



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: 2011.02.13 @ 19:00:00

End Date: 2011.02.14 @ 00:58:30

Job Ticket #: 1067 DST #: 4

Eagle Testers LLC.

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

620-617-7548

Printed: 2011.02.13 @ 19:12:06



DRILL STEM TEST REPORT

GRAND MESA OPERATING

KLAUS-HESS 1-33

1700 N WATERFRONT
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ATTN: BOB PETERSON

33-13S-31W GOVE

Job Ticket: 1067

DST#: 4

Test Start: 2011.02.13 @ 19:00:00

GENERAL INFORMATION:

Formation: **LKC -K-**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:54:30

Time Test Ended: 00:58:30

Test Type: Conventional Bottom Hole (Initial)

Tester: DAVID NICHOLS

Unit No: 15 43 MRT OAKLEY

Interval: **4142.00 ft (KB) To 4167.00 ft (KB) (TVD)**

Reference Elevations: 2853.00 ft (KB)

Total Depth: 4167.00 ft (KB) (TVD)

2846.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 7.00 ft

Serial #: **6651**

Inside

Press@RunDepth: 133.06 psig @ 4163.00 ft (KB)

Capacity: 5000.00 psig

Start Date: 2011.02.13

End Date:

2011.02.14

Last Calib.:

2011.02.13

Start Time: 19:00:00

End Time:

00:58:30

Time On Btm:

2011.02.13 @ 20:53:30

Time Off Btm:

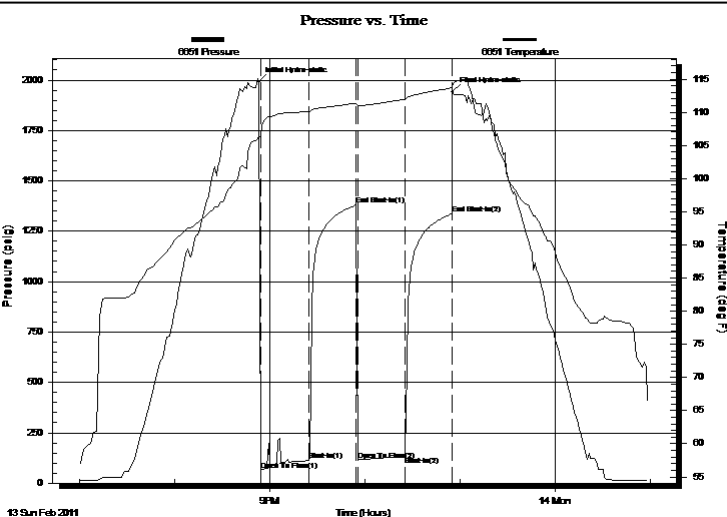
2011.02.13 @ 22:55:30

TEST COMMENT: 30-INITIAL OPENING WEAK BLOW BUILT TO 1 INCH THEN DIED OF TO SURFACE BLOW

30-INITIAL SHUT IN NO BLOW BACK

30-FINAL OPENING SURFACE BLOW

30-FINAL SHUT IN NO BLOW BACK



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1990.63	106.34	Initial Hydro-static
1	65.73	106.29	Open To Flow (1)
32	111.85	110.11	Shut-In(1)
61	1379.98	111.36	End Shut-In(1)
63	116.12	111.03	Open To Flow (2)
93	133.06	111.97	Shut-In(2)
122	1335.75	113.69	End Shut-In(2)
122	1942.05	113.96	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
75.00	MUD 100%MUD	0.37
120.00	MUDDY WATER 40%M60%WATER	1.32

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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1700 N WATERFRONT
PKWY BLDG 600
WICHITA KS 67206
ATTN: BOB PETERSON

33-13S-31W GOVE

Job Ticket: 1067

DST#: 4

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GENERAL INFORMATION:

Formation: LKC -K-

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:54:30

Time Test Ended: 00:58:30

Test Type: Conventional Bottom Hole (Initial)

Tester: DAVID NICHOLS

Unit No: 15 43 MRT OAKLEY

Interval: 4142.00 ft (KB) To 4167.00 ft (KB) (TVD)

Total Depth: 4167.00 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: 1335.83 psig @ 4164.00 ft (KB)

Start Date: 2011.02.13

End Date:

2011.02.14

Capacity: 5000.00 psig

Last Calib.: 2011.02.13

Start Time: 19:00:00

End Time:

01:04:30

Time On Btm: 2011.02.13 @ 20:51:00

Time Off Btm: 2011.02.13 @ 22:56:00

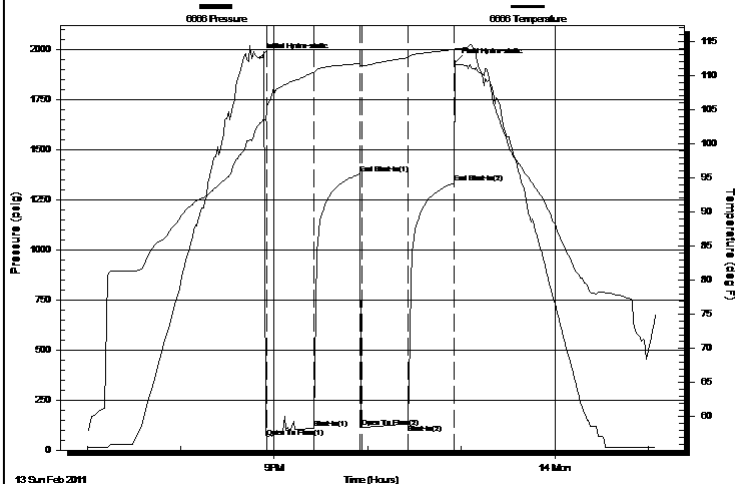
TEST COMMENT: 30-INITIAL OPENING WEAK BLOW BUILT TO 1 INCH THEN DIED OF TO SURFACE BLOW

30-INITIAL SHUT IN NO BLOW BACK

30-FINAL OPENING SURFACE BLOW

30-FINAL SHUT IN NO BLOW BACK

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1959.55	103.04	Initial Hydro-static
4	62.31	104.89	Open To Flow (1)
35	109.72	110.45	Shut-In (1)
64	1380.72	111.77	End Shut-In (1)
65	113.25	111.41	Open To Flow (2)
95	130.63	112.62	Shut-In (2)
125	1335.83	113.81	End Shut-In (2)
125	1938.38	113.92	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
75.00	MUD 100%MUD	0.37
120.00	MUDDY WATER 40%M60%WATER	1.32

Gas Rates

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

TOOL DIAGRAM

GRAND MESA OPERATING

KLAUS-HESS 1-33

1700 N WATERFRONT

33-13S-31W GOVE

PKWY BLDG 600

Job Ticket: 1067

DST#: 4

WICHITA KS 67206

Test Start: 2011.02.13 @ 19:00:00

ATTN: BOB PETERSON

Tool Information

Drill Pipe:	Length:	3996.00 ft	Diameter:	3.88 inches	Volume:	58.44 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:	55000.00 lb
					Total Volume:	59.03 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:		2.75 ft					String Weight: Initial	48000.00 lb
Depth to Top Packer:		4142.00 ft					Final	48000.00 lb
Depth to Bottom Packer:		ft						
Interval between Packers:		25.00 ft						
Tool Length:		53.75 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			4118.25	
Hydrolic tool	5.00			4123.25	
Change over sub	0.75			4124.00	
Jars	6.00			4130.00	
Safety Joint	2.00			4132.00	
Packer	5.00			4137.00	28.75 Bottom Of Top Packer
Packer	5.00			4142.00	
Anchor	20.00			4162.00	
Recorder	1.00	6651	Inside	4163.00	
Recorder	1.00	6666	Outside	4164.00	
Bull plug	3.00			4167.00	25.00 Bottom Packers & Anchor

Total Tool Length: 53.75



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FLUID SUMMARY

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Job Ticket: 1067

DST#: 4

WICHITA KS 67206

Test Start: 2011.02.13 @ 19:00:00

ATTN: BOB PETERSON

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: 60.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 6.80 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1300.00 ppm

Filter Cake: inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
75.00	MUD 100%MUD	0.369
120.00	MUDDY WATER 40%M60%WATER	1.318

Total Length: 195.00 ft Total Volume: 1.687 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RECOVERY CHOLRIDES 34,000

