



## DRILL STEM TEST REPORT

Prepared For: **Grand Mesa Operating Company**

1700 N Waterfront PKWY Bldg 600 Wichita  
KS 67206+5514

ATTN: Kent Matson

**32-13s-31w Gove**

**Hess #6-32**

Start Date: 2011.09.03 @ 17:35:00

End Date: 2011.09.04 @ 01:36:30

Job Ticket #: 18631                      DST #: 6

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

Printed: 2011.09.04 @ 02:04:00

Grand Mesa Operating Company  
Hess #6-32  
32-13s-31w Gove  
DST # 6  
Lower Johnson  
2011.09.03



# DRILL STEM TEST REPORT

Grand Mesa Operating Company

**Hess #6-32**

1700 N Waterfront PKWY Bldg 600 Wichita KS  
67206+5514

**32-13s-31w Gove**

Job Ticket: 18631

**DST#: 6**

ATTN: Kent Matson

Test Start: 2011.09.03 @ 17:35:00

## GENERAL INFORMATION:

Formation: **Lower Johnson**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:20:00

Time Test Ended: 01:36:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Jared Scheck

Unit No: 3320-Scott City

**Interval: 4552.00 ft (KB) To 4563.00 ft (KB) (TVD)**

Reference Elevations: 2943.00 ft (KB)

Total Depth: 4563.00 ft (KB) (TVD)

2938.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

**Serial #: 8419 Inside**

Press @ Run Depth: 166.67 psia @ 4559.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2011.09.03

End Date:

2011.09.04

Last Calib.:

2011.09.04

Start Time:

17:35:00

End Time:

01:36:30

Time On Btm:

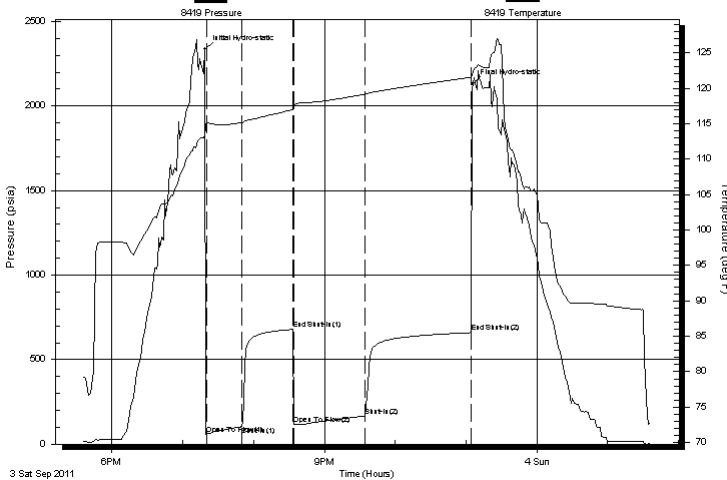
2011.09.03 @ 19:19:00

Time Off Btm:

2011.09.03 @ 23:06:00

**TEST COMMENT:** 1st Opening 30 Minutes-Fair blow built bottom of bucket in 18 minutes  
1st Shut-in 45 Minutes-1/2 Inch blow back  
2nd Opening 60 Minutes-Weak blow built bottom of bucket in 32 minutes  
2nd Shut-in 90 Minutes-1/2 Inch blow back

Pressure vs. Time



## PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2336.21	113.47	Initial Hydro-static
1	57.32	115.75	Open To Flow (1)
31	103.08	115.18	Shut-In(1)
75	678.78	117.00	End Shut-In(1)
76	115.85	117.60	Open To Flow (2)
136	166.67	119.15	Shut-In(2)
226	659.70	121.54	End Shut-In(2)
227	2130.21	122.23	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
120.00	Oil cut muddy w ater	0.59
0.00	20%oil 30%w ater 50% mud	0.00
330.00	Clean gassy oil 10%gas 90% oil	4.63
0.00	Chlorides 40,000	0.00
0.00	Resistivity	0.00

## Gas Rates

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



# DRILL STEM TEST REPORT

Grand Mesa Operating Company

**Hess #6-32**

1700 N Waterfront PKWY Bldg 600 Wichita KS  
67206+5514

**32-13s-31w Gove**

Job Ticket: 18631

**DST#: 6**

ATTN: Kent Matson

Test Start: 2011.09.03 @ 17:35:00

## GENERAL INFORMATION:

Formation: **Lower Johnson**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 19:20:00

Time Test Ended: 01:36:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Jared Scheck

Unit No: 3320-Scott City

**Interval: 4552.00 ft (KB) To 4563.00 ft (KB) (TVD)**

Reference Elevations: 2943.00 ft (KB)

Total Depth: 4563.00 ft (KB) (TVD)

2938.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

**Serial #: 8524 Outside**

Press @ RunDepth: 656.99 psia @ 4560.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2011.09.03

End Date:

2011.09.04

Last Calib.:

2011.09.04

Start Time: 17:35:00

End Time:

01:36:00

Time On Btm:

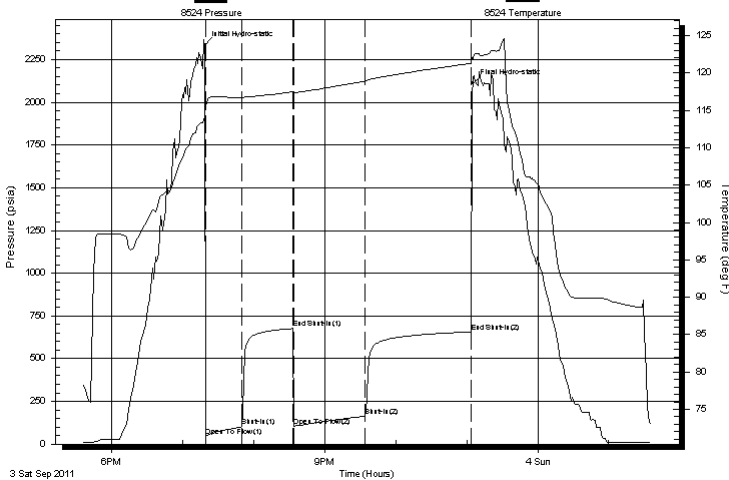
2011.09.03 @ 19:18:30

Time Off Btm:

2011.09.03 @ 23:05:00

**TEST COMMENT:** 1st Opening 30 Minutes-Fair blow built bottom of bucket in 18 minutes  
1st Shut-in 45 Minutes-1/2 Inch blow back  
2nd Opening 60 Minutes-Weak blow built bottom of bucket in 32 minutes  
2nd Shut-in 90 Minutes-1/2 Inch blow back

Pressure vs. Time



## PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2334.36	114.27	Initial Hydro-static
1	47.31	115.68	Open To Flow (1)
31	102.47	116.68	Shut-In(1)
75	676.30	117.50	End Shut-In(1)
76	104.70	117.38	Open To Flow (2)
136	163.29	118.92	Shut-In(2)
226	656.99	121.30	End Shut-In(2)
227	2110.24	121.76	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
120.00	Oil cut muddy w ater	0.59
0.00	20%oil 30%w ater 50% mud	0.00
330.00	Clean gassy oil 10%gas 90% oil	4.63
0.00	Chlorides 40,000	0.00
0.00	Resistivity	0.00

## Gas Rates

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



# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Grand Mesa Operating Company

**Hess #6-32**

1700 N Waterfront PKWY Bldg 600 Wichita KS  
67206+5514

**32-13s-31w Gove**

Job Ticket: 18631

**DST#: 6**

ATTN: Kent Matson

Test Start: 2011.09.03 @ 17:35:00

## Tool Information

Drill Pipe:	Length: 4426.00 ft	Diameter: 3.80 inches	Volume: 62.09 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: 80000.00 lb
			<u>Total Volume: 62.68 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	22.00 ft			String Weight: Initial 60000.00 lb
Depth to Top Packer:	4552.00 ft			Final 60000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	11.00 ft			
Tool Length:	39.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

SHut-InTool	5.00		Inside	4529.00	
Hydraulic Tool	5.00			4534.00	
Jars	6.00			4540.00	
Safety Joint	2.00			4542.00	
Packer	5.00			4547.00	28.00 Bottom Of Top Packer
Packer	5.00			4552.00	
Anchor	6.00			4558.00	
Recorder	1.00	8419	Inside	4559.00	
Recorder	1.00	8524	Outside	4560.00	
Bullnose	3.00			4563.00	11.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>39.00</b>				



# DRILL STEM TEST REPORT

## FLUID SUMMARY

Grand Mesa Operating Company

**Hess #6-32**

1700 N Waterfront PKWY Bldg 600 Wichita KS  
67206+5514

**32-13s-31w Gove**

Job Ticket: 18631

**DST#: 6**

ATTN: Kent Matson

Test Start: 2011.09.03 @ 17:35:00

### Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

49 deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 59.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.00 in<sup>3</sup>

Gas Cushion Type:

Resistivity: 0.20 ohm.m

Gas Cushion Pressure:

psia

Salinity: 2800.00 ppm

Filter Cake: 1.00 inches

### Recovery Information

Recovery Table

Length ft	Description	Volume bbl
120.00	Oil cut muddy w ater	0.590
0.00	20%oil 30%w ater 50% mud	0.000
330.00	Clean gassy oil 10%gas 90% oil	4.629
0.00	Chlorides 40,000	0.000
0.00	Resistivity	0.000

Total Length: 450.00 ft      Total Volume: 5.219 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: Chlorides 40,000 /Resistivity .2 @ 80 degrees /Gravity oil 49

Serial #: 8419

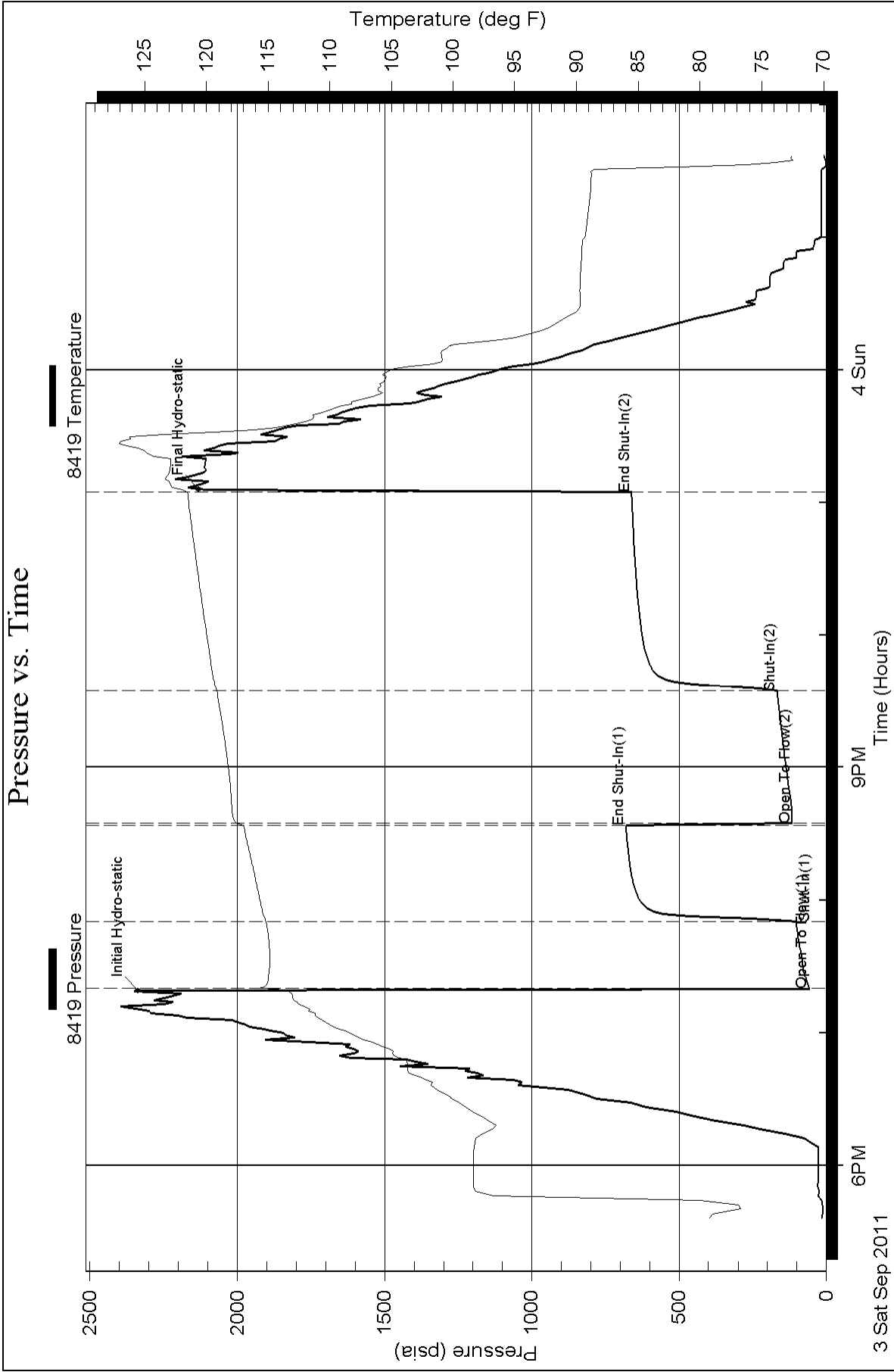
Inside

Grand Mesa Operating Company

32-13s-31w Gove

DST Test Number: 6

### Pressure vs. Time



Serial #: 8524

Outside Grand Mesa Operating Company

32-13s-31w Gove

DST Test Number: 6

### Pressure vs. Time

