

Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

Form ACO-1

January 2018

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

Gas DH EOR

OG GSW

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 EOR Conv. to SWD
 Plug Back Liner Conv. to GSW Conv. to Producer

Commingled Permit #: _____

Dual Completion Permit #: _____

SWD Permit #: _____

EOR Permit #: _____

GSW Permit #: _____

Spud Date or Date Reached TD Completion Date or Recompletion Date

API No.: _____

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 Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT I II III Approved by: _____ Date: _____

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 Geologist Report / Mud Logs <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
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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				

1. Did you perform a hydraulic fracturing treatment on this well? Yes No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? Yes No *(If No, skip question 3)*
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)*

Date of first Production/Injection or Resumed Production/Injection:	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) (Submit ACO-4)</i>	PRODUCTION INTERVAL: Top Bottom
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Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record <i>(Amount and Kind of Material Used)</i>

TUBING RECORD:	Size:	Set At:	Packer At:	
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Form	ACO1 - Well Completion
Operator	Mull Drilling Company, Inc.
Well Name	SCHIPPERS 1-33
Doc ID	1472997

All Electric Logs Run

CDL/CNL/PE
DIL
MEL
SONIC

Form	ACO1 - Well Completion
Operator	Mull Drilling Company, Inc.
Well Name	SCHIPPERS 1-33
Doc ID	1472997

Tops

Name	Top	Datum
Anhydrite	2540	+ 470
B/Anhydrite	2568	+ 442
Heebner	4007	- 997
Lansing	4049	- 1039
Stark	4263	- 1253
Marmaton	4350	- 1340
Pawnee	4441	- 1431
Myrick Station	4488	- 1478
Ft. Scott	4509	- 1499
Cherokee	4537	- 1527
Mississippian	4627	- 1617



CEMENT TREATMENT REPORT

Customer: Mull Drilling	Well: Schippers 1-33	Ticket: ICT2055
City, State:	County: Thomas, KS	Date: 6/12/2019
Field Rep: Scott	S-T-R: 33-10S-31W	Service: Cement

Downhole Information	
Hole Size:	12.25
Hole Depth:	287'
Casing Size:	8.625"
Casing Depth:	287'
Tubing / Liner:	In
Depth:	ft
Tool / Packer:	
Depth:	ft
Displacement:	17

Slurry	
Weight:	14.7 # / sx
Water / Sx:	6 5/7 gal / sx
Yield:	1 2/5 ft ³ / sx
Bbls / Ft.:	
Depth:	ft
Volume:	bbls
Excess:	110% %
Total Slurry:	43 bbls
Total Sacks:	170 sx

Cement Blend		
Product	%	#
Class A		15980
Gel		320
CaCl		480
Metso		
KolSeal		
PhenoSeal		
Salt		
Total		16,780

TIME	RATE	PSI	BBLs	REMARKS	TIME	RATE	PSI	BBLs	REMARKS
7pm				Arrivial					
705pm				Safety meeting					
710pm				Rig up					
930pm	5.0	200.0	65.0	Pump and displace cement					
10pm		200.0		Shut in plug down					
1010pm				Wash up and rig down					
1030pm				depart					
				Cement did circulate cellar					

CREW			UNIT			SUMMARY		
Cementer:	Miles Shaw	73.0				Average Rate	Average Pressure	Total Fluid
Pump Operator:	Josh Mosier	230.0				5 bpm	200.00 psi	65.00 bbls
Bulk #1:	John Polley	242.0						
Bulk #2:								



CEMENT TREATMENT REPORT

Customer:	Mull Drilling	Well:	Schippers 1-33	Ticket:	ICT2079
City, State:		County:	Sheridan, KS	Date:	6/21/2019
Field Rep:	Ray Brown	S-T-R:	33-10S-31W	Service:	Cement

Downhole Information

Hole Size:	7.875
Hole Depth:	4680'
Casing Size:	5.5"
Casing Depth:	4667'
Tubing / Liner:	in
Depth:	ft
Tool / Packer:	
Depth:	ft
Displacement:	bbbls

Slurry

Weight:	12/14.8	# / sx
Water / Sx:	15.4/6.6	gal / sx
Yield:	2.56/1.51	ft ³ / sx
Bbls / Ft.:		
Depth:		ft
Volume:		bbbls
Excess:		%
Total Slurry:	190	bbbls
Total Sacks:	500	sx

Cement Blend

Product	%	#
Class A		47000
Gel		188
CaCl		846
Metso		564
KolSeal		1000
PhenoSeal		75
Salt		1240
Total		50,913

TIME	RATE	PSI	BBLs	REMARKS	TIME	RATE	PSI	BBLs	REMARKS
6pm				Arrival					
605pm				Safety meeting					
610pm				Rig up equip					
645pm				Run in casing					
910pm				Circulate casing					
1040pm	4.0	400.0	25.0	Pump 200# Calcium and 200# Metso Flush					
11pm	4.0	100.0	15.0	Plug RH 30sx					
1110pm	6.0	400.0	176.0	Pump 270sx Hcon & 200sx H long					
1140pm				Release plug and wash up					
1145pm				Displace plug					
1215am	6.0	1,800.0	111.5	Plug down and held					
1230am				Rig down equip					
1255am				Depart					
				Cement did not circulate					

CREW			UNIT		SUMMARY		
Cementer:	Miles Shaw	73.0			Average Rate	Average Pressure	Total Fluid
Pump Operator:	<i>Michael Rebeck</i>	230.0			5 bpm	675.00 psi	327.50 bbls
Bulk #1:	Jesse Jones	242.0					
Bulk #2:	John Polley	181 / 254					



Company: Mull Drilling Company, Inc

Lease: Schippers #1-33

SEC: 33 TWN: 10S RNG: 31
County: THOMAS
State: Kansas
Drilling Contractor: WW Drilling, LLC -
Rig 8
Elevation: 3005 GL
Field Name: Wildcat
Pool: Wildcat
Job Number: 359
API #: 15-193-21044

Operation:
Uploading recovery &
pressures

DATE
June
17
2019

DST #1 **Formation: LKC** **Test Interval: 4085 -** **Total Depth: 4145'**
 "D,E,F" **4145'**
Time On: 02:37 06/17 Time Off: 08:23 06/17
Time On Bottom: 04:51 06/17 Time Off Bottom: 06:26 06/17

Electronic Volume
Estimate:
41'

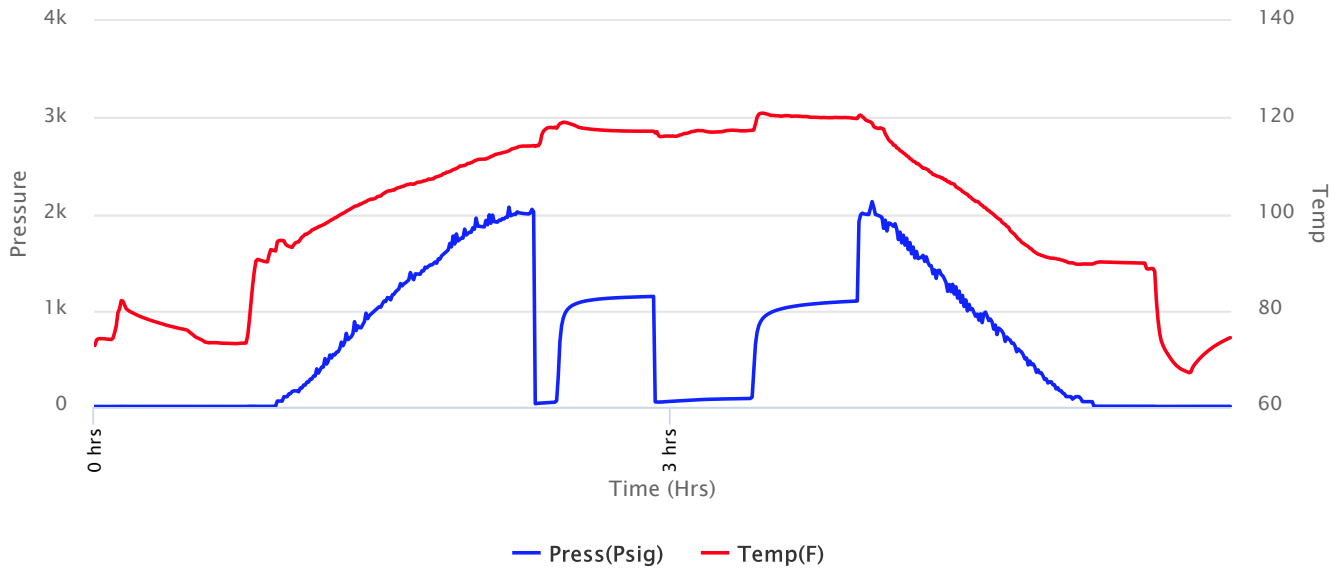
1st Open
Minutes: 5
Current Reading:
1" at 5 min
Max Reading: 1"

1st Close
Minutes: 30
Current Reading:
0" at 30 min
Max Reading: 0"

2nd Open
Minutes: 30
Current Reading:
.1" at 30 min
Max Reading: .3"

2nd Close
Minutes: 30
Current Reading:
0" at 30 min
Max Reading: 0"

Inside Recorder





Company: Mull Drilling Company, Inc
Lease: Schippers #1-33

SEC: 33 TWN: 10S RNG: 31
 County: THOMAS
 State: Kansas
 Drilling Contractor: WW Drilling, LLC - Rig 8
 Elevation: 3005 GL
 Field Name: Wildcat
 Pool: Wildcat
 Job Number: 359
 API #: 15-193-21044

Operation:
 Uploading recovery & pressures

DATE
 June
17
 2019

DST #1 **Formation: LKC "D,E,F"** **Test Interval: 4085 - 4145'** **Total Depth: 4145'**
 Time On: 02:37 06/17 Time Off: 08:23 06/17
 Time On Bottom: 04:51 06/17 Time Off Bottom: 06:26 06/17

Recovered

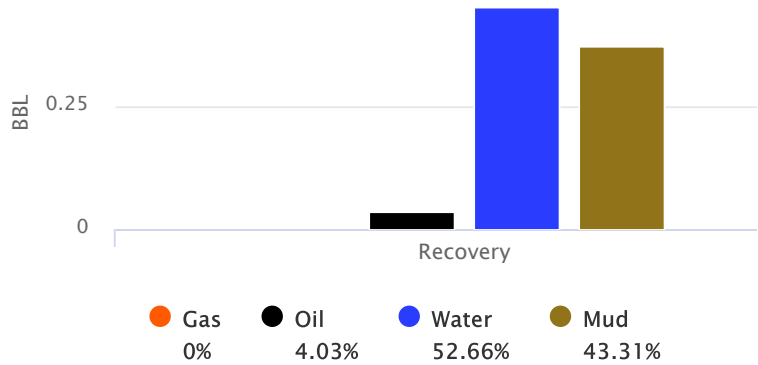
Foot	BBLs	Description of Fluid	Gas %	Oil %	Water %	Mud %
1	0.01423	O	0	100	0	0
15	0.21345	SLOCM	0	5	0	95
60	0.33244	SLOCHMCW	0	2	68	30
60	0.2952	SLOCMCW	0	1	76	23

Total Recovered: 136 ft
 Total Barrels Recovered: 0.85532

Reversed Out
 NO

Initial Hydrostatic Pressure	2002	PSI
Initial Flow	34 to 49	PSI
Initial Closed in Pressure	1145	PSI
Final Flow Pressure	52 to 88	PSI
Final Closed in Pressure	1096	PSI
Final Hydrostatic Pressure	1997	PSI
Temperature	121	°F
 Pressure Change Initial Close / Final Close	4.3	%

Recovery at a glance



GIP cubic foot volume: 0



**Company: Mull Drilling
Company, Inc**
Lease: Schippers #1-33

SEC: 33 TWN: 10S RNG: 31
County: THOMAS
State: Kansas
Drilling Contractor: WW Drilling, LLC -
Rig 8
Elevation: 3005 GL
Field Name: Wildcat
Pool: Wildcat
Job Number: 359
API #: 15-193-21044

Operation:
Uploading recovery &
pressures

DATE
June
17
2019

DST #1	Formation: LKC "D,E,F"	Test Interval: 4085 - 4145'	Total Depth: 4145'
	Time On: 02:37 06/17	Time Off: 08:23 06/17	
	Time On Bottom: 04:51 06/17	Time Off Bottom: 06:26 06/17	

BUCKET MEASUREMENT:

1st Open: 1/4" Blow built to 1" over 5 min.

1st Close: No Return

2nd Open: Weak surface blow built to 1/4" then died back to 1/8" over 30 min.

2nd Close: No Return

REMARKS:

Tool Sample: 0% Gas 5% Oil 45% Water 50% Mud

Measured RW: .2 @ 67 degrees °F

RW at Formation Temp: 0.115 @ 121 °F

Chlorides: 35000 ppm



**Company: Mull Drilling
Company, Inc
Lease: Schippers #1-33**

SEC: 33 TWN: 10S RNG: 31
County: THOMAS
State: Kansas
Drilling Contractor: WW Drilling, LLC -
Rig 8
Elevation: 3005 GL
Field Name: Wildcat
Pool: Wildcat
Job Number: 359
API #: 15-193-21044

Operation:
Uploading recovery &
pressures

DATE
June
17
2019

DST #1 Formation: LKC Test Interval: 4085 - Total Depth: 4145'
"D,E,F" **4145'**
Time On: 02:37 06/17 Time Off: 08:23 06/17
Time On Bottom: 04:51 06/17 Time Off Bottom: 06:26 06/17

Down Hole Makeup

Heads Up:	19.31 FT	Packer 1:	4079.73 FT
Drill Pipe:	3955.47 FT	Packer 2:	4084.73 FT
	<i>ID-3 1/2</i>	Top Recorder:	4069.15 FT
Weight Pipe:	0 FT	Bottom Recorder:	4088 FT
	<i>ID-2 7/8</i>	Well Bore Size:	7 7/8
Collars:	116 FT	Surface Choke:	1"
	<i>ID-2 1/4</i>	Bottom Choke:	5/8"
Test Tool:	33.57 FT		
	<i>ID-3 1/2-FH</i>		
	<i>Jars</i>		
	<i>Safety Joint</i>		
Total Anchor:	60.27		
	<u>Anchor Makeup</u>		
Packer Sub:	1 FT		
Perforations: (top):	24 FT		
	<i>4 1/2-FH</i>		
Change Over:	.5 FT		
Drill Pipe: (in anchor):	31.27 FT		
	<i>ID-3 1/2</i>		
Change Over:	.5 FT		
Perforations: (below):	3 FT		
	<i>4 1/2-FH</i>		



Company: Mull Drilling Company, Inc

Lease: Schippers #1-33

SEC: 33 TWN: 10S RNG: 31
County: THOMAS
State: Kansas
Drilling Contractor: WW Drilling, LLC - Rig 8
Elevation: 3005 GL
Field Name: Wildcat
Pool: Wildcat
Job Number: 359
API #: 15-193-21044

Operation:
Uploading recovery & pressures

DATE
June
17
2019

DST #1 Formation: LKC Test Interval: 4085 - Total Depth: 4145'
 "D,E,F" 4145'
Time On: 02:37 06/17 Time Off: 08:23 06/17
Time On Bottom: 04:51 06/17 Time Off Bottom: 06:26 06/17

Gas Volume Report

1st Open			
Time	Orifice	PSI	MCF/D

2nd Open			
Time	Orifice	PSI	MCF/D



**Company: Mull Drilling
Company, Inc**
Lease: Schippers #1-33

SEC: 33 TWN: 10S RNG: 31W
County: THOMAS
State: Kansas
Drilling Contractor: WW Drilling, LLC -
Rig 8
Elevation: 3005 GL
Field Name: Wildcat
Pool: WILDCAT
Job Number: 359
API #: 15-193-21044

Operation:
Uploading recovery &
pressures

DATE
June
17
2019

DST #2 **Formation: LKC "H-
J"** **Test Interval: 4175 -
4270'** **Total Depth: 4270'**

Time On: 23:23 06/17 Time Off: 07:24 06/18
Time On Bottom: 01:39 06/18 Time Off Bottom: 05:14 06/18

Electronic Volume
Estimate:
230'

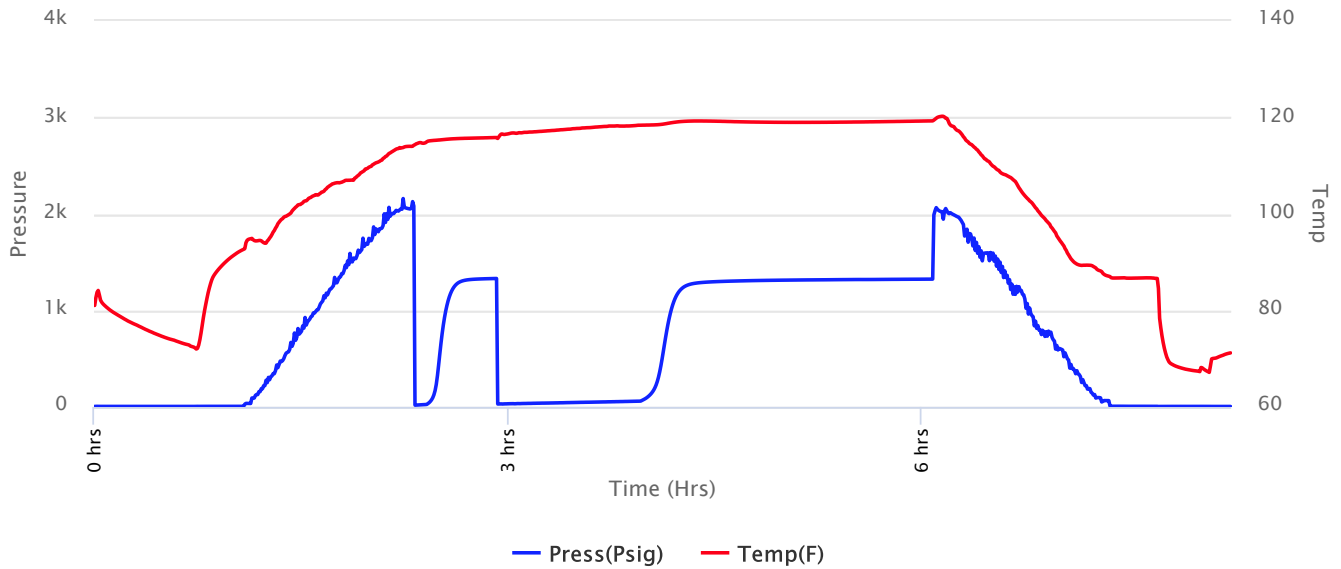
1st Open
Minutes: 5
Current Reading:
.25" at 5 min
Max Reading: .25"

1st Close
Minutes: 30
Current Reading:
0" at 30 min
Max Reading: 0"

2nd Open
Minutes: 60
Current Reading:
12.5" at 60 min
Max Reading: 12.5"

2nd Close
Minutes: 120
Current Reading:
1" at 120 min
Max Reading: 1"

Inside Recorder





**Company: Mull Drilling
Company, Inc
Lease: Schippers #1-33**

SEC: 33 TWN: 10S RNG: 31W
County: THOMAS
State: Kansas
Drilling Contractor: WW Drilling, LLC - Rig 8
Elevation: 3005 GL
Field Name: Wildcat
Pool: WILDCAT
Job Number: 359
API #: 15-193-21044

Operation:
Uploading recovery & pressures

DATE
June
17
2019

DST #2 **Formation: LKC "H-J"** **Test Interval: 4175 - 4270'** **Total Depth: 4270'**
Time On: 23:23 06/17 Time Off: 07:24 06/18
Time On Bottom: 01:39 06/18 Time Off Bottom: 05:14 06/18

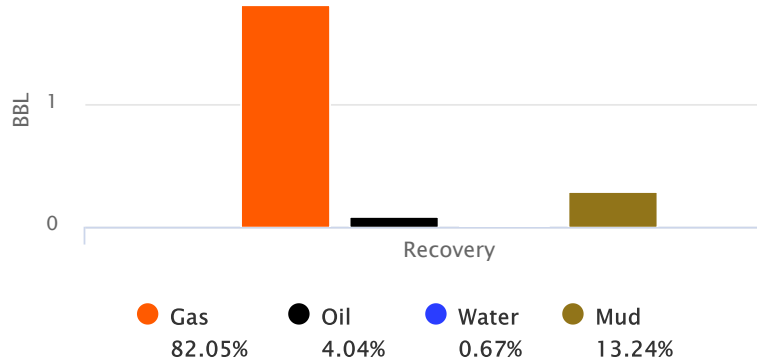
Recovered		Description of Fluid	Gas %	Oil %	Water %	Mud %
Foot	BBLs					
150	1.79934	G	100	0	0	0
20	0.0984	HOCM	0	30	0	70
60	0.2952	SLWCOCM	0	20	5	75

Total Recovered: 230 ft
Total Barrels Recovered: 2.19294

Reversed Out
NO

Initial Hydrostatic Pressure	2062	PSI
Initial Flow	18 to 24	PSI
Initial Closed in Pressure	1331	PSI
Final Flow Pressure	31 to 60	PSI
Final Closed in Pressure	1324	PSI
Final Hydrostatic Pressure	2025	PSI
Temperature	120	°F
Pressure Change Initial Close / Final Close	0.5	%

Recovery at a glance



GIP cubic foot volume: 10.10239



**Company: Mull Drilling
Company, Inc**

Lease: Schippers #1-33

SEC: 33 TWN: 10S RNG: 31W
County: THOMAS
State: Kansas
Drilling Contractor: WW Drilling, LLC -
Rig 8
Elevation: 3005 GL
Field Name: Wildcat
Pool: WILDCAT
Job Number: 359
API #: 15-193-21044

Operation:
Uploading recovery &
pressures

DATE
June
17
2019

DST #2 **Formation: LKC "H-
J"** **Test Interval: 4175 -
4270'** **Total Depth: 4270'**
Time On: 23:23 06/17 Time Off: 07:24 06/18
Time On Bottom: 01:39 06/18 Time Off Bottom: 05:14 06/18

BUCKET MEASUREMENT:

1st Open: 1/8" Blow built to 1/4" over 5 min.
1st Close: No Return
2nd Open: BoB in 47 min.
2nd Close: Weak surface Return built to 1" over 120 min.

REMARKS:

Tool Sample: 0% Gas 20% Oil 5% Water 75% Mud



**Company: Mull Drilling
Company, Inc**
Lease: Schippers #1-33

SEC: 33 TWN: 10S RNG: 31W
County: THOMAS
State: Kansas
Drilling Contractor: WW Drilling, LLC -
Rig 8
Elevation: 3005 GL
Field Name: Wildcat
Pool: WILDCAT
Job Number: 359
API #: 15-193-21044

Operation:
Uploading recovery &
pressures

DATE
June
17
2019

DST #2 **Formation: LKC "H-
J"** **Test Interval: 4175 -
4270'** **Total Depth: 4270'**

Time On: 23:23 06/17 Time Off: 07:24 06/18
Time On Bottom: 01:39 06/18 Time Off Bottom: 05:14 06/18

Down Hole Makeup

Heads Up: 22.83 FT	Packer 1: 4170.21 FT
Drill Pipe: 4049.47 FT <i>ID-3 1/2</i>	Packer 2: 4175.21 FT
Weight Pipe: 0 FT <i>ID-2 7/8</i>	Top Recorder: 4159.63 FT
Collars: 116 FT <i>ID-2 1/4</i>	Bottom Recorder: 4178 FT
Test Tool: 33.57 FT <i>ID-3 1/2-FH</i> <i>Jars</i> <i>Safety Joint</i>	Well Bore Size: 7 7/8
Total Anchor: 94.79	Surface Choke: 1"
Anchor Makeup	Bottom Choke: 5/8"
Packer Sub: 1 FT	
Perforations: (top): 27 FT <i>4 1/2-FH</i>	
Change Over: .5 FT	
Drill Pipe: (in anchor): 62.79 FT <i>ID-3 1/2</i>	
Change Over: .5 FT	
Perforations: (below): 3 FT <i>4 1/2-FH</i>	



Company: Mull Drilling Company, Inc

Lease: Schippers #1-33

SEC: 33 TWN: 10S RNG: 31W
County: THOMAS
State: Kansas
Drilling Contractor: WW Drilling, LLC -
Rig 8
Elevation: 3005 GL
Field Name: Wildcat
Pool: WILDCAT
Job Number: 359
API #: 15-193-21044

Operation: Uploading recovery & pressures
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DATE June 17 2019
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DST #2	Formation: LKC "H- J"	Test Interval: 4175 - 4270'	Total Depth: 4270'
Time On: 23:23 06/17		Time Off: 07:24 06/18	
Time On Bottom: 01:39 06/18		Time Off Bottom: 05:14 06/18	

Mud Properties

Mud Type: Chem

Weight: 9.2

Viscosity: 56

Filtrate: 6.4

Chlorides: 2200 ppm



**Company: Mull Drilling
Company, Inc**
Lease: Schippers #1-33

SEC: 33 TWN: 10S RNG: 31W
County: THOMAS
State: Kansas
Drilling Contractor: WW Drilling, LLC -
Rig 8
Elevation: 3005 GL
Field Name: Wildcat
Pool: WILDCAT
Job Number: 359
API #: 15-193-21044

Operation:
Uploading recovery &
pressures

DATE
June
19
2019

DST #3 Formation: Pawnee Test Interval: 4420 - 4460' Total Depth: 4460'
Time On: 06:47 06/19 Time Off: 15:28 06/19
Time On Bottom: 09:03 06/19 Time Off Bottom: 12:38 06/19

Electronic Volume
Estimate:
4417'

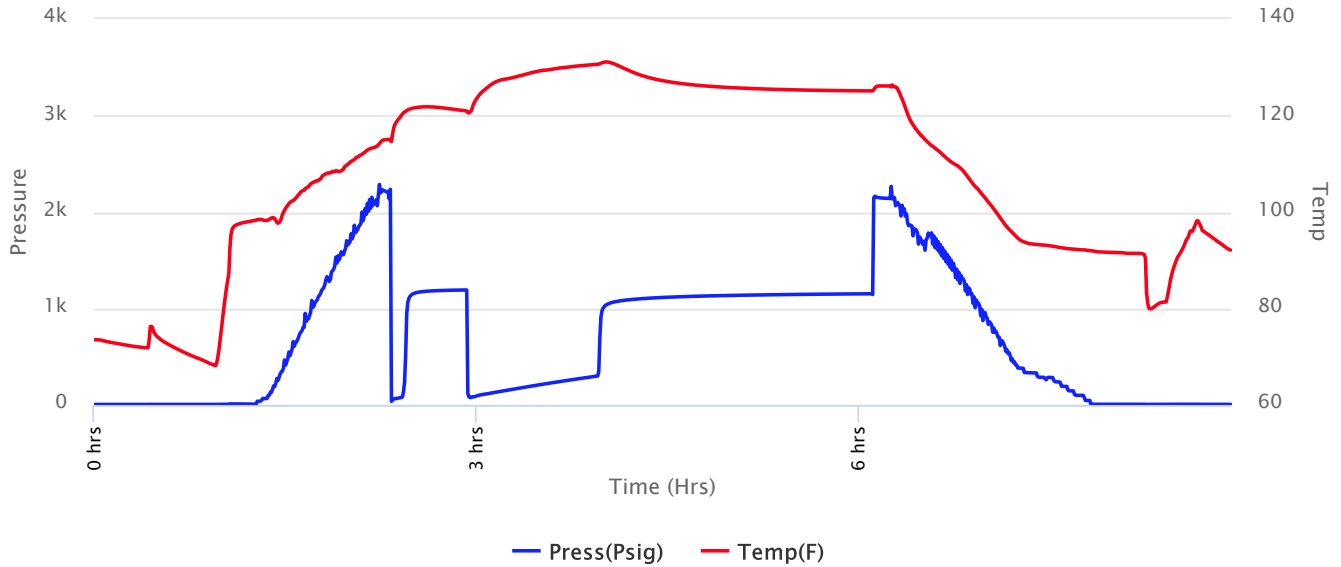
1st Open
Minutes: 5
Current Reading:
34.2" at 5 min
Max Reading: 34.2"

1st Close
Minutes: 30
Current Reading:
.1" at 30 min
Max Reading: .1"

2nd Open
Minutes: 60
Current Reading:
392.3" at 60 min
Max Reading: 392.3"

2nd Close
Minutes: 120
Current Reading:
68.5" at 120 min
Max Reading: 68.9"

Inside Recorder





**Company: Mull Drilling
Company, Inc**
Lease: Schippers #1-33

SEC: 33 TWN: 10S RNG: 31W
County: THOMAS
State: Kansas
Drilling Contractor: WW Drilling, LLC -
Rig 8
Elevation: 3005 GL
Field Name: Wildcat
Pool: WILDCAT
Job Number: 359
API #: 15-193-21044

Operation:
Uploading recovery &
pressures

DATE
June
19
2019

DST #3 Formation: Pawnee Test Interval: 4420 - 4460' Total Depth: 4460'
Time On: 06:47 06/19 Time Off: 15:28 06/19
Time On Bottom: 09:03 06/19 Time Off Bottom: 12:38 06/19

Recovered

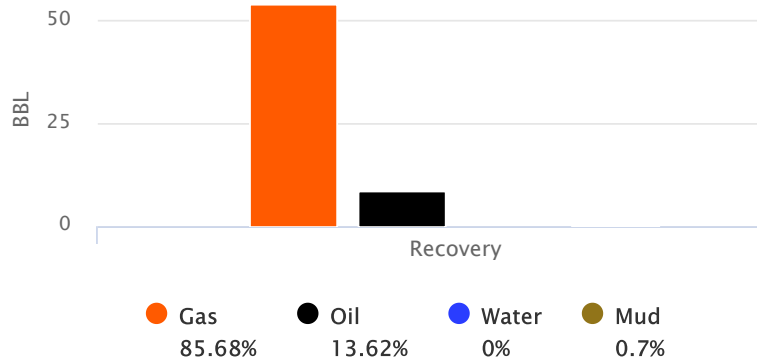
Foot	BBLs	Description of Fluid	Gas %	Oil %	Water %	Mud %
3685	52.43755	G	100	0	0	0
126	1.79298	SLGCO	10	90	0	0
220	3.1306	SLGCO	15	85	0	0
157	2.23411	SLMCSLGCO	15	79	0	6
126	1.79298	SLMCSLGCO	10	87	0	3
123	1.22893	SLMCGCO	20	78	0	2
60	0.2952	SLOGCM	20	3	0	77

Total Recovered: 4497 ft
Total Barrels Recovered: 62.91235

Reversed Out
NO

Initial Hydrostatic Pressure	2211	PSI
Initial Flow	37 to 78	PSI
Initial Closed in Pressure	1191	PSI
Final Flow Pressure	78 to 295	PSI
Final Closed in Pressure	1151	PSI
Final Hydrostatic Pressure	2162	PSI
Temperature	131	°F
Pressure Change Initial Close / Final Close	3.3	%

Recovery at a glance



GIP cubic foot volume: 302.65343



**Company: Mull Drilling
Company, Inc**

Lease: Schippers #1-33

SEC: 33 TWN: 10S RNG: 31W
County: THOMAS
State: Kansas
Drilling Contractor: WW Drilling, LLC -
Rig 8
Elevation: 3005 GL
Field Name: Wildcat
Pool: WILDCAT
Job Number: 359
API #: 15-193-21044

Operation:
Uploading recovery &
pressures

DATE
June
19
2019

DST #3 Formation: Pawnee Test Interval: 4420 - Total Depth: 4460'
4460'
Time On: 06:47 06/19 Time Off: 15:28 06/19
Time On Bottom: 09:03 06/19 Time Off Bottom: 12:38 06/19

BUCKET MEASUREMENT:

1st Open: BoB in 2 min. 15 sec.
1st Close: Weak Surface Return started at 6 min. Did not build or die.
2nd Open: BoB in 1 min. 17 sec.
2nd Close: BoB in 9 min. 53 sec.

REMARKS:

Gas to surface at end of final flow period. Slight odor too weak to measure.
Tool Sample: 30% Gas 50% Oil 0% Water 20% Mud
Gravity: 39.5 @ 60 °F



**Company: Mull Drilling
Company, Inc
Lease: Schippers #1-33**

SEC: 33 TWN: 10S RNG: 31W
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Rig 8
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DST #3 Formation: Pawnee Test Interval: 4420 - Total Depth: 4460'
4460'
Time On: 06:47 06/19 Time Off: 15:28 06/19
Time On Bottom: 09:03 06/19 Time Off Bottom: 12:38 06/19

Down Hole Makeup

Heads Up: 30.15 FT	Packer 1: 4414.59 FT
Drill Pipe: 4301.17 FT <i>ID-3 1/2</i>	Packer 2: 4419.59 FT
Weight Pipe: 0 FT <i>ID-2 7/8</i>	Top Recorder: 4404.01 FT
Collars: 116 FT <i>ID-2 1/4</i>	Bottom Recorder: 4425 FT
Test Tool: 33.57 FT <i>ID-3 1/2-FH</i> <i>Jars</i> <i>Safety Joint</i>	Well Bore Size: 7 7/8
Total Anchor: 40.41	Surface Choke: 1"
Anchor Makeup	Bottom Choke: 5/8"
Packer Sub: 1 FT	
Perforations: (top): 4 FT <i>4 1/2-FH</i>	
Change Over: .5 FT	
Drill Pipe: (in anchor): 31.41 FT <i>ID-3 1/2</i>	
Change Over: .5 FT	
Perforations: (below): 3 FT <i>4 1/2-FH</i>	



**Company: Mull Drilling
Company, Inc**

Lease: Schippers #1-33

SEC: 33 TWN: 10S RNG: 31W
County: THOMAS
State: Kansas
Drilling Contractor: WW Drilling, LLC -
Rig 8
Elevation: 3005 GL
Field Name: Wildcat
Pool: WILDCAT
Job Number: 359
API #: 15-193-21044

Operation:
Uploading recovery &
pressures

DATE
June
19
2019

DST #3 Formation: Pawnee Test Interval: 4420 - Total Depth: 4460'
4460'
Time On: 06:47 06/19 Time Off: 15:28 06/19
Time On Bottom: 09:03 06/19 Time Off Bottom: 12:38 06/19

Mud Properties

Mud Type: Chem **Weight:** 9.3 **Viscosity:** 59 **Filtrate:** 7.2 **Chlorides:** 3000 ppm



**Company: Mull Drilling
Company, Inc
Lease: Schippers #1-33**

SEC: 33 TWN: 10S RNG: 31W
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Rig 8
Elevation: 3005 GL
Field Name: Wildcat
Pool: WILDCAT
Job Number: 359
API #: 15-193-21044

Operation:
Uploading recovery &
pressures

DATE
June
19
2019

DST #3 Formation: Pawnee Test Interval: 4420 - Total Depth: 4460'
4460'
Time On: 06:47 06/19 Time Off: 15:28 06/19
Time On Bottom: 09:03 06/19 Time Off Bottom: 12:38 06/19

Gas Volume Report

1st Open			
Time	Orifice	PSI	MCF/D

2nd Open			
Time	Orifice	PSI	MCF/D



**Company: Mull Drilling
Company, Inc**
Lease: Schippers #1-33

SEC: 33 TWN: 10S RNG: 31W
County: THOMAS
State: Kansas
Drilling Contractor: WW Drilling, LLC -
Rig 8
Elevation: 3005 GL
Field Name: Wildcat
Pool: WILDCAT
Job Number: 359
API #: 15-193-21044

Operation:
Uploading recovery &
pressures

DATE
June
20
2019

DST #4 **Formation: Cherokee Snd.** **Test Interval: 4530 - 4600'** **Total Depth: 4600'**
Time On: 11:52 06/20 Time Off: 18:40 06/20
Time On Bottom: 14:55 06/20 Time Off Bottom: 16:30 06/20

Electronic Volume
Estimate:
4'

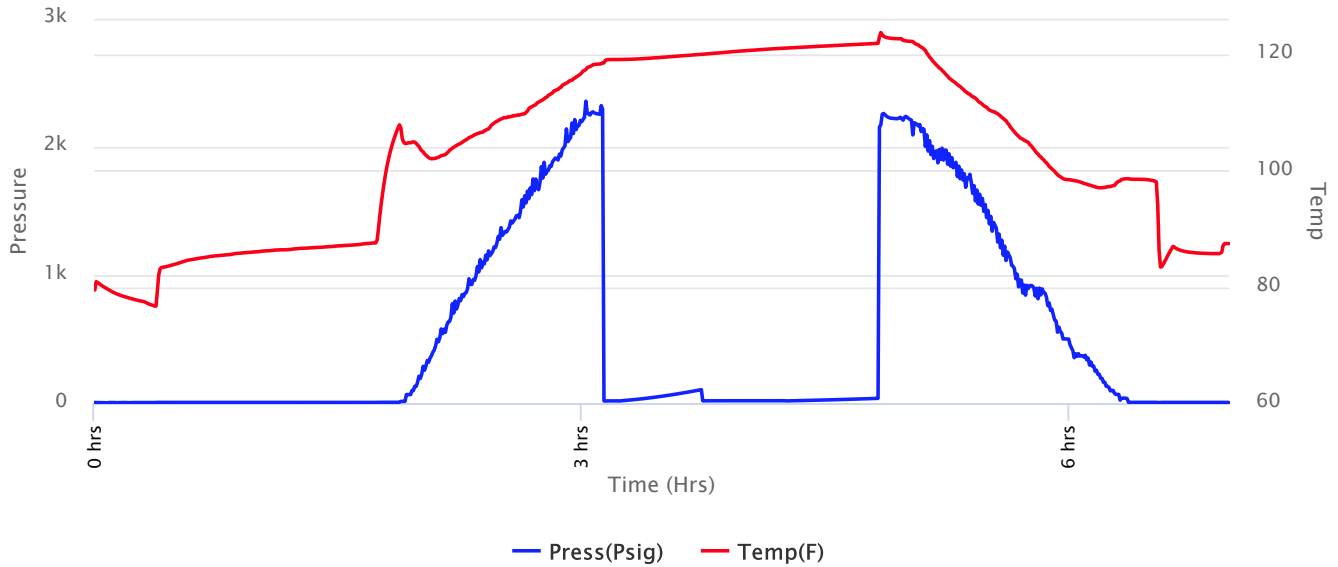
1st Open
Minutes: 5
Current Reading:
.1" at 5 min
Max Reading: .1"

1st Close
Minutes: 30
Current Reading:
0" at 30 min
Max Reading: 0"

2nd Open
Minutes: 30
Current Reading:
0" at 30 min
Max Reading: 0"

2nd Close
Minutes: 30
Current Reading:
0" at 30 min
Max Reading: 0"

Inside Recorder





**Company: Mull Drilling
Company, Inc**
Lease: Schippers #1-33

SEC: 33 TWN: 10S RNG: 31W
County: THOMAS
State: Kansas
Drilling Contractor: WW Drilling, LLC -
Rig 8
Elevation: 3005 GL
Field Name: Wildcat
Pool: WILDCAT
Job Number: 359
API #: 15-193-21044

Operation:
Uploading recovery &
pressures

DATE
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2019

DST #4 **Formation: Cherokee Snd.** **Test Interval: 4530 - 4600'** **Total Depth: 4600'**
Time On: 11:52 06/20 Time Off: 18:40 06/20
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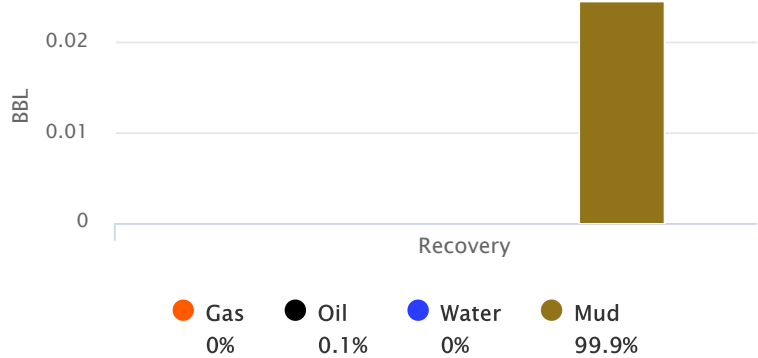
Recovered

Foot	BBLs	Description of Fluid	Gas %	Oil %	Water %	Mud %
5	0.0246	M (trace O)	0	.1	0	99.9

Total Recovered: 5 ft
Total Barrels Recovered: 0.0246

Reversed Out
NO

Recovery at a glance



Initial Hydrostatic Pressure	2262	PSI
Initial Flow	17 to 18	PSI
Initial Closed in Pressure	105	PSI
Final Flow Pressure	18 to 19	PSI
Final Closed in Pressure	37	PSI
Final Hydrostatic Pressure	2221	PSI
Temperature	122	°F
Pressure Change Initial Close / Final Close	64.9	%

GIP cubic foot volume: 0



**Company: Mull Drilling
Company, Inc**

Lease: Schippers #1-33

SEC: 33 TWN: 10S RNG: 31W
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Drilling Contractor: WW Drilling, LLC -
Rig 8
Elevation: 3005 GL
Field Name: Wildcat
Pool: WILDCAT
Job Number: 359
API #: 15-193-21044

Operation:
Uploading recovery &
pressures

DATE
June
20
2019

DST #4	Formation: Cherokee Snd.	Test Interval: 4530 - 4600'	Total Depth: 4600'
	Time On: 11:52 06/20	Time Off: 18:40 06/20	
	Time On Bottom: 14:55 06/20	Time Off Bottom: 16:30 06/20	

BUCKET MEASUREMENT:

1st Open: Surface Blow did not build or die
1st Close: No Return
2nd Open: No Blow
2nd Close: No Return

REMARKS:

Tool Sample: 0% Gas .1% Oil 0% Water 99.9% Mud



**Company: Mull Drilling
Company, Inc**
Lease: Schippers #1-33

SEC: 33 TWN: 10S RNG: 31W
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Rig 8
Elevation: 3005 GL
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Pool: WILDCAT
Job Number: 359
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DST #4 **Formation:** Cherokee Snd. **Test Interval: 4530 - 4600'** **Total Depth: 4600'**
Time On: 11:52 06/20 Time Off: 18:40 06/20
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Down Hole Makeup

Heads Up: 9.77999999999999 FT	Packer 1: 4524.75 FT
Drill Pipe: 4390.96 FT <i>ID-3 1/2</i>	Packer 2: 4529.75 FT
Weight Pipe: FT <i>ID-2 7/8</i>	Top Recorder: 4514.17 FT
Collars: 116 FT <i>ID-2 1/4</i>	Bottom Recorder: 4533 FT
Test Tool: 33.57 FT <i>ID-3 1/2-FH</i> <i>Jars</i> <i>Safety Joint</i>	Well Bore Size: 7 7/8
Total Anchor: 70.25	Surface Choke: 1"
Anchor Makeup	Bottom Choke: 5/8"
Packer Sub: 1 FT	
Perforations: (top): 34 FT <i>4 1/2-FH</i>	
Change Over: .5 FT	
Drill Pipe: (in anchor): 31.25 FT <i>ID-3 1/2</i>	
Change Over: .5 FT	
Perforations: (below): 3 FT <i>4 1/2-FH</i>	



**Company: Mull Drilling
Company, Inc**

Lease: Schippers #1-33

SEC: 33 TWN: 10S RNG: 31W
County: THOMAS
State: Kansas
Drilling Contractor: WW Drilling, LLC -
Rig 8
Elevation: 3005 GL
Field Name: Wildcat
Pool: WILDCAT
Job Number: 359
API #: 15-193-21044

Operation:
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pressures

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DST #4 **Formation:** Cherokee Snd. **Test Interval: 4530 - 4600'** **Total Depth: 4600'**
Time On: 11:52 06/20 Time Off: 18:40 06/20
Time On Bottom: 14:55 06/20 Time Off Bottom: 16:30 06/20

Mud Properties

Mud Type: Chem **Weight:** 9.4 **Viscosity:** 64 **Filtrate:** 8.8 **Chlorides:** 3400 ppm



**Company: Mull Drilling
Company, Inc**
Lease: Schippers #1-33

SEC: 33 TWN: 10S RNG: 31W
County: THOMAS
State: Kansas
Drilling Contractor: WW Drilling, LLC -
Rig 8
Elevation: 3005 GL
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Time On: 11:52 06/20 Time Off: 18:40 06/20
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Gas Volume Report

1st Open			
Time	Orifice	PSI	MCF/D

2nd Open			
Time	Orifice	PSI	MCF/D

KEVIN L. KESSLER

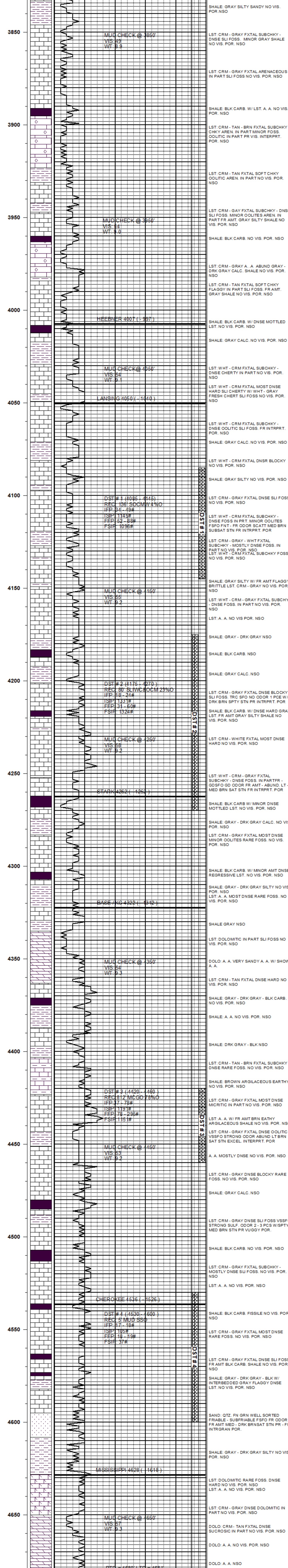
CONSULTING PETROLEUM GEOLOGIST

(316) 522 - 7338

OPERATOR : MULL DRILLING CO. INC.		ELEVATION
LEASE : SCHIPPERS	WELL # : 1 - 33	KB: 3010'
LOCATION : 1243' FSL & 1732' FWL		GL: 3005'
SEC : 33	TWP : 10 S	RGE : 31 W
COUNTY : THOMAS		STATE : KANSAS
CONTRACTOR: W W RIG # 8		CASING RECORD: SURFACE: 8 5/8" @ 287' PRODUCTION: 5 1/2" @ 4680'
COMM: 06 - 12 - 2019	COMP: 06 - 21 - 2019	
RTD: 4680'	LTD: 4681'	
GEOLOGICAL SUPERVISION FROM: 3800'		
SAMPLES SAVED FROM: 3800'		TO: RTD

FORMATION:	TOP	LOG DATUM	TOP	SAMPLE DATUM	COMP.
HEEBNER	4007	- 997	4007	-997	+ 05
LANSING	4050	- 1040	4050	- 1040	+ 06
STARK	4262	- 1252	4262	- 1252	+ 06
BASE/KC	4322	- 1312	4322	- 1312	+ 04
CHEROKEE	4536	- 1526	4536	- 1526	+ 14
MISSISSIPPI	4628	- 1618	4628	- 1618	+ 18

REFERENCE WELL FOR STRUCTURAL COMPARISON:
ABERCROMBIE #1 MILLER 33-10S-31W THOMAS CO KS



COMMENTS :
5 1/2" PRODUCTION CASING WAS RUN TO FURTHER TEST THE PRODUCTIVITY OF THIS WELL