



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Herman L. Loeb, LLC

29-27s-18w Kiowa Ks.

P.O.Box 838
Lawrenceville Il. 62439

Rosenberger#2-29

Job Ticket: 51892

DST#: 3

ATTN: Jon Christensen

Test Start: 2014.03.24 @ 19:03:18

GENERAL INFORMATION:

Formation: **KC. J**
 Deviated: No Whipstock: ft (KB)
 Test Type: Conventional Bottom Hole (Reset)
 Time Tool Opened: 20:47:33
 Tester: Gary Pevoteaux
 Time Test Ended: 02:26:33
 Unit No: 56
 Interval: **4447.00 ft (KB) To 4463.00 ft (KB) (TVD)**
 Reference Elevations: 2217.00 ft (KB)
 Total Depth: 4463.00 ft (KB) (TVD)
 2205.00 ft (CF)
 Hole Diameter: 7.88 inches
 Hole Condition: Fair
 KB to GR/CF: 12.00 ft

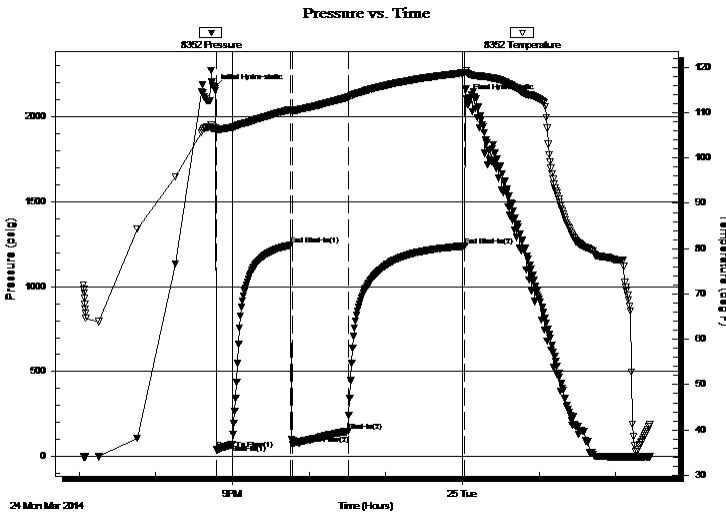
Serial #: 8352

Inside

Press @ Run Depth: 148.37 psig @ 4448.00 ft (KB) Capacity: 8000.00 psig
 Start Date: 2014.03.24 End Date: 2014.03.25 Last Calib.: 2014.03.25
 Start Time: 19:03:23 End Time: 02:26:32 Time On Btm: 2014.03.24 @ 20:45:33
 Time Off Btm: 2014.03.25 @ 00:03:18

TEST COMMENT: IF: Strong blow . B.O.B. in 45 secs.
 IS: Fair blow . Increase to 6".
 FF: Strong blow . B.O.B. in 45 secs. GTS in 23 mins. (see gas flow report)
 FS: Strong blow . B.O.B.

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2168.04	106.55	Initial Hydro-static
2	40.38	106.21	Open To Flow (1)
14	70.32	106.75	Shut-In(1)
60	1243.87	110.69	End Shut-In(1)
62	69.59	110.41	Open To Flow (2)
105	148.37	113.40	Shut-In(2)
197	1239.75	118.80	End Shut-In(2)
198	2104.57	118.85	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
105.00	SW /Rw .13ohms @44deg	0.52
185.00	GMCO 52%g 8%m 4%o	0.91
70.00	CGO 21%g 79%o	0.71

* Recovery from multiple tests

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.13	2.00	6.06
Last Gas Rate	0.13	5.00	7.19



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FLUID SUMMARY

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Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

41.2 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

111000 ppm

Viscosity: 62.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 9.19 in³

Gas Cushion Type:

Resistivity: 0.00 ohm.m

Gas Cushion Pressure:

psig

Salinity: 4000.00 ppm

Filter Cake: 0.20 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
105.00	SW /Rw .13ohms @44deg	0.516
185.00	GMCO 52%g 8%m 4%o	0.910
70.00	CGO 21%g 79%o	0.709

Total Length: 360.00 ft

Total Volume: 2.135 bbl

Num Fluid Samples: 0

Num Gas Bombs: 1

Serial #: gp-3

Laboratory Name: Caraway

Laboratory Location: Liberal, KS

Recovery Comments:



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GAS RATES

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Gas Rates Information

Temperature: 59 (deg F)
Relative Density: 0.65
Z Factor: 0.8

Gas Rates Table

Flow Period	Elapsed Time	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
2	30	0.13	2.00	6.06
2	45	0.13	5.00	7.19

