



## DRILL STEM TEST REPORT

Prepared For: **Bach Oil Production**

PO Box 723  
Alma, NE 68920

ATTN: Bob Peterson

### **Forsberg #1**

### **6-4s-19w Phillips, KS**

Start Date: 2012.11.01 @ 03:21:52

End Date: 2012.11.01 @ 10:51:22

Job Ticket #: 48098                      DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.11.13 @ 11:24:51



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Bach Oil Production

**6-4s-19w Phillips, KS**

PO Box 723  
Alma, NE 68920

**Forssberg #1**

Job Ticket: 48098

**DST#: 1**

ATTN: Bob Peterson

Test Start: 2012.11.01 @ 03:21:52

## GENERAL INFORMATION:

Formation: **LKC "C & D"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:44:37

Time Test Ended: 10:51:22

Test Type: Conventional Bottom Hole (Initial)

Tester: Ryan Nichols/Kevin M

Unit No: 43

**Interval: 3325.00 ft (KB) To 3375.00 ft (KB) (TVD)**

Reference Elevations: 2100.00 ft (KB)

Total Depth: 3375.00 ft (KB) (TVD)

2094.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 6.00 ft

**Serial #: 6799**

**Inside**

Press @ Run Depth: 44.98 psig @ 3326.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.11.01

End Date: 2012.11.01

Last Calib.: 2012.11.01

Start Time: 03:30:05

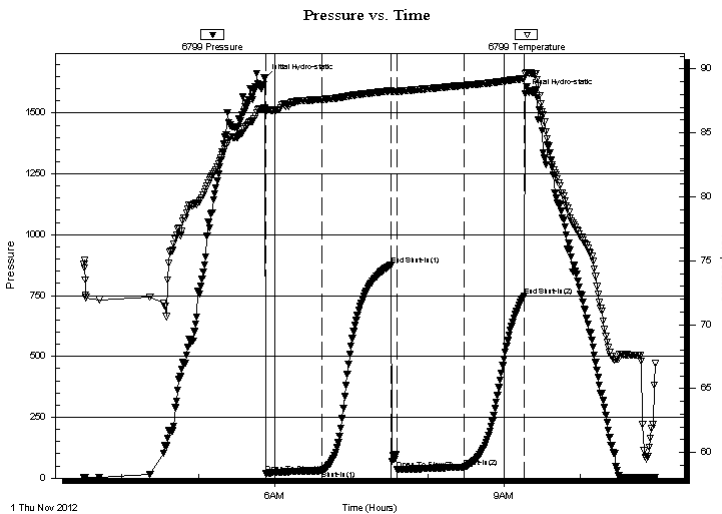
End Time: 10:59:29

Time On Btm: 2012.11.01 @ 05:51:45

Time Off Btm: 2012.11.01 @ 09:16:45

**TEST COMMENT:** IF - 45 Weak surface blow built to 1.5"  
ISI - 45 No return  
FF - 60 Weak surface blow started at 5 mins. built to 1"  
FSI - 45

## PRESSURE SUMMARY



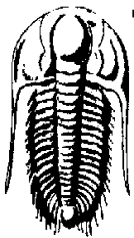
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1643.00	86.92	Initial Hydro-static
1	20.42	86.66	Open To Flow (1)
45	30.92	87.61	Shut-In(1)
99	874.22	88.28	End Shut-In(1)
104	35.58	88.23	Open To Flow (2)
157	44.98	88.70	Shut-In(2)
204	749.39	89.23	End Shut-In(2)
205	1579.25	89.64	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
39.00	GOCM - 10G - 10o - 80M	0.19
1.00	Free oil 100%	0.00

## Gas Rates

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



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TESTING, INC.**

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Bach Oil Production

**6-4s-19w Phillips, KS**

PO Box 723  
Alma, NE 68920

**Forssberg #1**

Job Ticket: 48098

**DST#: 1**

ATTN: Bob Peterson

Test Start: 2012.11.01 @ 03:21:52

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Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:44:37

Time Test Ended: 10:51:22

Test Type: Conventional Bottom Hole (Initial)

Tester: Ryan Nichols/Kevin M

Unit No: 43

**Interval: 3325.00 ft (KB) To 3375.00 ft (KB) (TVD)**

Reference Elevations: 2100.00 ft (KB)

Total Depth: 3375.00 ft (KB) (TVD)

2094.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 6.00 ft

**Serial #: 8648      Inside**

Press @ Run Depth: psig @ 3326.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.11.01

End Date: 2012.11.01

Last Calib.: 2012.11.01

Start Time: 03:30:05

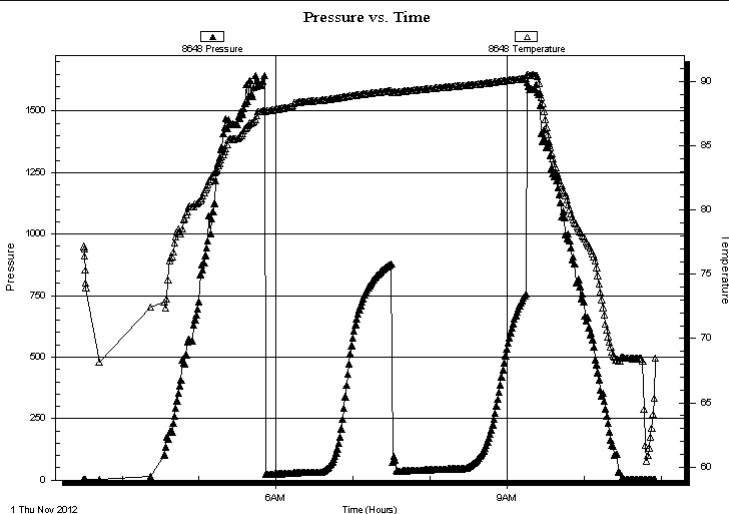
End Time: 10:55:59

Time On Btm:

Time Off Btm:

**TEST COMMENT:** IF - 45 Weak surface blow built to 1.5"  
ISI - 45 No return  
FF - 60 Weak surface blow started at 5 mins. built to 1"  
FSI - 45

## PRESSURE SUMMARY



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

## Recovery

Length (ft)	Description	Volume (bbl)
39.00	GOCM - 10G - 10o - 80M	0.19
1.00	Free oil 100%	0.00

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Bach Oil Production

**6-4s-19w Phillips, KS**

PO Box 723  
Alma, NE 68920

**Forssberg #1**

Job Ticket: 48098

**DST#: 1**

ATTN: Bob Peterson

Test Start: 2012.11.01 @ 03:21:52

## Tool Information

Drill Pipe:	Length: 3125.00 ft	Diameter: 3.80 inches	Volume: 43.84 bbl	Tool Weight: 2500.00 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: 186.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: 44.75 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 42000.00 lb
Depth to Top Packer:	3325.00 ft			Final 42000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	50.00 ft			
Tool Length:	79.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

**Length (ft) Serial No. Position Depth (ft) Accum. Lengths**

Change Over Sub	1.00			3297.00	
Shut In Tool	5.00			3302.00	
Hydraulic tool	5.00			3307.00	
Jars	5.00			3312.00	
Safety Joint	3.00			3315.00	
Packer	5.00			3320.00	29.00 Bottom Of Top Packer
Packer	5.00			3325.00	
Stubb	1.00			3326.00	
Recorder	0.00	8648	Inside	3326.00	
Recorder	0.00	6799	Inside	3326.00	
Perforations	11.00			3337.00	
Change Over Sub	1.00			3338.00	
Drill Pipe	31.00			3369.00	
Change Over Sub	1.00			3370.00	
Bullnose	5.00			3375.00	50.00 Bottom Packers & Anchor

**Total Tool Length: 79.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Bach Oil Production

**6-4s-19w Phillips, KS**

PO Box 723  
Alma, NE 68920

**Forsberg #1**

Job Ticket: 48098

**DST#: 1**

ATTN: Bob Peterson

Test Start: 2012.11.01 @ 03:21:52

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 8.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 48.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.98 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 800.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
39.00	GOCM - 10G - 10o - 80M	0.192
1.00	Free oil 100%	0.005

Total Length: 40.00 ft      Total Volume: 0.197 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

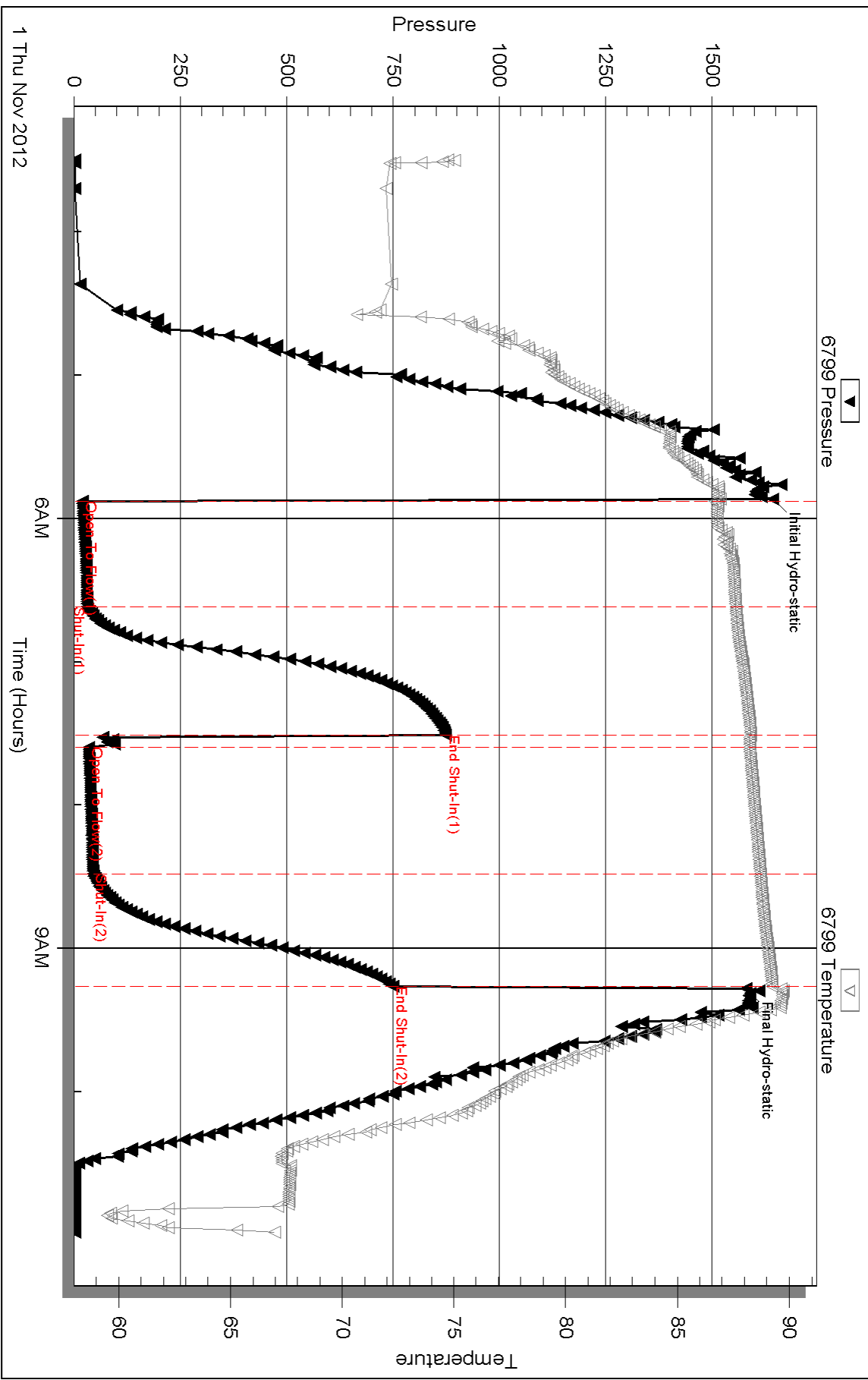
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

# Pressure vs. Time



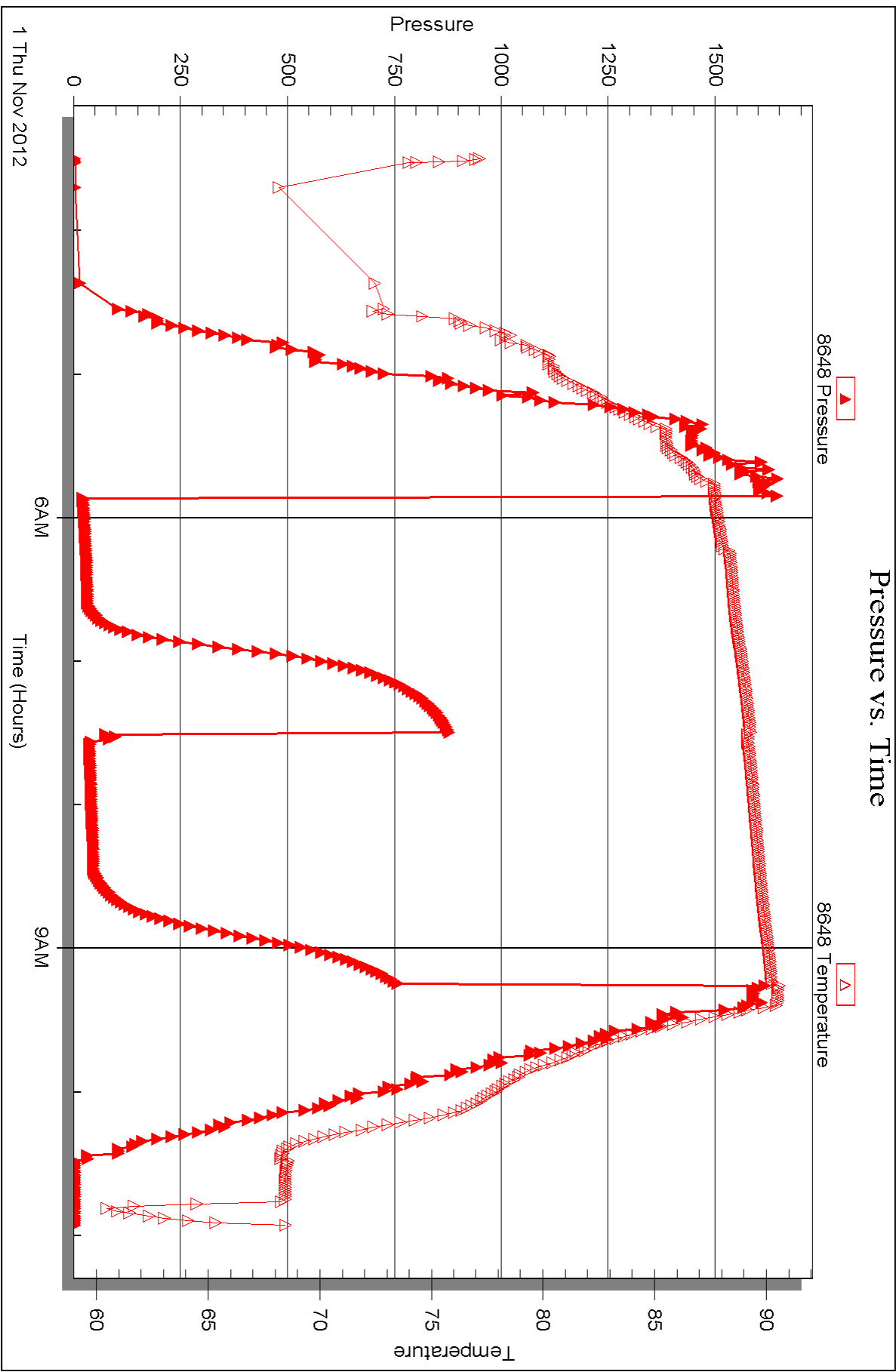
Serial #: 8648

Inside

Bach Oil Production

Forssberg #1

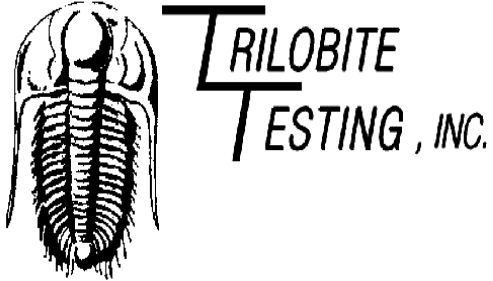
DST Test Number: 1



Triobite Testing, Inc

Ref. No: 48098

Printed: 2012.11.13 @ 11:24:56



## DRILL STEM TEST REPORT

Prepared For: **Bach Oil Production**

PO Box 723  
Alma, NE 68920

ATTN: Bob Peterson

### **Forsberg #1**

### **6-4s-19w Phillips, KS**

Start Date: 2012.11.01 @ 20:58:05

End Date: 2012.11.02 @ 03:41:29

Job Ticket #: 48099                      DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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

Printed: 2012.11.13 @ 11:23:17





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Bach Oil Production

**6-4s-19w Phillips, KS**

PO Box 723  
Alma, NE 68920

**Forssberg #1**

Job Ticket: 48099

**DST#: 2**

ATTN: Bob Peterson

Test Start: 2012.11.01 @ 20:58:05

## GENERAL INFORMATION:

Formation: **LKC "F - J"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:47:30

Time Test Ended: 03:41:29

Test Type: Conventional Bottom Hole (Initial)

Tester: Ryan Nichols/Kevin M

Unit No: 43

**Interval: 3372.00 ft (KB) To 3480.00 ft (KB) (TVD)**

Reference Elevations: 2100.00 ft (KB)

Total Depth: ft (KB) (TVD)

2094.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 6.00 ft

**Serial #: 6799**

**Inside**

Press @ Run Depth: 214.22 psig @ 3373.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.11.01

End Date:

2012.11.02

Last Calib.:

2012.11.02

Start Time: 20:58:05

End Time:

03:41:29

Time On Btm:

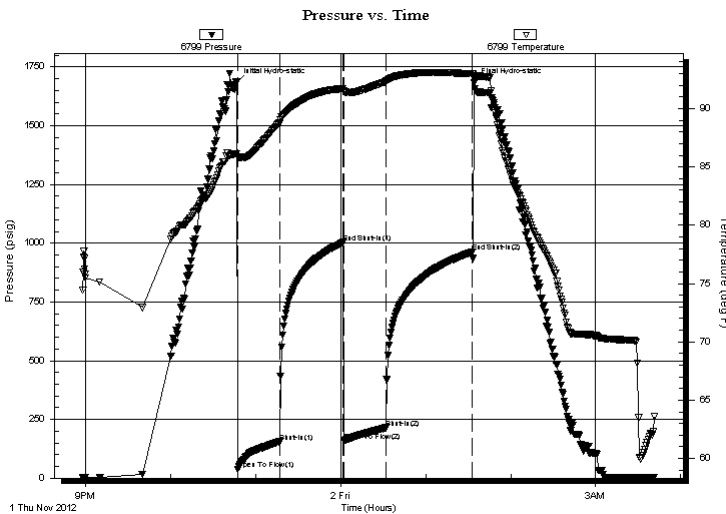
2012.11.01 @ 22:46:45

Time Off Btm:

2012.11.02 @ 01:33:59

**TEST COMMENT:** 30 - IF - BoB in 11 mins  
45 - ISI - No return  
30 - FF - 1/8" blow built to 10"  
60 - FSI - No return

## PRESSURE SUMMARY



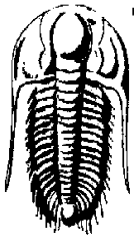
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1685.47	86.15	Initial Hydro-static
1	37.25	85.83	Open To Flow (1)
30	154.70	88.77	Shut-In(1)
75	1002.68	91.72	End Shut-In(1)
76	159.11	91.50	Open To Flow (2)
106	214.22	92.30	Shut-In(2)
166	961.01	92.97	End Shut-In(2)
168	1681.45	92.77	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
120.00	W 100%	0.59
122.00	MW - 5M - 95W	1.11
126.00	MW - 5M - 95W	1.77
40.00	OCMW - 5o - 80W - 15M	0.56

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Bach Oil Production

6-4s-19w Phillips, KS

PO Box 723  
Alma, NE 68920

**Forssberg #1**

ATTN: Bob Peterson

Job Ticket: 48099

**DST#: 2**

Test Start: 2012.11.01 @ 20:58:05

## GENERAL INFORMATION:

Formation: **LKC "F - J"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:47:30

Time Test Ended: 03:41:29

Test Type: Conventional Bottom Hole (Initial)

Tester: Ryan Nichols/Kevin M

Unit No: 43

Interval: **3372.00 ft (KB) To 3480.00 ft (KB) (TVD)**

Reference Elevations: 2100.00 ft (KB)

Total Depth: ft (KB) (TVD)

2094.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 6.00 ft

**Serial #: 8648**

**Inside**

Press @ Run Depth: psig @ 3373.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.11.01

End Date:

2012.11.02

Last Calib.:

2012.11.02

Start Time: 20:58:50

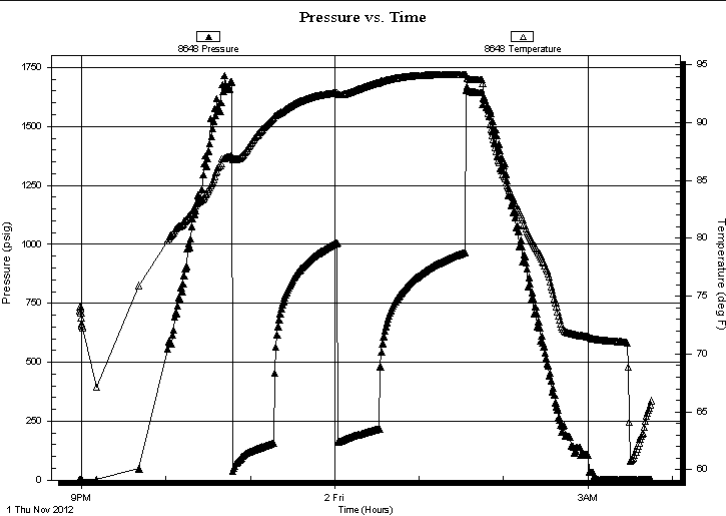
End Time:

03:45:29

Time On Btm:

Time Off Btm:

TEST COMMENT: 30 - IF - BoB in 11 mins  
45 - ISI - No return  
30 - FF - 1/8" blow built to 10"  
60 - FSI - No return



## PRESSURE SUMMARY

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

## Recovery

Length (ft)	Description	Volume (bbl)
120.00	W 100%	0.59
122.00	MW - 5M - 95W	1.11
126.00	MW - 5M - 95W	1.77
40.00	OCMW - 5o - 80W - 15M	0.56

## Gas Rates

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Bach Oil Production

**6-4s-19w Phillips, KS**

PO Box 723  
Alma, NE 68920

**Forssberg #1**

Job Ticket: 48099

**DST#: 2**

ATTN: Bob Peterson

Test Start: 2012.11.01 @ 20:58:05

## Tool Information

Drill Pipe:	Length: 3187.00 ft	Diameter: 3.80 inches	Volume: 44.71 bbl	Tool Weight: 2500.00 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: 186.00 ft	Diameter: 2.25 inches	Volume: 0.91 bbl	Weight to Pull Loose: 50000.00 lb
			<u>Total Volume: 45.62 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial 42000.00 lb
Depth to Top Packer:	3372.00 ft			Final 45000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	108.00 ft			
Tool Length:	137.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

**Length (ft) Serial No. Position Depth (ft) Accum. Lengths**

Change Over Sub	1.00			3344.00	
Shut In Tool	5.00			3349.00	
Hydraulic tool	5.00			3354.00	
Jars	5.00			3359.00	
Safety Joint	3.00			3362.00	
Packer	5.00			3367.00	29.00 Bottom Of Top Packer
Packer	5.00			3372.00	
Stubb	1.00			3373.00	
Recorder	0.00	8648	Inside	3373.00	
Recorder	0.00	6799	Inside	3373.00	
Perforations	5.00			3378.00	
Change Over Sub	1.00			3379.00	
Drill Pipe	95.00			3474.00	
Change Over Sub	1.00			3475.00	
Bullnose	5.00			3480.00	108.00 Bottom Packers & Anchor

**Total Tool Length: 137.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Bach Oil Production

**6-4s-19w Phillips, KS**

PO Box 723  
Alma, NE 68920

**Forsberg #1**

Job Ticket: 48099

**DST#: 2**

ATTN: Bob Peterson

Test Start: 2012.11.01 @ 20:58:05

## 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:

35000 ppm

Viscosity: 60.00 sec/qt

Cushion Volume:

bbbl

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

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 800.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
120.00	W 100%	0.590
122.00	MW - 5M - 95W	1.110
126.00	MW - 5M - 95W	1.767
40.00	OCMW - 5o - 80W - 15M	0.561

Total Length: 408.00 ft      Total Volume: 4.028 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW .1 @ 62 deg. = 35000ppm

Serial #: 6799

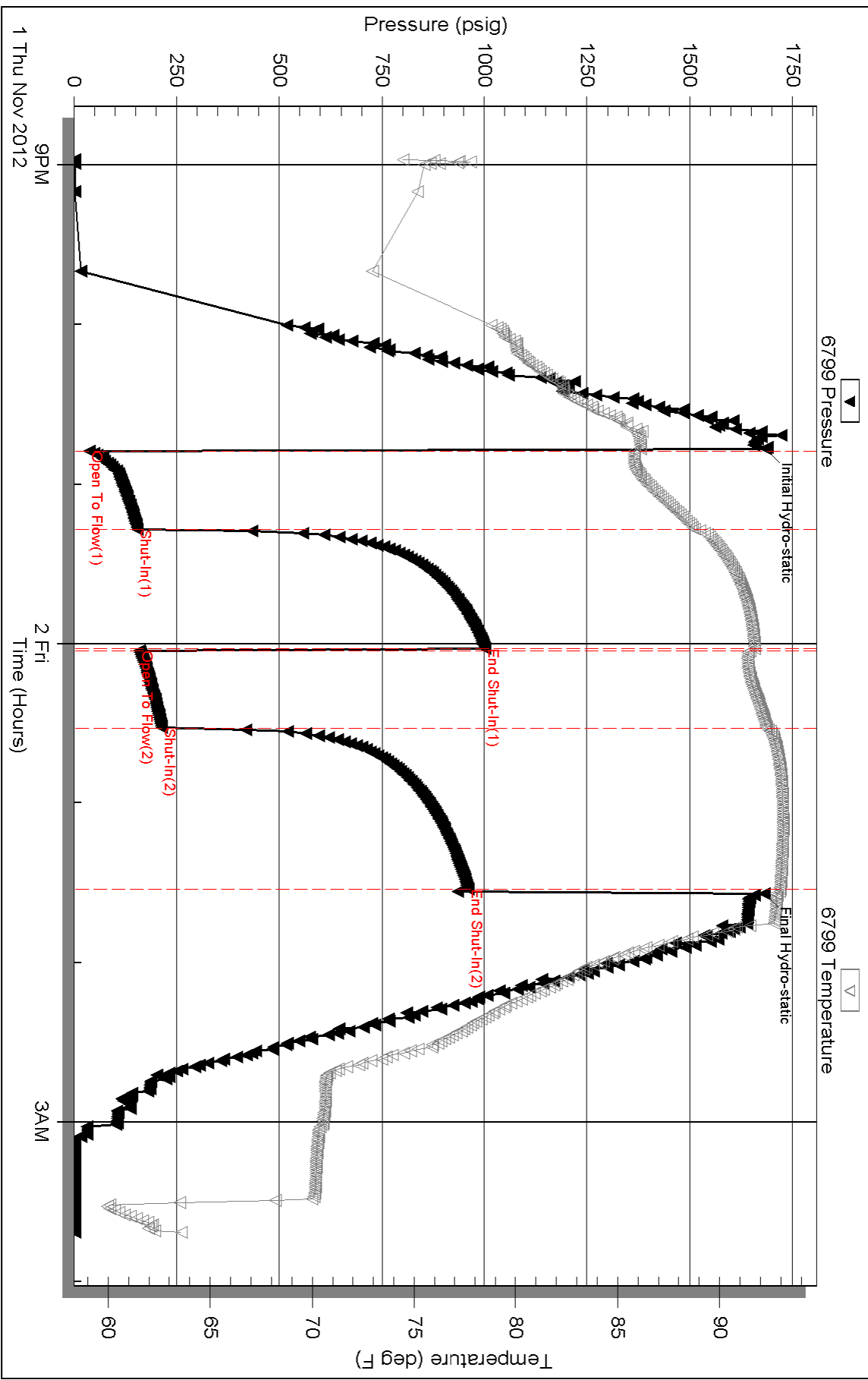
Inside

Bach Oil Production

Forssberg #1

DST Test Number: 2

# Pressure vs. Time



Triobite Testing, Inc

Ref. No: 48099

Printed: 2012.11.13 @ 11:23:21

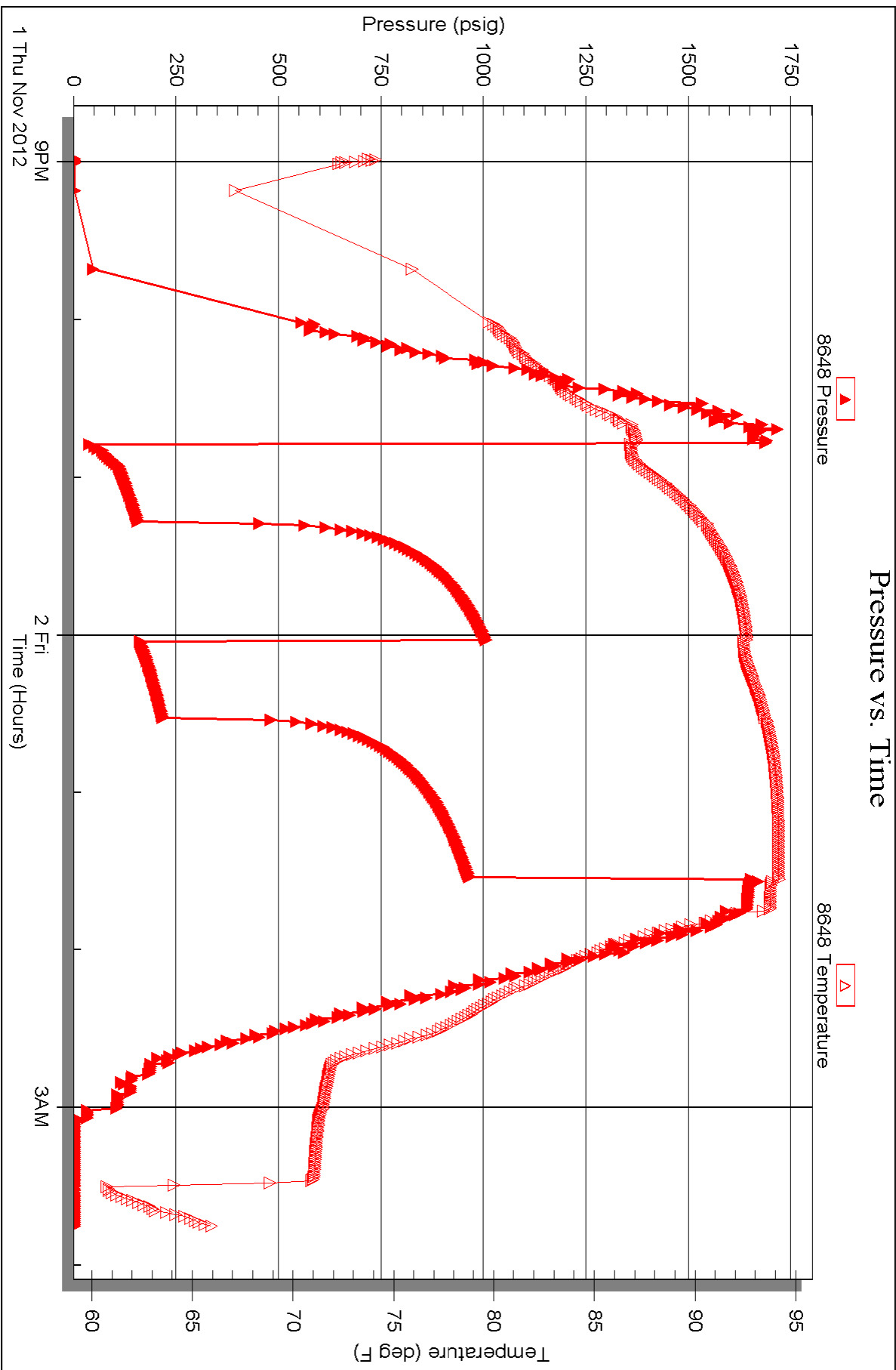
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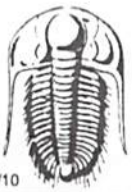
Inside

Bach Oil Production

Forssberg #1

DST Test Number: 2





# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 48098

Well Name & No. Bach Oil Productions 5 Test No. 1 Date 11-1-12  
 Company Folssberg #1 Elevation 2100 KB 2094 GL  
 Address P.O. Box 723 Alma NE 68920  
 Co. Rep / Geo. Bob Peterson Rig Murfin #8  
 Location: Sec. 6 Twp. 4S Rge. 19W Co. Phillips State KS

Interval Tested 3325 - 3375 Zone Tested LKC "c2D"  
 Anchor Length 50' Drill Pipe Run 186 Mud Wt. 8.5  
 Top Packer Depth 3321 Drill Collars Run 186 Vis 48  
 Bottom Packer Depth 3325 Wt. Pipe Run 0 WL 8  
 Total Depth 3375 Chlorides 800 ppm System LCM 2.5  
 Blow Description IF - 45 Weak surface blow built to 1.5"  
ISI - 45 No return  
FF - 45 Weak surface blow started at 5mins. built to 1"  
FST - 45

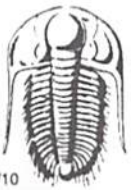
Rec	Feet of	%gas	%oil	%water	%mud
1	Free oil	100			
39	GOCM	10		80	

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

(A) Initial Hydrostatic 1643  Test 1150 T-On Location 3:15 a.m.  
 (B) First Initial Flow 20  Jars 250 T-Started 3:30 a.m.  
 (C) First Final Flow 30  Safety Joint 75 T-Open 5:52 a.m.  
 (D) Initial Shut-In 874  Circ Sub \_\_\_\_\_ T-Pulled 9:13 a.m.  
 (E) Second Initial Flow 35  Hourly Standby \_\_\_\_\_ T-Out 10:40 a.m.  
 (F) Second Final Flow 44  Mileage 126 RT 195.30 Comments \_\_\_\_\_  
 (G) Final Shut-In 749  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1579  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Initial Open 45  Extra Recorder \_\_\_\_\_ Sub Total 0  
 Initial Shut-In 45  Day Standby \_\_\_\_\_ Total 1670.30  
 Final Flow 60  Accessibility \_\_\_\_\_ MP/DST Disc't \_\_\_\_\_  
 Final Shut-In 45 Sub Total 1670.30

Approved By \_\_\_\_\_ Our Representative Ryan Nichols  
 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.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 48099

Well Name & No. ~~000~~ Forsberg #1 Test No. 2 Date 11/1/12  
 Company Bach Oil Productions Elevation 2100 KB 2094 GL  
 Address P.O. Box 723 Alma NE 68920  
 Co. Rep / Geo. Bob Peterson Rig Murfin #8  
 Location: Sec. 6 Twp. 45 Rge. 19 W Co. Phillips State KS

Interval Tested 3372-3480 Zone Tested "F-J" LKC  
 Anchor Length ~~108'~~ 108' Drill Pipe Run 3187 Mud Wt. 9.1  
 Top Packer Depth 3368 Drill Collars Run 186 Vis 60  
 Bottom Packer Depth 3372 Wt. Pipe Run 0 WL 7.6  
 Total Depth 3480 Chlorides 800 ppm System LCM #2  
 Blow Description IF - 30 Built to Bobin 11 mins.  
ISI - 45 No Return  
FF - 30 1/8" blow built to 10"  
FSI - 60

Rec	Feet of	%gas	%oil	%water	%mud
<u>120</u>	<u>W</u>		<u>100</u>		
<u>122</u>	<u>MW</u>		<u>95</u>	<u>5</u>	
<u>126</u>	<u>MW</u>		<u>95</u>	<u>5</u>	
<u>40</u>	<u>OCMW</u>	<u>5</u>	<u>80</u>	<u>15</u>	
Rec	Feet of	%gas	%oil	%water	%mud
	<u>Recoverys are reverse</u>				

Rec Total 408 BHT 93 Gravity — API RW .1 @ 62 °F Chlorides 35000 ppm

(A) Initial Hydrostatic 1685  Test 1150 T-On Location 8:50 PM  
 (B) First Initial Flow 37  Jars 250 T-Started 8:58 PM  
 (C) First Final Flow 154  Safety Joint 75 T-Open 10:48 PM  
 (D) Initial Shut-In 1002  Circ Sub N/C T-Pulled 1:33 AM  
 (E) Second Initial Flow 159  Hourly Standby \_\_\_\_\_ T-Out 3:50 AM  
 (F) Second Final Flow 214  Mileage 126 RT 195.30 Comments \_\_\_\_\_  
 (G) Final Shut-In 961  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1681  Straddle \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility \_\_\_\_\_

Initial Open ~~30~~ 30  
 Initial Shut-In 45  
 Final Flow 30  
 Final Shut-In 60

Sub Total 1670.30

MP/DST Disc't 75% 25%

Approved By \_\_\_\_\_ Our Representative Ryan Nichols

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.