



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 @ 04:00:00

End Date: 2011.02.13 @ 11:28:30

Job Ticket #: 1066 DST #: 3

Eagle Testers LLC.

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

620-617-7548

Printed: 2011.02.13 @ 04:12:04



DRILL STEM TEST REPORT

GRAND MESA OPERATING

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33-13S-31W GOVE

Job Ticket: 1066

DST#: 3

Test Start: 2011.02.13 @ 04:00:00

GENERAL INFORMATION:

Formation: **LKC -J-**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:22:00

Time Test Ended: 11:28:30

Test Type: Conventional Bottom Hole (Initial)

Tester: DAVID NICHOLS

Unit No: 15 43 MRT OAKLEY

Interval: **4126.00 ft (KB) To 4136.00 ft (KB) (TVD)**

Total Depth: 4136.00 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: 215.20 psig @ 4133.00 ft (KB)

Capacity: 5000.00 psig

Start Date: 2011.02.13

End Date:

2011.02.13

Last Calib.: 2011.02.13

Start Time: 04:00:00

End Time:

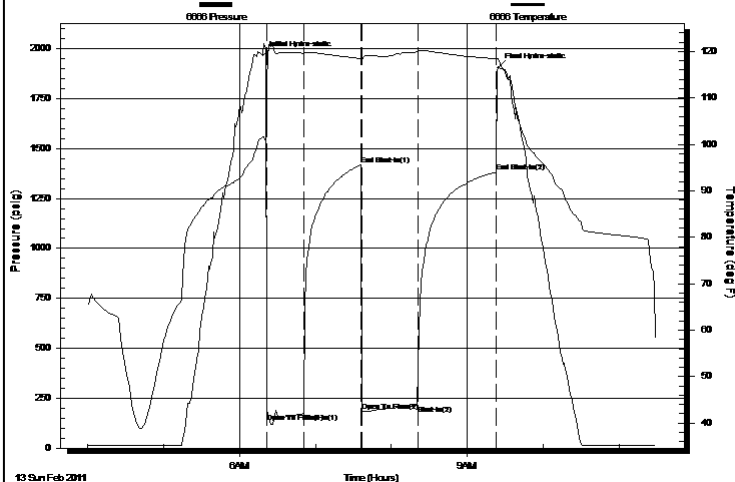
11:28:30

Time On Btm: 2011.02.13 @ 06:18:30

Time Off Btm: 2011.02.13 @ 09:24:30

TEST COMMENT: 30-INITIAL OPENING FAIR BLOW BOTTOM BUCKET IN 12 MINS
45-INITIAL SHUT IN SURFACE BLOW BACK
45-FINAL OPENING WEAK BUILDING BLOW BUILT TO 10 INCHES INTO WATER
60-FINAL SHUT IN NO BLOW BACK

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1965.52	101.54	Initial Hydro-static
4	131.83	113.77	Open To Flow (1)
33	173.97	119.59	Shut-In(1)
77	1418.13	118.44	End Shut-In(1)
79	184.89	118.35	Open To Flow (2)
123	215.20	119.93	Shut-In(2)
184	1382.21	118.44	End Shut-In(2)
186	1903.79	118.38	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
200.00	MUD 100%MUD	1.76
60.00	MUD CUT WATER 40%W60%MUD	0.88
120.00	MUDDY WATER 40%M60%WATER	1.75

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)
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Test Type: Conventional Bottom Hole (Initial)

Tester: DAVID NICHOLS

Unit No: 15 43 MRT OAKLEY

Interval: 4126.00 ft (KB) To 4136.00 ft (KB) (TVD)

Total Depth: 4136.00 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: 1381.07 psig @ 4132.00 ft (KB)

Capacity: 5000.00 psig

Start Date: 2011.02.13

End Date:

2011.02.13

Last Calib.: 2011.02.13

Start Time: 04:00:00

End Time:

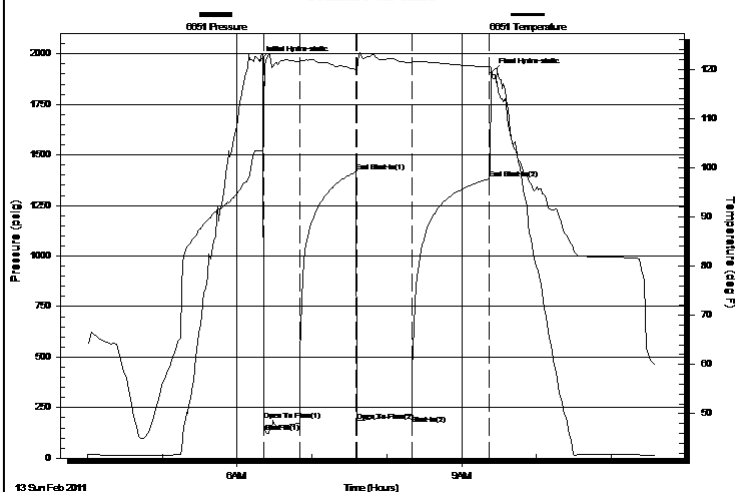
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60-FINAL SHUT IN NO BLOW BACK

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1966.13	103.51	Initial Hydro-static
3	186.57	112.14	Open To Flow (1)
32	171.84	121.56	Shut-In(1)
77	1418.27	120.00	End Shut-In(1)
78	184.82	119.61	Open To Flow (2)
122	213.64	121.34	Shut-In(2)
184	1381.07	120.44	End Shut-In(2)
186	1907.03	119.69	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
200.00	MUD 100%MUD	1.76
60.00	MUD CUT WATER 40%W60%MUD	0.88
120.00	MUDDY WATER 40%M60%WATER	1.75

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: 1066

DST#: 3

WICHITA KS 67206

Test Start: 2011.02.13 @ 04:00:00

ATTN: BOB PETERSON

Tool Information

Drill Pipe:	Length:	3980.00 ft	Diameter:	3.88 inches	Volume:	58.20 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:	58.79 bbl	Tool Chased	0.00 ft
Drill Pipe Above KB:		2.75 ft					String Weight: Initial	45000.00 lb
Depth to Top Packer:		4126.00 ft					Final	45000.00 lb
Depth to Bottom Packer:		ft						
Interval between Packers:		10.00 ft						
Tool Length:		38.75 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			4102.25	
Hydraulic tool	5.00			4107.25	
Change over sub	0.75			4108.00	
Jars	6.00			4114.00	
Safety Joint	2.00			4116.00	
Packer	5.00			4121.00	28.75 Bottom Of Top Packer
Packer	5.00			4126.00	
Anchor	5.00			4131.00	
Recorder	1.00	6651	Inside	4132.00	
Recorder	1.00	6666	Outside	4133.00	
Bull plug	3.00			4136.00	10.00 Bottom Packers & Anchor

Total Tool Length: 38.75



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FLUID SUMMARY

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33-13S-31W GOVE

Job Ticket: 1066

DST#: 3

Test Start: 2011.02.13 @ 04:00:00

Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 60.00 sec/qt

Water Loss: 10.50 in³

Resistivity: ohm.m

Salinity: 1500.00 ppm

Filter Cake: inches

Cushion Type:

Cushion Length:

Cushion Volume:

Gas Cushion Type:

Gas Cushion Pressure:

Oil API:

Water Salinity:

deg API

ppm

ft

bbl

psig

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
200.00	MUD 100%MUD	1.760
60.00	MUD CUT WATER 40%W60%MUD	0.877
120.00	MUDDY WATER 40%M60%WATER	1.755

Total Length: 380.00 ft Total Volume: 4.392 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

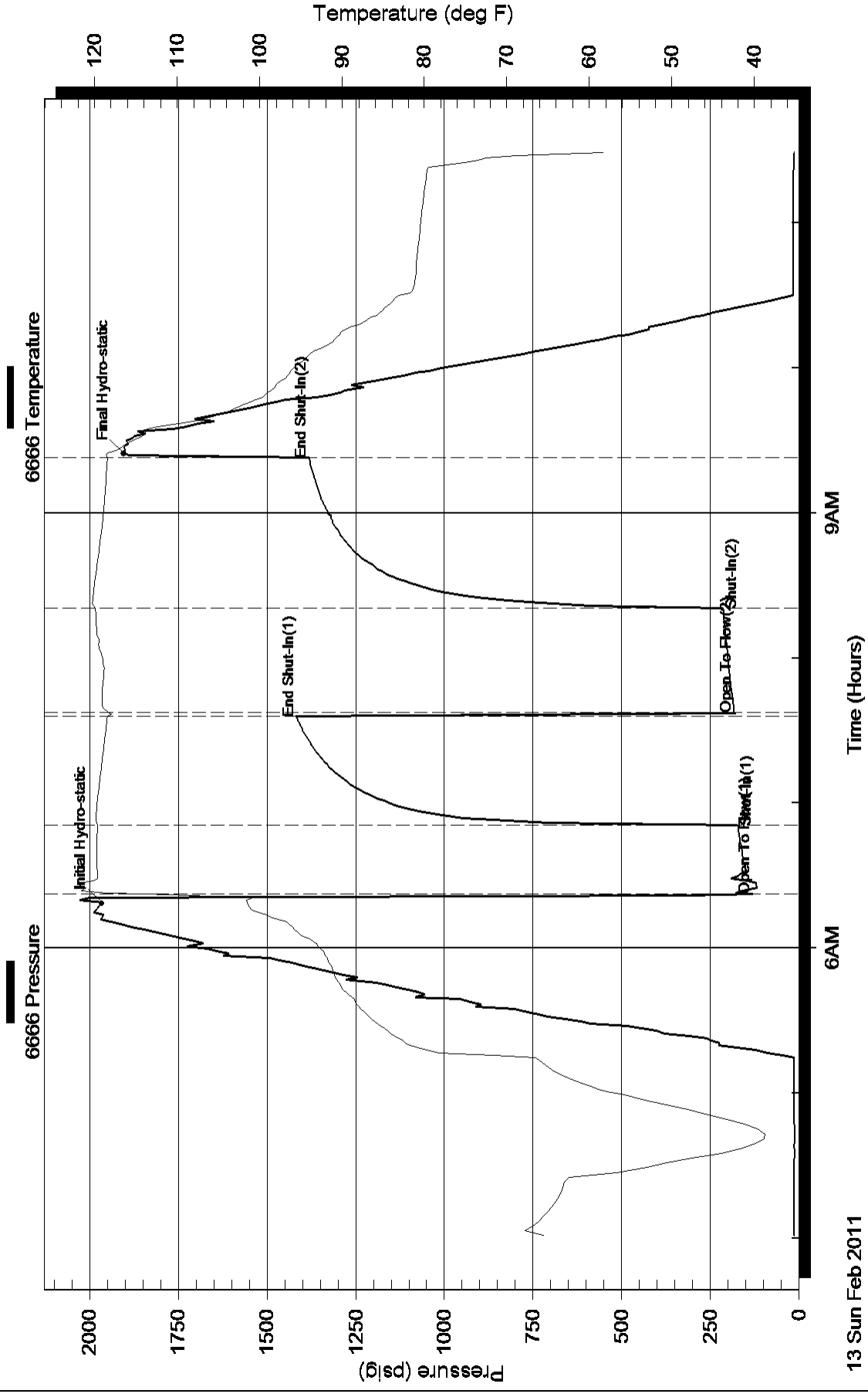
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RECOVERY CHLORIDES 37,000 PPM

Pressure vs. Time



Pressure vs. Time

