DRILL STEM TEST REPORT

Woolsey Operating Company

125 North Market Suite 100
Wichita Kansas 67202+1729

ATTN: Scott Alberg

Harbaugh GU #2

13/34S/12W Barber

Job Ticket: 15661 **DST#: 1**

Test Start: 2011.03.02 @ 07:50:00

GENERAL INFORMATION:

Formation: **Cherokee-Mississippi**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 11:10:00
Time Test Ended: 18:01:00

Test Type: Conventional Bottom Hole (Initial)
Tester: Dylan E Ellis
Unit No: 3345/Pratt/104

Interval: 4617.00 ft (KB) To 4710.00 ft (KB) (TVD)
Total Depth: 4710.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

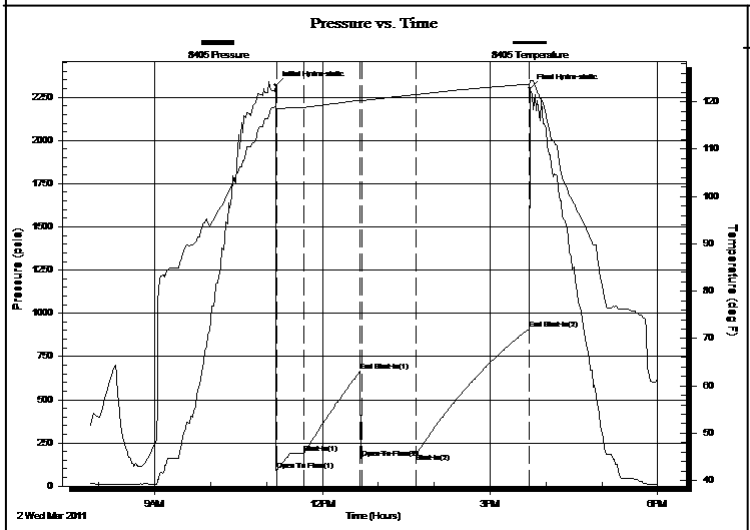
Reference Elevations: 1441.00 ft (KB)
1432.00 ft (CF)
KB to GR/CF: 9.00 ft

Serial #: 8405 **Inside**

Press@RunDepth: 910.56 psia @ 4706.44 ft (KB)
Start Date: 2011.03.02 End Date: 2011.03.02
Start Time: 07:50:00 End Time: 18:00:51

Capacity: 5000.00 psia
Last Calib.: 2011.03.02
Time On Btm: 2011.03.02 @ 11:09:21
Time Off Btm: 2011.03.02 @ 15:42:51

TEST COMMENT:
1ST Opening 30 Minutes fair blow /blow built to 11 inches into bucket of w ater
1ST Shut-In 60 Minutes no bow back
2ND Opening 60 Minutes good blow /blow blew bottom of bucket in 3 minutes
2ND Shut-In 120 Minutes no blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2319.85	118.83	Initial Hydro-static
1	89.47	118.49	Open To Flow (1)
31	188.01	118.80	Shut-In(1)
91	663.52	120.34	End Shut-In(1)
93	161.38	120.24	Open To Flow (2)
152	188.46	121.52	Shut-In(2)
273	910.56	123.68	End Shut-In(2)
274	2302.02	124.25	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
295.00	Mud 100%	1.54

Gas Rates

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

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TOOL DIAGRAM

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Tool Information

Drill Pipe:	Length:	4333.00 ft	Diameter:	3.80 inches	Volume:	60.78 bbl	Tool Weight:		2000.00 lb
Heavy Wt. Pipe:	Length:	0.00 ft	Diameter:	0.00 inches	Volume:	0.00 bbl	Weight set on Packer:		20000.00 lb
Drill Collar:	Length:	285.44 ft	Diameter:	2.25 inches	Volume:	1.40 bbl	Weight to Pull Loose:		7000.00 lb
					Total Volume:	62.18 bbl	Tool Chased		0.00 ft
Drill Pipe Above KB:		29.44 ft					String Weight:	Initial	60000.00 lb
Depth to Top Packer:		4617.00 ft						Final	61000.00 lb
Depth to Bottom Packer:		ft							
Interval betw een Packers:		93.44 ft							
Tool Length:		121.44 ft							
Number of Packers:		2	Diameter:	6.75 inches					

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Shut-In Tool	5.00			4594.00		
Hydrolic Tool	5.00			4599.00		
Jars	6.00			4605.00		
Safety Joint	2.00			4607.00		
Packer	5.00			4612.00	28.00	Bottom Of Top Packer
Packer	5.00			4617.00		
Perforations	5.00			4622.00		
Change Over Sub	0.75			4622.75		
Drill Pipe	63.94			4686.69		
Change Over Sub	0.75			4687.44		
Perforations	18.00			4705.44		
Recorder	1.00	8405	Inside	4706.44		
Recorder	1.00	8400	Outside	4707.44		
Bull Plug	3.00			4710.44	93.44	Bottom Packers & Anchor
Total Tool Length:	**121.44**					

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FLUID SUMMARY

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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:	54.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	9.00 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psia		
Salinity:	2000.00 ppm				
Filter Cake:	1.00 inches				

Recovery Information

Recovery Table

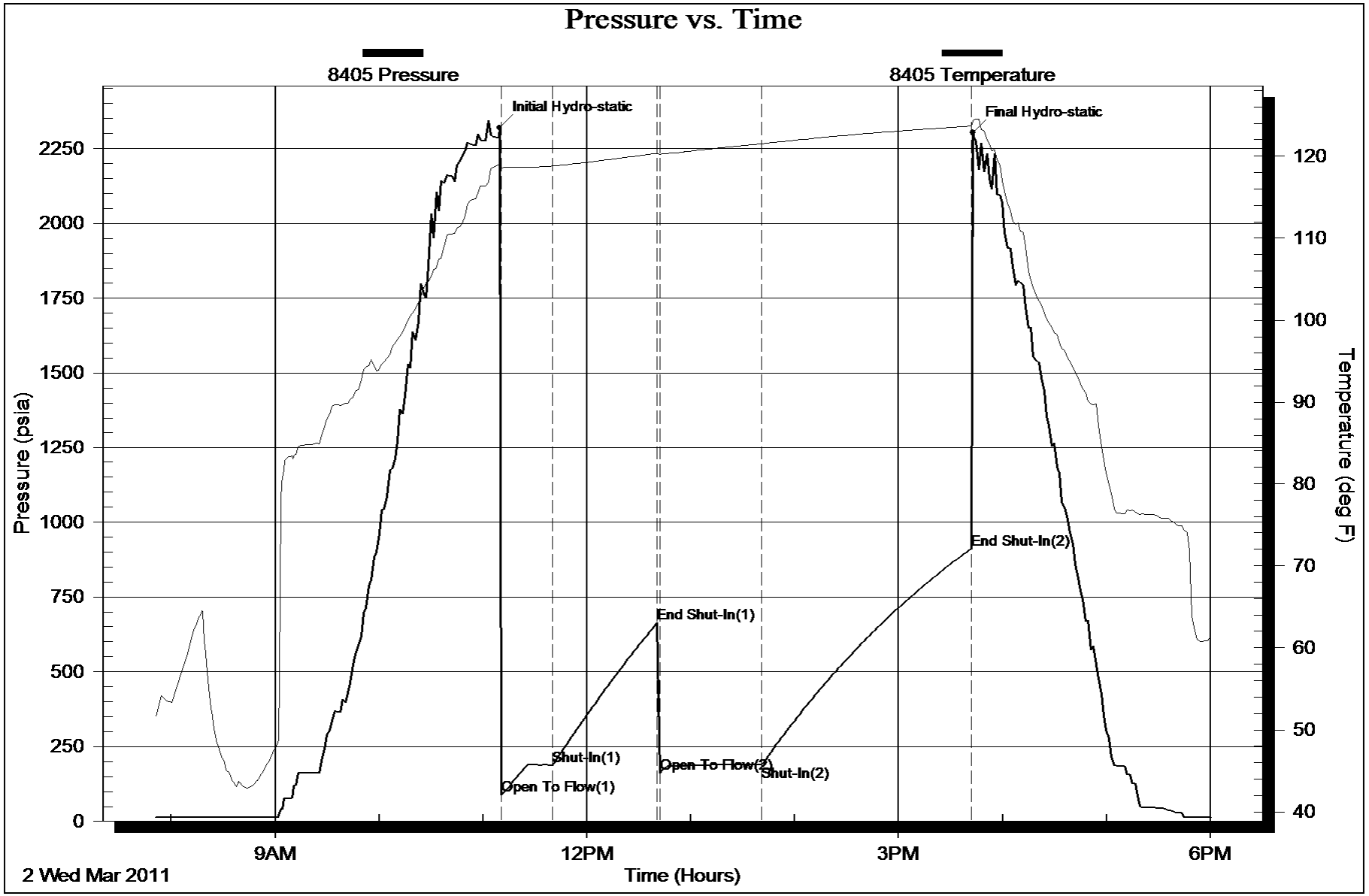
Length ft	Description	Volume bbl
295.00	Mud 100%	1.538

Total Length: 295.00 ft Total Volume: 1.538 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

Recovery Comments:


Pressure vs. Time
8405 Pressure
8405 Temperature
Initial Hydro-static
Final Hydro-static
End Shut-In(1)
End Shut-In(2)
Shut-In(1)
Open To Flow(1)
Open To Flow(2)
Shut-In(2)
Pressure (psia)
Temperature (deg F)
Time (Hours)
9AM
12PM
3PM
6PM
2 Wed Mar 2011
0
250
500
750
1000
1250
1500
1750
2000
2250
40
50
60
70
80
90
100
110
120