight: Initial 82000.00 lb
Depth to Top Packer:	4736.00 ft			Final 86000.00 lb
Depth to Bottom Packer:	4770.00 ft			
Interval between Packers:	34.00 ft			
Tool Length:	163.50 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Length (ft) Serial No. Position Depth (ft) Accum. Lengths

Change Over Sub	1.00			4709.50	
Shut In Tool	5.00			4714.50	
Hydraulic tool	5.00			4719.50	
Jars	5.00			4724.50	
Safety Joint	2.50			4727.00	
Packer	5.00			4732.00	27.50 Bottom Of Top Packer
Packer	4.00			4736.00	
Stubb	1.00			4737.00	
Perforations	4.00			4741.00	
Recorder	0.00	8357	Inside	4741.00	
Recorder	0.00	8645	Outside	4741.00	
Perforations	25.00			4766.00	
Blank Off Sub	1.00			4767.00	
topof s pack	3.00			4770.00	34.00 Tool Interval
Packer	0.00			4770.00	
Stubb	1.00			4771.00	
Perforations	3.00			4774.00	
Change Over Sub	1.00			4775.00	
Recorder	0.00	6751	Below	4775.00	
Drill Pipe	93.00			4868.00	
Change Over Sub	1.00			4869.00	
Bullnose	3.00			4872.00	102.00 Bottom Packers & Anchor

Total Tool Length: 163.50



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

McCoy Petroleum Corp.

S17-30s-30w Meade, KS

8080 E Central STE 300
Wichita, KS 67206

Patterson-O'Brate A

Job Ticket: 55565

DST#: 1

ATTN: Dave Williams

Test Start: 2013.12.20 @ 17:10:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

190000 ppm

Viscosity: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.19 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 2600.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1003.00	GMW 5g 3m 92w	11.819
189.00	GMW 5g 15m 80w	2.651
252.00	MW 35m 65w	3.535
268.00	OSWM 40w 60m	3.759

Total Length: 1712.00 ft Total Volume: 21.764 bbl

Num Fluid Samples: 0

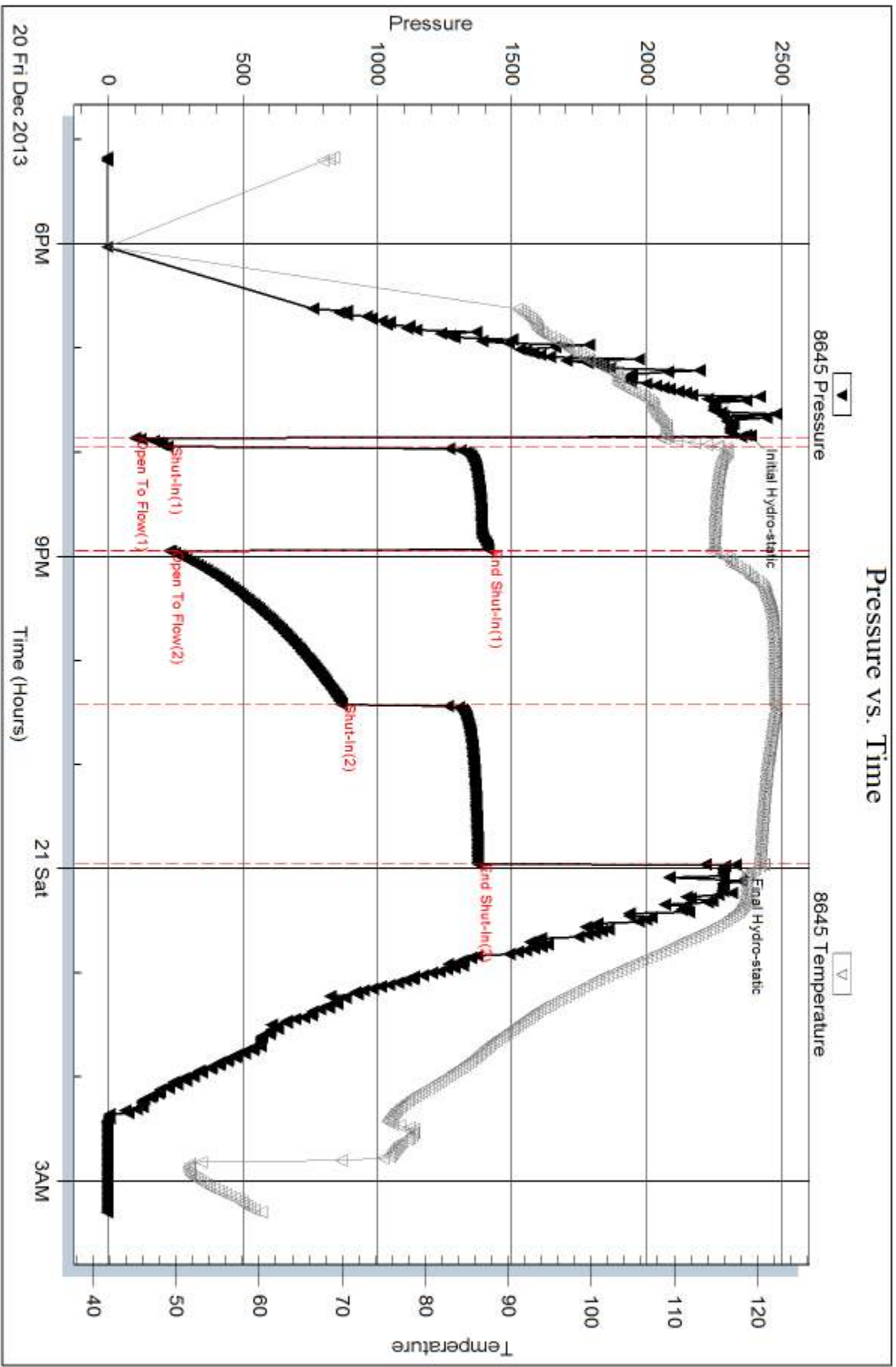
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW: .075 @ 47 Degrees F = 190000 PPM



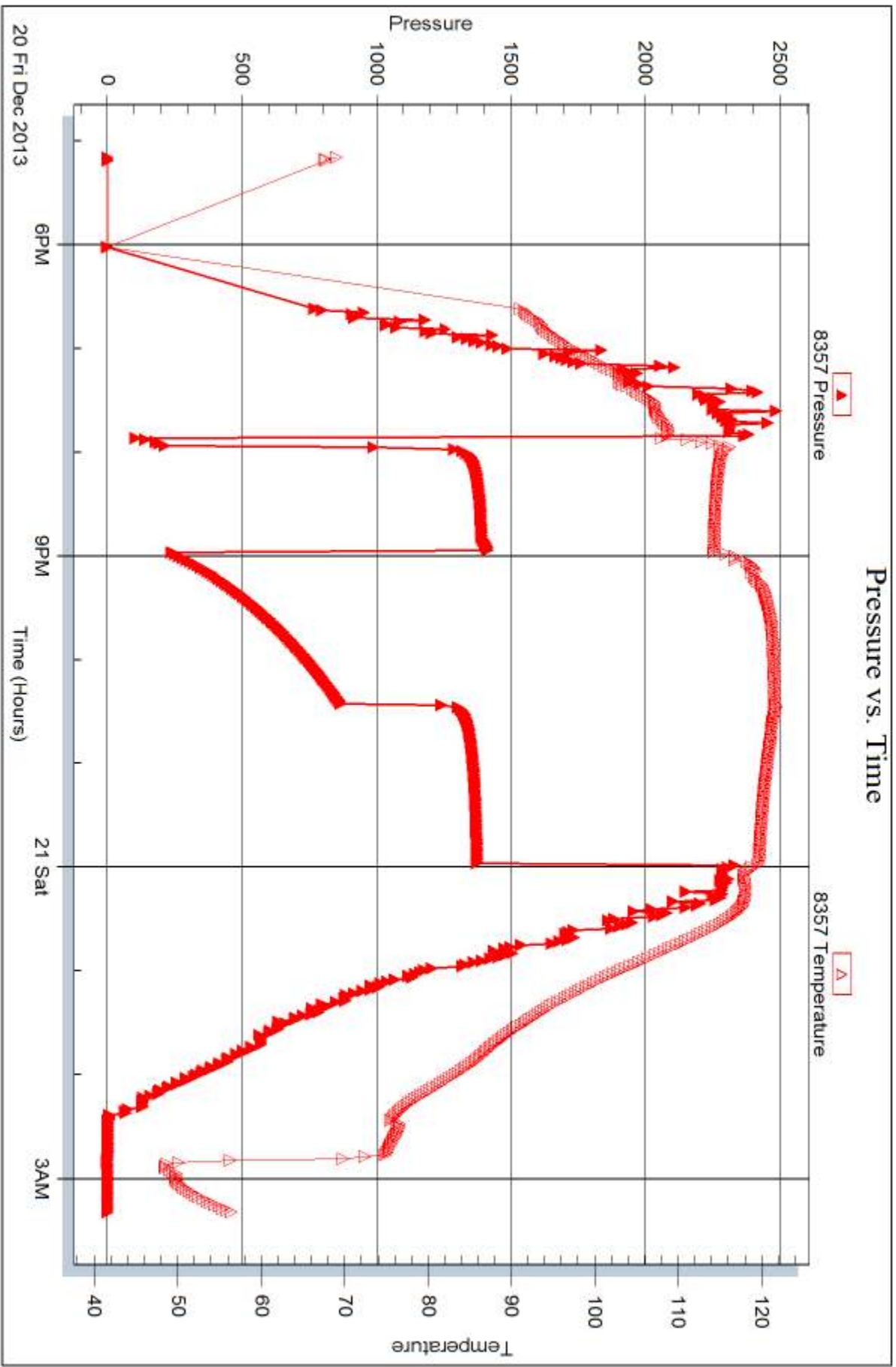
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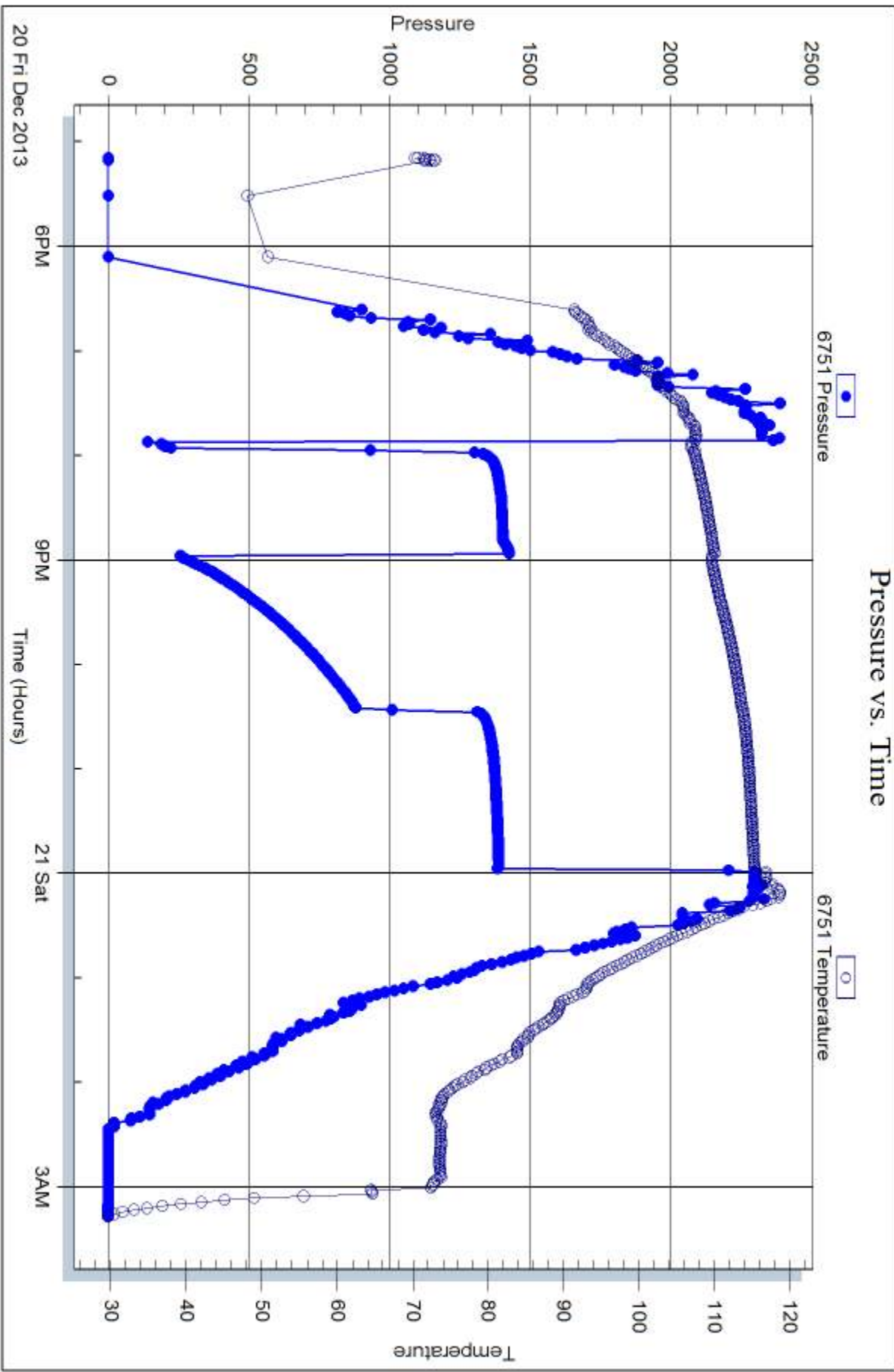
Inside

McCoy Petroleum Corp.

Patterson-O'Brate A

DST Test Number: 1







DRILL STEM TEST REPORT

Prepared For: **McCoy Petroleum Corp.**

8080 E Central STE 300
Wichita, KS 67206

ATTN: Dave Williams

Patterson-O'Brate A

S17-30s-30w Meade, KS

Start Date: 2013.12.28 @ 02:31:00

End Date: 2013.12.28 @ 12:22:35

Job Ticket #: 55566 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2013.12.31 @ 09:00:54



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

McCoy Petroleum Corp.
 8080 E Central STE 300
 Wichita, KS 67206
 ATTN: Dave Williams

S17-30s-30w Meade, KS
Patterson-O'Brate A
 Job Ticket: 55566 **DST#: 2**
 Test Start: 2013.12.28 @ 02:31:00

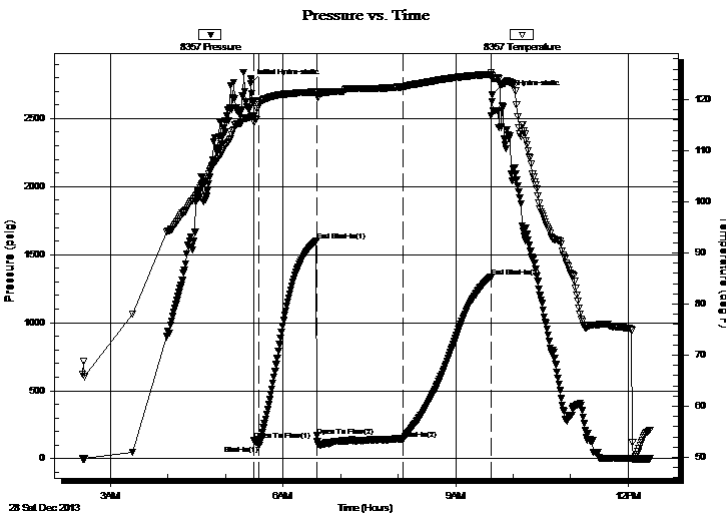
GENERAL INFORMATION:

Formation: **Mississippian "Chest"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 05:29:54
 Time Test Ended: 12:22:35
 Interval: **5259.00 ft (KB) To 5330.00 ft (KB) (TVD)**
 Total Depth: 5330.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Chuck Smith
 Unit No: 62
 Reference Elevations: 2827.00 ft (KB)
 2816.00 ft (CF)
 KB to GR/CF: 11.00 ft

Serial #: 8357 Inside
 Press@RunDepth: 145.99 psig @ 5260.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2013.12.28 End Date: 2013.12.28 Last Calib.: 2013.12.28
 Start Time: 02:31:05 End Time: 12:22:36 Time On Btm: 2013.12.28 @ 05:26:30
 Time Off Btm: 2013.12.28 @ 09:37:47

TEST COMMENT: 11" Blow .
 No return.
 B.O.B. @ 10 sec.
 Weak return died @ 15 min.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2756.06	116.70	Initial Hydro-static
4	137.40	115.60	Open To Flow (1)
9	97.46	119.47	Shut-In(1)
69	1601.72	121.45	End Shut-In(1)
69	168.99	120.91	Open To Flow (2)
159	145.99	122.53	Shut-In(2)
251	1333.03	124.93	End Shut-In(2)
252	2673.28	124.61	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
62.00	GOCM 50g 15o 35m Emulsion	0.30
62.00	GOCM 20g 5o 75m Emulsion	0.30
124.00	GSOCM 25g 1o 74m	0.62
77.00	GOSM 5g 95m	1.08
0.00	No gassy odor nor visible vapor in pipe	0.00

* Recovery from multiple tests

Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

McCoy Petroleum Corp.

S17-30s-30w Meade, KS

8080 E Central STE 300
Wichita, KS 67206

Patterson-O'Brate A

Job Ticket: 55566

DST#: 2

ATTN: Dave Williams

Test Start: 2013.12.28 @ 02:31:00

Tool Information

Drill Pipe:	Length: 5000.00 ft	Diameter: 3.80 inches	Volume: 70.14 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: inches	Volume: 0.00 bbl	Weight set on Packer:	22000.00 lb
Drill Collar:	Length: 247.00 ft	Diameter: 2.25 inches	Volume: 1.21 bbl	Weight to Pull Loose:	95000.00 lb
			<u>Total Volume: 71.35 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	15.50 ft			String Weight: Initial	84000.00 lb
Depth to Top Packer:	5259.00 ft			Final	85000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	71.00 ft				
Tool Length:	98.50 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			5232.50	
Shut In Tool	5.00			5237.50	
Hydraulic tool	5.00			5242.50	
Jars	5.00			5247.50	
Safety Joint	2.50			5250.00	
Packer	5.00			5255.00	27.50 Bottom Of Top Packer
Packer	4.00			5259.00	
Stubb	1.00			5260.00	
Recorder	0.00	8357	Inside	5260.00	
Recorder	0.00	8645	Outside	5260.00	
Perforations	3.00			5263.00	
Change Over Sub	1.00			5264.00	
Drill Pipe	62.00			5326.00	
Change Over Sub	1.00			5327.00	
Bullnose	3.00			5330.00	71.00 Bottom Packers & Anchor

Total Tool Length: 98.50



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

McCoy Petroleum Corp.

S17-30s-30w Meade, KS

8080 E Central STE 300
Wichita, KS 67206

Patterson-O'Brate A

Job Ticket: 55566

DST#: 2

ATTN: Dave Williams

Test Start: 2013.12.28 @ 02:31:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 10.39 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 6100.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
62.00	GOCM 50g 15o 35m Emulsion	0.305
62.00	GOCM 20g 5o 75m Emulsion	0.305
124.00	GSOCM 25g 1o 74m	0.619
77.00	GOSM 5g 95m	1.080
0.00	No gassy odor nor visible vapor in pipe	0.000

Total Length: 325.00 ft

Total Volume: 2.309 bbl

Num Fluid Samples: 0

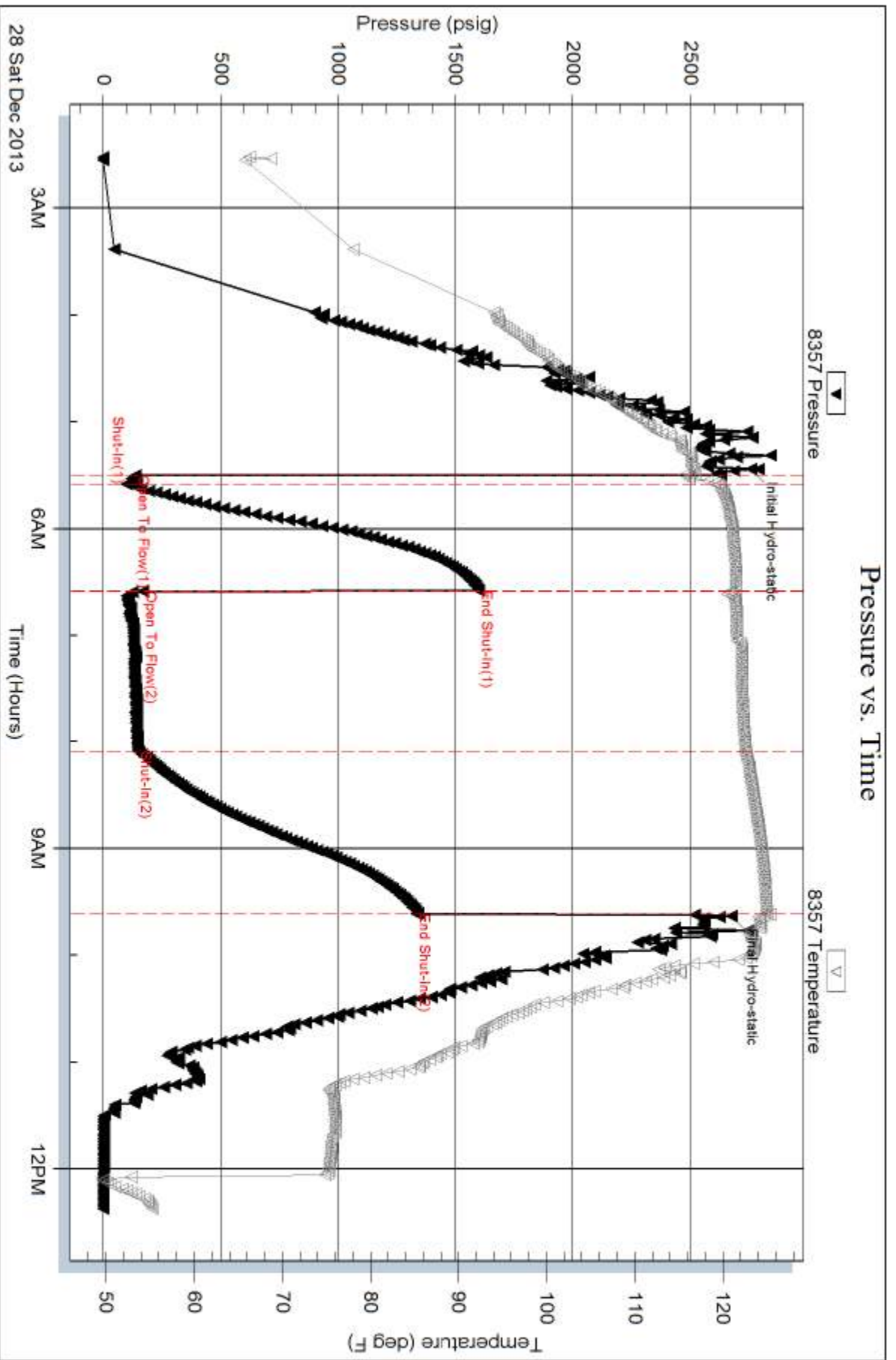
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

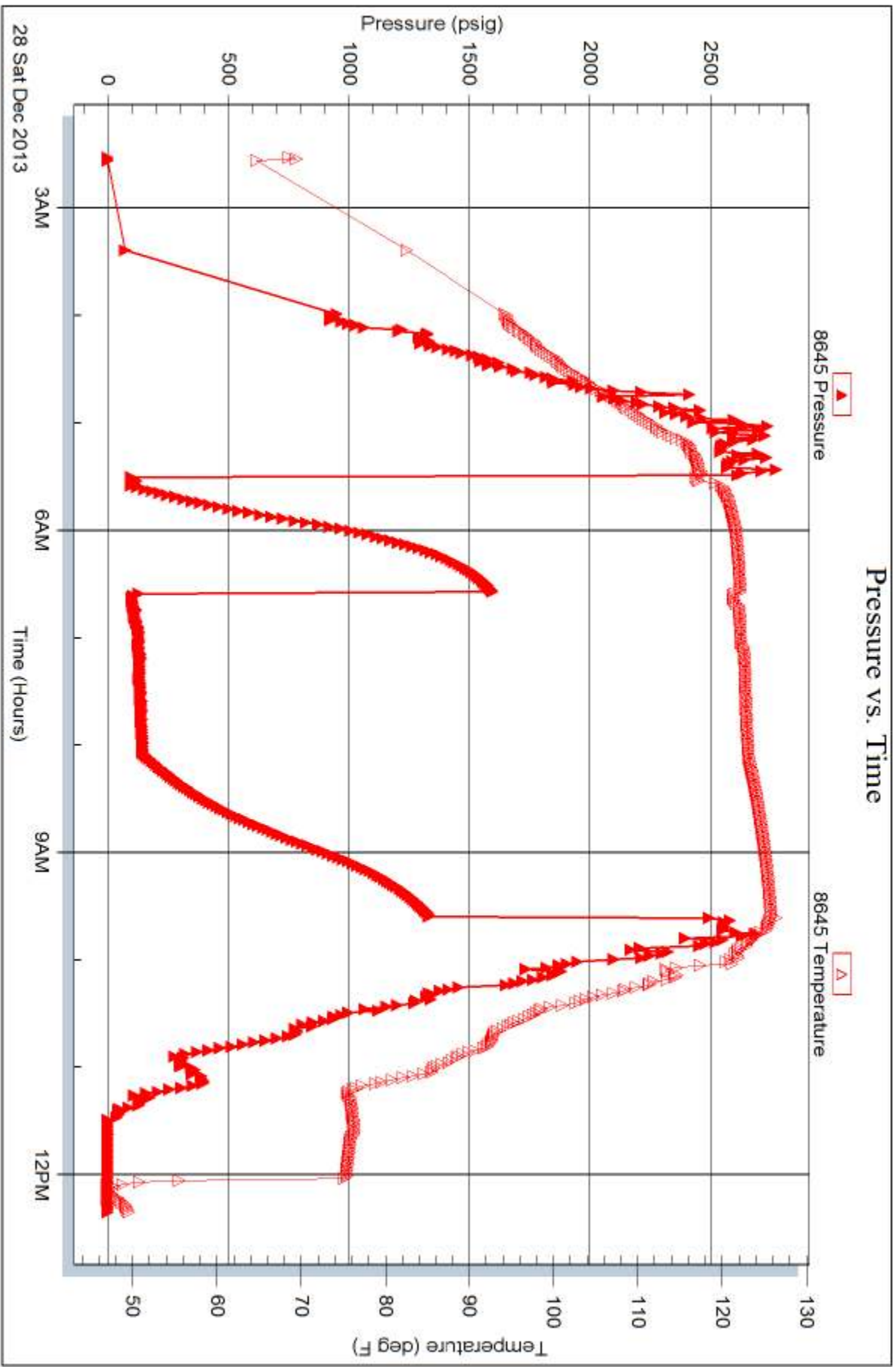


Serial #: 8645

Outside McCoy Petroleum Corp.

Patterson-O'Brate A

DST Test Number: 2



Triobite Testing, Inc

Ref. No: 55566

Printed: 2013.12.31 @ 09:00:56



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **55565**

Well Name & No. Patterson-O'Brate 'A' 1-17 Test No. 1 Date 12-20-13
 Company McCoy Petroleum Elevation 2827 KB 2816 GL
 Address 8080 E. Central STE 300 Wichita, KS 67204
 Co. Rep / Geo. Dave Williams Rig Sterling #2
 Location: Sec. 17 Twp. 30s Rge. 30w Co. Meade State KS

Interval Tested 4736-4770 Zone Tested LKC "Swape" (K)
 Anchor Length 34 Drill Pipe Run 4490 Mud Wt. 9.2
 Top Packer Depth 4732 Drill Collars Run 247 Vis 55
 Bottom Packer Depth 4770 Wt. Pipe Run 0 WL 7.2
 Total Depth 4872 Chlorides 2600 ppm System LCM 4#

Blow Description B.O.B. @ 3 min.
No return.
B.O.B. @ 4 1/2 min.
No return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>268</u>	<u>OSWOSWM</u>		<u>40</u>	<u>60</u>	
<u>252</u>	<u>MW</u>		<u>65</u>	<u>35</u>	
<u>189</u>	<u>GMW</u>	<u>5</u>	<u>80</u>	<u>15</u>	
<u>1003</u>	<u>GMW</u>	<u>5</u>	<u>92</u>	<u>3</u>	
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 1712 BHT 120 Gravity - API RW .075 @ 47 °F Chlorides 190,000 ppm

(A) Initial Hydrostatic 2384 Test 1050 T-On Location 16:00
 (B) First Initial Flow 100 Jars 250 T-Started 17:10
 (C) First Final Flow 223 Safety Joint 75 T-Open 19:52
 (D) Initial Shut-In 1412 Circ Sub NIC T-Pulled 23:57
 (E) Second Initial Flow 229 Hourly Standby _____ T-Out 3:18
 (F) Second Final Flow 867 Mileage 186RT 288..30
 (G) Final Shut-In 1374 Sampler _____
 (H) Final Hydrostatic 2330 Straddle 600 Ruined Shale Packer _____

Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Initial Open 5 Extra Recorder _____ Sub Total 0
 Initial Shut-In 60 Day Standby _____ Total 2263.30
 Final Flow 90 Accessibility _____ MP/DST Disc't _____
 Final Shut-In 90 Sub Total 2263.30

Approved By Dave Williams Our Representative Chuck Smith

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. **55566**

Well Name & No. Patterson - O'Brate A 1-17 Test No. 2 Date 12-28-13
 Company McCoy Petroleum Corp. Elevation 2827 KB 2816 GL
 Address 8080 E. Central STE 300 Wichita, KS 67206
 Co. Rep / Geo. Dave Williams Rig Sterling #2
 Location: Sec. 17 Twp. 30s Rge. 30w Co. Meade State KS

Interval Tested 5259-5330 Zone Tested Mississippian "Chester"
 Anchor Length 71 Drill Pipe Run 5000 Mud Wt. 9.4
 Top Packer Depth 5255 Drill Collars Run 247 Vis 53
 Bottom Packer Depth 5259 Wt. Pipe Run 0 WL 10.4
 Total Depth 5330 Chlorides 6100 ppm System LCM 6[#]

Blow Description 11" Blow.
No return.
B.O.B. @ 10 sec.
Weak return died @ 15 min.

Rec	Feet of	%gas	%oil	%water	%mud
<u>77</u>	<u>GOSM</u>	<u>5</u>		<u>9.5</u>	
<u>124</u>	<u>G50CM</u>	<u>25</u>	<u>1</u>	<u>74</u>	
<u>62</u>	<u>GOCM Emulsion</u>	<u>20</u>	<u>5</u>	<u>7.5</u>	
<u>62</u>	<u>GOCM Emulsion</u>	<u>50</u>	<u>15</u>	<u>35</u>	
	<u>No gassy odor nor visible vapor in pipe</u>				

Rec Total 325 BHT 125 Gravity — API RW @ °F Chlorides — ppm

(A) Initial Hydrostatic 2756 Test 1350 T-On Location 1:15
 (B) First Initial Flow 137 Jars 250 T-Started 2:31
 (C) First Final Flow 97 Safety Joint 75 T-Open 5:30
 (D) Initial Shut-In 1602 Circ Sub N/C T-Pulled 9:37
 (E) Second Initial Flow 169 Hourly Standby _____ T-Out 12:23
 (F) Second Final Flow 146 Mileage 186RT 576.60 Comments No test after.
 (G) Final Shut-In 1333 Sampler _____ Picked up tools 12-30-13
 (H) Final Hydrostatic 2673 Straddle _____ 1:00 a.m. 2 nights motel.
 Ruined Shale Packer _____
 Shale Packer _____
 Ruined Packer _____
 Extra Packer _____
 Extra Recorder _____
 Day Standby 31RT motel 1d 12.5h Sub Total 800
 Accessibility _____ Total 3051.60
 Sub Total 2251.60 MP/DST Disc't _____

Approved By Daniel P. Wilmer Our Representative Chuck Smith

TriLOBITE TESTING INC. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



**Scale 1:240 (5"=100') Imperial
Measured Depth Log**

Well Name: PATTERSON-O'BRATE "A" # 1-17
Location: N/2- SW - NW of Sec. 17 - T. 30 S. - R. 30 W.
License Number: A.P.I. # 15 - 119 - 21,357 - 00 - 00
Spud Date: 12/13/2013
Surface Coordinates: SPOT: 1650' FNL & 660' FWL

Region: MEADE CO., KS.
Drilling Completed: 12/30/2013

**Bottom Hole
Coordinates:**
Ground Elevation (ft): 2816' **K.B. Elevation (ft):** 2827'
Logged Interval (ft): 1824' **To:** 5708' **Total Depth (ft):** 5708'
Formation: MISSISSIPPIAN "ST. LOUIS" FORMATION
Type of Drilling Fluid: CHEMICAL/POLYMER/GEL. & MUD DISPLACEMENT @ 3018'.
Printed by MUD.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR

Company: McCOY PETROLEUM CORPORATION KCC LIC. NO. # 5003
Address: 8080 E. CENTRAL, STE. 300
WICHITA, KANSAS 67206-2366

GEOLOGIST

Name: DAVID P. WILLIAMS, P.G.
Company: DW ENERGY, LLC
Address: 312 N. BROADVIEW STREET
WICHITA, KANSAS 67208

CASING & DEVIATION

Surface Casing: Spud at 10:15 pm on 12/13/13. Drilled 12-1/4" to 1828'. Ran 44 joints of new 24#, 8-5/8" casing. Tallied 1810'. Set at 1824' KB. Welded straps on shoe, bottom 3 joints and top 2 joints. Tacked collars on the remainder. (5) Centralizers on joints 1-3-5-10-27. Float insert in top of 1st joint. Cemented with 10 bbl Stop Loss; and 670 sks ALWA; 3% CC, 1/4# FS. Then tailed with 200 sks Class A; 3% CC; 1/4# FS. Cement did circulate. Plug down at 4:15 pm on 12/16/13. Allied Cementing ticket #052125. Basket on Joint #28 at 682'. At 6:00 pm cement was down 20'. At 8:00 pm cement fell down to 70' below GL. Allied cemented from top top by pumping cement into cellar. Cemented with 100 sks Class A Neat. Completed at 1:00 am 12/17/13.

DSTs

~~ DST # 1 ~~ 4736' - 4770' (Straddle). Miss-Run (Bottom Packer Failure).

~~ DST # 2 ~~ 5259'-5330'. Times: 5"-60"-90"-90";

Blow: IF= Good/11" . No Blow Back During ISIP. FF= Strong Blow BOB/Immed 10 Sec. Slight Blow Back During FSIP/15" & Died.

Recovery: 325' TF: 77' GOSM (5% G & 95% M); 124' GSOCM (25% G, 1% O, 74% M); 62' GOCM & EMUL (20% G, 5% O, 75% M); & 62' GOCM & EMUL (50% G, 15% O, 35% M).

Pressures: IH = 2756#; FH = 2673#; IF=137-97#; FF=169-146#; ISIP=1602#; FSIP=1333#; Temp.=125 degrees F.

Comments

After review of all geologic samples as examined, combined with the fluid and pressures results from all drill stem tests taken and analysis from the electric logs run, it was determined by all parties that production casing should be run in order to further evaluate this well.

Respectfully submitted,

David P. Williams, P. G # 88 Kansas

ROCK TYPES

	Anhy		Clyst		Gry shale		Mrlst		Shgy
	Bent		Coal		Gyp		Red shale		Sltst
	Brec		Congl		Igne		Salt		Ss
	Carb sh		Dol		Lmst		Shale		Till
	Cht		Grn sh		Meta		Shcol		

ACCESSORIES

MINERAL		Hvymin		Pellet		Ssstrg	
	Anhy		Kaol		Pisolite		
	Arggrn		Marl		Plant	TEXTURE	
	Arg		Minxl		Bryozoa		Boundst
	Bent		Nodule		Cephal		Chalky
	Bit		Phos		Coral		Cryxln
	Brecfrag		Pyr		Crin		Earthy
	Calc		Salt		Echin		Finexln
	Carb		Sandy		Fish		Grainst
	Chtdk		Silt		Foram		Lithogr
	Chtlt		Sil		Fossil		Microxln
	Dol		Sulphur		Fuss		Mudst
	Feldspar		Tuff		Gastro		Packst
	Ferrpel				Oolite		Wackest
	Ferr	FOSSIL			Oomold		
	Glau		Algae		Ostra		
	Gyp		Amph		Pelec		

STRINGER

	Anhy
	Arg
	Bent
	Coal
	Dol
	Gryslt
	Grysh
	Gyp
	Ls
	Mrst
	Sltstrg

OTHER SYMBOLS

- POROSITY**
- [E] Earthy
 - [B] Fenest
 - [F] Fracture
 - [X] Inter
 - [Z] Moldic
 - [O] Organic
 - [P] Pinpoint

[V] Vuggy

- SORTING**
- [W] Well
 - [M] Moderate
 - [P] Poor

- ROUNDING**
- [R] Rounded
 - [r] Subrnd
 - [a] Subang
 - [A] Angular

OIL SHOW

- [*] Gas show

- [●] Even
- [○] Spotted
- [○] Ques
- [□] Dead

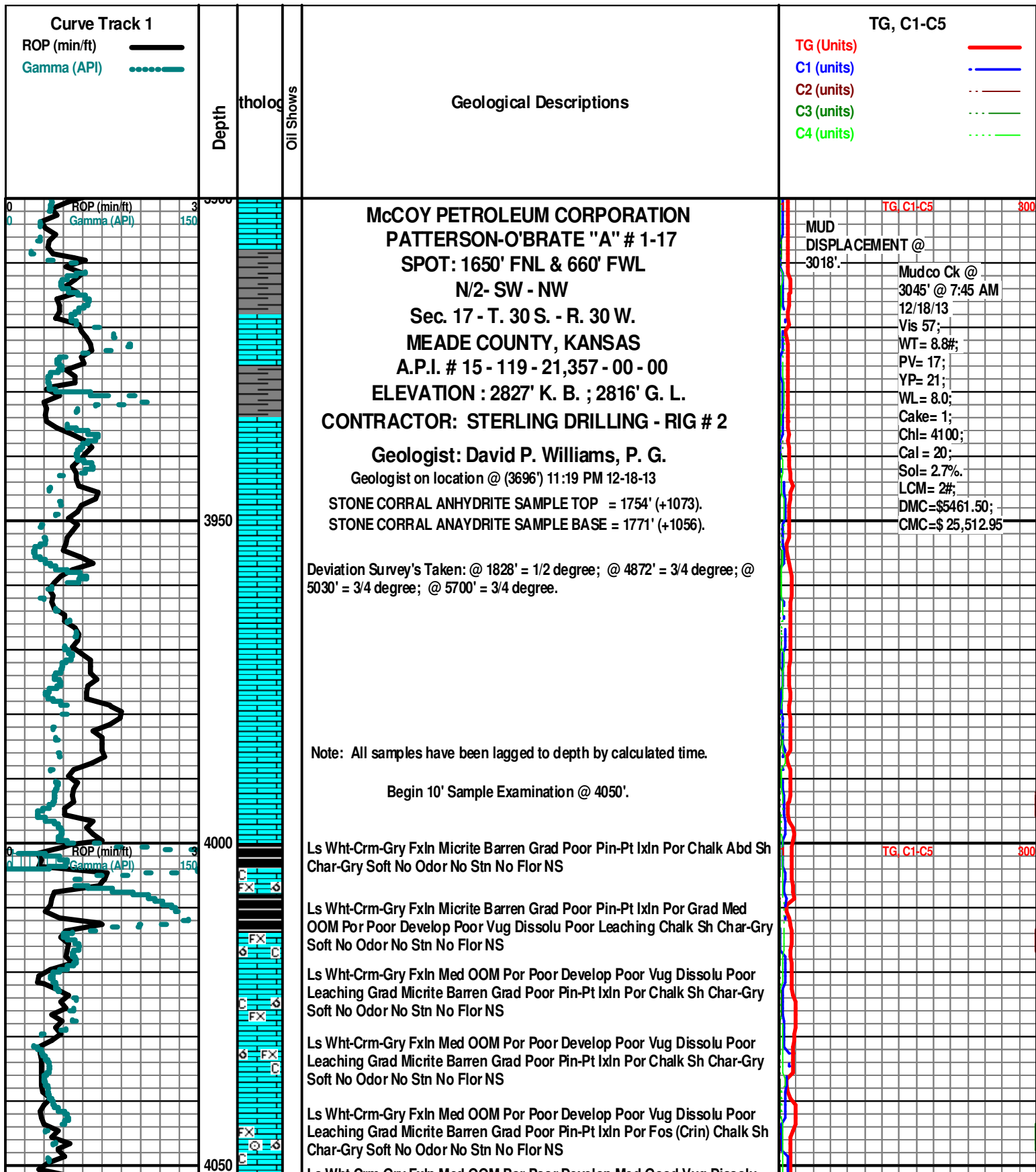
INTERVAL

- [■] Dst
- [■] Dst_alt

[■] Straddle test tail pi
[■] Core

EVENT

- [▶] Rft
- [▶] Sidewall



McCOY PETROLEUM CORPORATION
PATTERSON-O'BRATE "A" # 1-17
SPOT: 1650' FNL & 660' FWL
N/2- SW - NW
Sec. 17 - T. 30 S. - R. 30 W.
MEADE COUNTY, KANSAS
A.P.I. # 15 - 119 - 21,357 - 00 - 00
ELEVATION : 2827' K. B. ; 2816' G. L.
CONTRACTOR: STERLING DRILLING - RIG # 2

Geologist: David P. Williams, P. G.
 Geologist on location @ (3696) 11:19 PM 12-18-13

STONE CORRAL ANHYDRITE SAMPLE TOP = 1754' (+1073).
 STONE CORRAL ANAYDRITE SAMPLE BASE = 1771' (+1056).

Deviation Survey's Taken: @ 1828' = 1/2 degree; @ 4872' = 3/4 degree; @ 5030' = 3/4 degree; @ 5700' = 3/4 degree.

Note: All samples have been lagged to depth by calculated time.

Begin 10' Sample Examination @ 4050'.

Ls Wht-Crm-Gry Fxln Micrite Barren Grad Poor Pin-Pt Ixln Por Chalk Abd Sh
 Char-Gry Soft No Odor No Stn No Flor NS

Ls Wht-Crm-Gry Fxln Micrite Barren Grad Poor Pin-Pt Ixln Por Grad Med
 OOM Por Poor Develop Poor Vug Dissolu Poor Leaching Chalk Sh Char-Gry
 Soft No Odor No Stn No Flor NS

Ls Wht-Crm-Gry Fxln Med OOM Por Poor Develop Poor Vug Dissolu Poor
 Leaching Grad Micrite Barren Grad Poor Pin-Pt Ixln Por Chalk Sh Char-Gry
 Soft No Odor No Stn No Flor NS

Ls Wht-Crm-Gry Fxln Med OOM Por Poor Develop Poor Vug Dissolu Poor
 Leaching Grad Micrite Barren Grad Poor Pin-Pt Ixln Por Chalk Sh Char-Gry
 Soft No Odor No Stn No Flor NS

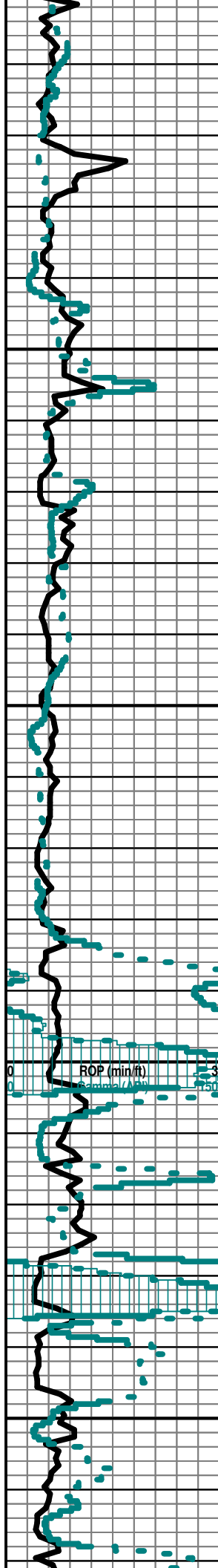
Ls Wht-Crm-Gry Fxln Med OOM Por Poor Develop Poor Vug Dissolu Poor
 Leaching Grad Micrite Barren Grad Poor Pin-Pt Ixln Por Fos (Crim) Chalk Sh
 Char-Gry Soft No Odor No Stn No Flor NS

TG, C1-C5

- TG (Units) [Red line]
- C1 (units) [Blue line]
- C2 (units) [Red line]
- C3 (units) [Green line]
- C4 (units) [Green line]

MUD
 DISPLACEMENT @
 3018'.
 Mudco Ck @
 3045' @ 7:45 AM
 12/18/13
 Vis 57;
 WT= 8.8#;
 PV= 17;
 YP= 21;
 WL= 8.0;
 Cake= 1;
 Chl= 4100;
 Cal = 20;
 Sol= 2.7%.
 LCM= 2#;
 DMC=\$5461.50;
 CMC=\$ 25,512.95

TG C1-C5 800



4100

4150

4200

4250

Ls Wht-Crm-Gry FxIn Med OOM Por Poor Develop Med-Good Vug Dissolu Some Deep Vug Leaching Grad Micrite Barren Grad Poor Pin-Pt IxIn Por Pyr Mass Chalk Sh Char-Gry Soft No Odor No Stn No Flor NS

Ls Wht-Crm-Gry FxIn Med OOM Por Poor Develop Med-Good Vug Dissolu Some Deep Vug Leaching Grad Micrite Barren Grad Poor Pin-Pt IxIn Por Chalk Sh Char-Gry Soft No Odor No Stn No Flor NS

Ls Wht-Crm-Gry FxIn Med OOM Por Poor Develop Med-Good Vug Dissolu Some Deep Vug Leaching Grad Micrite Barren Grad Poor Pin-Pt IxIn Por Chalk Sh Char-Gry Soft No Odor No Stn No Flor NS

Ls Wht-Crm-Gry FxIn Med OOM Por Poor Develop Med-Good Vug Dissolu Some Deep Vug Leaching Grad Micrite Barren Grad Poor Pin-Pt IxIn Por Pyr Mass Chalk Sh Char-Gry Soft No Odor No Stn No Flor NS

Ls Gry-Wht-Crm-FxIn Micrite Barren Grad Poor Pin-Pt IxIn Por Grad Fair OOM Por (w/Small OOids in pl) Poor Develop Poor Dissolu Poor Leaching Chalk Sh Char-Gry Soft No Odor No Stn No Flor NS

Ls Gry-Wht-Crm-FxIn Micrite Barren Grad Poor Pin-Pt IxIn Por Grad Fair OOM Por (w/Small OOids in pl) Poor Develop Poor Dissolu Poor Leaching Chalk Sh Char-Gry Soft No Odor No Stn No Flor NS

Ls Wht-Crm-Gry FxIn Micrite Barren Grad Poor Pin-Pt IxIn Por Grad Fair OOM Por (w/Small OOids in pl) Poor Develop Poor Dissolu Poor Leaching Chalk Sh Char-Gry Soft No Odor No Stn No Flor NS

Ls Wht-Crm-Gry FxIn Micrite Barren Grad Poor Pin-Pt IxIn Por Grad Tr Poor OOM Por AA Dec Chalk Abd Sh Char-Gry Soft No Odor No Stn No Flor NS

Ls Wht-Crm-Gry FxIn Micrite Barren Grad Poor Pin-Pt IxIn Por Grad Tr Poor OOM Por AA Dec Chalk Abd Sh Char-Gry-Drk Gry Soft No Odor No Stn No Flor NS

Ls Wht-Crm-Gry FxIn Micrite Barren Grad Poor Pin-Pt IxIn Por Grad Tr Poor OOM Por AA Dec Chalk Abd Sh Char-Gry-Drk Gry Soft No Odor No Stn No Flor NS

Sh Blk Carb -Char-Gry Fissil Ls Wht-Crm-Gry FxIn Micrite Barren Grad Poor Pin-Pt IxIn Por Chalk Soft No Odor No Stn No Flor NS

Sh Char-Gry-Blk Carb Fissil Ls Wht-Crm-Gry FxIn Micrite Barren Grad Poor Pin-Pt IxIn Por Chalk Soft No Odor No Stn No Flor NS

Ls Wht-Crm-Gry FxIn Micrite Barren Grad Poor Pin-Pt IxIn Por Grad Tr Poor OOM Por AA Dec Chalk Abd Sh Char-Gry-Drk Gry Soft No Odor No Stn No Flor NS

Ls Wht-Crm-Gry FxIn Micrite Barren Grad Poor Pin-Pt IxIn Por Grad Tr Poor OOM Por AA Dec Chalk Abd Sh Char-Gry-Drk Gry Soft No Odor No Stn No Flor NS

Sh Blk Carb-Char-Gry-Maroon Fissil Ls Wht-Crm-Gry FxIn Dns Micrite Grad Pin-Pt IxIn Por Chalk No Odor No Stn No Flor NS

Sh Blk Carb-Char-Gry-Maroon Fissil Ls Wht-Crm-Gry FxIn Dns Micrite Grad Pin-Pt IxIn Por Chalk No Odor No Stn No Flor NS

Ls Wht-Crm-Gry FxIn Dns Micrite Grad Pin-Pt IxIn Por Chalk No Odor No Stn No Flor NS

HEEBNER 4228' (- 1401)

Sh Blk Carb-Char-Gry (w/Pyr Inclus)-Maroon Soft-Fissil Ls Wht-Crm-Gry FxIn Dns Micrite Grad Pin-Pt IxIn Por Cht Wht Op Shp Vit Chalk No Odor No Stn No Flor NS

Ls Wht-Crm-Gry FxIn Dns Micrite Grad Pin-Pt IxIn Por Chalk No Odor No Stn No Flor NS

TORONTO 4248' (- 1421)

Ls Wht-Crm-Gry FxIn Dns Micrite Grad Pin-Pt IxIn Por Chalk No Odor No Stn No Flor NS

Sh Char-Gry (w/Pyr Inclus)-Maroon Soft-Fissil Ls Wht-Crm-Gry FxIn Dns Micrite Grad Pin-Pt IxIn Por Cht Wht Op Shp Vit Chalk No Odor No Stn No Flor NS

DOUGLAS 4268' (- 1441)

Sh Char-Gry (w/Pyr Inclus)-Maroon Soft-Fissil Ls Wht-Crm-Gry FxIn Dns Micrite Grad Pin-Pt IxIn Por Cht Wht Op Shp Vit Chalk No Odor No Stn No Flor NS

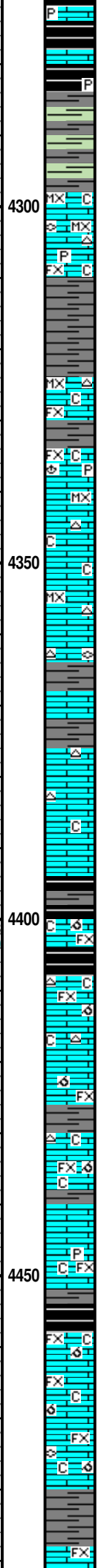
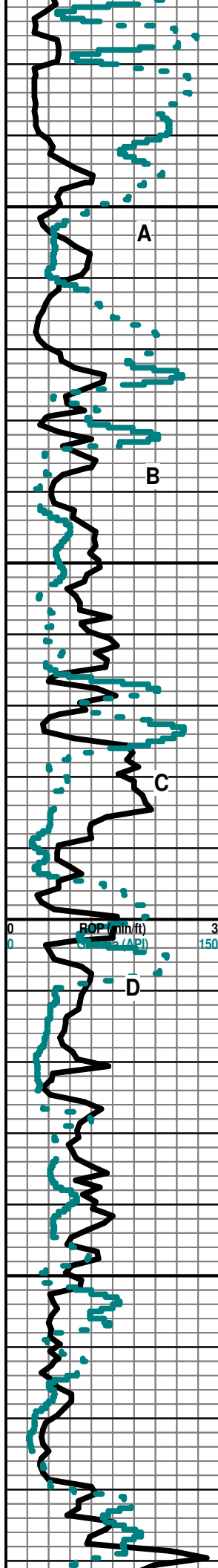
SH GAS KICK= 119 UNITS

TG C1-C5 800

ADJ. ANNULAR VELOCITY (AV) @ 4216' = 198.08.

SH GAS KICK= 103 UNITS

SH GAS KICK= 124 UNITS



Sh Char-Gry (w/Pyr Inklus) Maroon Soft-Fissil Ls Wht-Crm-Gry Fxln Dns Micrite Grad Pin-Pt Ixln Por Cht Wht Op Shp Vit Chalk No Odor No Stn No Flor NS

Sh Char-Gry (w/Pyr Inklus) Soft-Fissil Ls Wht-Crm-Gry Fxln Dns Micrite Grad Pin-Pt Ixln Por Cht Wht Op Shp Vit Chalk No Odor No Stn No Flor NS

Ls Wht-Crm-Gry Microxln Dns Micritic Barren Chalk Abd Sh AA No Odor No Stn No Flor

LANSING 4298' (- 1471)

Ls Wht-Crm-Tan-Gry (w/Pyr & Fos (Fuss) Inklus) Microxln Dns Micritic Barren Grad Fxln Poor Pin-Pt Ixln Por Barren Cht Wht Op Shp Vit Chalk No Odor No Stn No Flor

Ls Wht-Crm-Tan-Gry Microxln Dns Micritic Barren Grad Fxln Poor Pin-Pt Ixln Por Barren Fos (Fuss, Spiculitic Inklus) Cht Wht Op Shp Vit Chalk No Odor No Stn No Flor

Ls Wht-Crm-Tan-Gry Microxln Dns Micritic Barren Grad Fxln Poor Pin-Pt Ixln Por Barren Fos (Fuss) Cht Wht Op Shp Vit Chalk No Odor No Stn No Flor

Ls Wht-Crm-Gry Fxln Micrite Barren Grad Poor Pin-Pt Ixln Por Fos (Brach w/Pyr Inklus) Chalk Sh Char-Gry-Blk Carb-Maroon Fissil Soft No Odor No Stn No Flor NS

Ls Wht-Crm Microxln-Fxln Micrite Barren Grad Poor Pin-Pt Ixln Por Cht Wht Op Shp Vit Chalk Sh Char-Gry Soft-Fissil Soft No Odor No Stn No Flor NS

Ls Wht-Crm-Gry Fxln Micrite Barren Grad Poor Pin-Pt Ixln Por Cht Wht Op Shp Vit Chalk Sh Char-Gry-Blk Carb-Maroon Fissil Soft No Odor No Stn No Flor NS

Sh Char-Gry-Blk Carb Tr Soft- Fissil Ls Wht-Crm-Gry Microxln Dns Micrite Barren Grad Poor Ixln Por ht Wht-Tan Op Shp Vit Chalk Fos (Fuss) No Odor No Stn No Flor NS

Ls Wht-Crm-Tan Fxln Micrite Barren Cht Wht-Tan Translu-Op Shp Vit Chalk Sh Char-Gry Fissil-Soft No Odor No Stn No Flor NS

Ls Wht-Crm-Tan Fxln Micrite Barren Cht Wht-Tan Translu-Op Shp Vit Chalk Sh Char-Gry Fissil-Soft No Odor No Stn No Flor NS

Ls Wht-Crm-Tan Fxln Micrite Barren Cht Wht-Tan Translu-Op Shp Vit Chalk Sh Blk Carb-Char-Gry Fissil-Soft No Odor No Stn No Flor NS

Ls Wht-Crm-Gry Fxln Micrite Barren Grad Fair-Med Pin-Pt Ixln Por Grad Poor OOM Por Poor InterOOM Por Barren Chalk Abd Cht Wht-Tan Translu-Op Shp Vit Sh Blk Carb-Char-Gry Fissil-Soft No Odor No Stn No Flor NS

Ls Wht-Crm-Gry Fxln Micrite Barren Grad Fair-Med Pin-Pt Ixln Por Grad Poor OOM Por Poor InterOOM Por Barren Chalk Abd Cht Wht-Tan Translu-Op Shp Vit Sh Char-Gry Fissil-Soft No Odor No Stn No Flor NS

Ls Wht-Crm-Gry Fxln Micrite Barren Grad Fair-Med Pin-Pt Ixln Por Grad Poor OOM Por Poor InterOOM Por Barren Chalk Abd Cht Wht-Tan Translu-Op Shp Vit Sh Char-Gry Fissil-Soft No Odor No Stn No Flor NS

Ls Wht-Crm-Gry Fxln Micrite Barren Grad Fair-Med Pin-Pt Ixln Por Grad Poor OOM Por Poor InterOOM Por Barren Chalk Abd Cht Wht-Tan Translu-Op Shp Vit Sh Char-Gry Fissil-Soft No Odor No Stn No Flor NS

Ls Wht-Crm-Gry Fxln Micrite Barren Grad Fair-Med Pin-Pt Ixln Por Grad Poor OOM Por Poor InterOOM Por Barren Chalk Abd Cht Wht-Tan Translu-Op Shp Vit Sh Char-Gry Fissil-Soft No Odor No Stn No Flor NS

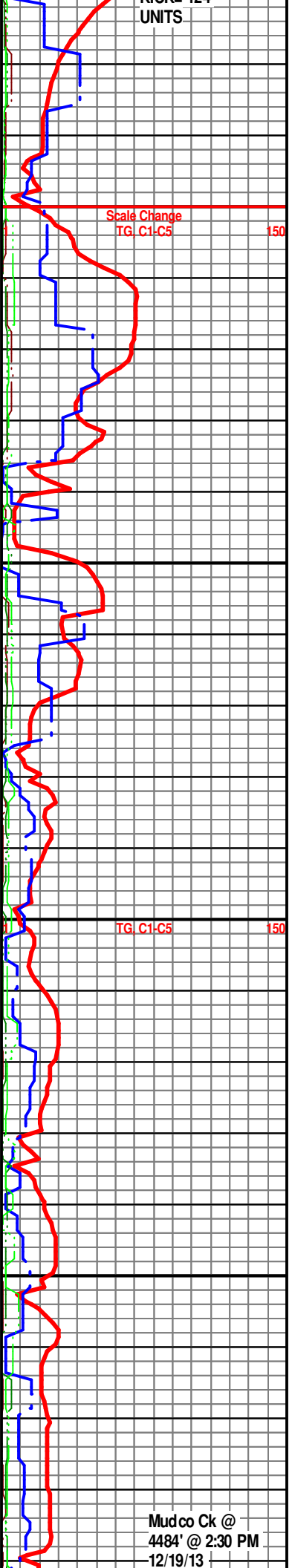
Ls Crm-Tan-Gry Fxln Dns Micrite Poor- Ixln Por Barren Chalky Sh Blk Carb-Char- Gry (w/Pyr Inklus) No Odor No Flor No Stn NS

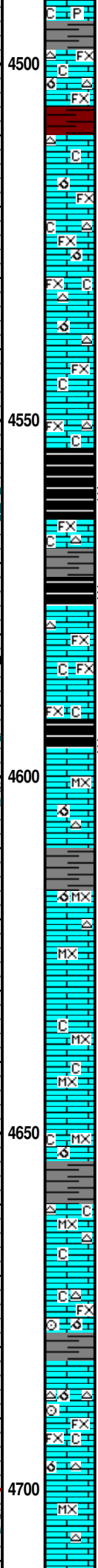
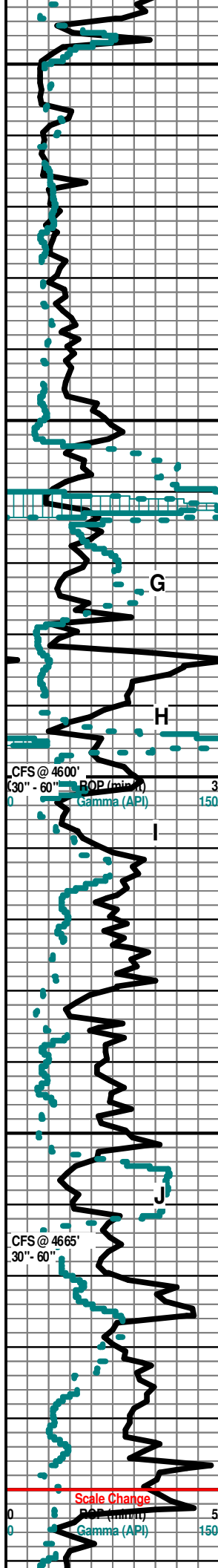
Ls Crm-Tan-Gry Fxln Poor- Ixln Por Barren (w/Fos (Crin) Inklus) Grad Poor OOM Por Poor Leaching Poor Develop Chalk Abd Sh Char-Gry-Aqua Fissil No Odor No Flor No Stn NS

Ls Wht-Crm-Tan Fxln Fair-Med OOM Por Poor InterOOM Por Barren Chalk Abd Cht Wht-Tan Translu-Op Shp Vit Sh Char-Gry Fissil-Soft No Odor No Stn No Flor NS

Ls Wht-Crm-Tan Fxln Fair-Med OOM Por Poor InterOOM Por Barren Chalk Abd Cht Wht-Tan Translu-Op Shp Vit Sh Blk Carb-Char-Gry Fissil-Soft No Odor No Stn No Flor NS

Ls Crm-Tan-Gry Fxln Dns Micrite Poor Ixln Por Barren Fos (Fuss) Chalky Sh Blk Carb-Char-Gry Fissil No Odor No Flor No Stn NS





Ls Crm-Tan-Gry FxIn Dns Micrite Poor IxIn Por Barren Pyr Mass Cht Wht Op Shp Vit Chalky Sh Blk Carb-Char-Gry Fissil No Odor No Flor No Stn NS

Ls Wht-Crm-Tan FxIn Med-Good OOM Por Poor-Fair InterOOM Por Barren Chalk Abd Cht Wht-Tan Translu-Op Shp Vit Sh Blk Carb - Char - Gry- Red Fissil-Soft No Odor No Stn No Flor NS

Ls Wht-Crm-Tan FxIn Med-Good OOM Por Poor-Fair InterOOM Por Barren Chalk Abd Cht Wht-Tan Translu-Op Shp Vit Sh Blk Carb - Char - Gry-Maroon Fissil-Soft No Odor No Stn No Flor NS

Ls Wht-Crm-Tan FxIn Med-Good OOM Por Poor-Fair InterOOM Por Barren Chalk Abd Cht Wht-Tan Translu-Op Shp Vit Sh Blk Carb - Char - Gry-Maroon Fissil-Soft No Odor No Stn No Flor NS

Ls Crm-Tan-Gry FxIn Med-Good OOM Por Poor-Fair InterOOM Vug Por (w/Small-Med OOids in pl) Barren Cht Wht Op Shp Vit Sh AA No Odor No Flor No Stn NS

Sh Blk Carb - Char - Gry- Maroon Fissil-Soft Ls Crm-Tan-Gry FxIn Dns Micrite Poor IxIn Por Barren Cht Wht -Gry Translu-Op Shp Vit Chalky No Odor No Flor No Stn NS

30" CFS @ 4600' Ls Crm-Tan-Gry FxIn Dns Micrite Poor IxIn Por Barren Cht Wht -Gry Translu-Op Shp Vit Pyr Mass ChalkSh Blk Carb-Char-Gry-Maroon Fissil-Soft y No Odor No Flor No Stn NS

LANSING "G" 4576' (- 1749)

60" CFS @ 4600' Ls Crm-Tan-Gry FxIn Dns Micrite Poor IxIn Por Barren Cht Wht -Gry Translu-Op Shp Vit Pyr Mass ChalkSh Blk Carb-Char-Gry-Maroon Fissil-Soft y No Odor No Flor No Stn NS

Ls Wht-Crm MicroxIn Dns Micrite Grad Fair Granular IxIn Por Barren Grad Poor OOM Por Poor Develop Poor Leaching Cht Wht Op Shp Vit Sh AA No Odor No Flor No Stn NS

Ls Wht-Crm MicroxIn Dns Micrite Cht Wht Op Shp Vit Sh AA No Odor No Flor No Stn NS

30" CFS @ 4665' Ls Crm-Tan FxIn Soft Chalk V Abd Grad Dns Micrite Sh Char Tr Only Soft No Odor No Flor No Stn NS

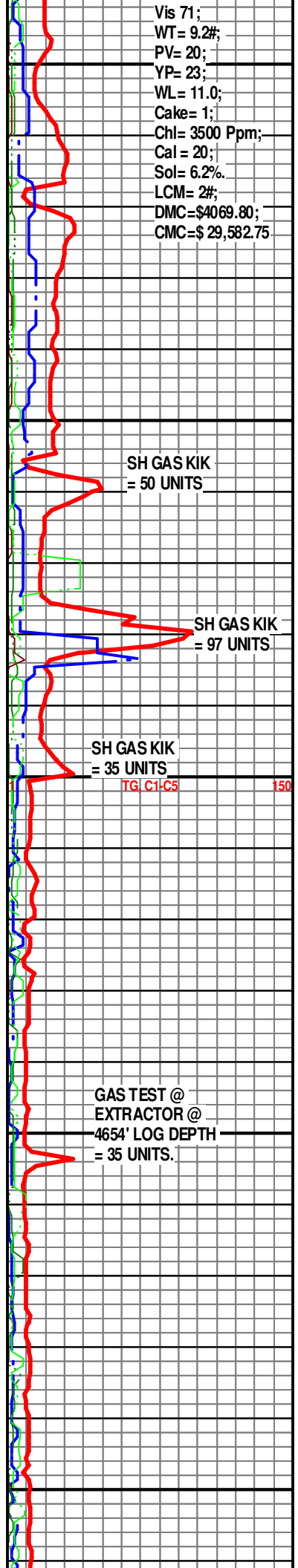
60" CFS @ 4665' Ls Wht-Crm MicroxIn Dns Micrite Grad Fair OOM Por Poor Develop Poor Leaching Soft Chalk Abd AA Cht Gry Translu-Op Shp Vit Sh AA No Odor No Flor No Stn NS

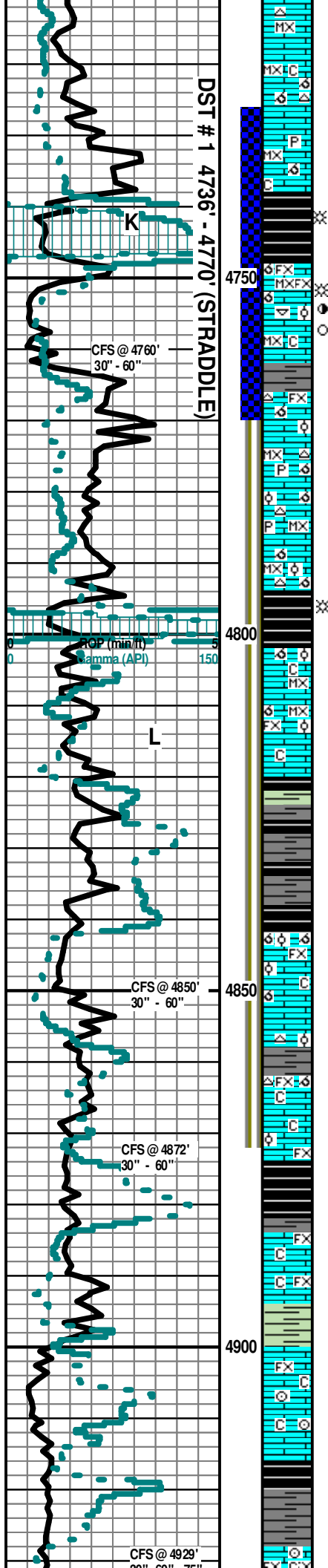
Ls Crm-Tan FxIn Poor OOM Por Poor InterOOM Por Poor Dissolu Poor Leaching Grad Dns Mirite Cht Wht Op Shp Vit Fos (Crin) Chalky Sh Char-Gry Fissil No Odor No Flor No Stn NS

Ls Crm-Tan FxIn Poor OOM Por Poor InterOOM Por Poor Dissolu Poor Leaching Cht Wht Op Shp Vit Fos (Crin) Chalky Sh Char-Gry Fissil No Odor No Flor No Stn NS

Ls Crm-Tan FxIn Poor OOM Por Poor InterOOM Por Poor Dissolu Pooe Leaching Grad Dns Micrite Cht Wht Op Shp Vit Fos (Crin) Chalky Sh Blk Carb-Char-Gry Fissil No Odor No Flor No Stn NS

Ls Wht-Crm MicroxIn Dns Micrite Cht Gry Translu-Op Shp Vit Sh Char- Gry Soft (Tr Only) No Odor No Stn No Flor NS





Ls Wht-Crm MicroIn Dns Micrite Cht Gry Translu-Op Shp Vit Sh Char- Gry Soft No Odor No Stn No Flor NS

Ls Wht-Crm-Tan-Gry MicroIn Dns Micrite Cht Gry Translu-Op Shp Vit Sh Blk Carb- Char- Gry Soft No Odor No Stn No Flor NS

STARK SHALE 4740' (- 1913)

30" CFS @ 4760' Sh Blk Carb-Char Fissil (w/SG) V Abd Ls Wht-Crm-Tan-Brn MicroIn Dns Micrite (w/Pyr Inclus) Grad M/G-OOM Por (w/Small OOids in pl) G- Develop G-Leaching Pyr Mass Chalky ? Faint Odor No Stn No Flor SG

KANSAS CITY "SWOPE" (K) 4748' (-1921)

60" CFS @ 4760' Ls Wht-Crm-Tan MicroIn-FxIn Dns Micrite Grad FxIn Fair-Med Vug InterOOM Por (w/Small-Med OOids in pl) Med-Good Leaching Med Develop (w/SSG & SSO in Heated Wtr & Sli Lt Brn Stn on Edges of OOids (10% in Tray) (SSG & SSO W/Broken in Wtr Under Heat & Both Gas & Oil Do Sli Flor) ? Faint Odor Cht Wht-Gry Op Shp Vit Fos (Pelec) Chalky Sh Blk Carb Fissil Sat Flor SSG & SS Stn SSG & SSFO

Ls Wht-Crm FxIn Med OOM Por (w/ Med OOids in pl) Med-Good Leaching AA Med-Good Dissolu Barren Grad MicroIn Dns Micrite Chalky Sh Char-Gry Fissil No Odor No Stn No Flor NS

Ls Wht-Crm FxIn MicroIn Dns Micrite & Med OOM Por AA Dec Fair Leaching AA Fair Dissolu Barren Grad Chalky Sh Char-Gry (w/Pry Inclus) Fissil No Odor No Stn No Flor NS

Ls Wht-Crm FxIn MicroIn Dns Micrite & Med OOM Por AA Dec Fair Leaching AA Fair Dissolu Barren Grad Chalky Sh Char-Gry (w/Pry Inclus) Fissil No Odor No Stn No Flor NS

HUSHPUCKNEY SHALE 4796' (- 1969)

KANSAS CITY "HERTHA (L)" 4802' (- 1975)

Ls Crm-Tan MicroIn Dns Micrite Chalk Sh Blk arb Fissil No Odor No Stn No Flor NS

KANSAS CITY "HERTHA Ø" 4813' (-1997)

Ls Wht-Crm FxIn Med OOM Por (w/ Med OOids in pl) Med-Good Leaching ? Sli Min Flor Med-Good Dissolu Grad MicroIn Dns Micrite Chalky Sh Char-Gry Fissil No Odor No Stn No Flor NS

Sh Blk Carb-Char-Gry Fissil Ls AA Chalky No Odor No Stn No Flor NS

30" CFS @ 4850' Ls Tan FxIn Micritic Grad Fair-Med OOM Por (w/OOL in pl) Fair Dissolu Fair Develop Med-Good Leaching Barren Chalk Sh Char-Grn Fissil No Odor No Flor No Stn NS

60" CFS @ 4850' Ls Tan-Crm FxIn Micritic Grad Fair-Med OOM Por (w/OOL in pl) Fair Dissolu Fair Develop Med-Good Leaching Barren Chalk Sh Char-Grn Fissil No Odor No Flor No Stn NS

30" CFS @ 4872' Ls Tan-Crm FxIn Fair OOM Por (w/OOL in pl) Fair Dissolu Fair Develop Med-Good Leaching Grad Dns Micritic Barren Cht Wht Op Shp Vit Chalk Sh Char-Grn Fissil No Odor No Flor No Stn NS

60" CFS @ 4872' Ls Tan-Crm FxIn Fair OOM Por (w/OOL in pl) Fair Dissolu Fair Develop Med-Good Leaching Grad Dns Micritic Barren Cht Wht Op Shp Vit Chalk Sh Char-Grn Fissil No Odor No Flor No Stn NS

Sh Blk Carb-Char-Gry-Maroon-Aqua Soft-Fissil Ls Crm-Wht-Tan FxIn Poor IxIn Por Micritic Dns Barren Grad FxIn Chalk I No Odor No Flor No Stn NS

MARMATON 4884' (- 2057)

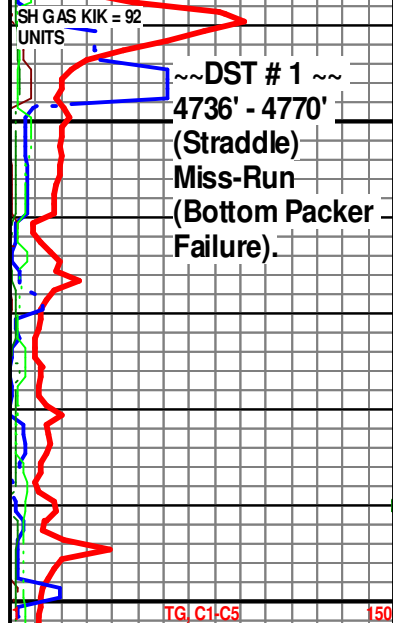
Ls Crm-Wht-Tan FxIn Poor IxIn Por Micritic Dns Barren Grad FxIn Chalk Sh Char-Gry-Maroon-Aqua Soft-Fissil No Odor No Flor No Stn NS

30" CFS @ 4929' Ls Crm-Wht-Tan FxIn Poor IxIn Por Micritic Dns Barren Grad FxIn Chalk Sh Char-Gry-Maroon-Aqua Soft-Fissil No Odor No Flor No Stn NS

60" CFS @ 4929' Ls Crm-Wht-Tan FxIn Poor IxIn Por Micritic Dns Barren Grad FxIn Fos (Crim) V Abd Chalk Sh Blk Carb-Char-Gry- Maroon-Aqua Soft-Fissil No Odor No Flor No Stn NS

MARMATON "B" 4927' (- 2100)

75" CFS @ 4929' Ls Crm-Wht-Tan FxIn Poor IxIn Por Micritic Dns Barren Grad FxIn Fos (Crim) V Abd Chalk Sh Blk Carb-Char-Gry- Maroon-Aqua Soft-Fissil No Odor No Flor No Stn NS



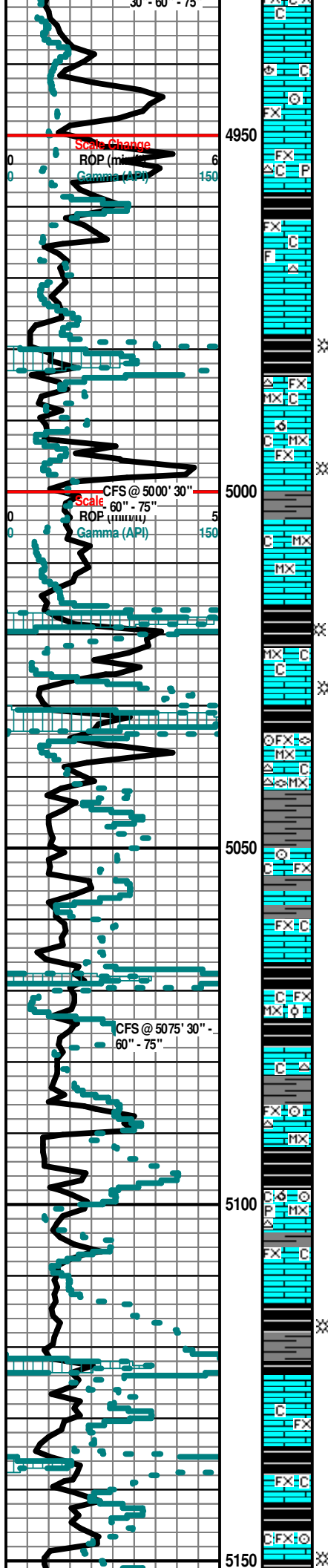
SH GAS KIK = 92 UNITS
 ~DST # 1 ~
4736' - 4770'
(Straddle)
Miss-Run
(Bottom Packer Failure).

TG C1-C5 150

Mudco Ck @
 4872' @ 7:45 AM
 12/20/13
 Vis 51;
 WT= 9.2#;
 PV= 16;
 YP= 18;
 WL= 7.2#;
 Cake= 1;
 Chl= 2600 Ppm;
 Cal= 20;
 Sol= 6.3%.
 LCM= 6#;
 DMC=\$3,602.75;
 CMC=\$ 33,185.50.

SHUT DOWN FOR CHRISTMAS BREAK
 ON 12/21/13 @ 3:45 AM,
 START-UP DRILLING @ 10:00 P.M.
 12/26/13.

Mudco Ck @
 4872' @ 7:00 PM
 12/26/13
 Vis 58;
 WT= 8.8#;
 PV= 19;
 YP= 21;
 WL= 12.0#;
 Cake= 1;
 Chl= 6900 Ppm;
 Cal= 120;
 Sol= 3.2%.
 LCM= 6#;
 DMC=\$1,192.95;
 CMC=\$ 36,110.60.



V Abd Chalk Sh Char- Gry- Maroon - Aqua Soft-Fissil No Odor No Flor No Stn NS

Ls Crm-Wht-Gry Fxln Poor Ixln Por Micritic Dns Barren Chalk Sh Char-Gry Soft-Fissil No Odor No Flor No Stn NS

Ls Tan-Crm-Wht-Gry Fxln Poor Ixln Por Micritic Dns Barren Fos (Brach, Crin) Chalk Sh Char-Gry Soft-Fissil No Odor No Flor No Stn NS

Ls Wht-Crm-Gry Fxln Poor Ixln Pin-Pt Por Micritic (w/Pyr Includ) Dns Barren Cht Wht Translu-Op Shp Vit Fos (Fuss) Chalk Sh Char-Gry Soft-Fissil No Odor No Flor No Stn NS

BANDERA SHALE 4978' (- 2151)

PAWNEE 4984' (- 2157)

60" CFS @ 5000' Ls Wht-Crm-Gry Microxln-Fxln Micrite Dns Grad Poor Ixln Gran Por Cht Wht Translu-Op Shp Vit Sh Blk Carb-Char- Grn/Gry Fissil No Odor No Flor No Stn NS

75" CFS @ 5000' Sh Blk Carb-Char- Grn/Gry Fissil Ls Wht-Crm-Gry Microxln-Fxln Micrite Dns Grad Poor Ixln Gran Por Grad Poor OOM Por Poor InterOOM Por Poor Leaching Poor Develop (Tr Only) No Odor No Stn No Flor NS

Ls Wht-Crm-Tan Microxln Micrite Chalky Sh Blk Carb-Aqua No Odor No Flor No Stn NS

LABETTE SHALE 5016' (- 2189)

FORT SCOTT 5021' (-2194)

Sh Blk Carb-Char-Gry Fissil Ls Wht-Crm-Tan Microxln Micrite Chalky No Odor No Flor No Stn NS

CHEROKEE SHALE 5030' (- 2203)

Sh Blk Carb Abd-Char-Gry Fissil Ls Wht-Crm-Tan Microxln Micrite Grad Fxln Poor Pin-Pt Ixln Por Cht Amber-Wht-Tan Translu-Op Shp Vit Fos (Crin, Fuss) Chalk No Odor No Flor No Stn NS

30" CFS @ 5075' Ls Wht-Crm-Tan Microxln Micrite Grad Fxln Poor Pin-Pt Ixln Por Cht Amber-Wht-Tan Translu-Op Shp Vit Fos (Crin, Fuss) Chalk Sh Blk Carb Abd-Char-Gry No Odor No Flor No Stn NS

60" CFS @ 5075' Ls Crm-Wht Fxln Poor Ixln Por Micritic Dns Barren Chalk Sh Char-Gry Fissil No Odor No Flor No Stn NS

SECOND CHEROKEE SHALE 5067' (- 2240)

75" CFS @ 5075' Ls Crm-Wht Fxln Poor Ixln Por Micritic Dns Barren Chalk Sh Char-Gry Fissil No Odor No Flor No Stn NS

Sh Blk Carb-Char-Gry Fissil Ls Crm-Tan Microxln-Fxln Poor Ixln Por Micritic Dns Barren Grad Poor OOL Por (w Small OOids in pl) Cht Wht Op Shp Vit Chalk Sh Char-Gry Fissil No Odor No Flor No Stn NS

Sh Blk Carb-Char-Gry Fissil Ls Crm-Tan Microxln-Fxln Poor Ixln Por Micritic Dns Barren Grad Poor OOM Por (w Small OOids in pl) Cht Wht Op Shp Vit Chalk Fos (Crin) Sh Char-Gry Fissil No Odor No Flor No Stn NS

Ls Wht-Crm Fxln Poor Ixln Por Micritic Dns (w/Pyr Includ) Barren Chalk Cht Amber Op Shp Vit Sh Blk Carb-Gry Fissil No Odor No Flor No Stn NS

THIRD CHEROKEE SHALE 5114' (- 2287)

Sh Blk Carb-Gry Fissil Ls Crm-Wht-Tan Fxln Poor Ixln Por Micritic Dns Barren Chalk No Odor No Flor No Stn NS

Sh Blk Carb (w/SG)-Char-Gry Fissil Ls Wht-Crm-Tan Microxln-Fxln Poor Ixln Por Micritic Dns Barren Chalk Wht Soft No Odor No Flor No Stn NS

Sh Blk Carb-Gry Fissil Ls Crm-Wht-Tan Fxln Poor Ixln Por Micritic Dns Barren Chalk No Odor No Flor No Stn NS

Ls Crm-Wht-Tan Fxln Poor Ixln Por Micritic Dns Barren Chalk Fos (Crin) Sh Blk Carb-Gry Fissil No Odor No Flor No Stn NS

Ls Crm-Wht-Tan Fxln Poor Ixln Por Micritic Dns Barren Chalk Wht Soft

SH GAS KICK = 93 UNITS

GAS KICK = 55 UNITS

Scale Change TG C1C5 600

SH GAS KICK = 103 UNITS

SH GAS KICK = 242 UNITS

GAS KICK = 103 UNITS

Mudco Ck @
5082' @ 6:50 AM
12/27/13
Vis 47;
WT= 9.0#;
PV= 16;
YP= 16;
WL= 9.0#;
Cake= 1;
Chl= 6100 Ppm;
Cal= 80;
Sol= 4.7%
LCM= 6#;
DMC=\$2,267.55;
CMC=\$ 38,378.15.

SH GAS KICK = 149 UNITS

ES Crm-Wht-Tan Fxn Por Ixln Por Micritic Dns Barren Chalk Cht Drk Blk Cht-Wht-Amber Op Shp Vit Sh Blk Carb-Gry Fissil No Odor No Flor No Stn NS

Sh Char-Gry-Tr Blk Carb Fissil Ls Crm-Wht-Tan Fxn Poor Ixln Por Micritic Dns Barren Chalk Wht Soft No Odor No Flor No Stn NS

Sh Char-Gry-Tr Blk Carb Fissil Ls Crm-Wht-Tan Fxn Poor Ixln Por Micritic Dns Barren Chalk Cht-Gry Op Shp Vit I No Odor No Flor No Stn NS

Sh Char-Gry-Tr Blk Carb Fissil Abd Ls Crm-Wht-Tan Fxn Poor Ixln Por Micritic Dns Barren Grad Poor OOM Por (w/Small OOids in pl) Poor Dissolu Poor Leaching Chalk Cht Drk Blk (w/Wht Fos Includ) Op Shp Vit Fos (Fuss) No Odor No Flor No Stn NS

Sh Char-Gry-Tr Blk Carb Fissil Ls Crm-Wht-Tan Fxn Poor Ixln Por Micritic Dns Barren Grad Poor OOM Por (w/Small OOids in pl) Poor Dissolu Poor Leaching Chalk Cht Drk Blk (w/Wht Fos Includ) Op Shp Vit Fos (Fuss) No Odor No Flor No Stn NS

Sh Char-Gry-Tr Blk Carb Fissil Ls Crm-Wht-Tan Fxn Poor Ixln Por Micritic Dns Barren Chalk Cht-Gry Op Shp Vit I No Odor No Flor No Stn NS

Sh Char-Gry-Tr Blk Carb Fissil Ls Crm-Wht-Tan Fxn Poor Ixln Por Micritic Dns Barren Cht Wht (Fos (Fuss) Includ) Op Shp Vit No Odor No Flor No Stn NS

Sh Char-Gry-Tr Blk Carb Fissil Ls Crm-Wht-Tan Fxn Poor Ixln Por Micritic Dns Barren Chalk Cht Drk Blk-Wht (w/Fos (Fuss) Includ) Op Shp Vit No Odor No Flor No Stn NS

Ls Crm-Wht-Tan Fxn Poor Ixln Por Micritic Dns Barren Chalk Cht Drk Blk-Wht (w/Fos (Fuss) Includ) Op Shp Vit Sh Char-Gry-Tr Blk Carb Fissil No Odor No Flor No Stn NS

ATOKA SHALE 5240' (- 2413)

30" CFS @ 5265' Sh Char-Gry-Tr Blk Carb-Brn Soft-Fissil Ls Crm-Wht-Tan MicroIn-Fxn Poor Ixln Por Micritic Dns Barren Chalk Cht Drk Blk-Wht (w/Fos (Fuss) Includ) Op Shp Vit Faint Odor No Flor No Stn NS

60" CFS @ 5265' Sh Char-Gry-Blk Carb (w/SSG) Soft-Fissil Ls Crm-Wht-Tan MicroIn-Fxn Poor Ixln Por Micritic Dns Barren Chalk Cht Drk Blk-Wht Banding (w/Fos (Fuss) Includ) Op Shp Vit No Odor ? Min Flor (2 Pcs) No Stn NS

75" CFS @ 5265' Sh Char-Gry-Blk Carb Soft-Fissil Ls Crm-Wht-Tan MicroIn-Fxn Poor Ixln Por Micritic Dns Barren Chalk Cht Drk Blk-Wht Banding (w/Fos (Fuss) Includ) Op Shp Vit No Odor No Flor No Stn NS

30" CFS @ 5290' Sh Char-Gry-Blk Carb Soft-Fissil Ls Crm-Wht-Tan MicroIn-Fxn Poor Ixln Por Micritic Dns Barren Chalk Cht Drk Blk-Wht Banding (w/Fos (Fuss) Includ) Op Shp Vit No Odor No Flor No Stn NS

60" CFS @ 5290' Ls Crm-Wht-Tan MicroIn-Fxn Poor Ixln Por Micritic Dns Barren Chalk Cht Drk Blk-Wht Banding (w/Fos (Fuss) Includ) Op Shp Vit Sh Char-Gry-Blk Carb Soft-Fissil No Odor No Flor No Stn NS

MORROW SHALE 5288' (- 2457) MISSISSIPPIAN CHESTER 5292' (- 2465)

75" CFS @ 5290' Ls Crm-Wht-Tan MicroIn-Fxn Poor Ixln Por Micritic Dns Barren Chalk Cht Drk Blk-Wht Banding (w/Fos (Fuss) Includ) Op Shp Vit Sh Char-Gry-Blk Carb Soft-Fissil No Odor No Flor No Stn NS

Ls Crm-Tan Fxn Fair-Med OOL Vug Por (w/Small-Med OOids in pl) Grad Med-Good Ixln Pin-Pt Por (w/Pyr Includ) (V Soft) (w/Matted Fos Includ (Brach, Crin, Fuss, Spicule) Por Med-Good SG & SO (Gas & Oil Do Not Flor) (GSG & GSFO w/Broken In Wtr Under Heat & SFO in tray) Med-Good Inc Odor Drk Brn Gillsonitic Stn No Flor GSG & GSO

30" CFS @ 5330' Ls Crm-Tan Fxn Fair-Med OOL Vug Por (w/Small-Med OOids in pl) Grad Med-Good Ixln Pin-Pt Por (w/Pyr Includ) (V Soft) (w/Matted Fos Includ (Brach, Bry, Crin, Fuss, Spicule) Por Med-Good SG & SO (Gas & Oil Do Not Flor) (GSG & GSFO w/Broken In Wtr Under Heat & SFO in tray) ? Glacu (Tr Only) Med-Good Inc Odor Drk Brn Hvy Gillsonitic Stn No Flor GSG & GSO

60" CFS @ 5330' Ls Crm-Tan Fxn Fair-Med OOL Vug Por (w/Small-Med OOids in pl) Grad Med-Good Ixln Pin-Pt Por (w/Pyr Includ) (w/Matted Fos Includ (Lg Crin V Abd, Pelec) Por Med-Good GSG & GSO Sh Blk Carb-Char-Aqua Fissil Inc. Good Odor Good Sat Sm (Lt Brn-Hvy Gillsonitic) No Flor GS

75" CFS @ 5330' Ls AA Sh Blk Carb-Char-Gry Fissil Inc. GS AA

? Trip Debris Sh Char- Gry- Drab Grn- Blk Carb Fissil Ls Wht- Crm- Gry MicroIn-Fxn Dns Micrite Grad Fair Pin-Pt Ixln Por (w/Streaks Pyr Includ) Pyr Mass Fos (Brach) No Odor No Flor NS

? Trip Debris Sh Char- Gry- Drab Grn- Blk Carb Fissil Ls Wht- Crm- Gry MicroIn-Fxn Dns Micrite Grad Fair Pin-Pt Ixln Por (w/Streaks Pyr Includ) Pyr Mass No Odor No Flor NS

? Trip Debris Sh Char- Gry- Drab Grn- Blk Carb Fissil Ls Wht- Crm- Gry MicroIn-Fxn Dns Micrite Grad Fair Pin-Pt Ixln Por (w/Streaks Pyr Includ) Pyr Mass No Odor No Flor NS

? Trip Debris Ls Wht-Fxn Dns Micrite Grad Fair Pin-Pt Ixln Por (w/streaks

SH GAS KICK = 144 UNITS

~ DST # 2 ~
5259'-5330'

Times:
5'-60"-90"-90";
Blow: IF=
Good/11" . No
Blow Back During
ISIP.
FF= Strong Blow
BOB/Immed 10
Sec. Slight Blow
Back During
FSIP/15" & Died.

SH GAS KICK = 118 UNITS

TG C1:C5 600

Recovery: 325' TF:
77' GOSM (5% G
& 95% M);
124' GSOCM (25%
G, 1% O, 74% M);
62' GOCM & EMUL
(20% G, 5% O, 75%
M); & 62' GOCM &
EMUL (50% G, 15%
O, 35% M).

SH GAS KICK = 218 UNITS

Pressures:
IH = 2756#;
FH = 2673#;
IF = 137.97#;
FF = 169-146#;
ISIP = 1602#;
FSIP = 1333#;
Temp. = 125
degrees F.

Mudco Ck @
5330' @ 8:20 AM
12/28/13
Vis 50;
WT = 9.35#;
PV = 16;
YP = 17;
WL = 10.4#;
Cake = 1;
Chl = 7000 Ppm;
Cal = Hvy;
Sol = 6.7%;
LCM = 7#;
DMC = \$720.25;
CMC = \$39,098.40.

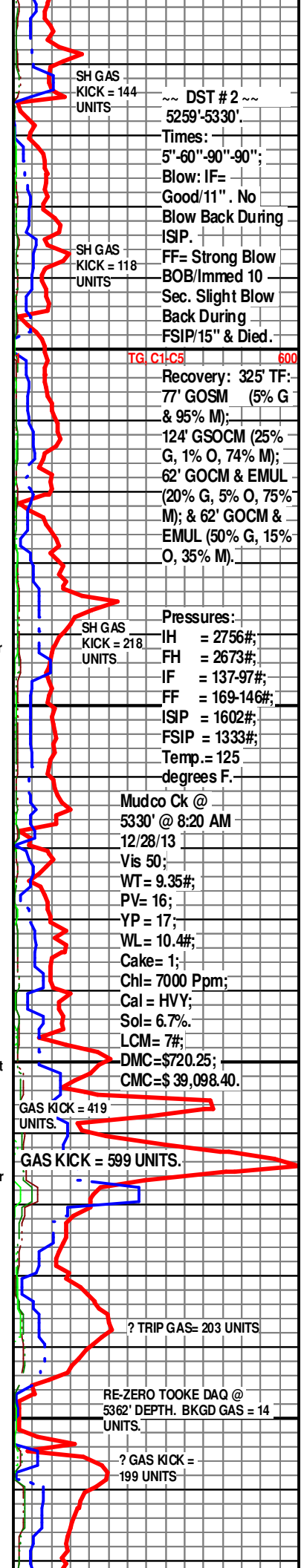
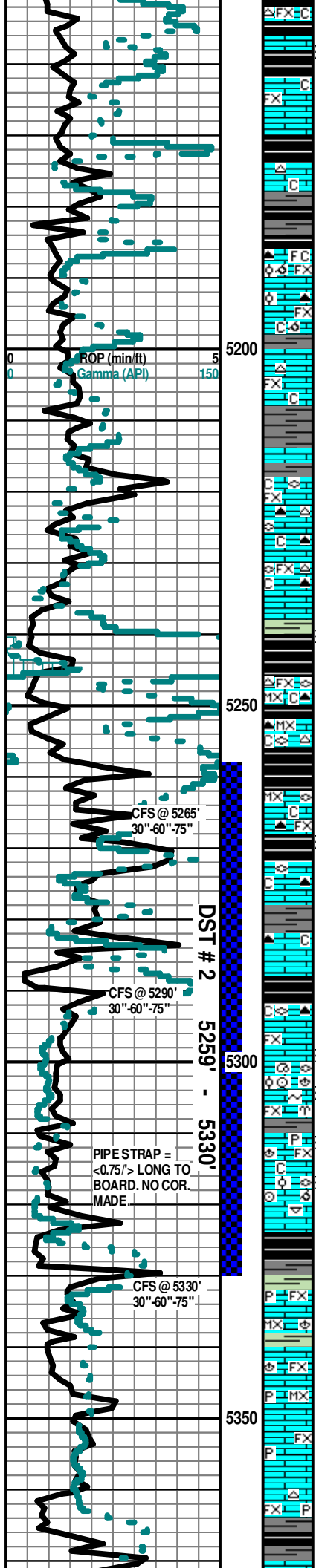
GAS KICK = 419 UNITS.

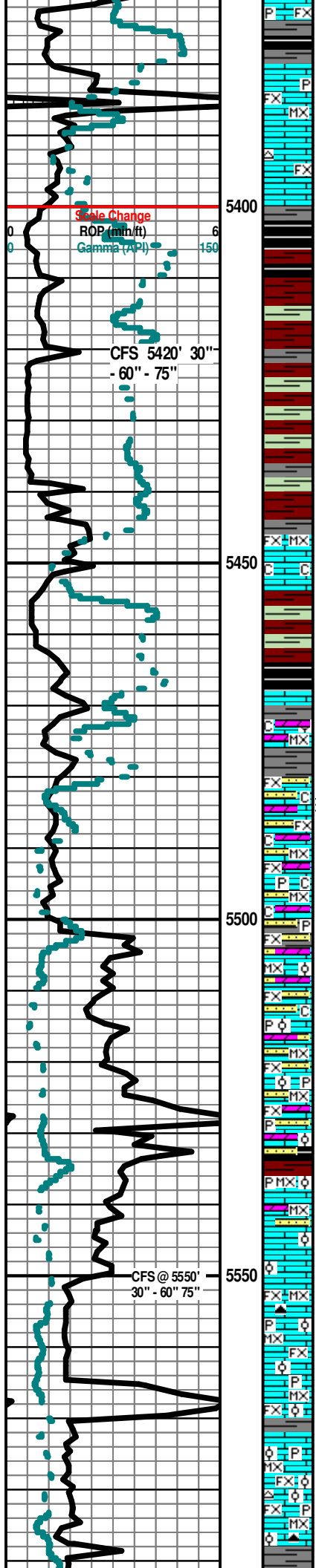
GAS KICK = 599 UNITS.

? TRIP GAS = 203 UNITS

RE-ZERO TOOKE DAQ @
5362' DEPTH. BKGD GAS = 14 UNITS.

? GAS KICK = 199 UNITS





Pyr Incl) Pyr Mass Abd Sh Char-Gry- Drab Grn-Blk Carb Fissil No Odor No Flor NS

? Trip Debris Sh Char- Gry-Drab Grn- Blk Carb- Fissil Ls Wht-Fxn Dns Micrite Grad Fair Pin-Pt IxIn Por (w/Streaks Pyr Inclus) Pyr Mass Abd Sh Char-Gry-Drab Grn-Blk Carb Fissil No Odor No Flor NS

Ls Wht-Crm Fxn Micrite Grad Fair IxIn Por Barren Cht Amber Translu Vit Shp Sh Maroon-Yell-Purp-Char-Blk Carb Soft-Fissil Abd No Odor No Stn No Flor

30" CFS @ 5420' Sh Maroon-Yell-Purp-Char-Blk Carb Soft-Fissil Abd Ls Wht-Crm Fxn Micrite Grad Fair IxIn Por Barren Cht Amber Translu Vit Shp No Odor No Stn No Flor

60" CFS @ 5420' Sh Maroon-Yell-Purp-Char-Blk Carb Soft-Fissil Abd Ls Wht-Crm Fxn Micrite Grad Fair IxIn Por Barren Cht Amber Translu Vit Shp No Odor No Stn No Flor

75" CFS @ 5420' Sh Varicolored AA Ls AA (1 Pc w/ Good Fxn Fos Mat IxIn Por w/Hvy Brn Stn W/ Good SG & SO ? Trip Debris Likely From Top Chester) No Odor (1 Pc Stn) No Flor NS

Sh Red-Maroon-Char-Aqua-Grn/Gry Soft-Fissil (Wash Red) V Abd Ls AA Fxn-MicroxIn Dns Micrite Barren Chalk No Odor No Stn No Flor NS

Sh Red-Maroon-Char-Aqua-Grn/Gry Soft-Fissil (Wash Red) V Abd Ls AA Fxn-MicroxIn Dns Micrite Barren Chalk No Odor No Stn No Flor NS

Sh Red-Maroon-Char-Aqua-Grn/Gry Soft-Fissil (Wash Red) V Abd Ls AA Fxn-MicroxIn Dns Micrite Barren Chalk No Odor No Stn No Flor NS

Sh Red-Maroon-Char-Aqua-Grn/Gry Soft-Fissil (Wash Red) V Abd Ls AA Fxn-MicroxIn Dns Micrite Barren Chalk No Odor No Stn No Flor NS

MISSISSIPPIAN "Ste. GEN" 5474' (- 2647)

Ls Wht-Lt Aqua (in Aqua CaCo3 Matrix) Fxn Poor OOL Por (w/V Small OOids in pl) "Sandy OOL Ls" Friable Grad Dolo Gry MicroxIn Dns Micrite Chalk Sh Char-Blk Carb-Gry-Grn-Aqua-Maroon Soft- Fissil No Odor No Flor No Stn NS NS

Ls Wht-Lt Brn (in CaCo3 Matrix) Fxn Poor OOL Por (w/V Small OOids in pl) "Sandy OOL Ls" Qtz Ss Wht-Lt Brn VFGm Poor "Salt & Pepper" InterGran Por (w/ SSG & SSO (Drk Brn) Under Heat in Wtr) Friable (Gas & Oil Do Not Flor) Grad Dolo Gry MicroxIn Dns Micrite Chalk Sh Varicolored Soft- Fissil No Odor No Flor Sli Stn (Lt Brn) SSG & SSO

Ls Wht-Lt Brn (in CaCo3 Matrix) Fxn Poor OOL Por (w/V Small OOids in pl) "Sandy OOL Ls" (w/Pyr Inclus) Qtz Ss Wht-Lt Brn VFGm Poor "Salt & Pepper" InterGran Por Friable Grad Dolo Gry MicroxIn Dns Micrite Chalk Sh Varicolored Soft- Fissil No Odor No Flor Sli ? Stn (Lt Brn) NS

Ls Wht-Lt Brn (in CaCo3 Matrix) Fxn Poor OOL Por (w/V Small OOids in pl) "Sandy OOL Ls" (w/Pyr Inclus) Qtz Ss Wht-Lt Brn VFGm Poor "Salt & Pepper" InterGran Por Friable Grad Dolo Gry MicroxIn Dns Micrite Chalk Sh Varicolored Soft- Fissil No Odor No Flor Sli ? Stn (Lt Brn) NS

Ls Wht-Lt Brn (in CaCo3 Matrix) Fxn Poor OOL Por (w/V Small OOids in pl) "Sandy OOL Ls" (w/Pyr Inclus) Qtz Ss Wht-Lt Brn VFGm Poor "Salt & Pepper" InterGran Por Friable Grad Dolo Gry MicroxIn Dns Micrite Chalk Sh Varicolored Soft- Fissil No Odor No Flor Sli ? Stn (Lt Brn) NS

30" CFS @ 5550' Ls Wht-Lt Brn (in CaCo3 Matrix) Fxn Poor OOL Por (w/V Small OOids in pl) "Sandy OOL Ls" (w/Pyr Inclus) Qtz Ss Wht-Lt Brn VFGm Poor "Salt & Pepper" InterGran Por Friable Grad Dolo Gry MicroxIn Dns Micrite Chalk Sh Varicolored Soft- Fissil No Odor No Flor Sli ? Stn (Lt Brn) NS

60" CFS @ 5550' Ls Wht-Lt Brn (in CaCo3 Matrix) Fxn Poor OOL Por (w/V Small OOids in pl) "Sandy OOL Ls" (w/Pyr Inclus) Qtz Ss Wht-Lt Brn VFGm Poor "Salt & Pepper" InterGran Por Friable Grad Dolo Gry MicroxIn Dns Micrite Chalk Sh Varicolored Soft- Fissil No Odor No Flor Sli ? Stn (Lt Brn) NS

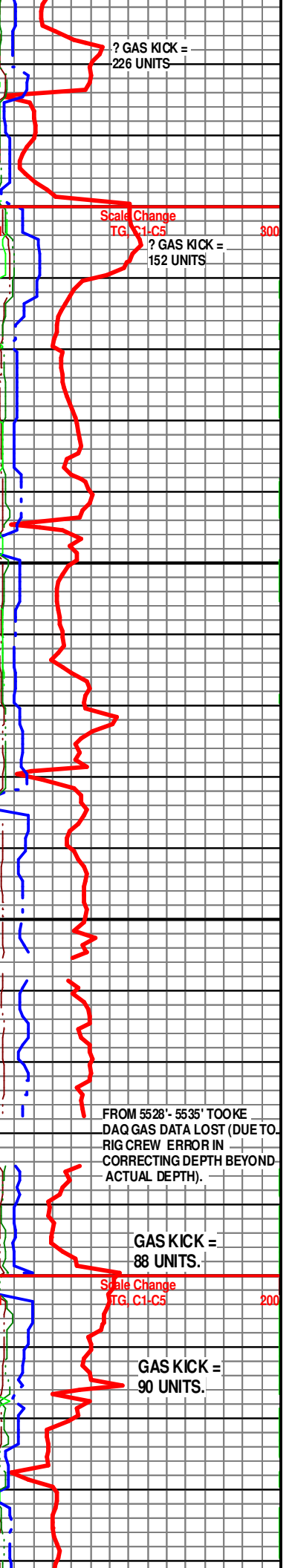
75" CFS @ 5550' Ls AA Qtz Ss AA Dolo AA Sh AA Inc Maroon No Odor No Flor No Stn NS

Ls Wht-Crm-Lt Gry MicroxIn-Fxn Poor IxIn Por Dns Micrite Grad Poor InterOOL Por (w/V Small OOids in pl w/ Pyr Inclus) Friable "Sandy OOL Ls" Cht Org - Peach Translu-Op Shp Vit Sh Char-Blk Carb-Lt Gry-Aqua Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Lt Gry MicroxIn-Fxn Poor IxIn Por Dns Micrite Grad Poor InterOOL Por (w/V Small OOids in pl w/ Pyr Inclus) Friable "Sandy OOL Ls" Glacu (Tr Only) Sh Char-Blk Carb-Lt Gry-Aqua Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Lt Gry MicroxIn-Fxn Poor IxIn Por Dns Micrite Grad Poor InterOOL Por (w/V Small OOids in pl w/ Pyr Inclus) Friable "Sandy OOL Ls" Sh Char-Blk Carb-Gry-Olive-Maroon Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Lt Gry MicroxIn-Fxn Poor IxIn Por Dns Micrite Grad Poor InterOOL Por (w/V Small OOids in pl w/ Pyr Inclus) Friable "Sandy OOL Ls" Sh Char-Blk Carb-Gry-Olive-Maroon Fissil No Odor No Stn No Flor NS



Ls Wht-Crm-Lt Gry MicroxIn-FxIn Poor IxIn Por Dns Micrite Grad Poor InterOOL Por (w/v Small OOids in pl w/ Pyr Inclus) Friable "Sandy OOL Ls" Sh Char-Blk Carb-Gry-Olive-Maroon Fissil No Odor No Stn No Flor NS

MISS. "ST. LOUIS" POROSITY 5604' (- 2777)

Ls Wht-Crm-Lt Gry MicroxIn-FxIn Poor IxIn Por Dns Micrite Grad Poor InterOOL Por (w/v Small OOids in pl w/ Pyr Inclus) Friable "Sandy OOL Ls" Cht Wh t- Clear Translu Shp Vit Sh Char-Blk Carb-Gry-Yell-Maroon Fissil No Odor No Stn No Flor NS

Ls Wht-Crm-Lt Gry MicroxIn-FxIn Poor IxIn Por Dns Micrite Grad Poor InterOOL Por (w/v Small OOids in pl w/ Pyr Inclus) Friable "Sandy OOL Ls" Grad Med OOL Por (w/Tr Poor Vug Leaching) ? VSSO (1 Pc) Cht Tan Op Shp Vit Chalky Sh Char-Blk Carb-Gry Fissil No Odor No Stn No Flor ? (1 Pc) NS

Ls Wht-Gry MicroxIn-FxIn Poor IxIn Por Dns Micrite Grad Poor InterOOL Por (w/Small-Med OOids in pl) Friable "Sandy OOL Ls" Grad Med OOL Por (w/Tr Poor Vug Leaching) Cht Wht-Peach Translu-Op Shp Vit Chalky Sh Char-Blk Carb-Gry Fissil No Odor No Stn No Flor NS

Ls Wht-Gry MicroxIn-FxIn Poor IxIn Por Dns Micrite Grad Poor InterOOL Por (w/Small-Med OOids in pl) Friable "Sandy OOL Ls" Grad Med OOL Por (w/Tr Poor Vug Leaching) Cht Wht-Peach Translu-Op Shp Vit Chalky Sh Char-Blk Carb-Gry Fissil No Odor No Stn No Flor NS

Ls Wht-Gry MicroxIn-FxIn Poor IxIn Por Dns Micrite Grad Poor InterOOL Por (w/Small-Med OOids in pl) Friable "Sandy OOL Ls" Grad Med OOL Por (w/Tr Poor Vug Leaching) Cht Peach-Org Inc Translu-Op Shp Vit Chalky Sh Char-Blk Carb-Maroon Abd Inc-Gry Fissil No Odor No Stn No Flor NS

Ls Wht-Gry MicroxIn-FxIn Poor IxIn Por Dns Micrite Grad Poor InterOOL Por (w/Small-Med OOids in pl) Friable "Sandy OOL Ls" Grad Med OOL Por (w/Tr Poor Vug Leaching) Cht Peach-Org Inc Translu-Op Shp Vit Chalky Sh Char-Blk Carb-Maroon Abd Inc-Gry Fissil No Odor No Stn No Flor NS

30" CFS @ 5700' Ls Wht-Gry MicroxIn-FxIn Poor IxIn Por Dns Micrite Grad Poor InterOOL Por (w/Small-Med OOids in pl) Friable "Sandy OOL Ls" Grad Med OOL Por (w/Tr Poor Vug Leaching) Cht Blk Translu-Op Shp Vit Chalky Sh Char-Blk Carb-Maroon Abd Inc-Gry Fissil No Odor No Stn No Flor NS

60" CFS @ 5700' Ls Wht-Gry MicroxIn-FxIn Poor IxIn Por Dns Micrite Grad Poor InterOOL Por (w/Small-Med OOids in pl) Friable "Sandy OOL Ls" Grad Med OOL Por (w/Tr Poor Vug Leaching) Cht Blk Translu-Op Shp Vit Chalky Sh Char-Blk Carb-Maroon Abd Inc-Gry Fissil No Odor No Stn No Flor NS

Electric Logs Run: By Weatherford Logging: Dual Induction; Compensated Density-Neutron; Sonic; & Microresistivity Logs.

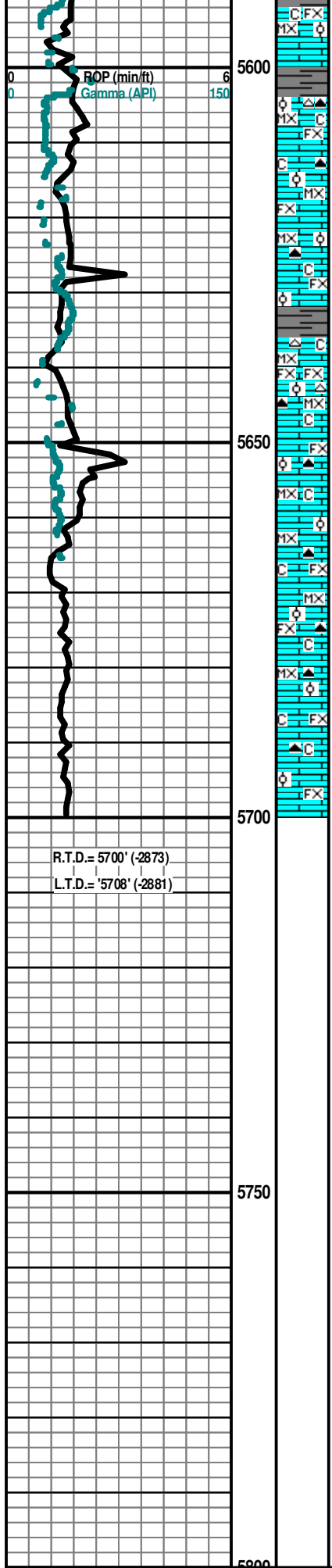
Geologist Left Location At: 8:30 AM on 12/30/2013

TG C1-C5 200

GAS KICK = 64 UNITS

Mudco Ck @
5596' @ 6:50 AM
12/29/13
Vis 69;
WT= 9.25#;
PV= 20;
YP= 23;
WL= 7.6;
Cake= 1;
Chl= 2800 Ppm;
Cal= 40;
Sol= 6.3%
LCM= 6.5#;
DMC=\$2,229.40;
CMC=\$ 41,327.80.

CHANGEOUT EXTRACTOR FILTER @ 5700';
GAS TEST EXTRACTOR = 100 UNITS.



R.T.D.= 5700' (-2873)
L.T.D.= 5708' (-2881)

ALLIED OIL & GAS SERVICES, LLC 052129

Federal Tax I.D.# 20-5975804

REMIT TO P.O. BOX 31

RUSSELL, KANSAS 67665

SERVICE POINT:

Liberal K.S.

DATE <u>12-16-13</u>	SEC.	TWP.	RANGE	CALLED OUT	ON LOCATION	JOB START	JOB FINISH
<u>Patterson - O'Brate LEASE</u>	<u>A</u>	<u>WELL# 1-17</u>	<u>LOCATION To Coopland K.S. on</u>		<u>County</u>	<u>1430</u>	<u>1600</u>
OLD OR (NEW) (Circle one)			<u>CR #2 go South 7 miles West into</u>		<u>Gray</u>		<u>K.S.</u>

CONTRACTOR <u>Steering #2</u>	OWNER
TYPE OF JOB <u>Surface</u>	
HOLE SIZE <u>12 1/4"</u>	T.D. <u>1830'</u>
CASING SIZE <u>8 5/8"</u>	DEPTH <u>1819.38"</u>
TUBING SIZE	DEPTH
DRILL PIPE	DEPTH
TOOL	DEPTH
PRES. MAX	MINIMUM
MEAS. LINE	SHOE JOINT
CEMENT LEFT IN CSG.	
PERFS.	
DISPLACEMENT <u>113.7</u>	

EQUIPMENT

PUMP TRUCK	CEMENTER <u>Kirby Harper</u>
# <u>519-550</u>	HELPER <u>Keamy D</u>
BULK TRUCK	
# <u>472-554</u>	DRIVER <u>Alex Corona</u>
BULK TRUCK	
# <u>456-556</u>	DRIVER <u>Alex Ayala</u>

REMARKS:

CEMENT	AMOUNT ORDERED <u>670sk ALWA-1</u>
	<u>3% CC, 1/4" FloSeal</u>
	<u>200 S/c Class A - 3% CC, 1/4" FloSeal</u>
COMMON	<u>200sk @ 17.90 = 3580.00</u>
POZMIX	@
GEL	@
CHLORIDE	<u>29.00 @ 6.40 = 1856.00</u>
ASE <u>ALC2A</u>	<u>670sk @ 16.50 = 11055.00</u>
<u>FloSeal</u>	<u>218sk @ 2.90 = 617.40</u>
	@
<u>Stop Loss</u>	<u>10 BBL @ 250.00 = 2500.00</u>
	@
	@
	@
	@
	@
HANDLING	<u>984 ft³ @ 2.45 = 2440.35</u>
MILEAGE	<u>1247 Tm @ 2.50 = 3242.25</u>

TOTAL 22000.00
25,320.95

SERVICE

DEPTH OF JOB	
PUMP TRUCK CHARGE	<u>2213.75</u>
EXTRA FOOTAGE	@
MILEAGE	<u>30mt @ 7.70 = 231.00</u>
MANIFOLD	<u>1 Day @ 275.00 = 275.00</u>
	<u>30mt @ 4.40 = 132.00</u>
	@

TOTAL 2851.75

PLUG & FLOAT EQUIPMENT

<u>Guide Shoe</u>	<u>1EA @ 460.94 = 460.94</u>
<u>Insert Float</u>	<u>1EA @ 446.94 = 446.94</u>
<u>Controlizers</u>	<u>5EA @ 74.80 = 374.40</u>
<u>Log Plug</u>	<u>1EA @ 131.04 = 131.04</u>
<u>Bucket</u>	<u>1EA @ 559.26 = 559.26</u>

TOTAL 1972.62

SALES TAX (If Any)	
TOTAL CHARGES	<u>30,145.35</u>
DISCOUNT	<u>Net -</u>
	<u>IF PAID IN 30 DAYS</u>

19,594.48

CHARGE TO: McCoy
STREET _____
CITY _____ STATE _____ ZIP _____

To: Allied Oil & Gas Services, LLC.
You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

PRINTED NAME _____
SIGNATURE Rave Allu

ALLIED OIL & GAS SERVICES, LLC 052047

Federal Tax I.D.# 20-5975804

REMIT TO P.O. BOX 31
RUSSELL, KANSAS 67665

SERVICE POINT:
Liberal (21)

DATE <u>10-30-13</u>	SEC <u>17</u>	TWP. <u>30</u>	RANGE <u>30W</u>	CALLED OUT	ON LOCATION <u>5:00pm</u>	JOB START <u>7:00pm</u>	JOB FINISH <u>9:00pm</u>
LEASE <u>Paterson Lease # 4</u>			WELL # <u>1-17</u>	LOCATION <u>Vec Coaland H/S</u>	COUNTY <u>Meade</u>	STATE <u>KS</u>	
OLD OR (NEW) (Circle one)							

CONTRACTOR Sterling # 5

TYPE OF JOB Production

HOLE SIZE 7 7/8 T.D.

CASING SIZE 4 1/2 DEPTH 5706

TUBING SIZE DEPTH

DRILL PIPE DEPTH

TOOL DEPTH

PRES. MAX MINIMUM

MEAS. LINE SHOE JOINT 42

CEMENT LEFT IN CSG.

PERFS.

DISPLACEMENT 90665

EQUIPMENT

OWNER

CEMENT

AMOUNT ORDERED 27551 Class A 6 mgyp
seal 10% salt + 2% # Gilsonite
1500 FL-160 5054602 40 40 seal

COMMON <u>A-9CH Class A 2750</u>	@ <u>23.40</u>	<u>6,435.00</u>
POZMIX <u>20 sk</u>	@ <u>9.35</u>	<u>187.00</u>
GEL <u>2 sk</u>	@ <u>23.40</u>	<u>46.80</u>
CHLORIDE	@	
<u>SE Gilsonite 1375 lb</u>	@ <u>.98</u>	<u>1,347.50</u>
<u>Class A Cement 30 sk</u>	@ <u>17.90</u>	<u>537.00</u>
<u>FL-160 129 lb</u>	@ <u>18.90</u>	<u>2,438.10</u>
<u>SPEL-Super flash 24 bbl</u>	@ <u>58.70</u>	<u>1,408.80</u>
	@	
	@	
	@	
	@	
HANDLING <u>411 cu ft</u>	@ <u>2.48</u>	<u>1,019.28</u>
MILEAGE <u>533 Ton mile</u>	@ <u>2.60</u>	<u>1,385.80</u>
		TOTAL <u>14,005.28</u>

PUMP TRUCK CEMENTER Lenny Bocca Aldo E.

530-484 HELPER Heriberto V.

BULK TRUCK

457-251 DRIVER Alex Aguila

BULK TRUCK

DRIVER

REMARKS:

CHARGE TO: McGoy Petroleum Corp

STREET _____

CITY _____ STATE _____ ZIP _____

TOTAL 3737.25

PLUG & FLOAT EQUIPMENT

<u>AFU Float Shoe 1</u>	@	<u>302.59</u>
<u>Latchdown Fly 1</u>	@	<u>272.61</u>
<u>Centralizers 6</u>	@ <u>Scale</u>	<u>336.96</u>
<u>Cement basket 1</u>	@	<u>315.90</u>
<u>Turbolizers 3</u>	@ <u>90.09</u>	<u>270.27</u>
		TOTAL <u>1578.33</u>

To: Allied Oil & Gas Services, LLC.
You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

SALES TAX (If Any) _____

TOTAL CHARGES \$ 20,120.86

DISCOUNT _____ IF PAID IN 30 DAYS

PRINTED NAME Calvin Mikkelsen

SIGNATURE Calvin Mikkelsen

Net \$ 13,078.56