



DRILL STEM TEST REPORT

Prepared For: **TDI Inc.**

1310 Bison Rd
67601

Hays KS

ATTN: Herb Deines

Irvin Trust #1

13-15s-19w Ellis,KS

Start Date: 2011.11.07 @ 18:04:01

End Date: 2011.11.08 @ 01:12:31

Job Ticket #: 44839 DST #: 1

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

Printed: 2011.11.10 @ 11:18:04

TDI Inc. 13-15s-19w Ellis,KS Irvin Trust #1 DST # 1 Lansing "H-J" 2011.11.07



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

TDI Inc.

13-15s-19w Ellis, KS

1310 Bison Rd

Hays KS 67601

Irvin Trust #1

Job Ticket: 44839

DST#: 1

ATTN: Herb Deines

Test Start: 2011.11.07 @ 18:04:01

GENERAL INFORMATION:

Formation: **Lansing "H-J"**

Deviated: No Whipstock: 3750.00 ft (KB)

Time Tool Opened: 20:06:31

Time Test Ended: 01:12:31

Test Type: Conventional Bottom Hole (Initial)

Tester: Paul Simpson

Unit No: 47

Interval: 3430.00 ft (KB) To 3500.00 ft (KB) (TVD)

Reference Elevations: 2015.00 ft (KB)

Total Depth: 3500.00 ft (KB) (TVD)

2005.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 6753

Inside

Press @ Run Depth: 178.03 psig @ 3467.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.11.07

End Date:

2011.11.08

Last Calib.: 1899.12.30

Start Time: 18:04:06

End Time:

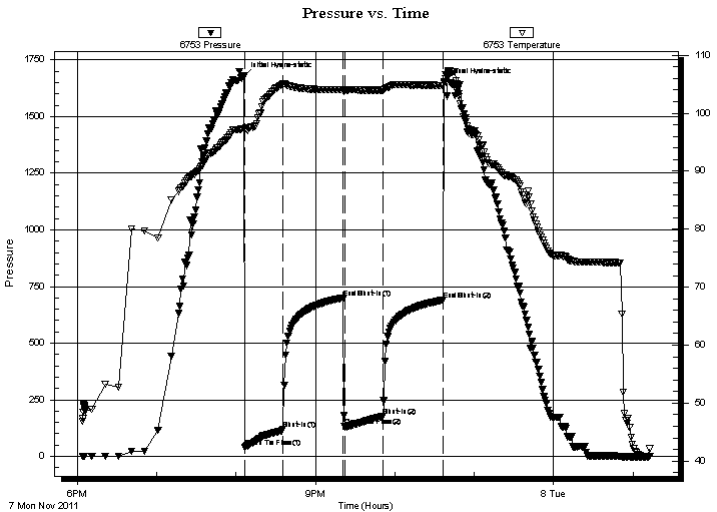
01:12:30

Time On Btm: 2011.11.07 @ 20:06:01

Time Off Btm: 2011.11.07 @ 22:37:31

TEST COMMENT: IF 1 inch blow building to bottom of bucket in 12 min
 ISI surface blow
 FF blow to bottom of bucket 16 min.
 FSI weak 1/2 " blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1678.96	97.38	Initial Hydro-static
1	41.81	97.05	Open To Flow (1)
30	118.41	105.07	Shut-In(1)
75	697.97	104.06	End Shut-In(1)
76	131.16	103.86	Open To Flow (2)
105	178.03	104.00	Shut-In(2)
151	690.03	104.78	End Shut-In(2)
152	1650.17	105.46	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
60.00	ocm 20% oil 80% mud	0.84
240.00	nw 90% water 10% mud	3.37
0.00	65' GIP	0.00

Gas Rates

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



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

TOOL DIAGRAM

TDI Inc.

13-15s-19w Ellis, KS

1310 Bison Rd

Hays KS 67601

Irvin Trust #1

Job Ticket: 44839

DST#: 1

ATTN: Herb Deines

Test Start: 2011.11.07 @ 18:04:01

Tool Information

Drill Pipe:	Length: 3430.00 ft	Diameter: 3.80 inches	Volume: 48.11 bbl	Tool Weight: 2500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 20000.00 lb
Drill Collar:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight to Pull Loose: 54000.00 lb
			<u>Total Volume: 48.11 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	21.00 ft			String Weight: Initial 41000.00 lb
Depth to Top Packer:	3430.00 ft			Final 44000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	70.00 ft			
Tool Length:	91.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description

Length (ft) Serial No. Position Depth (ft) Accum. Lengths

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3410.00	
Shut In Tool	5.00			3415.00	
Hydraulic tool	5.00			3420.00	
Packer	5.00			3425.00	21.00 Bottom Of Top Packer
Packer	5.00			3430.00	
Stubb	1.00			3431.00	
Perforations	3.00			3434.00	
Change Over Sub	1.00			3435.00	
Drill Pipe	31.00			3466.00	
Change Over Sub	1.00			3467.00	
Recorder	0.00	6753	Inside	3467.00	
Recorder	0.00	8319	Outside	3467.00	
Perforations	30.00			3497.00	
Bullnose	3.00			3500.00	70.00 Bottom Packers & Anchor

Total Tool Length: 91.00



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

TDI Inc. **13-15s-19w Ellis,KS**
1310 Bison Rd Hays KS 67601 **Irvin Trust #1**
Job Ticket: 44839 **DST#: 1**
ATTN: Herb Deines Test Start: 2011.11.07 @ 18:04:01

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: 105000 ppm	
Viscosity: 50.00 sec/qt	Cushion Volume: bbl		
Water Loss: 6.79 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: ppm			
Filter Cake: inches			

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	ocm 20% oil 80% mud	0.842
240.00	mw 90% water 10% mud	3.367
0.00	65' GIP	0.000

Total Length: 300.00 ft Total Volume: 4.209 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments: Rw .12@43

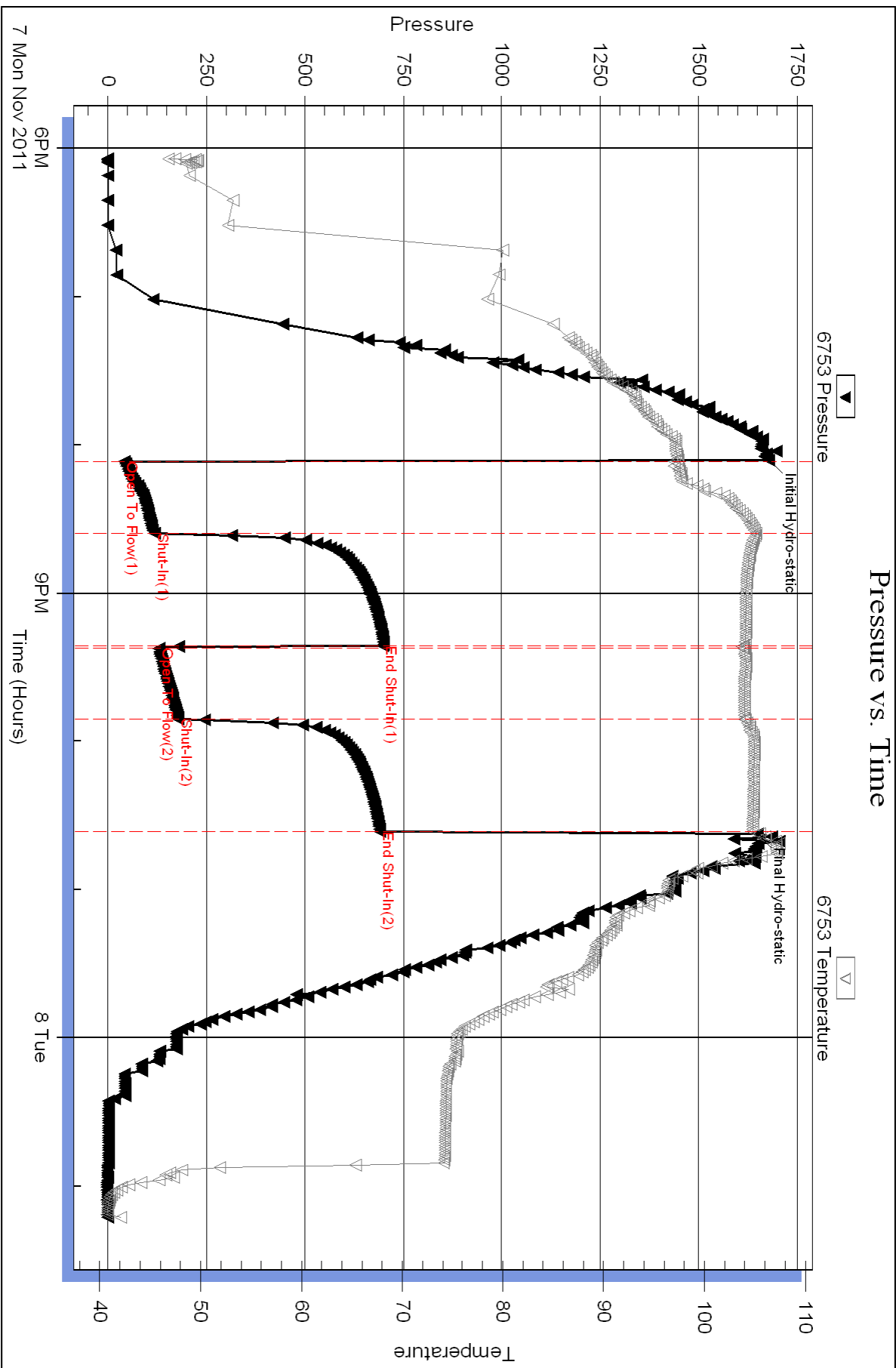
Serial #: 6753

Inside

TDI Inc.

Irvin Trust #1

DST Test Number: 1





DRILL STEM TEST REPORT

Prepared For: **TDI Inc.**

1310 Bison Rd
67601

Hays KS

ATTN: Herb Deines

Irvin Trust #1

13-15s-19w Ellis,KS

Start Date: 2011.11.09 @ 01:57:14

End Date: 2011.11.09 @ 09:30:44

Job Ticket #: 44840 DST #: 2

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

Printed: 2011.11.10 @ 11:18:45

TDI Inc.
13-15s-19w Ellis,KS
Irvin Trust #1
DST # 2
Lansing B-G
2011.11.09



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

TDI Inc.

13-15s-19w Ellis, KS

1310 Bison Rd

Hays KS 67601

Irvin Trust #1

Job Ticket: 44840

DST#: 2

ATTN: Herb Deines

Test Start: 2011.11.09 @ 01:57:14

GENERAL INFORMATION:

Formation: **Lansing B-G**

Deviated: No Whipstock: 3750.00 ft (KB)

Time Tool Opened: 04:32:14

Time Test Ended: 09:30:44

Test Type: Conventional Straddle (Reset)

Tester: Paul Simpson

Unit No: 47

Interval: 3314.00 ft (KB) To 3425.00 ft (KB) (TVD)

Reference Elevations: 2015.00 ft (KB)

Total Depth: 3750.00 ft (KB) (TVD)

2005.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

Serial #: 6753 Outside

Press @ Run Depth: 509.79 psig @ 3414.50 ft (KB)

Capacity: 8000.00 psig

Start Date: 2011.11.09

End Date:

2011.11.09

Last Calib.:

2011.11.10

Start Time: 01:57:19

End Time:

09:30:43

Time On Btm:

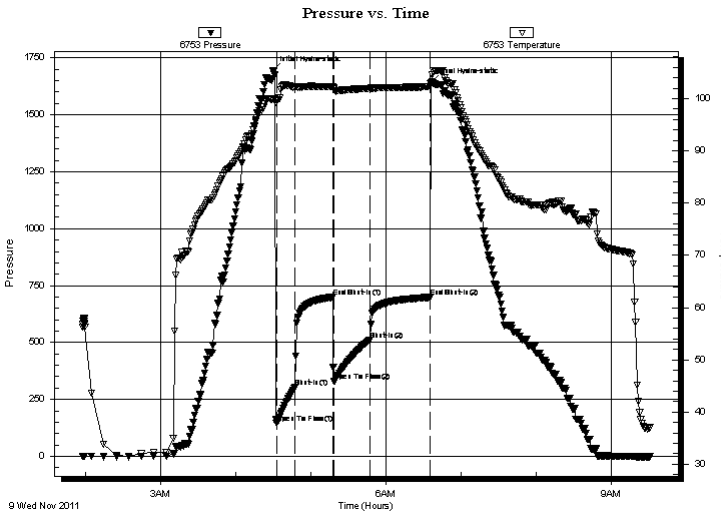
2011.11.09 @ 04:29:14

Time Off Btm:

2011.11.09 @ 06:35:44

TEST COMMENT: IF strong blow bottom of bucket in 1 min
 ISI 1/4" blow in 1 1/2 min.
 FF strong blow in bottom of bucket in 2 min.
 fSI surface blow building to 3 "

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1695.56	99.97	Initial Hydro-static
3	144.17	99.66	Open To Flow (1)
18	301.99	102.16	Shut-In(1)
48	699.32	102.28	End Shut-In(1)
49	330.31	101.83	Open To Flow (2)
78	509.79	101.95	Shut-In(2)
126	698.45	102.28	End Shut-In(2)
127	1641.62	102.75	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
420.00	sosmw 3% o 92& water 5% m	5.89
360.00	gsy o&mcw 20%g 20%o 25%w 15%m	5.05
280.00	gsy o&w cm 15%g 15%o 30%w 30%m	3.93
50.00	socm 5%o 95%m	0.70
0.00	520' gip	0.00

Gas Rates

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

* Recovery from multiple tests



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

FLUID SUMMARY

TDI Inc. **13-15s-19w Ellis,KS**
 1310 Bison Rd Hays KS 67601 **Irvin Trust #1**
 Job Ticket: 44840 **DST#: 2**
 ATTN: Herb Deines Test Start: 2011.11.09 @ 01:57:14

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length:	Water Salinity:	120000 ppm
Viscosity: 50.00 sec/qt	Cushion Volume:		
Water Loss: 6.79 in ³	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure:		psig
Salinity: ppm			
Filter Cake: inches			

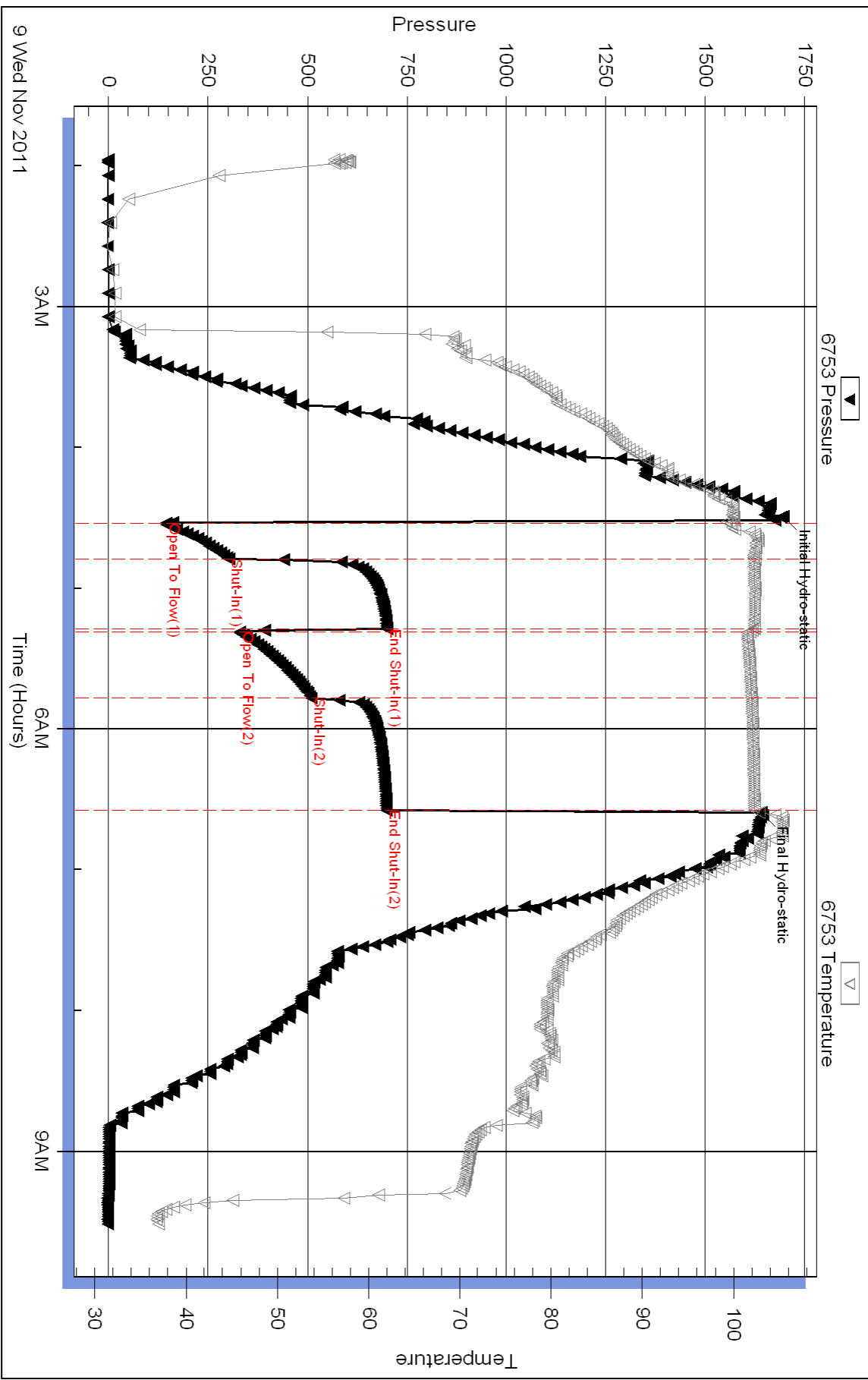
Recovery Information

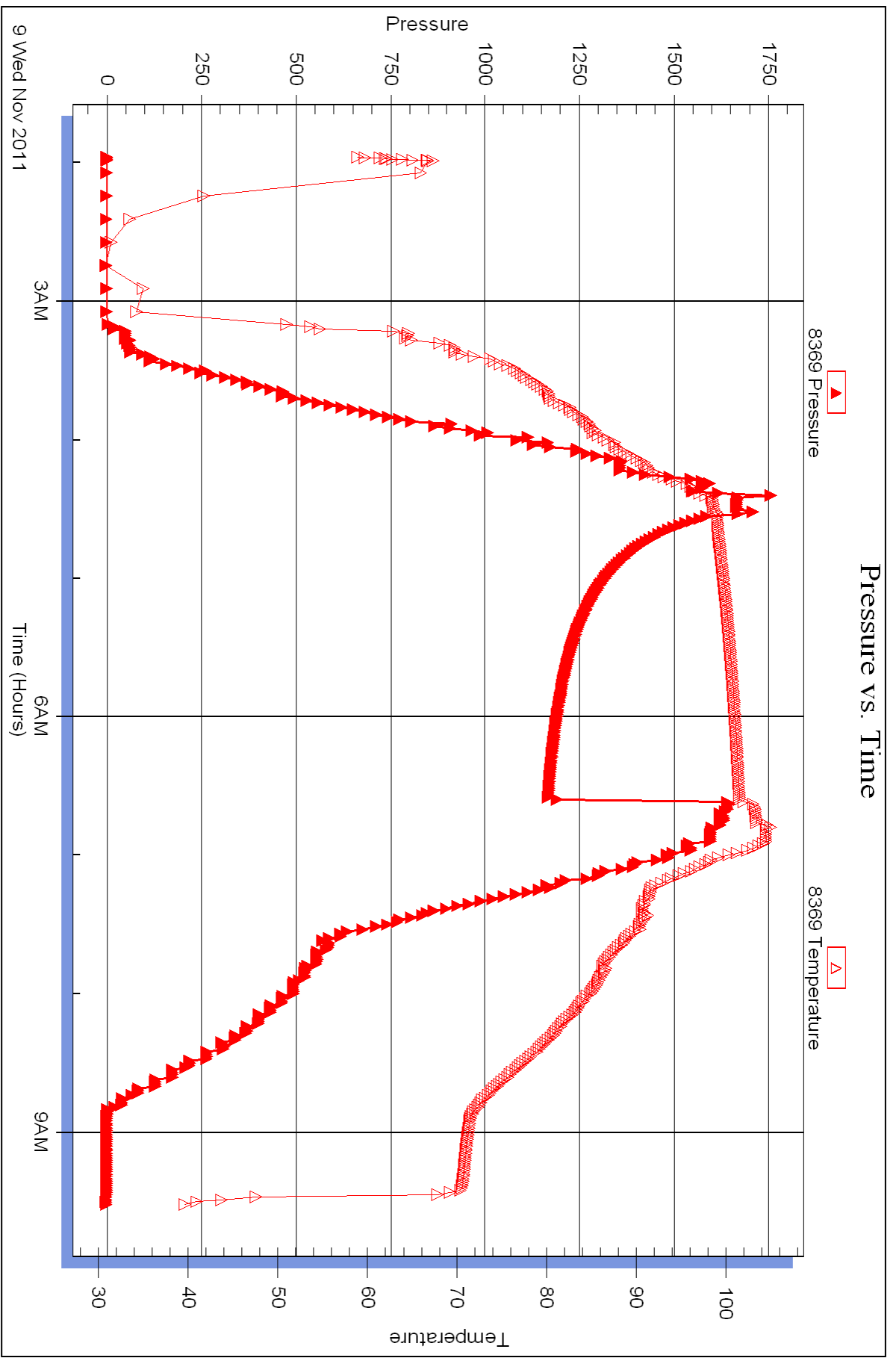
Recovery Table

Length ft	Description	Volume bbl
420.00	sosmw 3% o 92& water 5% m	5.891
360.00	gsy o&mcw 20%g 20%o 25%w 15%m	5.050
280.00	gsy o&w cm 15%g 15%o 30%w 30%m	3.928
50.00	socm 5%o 95%m	0.701
0.00	520' gip	0.000

Total Length: 1110.00 ft Total Volume: 15.570 bbl
 Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:
 Laboratory Name: Laboratory Location:
 Recovery Comments: Rw .1 @ 50

Pressure vs. Time







TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

RECEIVED
NOV 08 2011

Test Ticket

NO. 44839

4/10

BY: _____

Well Name & No. IRVIN Trust #1 Test No. 1 Date 11-7-11
 Company TDI Inc Elevation 2015 KB 2005 GL
 Address 1310 Bison Rd. Hays KS 67601
 Co. Rep / Geo. Herb Deives Rig Southwind #1
 Location: Sec. 13 Twp. 15 Rge. 19 Co. Ellis State KS

Interval Tested 3430-3500 Zone Tested HFI
 Anchor Length 70 Drill Pipe Run _____ Mud Wt. 9
 Top Packer Depth 3425 Drill Collars Run _____ Vis 50
 Bottom Packer Depth 3430 Wt. Pipe Run _____ WL 6.8
 Total Depth 3500 Chlorides _____ ppm System LCM 2

Blow Description ~~FF~~ Blow to Bottom of Bucket 12 min
 ISI Surface Blow
 FF Blow to Bottom of Bucket 16 min
 FSI Weak 1/2 IN. Blow.

Rec	Feet of	%gas	%oil	%water	%mud
60	OCM	20		80	
240	MW		90	10	
65	STP				
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 305 BHT Gravity API RW .12 @ 43° F Chlorides 105000 ppm
 (A) Initial Hydrostatic 1679 Test 1125 T-On Location 1600
 (B) First Initial Flow 42 Jars _____ T-Started 1804
 (C) First Final Flow 818 Safety Joint _____ T-Open 2007
 (D) Initial Shut-In 698 Circ Sub _____ T-Pulled 2237
 (E) Second Initial Flow 131 Hourly Standby _____ T-Out 1:12
 (F) Second Final Flow 178 Mileage 30 RT 42 Comments _____
 (G) Final Shut-In 690 Sampler _____
 (H) Final Hydrostatic 1650 Straddle _____ Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Extra Recorder _____ Sub Total 0
 Day Standby _____ Total 1167
 Accessibility _____ MP/DST Disc't _____
 Sub Total 1167

Initial Open ~~200~~ 30
 Initial Shut-In ~~200~~ 45
 Final Flow ~~200~~ 30
 Final Shut-In ~~200~~ 45

Approved By _____ Our Representative Paul & Jim

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

RECEIVED
NOV 09 2011

Test Ticket

NO. 44840

4/10

BY: _____

Well Name & No. Irvin Trust #1 Test No. 2 Date 11-9-11
 Company TDI Inc. Elevation 2015 KB 2005 GL
 Address 1310 Bison Rd. Hays Ks. 67601
 Co. Rep / Geo. Herb Deines Rig South Wind #1
 Location: Sec. 13 Twp. 15 Rge. 19 Co. Ellis State K5

Interval Tested 3314-3425 Zone Tested Lansing B-G
 Anchor Length 111 Drill Pipe Run 3305 Mud Wt. 9.2
 Top Packer Depth 3309-3314 Drill Collars Run _____ Vis 52
 Bottom Packer Depth 3425 Wt. Pipe Run _____ WL 6.8
 Total Depth 3750 Chlorides 2900 ppm System LCM 1

Blow Description IF. Strong Blow Bottom of Bucket 1min
FSI 25 in. Blow 1.5 min
FF Strong Blow Bottom of Bucket 2 min
FSI 1/4 in. blow building to 3 inches

Rec	Feet of	%gas	%oil	%water	%mud
420	505 MW	3	92	5	
360	507 MW	20	25	15	
280	509 MW	15	30	30	
50	50 CM	5		95	
520	G-IP				

Rec Total 1110 BHT _____ Gravity _____ API RW 1 @ 50 ° F Chlorides 12000 ppm

(A) Initial Hydrostatic 1696 Test 1125 T-On Location 0105
 (B) First Initial Flow 144 Jars _____ T-Started 0150
 (C) First Final Flow 302 Safety Joint _____ T-Open 0429
 (D) Initial Shut-In 699 Circ Sub _____ T-Pulled 0635
 (E) Second Initial Flow 330 Hourly Standby _____ T-Out 0930
 (F) Second Final Flow 510 Mileage 30 RT 42 Comments _____
 (G) Final Shut-In 698 Sampler _____
 (H) Final Hydrostatic 1642 Straddle 600 Ruined Shale Packer _____
 Shale Packer _____ Ruined Packer _____
 Extra Packer _____ Extra Copies _____
 Initial Open 15 Extra Recorder _____ Sub Total 0
 Initial Shut-In 30 Day Standby _____ Total 1767
 Final Flow 30 Accessibility _____ MP/DST Disc't _____
 Final Shut-In 45 Sub Total 1767

Approved By _____ Our Representative Paul + Jim
 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.