



## DRILL STEM TEST REPORT

Prepared For: **Cascade Petroleum, LLC**

1331 17th St, Suite 400  
Denver, CO 80212

ATTN: Mark

**Craig 9S-55W-19-41**

**9-9s-55w Lincoln,CO**

Start Date: 2014.05.29 @ 00:22:39

End Date: 2014.05.29 @ 11:35:39

Job Ticket #: 59060                      DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2014.05.30 @ 13:47:04



**TRILOBITE**  
**TESTING, INC.**

## DRILL STEM TEST REPORT

Cascade Petroleum, LLC

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**Craig 9S-55W-19-41**

Job Ticket: 59060

**DST#: 1**

ATTN: Mark

Test Start: 2014.05.29 @ 00:22:39

### GENERAL INFORMATION:

Formation: **Cherokee**

Deviated: No Whipstock: ft (KB)

Time Tool Opened:

Time Test Ended: 11:35:39

Test Type: Conventional Bottom Hole (Initial)

Tester: Justin Harris

Unit No: 55

**Interval: 7415.00 ft (KB) To 7447.00 ft (KB) (TVD)**

Total Depth: 7447.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 5397.00 ft (KB)

5382.00 ft (CF)

KB to GR/CF: 15.00 ft

**Serial #: 8844 Outside**

Press@RunDepth: psig @ 7416.00 ft (KB)

Start Date: 2014.05.29

End Date:

2014.05.29

Start Time: 00:22:54

End Time:

11:35:39

Capacity: 8000.00 psig

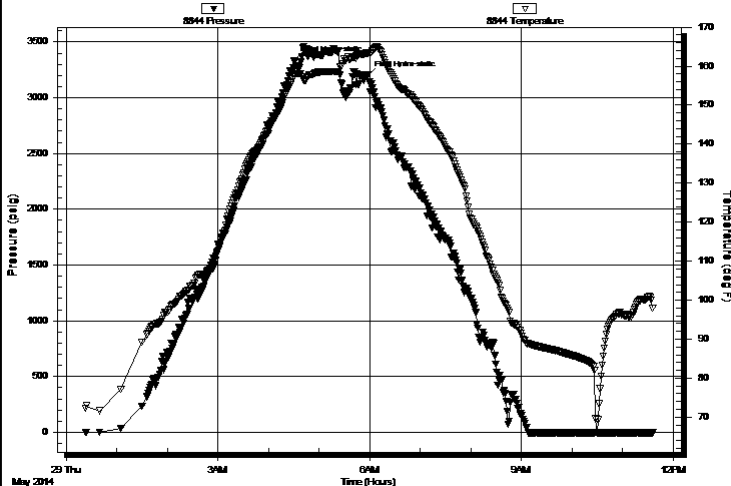
Last Calib.: 2014.05.29

Time On Btm: 2014.05.29 @ 04:30:24

Time Off Btm: 2014.05.29 @ 05:57:24

TEST COMMENT: Mis Run

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	3330.51	157.52	Initial Hydro-static
87	3201.77	163.35	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
4526.00	100M	51.18

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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Reference Elevations: 5397.00 ft (KB)

5382.00 ft (CF)

KB to GR/CF: 15.00 ft

**Serial #: 6771 Inside**

Press@RunDepth: psig @ 7416.00 ft (KB)

Start Date: 2014.05.29

End Date:

2014.05.29

Start Time: 00:22:15

End Time:

11:35:15

Capacity: 8000.00 psig

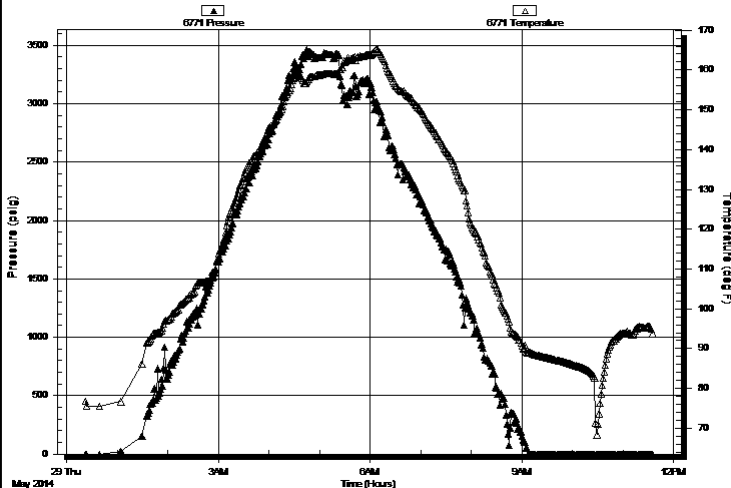
Last Calib.: 2014.05.29

Time On Btm:

Time Off Btm:

TEST COMMENT: Mis Run

Pressure vs. Time



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
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### Recovery

Length (ft)	Description	Volume (bbl)
4526.00	100M	51.18

### Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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## DRILL STEM TEST REPORT

### TOOL DIAGRAM

Cascade Petroleum, LLC

**9-9s-55w Lincoln, CO**

1331 17th St, Suite 400  
Denver, CO 80212

**Craig 9S-55W-19-41**

Job Ticket: 59060

**DST#: 1**

ATTN: Mark

Test Start: 2014.05.29 @ 00:22:39

### Tool Information

Drill Pipe:	Length:	6414.00 ft	Diameter:	3.80 inches	Volume:	89.97 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length:	675.00 ft	Diameter:	inches	Volume:	6557102 bbl	Weight set on Packer:	30000.00 lb
Drill Collar:	Length:	311.67 ft	Diameter:	2.25 inches	Volume:	1.53 bbl	Weight to Pull Loose:	200000.0 lb
					Total Volume:	6557102 bbl	Tool Chased	4.00 ft
Drill Pipe Above KB:		13.67 ft					String Weight: Initial	180000.0 lb
Depth to Top Packer:		7415.00 ft					Final	200000.0 lb
Depth to Bottom Packer:		ft						
Interval between Packers:		32.00 ft						
Tool Length:		60.00 ft						
Number of Packers:		2	Diameter:	6.75 inches				
Tool Comments:								

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			7388.00	
Shut In Tool	5.00			7393.00	
Hydraulic tool	5.00			7398.00	
Jars	5.00			7403.00	
Safety Joint	3.00			7406.00	
Packer	5.00			7411.00	28.00 Bottom Of Top Packer
Packer	4.00			7415.00	
Stubb	1.00			7416.00	
Recorder	0.00	6771	Inside	7416.00	
Recorder	0.00	8844	Outside	7416.00	
Perforations	26.00			7442.00	
Change Over Sub	0.00			7442.00	
Drill Pipe	0.00			7442.00	
Change Over Sub	0.00			7442.00	
Bullnose	5.00			7447.00	32.00 Bottom Packers & Anchor

**Total Tool Length: 60.00**



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## DRILL STEM TEST REPORT

### FLUID SUMMARY

Cascade Petroleum, LLC

**9-9s-55w Lincoln, CO**

1331 17th St, Suite 400  
Denver, CO 80212

**Craig 9S-55W-19-41**

Job Ticket: 59060

**DST#: 1**

ATTN: Mark

Test Start: 2014.05.29 @ 00:22:39

### Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 54.00 sec/qt

Water Loss: 3.80 in<sup>3</sup>

Resistivity: ohm.m

Salinity: 1200.00 ppm

Filter Cake: 1.00 inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

ft

bbl

psig

Oil API:

Water Salinity:

0 deg API

0 ppm

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
4526.00	100M	51.180

Total Length: 4526.00 ft

Total Volume: 51.180 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

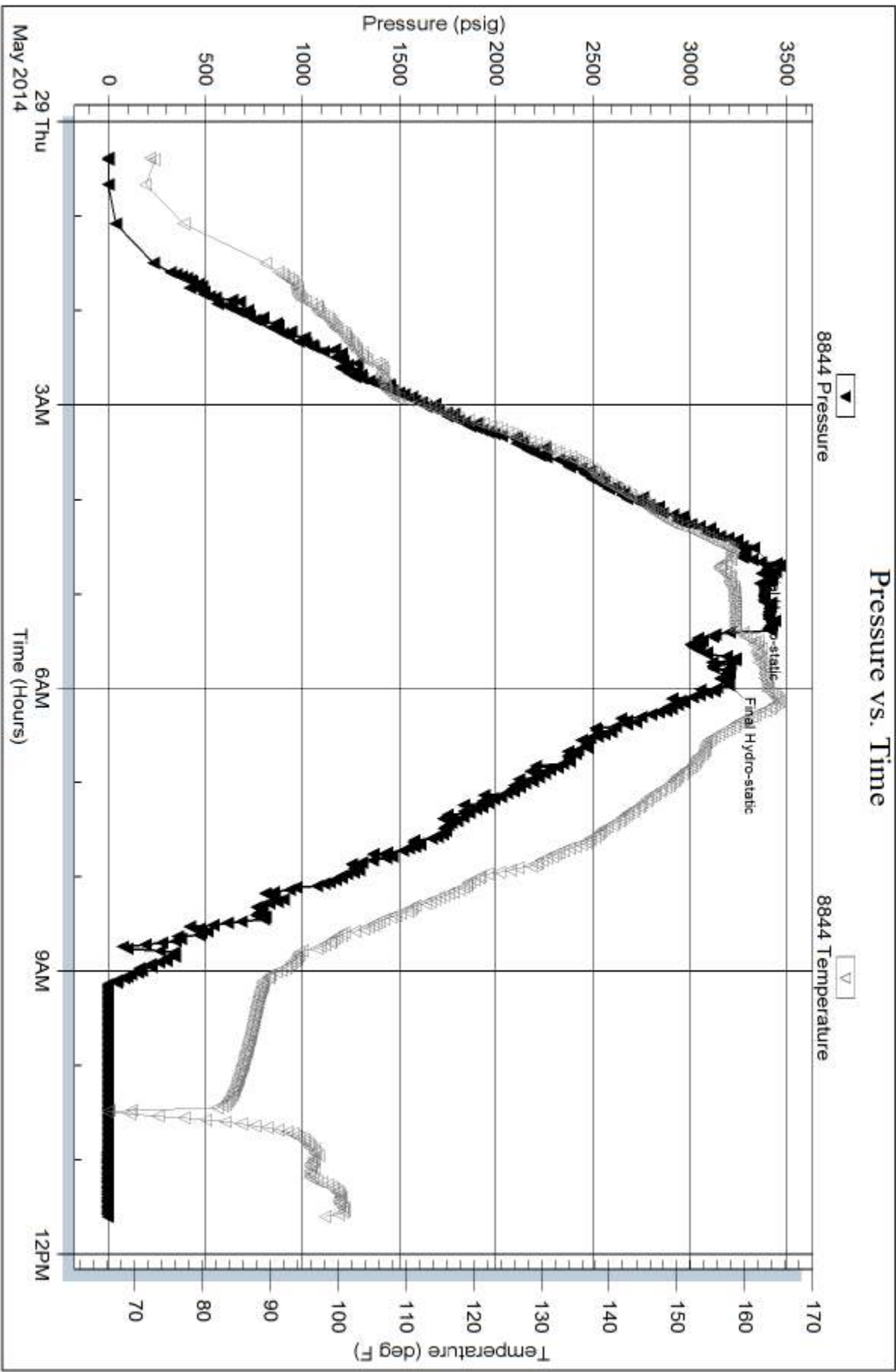
Recovery Comments:

Serial #: 8844

Outside Cascade Petroleum, LLC

Craig 9S-55W-19-41

DST Test Number: 1



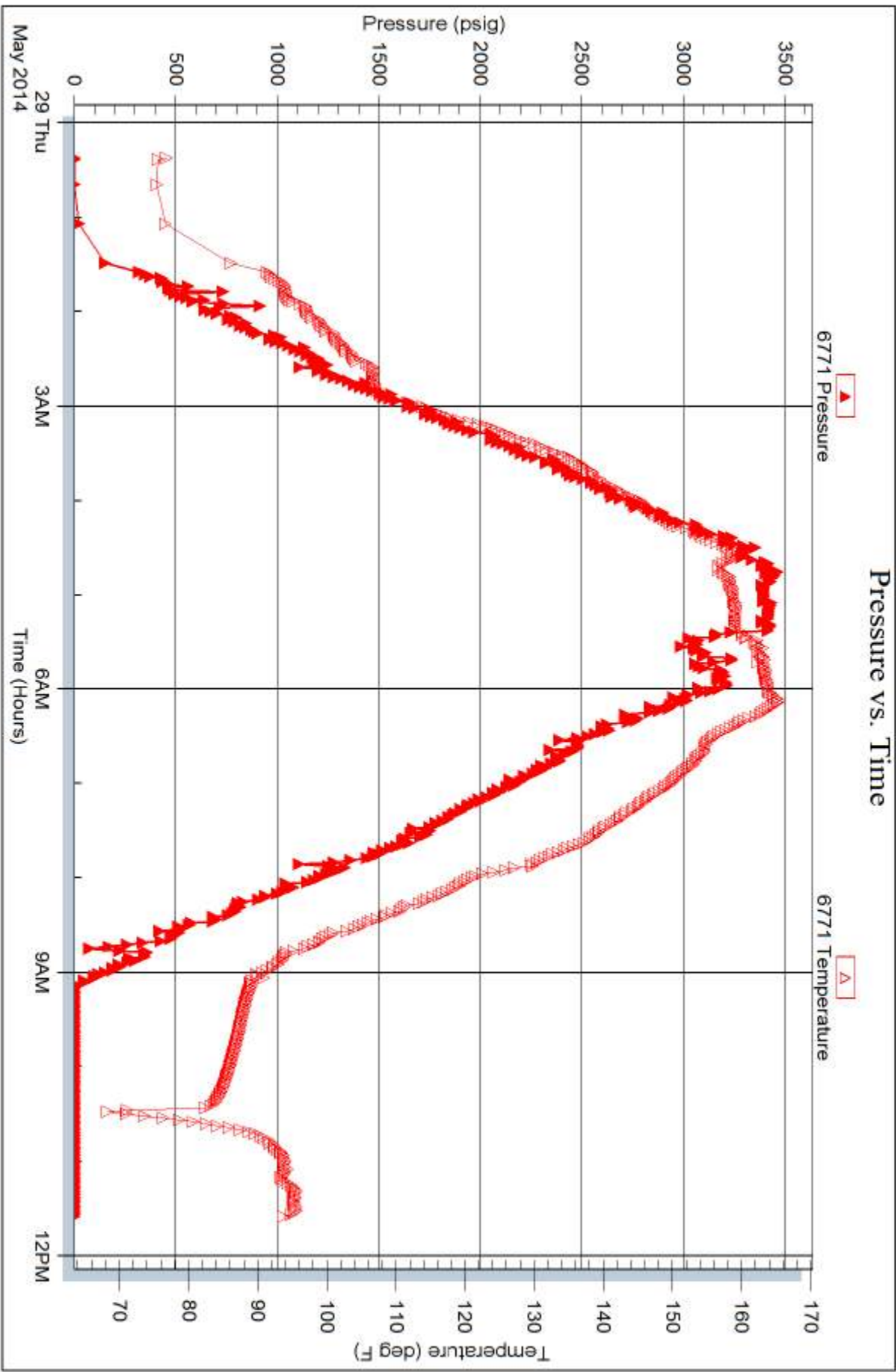
Serial #: 6771

Inside

Cascade Petroleum, LLC

Craig 9S-55W-19-41

DST Test Number: 1





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 59060

Well Name & No. Craig 95-SSW-19-41 Test No. 1 Date 5/25/14  
 Company Cascade Petroleum Elevation 5397 KB 5382 GL  
 Address 1331 W 1st St, Suite 400 Denver, CO  
 Co. Rep / Geo. Mike Neville Rig Savanna 450e  
 Location: Sec. 9 Twp. 9S Rge. SSW Co. Lincoln State CO

Interval Tested 7415 Zone Tested Cherokee limestone A  
 Anchor Length 321 Drill Pipe Run 6414 Mud Wt. 8.7  
 Top Packer Depth 7440 Drill Collars Run 311 Vis 54  
 Bottom Packer Depth 7415 Wt. Pipe Run 195 WL 3.8  
 Total Depth 7447 Chlorides 1200 ppm System LCM i

Blow Description Mis Run Free Perforated @ open

Rec	Feet of	%gas	%oil	%water	%mud
<u>4524</u>	<u>M</u>			<u>100</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 4524 BHT 3330 Gravity 1.4230 API RW 35 @ 11.10 F Chlorides 1200 ppm

(A) Initial Hydrostatic 3330 ☒ Test 5250 T-On Location 11:10  
 (B) First Initial Flow 3330 ☒ Jars 250 T-Started 12:55  
 (C) First Final Flow 3330 ☒ Safety Joint 75 T-Open 0630  
 (D) Initial Shut-In 3330 ☒ Circ Sub 450-00 50 T-Pulled 700  
 (E) Second Initial Flow 3330 ☐ Hourly Standby 50 T-Out 11:40  
 (F) Second Final Flow 3330 ☒ Mileage 375 RT 581.25 Comments  
 (G) Final Shut-In 3330 ☐ Sampler 50  
 (H) Final Hydrostatic 3201 ☐ Straddle 50 ☒ Ruined Shale Packer 350  
☐ Ruined Packer

Initial Open 3201 ☐ Extra Packer 50 Date: 5-25-14 Extra Copies  
 Initial Shut-In 3201 ☐ Extra Recorder 50 Sub Total 0  
 Final Flow 3201 ☐ Day Standby 50 Signature: [Signature] Total 6806.25  
 Final Shut-In 3201 ☐ Accessibility 50 MP/DST Disc't 50  
 Sub Total 6456.25

Approved By [Signature] Our Representative [Signature]  
 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.