



**TRILOBITE
TESTING, INC**

DRILL STEM TEST REPORT

Black Diamond Oil

27-5S-21W Norton, KS

PO Box 641
Hays, KS 67601

Kemper #2

Job Ticket: 56955

DST#: 1

ATTN: Herb Deines

Test Start: 2014.03.10 @ 03:24:00

GENERAL INFORMATION:

Formation: **Arbuckle**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 05:39:30

Time Test Ended: 09:56:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Kevin Mack

Unit No: 66

Interval: 3561.00 ft (KB) To 3609.00 ft (KB) (TVD)

Reference Elevations: 2172.00 ft (KB)

Total Depth: 3609.00 ft (KB) (TVD)

2167.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 8653 Outside

Press@RunDepth: 302.68 psig @ 3562.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2014.03.10

End Date:

2014.03.10

Last Calib.:

2014.03.10

Start Time: 03:25:00

End Time:

09:56:00

Time On Btm:

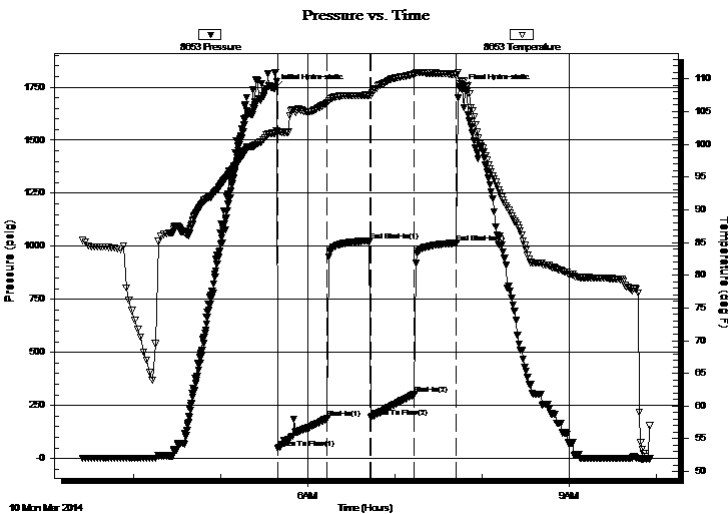
2014.03.10 @ 05:37:00

Time Off Btm:

2014.03.10 @ 07:46:00

TEST COMMENT: 30 - IF- BoB in 12 min.
30 - IS- No Return
30 - FF- BoB in 15 min.
30 - FS- No Return

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1743.05	101.70	Initial Hydro-static
3	46.75	101.98	Open To Flow (1)
37	189.66	106.39	Shut-In(1)
66	1026.32	107.52	End Shut-In(1)
67	193.46	107.49	Open To Flow (2)
97	302.68	110.74	Shut-In(2)
126	1015.82	110.64	End Shut-In(2)
129	1741.10	109.50	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	MW	0.59
122.00	OSMW 90W 10M (oil spots)	1.68
63.00	OSMW 80W 20M (oil spots)	0.88
126.00	OSMW 50M 50W (oil spots)	1.77
189.00	WCOM 30o 20W 50M	2.65
33.00	WCOM 30o 10W 60M	0.46

Gas Rates

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



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FLUID SUMMARY

Black Diamond Oil

27-5S-21W Norton, KS

PO Box 641
Hays, KS 67601

Kemper #2

Job Ticket: 56955

DST#: 1

ATTN: Herb Deines

Test Start: 2014.03.10 @ 03:24:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

23 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

55000 ppm

Viscosity: 52.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.80 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 1500.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
120.00	MW	0.590
122.00	OSMW 90W 10M (oil spots)	1.684
63.00	OSMW 80W 20M (oil spots)	0.884
126.00	OSMW 50M 50W (oil spots)	1.767
189.00	WCOM 30o 20W 50M	2.651
33.00	WCOM 30o 10W 60M	0.463
40.00	Clean Oil	0.561

Total Length: 693.00 ft Total Volume: 8.600 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Oil API 24 @ 70 deg = 23 cor

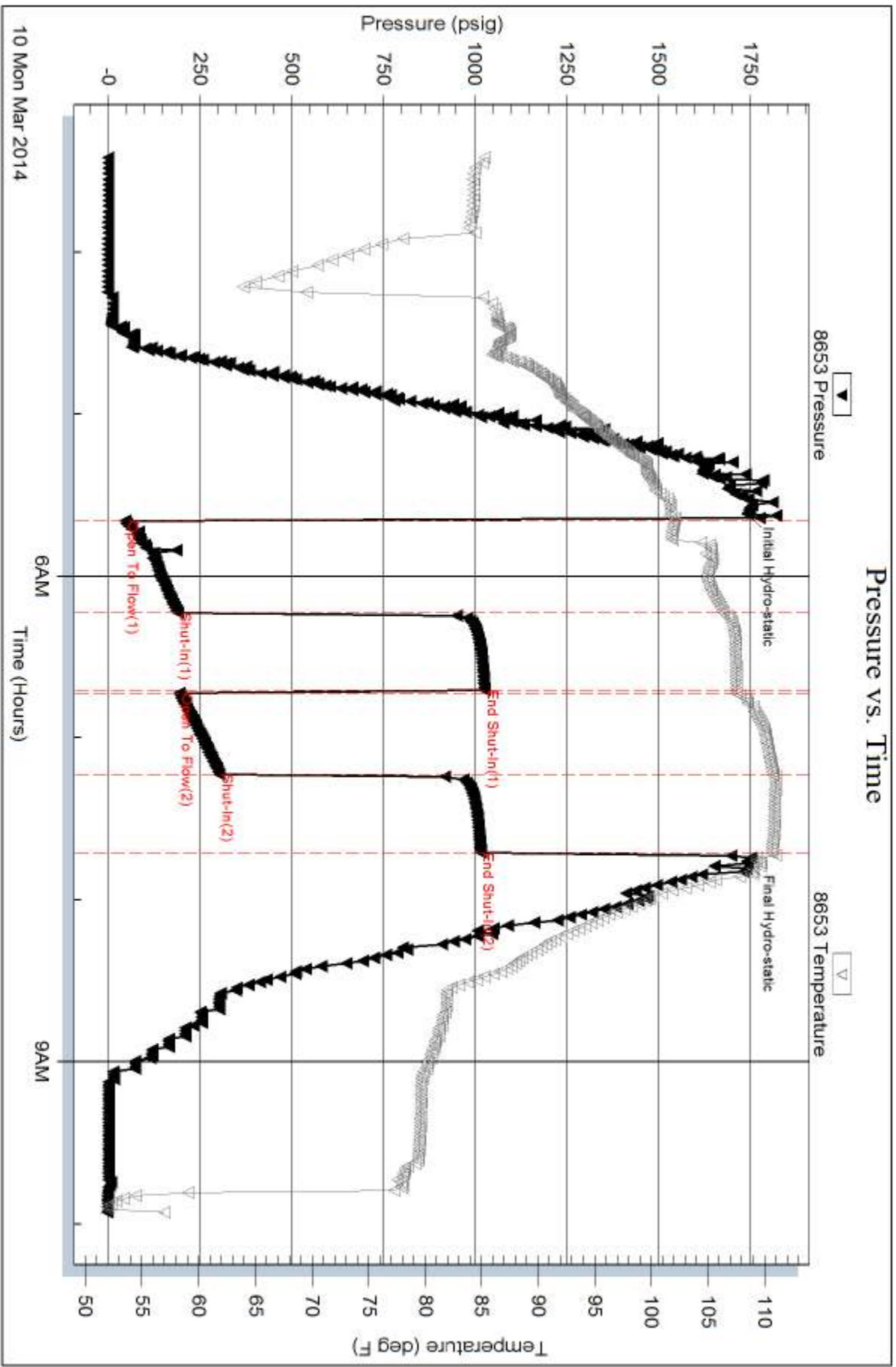
RW .179 @ 54 deg = 55000ppm

Serial #: 8653

Outside Black Diamond Oil

Kemper #2

DST Test Number: 1



Trilobite Testing, Inc

Ref. No: 56955

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