



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Woolsey Oper. Co. LLC.
 125 N. Market Ste. 1000
 Wichita, KS 67202-1729
 ATTN: Scott Alberg

18-32s-12w
Warren Fee #10
 Job Ticket: 49529 **DST#: 2**
 Test Start: 2012.07.28 @ 02:13:21

GENERAL INFORMATION:

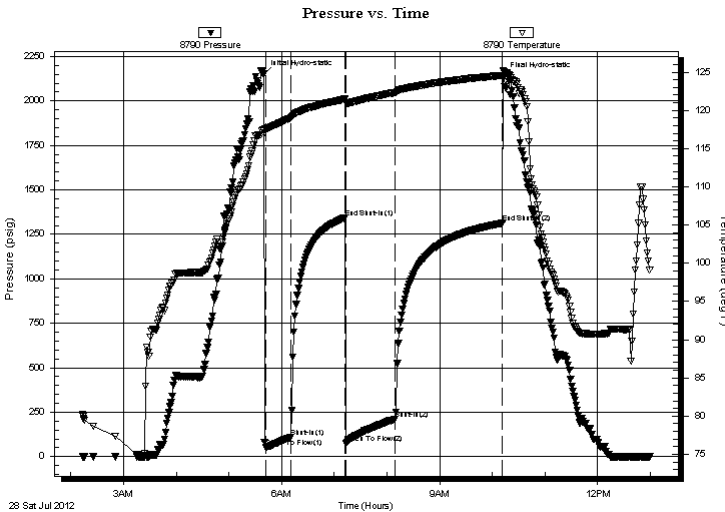
Formation: **Mississippi**
 Deviated: No Whipstock: ft (KB)
 Time Tool Opened: 05:41:36
 Time Test Ended: 12:59:36
 Interval: **4424.00 ft (KB) To 4481.00 ft (KB) (TVD)**
 Total Depth: 4481.00 ft (KB) (TVD)
 Hole Diameter: 7.88 inches Hole Condition: Fair
 Test Type: Conventional Bottom Hole (Reset)
 Tester: Ryan Reynolds
 Unit No: 63
 Reference Elevations: 1625.00 ft (KB)
 1615.00 ft (CF)
 KB to GR/CF: 10.00 ft

Serial #: 8790

Press @ Run Depth: 211.50 psig @ ft (KB) Capacity: 8000.00 psig
 Start Date: 2012.07.28 End Date: 2012.07.28 Last Calib.: 2012.07.28
 Start Time: 02:13:26 End Time: 12:59:36 Time On Btm: 2012.07.28 @ 05:39:21
 Time Off Btm: 2012.07.28 @ 10:12:36

TEST COMMENT: IF: Very strong blow . BOB 10 sec. GTS in 30min.
 IS: Weak 1/4" BB
 FF: Strong blow . BOB 15sec. Gauged gas
 FS: Fair 4" BB

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2150.92	117.40	Initial Hydro-static
3	54.54	117.57	Open To Flow (1)
32	108.98	119.04	Shut-In(1)
93	1341.50	121.44	End Shut-In(1)
94	76.14	120.98	Open To Flow (2)
150	211.50	122.31	Shut-In(2)
273	1313.48	124.56	End Shut-In(2)
274	2137.05	125.22	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
30.00	MCGCWO 15% mud, 20% gas, 25% water, 0.15 oil	
60.00	MCGCO 15% mud, 20% gas, 65% oil	0.30
300.00	Clean Gassy Oil 20% gas, 80% oil	3.94

* Recovery from multiple tests

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
First Gas Rate	0.13	10.00	9.13
Last Gas Rate	0.13	48.00	23.35
Max. Gas Rate	0.13	48.00	23.35



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

FLUID SUMMARY

Woolsey Oper. Co. LLC.

18-32s-12w

125 N. Market Ste. 1000
Wichita, KS 67202-1729

Warren Fee #10

Job Ticket: 49529

DST#: 2

ATTN: Scott Alberg

Test Start: 2012.07.28 @ 02:13:21

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: 46.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 10.38 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 5000.00 ppm

Filter Cake: 0.02 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
30.00	MCGCWO 15%mud, 20%gas, 25%water, 4%	0.148
60.00	MCGCO 15%mud, 20%gas, 65%oil	0.295
300.00	Clean Gassy Oil 20%gas, 80%oil	3.944

Total Length: 390.00 ft

Total Volume: 4.387 bbl

Num Fluid Samples: 1

Num Gas Bombs: 2

Serial #: RR-2

Laboratory Name: Caraway

Laboratory Location: Liberal, KS

Recovery Comments:



**TRILOBITE
TESTING, INC.**

DRILL STEM TEST REPORT

GAS RATES

Woolsey Oper. Co. LLC.

18-32s-12w

125 N. Market Ste. 1000
Wichita, KS 67202-1729

Warren Fee #10

Job Ticket: 49529

DST#: 2

ATTN: Scott Alberg

Test Start: 2012.07.28 @ 02:13:21

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	5	0.13	10.00	9.13
2	5	0.13	10.00	9.13
2	10	0.13	13.50	10.44
2	20	0.13	23.00	14.00
2	30	0.13	30.00	16.62
2	40	0.13	42.00	21.11
2	50	0.13	48.00	23.35

