



## DRILL STEM TEST REPORT

Prepared For: **Grand Mesa Operating**

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

ATTN: Steve Stribling

**4/16S/33W/Scott**

**Dirks 1-4**

Start Date: 2011.06.17 @ 17:56:00

End Date: 2011.06.18 @ 02:47:30

Job Ticket #: 16586                      DST #: 3

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

Printed: 2011.06.18 @ 00:22:52

Grand Mesa Operating

Dirks 1-4

4/16S/33W/Scott

DST # 3

Lansing zones H,I,J

2011.06.17



# DRILL STEM TEST REPORT

Grand Mesa Operating

Dirks 1-4

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

4/16S/33W/Scott

Job Ticket: 16586

DST#: 3

Test Start: 2011.06.17 @ 17:56:00

## GENERAL INFORMATION:

Formation: **Lansing zones H,I,J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:50:00

Time Test Ended: 02:47:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Ken Swinney

Unit No: 3325 Scott City/28

Interval: **4188.00 ft (KB) To 4293.00 ft (KB) (TVD)**

Reference Elevations: 3068.00 ft (KB)

Total Depth: 4293.00 ft (KB) (TVD)

3063.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 6749

Inside

Press @ Run Depth: 232.54 psig @ 4288.60 ft (KB)

Capacity: 5000.00 psig

Start Date: 2011.06.17

End Date: 2011.06.18

Last Calib.: 2011.06.17

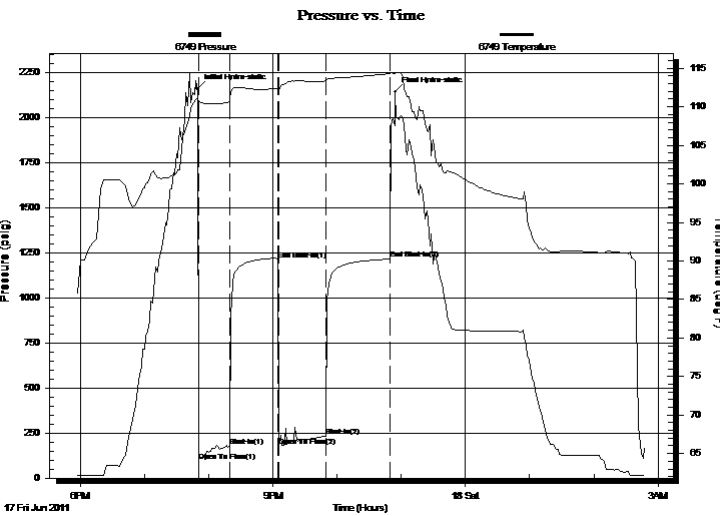
Start Time: 17:57:00

End Time: 02:47:30

Time On Btm: 2011.06.17 @ 19:49:00

Time Off Btm: 2011.06.17 @ 22:54:00

TEST COMMENT: 1ST Open 30 Minutes/Weak blow/Blow built to 11 inches  
 1ST Shut In 45 Minutes/No blow back  
 2ND Open 45 Minutes/Weak blow/Blow built to 13 inches  
 2ND Shut In 60 Minutes/No blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2159.69	111.12	Initial Hydro-static
1	95.69	110.63	Open To Flow (1)
31	174.04	111.03	Shut-In(1)
75	1210.58	112.37	End Shut-In(1)
76	175.22	112.11	Open To Flow (2)
120	232.54	113.35	Shut-In(2)
181	1214.99	114.32	End Shut-In(2)
185	2141.51	114.42	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
55.00	Mud with show of oil Mud 100%	0.27
60.00	Oil cut mud---Oil 5% Mud 95%	0.30
60.00	Oil cut w atery mud	0.83
0.00	Oil 10% Water 25% Mud 65%	0.00
120.00	Oil cut w atery mud	1.75
0.00	Oil 20% Water 40% Mud 40%	0.00

## Gas Rates

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



# DRILL STEM TEST REPORT

Grand Mesa Operating

Dirks 1-4

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

4/16S/33W/Scott

Job Ticket: 16586

DST#: 3

Test Start: 2011.06.17 @ 17:56:00

## GENERAL INFORMATION:

Formation: **Lansing zones H,I,J**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:50:00

Time Test Ended: 02:47:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Ken Swinney

Unit No: 3325 Scott City/28

Interval: **4188.00 ft (KB) To 4293.00 ft (KB) (TVD)**

Reference Elevations: 3068.00 ft (KB)

Total Depth: 4293.00 ft (KB) (TVD)

3063.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: **6748** Outside

Press @ Run Depth: 1215.94 psig @ 4289.60 ft (KB)

Capacity: 5000.00 psig

Start Date: 2011.06.17 End Date: 2011.06.18

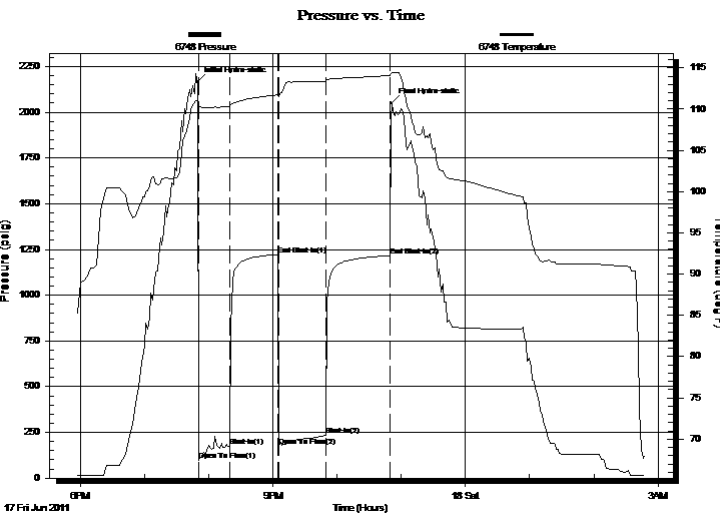
Last Calib.: 2011.06.17

Start Time: 17:57:00 End Time: 02:48:30

Time On Btm: 2011.06.17 @ 19:49:00

Time Off Btm: 2011.06.17 @ 22:51:00

TEST COMMENT: 1ST Open 30 Minutes/Weak blow/Blow built to 11 inches  
 1ST Shut In 45 Minutes/No blow back  
 2ND Open 45 Minutes/Weak blow/Blow built to 13 inches  
 2ND Shut In 60 Minutes/No blow back



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2166.45	110.90	Initial Hydro-static
1	95.35	110.35	Open To Flow (1)
31	174.66	110.29	Shut-In(1)
75	1221.92	111.75	End Shut-In(1)
76	175.76	111.47	Open To Flow (2)
120	233.13	113.34	Shut-In(2)
181	1215.94	114.08	End Shut-In(2)
182	2049.90	114.37	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
55.00	Mud with show of oil Mud 100%	0.27
60.00	Oil cut mud---Oil 5% Mud 95%	0.30
60.00	Oil cut w atery mud	0.83
0.00	Oil 10% Water 25% Mud 65%	0.00
120.00	Oil cut w atery mud	1.75
0.00	Oil 20% Water 40% Mud 40%	0.00

## Gas Rates

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



# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Grand Mesa Operating

**Dirks 1-4**

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

**4/16S/33W/Scott**

Job Ticket: 16586

**DST#: 3**

Test Start: 2011.06.17 @ 17:56:00

**Tool Information**

Drill Pipe:	Length: 4053.00 ft	Diameter: 3.88 inches	Volume: 59.27 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:	70000.00 lb
			<u>Total Volume: 59.86 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	13.75 ft			String Weight: Initial	57000.00 lb
Depth to Top Packer:	4188.00 ft			Final	59000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	104.60 ft				
Tool Length:	133.35 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			4164.25	
Hydraulic tool	5.00			4169.25	
Change over sub	0.75			4170.00	
Jars	6.00			4176.00	
Safety Joint	2.00			4178.00	
Packer	5.00			4183.00	28.75 Bottom Of Top Packer
Packer	5.00			4188.00	
Anchor	5.00			4193.00	
change over sub	0.75			4193.75	
drill pipe	63.10			4256.85	
change over sub	0.75			4257.60	
anchor	30.00			4287.60	
Recorder	1.00	6749	Inside	4288.60	
Recorder	1.00	6748	Outside	4289.60	
bull plug	3.00			4292.60	104.60 Bottom Packers & Anchor

**Total Tool Length: 133.35**



# DRILL STEM TEST REPORT

## FLUID SUMMARY

Grand Mesa Operating

**Dirks 1-4**

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

**4/16S/33W/Scott**

Job Ticket: 16586

**DST#: 3**

Test Start: 2011.06.17 @ 17:56:00

### 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: 59.00 sec/qt	Cushion Volume: bbl		
Water Loss: 9.58 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: ohm.m	Gas Cushion Pressure: psig		
Salinity: 7400.00 ppm			
Filter Cake: 2.00 inches			

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
55.00	Mud with show of oil Mud 100%	0.270
60.00	Oil cut mud--Oil 5% Mud 95%	0.295
60.00	Oil cut w atery mud	0.829
0.00	Oil 10% Water 25% Mud 65%	0.000
120.00	Oil cut w atery mud	1.755
0.00	Oil 20% Water 40% Mud 40%	0.000

Total Length: 295.00 ft      Total Volume: 3.149 bbl

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

Laboratory Name:      Laboratory Location:

Recovery Comments: Recovery Chlorides 25000 ppm

Serial #: 6749

Inside

Grand Mesa Operating

4/16S/33W/Scott

DST Test Number: 3

### Pressure vs. Time

