



TRILOBITE TESTING, INC

DRILL STEM TEST REPORT

Phillips Exploration Co LC
 211 Cedar Ridge CT
 PO Box 850
 Andover Ks 67002-0850
 ATTN: Jim Phillips

24-11s-24w Trego

Vreeland PC #24

Job Ticket: 59302

DST#: 1

Test Start: 2014.05.27 @ 21:00:30

GENERAL INFORMATION:

Formation: **LKC B-C**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 22:55:25
 Time Test Ended: 04:12:24
 Interval: **3806.00 ft (KB) To 3846.00 ft (KB) (TVD)**
 Total Depth: 3846.00 ft (KB) (TVD)
 Hole Diameter: 7.85 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Initial)
 Tester: Ray Schwager
 Unit No: 70
 Reference Elevations: 2432.00 ft (KB)
 2427.00 ft (CF)
 KB to GR/CF: 5.00 ft

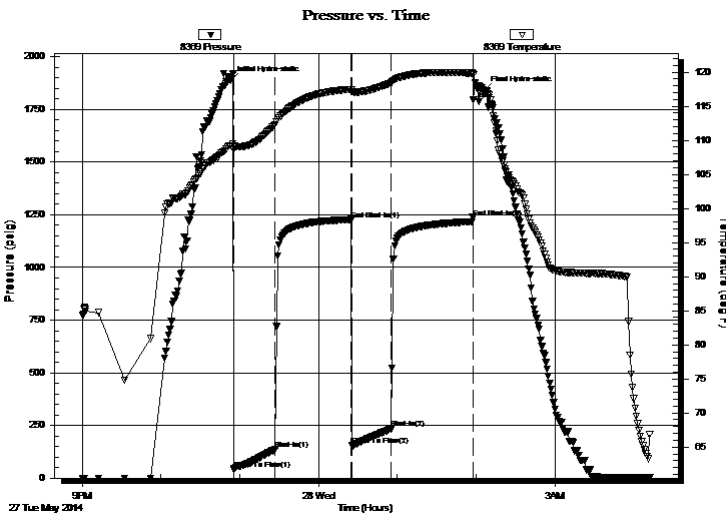
Serial #: 8369

Inside

Press@RunDepth: 234.77 psig @ 3811.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.05.27 End Date: 2014.05.28 Last Calib.: 2014.05.28
 Start Time: 21:00:30 End Time: 04:12:24 Time On Btm: 2014.05.27 @ 22:52:55
 Time Off Btm: 2014.05.28 @ 02:05:54

TEST COMMENT: 30-IFP-w k to strg in 8 min
 60-ISIP-3/4"bl bk
 30-FFP-w k to strg in 9 min
 60-FSIP-3/4"bl bk

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1888.65	109.17	Initial Hydro-static
3	42.99	108.64	Open To Flow (1)
34	136.50	112.33	Shut-In(1)
92	1227.92	117.49	End Shut-In(1)
93	155.78	117.17	Open To Flow (2)
123	234.77	118.42	Shut-In(2)
185	1237.61	119.83	End Shut-In(2)
193	1840.44	116.80	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
0.00	500'GIP	0.00
124.00	Water w/show of oil	1.47
62.00	SO&GCW 10%G5%O85%W	0.87
124.00	MGO 10%G10%M80%O	1.74
186.00	CO	2.61

Gas Rates

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

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Test Start: 2014.05.27 @ 21:00:30

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 55.00 sec/qt
Water Loss: 7.20 in³
Resistivity: ohm.m
Salinity: 1600.00 ppm
Filter Cake: 1.00 inches

Cushion Type:
Cushion Length: ft
Cushion Volume: bbl
Gas Cushion Type:
Gas Cushion Pressure: psig

Oil API: 18 deg API
Water Salinity: 68000 ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
0.00	500'GIP	0.000
124.00	Water w/show of oil	1.466
62.00	SO&GCW 10%G5%O85%W	0.870
124.00	MGO 10%G10%M80%O	1.739
186.00	CO	2.609

Total Length: 496.00 ft Total Volume: 6.684 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: RW .11@70F

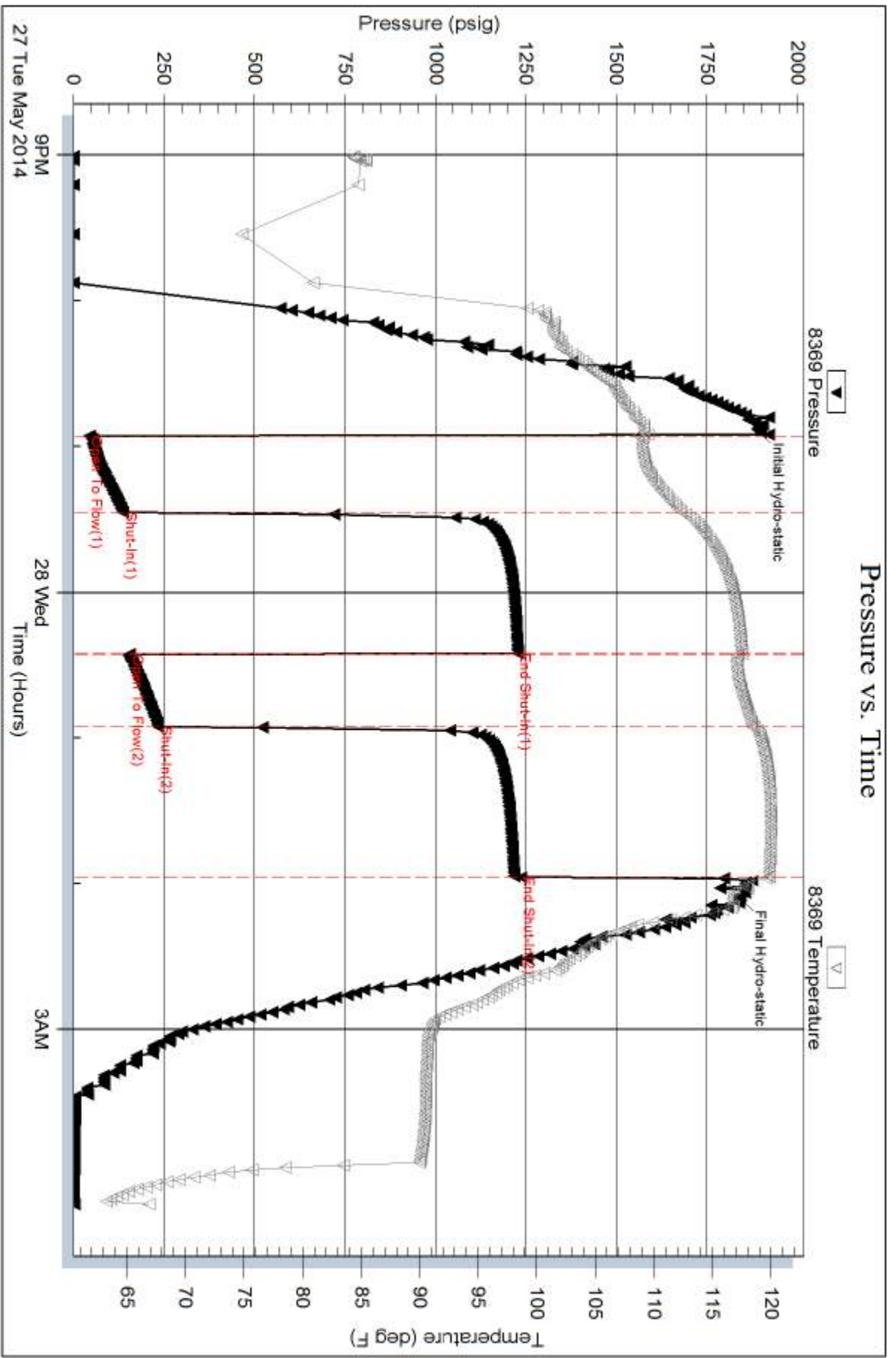
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Inside

Phillips Exploration Co LC

Vreeland FC#24

DST Test Number: 1



Triobite Testing, Inc

Ref. No: 59302

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