



DRILL STEM TEST REPORT

Prepared For: **Grand Mesa Operating**

1700 North Waterfront Parkway Building 600
Wichita Kansas 67206

ATTN: Steve Carl

9/14S/31W Gove Co.

Hund # 2-9

Start Date: 2011.05.10 @ 08:30:00

End Date: 2011.05.10 @ 17:13:30

Job Ticket #: 16531 DST #: 3

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

Printed: 2011.05.10 @ 17:45:10

Grand Mesa Operating

Hund # 2-9

9/14S/31W Gove Co.

DST # 3

Fl.Scott,Vertigris,K

2011.05.10



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Hund # 2-9

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Job Ticket: 16531

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Test Start: 2011.05.10 @ 08:30:00

GENERAL INFORMATION:

Formation: **Ft.Scott,Vertigris,K**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 10:46:00

Time Test Ended: 17:13:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Dylan E Ellis

Unit No: 3345/Scott City/94

Interval: 4466.00 ft (KB) To 4546.00 ft (KB) (TVD)

Reference Elevations: 2936.00 ft (KB)

Total Depth: 4546.00 ft (KB) (TVD)

2931.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8400 Outside

Press @ Run Depth: 212.81 psia @ 4542.73 ft (KB)

Capacity: 5000.00 psia

Start Date: 2011.05.10

End Date: 2011.05.10

Last Calib.: 2011.05.10

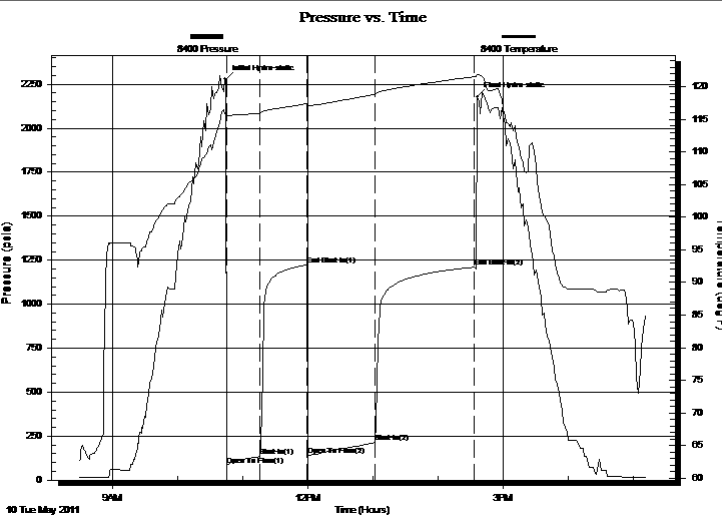
Start Time: 08:30:00

End Time: 17:13:30

Time On Btm: 2011.05.10 @ 10:44:30

Time Off Btm: 2011.05.10 @ 14:36:30

TEST COMMENT: 1ST Opening 30 Minutes fair blow /blow blew to bottom of bucket in 12 minutes
1ST Shut-In 45 Minutes yes blow back/ 1.50 inches
2ND Opening 45 Minutes good blow /blow blew to bottom of bucket in 7 minutes
2ND Shut-In 60 Minutes yes blow back/2.25 inches



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2278.28	115.68	Initial Hydro-static
2	81.43	115.41	Open To Flow (1)
32	134.60	115.93	Shut-In(1)
75	1224.20	117.40	End Shut-In(1)
76	141.15	117.12	Open To Flow (2)
138	212.81	118.83	Shut-In(2)
230	1210.04	121.55	End Shut-In(2)
232	2179.73	121.89	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
166.00	Clean Gassy Oil	1.24
0.00	20% Gas 80% Oil	0.00
126.00	Slightly Gassy Mud cut Oil	1.77
0.00	10% Gas 20% Mud 70% Oil	0.00
126.00	Gassy Mud cut Oil	1.77
0.00	30% Gas 30% Mud 40% Oil	0.00

Gas Rates

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



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Tester: Dylan E Ellis

Unit No: 3345/Scott City/94

Interval: 4466.00 ft (KB) To 4546.00 ft (KB) (TVD)

Reference Elevations: 2936.00 ft (KB)

Total Depth: 4546.00 ft (KB) (TVD)

2931.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: 8405

Inside

Press @ Run Depth: 1208.90 psia @ 4541.73 ft (KB)

Capacity: 5000.00 psia

Start Date: 2011.05.10

End Date: 2011.05.10

Last Calib.: 2011.05.10

Start Time: 08:30:00

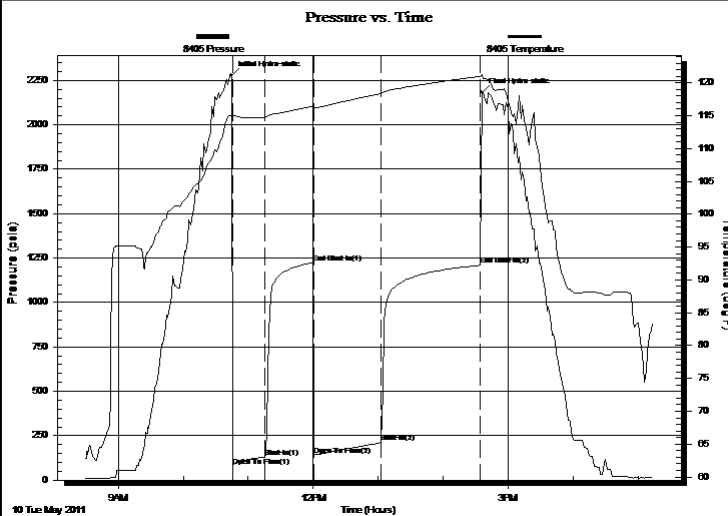
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1ST Shut-In 45 Minutes yes blow back/ 1.50 inches
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2ND Shut-In 60 Minutes yes blow back/2.25 inches

PRESSURE SUMMARY



Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2278.86	115.02	Initial Hydro-static
1	78.14	114.81	Open To Flow (1)
31	131.54	114.75	Shut-In(1)
75	1223.29	116.43	End Shut-In(1)
76	142.53	116.20	Open To Flow (2)
138	211.14	118.33	Shut-In(2)
230	1208.90	121.00	End Shut-In(2)
231	2181.92	121.29	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
166.00	Clean Gassy Oil	1.24
0.00	20% Gas 80% Oil	0.00
126.00	Slightly Gassy Mud cut Oil	1.77
0.00	10% Gas 20% Mud 70% Oil	0.00
126.00	Gassy Mud cut Oil	1.77
0.00	30% Gas 30% Mud 40% Oil	0.00

Gas Rates

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



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TOOL DIAGRAM

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Test Start: 2011.05.10 @ 08:30:00

Tool Information

Drill Pipe:	Length: 4349.00 ft	Diameter: 3.80 inches	Volume: 61.01 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: 119.12 ft	Diameter: 2.25 inches	Volume: 0.59 bbl	Weight to Pull Loose: 28000.00 lb
			<u>Total Volume: 61.60 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	30.12 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4466.00 ft			Final 68000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	79.73 ft			
Tool Length:	107.73 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			4443.00	
Hydraulic Tool	5.00			4448.00	
Jars	6.00			4454.00	
Safety Joint	2.00			4456.00	
Packer	5.00			4461.00	28.00 Bottom Of Top Packer
Packer	5.00			4466.00	
Perforations	5.00			4471.00	
Change Over Sub	0.75			4471.75	
Drill Pipe	62.23			4533.98	
Change Over Sub	0.75			4534.73	
Perforations	6.00			4540.73	
Recorder	1.00	8405	Inside	4541.73	
Recorder	1.00	8400	Outside	4542.73	
Bull Plug	3.00			4545.73	79.73 Bottom Packers & Anchor

Total Tool Length: 107.73



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FLUID SUMMARY

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Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 51.00 sec/qt
Water Loss: 7.20 in³
Resistivity: ohm.m
Salinity: 3900.00 ppm
Filter Cake: 1.00 inches

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

Oil API: deg API
Water Salinity: ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
166.00	Clean Gassy Oil	1.243
0.00	20% Gas 80% Oil	0.000
126.00	Slightly Gassy Mud cut Oil	1.767
0.00	10% Gas 20% Mud 70% Oil	0.000
126.00	Gassy Mud cut Oil	1.767
0.00	30% Gas 30% Mud 40% Oil	0.000
0.00	1290 feet of Gas in the pipe	0.000
0.00	Gravity of oil corrected w as 41	0.000

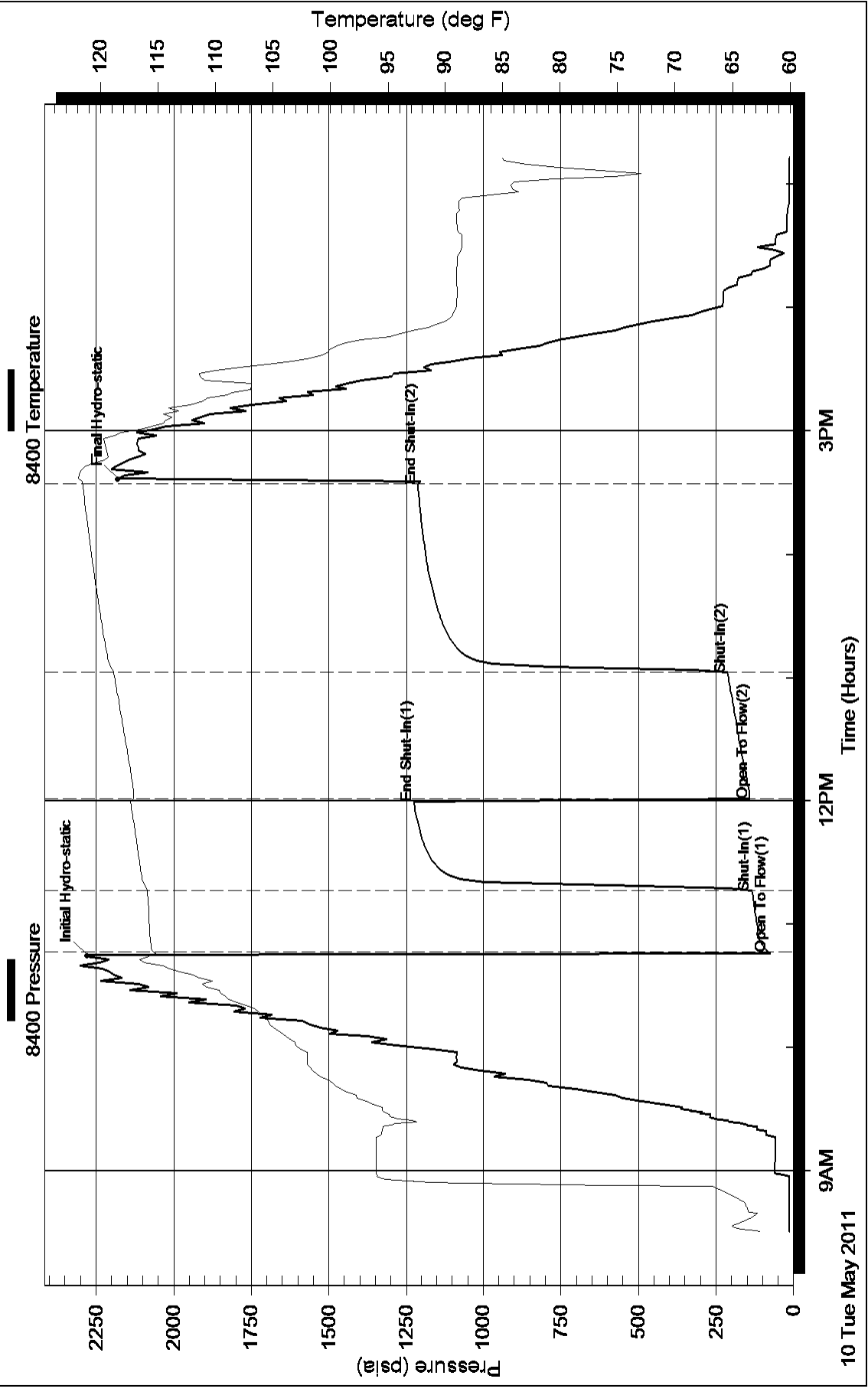
Total Length: 418.00 ft Total Volume: 4.777 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments:

Pressure vs. Time



Pressure vs. Time

