



DRILL STEM TEST REPORT

Prepared For: **Bach Oil Production**

PO Box 723
Alma NE. 68920

ATTN: Bob Peterson

Johnny #4

2-1s-19w Phillips,KS

Start Date: 2014.12.17 @ 10:30:00

End Date: 2014.12.17 @ 17:51:15

Job Ticket #: 62503 DST #: 1

Trilobite Testing, Inc
1515 Commerce Parkway Hays, KS 67601
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**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Bach Oil Production

2-1s-19w Phillips,KS

PO Box 723
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Job Ticket: 62503

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Test Start: 2014.12.17 @ 10:30:00

GENERAL INFORMATION:

Formation: **LKC "F-I"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:10:45

Time Test Ended: 17:51:15

Test Type: Conventional Bottom Hole (Initial)

Tester: Bob Hamel

Unit No: 72

Interval: 3312.00 ft (KB) To 3430.00 ft (KB) (TVD)

Reference Elevations: 1992.00 ft (KB)

Total Depth: 3430.00 ft (KB) (TVD)

1985.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

Serial #: 6772

Inside

Press@RunDepth: 106.17 psig @ 3315.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.12.17

End Date:

2014.12.17

Last Calib.:

2014.12.17

Start Time: 10:30:05

End Time:

17:51:14

Time On Btm:

2014.12.17 @ 13:09:30

Time Off Btm:

2014.12.17 @ 15:52:45

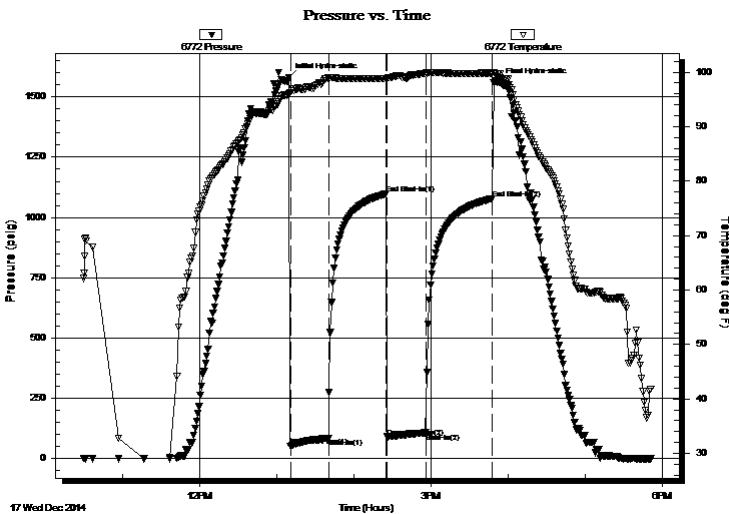
TEST COMMENT: I.F. - 30 - Weak blow built to 6 1/4"

I.S. - 45 - No blow back

F.F. - 30 - Weak blow died in 7 min

F.S.I. - 45 - No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1580.29	96.08	Initial Hydro-static
2	50.05	96.19	Open To Flow (1)
31	83.60	98.97	Shut-In(1)
76	1097.46	98.86	End Shut-In(1)
77	89.21	98.73	Open To Flow (2)
107	106.17	99.76	Shut-In(2)
159	1078.81	99.81	End Shut-In(2)
164	1560.76	99.72	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
63.00	S,O,C,W,M, 5%O 20%W 75%M	0.31
63.00	S,O,C,W,M 2%O 8%W 90%M	0.31
63.00	O,C,M, 15%O 85%M	0.88
25.00	H,O,C,M, 20%O 80%M	0.35

Gas Rates

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



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TOOL DIAGRAM

Bach Oil Production

2-1s-19w Phillips,KS

PO Box 723
Alma NE. 68920

Johnny #4

Job Ticket: 62503

DST#: 1

ATTN: Bob Peterson

Test Start: 2014.12.17 @ 10:30:00

Tool Information

Drill Pipe:	Length: 3176.00 ft	Diameter: 3.80 inches	Volume: 44.55 bbl	Tool Weight:	2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer:	30000.00 lb
Drill Collar:	Length: 126.00 ft	Diameter: 2.25 inches	Volume: 0.62 bbl	Weight to Pull Loose:	60000.00 lb
			<u>Total Volume: 45.17 bbl</u>	Tool Chased	6.00 ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial	47000.00 lb
Depth to Top Packer:	3312.00 ft			Final	50000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	118.00 ft				
Tool Length:	146.00 ft				
Number of Packers:	2	Diameter:	6.75 inches		

Tool Comments: TEST TOOL SLID 6' FT. TO BOTTOM

Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3285.00	
Shut In Tool	5.00			3290.00	
Hydraulic tool	5.00			3295.00	
Jars	5.00			3300.00	
Safety Joint	3.00			3303.00	
Packer	5.00			3308.00	28.00 Bottom Of Top Packer
Packer	4.00			3312.00	
Stubb	1.00			3313.00	
Perforations	2.00			3315.00	
Recorder	0.00	6772	Inside	3315.00	
Recorder	0.00	8167	Outside	3315.00	
Perforations	17.00			3332.00	
Change Over Sub	1.00			3333.00	
Drill Pipe	93.00			3426.00	
Change Over Sub	1.00			3427.00	
Bullnose	3.00			3430.00	118.00 Bottom Packers & Anchor
Total Tool Length:	146.00				



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DRILL STEM TEST REPORT

FLUID SUMMARY

Bach Oil Production

2-1s-19w Phillips,KS

PO Box 723
Alma NE. 68920

Johnny #4

Job Ticket: 62503

DST#: 1

ATTN: Bob Peterson

Test Start: 2014.12.17 @ 10:30:00

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: 4.79 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 500.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
63.00	S,O,C,W,M, 5%O 20%W 75%M	0.310
63.00	S,O,C,W,M 2%O 8%W 90%M	0.310
63.00	O,C,M, 15%O 85%M	0.884
25.00	H,O,C,M, 20%O 80%M	0.351

Total Length: 214.00 ft

Total Volume: 1.855 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

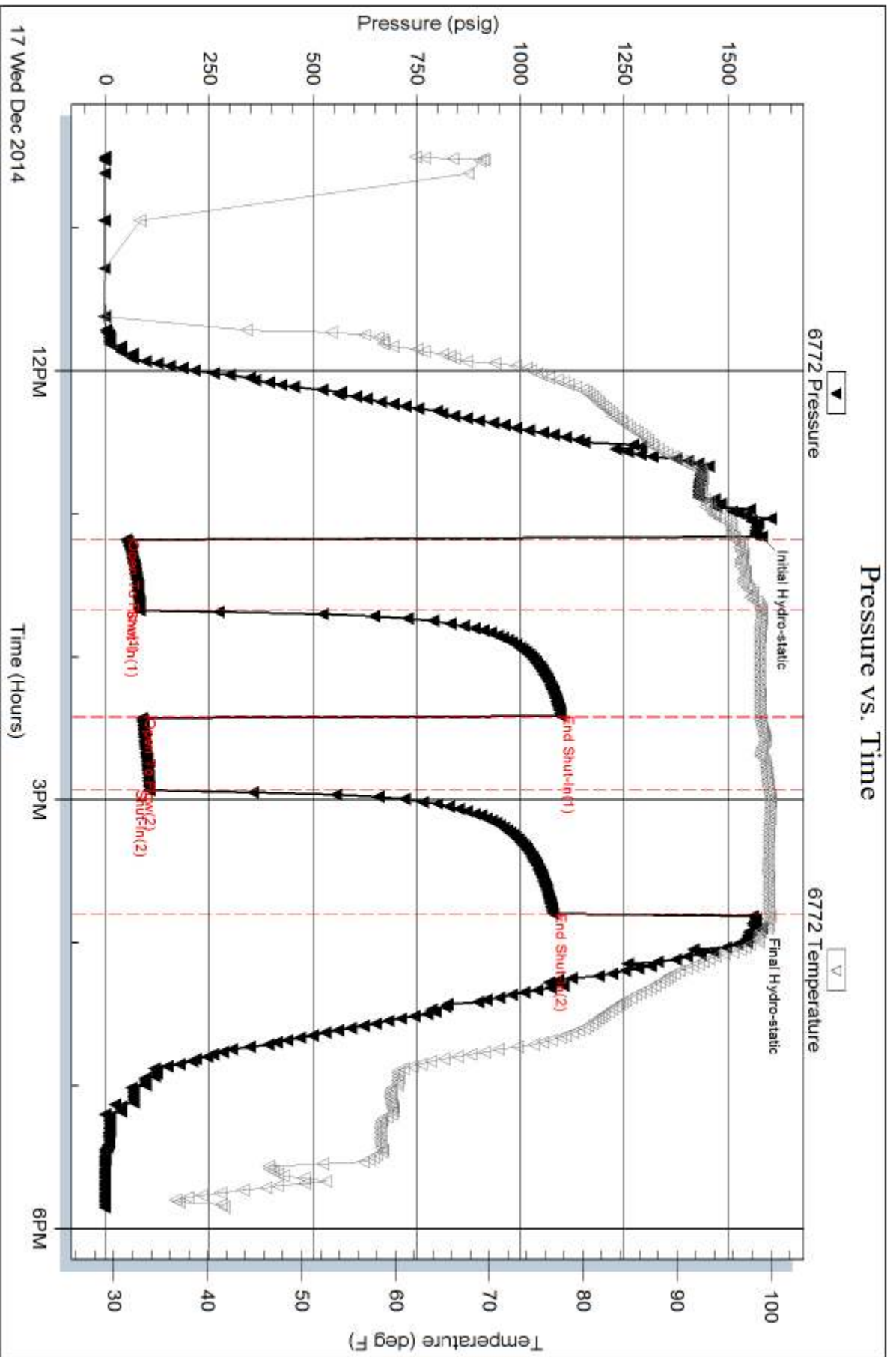
Serial #: 6772

Inside

Bach Oil Production

Johnny #4

DST Test Number: 1

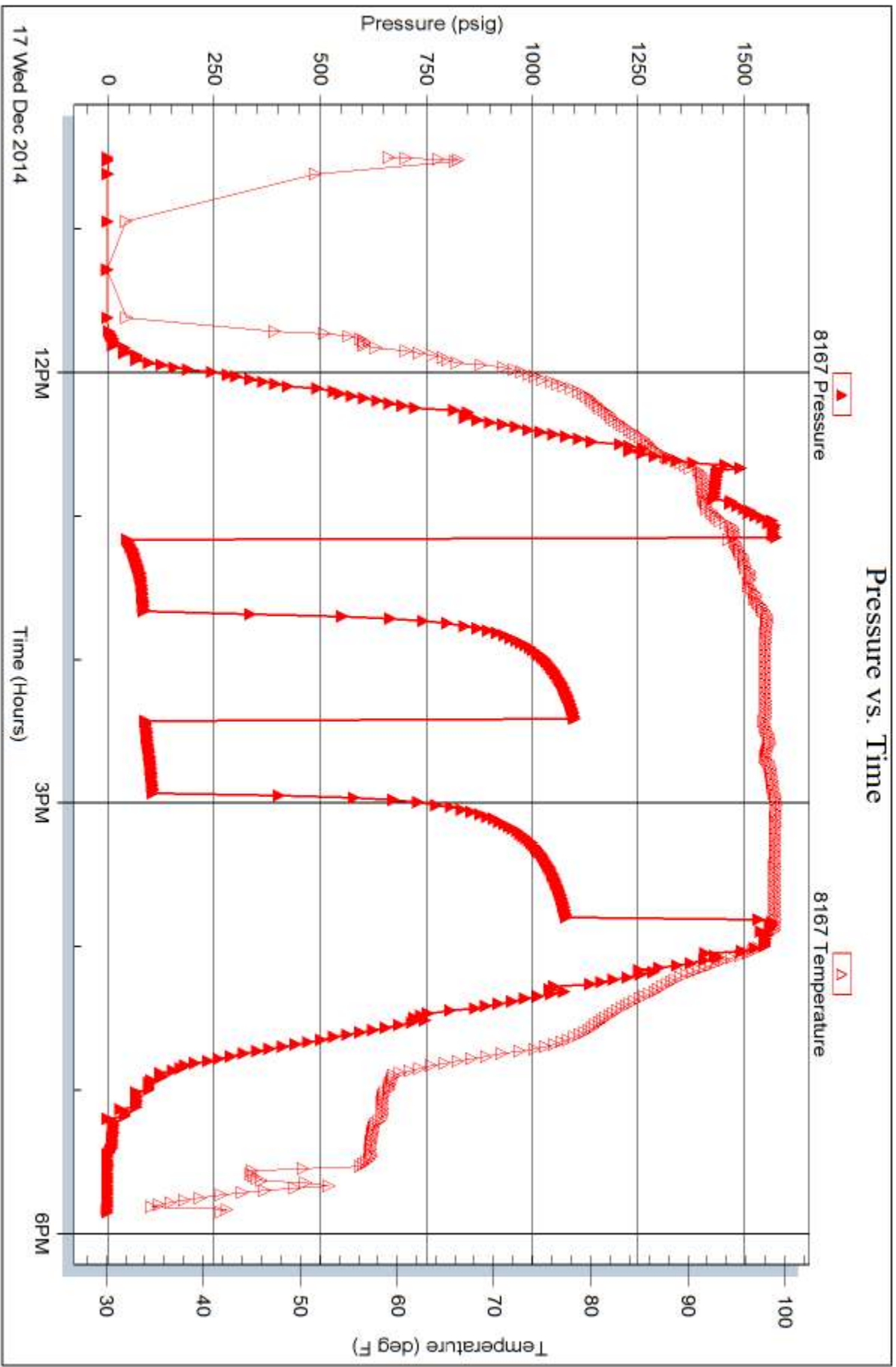


Serial #: 8167

Outside Bach Oil Production

Johnny #4

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 62503

Printed: 2014.12.19 @ 11:15:31



TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 62503

Well Name & No. Johnny #4 Test No. 1 Date 12-17-14
 Company Bach Oil Production Elevation 1992 KB 1985 GL
 Address P.O. Box 723 Alma NEbraska 68920
 Co. Rep / Geo. Bob Peterson Rig Murfin # 24
 Location: Sec. 2 Twp. 1 S. Rge. 19 W. Co. Phillips State KS.

Interval Tested 3312-3430 Zone Tested h.k.c. "F-I"
 Anchor Length 128' Drill Pipe Run 3176. Mud Wt. 8.8
 Top Packer Depth 3307 Drill Collars Run 126' Vis 57
 Bottom Packer Depth 3312 Wt. Pipe Run — WL 4.8
 Total Depth 3430 Chlorides 500 ppm System LCM 1 1/2

Blow Description I.F.-30-1/2" Blow Built to 6 1/4" in 30 min.
I.S.I-45-No B.B.

F.F.-30-1/4" Int. Blow Died in 7 min.
F.S.I-45-No B.B. "test tool slid 6'ft. to Bottom."

Rec	Feet of	%gas	%oil	%water	%mud
1000	(tool sample)	S, W, C, O, M	15	5	80
35	H, O, C, M		20		80
63	O, C, M		15		85
63	S, O, C, W, M		2	8	90
63	S, O, C, W, M		5	20	75

Rec Total 204 BHT 99.7 Gravity — API RW — @ — ° F Chlorides — ppm

(A) Initial Hydrostatic 1,580 Test 1150 T-On Location 09:51:00
 (B) First Initial Flow SD Jars 250 T-Started 10:30:00
 (C) First Final Flow 84 Safety Joint 75 T-Open 13:13:00
 (D) Initial Shut-In 1,097 Circ Sub _____ T-Pulled 15:43:00
 (E) Second Initial Flow 89 Hourly Standby _____ T-Out 17:51:15

(F) Second Final Flow 106 Mileage 172 R.T. 266.60
 (G) Final Shut-In 1,079 Sampler _____
 (H) Final Hydrostatic 1,561 Straddle _____

Shale Packer _____
 Extra Packer _____
 Extra Recorder _____

Initial Open 30 Day Standby _____
 Initial Shut-In 45 Accessibility _____
 Final Flow 30 Sub Total 0
 Final Shut-In 45 Total 1741.60

Sub Total 1741.60 MP/DST Disc't _____

Approved By _____ Our Representative Bob Peterson

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