

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)</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	HILLS 1-13
Doc ID	1518442

All Electric Logs Run

CDL/CNL/PE
SONIC
MEL
DIL

Form	ACO1 - Well Completion
Operator	Mull Drilling Company, Inc.
Well Name	HILLS 1-13
Doc ID	1518442

Tops

Name	Top	Datum
Anhydrite	2654	+ 324
B/Anhydrite	2686	+ 292
Heebner	3865	- 887
Lansing	3911	- 933
Stark	4096	- 1117
Marmaton	4163	- 1185
Pawnee	4270	- 1292
Cherokee	4347	- 1369



785-953-0222

TICKET NUMBER 1010 K
 LOCATION Auguston
 FOREMAN Walt Winkler

**FIELD TICKET & TREATMENT REPORT
 CEMENT**

DATE	CUSTOMER #	WELL NAME & NUMBER	SECTION	TOWNSHIP	RANGE	COUNTY
		Hills #1-13	13	5 ³	33	Reynolds
CUSTOMER Mell Dole			2011 + 2.2 Area 2 rd E 4 1/2 E			
MAILING ADDRESS			TRUCK #	DRIVER	TRUCK #	DRIVER
CITY			Jason			
STATE			C. Hamilton			
ZIP CODE			J.D. Winkler			
			Walt Winkler			

JOB TYPE Surface HOLE SIZE 12 1/4 HOLE DEPTH 221 CASING SIZE & WEIGHT 2 3/8" x 20' #
 CASING DEPTH 221 DRILL PIPE _____ TUBING _____ OTHER _____
 SLURRY WEIGHT 15.0 SLURRY VOL _____ WATER gal/sk _____ CEMENT LEFT IN CASING 15' to 20'
 DISPLACEMENT 17.74 DISPLACEMENT PSI _____ MIX PSI _____ RATE 4 RPM

REMARKS: Surface operations, 17' to 20' at well #117.
Flow volume on bottom, mix 185 cc. water, 3% cement, Displacement
17.74 BBL H₂O, fluid.
Cement Del. Ctr.
in well

Thank You
 Walt Winkler

ACCOUNT CODE	QUANTITY or UNITS	DESCRIPTION of SERVICES or PRODUCT	UNIT PRICE	TOTAL
	1	PUMP CHARGE	1,150 ⁰⁰	1,150 ⁰⁰
	40	MILEAGE	75	2,960 ⁰⁰
	8.70	For Mileage Tollway (min)	15	130 ⁰⁰
	185 cc	Surface Placed II	24 ⁰⁰	4,440 ⁰⁰
				6,536 ⁰⁰
		Loss 25% - 1.50		1,234 ⁰⁰
				4,902 ⁰⁰

AUTHORIZATION [Signature] TITLE [Signature] DATE _____

I acknowledge that the payments 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.

CUSTOMER
Mull Drilling Co

WELL NO.
1-13

LEASE
Hills

JOB TYPE
Long String

TICKET NO.
032764

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	1900							On location w/float Equipment Rig Laying Down Drill Collars
								TD-4420' 112 Jts set @ 4385' 5 1/2" x 15.5# Shoe IT-37.32' Baffle Plate-4352' Centralizers-3, 6, 9, 12, 15, 18, 21, 24
	2030							Start Pipe w/Float Equipment Break Circulation on Bottom Hook up to Swift
	2245							Plug Rathole w/ 30 sacks 400 Pump Mud Plush 400 Pump KLL Spacer 300 Start SMD Cmt @ 11.2 ppq Raise Weight to 14.5 ppq Fin Cement, shut down VAC Drop Plug, Washout pump & lines Start Displacement
		2	8					
		5	12					
		5	20					
		5 1/2						
			39					
		5 1/2	78					
		7						
		6	70					
			102					
	0130	5 1/2	103 1/2					500 Catch Cement 1000 Lift PSI 1800 Land Plug Release Truck, Dry Wash up Rack up Job Complete
	0200							

Thank You
Jon, Austin, Shane



PO Box 466
Ness City, KS 67560
Off: 785-798-2300

TICKET CONTINUATION

Ticket No. 032764

CUSTOMER
Mull Drilling

DATE
03/11/2020

PAGE 2 OF 2

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING		TIME	DESCRIPTION	WELL				UNIT PRICE	AMOUNT
		LOC	ACCT			QTY	U/M	QTY	U/M		
330		2			Swift Mult. Density 5th	250	SKS			17.00	4250.00
276		2			Fluocel	681	lbs			3.00	1800.00
581		2								1.85	462.50
583		2								0.95	1299.00

SERVICE CHARGE
MILEAGE CHARGE
TOTAL WEIGHT
LOADED MILES

CONCRETE
TON MILES

1.85
0.95
462.50
1299.00

CONTINUATION TOTAL

6192.00



Company: Mull Drilling Company, Inc
Lease: Hills #1-13

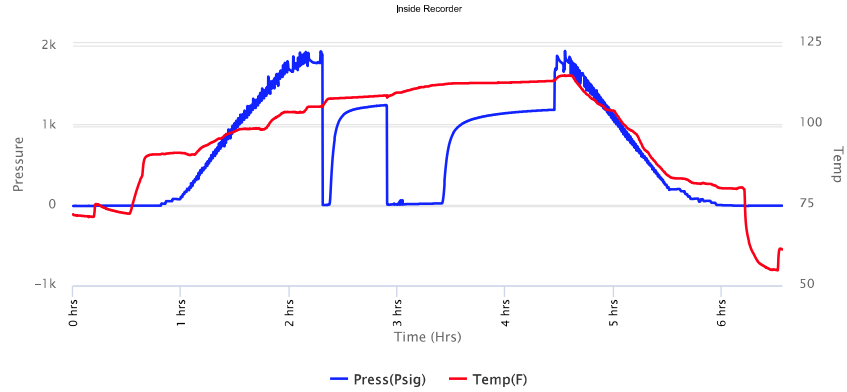
SEC: 13 TWN: 5S RNG: 22W
 County: RAWLINS
 State: Kansas
 Drilling Contractor: Murfin Drilling Company, Inc - Rig 110
 Elevation: 2970 Sur
 Field Name: Wildcat
 Pool: Wildcat
 Job Number: 444
 API #: 15-153-21246-00-00

Operation:
 Uploading recovery & pressures

DATE
 March
07
 2020

DST #1 **Formation: Toronto-Lan A** **Test Interval: 3864 - 3920'** **Total Depth: 3920'**
 Time On: 17:27 03/07 Time Off: 23:51 03/07
 Time On Bottom: 19:40 03/07 Time Off Bottom: 21:45 03/07

Electronic Volume Estimate: g'	1st Open Minutes: 5 Current Reading: .3" at 5 min Max Reading: .3"	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"
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Company: Mull Drilling Company, Inc
Lease: Hills #1-13

SEC: 13 TWN: 5S RNG: 22W
 County: RAWLINS
 State: Kansas
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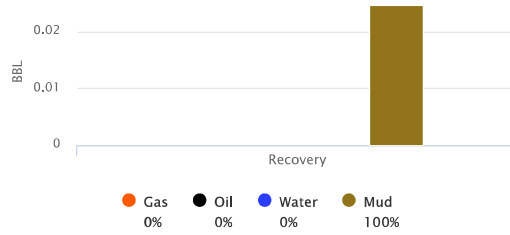
Recovered		Description of Fluid	Gas %	Oil %	Water %	Mud %
Feet	BBLs					
5	0.0246	M	0	0	0	100

Total Recovered: 5 ft
 Total Barrels Recovered: 0.0246

Reversed Out
 NO

Recovery at a glance

Initial Hydrostatic Pressure	1786	PSI
Initial Flow	8 to 11	PSI
Initial Closed in Pressure	1259	PSI
Final Flow Pressure	13 to 28	PSI
Final Closed in Pressure	1202	PSI
Final Hydrostatic Pressure	1774	PSI
Temperature	114	°F
Pressure Change Initial Close / Final Close	4.6	%



GIP cubic foot volume: 0



Company: Mull Drilling Company, Inc
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 Elevation: 2970 Sur
 Field Name: Wildcat
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Operation:
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DATE
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 Time On: 17:27 03/07 Time Off: 23:51 03/07
 Time On Bottom: 19:40 03/07 Time Off Bottom: 21:45 03/07

BUCKET MEASUREMENT:
 1st Open: Built to .3 in 5 min
 1st Close: No Blow
 2nd Open: No Blow
 2nd Close: No Blow

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



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Operation:
Uploading recovery & pressures

DATE
March
07
2020

DST #1 Formation: Toronto-Lan A Test Interval: 3864 - 3920' Total Depth: 3920'
Time On: 17:27 03/07 Time Off: 23:51 03/07
Time On Bottom: 19:40 03/07 Time Off Bottom: 21:45 03/07

Down Hole Makeup

Heads Up: 6.00000000000002 FT Packer 1: 3858.6 FT
Drill Pipe: 3669.9 FT Packer 2: 3864.1 FT
 ID-3 1/2 Top Recorder: 3850.6 FT
Weight Pipe: FT Bottom Recorder: 3918 FT
 ID-2 7/8
Collars: 174.54 FT Well Bore Size: 7 7/8
 ID-2 1/4 Surface Choke: 1"
Test Tool: 26.66 FT Bottom Choke: 5/8"
 ID-3 1/2-FH
Total Anchor: 55.9
Anchor Makeup
Packer Sub: 1 FT
Perforations: (top): 19 FT
 4 1/2-FH
Change Over: 1 FT
Drill Pipe: (in anchor): 31.4 FT
 ID-3 1/2
Change Over: .5 FT
Perforations: (below): 3 FT
 4 1/2-FH



Company: Mull Drilling Company, Inc
Lease: Hills #1-13

SEC: 13 TWN: 5S RNG: 22W
County: RAWLINS
State: Kansas
Drilling Contractor: Murfin Drilling Company, Inc - Rig 110
Elevation: 2970 Sur
Field Name: Wildcat
Pool: Wildcat
Job Number: 444
API #: 15-153-21246-00-00

Operation:
Uploading recovery & pressures

DATE
March
07
2020

DST #1 Formation: Toronto-Lan A Test Interval: 3864 - 3920' Total Depth: 3920'
Time On: 17:27 03/07 Time Off: 23:51 03/07
Time On Bottom: 19:40 03/07 Time Off Bottom: 21:45 03/07

Mud Properties

Mud Type: Chemical Weight: 9.0 Viscosity: 57 Filtrate: 6.0 Chlorides: 2100 ppm



Company: Mull Drilling Company, Inc
Lease: Hills #1-13

SEC: 13 TWN: 5S RNG: 22W
County: RAWLINS
State: Kansas
Drilling Contractor: Murfin Drilling Company, Inc - Rig 110
Elevation: 2970 Sur
Field Name: Wildcat
Pool: Wildcat
Job Number: 444
API #: 15-153-21246-00-00

Operation:
Uploading recovery & pressures

DATE
March
07
2020

DST #1 Formation: Toronto-Lan A Test Interval: 3864 - 3920' Total Depth: 3920'
Time On: 17:27 03/07 Time Off: 23:51 03/07
Time On Bottom: 19:40 03/07 Time Off Bottom: 21:45 03/07

Gas Volume Report

1st Open			
Time	Orifice	PSI	MCF/D

2nd Open			
Time	Orifice	PSI	MCF/D



Company: Mull Drilling Company, Inc
Lease: Hills #1-13

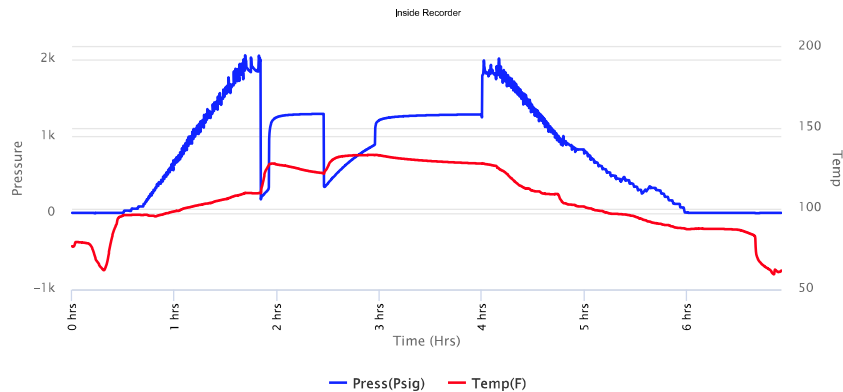
SEC: 13 TWN: 5S RNG: 22W
 County: RAWLINS
 State: Kansas
 Drilling Contractor: Murfin Drilling Company, Inc - Rig 110
 Elevation: 2970 Sur
 Field Name: Wildcat
 Pool: Wildcat
 Job Number: 444
 API #: 15-153-21246-00-00

Operation:
 Uploading recovery & pressures

DATE
 March
08
 2020

DST #2 **Formation: Lan D-I** **Test Interval: 3958 - 4050'** **Total Depth: 4050'**
 Time On: 16:07 03/08 Time Off: 22:50 03/08
 Time On Bottom: 17:55 03/08 Time Off Bottom: 20:00 03/08

Electronic Volume Estimate: 2400'	1st Open Minutes: 5 Current Reading: 40.3" at 5 min Max Reading: 40.3"	1st Close Minutes: 30 Current Reading: 0" at 30 min Max Reading: 0"	2nd Open Minutes: 30 Current Reading: 199.8" at 30 min Max Reading: 199.8"	2nd Close Minutes: 60 Current Reading: 0" at 60 min Max Reading: 0"
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Company: Mull Drilling Company, Inc
Lease: Hills #1-13

SEC: 13 TWN: 5S RNG: 22W
 County: RAWLINS
 State: Kansas
 Drilling Contractor: Murfin Drilling Company, Inc - Rig 110
 Elevation: 2970 Sur
 Field Name: Wildcat
 Pool: Wildcat
 Job Number: 444
 API #: 15-153-21246-00-00

Operation:
 Uploading recovery & pressures

DATE
 March
08
 2020

DST #2 **Formation: Lan D-I** **Test Interval: 3958 - 4050'** **Total Depth: 4050'**
 Time On: 16:07 03/08 Time Off: 22:50 03/08
 Time On Bottom: 17:55 03/08 Time Off Bottom: 20:00 03/08

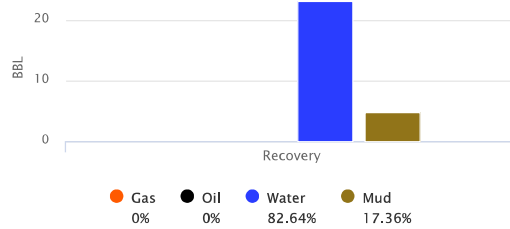
Recovered		Description of Fluid	Gas %	Oil %	Water %	Mud %
Foot	BBLs					
240	3.4152	HWCM	0	0	30	70
1830	24.4159326	SLMCW	0	0	90	10

Total Recovered: 2070 ft
 Total Barrels Recovered: 27.8311326

Reversed Out
NO

Recovery at a glance

Initial Hydrostatic Pressure	1847	PSI
Initial Flow	177 to 310	PSI
Initial Closed in Pressure	1290	PSI
Final Flow Pressure	341 to 893	PSI
Final Closed in Pressure	1285	PSI
Final Hydrostatic Pressure	1829	PSI
Temperature	134	°F
Pressure Change Initial Close / Final Close	0.4	%



GIP cubic foot volume: 0



Company: Mull Drilling Company, Inc
Lease: Hills #1-13

SEC: 13 TWN: 5S RNG: 22W
 County: RAWLINS
 State: Kansas
 Drilling Contractor: Murfin Drilling Company, Inc - Rig 110
 Elevation: 2970 Sur
 Field Name: Wildcat
 Pool: Wildcat
 Job Number: 444
 API #: 15-153-21246-00-00

Operation:
 Uploading recovery & pressures

DATE
 March
08
 2020

DST #2 **Formation: Lan D-I** **Test Interval: 3958 - 4050'** **Total Depth: 4050'**

Time On: 16:07 03/08 Time Off: 22:50 03/08
 Time On Bottom: 17:55 03/08 Time Off Bottom: 20:00 03/08

BUCKET MEASUREMENT:

1st Open: BOB in 1 min
 1st Close: No Blow
 2nd Open: BOB in 1 min
 2nd Close: No Blow

REMARKS:

Tool plugged with cuttings

Chlorides: 26,000 ppm



Company: Mull Drilling Company, Inc
Lease: Hills #1-13

SEC: 13 TWN: 5S RNG: 22W
County: RAWLINS
State: Kansas
Drilling Contractor: Murfin Drilling Company, Inc - Rig 110
Elevation: 2970 Sur
Field Name: Wildcat
Pool: Wildcat
Job Number: 444
API #: 15-153-21246-00-00

Operation:
Uploading recovery & pressures

DATE
March
08
2020

DST #2 **Formation:** Lan D-I **Test Interval:** 3958 - 4050' **Total Depth:** 4050'
Time On: 16:07 03/08 Time Off: 22:50 03/08
Time On Bottom: 17:55 03/08 Time Off Bottom: 20:00 03/08

Down Hole Makeup

Heads Up: 14.76 FT	Packer 1: 3952.15 FT
Drill Pipe: 3764.8 FT <i>ID-3 1/2</i>	Packer 2: 3957.65 FT
Weight Pipe: FT <i>ID-2 7/8</i>	Top Recorder: 3941.57 FT
Collars: 174.54 FT <i>ID-2 1/4</i>	Bottom Recorder: 4048 FT
Test Tool: 34.07 FT <i>ID-3 1/2-FH</i> <i>Jars</i> <i>Safety Joint</i>	Well Bore Size: 7 7/8
Total Anchor: 92.35	Surface Choke: 1"
Anchor Makeup	Bottom Choke: 5/8"
Packer Sub: 1 FT	
Perforations: (top): 23 FT <i>4 1/2-FH</i>	
Change Over: 1 FT	
Drill Pipe: (in anchor): 63.35 FT <i>ID-3 1/2</i>	
Change Over: 1 FT	
Perforations: (below): 3 FT <i>4 1/2-FH</i>	



Company: Mull Drilling Company, Inc
Lease: Hills #1-13

SEC: 13 TWN: 5S RNG: 22W
County: RAWLINS
State: Kansas
Drilling Contractor: Murfin Drilling Company, Inc - Rig 110
Elevation: 2970 Sur
Field Name: Wildcat
Pool: Wildcat
Job Number: 444
API #: 15-153-21246-00-00

Operation:
Uploading recovery & pressures

DATE
March
08
2020

DST #2 **Formation:** Lan D-I **Test Interval:** 3958 - 4050' **Total Depth:** 4050'
Time On: 16:07 03/08 Time Off: 22:50 03/08
Time On Bottom: 17:55 03/08 Time Off Bottom: 20:00 03/08

Mud Properties

Mud Type: Chemical **Weight:** 9.0 **Viscosity:** 57 **Filtrate:** 6.0 **Chlorides:** 2100 ppm



**Company: Mull Drilling
Company, Inc**
Lease: Hills #1-13

SEC: 13 TWN: 5S RNG: 22W
County: RAWLINS
State: Kansas
Drilling Contractor: Murfin Drilling
Company, Inc - Rig 110
Elevation: 2970 Sur
Field Name: Wildcat
Pool: Wildcat
Job Number: 444
API #: 15-153-21246-00-00

Operation:
Uploading recovery &
pressures

DATE
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DST #2 **Formation: Lan D-I** **Test Interval: 3958 - 4050'** **Total Depth: 4050'**
Time On: 16:07 03/08 Time Off: 22:50 03/08
Time On Bottom: 17:55 03/08 Time Off Bottom: 20:00 03/08

Gas Volume Report

1st Open			
Time	Orifice	PSI	MCF/D

2nd Open			
Time	Orifice	PSI	MCF/D



Company: Mull Drilling Company, Inc
Lease: Hills #1-13

SEC: 13 TWN: 5S RNG: 33W
 County: RAWLINS
 State: Kansas
 Drilling Contractor: Murfin Drilling Company, Inc - Rig 110
 Elevation: 2970 GL
 Field Name: Wildcat
 Pool: WILDCAT
 Job Number: 444
 API #: 15-153-21246-00-00

Operation:
 Tripping out of hole with test tool

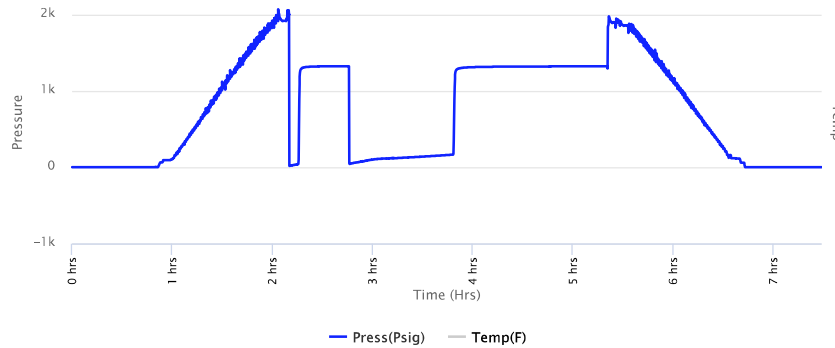
DATE
 March
09
 2020

DST #3 **Formation: Lan J** **Test Interval: 4048 - 4094'** **Total Depth: 4094'**

Time On: 06:45 03/09 Time Off: 00:00 01/01
 Time On Bottom: 10:14 03/09 Time Off Bottom: 13:19 03/09

Electronic Volume Estimate: 231'	1st Open Minutes: 5 Current Reading: 2" at 5 min Max Reading: 2"	1st Close Minutes: 30 Current Reading: 0" at 30 min Max Reading: 0"	2nd Open Minutes: 60 Current Reading: 8.9" at 60 min Max Reading: 8.9"	2nd Close Minutes: 90 Current Reading: 0" at 90 min Max Reading: 0"
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Inside Recorder



Company: Mull Drilling Company, Inc
Lease: Hills #1-13

SEC: 13 TWN: 5S RNG: 33W
 County: RAWLINS
 State: Kansas
 Drilling Contractor: Murfin Drilling Company, Inc - Rig 110
 Elevation: 2970 GL
 Field Name: Wildcat
 Pool: WILDCAT
 Job Number: 444
 API #: 15-153-21246-00-00

Operation:
 Tripping out of hole with test tool

DATE
 March
09
 2020

DST #3 **Formation: Lan J** **Test Interval: 4048 - 4094'** **Total Depth: 4094'**

Time On: 06:45 03/09 Time Off: 00:00 01/01
 Time On Bottom: 10:14 03/09 Time Off Bottom: 13:19 03/09

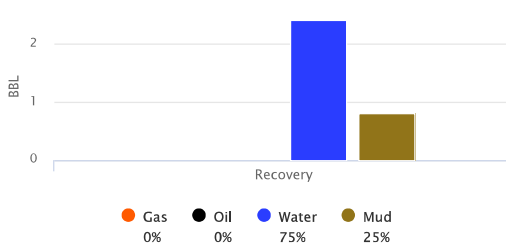
Recovered		Description of Fluid	Gas %	Oil %	Water %	Mud %
Foot	BBLs					
340	3.2132326	MCW	0	0	75	25

Total Recovered: 340 ft
 Total Barrels Recovered: 3.2132326

Reversed Out
 NO

Recovery at a glance

Initial Hydrostatic Pressure	1914	PSI
Initial Flow	17 to 40	PSI
Initial Closed in Pressure	1320	PSI
Final Flow Pressure	43 to 164	PSI
Final Closed in Pressure	1320	PSI
Final Hydrostatic Pressure	1896	PSI
Temperature	127	°F
Pressure Change Initial Close / Final Close	0.0	%



GIP cubic foot volume: 0



Company: Mull Drilling Company, Inc
Lease: Hills #1-13

SEC: 13 TWN: 5S RNG: 33W
 County: RAWLINS
 State: Kansas
 Drilling Contractor: Murfin Drilling Company, Inc - Rig 110
 Elevation: 2970 GL
 Field Name: Wildcat
 Pool: WILDCAT
 Job Number: 444
 API #: 15-153-21246-00-00

Operation:
 Tripping out of hole with test tool

DATE
 March
09
 2020

DST #3 **Formation: Lan J** **Test Interval: 4048 - 4094'** **Total Depth: 4094'**

Time On: 06:45 03/09 Time Off: 00:00 01/01
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BUCKET MEASUREMENT:

1st Open: BOB in 2 min
 1st Close: No Blow
 2nd Open: Built to 8.9
 2nd Close: No Blow

REMARKS:

Tool Sample: -10% Gas 0% Oil 65% Water 45% Mud
 Chlorides: 29000 ppm



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Time On: 06:45 03/09 Time Off: 00:00 01/01
Time On Bottom: 10:14 03/09 Time Off Bottom: 13:19 03/09

Down Hole Makeup

Heads Up:	11.16 FT	Packer 1:	4042.97 FT
Drill Pipe:	3859.43 FT <i>ID-3 1/2</i>	Packer 2:	4048.47 FT
Weight Pipe:	FT <i>ID-2 7/8</i>	Top Recorder:	4034.97 FT
Collars:	174.54 FT <i>ID-2 1/4</i>	Bottom Recorder:	4092 FT
Test Tool:	26.66 FT <i>ID-3 1/2-FH</i>	Well Bore Size:	7 7/8
Total Anchor:	45.53	Surface Choke:	1"
<u>Anchor Makeup</u>		Bottom Choke:	5/8"
Packer Sub:	1 FT		
Perforations: (top):	8 FT <i>4 1/2-FH</i>		
Change Over:	1 FT		
Drill Pipe: (in anchor):	31.53 FT <i>ID-3 1/2</i>		
Change Over:	1 FT		
Perforations: (below):	3 FT <i>4 1/2-FH</i>		



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DST #3 Formation: Lan J Test Interval: 4048 - 4094' Total Depth: 4094'
Time On: 06:45 03/09 Time Off: 00:00 01/01
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Mud Properties

Mud Type: Chemical Weight: 9.1 Viscosity: 60 Filtrate: 6.5 Chlorides: 3500 ppm



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Company, Inc**
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DST #3 Formation: Lan J Test Interval: 4048 - 4094' Total Depth: 4094'
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Gas Volume Report

1st Open			
Time	Orifice	PSI	MCF/D

2nd Open			
Time	Orifice	PSI	MCF/D



Company: Mull Drilling Company, Inc
Lease: Hills #1-13

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 Elevation: 2970 GL
 Field Name: Wildcat
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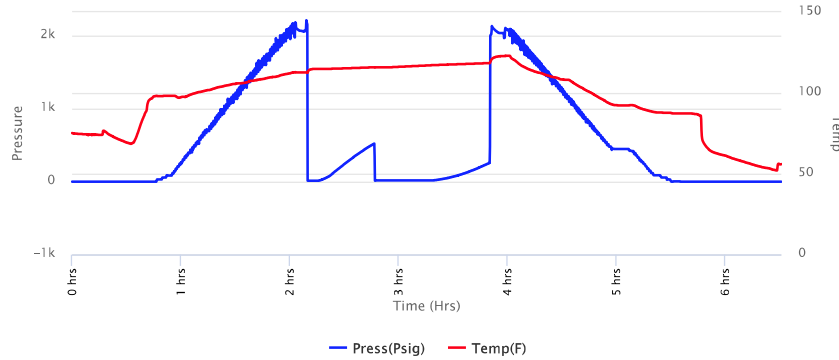
Operation:
 Uploading recovery & pressures

DATE
 March
10
 2020

DST #4 **Formation: Myric Station, Ft. Scott, Cherokee** **Test Interval: 4288 - 4380'** **Total Depth: 4380'**
 Time On: 17:58 03/10 Time Off: 00:19 03/11
 Time On Bottom: 20:05 03/10 Time Off Bottom: 21:40 03/10

Electronic Volume Estimate: 0'	1st Open Minutes: 5 Current Reading: 0" at 5 min Max Reading: 0"	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"
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Inside Recorder



Company: Mull Drilling Company, Inc
Lease: Hills #1-13

SEC: 13 TWN: 5S RNG: 33W
 County: RAWLINS
 State: Kansas
 Drilling Contractor: Murfin Drilling Company, Inc - Rig 110
 Elevation: 2970 GL
 Field Name: Wildcat
 Pool: WILDCAT
 Job Number: 444
 API #: 15-153-21246-00-00

Operation:
 Uploading recovery & pressures

DATE
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DST #4 **Formation: Myric Station, Ft. Scott, Cherokee** **Test Interval: 4288 - 4380'** **Total Depth: 4380'**
 Time On: 17:58 03/10 Time Off: 00:19 03/11
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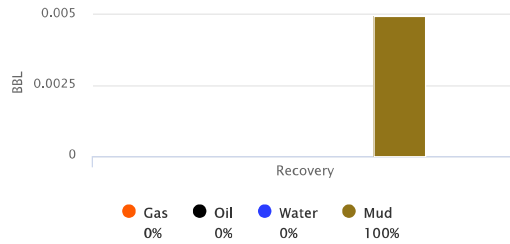
Recovered		Description of Fluid	Gas %	Oil %	Water %	Mud %
Foot	BBS					
1	0.00492	M	0	0	0	100

Total Recovered: 1 ft
 Total Barrels Recovered: 0.00492

Reversed Out
 NO

Recovery at a glance

Initial Hydrostatic Pressure	2066	PSI
Initial Flow	14 to 14	PSI
Initial Closed in Pressure	522	PSI
Final Flow Pressure	15 to 17	PSI
Final Closed in Pressure	258	PSI
Final Hydrostatic Pressure	2038	PSI
Temperature	119	°F
Pressure Change Initial Close / Final Close	50.6	%



GIP cubic foot volume: 0



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 Time On: 17:58 03/10 Time Off: 00:19 03/11
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BUCKET MEASUREMENT:

1st Open: No Blow
 1st Close: No Blow
 2nd Open: No Blow
 2nd Close: No Blow

REMARKS:

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



Company: Mull Drilling Company, Inc
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Time On: 17:58 03/10 Time Off: 00:19 03/11
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Down Hole Makeup

Heads Up: 22.69 FT **Packer 1:** 4282.15 FT
Drill Pipe: 4110.14 FT **Packer 2:** 4287.65 FT
ID-3 1/2 **Top Recorder:** 4274.15 FT
Weight Pipe: FT **Bottom Recorder:** 4378 FT
ID-2 7/8 **Well Bore Size:** 7 7/8
Collars: 174.54 FT **Surface Choke:** 1"
ID-2 1/4 **Bottom Choke:** 5/8"
Test Tool: 26.66 FT
ID-3 1/2-FH
Total Anchor: 92.35
Anchor Makeup
Packer Sub: 1 FT
Perforations: (top): 23 FT
4 1/2-FH
Change Over: 1 FT
Drill Pipe: (in anchor): 63.35 FT
ID-3 1/2
Change Over: 1 FT
Perforations: (below): 3 FT
4 1/2-FH



Company: Mull Drilling Company, Inc
Lease: Hills #1-13

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Time On: 17:58 03/10 Time Off: 00:19 03/11
Time On Bottom: 20:05 03/10 Time Off Bottom: 21:40 03/10

Mud Properties

Mud Type: Chemical **Weight:** 9.1 **Viscosity:** 55 **Filtrate:** 7.2 **Chlorides:** 3000 ppm



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Gas Volume Report

1st Open			
Time	Orifice	PSI	MCF/D

2nd Open			
Time	Orifice	PSI	MCF/D

