



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Black Diamond Oil

18-4s-19w

Po Box 641
Hays Ks 67601

Zillinger A #1

Job Ticket: 041772

DST#: 1

ATTN: Jeff Lawler

Test Start: 2013.09.28 @ 20:26:56

GENERAL INFORMATION:

Formation: **Toronto-LKC-B**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 22:19:26

Time Test Ended: 03:20:26

Test Type: (Initial)

Tester: Jeff Brown

Unit No: 67

Interval: 3134.00 ft (KB) To 3200.00 ft (KB) (TVD)

Reference Elevations: 1998.00 ft (KB)

Total Depth: 3200.00 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: 92.75 psig @ 3172.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.09.28

End Date: 2013.09.29

Last Calib.: 2013.09.29

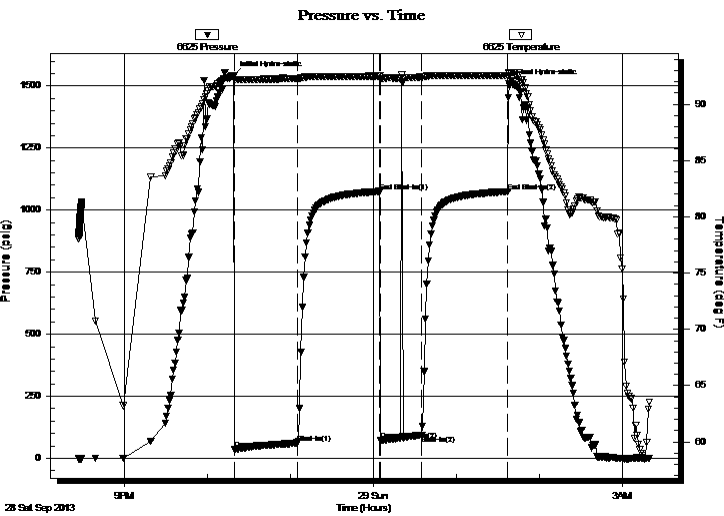
Start Time: 20:26:57

End Time: 03:19:26

Time On Btm: 2013.09.28 @ 22:18:56

Time Off Btm: 2013.09.29 @ 01:37:56

TEST COMMENT: IFP=Weak blow built to 3 in
ISI=Dead no blow back
FFP=Dead flushed tool- Weak surface blow built to 1/4 in
FSI=Dead no blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1541.83	92.46	Initial Hydro-static
1	35.70	92.19	Open To Flow (1)
46	61.87	92.28	Shut-In(1)
106	1075.30	92.49	End Shut-In(1)
106	70.87	92.28	Open To Flow (2)
136	92.75	92.42	Shut-In(2)
198	1074.63	92.56	End Shut-In(2)
199	1510.31	92.67	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
123.00	Mud with oil spots	0.61

Gas Rates

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



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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: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.00 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 500.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
123.00	Mud with oil spots	0.614

Total Length: 123.00 ft Total Volume: 0.614 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Serial #: 6625

Outside Black Diamond Oil

Zilinger A #1

DST Test Number: 1

