



## 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

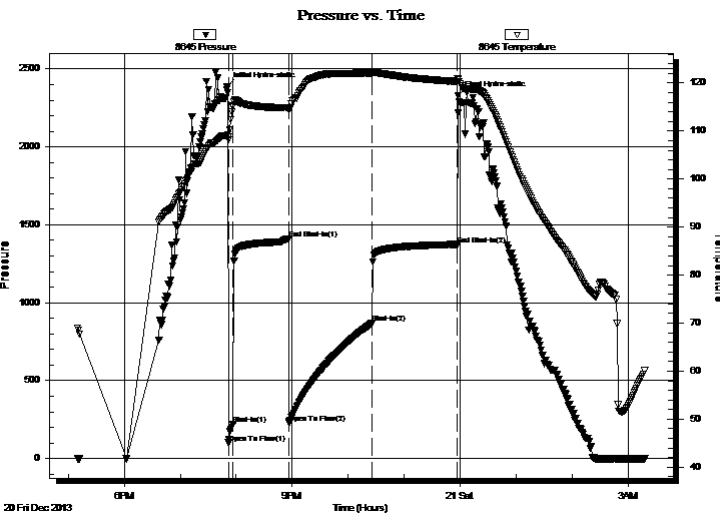
**S17-30s-30w Meade, KS**  
**Patterson-O'Brate A**  
 Job Ticket: 55565 **DST#: 1**  
 Test Start: 2013.12.20 @ 17:10:00

## 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 in<sup>3</sup>

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 bbbl
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

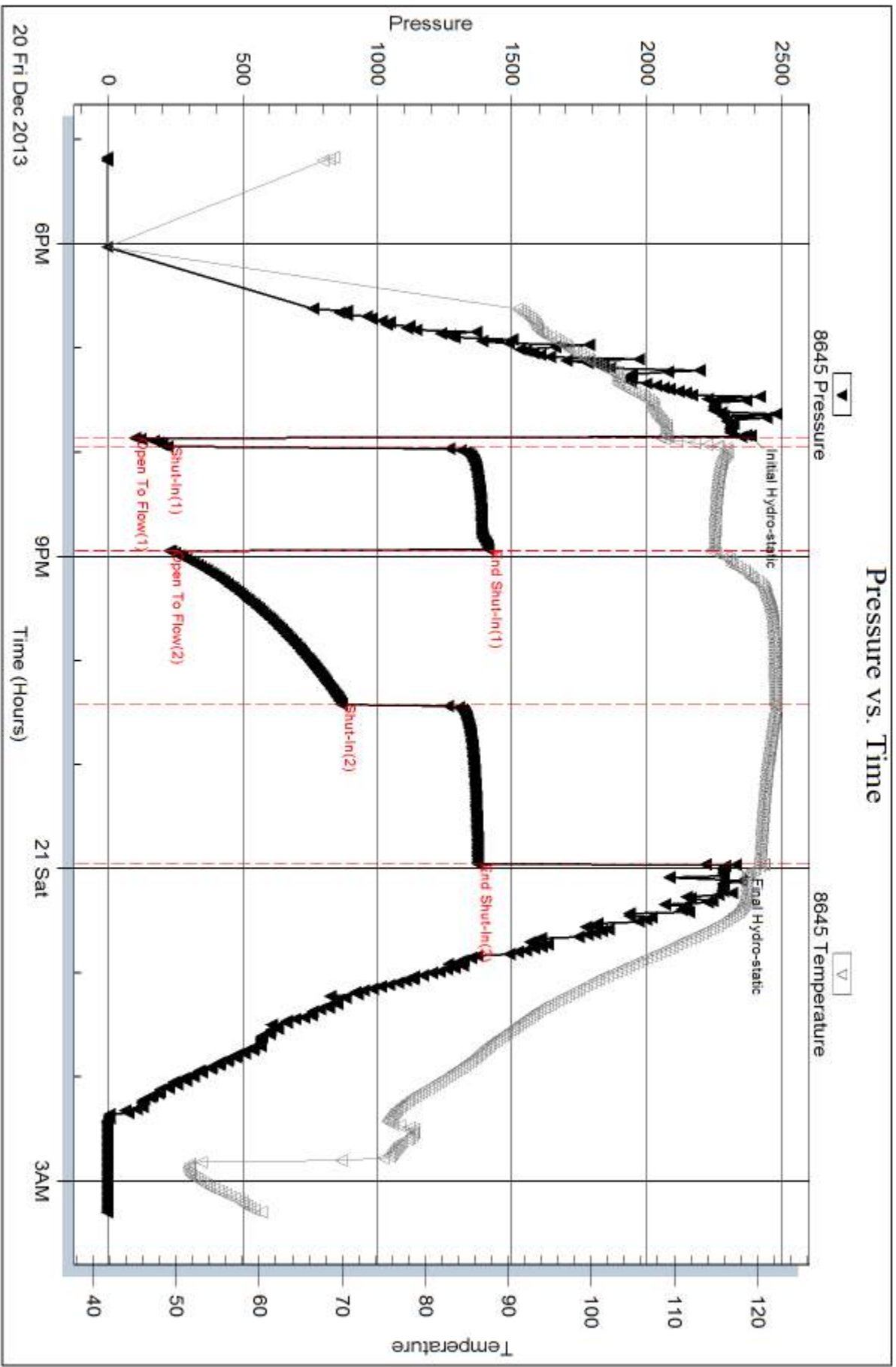
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

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



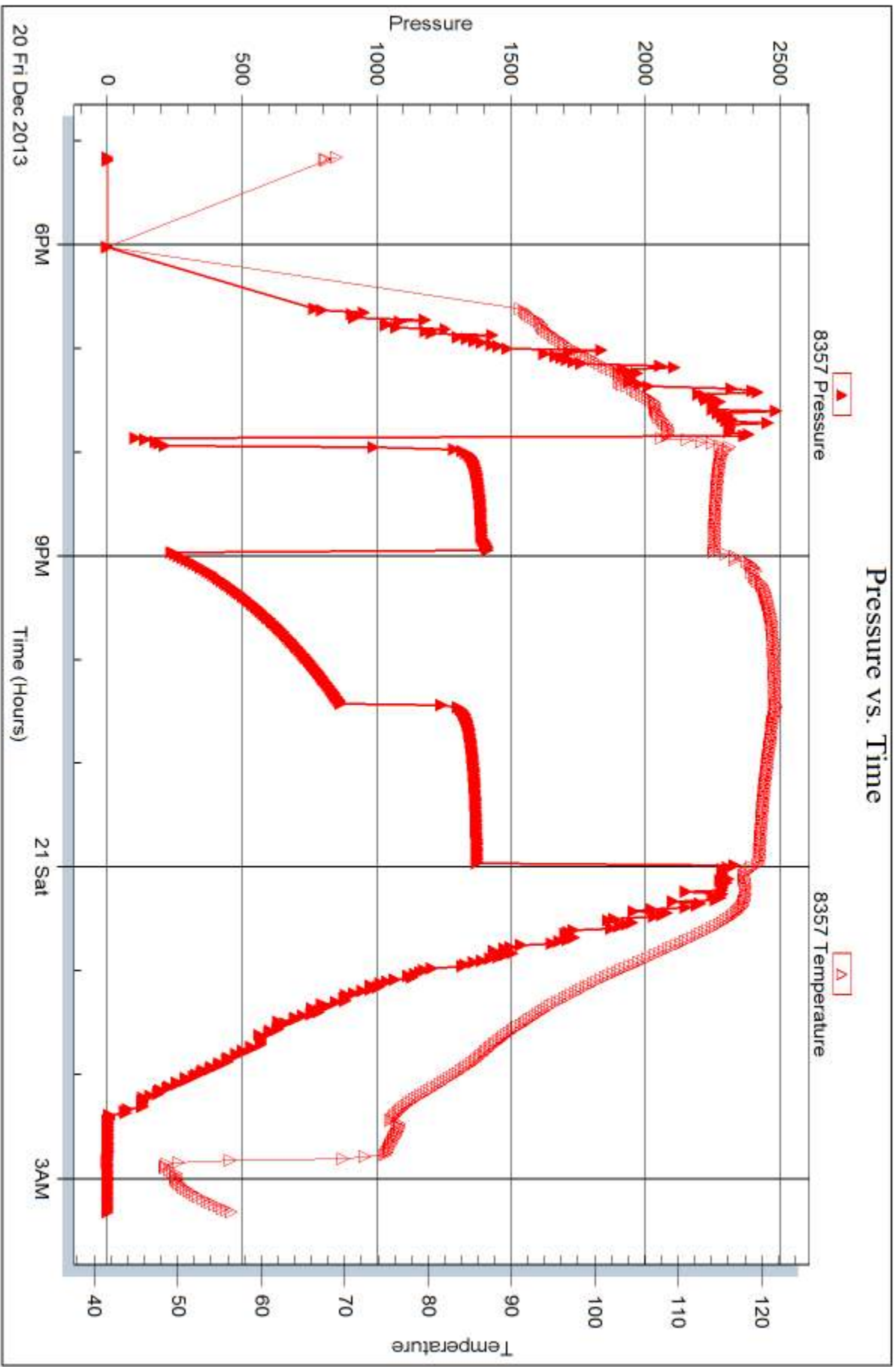
Serial #: 8357

Inside

McCoy Petroleum Corp.

Patterson-O'Brate A

DST Test Number: 1

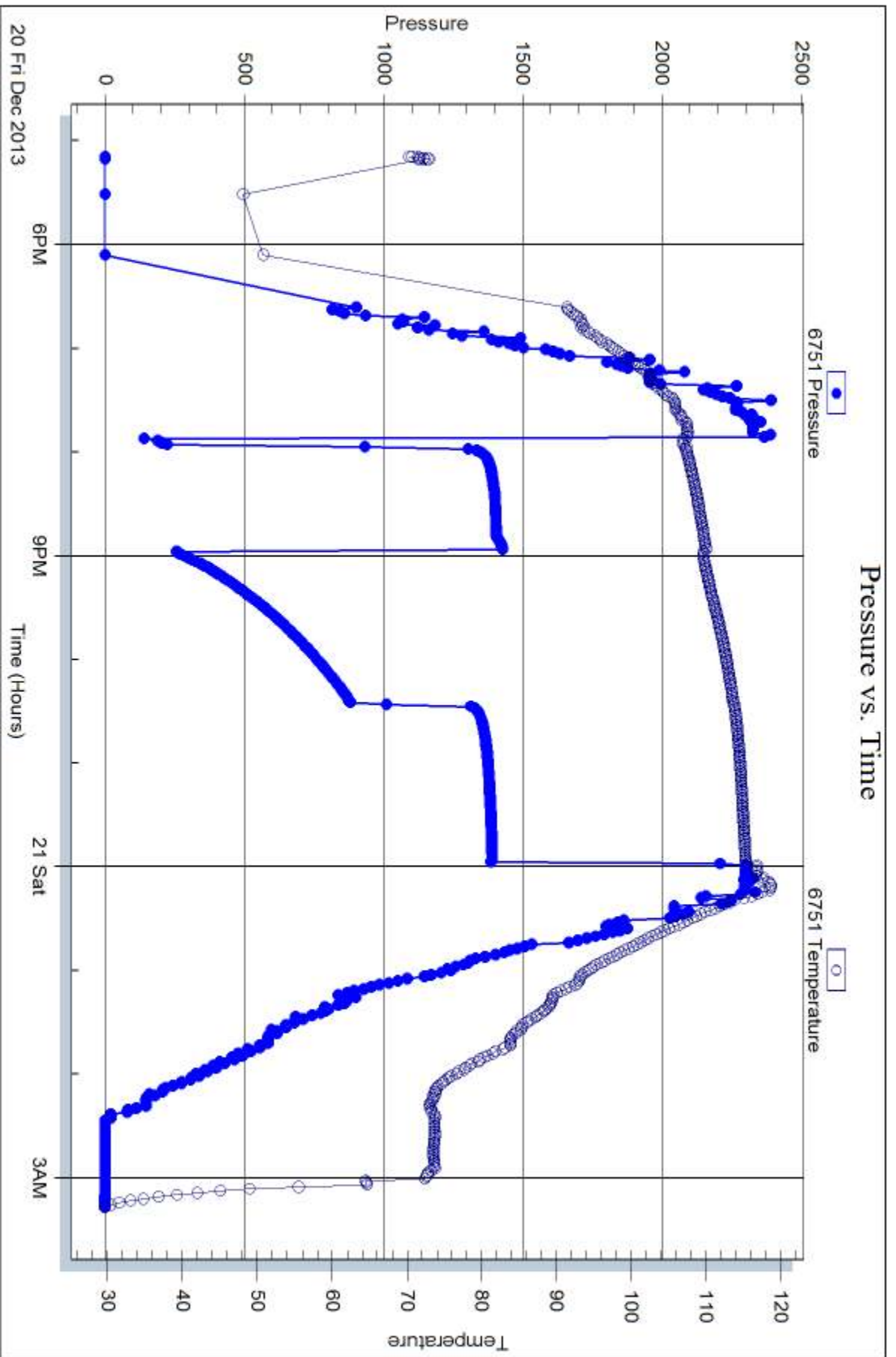


Trilobite Testing, Inc

Ref. No: 55565

Printed: 2013.12.31 @ 09:01:48







## 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.

**S17-30s-30w Meade, KS**

8080 E Central STE 300  
Wichita, KS 67206

**Patterson-O'Brate A**

ATTN: Dave Williams

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

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Smith

Unit No: 62

**Interval: 5259.00 ft (KB) To 5330.00 ft (KB) (TVD)**

Reference Elevations: 2827.00 ft (KB)

Total Depth: 5330.00 ft (KB) (TVD)

2816.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

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

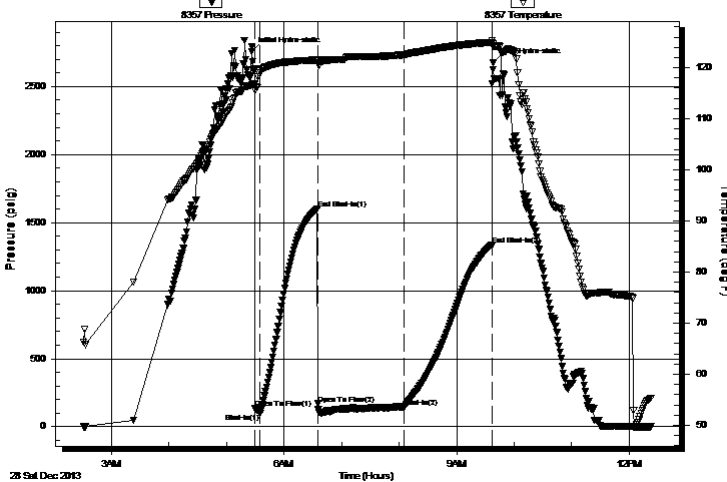
TEST COMMENT: 11" Blow .

No return.

B.O.B. @ 10 sec.

Weak return died @ 15 min.

Pressure vs. Time



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

Gas Rates

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

\* Recovery from multiple tests





**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**



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# 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 in<sup>3</sup>

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

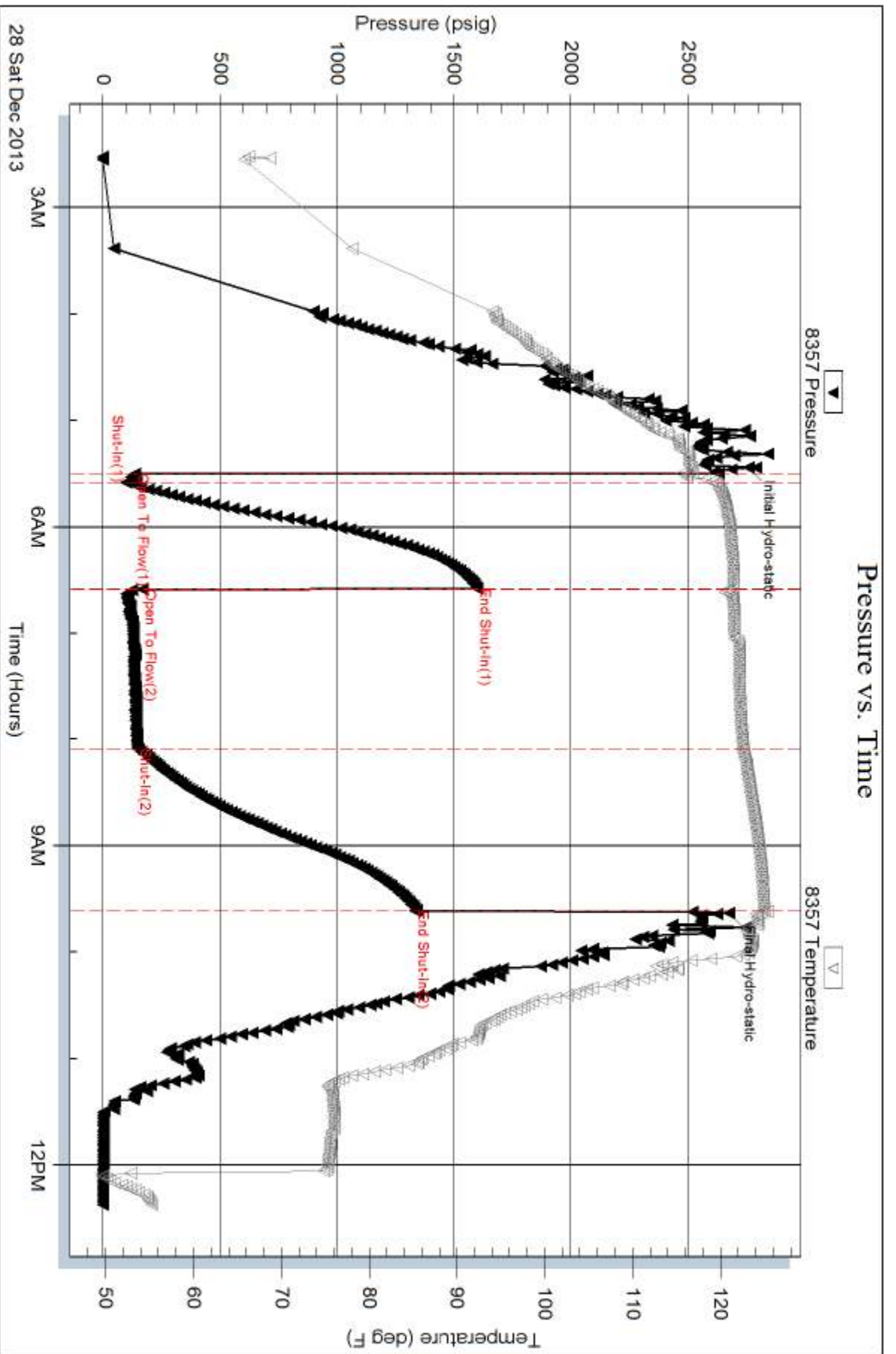
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

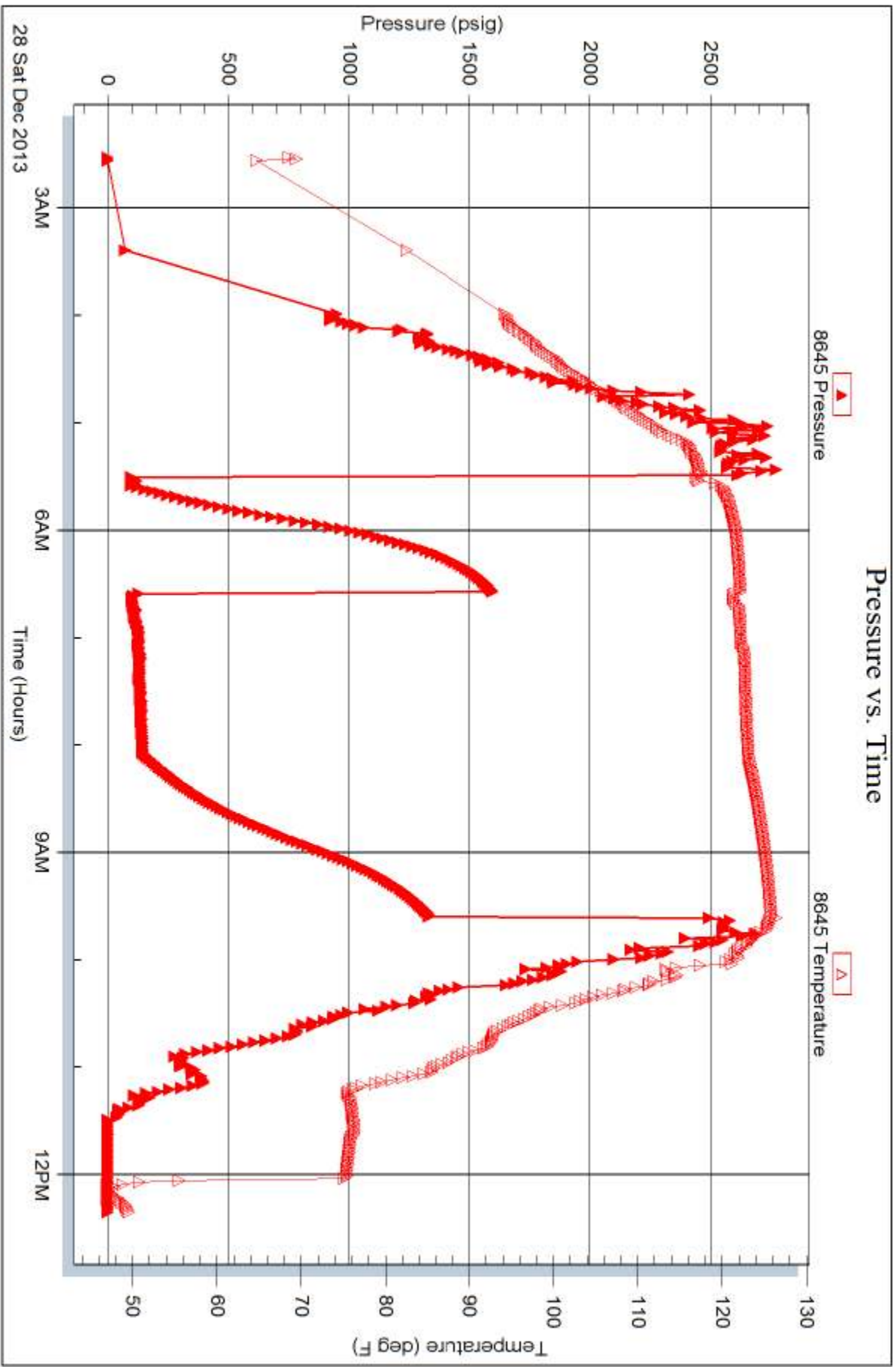


Serial #: 8645

Outside McCoy Petroleum Corp.

Patterson-O'Brate A

DST Test Number: 2

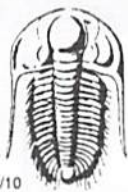


Trilobite Testing, Inc

Ref. No: 55566

Printed: 2013.12.31 @ 09:00:56





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. **55565**

4/10

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>OSW OSWM</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<sup>#</sup>

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. Wilkins Our Representative Chuck Smith

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