



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Shakespeare Oil Comp. INC.

**21-15s-32w-Scott KS**

202 West main st.  
Salem, IL 62881

**Zanobia #1-21**

Job Ticket: 49842

**DST#: 1**

ATTN: Tim Priest

Test Start: 2012.11.22 @ 05:06:32

## GENERAL INFORMATION:

Formation: **Lansing B**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:55:47

Time Test Ended: 11:15:32

Test Type: Conventional Bottom Hole (Initial)

Tester: Tate Lang

Unit No: 46

**Interval: 3881.00 ft (KB) To 3860.00 ft (KB) (TVD)**

Reference Elevations: 2865.00 ft (KB)

Total Depth: 3860.00 ft (KB) (TVD)

2855.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

**Serial #: 8675**

**Inside**

Press @ Run Depth: 79.71 psig @ 3832.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.11.22

End Date:

2012.11.22

Last Calib.:

2012.11.22

Start Time: 05:06:47

End Time:

11:15:32

Time On Btm:

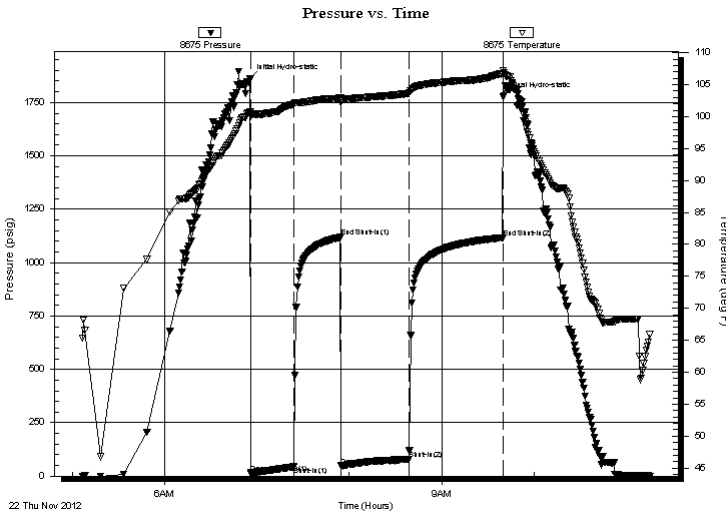
2012.11.22 @ 06:55:32

Time Off Btm:

2012.11.22 @ 09:39:47

**TEST COMMENT:** IF-Weak surface blow built to 3 in.  
ISI-Dead no return  
FF-Weak surface blow built to 3 in.  
FSI-Dead no return.

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1862.21	100.69	Initial Hydro-static
1	14.34	100.09	Open To Flow (1)
29	44.25	101.96	Shut-In(1)
59	1118.89	102.89	End Shut-In(1)
59	48.05	102.22	Open To Flow (2)
104	79.71	103.66	Shut-In(2)
164	1117.04	106.73	End Shut-In(2)
165	1776.52	107.24	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
90.00	10%W 90%M	0.44

## Gas Rates

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



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Shakespeare Oil Comp. INC.

**21-15s-32w-Scott KS**

202 West main st.  
Salem, IL 62881

**Zanobia #1-21**

Job Ticket: 49842

**DST#: 1**

ATTN: Tim Priest

Test Start: 2012.11.22 @ 05:06:32

## 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:

bbbl

Water Loss: 6.80 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 4800.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
90.00	10%W 90%M	0.443

Total Length: 90.00 ft      Total Volume: 0.443 bbl

Num Fluid Samples: 0

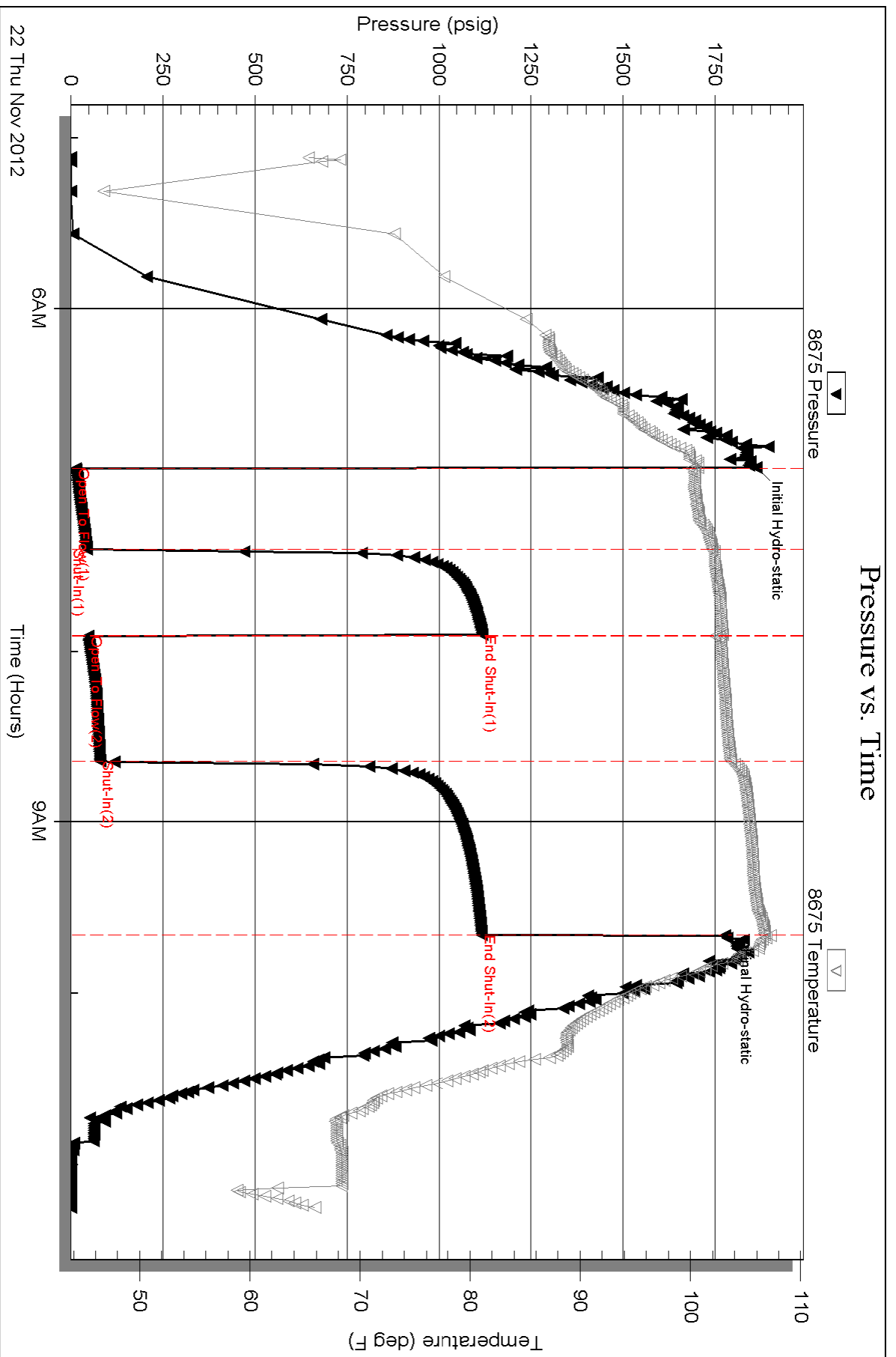
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





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Shakespeare Oil Comp. INC.

**21-15s-32w-Scott KS**

202 West main st.  
Salem, IL 62881

**Zanobia #1-21**

Job Ticket: 49843

**DST#: 2**

ATTN: Tim Priest

Test Start: 2012.11.22 @ 20:45:00

## GENERAL INFORMATION:

Formation: **Lansing D**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:32:00

Time Test Ended: 04:12:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Tate Lang

Unit No: 46

**Interval: 3892.00 ft (KB) To 3911.00 ft (KB) (TVD)**

Reference Elevations: 2865.00 ft (KB)

Total Depth: 3911.00 ft (KB) (TVD)

2855.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

**Serial #: 8675**

**Inside**

Press @ Run Depth: 147.11 psig @ 3893.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.11.22

End Date:

2012.11.23

Last Calib.:

2012.11.23

Start Time: 20:45:15

End Time:

04:12:45

Time On Btm:

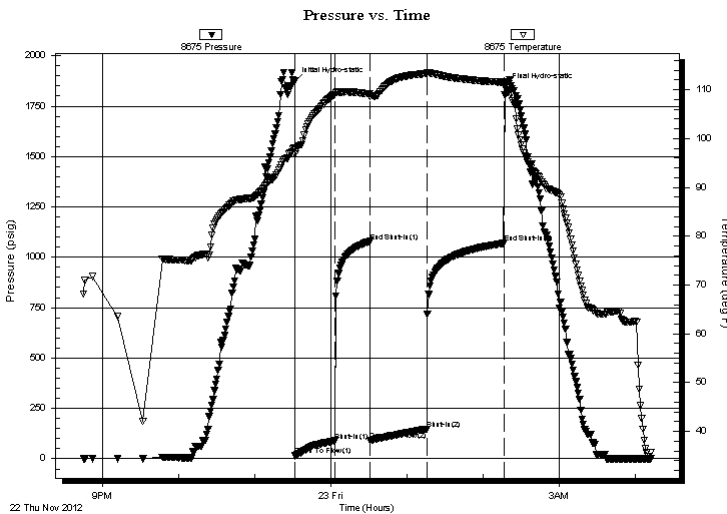
2012.11.22 @ 23:31:45

Time Off Btm:

2012.11.23 @ 02:17:30

**TEST COMMENT:** IF-Strong blow built to 8 in.  
ISI-Dead no return  
FF-Built to 8" blow  
FSI-No return blow

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1872.50	98.06	Initial Hydro-static
1	15.12	96.84	Open To Flow (1)
32	89.44	109.07	Shut-In(1)
59	1078.47	109.16	End Shut-In(1)
60	91.09	108.56	Open To Flow (2)
104	147.11	113.35	Shut-In(2)
165	1069.16	111.56	End Shut-In(2)
166	1842.94	111.26	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
290.00	mcw 5%M 95%W	3.00

## Gas Rates

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

\* Recovery from multiple tests



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# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Shakespeare Oil Comp. INC.

**21-15s-32w-Scott KS**

202 West main st.  
Salem, IL 62881

**Zanobia #1-21**

Job Ticket: 49843

**DST#: 2**

ATTN: Tim Priest

Test Start: 2012.11.22 @ 20:45:00

## 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: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.00 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6000.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
290.00	mcw 5%M 95%W	3.002

Total Length: 290.00 ft      Total Volume: 3.002 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW: .50 @ 30 F = 30,000

Serial #: 8675

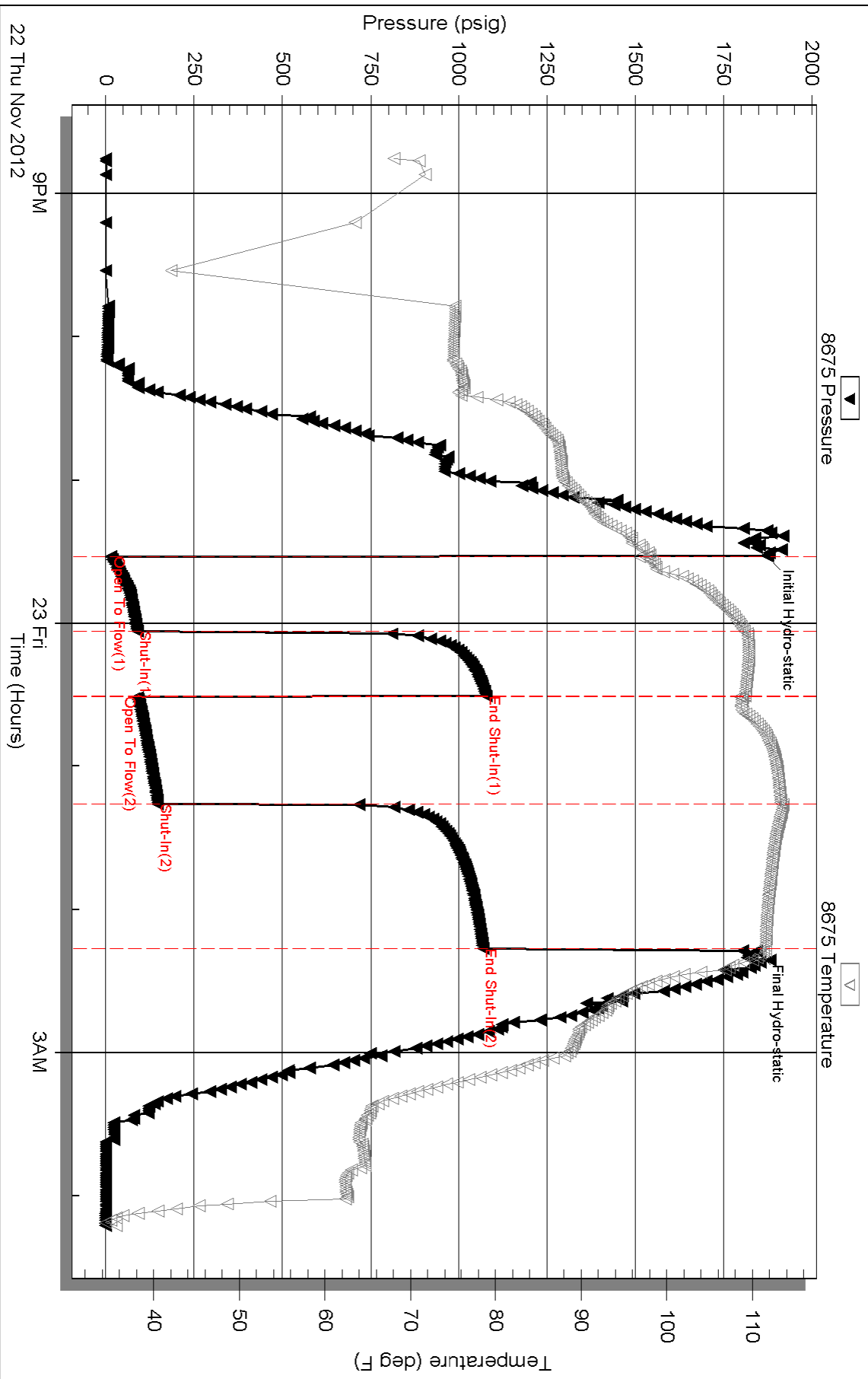
Inside

Shakespeare Oil Corp. INC.

Zanobia #1-21

DST Test Number: 2

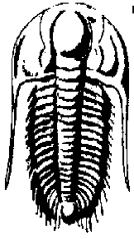
### Pressure vs. Time



Triobite Testing, Inc

Ref. No: 49843

Printed: 2012.11.23 @ 06:42:28



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TESTING, INC**

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Shakespeare Oil Comp. INC.

**21-15s-32w-Scott KS**

202 West main st.  
Salem, IL 62881

**Zanobia #1-21**

Job Ticket: 48924

**DST#: 3**

ATTN: Tim Priest

Test Start: 2012.11.24 @ 05:00:00

## GENERAL INFORMATION:

Formation: **Kansas City "L"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:01:30

Time Test Ended: 11:26:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Jace McKinney

Unit No: 46

**Interval: 4109.00 ft (KB) To 4130.00 ft (KB) (TVD)**

Reference Elevations: 2865.00 ft (KB)

Total Depth: 4130.00 ft (KB) (TVD)

2855.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

**Serial #: 8675**

**Inside**

Press @ Run Depth: 116.42 psig @ 4110.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.11.24

End Date: 2012.11.24

Last Calib.: 2012.11.24

Start Time: 05:00:15

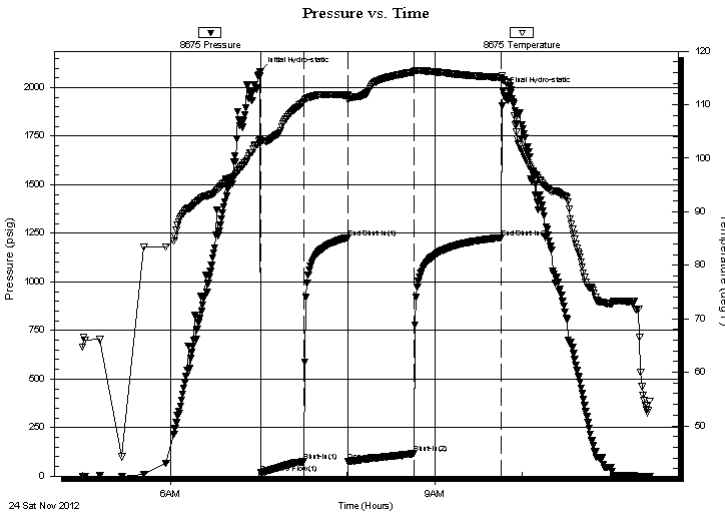
End Time: 11:26:30

Time On Btm: 2012.11.24 @ 07:01:15

Time Off Btm: 2012.11.24 @ 09:47:00

**TEST COMMENT:** Built to 7" blow  
No return blow  
Built to 7 1/2" blow  
No return blow

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2083.69	103.50	Initial Hydro-static
1	16.73	102.86	Open To Flow (1)
30	74.99	110.61	Shut-In(1)
60	1227.74	111.80	End Shut-In(1)
60	74.64	110.94	Open To Flow (2)
105	116.42	116.14	Shut-In(2)
165	1228.09	115.10	End Shut-In(2)
166	1979.05	114.59	Final Hydro-static

## Recovery

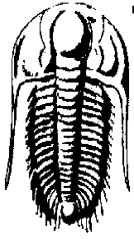
Length (ft)	Description	Volume (bbl)
220.00	mcw 10%M 90%W	2.01

## Gas Rates

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

\* Recovery from multiple tests





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**FLUID SUMMARY**

Shakespeare Oil Comp. INC.

**21-15s-32w-Scott KS**

202 West main st.  
Salem, IL 62881

**Zanobia #1-21**

Job Ticket: 48924

**DST#: 3**

ATTN: Tim Priest

Test Start: 2012.11.24 @ 05:00:00

## 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: 49.00 sec/qt	Cushion Volume: bbl		
Water Loss: 7.60 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 6600.00 ppm			
Filter Cake: 1.00 inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
220.00	mcw 10%M 90%W	2.007

Total Length: 220.00 ft      Total Volume: 2.007 bbl

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

Laboratory Name:      Laboratory Location:

Recovery Comments: RW: .25 @ 50 F = 40,000

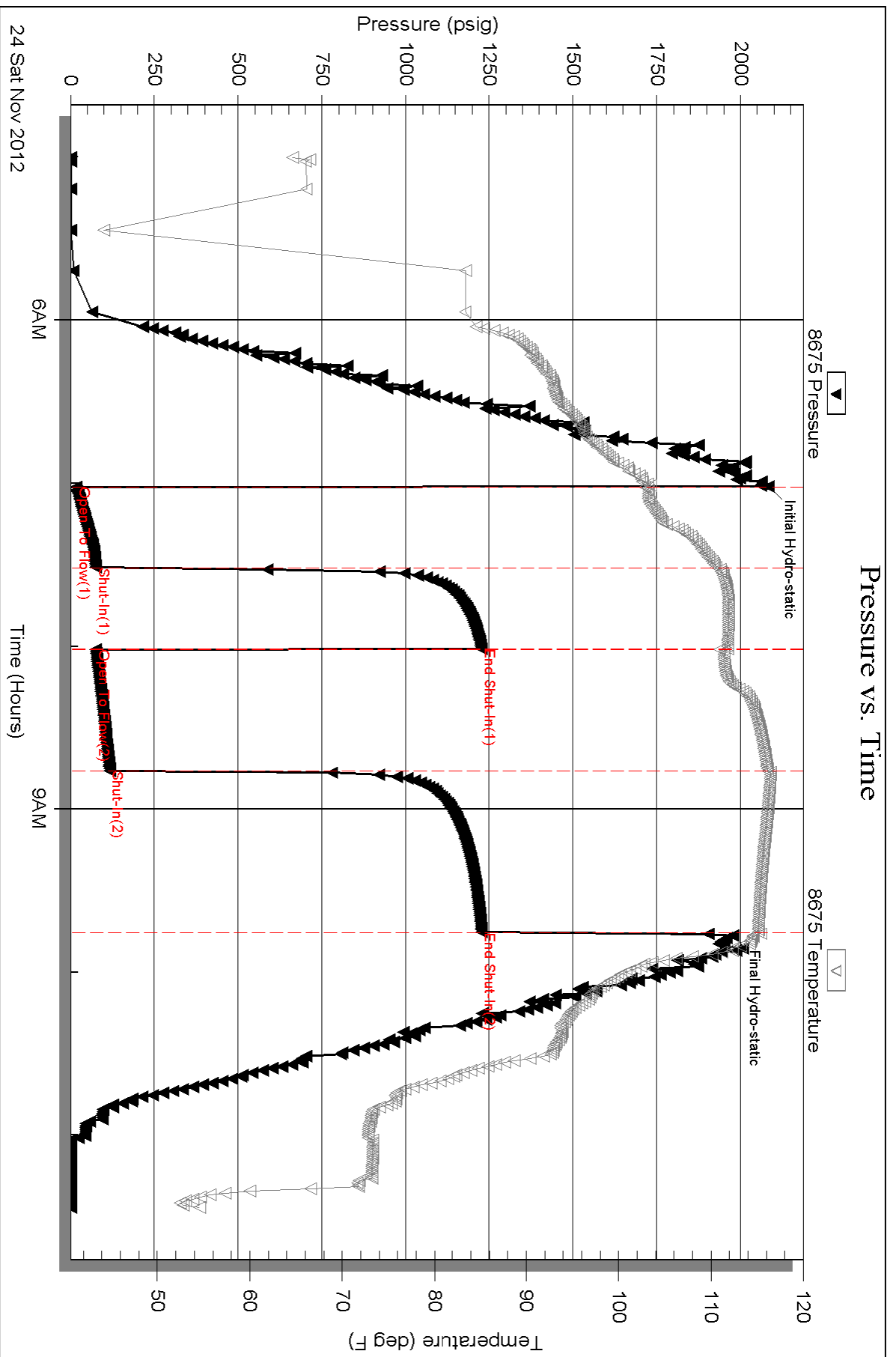
Serial #: 8675

Inside

Shakespeare Oil Corp. INC.

Zanobia #1-21

DST Test Number: 3

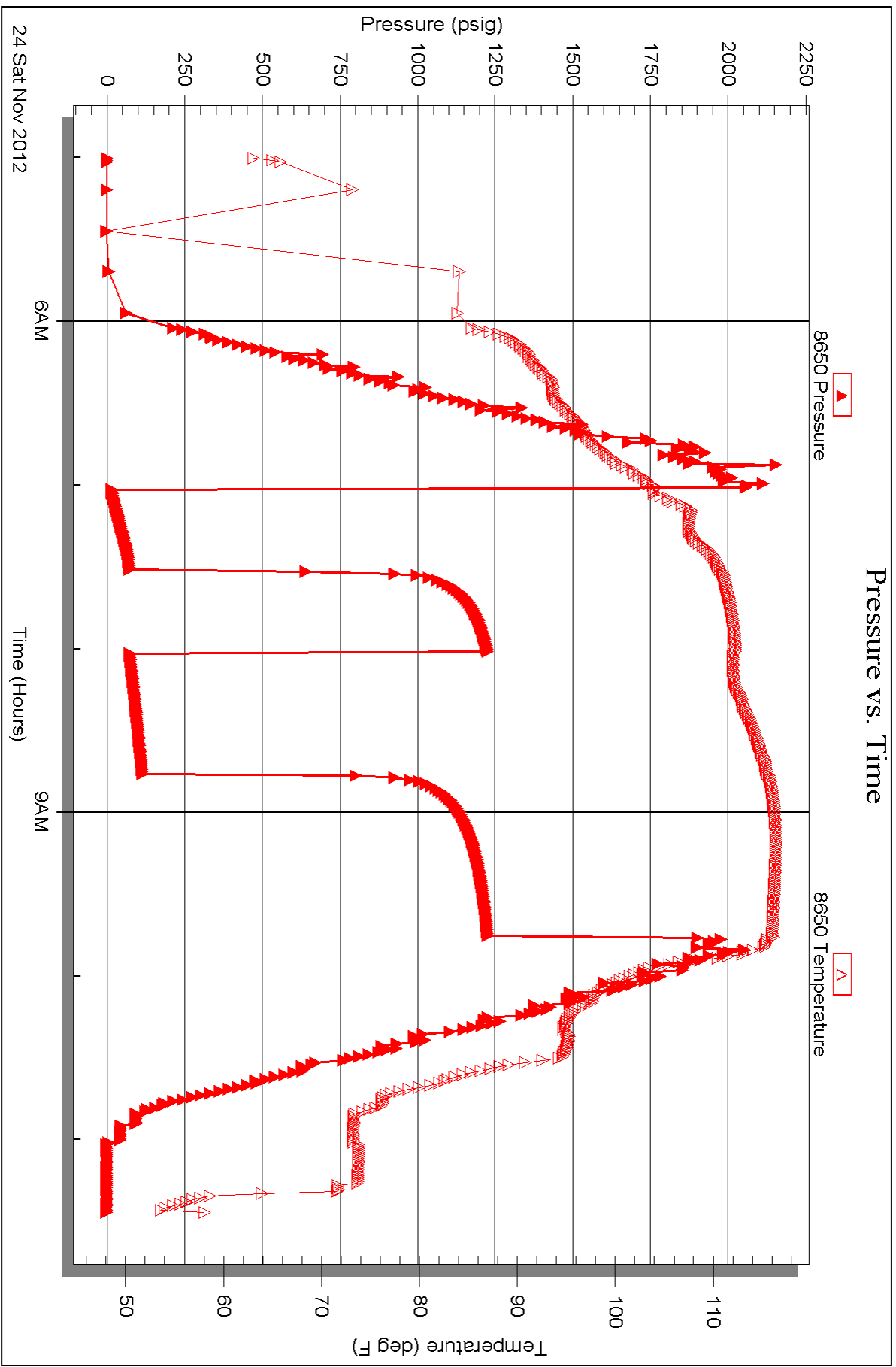


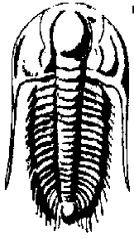
Serial #: 8650

Outside Shakespeare Oil Corp. INC.

Zanobia #1-21

DST Test Number: 3





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# DRILL STEM TEST REPORT

Shakespeare Oil Comp. INC.

**21-15s-32w-Scott KS**

202 West main st.  
Salem, IL 62881

**Zanobia #1-21**

Job Ticket: 48925

**DST#: 4**

ATTN: Tim Priest

Test Start: 2012.11.25 @ 08:30:00

## GENERAL INFORMATION:

Formation: **Marmaton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:45:30

Time Test Ended: 15:38:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Jace McKinney

Unit No: 46

**Interval: 4144.00 ft (KB) To 4255.00 ft (KB) (TVD)**

Reference Elevations: 2865.00 ft (KB)

Total Depth: 4255.00 ft (KB) (TVD)

2855.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

**Serial #: 8675**

**Inside**

Press @ RunDepth: 449.86 psig @ 4145.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.11.25

End Date:

2012.11.25

Last Calib.:

2012.11.25

Start Time: 08:30:15

End Time:

15:38:30

Time On Btm:

2012.11.25 @ 10:45:15

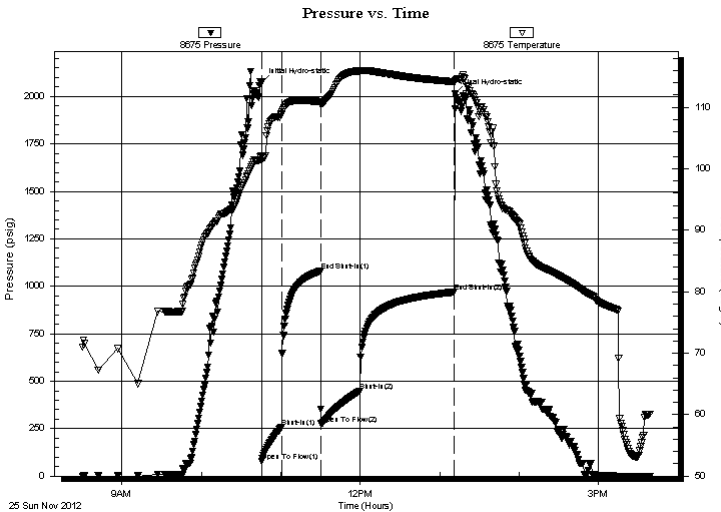
Time Off Btm:

2012.11.25 @ 13:11:45

## TEST COMMENT:

B.O.B. in 2 min.  
Bled off for 5 min. No return blow  
B.O.B. in 4 1/2 min.  
Bled off for 5 min. Built to 1/4" return blow

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2074.77	102.04	Initial Hydro-static
1	79.61	101.28	Open To Flow (1)
16	258.84	108.88	Shut-In(1)
45	1080.05	110.93	End Shut-In(1)
46	275.66	110.66	Open To Flow (2)
75	449.86	115.89	Shut-In(2)
146	969.97	114.11	End Shut-In(2)
147	2012.83	114.19	Final Hydro-static

## Recovery

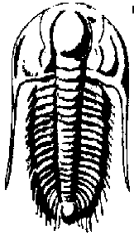
Length (ft)	Description	Volume (bbl)
118.00	mcw with oil scum 5%M 95%W	0.58
295.00	ocgmw 5%O 5%G 30%M 60%W	4.13
477.00	gcomw 10%G 10%O 40%M 40%W	6.69
0.00	200 Feet Gas In Pipe Weak Gas	0.00

\* Recovery from multiple tests

## Gas Rates

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





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Shakespeare Oil Comp. INC.

**21-15s-32w-Scott KS**

202 West main st.  
Salem, IL 62881

**Zanobia #1-21**

Job Ticket: 48925

**DST#: 4**

ATTN: Tim Priest

Test Start: 2012.11.25 @ 08:30:00

## 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: 62.00 sec/qt	Cushion Volume: bbl		
Water Loss: 9.38 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 6500.00 ppm			
Filter Cake: 1.00 inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
118.00	mcw with oil scum 5%M 95%W	0.580
295.00	ocgmw 5%O 5%G 30%M 60%W	4.134
477.00	gcomw 10%G 10%O 40%M 40%W	6.691
0.00	200 Feet Gas In Pipe Weak Gas	0.000

Total Length: 890.00 ft      Total Volume: 11.405 bbl

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

Laboratory Name:      Laboratory Location:

Recovery Comments: RW: .20 @ 60 F = 40,000

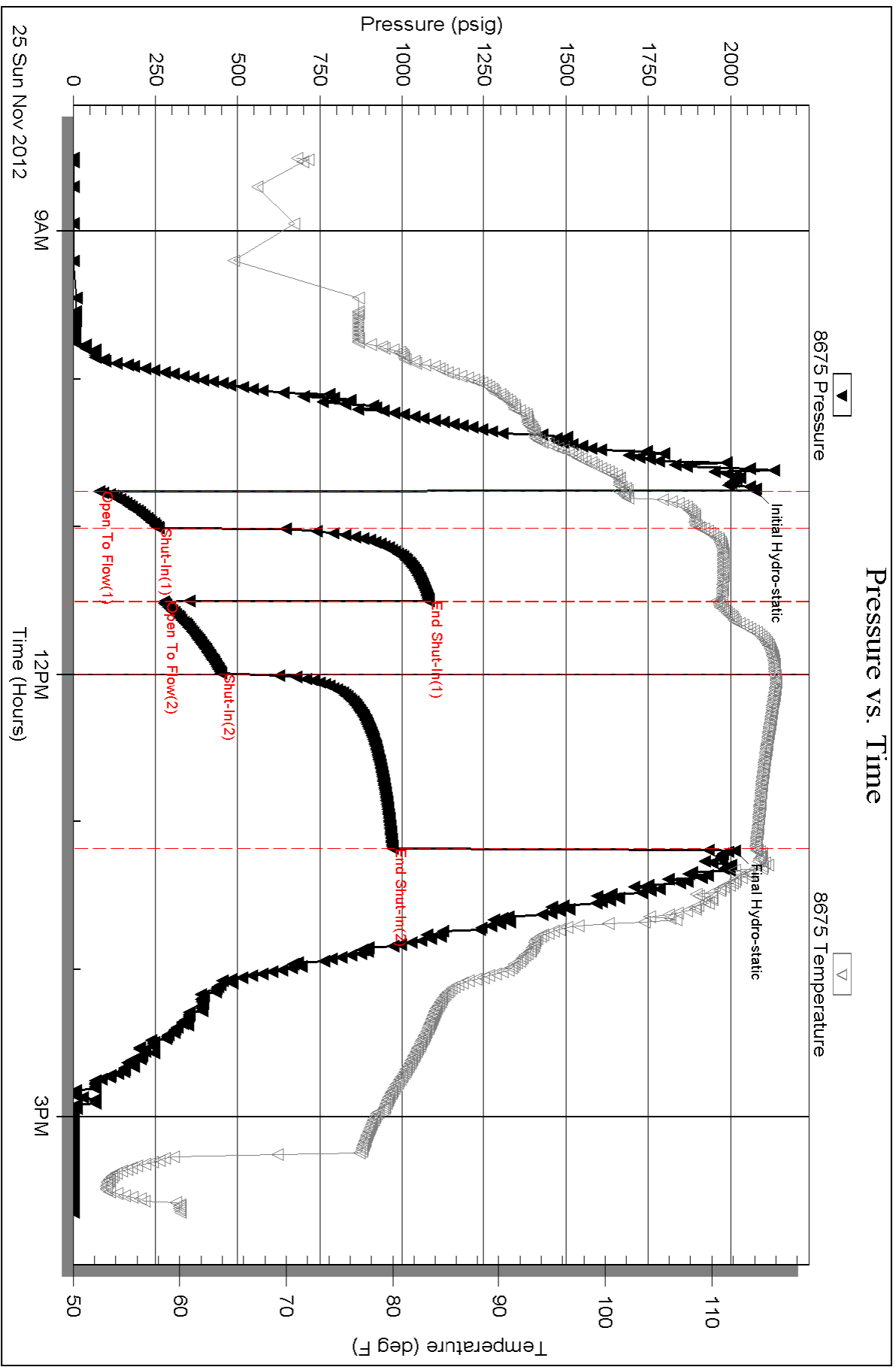
Serial #: 8675

Inside

Shakespeare Oil Corp. INC.

Zanobia #1-21

DST Test Number: 4

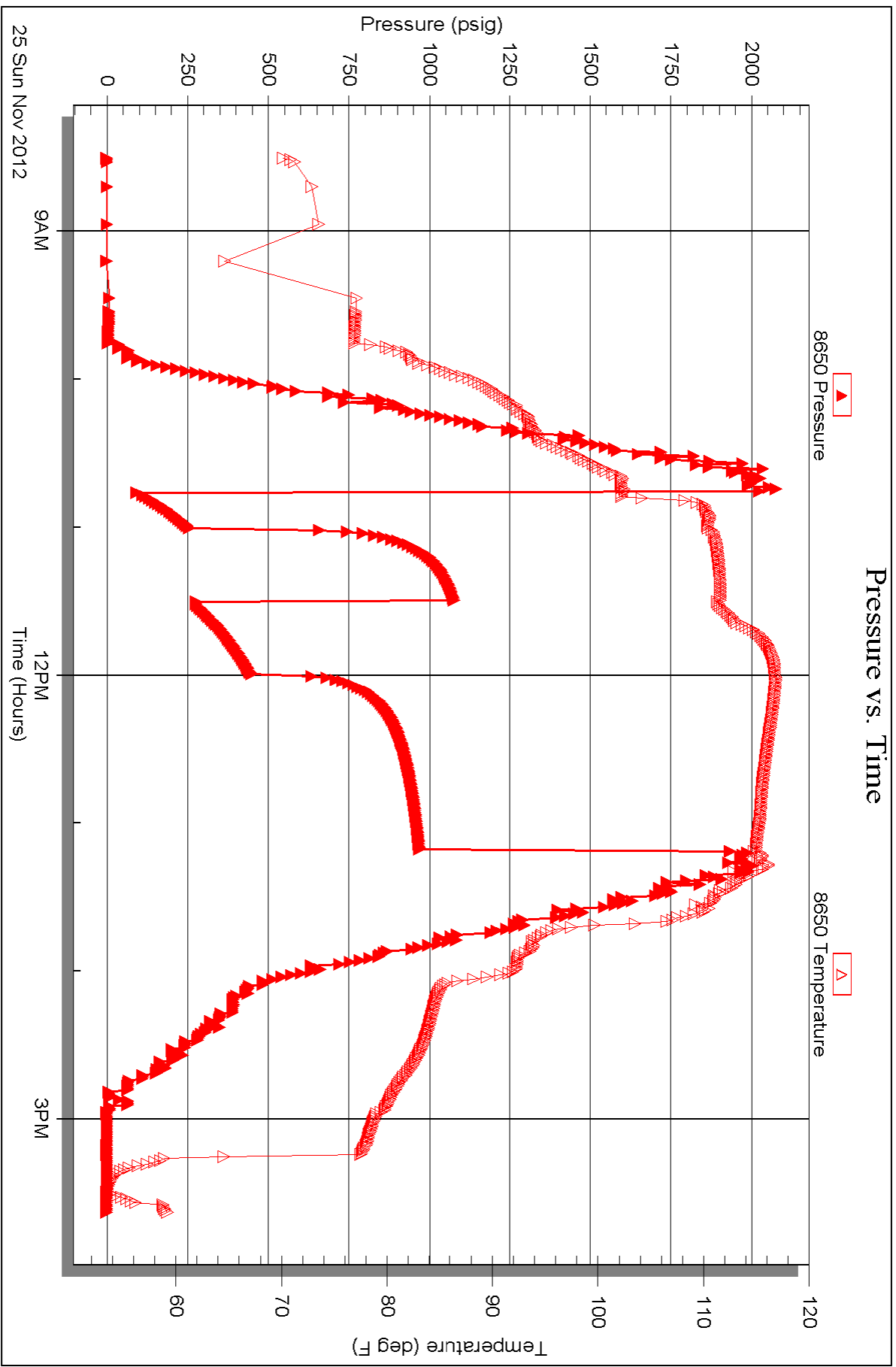


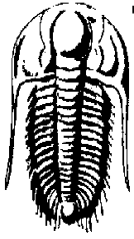
Serial #: 8650

Outside Shakespeare Oil Corp. INC.

Zanobia #1-21

DST Test Number: 4





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Shakespeare Oil Comp. INC.

**21-15s-32w-Logan KS**

202 West main st.  
Salem, IL 62881

**Zanobia #1-21**

Job Ticket: 49926

**DST#: 5**

ATTN: Tim Priest

Test Start: 2012.11.26 @ 09:05:00

## GENERAL INFORMATION:

Formation: **Pawnee & Fort Scott**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:09:15

Time Test Ended: 16:30:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Jace McKinney

Unit No: 46

**Interval: 4268.00 ft (KB) To 4349.00 ft (KB) (TVD)**

Reference Elevations: 2865.00 ft (KB)

Total Depth: 4349.00 ft (KB) (TVD)

2855.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 10.00 ft

**Serial #: 8675**

**Inside**

Press @ Run Depth: 111.09 psig @ 4269.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.11.26

End Date: 2012.11.26

Last Calib.: 2012.11.26

Start Time: 09:05:15

End Time: 16:30:45

Time On Btm: 2012.11.26 @ 11:09:00

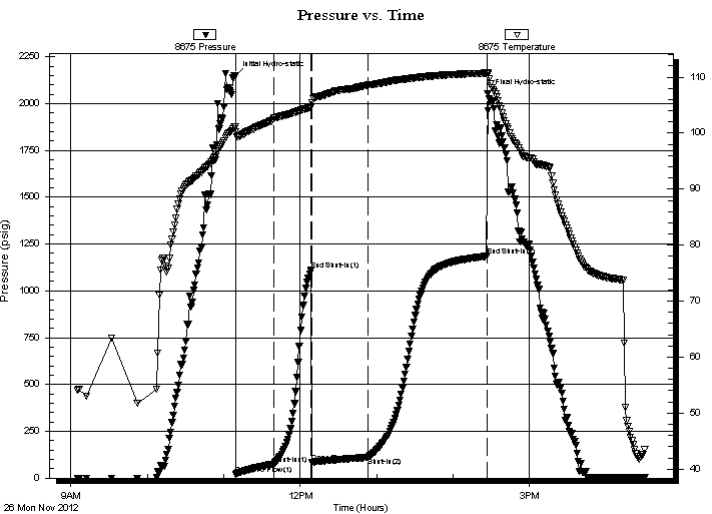
Time Off Btm: 2012.11.26 @ 14:27:00

**TEST COMMENT:** Built to 4 1/2" blow

No return blow

Built to 4" blow

No return blow



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2149.49	101.20	Initial Hydro-static
1	21.20	100.26	Open To Flow (1)
30	75.44	102.68	Shut-In(1)
60	1109.83	104.62	End Shut-In(1)
61	84.25	105.50	Open To Flow (2)
104	111.09	108.60	Shut-In(2)
198	1185.10	110.75	End Shut-In(2)
198	2054.09	110.86	Final Hydro-static

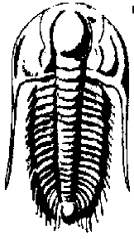
## Recovery

Length (ft)	Description	Volume (bbl)
185.00	w cm 10%W 90%M w ith few oil spots	1.52

## Gas Rates

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

\* Recovery from multiple tests



**TRILOBITE  
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# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Shakespeare Oil Comp. INC.

**21-15s-32w-Logan KS**

202 West main st.  
Salem, IL 62881

**Zanobia #1-21**

Job Ticket: 49926

**DST#: 5**

ATTN: Tim Priest

Test Start: 2012.11.26 @ 09:05:00

## 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: 54.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.99 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6900.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
185.00	w cm 10%W 90%M w ith few oil spots	1.516

Total Length: 185.00 ft      Total Volume: 1.516 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW: .45 @ 45 F = 25,000

Serial #: 8675

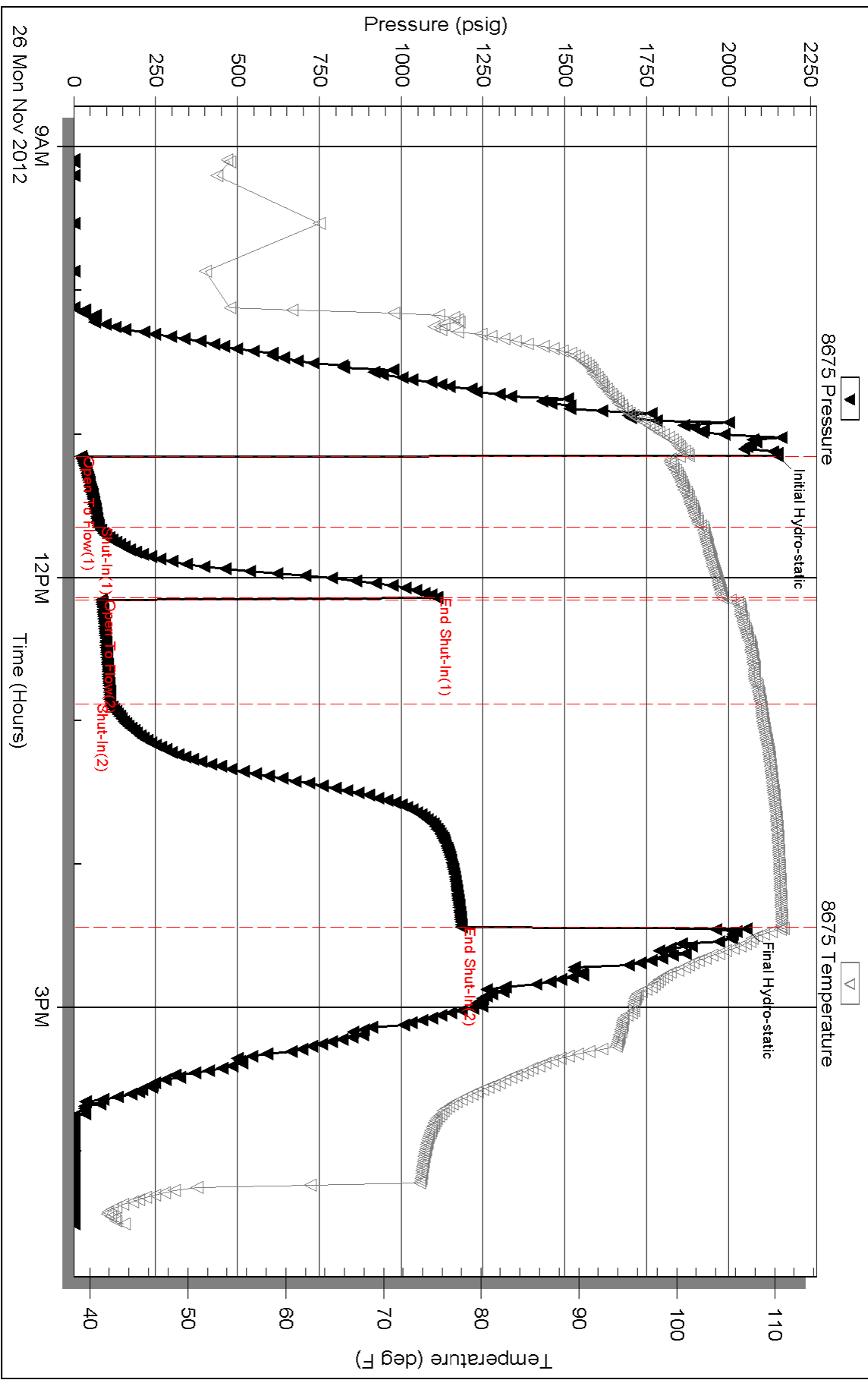
Inside

Shakespeare Oil Corp. INC.

Zanobia #1-21

DST Test Number: 5

### Pressure vs. Time



Triobite Testing, Inc

Ref. No: 49926

Printed: 2012.11.26 @ 22:40:26