



DRILL STEM TEST REPORT

Prepared For: **GRAND MESA OPERATING**

1700 N WATERFRONT PKWY BLDG 600
WICHITA KS 67206

ATTN: MACK ARMSTRONG

34-12S-32W LOGAN

DALE 1-34

Start Date: 2011.04.02 @ 00:00:00

End Date: 2011.04.02 @ 05:33:00

Job Ticket #: 1008 DST #: 1

Eagle Testers LLC.

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

620-617-7548

Printed: 2011.04.02 @ 00:37:05

GRAND MESA OPERATING
DALE 1-34
34-12S-32W LOGAN
DST # 1
LKC -E-F-
2011.04.02



DRILL STEM TEST REPORT

GRAND MESA OPERATING

DALE 1-34

1700 N WATERFRONT PKWY BLDG 600
WICHITA KS 67206

34-12S-32W LOGAN

Job Ticket: 1008

DST#: 1

ATTN: MACK ARMSTRONG

Test Start: 2011.04.02 @ 00:00:00

GENERAL INFORMATION:

Formation: **LKC -E-F-**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 01:57:00

Time Test Ended: 05:33:00

Test Type: Conventional Bottom Hole (Initial)

Tester: DAVID NICHOLS

Unit No: 15

Interval: **4072.00 ft (KB) To 4100.00 ft (KB) (TVD)**

Reference Elevations: 2989.00 ft (KB)

Total Depth: 4100.00 ft (KB) (TVD)

2983.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 6.00 ft

Serial #: **6663**

Inside

Press @ RunDepth: 64.69 psig @ 4096.00 ft (KB)

Capacity: 5000.00 psig

Start Date: 2011.04.02

End Date:

2011.04.02

Last Calib.:

2011.04.02

Start Time: 00:00:00

End Time:

05:33:00

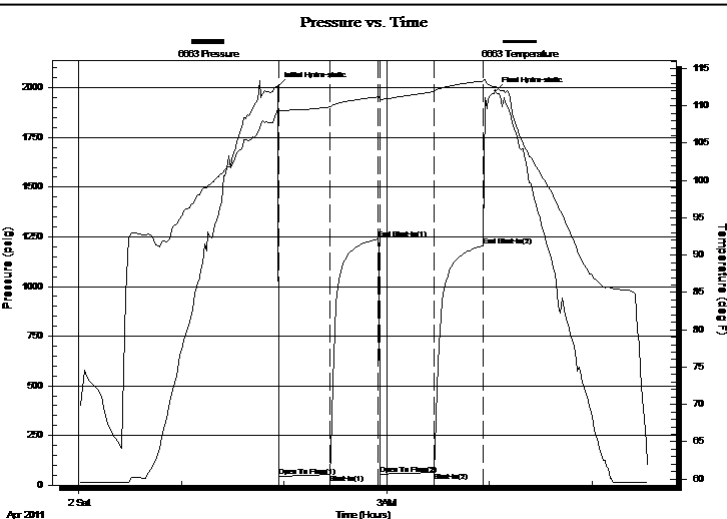
Time On Btm:

2011.04.02 @ 01:56:30

Time Off Btm:

2011.04.02 @ 04:03:30

TEST COMMENT: 30-INITIAL OPENING WEAK BLOW BUILT TO 1 INCH INTO WATER
30-INITIAL SHUT IN NO BLOW BACK
30-FINAL OPENING VERY WEAK SURFACE BLOW
30-FINAL SHUT IN NO BLOW BACK



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2004.43	109.54	Initial Hydro-static
1	43.22	109.17	Open To Flow (1)
30	53.50	109.85	Shut-In(1)
59	1240.49	111.21	End Shut-In(1)
60	54.94	110.89	Open To Flow (2)
91	64.69	111.91	Shut-In(2)
120	1205.34	113.34	End Shut-In(2)
127	1982.86	112.53	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	MUD WITH A SPOT OF OIL 100%MUD	0.07

Gas Rates

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



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Unit No: 15

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Reference Elevations: 2989.00 ft (KB)

Total Depth: 4100.00 ft (KB) (TVD)

2983.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 6.00 ft

Serial #: **6666**

Outside

Press @ Run Depth: 1204.63 psig @ 4097.00 ft (KB)

Capacity: 5000.00 psig

Start Date: 2011.04.02

End Date: 2011.04.02

Last Calib.: 2011.04.02

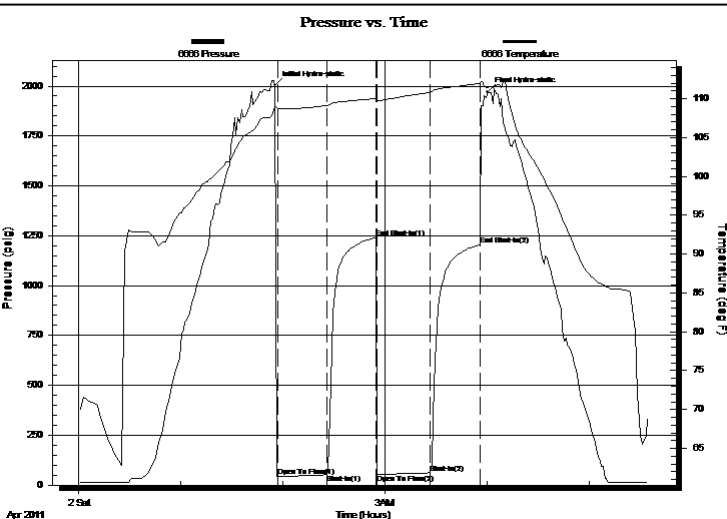
Start Time: 00:00:00

End Time: 05:34:30

Time On Btm: 2011.04.02 @ 01:55:30

Time Off Btm: 2011.04.02 @ 04:00:30

TEST COMMENT: 30-INITIAL OPENING WEAK BLOW BUILT TO 1 INCH INTO WATER
30-INITIAL SHUT IN NO BLOW BACK
30-FINAL OPENING VERY WEAK SURFACE BLOW
30-FINAL SHUT IN NO BLOW BACK



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2003.17	109.02	Initial Hydro-static
2	42.15	108.76	Open To Flow (1)
31	52.08	109.08	Shut-In(1)
59	1239.68	110.02	End Shut-In(1)
60	53.14	109.74	Open To Flow (2)
91	61.58	110.81	Shut-In(2)
121	1204.63	111.94	End Shut-In(2)
125	1970.38	111.49	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
15.00	MUD WITH A SPOT OF OIL 100%MUD	0.07

Gas Rates

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



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TOOL DIAGRAM

GRAND MESA OPERATING

DALE 1-34

1700 N WATERFRONT PKWY BLDG 600
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34-12S-32W LOGAN

Job Ticket: 1008

DST#: 1

ATTN: MACK ARMSTRONG

Test Start: 2011.04.02 @ 00:00:00

Tool Information

Drill Pipe:	Length: 3926.00 ft	Diameter: 3.88 inches	Volume: 57.41 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: 58.00 bbl</u>	Tool Chased	0.00 ft
Drill Pipe Above KB:	3.00 ft			String Weight: Initial	55000.00 lb
Depth to Top Packer:	4072.00 ft			Final	55000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	28.00 ft				
Tool Length:	57.00 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			4048.00	
Hydraulic tool	5.00			4053.00	
Change over sub	1.00			4054.00	
Jars	6.00			4060.00	
Safety Joint	2.00			4062.00	
Packer	5.00			4067.00	29.00 Bottom Of Top Packer
Packer	5.00			4072.00	
Anchor	23.00			4095.00	
Recorder	1.00	6663	Inside	4096.00	
Recorder	1.00	6666	Outside	4097.00	
Bullnose	3.00			4100.00	28.00 Bottom Packers & Anchor

Total Tool Length: 57.00



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FLUID SUMMARY

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DST#: 1

ATTN: MACK ARMSTRONG

Test Start: 2011.04.02 @ 00:00:00

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: 59.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.40 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1500.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
15.00	MUD WITH A SPOT OF OIL 100%MUD	0.074

Total Length: 15.00 ft Total Volume: 0.074 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time

