



## DRILL STEM TEST REPORT

Prepared For: **Norstar Petroleum, Inc.**

88 Inverness CIR E Unit F104  
Englewood, CO 80112

ATTN: Tyler Sanders

### **Wilson #2-10**

### **10-2s-27w Decatur,KS**

Start Date: 2013.07.29 @ 23:47:00

End Date: 2013.07.30 @ 03:29:00

Job Ticket #: 52812                      DST #: 1

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

Printed: 2013.08.02 @ 08:49:27







**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Norstar Petroleum, Inc.

**10-2s-27w Decatur,KS**

88 Inverness CIR E Unit F104  
Englewood, CO 80112

**Wilson #2-10**

Job Ticket: 52812

**DST#: 1**

ATTN: Tyler Sanders

Test Start: 2013.07.29 @ 23:47:00

## Tool Information

Drill Pipe:	Length: 3209.00 ft	Diameter: 3.80 inches	Volume: 45.01 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 122.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 45.61 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	32.00 ft			String Weight: Initial 40000.00 lb
Depth to Top Packer:	3327.00 ft			Final 40000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	90.00 ft			
Tool Length:	118.00 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			3300.00	
Shut In Tool	5.00			3305.00	
Hydraulic tool	5.00			3310.00	
Jars	5.00			3315.00	
Safety Joint	3.00			3318.00	
Packer	5.00			3323.00	28.00 Bottom Of Top Packer
Packer	4.00			3327.00	
Stubb	1.00			3328.00	
Recorder	0.00	6772	Outside	3328.00	
Recorder	0.00	8845	Outside	3328.00	
Perforations	19.00			3347.00	
Change Over Sub	1.00			3348.00	
Drill Pipe	63.00			3411.00	
Change Over Sub	1.00			3412.00	
Bullnose	5.00			3417.00	90.00 Bottom Packers & Anchor

**Total Tool Length: 118.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Norstar Petroleum, Inc.

**10-2s-27w Decatur,KS**

88 Inverness CIR E Unit F104  
Englewood, CO 80112

**Wilson #2-10**

Job Ticket: 52812

**DST#: 1**

ATTN: Tyler Sanders

Test Start: 2013.07.29 @ 23:47:00

## 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: 67.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.97 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 400.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
150.00	Mud 100m	0.993

Total Length: 150.00 ft      Total Volume: 0.993 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

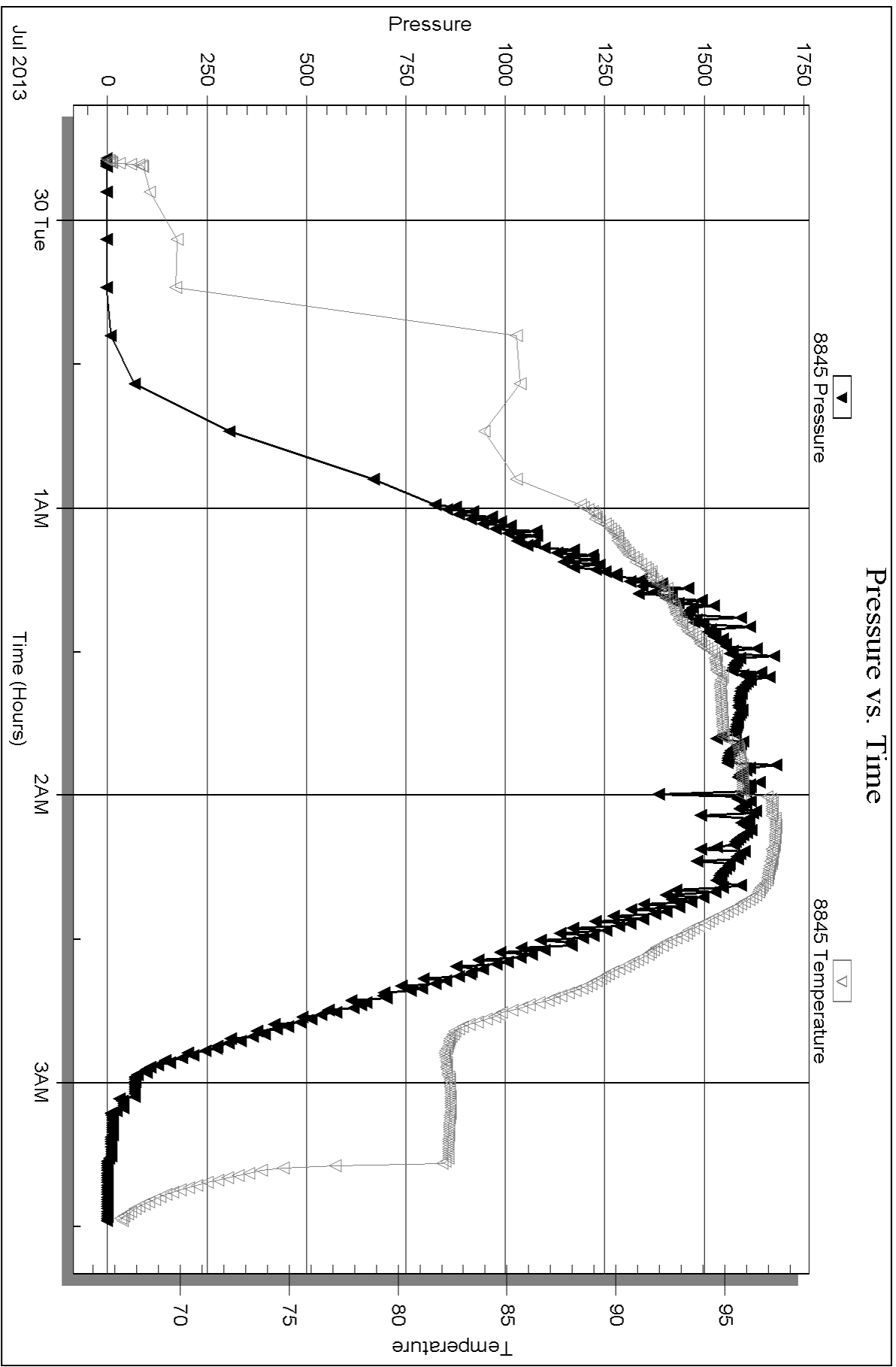
Recovery Comments:

Serial #: 8845

Outside Norstar Petroleum, Inc.

Wilson #2-10

DST Test Number: 1

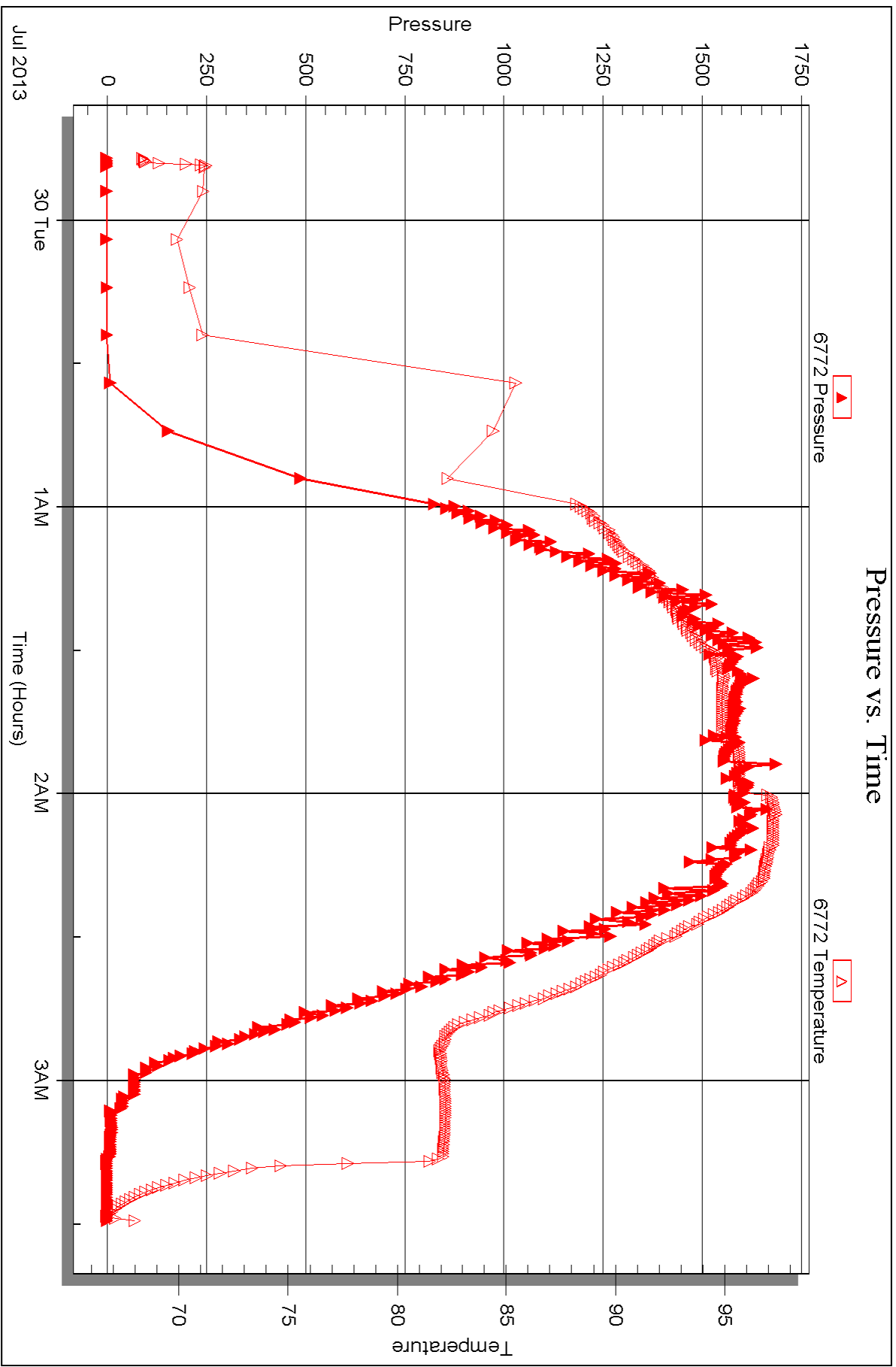


Serial #: 6772

Outside Norstar Petroleum, Inc.

Wilson #2-10

DST Test Number: 1





## DRILL STEM TEST REPORT

Prepared For: **Norstar Petroleum, Inc.**

88 Inverness CIR E Unit F104  
Englewood, CO 80112

ATTN: Tyler Sanders

### **Wilson #2-10**

### **10-2s-27w Decatur,KS**

Start Date: 2013.07.30 @ 03:44:00

End Date: 2013.07.30 @ 09:10:15

Job Ticket #: 52813                      DST #: 2

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2013.08.02 @ 08:48:48

Norstar Petroleum, Inc.

10-2s-27w Decatur,KS

Wilson #2-10

DST # 2

" Oread - Toronto "

2013.07.30









**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Norstar Petroleum, Inc.

**10-2s-27w Decatur,KS**

88 Inverness CIR E Unit F104  
Englewood, CO 80112

**Wilson #2-10**

Job Ticket: 52813

**DST#: 2**

ATTN: Tyler Sanders

Test Start: 2013.07.30 @ 03:44:00

## Tool Information

Drill Pipe:	Length: 3211.00 ft	Diameter: 3.80 inches	Volume: 45.04 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 122.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 45.64 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	25.00 ft			String Weight: Initial 40000.00 lb
Depth to Top Packer:	3336.00 ft			Final 40000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	81.00 ft			
Tool Length:	109.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

## Tool Description

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3309.00	
Shut In Tool	5.00			3314.00	
Hydraulic tool	5.00			3319.00	
Jars	5.00			3324.00	
Safety Joint	3.00			3327.00	
Packer	5.00			3332.00	28.00 Bottom Of Top Packer
Packer	4.00			3336.00	
Stubb	1.00			3337.00	
Recorder	0.00	6772	Outside	3337.00	
Recorder	0.00	8845	Outside	3337.00	
Perforations	10.00			3347.00	
Change Over Sub	1.00			3348.00	
Drill Pipe	63.00			3411.00	
Change Over Sub	1.00			3412.00	
Bullnose	5.00			3417.00	81.00 Bottom Packers & Anchor

**Total Tool Length: 109.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Norstar Petroleum, Inc.

**10-2s-27w Decatur,KS**

88 Inverness CIR E Unit F104  
Englewood, CO 80112

**Wilson #2-10**

Job Ticket: 52813

**DST#: 2**

ATTN: Tyler Sanders

Test Start: 2013.07.30 @ 03:44:00

## 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: 67.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.97 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 400.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	Mud 100m	0.025

Total Length: 5.00 ft      Total Volume: 0.025 bbl

Num Fluid Samples: 0

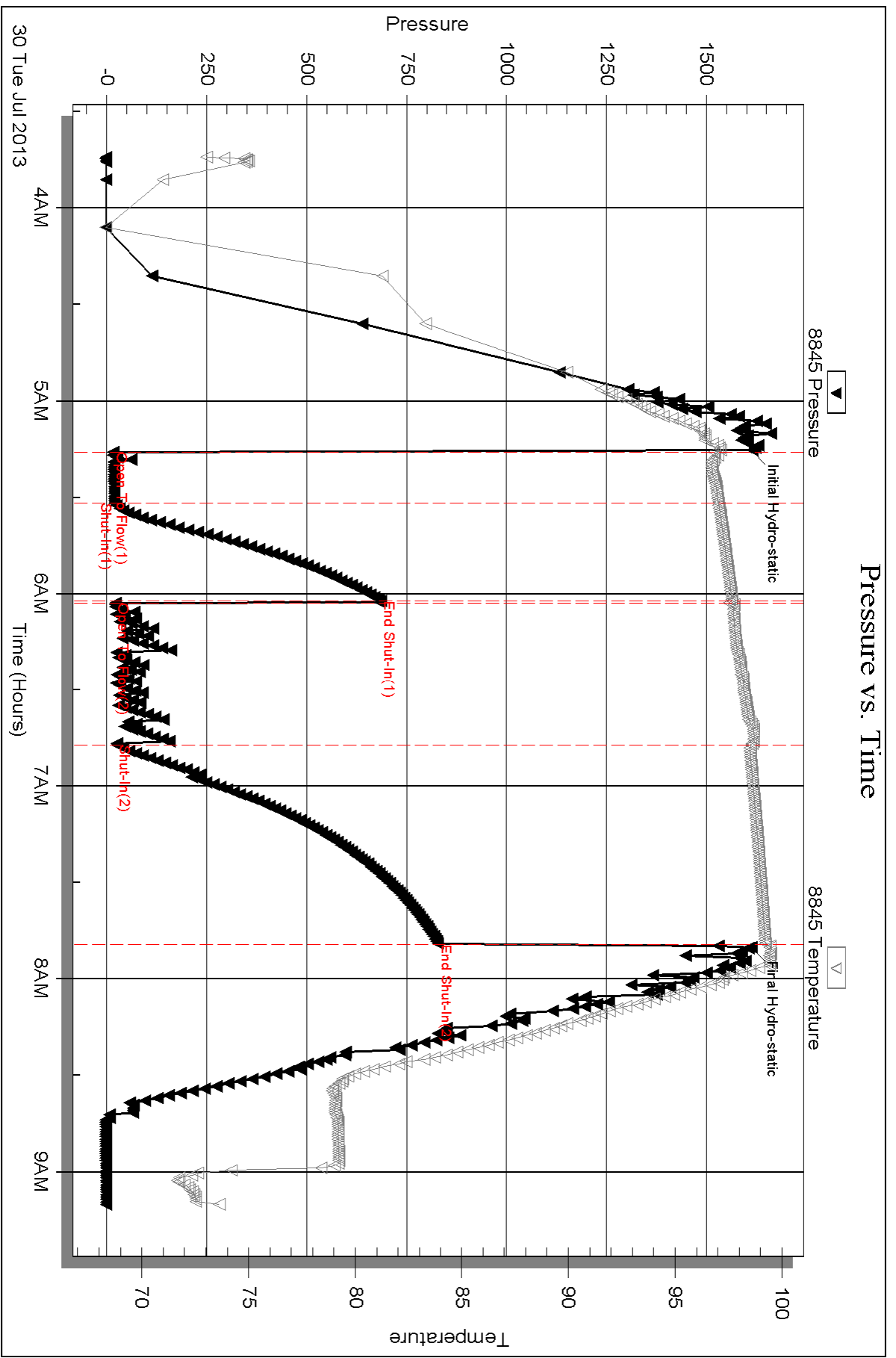
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

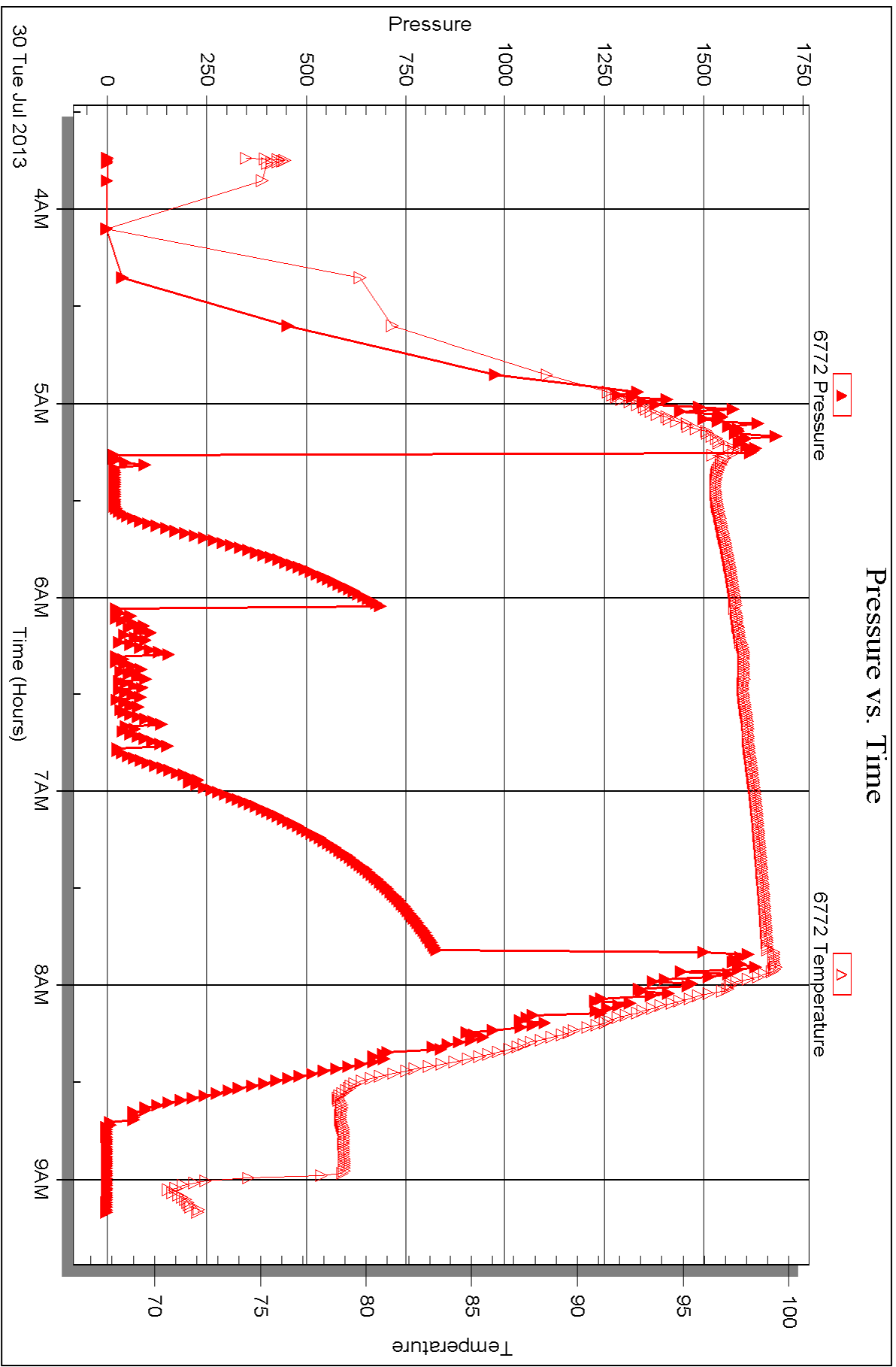


Serial #: 6772

Outside Norstar Petroleum, Inc.

Wilson #2-10

DST Test Number: 2





## DRILL STEM TEST REPORT

Prepared For: **Norstar Petroleum, Inc.**

88 Inverness CIR E Unit F104  
Englewood, CO 80112

ATTN: Tyler Sanders

### **Wilson #2-10**

### **10-2s-27w Decatur,KS**

Start Date: 2013.07.30 @ 16:52:00

End Date: 2013.07.30 @ 23:32:15

Job Ticket #: 52814                      DST #: 3

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

Printed: 2013.08.02 @ 08:43:38

Norstar Petroleum, Inc. 10-2s-27w Decatur,KS Wilson #2-10 DST # 3 LKC " C " 2013.07.30



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Norstar Petroleum, Inc.

**10-2s-27w Decatur, KS**

88 Inverness CIR E Unit F104  
Englewood, CO 80112

**Wilson #2-10**

Job Ticket: 52814

**DST#: 3**

ATTN: Tyler Sanders

Test Start: 2013.07.30 @ 16:52:00

## GENERAL INFORMATION:

Formation: **LKC " C "**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:32:45

Time Test Ended: 23:32:15

Test Type: Conventional Bottom Hole (Reset)

Tester: Sam Esparza

Unit No: 64

**Interval: 3438.00 ft (KB) To 3486.00 ft (KB) (TVD)**

Reference Elevations: 2588.00 ft (KB)

Total Depth: 3486.00 ft (KB) (TVD)

2583.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

**Serial #: 8845 Outside**

Press @ Run Depth: 103.41 psig @ 3439.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.07.30

End Date: 2013.07.30

Last Calib.: 2013.07.30

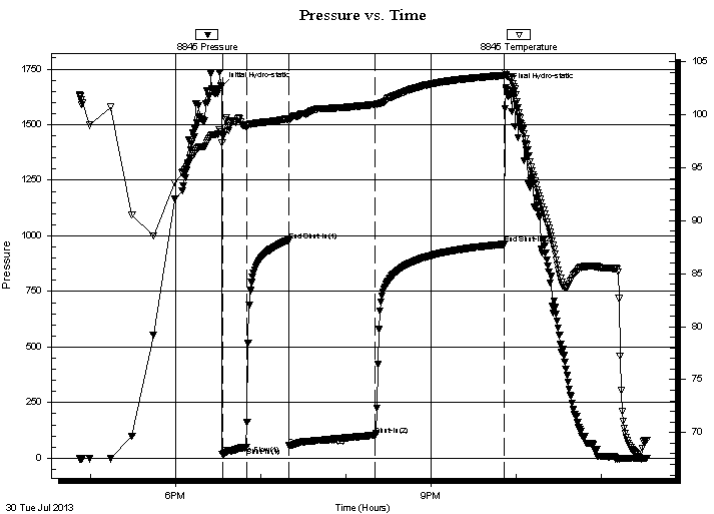
Start Time: 16:52:05

End Time: 23:32:14

Time On Btm: 2013.07.30 @ 18:32:30

Time Off Btm: 2013.07.30 @ 21:53:00

**TEST COMMENT:** IF: 2 3/4" Blow .  
IS: No Return.  
FF: 8" Blow .  
FS: No Return.



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1672.85	98.42	Initial Hydro-static
1	17.39	97.36	Open To Flow (1)
18	51.04	98.95	Shut-In(1)
47	979.93	99.66	End Shut-In(1)
48	55.31	99.46	Open To Flow (2)
109	103.41	100.98	Shut-In(2)
200	962.43	103.73	End Shut-In(2)
201	1667.77	103.78	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
120.00	MCW ( Oil spots on top ) 30m 70w	0.59
35.00	WCM ( Oil Scum on top ) 20w 80m	0.47

## Gas Rates

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

\* Recovery from multiple tests







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# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Norstar Petroleum, Inc.

**10-2s-27w Decatur,KS**

88 Inverness CIR E Unit F104  
Englewood, CO 80112

**Wilson #2-10**

Job Ticket: 52814

**DST#: 3**

ATTN: Tyler Sanders

Test Start: 2013.07.30 @ 16:52:00

## Tool Information

Drill Pipe:	Length: 3308.00 ft	Diameter: 3.80 inches	Volume: 46.40 bbl	Tool Weight:	2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	30000.00 lb
Drill Collar:	Length: 122.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose:	55000.00 lb
			<u>Total Volume: 47.00 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial	40000.00 lb
Depth to Top Packer:	3438.00 ft			Final	40000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	48.00 ft				
Tool Length:	76.00 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			3411.00	
Shut In Tool	5.00			3416.00	
Hydraulic tool	5.00			3421.00	
Jars	5.00			3426.00	
Safety Joint	3.00			3429.00	
Packer	5.00			3434.00	28.00 Bottom Of Top Packer
Packer	4.00			3438.00	
Stubb	1.00			3439.00	
Recorder	0.00	6772	Outside	3439.00	
Recorder	0.00	8845	Outside	3439.00	
Perforations	9.00			3448.00	
Change Over Sub	1.00			3449.00	
Drill Pipe	31.00			3480.00	
Change Over Sub	1.00			3481.00	
Bullnose	5.00			3486.00	48.00 Bottom Packers & Anchor

**Total Tool Length: 76.00**



**TRILOBITE  
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# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Norstar Petroleum, Inc.

**10-2s-27w Decatur,KS**

88 Inverness CIR E Unit F104  
Englewood, CO 80112

**Wilson #2-10**

Job Ticket: 52814

**DST#: 3**

ATTN: Tyler Sanders

Test Start: 2013.07.30 @ 16:52:00

## 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:

85000 ppm

Viscosity: 61.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.98 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 800.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
120.00	MCW ( Oil spots on top ) 30m 70w	0.590
35.00	WCM ( Oil Scum on top ) 20w 80m	0.473

Total Length: 155.00 ft      Total Volume: 1.063 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

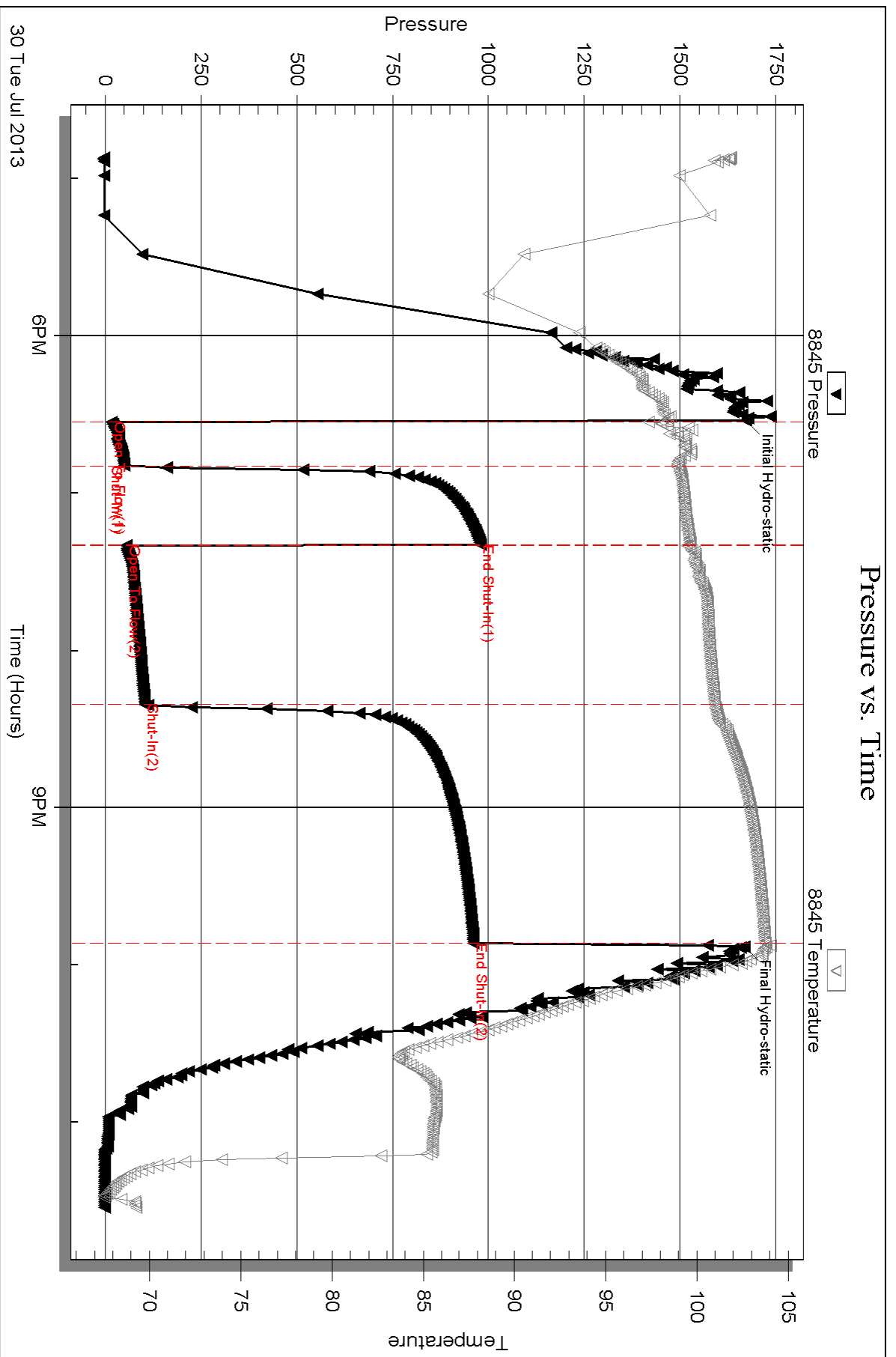
Recovery Comments: Water Salinity: .092 @ 71 Degrees= 85,000 ppm

Serial #: 8845

Outside Norstar Petroleum, Inc.

Wilson #2-10

DST Test Number: 3

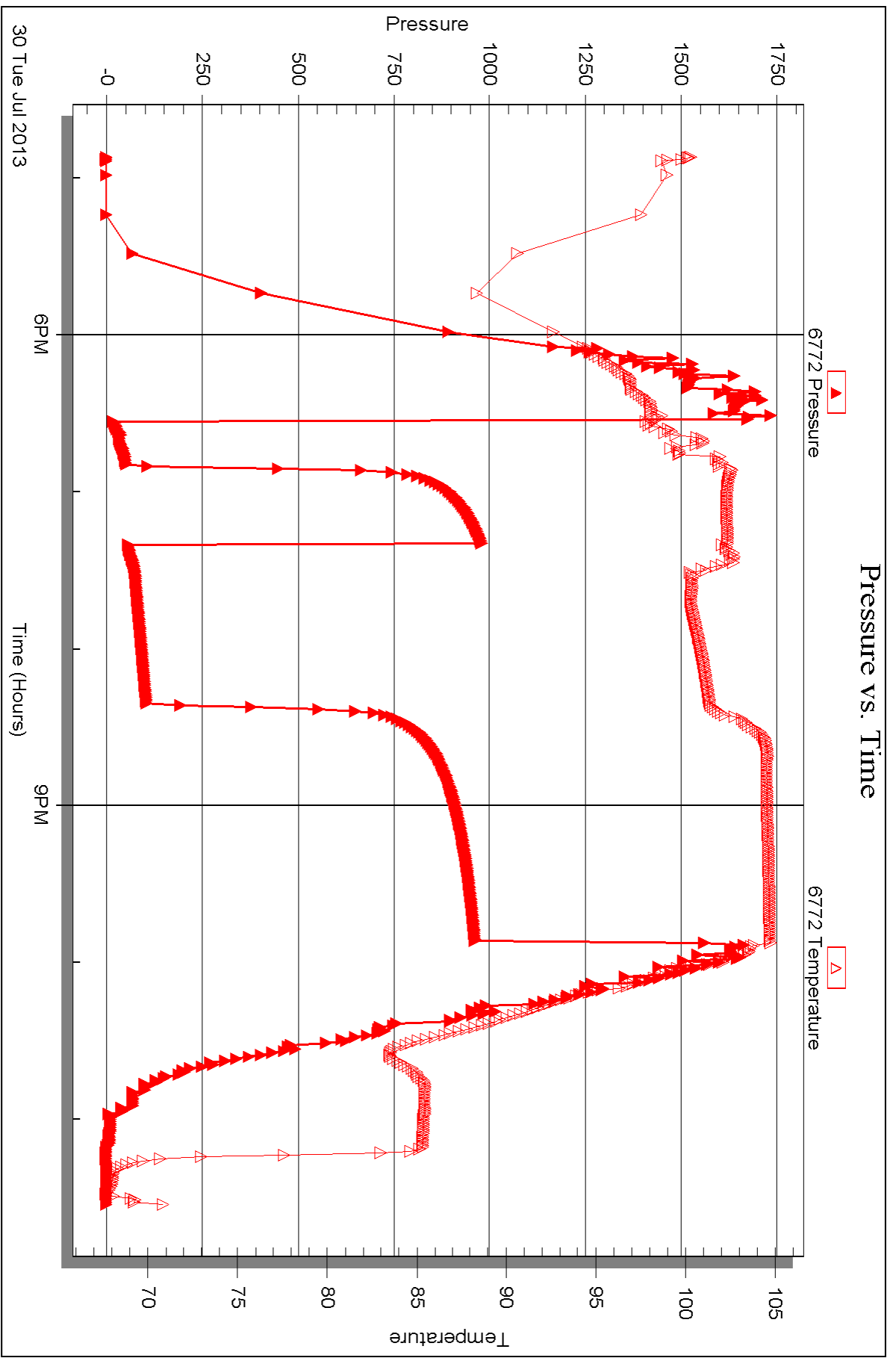


Serial #: 6772

Outside Norstar Petroleum, Inc.

Wilson #2-10

DST Test Number: 3





## DRILL STEM TEST REPORT

Prepared For: **Norstar Petroleum, Inc.**

88 Inverness CIR E Unit F104  
Englewood, CO 80112

ATTN: Tyler Sanders

### **Wilson #2-10**

### **10-2s-27w Decatur,KS**

Start Date: 2013.07.31 @ 06:14:00

End Date: 2013.07.31 @ 13:15:30

Job Ticket #: 52815                      DST #: 4

Trilobite Testing, Inc

PO Box 362 Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2013.08.02 @ 08:39:04

Norstar Petroleum, Inc. 10-2s-27w Decatur,KS Wilson #2-10 DST # 4 LKC " D " 2013.07.31



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Norstar Petroleum, Inc.  
 88 Inverness CIR E Unit F104  
 Englewood, CO 80112  
 ATTN: Tyler Sanders

**10-2s-27w Decatur, KS**  
**Wilson #2-10**  
 Job Ticket: 52815 **DST#: 4**  
 Test Start: 2013.07.31 @ 06:14:00

## GENERAL INFORMATION:

Formation: **LKC " D "**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 08:08:00  
 Time Test Ended: 13:15:30  
 Interval: **3471.00 ft (KB) To 3520.00 ft (KB) (TVD)**  
 Total Depth: 3520.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Sam Esparza  
 Unit No: 64  
 Reference Elevations: 2588.00 ft (KB)  
 2583.00 ft (CF)  
 KB to GR/CF: 5.00 ft

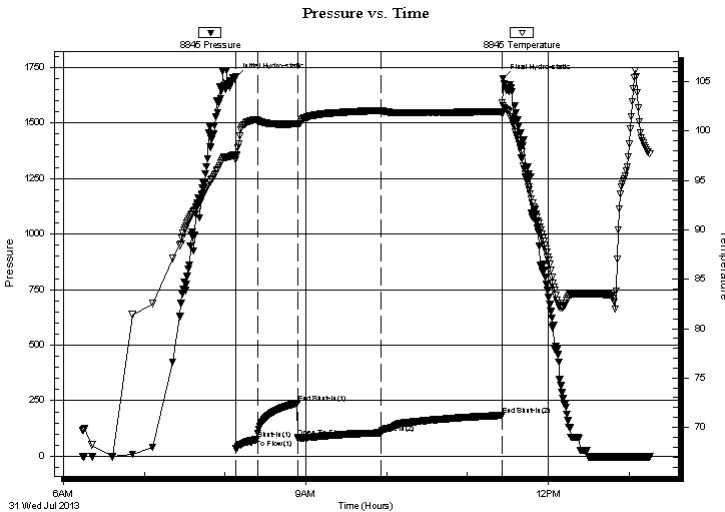
## Serial #: 8845

**Outside**

Press @ Run Depth: 105.80 psig @ 3472.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2013.07.31 End Date: 2013.07.31 Last Calib.: 2013.07.31  
 Start Time: 06:14:05 End Time: 13:15:29 Time On Btm: 2013.07.31 @ 08:07:45  
 Time Off Btm: 2013.07.31 @ 11:26:30

TEST COMMENT: IF: 6 3/4" Blow .  
 IS: No Return.  
 FF: 7 3/4" Blow .  
 FS: No Return.

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1705.75	97.54	Initial Hydro-static
1	34.45	97.07	Open To Flow (1)
16	75.05	101.09	Shut-In(1)
46	238.72	100.71	End Shut-In(1)
47	85.68	100.65	Open To Flow (2)
108	105.80	102.06	Shut-In(2)
198	183.99	101.98	End Shut-In(2)
199	1699.44	102.55	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
120.00	OMCW 5o 15m 80w	0.59
60.00	OWCM 10o 10w 80m	0.82
15.00	Clean Oil 100o	0.21

\* Recovery from multiple tests

## Gas Rates

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







**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Norstar Petroleum, Inc.

**10-2s-27w Decatur,KS**

88 Inverness CIR E Unit F104  
Englewood, CO 80112

**Wilson #2-10**

Job Ticket: 52815

**DST#: 4**

ATTN: Tyler Sanders

Test Start: 2013.07.31 @ 06:14:00

## Tool Information

Drill Pipe:	Length: 3336.00 ft	Diameter: 3.80 inches	Volume: 46.80 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 30000.00 lb
Drill Collar:	Length: 122.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 47.40 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	15.00 ft			String Weight: Initial 40000.00 lb
Depth to Top Packer:	3471.00 ft			Final 40000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	49.00 ft			
Tool Length:	77.00 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			3444.00	
Shut In Tool	5.00			3449.00	
Hydraulic tool	5.00			3454.00	
Jars	5.00			3459.00	
Safety Joint	3.00			3462.00	
Packer	5.00			3467.00	28.00 Bottom Of Top Packer
Packer	4.00			3471.00	
Stubb	1.00			3472.00	
Recorder	0.00	6772	Outside	3472.00	
Recorder	0.00	8845	Outside	3472.00	
Perforations	10.00			3482.00	
Change Over Sub	1.00			3483.00	
Drill Pipe	31.00			3514.00	
Change Over Sub	1.00			3515.00	
Bullnose	5.00			3520.00	49.00 Bottom Packers & Anchor

**Total Tool Length: 77.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Norstar Petroleum, Inc.

**10-2s-27w Decatur,KS**

88 Inverness CIR E Unit F104  
Englewood, CO 80112

**Wilson #2-10**

Job Ticket: 52815

**DST#: 4**

ATTN: Tyler Sanders

Test Start: 2013.07.31 @ 06:14:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

34 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

85000 ppm

Viscosity: 63.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.98 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 800.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
120.00	OMCW 5o 15m 80w	0.590
60.00	OWCM 10o 10w 80m	0.823
15.00	Clean Oil 100o	0.210

Total Length: 195.00 ft      Total Volume: 1.623 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

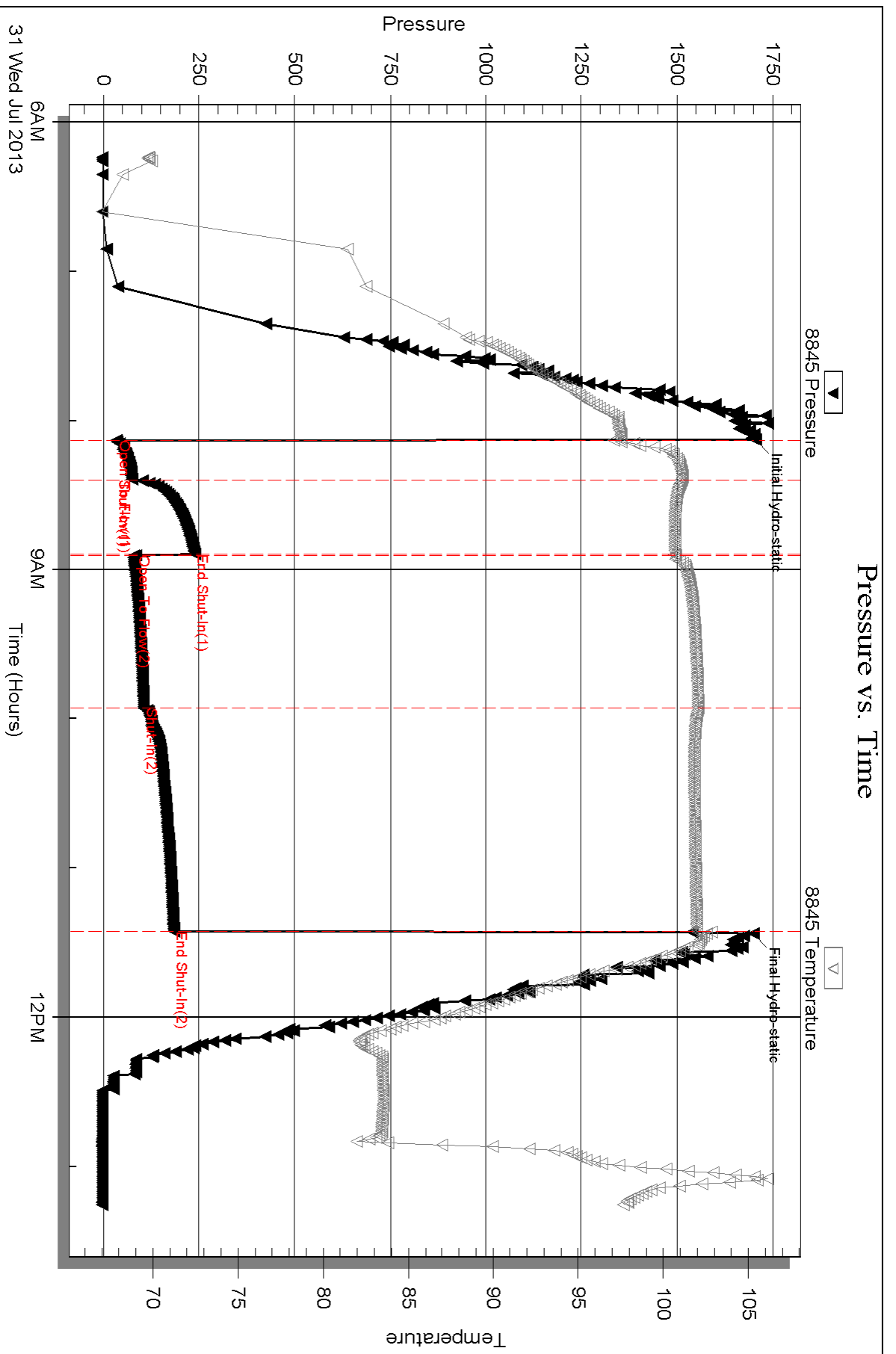
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Oil API: 37 @ 90 degrees= 34 deg API

Water Salinity: .063 @ 96 degrees= 85,000 ppm

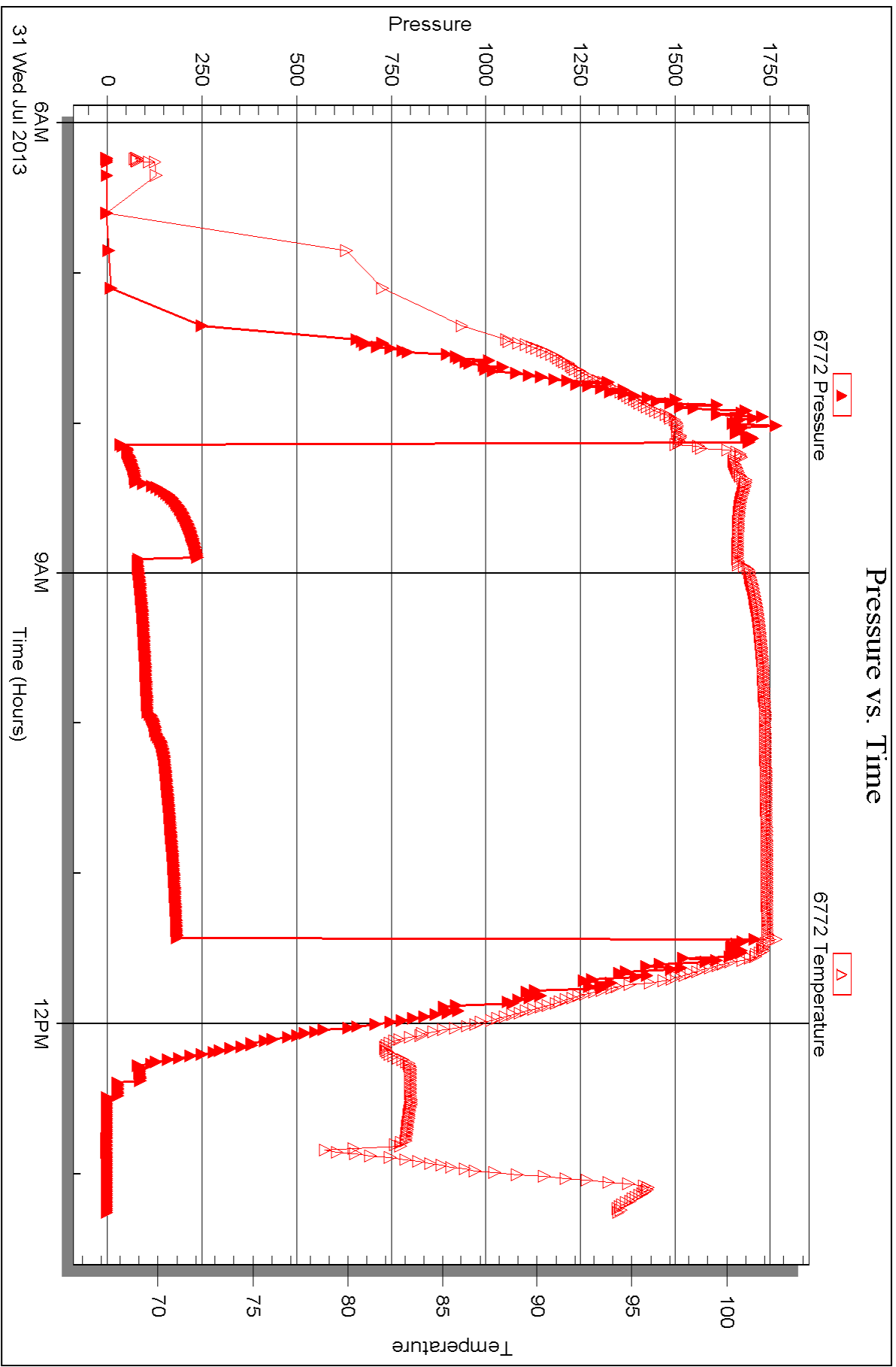


Serial #: 6772

Outside Norstar Petroleum, Inc.

Wilson #2-10

DST Test Number: 4





## DRILL STEM TEST REPORT

Prepared For: **Norstar Petroleum, Inc.**

88 Inverness CIR E Unit F104  
Englewood, CO 80112

ATTN: Tyler Sanders

### **Wilson #2-10**

### **10-2s-27w Decatur,KS**

Start Date: 2013.07.31 @ 18:32:00

End Date: 2013.08.01 @ 00:49:00

Job Ticket #: 53470                      DST #: 5

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

Printed: 2013.08.02 @ 08:38:24



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Norstar Petroleum, Inc.

**10-2s-27w Decatur, KS**

88 Inverness CIR E Unit F104  
Englewood, CO 80112

**Wilson #2-10**

Job Ticket: 53470

**DST#: 5**

ATTN: Tyler Sanders

Test Start: 2013.07.31 @ 18:32:00

## GENERAL INFORMATION:

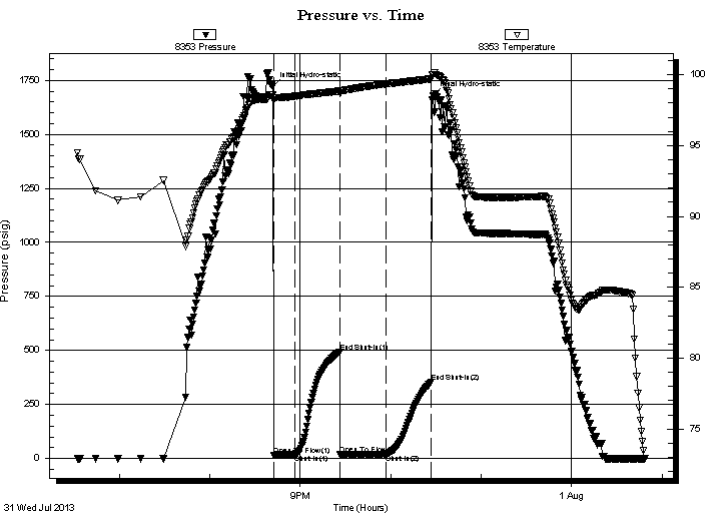
Formation: **LKC "E"**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 20:42:15  
 Time Test Ended: 00:49:00  
 Interval: **3515.00 ft (KB) To 3550.00 ft (KB) (TVD)**  
 Total Depth: 3550.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Ryan Nichols  
 Unit No: 44  
 Reference Elevations: 2588.00 ft (KB)  
 2583.00 ft (CF)  
 KB to GR/CF: 5.00 ft

## Serial #: 8353

**Outside**

Press @ Run Depth: 20.22 psig @ 3516.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2013.07.31 End Date: 2013.08.01 Last Calib.: 2013.08.01  
 Start Time: 18:32:15 End Time: 00:49:00 Time On Btm: 2013.07.31 @ 20:42:00  
 Time Off Btm: 2013.07.31 @ 22:28:15

TEST COMMENT: 15 IF - Surface blow  
 30 ISI - No return  
 30 FF - No blow  
 30 FSI - No return



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1721.86	98.56	Initial Hydro-static
1	15.44	98.17	Open To Flow (1)
14	17.38	98.47	Shut-In(1)
45	494.45	98.84	End Shut-In(1)
45	17.57	98.70	Open To Flow (2)
75	20.22	99.34	Shut-In(2)
105	352.56	99.70	End Shut-In(2)
107	1681.03	100.02	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
5.00	Mud - 100%M	0.02

\* Recovery from multiple tests

## Gas Rates

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





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Norstar Petroleum, Inc.

**10-2s-27w Decatur,KS**

88 Inverness CIR E Unit F104  
Englewood, CO 80112

**Wilson #2-10**

Job Ticket: 53470

**DST#: 5**

ATTN: Tyler Sanders

Test Start: 2013.07.31 @ 18:32:00

## Tool Information

Drill Pipe:	Length: 3372.00 ft	Diameter: 3.80 inches	Volume: 47.30 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: 25000.00 lb
Drill Collar:	Length: 122.00 ft	Diameter: 2.25 inches	Volume: 0.60 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 47.90 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	7.00 ft			String Weight: Initial 40000.00 lb
Depth to Top Packer:	3515.00 ft			Final 40000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	35.00 ft			
Tool Length:	63.00 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			3488.00	
Shut In Tool	5.00			3493.00	
Hydraulic tool	5.00			3498.00	
Jars	5.00			3503.00	
Safety Joint	3.00			3506.00	
Packer	5.00			3511.00	28.00 Bottom Of Top Packer
Packer	4.00			3515.00	
Packer - Shale	0.00			3515.00	
Stubb	1.00			3516.00	
Recorder	0.00	8353	Outside	3516.00	
Recorder	0.00	8360	Outside	3516.00	
Perforations	31.00			3547.00	
Bullnose	3.00			3550.00	35.00 Bottom Packers & Anchor

**Total Tool Length: 63.00**





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

## FLUID SUMMARY

Norstar Petroleum, Inc.

**10-2s-27w Decatur,KS**

88 Inverness CIR E Unit F104  
Englewood, CO 80112

**Wilson #2-10**

Job Ticket: 53470

**DST#: 5**

ATTN: Tyler Sanders

Test Start: 2013.07.31 @ 18:32:00

### 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: 67.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.97 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 400.00 ppm

Filter Cake: 1.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	Mud - 100%M	0.025

Total Length: 5.00 ft      Total Volume: 0.025 bbl

Num Fluid Samples: 0

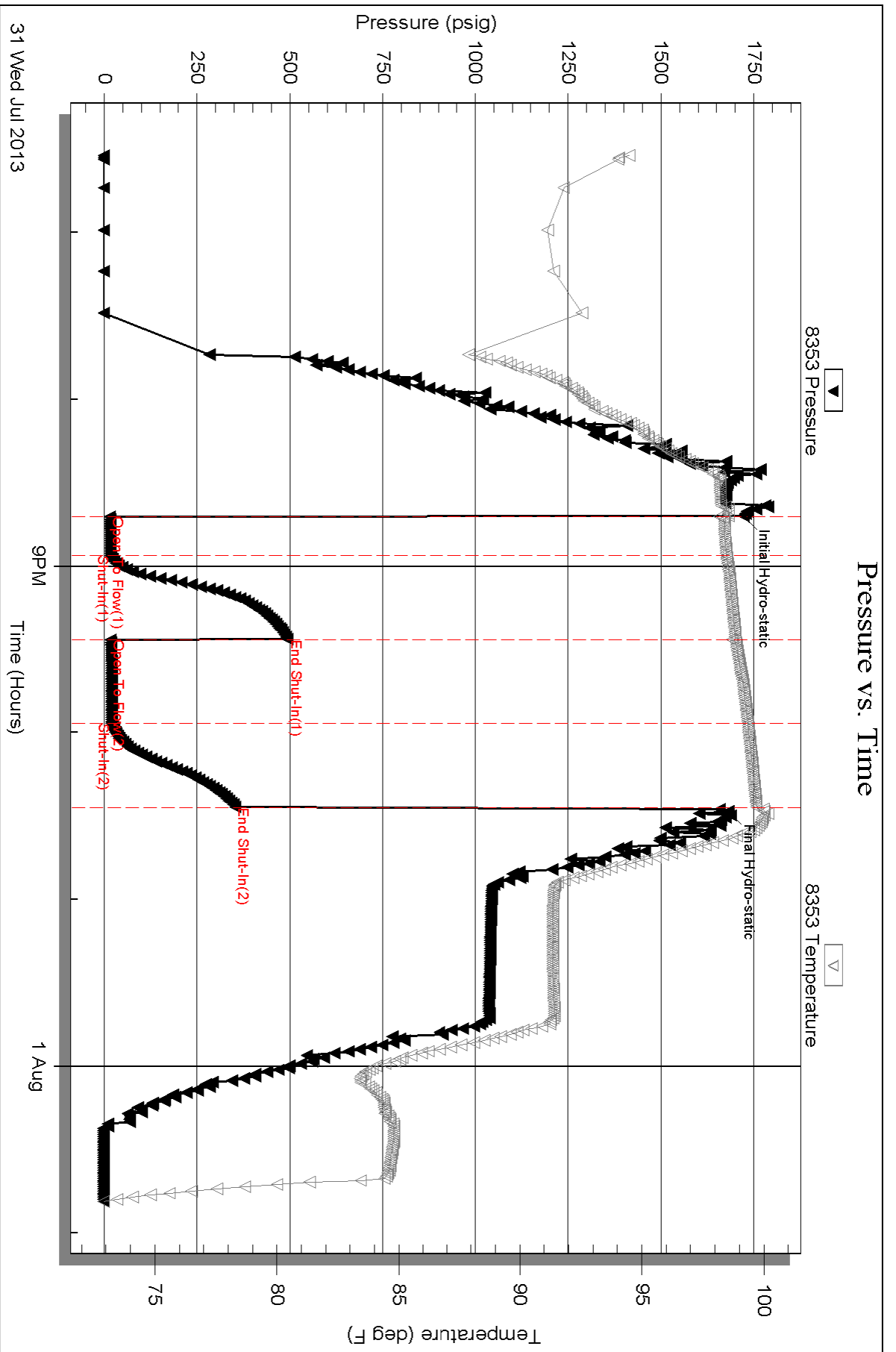
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

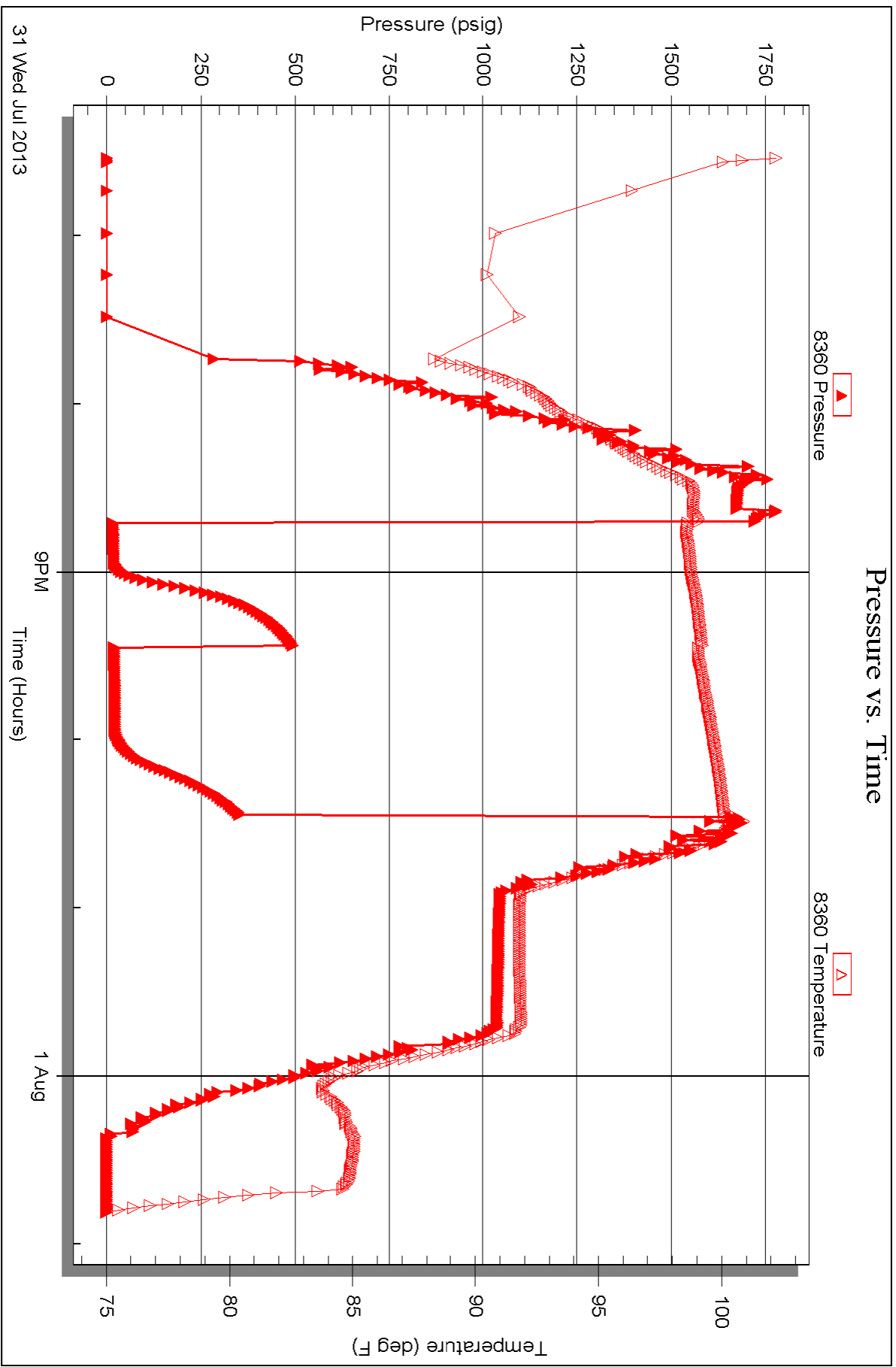


Serial #: 8360

Outside Norstar Petroleum, Inc.

Wilson #2-10

DST Test Number: 5





# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 52812

Well Name & No. Wilson #2-10 Test No. 1 Date 7/29/13  
 Company Norstar Petroleum, Inc. Elevation 2588 KB 2583 GL  
 Address 88 Inverness CIR E Unit F104 Englewood, CO 80112  
 Co. Rep / Geo. Tyler Sanders Rig WW #6  
 Location: Sec. 10 Twp. 2S Rge. 27W Co. Decatur State KS

Interval Tested 3327-3417 Zone Tested "Oread - Toronto"  
 Anchor Length 90' Drill Pipe Run 3209 Mud Wt. 9.0  
 Top Packer Depth 3323 Drill Collars Run 122 Vis 67  
 Bottom Packer Depth 3327 Wt. Pipe Run Ø WL 8.0  
 Total Depth 3417 Chlorides 400 ppm System LCM 4

Blow Description IF:  
ISI:  
FF: MIS-Run Packer Failure  
FSI:

Rec	Feet of	%gas	%oil	%water	%mud
<u>150</u>	<u>Mud</u>			<u>100</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 150 BHT N/A Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic  Test 950 T-On Location 19:45  
 (B) First Initial Flow  Jars 250 T-Started 23:47  
 (C) First Final Flow  Safety Joint 75 T-Open N/A  
 (D) Initial Shut-In  Circ Sub N/C T-Pulled N/A  
 (E) Second Initial Flow  Hourly Standby — T-Out 3:30  
 (F) Second Final Flow  Mileage 248 R/T 30rt 46.50 Comments projected time out 20:30. Actual time out 23:55  
 (G) Final Shut-In  Sampler — Lost Circ.  
 (H) Final Hydrostatic  Straddle —  Ruined Shale Packer —

Initial Open —  Shale Packer 250  Ruined Packer —  
 Initial Shut-In N/A  Extra Packer —  Extra Copies —  
 Final Flow —  Extra Recorder — Sub Total 0  
 Final Shut-In —  Day Standby — Total 1571.50  
 Accessibility — MP/DST Disc't —  
 Sub Total 1571.50

Approved By \_\_\_\_\_ Our Representative [Signature]

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 52813

Well Name & No. Wilson #2-10 Test No. 2 Date 7/30/13  
 Company Norstar Petroleum, Inc. Elevation 2588 KB 2583 GL  
 Address 88 Inverness CIR E Unit F104 Englewood, CO 80112  
 Co. Rep / Geo. Tyler Sanders Rig LVW#6  
 Location: Sec. 10 Twp. 27S Rge 27W Co. Decatur State KS

Interval Tested 3336-3417 Zone Tested "Orend - Toronto"  
 Anchor Length 81 Drill Pipe Run 3211 Mud Wt. 9.0  
 Top Packer Depth 3332 Drill Collars Run 122 Vis 67  
 Bottom Packer Depth 3336 Wt. Pipe Run Ø WL 8.0  
 Total Depth 3417 Chlorides 400 ppm System LCM 4

Blow Description IF: 1/4" Blow.  
IST: No Return.  
FF: No Blow.  
FST: No Return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>Mud</u>			<u>100</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 5 BHT 99 Gravity — API RW — @ — °F Chlorides — ppm

(A) Initial Hydrostatic	<u>1613</u>	<input checked="" type="checkbox"/> Test	<u>1150</u>	T-On Location	<u>19:45 7/29/13</u>
(B) First Initial Flow	<u>17</u>	<input checked="" type="checkbox"/> Jars	<u>250</u>	T-Started	<u>03:44 7/30/13</u>
(C) First Final Flow	<u>19</u>	<input checked="" type="checkbox"/> Safety Joint	<u>75</u>	T-Open	<u>05:15</u>
(D) Initial Shut-In	<u>685</u>	<input checked="" type="checkbox"/> Circ Sub	<u>N/C</u>	T-Pulled	<u>07:48</u>
(E) Second Initial Flow	<u>21</u>	<input type="checkbox"/> Hourly Standby		T-Out	<u>09:09</u>
(F) Second Final Flow	<u>25</u>	<input checked="" type="checkbox"/> Mileage	<u>248 R/T</u>	Comments	<u>Hotel, Motel, Holiday Inn</u>
(G) Final Shut-In	<u>829</u>	<input type="checkbox"/> Sampler			
(H) Final Hydrostatic	<u>1612</u>	<input type="checkbox"/> Straddle		<input type="checkbox"/> Ruined Shale Packer	

Initial Open	<u>15</u>	<input checked="" type="checkbox"/> Shale Packer	<u>250</u>	<input type="checkbox"/> Ruined Packer	
Initial Shut-In	<u>30</u>	<input type="checkbox"/> Extra Packer		<input type="checkbox"/> Extra Copies	
Final Flow	<u>45</u>	<input type="checkbox"/> Extra Recorder		Sub Total	<u>0</u>
Final Shut-In	<u>60</u>	<input type="checkbox"/> Day Standby		Total	<u>1725</u>
		<input type="checkbox"/> Accessibility		MP/DST Disc't	
		Sub Total	<u>1725</u>		

Approved By Tyler Sanders Our Representative [Signature]

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# TRIBOLITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 52814

4/10

Well Name & No. Wilson #2-10 Test No. 3 Date 7/30/13  
 Company Norstar Petroleum, Inc. Elevation 2588 KB 2583 GL  
 Address 88 Inverness CIR E Unit F104 Englewood, CO 80112  
 Co. Rep / Geo. Tyler Sanders Rig WW #6  
 Location: Sec. 10 Twp. 2S Rge. 27W Co. Decatur State KS

Interval Tested 3438-3486 Zone Tested Lansing "C"  
 Anchor Length 48' Drill Pipe Run 3308 Mud Wt. 8.8  
 Top Packer Depth 3434 Drill Collars Run 122 Vis 61  
 Bottom Packer Depth 3438 Wt. Pipe Run 0 WL 8.0  
 Total Depth 3486 Chlorides 800 ppm System LCM 10

Blow Description IF: 2 3/4" Blow.  
ISI: No Return.  
FF: 8" Blow  
FSI: No Return.

Rec	Feet of	%gas	%oil	%water	%mud
<u>35'</u>	<u>WCM (oil sum on top)</u>		<u>20</u>	<u>80</u>	
<u>120</u>	<u>MCW (oil spots on top)</u>		<u>70</u>	<u>30</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 155 BHT 104 Gravity — API RW .092 @ 71 °F Chlorides 85,000 ppm

(A) Initial Hydrostatic <u>1673</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>16:45</u>
(B) First Initial Flow <u>17</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>16:52</u>
(C) First Final Flow <u>51</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>18:33</u>
(D) Initial Shut-In <u>980</u>	<input checked="" type="checkbox"/> Circ Sub <u>N/C</u>	T-Pulled <u>21:58</u>
(E) Second Initial Flow <u>55</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>23:33</u>
(F) Second Final Flow <u>103</u>	<input checked="" type="checkbox"/> Mileage <u>248 R/T</u> 46.50	Comments
(G) Final Shut-In <u>962</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1668</u>	<input type="checkbox"/> Straddle	<input type="checkbox"/> Ruined Shale Packer

Initial Open <u>15</u>	<input checked="" type="checkbox"/> Shale Packer <u>250</u>	<input type="checkbox"/> Ruined Packer
Initial Shut-In <u>30</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Extra Copies
Final Flow <u>60</u>	<input type="checkbox"/> Extra Recorder	Sub Total <u>0</u>
Final Shut-In <u>90</u>	<input type="checkbox"/> Day Standby	Total <u>1771.50</u>
	<input type="checkbox"/> Accessibility	MP/DST Disc't
	Sub Total <u>1771.50</u>	

Approved By Tyler Sanders Our Representative

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 52815

4/10

Well Name & No. Wilson #2-10 Test No. 4 Date 7/31/13  
 Company Norstar Petroleum, Inc. Elevation 2584 KB 2583 GI.  
 Address 88 Inverness CIR E Unit F104 Englewood, CO 80112  
 Co. Rep / Geo. Tyler Sanders Rig WW#6  
 Location: Sec. 10 Twp. 2S Rge. 27W Co. Decatur State KS

Interval Tested 3471 - 3520 Zone Tested Lansing "D"  
 Anchor Length 49' Drill Pipe Run 3336 Mud Wt. 9.1  
 Top Packer Depth 3467 Drill Collars Run 122 Vis 63  
 Bottom Packer Depth 3471 Wt. Pipe Run 0 WL 8.0  
 Total Depth 3520 Chlorides 000 ppm System LCM 4

Blow Description IF: 6 3/4" Blow.  
FSI: No Return.  
FF: 7 3/4" Blow.  
FSI: No Return

Rec	Feet of	%gas	%oil	%water	%mud
15	Clean oil	100			
60	OWCM	10	10	80	
120	OmCW	5	80	15	

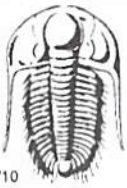
Rec Total 195 BHT 102 Gravity 34 API RW .063 @ 96 °F Chlorides 85,000 ppm

(A) Initial Hydrostatic <u>1706</u>	<input checked="" type="checkbox"/> Test <u>1150</u>	T-On Location <u>5:50</u>
(B) First Initial Flow <u>34</u>	<input checked="" type="checkbox"/> Jars <u>250</u>	T-Started <u>6:14</u>
(C) First Final Flow <u>75</u>	<input checked="" type="checkbox"/> Safety Joint <u>75</u>	T-Open <u>8:08</u>
(D) Initial Shut-In <u>239</u>	<input checked="" type="checkbox"/> Circ Sub <u>N/C</u>	T-Pulled <u>11:26</u>
(E) Second Initial Flow <u>86</u>	<input type="checkbox"/> Hourly Standby	T-Out <u>13:16</u>
(F) Second Final Flow <u>106</u>	<input checked="" type="checkbox"/> Mileage <u>248 R/H</u> 46.50	Comments <u>Gravity: 37 @ 90° = 34</u>
(G) Final Shut-In <u>184</u>	<input type="checkbox"/> Sampler	
(H) Final Hydrostatic <u>1699</u>	<input type="checkbox"/> Straddle	

Initial Open <u>15</u>	<input checked="" type="checkbox"/> Shale Packer <u>250</u>	<input type="checkbox"/> Ruined Shale Packer
Initial Shut-In <u>30</u>	<input type="checkbox"/> Extra Packer	<input type="checkbox"/> Ruined Packer
Final Flow <u>60</u>	<input type="checkbox"/> Extra Recorder	<input type="checkbox"/> Extra Copies
Final Shut-In <u>90</u>	<input type="checkbox"/> Day Standby	Sub Total <u>0</u>
	<input type="checkbox"/> Accessibility	Total <u>1771.50</u>
	Sub Total <u>1771.50</u>	MP/IST Disc't

Approved By Tyler H. Sanders Our Representative [Signature]

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# TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

## Test Ticket

NO. 53470

Well Name & No. Wilson # 2-10 Test No. 5 Date 7/31/13  
 Company Noistar Petroleum, Inc. Elevation 2586 KB 2583 GL  
 Address 48 Inverness CTR E Unit F 104 Englewood Co 80112  
 Co. Rep / Geo. Tyler Sanders Rig WW #6  
 Location: Sec. 10 Twp. 25 Rge. 27W Co. Decatur State K5

Interval Tested 3515-3550 Zone Tested LKC "E"  
 Anchor Length 35' Drill Pipe Run ~~3372~~ 3372' Mud Wt. 9.1  
 Top Packer Depth 3510 Drill Collars Run 122' Vis 63  
 Bottom Packer Depth 3515 Wt. Pipe Run 0' WL 8.0  
 Total Depth 3550 Chlorides 800 ppm System LCM 8

Blow Description IF - Surface blow  
ISI - No ~~return~~ return  
FF - No blow  
FSI - No return

Rec	Feet of	%gas	%oil	%water	%mud
<u>5'</u>	<u>Mud</u>			<u>100</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 5' BHT 100° Gravity — API RW — @ —° F Chlorides — ppm

(A) Initial Hydrostatic 1722  Test 1150 T-On Location 17:30  
 (B) First Initial Flow 15  Jars 250 T-Started 18:32  
 (C) First Final Flow 17  Safety Joint 75 T-Open 20:41  
 (D) Initial Shut-In 494  Circ Sub NC T-Pulled 22:26  
 (E) Second Initial Flow 18  Hourly Standby T-Out 00:49  
 (F) Second Final Flow 20  Mileage 30 RT X 2<sup>93</sup> Comments Loaded tabs @ 17:30 on 8/1/13  
 (G) Final Shut-In 353  Sampler  Ruined Shale Packer  
 (H) Final Hydrostatic 1681  Straddle  Ruined Packer

Initial Open 15  Shale Packer  Ruined Packer  
 Initial Shut-In 30  Extra Packer  Extra Copies  
 Final Flow 30  Extra Recorder Sub Total 0  
 Final Shut-In 30  Day Standby Total 1568  
 Accessibility MP/DST Disc't  
 Sub Total 1568

Approved By \_\_\_\_\_ Our Representative Tyler Sanders

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