

## DRILL STEM TEST REPORT

Prepared For: **Great Plains Energy, Inc**

6121 S. 58th St. Suite B  
Lincoln, NE 68516

ATTN: Mike Madcharo

**Odle #1-8**

**8-7s-18w Rooks,KS**

Start Date: 2013.06.12 @ 07:02:52

End Date: 2013.06.12 @ 17:36:07

Job Ticket #: 50432                      DST #: 3

Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Great Plains Energy, Inc    8-7s-18w Rooks,KS    Odle #1-8    DST # 3    D-G    2013.06.12



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TESTING, INC.**

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Test Start: 2013.06.12 @ 07:02:52

### GENERAL INFORMATION:

Formation: **D-G**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 09:12:22  
 Time Test Ended: 17:36:07

Test Type: Conventional Bottom Hole (Reset)  
 Tester: Jason McLemore  
 Unit No: 54

Interval: **3202.00 ft (KB) To 3260.00 ft (KB) (TVD)**  
 Total Depth: 3260.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 1945.00 ft (KB)  
 1937.00 ft (CF)  
 KB to GR/CF: 8.00 ft

**Serial #: 8789**

**Inside**

Press@RunDepth: 477.83 psig @ 3237.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2013.06.12

End Date:

2013.06.12

Last Calib.: 2013.06.12

Start Time: 07:02:54

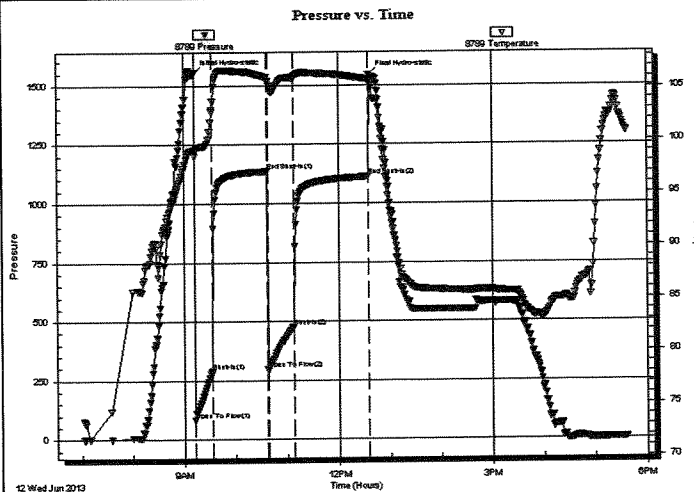
End Time:

17:36:07

Time On Btm: 2013.06.12 @ 09:11:52

Time Off Btm: 2013.06.12 @ 12:35:37

TEST COMMENT: IFF-Strong, BOB in 1 Min.  
 IS-Blow back BOB in 30 Min.  
 FFP-Strong, BOB in 2 Min.  
 FSI-Blow back Built to 1"



### PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1552.60	99.02	Initial Hydro-static
1	83.55	98.45	Open To Flow (1)
21	290.37	102.87	Shut-In(1)
85	1136.57	105.97	End Shut-In(1)
85	295.81	105.55	Open To Flow (2)
116	477.83	105.84	Shut-In(2)
203	1113.31	105.73	End Shut-In(2)
204	1544.13	105.61	Final Hydro-static

### Recovery

Length (ft)	Description	Volume (bbl)
50.00	MCO-60%O-40%M	0.25
1300.00	Free Oil	17.60
0.00	570' Gas In Pipe	0.00

\* Recovery from multiple tests

### Gas Rates

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



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**TOOL DIAGRAM**

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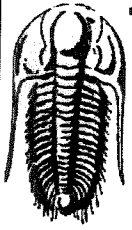
**Tool Information**

Drill Pipe:	Length: 3074.00 ft	Diameter: 3.80 inches	Volume: 43.12 bbl	Tool Weight: 2000.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 2.70 inches	Volume: 0.00 bbl	Weight set on Packer: 25000.00 lb
Drill Collar:	Length: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 40000.00 lb
			<u>Total Volume: 43.71 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial 35000.00 lb
Depth to Top Packer:	3202.00 ft			Final 38000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	58.00 ft			
Tool Length:	86.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

**Tool Description**

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
Change Over Sub	1.00			3175.00	
Shut In Tool	5.00			3180.00	
Hydraulic tool	5.00			3185.00	
Jars	5.00			3190.00	
Safety Joint	2.00			3192.00	
Packer	5.00			3197.00	28.00 Bottom Of Top Packer
Packer	5.00			3202.00	
Stubb	1.00			3203.00	
Perforations	1.00			3204.00	
Change Over Sub	1.00			3205.00	
Blank Spacing	31.00			3236.00	
Change Over Sub	1.00			3237.00	
Recorder	0.00	8789	Inside	3237.00	
Recorder	0.00	6668	Outside	3237.00	
Perforations	20.00			3257.00	
Bullnose	3.00			3260.00	58.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>86.00</b>				



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**FLUID SUMMARY**

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### Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	34 deg API
Mud Weight: 9.00 lb/gal	Cushion Length:	Water Salinity:	ppm
Viscosity: 40.00 sec/qt			
Water Loss: 7.98 in <sup>3</sup>	Cushion Volume:		
Resistivity: ohm.m	Gas Cushion Type:		
Salinity: 2100.00 ppm	Gas Cushion Pressure:		
Filter Cake: inches			

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
50.00	MCO-60%O-40%M	0.246
1300.00	Free Oil	17.598
0.00	570' Gas In Pipe	0.000

Total Length: 1350.00 ft      Total Volume: 17.844 bbl  
Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
Laboratory Name:      Laboratory Location:  
Recovery Comments:

### Pressure vs. Time

