



## DRILL STEM TEST REPORT

Prepared For: **Baird Oil Company LLC**

PO Box 428  
Logon KS 67646-0428

ATTN: Jim Baird / Rich Bel

**26-3s-22w Norton,KS**

**Esslinger Ranch Inc #4-26**

Start Date: 2013.10.11 @ 21:05:13

End Date: 2013.10.12 @ 01:37:22

Job Ticket #: 54825                      DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.10.15 @ 15:12:39



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Baird Oil Company LLC

**Esslinger Ranch Inc #4-26**

PO Box 428  
Logon KS 67646-0428

**26-3s-22w Norton,KS**

ATTN: Jim Baird / Rich Bel

Job Ticket: 54825

**DST#: 1**

Test Start: 2013.10.11 @ 21:05:13

## GENERAL INFORMATION:

Formation: **LKC J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:50:53

Time Test Ended: 01:37:22

Test Type: Conventional Bottom Hole (Initial)

Tester: Ray Schwager

Unit No: 70

**Interval: 3674.00 ft (KB) To 3710.00 ft (KB) (TVD)**

Reference Elevations: 2302.00 ft (KB)

Total Depth: 3710.00 ft (KB) (TVD)

2294.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 8369**

**Inside**

Press @ RunDepth: 18.85 psig @ 3683.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.10.11

End Date:

2013.10.12

Last Calib.: 2013.10.12

Start Time: 21:05:13

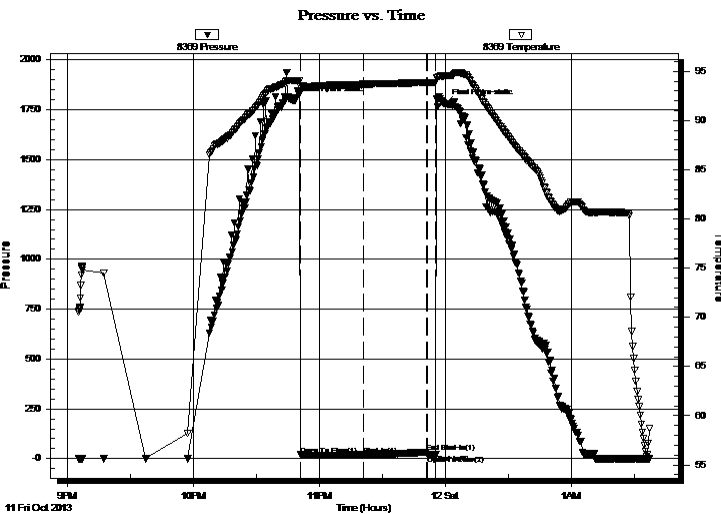
End Time:

01:37:22

Time On Btm: 2013.10.11 @ 22:48:08

Time Off Btm: 2013.10.11 @ 23:59:53

**TEST COMMENT:** 30-IFP-w k surface bl , died in 15 min  
30-ISIP-no bl  
5-FFP-no bl , pulled tool



## PRESSURE SUMMARY

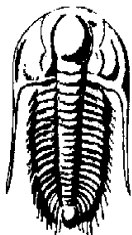
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1795.45	94.06	Initial Hydro-static
3	18.86	93.39	Open To Flow (1)
33	18.85	93.68	Shut-In(1)
63	32.40	93.86	End Shut-In(1)
64	19.15	93.86	Open To Flow (2)
68	19.49	93.89	Shut-In(2)
72	1780.67	94.55	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
2.00	Mud	0.01

## Gas Rates

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



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Baird Oil Company LLC

**Esslinger Ranch Inc #4-26**

PO Box 428  
Logon KS 67646-0428

**26-3s-22w Norton,KS**

ATTN: Jim Baird / Rich Bel

Job Ticket: 54825 **DST#: 1**

Test Start: 2013.10.11 @ 21:05:13

## GENERAL INFORMATION:

Formation: **LKC J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:50:53

Time Test Ended: 01:37:22

Test Type: Conventional Bottom Hole (Initial)

Tester: Ray Schwager

Unit No: 70

**Interval: 3674.00 ft (KB) To 3710.00 ft (KB) (TVD)**

Reference Elevations: 2302.00 ft (KB)

Total Depth: 3710.00 ft (KB) (TVD)

2294.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 8700 Outside**

Press @ RunDepth: psig @ 3683.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.10.11

End Date:

2013.10.12

Last Calib.:

2013.10.12

Start Time: 21:07:40

End Time:

01:36:53

Time On Btm:

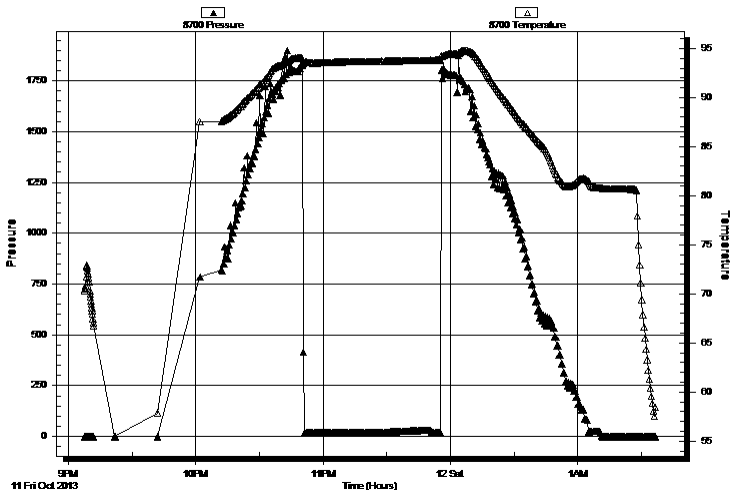
Time Off Btm:

**TEST COMMENT:** 30-IFP-w k surface bl , died in 15 min

30-ISIP-no bl

5-FFP-no bl , pulled tool

Pressure vs. Time



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
2.00	Mud	0.01

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Baird Oil Company LLC

**Esslinger Ranch Inc #4-26**

PO Box 428  
Logon KS 67646-0428

**26-3s-22w Norton,KS**

Job Ticket: 54825 **DST#: 1**

ATTN: Jim Baird / Rich Bel

Test Start: 2013.10.11 @ 21:05:13

## Tool Information

Drill Pipe:	Length: 3552.00 ft	Diameter: 3.80 inches	Volume: 49.83 bbl	Tool Weight:	2200.00 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: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose:	80000.00 lb
			<u>Total Volume: 50.42 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	19.00 ft			String Weight: Initial	59000.00 lb
Depth to Top Packer:	3674.00 ft			Final	59000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	36.00 ft				
Tool Length:	57.00 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			3654.00	
Shut In Tool	5.00			3659.00	
Hydraulic tool	5.00			3664.00	
Packer	5.00			3669.00	21.00 Bottom Of Top Packer
Packer	5.00			3674.00	
Stubb	1.00			3675.00	
Perforations	8.00			3683.00	
Recorder	0.00	8369	Inside	3683.00	
Recorder	0.00	8700	Outside	3683.00	
Perforations	24.00			3707.00	
Bullnose	3.00			3710.00	36.00 Bottom Packers & Anchor

**Total Tool Length: 57.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Baird Oil Company LLC

**Esslinger Ranch Inc #4-26**

PO Box 428  
Logon KS 67646-0428

**26-3s-22w Norton,KS**

Job Ticket: 54825      **DST#: 1**

ATTN: Jim Baird / Rich Bel

Test Start: 2013.10.11 @ 21:05:13

## 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: 60.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.75 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 1100.00 ppm			
Filter Cake: 1.00 inches			

## Recovery Information

Recovery Table

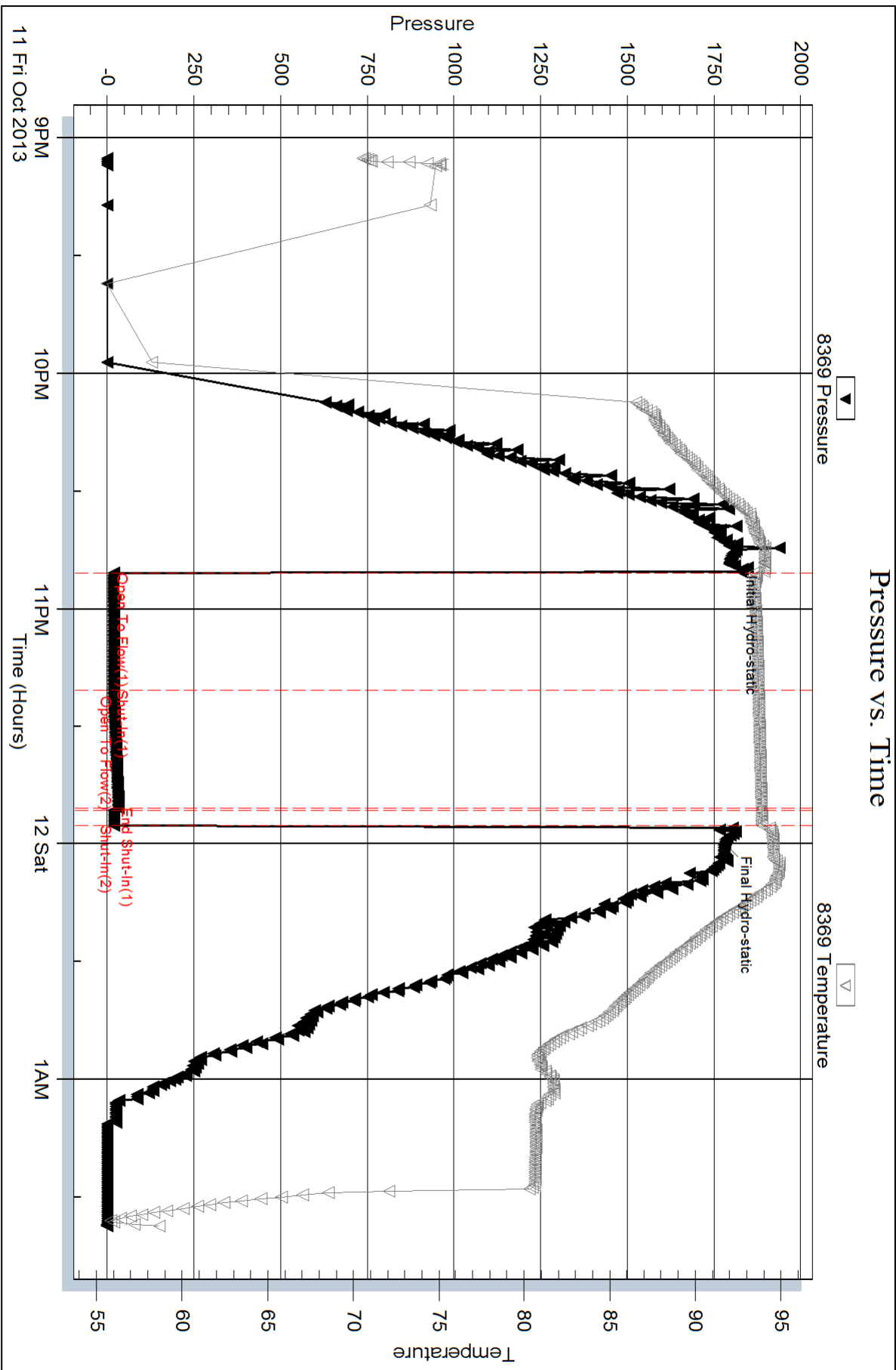
Length ft	Description	Volume bbl
2.00	Mud	0.010

Total Length: 2.00 ft      Total Volume: 0.010 bbl

Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:

Laboratory Name:      Laboratory Location:

Recovery Comments:

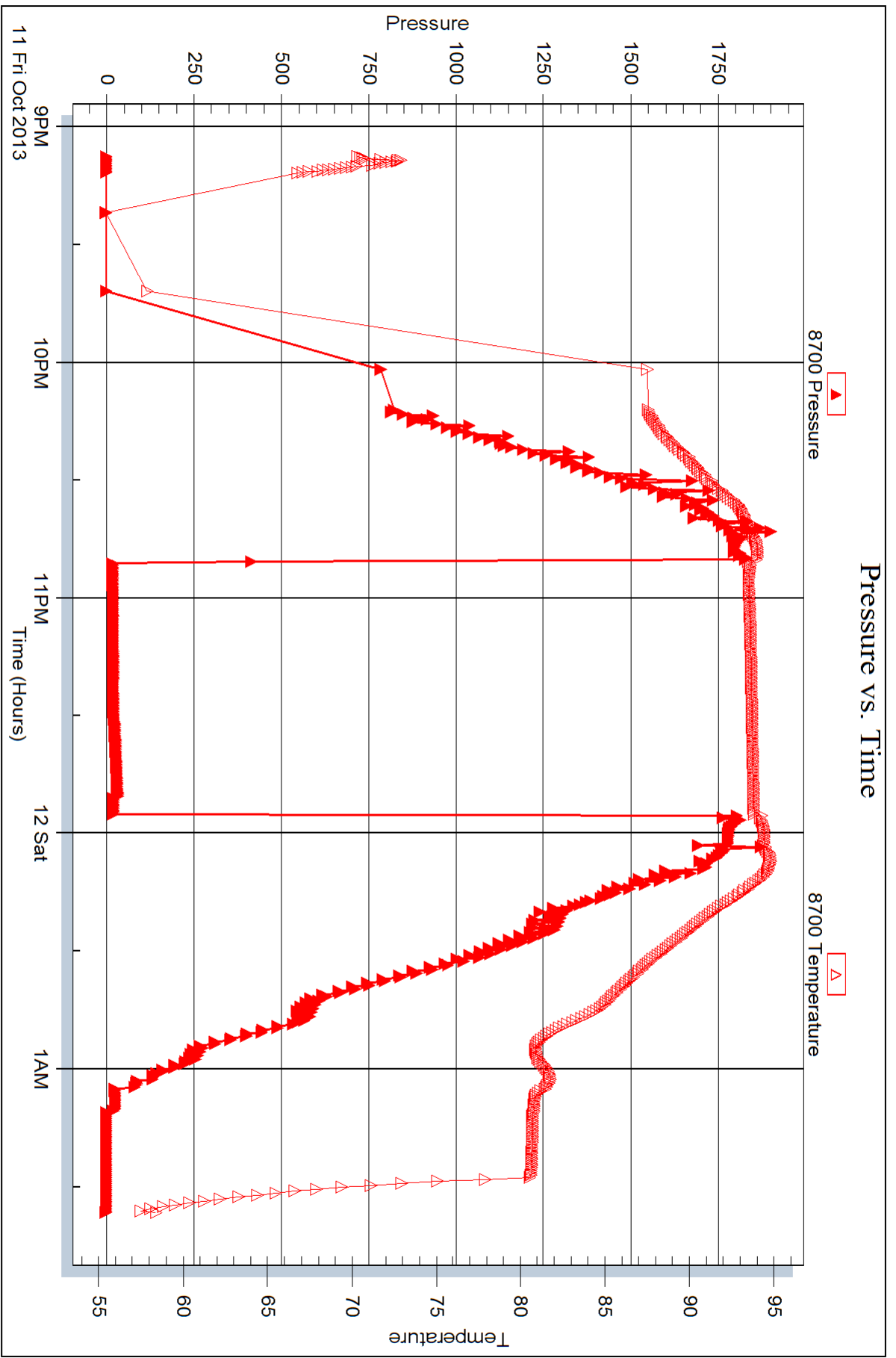


Serial #: 8700

Outside Baird Oil Company LLC

26-35-22w Norton, KS

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 54825

Printed: 2013.10.15 @ 15:12:40



## DRILL STEM TEST REPORT

Prepared For: **Baird Oil Company LLC**

PO Box 428  
Logon KS 67646-0428

ATTN: Jim Baird / Rich Bel

**26-3s-22w Norton,KS**

**Esslinger Ranch Inc #4-26**

Start Date: 2013.10.12 @ 21:30:58

End Date: 2013.10.13 @ 04:18:52

Job Ticket #: 54351                      DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.10.15 @ 15:12:14

Baird Oil Company LLC

Esslinger Ranch Inc #4-26

26-3s-22w Norton,KS

DST # 2

Penn Sd

2013.10.12





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Baird Oil Company LLC

**Esslinger Ranch Inc #4-26**

PO Box 428  
Logon KS 67646-0428

**26-3s-22w Norton,KS**

ATTN: Jim Baird / Rich Bel

Job Ticket: 54351

**DST#: 2**

Test Start: 2013.10.12 @ 21:30:58

## GENERAL INFORMATION:

Formation: **Penn Sd**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 23:39:23  
 Time Test Ended: 04:18:52  
 Interval: **3798.00 ft (KB) To 3810.00 ft (KB) (TVD)**  
 Total Depth: 3810.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Ray Schwager  
 Unit No: 70  
 Reference Elevations: 2302.00 ft (KB)  
 2294.00 ft (CF)  
 KB to GR/CF: 8.00 ft

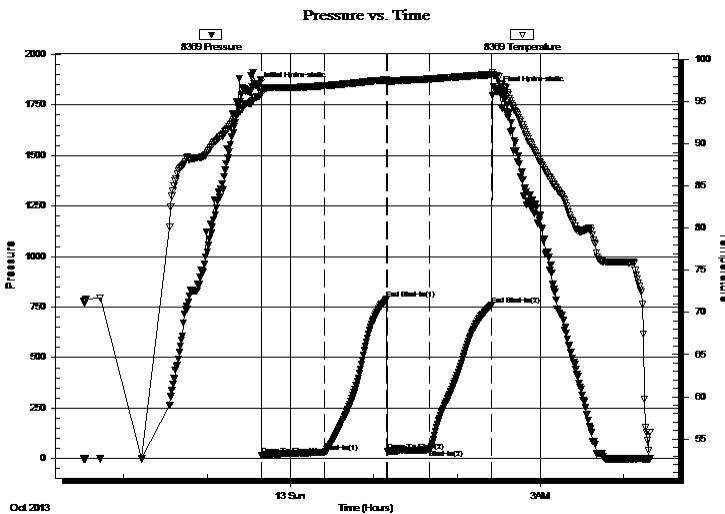
## Serial #: 8369

Inside

Press @ Run Depth: 45.20 psig @ 3804.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2013.10.12 End Date: 2013.10.13 Last Calib.: 2013.10.13  
 Start Time: 21:30:58 End Time: 04:18:52 Time On Btm: 2013.10.12 @ 23:36:08  
 Time Off Btm: 2013.10.13 @ 02:28:22

TEST COMMENT: 45-IFP-w k bl thru-out 1/4" to 1" bl  
 45-ISIP-no bl  
 30-FFP-no bl for 15 min , then vy w k surface bl  
 45-FSIP-no bl

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1842.37	95.58	Initial Hydro-static
4	16.18	95.98	Open To Flow (1)
49	32.61	96.88	Shut-In(1)
94	789.85	97.57	End Shut-In(1)
94	37.62	97.28	Open To Flow (2)
124	45.20	97.67	Shut-In(2)
169	759.56	98.19	End Shut-In(2)
173	1818.93	98.06	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
25.00	CO	0.12
40.00	MO 30%M75%O	0.20

\* Recovery from multiple tests

## Gas Rates

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



# TRILOBITE TESTING, INC.

## DRILL STEM TEST REPORT

Baird Oil Company LLC

Esslinger Ranch Inc #4-26

PO Box 428  
Logon KS 67646-0428

26-3s-22w Norton, KS

Job Ticket: 54351

DST#: 2

ATTN: Jim Baird / Rich Bel

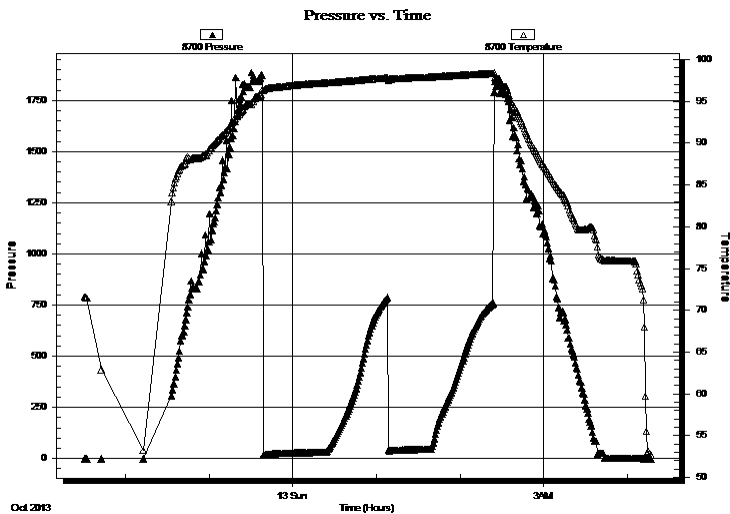
Test Start: 2013.10.12 @ 21:30:58

### GENERAL INFORMATION:

Formation: **Penn Sd**  
Deviated: No Whipstock: ft (KB)  
Test Type: Conventional Bottom Hole (Reset)  
Time Tool Opened: 23:39:23  
Tester: Ray Schwager  
Time Test Ended: 04:18:52  
Unit No: 70  
Interval: **3798.00 ft (KB) To 3810.00 ft (KB) (TVD)**  
Reference Elevations: 2302.00 ft (KB)  
Total Depth: 3810.00 ft (KB) (TVD)  
2294.00 ft (CF)  
Hole Diameter: 7.88 inches  
Hole Condition: Fair  
KB to GR/CF: 8.00 ft

**Serial #: 8700 Outside**  
Press @ Run Depth: psig @ 3804.00 ft (KB) Capacity: 8000.00 psig  
Start Date: 2013.10.12 End Date: 2013.10.13 Last Calib.: 2013.10.13  
Start Time: 21:30:27 End Time: 04:16:51 Time On Btm:  
Time Off Btm:

TEST COMMENT: 45-IFP-w k bl thru-out 1/4" to 1" bl  
45-ISIP-no bl  
30-FFP-no bl for 15 min , then vy w k surface bl  
45-FSIP-no bl



### PRESSURE SUMMARY

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

### Recovery

Length (ft)	Description	Volume (bbl)
25.00	CO	0.12
40.00	MO 30%M75%O	0.20

### Gas Rates

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

\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Baird Oil Company LLC

**Esslinger Ranch Inc #4-26**

PO Box 428  
Logon KS 67646-0428

**26-3s-22w Norton,KS**

ATTN: Jim Baird / Rich Bel

Job Ticket: 54351

**DST#: 2**

Test Start: 2013.10.12 @ 21:30:58

## Tool Information

Drill Pipe:	Length: 3680.00 ft	Diameter: 3.80 inches	Volume: 51.62 bbl	Tool Weight:	2200.00 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: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose:	80000.00 lb
			<u>Total Volume: 52.21 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	23.00 ft			String Weight: Initial	60000.00 lb
Depth to Top Packer:	3798.00 ft			Final	60000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	12.00 ft				
Tool Length:	33.00 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			3778.00	
Shut In Tool	5.00			3783.00	
Hydraulic tool	5.00			3788.00	
Packer	5.00			3793.00	21.00 Bottom Of Top Packer
Packer	5.00			3798.00	
Stubb	1.00			3799.00	
Perforations	5.00			3804.00	
Recorder	0.00	8369	Inside	3804.00	
Recorder	0.00	8700	Outside	3804.00	
Perforations	3.00			3807.00	
Bullnose	3.00			3810.00	12.00 Bottom Packers & Anchor

**Total Tool Length: 33.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Baird Oil Company LLC

**Esslinger Ranch Inc #4-26**

PO Box 428  
Logon KS 67646-0428

**26-3s-22w Norton,KS**

Job Ticket: 54351      **DST#: 2**

ATTN: Jim Baird / Rich Bel

Test Start: 2013.10.12 @ 21:30:58

## Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 18 deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity: ppm
Viscosity: 52.00 sec/qt	Cushion Volume: bbl	
Water Loss: 6.76 in <sup>3</sup>	Gas Cushion Type:	
Resistivity: ohm.m	Gas Cushion Pressure: psig	
Salinity: 1100.00 ppm		
Filter Cake: 2.00 inches		

## Recovery Information

Recovery Table

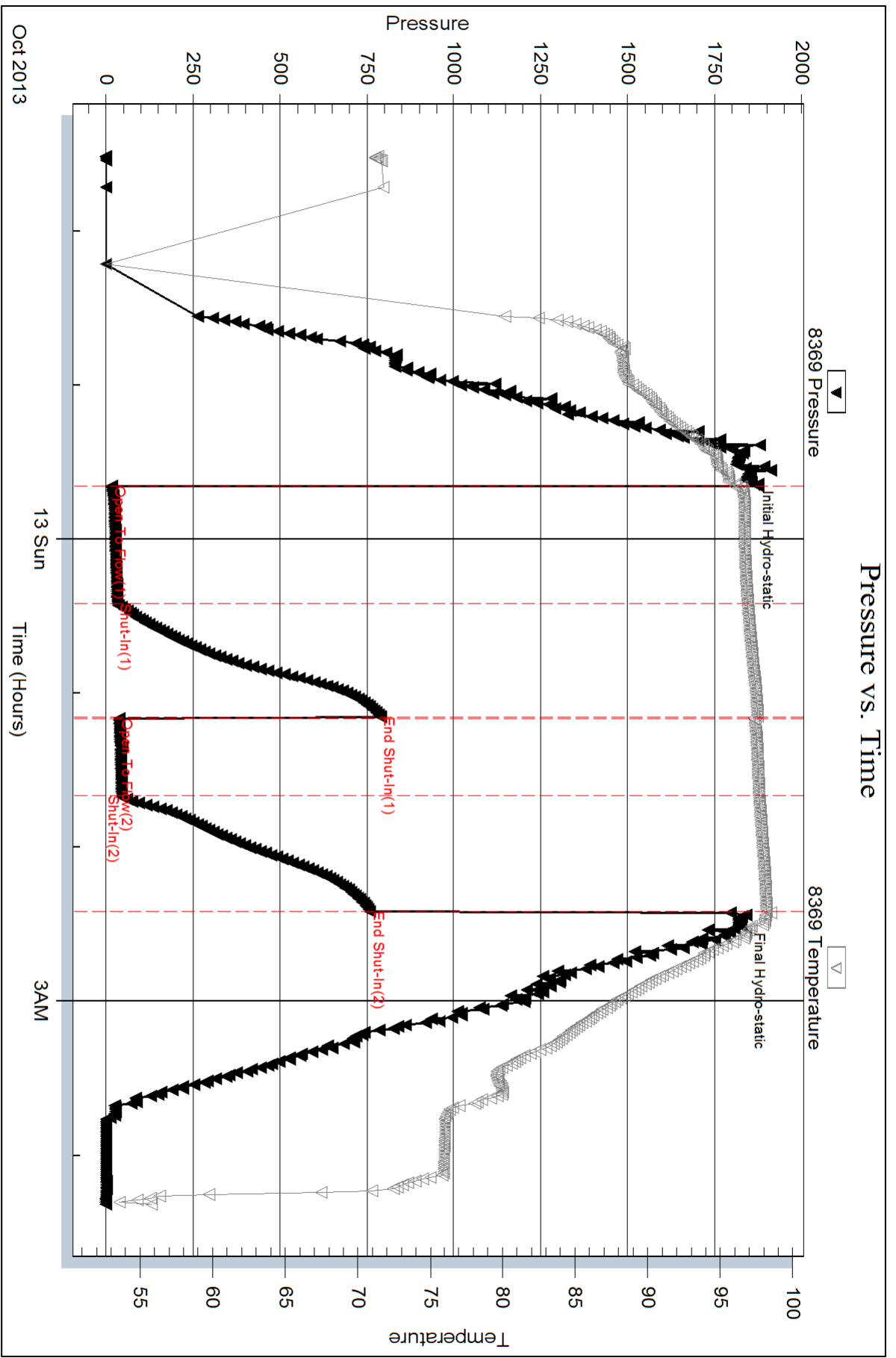
Length ft	Description	Volume bbl
25.00	CO	0.123
40.00	MO 30%M75%O	0.197

Total Length: 65.00 ft      Total Volume: 0.320 bbl

Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:

Laboratory Name:      Laboratory Location:

Recovery Comments:

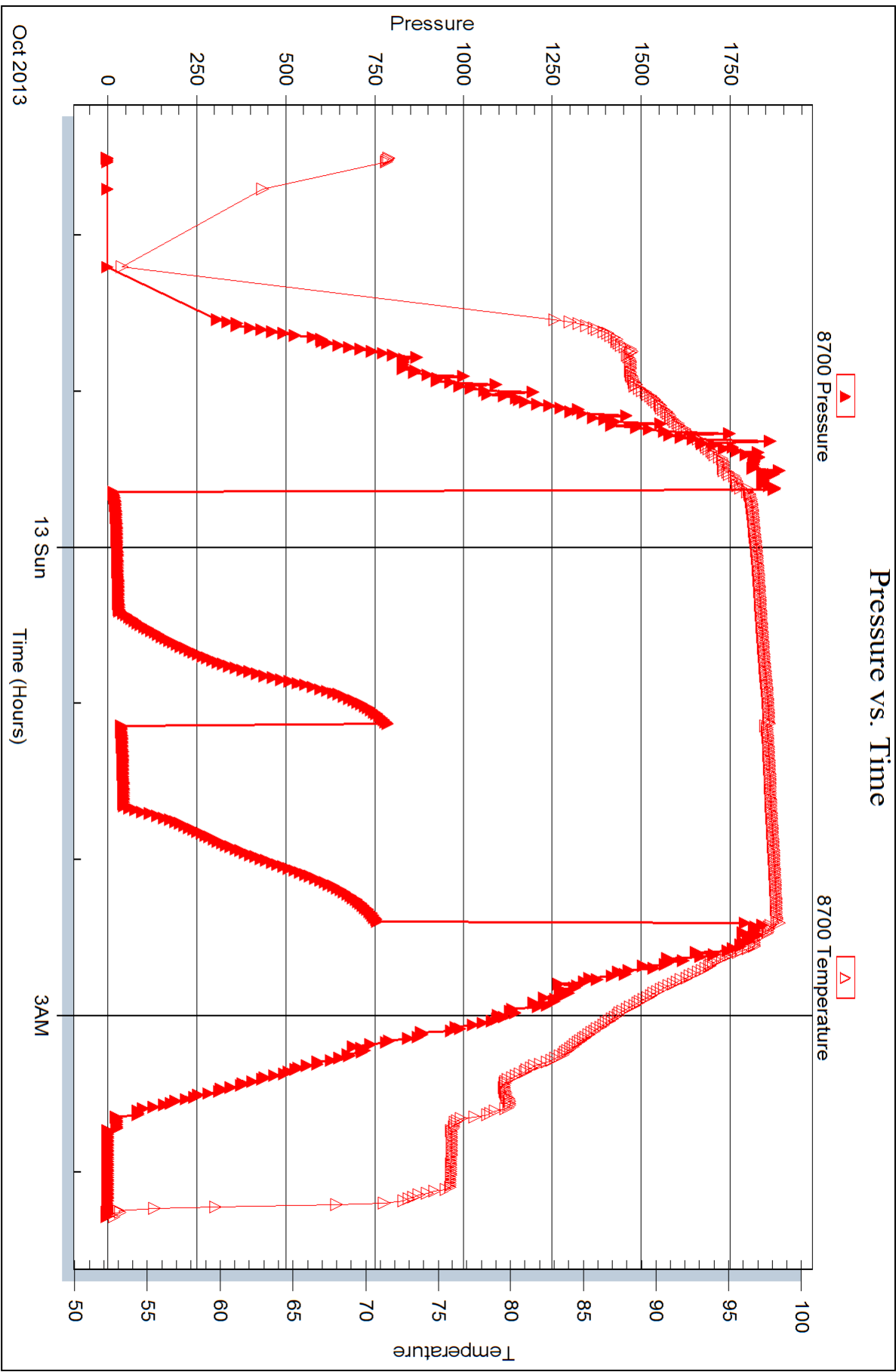


Serial #: 8700

Outside Baird Oil Company LLC

26-35-22w Norton, KS

DST Test Number: 2



Trilobite Testing, Inc

Ref. No: 54351

Printed: 2013.10.15 @ 15:12:15



## DRILL STEM TEST REPORT

Prepared For: **Baird Oil Company LLC**

PO Box 428  
Logon KS 67646-0428

ATTN: Jim Baird / Rich Bel

**26-3s-22w Norton,KS**

**Esslinger Ranch Inc #4-26**

Start Date: 2013.10.13 @ 10:00:56

End Date: 2013.10.13 @ 16:26:50

Job Ticket #: 54352                      DST #: 3

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.10.15 @ 15:11:40

Baird Oil Company LLC

Esslinger Ranch Inc #4-26

26-3s-22w Norton,KS

DST # 3

Arbuckle

2013.10.13



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Baird Oil Company LLC

**Esslinger Ranch Inc #4-26**

PO Box 428  
Logon KS 67646-0428

**26-3s-22w Norton,KS**

ATTN: Jim Baird / Rich Bel

Job Ticket: 54352

**DST#: 3**

Test Start: 2013.10.13 @ 10:00:56

## GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:56:06

Time Test Ended: 16:26:50

Test Type: Conventional Bottom Hole (Reset)

Tester: Ray Schwager

Unit No: 70

**Interval: 3810.00 ft (KB) To 3820.00 ft (KB) (TVD)**

Reference Elevations: 2302.00 ft (KB)

Total Depth: 3820.00 ft (KB) (TVD)

2294.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 8369**

**Inside**

Press @ Run Depth: 32.32 psig @ 3812.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.10.13

End Date:

2013.10.13

Last Calib.: 2013.10.13

Start Time: 10:00:56

End Time:

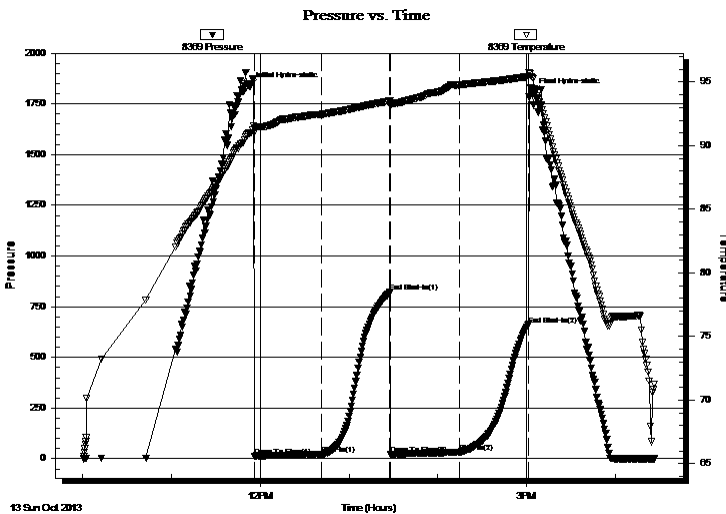
16:26:50

Time On Btm: 2013.10.13 @ 11:52:51

Time Off Btm: 2013.10.13 @ 15:03:35

**TEST COMMENT:** 45-IFP-vy w k bl , surface to 1/16" bl  
45-ISIP-no bl  
45-FFP-surface bl thru-out  
45-FSIP-no bl

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1837.35	91.00	Initial Hydro-static
4	13.33	91.00	Open To Flow (1)
49	22.76	92.46	Shut-In(1)
95	820.45	93.50	End Shut-In(1)
96	22.68	93.32	Open To Flow (2)
142	32.32	94.76	Shut-In(2)
189	661.51	95.43	End Shut-In(2)
191	1806.49	95.37	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
10.00	O&GCM 5%G10%O85%M	0.05

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Baird Oil Company LLC

**Esslinger Ranch Inc #4-26**

PO Box 428  
Logon KS 67646-0428

**26-3s-22w Norton, KS**

ATTN: Jim Baird / Rich Bel

Job Ticket: 54352      **DST#: 3**  
Test Start: 2013.10.13 @ 10:00:56

## GENERAL INFORMATION:

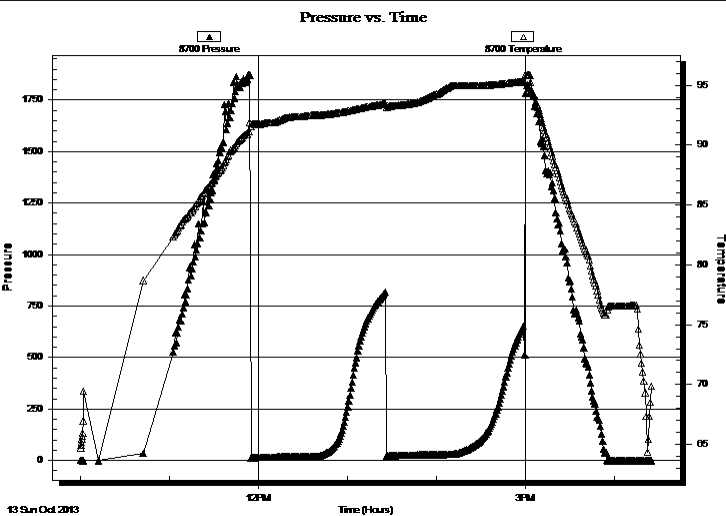
Formation: <b>Arbuckle</b>			
Deviated: No Whipstock:	ft (KB)	Test Type: Conventional Bottom Hole (Reset)	
Time Tool Opened: 11:56:06		Tester: Ray Schwager	
Time Test Ended: 16:26:50		Unit No: 70	
<b>Interval: 3810.00 ft (KB) To 3820.00 ft (KB) (TVD)</b>		Reference Elevations: 2302.00 ft (KB)	
Total Depth: 3820.00 ft (KB) (TVD)		2294.00 ft (CF)	
Hole Diameter: 7.88 inches	Hole Condition: Fair	KB to GR/CF: 8.00 ft	

**Serial #: 8700**

**Outside**

Press @ Run Depth:                      psig @      3812.00 ft (KB)	Capacity:    8000.00 psig
Start Date:                                      2013.10.13      End Date:                                      2013.10.13	Last Calib.:    2013.10.13
Start Time:                                      10:00:09      End Time:                                      16:24:48	Time On Btm:
	Time Off Btm:

TEST COMMENT: 45-IFP-vy w k bl , surface to 1/16" bl  
45-ISIP-no bl  
45-FFP-surface bl thru-out  
45-FSIP-no bl



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
10.00	O&GCM 5%G10%O85%M	0.05

## Gas Rates

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

\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Baird Oil Company LLC

**Esslinger Ranch Inc #4-26**

PO Box 428  
Logon KS 67646-0428

**26-3s-22w Norton,KS**

Job Ticket: 54352

**DST#: 3**

ATTN: Jim Baird / Rich Bel

Test Start: 2013.10.13 @ 10:00:56

## Tool Information

Drill Pipe:	Length: 3679.00 ft	Diameter: 3.80 inches	Volume: 51.61 bbl	Tool Weight:	2200.00 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: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose:	75000.00 lb
			<u>Total Volume: 52.20 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	10.00 ft			String Weight: Initial	60000.00 lb
Depth to Top Packer:	3810.00 ft			Final	60000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	10.00 ft				
Tool Length:	31.00 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			3790.00	
Shut In Tool	5.00			3795.00	
Hydraulic tool	5.00			3800.00	
Packer	5.00			3805.00	21.00 Bottom Of Top Packer
Packer	5.00			3810.00	
Stubb	1.00			3811.00	
Perforations	1.00			3812.00	
Recorder	0.00	8369	Inside	3812.00	
Recorder	0.00	8700	Outside	3812.00	
Perforations	5.00			3817.00	
Bullnose	3.00			3820.00	10.00 Bottom Packers & Anchor

**Total Tool Length: 31.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Baird Oil Company LLC

**Esslinger Ranch Inc #4-26**

PO Box 428  
Logon KS 67646-0428

**26-3s-22w Norton,KS**

Job Ticket: 54352

**DST#: 3**

ATTN: Jim Baird / Rich Bel

Test Start: 2013.10.13 @ 10:00:56

## 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: 46.00 sec/qt

Cushion Volume: bbl

Water Loss: 6.75 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure: psig

Salinity: 1100.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	O&GCM 5%G10%O85%M	0.049

Total Length: 10.00 ft      Total Volume: 0.049 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

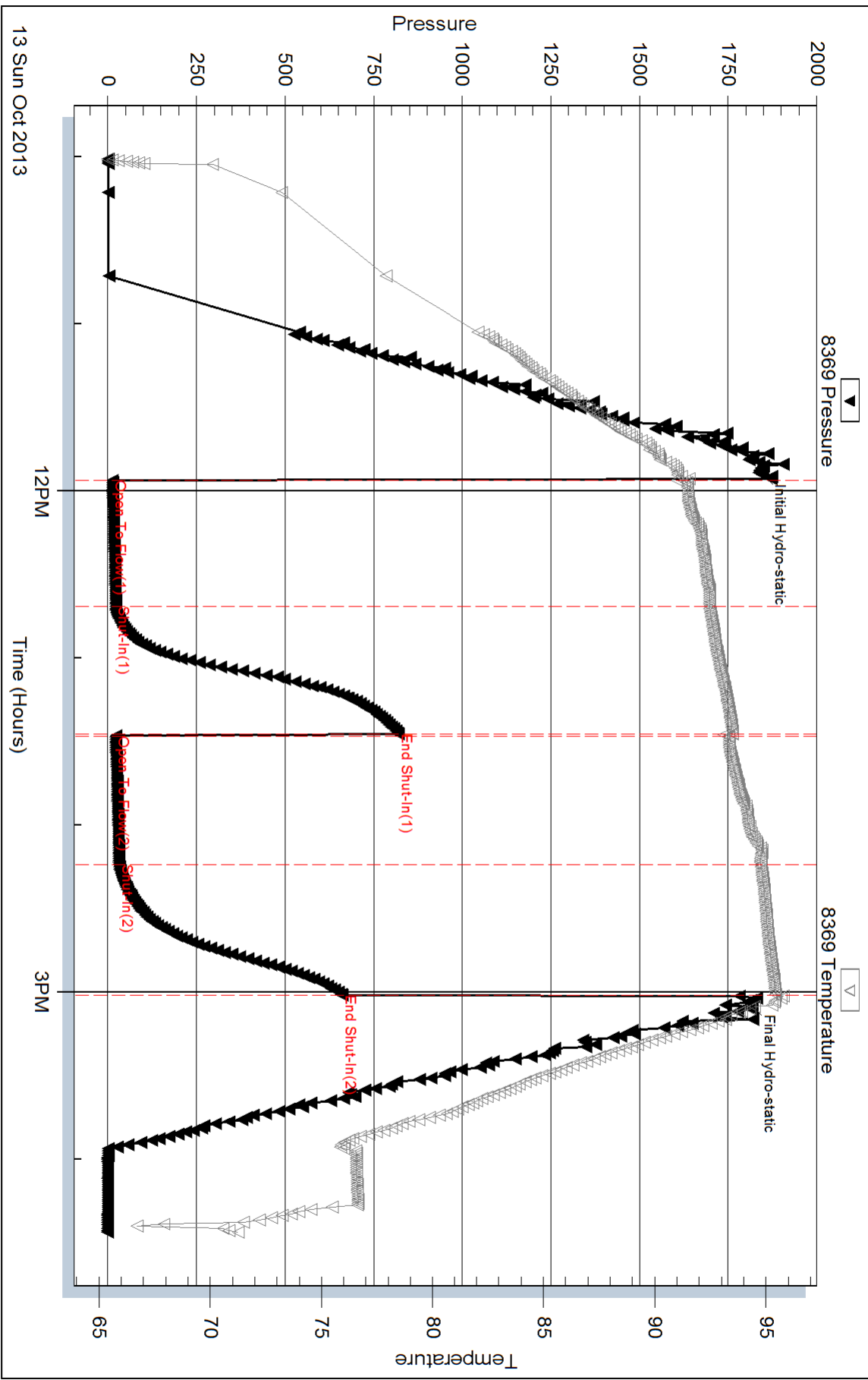
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time

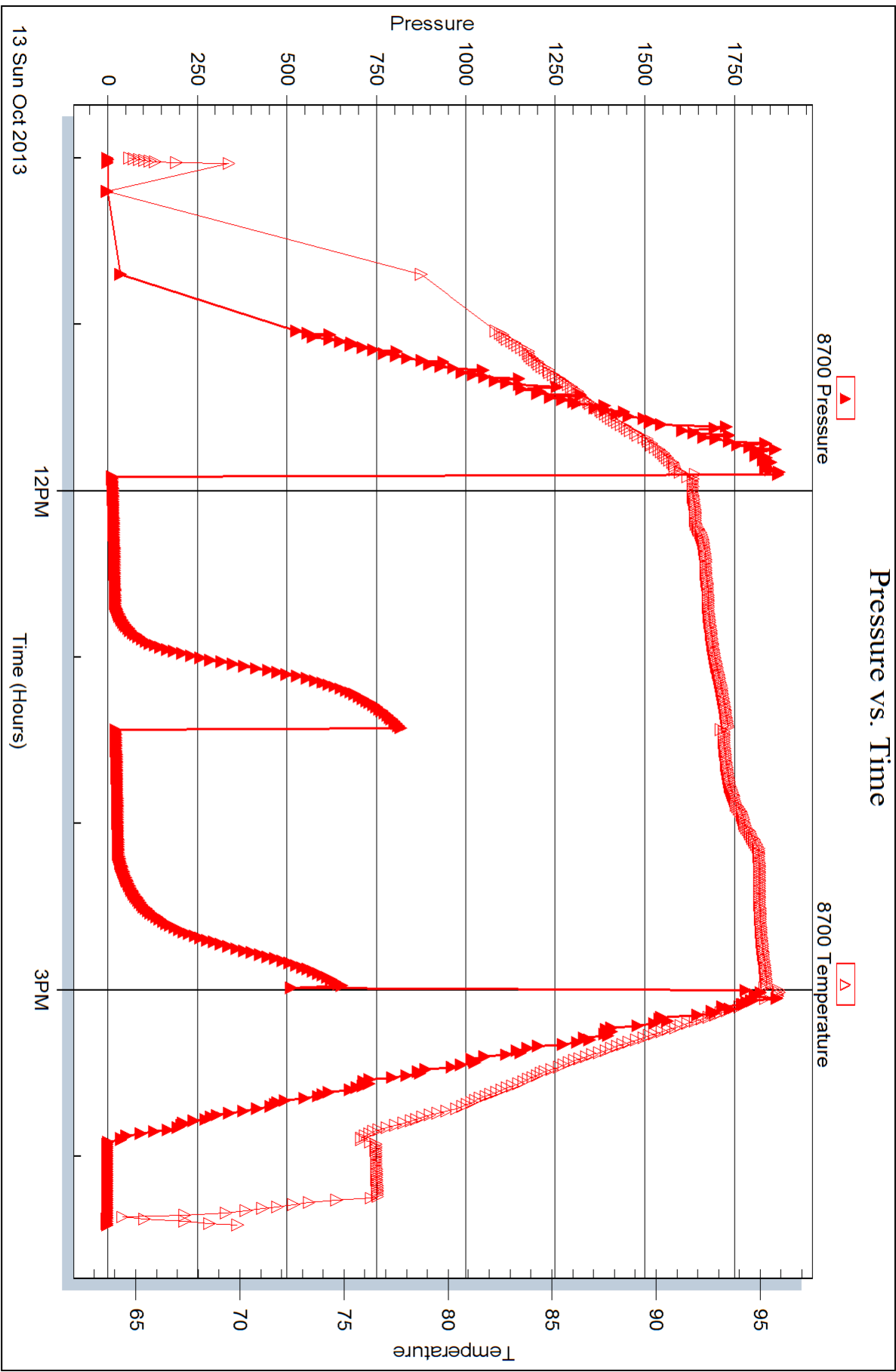


Serial #: 8700

Outside Baird Oil Company LLC

26-35-22w Norton, KS

DST Test Number: 3





## DRILL STEM TEST REPORT

Prepared For: **Baird Oil Company LLC**

PO Box 428  
Logon KS 67646-0428

ATTN: Jim Baird / Rich Bel

**26-3s-22w Norton,KS**

**Esslinger Ranch Inc #4-26**

Start Date: 2013.10.13 @ 22:45:22

End Date: 2013.10.14 @ 05:18:16

Job Ticket #: 54353                      DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2013.10.15 @ 15:11:14

Baird Oil Company LLC

Esslinger Ranch Inc #4-26

26-3s-22w Norton,KS

DST # 4

Arbuckle

2013.10.13



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Baird Oil Company LLC

**Esslinger Ranch Inc #4-26**

PO Box 428  
Logon KS 67646-0428

**26-3s-22w Norton,KS**

ATTN: Jim Baird / Rich Bel

Job Ticket: 54353

**DST#: 4**

Test Start: 2013.10.13 @ 22:45:22

## GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:39:32

Time Test Ended: 05:18:16

Test Type: Conventional Bottom Hole (Reset)

Tester: Ray Schwager

Unit No: 70

**Interval: 3830.00 ft (KB) To 3835.00 ft (KB) (TVD)**

Reference Elevations: 2302.00 ft (KB)

Total Depth: 3835.00 ft (KB) (TVD)

2294.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

**Serial #: 8369 Inside**

Press @ Run Depth: 364.79 psig @ 3827.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.10.13

End Date:

2013.10.14

Last Calib.: 2013.10.14

Start Time: 22:45:22

End Time:

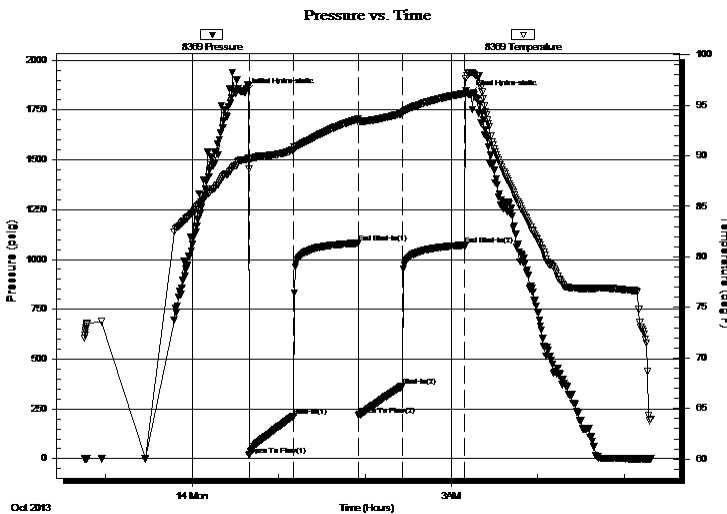
05:18:16

Time On Btm: 2013.10.14 @ 00:36:47

Time Off Btm: 2013.10.14 @ 03:12:31

**TEST COMMENT:** 30-IFP-w k to strg in 8 min  
45-ISIP-surface bl bk  
30-FFP-w k to strg in 9 min  
45-FSIP-no bl

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1839.61	89.62	Initial Hydro-static
3	17.41	88.72	Open To Flow (1)
34	213.87	90.60	Shut-In(1)
79	1082.62	93.66	End Shut-In(1)
79	217.32	93.27	Open To Flow (2)
109	364.79	94.19	Shut-In(2)
153	1072.44	96.16	End Shut-In(2)
156	1826.88	98.19	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
540.00	Water	6.48
70.00	MW 20%M80%W w / show of oil	0.98

## Gas Rates

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

\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Baird Oil Company LLC

**Esslinger Ranch Inc #4-26**

PO Box 428  
Logon KS 67646-0428

**26-3s-22w Norton,KS**

ATTN: Jim Baird / Rich Bel

Job Ticket: 54353

**DST#: 4**

Test Start: 2013.10.13 @ 22:45:22

### GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 00:39:32

Time Test Ended: 05:18:16

**Interval: 3830.00 ft (KB) To 3835.00 ft (KB) (TVD)**

Total Depth: 3835.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Test Type: Conventional Bottom Hole (Reset)

Tester: Ray Schwager

Unit No: 70

Reference Elevations: 2302.00 ft (KB)

2294.00 ft (CF)

KB to GR/CF: 8.00 ft

**Serial #: 8700 Outside**

Press @ RunDepth: psig @ 3827.00 ft (KB)

Start Date: 2013.10.13

End Date:

2013.10.14

Capacity: 8000.00 psig

Last Calib.:

2013.10.14

Start Time: 22:45:33

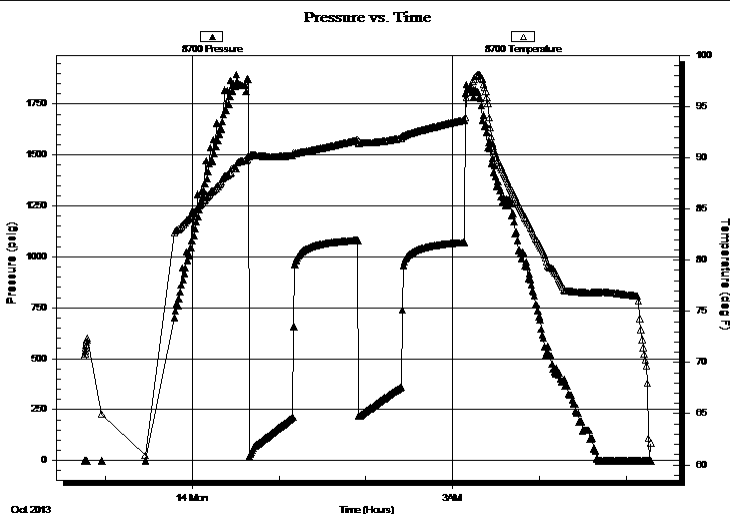
End Time:

05:17:12

Time On Btm:

Time Off Btm:

TEST COMMENT: 30-IFP-w k to strg in 8 min  
45-ISIP-surface bl bk  
30-FFP-w k to strg in 9 min  
45-FSIP-no bl



### PRESSURE SUMMARY

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

### Recovery

Length (ft)	Description	Volume (bbl)
540.00	Water	6.48
70.00	MW 20%M80%W w / show of oil	0.98

### Gas Rates

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

\* Recovery from multiple tests





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Baird Oil Company LLC

**Esslinger Ranch Inc #4-26**

PO Box 428  
Logon KS 67646-0428

**26-3s-22w Norton,KS**

Job Ticket: 54353

**DST#: 4**

ATTN: Jim Baird / Rich Bel

Test Start: 2013.10.13 @ 22:45:22

## Tool Information

Drill Pipe:	Length: 3709.00 ft	Diameter: 3.80 inches	Volume: 52.03 bbl	Tool Weight: 2200.00 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: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 75000.00 lb
			<u>Total Volume: 52.62 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	3820.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	15.00 ft			
Tool Length:	36.00 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			3800.00	
Shut In Tool	5.00			3805.00	
Hydraulic tool	5.00			3810.00	
Packer	5.00			3815.00	21.00 Bottom Of Top Packer
Packer	5.00			3820.00	
Stubb	1.00			3821.00	
Perforations	6.00			3827.00	
Recorder	0.00	8369	Inside	3827.00	
Recorder	0.00	8700	Outside	3827.00	
Perforations	5.00			3832.00	
Bullnose	3.00			3835.00	15.00 Bottom Packers & Anchor

**Total Tool Length: 36.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Baird Oil Company LLC

**Esslinger Ranch Inc #4-26**

PO Box 428  
Logon KS 67646-0428

**26-3s-22w Norton,KS**

Job Ticket: 54353

**DST#: 4**

ATTN: Jim Baird / Rich Bel

Test Start: 2013.10.13 @ 22:45:22

## 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:

46000 ppm

Viscosity: 53.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.76 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1100.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
540.00	Water	6.482
70.00	MW 20%M80%W w / show of oil	0.982

Total Length: 610.00 ft      Total Volume: 7.464 bbl

Num Fluid Samples: 0

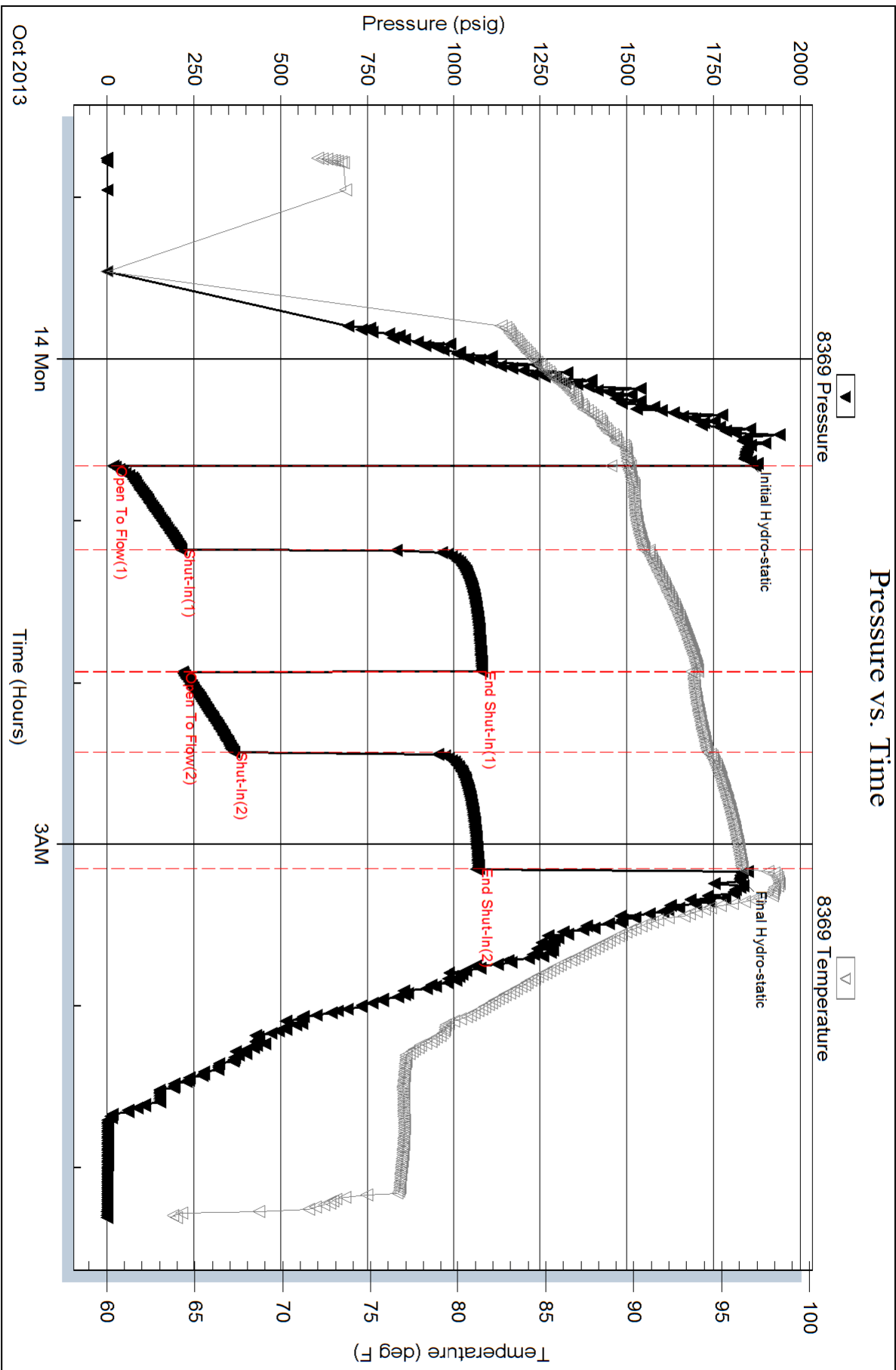
Num Gas Bombs: 0

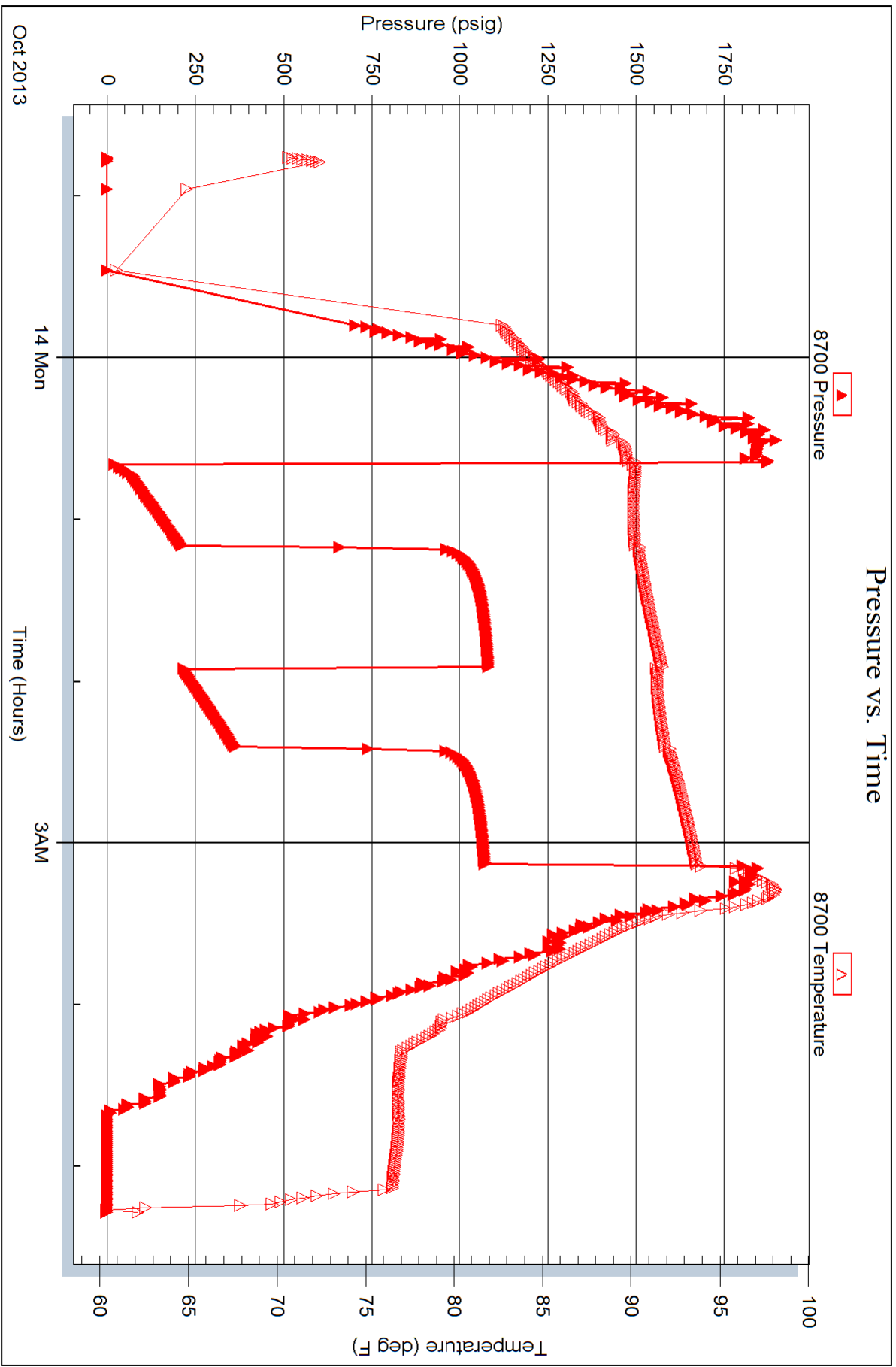
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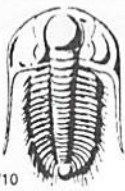
Laboratory Name:

Laboratory Location:

Recovery Comments: RW .15 @ 65F







# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 54825

Well Name & No. Esslinger Ranch, Inc #4-26 Test No. 1 Date 10-11-13  
 Company Baird Oil Company, LLC Elevation 2302 KB 2294 GL  
 Address 113 W. MAIN P.O. Box 428 Logan, Ks 67646-0428  
 Co. Rep / Geo. Rich Bell Rig WW rig 12  
 Location: Sec. 26 Twp. 3<sup>s</sup> Rge. 22<sup>w</sup> Co. NORTON State Ko

Interval Tested 3674-3710 Zone Tested LKC "J"  
 Anchor Length 36 Drill Pipe Run 3552 Mud Wt. 9.3  
 Top Packer Depth 3669 Drill Collars Run 120 Vis 60  
 Bottom Packer Depth 3674 Wt. Pipe Run — WL 6.8  
 Total Depth 3710 Chlorides 1100 ppm System LCM 1#  
 Blow Description IFP - Weak surface blow, died in 15min  
ISTP - NO Blow  
FFP - NO Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>2</u>	<u>Mud</u>				

Rec Total 2 BHT 93 Gravity — API RW — @ — ° F Chlorides — ppm

(A) Initial Hydrostatic 1795  Test 1150 T-On Location 1830  
 (B) First Initial Flow 18  Jars T-Started 2105  
 (C) First Final Flow 18  Safety Joint T-Open 2250  
 (D) Initial Shut-In 32  Circ Sub T-Pulled 2355  
 (E) Second Initial Flow 19  Hourly Standby T-Out 0137  
 (F) Second Final Flow 19  Mileage 180 RT 96rt 148.80 Comments Motel stay  
 (G) Final Shut-In —  Sampler  Ruined Shale Packer  
 (H) Final Hydrostatic 1780  Straddle  Ruined Packer  
 Shale Packer  Extra Copies  
 Extra Packer  Extra Recorder Sub Total 0  
 Extra Recorder  Day Standby Total 1298.80  
 Day Standby  Accessibility MP/DST Disc't  
 Accessibility Sub Total 1298.80

Initial Open 30  
 Initial Shut-In 30  
 Final Flow 5  
 Final Shut-In pulled Tool

Approved By \_\_\_\_\_ Our Representative Ray Schwager Thank you

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 54351

Well Name & No. Esslinger Ranch, Inc #4-26 Test No. 2 Date 10-12-13  
 Company Baird Oil Company LLC Elevation 2302 KB 2294 GL  
 Address 113 W. MAIN PO Box 428 Logan, Ks 67646-0428  
 Co. Rep / Geo. Rich Bell Rig WW1912  
 Location: Sec. 26 Twp. 3<sup>s</sup> Rge. 22<sup>w</sup> Co. NORTON State Ks

Interval Tested 3798-3810 Zone Tested Penn 5d  
 Anchor Length 12 Drill Pipe Run 3680 Mud Wt. 9.2  
 Top Packer Depth 3793 Drill Collars Run 120 Vis 52  
 Bottom Packer Depth 3798 Wt. Pipe Run — WL 6.8  
 Total Depth 3810 Chlorides 1100 ppm System LCM 1#

Blow Description IFF - WEAK Blow then-out 1/4" To 1" Blow  
ISIP - NO Blow  
FFP - NO Blow 1<sup>st</sup> 15min, then very weak surface Blow  
FSTIP - NO Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>25</u>	<u>CO</u>				
<u>40</u>	<u>MO</u>		<u>70</u>		<u>30</u>

Rec Total 65 BHT 98 Gravity 18 API RW — @ — ° F Chlorides — ppm

(A) Initial Hydrostatic 1842  Test 1150 T-On Location 2105  
 (B) First Initial Flow 16  Jars T-Started 2130  
 (C) First Final Flow 32  Safety Joint T-Open 2340  
 (D) Initial Shut-In 789  Circ Sub T-Pulled 0225  
 (E) Second Initial Flow 37  Hourly Standby T-Out 0418  
 (F) Second Final Flow 45  Mileage 148.80 Comments MOTEL STAY  
 (G) Final Shut-In 759  Sampler  Ruined Shale Packer  
 (H) Final Hydrostatic 1818  Straddle  Ruined Packer

Initial Open 45  Shale Packer  Ruined Packer  
 Initial Shut-In 45  Extra Packer  Extra Copies  
 Final Flow 30  Extra Recorder Sub Total 0  
 Final Shut-In 45  Day Standby Total 1298.80  
 Accessibility MP/DST Disc't

Approved By \_\_\_\_\_ Our Representative RAY SCHWAGER Thank you

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. 54352

Well Name & No. Esslinger Ranch, Inc # 4-26 Test No. 3 Date 10-13-13  
 Company BAIRD OIL COMPANY LLC Elevation 2302 KB 2294 GL  
 Address 113 W. MAIN PO Box 428 Logan, Ko 67646-0428  
 Co. Rep / Geo. Rich Bell Rig WW rig 12  
 Location: Sec. 26 Twp. 3<sup>s</sup> Rge. 22<sup>w</sup> Co. NORTON State Ko

Interval Tested 3810-3820 Zone Tested Arbuckle  
 Anchor Length 10 Drill Pipe Run 3679 Mud Wt. 9.2  
 Top Packer Depth 3805 Drill Collars Run 120 Vis 46  
 Bottom Packer Depth 3810 Wt. Pipe Run - WL 6.4  
 Total Depth 3820 Chlorides 1100 ppm System LCM 1#

Blow Description IFP - Very Weak Blow, surface to 1/16" Blow  
ISIP - NO Blow  
FFP - surface Blow thru-out  
FSIP - NO Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>0-6 CM</u>	<u>5</u>	<u>10</u>	<u>85</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 10 BHT 95 Gravity - API RW - @ - ° F Chlorides - ppm

(A) Initial Hydrostatic 1837  Test 1150 T-On Location 0930  
 (B) First Initial Flow 13  Jars T-Started 1000  
 (C) First Final Flow 22  Safety Joint T-Open 1155  
 (D) Initial Shut-In 820  Circ Sub T-Pulled 1455  
 (E) Second Initial Flow 22  Hourly Standby T-Out 1626  
 (F) Second Final Flow 32  Mileage 148.80 Comments Motel  
 (G) Final Shut-In 661  Sampler  Ruined Shale Packer  
 (H) Final Hydrostatic 1806  Straddle  Ruined Packer

Initial Open 45  Shale Packer  Extra Copies  
 Initial Shut-In 45  Extra Packer Sub Total 0  
 Final Flow 45  Extra Recorder Total 1298.80  
 Final Shut-In 45  Day Standby MP/DST Disc't  
 Accessibility Sub Total 1298.80

Approved By \_\_\_\_\_ Our Representative Ray Schwager Thank you

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 54353

Well Name & No. Esslinger Ranch, Inc #4-26 Test No. 4 Date 10-13-13  
 Company Barad Oil Company LLC Elevation 2302 KB 2294 GL  
 Address 113 W. Main Po Box 428 Logan, Ks 67646-0428  
 Co. Rep / Geo. Rich Bell Rig WW rig 12  
 Location: Sec. 26 Twp. 3<sup>s</sup> Rge. 22<sup>w</sup> Co. Norton State Ks

Interval Tested 3820-3835 Zone Tested Arbuckle  
 Anchor Length 15 Drill Pipe Run 3709 Mud Wt. 9  
 Top Packer Depth 3815 Drill Collars Run 120 Vis 53  
 Bottom Packer Depth 3820 Wt. Pipe Run - WL 6.4  
 Total Depth 3835 Chlorides 1100 ppm System LCM 2#

Blow Description IFP - WEAK TO STRONG IN 8 MIN  
ISIP - SURFACE BLOW BACK  
FFP - WEAK TO STRONG IN 9 MIN  
FSIP - NO BLOW

Rec	Feet of	%gas	%oil	%water	%mud
<u>70</u>	<u>MW w/show of oil</u>			<u>80</u>	<u>20</u>
<u>540</u>	<u>WATER</u>				

Rec Total 610 BHT 96 Gravity - API RW .15 @ 65 ° F Chlorides 46000 ppm  
 (A) Initial Hydrostatic 1839  Test 1150 T-On Location 2200  
 (B) First Initial Flow 17  Jars - T-Started 2245  
 (C) First Final Flow 213  Safety Joint - T-Open 0040  
 (D) Initial Shut-In 1082  Circ Sub - T-Pulled 0310  
 (E) Second Initial Flow 217  Hourly Standby - T-Out 0518  
 (F) Second Final Flow 364  Mileage N/C Comments STAYED AT RIG BETWEEN TESTS  
 (G) Final Shut-In 1072  Sampler -  
 (H) Final Hydrostatic 1826  Straddle -  Ruined Shale Packer  
 Shale Packer  Ruined Packer  
 Extra Packer  Extra Copies  
 Extra Recorder Sub Total 0  
 Day Standby Total 1150  
 Accessibility MP/DST Disc't -  
 Sub Total 1150

Initial Open 30  
 Initial Shut-In 45  
 Final Flow 30  
 Final Shut-In 45

Approved By \_\_\_\_\_ Our Representative Ray Schwager *Thank you*

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.