



DRILL STEM TEST REPORT

Prepared For: **GRAND MESA OPERATING**

1700 N WATERFRONT PKWY BLDG 600
WICHITA KS 67206

ATTN: BOB PETERSON

7-21S-25W HODGEMAN

FRANCES 1-7

Start Date: 2011.05.10 @ 16:00:00

End Date: 2011.05.10 @ 23:40:30

Job Ticket #: 1025 DST #: 4

Eagle Testers LLC.

P.O.Box 1011, Great Bend, KS 67530

620-617-7548

Printed: 2011.05.10 @ 17:04:52

GRAND MESA OPERATING

FRANCES 1-7

7-21S-25W

HODGEMAN

DST # 4

MISSISSIPPIAN

2011.05.10



DRILL STEM TEST REPORT

GRAND MESA OPERATING

FRANCES 1-7

1700 N WATERFRONT PKWY BLDG 600
WICHITA KS 67206

7-21S-25W HODGEMAN

Job Ticket: 1025

DST#: 4

ATTN: BOB PETERSON

Test Start: 2011.05.10 @ 16:00:00

GENERAL INFORMATION:

Formation: **MISSISSIPPIAN**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 18:12:30

Time Test Ended: 23:40:30

Test Type: Conventional Bottom Hole (Initial)

Tester: DAVID NICHOLS

Unit No: 15 184 MRT GREAT BE

Interval: **4468.00 ft (KB) To 4482.00 ft (KB) (TVD)**

Reference Elevations: 2395.00 ft (KB)

Total Depth: 4482.00 ft (KB) (TVD)

2390.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: **6666**

Inside

Press @ RunDepth: 42.75 psig @ 4478.00 ft (KB)

Capacity: 5000.00 psig

Start Date: 2011.05.10

End Date:

2011.05.10

Last Calib.:

2011.05.10

Start Time: 16:00:00

End Time:

23:40:30

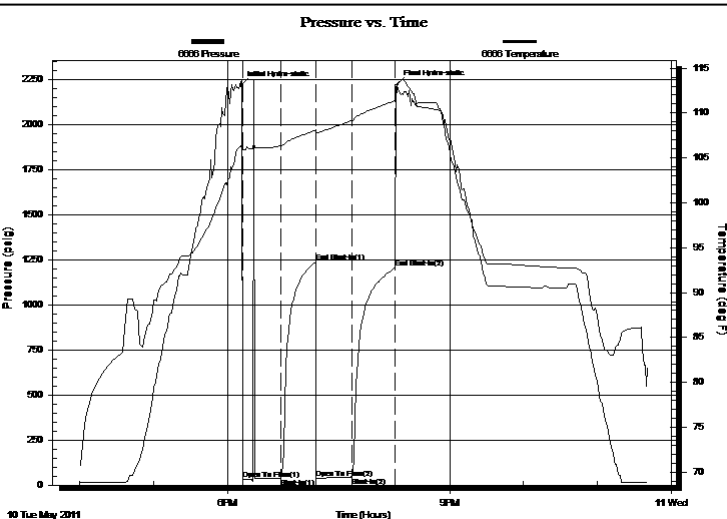
Time On Btm:

2011.05.10 @ 18:11:00

Time Off Btm:

2011.05.10 @ 20:17:30

TEST COMMENT: 30-INITIAL OPENING VERY WEAK SURFACE BLOW FLUSHED TOOL AFTER 10 MINS VERY WEAK SURFACE BLOW
30-INITIAL SHUT IN NO BLOW BACK
30-FINAL OPENING NO BLOW
30-FINAL SHUT IN NO BLOW BACK



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2218.19	106.39	Initial Hydro-static
2	33.85	106.03	Open To Flow (1)
33	38.13	106.36	Shut-In(1)
61	1238.34	108.11	End Shut-In(1)
61	39.22	107.76	Open To Flow (2)
90	42.75	109.14	Shut-In(2)
125	1205.38	111.37	End Shut-In(2)
127	2222.15	112.72	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	MUD 100% MUD	0.05

Gas Rates

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



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Time Test Ended: 23:40:30

Test Type: Conventional Bottom Hole (Initial)

Tester: DAVID NICHOLS

Unit No: 15 184 MRT GREAT BE

Interval: **4468.00 ft (KB) To 4482.00 ft (KB) (TVD)**

Reference Elevations: 2395.00 ft (KB)

Total Depth: 4482.00 ft (KB) (TVD)

2390.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 5.00 ft

Serial #: **6663** Outside

Press @ RunDepth: 1206.46 psig @ 4479.00 ft (KB)

Capacity: 5000.00 psig

Start Date: 2011.05.10

End Date: 2011.05.10

Last Calib.: 2011.05.10

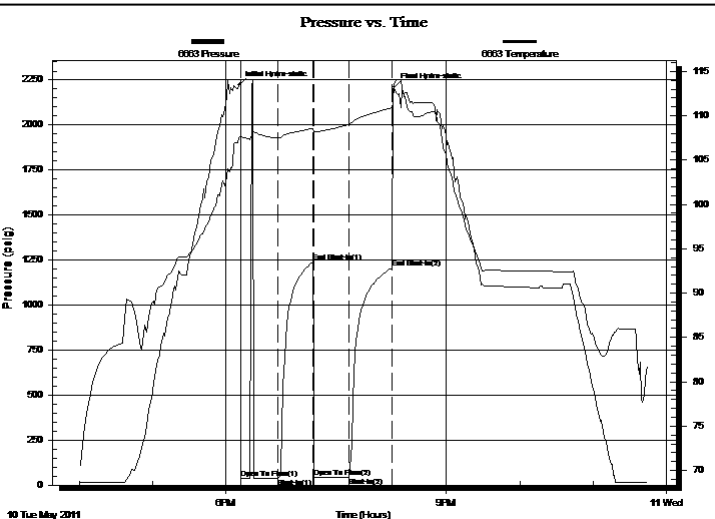
Start Time: 16:00:00

End Time: 23:44:30

Time On Btm: 2011.05.10 @ 18:10:30

Time Off Btm: 2011.05.10 @ 20:17:30

TEST COMMENT: 30-INITIAL OPENING VERY WEAK SURFACE BLOW FLUSHED TOOL AFTER 10 MINS VERY WEAK SURFACE BLOW
30-INITIAL SHUT IN NO BLOW BACK
30-FINAL OPENING NO BLOW
30-FINAL SHUT IN NO BLOW BACK



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2220.06	107.51	Initial Hydro-static
2	35.60	107.53	Open To Flow (1)
33	40.06	107.54	Shut-In(1)
61	1239.25	108.61	End Shut-In(1)
62	41.05	108.26	Open To Flow (2)
90	44.19	109.02	Shut-In(2)
125	1206.46	110.94	End Shut-In(2)
127	2210.30	113.64	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
10.00	MUD 100% MUD	0.05

Gas Rates

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



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TOOL DIAGRAM

GRAND MESA OPERATING

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ATTN: BOB PETERSON

Job Ticket: 1025

DST#: 4

Test Start: 2011.05.10 @ 16:00:00

Tool Information

Drill Pipe:	Length: 4262.00 ft	Diameter: 3.88 inches	Volume: 62.33 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: 180.00 ft	Diameter: 2.25 inches	Volume: 0.89 bbl	Weight to Pull Loose:	80000.00 lb
			<u>Total Volume: 63.22 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	3.00 ft			String Weight: Initial	62000.00 lb
Depth to Top Packer:	4468.00 ft			Final	62000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	14.00 ft				
Tool Length:	43.00 ft				
Number of Packers:	2	Diameter: 6.75 inches			

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Shut-in tool	5.00			4444.00	
Hydraulic tool	5.00			4449.00	
Change over sub	1.00			4450.00	
Jars	6.00			4456.00	
Safety Joint	2.00			4458.00	
Packer	5.00			4463.00	29.00 Bottom Of Top Packer
Packer	5.00			4468.00	
Anchor	9.00			4477.00	
Recorder	1.00	6666	Inside	4478.00	
Recorder	1.00	6663	Outside	4479.00	
Bullnose	3.00			4482.00	14.00 Bottom Packers & Anchor

Total Tool Length: 43.00



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FLUID SUMMARY

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DST#: 4

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Test Start: 2011.05.10 @ 16:00:00

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: 68.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.40 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 6700.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	MUD 100% MUD	0.049

Total Length: 10.00 ft Total Volume: 0.049 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

