



DRILL STEM TEST REPORT

Prepared For: **Baird Oil Company, LLC**

PO Box 428
Logan, KS 67646

ATTN: Richard Bell

Curtis Tien #1-12

12-7s-24w Graham,KS

Start Date: 2014.06.01 @ 10:48:35

End Date: 2014.06.01 @ 16:25:05

Job Ticket #: 59239 DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2014.06.03 @ 14:48:39



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Baird Oil Company, LLC

12-7s-24w Graham,KS

PO Box 428
Logan, KS 67646

Curtis Tien #1-12

Job Ticket: 59239

DST#: 1

ATTN: Richard Bell

Test Start: 2014.06.01 @ 10:48:35

GENERAL INFORMATION:

Formation: **LKC "D"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 12:50:35

Time Test Ended: 16:25:05

Test Type: Conventional Bottom Hole (Initial)

Tester: Brannan L

Unit No: 48

Interval: 3758.00 ft (KB) To 3778.00 ft (KB) (TVD)

Reference Elevations: 2431.00 ft (KB)

Total Depth: 3778.00 ft (KB) (TVD)

2423.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8321 Outside

Press@RunDepth: 34.30 psig @ 3775.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.06.01

End Date:

2014.06.01

Last Calib.:

2014.06.01

Start Time: 10:48:36

End Time:

16:25:05

Time On Btm:

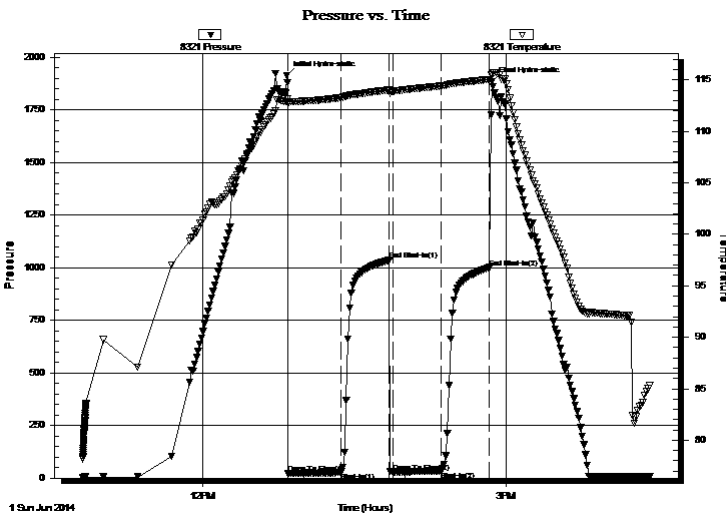
2014.06.01 @ 12:49:35

Time Off Btm:

2014.06.01 @ 14:51:35

TEST COMMENT: 30- IF- Weak Surface blow
30- IS- No blow
30- FF- No blow
30- FSI- No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1912.42	112.88	Initial Hydro-static
1	21.53	112.75	Open To Flow (1)
32	25.97	113.27	Shut-In(1)
61	1035.96	114.02	End Shut-In(1)
63	29.62	113.88	Open To Flow (2)
92	34.30	114.40	Shut-In(2)
121	1000.78	115.04	End Shut-In(2)
122	1885.33	115.52	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	M	0.02
5.00	MW	0.02

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Baird Oil Company, LLC

12-7s-24w Graham,KS

PO Box 428
Logan, KS 67646

Curtis Tien #1-12

Job Ticket: 59239

DST#: 1

ATTN: Richard Bell

Test Start: 2014.06.01 @ 10:48:35

Tool Information

Drill Pipe:	Length: 3648.00 ft	Diameter: 3.75 inches	Volume: 49.83 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 2.75 inches	Volume: - bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 123.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	33.00 ft			String Weight: Initial 48000.00 lb
Depth to Top Packer:	3758.00 ft			Final 48000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	20.00 ft			
Tool Length:	40.00 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			3739.00	
Shut In Tool	5.00			3744.00	
Hydraulic tool	5.00			3749.00	
Packer	5.00			3754.00	20.00 Bottom Of Top Packer
Packer	4.00			3758.00	
Stubb	1.00			3759.00	
Perforations	16.00			3775.00	
Recorder	0.00	8372	Inside	3775.00	
Recorder	0.00	8321	Outside	3775.00	
Bullnose	3.00			3778.00	20.00 Bottom Packers & Anchor
Total Tool Length:	40.00				



**TRILOBITE
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DRILL STEM TEST REPORT

FLUID SUMMARY

Baird Oil Company, LLC

12-7s-24w Graham,KS

PO Box 428
Logan, KS 67646

Curtis Tien #1-12

Job Ticket: 59239

DST#: 1

ATTN: Richard Bell

Test Start: 2014.06.01 @ 10:48:35

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:

bbbl

Water Loss: 7.59 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1300.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	M	0.025
5.00	MW	0.025

Total Length: 10.00 ft

Total Volume: 0.050 bbl

Num Fluid Samples: 0

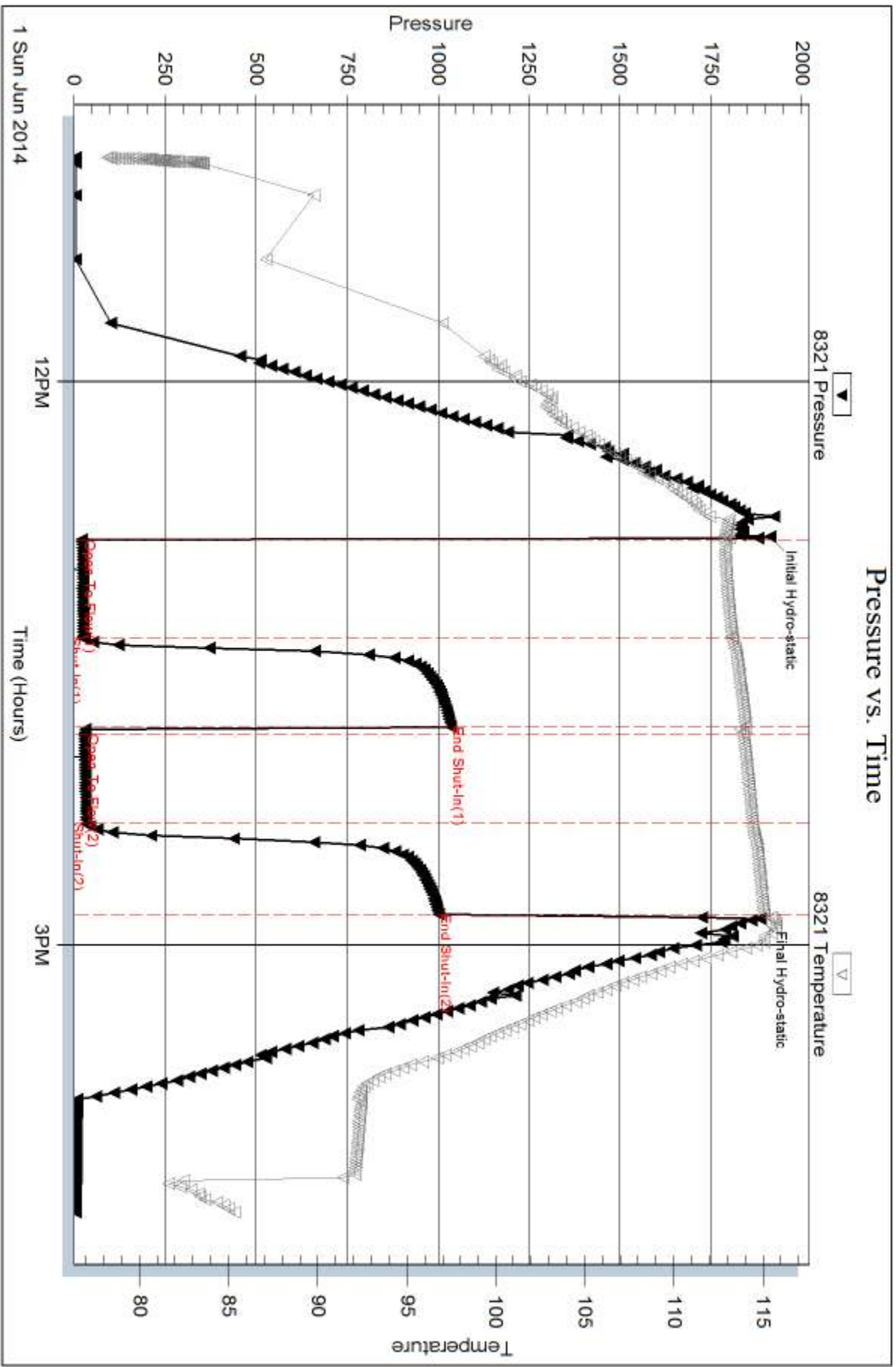
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



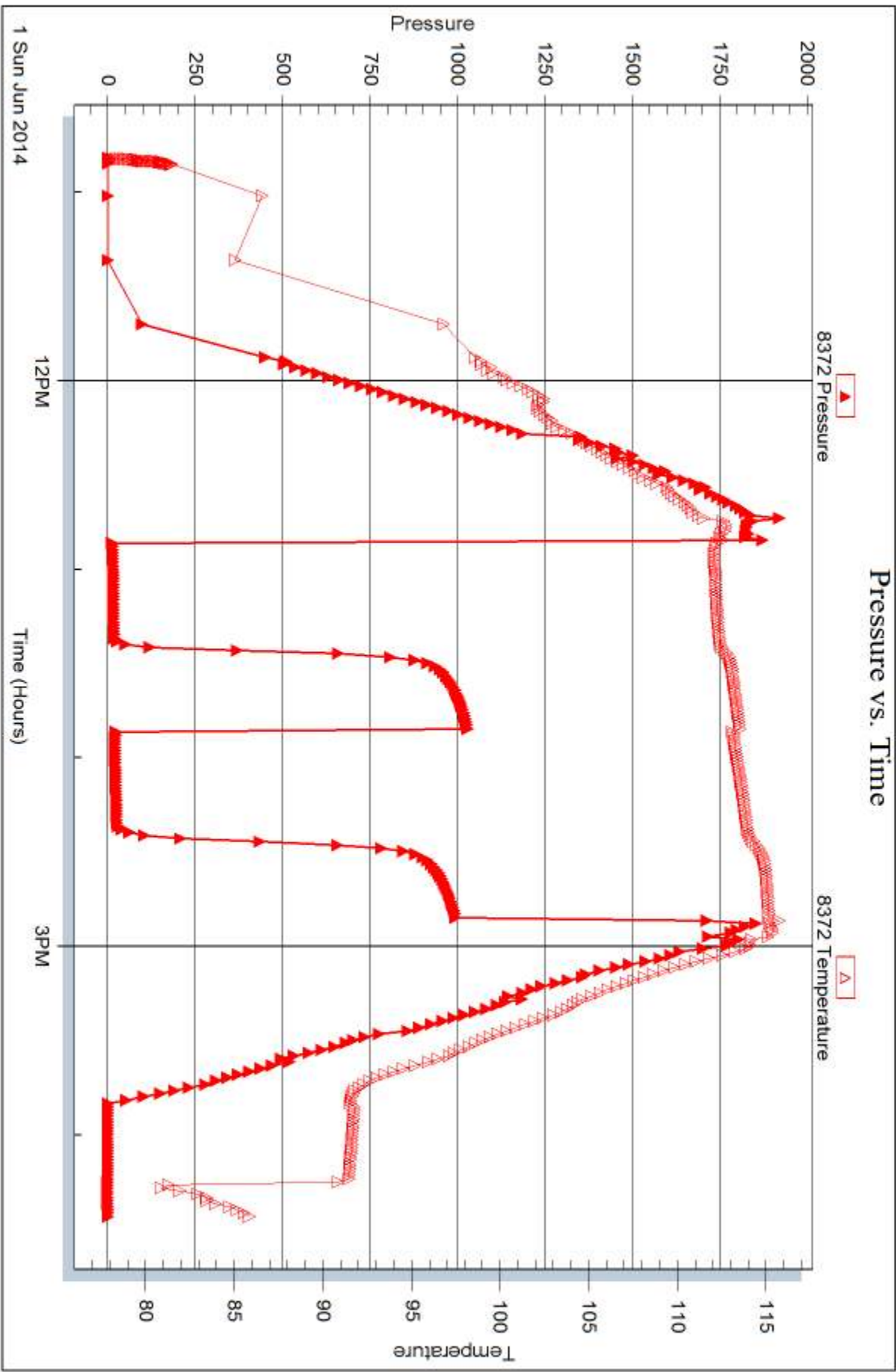
Serial #: 8372

Inside

Baird Oil Company, LLC

Curtis Tien #1-12

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Baird Oil Company, LLC**

PO Box 428
Logan, KS 67646

ATTN: Richard Bell

Curtis Tien #1-12

12-7s-24w Graham,KS

Start Date: 2014.06.01 @ 22:17:34

End Date: 2014.06.02 @ 06:20:04

Job Ticket #: 59240 DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2014.06.03 @ 14:48:07



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Baird Oil Company, LLC

12-7s-24w Graham,KS

PO Box 428
Logan, KS 67646

Curtis Tien #1-12

Job Ticket: 59240

DST#: 2

ATTN: Richard Bell

Test Start: 2014.06.01 @ 22:17:34

GENERAL INFORMATION:

Formation: **LKC "F"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:17:34

Time Test Ended: 06:20:04

Test Type: Conventional Bottom Hole (Reset)

Tester: Brannan L

Unit No: 48

Interval: 3778.00 ft (KB) To 3800.00 ft (KB) (TVD)

Reference Elevations: 2431.00 ft (KB)

Total Depth: 3800.00 ft (KB) (TVD)

2423.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 8.00 ft

Serial #: 8372

Inside

Press@RunDepth: 75.03 psig @ 3797.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.06.01

End Date:

2014.06.02

Last Calib.:

2014.06.02

Start Time: 22:17:35

End Time:

06:20:04

Time On Btm:

2014.06.02 @ 01:15:04

Time Off Btm:

2014.06.02 @ 03:51:34

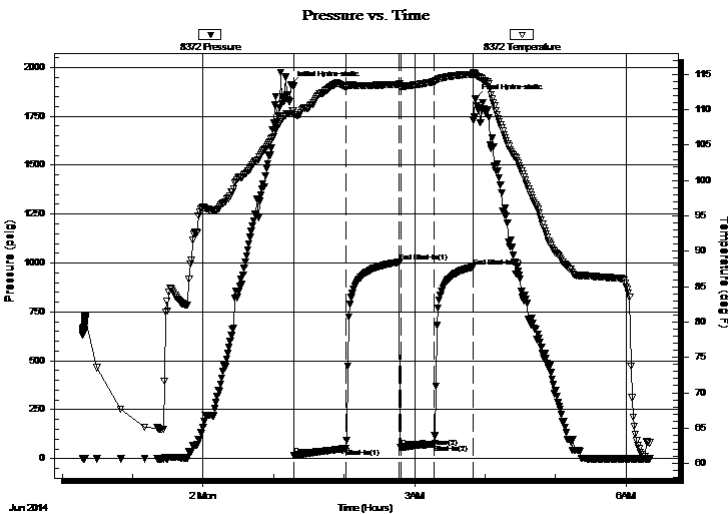
TEST COMMENT: 45- IF- Built very slow ly to 3"

45- IS- No blow

30- FF- No blow

30- FSI- No blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1909.12	109.46	Initial Hydro-static
3	16.04	109.33	Open To Flow (1)
47	53.29	113.30	Shut-In(1)
92	1004.51	113.62	End Shut-In(1)
93	55.57	113.33	Open To Flow (2)
122	75.03	113.98	Shut-In(2)
155	979.70	115.02	End Shut-In(2)
157	1839.57	114.95	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
135.00	MW, 40%M 60%W	0.77

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Baird Oil Company, LLC

12-7s-24w Graham,KS

PO Box 428
Logan, KS 67646

Curtis Tien #1-12

Job Ticket: 59240

DST#: 2

ATTN: Richard Bell

Test Start: 2014.06.01 @ 22:17:34

Tool Information

Drill Pipe:	Length: 3648.00 ft	Diameter: 3.75 inches	Volume: 49.83 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: ft	Diameter: 2.75 inches	Volume: - bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 123.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose: 57000.00 lb
			<u>Total Volume: - bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	13.00 ft			String Weight: Initial 53000.00 lb
Depth to Top Packer:	3778.00 ft			Final 53000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	22.00 ft			
Tool Length:	42.00 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			3759.00	
Shut In Tool	5.00			3764.00	
Hydraulic tool	5.00			3769.00	
Packer	5.00			3774.00	20.00 Bottom Of Top Packer
Packer	4.00			3778.00	
Stubb	1.00			3779.00	
Perforations	18.00			3797.00	
Recorder	0.00	8372	Inside	3797.00	
Recorder	0.00	8321	Outside	3797.00	
Bullnose	3.00			3800.00	22.00 Bottom Packers & Anchor
Total Tool Length:	42.00				



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

Baird Oil Company, LLC

12-7s-24w Graham,KS

PO Box 428
Logan, KS 67646

Curtis Tien #1-12

Job Ticket: 59240

DST#: 2

ATTN: Richard Bell

Test Start: 2014.06.01 @ 22:17:34

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: 55.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.19 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1400.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
135.00	MW, 40%M 60%W	0.769

Total Length: 135.00 ft Total Volume: 0.769 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

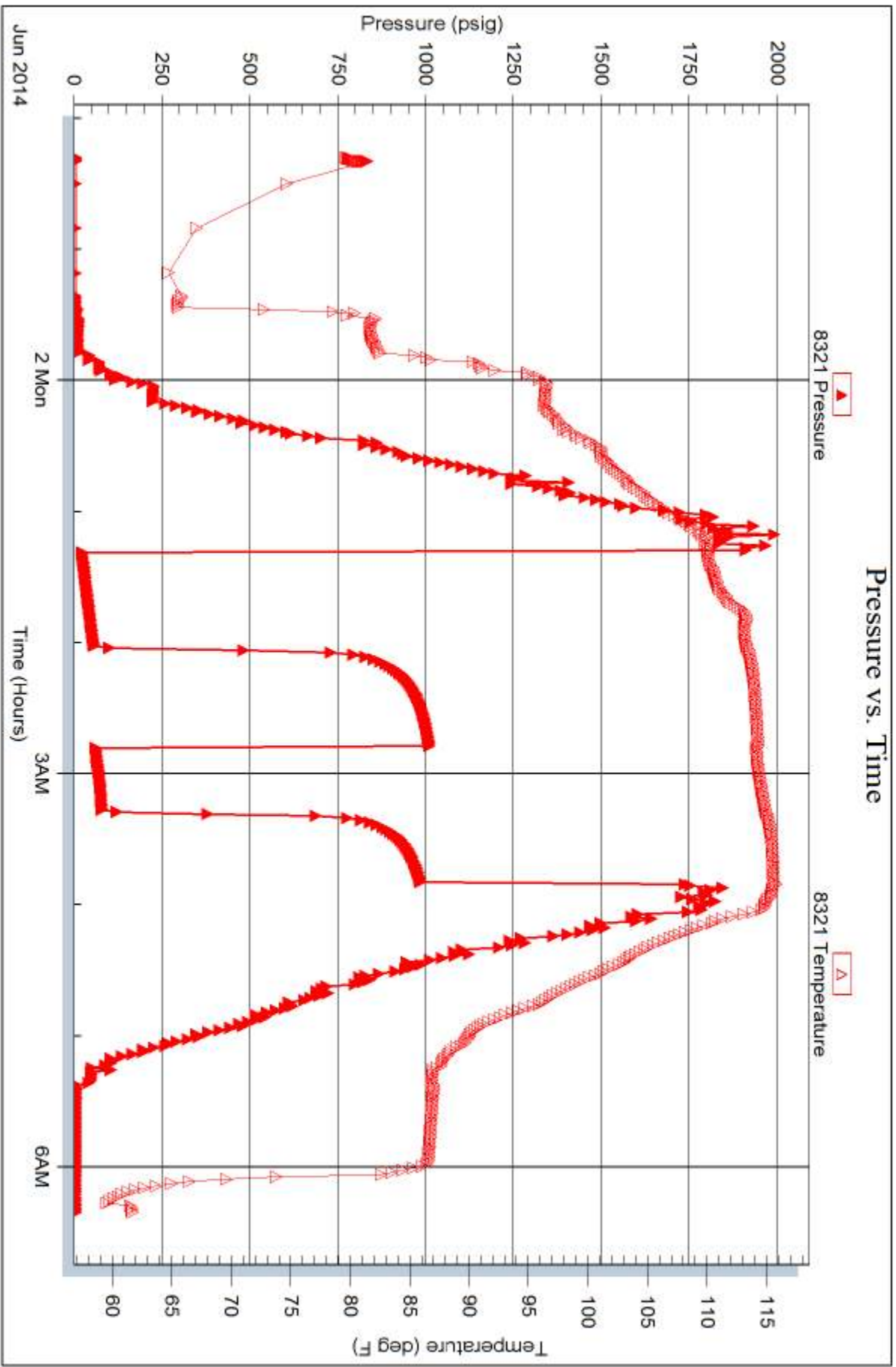
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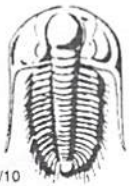
Serial #: 8321

Outside Baird Oil Company, LLC

Curtis Tien #1-12

DST Test Number: 2





TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 59239

Well Name & No. Curtis Tien #1-72 Test No. 1 Date 6/1/14
 Company Baird Oil Company, LLC Elevation 2431 KB 2423 GL
 Address 113 W. Main PO Box 428 Logan, KS 67646
 Co. Rep / Geo. Richard Bell Rig WW #12
 Location: Sec. 12 Twp. 7S Rge. 24W Co. Graham State KS

Interval Tested 3758-3778 Zone Tested LKC "D"
 Anchor Length 20' Drill Pipe Run 3648 Mud Wt. 8.9
 Top Packer Depth 3753 Drill Collars Run 123 Vis 60
 Bottom Packer Depth 3758 Wt. Pipe Run WL 7.6
 Total Depth 3778 Chlorides 1300 ppm System LCM 1#

Blow Description IF - Weak surface blow
ISI - No blow
FF - No blow
FST - No blow

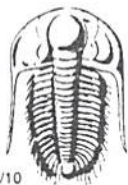
Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>M</u>				
<u>5</u>	<u>MW</u>				

Rec Total 10' BHT 115° Gravity API RW @ ° F Chlorides ppm

(A) Initial Hydrostatic <u>1912</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>1040</u>
(B) First Initial Flow <u>22</u>	<input type="checkbox"/> Jars <u> </u>	T-Started <u>1049</u>
(C) First Final Flow <u>26</u>	<input type="checkbox"/> Safety Joint <u> </u>	T-Open <u>1251</u>
(D) Initial Shut-In <u>1036</u>	<input type="checkbox"/> Circ Sub <u> </u>	T-Pulled <u>1451</u>
(E) Second Initial Flow <u>30</u>	<input type="checkbox"/> Hourly Standby <u> </u>	T-Out <u>1625</u>
(F) Second Final Flow <u>34</u>	<input checked="" type="checkbox"/> Mileage <u>152 RT</u> 235.60	Comments <u> </u>
(G) Final Shut-In <u>1001</u>	<input type="checkbox"/> Sampler <u> </u>	
(H) Final Hydrostatic <u>1885</u>	<input type="checkbox"/> Straddle <u> </u>	<input type="checkbox"/> Ruined Shale Packer <u> </u>
Initial Open <u>30</u>	<input type="checkbox"/> Shale Packer <u> </u>	<input type="checkbox"/> Ruined Packer <u> </u>
Initial Shut-In <u>30</u>	<input type="checkbox"/> Extra Packer <u> </u>	<input type="checkbox"/> Extra Copies <u> </u>
Final Flow <u>30</u>	<input type="checkbox"/> Extra Recorder <u> </u>	Sub Total <u>0</u>
Final Shut-In <u>30</u>	<input type="checkbox"/> Day Standby <u> </u>	Total <u>1385.60</u>
	<input type="checkbox"/> Accessibility <u> </u>	MP/DST Disc't <u> </u>
	Sub Total <u>1385.60</u>	

Approved By Our Representative Brannan L

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. 59240

Well Name & No. Curtis Tien #1-12 Test No. 2 Date 6/11/14
 Company Baird Oil Company, LLC Elevation 2431 KB 2423 GL
 Address 113 W. Main PO Box 428 Logan, KS 67646
 Co. Rep / Geo. Richard Bell Rig WW #12
 Location: Sec. 12 Twp. 7S Rge. 24W Co. Graham State KS

Interval Tested 3778-3800 Zone Tested LKC "F"
 Anchor Length 22' Drill Pipe Run 3648 Mud Wt. 9.1
 Top Packer Depth 3773 Drill Collars Run 123 Vis 55
 Bottom Packer Depth 3778 Wt. Pipe Run --- WL 7.2
 Total Depth 3800 Chlorides 1,400 ppm System LCM 3#

Blow Description IF - Built very slowly to 3"
ISD - No blow
FF - No blow
PSI - No blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>135</u>	<u>MW</u>			<u>60</u>	<u>40</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 135' BHT 115° Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1909 Test 1150 T-On Location 2210
 (B) First Initial Flow 16 Jars _____ T-Started 2218
 (C) First Final Flow 53 Safety Joint _____ T-Open 0117 6/2
 (D) Initial Shut-In 1005 Circ Sub _____ T-Pulled 0347
 (E) Second Initial Flow 56 Hourly Standby _____ T-Out 0620
 (F) Second Final Flow 75 Mileage 152 RT Comments Loaded tools
 (G) Final Shut-In 980 Sampler _____ 6/3 @ 0400
 (H) Final Hydrostatic 1840 Straddle _____
 Shale Packer _____ Ruined Shale Packer _____
 Extra Packer _____ Ruined Packer _____
 Extra Recorder _____
 Day Standby _____
 Accessibility _____

Initial Open 45 Sub Total 0
 Initial Shut-In 45 Total 1621.20
 Final Flow 30 MP/DST Disc't _____
 Final Shut-In 30 Sub Total 1621.20

Approved By _____ Our Representative Braman L

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.