



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

Hess Oil Co  
Box 1009  
McPherson Ks 67460  
ATTN: Jamie Hess

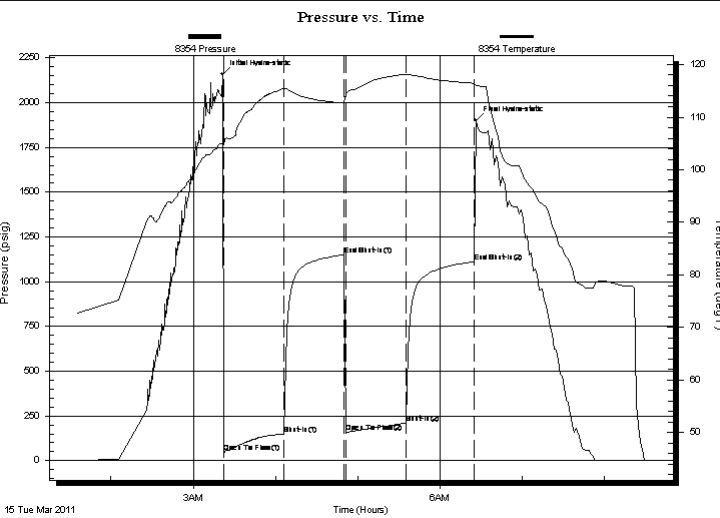
**Velma # 1**  
**13-17-20-Rush-Ks**  
Job Ticket: 041700 **DST#: 1**  
Test Start: 2011.03.15 @ 01:25:39

## GENERAL INFORMATION:

Formation: **Cher**  
Deviated: No Whipstock: ft (KB)  
Time Tool Opened: 03:22:19  
Time Test Ended: 08:29:39  
Interval: **3990.00 ft (KB) To 4020.00 ft (KB) (TVD)**  
Total Depth: 4020.00 ft (KB) (TVD)  
Hole Diameter: 7.88 inches Hole Condition: Good  
Test Type: Conventional Bottom Hole  
Tester: Dan Bangle  
Unit No: 38  
Reference Elevations: 2185.00 ft (KB)  
2180.00 ft (CF)  
KB to GR/CF: 5.00 ft

**Serial #: 8354 Inside**  
Press @ Run Depth: 209.32 psig @ 3991.00 ft (KB) Capacity: 8000.00 psig  
Start Date: 2011.03.15 End Date: 2011.03.15 Last Calib.: 2011.03.15  
Start Time: 01:35:39 End Time: 08:29:39 Time On Btm: 2011.03.15 @ 03:21:19  
Time Off Btm: 2011.03.15 @ 06:26:09

TEST COMMENT: IF- Weak building to 5"  
FF-Weak building to 2"  
Times[45-45-45]



PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2157.89	105.18	Initial Hydro-static
1	44.91	104.69	Open To Flow (1)
45	149.64	115.42	Shut-In(1)
89	1150.05	112.69	End Shut-In(1)
91	160.22	114.39	Open To Flow (2)
134	209.32	118.09	Shut-In(2)
184	1111.36	116.43	End Shut-In(2)
185	1901.00	116.05	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
360.00	Mdy Wtr	2.84

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



**TRILOBITE  
TESTING, INC**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Hess Oil Co  
Box 1009  
McPherson Ks 67460  
ATTN: Jamie Hess

**Velma # 1**  
**13-17-20-Rush-Ks**  
Job Ticket: 041700      **DST#: 1**  
Test Start: 2011.03.15 @ 01:25:39

## 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:	50000 ppm
Viscosity: 52.00 sec/qt	Cushion Volume: bbl		
Water Loss: 10.98 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 5000.00 ppm			
Filter Cake: inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
360.00	Mdy Wtr	2.836

Total Length: 360.00 ft      Total Volume: 2.836 bbl

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

Laboratory Name:      Laboratory Location:

Recovery Comments: Rw .17 @ 60 = 50000ppm

