



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: 2011.05.09 @ 01:33:00

End Date: 2011.05.09 @ 08:07:00

Job Ticket #: 16530 DST #: 2

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

Printed: 2011.05.09 @ 08:38:49

Grand Mesa Operating

Hund # 2-9

9/14S/31W Gove Co.

DST # 2

Kansas City " L " Zo

2011.05.09



DRILL STEM TEST REPORT

Grand Mesa Operating

Hund # 2-9

1700 North Waterfront Parkway Building 600
Wichita Kansas 67206

9/14S/31W Gove Co.

Job Ticket: 16530

DST#: 2

ATTN: Steve Carl

Test Start: 2011.05.09 @ 01:33:00

GENERAL INFORMATION:

Formation: **Kansas City " L " Zo**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:19:00

Time Test Ended: 08:07:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Dylan E Ellis

Unit No: 3345/Scott City/ 94

Interval: 4278.00 ft (KB) To 4320.00 ft (KB) (TVD)

Reference Elevations: 2936.00 ft (KB)

Total Depth: 4320.00 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: 256.76 psia @ 4316.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2011.05.09

End Date:

2011.05.09

Last Calib.:

2011.05.09

Start Time:

01:33:00

End Time:

08:07:00

Time On Btm:

2011.05.09 @ 03:18:00

Time Off Btm:

2011.05.09 @ 05:53:00

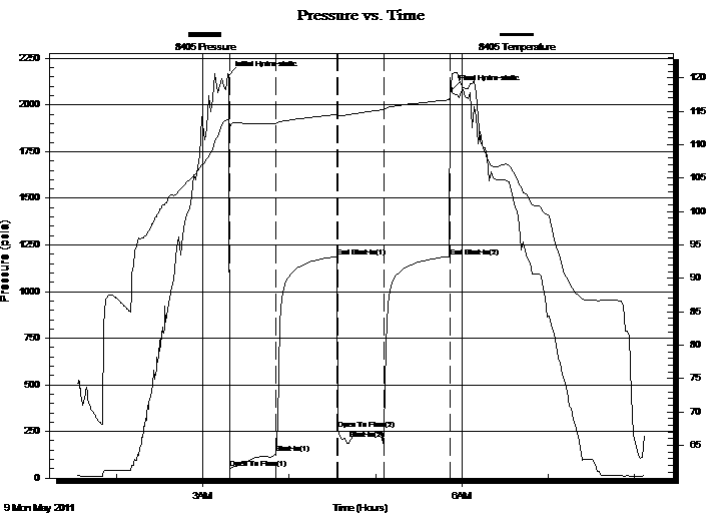
TEST COMMENT:

1ST Opening 30 Minutes fair building blow /blow built to 7 inches into bucket of water

1ST Shut-In 45 Minutes no blow back

2ND Opening 30 Minutes open tool/dead/after 4 minutes very weak building blow /3 inches into water

2ND Shut-In 45 Minutes no blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2160.26	113.71	Initial Hydro-static
1	52.84	112.70	Open To Flow (1)
33	134.73	113.20	Shut-In(1)
75	1188.36	114.58	End Shut-In(1)
76	264.49	114.42	Open To Flow (2)
108	256.76	115.30	Shut-In(2)
154	1188.05	116.75	End Shut-In(2)
155	2084.80	120.57	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
3.00	Clean Oil	0.01
42.00	Slightly Oil cut Watery Mud	0.21
0.00	10% Oil 20% Water 70% Mud	0.00
189.00	Slightly Oil cut Muddy Water	1.98
0.00	10% Oil 40% Water 50% Mud	0.00
0.00	Chlorides were 41,000.0	0.00

Gas Rates

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



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9/14S/31W Gove Co.

Job Ticket: 16530

DST#: 2

ATTN: Steve Carl

Test Start: 2011.05.09 @ 01:33:00

GENERAL INFORMATION:

Formation: **Kansas City " L " Zo**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:19:00

Time Test Ended: 08:07:00

Test Type: Conventional Bottom Hole (Initial)

Tester: Dylan E Ellis

Unit No: 3345/Scott City/ 94

Interval: 4278.00 ft (KB) To 4320.00 ft (KB) (TVD)

Reference Elevations: 2936.00 ft (KB)

Total Depth: 4320.00 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: 1189.14 psia @ 4317.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2011.05.09

End Date: 2011.05.09

Last Calib.: 2011.05.09

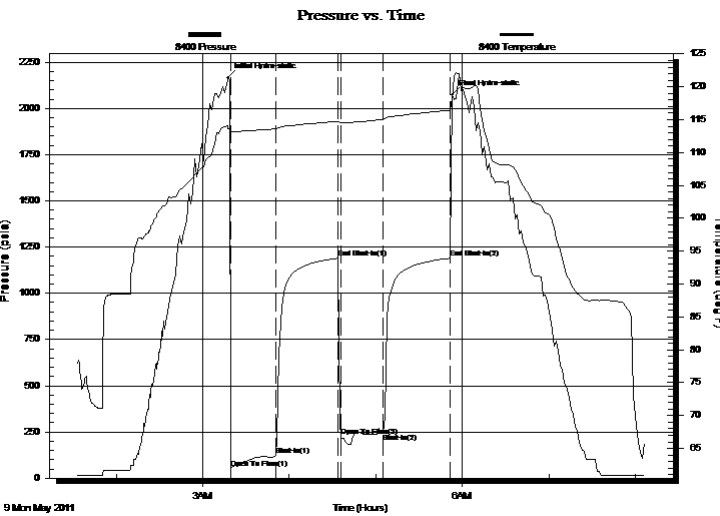
Start Time: 01:33:00

End Time: 08:07:00

Time On Btm: 2011.05.09 @ 03:17:30

Time Off Btm: 2011.05.09 @ 05:53:00

TEST COMMENT: 1ST Opening 30 Minutes fair building blow /blow built to 7 inches into bucket of water
1ST Shut-In 45 Minutes no blow back
2ND Opening 30 Minutes open tool/dead/after 4 minutes very weak building blow /3 inches into water
2ND Shut-In 45 Minutes no blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2164.32	113.69	Initial Hydro-static
2	54.37	113.09	Open To Flow (1)
33	121.84	113.58	Shut-In(1)
76	1189.53	114.75	End Shut-In(1)
78	227.05	114.47	Open To Flow (2)
108	240.84	115.04	Shut-In(2)
154	1189.14	116.45	End Shut-In(2)
156	2072.88	118.18	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
3.00	Clean Oil	0.01
42.00	Slightly Oil cut Watery Mud	0.21
0.00	10% Oil 20% Water 70% Mud	0.00
189.00	Slightly Oil cut Muddy Water	1.98
0.00	10% Oil 40% Water 50% Mud	0.00
0.00	Chlorides were 41,000.0	0.00

Gas Rates

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



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TOOL DIAGRAM

Grand Mesa Operating

Hund # 2-9

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DST#: 2

ATTN: Steve Carl

Test Start: 2011.05.09 @ 01:33:00

Tool Information

Drill Pipe:	Length: 4155.00 ft	Diameter: 3.80 inches	Volume: 58.28 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: 27000.00 lb
			<u>Total Volume: 58.87 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	24.12 ft			String Weight: Initial 59000.00 lb
Depth to Top Packer:	4278.00 ft			Final 61000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	42.00 ft			
Tool Length:	70.00 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			4255.00	
Hydraulic Tool	5.00			4260.00	
Jars	6.00			4266.00	
Safety Joint	2.00			4268.00	
Packer	5.00			4273.00	28.00 Bottom Of Top Packer
Packer	5.00			4278.00	
Perforations	37.00			4315.00	
Recorder	1.00	8405	Inside	4316.00	
Recorder	1.00	8400	Outside	4317.00	
Bull Plug	3.00			4320.00	42.00 Bottom Packers & Anchor
Total Tool Length:	70.00				



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FLUID SUMMARY

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DST#: 2

ATTN: Steve Carl

Test Start: 2011.05.09 @ 01:33:00

Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 9.00 lb/gal
Viscosity: 55.00 sec/qt
Water Loss: 6.80 in³
Resistivity: ohm.m
Salinity: 3800.00 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
3.00	Clean Oil	0.015
42.00	Slightly Oil cut Watery Mud	0.207
0.00	10% Oil 20% Water 70% Mud	0.000
189.00	Slightly Oil cut Muddy Water	1.976
0.00	10% Oil 40% Water 50%Mud	0.000
0.00	Chlorides were 41,000.0	0.000
0.00	Resistivity was .28 @ 56 degrees	0.000

Total Length: 234.00 ft Total Volume: 2.198 bbl

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

Laboratory Name: Laboratory Location:

Recovery Comments: Thank you for the work! Dylan

Pressure vs. Time

