



Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION 1075772
OIL & GAS CONSERVATION DIVISION

Form ACO-1

August 2013

Form must be Typed
Form must be Signed
All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

- New Well Re-Entry Workover
- Oil WSW SWD SIOW
- Gas D&A ENHR SIGW
- OG GSW Temp. Abd.
- CM (Coal Bed Methane)
- Cathodic Other (Core, Expl., etc.): _____

If Workover/Re-entry: Old Well Info as follows:

Operator: _____

Well Name: _____

Original Comp. Date: _____ Original Total Depth: _____

- Deepening Re-perf. Conv. to ENHR Conv. to SWD
- Plug Back Conv. to GSW Conv. to Producer
- Commingled Permit #: _____
- Dual Completion Permit #: _____
- SWD Permit #: _____
- ENHR Permit #: _____
- GSW Permit #: _____

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
-----------------------------------	-----------------	---

API No. 15 - _____

Spot Description: _____

_____-_____-_____- Sec. _____ Twp. _____ S. R. _____ East West

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE NW SE SW

GPS Location: Lat: _____, Long: _____
(e.g. xx.xxxxx) (e.g. -xxx.xxxxx)

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite:

Operator Name: _____

Lease Name: _____ License #: _____

Quarter _____ Sec. _____ Twp. _____ S. R. _____ East West

County: _____ Permit #: _____

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

- Confidentiality Requested
Date: _____
- Confidential Release Date: _____
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT I II III Approved by: _____ Date: _____

1075772

Operator Name: _____ Lease Name: _____ Well #: _____

Sec. _____ Twp. _____ S. R. _____ East West County: _____

INSTRUCTIONS: Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i> Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No List All E. Logs Run: _____	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample Name Top Datum
--	---

CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				

Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*

Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? Yes No *(If No, fill out Page Three of the ACO-1)*

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD:	Size:	Set At:	Packer At:	Liner Run: <input type="checkbox"/> Yes <input type="checkbox"/> No
----------------	-------	---------	------------	---

Date of First, Resumed Production, SWD or ENHR.	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____
---	--

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	PRODUCTION INTERVAL: _____ _____
--	--	---

Form	ACO1 - Well Completion
Operator	Mull Drilling Company, Inc.
Well Name	Patricia 1-31
Doc ID	1075772

All Electric Logs Run

CDL/CNL/PE
DIL
Micro
Sonic

Form	ACO1 - Well Completion
Operator	Mull Drilling Company, Inc.
Well Name	Patricia 1-31
Doc ID	1075772

Tops

Name	Top	Datum
Anhydrite	1696	+ 684
B/Anhydrite	1730	+ 650
Heebner Shale	3774	- 1394
Lansing	3813	- 1433
Stark Shale	4036	- 1656
B/KC	4102	- 1722
Pawnee	4186	- 1806
Ft. Scott	4284	- 1904
Cherokee Shale	4300	- 1920
Cherokee Sand	4393	- 2013
Mississippian	4396	- 2016

Conservation Division
Finney State Office Building
130 S. Market, Rm. 2078
Wichita, KS 67202-3802



Phone: 316-337-6200
Fax: 316-337-6211
<http://kcc.ks.gov/>

Mark Sievers, Chairman
Ward Loyd, Commissioner
Thomas E. Wright, Commissioner

Sam Brownback, Governor

March 05, 2012

Mark Shreve
Mull Drilling Company, Inc.
1700 N WATERFRONT PKWY
BLDG 1200
WICHITA, KS 67206

Re: ACO1
API 15-135-25300-00-00
Patricia 1-31
SW/4 Sec.31-16S-22W
Ness County, Kansas

Dear Production Department:

We are herewith requesting that the Well Completion Form ACO-1 and attached information for the subject well be held confidential for a period of two years.

Should you have any questions or need additional information regarding subject well, please contact our office.

Respectfully,
Mark Shreve



CONSOLIDATED WELL SERVICES
OF WICHITA, LLC

TICKET NUMBER 33703

LOCATION Oakley

FOREMAN Kelly Edge

PO Box 884, Chanute, KS 66720
820-431-9210 or 800-487-8678

FIELD TICKET & TREATMENT REPORT
CEMENT

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	KS COUNTY	
11-29-11	5659	Patricia 1-31	31	16 ^s	22 ^o	Wes	
CUSTOMER		Blownell w+ R&X		TRUCK #	DRIVER	TRUCK #	DRIVER
MAILING ADDRESS		2 1/2 S E 220		399	Damon M		
CITY		STATE	ZIP CODE	566	Wes E		

JOB TYPE Surface HOLE SIZE 12 1/4 HOLE DEPTH 280 CASING SIZE & WEIGHT 8 5/8 24
 CASING DEPTH 220 DRILL PIPE _____ TUBING _____ OTHER _____
 SLURRY WEIGHT 14 SLURRY VOL _____ WATER gal/ek _____ CEMENT LEFT in CASING 20
 DISPLACEMENT 12 1/2 DISPLACEMENT PSI _____ MIX PSI _____ RATE _____

REMARKS: Safety Meeting. Rigged upon w&w drilling rig #10. Hooked up to circulate. Mixed 160 SKS com 390cc 27mg/gal. displaced with 1 1/2 bbls H₂O. shut in. Washed out pumps + lines. Rigged down at location.

Cement did circulate

Circulated approx 3 bbl to pit

Thank You Kelly & crew

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
54013	1	PUMP CHARGE	1025.00	1025.00
5406	20	MILEAGE	5.00	100.00
11045	160 SKS	Class A cement	16.80	2688.00
5407	7.52	Ton Mileage delivery (min)	1.52	410.00
1102	451#	Calcium Chloride	.84	378.84
1118B	300#	Bentonite	.24	72.00
				4673.84
			246167	4673.84
			SALES TAX	177.98
			ESTIMATED TOTAL	4384.40

Rev'n 3797
3:30 PM

AUTHORIZATION [Signature]

TITLE _____

DATE 11-29-11

I acknowledge that the payment terms, unless specifically amended in writing on the front of the form or in the customer's account records, at our office, and conditions of service on the back of this form are in effect for services identified on this form.

KEVIN L. KESSLER
CONSULTING PETROLEUM GEOLOGIST
(316) 522-7338

OPERATOR : MULL DRILLING COMPANY INC.
LEASE : PATRICIA WELL # : 1 - 31
LOCATION : 1309' FSL & 1268' FWL
SEC: 31 TWP : 16 S RGE : 22 W
COUNTY : NESS STATE : KANSAS

ELEVATION
KB : 2380
GL : 2375
MEASUREMENTS FROM
KB

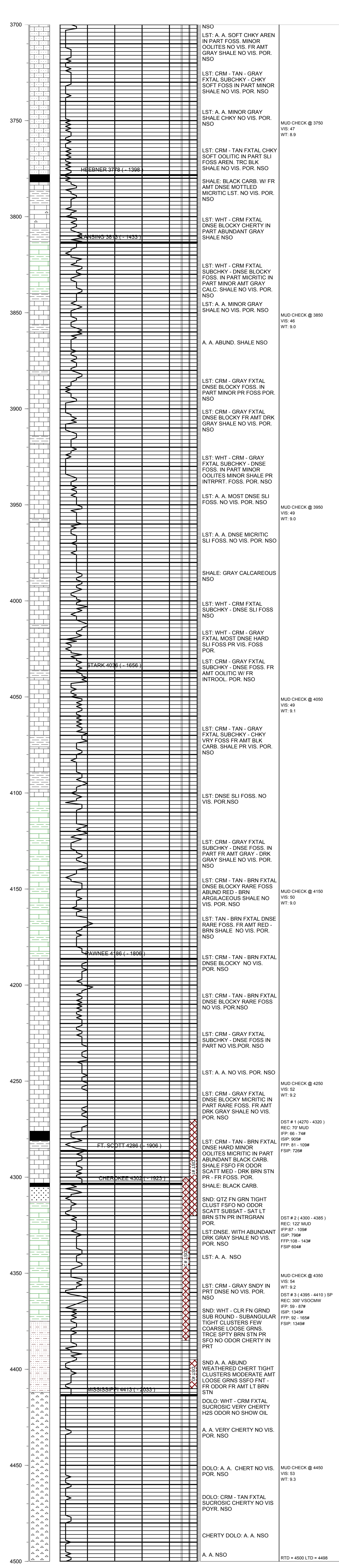
CONTRACTOR : WW DRILLING RIG # 10
COMM : 11 / 29 / 2011 COMP : 12 / 07 / 2011
RTD : 4500 LOG TD : 4498
SAMPLES SAVED FROM : 3700 TO : RTD
GEOLOGICAL SUPERVISION FROM : 3600 TO : RTD
MUD UP : 3500 TYPE MUD : CHEMICAL

CASING RECORD
SURFACE :
8 5/8" @ 220
PRODUCTION :
NONE

FORMATION	TOP	LOG	DATUM	TOP	SAMPLE	DATUM	STRUCT. COMP.
HEEBNER	3774		- 1394	3778		- 1398	- 02
LANSING	3813		- 1433	3813		- 1433	- 01
STARK	4036		- 1656	4036		- 1656	- 01
PAWNEE	4186		- 1806	4186		- 1806	- 02
FT. SCOTT	4282		- 1902	4286		- 1906	FLAT
CHEROKEE	4300		- 1920	4303		- 1923	FLAT
MISSISSIPPI	4412		- 2032	4413		- 2033	- 10

ELECTRICAL SURVEYS:
DIL
CNL / CDL
MICRO
SONIC

REFERENCE WELL FOR STRUCTURAL COMPARISON :
NORTHERN LIGHTS # 2 HIGGINS SEC.06 - T 17 S - R 22 W NESS COUNTY KANSAS



NSO
LST: A. A. SOFT CHKY AREN IN PART FOSS. MINOR OOLITES NO VIS. FR AMT GRAY SHALE NO VIS. POR. NSO
LST: CRM - TAN - GRAY FXTAL SUBCHKY - CHKY SOFT FOSS IN PART MINOR SHALE NO VIS. POR. NSO
LST: A. A. MINOR GRAY SHALE CHKY NO VIS. POR. NSO
MUD CHECK @ 3750
VIS: 47
WT: 8.9
LST: CRM - TAN FXTAL CHKY SOFT OOLITIC IN PART SLI FOSS AREN. TRC BLK SHALE NO VIS. POR. NSO
SHALE: BLACK CARB. W/ FR AMT DNSE MOTTLED MICRITIC LST. NO VIS. POR. NSO
LST: WHT - CRM FXTAL DNSE BLOCKY CHERTY IN PART ABUNDANT GRAY SHALE NSO
LST: WHT - CRM FXTAL SUBCHKY - DNSE BLOCKY FOSS. IN PART MICRITIC IN PART MINOR AMT GRAY CALC. SHALE NO VIS. POR. NSO
LST: A. A. MINOR GRAY SHALE NO VIS. POR. NSO
MUD CHECK @ 3850
VIS: 46
WT: 9.0
A. A. ABUND. SHALE NSO
LST: CRM - GRAY FXTAL DNSE BLOCKY FOSS. IN PART MINOR PR FOSS POR. NSO
LST: CRM - GRAY FXTAL DNSE BLOCKY FR AMT DRK GRAY SHALE NO VIS. POR. NSO
LST: WHT - CRM - GRAY FXTAL SUBCHKY - DNSE FOSS. IN PART MINOR OOLITES MINOR SHALE PR INTRPRT. FOSS. POR. NSO
LST: A. A. MOST DNSE SLI FOSS. NO VIS. POR. NSO
MUD CHECK @ 3950
VIS: 49
WT: 9.0
LST: A. A. DNSE MICRITIC SLI FOSS. NO VIS. POR. NSO
SHALE: GRAY CALCAREOUS NSO
LST: WHT - CRM FXTAL SUBCHKY - DNSE SLI FOSS NSO
LST: WHT - CRM - GRAY FXTAL MOST DNSE HARD SLI FOSS PR VIS. FOSS POR.
LST: CRM - GRAY FXTAL SUBCHKY - DNSE FOSS. FR AMT OOLITIC W/ FR INTRPRT. POR. NSO
MUD CHECK @ 4050
VIS: 48
WT: 9.1
LST: CRM - TAN - GRAY FXTAL SUBCHKY - CHKY VRY FOSS FR AMT BLK CARB. SHALE PR VIS. POR. NSO
LST: DNSE SLI FOSS. NO VIS. POR. NSO
LST: CRM - GRAY FXTAL SUBCHKY - DNSE FOSS. IN PART FR AMT GRAY - DRK GRAY SHALE NO VIS. POR. NSO
LST: CRM - TAN - BRN FXTAL DNSE BLOCKY RARE FOSS ABUND RED - BRN ARGILACEOUS SHALE NO VIS. POR. NSO
MUD CHECK @ 4150
VIS: 50
WT: 9.0
LST: TAN - BRN FXTAL DNSE RARE FOSS. FR AMT RED - BRN SHALE NO VIS. POR. NSO
LST: CRM - TAN - BRN FXTAL DNSE BLOCKY NO VIS. POR. NSO
LST: CRM - TAN - BRN FXTAL DNSE BLOCKY RARE FOSS NO VIS. POR. NSO
LST: CRM - GRAY FXTAL SUBCHKY - DNSE FOSS IN PART NO VIS. POR. NSO
LST: A. A. NO VIS. POR. NSO
MUD CHECK @ 4250
VIS: 52
WT: 9.2
LST: CRM - GRAY FXTAL DNSE BLOCKY MICRITIC IN PART RARE FOSS. FR AMT DRK GRAY SHALE NO VIS. POR. NSO
DST # 1 (4270 - 4320)
REC: 70' MUD
IFP: 66 - 74#
ISIP: 905#
FFP: 81 - 109#
FSIP: 726#
LST: CRM - TAN - BRN FXTAL DNSE HARD MINOR OOLITES MICRITIC IN PART ABUNDANT BLACK CARB. SHALE FSFO FR ODOR SCATT MED - DRK BRN STN PR - FR FOSS. POR.
SHALE: BLACK CARB.
SND: QTZ FN GRN TIGHT CLUST FSFO NO ODOR SCATT SUBSAT - SAT LT BRN STN PR INTRGRAN POR.
LST: DNSE. WITH ABUNDANT DRK GRAY SHALE NO VIS. POR. NSO
LST: A. A. NSO
MUD CHECK @ 4350
VIS: 54
WT: 9.2
DST # 2 (4300 - 4385)
REC: 122' MUD
IFP: 87 - 109#
ISIP: 1345#
FFP: 108 - 143#
FSIP: 604#
LST: CRM - GRAY SNDY IN PRT DNSE NO VIS. POR. NSO
SND: WHT - CLR FN GRND SUB ROUND - SUBANGULAR TIGHT CLUSTERS FEW COARSE LOOSE GRNS. TRCE SPTY BRN STN PR SFO NO ODOR CHERTY IN PRT
MUD CHECK @ 4450
VIS: 53
WT: 9.3
DST # 3 (4395 - 4410) SP
REC: 300' VSOCMW
IFP: 59 - 87#
ISIP: 1345#
FFP: 92 - 165#
FSIP: 1349#
SND A. A. ABUND WEATHERED CHERT TIGHT CLUSTERS MODERATE AMT LOOSE GRNS SSFO FNT - FR ODOR FR AMT LT BRN STN
DOLO: WHT - CRM FXTAL SUCROSIC VRY CHERTY H2S ODOR NO SHOW OIL
A. A. VRY CHERTY NO VIS. POR. NSO
DOLO: A. A. CHERT NO VIS. POR. NSO
DOLO: CRM - TAN FXTAL SUCROSIC CHERTY NO VIS POYR. NSO
CHERTY DOLO: A. A. NSO
A. A. NSO
RTD = 4500 LTD = 4498

COMMENTS:

**DUE TO NEGATIVE DST RESULTS THIS WELL
WAS PLUGGED AS DRY & ABANDONED**

KEVIN L. KESSLER



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: 2011.12.04 @ 09:30:00

End Date: 2011.12.04 @ 15:19:30

Job Ticket #: 17241 DST #: 1

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

Printed: 2011.12.04 @ 15:32:55



DRILL STEM TEST REPORT

Mull Drilling Company

31-16s-22w-Ness

1700 North Waterfront Parkway Wichita Kansas
67206

Patricia 1-31

Job Ticket: 17241

DST#: 1

ATTN: Kevin Kessler

Test Start: 2011.12.04 @ 09:30:00

GENERAL INFORMATION:

Formation: **Fort Scott**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:30:00

Time Test Ended: 15:19:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Dustin Ellis

Unit No: 3315-GB-150

Interval: 4270.00 ft (KB) To 4320.00 ft (KB) (TVD)

Reference Elevations: 2380.00 ft (KB)

Total Depth: 4320.00 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: 109.56 psia @ 4317.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2011.12.04

End Date: 2011.12.04

Last Calib.: 2011.12.04

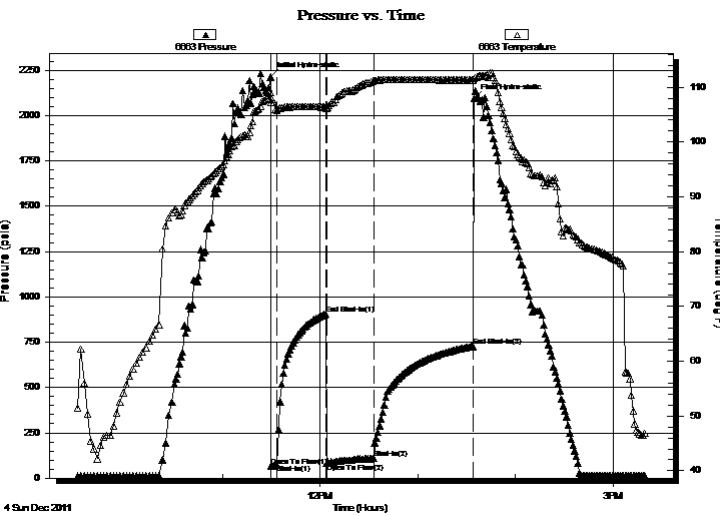
Start Time: 09:30:00

End Time: 15:19:30

Time On Btm: 2011.12.04 @ 11:29:30

Time Off Btm: 2011.12.04 @ 13:34:30

TEST COMMENT: 1st Open 5 minutes Weak building blow built to 1.5 inches into the bucket
1st Shut in 30 minutes No blow back
2nd Open 30 minutes Weak surface blow then died off
2nd Shut in 60 minutes No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2212.97	108.96	Initial Hydro-static
1	66.75	107.18	Open To Flow (1)
4	74.88	105.82	Shut-In(1)
34	905.38	106.38	End Shut-In(1)
35	81.46	106.18	Open To Flow (2)
64	109.56	111.16	Shut-In(2)
125	726.00	111.31	End Shut-In(2)
125	2093.25	111.62	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
70.00	Drilling Mud	0.34

Gas Rates

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



DRILL STEM TEST REPORT

Mull Drilling Company

31-16s-22w-Ness

1700 North Waterfront Parkway Wichita Kansas
67206

Patricia 1-31

Job Ticket: 17241

DST#: 1

ATTN: Kevin Kessler

Test Start: 2011.12.04 @ 09:30:00

GENERAL INFORMATION:

Formation: **Fort Scott**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 11:30:00

Time Test Ended: 15:19:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Dustin Ellis

Unit No: 3315-GB-150

Interval: 4270.00 ft (KB) To 4320.00 ft (KB) (TVD)

Reference Elevations: 2380.00 ft (KB)

Total Depth: 4320.00 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: 724.50 psia @ 4316.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2011.12.04

End Date:

2011.12.04

Last Calib.:

2011.12.04

Start Time: 09:30:00

End Time:

15:19:00

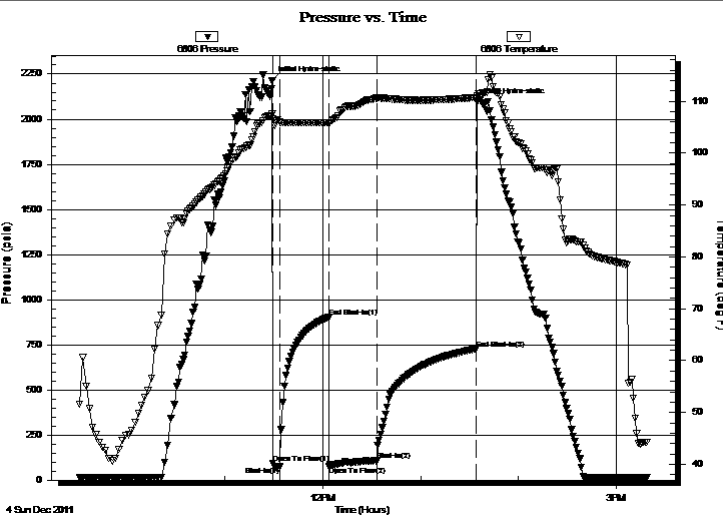
Time On Btm:

2011.12.04 @ 11:29:00

Time Off Btm:

2011.12.04 @ 13:34:30

TEST COMMENT: 1st Open 5 minutes Weak building blow built to 1.5 inches into the bucket
1st Shut in 30 minutes No blow back
2nd Open 30 minutes Weak surface blow then died off
2nd Shut in 60 minutes No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2211.98	107.48	Initial Hydro-static
1	93.50	106.63	Open To Flow (1)
5	74.34	105.96	Shut-In(1)
35	901.37	105.81	End Shut-In(1)
35	78.46	105.63	Open To Flow (2)
64	107.27	110.60	Shut-In(2)
125	724.50	110.70	End Shut-In(2)
126	2093.59	111.05	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
70.00	Drilling Mud	0.34

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: 17241

DST#: 1

ATTN: Kevin Kessler

Test Start: 2011.12.04 @ 09:30:00

Tool Information

Drill Pipe:	Length: 4098.00 ft	Diameter: 3.80 inches	Volume: 57.48 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: 71000.00 lb
			<u>Total Volume: 58.28 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	19.25 ft			String Weight: Initial 65000.00 lb
Depth to Top Packer:	4270.00 ft			Final 65000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	50.00 ft			
Tool Length:	78.00 ft			
Number of Packers:	2	Diameter: 6.25 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Shut-In Tool	5.00			4247.00	
Hydraulic Tool	5.00			4252.00	
Jars	6.00			4258.00	
Safety Joint	2.00			4260.00	
Packer	5.00			4265.00	28.00 Bottom Of Top Packer
Packer	5.00			4270.00	
Perforations	0.00			4270.00	
Change Over Sub	0.75			4270.75	
Drill Pipe	31.00			4301.75	
Change Over Sub	0.75			4302.50	
Perforations	12.50			4315.00	
Recorder	1.00	6806	Inside	4316.00	
Recorder	1.00	6663	Outside	4317.00	
Bull Plug	3.00			4320.00	50.00 Bottom Packers & Anchor

Total Tool Length: 78.00



DRILL STEM TEST REPORT

FLUID SUMMARY

Mull Drilling Company

31-16s-22w-Ness

1700 North Waterfront Parkway Wichita Kansas
67206

Patricia 1-31

Job Ticket: 17241

DST#: 1

ATTN: Kevin Kessler

Test Start: 2011.12.04 @ 09:30:00

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 10.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 49.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.80 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psia

Salinity: 5000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
70.00	Drilling Mud	0.344

Total Length: 70.00 ft Total Volume: 0.344 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

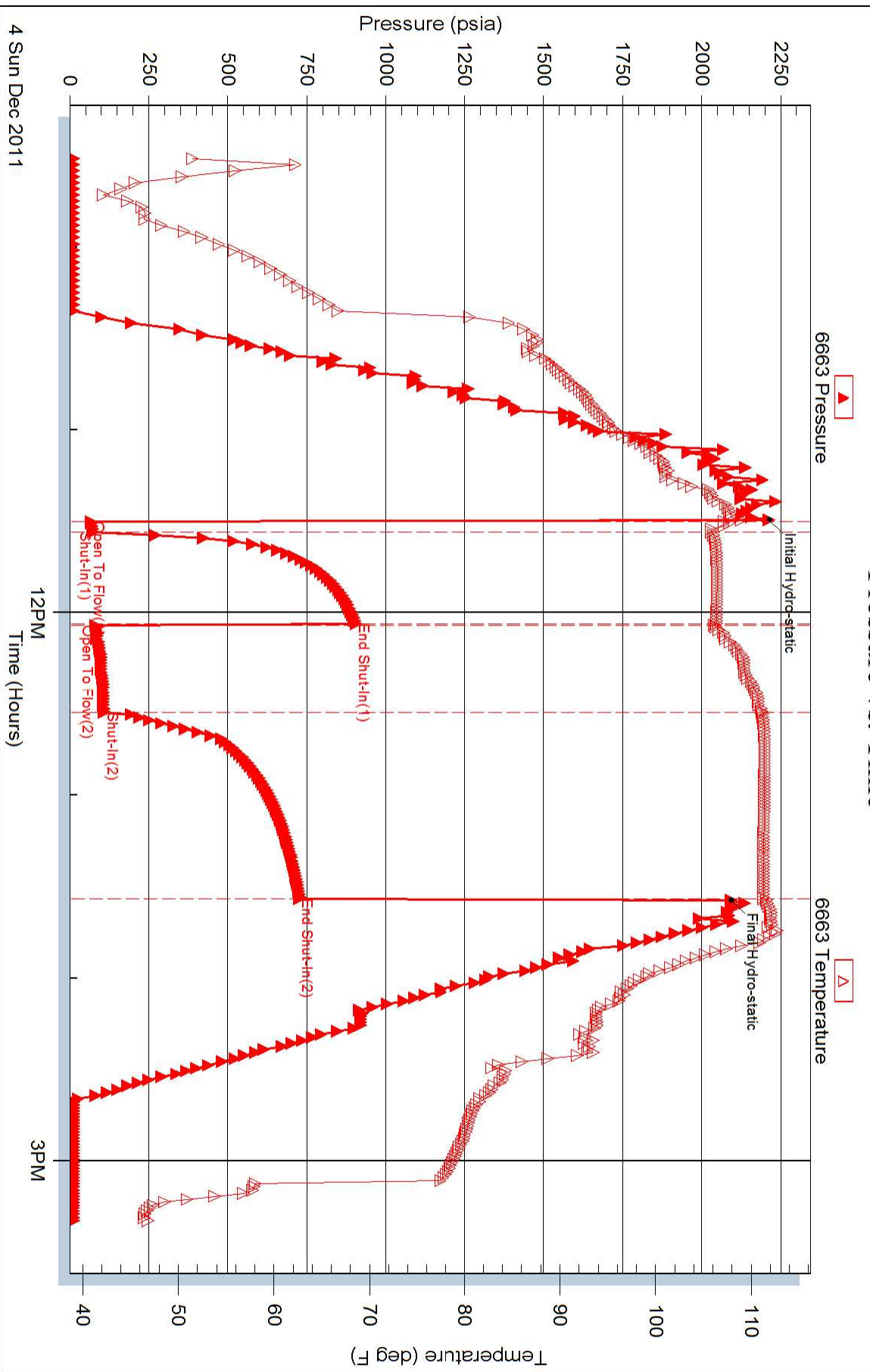
Serial #:

Laboratory Name:

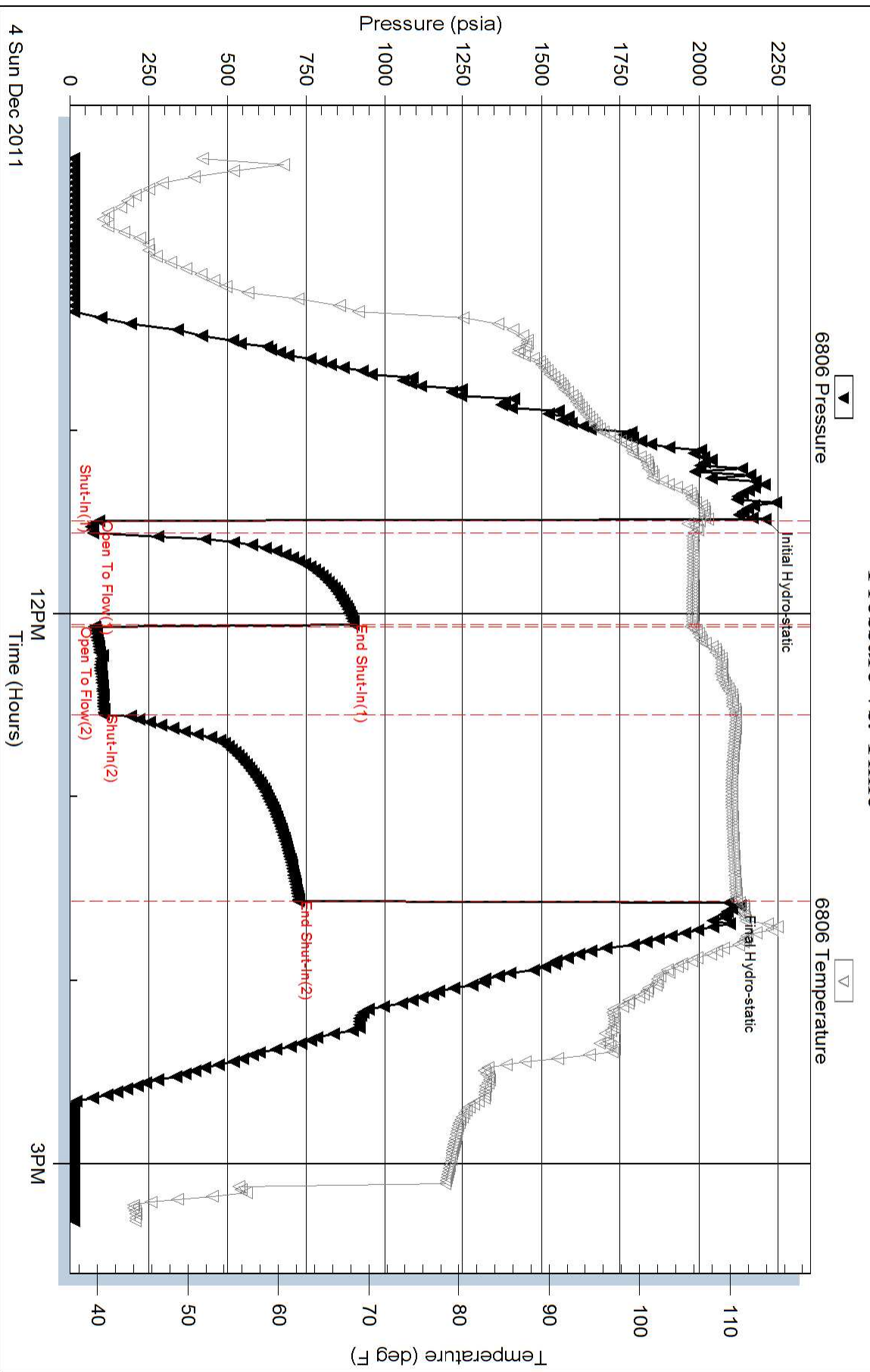
Laboratory Location:

Recovery Comments:

Pressure vs. Time



Pressure vs. Time





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

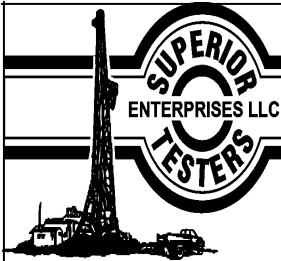
Start Date: 2011.12.05 @ 01:35:00

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



DRILL STEM TEST REPORT

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

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

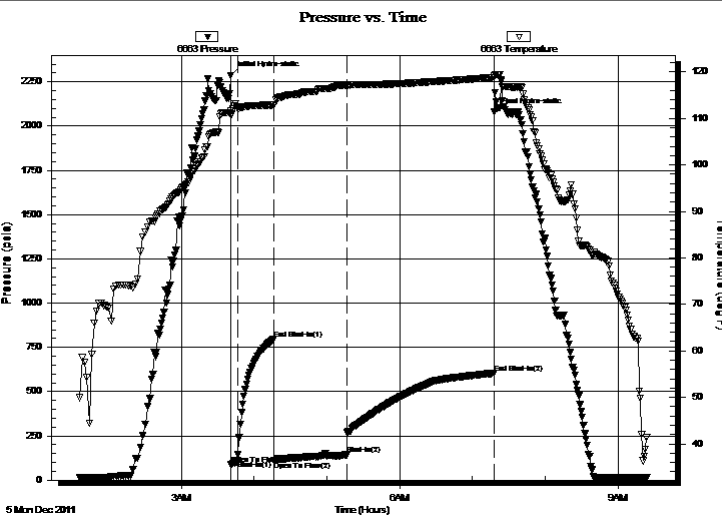
Start Time: 01:35:00

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)



DRILL STEM TEST REPORT

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

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 #: 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

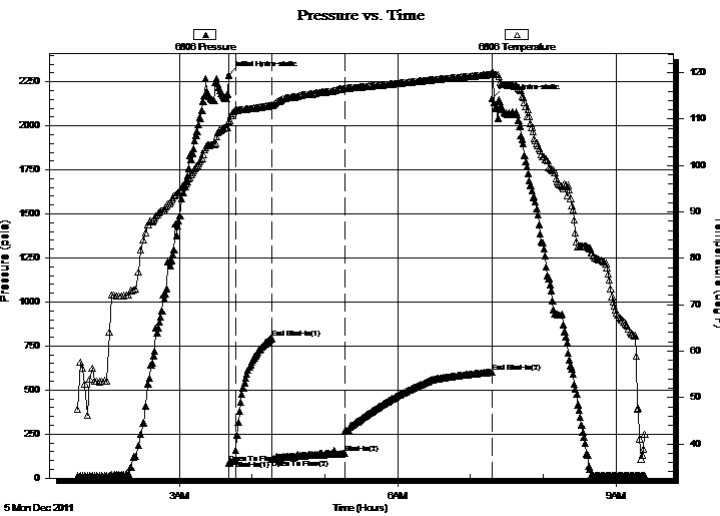
Start Time: 01:35:00

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	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
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



DRILL STEM TEST REPORT

FLUID SUMMARY

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

Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 10.00 lb/gal

Cushion Length:

ft

Water Salinity:

ppm

Viscosity: 49.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 8.80 in³

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psia

Salinity: 5000.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
122.00	Drilling Mud 100%	0.600

Total Length: 122.00 ft Total Volume: 0.600 bbl

Num Fluid Samples: 0

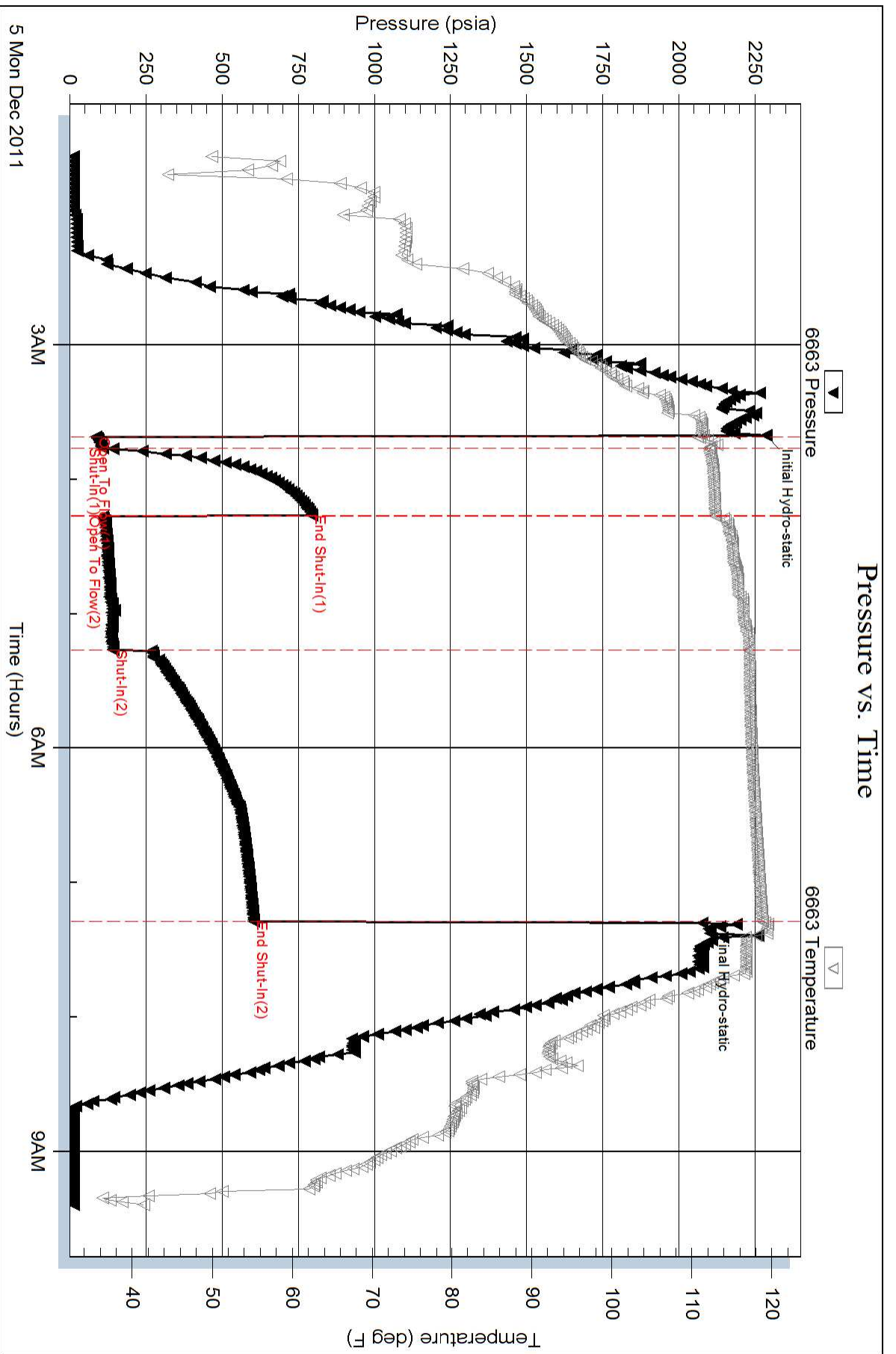
Num Gas Bombs: 0

Serial #:

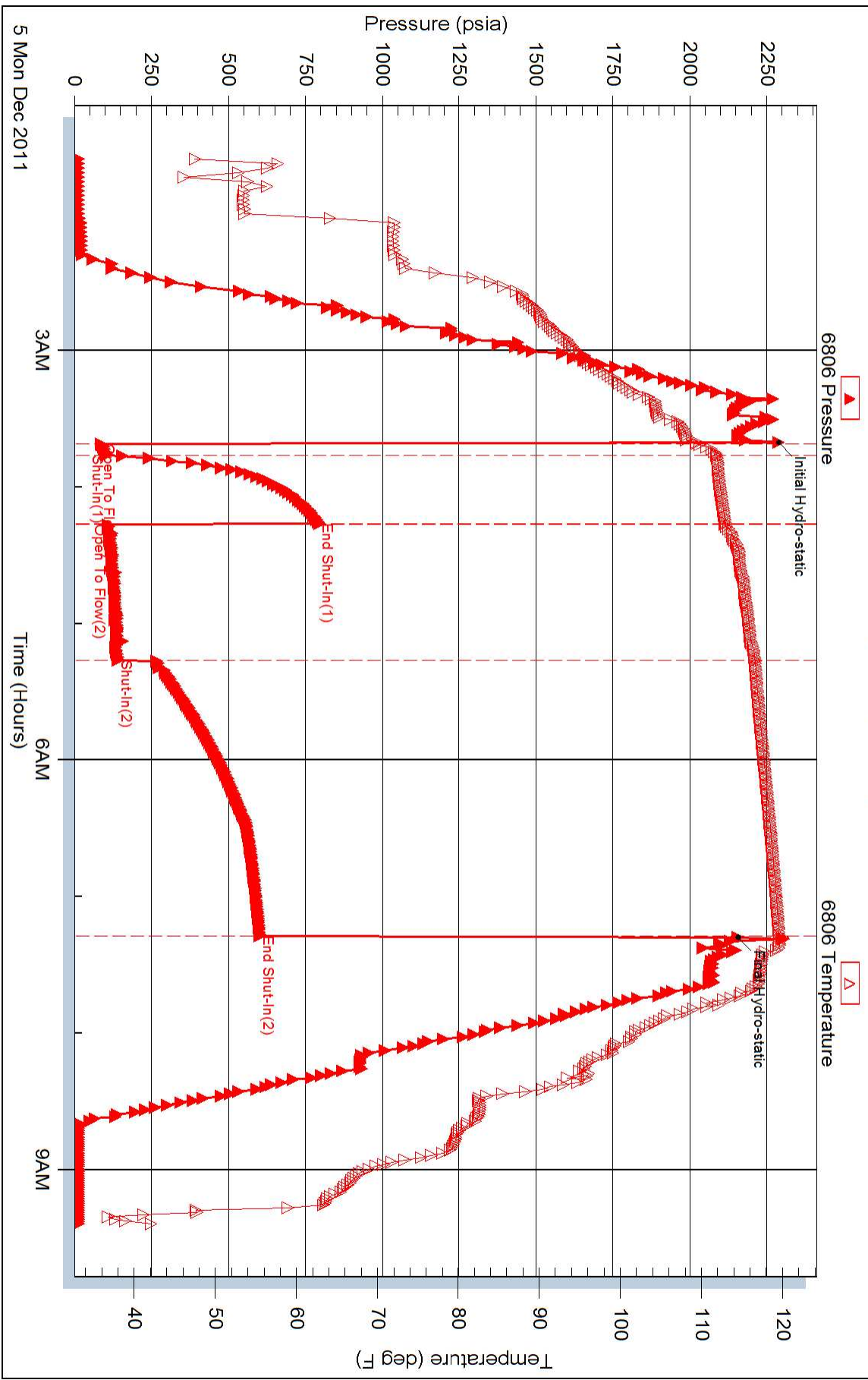
Laboratory Name:

Laboratory Location:

Recovery Comments:



Pressure vs. Time





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: 2011.12.06 @ 04:00:00

End Date: 2011.12.06 @ 13:14:30

Job Ticket #: 17244 DST #: 3

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

Printed: 2011.12.07 @ 16:12:03



DRILL STEM TEST REPORT

Mull Drilling Company

31-16s-22w-Ness

1700 North Waterfront Parkway Wichita Kansas
67206

Patricia 1-31

Job Ticket: 17244

DST#: 3

ATTN: Kevin Kessler

Test Start: 2011.12.06 @ 04:00:00

GENERAL INFORMATION:

Formation:

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:24:00

Time Test Ended: 13:14:30

Test Type: Conventional Straddle (Initial)

Tester: Dustin Ellis

Unit No: 3315-GB-150

Interval: 4395.00 ft (KB) To 4410.00 ft (KB) (TVD)

Reference Elevations: 2380.00 ft (KB)

Total Depth: 4500.00 ft (KB) (TVD)

2371.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 9.00 ft

Serial #: 6806

Outside

Press @ RunDepth: 165.39 psia @ 4409.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2011.12.06

End Date: 2011.12.06

Last Calib.: 2011.12.07

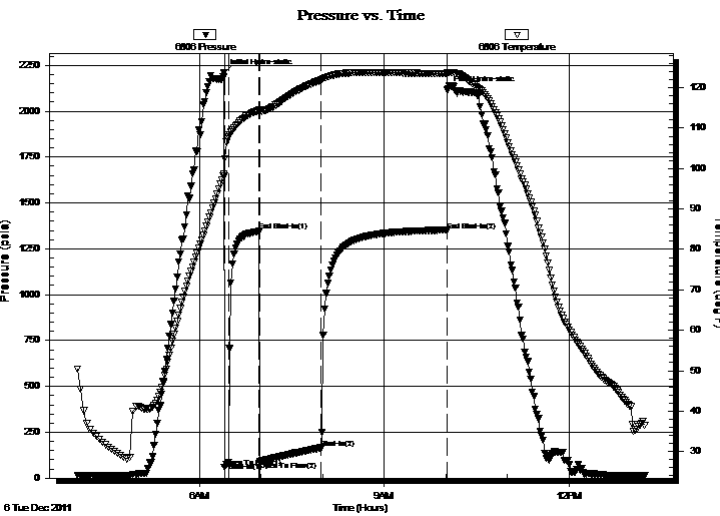
Start Time: 04:01:00

End Time: 13:14:30

Time On Btm: 2011.12.06 @ 06:23:30

Time Off Btm: 2011.12.06 @ 10:01:30

TEST COMMENT: 1st Open 5 minutes Fair building blow built to 2.5 into the bucket
1st Shut in 30 minutes No blow back
2nd Open 60 minutes Fair building blow blew bottom of bucket in 34 minutes.
2nd Shut in 120 minutes No blow back



PRESSURE SUMMARY

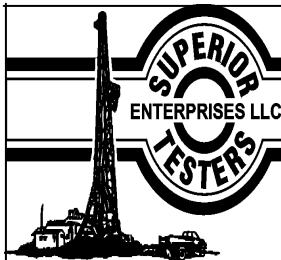
Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2206.71	98.61	Initial Hydro-static
1	59.85	98.26	Open To Flow (1)
5	87.54	107.87	Shut-In(1)
35	1345.07	114.42	End Shut-In(1)
35	92.89	114.13	Open To Flow (2)
95	165.39	121.89	Shut-In(2)
218	1349.70	123.45	End Shut-In(2)
218	2114.53	123.66	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	Water cut mud 90% water 10% mud	0.59
120.00	Muddy water 50% water 50% mud	1.29
60.00	Slighty oil cut mud 90% mud 10% oil	0.84
0.00	Chlorides 46000	0.00

Gas Rates

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



DRILL STEM TEST REPORT

Mull Drilling Company

31-16s-22w-Ness

1700 North Waterfront Parkway Wichita Kansas
67206

Patricia 1-31

Job Ticket: 17244

DST#: 3

ATTN: Kevin Kessler

Test Start: 2011.12.06 @ 04:00:00

GENERAL INFORMATION:

Formation:

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 06:24:00

Time Test Ended: 13:14:30

Test Type: Conventional Straddle (Initial)

Tester: Dustin Ellis

Unit No: 3315-GB-150

Interval: 4395.00 ft (KB) To 4410.00 ft (KB) (TVD)

Reference Elevations: 2380.00 ft (KB)

Total Depth: 4500.00 ft (KB) (TVD)

2371.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 9.00 ft

Serial #: 6999

Outside

Press @ RunDepth: psia @ 4506.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2011.12.06

End Date:

2011.12.06

Last Calib.:

2011.12.07

Start Time: 04:01:00

End Time:

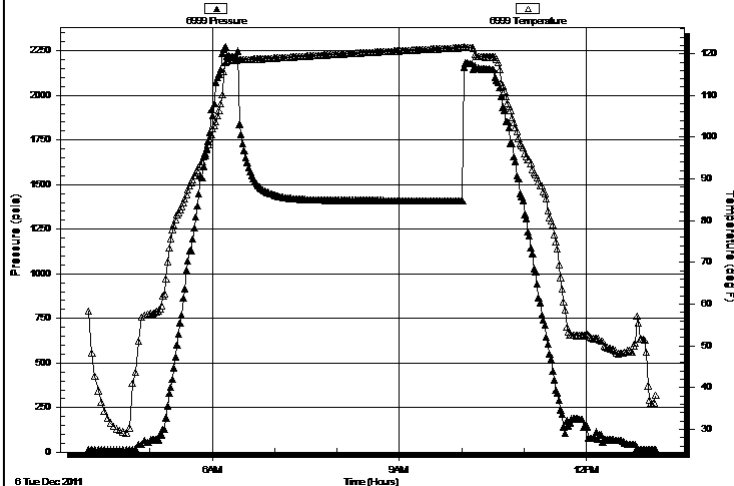
13:06:30

Time On Btm:

Time Off Btm:

TEST COMMENT: 1st Open 5 minutes Fair building blow built to 2.5 into the bucket
1st Shut in 30 minutes No blow back
2nd Open 60 minutes Fair building blow blew bottom of bucket in 34 minutes.
2nd Shut in 120 minutes No blow back

Pressure vs. Time



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
120.00	Water cut mud 90% w ater 10% mud	0.59
120.00	Muddy w ater 50%w ater 50% mud	1.29
60.00	Slighty oil cut mud 90% mud 10% oil	0.84
0.00	Chlorides 46000	0.00

Gas Rates

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



DRILL STEM TEST REPORT

Mull Drilling Company

31-16s-22w-Ness

1700 North Waterfront Parkway Wichita Kansas
67206

Patricia 1-31

Job Ticket: 17244

DST#: 3

ATTN: Kevin Kessler

Test Start: 2011.12.06 @ 04:00:00

GENERAL INFORMATION:

Formation:

Deviated: No Whipstock: ft (KB)

Test Type: Conventional Straddle (Initial)

Time Tool Opened: 06:24:00

Tester: Dustin Ellis

Time Test Ended: 13:14:30

Unit No: 3315-GB-150

Interval: 4395.00 ft (KB) To 4410.00 ft (KB) (TVD)

Reference Elevations: 2380.00 ft (KB)

Total Depth: 4500.00 ft (KB) (TVD)

2371.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Fair

KB to GR/CF: 9.00 ft

Serial #: 6663

Inside

Press @ RunDepth: 1352.79 psia @ 4408.00 ft (KB)

Capacity: 5000.00 psia

Start Date: 2011.12.06

End Date: 2011.12.06

Last Calib.: 2011.12.07

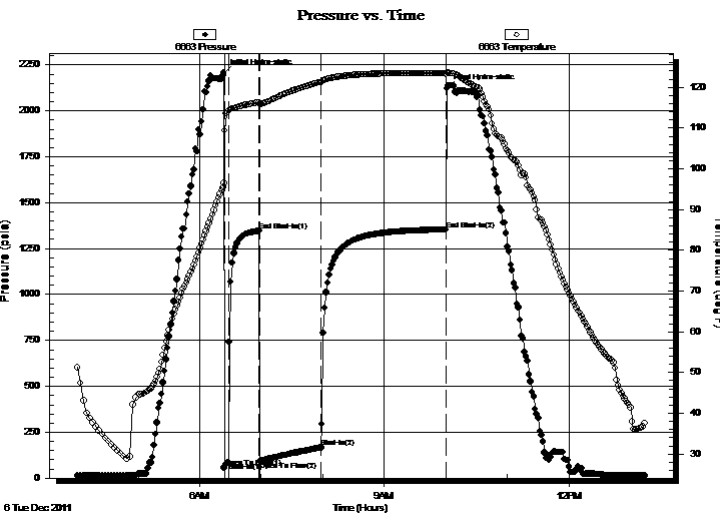
Start Time: 04:01:00

End Time: 13:14:30

Time On Btm: 2011.12.06 @ 06:23:30

Time Off Btm: 2011.12.06 @ 10:01:00

TEST COMMENT: 1st Open 5 minutes Fair building blow built to 2.5 into the bucket
1st Shut in 30 minutes No blow back
2nd Open 60 minutes Fair building blow blew bottom of bucket in 34 minutes.
2nd Shut in 120 minutes No blow back



PRESSURE SUMMARY

Time (Min.)	Pressure (psia)	Temp (deg F)	Annotation
0	2204.76	95.56	Initial Hydro-static
1	56.57	96.43	Open To Flow (1)
5	86.20	113.98	Shut-In(1)
35	1345.15	116.25	End Shut-In(1)
35	93.09	115.89	Open To Flow (2)
95	165.98	121.25	Shut-In(2)
217	1352.79	123.29	End Shut-In(2)
218	2119.99	123.67	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
120.00	Water cut mud 90% water 10% mud	0.59
120.00	Muddy water 50% water 50% mud	1.29
60.00	Slighty oil cut mud 90% mud 10% oil	0.84
0.00	Chlorides 46000	0.00

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: 17244

DST#: 3

ATTN: Kevin Kessler

Test Start: 2011.12.06 @ 04:00:00

Tool Information

Drill Pipe:	Length: 4214.00 ft	Diameter: 3.80 inches	Volume: 59.11 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: 80000.00 lb
			<u>Total Volume: 59.91 bbl</u>	Tool Chased 0.00 ft
Drill Pipe Above KB:	5.25 ft			String Weight: Initial 68000.00 lb
Depth to Top Packer:	4395.00 ft			Final 70000.00 lb
Depth to Bottom Packer:	4410.00 ft			
Interval between Packers:	15.00 ft			
Tool Length:	137.00 ft			
Number of Packers:	2	Diameter: 6.25 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Shut-In Tool	5.00			4377.00		
Hydraulic Tool	5.00			4382.00		
Safety Joint	2.00			4384.00		
Jars	6.00			4390.00		
Packer	5.00			4395.00	23.00	Bottom Of Top Packer
Perforations	12.00			4407.00		
Recorder	1.00	6663	Inside	4408.00		
Recorder	1.00	6806	Outside	4409.00		
Blank Off Sub	1.00			4410.00	15.00	Tool Interval
Packer	5.00			4415.00		
C.O. Sub	0.75			4415.75		
Drill Pipe	63.50			4479.25		
C.O. Sub	0.75			4480.00		
Anchor	25.00		Outside	4505.00		
Recorder	1.00	6999	Outside	4506.00		
Bullnose	3.00			4509.00	99.00	Bottom Packers & Anchor
Total Tool Length:	137.00					



DRILL STEM TEST REPORT

FLUID SUMMARY

Mull Drilling Company

31-16s-22w-Ness

1700 North Waterfront Parkway Wichita Kansas
67206

Patricia 1-31

Job Ticket: 17244

DST#: 3

ATTN: Kevin Kessler

Test Start: 2011.12.06 @ 04:00:00

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: 48.00 sec/qt

Cushion Volume:

bbbl

Water Loss: 7.60 in³

Gas Cushion Type:

Resistivity: 0.40 ohm.m

Gas Cushion Pressure:

psia

Salinity: 7500.00 ppm

Filter Cake: 1.00 inches

Recovery Information

Recovery Table

Length ft	Description	Volume bbbl
120.00	Water cut mud 90% water 10% mud	0.590
120.00	Muddy water 50% water 50% mud	1.289
60.00	Slighty oil cut mud 90% mud 10% oil	0.842
0.00	Chlorides 46000	0.000

Total Length: 300.00 ft

Total Volume: 2.721 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

