



DRILL STEM TEST REPORT

Prepared For: **TDI Inc**

1310 Bison Rd
Hays KS 67601 + 9696

ATTN: Tom Denning

Mike #2

3-15s-19w Ellis,KS

Start Date: 2012.09.22 @ 12:11:45

End Date: 2012.09.22 @ 20:03:06

Job Ticket #: 48545 DST #: 1

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

Printed: 2012.09.27 @ 14:55:14

TDI Inc
3-15s-19w Ellis,KS
Mike #2
DST # 1
LKC-C-F
2012.09.22



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

TDI Inc
 1310 Bison Rd
 Hays KS 67601 + 9696
 ATTN: Tom Denning

3-15s-19w Ellis, KS
Mike #2
 Job Ticket: 48545 **DST#: 1**
 Test Start: 2012.09.22 @ 12:11:45

GENERAL INFORMATION:

Formation: **LKC-C-F**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 15:56:15
 Time Test Ended: 20:03:06
 Interval: **3366.00 ft (KB) To 3430.00 ft (KB) (TVD)**
 Total Depth: 3430.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Good
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Jeff Brown
 Unit No: 44
 Reference Elevations: 2065.00 ft (KB)
 2055.00 ft (CF)
 KB to GR/CF: 10.00 ft

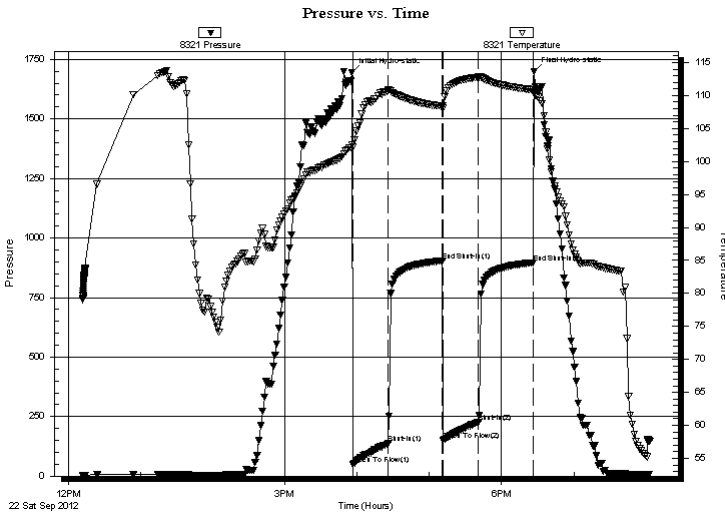
Serial #: 8321

Inside

Press @ Run Depth: 227.46 psig @ 3402.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2012.09.22 End Date: 2012.09.22 Last Calib.: 2012.09.22
 Start Time: 12:11:46 End Time: 20:03:06 Time On Btm: 2012.09.22 @ 15:55:45
 Time Off Btm: 2012.09.22 @ 18:27:15

TEST COMMENT: IFP=Good blow BOB in 11 1/4 min
 ISI=Dead no blow back
 FFP=Good blow BOB in 13 1/2 min
 FSI=Dead no blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1695.67	102.50	Initial Hydro-static
1	50.40	102.18	Open To Flow (1)
30	139.02	110.82	Shut-In(1)
75	904.17	108.39	End Shut-In(1)
76	150.77	108.09	Open To Flow (2)
105	227.46	112.79	Shut-In(2)
151	896.52	110.86	End Shut-In(2)
152	1700.04	110.38	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
378.00	MW 45%M 55%W	5.30
31.00	WM 15%W 85%M	0.43

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 + 9696
ATTN: Tom Denning

3-15s-19w Ellis, KS
Mike #2
Job Ticket: 48545 **DST#: 1**
Test Start: 2012.09.22 @ 12:11:45

Tool Information

Drill Pipe:	Length: 3361.00 ft	Diameter: 3.80 inches	Volume: 47.15 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: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	44000.00 lb
			<u>Total Volume: 47.15 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial	32000.00 lb
Depth to Top Packer:	3366.00 ft			Final	34000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	64.00 ft				
Tool Length:	84.00 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			3347.00	
Shut In Tool	5.00			3352.00	
Hydraulic tool	5.00			3357.00	
Packer	4.00			3361.00	20.00 Bottom Of Top Packer
Packer	5.00			3366.00	
Stubb	1.00			3367.00	
Perforations	2.00			3369.00	
Change Over Sub	1.00			3370.00	
Drill Pipe	31.00			3401.00	
Change Over Sub	1.00			3402.00	
Recorder	0.00	8321	Inside	3402.00	
Recorder	0.00	8737	Outside	3402.00	
Perforations	25.00			3427.00	
Bullnose	3.00			3430.00	64.00 Bottom Packers & Anchor

Total Tool Length: 84.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

TDI Inc
1310 Bison Rd
Hays KS 67601 + 9696
ATTN: Tom Denning

3-15s-19w Ellis,KS
Mike #2
Job Ticket: 48545 **DST#: 1**
Test Start: 2012.09.22 @ 12:11:45

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: 53.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.19 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 3800.00 ppm			
Filter Cake: inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
378.00	MW 45%M 55%W	5.302
31.00	WM 15%W 85%M	0.435

Total Length: 409.00 ft Total Volume: 5.737 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:

Serial #: 8321

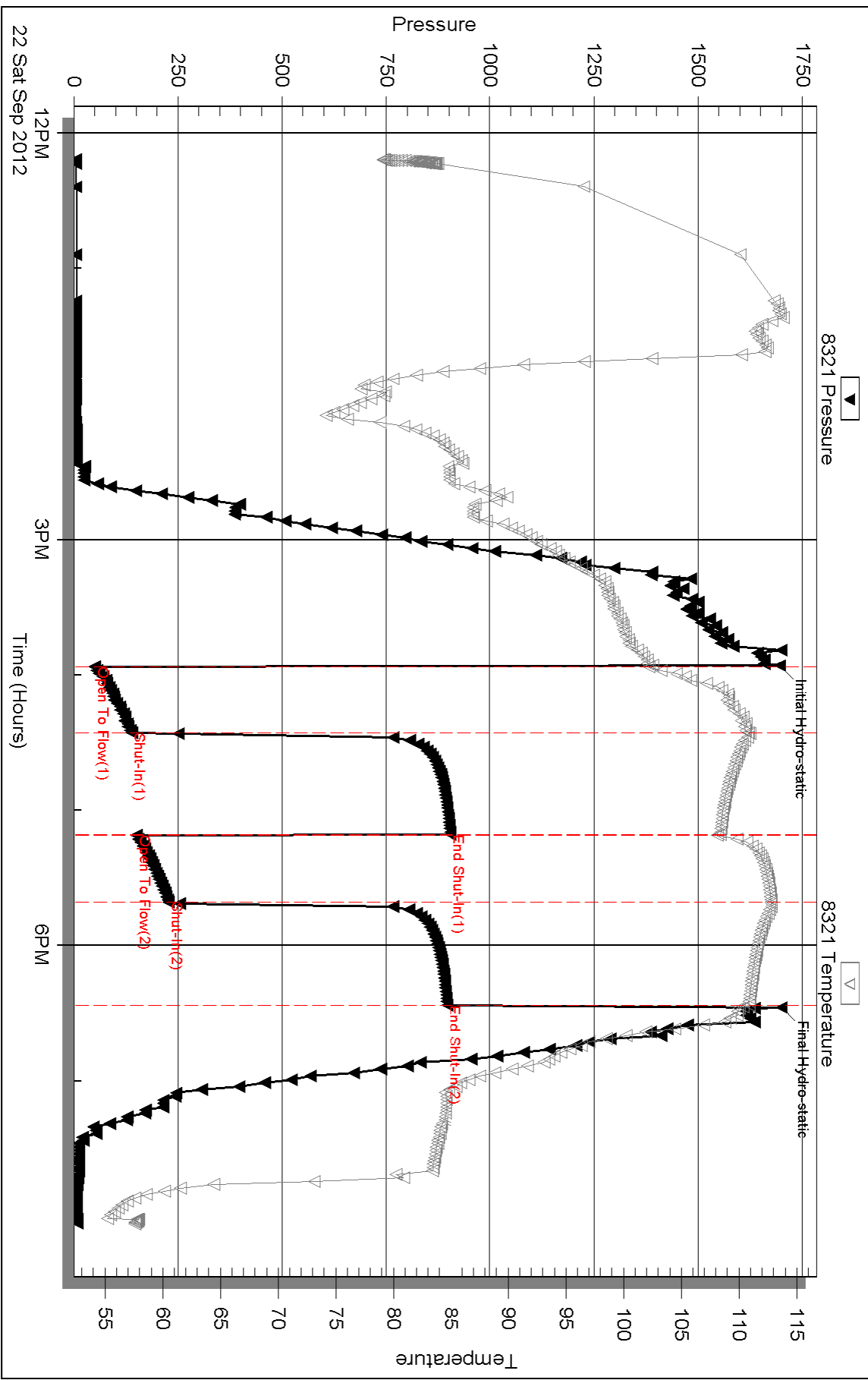
Inside

TDI Inc

Mike #2

DST Test Number: 1

Pressure vs. Time



Triobite Testing, Inc

Ref. No: 48545

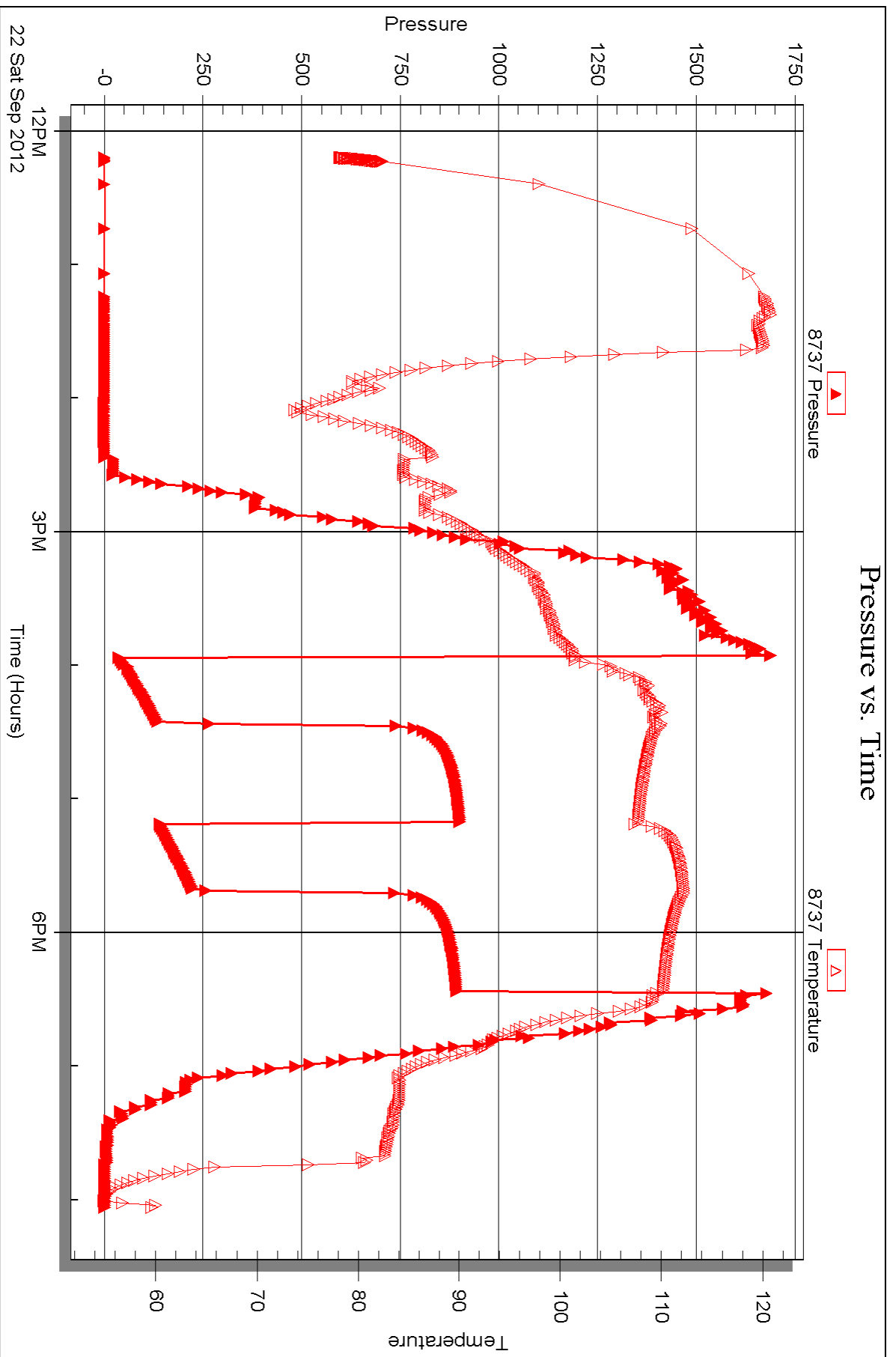
Printed: 2012.09.27 @ 14:55:18

Serial #: 8737

Outside TDI Inc

Mike #2

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **TDI Inc**

1310 Bison Rd
Hays KS 67601 + 9696

ATTN: Tom Denning

Mike #2

3-15s-19w Ellis,KS

Start Date: 2012.09.23 @ 06:18:14

End Date: 2012.09.23 @ 13:33:44

Job Ticket #: 48546 DST #: 2

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

Printed: 2012.09.27 @ 14:54:24

TDI Inc
3-15s-19w Ellis,KS
Mike #2
DST # 2
LKC-H-1
2012.09.23



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

TDI Inc
1310 Bison Rd
Hays KS 67601 + 9696
ATTN: Tom Denning

3-15s-19w Ellis,KS
Mike #2
Job Ticket: 48546 **DST#: 2**
Test Start: 2012.09.23 @ 06:18:14

GENERAL INFORMATION:

Formation: **LKC-H-I**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 08:34:44
Time Test Ended: 13:33:44
Interval: **3476.00 ft (KB) To 3523.00 ft (KB) (TVD)**
Total Depth: 3523.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Test Type: Conventional Bottom Hole (Reset)
Tester: Jeff Brown
Unit No: 44
Reference Elevations: 2065.00 ft (KB)
2055.00 ft (CF)
KB to GR/CF: 10.00 ft

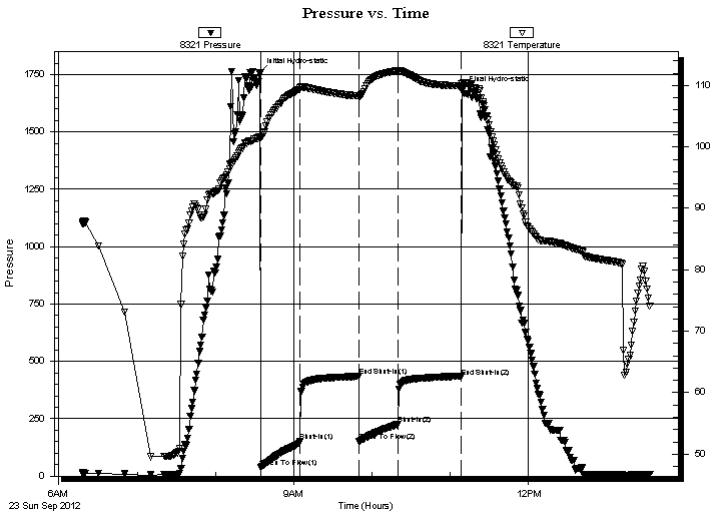
Serial #: 8321

Inside

Press @ Run Depth: 225.53 psig @ 3512.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2012.09.23 End Date: 2012.09.23 Last Calib.: 2012.09.23
Start Time: 06:18:15 End Time: 13:32:44 Time On Btm: 2012.09.23 @ 08:34:14
Time Off Btm: 2012.09.23 @ 11:08:44

TEST COMMENT: IFP=Good blow BOB in 8 3/4 min
ISI=Weak surface blow back died out in 10 min
FFP=Good blow BOB in 14 1/2 min
FSI=Weak surface blow back Died out in 10 min

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1756.76	101.67	Initial Hydro-static
1	38.17	101.45	Open To Flow (1)
31	150.52	109.57	Shut-In(1)
76	434.67	108.29	End Shut-In(1)
76	151.93	108.22	Open To Flow (2)
106	225.53	112.41	Shut-In(2)
154	433.48	109.94	End Shut-In(2)
155	1680.28	110.27	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
252.00	MW 10%M 90%W	3.53
189.00	WM 30%W 70%M	2.65

* 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 + 9696
ATTN: Tom Denning

3-15s-19w Ellis, KS
Mike #2
Job Ticket: 48546 **DST#: 2**
Test Start: 2012.09.23 @ 06:18:14

Tool Information

Drill Pipe:	Length: 3486.00 ft	Diameter: 3.80 inches	Volume: 48.90 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: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	48000.00 lb
			<u>Total Volume: 48.90 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	30.00 ft			String Weight: Initial	34000.00 lb
Depth to Top Packer:	3476.00 ft			Final	36000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	47.00 ft				
Tool Length:	67.00 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			3457.00	
Shut In Tool	5.00			3462.00	
Hydraulic tool	5.00			3467.00	
Packer	4.00			3471.00	20.00 Bottom Of Top Packer
Packer	5.00			3476.00	
Stubb	1.00			3477.00	
Perforations	2.00			3479.00	
Change Over Sub	1.00			3480.00	
Drill Pipe	31.00			3511.00	
Change Over Sub	1.00			3512.00	
Recorder	0.00	8321	Inside	3512.00	
Recorder	0.00	8737	Outside	3512.00	
Perforations	8.00			3520.00	
Bullnose	3.00			3523.00	47.00 Bottom Packers & Anchor

Total Tool Length: 67.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

TDI Inc
1310 Bison Rd
Hays KS 67601 + 9696
ATTN: Tom Denning

3-15s-19w Ellis,KS
Mike #2
Job Ticket: 48546 **DST#: 2**
Test Start: 2012.09.23 @ 06:18:14

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: 51.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.79 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 4000.00 ppm			
Filter Cake: inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
252.00	MW 10%M 90%W	3.535
189.00	WM 30%W 70%M	2.651

Total Length: 441.00 ft Total Volume: 6.186 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:

Serial #: 8321

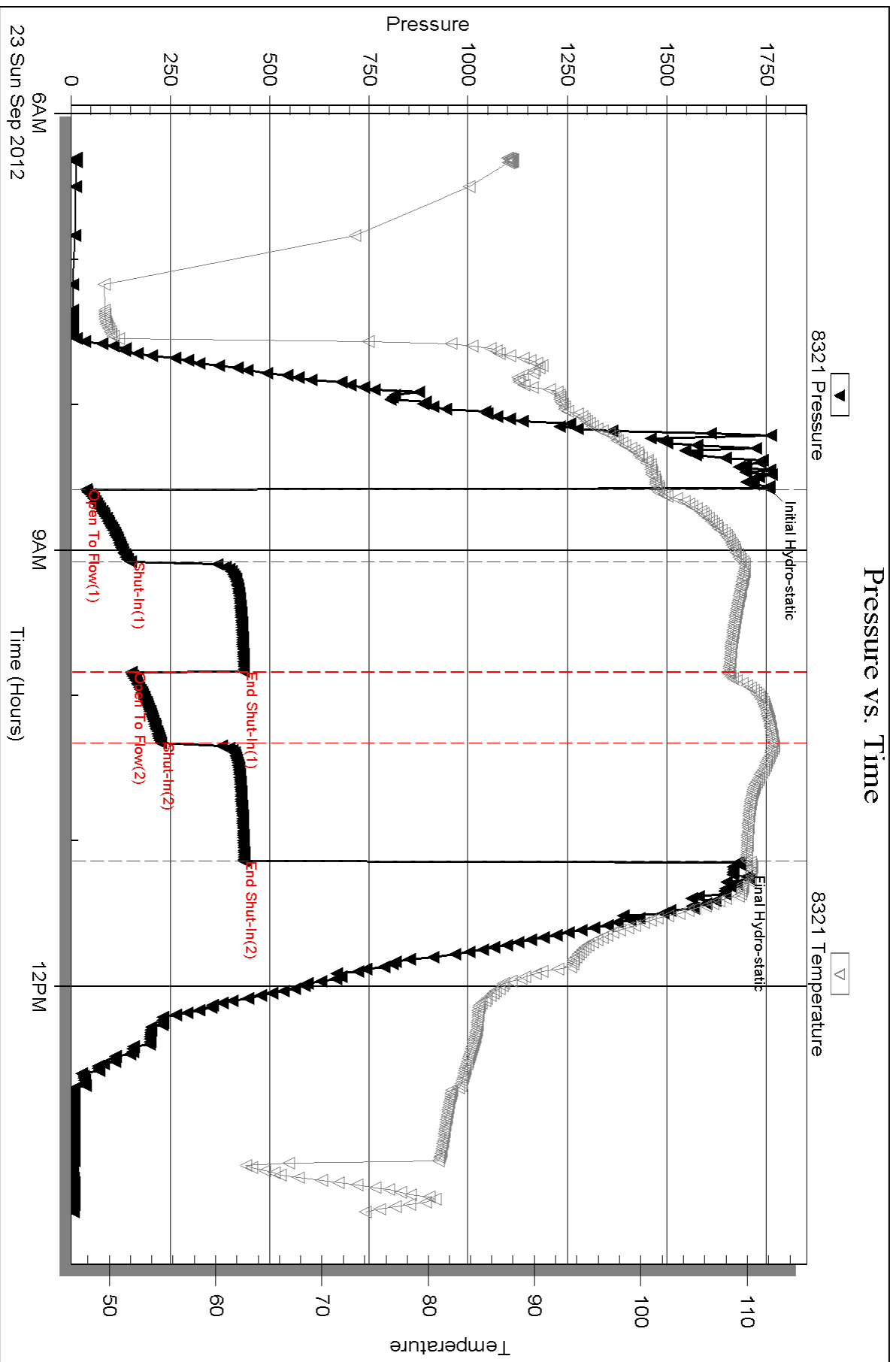
Inside

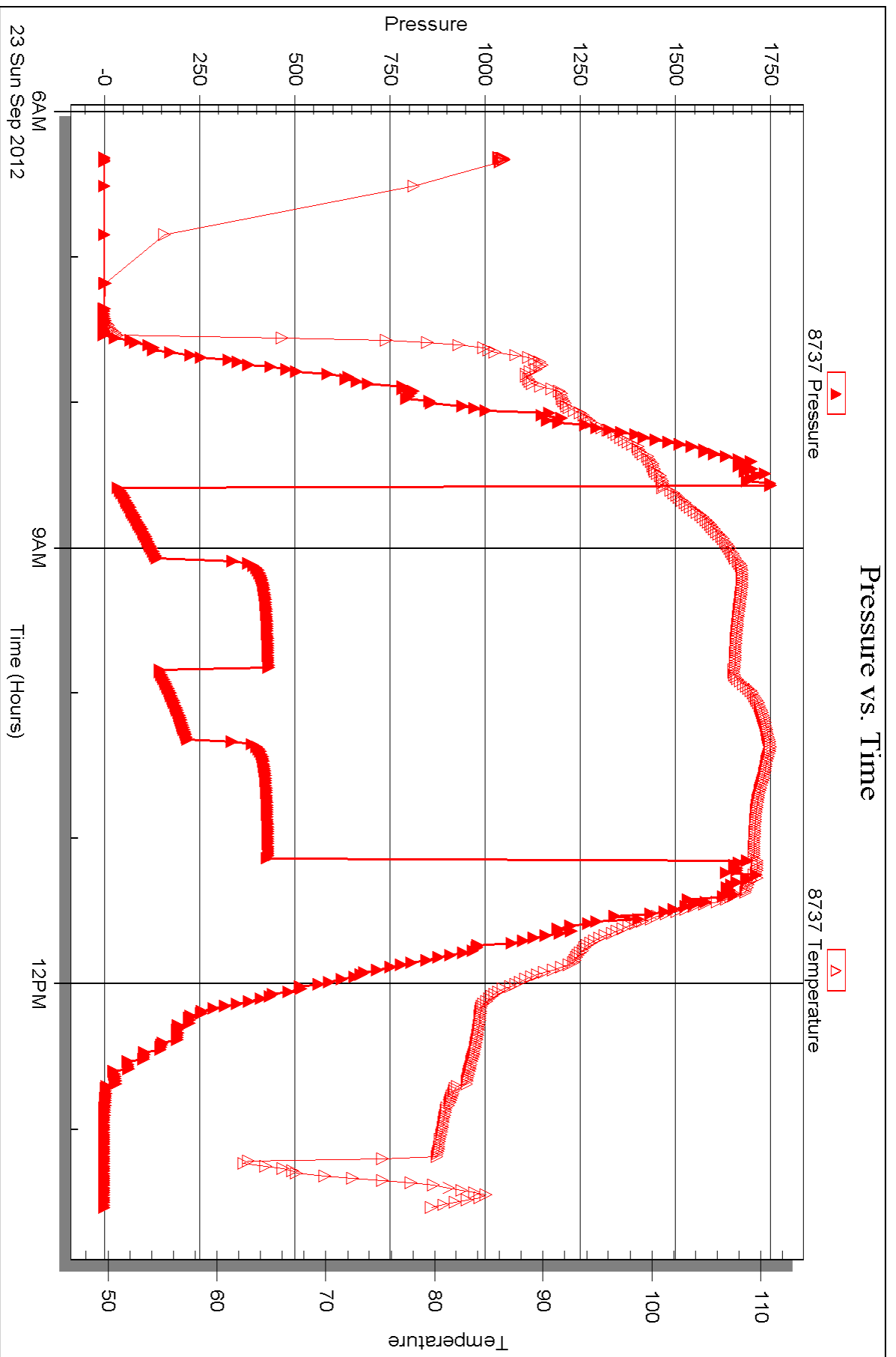
TDI Inc

Mike #2

DST Test Number: 2

Pressure vs. Time







DRILL STEM TEST REPORT

Prepared For: **TDI Inc**

1310 Bison Rd
Hays KS 67601 + 9696

ATTN: Tom Denning

Mike #2

3-15s-19w Ellis,KS

Start Date: 2012.09.23 @ 20:02:51

End Date: 2012.09.24 @ 01:09:21

Job Ticket #: 48547 DST #: 3

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

Printed: 2012.09.27 @ 14:53:42

TDI Inc
3-15s-19w Ellis,KS
Mike #2
DST # 3
LKC-J
2012.09.23



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

TDI Inc
 1310 Bison Rd
 Hays KS 67601 + 9696
 ATTN: Tom Denning

3-15s-19w Ellis,KS
Mike #2
 Job Ticket: 48547 **DST#: 3**
 Test Start: 2012.09.23 @ 20:02:51

GENERAL INFORMATION:

Formation: **LKC-J**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 21:21:21
 Time Test Ended: 01:09:21
 Interval: **3543.00 ft (KB) To 3554.00 ft (KB) (TVD)**
 Total Depth: 3554.00 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: 2065.00 ft (KB)
 2055.00 ft (CF)
 KB to GR/CF: 10.00 ft

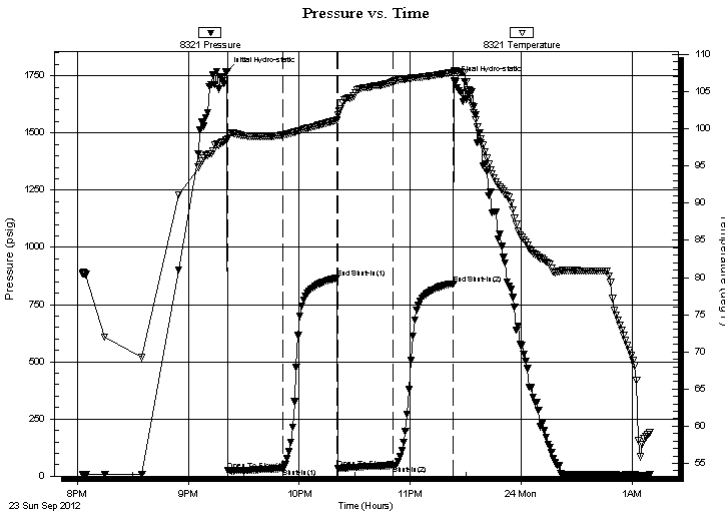
Serial #: 8321

Inside

Press @ Run Depth: 46.43 psig @ 3546.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2012.09.23 End Date: 2012.09.24 Last Calib.: 2012.09.24
 Start Time: 20:02:52 End Time: 01:09:21 Time On Btm: 2012.09.23 @ 21:20:51
 Time Off Btm: 2012.09.23 @ 23:23:51

TEST COMMENT: IFP-Good blow BOB in 13 1/2 min
 ISI-Weak surface blow back built to 1 1/4 in
 FFP-Good blow BOB in 14 1/2 min
 FSI-Weak surface blow back built to 2 1/4 in

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1767.61	98.57	Initial Hydro-static
1	25.84	98.64	Open To Flow (1)
30	32.92	99.17	Shut-In(1)
60	865.89	101.18	End Shut-In(1)
60	33.57	101.86	Open To Flow (2)
90	46.43	106.36	Shut-In(2)
123	838.89	107.59	End Shut-In(2)
123	1730.31	107.86	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
43.00	OCMW 10%O 60%W 30%M	0.60
10.00	HOCGWM 20%G 45%O 15%W 20%M	0.14
11.00	WMCO 5%W 30%M 65%O	0.15
0.00	409' GIP	0.00

* 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 + 9696
ATTN: Tom Denning

3-15s-19w Ellis,KS
Mike #2
Job Ticket: 48547 **DST#: 3**
Test Start: 2012.09.23 @ 20:02:51

Tool Information

Drill Pipe:	Length: 3549.00 ft	Diameter: 3.80 inches	Volume: 49.78 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: 0.00 ft	Diameter: 2.25 inches	Volume: 0.00 bbl	Weight to Pull Loose:	42000.00 lb
			<u>Total Volume: 49.78 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	26.00 ft			String Weight: Initial	33000.00 lb
Depth to Top Packer:	3543.00 ft			Final	34000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	11.00 ft				
Tool Length:	31.00 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			3524.00	
Shut In Tool	5.00			3529.00	
Hydraulic tool	5.00			3534.00	
Packer	4.00			3538.00	20.00 Bottom Of Top Packer
Packer	5.00			3543.00	
Stubb	1.00			3544.00	
Perforations	2.00			3546.00	
Recorder	0.00	8321	Inside	3546.00	
Recorder	0.00	8737	Outside	3546.00	
Perforations	5.00			3551.00	
Bullnose	3.00			3554.00	11.00 Bottom Packers & Anchor

Total Tool Length: 31.00



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

TDI Inc
1310 Bison Rd
Hays KS 67601 + 9696
ATTN: Tom Denning

3-15s-19w Ellis,KS
Mike #2
Job Ticket: 48547 **DST#: 3**
Test Start: 2012.09.23 @ 20:02:51

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: 51.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.80 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 4000.00 ppm			
Filter Cake: inches			

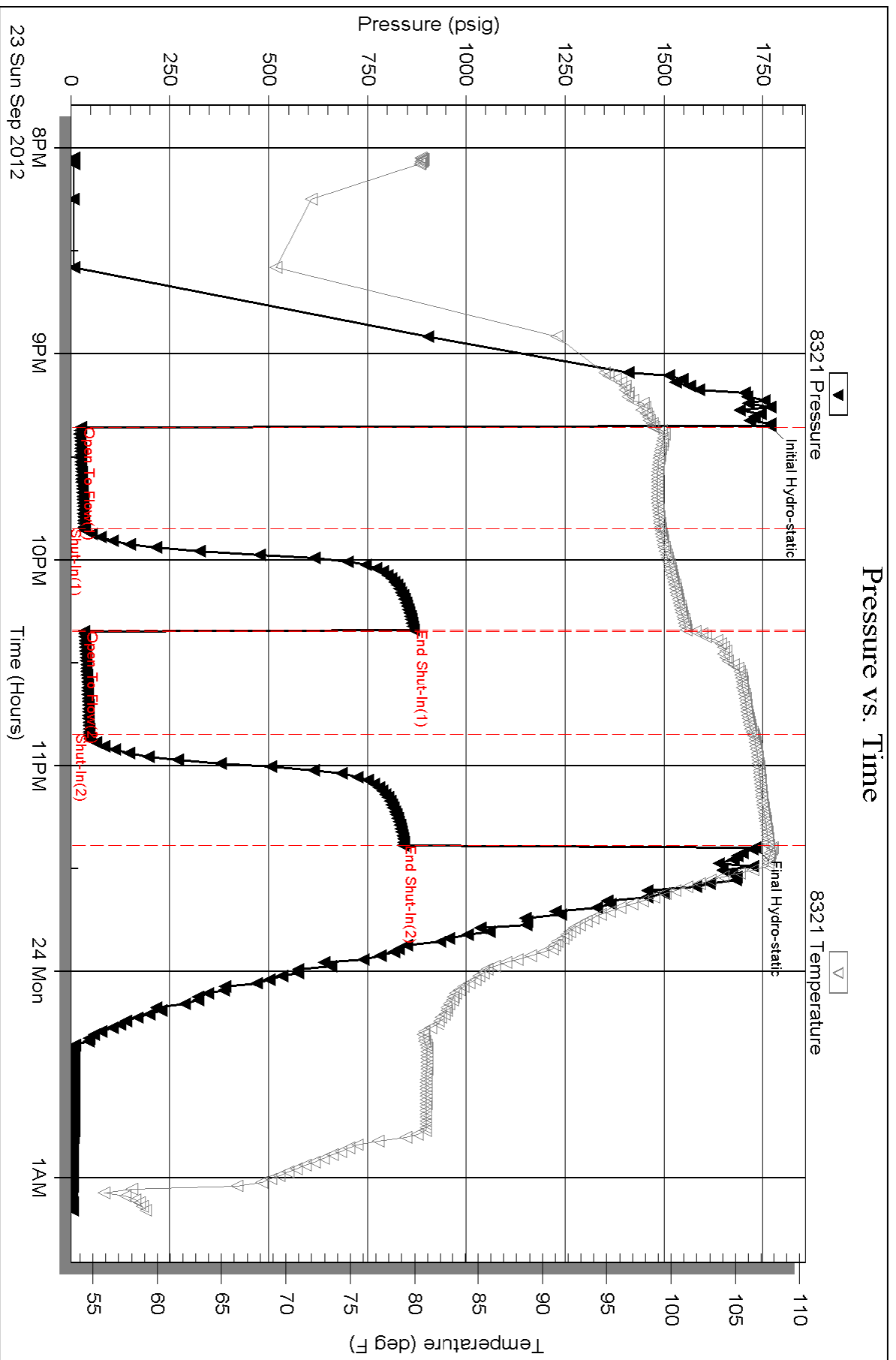
Recovery Information

Recovery Table

Length ft	Description	Volume bbl
43.00	OCMW 10%O 60%W 30%M	0.603
10.00	HOCGWM 20%G 45%O 15%W 20%M	0.140
11.00	WMCO 5%W 30%M 65%O	0.154
0.00	409' GIP	0.000

Total Length: 64.00 ft Total Volume: 0.897 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments:

Pressure vs. Time

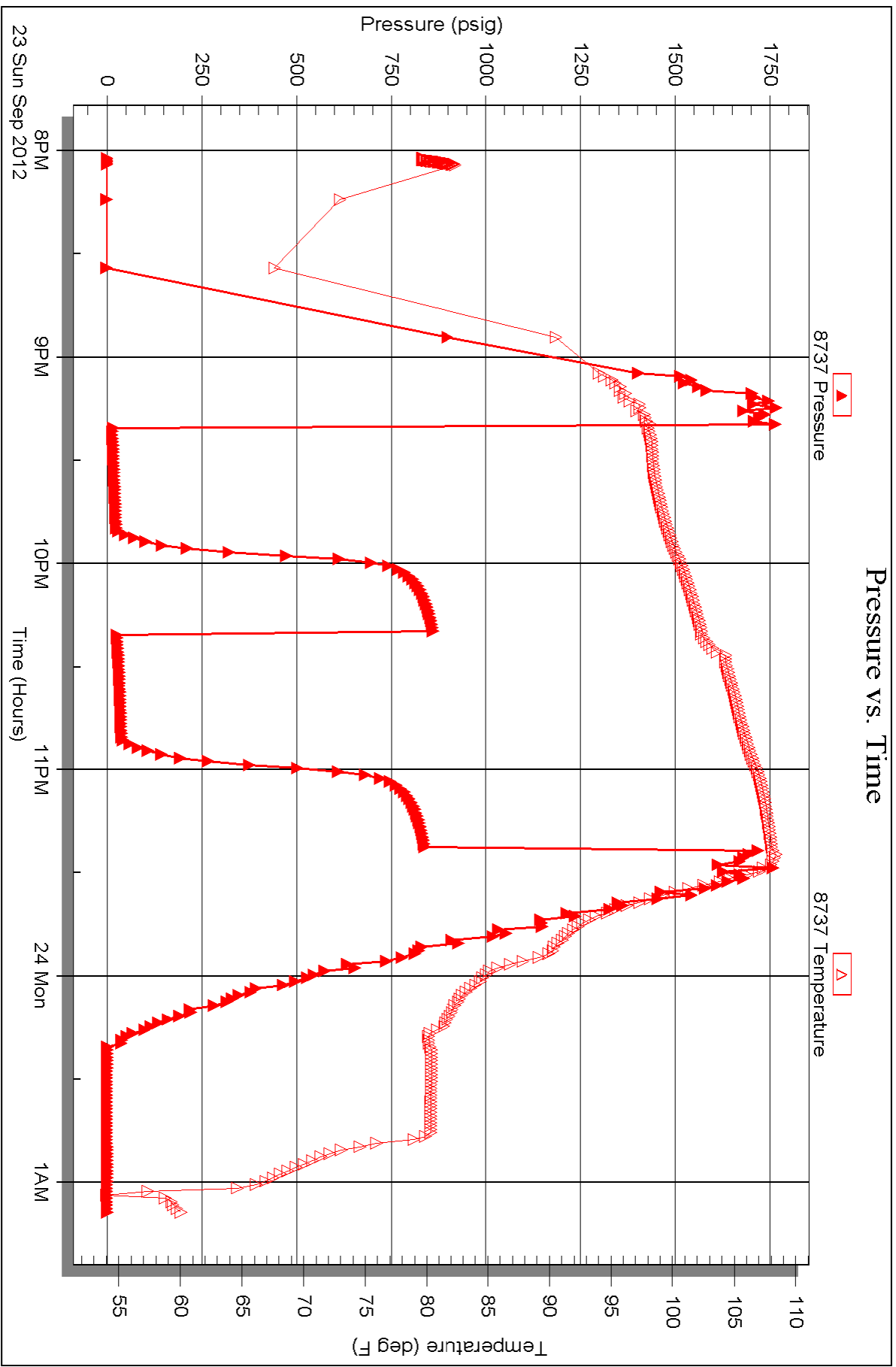


Serial #: 8737

Outside TDI Inc

Mike #2

DST Test Number: 3





TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 48545

Well Name & No. mike # 2 Test No. 1 Date 9-22-12
 Company TDI, INC Elevation 2045 KB 2055 GL
 Address 1310 BISON RD Hays KS 67601 + 92096
 Co. Rep / Geo. Herb Deines Rig Southwind #1
 Location: Sec. 3 Twp. 15S Rge. 19W Co. ELLIS State KS

Interval Tested 3366-3430 Zone Tested LKC-C-F
 Anchor Length 64 Drill Pipe Run 3361 Mud Wt. 9.0
 Top Packer Depth 3361 Drill Collars Run 0 Vis 53
 Bottom Packer Depth 3366 Wt. Pipe Run 0 WL 7.2
 Total Depth 3430 Chlorides 3800 ppm System LCM 1
 Blow Description IFP-GOOD Blow BOB IN 11 1/4 min
ISI-Dead No Blow Back
IFP-GOOD Blow BOB IN 13 1/2 min
ISI-Dead No Blow Back

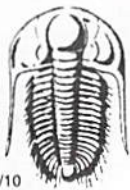
Rec	Feet of	%gas	%oil	%water	%mud
<u>378</u>	<u>MW</u>		<u>55</u>	<u>45</u>	
<u>31</u>	<u>WM</u>		<u>15</u>	<u>85</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 409 BHT 111 Gravity _____ API RW .1166 @ 64.4 °F Chlorides 50.000 ppm

(A) Initial Hydrostatic 11696 Test 1150 T-On Location 11:10
 (B) First Initial Flow 50 Jars _____ T-Started 12:11
 (C) First Final Flow 139 Safety Joint _____ T-Open 15:56
 (D) Initial Shut-In 904 Circ Sub _____ T-Pulled 18:26
 (E) Second Initial Flow 150 Hourly Standby _____ T-Out 20:03
 (F) Second Final Flow 227 Mileage 30 46.50 RT Comments _____
 (G) Final Shut-In 897 Sampler _____
 (H) Final Hydrostatic 1700 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Initial Open 30 Extra Recorder _____ Sub Total 0
 Initial Shut-In 45 Day Standby _____ Total 1196.50
 Final Flow 30 Accessibility _____ MP/DST Disc't _____
 Final Shut-In 45 Sub Total 1196.50

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.



TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 48546

Well Name & No. MIKE #2 Test No. 2 Date 9-23-12
 Company TDI, INC Elevation 2065 KB 2055 GL
 Address 1310 BISON RD HAYS KS 67701 + 9696
 Co. Rep / Geo. Herb Deines Rig SOUTH WIND #1
 Location: Sec. 3 Twp. 15S Rge. 19W Co. ELLIS State KS

Interval Tested 3476 - 3523 Zone Tested LKC-H-I
 Anchor Length 47 Drill Pipe Run 3486 Mud Wt. 9.3
 Top Packer Depth 3471 Drill Collars Run 0 Vis 51
 Bottom Packer Depth 3476 Wt. Pipe Run 0 WL 7.8
 Total Depth 3523 Chlorides 4000 ppm System LCM 1
 Blow Description: FF-GOOD Blow BOB 8 3/4 min
ISI-Weak Surface Blow Back Died out IN 10 min
FF-GOOD Blow BOB IN 14 1/2 min
FSI-Weak Surface Blow Back Died out IN 10 min

Rec	Feet of	%gas	%oil	%water	%mud
<u>252</u>	<u>MW</u>			<u>90%</u>	<u>10%</u>
<u>189</u>	<u>WM</u>			<u>30%</u>	<u>70%</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 441 BHT 110 Gravity _____ API RW 122 @ 80.1 °F Chlorides 56,000 ppm

(A) Initial Hydrostatic 1757 Test 1150 T-On Location 6:04
 (B) First Initial Flow 38 Jars _____ T-Started 6:18
 (C) First Final Flow 151 Safety Joint _____ T-Open 8:36
 (D) Initial Shut-In 435 Circ Sub _____ T-Pulled 11:06
 (E) Second Initial Flow 152 Hourly Standby _____ T-Out 13:33
 (F) Second Final Flow 226 Mileage 46.50 Comments _____
 (G) Final Shut-In 433 Sampler _____
 (H) Final Hydrostatic 1680 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 1196.50
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1196.50

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

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.



TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

Test Ticket

NO. 48547

Well Name & No. Mike #2 Test No. 3 Date 9-23-12
 Company TDI INC Elevation 2065 KB 2055 GL
 Address 1310 BISON RD Hays KS 67601 + 9696
 Co. Rep / Geo. Herb Deines Rig Southwind #1
 Location: Sec. 3 Twp. 15S Rge. 19W Co. ELLIS State KS

Interval Tested 3543 - 3554 Zone Tested LKC-5
 Anchor Length 11 Drill Pipe Run 3549 Mud Wt. 9.3
 Top Packer Depth 3538 Drill Collars Run 0 Vis 51
 Bottom Packer Depth 3543 Wt. Pipe Run 0 WL 7.8
 Total Depth 3554 Chlorides 4000 ppm System LCM 1

Blow Description FF-GOOD Blow BOB IN 13 1/2 min
FSI-Weak surface Blow Back Built TO 1 1/4 IN
FF-GOOD Blow BOB IN 14 1/2 min
FSI-Weak surface Blow Built TO 2 1/4 IN

Rec	Feet of	%gas	%oil	%water	%mud
<u>43</u>	<u>OC mW</u>	<u>10</u>	<u>60</u>	<u>30</u>	
<u>10</u>	<u>HOC GWM</u>	<u>20</u>	<u>45</u>	<u>15</u>	<u>20</u>
<u>11</u>	<u>WCMO</u>	<u>65</u>	<u>5</u>	<u>30</u>	
<u> </u>	<u>409-GIP</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>

Rec Total 64 BHT 108 Gravity API RW @ °F Chlorides ppm

(A) Initial Hydrostatic 1768 Test 1150 T-On Location 19:57
 (B) First Initial Flow 26 Jars T-Started 20:02
 (C) First Final Flow 33 Safety Joint T-Open 21:21
 (D) Initial Shut-In 866 Circ Sub T-Pulled 23:21
 (E) Second Initial Flow 34 Hourly Standby T-Out 1:09
 (F) Second Final Flow 46 Mileage 46.50 Comments
 (G) Final Shut-In 839 Sampler
 (H) Final Hydrostatic 1730 Straddle Ruined Shale Packer

Shale Packer Ruined Packer
 Extra Packer Extra Copies
 Extra Recorder Sub Total 0
 Day Standby Total 1196.50
 Accessibility MP/DST Disc't
 Sub Total 1196.50

Approved By Our Representative Jeff Brown

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