



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

Red Oak Energy
7701 E. Kellogg Dr.
STE 710 Wichita KS 67207
ATTN: Sean Dennihan

Johnson View Farm #1-30
30-13-38w Wallace,KS
Job Ticket: 64493 **DST#: 1**
Test Start: 2015.12.03 @ 00:00:00

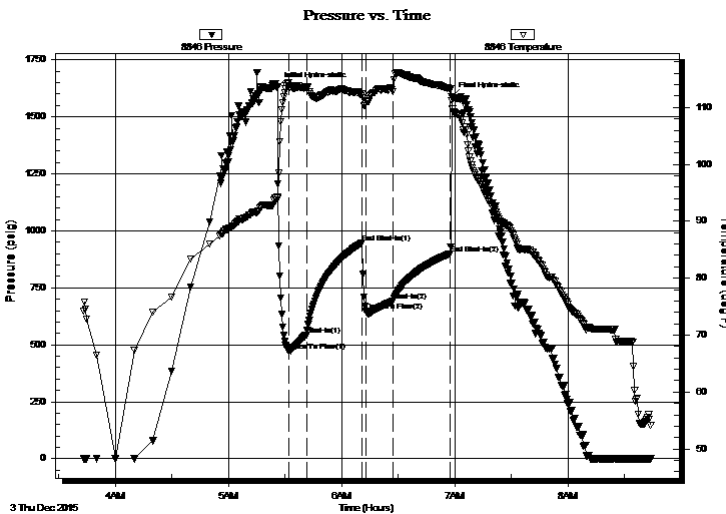
GENERAL INFORMATION:

Formation: **Topeka**
Deviated: No Whipstock: ft (KB)
Time Tool Opened:
Time Test Ended:
Interval: 3514.00 ft (KB) To 3563.00 ft (KB) (TVD)
Total Depth: 3563.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair
Reference Elevations: 3246.00 ft (KB)
3241.00 ft (CF)
KB to GR/CF: 5.00 ft
Test Type: Conventional Bottom Hole (Initial)
Tester: Mike Roberts
Unit No: 65

Serial #: 8846 Inside
Press@RunDepth: 900.30 psig @ 3520.00 ft (KB) Capacity: 8000.00 psig
Start Date: 2015.12.03 End Date: 2015.12.03 Last Calib.: 2015.12.03
Start Time: 03:43:15 End Time: 08:44:00 Time On Btm: 2015.12.03 @ 05:26:00
Time Off Btm: 2015.12.03 @ 06:58:15

TEST COMMENT: IF:BOB in 30 seconds.
IS:No return blow
FF:BOB in 30 seconds
FS:No return blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1632.99	94.17	Initial Hydro-static
6	472.41	114.35	Open To Flow (1)
16	544.28	113.41	Shut-In(1)
45	948.00	112.33	End Shut-In(1)
47	647.63	110.66	Open To Flow (2)
62	691.49	112.81	Shut-In(2)
92	900.30	113.28	End Shut-In(2)
93	1589.51	111.23	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
118.00	gcomw 5%g 15%o 20%m 60%w	0.58
310.00	gcow 10%g 40%o 50%w	4.35
496.00	gcom 10%g 30%o 60%m	6.96
486.00	ocm 1%o 99%m	6.82

Gas Rates

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



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FLUID SUMMARY

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7701 E. Kellogg Dr.
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ATTN: Sean Dennihan

Johnson View Farm #1-30
30-13-38w Wallace,KS
Job Ticket: 64493 **DST#: 1**
Test Start: 2015.12.03 @ 00:00:00

Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API: 0 deg API
Mud Weight: 10.00 lb/gal	Cushion Length: ft	Water Salinity: 20000 ppm
Viscosity: 32.00 sec/qt	Cushion Volume: bbl	
Water Loss: in ³	Gas Cushion Type:	
Resistivity: 0.00 ohm.m	Gas Cushion Pressure: psig	
Salinity: 21000.00 ppm		
Filter Cake: 1.00 inches		

Recovery Information

Recovery Table

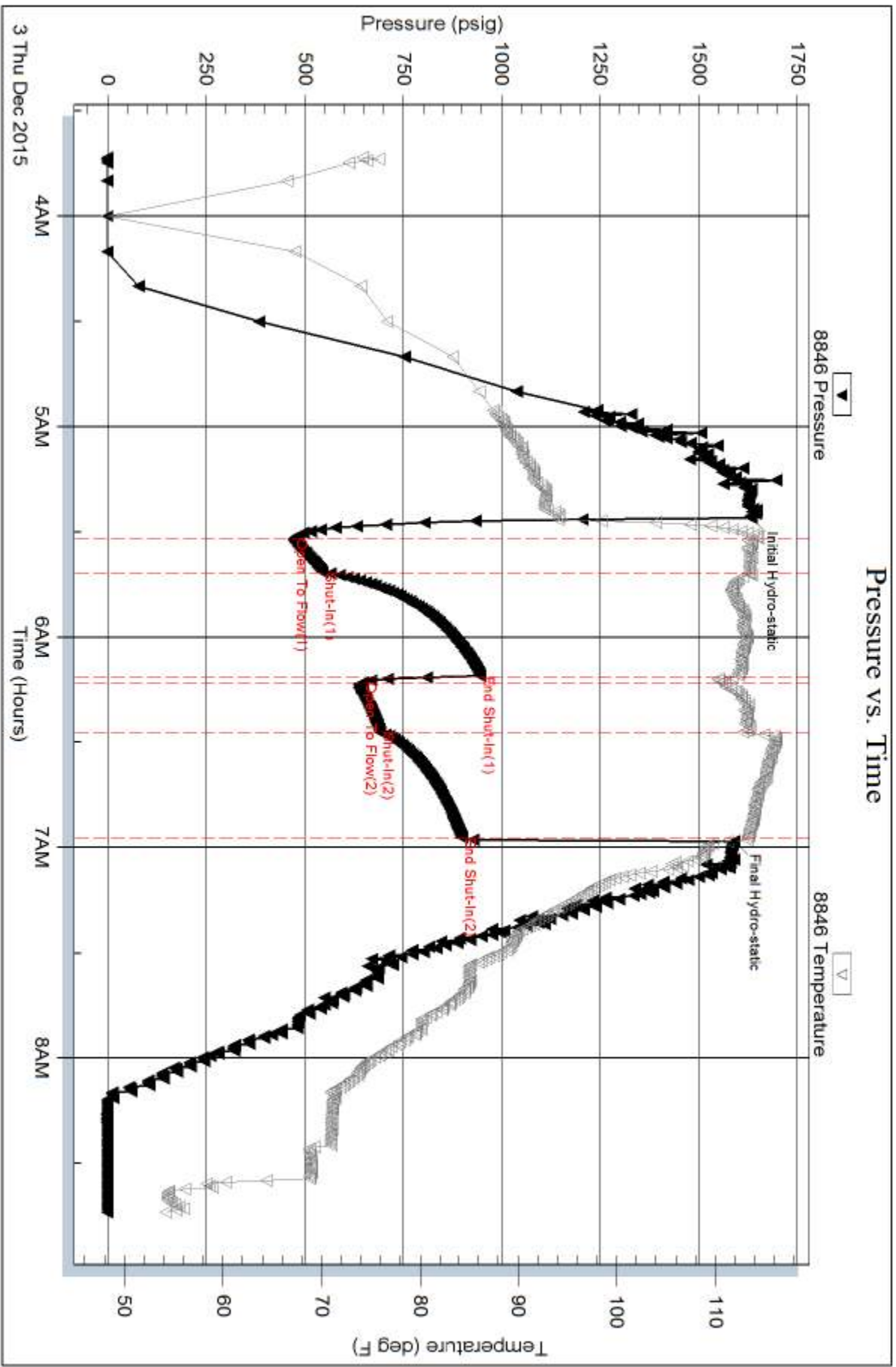
Length ft	Description	Volume bbl
118.00	gcomw 5%g 15%o 20%m 60%w	0.580
310.00	gcow 10%g 40%o 50%w	4.348
496.00	gcom 10%g 30%o 60%m	6.958
486.00	ocm 1%o 99%m	6.817

Total Length: 1410.00 ft Total Volume: 18.703 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: RW= .6 @ 42.6= 20,000 ppm





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DRILL STEM TEST REPORT

Red Oak Energy

30-13-38w Wallace Co KS

7701 E. Kellogg Dr.
STE 710 Wichita KS
67207

Johnson View Farms

Job Ticket: 64495

DST#: 2

ATTN: Sean Dennihan

Test Start: 2015.12.03 @ 18:54:15

GENERAL INFORMATION:

Formation: **Lecompton**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:22:00

Time Test Ended: 00:08:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Mike Roberts

Unit No: 65

Interval: 3702.00 ft (KB) To 3740.00 ft (KB) (TVD)

Reference Elevations: 3246.00 ft (KB)

Total Depth: 3740.00 ft (KB) (TVD)

3241.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8846 Inside

Press @ Run Depth: 567.17 psig @ 3735.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.12.03

End Date:

2015.12.04

Last Calib.:

2015.12.04

Start Time: 18:54:15

End Time:

00:08:45

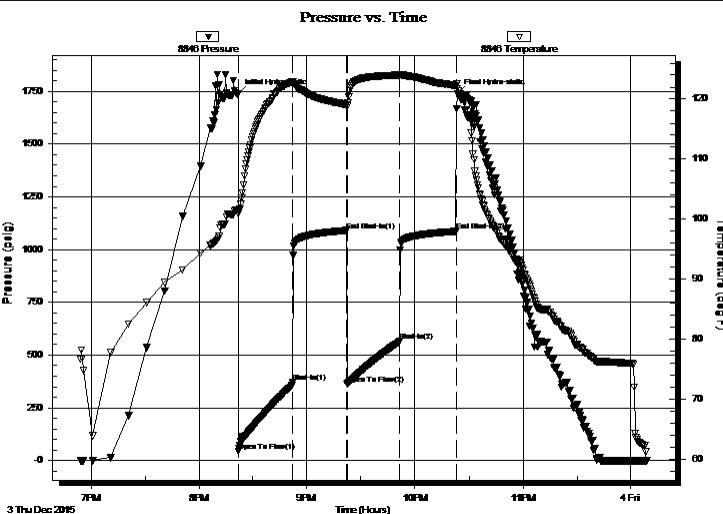
Time On Btm:

2015.12.03 @ 20:21:45

Time Off Btm:

2015.12.03 @ 22:23:45

TEST COMMENT: IF: Built to 2" blow
IS: No return blow
FF: Built to 2" blow
FS: No return blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1738.06	101.51	Initial Hydro-static
1	45.34	100.92	Open To Flow (1)
31	369.77	122.85	Shut-In(1)
61	1090.92	119.04	End Shut-In(1)
61	361.47	118.83	Open To Flow (2)
90	567.17	124.01	Shut-In(2)
122	1086.76	122.25	End Shut-In(2)
122	1739.02	121.80	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
366.00	mcw 10% m 90% w	4.06
640.00	w cm 5% w 95% m	8.98

Gas Rates

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

* Recovery from multiple tests



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DRILL STEM TEST REPORT

FLUID SUMMARY

Red Oak Energy

30-13-38w Wallace Co KS

7701 E. Kellogg Dr.
STE 710 Wichita KS
67207

Johnson View Farms

Job Ticket: 64495

DST#: 2

ATTN: Sean Dennihan

Test Start: 2015.12.03 @ 18:54:15

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

30000 ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.19 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 3500.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
366.00	mcw 10%m 90%w	4.059
640.00	w cm 5%w 95%m	8.978

Total Length: 1006.00 ft Total Volume: 13.037 bbl

Num Fluid Samples: 0

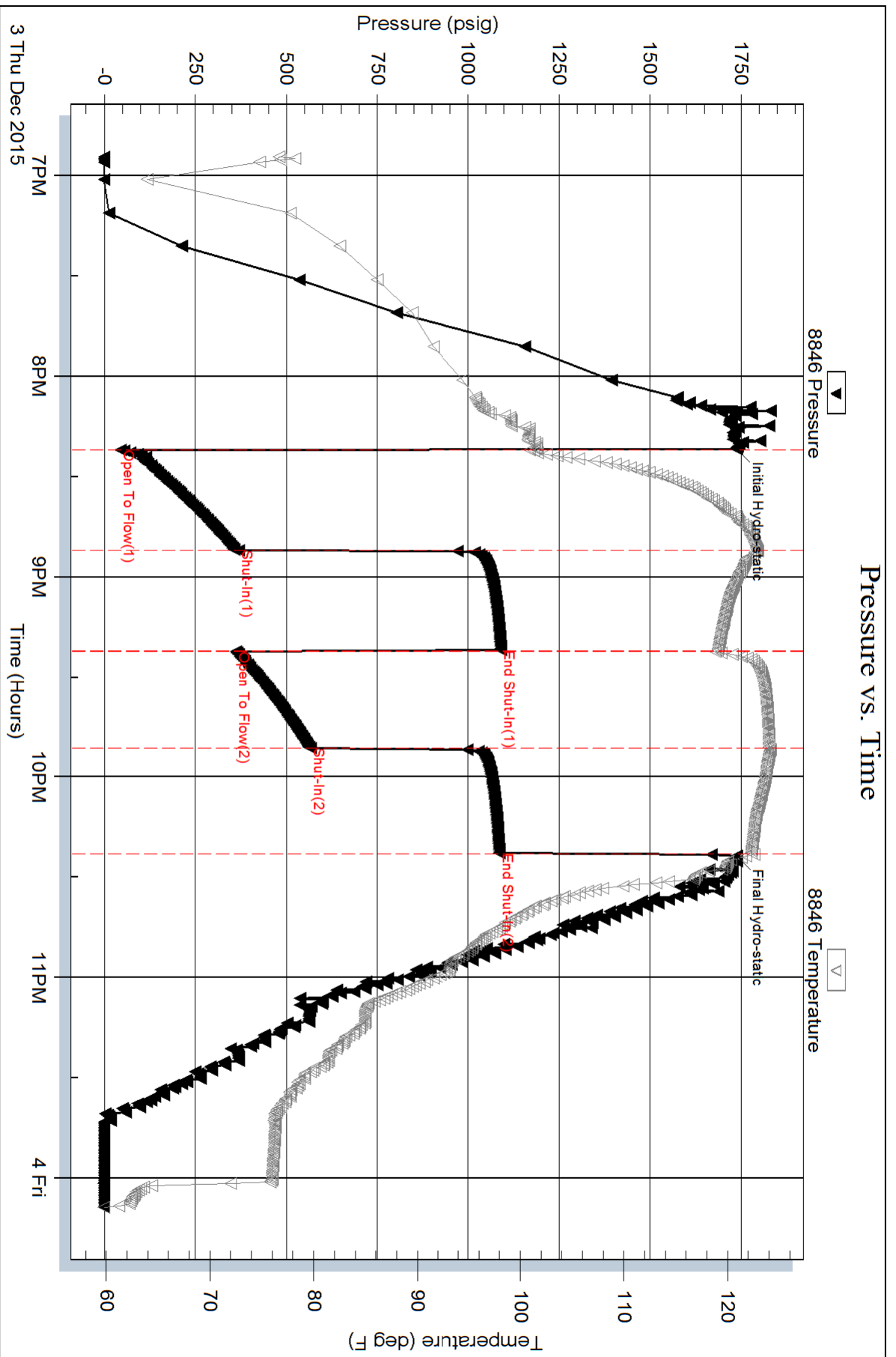
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW= .5@ 37.3*= 30,000 ppm





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Red Oak Energy

30-13-38w Wallace Co KS

7701 E. Kellogg Dr.
STE 710 Wichita KS
67207

Johnson View Farms

Job Ticket: 64496

DST#: 3

ATTN: Sean Dennihan

Test Start: 2015.12.04 @ 08:16:15

GENERAL INFORMATION:

Formation: **Lansing A**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 09:46:45

Time Test Ended: 13:34:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Mike Roberts

Unit No: 65

Interval: 3787.00 ft (KB) To 3826.00 ft (KB) (TVD)

Reference Elevations: 3246.00 ft (KB)

Total Depth: 3826.00 ft (KB) (TVD)

3241.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8846

Inside

Press@RunDepth: 106.64 psig @ 3821.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.12.04

End Date:

2015.12.04

Last Calib.:

2015.12.04

Start Time: 08:16:15

End Time:

13:34:00

Time On Btm:

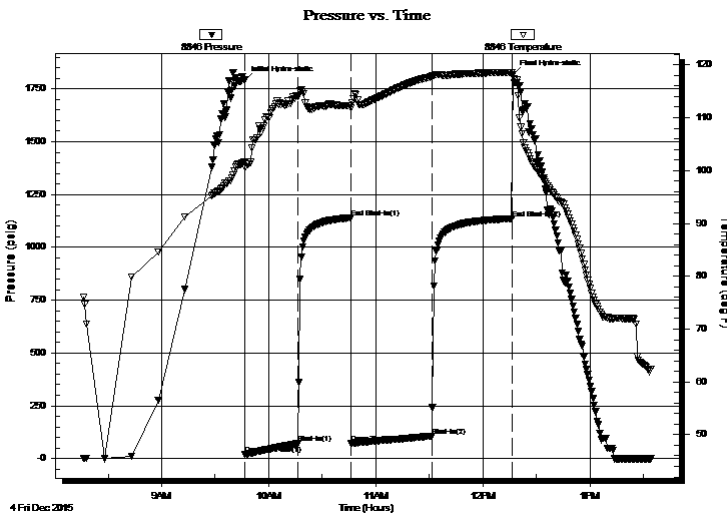
2015.12.04 @ 09:46:30

Time Off Btm:

2015.12.04 @ 12:16:45

TEST COMMENT: IF: Built to 4" blow
IS: No return blow
FF: Built to 6 1/2" blow
FS: Built to weak surface blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1790.94	101.59	Initial Hydro-static
1	19.61	100.59	Open To Flow (1)
30	71.28	113.94	Shut-In(1)
60	1140.00	112.22	End Shut-In(1)
60	73.46	111.83	Open To Flow (2)
105	106.64	117.80	Shut-In(2)
150	1136.09	118.57	End Shut-In(2)
151	1818.39	118.16	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
200.00	w cm 20%w 80%m	1.73

* Recovery from multiple tests

Gas Rates

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



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FLUID SUMMARY

Red Oak Energy

30-13-38w Wallace Co KS

7701 E. Kellogg Dr.
STE 710 Wichita KS
67207

Johnson View Farms

Job Ticket: 64496

DST#: 3

ATTN: Sean Dennihan

Test Start: 2015.12.04 @ 08:16:15

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

32000 ppm

Viscosity: 57.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.18 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 5100.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
200.00	w cm 20%w 80%m	1.731

Total Length: 200.00 ft Total Volume: 1.731 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

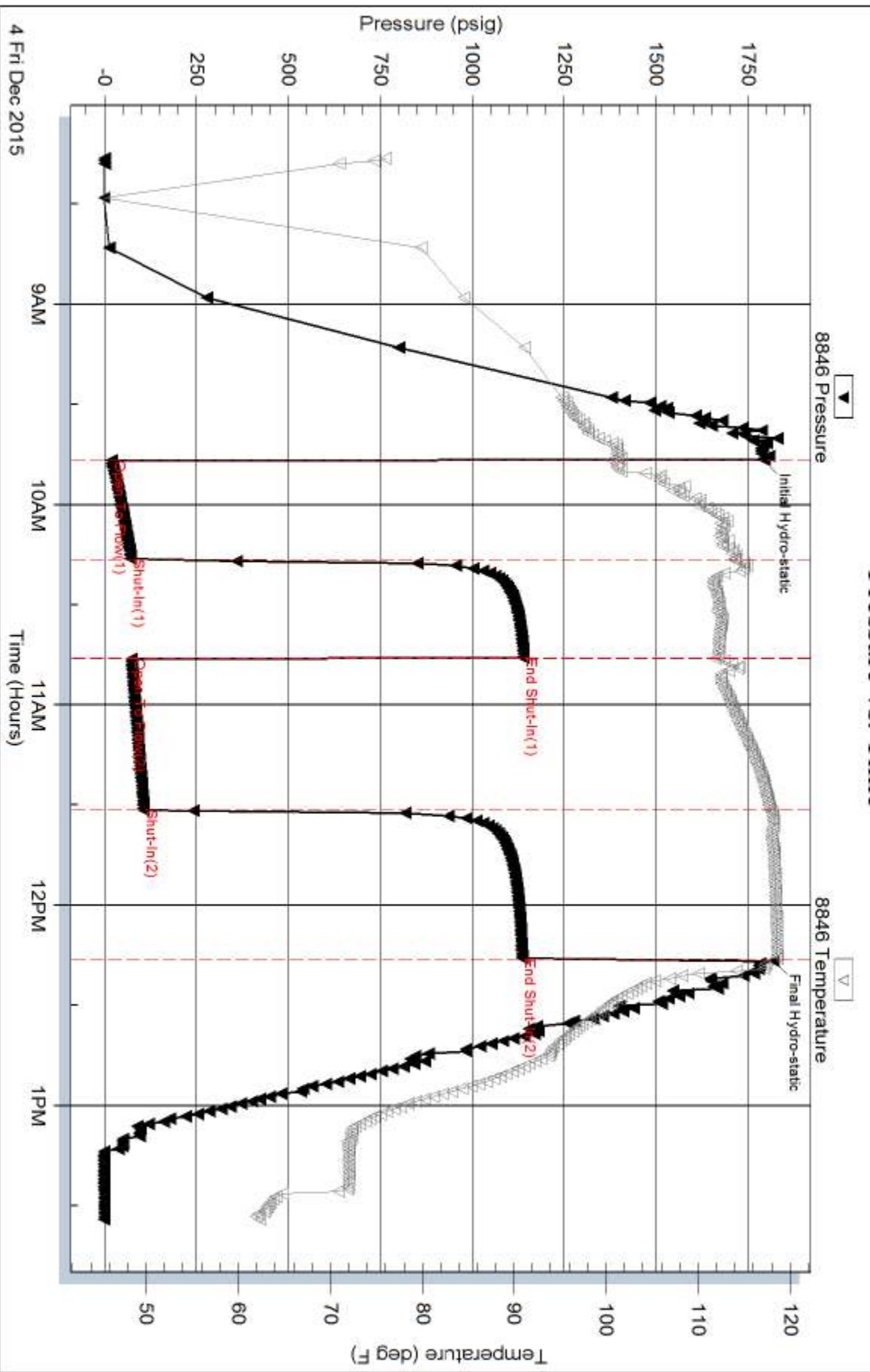
Serial #:

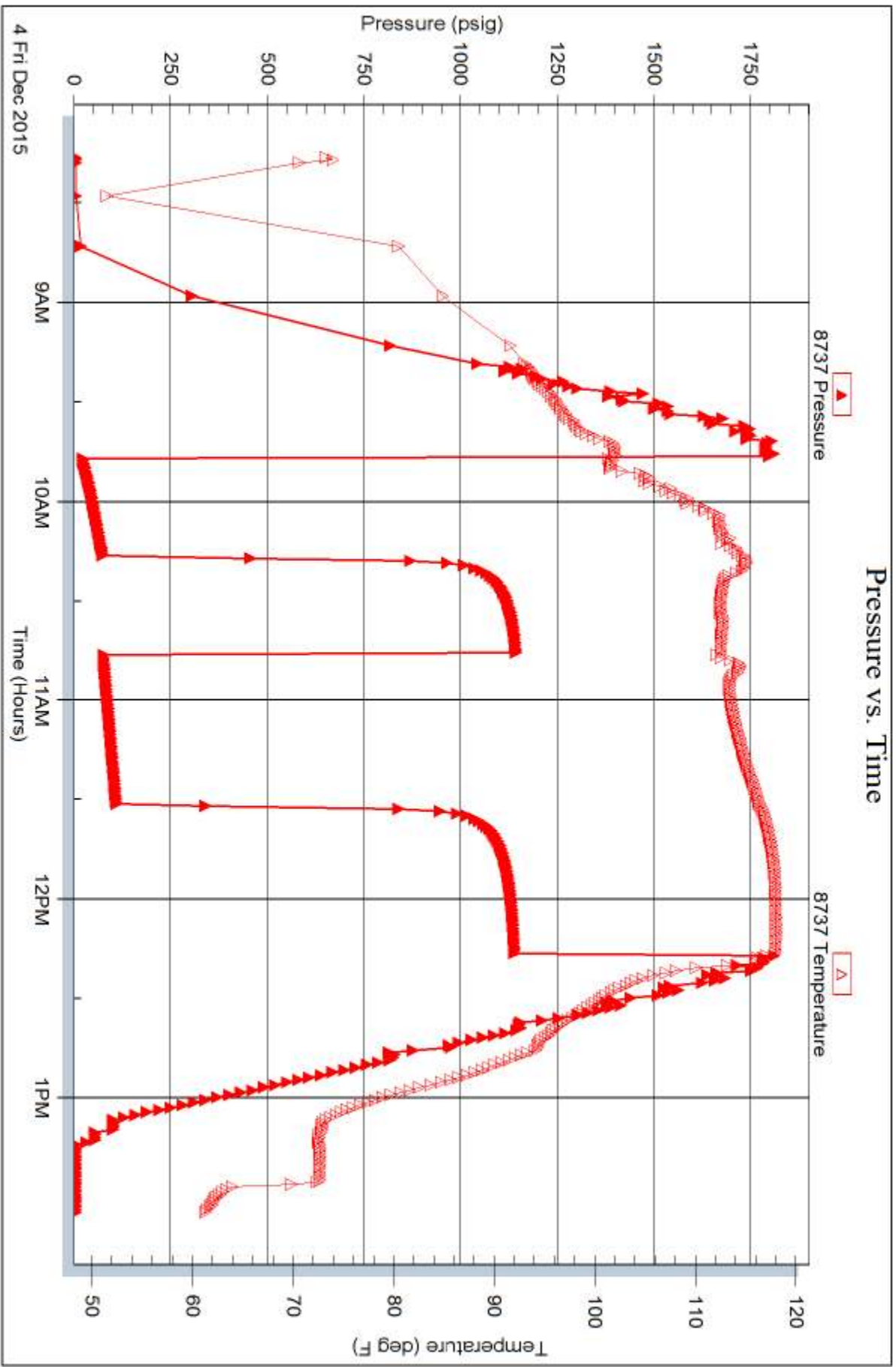
Laboratory Name:

Laboratory Location:

Recovery Comments: RW= .3@55.1*=32000 ppm

Pressure vs. Time







TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Red Oak Energy

30-13-38w Wallace Co KS

7701 E. Kellogg Dr.
STE 710 Wichita KS
67207

Johnson View Farms

Job Ticket: 64497

DST#: 4

ATTN: Sean Dennihan

Test Start: 2015.12.04 @ 19:51:15

GENERAL INFORMATION:

Formation: **C & D**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:06:15

Time Test Ended: 01:52:45

Test Type: Conventional Bottom Hole (Reset)

Tester: Mike Roberts

Unit No: 65

Interval: 3824.00 ft (KB) To 3878.00 ft (KB) (TVD)

Reference Elevations: 3246.00 ft (KB)

Total Depth: 3878.00 ft (KB) (TVD)

3241.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8846

Inside

Press @ Run Depth: 432.24 psig @ 3830.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.12.04

End Date:

2015.12.05

Last Calib.:

2015.12.05

Start Time: 19:51:15

End Time:

01:52:45

Time On Btm:

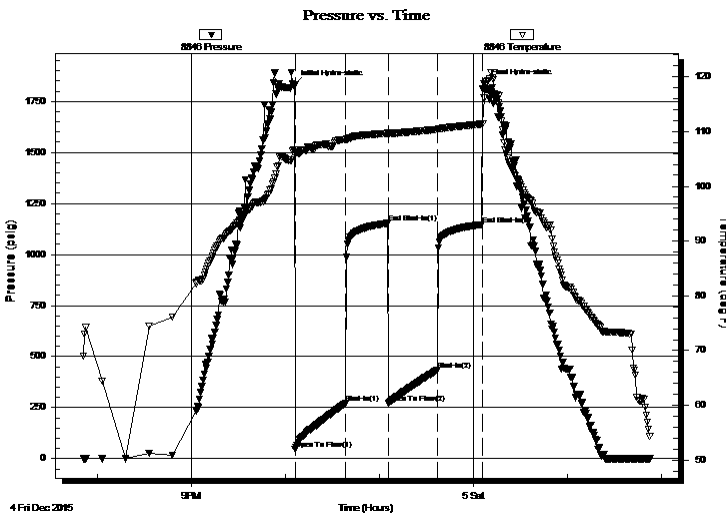
2015.12.04 @ 22:06:00

Time Off Btm:

2015.12.05 @ 00:06:45

TEST COMMENT: IF:BOB in 7 min.
IS:No return blow
FF:BOB in 8 min.
FS:No return blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1830.30	106.66	Initial Hydro-static
1	47.07	105.82	Open To Flow (1)
33	270.36	108.44	Shut-In(1)
60	1153.04	109.69	End Shut-In(1)
60	272.83	109.47	Open To Flow (2)
91	432.24	110.39	Shut-In(2)
120	1146.77	111.38	End Shut-In(2)
121	1838.12	116.12	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
490.00	mcw 10% m 90% w	5.80
310.00	mcw 40% m 60% w	4.35
134.00	w cm 10% w 90% m	1.88

Gas Rates

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

* Recovery from multiple tests



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7701 E. Kellogg Dr.
STE 710 Wichita KS
67207

Johnson View Farms

Job Ticket: 64497

DST#: 4

ATTN: Sean Dennihan

Test Start: 2015.12.04 @ 19:51:15

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

32000 ppm

Viscosity: 57.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.19 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 5100.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
490.00	mcw 10%m 90%w	5.798
310.00	mcw 40%m 60%w	4.348
134.00	w cm 10%w 90%m	1.880

Total Length: 934.00 ft Total Volume: 12.026 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

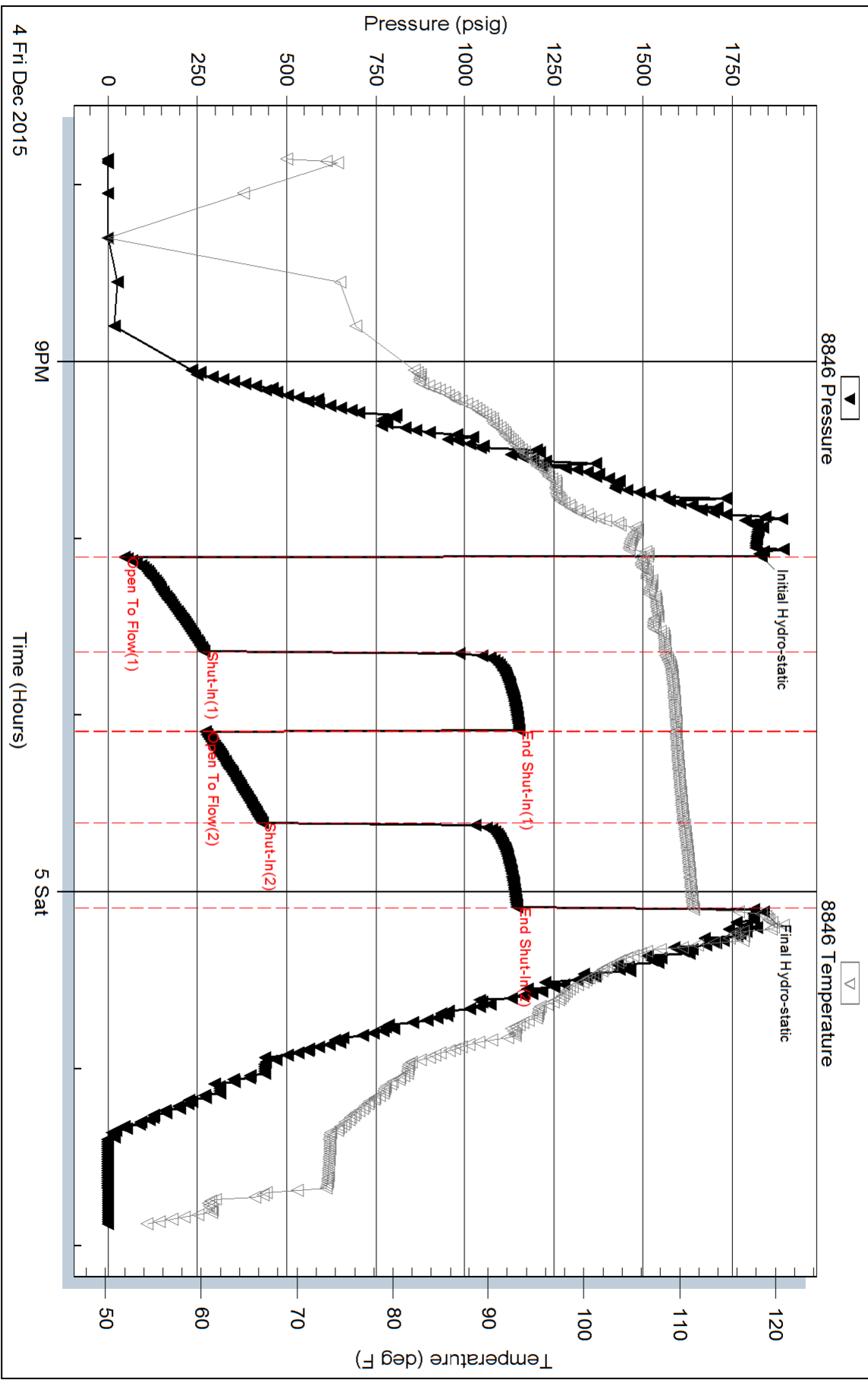
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW= .3@ 58.2= 32,000 ppm

Pressure vs. Time





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DRILL STEM TEST REPORT

Red Oak Energy

30-13-38w Wallace Co KS

7701 E. Kellogg Dr.
STE 710 Wichita KS
67207

Johnson View Farms

Job Ticket: 64498

DST#: 5

ATTN: Sean Dennihan

Test Start: 2015.12.06 @ 21:04:15

GENERAL INFORMATION:

Formation: **Sand**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 23:09:30

Time Test Ended: 04:13:00

Test Type: Conventional Bottom Hole (Reset)

Tester: Mike Roberts

Unit No: 65

Interval: 4475.00 ft (KB) To 4540.00 ft (KB) (TVD)

Reference Elevations: 3246.00 ft (KB)

Total Depth: 4540.00 ft (KB) (TVD)

3241.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8846 Inside

Press @ Run Depth: 692.81 psig @ 4481.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2015.12.06

End Date:

2015.12.07

Last Calib.:

2015.12.07

Start Time: 21:04:00

End Time:

04:12:45

Time On Btm:

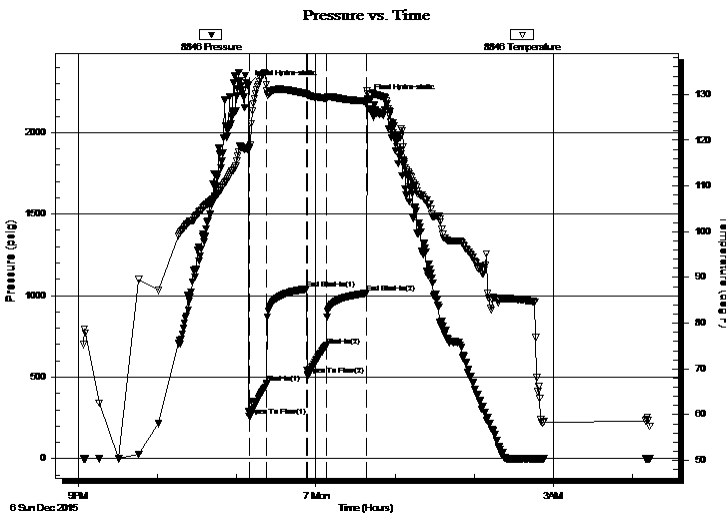
2015.12.06 @ 23:08:45

Time Off Btm:

2015.12.07 @ 00:38:45

TEST COMMENT: IF:BOB in 1 min.
IS:No return blow
FF:BOB in 1 1/2 min.
FS:No return blow

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2292.02	118.06	Initial Hydro-static
1	258.19	118.11	Open To Flow (1)
14	460.54	130.86	Shut-In(1)
45	1041.03	130.09	End Shut-In(1)
45	514.31	129.88	Open To Flow (2)
59	692.81	129.13	Shut-In(2)
90	1015.48	128.50	End Shut-In(2)
90	2207.57	130.85	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
614.00	mcw 2 %m 98%w	7.54
310.00	mcw 50%m 50%w	4.35
496.00	mud 100%m	6.96

Gas Rates

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

* Recovery from multiple tests



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DRILL STEM TEST REPORT

FLUID SUMMARY

Red Oak Energy

30-13-38w Wallace Co KS

7701 E. Kellogg Dr.
STE 710 Wichita KS
67207

Johnson View Farms

Job Ticket: 64498

DST#: 5

ATTN: Sean Dennihan

Test Start: 2015.12.06 @ 21:04:15

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

0 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

24000 ppm

Viscosity: 65.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.78 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 8000.00 ppm

Filter Cake: 2.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
614.00	mcw 2 %m 98%w	7.538
310.00	mcw 50%m 50%w	4.348
496.00	mud 100%m	6.958

Total Length: 1420.00 ft Total Volume: 18.844 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW= .6@38.2= 24,000 ppm

Pressure vs. Time

