



DRILL STEM TEST REPORT

Prepared For: **TDI Inc.**

1310 Bison Rd
Hays KS 67601

ATTN: Herb Deines

Bixenman #1

11-15s-19w Ellis,KS

Start Date: 2012.08.18 @ 14:45:05

End Date: 2012.08.18 @ 20:27:50

Job Ticket #: 47916 DST #: 1

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

Printed: 2012.08.27 @ 11:14:39

TDI Inc.
11-15s-19w Ellis,KS
Bixenman #1
DST # 1
LKC'A-C'
2012.08.18



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

TDI Inc.
1310 Bison Rd
Hays KS 67601
ATTN: Herb Deines

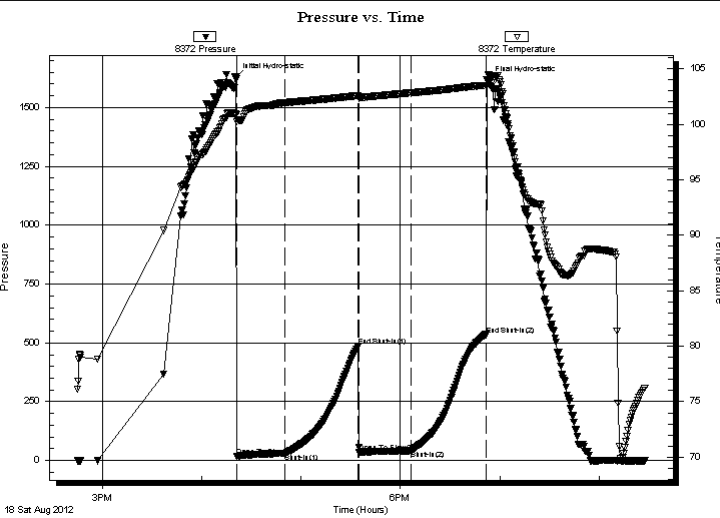
11-15s-19w Ellis,KS
Bixenman #1
Job Ticket: 47916 **DST#: 1**
Test Start: 2012.08.18 @ 14:45:05

GENERAL INFORMATION:

Formation: **LKC"A-C"**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 16:21:20
 Time Test Ended: 20:27:50
 Interval: **3332.00 ft (KB) To 3382.00 ft (KB) (TVD)**
 Total Depth: 3382.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Andy Carreira
 Unit No: 39
 Reference Elevations: 2065.00 ft (KB)
 2058.00 ft (CF)
 KB to GR/CF: 7.00 ft

Serial #: 8372 Outside
 Press @ Run Depth: 42.57 psig @ 3339.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2012.08.18 End Date: 2012.08.18 Last Calib.: 2012.08.18
 Start Time: 14:45:05 End Time: 20:27:50 Time On Btm: 2012.08.18 @ 16:20:30
 Time Off Btm: 2012.08.18 @ 18:53:00

TEST COMMENT: IF:(30min) 5" blow in 15 min. 8" in 20 min.
 IS:(45min) No Return
 FF:(30min) BOB, 30 sec.
 FS:(45min) No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1625.36	100.89	Initial Hydro-static
1	16.60	100.23	Open To Flow (1)
30	30.72	101.94	Shut-In(1)
74	485.53	102.58	End Shut-In(1)
75	34.47	102.42	Open To Flow (2)
106	42.57	102.83	Shut-In(2)
151	534.73	103.51	End Shut-In(2)
153	1614.04	104.48	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
70.00	HOCGM g=10% o=30% m=60%	0.98

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

TDI Inc.
1310 Bison Rd
Hays KS 67601
ATTN: Herb Deines

11-15s-19w Ellis,KS
Bixenman #1
Job Ticket: 47916 **DST#: 1**
Test Start: 2012.08.18 @ 14:45:05

Tool Information

Drill Pipe:	Length: 3342.00 ft	Diameter: 3.80 inches	Volume: 46.88 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:	22000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	42000.00 lb
			<u>Total Volume: 46.88 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial	37000.00 lb
Depth to Top Packer:	3332.00 ft			Final	38000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	50.00 ft				
Tool Length:	70.00 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			3313.00	
Shut In Tool	5.00			3318.00	
Hydraulic tool	5.00			3323.00	
Packer	5.00			3328.00	20.00 Bottom Of Top Packer
Packer	4.00			3332.00	
Stubb	1.00			3333.00	
Perforations	5.00			3338.00	
Change Over Sub	1.00			3339.00	
Recorder	0.00	8017	Inside	3339.00	
Recorder	0.00	8372	Outside	3339.00	
Drill Pipe	32.00			3371.00	
Change Over Sub	1.00			3372.00	
Perforations	7.00			3379.00	
Bullnose	3.00			3382.00	50.00 Bottom Packers & Anchor

Total Tool Length: 70.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

TDI Inc. **11-15s-19w Ellis,KS**
 1310 Bison Rd **Bixenman #1**
 Hays KS 67601 Job Ticket: 47916 **DST#: 1**
 ATTN: Herb Deines Test Start: 2012.08.18 @ 14:45:05

Mud and Cushion Information

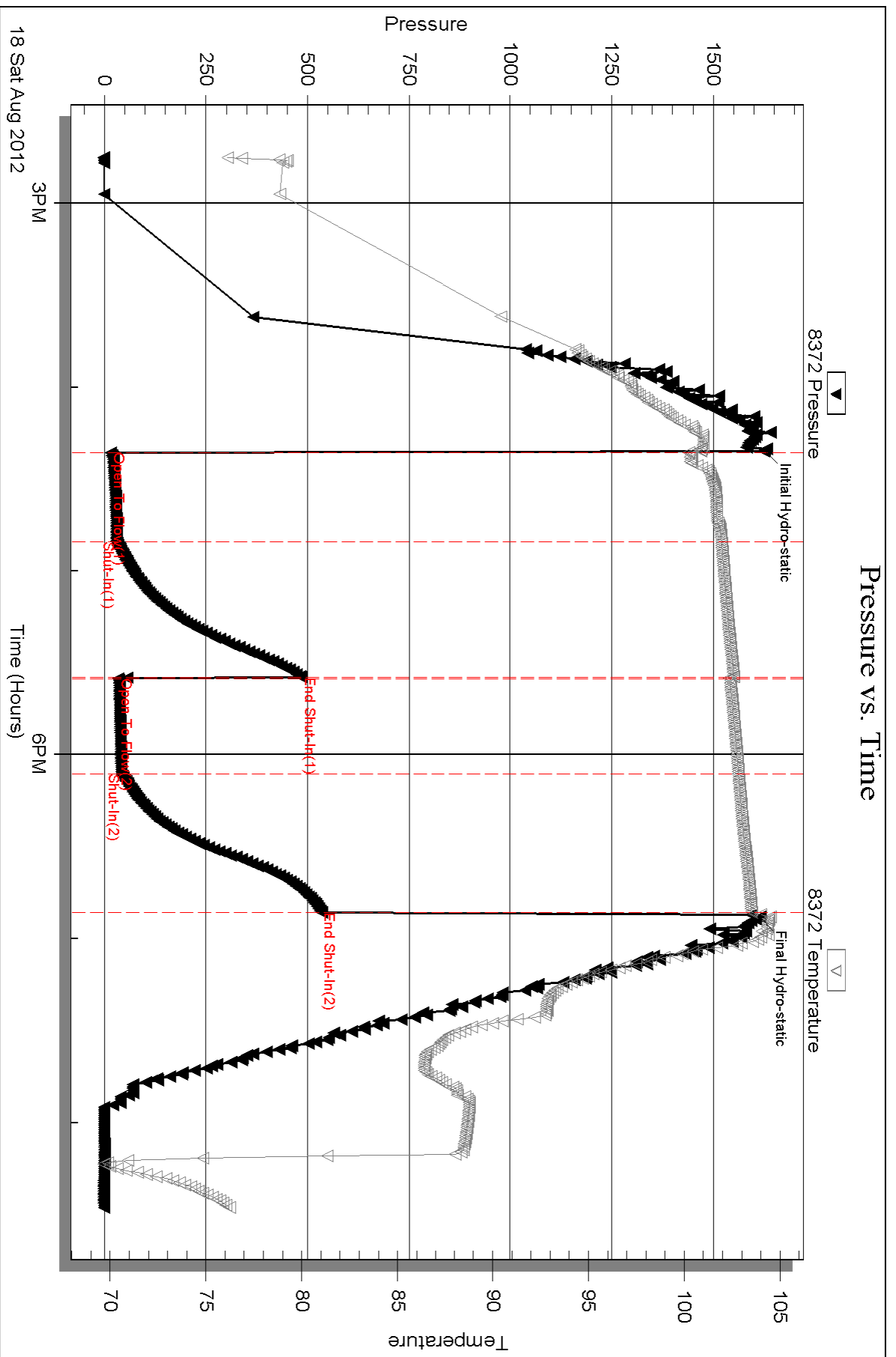
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	ppm
Viscosity: 58.00 sec/qt	Cushion Volume: bbl		
Water Loss: 9.17 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 7300.00 ppm			
Filter Cake: inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
70.00	HOCGM g=10% o=30% m=60%	0.982

Total Length: 70.00 ft Total Volume: 0.982 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:



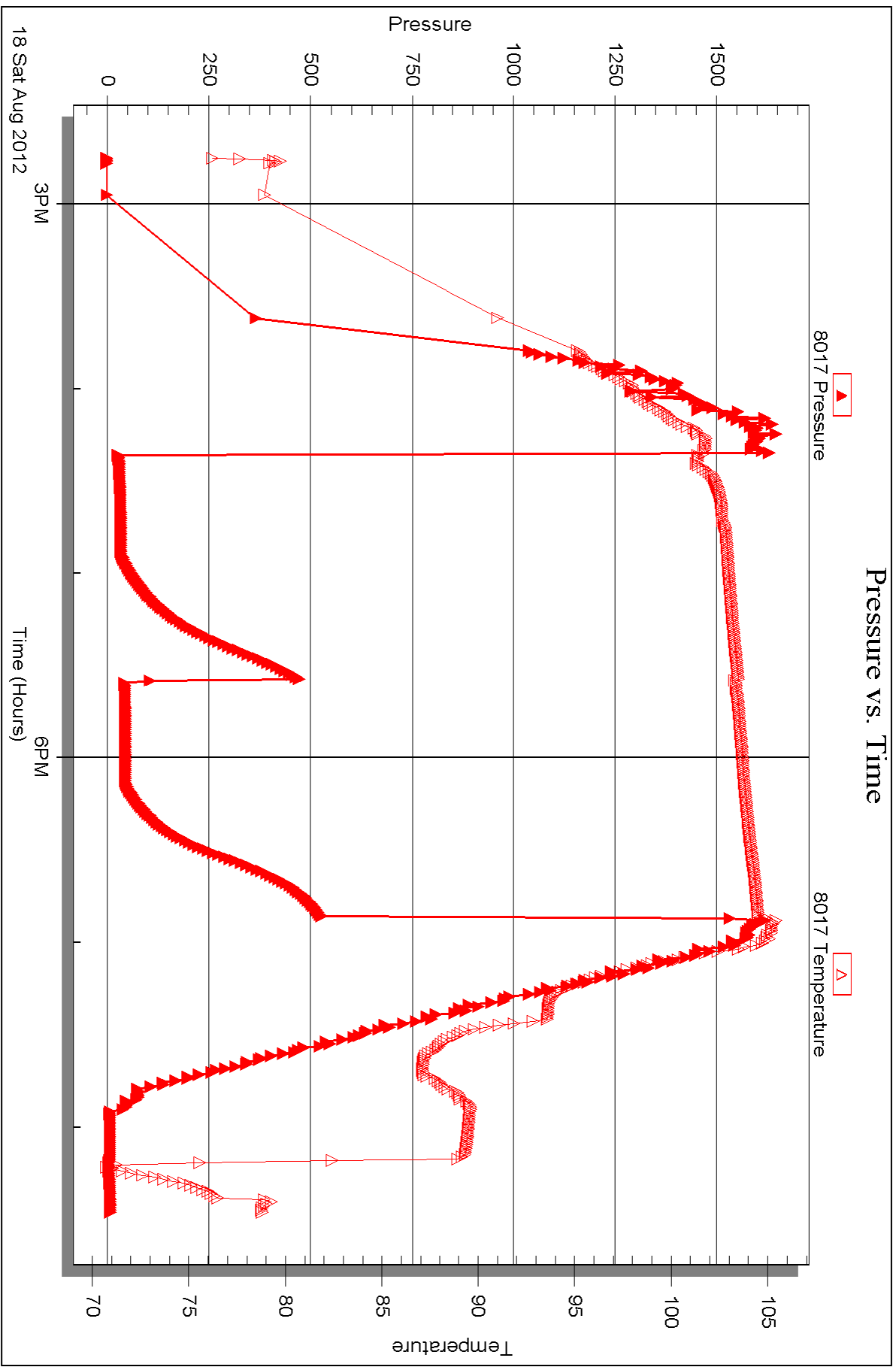
Serial #: 8017

Inside

TDI Inc.

Bixenman #1

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **TDI Inc.**

1310 Bison Rd
Hays KS 67601

ATTN: Herb Deines

Bixenman #1

11-15s-19w Ellis,KS

Start Date: 2012.08.19 @ 14:07:05

End Date: 2012.08.19 @ 20:19:50

Job Ticket #: 47917 DST #: 2

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

Printed: 2012.08.27 @ 11:13:46

TDI Inc. 11-15s-19w Ellis,KS Bixenman #1 DST # 2 LKC-"H-J" 2012.08.19



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

TDI Inc.
1310 Bison Rd
Hays KS 67601
ATTN: Herb Deines

11-15s-19w Ellis, KS
Bixenman #1
Job Ticket: 47917 **DST#: 2**
Test Start: 2012.08.19 @ 14:07:05

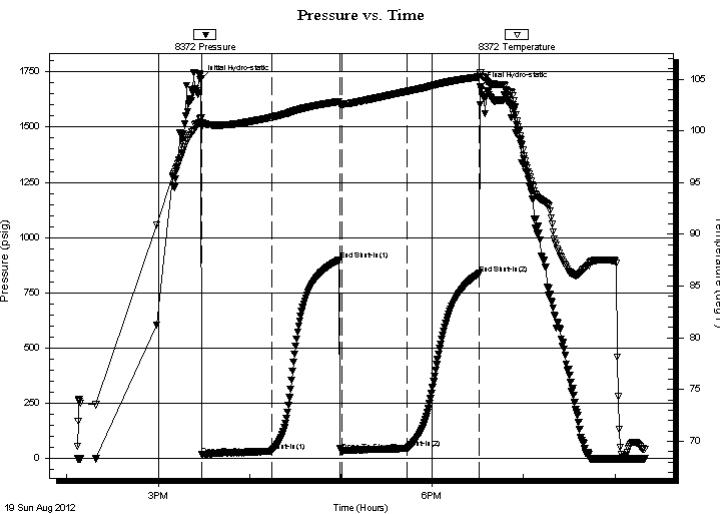
GENERAL INFORMATION:

Formation: **LKC"H-J"**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 15:28:30
Time Test Ended: 20:19:50
Interval: **3450.00 ft (KB) To 3535.00 ft (KB) (TVD)**
Total Depth: 3535.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole (Reset)
Tester: Andy Carreira
Unit No: 39
Reference Elevations: 2065.00 ft (KB)
2058.00 ft (CF)
KB to GR/CF: 7.00 ft

Serial #: 8372 Outside

Press @ Run Depth: 45.77 psig @ 3457.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2012.08.19 End Date: 2012.08.19 Last Calib.: 2012.08.19
Start Time: 14:07:05 End Time: 20:19:50 Time On Btm: 2012.08.19 @ 15:27:40
Time Off Btm: 2012.08.19 @ 18:31:39

TEST COMMENT: IF:(45min) 1" blow in 9 min.
ISl:(45min) No Return
FF:(45min) 1" blow in 2 min. 2" in 13 min. Decreased to 1"
FSl:(45min) No Return



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1715.56	101.18	Initial Hydro-static
1	16.32	100.35	Open To Flow (1)
47	32.84	101.30	Shut-In(1)
92	899.11	102.84	End Shut-In(1)
93	33.37	102.59	Open To Flow (2)
136	45.77	103.81	Shut-In(2)
184	836.70	105.23	End Shut-In(2)
184	1684.41	105.65	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
1.00	CO	0.01
69.00	SOCM o=5% m=95%	0.97

* Recovery from multiple tests

Gas Rates

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



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TOOL DIAGRAM

TDI Inc.
1310 Bison Rd
Hays KS 67601
ATTN: Herb Deines

11-15s-19w Ellis,KS
Bixenman #1
Job Ticket: 47917 **DST#: 2**
Test Start: 2012.08.19 @ 14:07:05

Tool Information

Drill Pipe:	Length: 3439.00 ft	Diameter: 3.80 inches	Volume: 48.24 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:	24000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	44000.00 lb
			<u>Total Volume: 48.24 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	9.00 ft			String Weight: Initial	39000.00 lb
Depth to Top Packer:	3450.00 ft			Final	40000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	85.00 ft				
Tool Length:	105.00 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			3431.00	
Shut In Tool	5.00			3436.00	
Hydraulic tool	5.00			3441.00	
Packer	5.00			3446.00	20.00 Bottom Of Top Packer
Packer	4.00			3450.00	
Stubb	1.00			3451.00	
Perforations	5.00			3456.00	
Change Over Sub	1.00			3457.00	
Recorder	0.00	8017	Inside	3457.00	
Recorder	0.00	8372	Outside	3457.00	
Drill Pipe	63.00			3520.00	
Change Over Sub	1.00			3521.00	
Perforations	11.00			3532.00	
Bullnose	3.00			3535.00	85.00 Bottom Packers & Anchor

Total Tool Length: 105.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

TDI Inc. **11-15s-19w Ellis,KS**
 1310 Bison Rd **Bixenman #1**
 Hays KS 67601 Job Ticket: 47917 **DST#: 2**
 ATTN: Herb Deines Test Start: 2012.08.19 @ 14:07:05

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:	ppm
Viscosity: 58.00 sec/qt	Cushion Volume: bbl		
Water Loss: 9.15 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 7300.00 ppm			
Filter Cake: inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
1.00	CO	0.014
69.00	SOCM o=5% m=95%	0.968

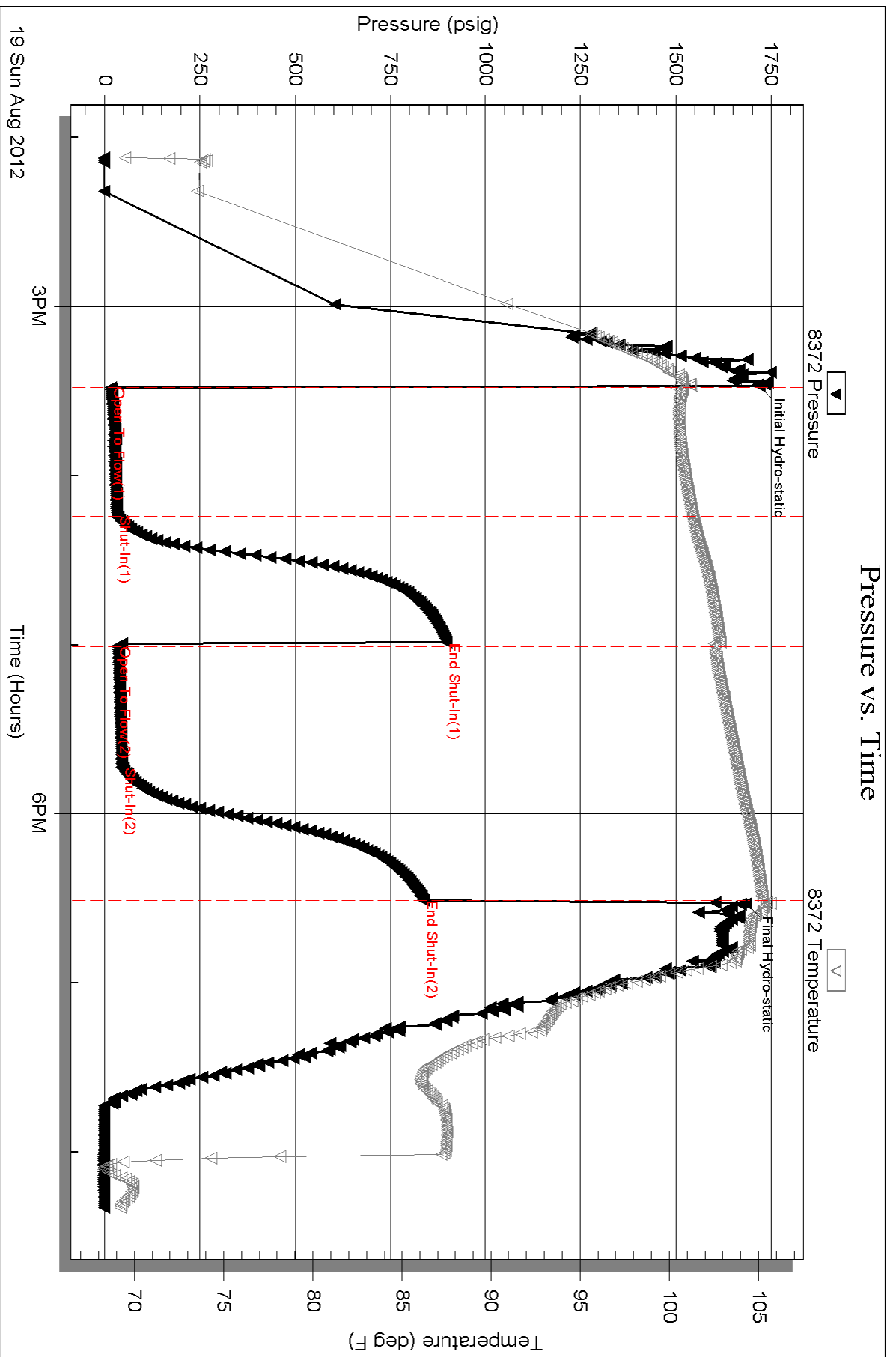
Total Length: 70.00 ft Total Volume: 0.982 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:

Serial #: 8372

Outside TDI Inc.

Bixenman #1

DST Test Number: 2



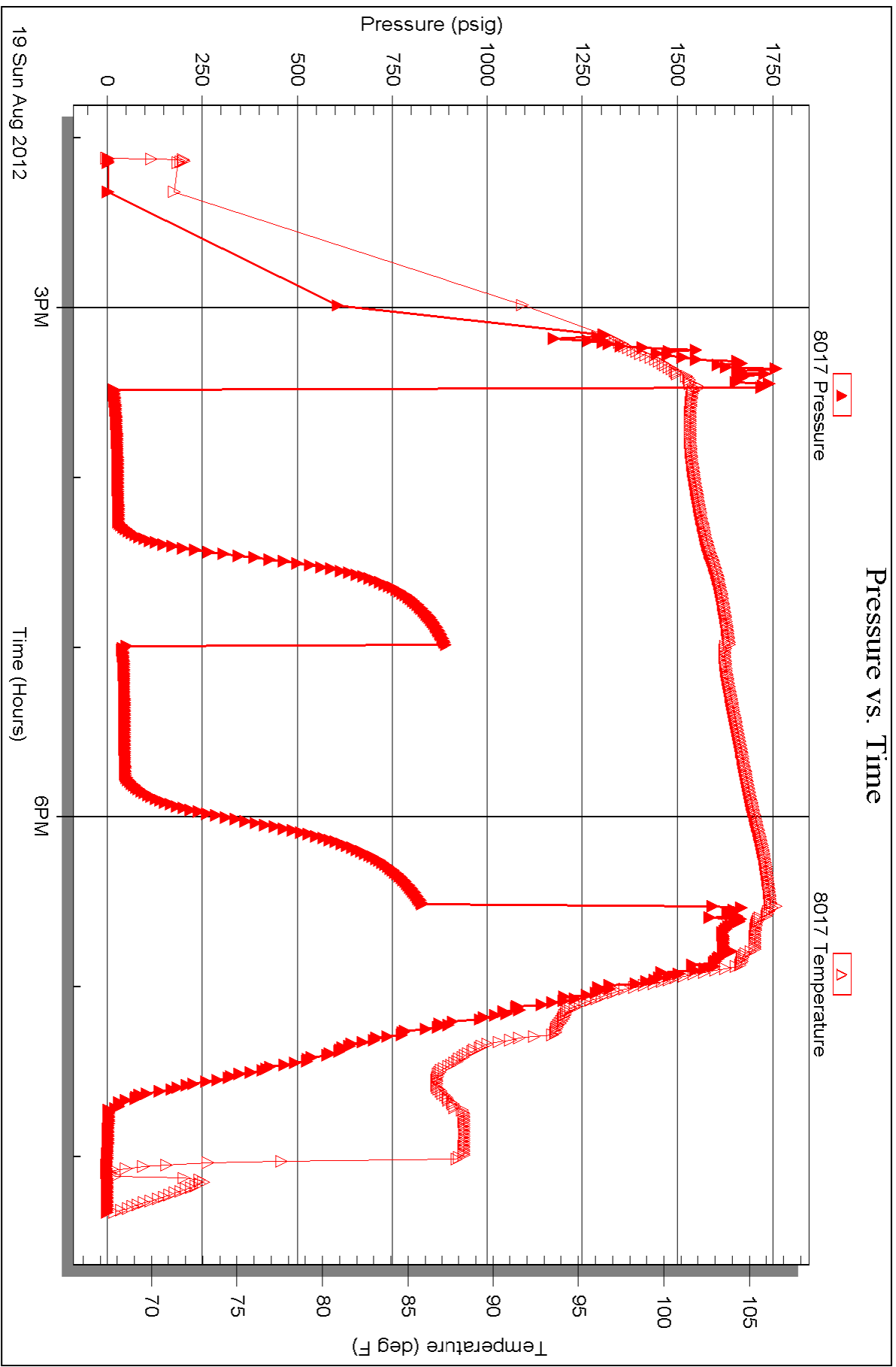
Serial #: 8017

Inside

TDI Inc.

Bixeman #1

DST Test Number: 2





TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 47916

Well Name & No. BIXENMAN #1 Test No. 1 Date 8-18-12
 Company TDI Elevation 2065 KB 2058 GL
 Address 1310 BISON RD HAYS KS 67601
 Co. Rep / Geo. Herb Deines Rig Southwind #4
 Location: Sec. 11 Twp. 15 Rge. 19W Co. Ellis State Ks

Interval Tested 3332-3382 Zone Tested LKC "A,B,C"
 Anchor Length 50 Drill Pipe Run 3342 Mud Wt. 9.1
 Top Packer Depth 3327 Drill Collars Run 0 Vis 58
 Bottom Packer Depth 3332 Wt. Pipe Run 0 WL 9.2
 Total Depth 3382 Chlorides 7300 ppm System LCM 3#

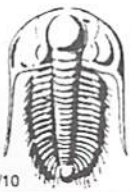
Blow Description 5" blow in 15 min. 8" in 28 min
ESP: NO RETURN
FP: BOB, 30 sec.
ESP: NO RETURN

Rec	Feet of	%gas	%oil	%water	%mud
<u>70</u>	<u>HOCBM</u>	<u>10</u>	<u>30</u>	<u>60</u>	
<u>315</u>	<u>BIP</u>				

Rec Total 70' BHT 1030 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic <u>1625</u>	<input checked="" type="checkbox"/> Test 1150	T-On Location <u>13:40</u>
(B) First Initial Flow <u>16</u>	<input type="checkbox"/> Jars _____	T-Started <u>14:45</u>
(C) First Final Flow <u>30</u>	<input type="checkbox"/> Safety Joint _____	T-Open <u>16:20</u>
(D) Initial Shut-In <u>485</u>	<input type="checkbox"/> Circ Sub _____	T-Pulled <u>18:50</u>
(E) Second Initial Flow <u>34</u>	<input type="checkbox"/> Hourly Standby _____	T-Out <u>20:28</u>
(F) Second Final Flow <u>42</u>	<input checked="" type="checkbox"/> Mileage <u>28RT</u> 43.40	Comments _____
(G) Final Shut-In <u>534</u>	<input type="checkbox"/> Sampler _____	
(H) Final Hydrostatic <u>1614</u>	<input type="checkbox"/> Straddle _____	<input type="checkbox"/> Ruined Shale Packer _____
	<input type="checkbox"/> Shale Packer _____	<input type="checkbox"/> Ruined Packer _____
Initial Open <u>30</u>	<input type="checkbox"/> Extra Packer _____	<input type="checkbox"/> Extra Copies _____
Initial Shut-In <u>45</u>	<input type="checkbox"/> Extra Recorder _____	Sub Total <u>0</u>
Final Flow <u>30</u>	<input type="checkbox"/> Day Standby _____	Total <u>1193.40</u>
Final Shut-In <u>45</u>	<input type="checkbox"/> Accessibility _____	MP/DST Disc't _____
	Sub Total <u>1193.40</u>	

Approved By _____ Our Representative [Signature]
 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. 47917

Well Name & No. BIXENMAN #1 Test No. 2 Date 8-19-12
 Company TDS Elevation 2065 KB 2058 GL
 Address 1310 BISON RD Hays KS 67601
 Co. Rep / Geo. HERB DEINES Rig SOUTHWIND #4
 Location: Sec. 11 Twp. 15 Rge. 19W Co. ELLIS State KS

Interval Tested 3450-3535 Zone Tested LKC^uH I J^u
 Anchor Length 85 Drill Pipe Run 3439 Mud Wt. 9.1
 Top Packer Depth 3445 Drill Collars Run 0 Vis 58
 Bottom Packer Depth 3450 Wt. Pipe Run 0 WL 9.2
 Total Depth 3535 Chlorides 73000 ppm System LCM 3H

Blow Description FP: 1" blow in 9min.
ISF: NO RETURN
FF: 1" blow in 2min, 2" in 13min. DECREASED to 1"
FSL: NO RETURN

Rec	Feet of	%gas	%oil	%water	%mud
<u>1</u>	<u>oil</u>		<u>100</u>		
<u>69</u>	<u>50cm</u>		<u>5</u>		<u>95</u>

Rec Total 70 BHT 105 Gravity _____ API RW _____ @ _____ °F Chlorides _____ ppm

(A) Initial Hydrostatic 1715 Test 1150 T-On Location 13:35
 (B) First Initial Flow 16 Jars _____ T-Started 14:07
 (C) First Final Flow 32 Safety Joint _____ T-Open 15:29
 (D) Initial Shut-In 899 Circ Sub _____ T-Pulled 18:29
 (E) Second Initial Flow 33 Hourly Standby _____ T-Out 20:20
 (F) Second Final Flow 45 Mileage ← 28RT 43.40 Comments _____
 (G) Final Shut-In 836 Sampler _____
 (H) Final Hydrostatic 1684 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 1193.40
 Final Flow 45 Accessibility _____ MP/DST Disc't _____
 Final Shut-In 45 Sub Total 1193.40

Approved By _____ Our Representative [Signature]

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.