



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Empire Energy E&P,LLC
345 Riverview St
STE 540 Wichita KS 67203
ATTN: Kent Matson

4-16s-17w,Rush,KS

Staab #1

Job Ticket: 54115

DST#: 1

Test Start: 2014.04.10 @ 22:55:00

GENERAL INFORMATION:

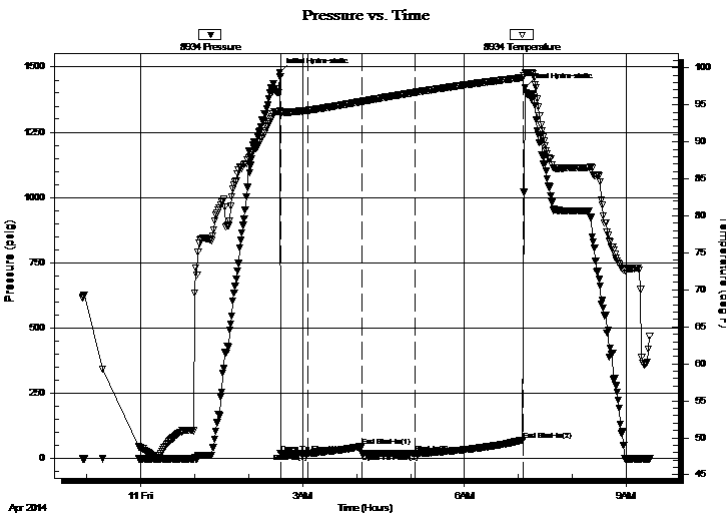
Formation: **Oread**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 02:35:15
 Time Test Ended: 09:26:15
 Interval: **3028.00 ft (KB) To 3060.00 ft (KB) (TVD)**
 Total Depth: 3060.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Brett Dickinson
 Unit No: 59
 Reference Elevations: 1886.00 ft (KB)
 1881.00 ft (CF)
 KB to GR/CF: 5.00 ft

Serial #: 8934 Outside

Press@RunDepth: 18.55 psig @ 3057.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.04.10 End Date: 2014.04.11 Last Calib.: 2014.04.11
 Start Time: 22:55:05 End Time: 09:26:15 Time On Btm: 2014.04.11 @ 02:34:15
 Time Off Btm: 2014.04.11 @ 07:07:15

TEST COMMENT: IF-1/4 in blow died back to 1/8 in
 ISI - No blow back
 FF- No blow
 FSi- No blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1479.40	94.16	Initial Hydro-static
1	19.07	93.79	Open To Flow (1)
31	18.44	94.25	Shut-In(1)
92	46.41	95.46	End Shut-In(1)
92	17.96	95.45	Open To Flow (2)
151	18.55	96.68	Shut-In(2)
271	70.20	98.68	End Shut-In(2)
273	1420.49	99.35	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	OS Mud	0.02

Gas Rates

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



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FLUID SUMMARY

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STE 540 Wichita KS 67203

Staab #1

Job Ticket: 54115

DST#: 1

ATTN: Kent Matson

Test Start: 2014.04.10 @ 22:55:00

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: 74.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.19 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6100.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	OS Mud	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:

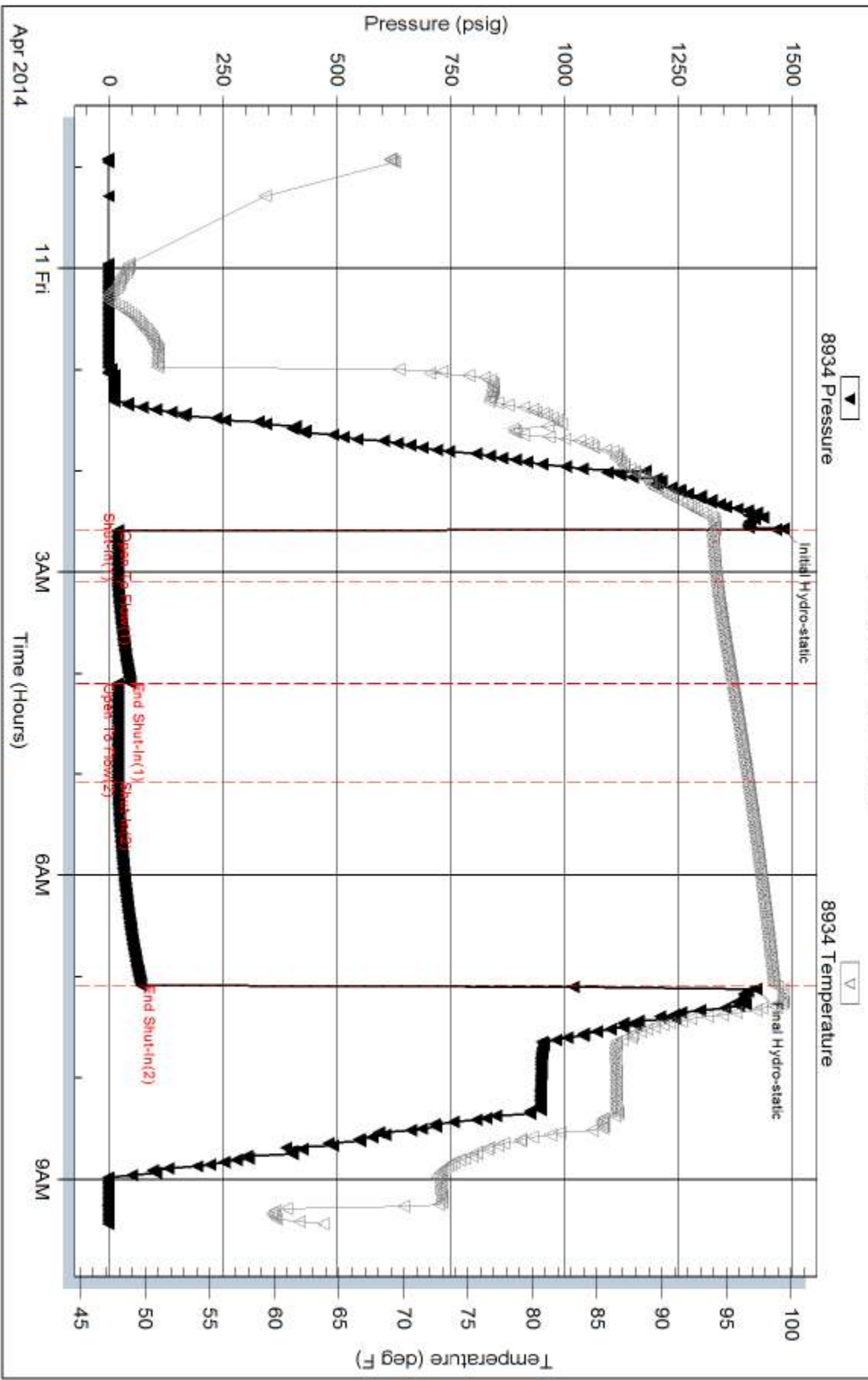
Serial #: 8934

Outside Empire Energy E&P, LLC

Shaft #1

DST Test Number: 1

Pressure vs. Time



Trilobite Testing, Inc

Ref. No: 54115

Printed: 2014.04.11 @ 10:34:12