



## DRILL STEM TEST REPORT

Prepared For: **Valhalla Exploration L.L.C**  
133 N Glendale Wichita KS 67206

ATTN: Derek Patterson

### **Helmerts#1-1**

#### **1-22s-12w Stafford**

Start Date: 2012.05.11 @ 08:45:00

End Date: 2012.05.11 @ 15:04:00

Job Ticket #: 17141                      DST #: 6

Superior Testers Enterprises LLC  
PO Box 138 Great Bend KS 67530  
1-800-792-6902

Printed: 2012.05.11 @ 15:05:52



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 Job Ticket: 17141 **DST#: 6**  
 Test Start: 2012.05.11 @ 08:45:00

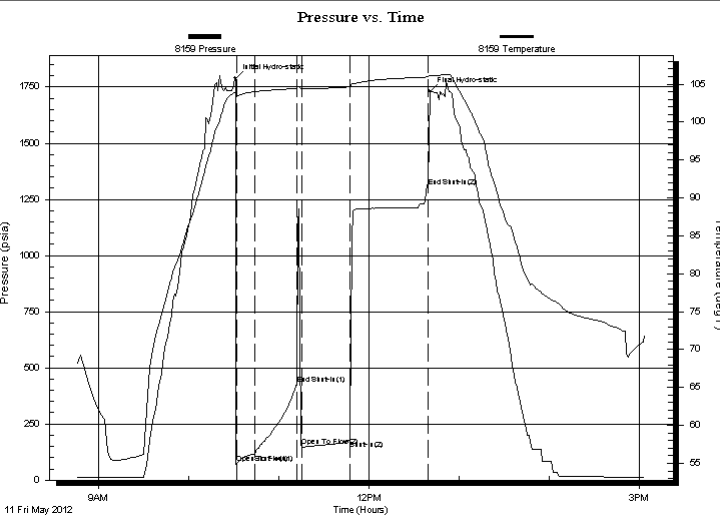
## GENERAL INFORMATION:

Formation: **Viola**  
 Deviated: No Whipstock: ft (KB) Test Type: Conventional Straddle (Initial)  
 Time Tool Opened: 10:32:00 Tester: Jared Scheck  
 Time Test Ended: 15:04:00 Unit No: 3320-GB-50  
**Interval: 3440.00 ft (KB) To 3504.00 ft (KB) (TVD)** Reference Elevations: 1814.00 ft (KB)  
 Total Depth: 3693.00 ft (KB) (TVD) 1807.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: KB to GR/CF: 7.00 ft

## Serial #: 8159

Press @ RunDepth: 177.47 psia @ ft (KB) Capacity: 5000.00 psia  
 Start Date: 2012.05.11 End Date: 2012.05.11 Last Calib.: 2012.05.11  
 Start Time: 08:45:00 End Time: 15:04:00 Time On Btm: 2012.05.11 @ 10:31:00  
 Time Off Btm: 2012.05.11 @ 12:40:30

**TEST COMMENT:** 1st Opening 10 Minutes-Fair blow built 6 inches  
 1st Shut-in 30 Minutes-No blow back  
 2nd Opening 30 minutes-Fair blow built bottom of bucket in 30 minutes  
 2nd Shut-in 60 Minutes-No blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1789.63	103.94	Initial Hydro-static
1	75.07	103.46	Open To Flow (1)
13	114.39	104.00	Shut-In(1)
41	429.19	104.43	End Shut-In(1)
44	149.86	104.38	Open To Flow (2)
76	177.47	104.64	Shut-In(2)
128	1306.68	105.96	End Shut-In(2)
130	1730.03	106.10	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
240.00	muddy oil cut gas 40%gas 10%oil 50%	2.27
0.00	240 gas in pipe	0.00

## Gas Rates

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





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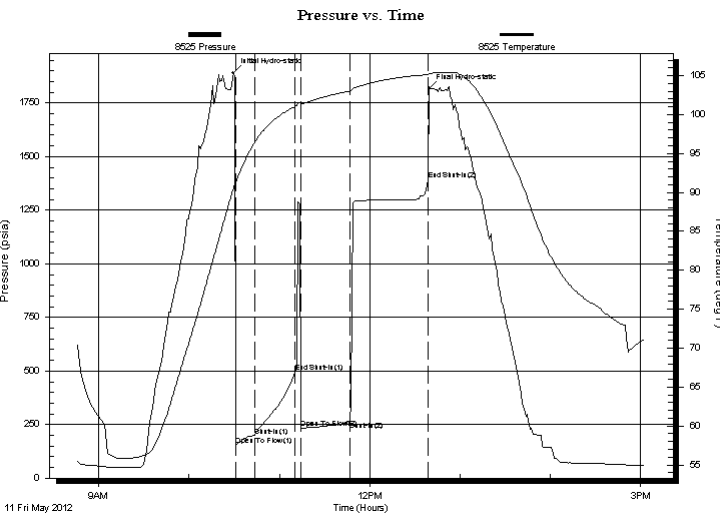
## GENERAL INFORMATION:

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**Interval: 3440.00 ft (KB) To 3504.00 ft (KB) (TVD)** Reference Elevations: 1814.00 ft (KB)  
 Total Depth: 3693.00 ft (KB) (TVD) 1807.00 ft (CF)  
 Hole Diameter: 7.88 inches Hole Condition: KB to GR/CF: 7.00 ft

## Serial #: 8525

Press @ RunDepth: 1393.35 psia @ ft (KB) Capacity: 5000.00 psia  
 Start Date: 2012.05.11 End Date: 2012.05.11 Last Calib.: 2012.05.11  
 Start Time: 08:45:00 End Time: 15:03:00 Time On Btm: 2012.05.11 @ 10:29:30  
 Time Off Btm: 2012.05.11 @ 12:39:30

**TEST COMMENT:** 1st Opening 10 Minutes-Fair blow built 6 inches  
 1st Shut-in 30 Minutes-No blow back  
 2nd Opening 30 minutes-Fair blow built bottom of bucket in 30 minutes  
 2nd Shut-in 60 Minutes-No blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	1890.75	90.62	Initial Hydro-static
2	151.72	91.24	Open To Flow (1)
14	197.52	96.39	Shut-In(1)
41	494.39	101.03	End Shut-In(1)
45	234.63	101.35	Open To Flow (2)
77	264.50	103.01	Shut-In(2)
129	1393.35	105.16	End Shut-In(2)
130	1816.83	105.27	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
240.00	muddy oil cut gas 40%gas 10%oil 50%	2.27
0.00	240 gas in pipe	0.00

## Gas Rates

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



# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Valhalla Exploration L.L.C

**1-22s-12w Stafford**

133 N Glendale Wichita KS 67206

**Helmers#1-1**

Job Ticket: 17141

**DST#: 6**

ATTN: Derek Patterson

Test Start: 2012.05.11 @ 08:45:00

## Tool Information

Drill Pipe:	Length: 3310.00 ft	Diameter: 3.80 inches	Volume: 46.43 bbl	Tool Weight: 1000.00 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: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 60000.00 lb
			<u>Total Volume: 47.02 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	18.00 ft			String Weight: Initial 50000.00 lb
Depth to Top Packer:	3440.00 ft			Final 50000.00 lb
Depth to Bottom Packer:	3504.00 ft			
Interval between Packers:	64.00 ft			
Tool Length:	286.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments: Tool hit bridge 18 feet off bottom open tool did not get to bottom

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
SHut-InTool	5.00		Inside	3417.00	
Hydraulic Tool	5.00			3422.00	
Jars	6.00			3428.00	
Safety Joint	2.00			3430.00	
Packer	5.00			3435.00	28.00 Bottom Of Top Packer
Packer	5.00			3440.00	
Anchor	31.50			3471.50	
Change Over Sub	0.75			3472.25	
Drill Pipe	31.00		Outside	3503.25	
Change Over Sub	0.75		Outside	3504.00	64.00 Tool Interval
Packer	5.00			3509.00	
tail pipe	184.00			3693.00	
Recorder	1.00		Inside	3694.00	
Recorder	1.00		Outside	3695.00	
Bullnose	3.00			3698.00	194.00 Bottom Packers & Anchor

**Total Tool Length: 286.00**



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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: 41.00 sec/qt	Cushion Volume: bbl		
Water Loss: 9.20 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psia		
Salinity: 9800.00 ppm			
Filter Cake: 1.00 inches			

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
240.00	muddy oil cut gas 40%gas 10%oil 50%mud	2.273
0.00	240 gas in pipe	0.000

Total Length: 240.00 ft      Total Volume: bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments:

