



DRILL STEM TEST REPORT

Prepared For: **GRAND MESA OPERATING**

1700 N WATERFRONT
PKWY BLDG 600
WICHITA KS 67206

ATTN: BOB PETERSON

33-13S-31W GOVE

KLAUS-HESS 1-33

Start Date: 2011.02.11 @ 03:00:00

End Date: 2011.02.11 @ 10:53:00

Job Ticket #: 1064 DST #: 1

Eagle Testers LLC.

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

620-617-7548

Printed: 2011.02.11 @ 04:14:31

GRAND MESA OPERATING
KLAUS-HESS 1-33
33-13S-31W GOVE
DST # 1
LKC C-
2011.02.11



DRILL STEM TEST REPORT

GRAND MESA OPERATING

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ATTN: BOB PETERSON

33-13S-31W GOVE

Job Ticket: 1064

DST#: 1

Test Start: 2011.02.11 @ 03:00:00

GENERAL INFORMATION:

Formation: **LKC C-**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 04:45:00

Time Test Ended: 10:53:00

Test Type: Conventional Bottom Hole (Initial)

Tester: DAVID NICHOLS

Unit No: 15 43 MRT OAKLEY

Interval: **3928.00 ft (KB) To 3950.00 ft (KB) (TVD)**

Total Depth: 3950.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2853.00 ft (KB)

2846.00 ft (CF)

KB to GR/CF: 7.00 ft

Serial #: **6666** Outside

Press@RunDepth: 508.29 psig @ 3947.00 ft (KB)

Start Date: 2011.02.11

End Date:

2011.02.11

Start Time: 03:00:00

End Time:

10:53:00

Capacity: 5000.00 psig

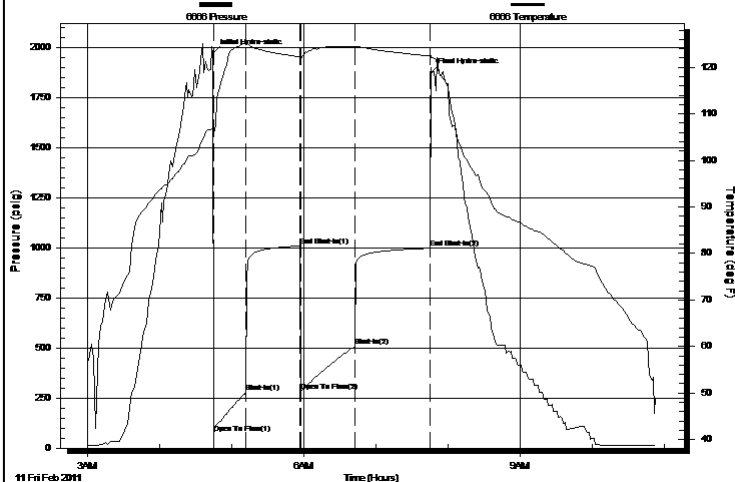
Last Calib.: 2011.02.11

Time On Btm: 2011.02.11 @ 04:44:30

Time Off Btm: 2011.02.11 @ 07:46:00

TEST COMMENT: 30-INITIAL OPENING GOOD BLOW BOTTOM BUCKET IN 6 MINS
45-INITIAL SHUT IN FAIR BLOW BACK
45-FINAL OPENING GOOD BLOW BOTTOM BUCKET IN 6 MINS
60-FINAL SHUT IN FAIR BLOW BACK

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1967.71	106.65	Initial Hydro-static
1	73.53	106.24	Open To Flow (1)
28	280.49	125.17	Shut-In (1)
72	1008.25	122.28	End Shut-In (1)
73	281.68	121.91	Open To Flow (2)
118	508.29	124.41	Shut-In (2)
180	996.32	122.48	End Shut-In (2)
182	1870.79	122.17	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
480.00	GAS IN PIPE 100%GAS	5.82
960.00	GASSY OIL 75%OIL25%GAS	14.04
240.00	MUD CUTGASSY OIL 15%M15%G70%O	3.51

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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Job Ticket: 1064

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Test Type: Conventional Bottom Hole (Initial)

Tester: DAVID NICHOLS

Unit No: 15 43 MRT OAKLEY

Interval: **3928.00 ft (KB) To 3950.00 ft (KB) (TVD)**

Total Depth: 3950.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2853.00 ft (KB)

2846.00 ft (CF)

KB to GR/CF: 7.00 ft

Serial #: **6651**

Inside

Press@RunDepth: 996.88 psig @ 3946.00 ft (KB)

Start Date: 2011.02.11

End Date:

2011.02.11

Start Time: 03:00:00

End Time:

10:53:30

Capacity: 5000.00 psig

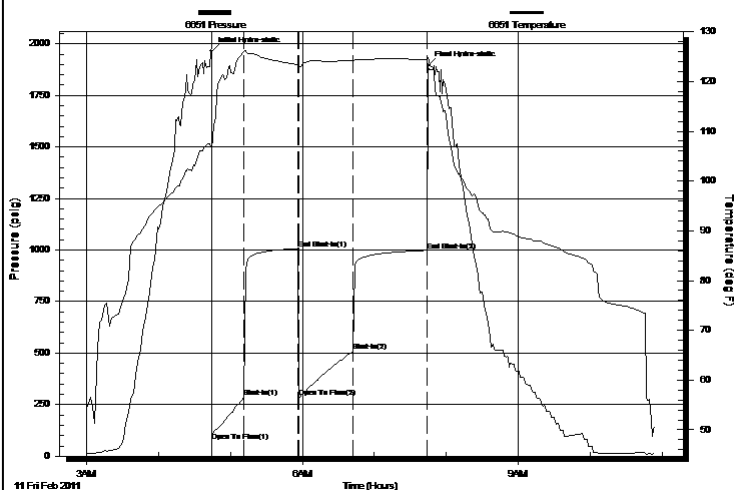
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60-FINAL SHUT IN FAIR BLOW BACK

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1963.30	107.01	Initial Hydro-static
1	73.87	106.57	Open To Flow (1)
28	283.63	125.94	Shut-In(1)
73	1007.66	123.38	End Shut-In(1)
73	285.59	123.06	Open To Flow (2)
118	507.51	124.17	Shut-In(2)
180	996.88	124.40	End Shut-In(2)
181	1894.78	124.55	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
480.00	GAS IN PIPE 100%GAS	5.82
960.00	GASSY OIL 75%OIL25%GAS	14.04
240.00	MUD CUTGASSY OIL 15%M15%G70%O	3.51

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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DRILL STEM TEST REPORT

TOOL DIAGRAM

GRAND MESA OPERATING

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33-13S-31W GOVE

Job Ticket: 1064

DST#: 1

Test Start: 2011.02.11 @ 03:00:00

Tool Information

Drill Pipe:	Length:	3777.00 ft	Diameter:	3.88 inches	Volume:	55.24 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:	124.00 ft	Diameter:	2.25 inches	Volume:	0.61 bbl	Weight to Pull Loose:	50000.00 lb
					Total Volume:	55.85 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:		1.75 ft					String Weight: Initial	44000.00 lb
Depth to Top Packer:		3928.00 ft					Final	48000.00 lb
Depth to Bottom Packer:		ft						
Interval between Packers:		22.00 ft						
Tool Length:		50.75 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			3904.25	
Hydrolic tool	5.00			3909.25	
Change over sub	0.75			3910.00	
Jars	6.00			3916.00	
Safety Joint	2.00			3918.00	
Packer	5.00			3923.00	28.75 Bottom Of Top Packer
Packer	5.00			3928.00	
Anchor	17.00			3945.00	
Recorder	1.00	6651	Inside	3946.00	
Recorder	1.00	6666	Outside	3947.00	
Bull plug	3.00			3950.00	22.00 Bottom Packers & Anchor

Total Tool Length: 50.75



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FLUID SUMMARY

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DST#: 1

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Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 58.00 sec/qt

Water Loss: 7.20 in³

Resistivity: 1000.00 ohm.m

Salinity: ppm

Filter Cake: inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

Oil API:

Water Salinity:

35 deg API

ppm

ft

bbl

psig

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
480.00	GAS IN PIPE 100%GAS	5.816
960.00	GASSY OIL 75%OIL25%GAS	14.039
240.00	MUD CUTGASSY OIL 15%M15%G70%OIL	3.510

Total Length: 1680.00 ft

Total Volume: 23.365 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: GRAVITY OF OIL 35

