



DRILL STEM TEST REPORT

Prepared For: **Bach Oil Production**

PO Box 723
Alma NE 68920-0723

ATTN: Jason Bach

Hanke #2

22-3s-19w Phillips,KS

Start Date: 2012.07.15 @ 19:19:55

End Date: 2012.07.15 @ 21:11:35

Job Ticket #: 49327 DST #: 1

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2012.07.24 @ 15:43:12



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Bach Oil Production
PO Box 723
Alma NE 68920-0723
ATTN: Jason Bach

22-3s-19w Phillips,KS

Hanke #2

Job Ticket: 49327

DST#: 1

Test Start: 2012.07.15 @ 19:19:55

GENERAL INFORMATION:

Formation: **LKC- C-D-E-F-G**

Deviated: No Whipstock: ft (KB)

Time Tool Opened:

Time Test Ended: 21:11:35

Test Type: Conventional Bottom Hole (Initial)

Tester: Jeff Brown

Unit No: 44

Interval: 3260.00 ft (KB) To 3340.00 ft (KB) (TVD)

Reference Elevations: 2057.00 ft (KB)

Total Depth: 3340.00 ft (KB) (TVD)

2052.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8321

Inside

Press @ Run Depth: psig @ 3266.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.07.15

End Date:

2012.07.15

Last Calib.:

2012.07.15

Start Time:

19:19:56

End Time:

21:10:35

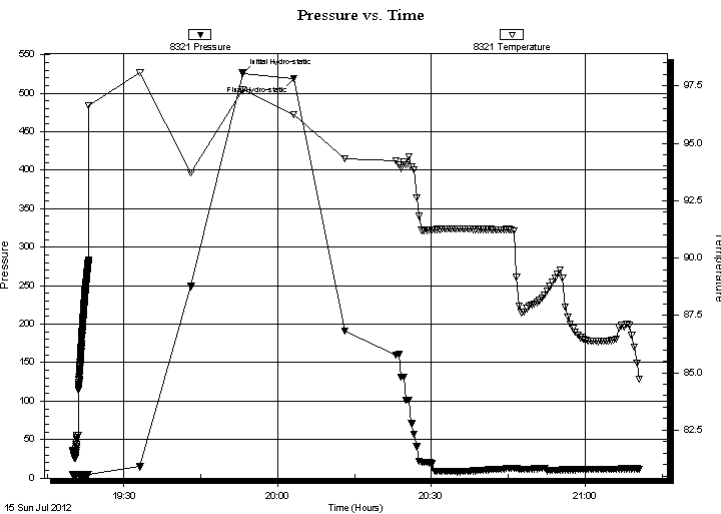
Time On Btm:

2012.07.15 @ 19:53:05

Time Off Btm:

2012.07.15 @ 20:03:05

TEST COMMENT: MIS-Run Hit a bridge stacked out



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	525.99	97.32	Initial Hydro-static
10	518.59	96.25	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

Bach Oil Production
PO Box 723
Alma NE 68920-0723
ATTN: Jason Bach

22-3s-19w Phillips,KS
Hanke #2
Job Ticket: 49327 **DST#: 1**
Test Start: 2012.07.15 @ 19:19:55

Tool Information

Drill Pipe:	Length: 3234.00 ft	Diameter: 3.80 inches	Volume: 45.36 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer:	2000.00 lb
Drill Collar:	Length: 29.00 ft	Diameter: 2.25 inches	Volume: 0.14 bbl	Weight to Pull Loose:	lb
			<u>Total Volume: 45.50 bbl</u>	Tool Chased	ft
Drill Pipe Above KB:	31.00 ft			String Weight: Initial	lb
Depth to Top Packer:	3260.00 ft			Final	lb
Depth to Bottom Packer:	ft				
Interval between Packers:	80.00 ft				
Tool Length:	108.00 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			3233.00	
Shut In Tool	5.00			3238.00	
Hydraulic tool	5.00			3243.00	
Jars	5.00			3248.00	
Safety Joint	3.00			3251.00	
Packer	4.00			3255.00	28.00 Bottom Of Top Packer
Packer	5.00			3260.00	
Stubb	1.00			3261.00	
Perforations	4.00			3265.00	
Change Over Sub	1.00			3266.00	
Recorder	0.00	8321	Inside	3266.00	
Recorder	0.00	8737	Outside	3266.00	
Drill Pipe	63.00			3329.00	
Change Over Sub	1.00			3330.00	
Perforations	7.00			3337.00	
Bullnose	3.00			3340.00	80.00 Bottom Packers & Anchor
Total Tool Length:	108.00				



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Bach Oil Production
PO Box 723
Alma NE 68920-0723
ATTN: Jason Bach

22-3s-19w Phillips,KS
Hanke #2
Job Ticket: 49327 **DST#: 1**
Test Start: 2012.07.15 @ 19:19:55

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: 44.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.78 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 800.00 ppm			
Filter Cake: inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl

Total Length: ft Total Volume: bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments:

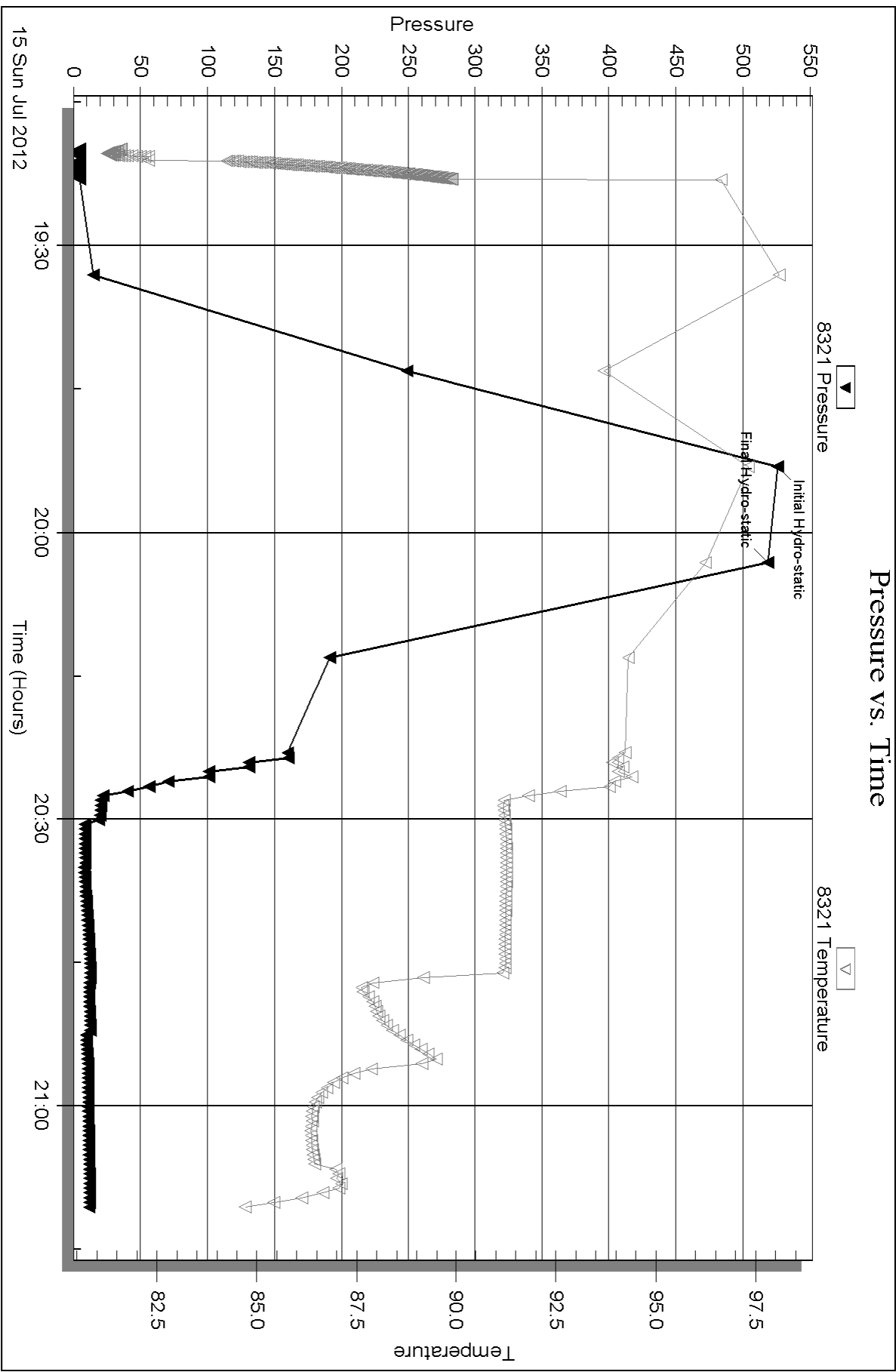
Serial #: 8321

Inside

Bach Oil Production

Hanke #2

DST Test Number: 1



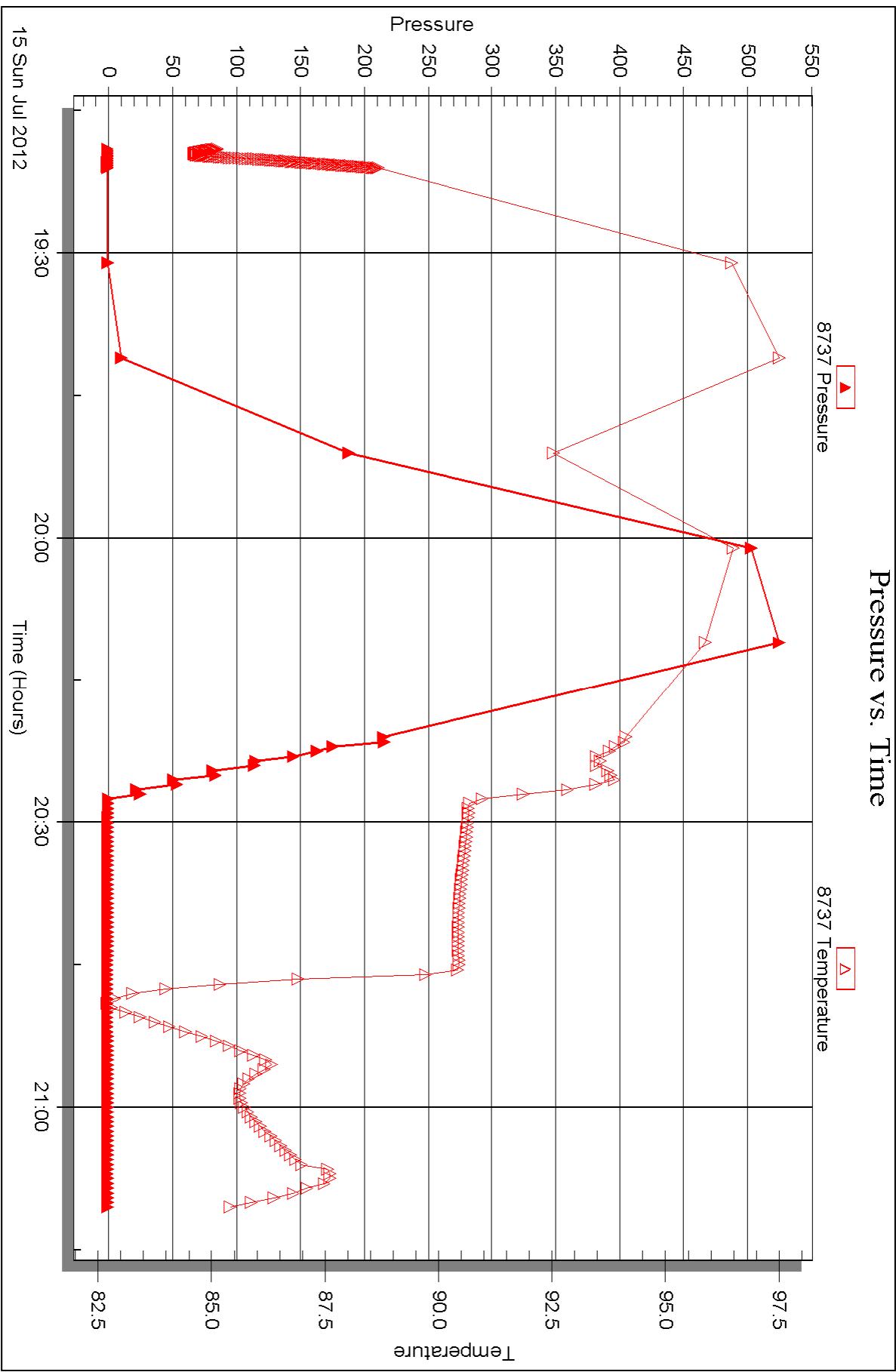
Serial #: 8737

Outside

Bach Oil Production

Hanke #2

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **Bach Oil Production**

PO Box 723
Alma NE 68920-0723

ATTN: Jason Bach

Hanke #2

22-3s-19w Phillips,KS

Start Date: 2012.07.16 @ 01:18:57

End Date: 2012.07.16 @ 08:12:57

Job Ticket #: 49328 DST #: 2

Trilobite Testing, Inc
PO Box 362 Hays, KS 67601
ph: 785-625-4778 fax: 785-625-5620

Printed: 2012.07.24 @ 15:42:21

Bach Oil Production
22-3s-19w Phillips,KS
Hanke #2
DST # 2
LKC- C-D-E-F-G
2012.07.16



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Bach Oil Production
PO Box 723
Alma NE 68920-0723
ATTN: Jason Bach

22-3s-19w Phillips,KS

Hanke #2

Job Ticket: 49328

DST#: 2

Test Start: 2012.07.16 @ 01:18:57

GENERAL INFORMATION:

Formation: **LKC- C-D-E-F-G**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 03:16:57
 Time Test Ended: 08:12:57
 Interval: **3260.00 ft (KB) To 3340.00 ft (KB) (TVD)**
 Total Depth: 3340.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Jeff Brown
 Unit No: 44
 Reference Elevations: 2057.00 ft (KB)
 2052.00 ft (CF)
 KB to GR/CF: 5.00 ft

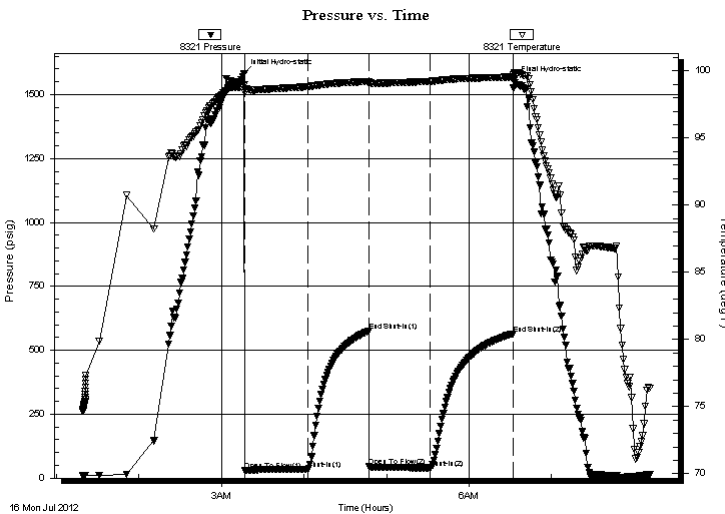
Serial #: 8321

Inside

Press @ Run Depth: 40.00 psig @ 3266.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2012.07.16 End Date: 2012.07.16 Last Calib.: 2012.07.16
 Start Time: 01:18:58 End Time: 08:11:57 Time On Btm: 2012.07.16 @ 03:16:27
 Time Off Btm: 2012.07.16 @ 06:32:57

TEST COMMENT: IFP-Weak blow built to 1 1/8 in
 ISI-Dead no blow back
 FFP-Weak surface blow built to 1/8 in
 FSI-Dead no blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1583.23	98.97	Initial Hydro-static
1	29.94	98.35	Open To Flow (1)
47	34.87	98.84	Shut-In(1)
91	576.26	99.22	End Shut-In(1)
91	44.86	99.05	Open To Flow (2)
136	40.00	99.23	Shut-In(2)
196	564.43	99.56	End Shut-In(2)
197	1556.73	99.83	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	V SOCM 2%O 98%M	0.16

* Recovery from multiple tests

Gas Rates

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



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DRILL STEM TEST REPORT

TOOL DIAGRAM

Bach Oil Production
PO Box 723
Alma NE 68920-0723
ATTN: Jason Bach

22-3s-19w Phillips,KS
Hanke #2
Job Ticket: 49328 **DST#: 2**
Test Start: 2012.07.16 @ 01:18:57

Tool Information

Drill Pipe:	Length: 3234.00 ft	Diameter: 3.80 inches	Volume: 45.36 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer:	20000.00 lb
Drill Collar:	Length: 29.00 ft	Diameter: 2.25 inches	Volume: 0.14 bbl	Weight to Pull Loose:	48000.00 lb
			<u>Total Volume: 45.50 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	31.00 ft			String Weight: Initial	43000.00 lb
Depth to Top Packer:	3260.00 ft			Final	43000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	80.00 ft				
Tool Length:	108.00 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			3233.00	
Shut In Tool	5.00			3238.00	
Hydraulic tool	5.00			3243.00	
Jars	5.00			3248.00	
Safety Joint	3.00			3251.00	
Packer	4.00			3255.00	28.00 Bottom Of Top Packer
Packer	5.00			3260.00	
Stubb	1.00			3261.00	
Perforations	4.00			3265.00	
Change Over Sub	1.00			3266.00	
Recorder	0.00	8321	Inside	3266.00	
Recorder	0.00	8737	Outside	3266.00	
Drill Pipe	63.00			3329.00	
Change Over Sub	1.00			3330.00	
Perforations	7.00			3337.00	
Bullnose	3.00			3340.00	80.00 Bottom Packers & Anchor
Total Tool Length:	108.00				



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Alma NE 68920-0723
ATTN: Jason Bach

22-3s-19w Phillips,KS
Hanke #2
Job Ticket: 49328 **DST#: 2**
Test Start: 2012.07.16 @ 01:18:57

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: 44.00 sec/qt	Cushion Volume: bbl		
Water Loss: 8.77 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 800.00 ppm			
Filter Cake: inches			

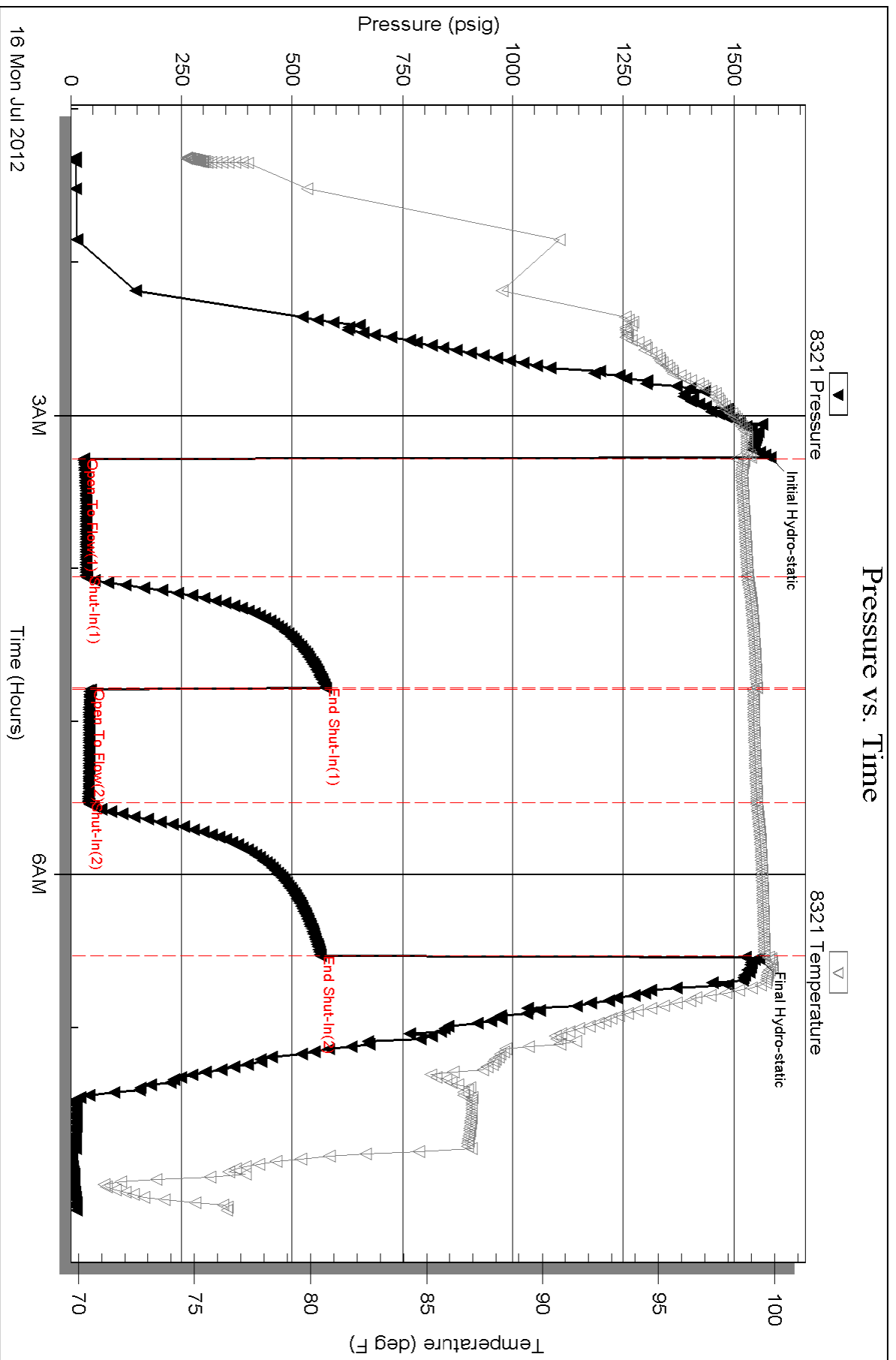
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
30.00	VSOCM 2%O 98%M	0.157

Total Length: 30.00 ft Total Volume: 0.157 bbl
Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
Laboratory Name: Laboratory Location:
Recovery Comments: Had 8 foot of fill in hole

Pressure vs. Time



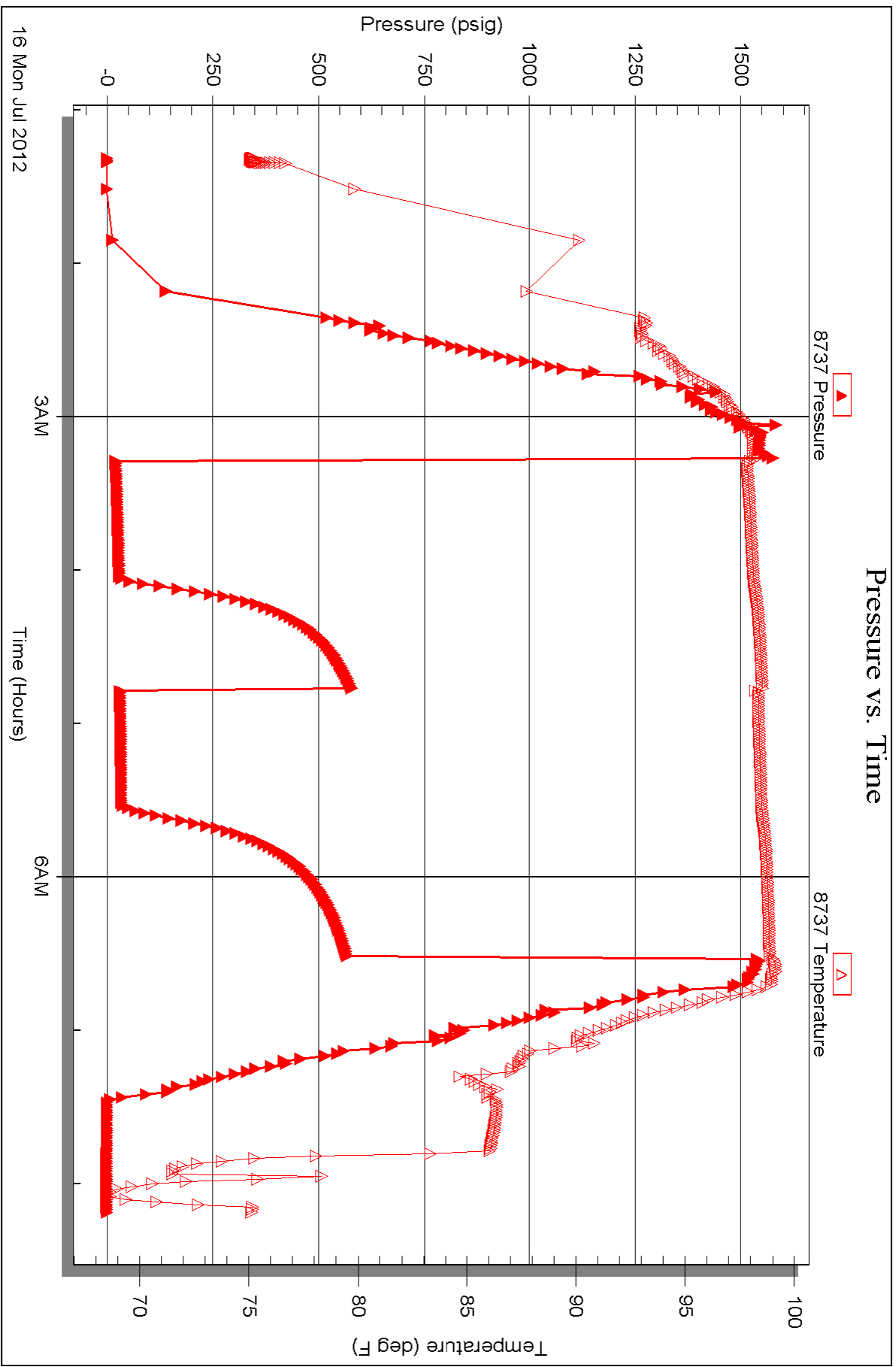
Serial #: 8737

Outside

Bach Oil Production

Hanke #2

DST Test Number: 2





TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 49328

Well Name & No. Hanke #2 Test No. 2 Date 7-16-12
 Company Bach oil production Elevation 2057 KB 2052 GL
 Address PO Box 723 ALMA NE 68920 + 0723
 Co. Rep / Geo. Bob Peterson Rig Murfin #16
 Location: Sec. 22 Twp. 3s Rge. 19W Co. Phillips State Ks

Interval Tested 3240 - 3340 Zone Tested LKC - C-D-E-F-G
 Anchor Length 80 Drill Pipe Run 3234 Mud Wt. 88
 Top Packer Depth 3255 Drill Collars Run 29 Vis 44
 Bottom Packer Depth 3240 Wt. Pipe Run 0 WL 8.8
 Total Depth 3340 Chlorides 800 ppm System LCM 4

Blow Description FF- Weak Blow Built To 1 1/8 IN
IS- Dead No Blow Back
FF- Weak Surface Blow Built 1/8 IN
IS- Dead No Blow Back

Rec	Feet of	%gas	%oil	%water	%mud
<u>30</u>	<u>USDCM</u>	<u>2</u>		<u>98</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 30 BHT 100 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1583 Test 1150 T-On Location 00:58
 (B) First Initial Flow 30 Jars 250 T-Started 1:18
 (C) First Final Flow 35 Safety Joint 75 T-Open 3:18
 (D) Initial Shut-In 576 Circ Sub T-Pulled 6:33
 (E) Second Initial Flow 45 Hourly Standby T-Out 8:12
 (F) Second Final Flow 40 Mileage 226.30 Comments Had 8 feet of fill in hole
 (G) Final Shut-In 524 Sampler Ruined Shale Packer
 (H) Final Hydrostatic 1557 Straddle Ruined Packer

Initial Open 45 Extra Packer Extra Copies
 Initial Shut-In 45 Extra Recorder Sub Total 0
 Final Flow 45 Day Standby Total 1501.30
 Final Shut-In 40 Accessibility MP/DST Disc't
 Sub Total 1501.30

Approved By _____ Our Representative Jeff Brown

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.