



## DRILL STEM TEST REPORT

Prepared For: **McCoy Petroleum Corporation**

880 E Central Ste 300  
Wichita, KS 67206

ATTN: Dave Williams

**17-30s-30w Meade,KS**

**Patterson-OBrate #2-17**

Start Date: 2014.04.24 @ 20:05:29

End Date: 2014.04.25 @ 05:43:59

Job Ticket #: 58982                      DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2014.04.29 @ 11:04:47



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

McCoy Petroleum Corporation

**Patterson-OBrate #2-17**

880 E Central Ste 300  
Wichita, KS 67206

**17-30s-30w Meade,KS**

ATTN: Dave Williams

Job Ticket: 58982

**DST#: 1**

Test Start: 2014.04.24 @ 20:05:29

## GENERAL INFORMATION:

Formation: **LKC "G"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:23:44

Time Test Ended: 05:43:59

Test Type: Conventional Bottom Hole (Initial)

Tester: Leal Cason

Unit No: 74

**Interval: 4550.00 ft (KB) To 4585.00 ft (KB) (TVD)**

Reference Elevations: 2825.00 ft (KB)

Total Depth: 4585.00 ft (KB) (TVD)

2814.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 11.00 ft

**Serial #: 6798**

**Inside**

Press@RunDepth: 202.86 psig @ 4551.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.04.24

End Date:

2014.04.25

Last Calib.:

2014.04.25

Start Time: 20:05:30

End Time:

05:43:59

Time On Btm:

2014.04.24 @ 22:13:44

Time Off Btm:

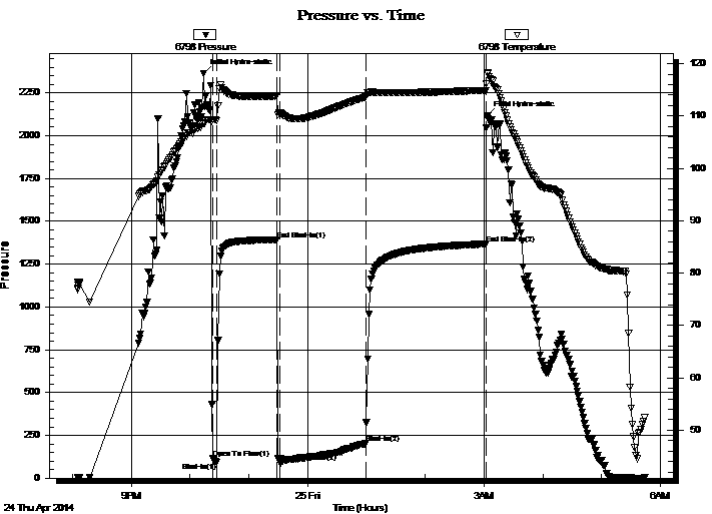
2014.04.25 @ 03:03:29

TEST COMMENT: IF: Strong Blow , BOB in 15 seconds

IS: No Blow Back

FF: Strong Blow , BOB Immediate, GTS in 2 minutes, Caught Sample & Guaged W/Merla

FS: 1/2" Blow Back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2364.55	108.58	Initial Hydro-static
10	116.85	109.26	Open To Flow (1)
14	92.66	109.11	Shut-In(1)
75	1392.87	113.82	End Shut-In(1)
78	94.61	110.65	Open To Flow (2)
166	202.86	113.67	Shut-In(2)
289	1367.86	114.87	End Shut-In(2)
290	2114.77	118.31	Final Hydro-static

## Recovery

## Gas Rates

Length (ft)	Description	Volume (bbl)
0.00	GTS	0.00
247.00	MCW 20%M 80%M	1.78
217.00	GWCM 10%G 30%W 60%M	3.04

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

McCoy Petroleum Corporation

**Patterson-OBrate #2-17**

880 E Central Ste 300  
Wichita, KS 67206

**17-30s-30w Meade,KS**

Job Ticket: 58982

**DST#: 1**

ATTN: Dave Williams

Test Start: 2014.04.24 @ 20:05:29

## Tool Information

Drill Pipe:	Length: 4366.00 ft	Diameter: 3.80 inches	Volume: 61.24 bbl	Tool Weight: 2100.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 185.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 95000.00 lb
			<u>Total Volume: 62.15 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	27.00 ft			String Weight: Initial 82000.00 lb
Depth to Top Packer:	4550.00 ft			Final 84000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	35.00 ft			
Tool Length:	61.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			4529.00	
Hydraulic tool	5.00			4534.00	
Jars	5.00			4539.00	
Safety Joint	2.00			4541.00	
Packer	5.00			4546.00	26.00 Bottom Of Top Packer
Packer	4.00			4550.00	
Stubb	1.00			4551.00	
Recorder	0.00	6798	Inside	4551.00	
Recorder	0.00	8367	Outside	4551.00	
Perforations	31.00			4582.00	
Bullnose	3.00			4585.00	35.00 Bottom Packers & Anchor

**Total Tool Length: 61.00**



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

McCoy Petroleum Corporation

**Patterson-OBrate #2-17**

880 E Central Ste 300  
Wichita, KS 67206

**17-30s-30w Meade,KS**

Job Ticket: 58982

**DST#: 1**

ATTN: Dave Williams

Test Start: 2014.04.24 @ 20:05:29

## 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:

60000 ppm

Viscosity: 48.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.17 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2800.00 ppm

Filter Cake: 0.02 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	GTS	0.000
247.00	MCW 20%M 80%M	1.779
217.00	GWCM 10%G 30%W 60%M	3.044

Total Length: 464.00 ft      Total Volume: 4.823 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW was .2 @ 44 degrees

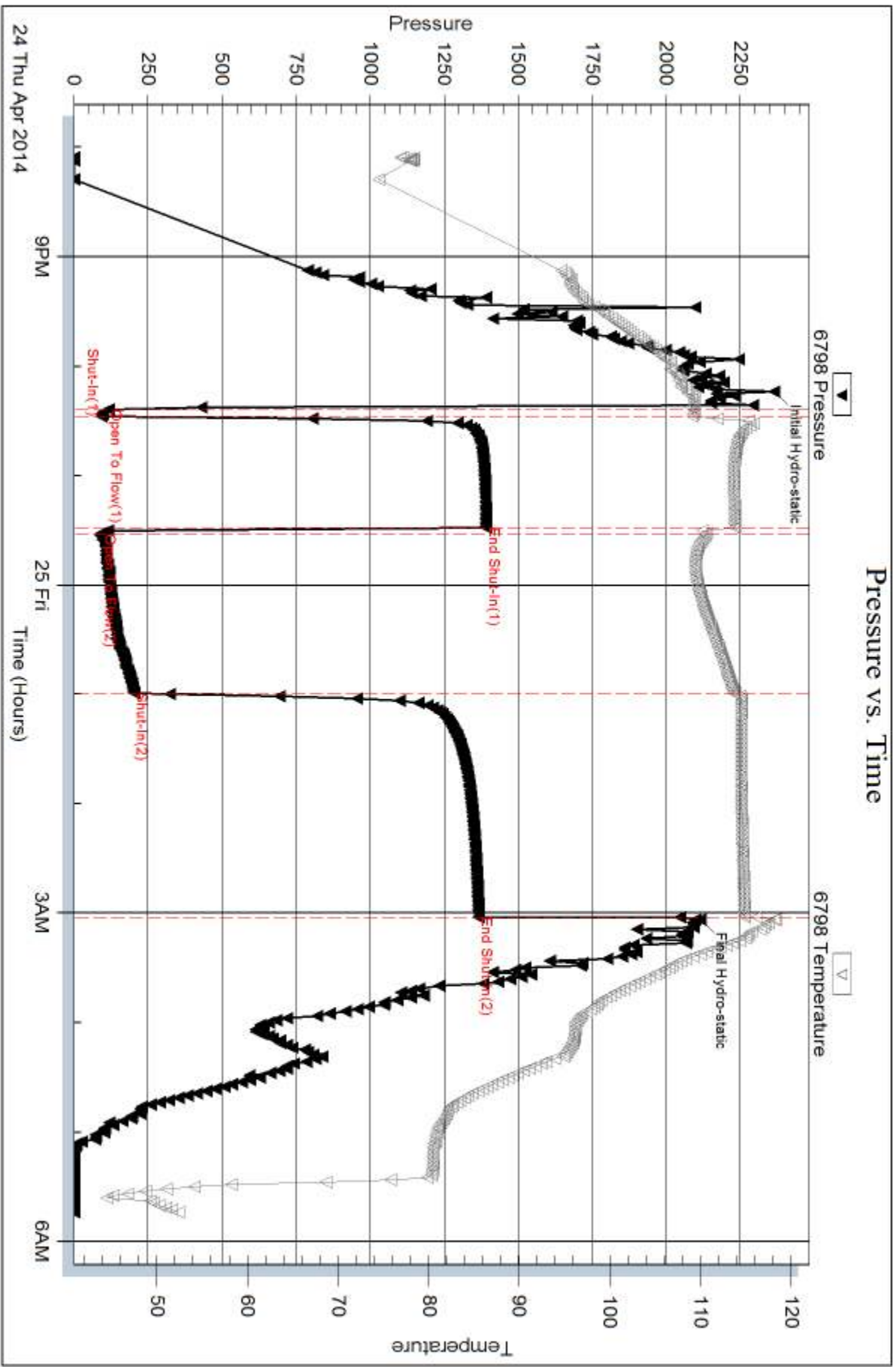
Serial #: 6798

Inside

McCoy Petroleum Corporation

17-30s-30w Meade,KS

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 58982

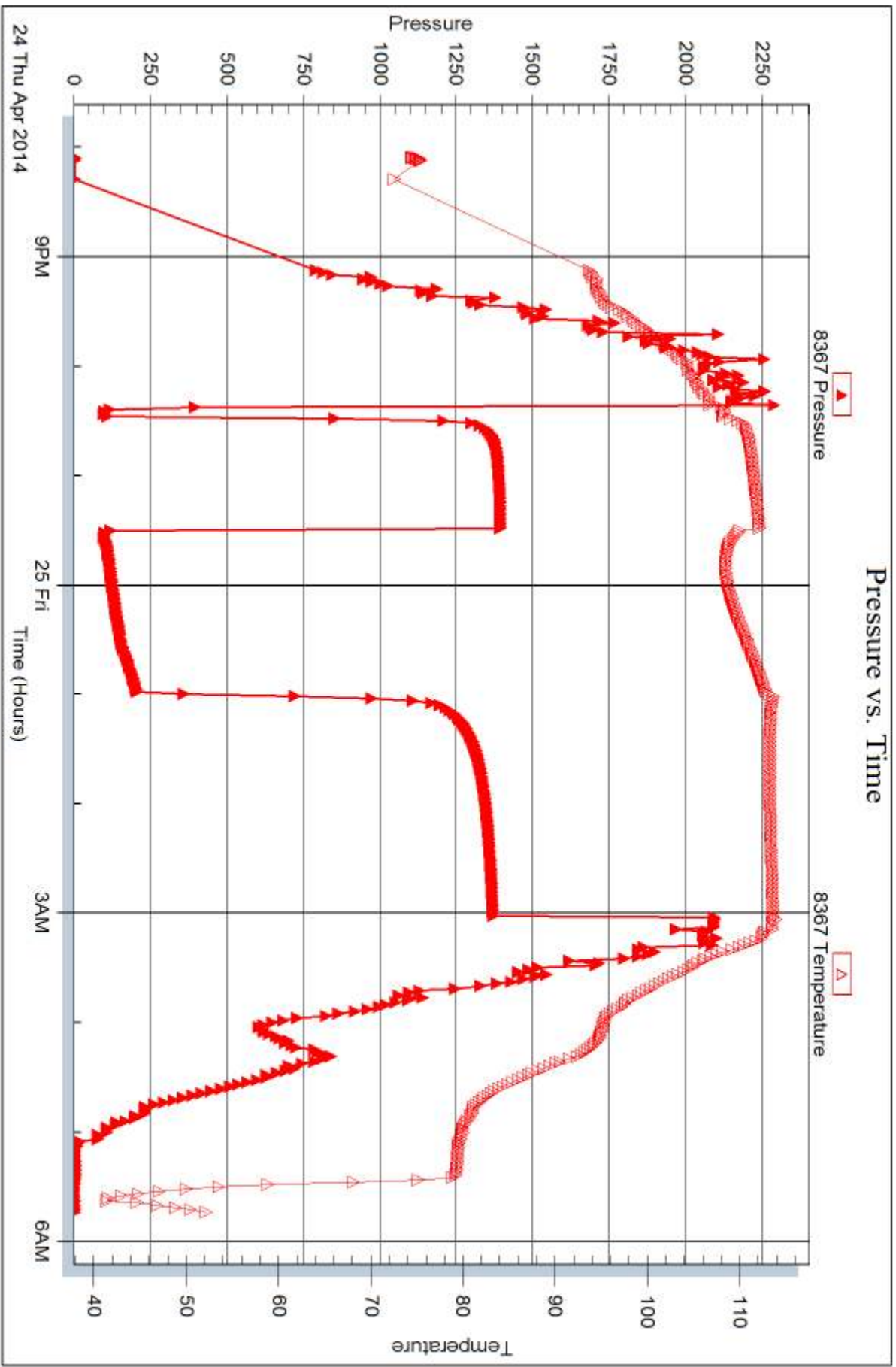
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Serial #: 8367

Outside McCoy Petroleum Corporation

17-30s-30w Meade, KS

DST Test Number: 1





## DRILL STEM TEST REPORT

Prepared For: **McCoy Petroleum Corporation**

880 E Central Ste 300  
Wichita, KS 67206

ATTN: Dave Williams

**17-30s-30w Meade,KS**

**Patterson-OBrate #2-17**

Start Date: 2014.04.26 @ 13:45:12

End Date: 2014.04.27 @ 00:04:27

Job Ticket #: 58983                      DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2014.04.29 @ 11:04:14





**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

McCoy Petroleum Corporation

**Patterson-OBrate #2-17**

880 E Central Ste 300  
Wichita, KS 67206

**17-30s-30w Meade,KS**

ATTN: Dave Williams

Job Ticket: 58983

**DST#: 2**

Test Start: 2014.04.26 @ 13:45:12

## GENERAL INFORMATION:

Formation: **Chester**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:21:42

Time Test Ended: 00:04:27

Test Type: Conventional Bottom Hole (Reset)

Tester: Leal Cason

Unit No: 74

**Interval: 5283.00 ft (KB) To 5346.00 ft (KB) (TVD)**

Reference Elevations: 2825.00 ft (KB)

Total Depth: 5346.00 ft (KB) (TVD)

2814.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 11.00 ft

**Serial #: 6798 Inside**

Press@RunDepth: 35.99 psig @ 5284.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.04.26

End Date:

2014.04.27

Last Calib.: 2014.04.27

Start Time: 13:45:13

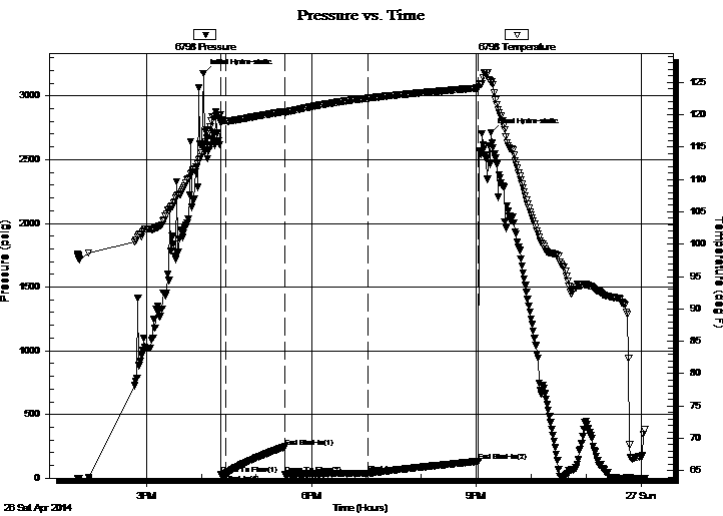
End Time:

00:04:27

Time On Btm: 2014.04.26 @ 16:02:12

Time Off Btm: 2014.04.26 @ 21:15:57

TEST COMMENT: IF: Weak 1/2" Blow  
IS: No Blow Back  
FF: Weak 2" Blow  
FS: No Blow Back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	3177.85	115.21	Initial Hydro-static
20	27.19	119.16	Open To Flow (1)
25	30.93	119.02	Shut-In(1)
89	246.11	120.49	End Shut-In(1)
90	28.12	120.41	Open To Flow (2)
180	35.99	122.55	Shut-In(2)
300	131.96	124.14	End Shut-In(2)
314	2710.42	124.92	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
20.00	SOCM 2&O 98%M	0.10

\* 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 Corporation

**Patterson-OBrate #2-17**

880 E Central Ste 300  
Wichita, KS 67206

**17-30s-30w Meade,KS**

Job Ticket: 58983

**DST#: 2**

ATTN: Dave Williams

Test Start: 2014.04.26 @ 13:45:12

## Tool Information

Drill Pipe:	Length: 5097.00 ft	Diameter: 3.80 inches	Volume: 71.50 bbl	Tool Weight:	2100.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	25000.00 lb
Drill Collar:	Length: 185.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose:	130000.0 lb
			<u>Total Volume: 72.41 bbl</u>	Tool Chased	ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial	88000.00 lb
Depth to Top Packer:	5283.00 ft			Final	88000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	63.00 ft				
Tool Length:	89.00 ft				
Number of Packers:	2	Diameter:	6.75 inches		
Tool Comments:					

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			5262.00	
Hydraulic tool	5.00			5267.00	
Jars	5.00			5272.00	
Safety Joint	2.00			5274.00	
Packer	5.00			5279.00	26.00 Bottom Of Top Packer
Packer	4.00			5283.00	
Stubb	1.00			5284.00	
Recorder	0.00	6798	Inside	5284.00	
Recorder	0.00	8367	Outside	5284.00	
Perforations	5.00			5289.00	
Change Over Sub	1.00			5290.00	
Drill Pipe	32.00			5322.00	
Change Over Sub	1.00			5323.00	
Perforations	20.00			5343.00	
Bullnose	3.00			5346.00	63.00 Bottom Packers & Anchor

**Total Tool Length: 89.00**



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# DRILL STEM TEST REPORT

**FLUID SUMMARY**

McCoy Petroleum Corporation

**Patterson-OBrate #2-17**

880 E Central Ste 300  
Wichita, KS 67206

**17-30s-30w Meade,KS**

Job Ticket: 58983

**DST#: 2**

ATTN: Dave Williams

Test Start: 2014.04.26 @ 13:45:12

## 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: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.19 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 3100.00 ppm

Filter Cake: 0.02 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
20.00	SOCM 2&O 98%M	0.098

Total Length: 20.00 ft      Total Volume: 0.098 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 6798

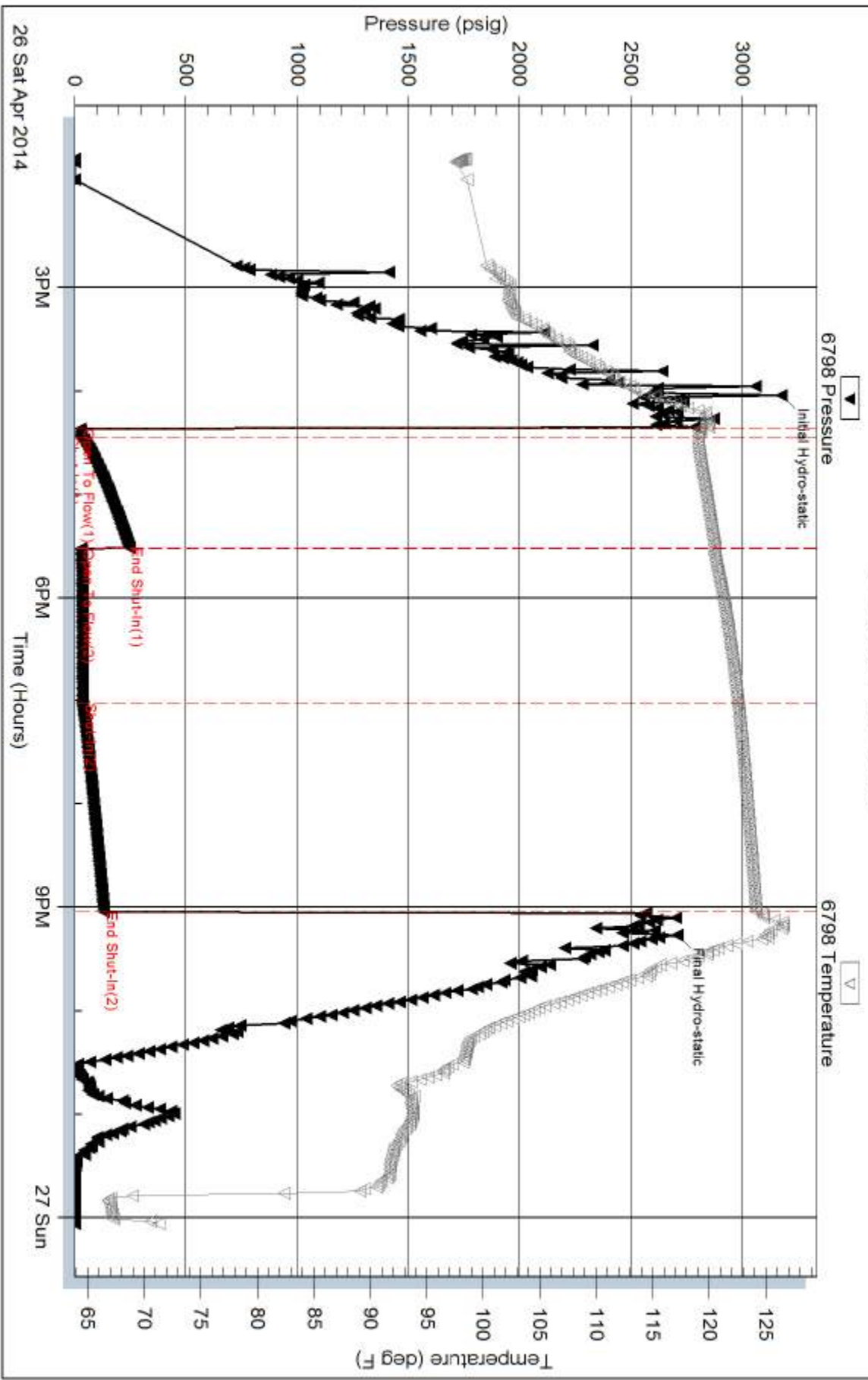
Inside

McCoy Petroleum Corporation

17-30s-30w Meade,KS

DST Test Number: 2

### Pressure vs. Time



Trilobite Testing, Inc

Ref. No: 58983

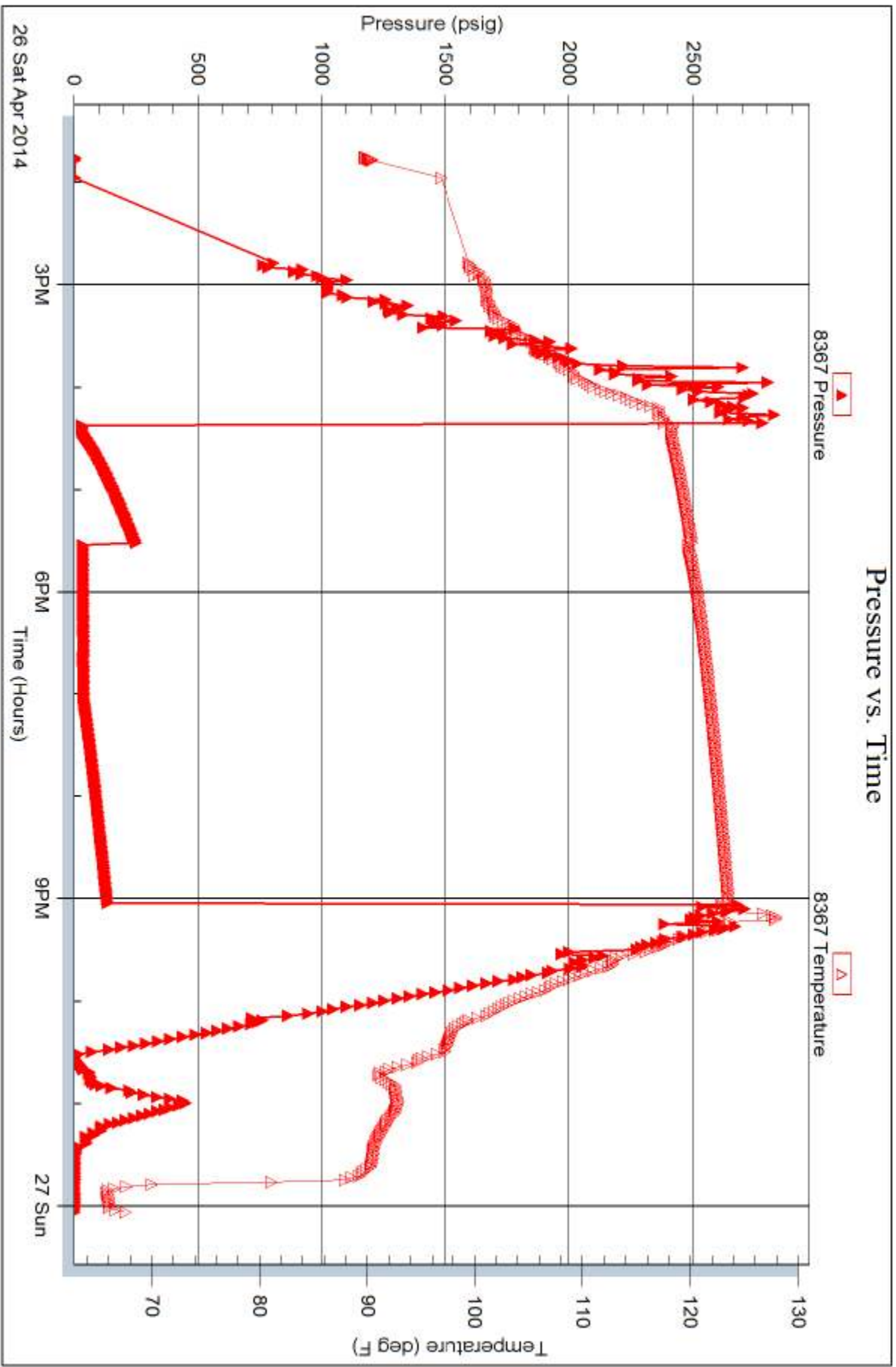
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Serial #: 8367

Outside McCoy Petroleum Corporation

17-30s-30w Meade, KS

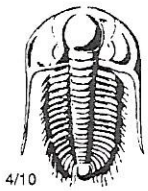
DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 58983

Printed: 2014.04.29 @ 11:04:15



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 58982

Well Name & No. Patterson-O'Brate A 2-17 Test No. 1 Date 04/24/14  
 Company McCoy Petroleum Corporation Elevation 2875 KB 2814 GL  
 Address 8080 F Central Ste 300 Wichita, KS 67206  
 Co. Rep / Geo. Dave Williams Rig Sterling 2  
 Location: Sec. 17 Twp. 30S Rge. 30W Co. Meadow State KS

Interval Tested 4550 - 4585 Zone Tested Lansing "G"  
 Anchor Length 35 Drill Pipe Run 4366 Mud Wt. 9.3  
 Top Packer Depth 4545 Drill Collars Run 185 Vis 48  
 Bottom Packer Depth 4550 Wt. Pipe Run 0 WL 9.2  
 Total Depth 4585 Chlorides 2800 ppm System LCM 2

Blow Description IF: Strong Blow, BOB in 15 seconds  
FSI: No Blow Back  
FF: Strong Blow, BOB immediate, GTS in 2 minutes, caught sampler & gauged w/merka  
FSI: 1/2 inch Blow Back

Rec	Feet of	%gas	%oil	%water	%mud
<u>4087</u>	<u>GIP</u>				
<u>217</u>	<u>GWCM</u>	<u>10%</u>		<u>30%</u>	<u>60%</u>
<u>247</u>	<u>MCW</u>			<u>80%</u>	<u>20%</u>
Rec Total	<u>464</u>				

BHT 115 Gravity N/C API RW .2 @ 44 °F Chlorides 60,000 ppm

(A) Initial Hydrostatic 2365  Test 1250 T-On Location 18:45  
 (B) First Initial Flow 117  Jars 250 T-Started 20:05  
 (C) First Final Flow 93  Safety Joint 75 T-Open 22:23  
 (D) Initial Shut-In 1393  Circ Sub \_\_\_\_\_ T-Pulled 03:02  
 (E) Second Initial Flow 95  Hourly Standby 1 T-Out 05:43  
 (F) Second Final Flow 203  Mileage 240 372 Comments MOTEL  
 (G) Final Shut-In 1368  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 2114  Straddle \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_

Ruined Shale Packer \_\_\_\_\_  
 Ruined Packer \_\_\_\_\_  
 Extra Copies \_\_\_\_\_

Sub Total 0  
 Total 1947  
 MP/DST Disc't \_\_\_\_\_

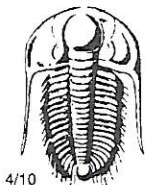
Approved By Daniel P. Walsh Our Representative [Signature]

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 58983

Well Name & No. Patterson - O'brate A 2-17 Test No. 2 Date 04/26/14  
 Company McCoy Petroleum Corporation Elevation 2825 KB 2814 GL  
 Address 3080 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 5283 - 5346 Zone Tested Chester  
 Anchor Length 63 Drill Pipe Run 5097 Mud Wt. 9.3  
 Top Packer Depth 5278 Drill Collars Run 185 Vis 50  
 Bottom Packer Depth 5283 Wt. Pipe Run 0 WL 9.2  
 Total Depth 5346 Chlorides 2100 ppm System LCM 4

Blow Description IF: weak 1/2 inch Blow  
ISI: NO Blow Back  
FF: weak 2 inch Blow  
FSI: NO Blow Back

Rec	Feet of	%gas	%oil	%water	%mud
<u>20</u>	<u>50cm</u>	<u>2</u>		<u>98</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 20 BHT 125 Gravity N/C API RW N/C @ N/C °F Chlorides N/C ppm

(A) Initial Hydrostatic <u>3178</u>	<input checked="" type="checkbox"/> Test <u>1350</u>	T-On Location <u>12:00</u>
(B) First Initial Flow <u>27</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>13:45</u>
(C) First Final Flow <u>31</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>16:21</u>
(D) Initial Shut-In <u>246</u>	<input type="checkbox"/> Circ Sub	T-Pulled <u>21:02</u>
(E) Second Initial Flow <u>28</u>	<input checked="" type="checkbox"/> Hourly Standby <u>1</u> .25h 25	T-Out <u>00:04</u>
(F) Second Final Flow <u>36</u>	<input checked="" type="checkbox"/> Mileage <u>(2407)</u> 744	Comments <u>Motel</u>
(G) Final Shut-In <u>132</u>	<input type="checkbox"/> Sampler	<u>Loaded Tools @ 11:00</u>
(H) Final Hydrostatic <u>2710</u>	<input type="checkbox"/> Straddle	<u>on 04/28/14</u>
Initial Open <u>5</u>	<input type="checkbox"/> Shale Packer	<input type="checkbox"/> Ruined Shale Packer
Initial Shut-In <u>60</u>	<input type="checkbox"/> Extra Packer	<input checked="" type="checkbox"/> Ruined Packer <u>320</u>
Final Flow <u>90</u>	<input type="checkbox"/> Extra Recorder	<input type="checkbox"/> Extra Copies
Final Shut-In <u>120</u>	<input checked="" type="checkbox"/> Day Standby <u>1</u> 1d 11h	Sub Total <u>800</u>
	<input type="checkbox"/> Accessibility	Total <u>3564</u>
	Sub Total <u>2444</u>	MP/DST Disc't

Approved By [Signature] Our Representative [Signature]

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