



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Phillips Exploration Company Lc

21-14s-24w

Po Box 850
Andover Ks 67002

Gaither 1-21

Job Ticket: 041770

DST#: 1

ATTN: Pat Deenihan

Test Start: 2013.09.24 @ 00:01:51

GENERAL INFORMATION:

Formation: **Mississippian**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 02:25:51

Time Test Ended: 09:48:51

Test Type: Conventional Bottom Hole (Initial)

Tester: Jeff Brown

Unit No: 67

Interval: 4150.00 ft (KB) To 4233.00 ft (KB) (TVD)

Reference Elevations: 2326.00 ft (KB)

Total Depth: 4233.00 ft (KB) (TVD)

2321.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 5.00 ft

Serial #: 6625 Outside

Press @ Run Depth: 340.19 psig @ 4218.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.09.24

End Date:

2013.09.24

Last Calib.:

2013.09.24

Start Time: 00:01:52

End Time:

09:40:51

Time On Btm:

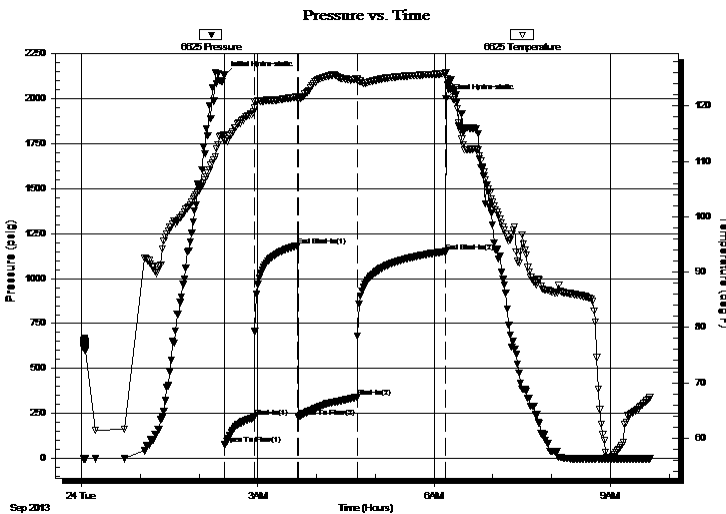
2013.09.24 @ 02:25:21

Time Off Btm:

2013.09.24 @ 06:12:21

TEST COMMENT: IFP=Good blow BOB in 10-1/2 min
ISI=Dead no blow back
FFP=Good blow BOB in 14 min
FSI=Dead no blow back

PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2130.74	114.71	Initial Hydro-static
1	76.57	113.71	Open To Flow (1)
31	231.19	119.65	Shut-In(1)
76	1183.85	121.64	End Shut-In(1)
76	229.48	121.44	Open To Flow (2)
136	340.19	124.90	Shut-In(2)
227	1150.76	125.85	End Shut-In(2)
227	2001.97	126.09	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
58.00	SOCGWM 10%G 5%O 15%W 70%M	0.29
59.00	MCGWO 10%G 10%W 20%M 60%O	0.29
320.00	GOCM 20%G 10%O 70%M	3.10
246.00	HOCGM 45%G 10%M 45%O	3.45
10.00	Gassy Oil 20%G 80%O	0.14

Gas Rates

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



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FLUID SUMMARY

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Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 60.00 sec/qt
Water Loss: 6.80 in³
Resistivity: ohm.m
Salinity: 1400.00 ppm
Filter Cake: inches

Cushion Type:
Cushion Length: ft
Cushion Volume: bbl
Gas Cushion Type:
Gas Cushion Pressure: psig

Oil API: 38 deg API
Water Salinity: ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
58.00	SOCGWM 10%G 5%O 15%W 70%M	0.285
59.00	MCGWO 10%G 10%W 20%M 60%O	0.290
320.00	GOCM 20%G 10%O 70%M	3.104
246.00	HOCGM 45%G 10%M 45%O	3.451
10.00	Gassy Oil 20%G 80%O	0.140

Total Length: 693.00 ft Total Volume: 7.270 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

