



## DRILL STEM TEST REPORT

Prepared For: **Grand Mesa Operating**

1700 N Waterfront Parkway  
Building 600  
Wichita, KS 67206+5514

ATTN: Steve Stribling

**33/13S/31W/Gove**

**Hess 2-33**

Start Date: 2011.06.05 @ 01:28:00

End Date: 2011.06.05 @ 08:31:00

Job Ticket #: 15796                      DST #: 6

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

Printed: 2011.06.06 @ 09:33:38



# DRILL STEM TEST REPORT

Grand Mesa Operating  
 1700 N Waterfront Parkway  
 Building 600  
 Wichita, KS 67206+5514  
 ATTN: Steve Stribling

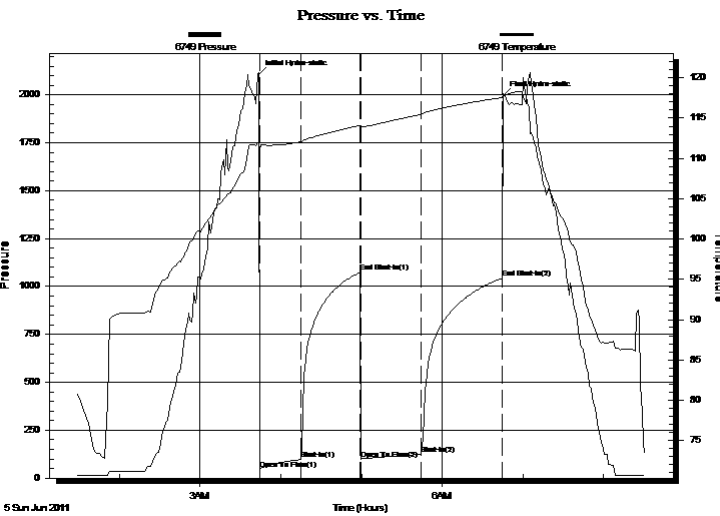
**Hess 2-33**  
**33/13S/31W/Gove**  
 Job Ticket: 15796 **DST#: 6**  
 Test Start: 2011.06.05 @ 01:28:00

## GENERAL INFORMATION:

Formation: **Lansing Zone K**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 03:44:30  
 Time Test Ended: 08:31:00  
 Interval: **4159.00 ft (KB) To 4186.00 ft (KB) (TVD)**  
 Total Depth: 4186.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Ken Swinney  
 Unit No: 3325 Scott City/94  
 Reference Elevations: 2877.00 ft (KB)  
 2872.00 ft (CF)  
 KB to GR/CF: 5.00 ft

**Serial #: 6749 Inside**  
 Press @ Run Depth: 124.55 psig @ 4182.00 ft (KB) Capacity: 5000.00 psig  
 Start Date: 2011.06.05 End Date: 2011.06.05 Last Calib.: 2011.06.05  
 Start Time: 01:29:00 End Time: 08:31:00 Time On Btm: 2011.06.05 @ 03:44:00  
 Time Off Btm: 2011.06.05 @ 06:45:30

**TEST COMMENT:** 1ST Open 30 Minutes/Weak blow/Blow built to 1 1/2 inch in 9 minutes/Held steady  
 1ST Shut In 45 Minutes/No blow back  
 2ND Open 45 Minutes/Weak blow/Blow built to 3/4 inch in 7 minutes/Held steady  
 2ND Shut In 60 Minutes/No blow back



PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2107.77	111.98	Initial Hydro-static
1	44.10	111.04	Open To Flow (1)
31	99.33	112.08	Shut-In(1)
75	1074.62	114.13	End Shut-In(1)
76	100.19	113.83	Open To Flow (2)
120	124.55	115.46	Shut-In(2)
181	1042.93	117.55	End Shut-In(2)
182	1998.23	117.82	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
190.00	Muddy water 35% Mud 65% Water	1.61

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



# DRILL STEM TEST REPORT

Grand Mesa Operating  
 1700 N Waterfront Parkway  
 Building 600  
 Wichita, KS 67206+5514  
 ATTN: Steve Stribling

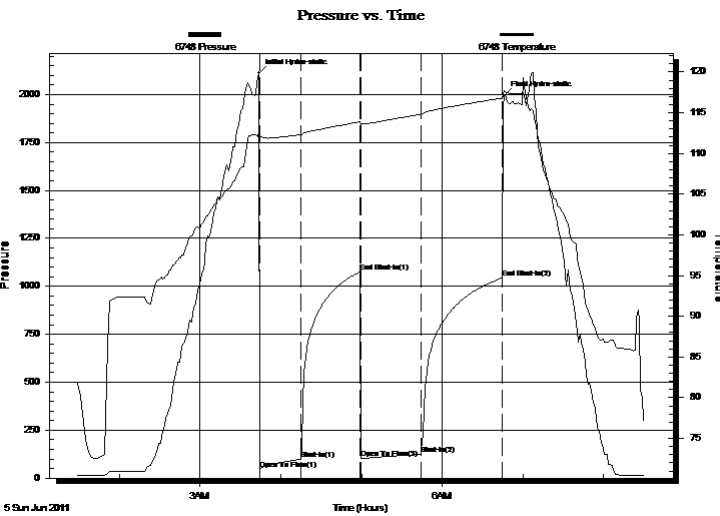
**Hess 2-33**  
**33/13S/31W/Gove**  
 Job Ticket: 15796 **DST#: 6**  
 Test Start: 2011.06.05 @ 01:28:00

## GENERAL INFORMATION:

Formation: **Lansing Zone K**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 03:44:30  
 Time Test Ended: 08:31:00  
 Interval: **4159.00 ft (KB) To 4186.00 ft (KB) (TVD)**  
 Total Depth: 4186.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Ken Swinney  
 Unit No: 3325 Scott City/94  
 Reference Elevations: 2877.00 ft (KB)  
 2872.00 ft (CF)  
 KB to GR/CF: 5.00 ft

**Serial #: 6748 Outside**  
 Press @ Run Depth: 1044.08 psig @ 4183.00 ft (KB) Capacity: 5000.00 psig  
 Start Date: 2011.06.05 End Date: 2011.06.05 Last Calib.: 2011.06.05  
 Start Time: 01:29:00 End Time: 08:30:30 Time On Btm: 2011.06.05 @ 03:44:00  
 Time Off Btm: 2011.06.05 @ 06:46:00

**TEST COMMENT:** 1ST Open 30 Minutes/Weak blow/Blow built to 1 1/2 inch in 9 minutes/Held steady  
 1ST Shut In 45 Minutes/No blow back  
 2ND Open 45 Minutes/Weak blow/Blow built to 3/4 inch in 7 minutes/Held steady  
 2ND Shut In 60 Minutes/No blow back



PRESSURE SUMMARY			
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2109.55	112.67	Initial Hydro-static
1	45.61	111.96	Open To Flow (1)
31	96.94	112.30	Shut-In(1)
75	1074.37	113.87	End Shut-In(1)
76	101.13	113.59	Open To Flow (2)
120	125.26	114.80	Shut-In(2)
181	1044.08	116.77	End Shut-In(2)
182	1992.17	117.75	Final Hydro-static

Recovery		
Length (ft)	Description	Volume (bbl)
190.00	Muddy water 35% Mud 65% Water	1.61

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



# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Grand Mesa Operating

**Hess 2-33**

1700 N Waterfront Parkway ay  
 Building 600  
 Wichita, KS 67206+5514  
 ATTN: Steve Stribling

**33/13S/31W/Gove**

Job Ticket: 15796

**DST#: 6**

Test Start: 2011.06.05 @ 01:28:00

**Tool Information**

Drill Pipe:	Length: 4026.00 ft	Diameter: 3.88 inches	Volume: 58.88 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: 120.00 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 65000.00 lb
			<u>Total Volume: 59.47 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	16.00 ft			String Weight: Initial 54000.00 lb
Depth to Top Packer:	4159.00 ft			Final 54000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	27.00 ft			
Tool Length:	56.00 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			4135.00	
Hydraulic tool	5.00			4140.00	
Change over sub	1.00			4141.00	
Jars	6.00			4147.00	
Safety Joint	2.00			4149.00	
Packer	5.00			4154.00	29.00 Bottom Of Top Packer
Packer	5.00			4159.00	
Anchor	22.00			4181.00	
Recorder	1.00	6749	Inside	4182.00	
Recorder	1.00	6748	Outside	4183.00	
Bullnose	3.00			4186.00	27.00 Bottom Packers & Anchor

**Total Tool Length: 56.00**



# DRILL STEM TEST REPORT

## FLUID SUMMARY

Grand Mesa Operating

**Hess 2-33**

1700 N Waterfront Parkway  
 Building 600  
 Wichita, KS 67206+5514  
 ATTN: Steve Stribling

**33/13S/31W/Gove**

Job Ticket: 15796

**DST#: 6**

Test Start: 2011.06.05 @ 01:28:00

### Mud and Cushion Information

Mud Type: Gel Chem  
 Mud Weight: 9.00 lb/gal  
 Viscosity: 62.00 sec/qt  
 Water Loss: 6.79 in<sup>3</sup>  
 Resistivity: ohm.m  
 Salinity: 4000.00 ppm  
 Filter Cake: 1.00 inches

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

Oil API: deg API  
 Water Salinity: ppm

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
190.00	Muddy water 35% Mud 65% Water	1.614

Total Length: 190.00 ft      Total Volume: 1.614 bbl

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

Laboratory Name:      Laboratory Location:

Recovery Comments: Recovery Chlorides 33,000 ppm  
 Thin layer of oil on first stand of fluid

# Pressure vs. Time

