



## DRILL STEM TEST REPORT

Prepared For: **Bennett & Schulte Oil Co**

PO Box 329  
Russell KS 67665

ATTN: Bob Hopkins

### **Hilger #3**

#### **7-13s-14w Russell,KS**

Start Date: 2013.11.08 @ 16:56:00

End Date: 2013.11.08 @ 22:33:15

Job Ticket #: 55317                      DST #: 1

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

Printed: 2013.11.13 @ 10:37:26



**TRILOBITE TESTING, INC**

# DRILL STEM TEST REPORT

Bennett & Schulte Oil Co

**7-13s-14w Russell,KS**

PO Box 329  
Russell KS 67665

**Hilger #3**

Job Ticket: 55317

**DST#: 1**

ATTN: Bob Hopkins

Test Start: 2013.11.08 @ 16:56:00

## GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:11:45

Time Test Ended: 22:33:15

Test Type: Conventional Bottom Hole (Initial)

Tester: Brett Dickinson

Unit No: 59

**Interval: 3126.00 ft (KB) To 3152.00 ft (KB) (TVD)**

Reference Elevations: 1702.00 ft (KB)

Total Depth: 3152.00 ft (KB) (TVD)

1695.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

**Serial #: 8736**

**Inside**

Press@RunDepth: 50.72 psig @ 3149.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.11.08

End Date:

2013.11.08

Last Calib.:

2013.11.08

Start Time: 16:56:05

End Time:

22:33:14

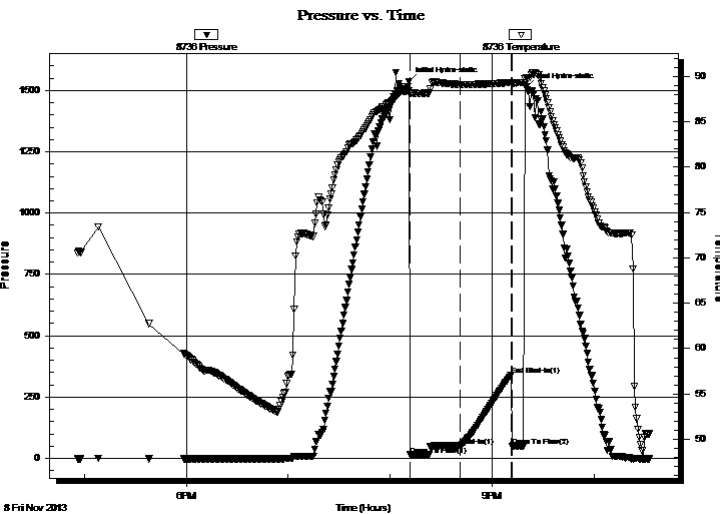
Time On Btm:

2013.11.08 @ 20:11:00

Time Off Btm:

2013.11.08 @ 21:20:00

**TEST COMMENT:** IF-Surface blow died in 10 min flush tool no blow  
IS-No blow  
FF-No blow



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1536.45	88.41	Initial Hydro-static
1	14.13	88.10	Open To Flow (1)
30	50.72	89.12	Shut-In(1)
61	338.99	89.31	End Shut-In(1)
61	50.64	89.23	Open To Flow (2)
69	1513.24	89.84	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
65.00	Mud	0.91

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Bennett & Schulte Oil Co

**7-13s-14w Russell,KS**

PO Box 329  
Russell KS 67665

**Hilger #3**

Job Ticket: 55317

**DST#: 1**

ATTN: Bob Hopkins

Test Start: 2013.11.08 @ 16:56:00

## Tool Information

Drill Pipe:	Length: 3130.00 ft	Diameter: 3.80 inches	Volume: 43.91 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 45000.00 lb
			<u>Total Volume: 43.91 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 42000.00 lb
Depth to Top Packer:	3126.00 ft			Final 42000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	26.00 ft			
Tool Length:	47.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3106.00	
Shut In Tool	5.00			3111.00	
Hydraulic tool	5.00			3116.00	
Packer	5.00			3121.00	21.00 Bottom Of Top Packer
Packer	5.00			3126.00	
Stubb	1.00			3127.00	
Perforations	22.00			3149.00	
Recorder	0.00	8736	Inside	3149.00	
Recorder	0.00	6753	Outside	3149.00	
Bullnose	3.00			3152.00	26.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>47.00</b>				



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Bennett & Schulte Oil Co

**7-13s-14w Russell,KS**

PO Box 329  
Russell KS 67665

**Hilger #3**

Job Ticket: 55317

**DST#: 1**

ATTN: Bob Hopkins

Test Start: 2013.11.08 @ 16:56:00

## 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: 59.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.59 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
65.00	Mud	0.912

Total Length: 65.00 ft      Total Volume: 0.912 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

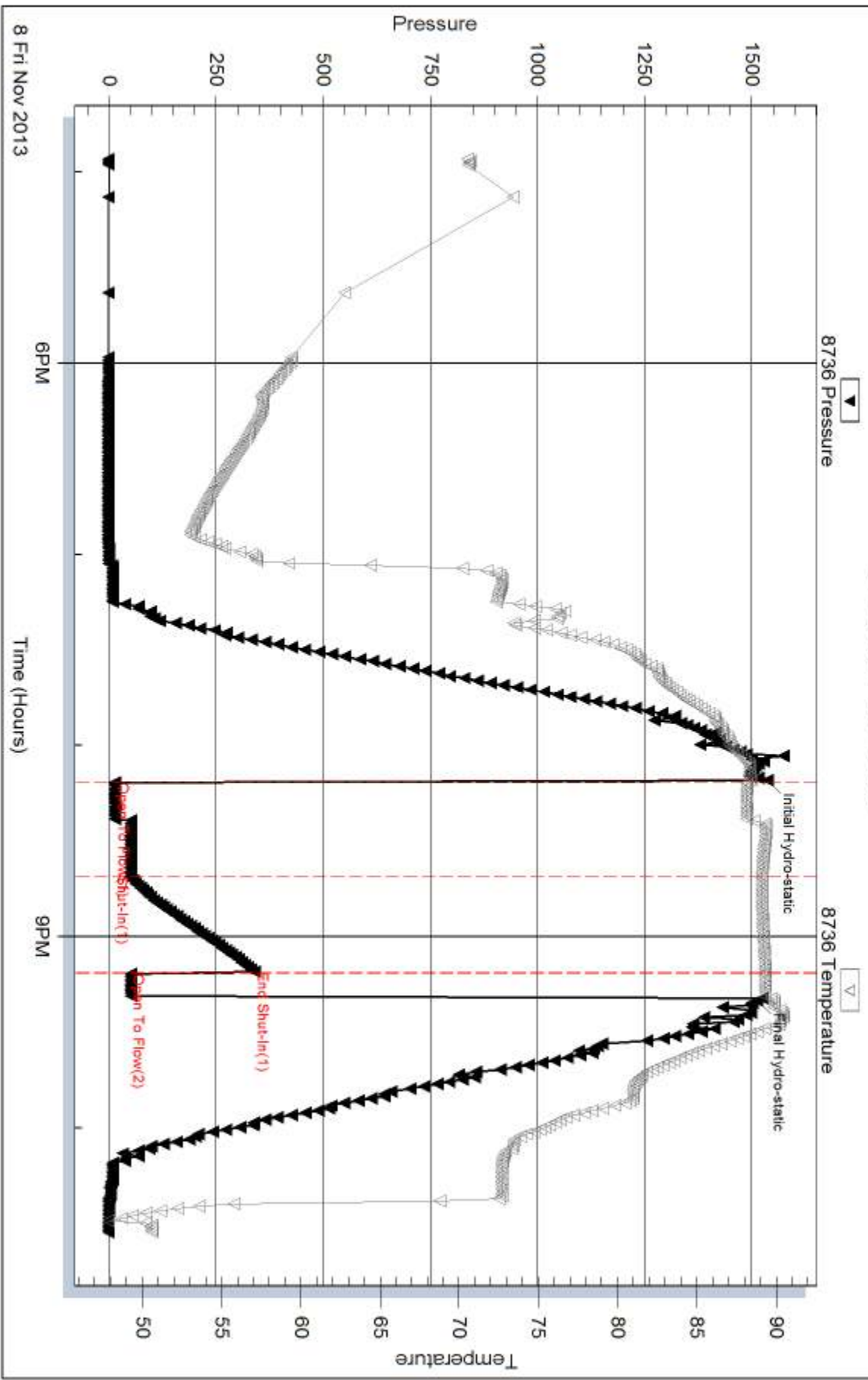
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time

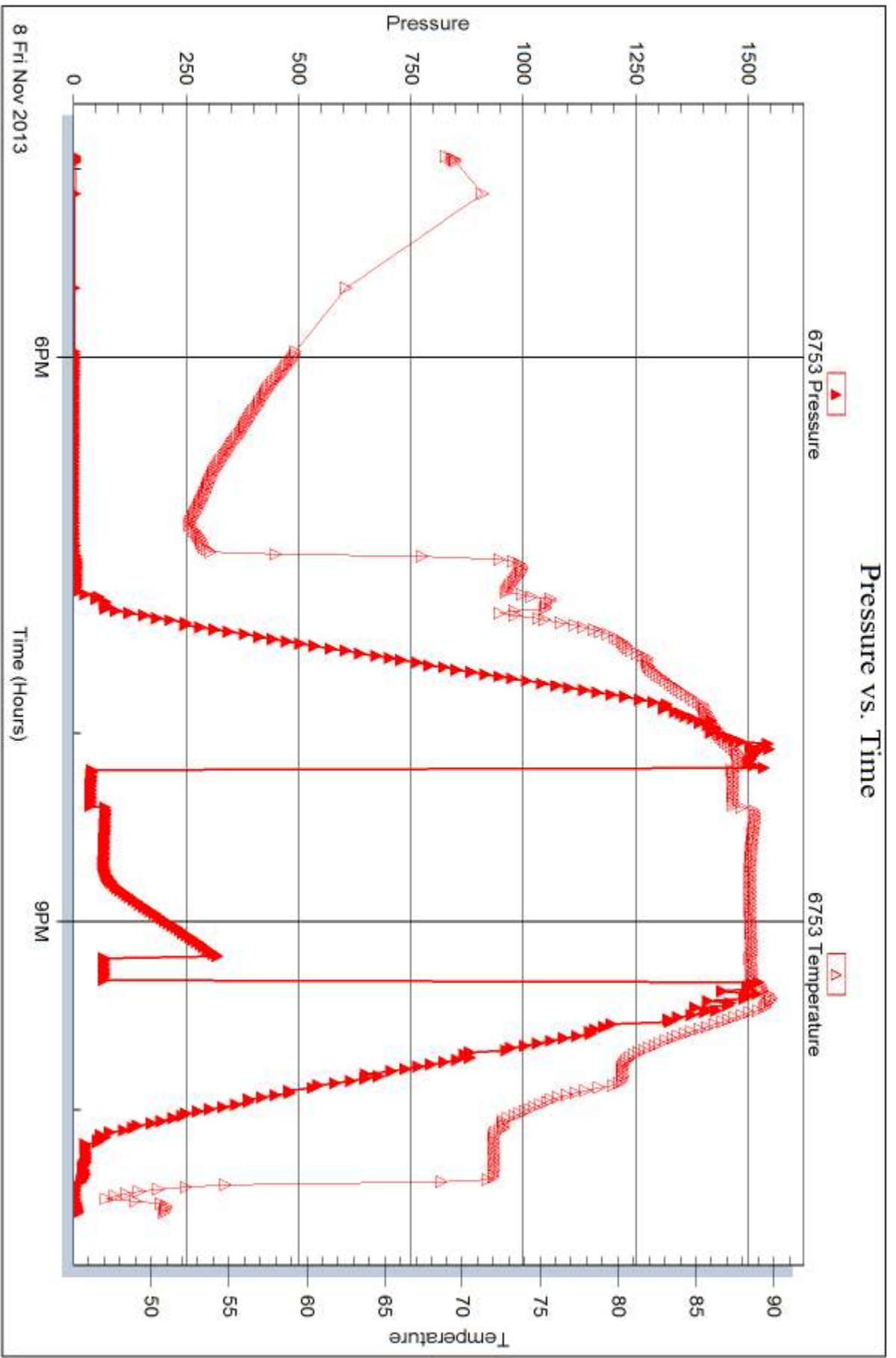


Serial #: 6753

Outside Bennett & Schulte Oil Co

Hilger #3

DST Test Number: 1



Tribble Testing, Inc

Ref. No: 55317

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## DRILL STEM TEST REPORT

Prepared For: **Bennett & Schulte Oil Co**

PO Box 329  
Russell KS 67665

ATTN: Bob Hopkins

### **Hilger #3**

#### **7-13s-14w Russell,KS**

Start Date: 2013.11.09 @ 03:35:00

End Date: 2013.11.09 @ 08:45:15

Job Ticket #: 55318                      DST #: 2

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

Printed: 2013.11.13 @ 10:36:35





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Bennett & Schulte Oil Co

**7-13s-14w Russell,KS**

PO Box 329  
Russell KS 67665

**Hilger #3**

Job Ticket: 55318

**DST#: 2**

ATTN: Bob Hopkins

Test Start: 2013.11.09 @ 03:35:00

## GENERAL INFORMATION:

Formation: **Atbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:07:30

Time Test Ended: 08:45:15

Test Type: Conventional Bottom Hole (Reset)

Tester: Brett Dickinson

Unit No: 59

**Interval: 3146.00 ft (KB) To 3166.00 ft (KB) (TVD)**

Reference Elevations: 1702.00 ft (KB)

Total Depth: 3166.00 ft (KB) (TVD)

1695.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

**Serial #: 8736**

**Inside**

Press@RunDepth: 375.12 psig @ 3163.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.11.09

End Date:

2013.11.09

Last Calib.:

2013.11.09

Start Time: 03:35:05

End Time:

08:45:14

Time On Btm:

2013.11.09 @ 05:07:00

Time Off Btm:

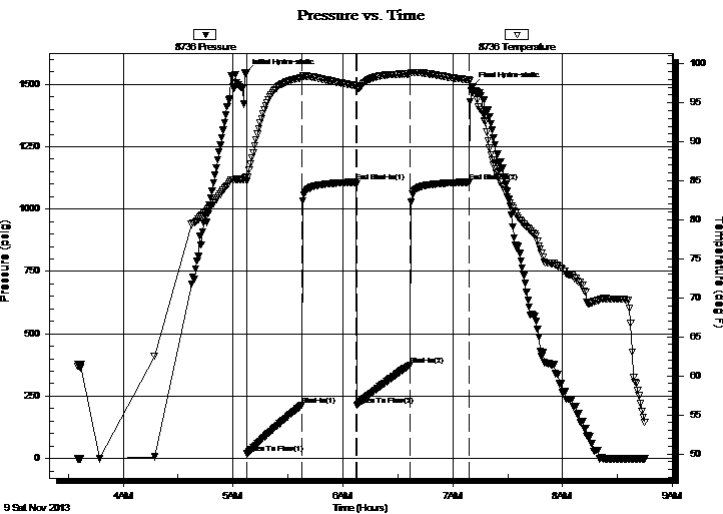
2013.11.09 @ 07:10:45

TEST COMMENT: IF-BOB in 5 1/2 min

IS-No blow

FF-BOB in 6 min

FS-No blow



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1545.57	85.44	Initial Hydro-static
1	19.46	84.93	Open To Flow (1)
31	212.89	98.21	Shut-In(1)
60	1108.48	97.21	End Shut-In(1)
61	214.69	96.81	Open To Flow (2)
90	375.12	98.70	Shut-In(2)
122	1108.31	97.91	End Shut-In(2)
124	1489.90	96.30	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
630.00	Water	8.84
130.00	MCW 20%M 80%W	1.82

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Bennett & Schulte Oil Co

**7-13s-14w Russell,KS**

PO Box 329  
Russell KS 67665

**Hilger #3**

Job Ticket: 55318

**DST#: 2**

ATTN: Bob Hopkins

Test Start: 2013.11.09 @ 03:35:00

## Tool Information

Drill Pipe:	Length: 3130.00 ft	Diameter: 3.80 inches	Volume: 43.91 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: 43.91 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	5.00 ft			String Weight: Initial 42000.00 lb
Depth to Top Packer:	3146.00 ft			Final 47000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	20.00 ft			
Tool Length:	41.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3126.00	
Shut In Tool	5.00			3131.00	
Hydraulic tool	5.00			3136.00	
Packer	5.00			3141.00	21.00 Bottom Of Top Packer
Packer	5.00			3146.00	
Stubb	1.00			3147.00	
Perforations	16.00			3163.00	
Recorder	0.00	8736	Inside	3163.00	
Recorder	0.00	6753	Outside	3163.00	
Bullnose	3.00			3166.00	20.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>41.00</b>				



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Bennett & Schulte Oil Co

**7-13s-14w Russell,KS**

PO Box 329  
Russell KS 67665

**Hilger #3**

Job Ticket: 55318

**DST#: 2**

ATTN: Bob Hopkins

Test Start: 2013.11.09 @ 03:35:00

### 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:

24000 ppm

Viscosity: 59.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.59 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
630.00	Water	8.837
130.00	MCW 20%M 80%W	1.824

Total Length: 760.00 ft      Total Volume: 10.661 bbl

Num Fluid Samples: 0

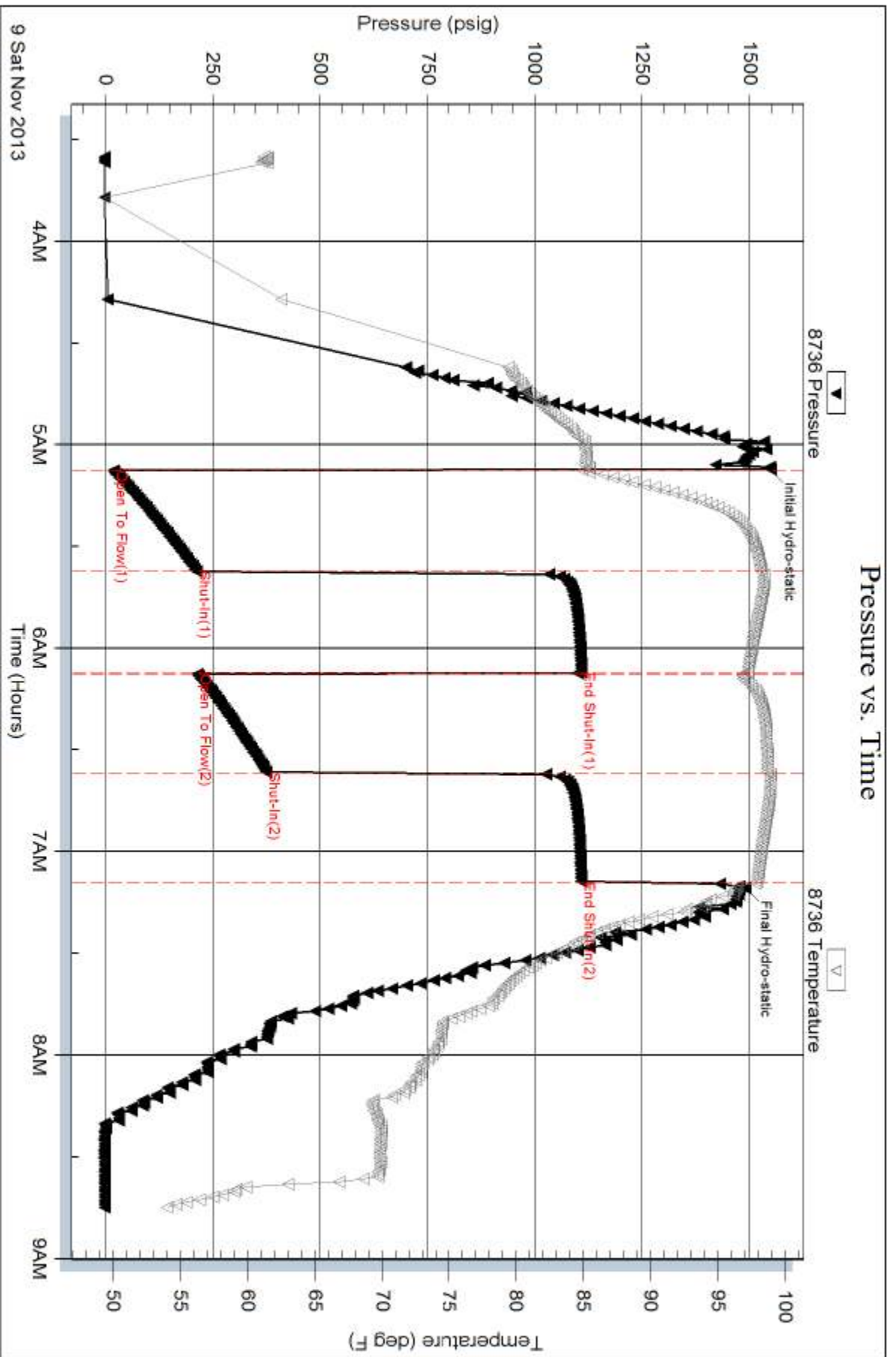
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

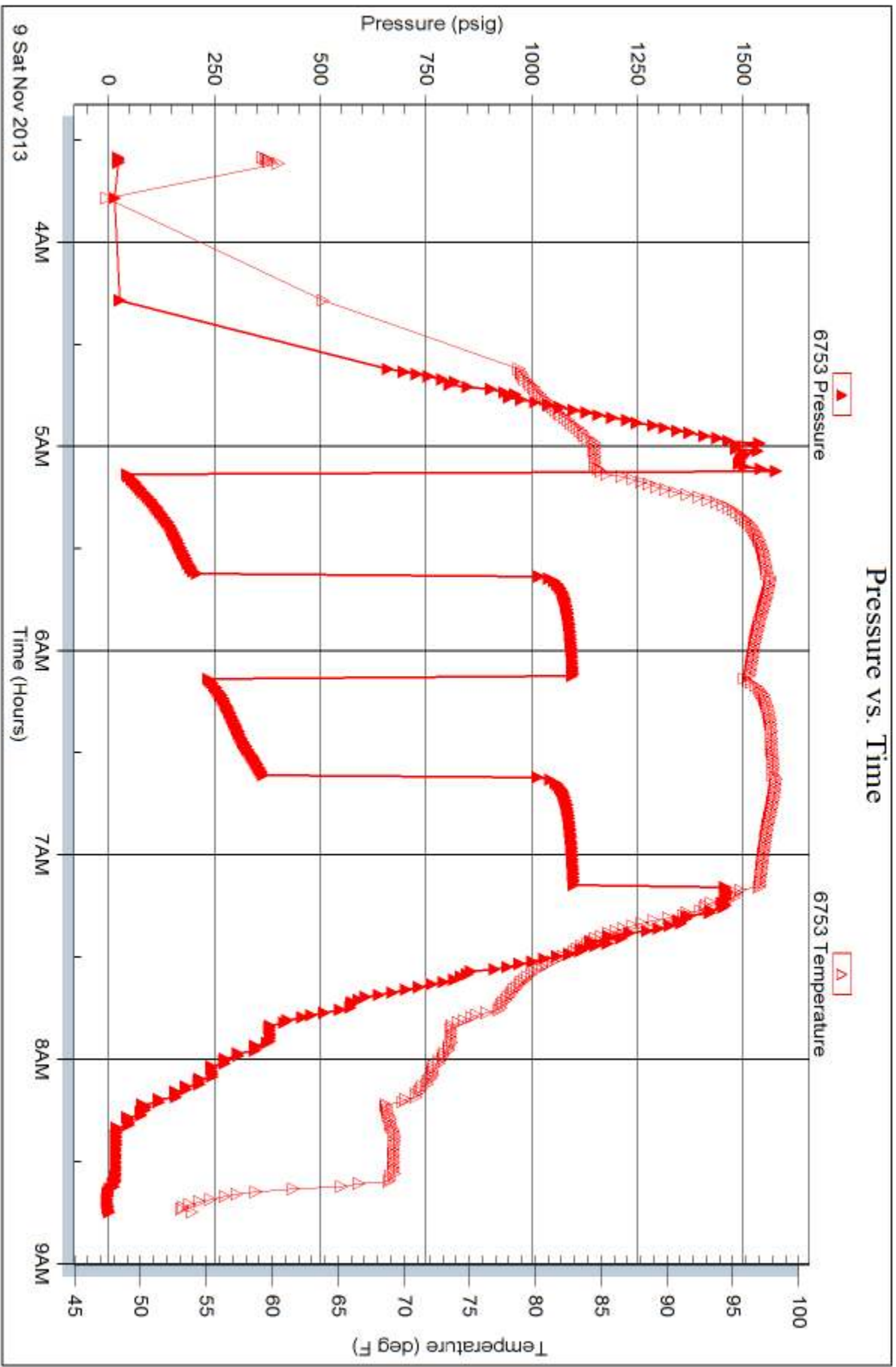


Serial #: 6753

Outside Bennett & Schulte Oil Co

Hilger #3

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 55318

Printed: 2013.11.13 @ 10:36:36



# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. **55317**

Well Name & No. Hilger #3 Test No. 1 Date 1/8/13  
 Company Bennett & Schulte Oil Co., A General Part<sup>Ship</sup> Elevation 1702 KB 1695 GL  
 Address PO Box 329 Russell KS 67665  
 Co. Rep / Geo. Bob Hopkins Rig Royal #2  
 Location: Sec. 7 Twp. 13 Rge. 14 Co. Russell State KS

Interval Tested 3126 - 3152 Zone Tested Arb.  
 Anchor Length 26 Drill Pipe Run 3130 Mud Wt. 8.9  
 Top Packer Depth 3121 Drill Collars Run — Vis 59  
 Bottom Packer Depth 3126 Wt. Pipe Run — WL 7.6  
 Total Depth 3152 Chlorides 2,000 ppm System LCM 2<sup>#</sup>  
 Blow Description IF - Surface blow died in 10 min flush tool No blow  
EBF - No blow  
FF - No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>65</u>	<u>Mud</u>				

Rec Total 65 BHT 89 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm

(A) Initial Hydrostatic 1,536  Test 1150 T-On Location 16:20  
 (B) First Initial Flow 14  Jars \_\_\_\_\_ T-Started 16:56  
 (C) First Final Flow 51  Safety Joint \_\_\_\_\_ T-Open 20:12  
 (D) Initial Shut-In 339  Circ Sub \_\_\_\_\_ T-Pulled 21:20  
 (E) Second Initial Flow 51  Hourly Standby \_\_\_\_\_ T-Out 22:33  
 (F) Second Final Flow \_\_\_\_\_  Mileage 68rt 105.40  
 (G) Final Shut-In \_\_\_\_\_  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1,513  Straddle \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_

Initial Open 30  
 Initial Shut-In 30  
 Final Flow 8  
 Final Shut-In \_\_\_\_\_

Sub Total 1255.40  
 Total 1255.40  
 MP/DST Disc't \_\_\_\_\_

Approved By \_\_\_\_\_ Our Representative Burt Dyer

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. **55318**

Well Name & No. Hilger #3 Test No. 2 Date 1/9/13  
 Company Bennett & Schulte Oil Co Elevation 1702 KB 1695 GL  
 Address PO Box 329 Russell KS 67665  
 Co. Rep / Geo. Bob Hopkins Rig Royal #2  
 Location: Sec. 7 Twp. 13 Rge. 14 Co. Russell State KS

Interval Tested 3146-3166 Zone Tested Arb  
 Anchor Length 20 Drill Pipe Run 3130 Mud Wt. 8.9  
 Top Packer Depth 3141 Drill Collars Run - Vis 59  
 Bottom Packer Depth 3146 Wt. Pipe Run - WL 7.6  
 Total Depth 3166 Chlorides 2,000 ppm System LCM 2#

Blow Description IF - BOB in 5 1/2 min  
FSI - No blow  
FF - BOB in 6 min  
FSI - No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>630</u>	<u>water</u>				
<u>130</u>	<u>MCW</u>			<u>80</u>	<u>20</u>

Rec Total 260 BHT 98 Gravity \_\_\_\_\_ API RW .5 @ 40° F Chlorides 24000 ppm  
 (A) Initial Hydrostatic 1,546  Test 1150 T-On Location 3:25  
 (B) First Initial Flow 19  Jars \_\_\_\_\_ T-Started 3:35  
 (C) First Final Flow 213  Safety Joint \_\_\_\_\_ T-Open 5:07  
 (D) Initial Shut-In 1,108  Circ Sub \_\_\_\_\_ T-Pulled 7:07  
 (E) Second Initial Flow 215  Hourly Standby \_\_\_\_\_ T-Out 8:45  
 (F) Second Final Flow 375  Mileage 68RT 105.40 Comments \_\_\_\_\_  
 (G) Final Shut-In 1,108  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1,490  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Initial Open 30  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Initial Shut-In 30  Day Standby \_\_\_\_\_ Total 1255.40  
 Final Flow 30  Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Final Shut-In 30 Sub Total 1255.40

Approved By \_\_\_\_\_ Our Representative Batt Dred

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.