



## DRILL STEM TEST REPORT

Prepared For: **Bach Oil Production**

PO Box 723  
Alma, NE 68920

ATTN: Bob Peterson

**3-4s-20w Phillips, KS**

**LJ-Ranch #1**

Start Date: 2010.11.29 @ 09:55:00

End Date: 2010.11.29 @ 16:02:30

Job Ticket #: 040111          DST #: 1

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

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



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Bach Oil Production

**LJ-Ranch #1**

PO Box 723  
Alma, NE 68920

**3-4s-20w Phillips, KS**

ATTN: Bob Peterson

Job Ticket: 040111

**DST#: 1**

Test Start: 2010.11.29 @ 09:55:00

## GENERAL INFORMATION:

Formation: **Toronto-LKC"A"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:46:30

Time Test Ended: 16:02:30

Test Type: Conventional Bottom Hole

Tester: Chuck Kreuzer Jr.

Unit No: 36

**Interval: 3293.00 ft (KB) To 3368.00 ft (KB) (TVD)**

Reference Elevations: 2121.00 ft (KB)

Total Depth: 3368.00 ft (KB) (TVD)

2116.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

**Serial #: 6741**

**Inside**

Press@RunDepth: 240.78 psig @ 3302.50 ft (KB)

Capacity: 8000.00 psig

Start Date: 2010.11.29

End Date:

2010.11.29

Last Calib.: 2010.11.29

Start Time: 09:55:01

End Time:

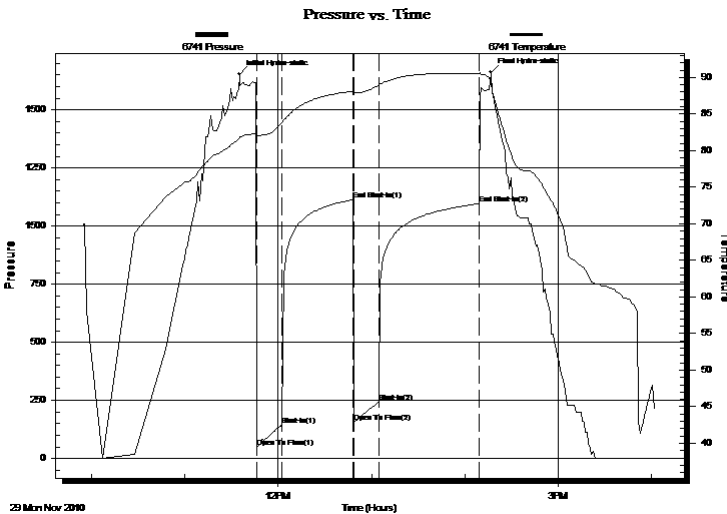
16:02:30

Time On Btm: 2010.11.29 @ 11:35:00

Time Off Btm: 2010.11.29 @ 14:16:30

**TEST COMMENT:** IF: Strong blow B.O.B in 3 mins.  
IS: No blow back over 45 mins.  
FF: Strong blow B.O.B in 4 mins.  
FS: No blow back over 60 mins.

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1653.86	81.71	Initial Hydro-static
12	47.88	82.02	Open To Flow (1)
28	144.71	83.88	Shut-In(1)
73	1113.48	88.12	End Shut-In(1)
74	156.10	87.71	Open To Flow (2)
90	240.78	88.90	Shut-In(2)
154	1095.54	90.53	End Shut-In(2)
162	1661.18	89.29	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
420.00	mcw -20% m80% w	5.60

## Gas Rates

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



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# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Bach Oil Production

**LJ-Ranch #1**

PO Box 723  
Alma, NE 68920

**3-4s-20w Phillips, KS**

ATTN: Bob Peterson

Job Ticket: 040111

**DST#: 1**

Test Start: 2010.11.29 @ 09:55:00

## Tool Information

Drill Pipe:	Length: 3265.00 ft	Diameter: 3.80 inches	Volume: 45.80 bbl	Tool Weight: 2800.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 28000.00 lb
Drill Collar:	Length: 32.00 ft	Diameter: 2.25 inches	Volume: 0.16 bbl	Weight to Pull Loose: 55000.00 lb
			<u>Total Volume: 45.96 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	3293.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	75.00 ft			
Tool Length:	103.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Shut In Tool	5.00			3270.00	
Hydraulic tool	5.00			3275.00	
Jars	5.00			3280.00	
Safety Joint	3.00			3283.00	
Packer	5.00			3288.00	28.00 Bottom Of Top Packer
Packer	5.00			3293.00	
Stubb	1.00			3294.00	
Perforations	8.00			3302.00	
Change Over Sub	0.50			3302.50	
Recorder	0.00	6752	Inside	3302.50	
Recorder	0.00	6741	Inside	3302.50	
Blank Spacing	62.00			3364.50	
Change Over Sub	0.50			3365.00	
Bullnose	3.00			3368.00	75.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>103.00</b>				



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# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Bach Oil Production

**LJ-Ranch #1**

PO Box 723  
Alma, NE 68920

**3-4s-20w Phillips, KS**

Job Ticket: 040111

**DST#: 1**

ATTN: Bob Peterson

Test Start: 2010.11.29 @ 09:55:00

## 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:

40000 ppm

Viscosity: 64.00 sec/qt

Cushion Volume:

bbbl

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

Gas Cushion Type:

Resistivity: 0.38 ohm.m

Gas Cushion Pressure:

psig

Salinity: 600.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
420.00	mcw -20% m80%w	5.600

Total Length: 420.00 ft

Total Volume: 5.600 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

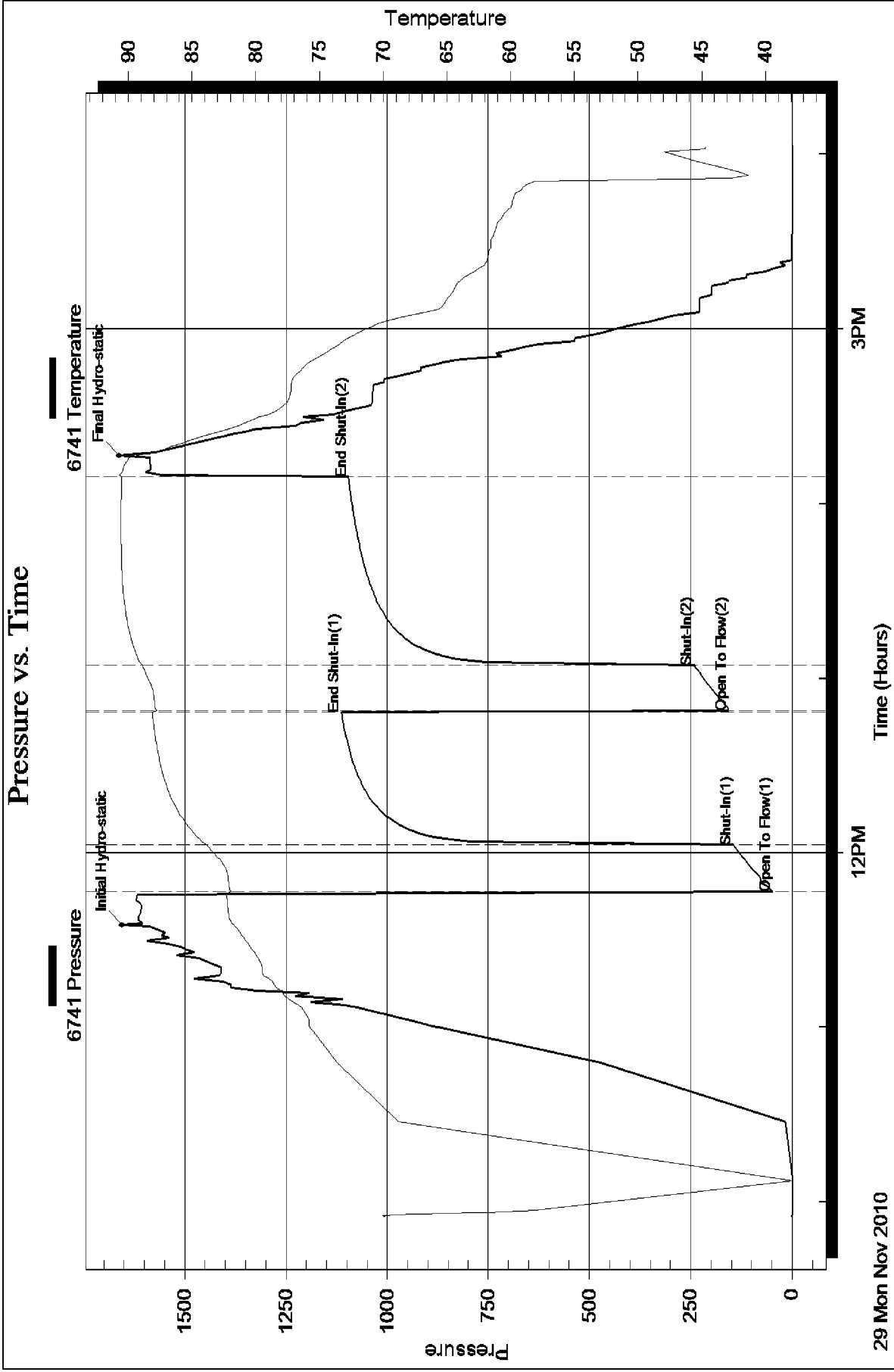
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

# Pressure vs. Time





## DRILL STEM TEST REPORT

Prepared For: **Bach Oil Production**

PO Box 723  
Alma, NE 68920

ATTN: Bob Peterson

**3-4s-20w Phillips, KS**

**LJ-Ranch #1**

Start Date: 2010.11.30 @ 00:50:00

End Date: 2010.11.30 @ 08:50:00

Job Ticket #: 040112                      DST #: 2

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# DRILL STEM TEST REPORT

Bach Oil Production

**LJ-Ranch #1**

PO Box 723  
Alma, NE 68920

**3-4s-20w Phillips, KS**

ATTN: Bob Peterson

Job Ticket: 040112

**DST#: 2**

Test Start: 2010.11.30 @ 00:50:00

## GENERAL INFORMATION:

Formation: **LKC C-G**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:00:30

Time Test Ended: 08:50:00

Test Type: Conventional Bottom Hole

Tester: Chuck Kreuzer Jr.

Unit No: 36

**Interval: 3362.00 ft (KB) To 3430.00 ft (KB) (TVD)**

Reference Elevations: 2121.00 ft (KB)

Total Depth: 3430.00 ft (KB) (TVD)

2116.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

**Serial #: 6741**

**Inside**

Press@RunDepth: 772.67 psig @ 3373.50 ft (KB)

Capacity: 8000.00 psig

Start Date: 2010.11.30

End Date: 2010.11.30

Last Calib.: 2010.11.30

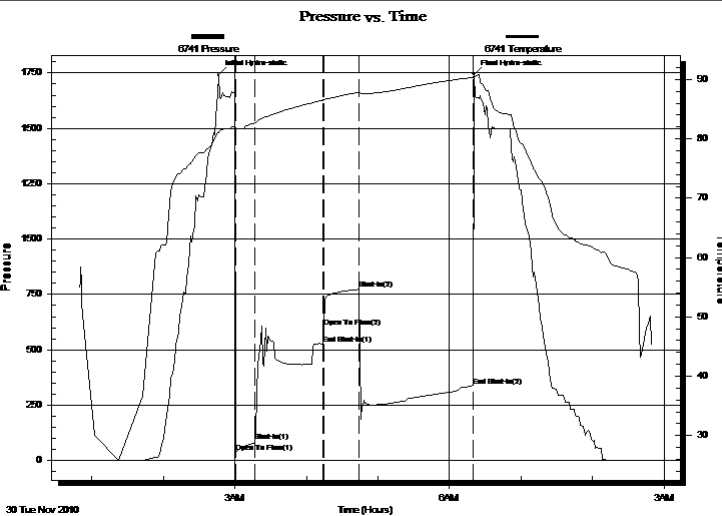
Start Time: 00:50:01

End Time: 08:50:00

Time On Btm: 2010.11.30 @ 02:46:30

Time Off Btm: 2010.11.30 @ 06:20:30

**TEST COMMENT:** IF: Strong blow, Built to B.O.B in 5 mins.  
IS: Fair blow, Built to B.O.B in 38 mins.  
FF: Weak blow, Built to 2 in. over 30 mins.  
FS: Weak blow, Built to 4in. over 90 mins.



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1741.11	81.13	Initial Hydro-static
14	35.72	81.70	Open To Flow (1)
31	85.52	82.71	Shut-In(1)
88	527.20	86.56	End Shut-In(1)
88	600.34	86.61	Open To Flow (2)
118	772.67	87.78	Shut-In(2)
213	337.53	90.37	End Shut-In(2)
214	1743.64	90.71	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
186.00	gmcw -10%g 10%m 80%w	2.32
248.00	gmco-25%g 15%m 60%o	3.48
186.00	gmco-20%g 20%m 60%o	2.61
0.00	124ft. GIP	0.00

## Gas Rates

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



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**TOOL DIAGRAM**

Bach Oil Production

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PO Box 723  
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**3-4s-20w Phillips, KS**

Job Ticket: 040112

**DST#: 2**

ATTN: Bob Peterson

Test Start: 2010.11.30 @ 00:50:00

## Tool Information

Drill Pipe:	Length: 3328.00 ft	Diameter: 3.80 inches	Volume: 46.68 bbl	Tool Weight: 2800.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 28000.00 lb
Drill Collar:	Length: 32.00 ft	Diameter: 2.25 inches	Volume: 0.16 bbl	Weight to Pull Loose: 55000.00 lb
			<u>Total Volume: 46.84 bbl</u>	Tool Chased 2.00 ft
Drill Pipe Above KB:	26.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	3362.00 ft			Final 52000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	68.00 ft			
Tool Length:	96.00 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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Shut In Tool	5.00			3339.00	
Hydraulic tool	5.00			3344.00	
Jars	5.00			3349.00	
Safety Joint	3.00			3352.00	
Packer	5.00			3357.00	28.00 Bottom Of Top Packer
Packer	5.00			3362.00	
Stubb	1.00			3363.00	
Perforations	10.00			3373.00	
Change Over Sub	0.50			3373.50	
Recorder	0.00	6752	Inside	3373.50	
Recorder	0.00	6741	Inside	3373.50	
Blank Spacing	32.00			3405.50	
Change Over Sub	0.50			3406.00	
Perforations	21.00			3427.00	
Bullnose	3.00			3430.00	68.00 Bottom Packers & Anchor

**Total Tool Length: 96.00**





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**3-4s-20w Phillips, KS**

Job Ticket: 040112

**DST#: 2**

ATTN: Bob Peterson

Test Start: 2010.11.30 @ 00:50:00

## 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: 57.00 sec/qt

Cushion Volume:

bbbl

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

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1000.00 ppm

Filter Cake: 2.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
186.00	gmcw - 10%g 10%m 80%w	2.318
248.00	gmco-25%g 15%m 60%o	3.479
186.00	gmco-20%g 20%m 60%o	2.609
0.00	124ft. GIP	0.000

Total Length: 620.00 ft

Total Volume: 8.406 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

