



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

O' Brien Resources, LLC

**S19-16s-29w Lane, KS**

POB 6149  
Shreveport, LA 71136

**Steffens 19 #1**

Job Ticket: 48495

**DST#: 1**

ATTN: Kurt Talbot

Test Start: 2012.11.28 @ 01:14:00

## GENERAL INFORMATION:

Formation: **Toronto - Lansing A**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:25:13

Time Test Ended: 07:25:13

Test Type: Conventional Bottom Hole (Initial)

Tester: Chuck Smith

Unit No: 62

**Interval: 3844.00 ft (KB) To 3910.00 ft (KB) (TVD)**

Reference Elevations: 2788.00 ft (KB)

Total Depth: 3910.00 ft (KB) (TVD)

2779.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 9.00 ft

**Serial #: 8018 Inside**

Press @ Run Depth: 49.13 psig @ 3845.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.11.28

End Date: 2012.11.28

Last Calib.: 2012.11.29

Start Time: 01:13:46

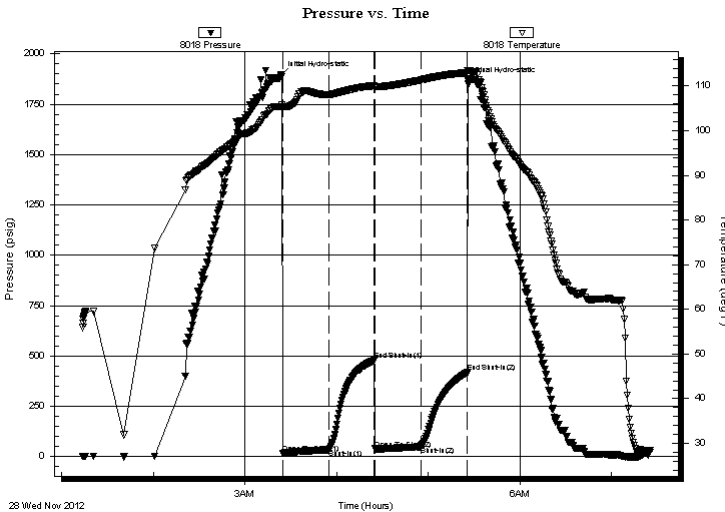
End Time: 07:24:57

Time On Btm: 2012.11.28 @ 03:23:27

Time Off Btm: 2012.11.28 @ 05:25:57

TEST COMMENT: 4" Blow .  
No return.  
4" Blow .  
No return.

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1891.86	105.43	Initial Hydro-static
2	17.43	105.16	Open To Flow (1)
32	34.74	108.08	Shut-In(1)
61	477.80	110.07	End Shut-In(1)
62	38.10	109.82	Open To Flow (2)
92	49.13	111.31	Shut-In(2)
123	417.82	112.96	End Shut-In(2)
123	1864.46	113.48	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
62.00	OCM 5o 95m	0.87
45.00	OCM 25o 75m	0.63

## Gas Rates

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



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**Steffens 19 #1**

Job Ticket: 48495

**DST#: 1**

ATTN: Kurt Talbot

Test Start: 2012.11.28 @ 01:14:00

## 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: 44.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 5.60 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1200.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
62.00	OCM 5o 95m	0.870
45.00	OCM 25o 75m	0.631

Total Length: 107.00 ft      Total Volume: 1.501 bbl

Num Fluid Samples: 0

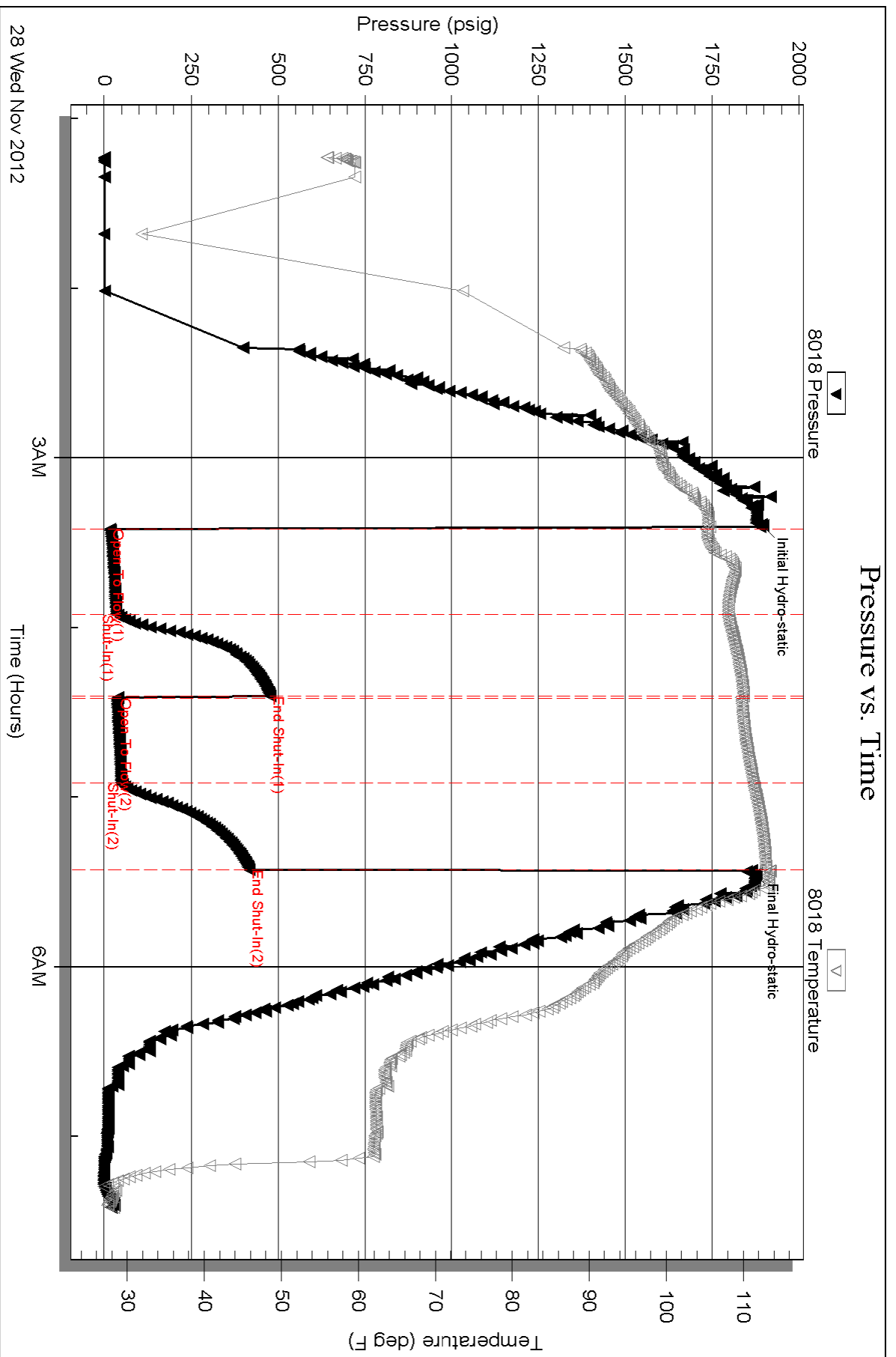
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





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O' Brien Resources, LLC

**S19-16s-29w Lane, KS**

POB 6149  
Shreveport, LA 71136

**Steffens 19 #1**

Job Ticket: 45983

**DST#: 3**

ATTN: Kurt Talbot

Test Start: 2012.12.01 @ 15:35:00

## GENERAL INFORMATION:

Formation: **Myrick Station.**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 17:37:10

Time Test Ended: 21:41:09

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Smith

Unit No: 62

**Interval: 4328.00 ft (KB) To 4390.00 ft (KB) (TVD)**

Reference Elevations: 2788.00 ft (KB)

Total Depth: 4390.00 ft (KB) (TVD)

2779.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 9.00 ft

**Serial #: 8018**

**Inside**

Press @ Run Depth: 595.48 psig @ 4334.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.12.01

End Date:

2012.12.01

Last Calib.:

2012.12.01

Start Time: 15:35:02

End Time:

21:41:10

Time On Btm:

2012.12.01 @ 17:36:20

Time Off Btm:

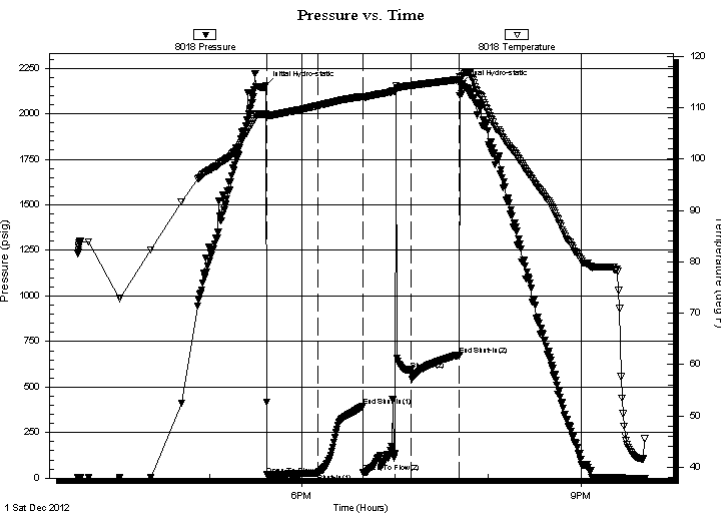
2012.12.01 @ 19:42:10

**TEST COMMENT:** 1" Blow.

No return.

No blow, flushed tool. surge died. Note: tool seems to have plugged during flush causing high "final flow" pressure

No return.



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2153.03	108.79	Initial Hydro-static
1	17.82	108.11	Open To Flow (1)
34	27.63	110.39	Shut-In(1)
63	396.97	112.23	End Shut-In(1)
64	29.35	112.02	Open To Flow (2)
94	595.48	114.36	Shut-In(2)
126	676.89	115.51	End Shut-In(2)
126	2157.49	115.85	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
40.00	VSOCM 1 to 99m	0.56

\* Recovery from multiple tests

## Gas Rates

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



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POB 6149  
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**Steffens 19 #1**

Job Ticket: 45983

**DST#: 3**

ATTN: Kurt Talbot

Test Start: 2012.12.01 @ 15:35:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 10.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.40 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1400.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
40.00	VSOCM 1o 99m	0.561

Total Length: 40.00 ft      Total Volume: 0.561 bbl

Num Fluid Samples: 0

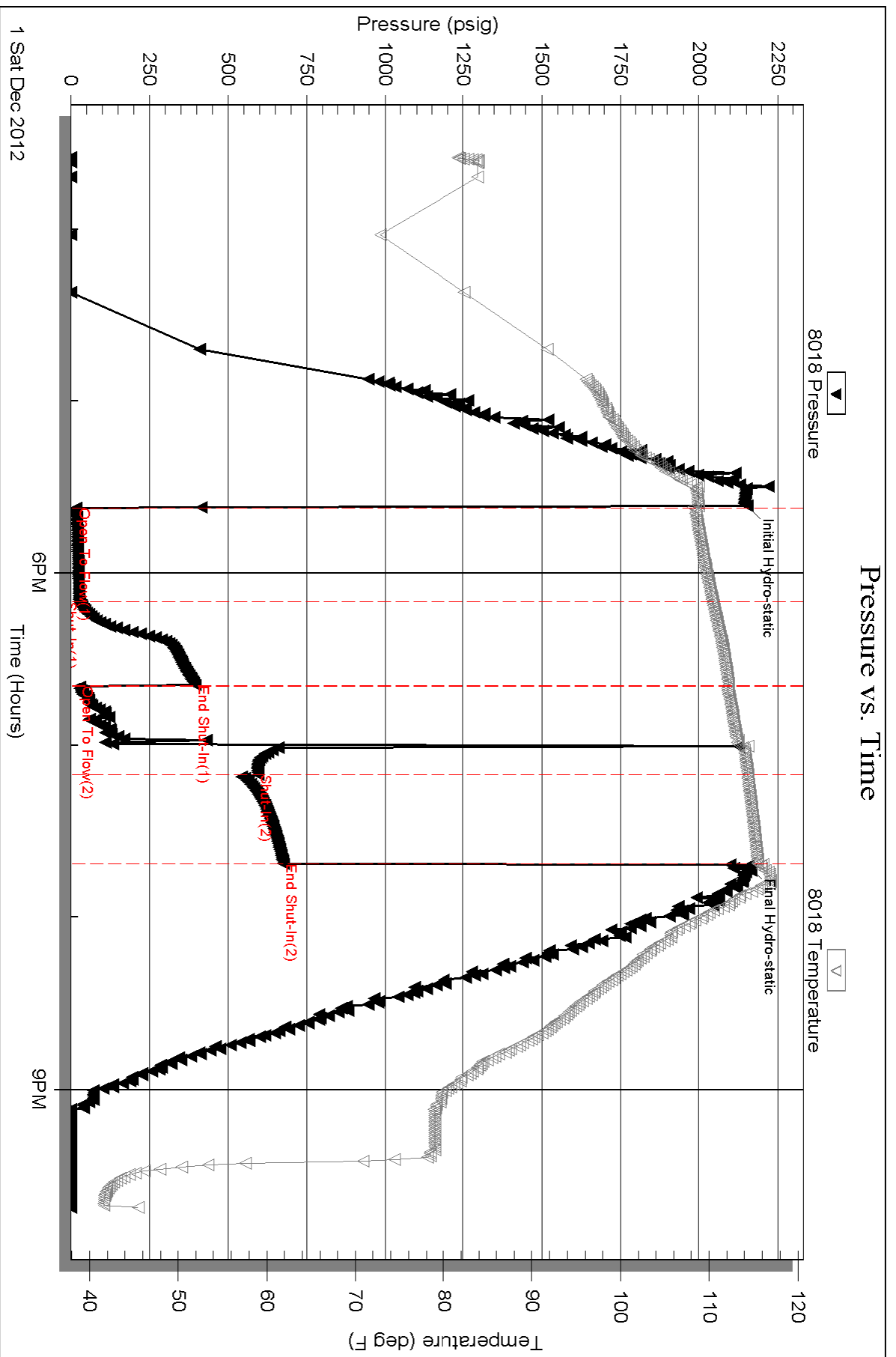
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





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Shreveport, LA 71136

**Steffens 19 #1**

Job Ticket: 45982

**DST#: 2**

ATTN: Kurt Talbot

Test Start: 2012.11.30 @ 07:43:00

## GENERAL INFORMATION:

Formation: **Lansing H - J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:31:50

Time Test Ended: 12:59:50

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Smith

Unit No: 62

**Interval: 4044.00 ft (KB) To 4140.00 ft (KB) (TVD)**

Reference Elevations: 2788.00 ft (KB)

Total Depth: 4140.00 ft (KB) (TVD)

2779.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 9.00 ft

**Serial #: 8018**

**Inside**

Press @ Run Depth: 23.49 psig @ 4050.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.11.30

End Date: 2012.11.30

Last Calib.: 2012.11.30

Start Time: 07:43:02

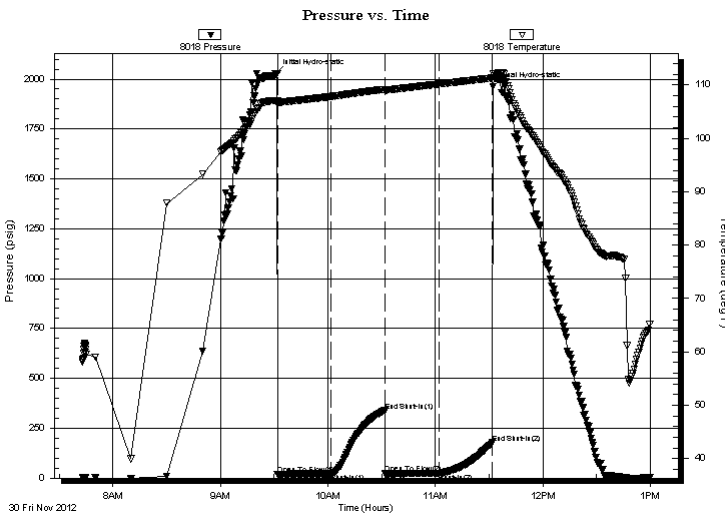
End Time: 12:59:50

Time On Btm: 2012.11.30 @ 09:30:40

Time Off Btm: 2012.11.30 @ 11:32:20

**TEST COMMENT:** 1/2" Blow .  
No return.  
No blow .  
No return.

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2029.08	107.05	Initial Hydro-static
2	18.14	106.27	Open To Flow (1)
31	21.82	107.84	Shut-In(1)
61	337.32	109.19	End Shut-In(1)
62	21.61	108.94	Open To Flow (2)
92	23.49	110.19	Shut-In(2)
121	176.40	111.32	End Shut-In(2)
122	1962.25	112.11	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
20.00	VSOCM 1 to 99m	0.28

\* Recovery from multiple tests

## Gas Rates

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



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**Steffens 19 #1**

Job Ticket: 45982

**DST#: 2**

ATTN: Kurt Talbot

Test Start: 2012.11.30 @ 07:43:00

## 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:

bbbl

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

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
20.00	VSOCM 1o 99m	0.281

Total Length: 20.00 ft      Total Volume: 0.281 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

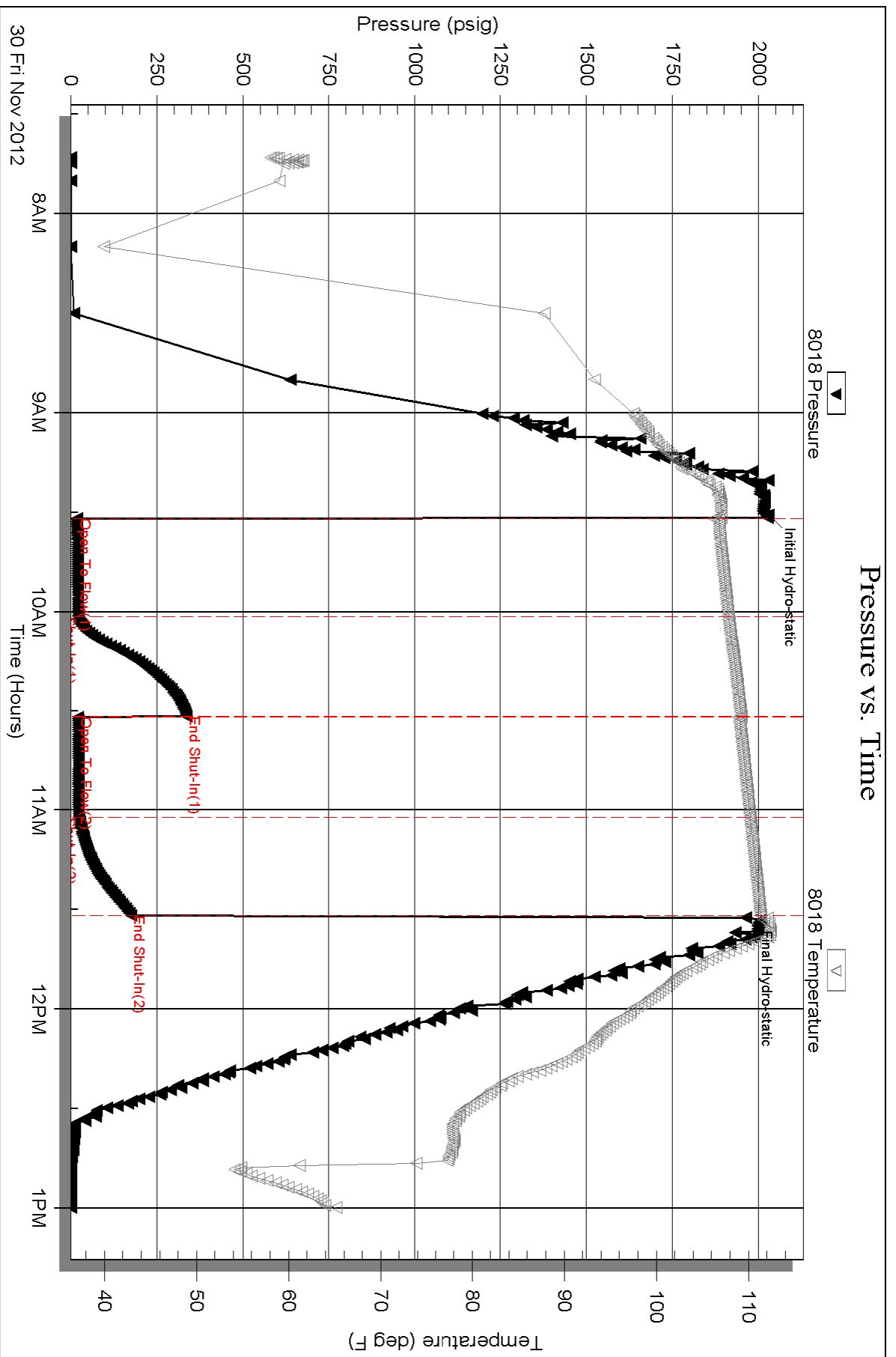
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:







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Shreveport, LA 71136

**Steffens 19 #1**

Job Ticket: 45985

**DST#: 5**

ATTN: Kurt Talbot

Test Start: 2012.12.02 @ 21:50:00

## GENERAL INFORMATION:

Formation: **Cherokee - Johnson**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:48:40

Time Test Ended: 04:11:30

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Smith

Unit No: 62

**Interval: 4424.00 ft (KB) To 4485.00 ft (KB) (TVD)**

Reference Elevations: 2788.00 ft (KB)

Total Depth: 4485.00 ft (KB) (TVD)

2779.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 9.00 ft

**Serial #: 8018**

**Inside**

Press @ Run Depth: 19.69 psig @ 4429.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.12.02

End Date:

2012.12.03

Last Calib.: 2012.12.03

Start Time: 21:50:02

End Time:

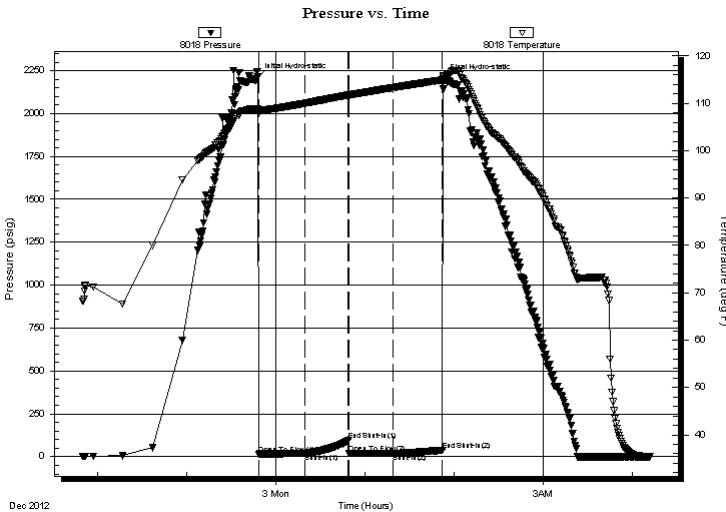
04:11:30

Time On Btm: 2012.12.02 @ 23:47:30

Time Off Btm: 2012.12.03 @ 01:52:30

**TEST COMMENT:** Surface blow built to 1/2"  
No return.  
Weak surface blow.  
No return.

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2211.58	108.81	Initial Hydro-static
2	16.27	107.89	Open To Flow (1)
32	19.05	110.02	Shut-In(1)
62	94.42	111.75	End Shut-In(1)
62	19.34	111.71	Open To Flow (2)
92	19.69	113.33	Shut-In(2)
125	38.00	114.92	End Shut-In(2)
125	2200.74	115.74	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
10.00	OCM 5o 95m	0.14

## Gas Rates

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

\* Recovery from multiple tests



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**Steffens 19 #1**

Job Ticket: 45985

**DST#: 5**

ATTN: Kurt Talbot

Test Start: 2012.12.02 @ 21:50:00

## 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: 50.00 sec/qt

Cushion Volume:

bbbl

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

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1700.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	OCM 5o 95m	0.140

Total Length: 10.00 ft      Total Volume: 0.140 bbl

Num Fluid Samples: 0

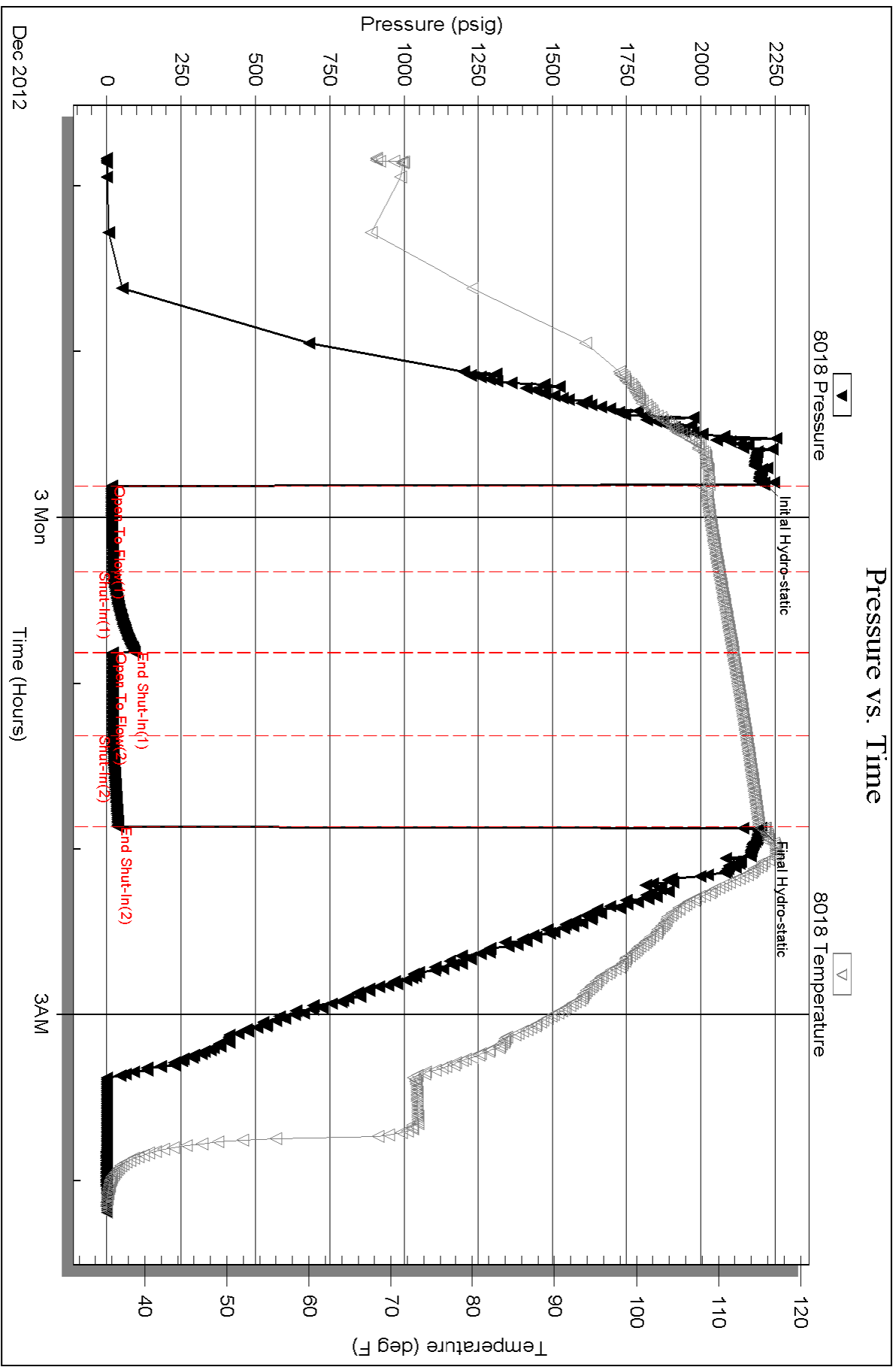
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:





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**Steffens 19 #1**

Job Ticket: 45984

**DST#: 4**

ATTN: Kurt Talbot

Test Start: 2012.12.02 @ 05:55:00

## GENERAL INFORMATION:

Formation: **Ft. Scott**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 07:23:10

Time Test Ended: 11:03:39

Test Type: Conventional Bottom Hole (Reset)

Tester: Chuck Smith

Unit No: 62

**Interval: 4383.00 ft (KB) To 4425.00 ft (KB) (TVD)**

Reference Elevations: 2788.00 ft (KB)

Total Depth: 4425.00 ft (KB) (TVD)

2779.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 9.00 ft

**Serial #: 8018**

**Inside**

Press @ Run Depth: 21.13 psig @ 4389.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.12.02

End Date:

2012.12.02

Last Calib.: 2012.12.02

Start Time: 05:55:02

End Time:

11:03:40

Time On Btm: 2012.12.02 @ 07:21:50

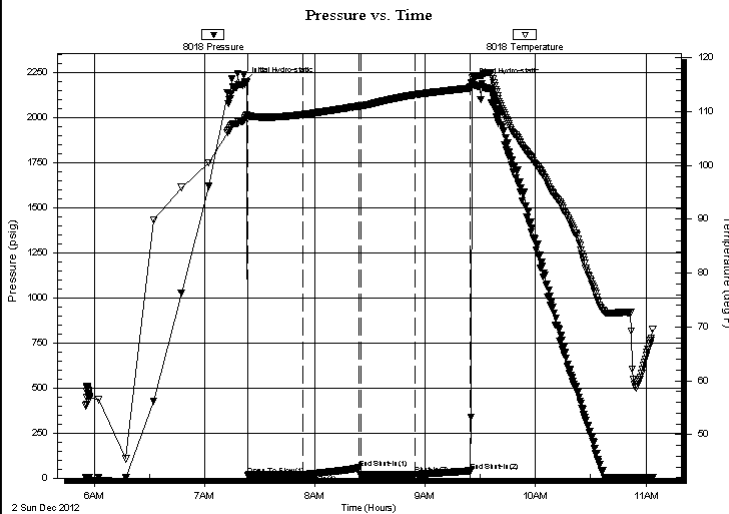
Time Off Btm: 2012.12.02 @ 09:25:10

**TEST COMMENT:** 3/4" Blow .

No return.

Weak surface blow .

No return.



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2195.98	108.77	Initial Hydro-static
2	17.26	108.71	Open To Flow (1)
32	20.64	109.45	Shut-In(1)
62	56.65	111.03	End Shut-In(1)
63	17.72	111.02	Open To Flow (2)
93	21.13	113.14	Shut-In(2)
123	40.69	114.37	End Shut-In(2)
124	2191.39	115.23	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
15.00	OSM 3o 97m	0.21

## Gas Rates

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

\* Recovery from multiple tests



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**Steffens 19 #1**

Job Ticket: 45984

**DST#: 4**

ATTN: Kurt Talbot

Test Start: 2012.12.02 @ 05:55:00

## 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: 50.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.40 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1400.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
15.00	OSM 3o 97m	0.210

Total Length: 15.00 ft      Total Volume:                      bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

### Pressure vs. Time

