



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Black Diamond Oil

18-4s-19w

Po Box 641
Hays Ks 67601

Zillinger A #1

Job Ticket: 041775

DST#: 4

ATTN: Jeff Lawler

Test Start: 2013.09.30 @ 14:53:36

GENERAL INFORMATION:

Formation: **LKC=H-J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 16:24:36

Time Test Ended: 20:20:06

Test Type: (Reset)

Tester: Jeff Brown

Unit No: 67

Interval: 3291.00 ft (KB) To 3358.00 ft (KB) (TVD)

Reference Elevations: 1998.00 ft (KB)

Total Depth: 3358.00 ft (KB) (TVD)

1993.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 6625 Outside

Press @ Run Depth: 33.35 psig @ 3326.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.09.30

End Date: 2013.09.30

Last Calib.: 2013.09.30

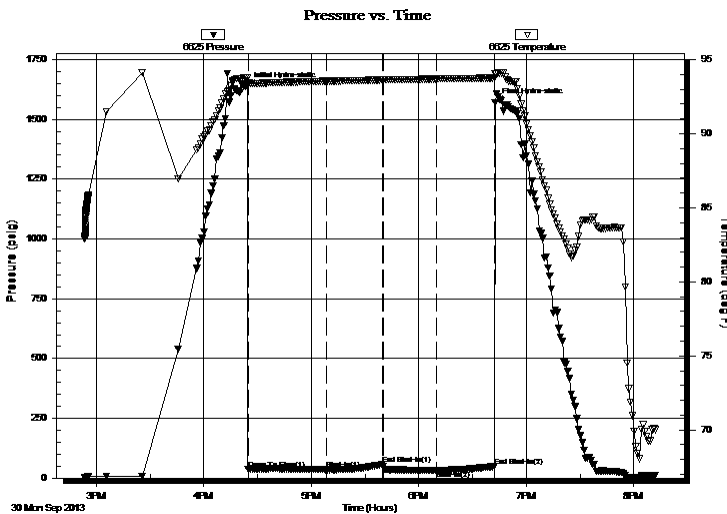
Start Time: 14:53:37

End Time: 20:12:06

Time On Btm: 2013.09.30 @ 16:24:06

Time Off Btm: 2013.09.30 @ 18:42:36

TEST COMMENT: IFP=Weak surface blow
ISI=Dead no blow back
FFP=Dead no blow
FSI=Dead no blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1638.12	93.76	Initial Hydro-static
1	37.64	93.47	Open To Flow (1)
45	35.34	93.55	Shut-In(1)
76	57.37	93.63	End Shut-In(1)
76	48.15	93.63	Open To Flow (2)
106	33.35	93.70	Shut-In(2)
138	48.15	93.77	End Shut-In(2)
139	1568.63	94.02	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
5.00	SOCM 5%O 95%M	0.02

Gas Rates

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

* Recovery from multiple tests



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FLUID SUMMARY

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DST#: 4

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Test Start: 2013.09.30 @ 14:53:36

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: 59.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.00 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 2000.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
5.00	SOCM 5%O 95%M	0.025

Total Length: 5.00 ft Total Volume: 0.025 bbl

Num Fluid Samples: 0

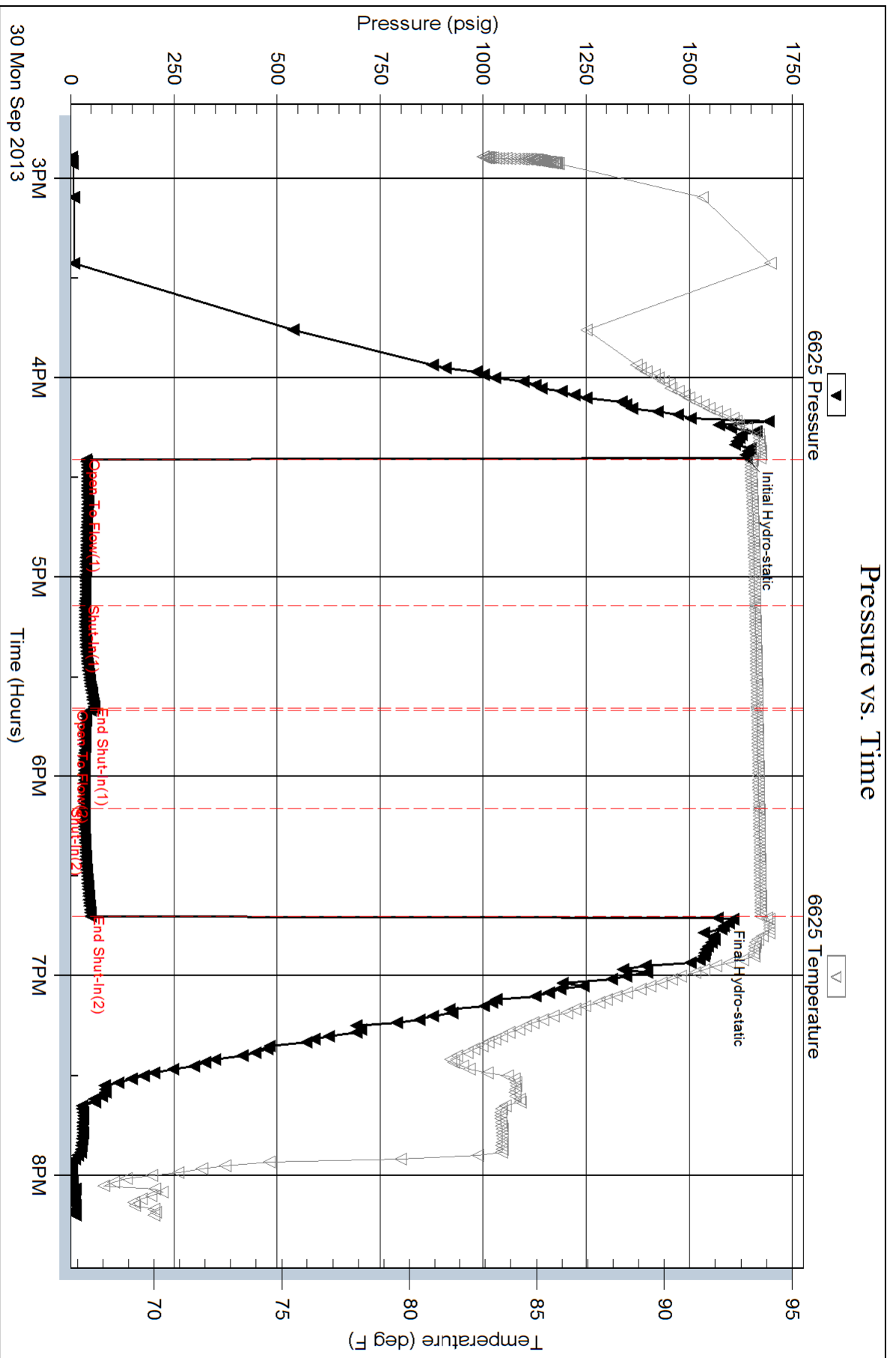
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:



Serial #: 8679

Inside

Black Diamond Oil

Zilinger A #1

DST Test Number: 4

