



DRILL STEM TEST REPORT

Prepared For: **Mull Drilling Company**

1700 North Waterfront Parkway Wichita
Kansas
67206

ATTN: Kevin Kessler

Patricia 1-31

31-16s-22w-Ness

Start Date: 2011.12.05 @ 01:35:00

End Date: 2011.12.05 @ 09:23:30

Job Ticket #: 17242 DST #: 2

Superior Testers Enterprises LLC
PO Box 138 Great Bend KS 67530
1-800-792-6902

Printed: 2011.12.05 @ 09:39:01



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Mull Drilling Company

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1700 North Waterfront Parkway Wichita Kansas
67206

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Job Ticket: 17242

DST#: 2

ATTN: Kevin Kessler

Test Start: 2011.12.05 @ 01:35:00

GENERAL INFORMATION:

Formation: **Cherachy Sad**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 03:41:00

Time Test Ended: 09:23:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Dustin Ellis

Unit No: 3315-GB-150

Interval: 4380.00 ft (KB) To 4385.00 ft (KB) (TVD)

Reference Elevations: 2380.00 ft (KB)

Total Depth: 4385.00 ft (KB) (TVD)

2371.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 9.00 ft

Serial #: 6663 Outside

Press @ RunDepth: 143.42 psia @ 4462.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2011.12.05

End Date: 2011.12.05

Last Calib.: 2011.12.05

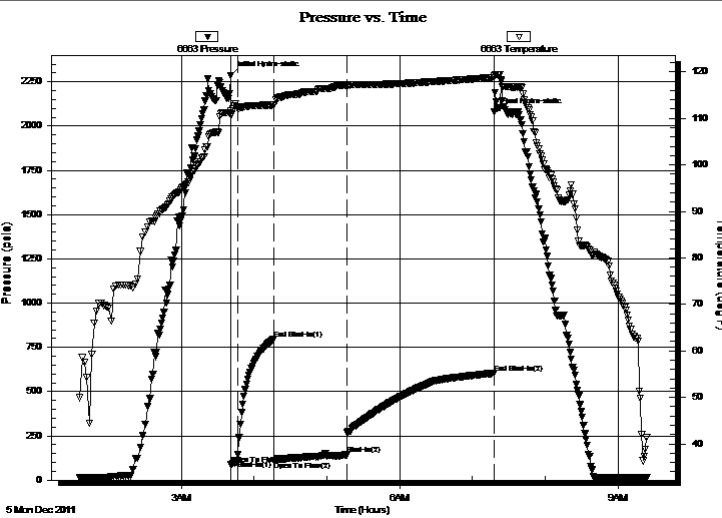
Start Time: 01:35:00

End Time: 09:23:30

Time On Btm: 2011.12.05 @ 03:40:30

Time Off Btm: 2011.12.05 @ 07:18:00

TEST COMMENT: 1st Open 5 minutes Fair building blow built to 2 inches into the bucket
1st Shut in 30 minutes No blow back
2nd Open 60 minutes Weak surface blow Stayed steady
2nd Shut in 120 minutes No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2287.19	111.53	Initial Hydro-static
1	87.61	110.73	Open To Flow (1)
6	109.45	112.22	Shut-In(1)
36	796.18	112.90	End Shut-In(1)
36	108.76	112.93	Open To Flow (2)
96	143.42	117.14	Shut-In(2)
217	604.00	118.81	End Shut-In(2)
218	2078.19	119.14	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
122.00	Drilling Mud 100%	0.60

Gas Rates

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



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Reference Elevations: 2380.00 ft (KB)

Total Depth: 4385.00 ft (KB) (TVD)

2371.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 9.00 ft

Serial #: 6806

Inside

Press @ Run Depth: 602.44 psia @ 4461.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2011.12.05

End Date: 2011.12.05

Last Calib.: 2011.12.05

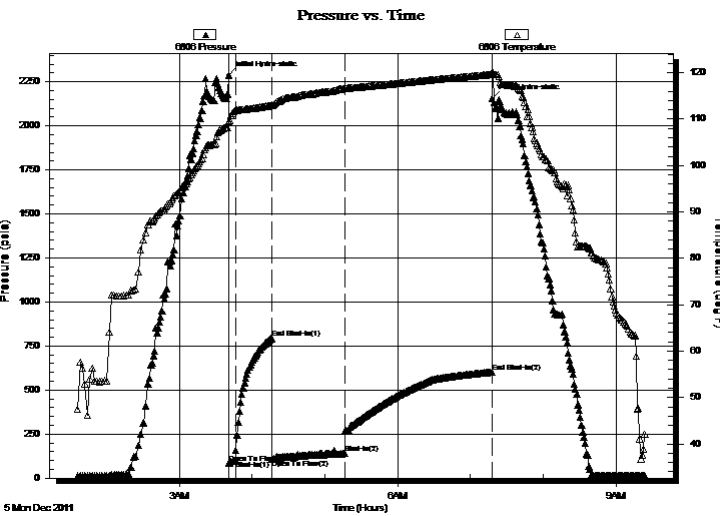
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1st Shut in 30 minutes No blow back
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PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2288.10	109.45	Initial Hydro-static
1	86.27	109.30	Open To Flow (1)
6	102.92	111.86	Shut-In(1)
36	794.73	112.96	End Shut-In(1)
36	109.50	112.84	Open To Flow (2)
96	141.54	116.57	Shut-In(2)
217	602.44	119.61	End Shut-In(2)
218	2155.61	120.02	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
122.00	Drilling Mud 100%	0.60

Gas Rates

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



DRILL STEM TEST REPORT

TOOL DIAGRAM

Mull Drilling Company

31-16s-22w-Ness

1700 North Waterfront Parkway Wichita Kansas
67206

Patricia 1-31

Job Ticket: 17242

DST#: 2

ATTN: Kevin Kessler

Test Start: 2011.12.05 @ 01:35:00

Tool Information

Drill Pipe:	Length: 4208.00 ft	Diameter: 3.80 inches	Volume: 59.03 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: 163.25 ft	Diameter: 2.25 inches	Volume: 0.80 bbl	Weight to Pull Loose: 70000.00 lb
			<u>Total Volume: 59.83 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	19.25 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	4380.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	85.00 ft			
Tool Length:	113.00 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			4357.00	
Hydraulic Tool	5.00			4362.00	
Jars	6.00			4368.00	
Safety Joint	2.00			4370.00	
Packer	5.00			4375.00	28.00 Bottom Of Top Packer
Packer	5.00			4380.00	
Perforations	0.00			4380.00	
Change Over Sub	0.75			4380.75	
Drill Pipe	62.00			4442.75	
Change Over Sub	0.75			4443.50	
Perforations	16.50			4460.00	
Recorder	1.00	6806	Inside	4461.00	
Recorder	1.00	6663	Outside	4462.00	
Bull Plug	3.00			4465.00	85.00 Bottom Packers & Anchor

Total Tool Length: 113.00



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FLUID SUMMARY

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Mud and Cushion Information

Mud Type: Gel Chem
Mud Weight: 10.00 lb/gal
Viscosity: 49.00 sec/qt
Water Loss: 8.80 in³
Resistivity: ohm.m
Salinity: 5000.00 ppm
Filter Cake: 1.00 inches

Cushion Type:
Cushion Length: ft
Cushion Volume: bbl
Gas Cushion Type:
Gas Cushion Pressure: psia

Oil API: deg API
Water Salinity: ppm

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
122.00	Drilling Mud 100%	0.600

Total Length: 122.00 ft Total Volume: 0.600 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

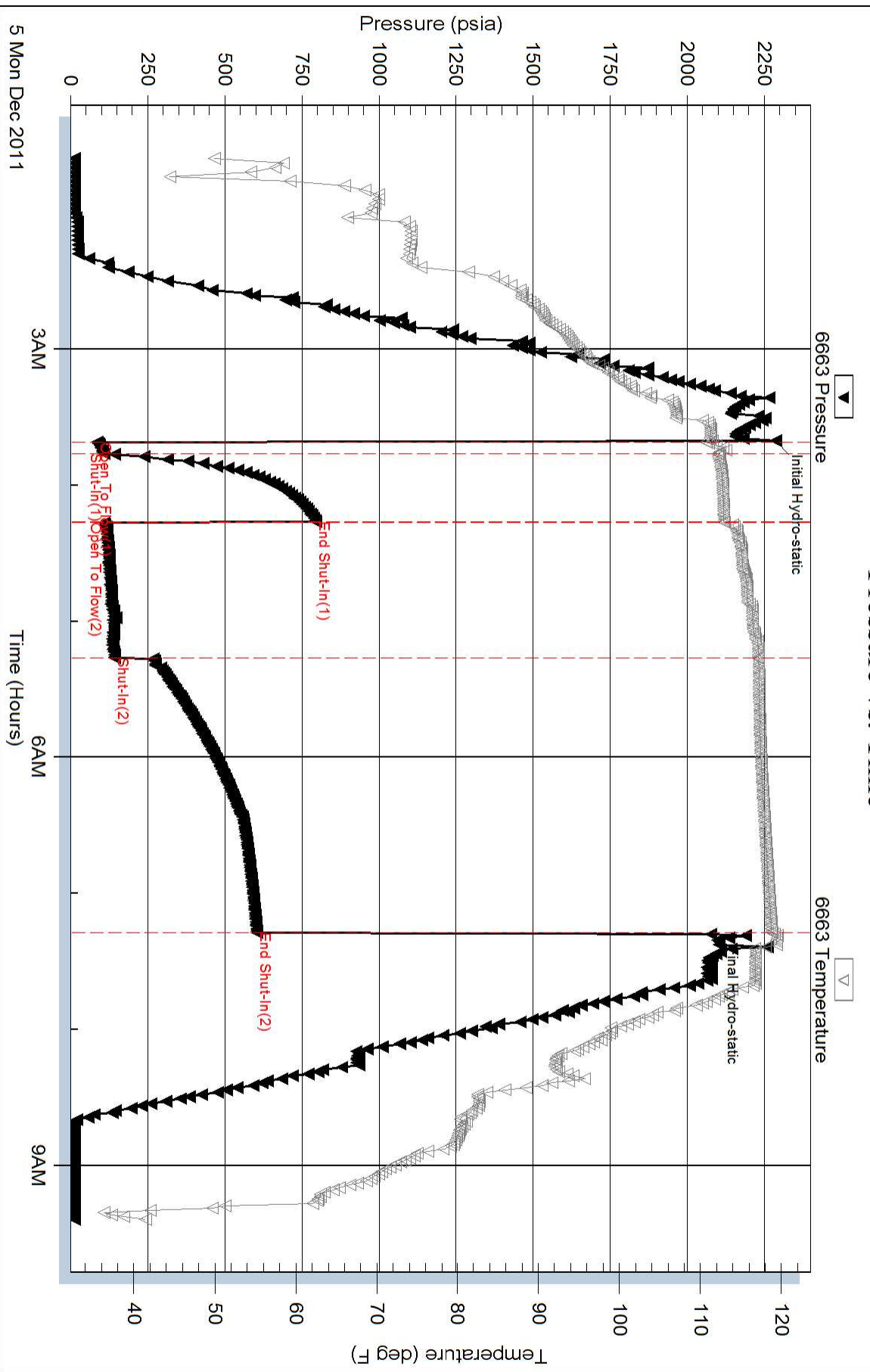
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

Pressure vs. Time



Pressure vs. Time

