

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 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](mailto: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)</i> <i>(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	PHILLIPS 1-20
Doc ID	1447689

All Electric Logs Run

CDL/CNL/PE
MEL
DIL
SONIC







# Company: Mull Drilling Company, Inc

## Lease: Phillips #1-20

SEC: 20 TWN: 24S RNG: 23W  
 County: HODGEMAN  
 State: Kansas  
 Drilling Contractor: WW Drilling, LLC -  
 Rig 4  
 Elevation: 2386 Est  
 Field Name: Wildcat  
 Pool: Wildcat  
 Job Number: 263

**Operation:**  
 Uploading recovery &  
 pressures

**DATE**  
 November  
**03**  
 2018

**DST #1**      **Formation: Congl  
chert**      **Test Interval: 4645 -  
4690'**      **Total Depth: 4690'**

Time On: 19:25 11/03      Time Off: 01:49 11/04  
 Time On Bottom: 21:50 11/03      Time Off Bottom: 23:55 11/03

Electronic Volume  
 Estimate:  
 18'

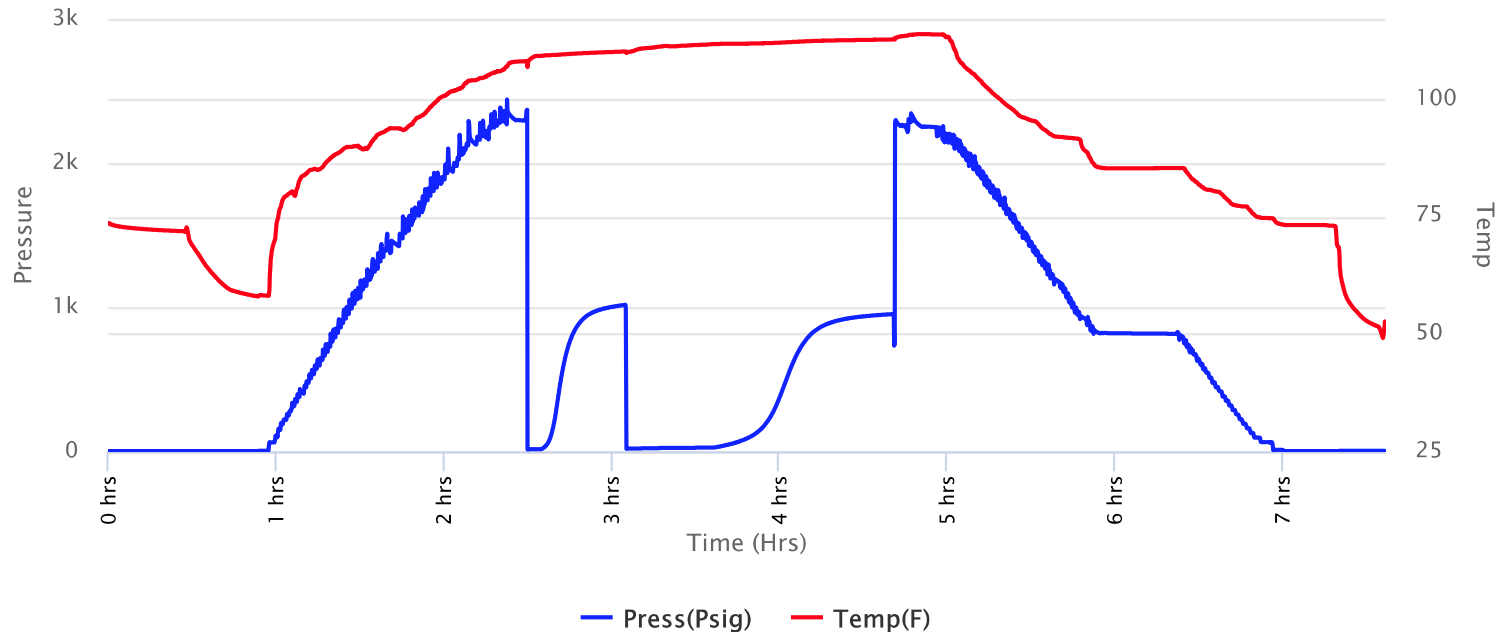
1st Open  
 Minutes: 5  
 Current Reading:  
 .5" at 5 min  
 Max Reading: .5"

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: 60  
 Current Reading:  
 0" at 60 min  
 Max Reading: 0"

Inside Recorder





**Company: Mull Drilling  
Company, Inc  
Lease: Phillips #1-20**

SEC: 20 TWN: 24S RNG: 23W  
County: HODGEMAN  
State: Kansas  
Drilling Contractor: WW Drilling, LLC -  
Rig 4  
Elevation: 2386 Est  
Field Name: Wildcat  
Pool: Wildcat  
Job Number: 263

**Operation:**  
Uploading recovery &  
pressures

**DATE**  
November  
**03**  
2018

**DST #1**      **Formation: Congl  
chert**      **Test Interval: 4645 -  
4690'**      **Total Depth: 4690'**  
Time On: 19:25 11/03      Time Off: 01:49 11/04  
Time On Bottom: 21:50 11/03      Time Off Bottom: 23:55 11/03

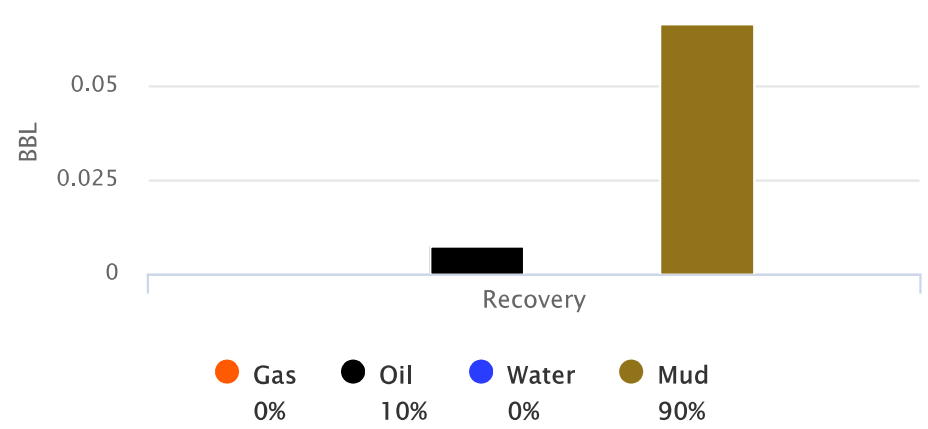
<u>Recovered</u>		<u>Description of Fluid</u>	<u>Gas %</u>	<u>Oil %</u>	<u>Water %</u>	<u>Mud %</u>
<u>Foot</u>	<u>BBLs</u>					
15	0.0738	SLOCM	0	10	0	90

Total Recovered: 15 ft  
Total Barrels Recovered: 0.0738

Reversed Out  
NO

**Recovery at a glance**

Initial Hydrostatic Pressure	2296	PSI
Initial Flow	14 to 16	PSI
<b>Initial Closed in Pressure</b>	<b>1017</b>	<b>PSI</b>
Final Flow Pressure	19 to 26	PSI
<b>Final Closed in Pressure</b>	<b>953</b>	<b>PSI</b>
Final Hydrostatic Pressure	2269	PSI
Temperature	113	°F
Pressure Change Initial Close / Final Close	6.3	%







**Company: Mull Drilling  
Company, Inc  
Lease: Phillips #1-20**

SEC: 20 TWN: 24S RNG: 23W  
County: HODGEMAN  
State: Kansas  
Drilling Contractor: WW Drilling, LLC -  
Rig 4  
Elevation: 2386 Est  
Field Name: Wildcat  
Pool: Wildcat  
Job Number: 263

**Operation:**  
Uploading recovery &  
pressures

**DATE**  
November  
**03**  
2018

DST #1	Formation: Congl chert	Test Interval: 4645 - 4690'	Total Depth: 4690'
	Time On: 19:25 11/03	Time Off: 01:49 11/04	
	Time On Bottom: 21:50 11/03	Time Off Bottom: 23:55 11/03	

**BUCKET MEASUREMENT:**

**REMARKS:**

Tool Sample: 0% Gas 15% Oil 0% Water 85% Mud



**Company: Mull Drilling  
Company, Inc**  
**Lease: Phillips #1-20**

SEC: 20 TWN: 24S RNG: 23W  
County: HODGEMAN  
State: Kansas  
Drilling Contractor: WW Drilling, LLC -  
Rig 4  
Elevation: 2386 Est  
Field Name: Wildcat  
Pool: Wildcat  
Job Number: 263

**Operation:**  
Uploading recovery &  
pressures

**DATE**  
November  
**03**  
2018

<b>DST #1</b>	<b>Formation: Congl chert</b>	<b>Test Interval: 4645 - 4690'</b>	<b>Total Depth: 4690'</b>
	Time On: 19:25 11/03	Time Off: 01:49 11/04	
	Time On Bottom: 21:50 11/03	Time Off Bottom: 23:55 11/03	

**Down Hole Makeup**

<b>Heads Up:</b> 31.27 FT	<b>Packer 1:</b> 4640.07 FT
<b>Drill Pipe:</b> 4534.6 FT <i>ID-3 1/2</i>	<b>Packer 2:</b> 4645.07 FT
<b>Weight Pipe:</b> FT <i>ID-2 7/8</i>	<b>Top Recorder:</b> 4632.07 FT
	<b>Bottom Recorder:</b> 4688 FT
	<b>Well Bore Size:</b> 7 7/8

**Collars:** 116.58 FT

*ID-2 1/4*

**Test Tool:** 26.16 FT

*ID-3 1/2-FH*

**Total Anchor:** 44.93

**Anchor Makeup**

**Packer Sub:** 1 FT

**Perforations: (top):** 7 FT

*4 1/2-FH*

**Change Over:** 1 FT

**Drill Pipe: (in anchor):** 31.93 FT

*ID-3 1/2*

**Change Over:** 1 FT

**Perforations: (below):** 3 FT

*4 1/2-FH*

**Surface Choke:** 1"

**Bottom Choke:** 5/8"



Operation:

**Company: Mull Drilling  
Company, Inc  
Lease: Phillips #1-20**

SEC: 20 TWN: 24S RNG: 23W  
County: HODGEMAN  
State: Kansas  
Drilling Contractor: WW Drilling, LLC -  
Rig 4  
Elevation: 2386 Est  
Field Name: Wildcat  
Pool: Wildcat  
Job Number: 263

Uploading recovery &  
pressures

**DATE**  
November  
**03**  
2018

**DST #1**

**Formation: Congl  
chert**

**Test Interval: 4645 -  
4690'**

**Total Depth: 4690'**

Time On: 19:25 11/03

Time Off: 01:49 11/04

Time On Bottom: 21:50 11/03

Time Off Bottom: 23:55 11/03

### **Mud Properties**

**Mud Type:** Chemical

**Weight:** 9.1

**Viscosity:** 59

**Filtrate:** 10.4

**Chlorides:** 6800 ppm







**Company: Mull Drilling  
Company, Inc  
Lease: Phillips #1-20**

SEC: 20 TWN: 24S RNG: 23W  
County: HODGEMAN  
State: Kansas  
Drilling Contractor: WW Drilling, LLC -  
Rig 4  
Elevation: 2386 Est  
Field Name: Wildcat  
Pool: Wildcat  
Job Number: 263

**Operation:**  
Uploading recovery &  
pressures

**DATE**  
November  
**04**  
2018

**DST #3      Formation: Miss      Test Interval: 4645 - 4710'      Total Depth: 4710'**  
Time On: 14:10 11/04      Time Off: 19:20 11/04  
Time On Bottom: 16:05 11/04      Time Off Bottom: 16:15 11/04

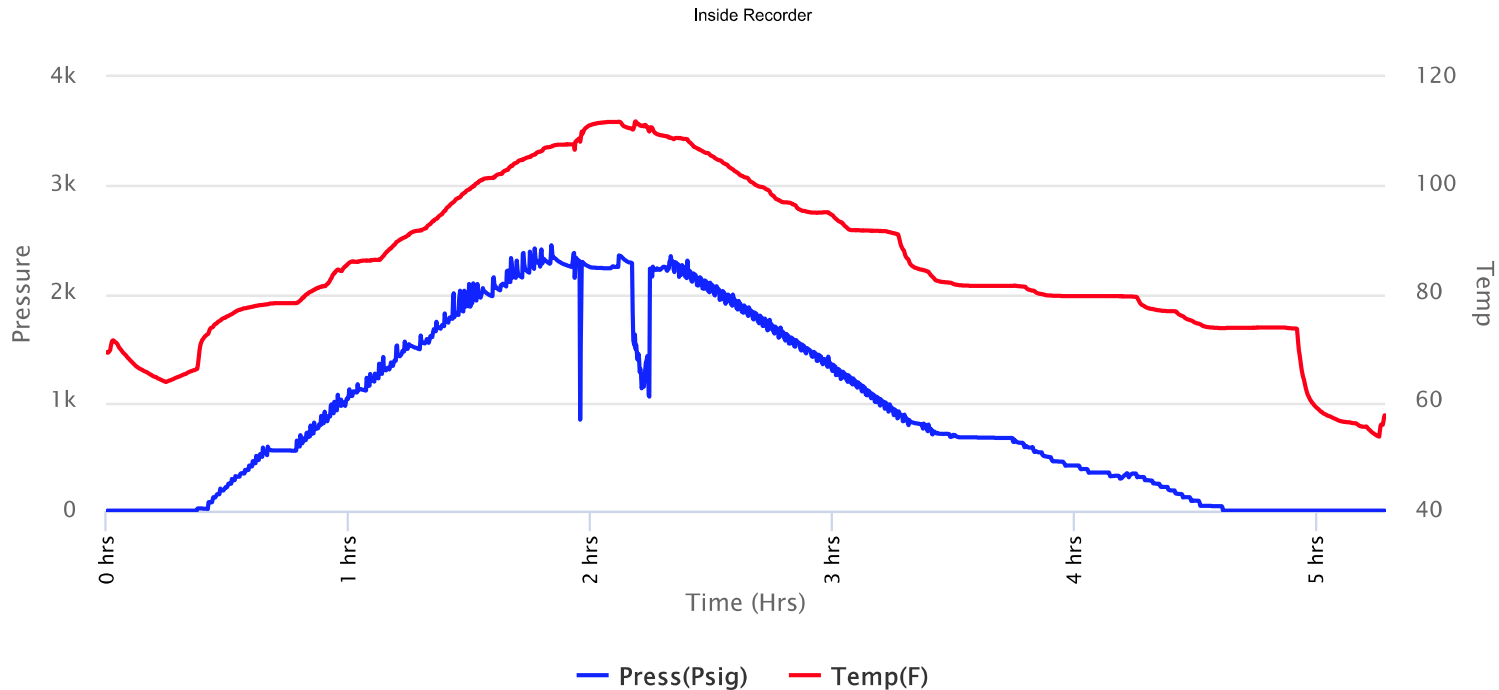
Electronic Volume  
Estimate:  
0'

1st Open  
N/A

1st Close  
N/A

2nd Open  
N/A

2nd Close  
N/A





**Company: Mull Drilling  
Company, Inc  
Lease: Phillips #1-20**

SEC: 20 TWN: 24S RNG: 23W  
County: HODGEMAN  
State: Kansas  
Drilling Contractor: WW Drilling, LLC -  
Rig 4  
Elevation: 2386 Est  
Field Name: Wildcat  
Pool: Wildcat  
Job Number: 263

**Operation:**  
Uploading recovery &  
pressures

**DATE**  
November  
**04**  
2018

**DST #3      Formation: Miss      Test Interval: 4645 -      Total Depth: 4710'**  
**4710'**  
Time On: 14:10 11/04      Time Off: 19:20 11/04  
Time On Bottom: 16:05 11/04      Time Off Bottom: 16:15 11/04

<u>Recovered</u>		<u>Description of Fluid</u>	<u>Gas %</u>	<u>Oil %</u>	<u>Water %</u>	<u>Mud %</u>
<u>Foot</u>	<u>BBLs</u>					
1000	13.1446402	M	0	0	0	100

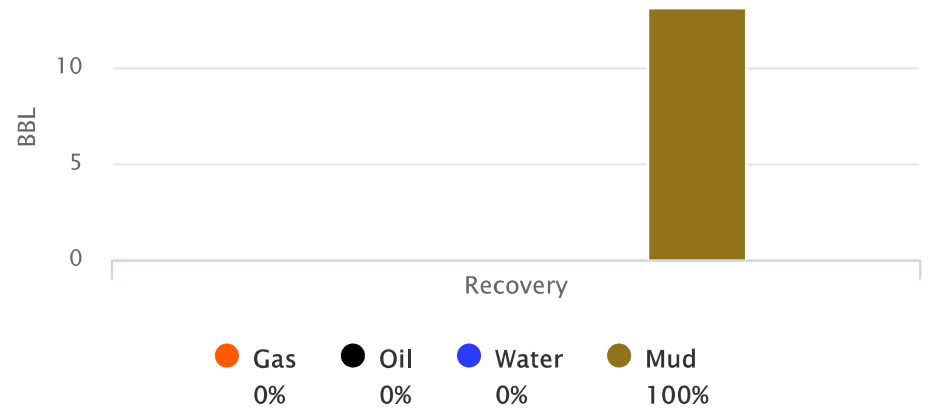
Total Recovered: 1000 ft  
Total Barrels Recovered: 13.1446402

Reversed Out  
NO

**Recovery at a glance**



Initial Hydrostatic Pressure	2260	PSI
Initial Flow	0	PSI
<b>Initial Closed in Pressure</b>	<b>0</b>	<b>PSI</b>
Final Flow Pressure	0	PSI
<b>Final Closed in Pressure</b>	<b>0</b>	<b>PSI</b>
Final Hydrostatic Pressure	2231	PSI
Temperature	112	°F
Pressure Change Initial Close / Final Close	0.0	%





**Company: Mull Drilling  
Company, Inc  
Lease: Phillips #1-20**

SEC: 20 TWN: 24S RNG: 23W  
County: HODGEMAN  
State: Kansas  
Drilling Contractor: WW Drilling, LLC -  
Rig 4  
Elevation: 2386 Est  
Field Name: Wildcat  
Pool: Wildcat  
Job Number: 263

**Operation:**  
Uploading recovery &  
pressures

**DATE**  
November  
**04**  
2018

<b>DST #3</b>	<b>Formation: Miss</b>	<b>Test Interval: 4645 - 4710'</b>	<b>Total Depth: 4710'</b>
	Time On: 14:10 11/04	Time Off: 19:20 11/04	
	Time On Bottom: 16:05 11/04	Time Off Bottom: 16:15 11/04	

**BUCKET MEASUREMENT:**

1st Open: Miss Run

**REMARKS:**

Miss Run

Tool Sample: 0% Gas 0% Oil 0% Water 100% Mud



**Operation:**

Uploading recovery &  
pressures

**DATE**

November

**04**

2018

**Company: Mull Drilling  
Company, Inc**  
**Lease: Phillips #1-20**

SEC: 20 TWN: 24S RNG: 23W  
County: HODGEMAN  
State: Kansas  
Drilling Contractor: WW Drilling, LLC -  
Rig 4  
Elevation: 2386 Est  
Field Name: Wildcat  
Pool: Wildcat  
Job Number: 263

<b>DST #3</b>	<b>Formation: Miss</b>	<b>Test Interval: 4645 - 4710'</b>	<b>Total Depth: 4710'</b>
	Time On: 14:10 11/04	Time Off: 19:20 11/04	
	Time On Bottom: 16:05 11/04	Time Off Bottom: 16:15 11/04	

**Down Hole Makeup**

<b>Heads Up:</b> 32 FT	<b>Packer 1:</b> 4639.53 FT
<b>Drill Pipe:</b> 4534.79 FT <i>ID-3 1/2</i>	<b>Packer 2:</b> 4644.53 FT
<b>Weight Pipe:</b> FT <i>ID-2 7/8</i>	<b>Top Recorder:</b> 4631.53 FT
	<b>Bottom Recorder:</b> 4693 FT
	<b>Well Bore Size:</b> 7 7/8

**Collars:** 116.58 FT

*ID-2 1/4*

**Test Tool:** 26.16 FT

*ID-3 1/2-FH*

**Total Anchor:** 65.47

**Anchor Makeup**

**Packer Sub:** 1 FT

**Perforations: (top):** 13 FT

*4 1/2-FH*

**Change Over:** 1 FT

**Drill Pipe: (in anchor):** 31.47 FT

*ID-3 1/2*

**Change Over:** 1 FT

**Perforations: (below):** 18 FT

*4 1/2-FH*

**Surface Choke:** 1"

**Bottom Choke:** 5/8"



Operation:

**Company: Mull Drilling  
Company, Inc  
Lease: Phillips #1-20**

SEC: 20 TWN: 24S RNG: 23W  
County: HODGEMAN  
State: Kansas  
Drilling Contractor: WW Drilling, LLC -  
Rig 4  
Elevation: 2386 Est  
Field Name: Wildcat  
Pool: Wildcat  
Job Number: 263

Uploading recovery &  
pressures

**DATE**  
November  
**04**  
2018

**DST #3**

**Formation: Miss**

**Test Interval: 4645 -  
4710'**

**Total Depth: 4710'**

Time On: 14:10 11/04

Time Off: 19:20 11/04

Time On Bottom: 16:05 11/04

Time Off Bottom: 16:15 11/04

### **Mud Properties**

**Mud Type:** Chemical

**Weight:** 9.2

**Viscosity:** 60

**Filtrate:** 10.4

**Chlorides:** 6800 ppm



**Company: Mull Drilling  
Company, Inc  
Lease: Phillips #1-20**

SEC: 20 TWN: 24S RNG: 23W  
County: HODGEMAN  
State: Kansas  
Drilling Contractor: WW Drilling, LLC -  
Rig 4  
Elevation: 2386 Est  
Field Name: Wildcat  
Pool: Wildcat  
Job Number: 263

**Operation:**  
Uploading recovery &  
pressures

**DATE**  
November  
**04**  
2018

**DST #3      Formation: Miss      Test Interval: 4645 -      Total Depth: 4710'**  
**4710'**  
Time On: 14:10 11/04      Time Off: 19:20 11/04  
Time On Bottom: 16:05 11/04      Time Off Bottom: 16:15 11/04

**Gas Volume Report**

1st Open

Time	Orifice	PSI	MCF/D
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2nd Open

Time	Orifice	PSI	MCF/D
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**Company: Mull Drilling  
Company, Inc  
Lease: Phillips #1-20**

SEC: 20 TWN: 24S RNG: 23W  
County: HODGEMAN  
State: Kansas  
Drilling Contractor: WW Drilling, LLC -  
Rig 4  
Elevation: 2386 GL  
Field Name: Wildcat  
Pool: WILDCAT  
Job Number: 263

**Operation:**  
Uploading recovery &  
pressures

**DATE**  
November  
**05**  
2018

**DST #4**      **Formation: Miss Straddle**      **Test Interval: 4662 - 4707'**      **Total Depth: 4823'**  
Time On: 15:35 11/05      Time Off: 21:29 11/05  
Time On Bottom: 17:40 11/05      Time Off Bottom: 18:00 11/05

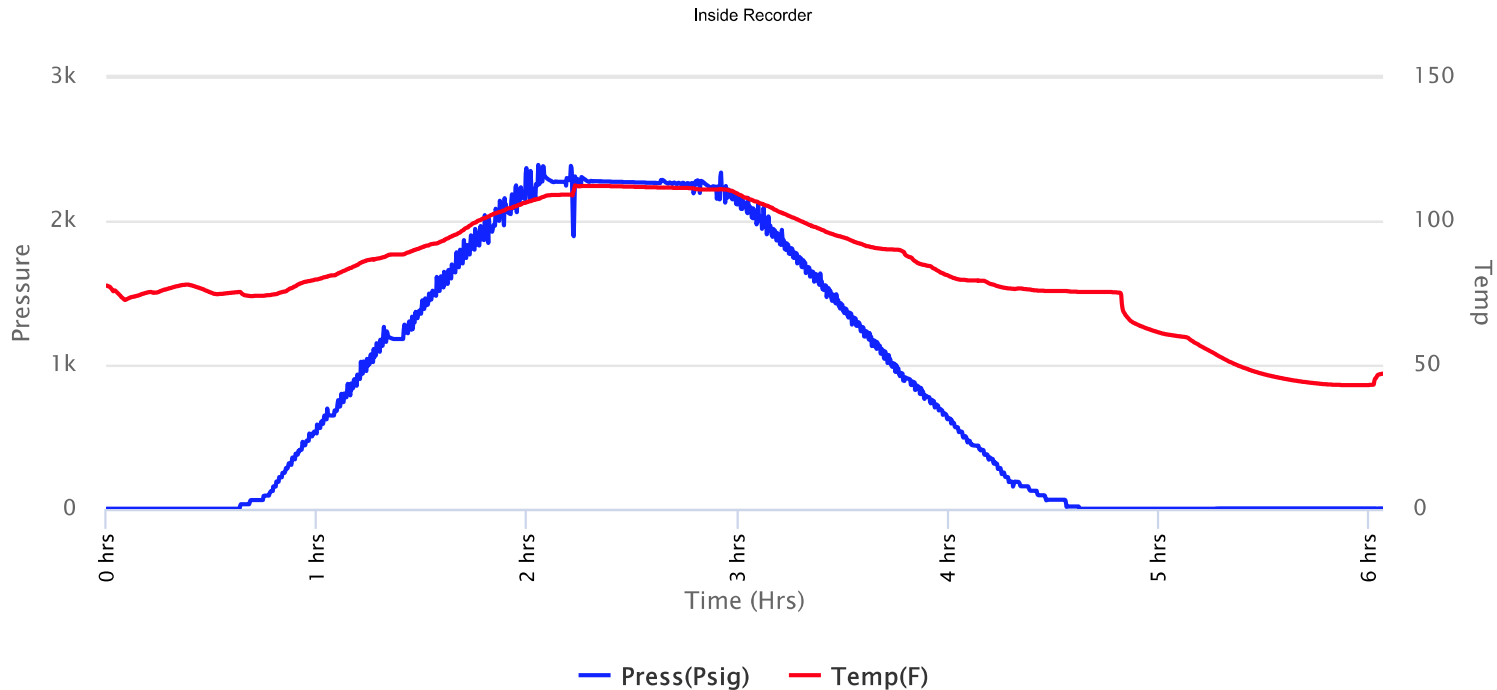
Electronic Volume Estimate:  
0'

1st Open  
N/A

1st Close  
N/A

2nd Open  
N/A

2nd Close  
N/A







**Company: Mull Drilling  
Company, Inc**  
**Lease: Phillips #1-20**

SEC: 20 TWN: 24S RNG: 23W  
County: HODGEMAN  
State: Kansas  
Drilling Contractor: WW Drilling, LLC -  
Rig 4  
Elevation: 2386 GL  
Field Name: Wildcat  
Pool: WILDCAT  
Job Number: 263

**Operation:**  
Uploading recovery &  
pressures

**DATE**  
November  
**05**  
2018

**DST #4**      **Formation: Miss  
Straddle**      **Test Interval: 4662 -  
4707'**      **Total Depth: 4823'**  
Time On: 15:35 11/05      Time Off: 21:29 11/05  
Time On Bottom: 17:40 11/05      Time Off Bottom: 18:00 11/05

Recovered

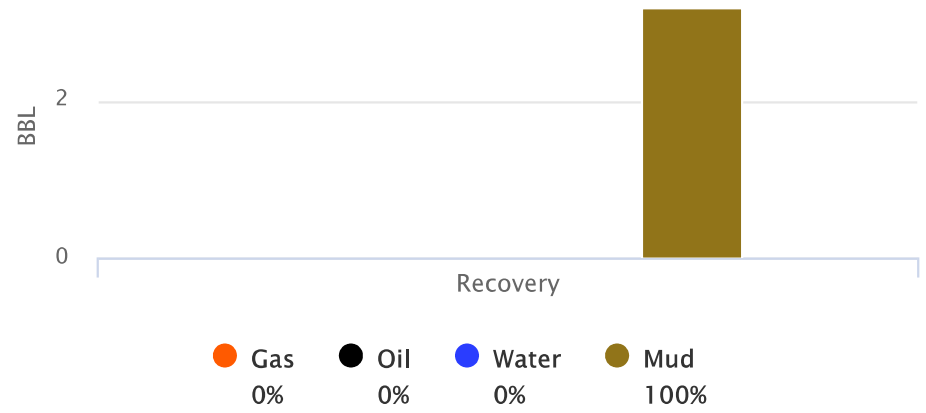
<u>Foot</u>	<u>BBS</u>	<u>Description of Fluid</u>	<u>Gas %</u>	<u>Oil %</u>	<u>Water %</u>	<u>Mud %</u>
300	3.1836402	M	0	0	0	100

Total Recovered: 300 ft  
Total Barrels Recovered: 3.1836402

Reversed Out  
NO

**Recovery at a glance**

Initial Hydrostatic Pressure	2272	PSI
Initial Flow	0	PSI
<b>Initial Closed in Pressure</b>	<b>0</b>	<b>PSI</b>
Final Flow Pressure	0	PSI
<b>Final Closed in Pressure</b>	<b>0</b>	<b>PSI</b>
Final Hydrostatic Pressure	2236	PSI
Temperature	112	°F
Pressure Change Initial Close / Final Close	0.0	%





**Company: Mull Drilling  
Company, Inc  
Lease: Phillips #1-20**

SEC: 20 TWN: 24S RNG: 23W  
County: HODGEMAN  
State: Kansas  
Drilling Contractor: WW Drilling, LLC -  
Rig 4  
Elevation: 2386 GL  
Field Name: Wildcat  
Pool: WILDCAT  
Job Number: 263

**Operation:**  
Uploading recovery &  
pressures

**DATE**  
November  
**05**  
2018

**DST #4**      **Formation: Miss Straddle**      **Test Interval: 4662 - 4707'**      **Total Depth: 4823'**  
Time On: 15:35 11/05      Time Off: 21:29 11/05  
Time On Bottom: 17:40 11/05      Time Off Bottom: 18:00 11/05

**BUCKET MEASUREMENT:**

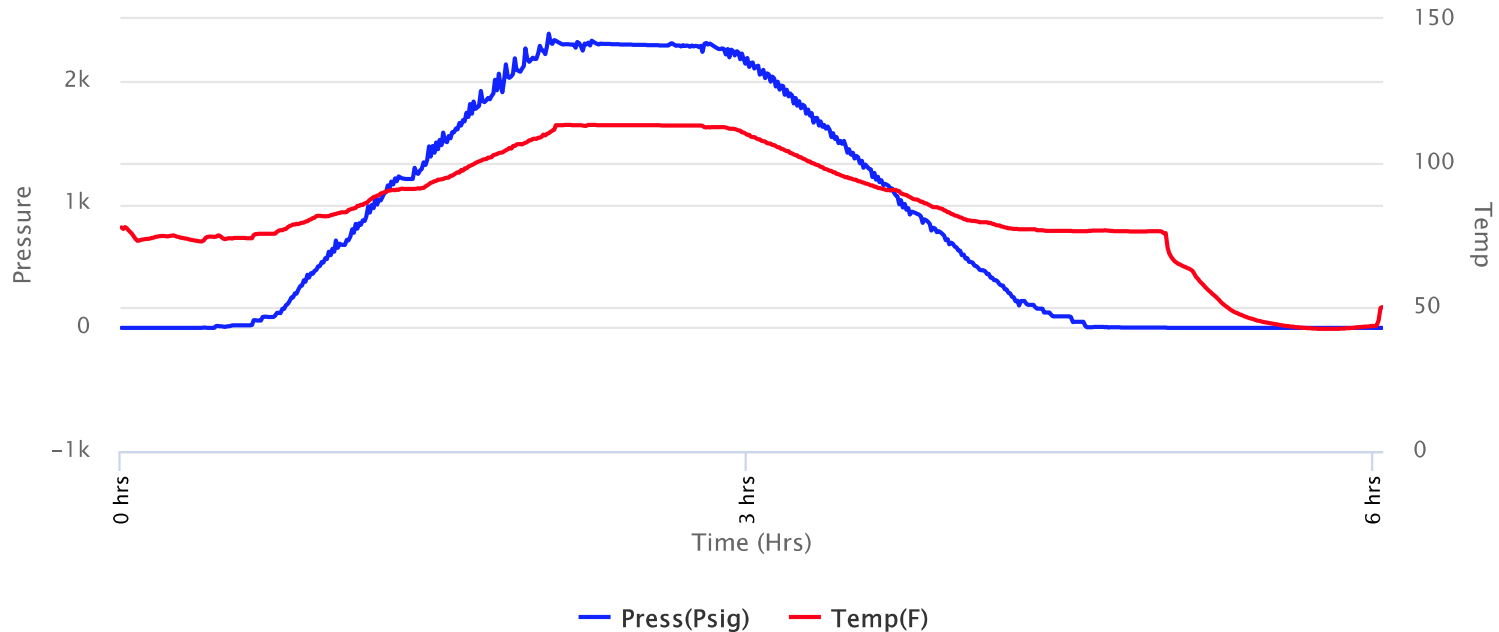
1st Open: Miss run

**REMARKS:**

Miss Run

Tool Sample: 0% Gas 0% Oil 0% Water 100% Mud

**Below Straddle Recorder**





**Company: Mull Drilling  
Company, Inc**  
**Lease: Phillips #1-20**

SEC: 20 TWN: 24S RNG: 23W  
County: HODGEMAN  
State: Kansas  
Drilling Contractor: WW Drilling, LLC -  
Rig 4  
Elevation: 2386 GL  
Field Name: Wildcat  
Pool: WILDCAT  
Job Number: 263

**Operation:**  
Uploading recovery &  
pressures

**DATE**  
November  
**05**  
2018

<b>DST #4</b>	<b>Formation: Miss Straddle</b>	<b>Test Interval: 4662 - 4707'</b>	<b>Total Depth: 4823'</b>
	Time On: 15:35 11/05	Time Off: 21:29 11/05	
	Time On Bottom: 17:40 11/05	Time Off Bottom: 18:00 11/05	

**Down Hole Makeup**

<b>Heads Up:</b> 11.31 FT	<b>Packer 1:</b> 4657 FT
<b>Drill Pipe:</b> 4531.07 FT <i>ID-3 1/2</i>	<b>Packer 2:</b> 4662 FT
<b>Weight Pipe:</b> FT <i>ID-2 7/8</i>	<b>Packer 3:</b> 4707 FT
	<b>Top Recorder:</b> 4648.5 FT
	<b>Bottom Recorder:</b> 4708 FT

**Collars:** 116.58 FT

*ID-2 1/4*

**Test Tool:** 26.66 FT

*ID-3 1/2-FH*

**Total Anchor:** 45

**Anchor Makeup**

**Packer Sub:** 1 FT

**Perforations: (top):** 44 FT

*4 1/2-FH*

**Change Over:** FT

**Drill Pipe: (in anchor):** FT

*ID-3 1/2*

**Change Over:** FT

**Perforations: (below):** FT

*4 1/2-FH*

**STRADDLE**

**Straddle Packer(s):** 1 FT

**Change Over:** 1 FT

**Drill Pipe:** 96.10 FT

*ID-3 1/2"*

**Change Over:** 1 FT

**Perforations (in tail pipe):** 13 FT

*4 1/2-FH*

**Below Straddle Recorder:** 4811 FT

**Well Bore Size:** 7 7/8

**Surface Choke:** 1"

**Bottom Choke:** 5/8"



Operation:

**Company: Mull Drilling  
Company, Inc  
Lease: Phillips #1-20**

SEC: 20 TWN: 24S RNG: 23W

County: HODGEMAN

State: Kansas

Drilling Contractor: WW Drilling, LLC -  
Rig 4

Elevation: 2386 GL

Field Name: Wildcat

Pool: WILDCAT

Job Number: 263

Uploading recovery &  
pressures

**DATE**  
November  
**05**  
2018

**DST #4**

**Formation: Miss  
Straddle**

**Test Interval: 4662 -  
4707'**

**Total Depth: 4823'**

Time On: 15:35 11/05

Time Off: 21:29 11/05

Time On Bottom: 17:40 11/05

Time Off Bottom: 18:00 11/05

### **Mud Properties**

**Mud Type:** Chemical

**Weight:** 9.2

**Viscosity:** 61

**Filtrate:** 10.4

**Chlorides:** 6800 ppm



**Company: Mull Drilling  
Company, Inc  
Lease: Phillips #1-20**

SEC: 20 TWN: 24S RNG: 23W  
County: HODGEMAN  
State: Kansas  
Drilling Contractor: WW Drilling, LLC -  
Rig 4  
Elevation: 2386 GL  
Field Name: Wildcat  
Pool: WILDCAT  
Job Number: 263

**Operation:**  
Uploading recovery &  
pressures

**DATE**  
November  
**05**  
2018

**DST #4      Formation: Miss Straddle      Test Interval: 4662 - 4707'      Total Depth: 4823'**  
Time On: 15:35 11/05      Time Off: 21:29 11/05  
Time On Bottom: 17:40 11/05      Time Off Bottom: 18:00 11/05

**Gas Volume Report**

1st Open

Time	Orifice	PSI	MCF/D
------	---------	-----	-------

2nd Open

Time	Orifice	PSI	MCF/D
------	---------	-----	-------







**Company: Mull Drilling  
Company, Inc  
Lease: Phillips #1-20**

SEC: 20 TWN: 24S RNG: 23W  
County: HODGEMAN  
State: Kansas  
Drilling Contractor: WW Drilling, LLC -  
Rig 4  
Elevation: 2386 Est  
Field Name: Wildcat  
Pool: Wildcat  
Job Number: 263

**Operation:**  
Uploading recovery &  
pressures

**DATE**  
November  
**04**  
2018

**DST #2**      **Formation: Miss**      **Test Interval: 4691 - 4710'**      **Total Depth: 4710'**  
Time On: 09:44 11/04      Time Off: 14:03 11/04  
Time On Bottom: 11:30 11/04      Time Off Bottom: 11:40 11/04

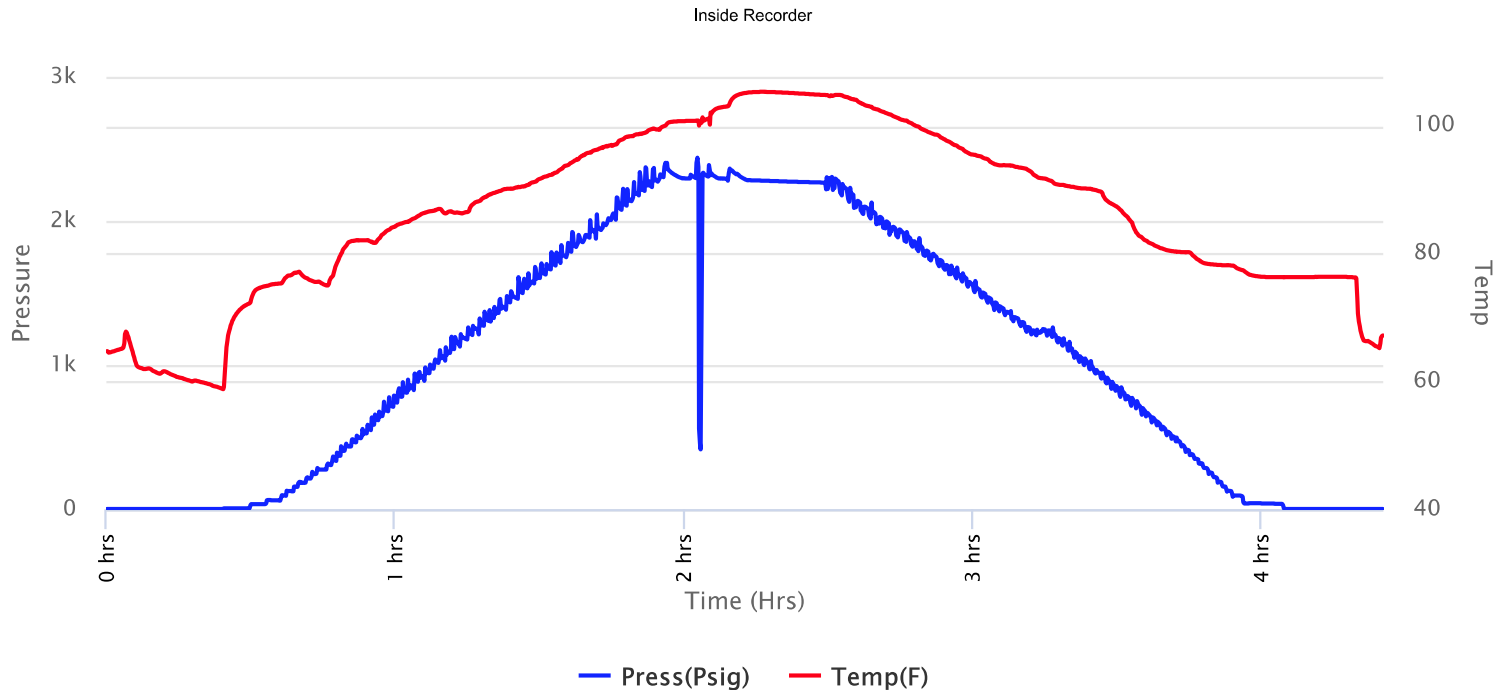
Electronic Volume  
Estimate:  
0'

1st Open  
N/A

1st Close  
N/A

2nd Open  
N/A

2nd Close  
N/A





**Company: Mull Drilling  
Company, Inc  
Lease: Phillips #1-20**

SEC: 20 TWN: 24S RNG: 23W  
County: HODGEMAN  
State: Kansas  
Drilling Contractor: WW Drilling, LLC -  
Rig 4  
Elevation: 2386 Est  
Field Name: Wildcat  
Pool: Wildcat  
Job Number: 263

**Operation:**  
Uploading recovery &  
pressures

**DATE**  
November  
**04**  
2018

**DST #2**      **Formation: Miss**      **Test Interval: 4691 - 4710'**      **Total Depth: 4710'**  
Time On: 09:44 11/04      Time Off: 14:03 11/04  
Time On Bottom: 11:30 11/04      Time Off Bottom: 11:40 11/04

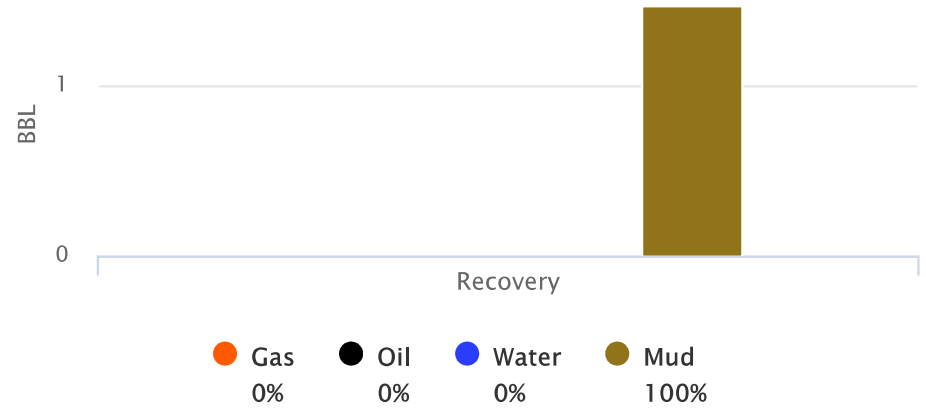
<u>Recovered</u>		<u>Description of Fluid</u>	<u>Gas %</u>	<u>Oil %</u>	<u>Water %</u>	<u>Mud %</u>
<u>Foot</u>	<u>BBS</u>					
180	1.4760402	M	0	0	0	100

Total Recovered: 180 ft  
Total Barrels Recovered: 1.4760402

Reversed Out  
NO

**Recovery at a glance**

Initial Hydrostatic Pressure	2297	PSI
Initial Flow	0	PSI
<b>Initial Closed in Pressure</b>	<b>0</b>	<b>PSI</b>
Final Flow Pressure	0	PSI
<b>Final Closed in Pressure</b>	<b>0</b>	<b>PSI</b>
Final Hydrostatic Pressure	2297	PSI
Temperature	102	°F
Pressure Change Initial Close / Final Close	0.0	%





**Company: Mull Drilling  
Company, Inc  
Lease: Phillips #1-20**

SEC: 20 TWN: 24S RNG: 23W  
County: HODGEMAN  
State: Kansas  
Drilling Contractor: WW Drilling, LLC -  
Rig 4  
Elevation: 2386 Est  
Field Name: Wildcat  
Pool: Wildcat  
Job Number: 263

**Operation:**  
Uploading recovery &  
pressures

**DATE**  
November  
**04**  
2018

<b>DST #2</b>	<b>Formation: Miss</b>	<b>Test Interval: 4691 - 4710'</b>	<b>Total Depth: 4710'</b>
	Time On: 09:44 11/04	Time Off: 14:03 11/04	
	Time On Bottom: 11:30 11/04	Time Off Bottom: 11:40 11/04	

**BUCKET MEASUREMENT:**

1st Open: Miss run

**REMARKS:**

Miss run tried settings packers twice both unsuccessful

Tool Sample: 0% Gas 0% Oil 0% Water 100% Mud



**Company: Mull Drilling  
Company, Inc  
Lease: Phillips #1-20**

SEC: 20 TWN: 24S RNG: 23W  
County: HODGEMAN  
State: Kansas  
Drilling Contractor: WW Drilling, LLC - Rig 4  
Elevation: 2386 Est  
Field Name: Wildcat  
Pool: Wildcat  
Job Number: 263

**Operation:**  
Uploading recovery &  
pressures

**DATE**  
November  
**04**  
2018

<b>DST #2</b>	<b>Formation: Miss</b>	<b>Test Interval: 4691 - 4710'</b>	<b>Total Depth: 4710'</b>
	Time On: 09:44 11/04	Time Off: 14:03 11/04	
	Time On Bottom: 11:30 11/04	Time Off Bottom: 11:40 11/04	

**Down Hole Makeup**

<b>Heads Up:</b> 17.83 FT	<b>Packer 1:</b> 4686 FT
<b>Drill Pipe:</b> 4567.09 FT <i>ID-3 1/2</i>	<b>Packer 2:</b> 4691 FT
<b>Weight Pipe:</b> FT <i>ID-2 7/8</i>	<b>Top Recorder:</b> 4678 FT
	<b>Bottom Recorder:</b> 4693 FT
	<b>Well Bore Size:</b> 7 7/8

**Collars:** 116.58 FT

*ID-2 1/4*

**Test Tool:** 26.16 FT

*ID-3 1/2-FH*

**Total Anchor:** 19

**Anchor Makeup**

**Packer Sub:** 1 FT

**Perforations: (top):** FT

*4 1/2-FH*

**Change Over:** FT

**Drill Pipe: (in anchor):** FT

*ID-3 1/2*

**Change Over:** FT

**Perforations: (below):** 18 FT

*4 1/2-FH*

**Surface Choke:** 1"

**Bottom Choke:** 5/8"



Operation:

**Company: Mull Drilling  
Company, Inc  
Lease: Phillips #1-20**

SEC: 20 TWN: 24S RNG: 23W  
County: HODGEMAN  
State: Kansas  
Drilling Contractor: WW Drilling, LLC -  
Rig 4  
Elevation: 2386 Est  
Field Name: Wildcat  
Pool: Wildcat  
Job Number: 263

Uploading recovery &  
pressures

**DATE**  
November  
**04**  
2018

**DST #2**

**Formation: Miss**

**Test Interval: 4691 -  
4710'**

**Total Depth: 4710'**

Time On: 09:44 11/04

Time Off: 14:03 11/04

Time On Bottom: 11:30 11/04

Time Off Bottom: 11:40 11/04

### **Mud Properties**

**Mud Type:** Chemical

**Weight:** 9.3

**Viscosity:** 52

**Filtrate:** 10.4

**Chlorides:** 8600 ppm



**Company: Mull Drilling  
Company, Inc**  
**Lease: Phillips #1-20**

SEC: 20 TWN: 24S RNG: 23W  
County: HODGEMAN  
State: Kansas  
Drilling Contractor: WW Drilling, LLC -  
Rig 4  
Elevation: 2386 Est  
Field Name: Wildcat  
Pool: Wildcat  
Job Number: 263

**Operation:**  
Uploading recovery &  
pressures

**DATE**  
November  
**04**  
2018

**DST #2**      **Formation: Miss**      **Test Interval: 4691 - 4710'**      **Total Depth: 4710'**  
Time On: 09:44 11/04      Time Off: 14:03 11/04  
Time On Bottom: 11:30 11/04      Time Off Bottom: 11:40 11/04

**Gas Volume Report**

1st Open

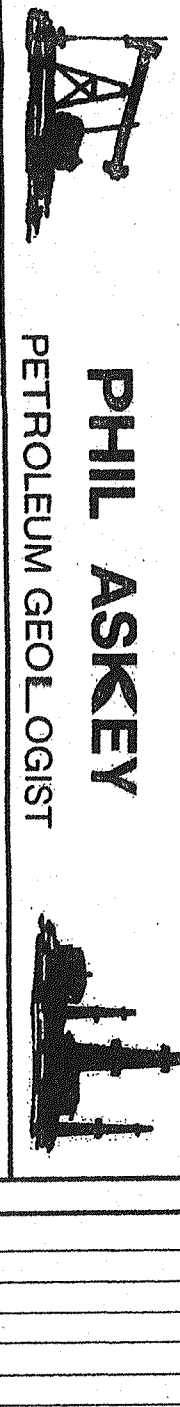
Time	Orifice	PSI	MCF/D
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2nd Open

Time	Orifice	PSI	MCF/D
------	---------	-----	-------







# PHIL ASKEY PETROLEUM GEOLOGIST GEOLOGIST'S REPORT

DRILLING TIME AND SAMPLE LOG

COMPANY	Mull Drilling Co., Inc.	ELEVATIONS	KB 2393'
LEASE	Phillips #1-20	CI	2388'
FIELD	Willard	Measurements Are	From KB
LOCATION	2250' E 5th & 7th F.W.L.	API #	15-0-83-21961
SEC	20	TWP	24 S
RNG	23 W	STATE	Kansas
COUNTY	Hodgeman	TYPE MUD	drilled mud
CONTRACTOR	W.L. Biggs #4	SPUD	10-29-18
RID	4823'	LTD	4822'
MUD UP	3960'	TYPE MUD	drilled mud
DEPTH	4823'	ELECTRICAL SURVEYS	None
LOG	4822'	LOG	4823'

FORMATION TOPS	LOG	SAMPLES	ES	HT	REFERENCE WELL
Alvendale	1530	+863	1533	4	None
Hebeville	3976	-1553	3976	4	None
Claswing	4015	-1672	4016	4	None
Stateville	4331	-1938	4331	4	None
Parmer	4578	-2185	4579	3	None
Cherokee	4579	-2186	4579	4	None
Wanda	4657	-2264	4657	1	None
Concho Chief	4685	-2292	4685	10	None
Angier Hill	4698	-2305	4698	4	None
W.L. Williams	4710	-2317	4710	116	None
MSD	4822	-2424	4823	116	None

REMARKS: The Mull Drilling Co. Phillips #1-20, had four target pay zones, i.e., coal beds, Mississippi and Miss Warden. The logs and logs' check were not made with non-commercial results. The miss Warden did not contain any hydrocarbons and was determined and evaluated as 'lost' on the DLG. The top section of the Mississippi did not have a sample shown. Three DSTs were attempted to cover the top of the Mississippi but all three had miscum-packer failures. After further discussion, it has decided to plug and abandon this well.

Phil Askey, P.G.

LEGEND	
	Anhydrite
	Salt
	Sandstone
	Shale
	Carb sh
	Limestone
	Ool.Lime
	Chert
	Dolomite

SCALE " = 100'

DEPTH	DRILLING TIME IN MINUTES PER FOOT	LITHOLOGY	SAMPLE DESCRIPTIONS	REMARKS
1520	15:22	LS	off sh. clay con. fm.	
1550	15:58	LS	tan con. fm. dat. f. sh.	
3900	39:46	LS	off sh. clay con. fm.	Samples: 10' wet/dry 3900-3940'; 20' wet/dry 3940-4400'; 10' wet/dry 4400'-RTD (4803') good sample (except for fluid washover area as noted in report)
50	39:46	SH	blk. calc.	Rig data: POC bit WOB 10K RPM 100 SPM 56-59 PP 825-850 bottom bit WOB 35K RPM 85 SPM 59 PP 975
4000	40:16	LS	off sh. clay con. fm.	Bit data 7 7/8" Smith M616 'POC' bit 218' 4503' 72 hrs (59.5'/hr) 7 7/8" Smith F-27 4503'-4823' 17 hrs (18.8'/hr)
50	40:16	LS	tan con. fm. dat. f. sh.	Dev Surveys 3/4" @ 218' 1" @ 4503' 1" @ RTD 4823'
4100	40:16	LS	off sh. clay con. fm.	No pipe Straps
50	40:16	LS	tan con. fm. dat. f. sh.	
4200	40:16	LS	off sh. clay con. fm.	
50	40:16	LS	tan con. fm. dat. f. sh.	
4300	40:16	LS	off sh. clay con. fm.	Mud-Co data @ 4311' WT 9.1 VIS 55 WL 9.2 pH 9.0 CL 6900 ppm LCM 2# Solids 5.7%
50	40:16	LS	tan con. fm. dat. f. sh.	
4400	40:16	LS	off sh. clay con. fm.	
50	40:16	LS	tan con. fm. dat. f. sh.	
4500	40:16	LS	off sh. clay con. fm.	Mud-Co data @ 4570' WT 9.1 VIS 55 WL 10.4 pH 9.5 CL 6800 ppm LCM 2# Solids 5.3%
50	40:16	LS	tan con. fm. dat. f. sh.	
4600	40:16	LS	off sh. clay con. fm.	Note: sample quality poor with mostly sh. m. clay. approx. from 4620-30 sample to 4690 est 90% sample; E-log show washover sections within this area.
50	40:16	LS	tan con. fm. dat. f. sh.	DST #1 4645'-4690' Times 5" 30"-30"-60" 1ST gen: 1/4"-1/2" blow 2nd gen: No blow
4700	40:16	LS	off sh. clay con. fm.	Rec: 15' slucm (10% WL 90% mud) 1FP 14-16# 15IP 107# 1FP 14-26# 15IP 953# 1FP 22-96-2269# BHT 113°F
50	40:16	LS	tan con. fm. dat. f. sh.	DST #2 4691'-4710' miscun-packer failure
4800	40:16	LS	off sh. clay con. fm.	DST #3 4645'-4710' miscun-packer failure
50	40:16	LS	tan con. fm. dat. f. sh.	Mud-Co data @ 4710' WT 9.35 VIS 52 WL 10.4 pH 9.5 CL 8,600 ppm LCM 2# Solids 6.6%
4800	40:16	LS	off sh. clay con. fm.	DST #4 'Straddle test' 4662'-4707' Times: miscun-packer failure
50	40:16	LS	tan con. fm. dat. f. sh.	
4800	40:16	LS	off sh. clay con. fm.	Mud-Co data @ 4823' WT 9.3 VIS 47 WL 9.6 pH 11.0 CL 7200 ppm LCM 2# Solids 6.7%

COMPANY	Mull Drilling Co., Inc.	ELEVATION:	2393' KB
LEASE	Phillips #1-20		
LOCATION	2250' E 5th & 7th F.W.L. SEC 20 TWP 24 S RNG 23 W		
COUNTY	Hodgeman	STATE	Kansas



Conservation Division  
266 N. Main St., Ste. 220  
Wichita, KS 67202-1513

Phone: 316-337-6200  
Fax: 346-337-6211  
<http://kcc.ks.gov/>

Dwight D. Keen, Chair  
Shari Feist Albrecht, Commissioner  
Jay Scott Emler, Commissioner

Laura Kelly, Governor

February 27, 2019

Mark Shreve  
Mull Drilling Company, Inc.  
1700 N WATERFRONT PKWY BLDG 1200  
WICHITA, KS 67206-6637

Re: ACO-1  
API 15-083-21961-00-00  
PHILLIPS 1-20  
SW/4 Sec.20-24S-23W  
Hodgeman County, Kansas

Dear Mark Shreve:

K.A.R. 82-3-107 provides for all completion information to be filed within 120 days of the spud date. Subsection(e)(2) of that regulation states "All rights to confidentiality shall be lost if the filings are not timely."

The above referenced well was spudded on 10/29/2018 and the ACO-1 was received on February 27, 2019 (not within the 120 days timely requirement).

Therefore, your request for confidential treatment of data contained within the ACO-1 filing cannot be granted at this time.

If you should have any questions, please do not hesitate to contact me at (316)337-6200.

Sincerely,

Production Department