

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
--	---

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
---	--	------------------------------------

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:	
----------------	-------	---------	------------	--

Form	ACO1 - Well Completion
Operator	L. D. Drilling, Inc.
Well Name	HORN 1-36
Doc ID	1489143

Tops

Name	Top	Datum
Anhydrite	2128	+693
Base Anhydrite	2155	+666
Stotler	3550	-729
Heebner	3966	-1145
Lansing	4008	-1187
Stark	4293	-1472
Marmaton	4404	-1583
Fort Scott	4542	-1721
Cherokee	4565	-1744
Mississippi	4642	-1823

Form	ACO1 - Well Completion
Operator	L. D. Drilling, Inc.
Well Name	HORN 1-36
Doc ID	1489143

Perforations

Shots Per Foot	Perforation Top	Perforation Bottom	BridgePlugType	BridgePlugSet At	Material Record
4	4352	4356			1500 gal 15% HCl Acid
4	4342	4346			
4	4336	4340			
4	4452	4456			1000 gal 15% HCl Acid
4	4404	4408			
4	4336	4340			750 gal 20% HCl Acid



Company: L. D. Drilling, Inc
Lease: Horn #1-36

SEC: 36 TWN: 19S RNG: 29W
 County: LANE
 State: Kansas
 Drilling Contractor: L. D. Drilling, Inc - Rig 1
 Elevation: 2818 EGL
 Field Name: J-MUR NE
 Pool: Infield
 Job Number: 392
 API #: 15-101-22631

Operation:
 Uploading recovery & pressures

DATE
 September
20
 2019

DST #1 **Formation: L/KC 200' Zone** **Test Interval: 4290 - 4307'** **Total Depth: 4307'**
 Time On: 22:23 09/20 Time Off: 05:44 09/21
 Time On Bottom: 00:26 09/21 Time Off Bottom: 03:26 09/21

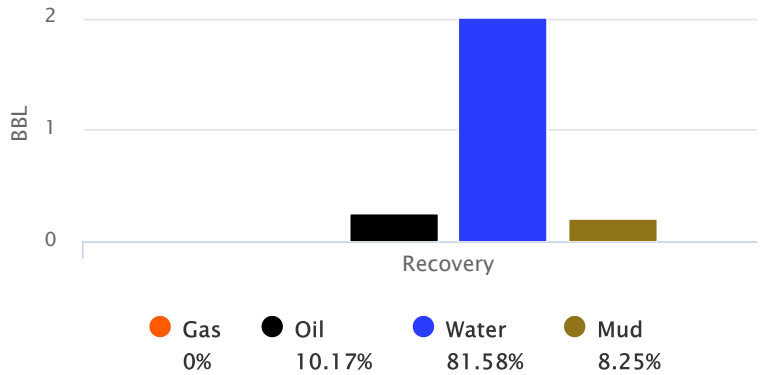
Recovered		Description of Fluid	Gas %	Oil %	Water %	Mud %
Foot	BBLs					
20	0.2052	O	0	100	0	0
220	2.2572	SLOCSLMCW	0	2	89	9

Total Recovered: 240 ft
 Total Barrels Recovered: 2.4624

Reversed Out
 NO

Initial Hydrostatic Pressure	2076	PSI
Initial Flow	13 to 60	PSI
Initial Closed in Pressure	725	PSI
Final Flow Pressure	62 to 315	PSI
Final Closed in Pressure	705	PSI
Final Hydrostatic Pressure	2068	PSI
Temperature	130	°F
Pressure Change Initial Close / Final Close	2.8	%

Recovery at a glance



GIP cubic foot volume: 0



Company: L. D. Drilling, Inc
Lease: Horn #1-36

SEC: 36 TWN: 19S RNG: 29W
 County: LANE
 State: Kansas
 Drilling Contractor: L. D. Drilling, Inc - Rig 1
 Elevation: 2818 EGL
 Field Name: J-MUR NE
 Pool: Infield
 Job Number: 392
 API #: 15-101-22631

Operation:
 Uploading recovery & pressures

DATE
 September
21
 2019

DST #2 **Formation: Lower 200' Zone** **Test Interval: 4318 - 4330'** **Total Depth: 4330'**
 Time On: 13:36 09/21 Time Off: 21:31 09/21
 Time On Bottom: 16:04 09/21 Time Off Bottom: 19:04 09/21

Electronic Volume Estimate:
 172'

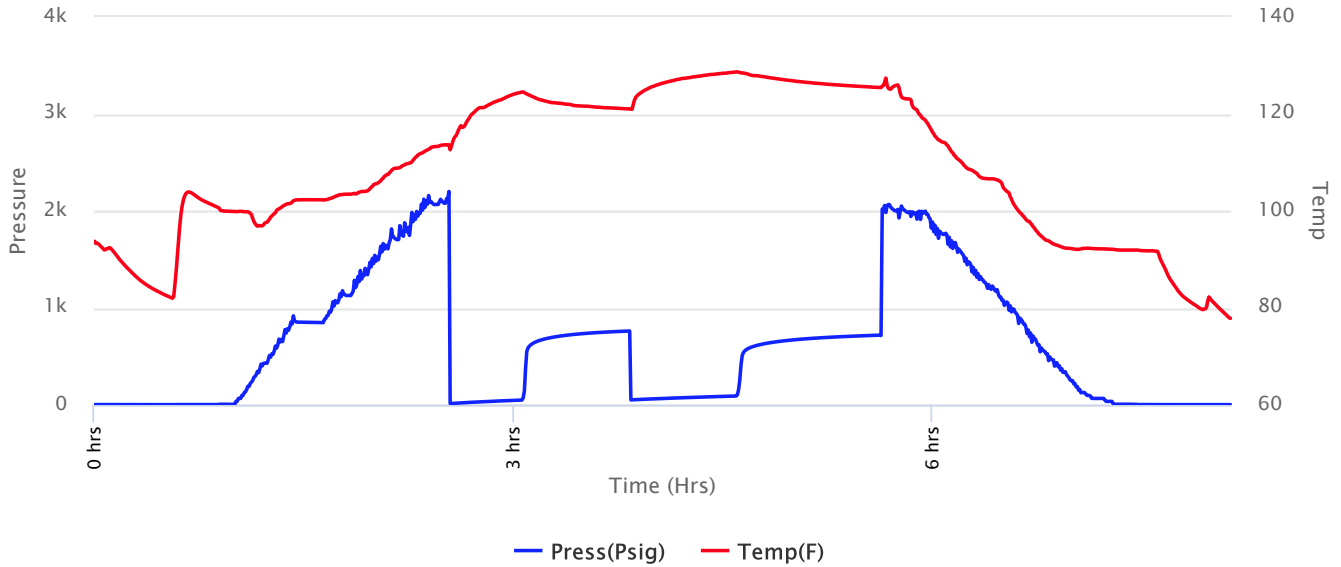
1st Open
 Minutes: 30
 Current Reading:
 7.5" at 30 min
 Max Reading: 7.5"

1st Close
 Minutes: 45
 Current Reading:
 0" at 45 min
 Max Reading: 0"

2nd Open
 Minutes: 45
 Current Reading:
 7.3" at 45 min
 Max Reading: 7.3"

2nd Close
 Minutes: 60
 Current Reading:
 0" at 60 min
 Max Reading: 0"

Inside Recorder





Company: L. D. Drilling, Inc
Lease: Horn #1-36

SEC: 36 TWN: 19S RNG: 29W
 County: LANE
 State: Kansas
 Drilling Contractor: L. D. Drilling, Inc - Rig 1
 Elevation: 2818 EGL
 Field Name: J-MUR NE
 Pool: Infield
 Job Number: 392
 API #: 15-101-22631

Operation:
 Uploading recovery & pressures

DATE
 September
21
 2019

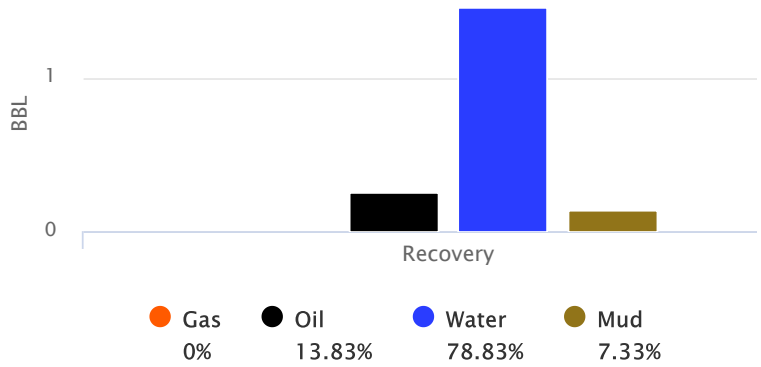
DST #2 **Formation: Lower 200' Zone** **Test Interval: 4318 - 4330'** **Total Depth: 4330'**
 Time On: 13:36 09/21 Time Off: 21:31 09/21
 Time On Bottom: 16:04 09/21 Time Off Bottom: 19:04 09/21

Recovered		Description of Fluid	Gas %	Oil %	Water %	Mud %
Foot	BBLs					
15	0.1539	SLOCMLCW	0	100	0	0
165	1.6929	SLOCMLCW	0	6	86	8

Total Recovered: 180 ft
 Total Barrels Recovered: 1.8468

Reversed Out
 NO

Recovery at a glance



Initial Hydrostatic Pressure	2125	PSI
Initial Flow	11 to 48	PSI
Initial Closed in Pressure	760	PSI
Final Flow Pressure	50 to 90	PSI
Final Closed in Pressure	714	PSI
Final Hydrostatic Pressure	2065	PSI
Temperature	129	°F
Pressure Change Initial Close / Final Close	6.1	%

GIP cubic foot volume: 0



Company: L. D. Drilling, Inc
Lease: Horn #1-36

SEC: 36 TWN: 19S RNG: 29W
County: LANE
State: Kansas
Drilling Contractor: L. D. Drilling, Inc -
Rig 1
Elevation: 2818 EGL
Field Name: J-MUR NE
Pool: Infield
Job Number: 392
API #: 15-101-22631

Operation:
Uploading recovery &
pressures

DATE
September
21
2019

DST #2	Formation: Lower 200' Zone	Test Interval: 4318 - 4330'	Total Depth: 4330'
	Time On: 13:36 09/21	Time Off: 21:31 09/21	
	Time On Bottom: 16:04 09/21	Time Off Bottom: 19:04 09/21	

BUCKET MEASUREMENT:

1st Open: Surface blow building to 7 1/4"

1st Close: No BB

2nd Open: Surface blow building to 7"

2nd Close: No BB

REMARKS:

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

Gravity: 35.5 @ 60 °F

Ph: 7.5

Measured RW: .28 @ 74 degrees °F

RW at Formation Temp: 0.167 @ 129 °F

Chlorides: 24,000 ppm



Company: L. D. Drilling, Inc
Lease: Horn #1-36

SEC: 36 TWN: 19S RNG: 29W
County: LANE
State: Kansas
Drilling Contractor: L. D. Drilling, Inc - Rig 1
Elevation: 2818 EGL
Field Name: J-MUR NE
Pool: Infield
Job Number: 392
API #: 15-101-22631

Operation:
Uploading recovery & pressures

DATE
September
21
2019

DST #2 **Formation: Lower 200' Zone** **Test Interval: 4318 - 4330'** **Total Depth: 4330'**
Time On: 13:36 09/21 Time Off: 21:31 09/21
Time On Bottom: 16:04 09/21 Time Off Bottom: 19:04 09/21

Down Hole Makeup

Heads Up: 17.54 FT	Packer 1: 4313 FT
Drill Pipe: 4302.97 FT <i>ID-3 1/4</i>	Packer 2: 4318 FT
Weight Pipe: 0 FT <i>ID-2 7/8</i>	Top Recorder: 4302.42 FT
Collars: 0 FT <i>ID-2 1/4</i>	Bottom Recorder: 4320 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: 12	Surface Choke: 1"
<u>Anchor Makeup</u>	Bottom Choke: 5/8"
Packer Sub: 1 FT	
Perforations: (top): 0 FT <i>4 1/2-FH</i>	
Change Over: 0 FT	
Drill Pipe: (in anchor): 0 FT <i>ID-3 1/4</i>	
Change Over: 0 FT	
Perforations: (below): 11 FT <i>4 1/2-FH</i>	



Company: L. D. Drilling, Inc
Lease: Horn #1-36

SEC: 36 TWN: 19S RNG: 29W
 County: LANE
 State: Kansas
 Drilling Contractor: L. D. Drilling, Inc - Rig 1
 Elevation: 2818 EGL
 Field Name: J-MUR NE
 Pool: Infield
 Job Number: 392
 API #: 15-101-22631

Operation:
 Uploading recovery & pressures

DATE
 September
21
 2019

DST #2 **Formation: Lower 200' Zone** **Test Interval: 4318 - 4330'** **Total Depth: 4330'**
 Time On: 13:36 09/21 Time Off: 21:31 09/21
 Time On Bottom: 16:04 09/21 Time Off Bottom: 19:04 09/21

Gas Volume Report

1st Open			
Time	Orifice	PSI	MCF/D

2nd Open			
Time	Orifice	PSI	MCF/D



Company: L. D. Drilling, Inc
Lease: Horn #1-36

SEC: 36 TWN: 19S RNG: 29W
 County: LANE
 State: Kansas
 Drilling Contractor: L. D. Drilling, Inc - Rig 1
 Elevation: 2818 EGL
 Field Name: J-MUR NE
 Pool: Infield
 Job Number: 392
 API #: 15-101-22631

Operation:
 Uploading recovery & pressures

DATE
 September
22
 2019

DST #3 **Formation: Middle Creek** **Test Interval: 4331 - 4342'** **Total Depth: 4342'**
 Time On: 04:37 09/22 Time Off: 11:32 09/22
 Time On Bottom: 06:37 09/22 Time Off Bottom: 09:37 09/22

Electronic Volume Estimate:
 65'

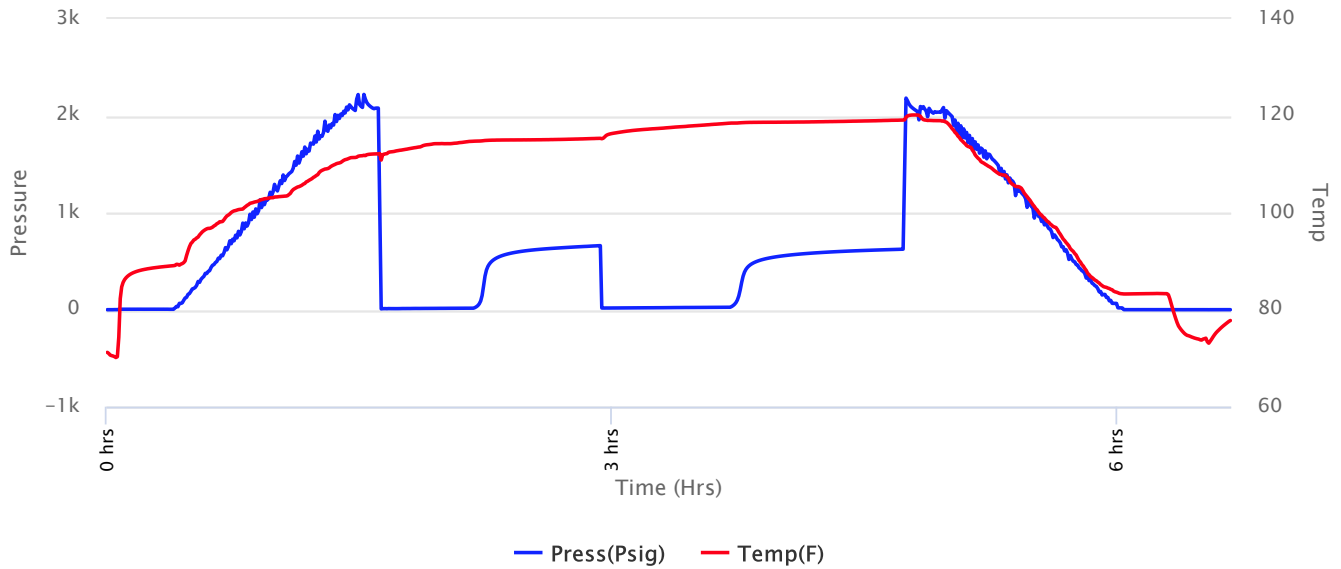
1st Open
 Minutes: 30
 Current Reading:
 2.4" at 30 min
 Max Reading: 2.4"

1st Close
 Minutes: 45
 Current Reading:
 0" at 45 min
 Max Reading: 0"

2nd Open
 Minutes: 45
 Current Reading:
 3.1" at 45 min
 Max Reading: 3.1"

2nd Close
 Minutes: 60
 Current Reading:
 0" at 60 min
 Max Reading: 0"

Inside Recorder





Company: L. D. Drilling, Inc
Lease: Horn #1-36

SEC: 36 TWN: 19S RNG: 29W
 County: LANE
 State: Kansas
 Drilling Contractor: L. D. Drilling, Inc - Rig 1
 Elevation: 2818 EGL
 Field Name: J-MUR NE
 Pool: Infield
 Job Number: 392
 API #: 15-101-22631

Operation:
 Uploading recovery & pressures

DATE
 September
22
 2019

DST #3 **Formation: Middle Creek** **Test Interval: 4331 - 4342'** **Total Depth: 4342'**
 Time On: 04:37 09/22 Time Off: 11:32 09/22
 Time On Bottom: 06:37 09/22 Time Off Bottom: 09:37 09/22

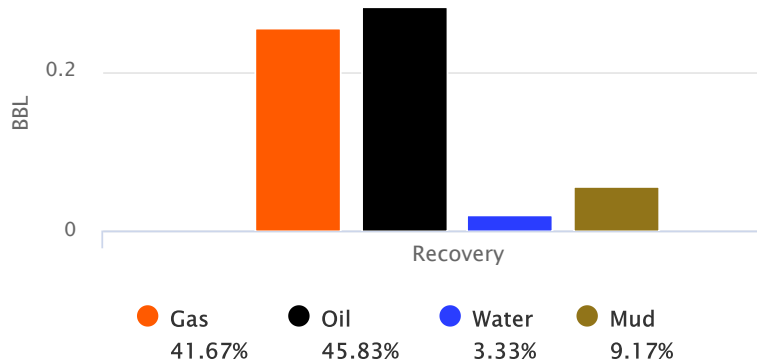
Recovered		Description of Fluid	Gas %	Oil %	Water %	Mud %
Foot	BBLs					
25	0.2565	G	100	0	0	0
25	0.2565	O	0	100	0	0
10	0.1026	WCOCM	0	25	20	55

Total Recovered: 60 ft
 Total Barrels Recovered: 0.6156

Reversed Out
 NO

Initial Hydrostatic Pressure	2073	PSI
Initial Flow	9 to 16	PSI
Initial Closed in Pressure	661	PSI
Final Flow Pressure	18 to 26	PSI
Final Closed in Pressure	624	PSI
Final Hydrostatic Pressure	2064	PSI
Temperature	120	°F
Pressure Change Initial Close / Final Close	5.6	%

Recovery at a glance



GIP cubic foot volume: 1.44012



Company: L. D. Drilling, Inc
Lease: Horn #1-36

SEC: 36 TWN: 19S RNG: 29W
County: LANE
State: Kansas
Drilling Contractor: L. D. Drilling, Inc -
Rig 1
Elevation: 2818 EGL
Field Name: J-MUR NE
Pool: Infield
Job Number: 392
API #: 15-101-22631

Operation:
Uploading recovery &
pressures

DATE
September
22
2019

DST #3	Formation: Middle Creek	Test Interval: 4331 - 4342'	Total Depth: 4342'
	Time On: 04:37 09/22	Time Off: 11:32 09/22	
	Time On Bottom: 06:37 09/22	Time Off Bottom: 09:37 09/22	

BUCKET MEASUREMENT:

1st Open: Surface blow building to 2 1/4"
1st Close: No BB
2nd Open: Surface blow building to 3"
2nd Close: No BB

REMARKS:

Tool Sample: 0% Gas 57% Oil 26% Water 17% Mud
Gravity: 36.8 @ 60 °F
Ph: 7.5
Measured RW: .51 @ 72 degrees °F
RW at Formation Temp: 0.317 @ 120 °F
Chlorides: 12,000 ppm



Company: L. D. Drilling, Inc
Lease: Horn #1-36

SEC: 36 TWN: 19S RNG: 29W
 County: LANE
 State: Kansas
 Drilling Contractor: L. D. Drilling, Inc - Rig 1
 Elevation: 2818 EGL
 Field Name: J-MUR NE
 Pool: Infield
 Job Number: 392
 API #: 15-101-22631

Operation:
 Uploading recovery & pressures

DATE
 September
22
 2019

DST #3 **Formation: Middle Creek** **Test Interval: 4331 - 4342'** **Total Depth: 4342'**
 Time On: 04:37 09/22 Time Off: 11:32 09/22
 Time On Bottom: 06:37 09/22 Time Off Bottom: 09:37 09/22

Down Hole Makeup

Heads Up: 36.04 FT	Packer 1: 4326 FT
Drill Pipe: 4334.47 FT <i>ID-3 1/4</i>	Packer 2: 4331 FT
Weight Pipe: 0 FT <i>ID-2 7/8</i>	Top Recorder: 4315.42 FT
Collars: 0 FT <i>ID-2 1/4</i>	Bottom Recorder: 4333 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: 11	Surface Choke: 1"
<u>Anchor Makeup</u>	Bottom Choke: 5/8"
Packer Sub: 1 FT	
Perforations: (top): 0 FT <i>4 1/2-FH</i>	
Change Over: 0 FT	
Drill Pipe: (in anchor): 0 FT <i>ID-3 1/4</i>	
Change Over: 0 FT	
Perforations: (below): 10 FT <i>4 1/2-FH</i>	



Company: L. D. Drilling, Inc
Lease: Horn #1-36

SEC: 36 TWN: 19S RNG: 29W
 County: LANE
 State: Kansas
 Drilling Contractor: L. D. Drilling, Inc - Rig 1
 Elevation: 2818 EGL
 Field Name: J-MUR NE
 Pool: Infield
 Job Number: 392
 API #: 15-101-22631

Operation:
 Uploading recovery & pressures

DATE
 September
22
 2019

DST #3 **Formation: Middle Creek** **Test Interval: 4331 - 4342'** **Total Depth: 4342'**
 Time On: 04:37 09/22 Time Off: 11:32 09/22
 Time On Bottom: 06:37 09/22 Time Off Bottom: 09:37 09/22

Gas Volume Report

1st Open			
Time	Orifice	PSI	MCF/D

2nd Open			
Time	Orifice	PSI	MCF/D



Company: L. D. Drilling, Inc
Lease: Horn #1-36

SEC: 36 TWN: 19S RNG: 29W
 County: LANE
 State: Kansas
 Drilling Contractor: L. D. Drilling, Inc - Rig 1
 Elevation: 2818 EGL
 Field Name: J-MUR NE
 Pool: Infield
 Job Number: 392
 API #: 15-101-22631

Operation:
 Test Complete

DATE
 September
22
 2019

DST #4 **Formation: L/KC 220' Zone** **Test Interval: 4338 - 4350'** **Total Depth: 4350'**
 Time On: 18:33 09/22 Time Off: 01:48 09/23
 Time On Bottom: 20:45 09/22 Time Off Bottom: 23:45 09/22

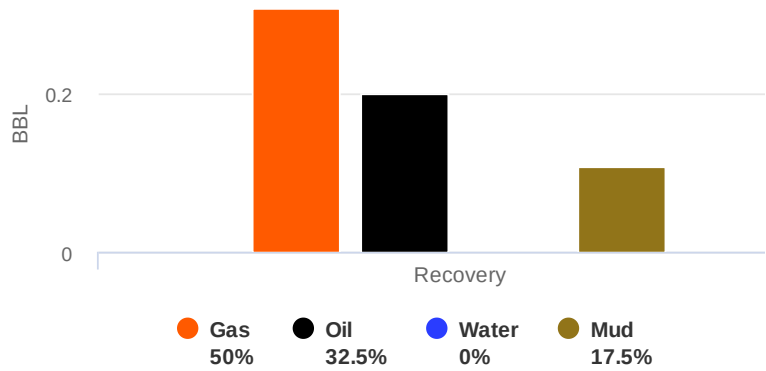
Recovered

Foot	BBLs	Description of Fluid	Gas %	Oil %	Water %	Mud %
30	0.3078	G	100	0	0	0
15	0.1539	O	0	100	0	0
15	0.1539	HOCM	0	30	0	70

Total Recovered: 60 ft
 Total Barrels Recovered: 0.6156

Reversed Out
 NO

Recovery at a glance



Initial Hydrostatic Pressure	2105	PSI
Initial Flow	11 to 15	PSI
Initial Closed in Pressure	610	PSI
Final Flow Pressure	16 to 23	PSI
Final Closed in Pressure	571	PSI
Final Hydrostatic Pressure	2102	PSI
Temperature	118	°F
Pressure Change Initial Close / Final Close	6.3	%

GIP cubic foot volume: 1.72814



Company: L. D. Drilling, Inc
Lease: Horn #1-36

SEC: 36 TWN: 19S RNG: 29W
 County: LANE
 State: Kansas
 Drilling Contractor: L. D. Drilling, Inc - Rig 1
 Elevation: 2818 EGL
 Field Name: J-MUR NE
 Pool: Infield
 Job Number: 392
 API #: 15-101-22631

Operation:
 Uploading recovery & pressures

DATE
 September
23
 2019

DST #5 **Formation: Lower 220' Zone** **Test Interval: 4351 - 4365'** **Total Depth: 4365'**
 Time On: 08:47 09/23 Time Off: 14:30 09/23
 Time On Bottom: 10:42 09/23 Time Off Bottom: 12:42 09/23

Electronic Volume Estimate:
 8'

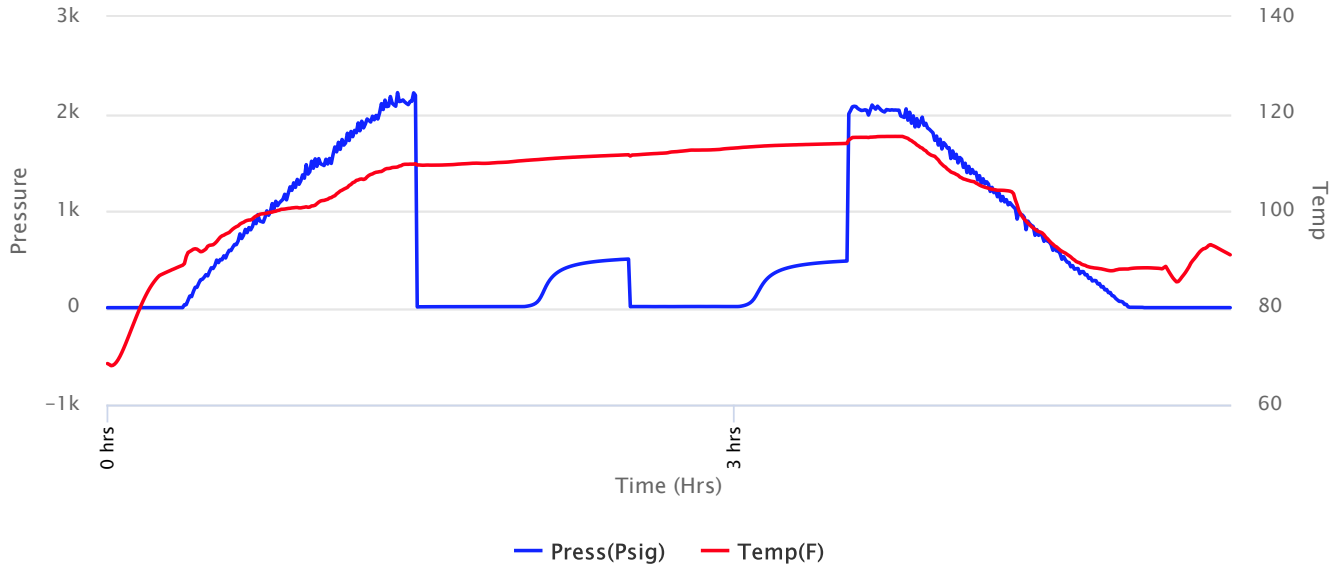
1st Open
 Minutes: 30
 Current Reading: .7" at 30 min
 Max Reading: .7"

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: L. D. Drilling, Inc
Lease: Horn #1-36

SEC: 36 TWN: 19S RNG: 29W
 County: LANE
 State: Kansas
 Drilling Contractor: L. D. Drilling, Inc - Rig 1
 Elevation: 2818 EGL
 Field Name: J-MUR NE
 Pool: Infield
 Job Number: 392
 API #: 15-101-22631

Operation:
 Uploading recovery & pressures

DATE
 September
23
 2019

DST #5 **Formation: Lower 220' Zone** **Test Interval: 4351 - 4365'** **Total Depth: 4365'**
 Time On: 08:47 09/23 Time Off: 14:30 09/23
 Time On Bottom: 10:42 09/23 Time Off Bottom: 12:42 09/23

Recovered

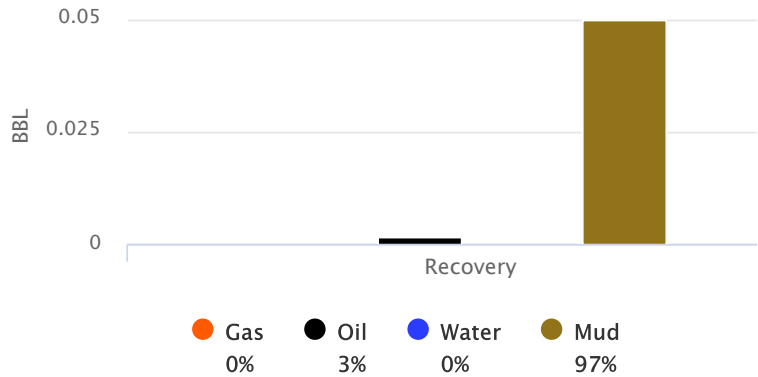
Foot	BBLs	Description of Fluid	Gas %	Oil %	Water %	Mud %
5	0.0513	SLOCM	0	3	0	97

Total Recovered: 5 ft
 Total Barrels Recovered: 0.0513

Reversed Out
NO

Initial Hydrostatic Pressure	2095	PSI
Initial Flow	8 to 12	PSI
Initial Closed in Pressure	502	PSI
Final Flow Pressure	11 to 12	PSI
Final Closed in Pressure	482	PSI
Final Hydrostatic Pressure	2091	PSI
Temperature	114	°F
Pressure Change Initial Close / Final Close	4.0	%

Recovery at a glance



GIP cubic foot volume: 0



Company: L. D. Drilling, Inc
Lease: Horn #1-36

SEC: 36 TWN: 19S RNG: 29W
County: LANE
State: Kansas
Drilling Contractor: L. D. Drilling, Inc -
Rig 1
Elevation: 2818 EGL
Field Name: J-MUR NE
Pool: Infield
Job Number: 392
API #: 15-101-22631

Operation:
Uploading recovery &
pressures

DATE
September
23
2019

DST #5	Formation: Lower 220' Zone	Test Interval: 4351 - 4365'	Total Depth: 4365'
	Time On: 08:47 09/23	Time Off: 14:30 09/23	
	Time On Bottom: 10:42 09/23	Time Off Bottom: 12:42 09/23	

BUCKET MEASUREMENT:

1st Open: Surface blow building to 1/2"
1st Close: No BB
2nd Open: Surface blow
2nd Close: No BB

REMARKS:

Tool Sample: 0% Gas 1% Oil 0% Water 99% Mud



Company: L. D. Drilling, Inc
Lease: Horn #1-36

SEC: 36 TWN: 19S RNG: 29W
 County: LANE
 State: Kansas
 Drilling Contractor: L. D. Drilling, Inc - Rig 1
 Elevation: 2818 EGL
 Field Name: J-MUR NE
 Pool: Infield
 Job Number: 392
 API #: 15-101-22631

Operation:
 Uploading recovery & pressures

DATE
 September
23
 2019

DST #5 **Formation: Lower 220' Zone** **Test Interval: 4351 - 4365'** **Total Depth: 4365'**
 Time On: 08:47 09/23 Time Off: 14:30 09/23
 Time On Bottom: 10:42 09/23 Time Off Bottom: 12:42 09/23

Down Hole Makeup

Heads Up: 16.04 FT	Packer 1: 4346 FT
Drill Pipe: 4334.47 FT <i>ID-3 1/4</i>	Packer 2: 4351 FT
Weight Pipe: 0 FT <i>ID-2 7/8</i>	Top Recorder: 4335.42 FT
Collars: 0 FT <i>ID-2 1/4</i>	Bottom Recorder: 4353 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: 14	Surface Choke: 1"
<u>Anchor Makeup</u>	Bottom Choke: 5/8"
Packer Sub: 1 FT	
Perforations: (top): 0 FT <i>4 1/2-FH</i>	
Change Over: 0 FT	
Drill Pipe: (in anchor): 0 FT <i>ID-3 1/4</i>	
Change Over: 0 FT	
Perforations: (below): 13 FT <i>4 1/2-FH</i>	



Company: L. D. Drilling, Inc
Lease: Horn #1-36

SEC: 36 TWN: 19S RNG: 29W
County: LANE
State: Kansas
Drilling Contractor: L. D. Drilling, Inc - Rig 1
Elevation: 2818 EGL
Field Name: J-MUR NE
Pool: Infield
Job Number: 392
API #: 15-101-22631

Operation:
Uploading recovery & pressures

DATE
September
23
2019

DST #5 **Formation: Lower 220' Zone** **Test Interval: 4351 - 4365'** **Total Depth: 4365'**
Time On: 08:47 09/23 Time Off: 14:30 09/23
Time On Bottom: 10:42 09/23 Time Off Bottom: 12:42 09/23

Gas Volume Report

1st Open			
Time	Orifice	PSI	MCF/D

2nd Open			
Time	Orifice	PSI	MCF/D



Company: L. D. Drilling, Inc
Lease: Horn #1-36

SEC: 36 TWN: 19S RNG: 29W
 County: LANE
 State: Kansas
 Drilling Contractor: L. D. Drilling, Inc - Rig 1
 Elevation: 2818 EGL
 Field Name: J-MUR NE
 Pool: Infield
 Job Number: 392
 API #: 15-101-22631

Operation:
 Uploading recovery & pressures

DATE
 September
24
 2019

DST #6 **Formation: Marmaton/Altamont** **Test Interval: 4377 - 4464'** **Total Depth: 4464'**
 Time On: 03:27 09/24 Time Off: 10:37 09/24
 Time On Bottom: 05:31 09/24 Time Off Bottom: 08:31 09/24

Electronic Volume Estimate:
 77'

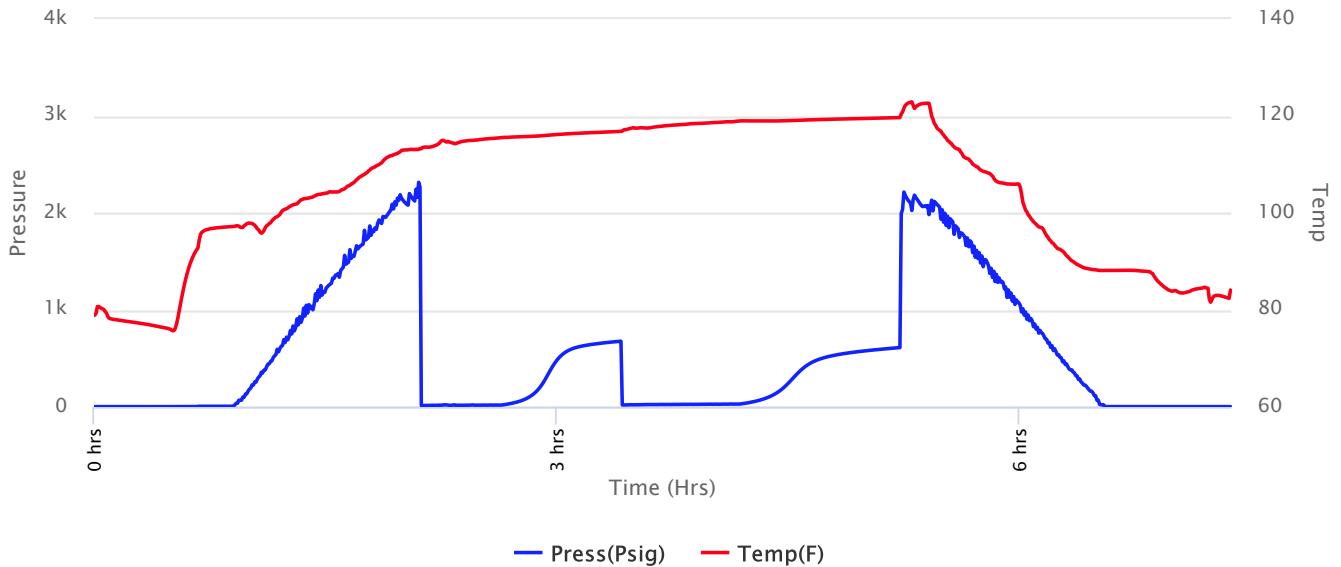
1st Open
 Minutes: 30
 Current Reading: 3.3" at 30 min
 Max Reading: 3.3"

1st Close
 Minutes: 45
 Current Reading: 0" at 45 min
 Max Reading: 0"

2nd Open
 Minutes: 45
 Current Reading: 3.2" at 45 min
 Max Reading: 3.2"

2nd Close
 Minutes: 60
 Current Reading: 0" at 60 min
 Max Reading: 0"

Inside Recorder





Company: L. D. Drilling, Inc
Lease: Horn #1-36

SEC: 36 TWN: 19S RNG: 29W
 County: LANE
 State: Kansas
 Drilling Contractor: L. D. Drilling, Inc - Rig 1
 Elevation: 2818 EGL
 Field Name: J-MUR NE
 Pool: Infield
 Job Number: 392
 API #: 15-101-22631

Operation:
 Uploading recovery & pressures

DATE
 September
24
 2019

DST #6 **Formation: Marmaton/Altamont** **Test Interval: 4377 - 4464'** **Total Depth: 4464'**
 Time On: 03:27 09/24 Time Off: 10:37 09/24
 Time On Bottom: 05:31 09/24 Time Off Bottom: 08:31 09/24

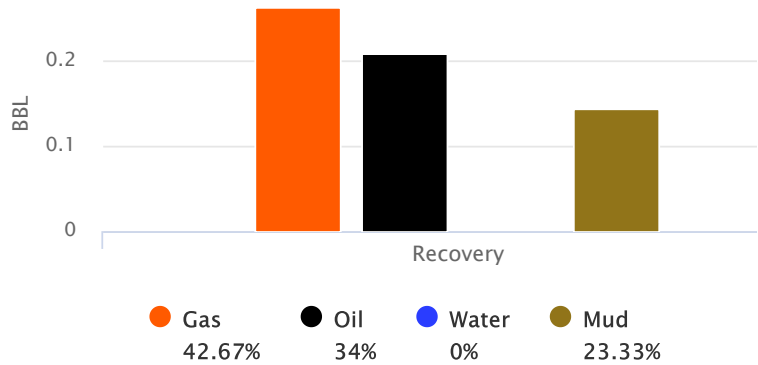
Recovered		Description of Fluid	Gas %	Oil %	Water %	Mud %
Foot	BBLs					
20	0.2052	G	100	0	0	0
40	0.4104	SLGCHMCO	14	51	0	35

Total Recovered: 60 ft
 Total Barrels Recovered: 0.6156

Reversed Out
NO

Initial Hydrostatic Pressure	2158	PSI
Initial Flow	12 to 17	PSI
Initial Closed in Pressure	675	PSI
Final Flow Pressure	19 to 27	PSI
Final Closed in Pressure	610	PSI
Final Hydrostatic Pressure	2154	PSI
Temperature	120	°F
Pressure Change Initial Close / Final Close	9.8	%

Recovery at a glance



GIP cubic foot volume: 1.47468



Company: L. D. Drilling, Inc
Lease: Horn #1-36

SEC: 36 TWN: 19S RNG: 29W
County: LANE
State: Kansas
Drilling Contractor: L. D. Drilling, Inc -
Rig 1
Elevation: 2818 EGL
Field Name: J-MUR NE
Pool: Infield
Job Number: 392
API #: 15-101-22631

Operation:
Uploading recovery &
pressures

DATE
September
24
2019

DST #6 **Formation:** **Test Interval: 4377 -** **Total Depth: 4464'**
Marmaton/Altamont **4464'**
Time On: 03:27 09/24 Time Off: 10:37 09/24
Time On Bottom: 05:31 09/24 Time Off Bottom: 08:31 09/24

BUCKET MEASUREMENT:

1st Open: Surface blow building to 3"
1st Close: No BB
2nd Open: Surface blow building to 3"
2nd Close: No BB

REMARKS:

Tool Sample: 0% Gas 55% Oil 0% Water 45% Mud



Company: L. D. Drilling, Inc
Lease: Horn #1-36

SEC: 36 TWN: 19S RNG: 29W
 County: LANE
 State: Kansas
 Drilling Contractor: L. D. Drilling, Inc -
 Rig 1
 Elevation: 2818 EGL
 Field Name: J-MUR NE
 Pool: Infield
 Job Number: 392
 API #: 15-101-22631

Operation:
 Uploading recovery &
 pressures

DATE
 September
24
 2019

DST #6 **Formation:** **Test Interval: 4377 -** **Total Depth: 4464'**
 Marmaton/Altamont **4464'**
 Time On: 03:27 09/24 Time Off: 10:37 09/24
 Time On Bottom: 05:31 09/24 Time Off Bottom: 08:31 09/24

Down Hole Makeup

Heads Up: 21.82 FT	Packer 1: 4371.92 FT
Drill Pipe: 4366.17 FT <i>ID-3 1/4</i>	Packer 2: 4376.92 FT
Weight Pipe: 0 FT <i>ID-2 7/8</i>	Top Recorder: 4361.34 FT
Collars: 0 FT <i>ID-2 1/4</i>	Bottom Recorder: 4447 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: 87.08	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: 1 FT	
Drill Pipe: (in anchor): 62.08 FT <i>ID-3 1/4</i>	
Change Over: 1 FT	
Perforations: (below): 18 FT <i>4 1/2-FH</i>	



Company: L. D. Drilling, Inc
Lease: Horn #1-36

SEC: 36 TWN: 19S RNG: 29W
 County: LANE
 State: Kansas
 Drilling Contractor: L. D. Drilling, Inc -
 Rig 1
 Elevation: 2818 EGL
 Field Name: J-MUR NE
 Pool: Infield
 Job Number: 392
 API #: 15-101-22631

Operation:
 Uploading recovery &
 pressures

DATE
 September
24
 2019

DST #6 **Formation: Marmaton/Altamont** **Test Interval: 4377 - 4464'** **Total Depth: 4464'**
 Time On: 03:27 09/24 Time Off: 10:37 09/24
 Time On Bottom: 05:31 09/24 Time Off Bottom: 08:31 09/24

Gas Volume Report

1st Open			
Time	Orifice	PSI	MCF/D

2nd Open			
Time	Orifice	PSI	MCF/D



Company: L. D. Drilling, Inc
Lease: Horn #1-36

SEC: 36 TWN: 19S RNG: 29W
 County: LANE
 State: Kansas
 Drilling Contractor: L. D. Drilling, Inc - Rig 1
 Elevation: 2818 EGL
 Field Name: J-MUR NE
 Pool: Infield
 Job Number: 392
 API #: 15-101-22631

Operation:
 Uploading recovery & pressures

DATE
 September
25
 2019

DST #7 **Formation: Myrick-Johnson** **Test Interval: 4512 - 4630'** **Total Depth: 4630'**
 Time On: 05:32 09/25 Time Off: 12:04 09/25
 Time On Bottom: 07:54 09/25 Time Off Bottom: 09:54 09/25

Electronic Volume Estimate:
 16'

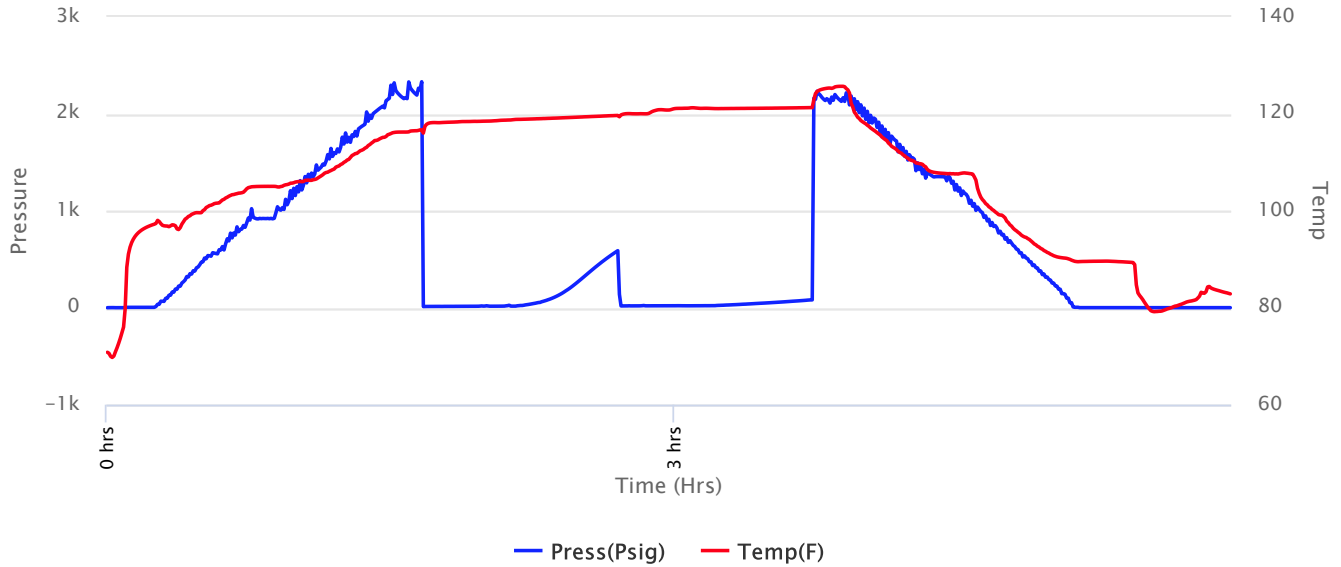
1st Open
 Minutes: 30
 Current Reading: 1.1" at 30 min
 Max Reading: 1.3"

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: 30
 Current Reading: 0" at 30 min
 Max Reading: 0"

Inside Recorder





Company: L. D. Drilling, Inc
Lease: Horn #1-36

SEC: 36 TWN: 19S RNG: 29W
 County: LANE
 State: Kansas
 Drilling Contractor: L. D. Drilling, Inc - Rig 1
 Elevation: 2818 EGL
 Field Name: J-MUR NE
 Pool: Infield
 Job Number: 392
 API #: 15-101-22631

Operation:
 Uploading recovery & pressures

DATE
 September
25
 2019

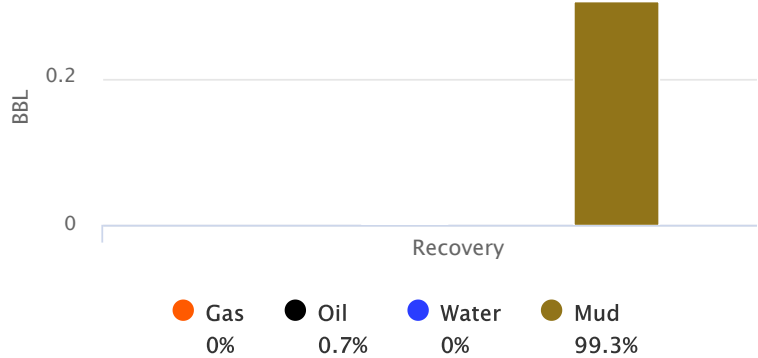
DST #7 **Formation: Myrick-Johnson** **Test Interval: 4512 - 4630'** **Total Depth: 4630'**
 Time On: 05:32 09/25 Time Off: 12:04 09/25
 Time On Bottom: 07:54 09/25 Time Off Bottom: 09:54 09/25

Recovered		Description of Fluid	Gas %	Oil %	Water %	Mud %
Foot	BBLs					
30	0.3078	M (trace O)	0	.7	0	99.3

Total Recovered: 30 ft
 Total Barrels Recovered: 0.3078

Reversed Out
 NO

Recovery at a glance



Initial Hydrostatic Pressure	2248	PSI
Initial Flow	12 to 17	PSI
Initial Closed in Pressure	588	PSI
Final Flow Pressure	19 to 21	PSI
Final Closed in Pressure	81	PSI
Final Hydrostatic Pressure	2233	PSI
Temperature	122	°F
Pressure Change Initial Close / Final Close	86.3	%

GIP cubic foot volume: 0



Company: L. D. Drilling, Inc
Lease: Horn #1-36

SEC: 36 TWN: 19S RNG: 29W
County: LANE
State: Kansas
Drilling Contractor: L. D. Drilling, Inc -
Rig 1
Elevation: 2818 EGL
Field Name: J-MUR NE
Pool: Infield
Job Number: 392
API #: 15-101-22631

Operation:
Uploading recovery &
pressures

DATE
September
25
2019

DST #7 **Formation: Myrick-
Johnson** **Test Interval: 4512 -
4630'** **Total Depth: 4630'**
Time On: 05:32 09/25 Time Off: 12:04 09/25
Time On Bottom: 07:54 09/25 Time Off Bottom: 09:54 09/25

BUCKET MEASUREMENT:

1st Open: 1/4" blow building to 3/4"

1st Close: No BB

2nd Open: Weak surface blow lasting 17 1/2 min.

2nd Close: No BB

REMARKS:

Tool Sample: 0% Gas 1% Oil 0% Water 99% Mud



Company: L. D. Drilling, Inc
Lease: Horn #1-36

SEC: 36 TWN: 19S RNG: 29W
 County: LANE
 State: Kansas
 Drilling Contractor: L. D. Drilling, Inc - Rig 1
 Elevation: 2818 EGL
 Field Name: J-MUR NE
 Pool: Infield
 Job Number: 392
 API #: 15-101-22631

Operation:
 Uploading recovery & pressures

DATE
 September
25
 2019

DST #7 Formation: Myrick-Johnson Test Interval: 4512 - 4630' Total Depth: 4630'
 Time On: 05:32 09/25 Time Off: 12:04 09/25
 Time On Bottom: 07:54 09/25 Time Off Bottom: 09:54 09/25

Down Hole Makeup

Heads Up: 12.55 FT	Packer 1: 4507.17 FT
Drill Pipe: 4492.15 FT <i>ID-3 1/4</i>	Packer 2: 4512.17 FT
Weight Pipe: 0 FT <i>ID-2 7/8</i>	Top Recorder: 4496.59 FT
Collars: 0 FT <i>ID-2 1/4</i>	Bottom Recorder: 4614 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: 117.83	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: 1 FT	
Drill Pipe: (in anchor): 93.83 FT <i>ID-3 1/4</i>	
Change Over: 1 FT	
Perforations: (below): 17 FT <i>4 1/2-FH</i>	



Company: L. D. Drilling, Inc
Lease: Horn #1-36

SEC: 36 TWN: 19S RNG: 29W
County: LANE
State: Kansas
Drilling Contractor: L. D. Drilling, Inc -
Rig 1
Elevation: 2818 EGL
Field Name: J-MUR NE
Pool: Infield
Job Number: 392
API #: 15-101-22631

Operation:
Uploading recovery &
pressures

DATE
September
25
2019

DST #7 **Formation: Myrick-
Johnson** **Test Interval: 4512 -
4630'** **Total Depth: 4630'**
Time On: 05:32 09/25 Time Off: 12:04 09/25
Time On Bottom: 07:54 09/25 Time Off Bottom: 09:54 09/25

Mud Properties

Mud Type: Chemical **Weight:** 9.3 **Viscosity:** 51 **Filtrate:** 8.0 **Chlorides:** 3,000 ppm

KIM B. SHOEMAKER

CONSULTING GEOLOGIST

316-684-9709 * WICHITA, KS

GEOLOGIST'S REPORT

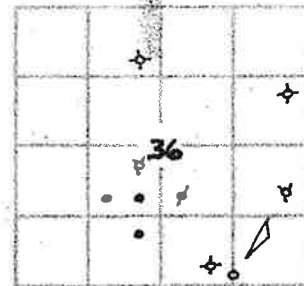
DRILLING TIME AND SAMPLE LOG

COMPANY L. D. DRILLING, INC.
 LEASE * 1-36 HORN
 FIELD J. MUR NE
 LOCATION 165' FSL & 1320' FEL
 SEC. 36 TWP. 19s RGE. 29w
 COUNTY LANE STATE KANSAS
 CONTRACTOR L. D. DRILLING, INC.
 SPUD. 9-14-19 COMP. 9-26-19
 RTD. 4747 LTD. 4748
 MUD UP. 3422 TYPE MUD CHEMICAL

ELEVATIONS
 KB. 2821
 DF. _____
 GL. 2816
 Measurements Are All
 From 2821 KB
 CASING
 SURFACE 8 5/8" @ 303'
 PRODUCTION 5 1/2" @
 ELECTRICAL SURVEYS
 Dual IND., DENS-N., MICRO

SAMPLES SAVED FROM 3800 TO 4747
 DRILLING TIME KEPT FROM 3500 TO 4747
 SAMPLES EXAMINED FROM 3800 TO 4747
 GEOLOGICAL SUPERVISION FROM 3900 TO 4747
 GEOLOGIST ON WELL KIM B. SHOEMAKER

FORMATION TOPS	LOG	SAMPLES
ANHYDRITE	2128 + 693	2125 + 696
B/ANH.	2155 + 666	2155 + 666
STOTLER	3550 - 729	3550 - 729
HEEBNER	3966 - 1145	3968 - 1147
LANGING	4008 - 1187	4008 - 1187
STARK	4293 - 1472	4291 - 1470
MARMATON	4404 - 1583	4403 - 1582
FORT SCOT	4542 - 1721	4545 - 1724
CHEROKEE	4565 - 1744	4566 - 1745
MISSISSIPPI	4642 - 1823	4640 - 1821


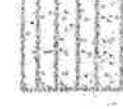



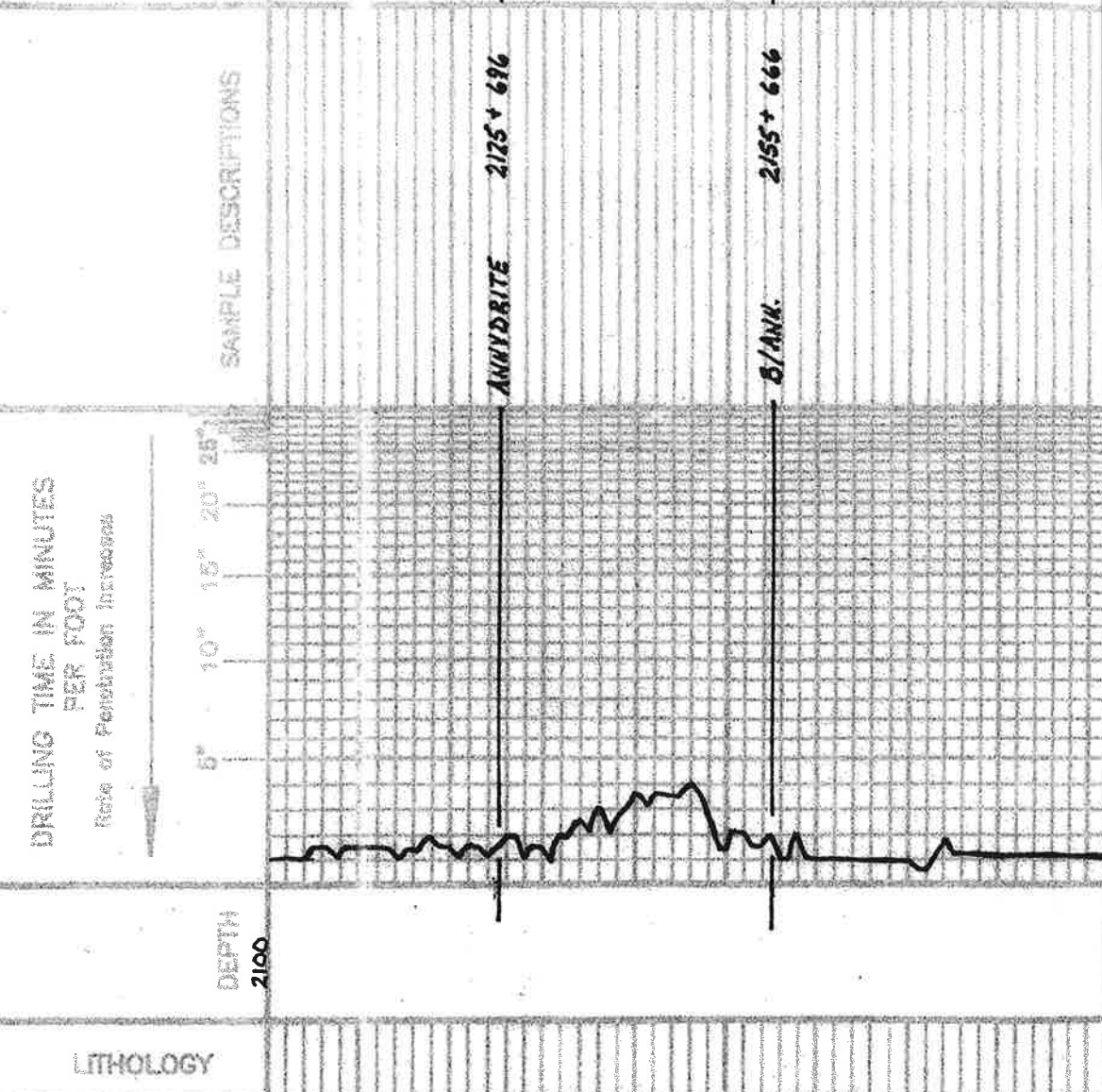
API: 15-101-22631

REMARKS

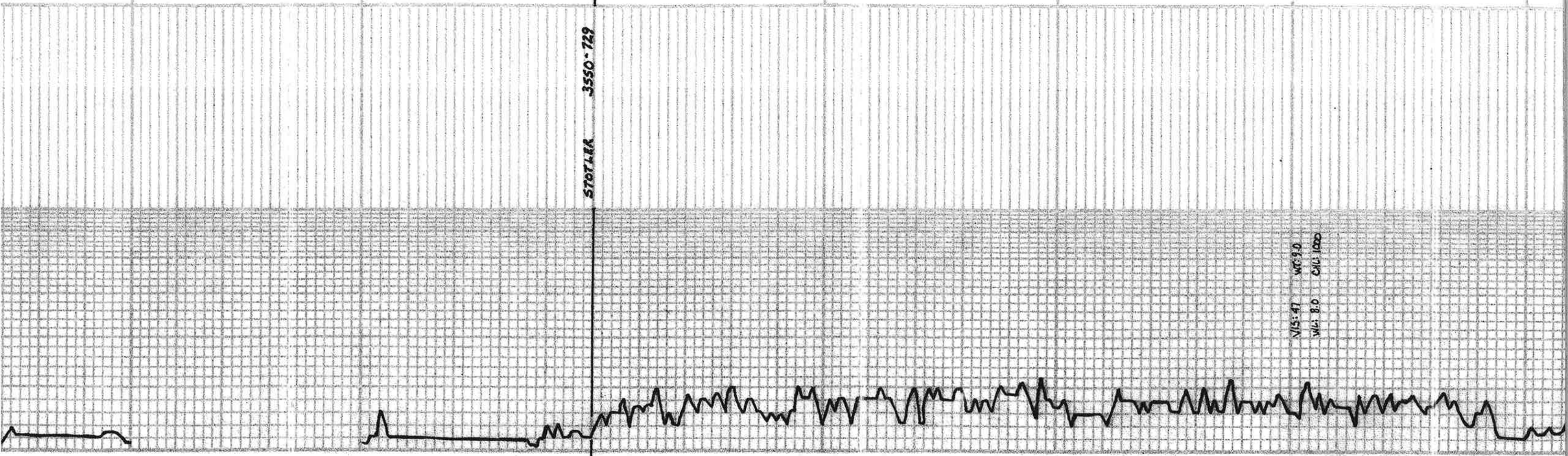
9-14-19 59VD
 9-15 @ 303'
 9-16 @ 1751'
 9-17 @ 2700'
 9-18 @ 3247'
 9-19 @ 3695'
 9-20 @ 4176'
 9-21 @ 4307'
 9-22 @ 4342'
 9-23 @ 4365'
 9-24 @ 4464'
 9-25 @ 4630'
 9-26 @ 4747'

LEGEND

-  Dolomite
-  Chert
-  Co. Lime
-  Unstrat. Co. Lime
-  Core sh.
-  Shale
-  Sandstone
-  Salt
-  Anhydrite



SHOED1-11



2200

3500

3600

3700

Samples are Lagged

LS. T. w. & St. Foss.

LS. G. Foss. St. Chl.

Sh. DEG. BLE

Sh. Kly.

LS. Kly. Foss. St. Chl.

LS. w. Kly. Foss. St. Chl.

LS. T. Foss. St. Delonchis.

LS. T. St. A

Sh. DEG.

LS. w. Foss.

LS. T. w. Foss.

LS. T. G. St. Foss.

HEBNER 3968-1147

St. Ble. Carb.

Sh. Kly.

LS. w. Foss. St. A

LS. w. Foss. St. A

Sh. Kly. LANSING 4008-1187

LS. w. Foss. St. A

Sh. Kly.

LS. T. G. St. A

Sh. DEG.

Sh. DEG.

LS. T. w. St. A

LS. w. Chl.

Sh. Kly.

LS. T. G. w. St. A

3800

3900

4000

V. 102

ls. wt. chly.
 Sh. Ltg
 Δ wt.
 ls. Tng. and sl. A
 ls. T. vsii. Clatili
 Sh. Gg.
 ls. Llg. vsi. Foss.
 Sh. Hlg.
 ls. Llg. sl. Foss.
 ls. T. Hlg. occ. Show.
 ls. wt. vchly.
 ls. Llg. vsi. Foss.
 ls. G. vs. A

MUNCIE CREEK 4192-1571

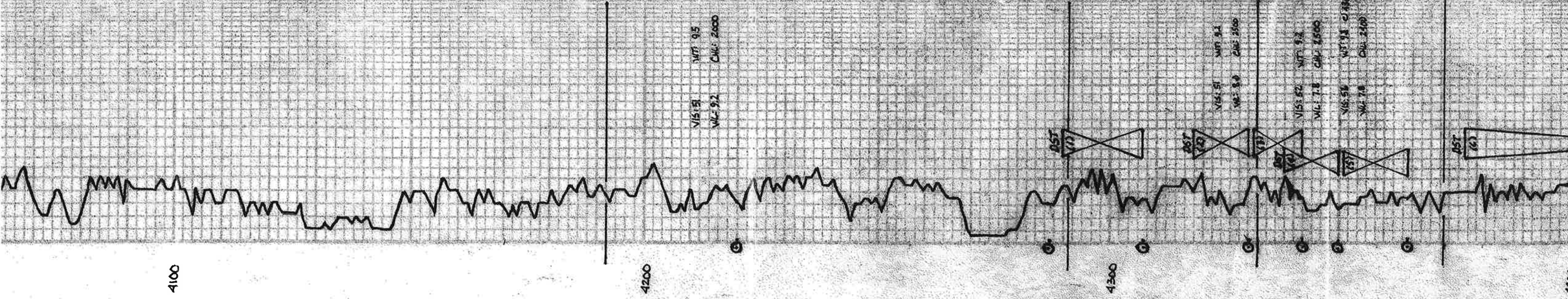
ls. Bl. vsi. Foss. vs. i. Calcitic
 Δ Des.
 Sh. G. Blue
 ls. Δ wt. Llg.
 ls. wt. vsi. Foss. - 401 sl. A
 ls. ls. T. and sl. A
 Sh. Dk. G.
 ls. B. vsi. Foss.
 Sh. Llg.
 ls. T. and sl. Foss. vs. i. SLA

Sh. Llg.
 ls. Llg. vsi. Foss. sl. A
 ls. T. and sl. Foss. vs. i. F. v. g.
 ls. wt. chly.
STARK 4291-1170
 Sh. Blue calc. ls. Bl. vsi. Foss. sl. A
 Sh.
 ls. wt. chly. and sl. F. v. g.
 ls. Bl. vsi. Foss. vs. i. F. v. g.
 ls. G. vsi. Foss. vs. i. A
 Δ Gg.

ls. G. vsi. Foss. vs. i. Dolomitic. sl. A
 ls. wt. chly. vsi. Foss. vs. i. Dull Floor
 ls. Llg. vsi. Foss. vs. i. Dull Floor
 ls. G. vsi. Foss. vs. i. Dull Floor
 Δ Gg.
MUSPICKNEY 4332-1511
 Sh. Blue calc.
 ls. wt. chly. vsi. Foss. vs. i. Dull Floor
 ls. Bl. vsi. Foss. vs. i. Dull Floor
 ls. Llg. vsi. Foss. vs. i. Dull Floor
 ls. G. vsi. Foss. vs. i. Dull Floor
 Δ Gg.

ls. wt. chly. vsi. Foss. vs. i. Dull Floor
 ls. Bl. vsi. Foss. vs. i. Dull Floor
 ls. Llg. vsi. Foss. vs. i. Dull Floor
 ls. G. vsi. Foss. vs. i. Dull Floor
 Δ Gg.
B/KC 4373-1552
 Sh. Llg.
 ls. wt. chly. vsi. Foss. vs. i. Dull Floor
 ls. Bl. vsi. Foss. vs. i. Dull Floor
 ls. Llg. vsi. Foss. vs. i. Dull Floor
 ls. G. vsi. Foss. vs. i. Dull Floor
 Δ Gg.

ls. wt. chly. vsi. Foss. vs. i. Dull Floor
 ls. Bl. vsi. Foss. vs. i. Dull Floor
 ls. Llg. vsi. Foss. vs. i. Dull Floor
 ls. G. vsi. Foss. vs. i. Dull Floor
 Δ Gg.



DST (1) 4290-4307
 1st OPEN: Blow built to 7 1/4"
 2nd OPEN: " " " 11"
 30-45-45-60
 Tool Sample
 17.01
 99.7W
 Rec: 20' Clean Oil
 220' vs. calc. vs. i.
 27.01. 897. W. 9.1 (M)
 TF: 240
 FP: 13-60 62-315 #
 SIP: 725-705 #
 Temp 180 °F

DST (2) 4318-4330
 1st OPEN: Blow built to 7 1/4"
 2nd OPEN: " " " 7"
 30-45-45-60
 Tool Sample
 100.1W
 Rec: 15' CO (Clean Oil)
 165' vs. calc. vs. i.
 167.01. 861. W. 8.1 (M)
 TF: 180
 FP: 11-48 50-90 #
 SIP: 760-714 #
 Temp 179 °F

DST (3) 4331-4342
 1st OPEN: Blow built to 2 1/4"
 2nd OPEN: " " " 3"
 30-45-45-60
 Tool Sample
 57.01
 26.1 W
 17.1 H
 Rec: 25' G.L.P.
 25' Clean Oil
 10' vs. calc. vs. i.
 257.01. 201. W. 5.5 (M)
 TF: 35
 FP: 9-16 18-26 #
 SIP: 661-624 #
 Temp 180 °F

DST (4) 4338-4350
 1st OPEN: Blow built to 2 1/4"
 2nd OPEN: " " " 3"
 30-45-45-60
 Tool Sample
 57.01
 26.1 W
 17.1 H
 Rec: 25' G.L.P.
 25' Clean Oil
 10' vs. calc. vs. i.
 257.01. 201. W. 5.5 (M)
 TF: 35
 FP: 9-16 18-26 #
 SIP: 661-624 #
 Temp 180 °F

59514 LA Bire

W. 10 040 3100

MISSISSIPPI 40-10-1921

Del. 41g. Fresh Suc.

Del. 7. out. V. Fresh. 55. Fresh. Veggy. No Show No Offer

Del. 75. Fresh. Suc.

65. 41. 51. Fresh. 51. Ch. L.

51. 81. 61.

45. 41. 81. 51. Suc. Fresh.

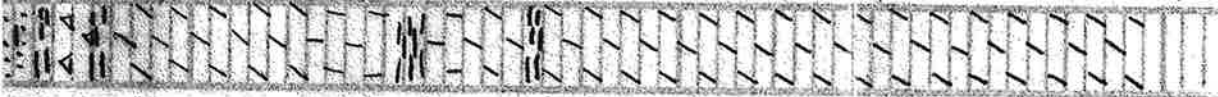
Del. 81. 51. Fresh.

Del. 71. 51. Fresh. 51. 61.

Del. 41. 81. 51. Fresh. w/ 21. 51. Fresh.

Del. 41. 51. Fresh. Suc. V. Fresh.

Del. 51. 51. Fresh.



4100

4747-1716





BASICSM
ENERGY SERVICES
PRESSURE PUMPING & WIRELINE

10244 NE Hwy. 61
P.O. Box 8613
Pratt, Kansas 67124
Phone 620-672-1201

1062

18mkt
45

FIELD SERVICE TICKET
1718 18296 A

DATE _____ TICKET NO. _____

DATE OF JOB: 9-26-19		DISTRICT: Pratt		NEW WELL <input checked="" type="checkbox"/> OLD WELL <input type="checkbox"/>		PROD <input type="checkbox"/> INJ <input type="checkbox"/> WDW <input type="checkbox"/>		CUSTOMER ORDER NO.:			
CUSTOMER: LD Drilling inc				LEASE: H01A				WELL NO.: 1-36			
ADDRESS:				COUNTY: Lane				STATE: KS			
CITY:				STATE:				SERVICE CREW: MATTAI, Mcgraw, Harold			
AUTHORIZED BY:				JOB TYPE: 2-42 5 1/2" Long String							
EQUIPMENT#	HRS	EQUIPMENT#	HRS	EQUIPMENT#	HRS	TRUCK CALLED		DATE	AM	PM	TIME
86779	1							9-26			1:00
						ARRIVED AT JOB					4:15
						START OPERATION					8:45
19860	.5					FINISH OPERATION					9:45
						RELEASED					10:30
						MILES FROM STATION TO WELL					100

CONTRACT CONDITIONS: (This contract must be signed before the job is commenced or merchandise is delivered).

The undersigned is authorized to execute this contract as an agent of the customer. As such, the undersigned agrees and acknowledges that this contract for services, materials, products, and/or supplies includes all of and only those terms and conditions appearing on the front and back of this document. No additional or substitute terms and/or conditions shall become a part of this contract without the written consent of an officer of Basic Energy Services LP.

SIGNED: Ruby Papp
(WELL OWNER, OPERATOR, CONTRACTOR OR AGENT)

ITEM/PRICE REF. NO.	MATERIAL, EQUIPMENT AND SERVICES USED	UNIT	QUANTITY	UNIT PRICE	\$ AMOUNT
BC 145	AA-2 Premium cement	54	150		2,850.00
BC 132	60/40 P02	54	30		810.00
CC 102	Cellulose	lb	38		152.00
CC 105	C-41P	lb	71		284.00
CC 111	SMT	lb	815		407.50
CC 113	SYP	lb	705		218.55
CC 187	C 17	lb	93		2,208.00
CC 201	Silicon	lb	901		901.00
CC 133	HCl	gal	5		365.00
CC 151	mud flush	gal	1,000		1,500.00
CC 200	cmo gel	lb	52		26.00
CC 5	depth charge 4000' - 5000'	hr	1		2,500.00
CC 240	blend + mix	54	180		252.00
Me 101	Light veh miles	mi	100		500.00
Me 102	Heavy eq miles	mi	200		1,600.00

SUB TOTAL

CHEMICAL / ACID DATA:			

SERVICE & EQUIPMENT	%TAX ON \$
MATERIALS	%TAX ON \$

TOTAL

SERVICE REPRESENTATIVE: Mike Mattai
THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY: X Ruby Papp
(WELL OWNER OPERATOR CONTRACTOR OR AGENT)

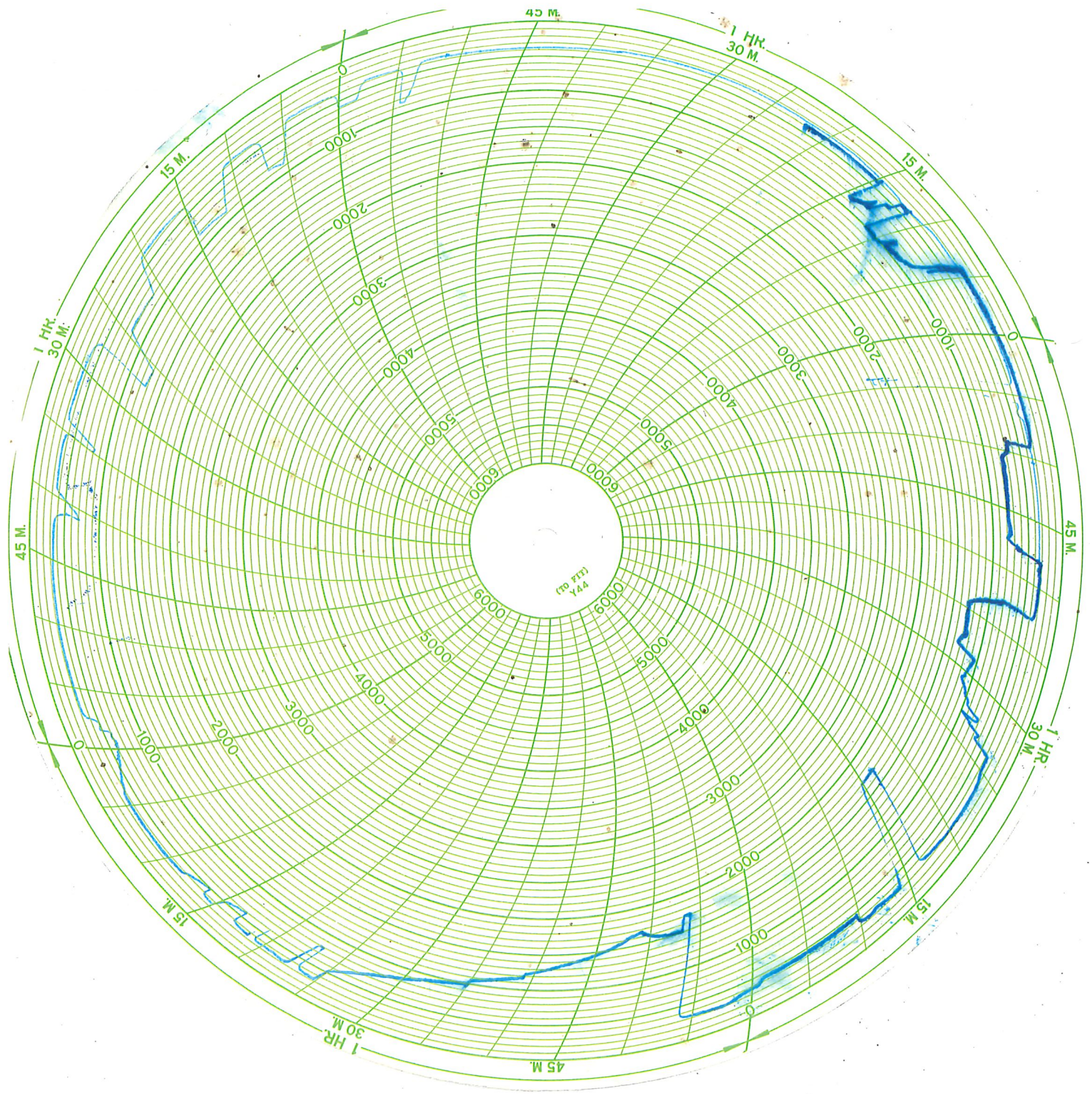
FIELD SERVICE ORDER NO.

Customer LD Drilling inc	Lease No.	Date 9-26-19
Lease HORN	Well # 1-36	
Field Order # 18296	Station PRATT	Casing 4747 RPA
Type Job Z-42 5 1/2" long string	Formation 42-25' show	County LANE State KS
		Legal Description 36-19S-29W

PIPE DATA		PERFORATING DATA		FLUID USED		TREATMENT RESUME		
Casing Size 5 1/2	Tubing Size	Shots/Ft		Acid 150 AA-2 LP Blend	RATE	PRESS	ISIP	
Depth 4740	Depth	From	To	Pre Pad 30 60/40 PDC	Max		5 Min.	
Volume 112.8	Volume	From	To	Pad	Min		10 Min.	
Max Press 1,300	Max Press	From	To	Frac	Avg		15 Min.	
Well Connection PC	Annulus Vol.	From	To		HHP Used		Annulus Pressure	
Plug Depth 4697.75	Packer Depth	From	To	Flush 111.8	Gas Volume		Total Load	

Customer Representative RICK POPP	Station Manager W. STERMAN	Treater MATTAI
Service Units 83353	77686	86729
Driver Names MATTAI	M. Graw	Harold

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
4:15					ON LOCATION / SAFETY MEETING
4:55					RUN 5 1/2 15.5" USED CSNG / PORT COLLAR TO TOP OF G3
					P.C. @ 2172' BASKETS ON TOP OF G1, + G2
					TUBING ON 1, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14 + G4
6:50					CSNG ON BOTTOM
6:56					HOOK TO CSNG / BREAK CIRC W. R. 13
8:45	330		24	5.5	PUMP 1,000 GALLONS MUD FLUSH
8:51	330		5	5.5	PUMP 5 bbl WATER
8:53	330		41	5.5	MIX 150 GAL AA-2
9:03			4	4	WASH PUMP + LINE / PROP PLUG
9:10	70			6.3	START DISPLACEMENT 29% K&L
9:23	240		78	6.3	LIFT PRESSURE
9:26			101		SLOW RATE
9:29	800/1500		111.8		PLUG DOWN / RELEASED + HOLD
9:45					PLUG RAT HOLD
					CIRCULATION THRU JOB
					JOB COMPLETE
					THANK YOU!
					MIKE MATTAI
					MIKE + HAROLD



10-11-19
 L.D. Drilling
 Horn 1-36
 Lane, KS
 Cement Squeeze

TTH: 50



BASIC
ENERGY SERVICES
PRESSURE PUMPING & WIRELINE

10244 NE Hwy. 61
P.O. Box 8613
Pratt, Kansas 67124
Phone 620-672-1201

36-195-29w

FIELD SERVICE TICKET
1718 18183 A

DATE _____ TICKET NO. _____

DATE OF JOB: 9/15/2019		DISTRICT: Pgs & Hks		NEW WELL <input checked="" type="checkbox"/> OLD WELL <input type="checkbox"/>		PROD <input type="checkbox"/> INJ <input type="checkbox"/> WDW <input type="checkbox"/>		CUSTOMER ORDER NO.:	
CUSTOMER: LD Drilling, Inc.				LEASE: Horn		WELL NO.: 1-36			
ADDRESS:				COUNTY: Lane		STATE: KS			
CITY:				STATE:		SERVICE CREW: Dgr., Bress, Pisz			
AUTHORIZED BY:				JOB TYPE: 242/8 5/8 SUIPSC					

EQUIPMENT#	HRS	EQUIPMENT#	HRS	EQUIPMENT#	HRS	TRUCK CALLED	DATE	AM/PM	TIME
19843	1/2						9/14	AM	7:00
21010	1/2						9/14	AM	10:45
							9/15	AM	12:15
							9/15	AM	12:45
							9/15	AM	1:00
						MILES FROM STATION TO WELL	157		

CONTRACT CONDITIONS: (This contract must be signed before the job is commenced or merchandise is delivered).

The undersigned is authorized to execute this contract as an agent of the customer. As such, the undersigned agrees and acknowledges that this contract for services, materials, products, and/or supplies includes all of and only those terms and conditions appearing on the front and back of this document. No additional or substitute terms and/or conditions shall become a part of this contract without the written consent of an officer of Basic Energy Services LP.

SIGNED: [Signature]
(WELL OWNER, OPERATOR, CONTRACTOR OR AGENT)

ITEM/PRICE REF. NO.	MATERIAL, EQUIPMENT AND SERVICES USED	UNIT	QUANTITY	UNIT PRICE	\$ AMOUNT
BC132	60/40 P02	SK	200		5,400 00
CC102	Celloflsre	LB	51		204 00
CC109	Calcium Chloride	LB	516		316 00
ME101	Light Vehicle Mileage	MI	100		500 00
ME102	Heavy Equipment Mileage	MI	200		1,1600 00
CC1	Depth Charge, 0-1,000'	HR	1		1,200 00
CF240	Blending & mixing Service Charge	SK	200		280 00
BE143	Service Supervisor Charge	EA	1		75 00
DE144	Driver Charge	EA	3		105 00

SUB TOTAL 9,880 00

CHEMICAL / ACID DATA:			

SERVICE & EQUIPMENT	%TAX ON \$	
MATERIALS	%TAX ON \$	
Discounted TOTAL		5,321 00

SERVICE REPRESENTATIVE: <u>[Signature]</u>	THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY: <u>[Signature]</u>
FIELD SERVICE ORDER NO.	(WELL OWNER OPERATOR CONTRACTOR OR AGENT)

Customer <i>LD Drilling</i>	Lease No.	Date <i>9/15/2019</i>	
Lease <i>Horn</i>	Well # <i>1-36</i>		
Field Order # <i>18183</i>	Station <i>Prs holes</i>	Casing <i>8 5/8</i>	Depth <i>306'</i>
		County <i>LGne</i>	State <i>KS</i>
Type Job <i>242/8 5/8 surface</i>	Formation <i>TD-303</i>	Legal Description <i>36-19s-29n</i>	

PIPE DATA		PERFORATING DATA		FLUID USED		TREATMENT RESUME		
Casing Size	Tubing Size	Shots/Ft		Acid	RATE	PRESS	ISIP	
<i>8 5/8</i>								
Depth <i>306'</i>	Depth	From	To	Pre Pad	Max		5 Min.	
Volume <i>19.4</i>	Volume	From	To	Pad	Min		10 Min.	
Max Press	Max Press	From	To	Frac	Avg		15 Min.	
Well Connection	Annulus Vol.	From	To		HHP Used		Annulus Pressure	
Plug Depth <i>286</i>	Packer Depth	From	To	Flush <i>Water</i>	Gas Volume		Total Load	

Customer Representative <i>Rick Wilson</i>	Station Manager <i>Justin Westerman</i>	Treater <i>Darin Franklin</i>
--	---	-------------------------------

Service Units	<i>92911</i>	<i>78982</i>	<i>19843</i>	<i>19960</i>	<i>21010</i>				
Driver Names	<i>Darin</i>	<i>Brett</i>	<i>Brett</i>	<i>Digz</i>	<i>Digz</i>				

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
<i>9/14</i>					
<i>10:45pm</i>					<i>On location/Safety meeting</i>
					<i>2005K 60/40 Poz + 3% cell 1/4# CF</i>
					<i>14.8ppg, 1.21 yield, 5.18 water</i>
<i>12:15pm</i>	<i>100</i>		<i>3</i>	<i>5</i>	<i>Pump 3 bbls water</i>
	<i>100</i>		<i>43</i>	<i>5</i>	<i>mix 2005K cement</i>
	<i>100</i>		<i>18</i>	<i>5</i>	<i>Displace water</i>
<i>12:30pm</i>					<i>Shut in</i>
					<i>Cement & Circulate - 10bbls</i>
					<i>Job Complete/Darin & crew</i>
					<i>Thsnic you!!!</i>

