

Confidentiality Requested:

Yes  No

**KANSAS CORPORATION COMMISSION  
OIL & GAS CONSERVATION DIVISION**

Form ACO-1

January 2018

**Form must be Typed**

**Form must be Signed**

**All blanks must be Filled**

**WELL COMPLETION FORM  
WELL HISTORY - DESCRIPTION OF WELL & LEASE**

OPERATOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Address 1: \_\_\_\_\_

Address 2: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ + \_\_\_\_\_

Contact Person: \_\_\_\_\_

Phone: ( \_\_\_\_\_ ) \_\_\_\_\_

CONTRACTOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Wellsite Geologist: \_\_\_\_\_

Purchaser: \_\_\_\_\_

Designate Type of Completion:

New Well  Re-Entry  Workover

Oil  WSW  SWD

Gas  DH  EOR

OG  GSW

CM (Coal Bed Methane)

Cathodic  Other (Core, Expl., etc.): \_\_\_\_\_

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

Operator: \_\_\_\_\_

Well Name: \_\_\_\_\_

Original Comp. Date: \_\_\_\_\_ Original Total Depth: \_\_\_\_\_

Deepening  Re-perf.  Conv. to EOR  Conv. to SWD

Plug Back  Liner  Conv. to GSW  Conv. to Producer

Commingled Permit #: \_\_\_\_\_

Dual Completion Permit #: \_\_\_\_\_

SWD Permit #: \_\_\_\_\_

EOR Permit #: \_\_\_\_\_

GSW Permit #: \_\_\_\_\_

Spud Date or Date Reached TD Completion Date or Recompletion Date

API No.: \_\_\_\_\_

Spot Description: \_\_\_\_\_

\_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

\_\_\_\_\_ Feet from  North /  South Line of Section

\_\_\_\_\_ Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

NE  NW  SE  SW

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

Datum:  NAD27  NAD83  WGS84

County: \_\_\_\_\_

Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Field Name: \_\_\_\_\_

Producing Formation: \_\_\_\_\_

Elevation: Ground: \_\_\_\_\_ Kelly Bushing: \_\_\_\_\_

Total Vertical Depth: \_\_\_\_\_ Plug Back Total Depth: \_\_\_\_\_

Amount of Surface Pipe Set and Cemented at: \_\_\_\_\_ Feet

Multiple Stage Cementing Collar Used?  Yes  No

If yes, show depth set: \_\_\_\_\_ Feet

If Alternate II completion, cement circulated from: \_\_\_\_\_

feet depth to: \_\_\_\_\_ w/ \_\_\_\_\_ sx cmt.

**Drilling Fluid Management Plan**

*(Data must be collected from the Reserve Pit)*

Chloride content: \_\_\_\_\_ ppm Fluid volume: \_\_\_\_\_ bbls

Dewatering method used: \_\_\_\_\_

Location of fluid disposal if hauled offsite:

Operator Name: \_\_\_\_\_

Lease Name: \_\_\_\_\_ License #: \_\_\_\_\_

Quarter \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

County: \_\_\_\_\_ Permit #: \_\_\_\_\_

**AFFIDAVIT**

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

Submitted Electronically

**KCC Office Use ONLY**

Confidentiality Requested

Date: \_\_\_\_\_

Confidential Release Date: \_\_\_\_\_

Wireline Log Received  Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

Operator Name: \_\_\_\_\_ Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West County: \_\_\_\_\_

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

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

Drill Stem Tests Taken <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(Attach Additional Sheets)</i>  Samples Sent to Geological Survey <input type="checkbox"/> Yes <input type="checkbox"/> No  Cores Taken <input type="checkbox"/> Yes <input type="checkbox"/> No Electric Log Run <input type="checkbox"/> Yes <input type="checkbox"/> No Geologist Report / Mud Logs <input type="checkbox"/> Yes <input type="checkbox"/> No  List All E. Logs Run:	<input type="checkbox"/> Log Formation (Top), Depth and Datum <input type="checkbox"/> Sample  Name Top Datum
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CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

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

1. Did you perform a hydraulic fracturing treatment on this well?  Yes  No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons?  Yes  No *(If No, skip question 3)*
3. Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry?  Yes  No *(If No, fill out Page Three of the ACO-1)*

Date of first Production/Injection or Resumed Production/Injection:	Producing Method: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas Lift <input type="checkbox"/> Other <i>(Explain)</i> _____			
Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio Gravity

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5) (Submit ACO-4)</i>	PRODUCTION INTERVAL: Top Bottom
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Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record <i>(Amount and Kind of Material Used)</i>

TUBING RECORD:	Size:	Set At:	Packer At:	
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Form	ACO1 - Well Completion
Operator	L. D. Drilling, Inc.
Well Name	NUSS 2
Doc ID	1431052

Tops

Name	Top	Datum
ANHYDRITE	2384	+517
BASE ANHYDRITE	2408	+493
STOTLER	3531	-630
HEEBNER	3881	-980
LANSING	3920	-1019
STARK	4168	-1267
MARMATON	4269	-1368
FORT SCOTT	4421	-1520
CHEROKEE	4448	-1547
MISSISSIPPI	4560	-1659
MISS SPERGEN	4686	-1785

Form	ACO1 - Well Completion
Operator	L. D. Drilling, Inc.
Well Name	NUSS 2
Doc ID	1431052

Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Number of Sacks Used	Type and Percent Additives
Surface	12.25	8.625	25	247	COMMON	250	2%CC, 1/4 #Polyflake
Production	7.875	5.5	15.5	4703	AA-2	150	Celloflake, salt
Production	7.875	5.5	15.5	4703	A-CONN	350	"
Production	7.875	5.5	15.5	4703	60/40 POZMIX	30	at Rathole



**Company: L. D. Drilling, Inc**  
**Lease: Nuss #2**

SEC: 35 TWN: 13S RNG: 32W  
 County: LOGAN  
 State: Kansas  
 Drilling Contractor: L. D. Drilling, Inc - Rig 1  
 Elevation: 2900 EGL  
 Field Name: Rose Garden NW  
 Pool: Infield  
 Job Number: 204

**Operation:**  
 Uploading recovery & pressures

**DATE**  
 September  
**16**  
 2018

**DST #1**      **Formation: Lansing A**      **Test Interval: 3912 - 3950'**      **Total Depth: 3950'**  
 Time On: 13:29 09/16      Time Off: 22:02 09/16  
 Time On Bottom: 16:03 09/16      Time Off Bottom: 19:03 09/16

Electronic Volume Estimate:  
 1820'

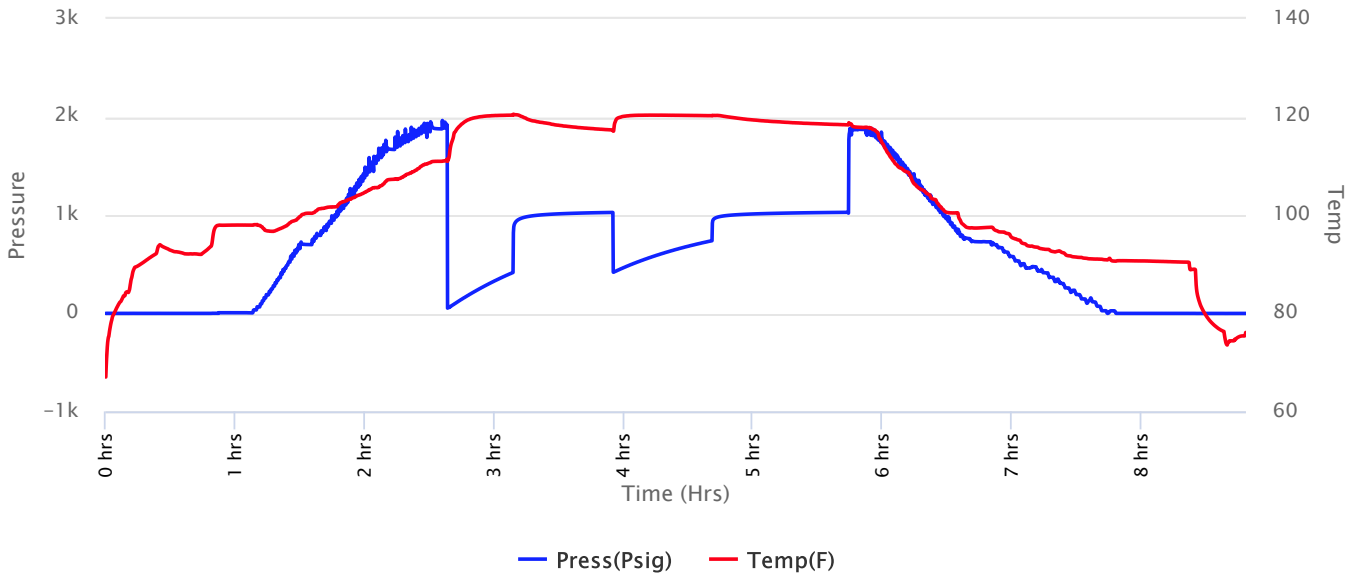
1st Open  
 Minutes: 30  
 Current Reading:  
 97.4" at 30 min  
 Max Reading: 97.4"

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

2nd Open  
 Minutes: 45  
 Current Reading:  
 99.7" at 45 min  
 Max Reading: 99.7"

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

Inside Recorder





**Company: L. D. Drilling, Inc**  
**Lease: Nuss #2**

SEC: 35 TWN: 13S RNG: 32W  
 County: LOGAN  
 State: Kansas  
 Drilling Contractor: L. D. Drilling, Inc - Rig 1  
 Elevation: 2900 EGL  
 Field Name: Rose Garden NW  
 Pool: Infield  
 Job Number: 204

**Operation:**  
 Uploading recovery & pressures

**DATE**  
 September  
**16**  
 2018

**DST #1**      **Formation: Lansing A**      **Test Interval: 3912 - 3950'**      **Total Depth: 3950'**  
 Time On: 13:29 09/16      Time Off: 22:02 09/16  
 Time On Bottom: 16:03 09/16      Time Off Bottom: 19:03 09/16

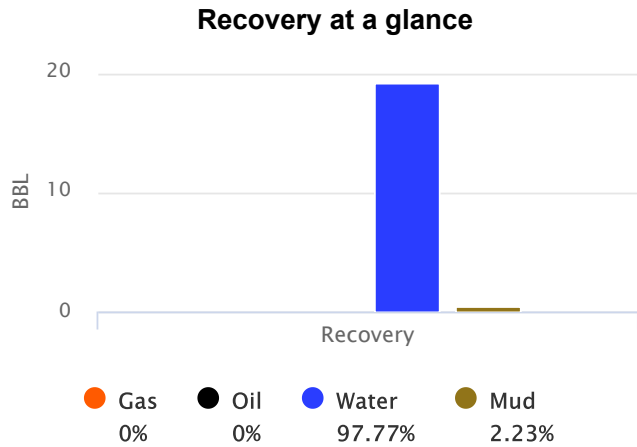
Recovered

Foot	BBLs	Description of Fluid	Gas %	Oil %	Water %	Mud %
18	0.18468	HMCW	0	0	70	30
189	1.93914	SLMCW	0	0	90	10
1638	16.80588	SLMCW	0	0	99	1
63	0.64638	SLMCW	0	0	97	3

Total Recovered: 1908 ft  
 Total Barrels Recovered: 19.57608

**Reversed Out**  
**NO**

Initial Hydrostatic Pressure	1879	PSI
Initial Flow	52 to 415	PSI
<b>Initial Closed in Pressure</b>	<b>1026</b>	<b>PSI</b>
Final Flow Pressure	418 to 739	PSI
<b>Final Closed in Pressure</b>	<b>1028</b>	<b>PSI</b>
Final Hydrostatic Pressure	1873	PSI
Temperature	121	°F
Pressure Change Initial Close / Final Close	0.0	%





**Company: L. D. Drilling, Inc**  
**Lease: Nuss #2**

SEC: 35 TWN: 13S RNG: 32W  
County: LOGAN  
State: Kansas  
Drilling Contractor: L. D. Drilling, Inc -  
Rig 1  
Elevation: 2900 EGL  
Field Name: Rose Garden NW  
Pool: Infield  
Job Number: 204

**Operation:**

Uploading recovery &  
pressures

**DATE**

September

**16**

2018

**DST #1      Formation: Lansing      Test Interval: 3912 -      Total Depth: 3950'**  
**A**  
**3950'**  
Time On: 13:29 09/16      Time Off: 22:02 09/16  
Time On Bottom: 16:03 09/16      Time Off Bottom: 19:03 09/16

**BUCKET MEASUREMENT:**

1st Open: 1" bob in 3 min  
1st Close: Nobb  
2nd Open: 1/4" bob in 4 min  
2nd Close: Nobb

**REMARKS:**

5 ft slide to btm

Tool Sample: 0% Gas 0% Oil 95% Water 5% Mud

Ph: 7

Measured RW: 1.5 @ 72 degrees °F

RW at Formation Temp: 0.925 @ 121 °F

Chlorides: 50000 ppm



**Company: L. D. Drilling, Inc**  
**Lease: Nuss #2**

SEC: 35 TWN: 13S RNG: 32W  
 County: LOGAN  
 State: Kansas  
 Drilling Contractor: L. D. Drilling, Inc -  
 Rig 1  
 Elevation: 2900 EGL  
 Field Name: Rose Garden NW  
 Pool: Infield  
 Job Number: 204

**Operation:**  
 Uploading recovery &  
 pressures

**DATE**  
 September  
**16**  
 2018

**DST #1      Formation: Lansing      Test Interval: 3912 -      Total Depth: 3950'**  
   **A**  **3950'**  
 Time On: 13:29 09/16      Time Off: 22:02 09/16  
 Time On Bottom: 16:03 09/16      Time Off Bottom: 19:03 09/16

**Down Hole Makeup**

<b>Heads Up:</b>	23.62 FT	<b>Packer 1:</b>	3907 FT
<b>Drill Pipe:</b>	3903.05 FT	<b>Packer 2:</b>	3912 FT
	<i>ID-3 1/4</i>	<b>Top Recorder:</b>	3896.42 FT
<b>Weight Pipe:</b>	FT	<b>Bottom Recorder:</b>	3916 FT
	<i>ID-2 7/8</i>	<b>Well Bore Size:</b>	7 7/8
<b>Collars:</b>	FT	<b>Surface Choke:</b>	1"
	<i>ID-2 1/4</i>	<b>Bottom Choke:</b>	5/8"
<b>Test Tool:</b>	33.57 FT		
	<i>ID-3 1/2-FH</i>		
	<i>Jars</i>		
	<i>Safety Joint</i>		
<b>Total Anchor:</b>	38		
	<u>Anchor Makeup</u>		
<b>Packer Sub:</b>	1 FT		
<b>Perforations: (top):</b>	2 FT		
	<i>4 1/2-FH</i>		
<b>Change Over:</b>	FT		
<b>Drill Pipe: (in anchor):</b>	FT		
	<i>ID-3 1/4</i>		
<b>Change Over:</b>	FT		
<b>Perforations: (below):</b>	35 FT		
	<i>4 1/2-FH</i>		





# Company: L. D. Drilling, Inc

## Lease: Nuss #2

SEC: 35 TWN: 13S RNG: 32W  
County: LOGAN  
State: Kansas  
Drilling Contractor: L. D. Drilling, Inc -  
Rig 1  
Elevation: 2900 EGL  
Field Name: Rose Garden NW  
Pool: Infield  
Job Number: 204

### Operation:

Uploading recovery &  
pressures

### DATE

September

**16**

2018

**DST #1**      **Formation: Lansing**      **Test Interval: 3912 -**      **Total Depth: 3950'**  
   **A**    **3950'**  
Time On: 13:29 09/16                          Time Off: 22:02 09/16  
Time On Bottom: 16:03 09/16      Time Off Bottom: 19:03 09/16

### Mud Properties

**Mud Type:** Chemical      **Weight:** 9.0                      **Viscosity:** 54                      **Filtrate:** 7.2                      **Chlorides:** 2200 ppm



**Company: L. D. Drilling, Inc**  
**Lease: Nuss #2**

SEC: 35 TWN: 13S RNG: 32W  
 County: LOGAN  
 State: Kansas  
 Drilling Contractor: L. D. Drilling, Inc - Rig 1  
 Elevation: 2900 EGL  
 Field Name: Rose Garden NW  
 Pool: Infield  
 Job Number: 204

**Operation:**  
 Uploading recovery & pressures

**DATE**  
 September  
**17**  
 2018

**DST #2**      **Formation: Lansing J and K 180-200' zone**      **Test Interval: 4137 - 4200'**      **Total Depth: 4200'**  
 Time On: 18:07 09/17      Time Off: 01:19 09/18  
 Time On Bottom: 20:36 09/17      Time Off Bottom: 23:36 09/17

Electronic Volume Estimate:  
 134'

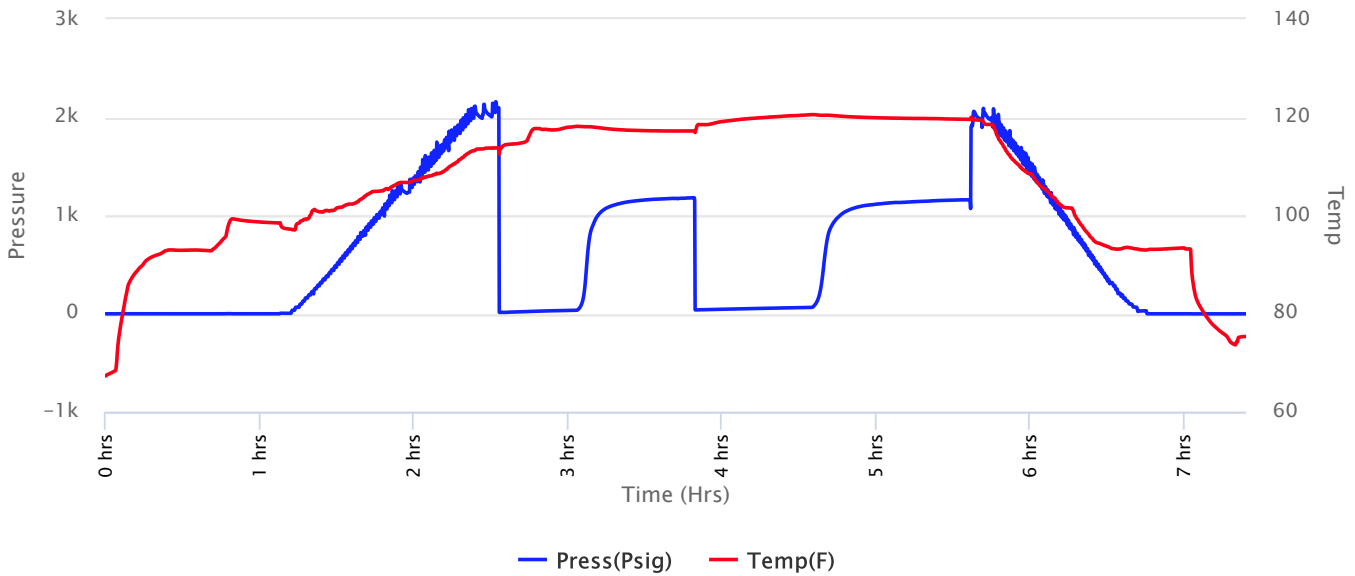
1st Open  
 Minutes: 30  
 Current Reading:  
 6" at 30 min  
 Max Reading: 6"

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

2nd Open  
 Minutes: 45  
 Current Reading:  
 6" at 45 min  
 Max Reading: 6"

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

Inside Recorder





**Company: L. D. Drilling, Inc**  
**Lease: Nuss #2**

SEC: 35 TWN: 13S RNG: 32W  
 County: LOGAN  
 State: Kansas  
 Drilling Contractor: L. D. Drilling, Inc - Rig 1  
 Elevation: 2900 EGL  
 Field Name: Rose Garden NW  
 Pool: Infield  
 Job Number: 204

**Operation:**  
 Uploading recovery & pressures

**DATE**  
 September  
**17**  
 2018

**DST #2**      **Formation: Lansing J and K 180-200' zone**      **Test Interval: 4137 - 4200'**      **Total Depth: 4200'**  
 Time On: 18:07 09/17      Time Off: 01:19 09/18  
 Time On Bottom: 20:36 09/17      Time Off Bottom: 23:36 09/17

Recovered

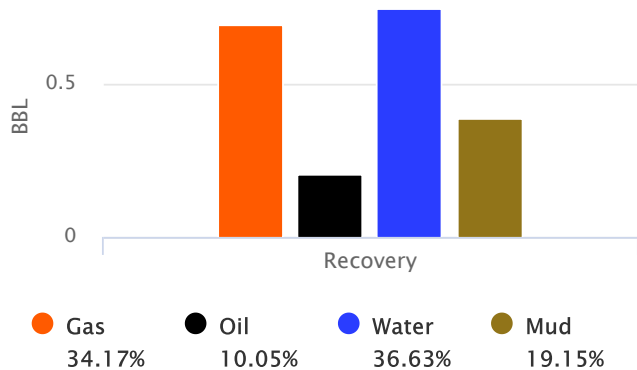
Foot	BBSL	Description of Fluid	Gas %	Oil %	Water %	Mud %
68	0.69768	G	100	0	0	0
20	0.2052	O	0	100	0	0
48	0.49248	HMCW	0	0	60	40
63	0.64638	HMCW	0	0	70	30

Total Recovered: 199 ft  
 Total Barrels Recovered: 2.04174

Reversed Out  
 NO

Initial Hydrostatic Pressure	2029	PSI
Initial Flow	14 to 35	PSI
<b>Initial Closed in Pressure</b>	<b>1181</b>	<b>PSI</b>
Final Flow Pressure	39 to 64	PSI
<b>Final Closed in Pressure</b>	<b>1159</b>	<b>PSI</b>
Final Hydrostatic Pressure	2015	PSI
Temperature	121	°F
Pressure Change Initial Close / Final Close	1.8	%

**Recovery at a glance**





**Company: L. D. Drilling, Inc**  
**Lease: Nuss #2**

SEC: 35 TWN: 13S RNG: 32W  
County: LOGAN  
State: Kansas  
Drilling Contractor: L. D. Drilling, Inc -  
Rig 1  
Elevation: 2900 EGL  
Field Name: Rose Garden NW  
Pool: Infield  
Job Number: 204

**Operation:**

Uploading recovery &  
pressures

**DATE**

September  
**17**  
2018

<b>DST #2</b>	<b>Formation: Lansing J and K 180-200' zone</b>	<b>Test Interval: 4137 - 4200'</b>	<b>Total Depth: 4200'</b>
	Time On: 18:07 09/17	Time Off: 01:19 09/18	
	Time On Bottom: 20:36 09/17	Time Off Bottom: 23:36 09/17	

**BUCKET MEASUREMENT:**

1st Open: Wsb built to 6"  
1st Close: Nobb  
2nd Open: Wsb built to 6"  
2nd Close: Nobb

**REMARKS:**

Tool Sample: 0% Gas 1% Oil 89% Water 10% Mud  
Gravity: 35 @ 60 °F  
Ph: 7  
Measured RW: .2 @ 74 degrees °F  
RW at Formation Temp: 0.126 @ 121 °F  
Chlorides: 36000 ppm



**Company: L. D. Drilling, Inc**  
**Lease: Nuss #2**

SEC: 35 TWN: 13S RNG: 32W  
County: LOGAN  
State: Kansas  
Drilling Contractor: L. D. Drilling, Inc - Rig 1  
Elevation: 2900 EGL  
Field Name: Rose Garden NW  
Pool: Infield  
Job Number: 204

**Operation:**  
Uploading recovery & pressures

**DATE**  
September  
**17**  
2018

**DST #2**     **Formation: Lansing J and K 180-200' zone**     **Test Interval: 4137 - 4200'**     **Total Depth: 4200'**  
Time On: 18:07 09/17     Time Off: 01:19 09/18  
Time On Bottom: 20:36 09/17     Time Off Bottom: 23:36 09/17

**Down Hole Makeup**

<b>Heads Up:</b> 16.56 FT	<b>Packer 1:</b> 4132 FT
<b>Drill Pipe:</b> 4120.99 FT <i>ID-3 1/4</i>	<b>Packer 2:</b> 4137 FT
<b>Weight Pipe:</b> FT <i>ID-2 7/8</i>	<b>Top Recorder:</b> 4121.42 FT
<b>Collars:</b> FT <i>ID-2 1/4</i>	<b>Bottom Recorder:</b> 4174 FT
<b>Test Tool:</b> 33.57 FT <i>ID-3 1/2-FH</i> <i>Jars</i> <i>Safety Joint</i>	<b>Well Bore Size:</b> 7 7/8
<b>Total Anchor:</b> 63	<b>Surface Choke:</b> 1"
<b>Anchor Makeup</b>	<b>Bottom Choke:</b> 5/8"
<b>Packer Sub:</b> 1 FT	
<b>Perforations: (top):</b> 2 FT <i>4 1/2-FH</i>	
<b>Change Over:</b> 1 FT	
<b>Drill Pipe: (in anchor):</b> 31.5 FT <i>ID-3 1/4</i>	
<b>Change Over:</b> .5 FT	
<b>Perforations: (below):</b> 27 FT <i>4 1/2-FH</i>	





**Company: L. D. Drilling, Inc**  
**Lease: Nuss #2**

SEC: 35 TWN: 13S RNG: 32W  
 County: LOGAN  
 State: Kansas  
 Drilling Contractor: L. D. Drilling, Inc - Rig 1  
 Elevation: 2900 EGL  
 Field Name: Rose Garden NW  
 Pool: Infield  
 Job Number: 204

**Operation:**  
 Uploading recovery & pressures

**DATE**  
 September  
**18**  
 2018

**DST #3**    **Formation: Altamant / Pawnee**    **Test Interval: 4324 - 4380'**    **Total Depth: 4380'**  
 Time On: 21:07 09/18    Time Off: 04:54 09/19  
 Time On Bottom: 23:27 09/18    Time Off Bottom: 02:27 09/19

Electronic Volume Estimate:  
 1001'

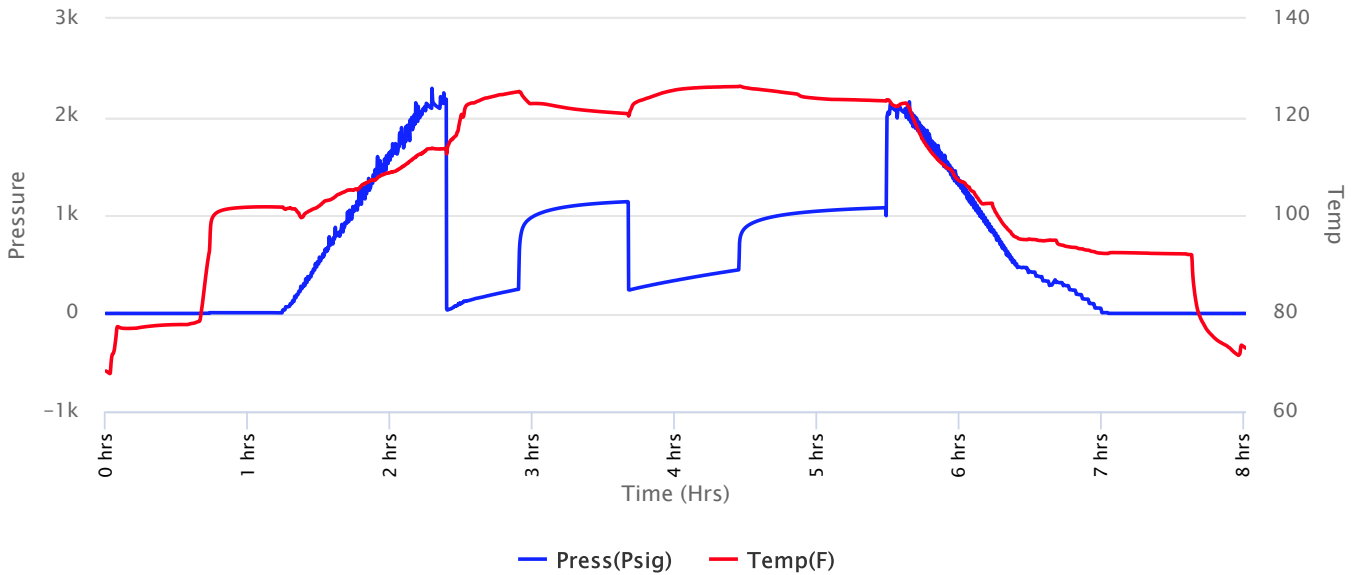
1st Open  
 Minutes: 30  
 Current Reading:  
 40.5" at 30 min  
 Max Reading: 40.5"

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

2nd Open  
 Minutes: 45  
 Current Reading:  
 47.6" at 45 min  
 Max Reading: 47.6"

2nd Close  
 Minutes: 60  
 Current Reading:  
 1.25" at 60 min  
 Max Reading: 1.25"

Inside Recorder





**Company: L. D. Drilling, Inc**  
**Lease: Nuss #2**

SEC: 35 TWN: 13S RNG: 32W  
 County: LOGAN  
 State: Kansas  
 Drilling Contractor: L. D. Drilling, Inc -  
 Rig 1  
 Elevation: 2900 EGL  
 Field Name: Rose Garden NW  
 Pool: Infield  
 Job Number: 204

**Operation:**  
 Uploading recovery &  
 pressures

**DATE**  
 September  
**18**  
 2018

**DST #3**      **Formation: Altamant / Pawnee**      **Test Interval: 4324 - 4380'**      **Total Depth: 4380'**  
 Time On: 21:07 09/18      Time Off: 04:54 09/19  
 Time On Bottom: 23:27 09/18      Time Off Bottom: 02:27 09/19

Recovered

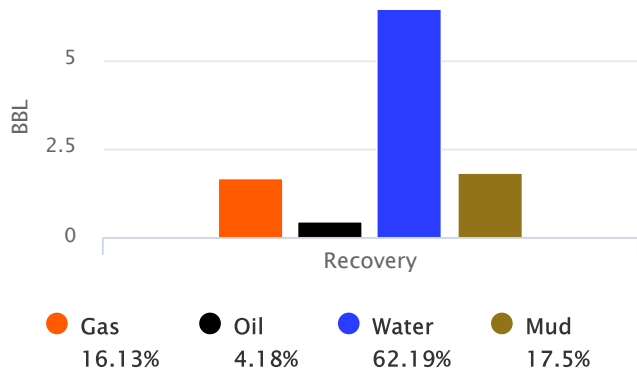
Foot	BBLs	Description of Fluid	Gas %	Oil %	Water %	Mud %
58	0.59508	G	100	0	0	0
5	0.0513	O	0	100	0	0
63	0.64638	SLOCSLGCHWCM	9	1	40	50
126	1.29276	SLOGGCHMCW	28	2	35	35
126	1.29276	SLOGGCHMCW	28	2	40	30
63	0.64638	SLOCSLMCHWCG	45	5	40	10
567	5.81742	SLOCSLMCW	0	5	85	10

Total Recovered: 1008 ft  
 Total Barrels Recovered: 10.34208

**Reversed Out**  
**NO**

Initial Hydrostatic Pressure	2109	PSI
Initial Flow	33 to 244	PSI
<b>Initial Closed in Pressure</b>	<b>1137</b>	<b>PSI</b>
Final Flow Pressure	240 to 443	PSI
<b>Final Closed in Pressure</b>	<b>1075</b>	<b>PSI</b>
Final Hydrostatic Pressure	2100	PSI
Temperature	127	°F
Pressure Change Initial Close / Final Close	5.5	%

**Recovery at a glance**







**Company: L. D. Drilling, Inc**  
**Lease: Nuss #2**

SEC: 35 TWN: 13S RNG: 32W  
County: LOGAN  
State: Kansas  
Drilling Contractor: L. D. Drilling, Inc -  
Rig 1  
Elevation: 2900 EGL  
Field Name: Rose Garden NW  
Pool: Infield  
Job Number: 204

**Operation:**

Uploading recovery &  
pressures

**DATE**

September  
**18**  
2018

<b>DST #3</b>	<b>Formation: Altamant / Pawnee</b>	<b>Test Interval: 4324 - 4380'</b>	<b>Total Depth: 4380'</b>
	Time On: 21:07 09/18	Time Off: 04:54 09/19	
	Time On Bottom: 23:27 09/18	Time Off Bottom: 02:27 09/19	

**BUCKET MEASUREMENT:**

*Diesel in Bucket*

1st Open: 1/2" bob in 6 1/2min

1st Close: Nobb

2nd Open: 1/4" bob in 9 min

2nd Close: Built to 1 1/4 "

**REMARKS:**

Tool Sample: 0% Gas 5% Oil 85% Water 10% Mud

Gravity: 27.1 @ 60 °F

Ph: 7

Measured RW: .2 @ 72 degrees °F

RW at Formation Temp: 0.118 @ 127 °F

Chlorides: 35000 ppm



**Company: L. D. Drilling, Inc**  
**Lease: Nuss #2**

SEC: 35 TWN: 13S RNG: 32W  
 County: LOGAN  
 State: Kansas  
 Drilling Contractor: L. D. Drilling, Inc -  
 Rig 1  
 Elevation: 2900 EGL  
 Field Name: Rose Garden NW  
 Pool: Infield  
 Job Number: 204

**Operation:**  
 Uploading recovery &  
 pressures

**DATE**  
 September  
**18**  
 2018

**DST #3**      **Formation: Altamant / Pawnee**      **Test Interval: 4324 - 4380'**      **Total Depth: 4380'**  
 Time On: 21:07 09/18      Time Off: 04:54 09/19  
 Time On Bottom: 23:27 09/18      Time Off Bottom: 02:27 09/19

**Down Hole Makeup**

<b>Heads Up:</b> 79.97 FT	<b>Packer 1:</b> 4319 FT
<b>Drill Pipe:</b> 4371.4 FT <i>ID-3 1/4</i>	<b>Packer 2:</b> 4324 FT
<b>Weight Pipe:</b> FT <i>ID-2 7/8</i>	<b>Top Recorder:</b> 4308.42 FT
<b>Collars:</b> FT <i>ID-2 1/4</i>	<b>Bottom Recorder:</b> 4361 FT
<b>Test Tool:</b> 33.57 FT <i>ID-3 1/2-FH</i> <i>Jars</i> <i>Safety Joint</i>	<b>Well Bore Size:</b> 7 7/8
<b>Total Anchor:</b> 56	<b>Surface Choke:</b> 1"
<b><u>Anchor Makeup</u></b>	<b>Bottom Choke:</b> 5/8"
<b>Packer Sub:</b> 1 FT	
<b>Perforations: (top):</b> 2 FT <i>4 1/2-FH</i>	
<b>Change Over:</b> 1 FT	
<b>Drill Pipe: (in anchor):</b> 31.5 FT <i>ID-3 1/4</i>	
<b>Change Over:</b> .5 FT	
<b>Perforations: (below):</b> 20 FT <i>4 1/2-FH</i>	





**Company: L. D. Drilling, Inc**  
**Lease: Nuss #2**

SEC: 35 TWN: 13S RNG: 32W  
 County: LOGAN  
 State: Kansas  
 Drilling Contractor: L. D. Drilling, Inc - Rig 1  
 Elevation: 2900 EGL  
 Field Name: Rose Garden NW  
 Pool: Infield  
 Job Number: 204

**Operation:**  
 Uploading recovery & pressures

**DATE**  
 September  
**19**  
 2018

**DST #4**      **Formation: Cherokee**      **Test Interval: 4392 - 4468'**      **Total Depth: 4468'**  
 Time On: 17:22 09/19      Time Off: 00:46 09/20  
 Time On Bottom: 19:44 09/19      Time Off Bottom: 22:44 09/19

Electronic Volume Estimate:  
 345'

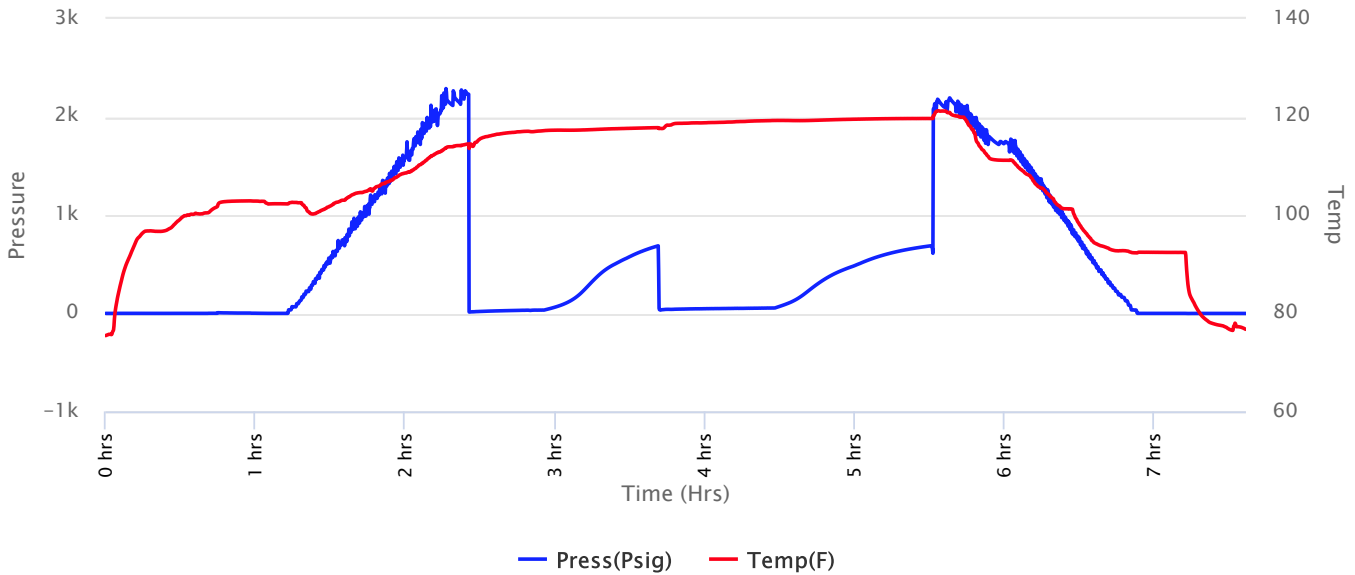
1st Open  
 Minutes: 30  
 Current Reading:  
 10.7" at 30 min  
 Max Reading: 10.7"

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

2nd Open  
 Minutes: 45  
 Current Reading:  
 18.7" at 45 min  
 Max Reading: 18.7"

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

Inside Recorder





**Company: L. D. Drilling, Inc**  
**Lease: Nuss #2**

SEC: 35 TWN: 13S RNG: 32W  
 County: LOGAN  
 State: Kansas  
 Drilling Contractor: L. D. Drilling, Inc - Rig 1  
 Elevation: 2900 EGL  
 Field Name: Rose Garden NW  
 Pool: Infield  
 Job Number: 204

**Operation:**  
 Uploading recovery & pressures

**DATE**  
 September  
**19**  
 2018

**DST #4**      **Formation: Cherokee**      **Test Interval: 4392 - 4468'**      **Total Depth: 4468'**  
 Time On: 17:22 09/19      Time Off: 00:46 09/20  
 Time On Bottom: 19:44 09/19      Time Off Bottom: 22:44 09/19

Recovered

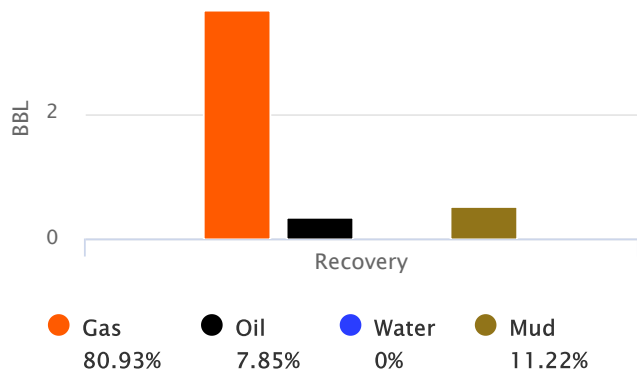
Foot	BBLs	Description of Fluid	Gas %	Oil %	Water %	Mud %
338	3.46788	G	100	0	0	0
10	0.1026	O	0	100	0	0
30	0.3078	HOCM	0	40	0	60
63	0.64638	OCHGCM	30	20	0	50

Total Recovered: 441 ft  
 Total Barrels Recovered: 4.52466

**Reversed Out**  
**NO**

Initial Hydrostatic Pressure	2160	PSI
Initial Flow	13 to 32	PSI
<b>Initial Closed in Pressure</b>	<b>687</b>	<b>PSI</b>
Final Flow Pressure	35 to 54	PSI
<b>Final Closed in Pressure</b>	<b>687</b>	<b>PSI</b>
Final Hydrostatic Pressure	2150	PSI
Temperature	120	°F
Pressure Change Initial Close / Final Close	0.0	%

**Recovery at a glance**





**Company: L. D. Drilling, Inc**  
**Lease: Nuss #2**

SEC: 35 TWN: 13S RNG: 32W  
County: LOGAN  
State: Kansas  
Drilling Contractor: L. D. Drilling, Inc -  
Rig 1  
Elevation: 2900 EGL  
Field Name: Rose Garden NW  
Pool: Infield  
Job Number: 204

**Operation:**

Uploading recovery &  
pressures

**DATE**

September

**19**

2018

**DST #4**

**Formation:  
Cherokee**

**Test Interval: 4392 -  
4468'**

**Total Depth: 4468'**

Time On: 17:22 09/19

Time Off: 00:46 09/20

Time On Bottom: 19:44 09/19

Time Off Bottom: 22:44 09/19

**BUCKET MEASUREMENT:**

1st Open: Wsb built to 10.7"

1st Close: Nobb

2nd Open: 1.5" bob in 22 1/2 min

2nd Close: nobb

**REMARKS:**

Tool Sample: 0% Gas 79% Oil 1% Water 20% Mud

Gravity: 26.7 @ 60 °F



**Company: L. D. Drilling, Inc**  
**Lease: Nuss #2**

SEC: 35 TWN: 13S RNG: 32W  
 County: LOGAN  
 State: Kansas  
 Drilling Contractor: L. D. Drilling, Inc -  
 Rig 1  
 Elevation: 2900 EGL  
 Field Name: Rose Garden NW  
 Pool: Infield  
 Job Number: 204

**Operation:**  
 Uploading recovery &  
 pressures

**DATE**  
 September  
**19**  
 2018

**DST #4**      **Formation:** Cherokee      **Test Interval: 4392 - 4468'**      **Total Depth: 4468'**  
 Time On: 17:22 09/19      Time Off: 00:46 09/20  
 Time On Bottom: 19:44 09/19      Time Off Bottom: 22:44 09/19

**Down Hole Makeup**

<b>Heads Up:</b> 10.9 FT	<b>Packer 1:</b> 4387 FT
<b>Drill Pipe:</b> 4370.33 FT <i>ID-3 1/4</i>	<b>Packer 2:</b> 4392 FT
<b>Weight Pipe:</b> FT <i>ID-2 7/8</i>	<b>Top Recorder:</b> 4376.42 FT
<b>Collars:</b> FT <i>ID-2 1/4</i>	<b>Bottom Recorder:</b> 4429 FT
<b>Test Tool:</b> 33.57 FT <i>ID-3 1/2-FH</i> <i>Jars</i> <i>Safety Joint</i>	<b>Well Bore Size:</b> 7 7/8
<b>Total Anchor:</b> 76	<b>Surface Choke:</b> 1"
<b>Anchor Makeup</b>	<b>Bottom Choke:</b> 5/8"
<b>Packer Sub:</b> 1 FT	
<b>Perforations: (top):</b> 2 FT <i>4 1/2-FH</i>	
<b>Change Over:</b> 1 FT	
<b>Drill Pipe: (in anchor):</b> 31.5 FT <i>ID-3 1/4</i>	
<b>Change Over:</b> .5 FT	
<b>Perforations: (below):</b> 40 FT <i>4 1/2-FH</i>	



**Company: L. D. Drilling, Inc**  
**Lease: Nuss #2**

SEC: 35 TWN: 13S RNG: 32W  
County: LOGAN  
State: Kansas  
Drilling Contractor: L. D. Drilling, Inc -  
Rig 1  
Elevation: 2900 EGL  
Field Name: Rose Garden NW  
Pool: Infield  
Job Number: 204

**Operation:**

Uploading recovery &  
pressures

**DATE**

September

**19**

2018

**DST #4**

**Formation:**  
**Cherokee**

**Test Interval: 4392 -**  
**4468'**

**Total Depth: 4468'**

Time On: 17:22 09/19

Time Off: 00:46 09/20

Time On Bottom: 19:44 09/19 Time Off Bottom: 22:44 09/19

**Mud Properties**

**Mud Type:**

**Weight:**

**Viscosity:**

**Filtrate:**

**Chlorides: ppm**





**Company: L. D. Drilling, Inc**  
**Lease: Nuss #2**

SEC: 35 TWN: 13S RNG: 32W  
 County: LOGAN  
 State: Kansas  
 Drilling Contractor: L. D. Drilling, Inc - Rig 1  
 Elevation: 2900 EGL  
 Field Name: Rose Garden NW  
 Pool: Infield  
 Job Number: 204

**Operation:**  
 Uploading recovery & pressures

**DATE**  
 September  
**20**  
 2018

**DST #5    Formation: Johnson    Test Interval: 4466 - 4531'    Total Depth: 4531'**  
 Time On: 11:09 09/20    Time Off: 19:17 09/20  
 Time On Bottom: 13:34 09/20    Time Off Bottom: 16:34 09/20

Electronic Volume Estimate:  
 592'

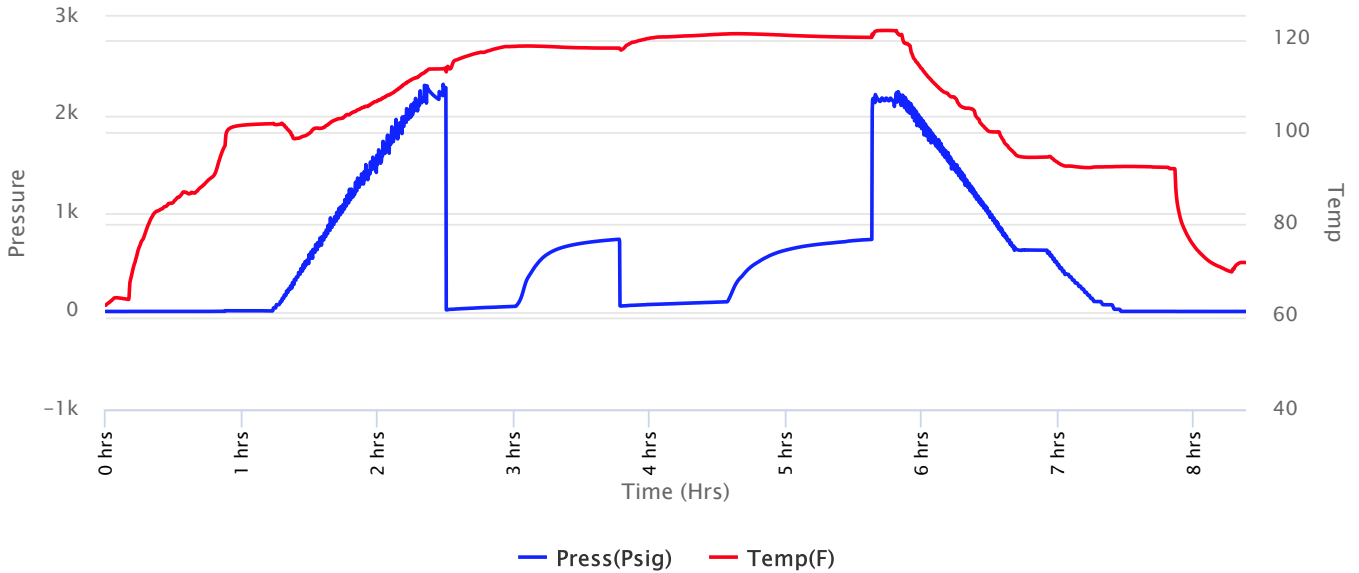
1st Open  
 Minutes: 30  
 Current Reading:  
 22" at 30 min  
 Max Reading: 22"

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

2nd Open  
 Minutes: 45  
 Current Reading:  
 27" at 45 min  
 Max Reading: 27"

2nd Close  
 Minutes: 60  
 Current Reading:  
 .25" at 60 min  
 Max Reading: .25"

Inside Recorder





**Company: L. D. Drilling, Inc**  
**Lease: Nuss #2**

SEC: 35 TWN: 13S RNG: 32W  
 County: LOGAN  
 State: Kansas  
 Drilling Contractor: L. D. Drilling, Inc - Rig 1  
 Elevation: 2900 EGL  
 Field Name: Rose Garden NW  
 Pool: Infield  
 Job Number: 204

**Operation:**  
 Uploading recovery & pressures

**DATE**  
 September  
**20**  
 2018

**DST #5**      **Formation: Johnson**      **Test Interval: 4466 - 4531'**      **Total Depth: 4531'**  
 Time On: 11:09 09/20      Time Off: 19:17 09/20  
 Time On Bottom: 13:34 09/20      Time Off Bottom: 16:34 09/20

Recovered

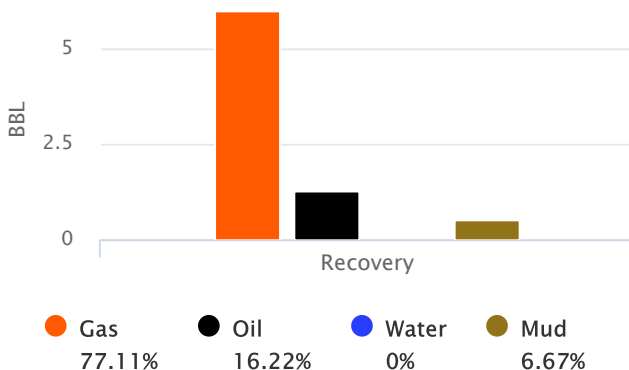
Foot	BBLs	Description of Fluid	Gas %	Oil %	Water %	Mud %
542	5.56092	G	100	0	0	0
25	0.2565	O	0	100	0	0
63	0.64638	GCMCO	20	55	0	25
63	0.64638	GCMCO	25	50	0	25
63	0.64638	GCHMCO	20	50	0	30

Total Recovered: 756 ft  
 Total Barrels Recovered: 7.75656

**Reversed Out**  
**NO**

Initial Hydrostatic Pressure	2200	PSI
Initial Flow	15 to 50	PSI
<b>Initial Closed in Pressure</b>	<b>734</b>	<b>PSI</b>
Final Flow Pressure	54 to 96	PSI
<b>Final Closed in Pressure</b>	<b>732</b>	<b>PSI</b>
Final Hydrostatic Pressure	2181	PSI
Temperature	122	°F
Pressure Change Initial Close / Final Close	0.2	%

**Recovery at a glance**





**Company: L. D. Drilling, Inc**  
**Lease: Nuss #2**

SEC: 35 TWN: 13S RNG: 32W  
County: LOGAN  
State: Kansas  
Drilling Contractor: L. D. Drilling, Inc -  
Rig 1  
Elevation: 2900 EGL  
Field Name: Rose Garden NW  
Pool: Infield  
Job Number: 204

**Operation:**

Uploading recovery &  
pressures

**DATE**

September

**20**

2018

**DST #5      Formation: Johnson      Test Interval: 4466 -      Total Depth: 4531'**  
**4531'**

Time On: 11:09 09/20

Time Off: 19:17 09/20

Time On Bottom: 13:34 09/20

Time Off Bottom: 16:34 09/20

**BUCKET MEASUREMENT:**

1st Open: 1/4" bob in 14min

1st Close: Built to 1"

2nd Open: 1/4" bob in 14min

2nd Close: built to 1/4"

**REMARKS:**

Tool Sample: 3% Gas 62% Oil 5% Water 30% Mud

Gravity: 28.5 @ 60 °F



**Company: L. D. Drilling, Inc**  
**Lease: Nuss #2**

SEC: 35 TWN: 13S RNG: 32W  
 County: LOGAN  
 State: Kansas  
 Drilling Contractor: L. D. Drilling, Inc -  
 Rig 1  
 Elevation: 2900 EGL  
 Field Name: Rose Garden NW  
 Pool: Infield  
 Job Number: 204

**Operation:**  
 Uploading recovery &  
 pressures

**DATE**  
 September  
**20**  
 2018

**DST #5    Formation: Johnson    Test Interval: 4466 -    Total Depth: 4531'**  
**4531'**  
 Time On: 11:09 09/20    Time Off: 19:17 09/20  
 Time On Bottom: 13:34 09/20    Time Off Bottom: 16:34 09/20

**Down Hole Makeup**

<b>Heads Up:</b> 31.29 FT	<b>Packer 1:</b> 4461 FT
<b>Drill Pipe:</b> 4464.72 FT <i>ID-3 1/4</i>	<b>Packer 2:</b> 4466 FT
<b>Weight Pipe:</b> FT <i>ID-2 7/8</i>	<b>Top Recorder:</b> 4450.42 FT
<b>Collars:</b> FT <i>ID-2 1/4</i>	<b>Bottom Recorder:</b> 4503 FT
<b>Test Tool:</b> 33.57 FT <i>ID-3 1/2-FH</i> <i>Jars</i> <i>Safety Joint</i>	<b>Well Bore Size:</b> 7 7/8
<b>Total Anchor:</b> 65	<b>Surface Choke:</b> 1"
<b>Anchor Makeup</b>	<b>Bottom Choke:</b> 5/8"
<b>Packer Sub:</b> 1 FT	
<b>Perforations: (top):</b> 2 FT <i>4 1/2-FH</i>	
<b>Change Over:</b> 1 FT	
<b>Drill Pipe: (in anchor):</b> 31.5 FT <i>ID-3 1/4</i>	
<b>Change Over:</b> .5 FT	
<b>Perforations: (below):</b> 29 FT <i>4 1/2-FH</i>	



**Company: L. D. Drilling, Inc**  
**Lease: Nuss #2**

SEC: 35 TWN: 13S RNG: 32W  
County: LOGAN  
State: Kansas  
Drilling Contractor: L. D. Drilling, Inc -  
Rig 1  
Elevation: 2900 EGL  
Field Name: Rose Garden NW  
Pool: Infield  
Job Number: 204

**Operation:**

Uploading recovery &  
pressures

**DATE**

September  
**20**  
2018

**DST #5      Formation: Johnson      Test Interval: 4466 -      Total Depth: 4531'**  
**4531'**

Time On: 11:09 09/20

Time Off: 19:17 09/20

Time On Bottom: 13:34 09/20

Time Off Bottom: 16:34 09/20

**Mud Properties**

**Mud Type:** Chemical

**Weight:** 9.3

**Viscosity:** 55

**Filtrate:** 8.0

**Chlorides:** 4500 ppm





Liberal Yard #1717 - Phone 620-624-2277 - 1700 S. Country Estates Road, Liberal KS 67901

**PRESSURE PUMPING Job Log**

Customer:	L.D. DRILLING, INC.	Cement Pump No.:	38750-19842 1hr	Operator TRK No.:	78938 Ruben
Address:		Ticket #:	1718 15927 L	Bulk TRK No.:	14355-37724 Oscar
City, State, Zip:		Job Type:	SURFACE Z-41		
Service District:		Well Type:	OIL		
Well Name and No.:	NUSS #2	Well Location:	35,13,32	County:	LOGAN State: KS

Type of Cmt	Sacks	Additives	Truck Loaded On		
Premiyum/ Common	250	2%CALCIUM CHLORIDE,1/4#POLYFLAKE	14355-37724 Oscar	Front	Back
				Front	Back
				Front	Back

Lead/Tail:	Weight #1 Gal.	Cu/Ft/sk	Water Requirements	CU. FT.	Man Hours / Personnel	
<b>Lead:</b>	14.8	1.34	6.33	335	Man Hours:	36
<b>Tail:</b>					# of Men on Job:	3

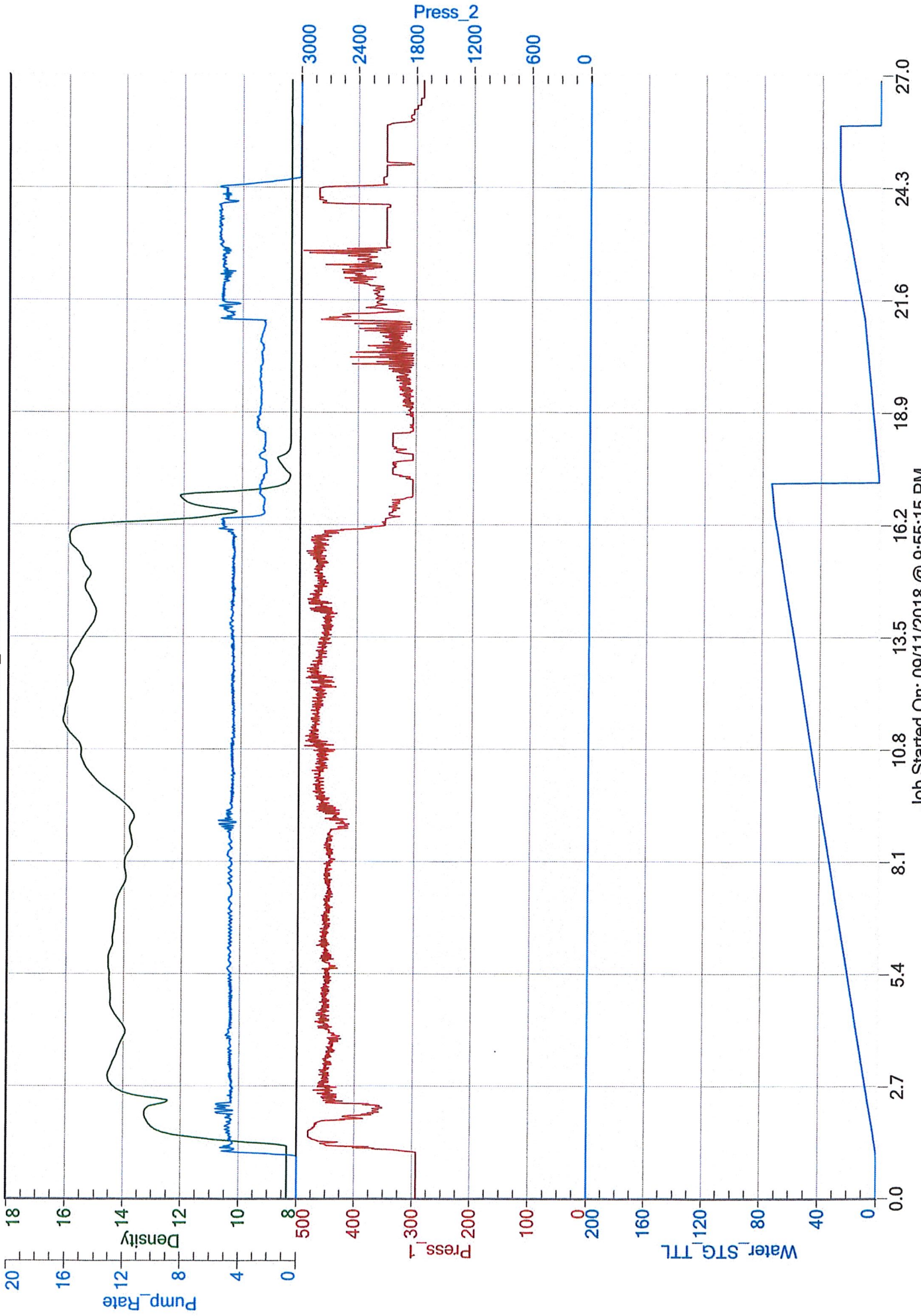
Time (am/pm)	BPM	Volume (BBLS)	Pumps		Pressure(PSI)		Description of Operation and Materials
			T	C	Tubing	Casing	
19:30							ON LOCATION
19:45							RIG UP
8:00 PM							SAFETTY MEETING
21::54	0.3	0.3			500		PRESSURE TEST
9:55 PM	4.8	59.6			100		PUMP 250SX @14.8#
21:13	4.7	13.7			100		DISPLACEMENT
21:19					70		SHUT DOWN / CLOSE VALVE
							RELEASE PRESSURE-0-PSI
							RIG DOWN
							15 BBLS CEMENT RETURNS

Size Hole	12 1/4	Depth	250'		TYPE	
Size & Wt. Csg.	8 5/8 25#	Depth	247'	New / Used	Packer	Depth
tbg.		Depth			Retainer	Depth
Top Plugs	220'	Type			Perfs	CIBP

Customer Signature:	Basic Representative:	RUBEN MARTINEZ
	Basic Signature:	
	Date of Service:	9/11/2018

# NUSS #2

WELL\_NAME



Job Started On: 09/11/2018 @ 9:55:15 PM





**BASIC**<sup>SM</sup>  
ENERGY SERVICES  
PRESSURE PUMPING & WIRELINE

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

**FIELD SERVICE TICKET**

1718 17148 A

TMA 52

DATE \_\_\_\_\_ TICKET NO. \_\_\_\_\_

DATE OF JOB <u>9-22-18</u> DISTRICT <u>Pratt-Kansas</u>		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 <u>LD Drilling Inc</u>		LEASE <u>NUSS</u> WELL NO. <u>2</u>							
ADDRESS _____		COUNTY <u>Logan</u> STATE <u>KS</u>							
CITY _____ STATE _____		SERVICE CREW <u>Fernis, Mike, Jose, Jose</u>							
AUTHORIZED BY _____		JOB TYPE: <u>5 1/2 stage production 2-42</u>							
EQUIPMENT#	HRS	EQUIPMENT#	HRS	EQUIPMENT#	HRS	TRUCK CALLED	DATE	AM	TIME
<u>86279</u>	<u>9</u>						<u>9-21-18</u>	<u>PM</u>	<u>2000</u>
<u>194148</u>	<u>9</u>					ARRIVED AT JOB	<u>9-22-18</u>	<u>PM</u>	<u>0130</u>
<u>194862</u>	<u>9</u>					START OPERATION		<u>PM</u>	<u>0330</u>
						FINISH OPERATION		<u>PM</u>	<u>0930</u>
						RELEASED		<u>PM</u>	<u>1030</u>
						MILES FROM STATION TO WELL			<u>100</u>

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
CP105	4A2 Cement	SK	150		2550 00
CP101	A-con Blend Common	SK	350		6300 00
CP103	60/40 Poz	SK	30		360 00
CC102	cello flake	lb	125		462 50
CC105	C-41P	lb	21		264 00
CC111	Salt	lb	901		450 50
CC113	CYP3um	lb	705		526 25
CC148	C-17	lb	92		1410 00
CC201	Gilsonite	lb	901		603 67
CC109	Caseum Chloride	lb	987		1036 35
CC200	Cement Gel	lb	52		13 00
CF1251	5 1/2 Auto Fill Flood shoe (Blue)	SA	1		360 00
CF481	5 1/2 Two stage cement collar	SA	1		4500 00
CF1901	5 1/2 Cement Basket	SA	2		580 00
CF1651	5 1/2 Turbolizer	SA	9		990 00
E100	Pickup mileage	Mi	100		450 00
E101	Heavy equipment mileage	Mi	200		1500 00
B113	Bulk delivery charge per ton mile	TNW	2460		6200 00
CB205	Depth charge 4001-5000'	4hr	1		2520 00
SUB TOTAL					32445 77

CHEMICAL / ACID DATA:			

SERVICE & EQUIPMENT	%TAX ON \$	
MATERIALS	%TAX ON \$	
TOTAL		19791 92

SERVICE REPRESENTATIVE <u>[Signature]</u>	THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY: <u>[Signature]</u> (WELL OWNER OPERATOR CONTRACTOR OR AGENT)
---	---

FIELD SERVICE ORDER NO. \_\_\_\_\_



**BASIC**<sup>SM</sup>  
**ENERGY SERVICES**  
 PRESSURE PUMPING & WIRELINE

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

**FIELD SERVICE TICKET**

1718 ~~17149~~ A  
 Cont. # 17146

DATE \_\_\_\_\_ TICKET NO. \_\_\_\_\_

DATE OF JOB <b>9-22-18</b> DISTRICT <b>Pratt/KCS</b>		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 <b>LD Drilling</b>		LEASE <b>NUSS</b> WELL NO. <b>2</b>	
ADDRESS		COUNTY <b>Logan</b> STATE <b>Kansas</b>	
CITY STATE		SERVICE CREW <b>Frenn, Mike, Jose, Jos E</b>	
AUTHORIZED BY		JOB TYPE: <b>5 1/2 2 stage production 2-42</b>	

EQUIPMENT#	HRS	EQUIPMENT#	HRS	EQUIPMENT#	HRS	TRUCK CALLED	DATE	AM PM	TIME
						ARRIVED AT JOB		AM PM	
						START OPERATION		AM PM	
						FINISH OPERATION		AM PM	
						RELEASED		AM PM	
						MILES FROM STATION TO WELL			

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
LB240	Blending & mixing service charge	SIC	530		742 00
S063	service supervision first 6 hrs on loc	SA	1		175 00

SUB TOTAL **32445 77**

CHEMICAL / ACID DATA:			

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

TOTAL **19791 92**

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

# BASIC

energy services, L.P.

## TREATMENT REPORT

Customer <i>LD Drilling Inc</i>	Lease No.	Date <i>9-22-16</i>
Lease <i>NU55</i>	Well # <i>2</i>	
Field Order # <i>17146</i>	Station <i>Pratt Kansas 17A</i>	Casing <i>5 1/2</i>
		Depth <i>4699.6</i>
Type Job <i>5 1/2" 2 stage Production string 2-42</i>	Formation	County <i>Logan</i>
		State <i>KS</i>
		Legal Description <i>35-135-32W</i>

PIPE DATA		PERFORATING DATA		FLUID USED	TREATMENT RESUME		
Casing Size <i>5 1/2</i>	Tubing Size	Shots/Ft		Acid	RATE	PRESS	ISIP
Depth <i>4699.6</i>	Depth	From	To	Pre Pad	Max		5 Min.
Volume <i>111.46</i>	Volume	From	To	Pad	Min		10 Min.
Max Press	Max Press	From	To	Frac	Avg		15 Min.
Well Connction <i>6" O</i>	Annulus Vol.	From	To		HHP Used		Annulus Pressure
Plug Depth	Packer Depth	From	To	Flush	Gas Volume		Total Load

Customer Representative				Station Manager				Treater			
Service Units	<i>76666</i>	<i>77666</i>	<i>66774</i>	<i>84981</i>	<i>19918</i>	<i>70759</i>	<i>19867</i>				
Driver Names	<i>Ferris</i>	<i>Mike</i>	<i>Mike</i>	<i>3062</i>	<i>3062</i>	<i>3062</i>	<i>3062</i>				

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
<i>0130</i>					<i>Arrive on location / Safety meeting</i>
<i>0145</i>					<i>Rig up equipment</i>
<i>0540</i>					<i>Install Turbilitors 3+ 2, 4, 6, 8, 10, 12, 14, 16, 55 Install cement baskets 3+ 1, 55</i>
					<i>Install DU tool top 50' H = 244.3'</i>
<i>0551</i>	<i>500</i>				<i>Drop Ball, Blow float seat</i>
<i>0700</i>	<i>310</i>		<i>10</i>	<i>2.0 5</i>	<i>Pump H2O ahead</i>
<i>0710</i>	<i>200</i>			<i>4</i>	<i>Start mixing AA2 cement @ 14.6 ppp</i>
<i>0715</i>	<i>100</i>		<i>20.5</i>	<i>4</i>	<i>75<sup>50</sup> AA2 cement away @ 14.6 ppp</i>
<i>0720</i>					<i>150<sup>50</sup> AA2 cement away @ 14.6 ppp S/D</i>
<i>0721</i>					<i>wash pumps + lines Drop ball down plug</i>
<i>0728</i>	<i>110</i>			<i>6</i>	<i>Start displacement - 53.3 Bbls H2O / 56.14 wpm</i>
<i>0738</i>	<i>300</i>		<i>71</i>	<i>6</i>	<i>Saw lift pressure @ 71 Bbls into displacement</i>
<i>0746</i>	<i>540</i>		<i>100</i>	<i>3.5</i>	<i>slow @ 150 bbls away</i>
<i>0749</i>	<i>1500</i>		<i>111.46</i>	<i>3.5</i>	<i>Land plug / check flows, flows held @ 25<sup>20</sup> back</i>
<i>0755</i>					<i>Drop dart</i>
<i>0815</i>	<i>1410</i>		<i>10</i>	<i>3.5</i>	<i>Pressure up, open DU tool B react. turbitor</i>
<i>0830</i>	<i>250</i>			<i>4</i>	<i>Start mixing A-con Blend @ 11.6 ppp</i>
<i>0848</i>	<i>110</i>		<i>46</i>	<i>4</i>	<i>175<sup>50</sup> A-con Blend away @ 11.6 ppp</i>
<i>0903</i>	<i>100</i>		<i>172</i>	<i>4</i>	<i>350<sup>50</sup> A-con Blend away @ 11.6 ppp S/D</i>
<i>0905</i>					<i>wash pumps + lines, drop class plug</i>
<i>9:15</i>	<i>390</i>			<i>6</i>	<i>Start H2O displacement</i>

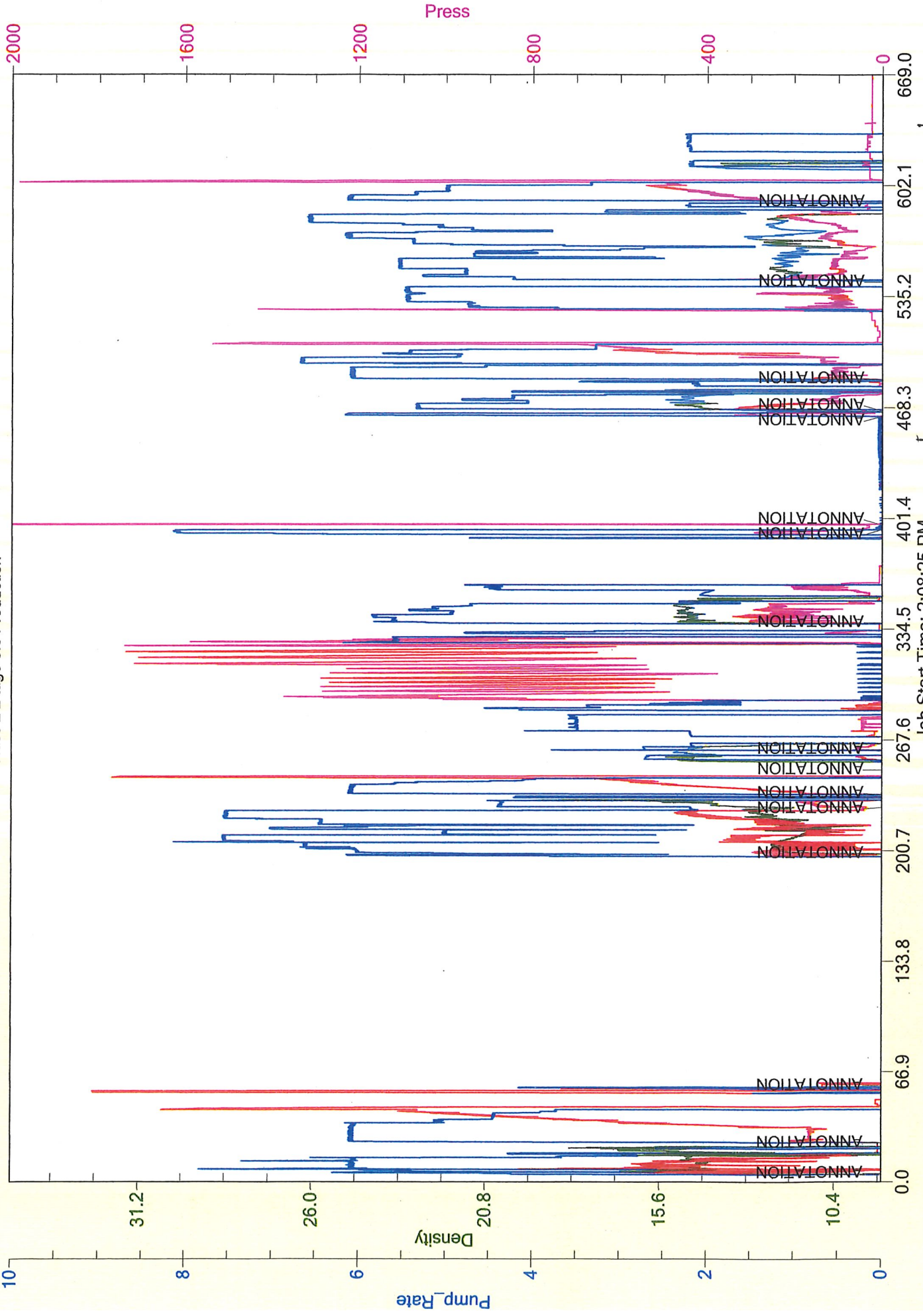
Customer <i>LD Drilling Inc</i>	Lease No.	Date <i>9-22-18</i>
Lease <i>MUSS #2</i>	Well # <i>#2</i>	
Field Order # <i>17146</i>	Station <i>Pratt/Kansas</i>	Casing <i>8 1/2</i>
	Depth <i>4169.6</i>	County <i>Logan</i>
Type Job <i>5 1/2" 2 stage production casing</i>	Formation	Legal Description <i>35-135-32W</i>

PIPE DATA		PERFORATING DATA		FLUID USED	TREATMENT RESUME		
Casing Size	Tubing Size	Shots/Ft		Acid	RATE	PRESS	ISIP
Depth	Depth	From	To	Pre Pad	Max		5 Min.
Volume	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	Packer Depth	From	To	Flush	Gas Volume		Total Load

Customer Representative	Station Manager	Treater
Service Units		
Driver Names		

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
0925	470		50	3.5	Slow down to land plug
0928	1800		56.3	3.5	Land plug pressure up shut tool <sup>Loss Circ</sup> <sub>600psi</sub>
0929					check flow, no flow
0935	20		7.5	2	Plug <del>set</del> Rot Hole 30 <sup>st</sup> 60/40 POC @ 13.6ppd
1000					Rig down
1030					Leave location
					1 <sup>st</sup> stage HOC - 1314.86' TOC - 3384.72
					2 <sup>nd</sup> stage HOC - 2443' TOC - SURFACE
					Saw cement @ surface at beginning of displacement = 58 Bbls cement to pit
					Thank you! Femisbordun

LD Drilling inc  
Nuss 2 2 tage 5.5 Production



LD Drilling Nuss 2 2 tage  
2.5 tage

Job Start Time: 2:08:25 PM

# KIM B. SHOEMAKER

CONSULTING GEOLOGIST

316-684-9709 \* WICHITA, KS

## GEOLOGIST'S REPORT

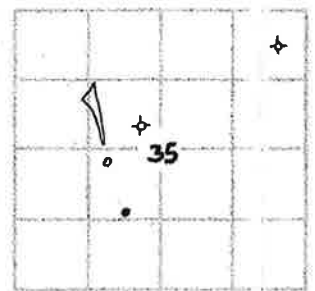
DRILLING TIME AND SAMPLE LOG

COMPANY L. D. DRILLING, INC.  
 LEASE #2 Nuss  
 FIELD ROSE GARDEN NORTHWEST  
 LOCATION 2432' ESL & 1649' FWL  
 SEC 35 T19SP 13s RGE 32W  
 COUNTY LOGAN STATE KANSAS  
 CONTRACTOR L. D. DRILLING, INC.  
 SPUD 9-11-18 COMP 9-22-18  
 RTD 4710 LTD 4711  
 MUD UP 3471 TYPE MUD CHEMICAL

ELEVATIONS  
 KB 2901  
 DF \_\_\_\_\_  
 GL 2896  
 Measurements Are All From 2901 KB  
 CASING  
 SURFACE 8 5/8" @ 17'  
 PRODUCTION 5 1/2" @  
 ELECTRICAL SURVEYS  
 DUAL IND., DENS-N., MICRO

SAMPLES SAVED FROM 3500 TO 4710  
 DRILLING TIME KEPT FROM 3400 TO 4710  
 SAMPLES EXAMINED FROM 3500 TO 4710  
 GEOLOGICAL SUPERVISION FROM 3700 TO 4710  
 GEOLOGIST ON WELL KIM B. SHOEMAKER

FORMATION TOPS	LOG	SAMPLES
ANHYDRITE	2384 + 517	2387 + 519
B/ANK.	2408 + 493	2411 + 490
STOTLER	3531 - 630	3532 - 631
HEEBNER	3881 - 980	3880 - 979
LANSING	3920 - 1019	3922 - 1021
STARK	4168 - 1267	4169 - 1268
MARMATON	4269 - 1368	4268 - 1367
FORT SCOT	4421 - 1520	4419 - 1518
CHEROKEE	4448 - 1547	4446 - 1545
MISSISSIPPI	4560 - 1659	4559 - 1658
MISS. SPERGEN	4686 - 1785	4686 - 1785

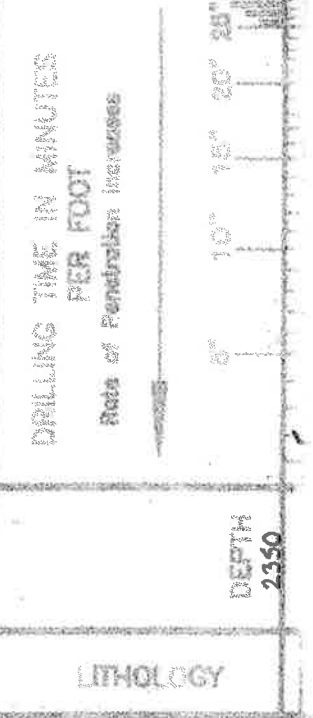


API: 15-109-21564

REMARKS  
 9-11-18 SPUD  
 9-12 @ 250'  
 9-13 @ 1760'  
 9-14 @ 2795'  
 9-15 @ 3242'  
 9-16 @ 3938'  
 9-17 @ 4053'  
 9-18 @ 4255'  
 9-19 @ 4380'  
 9-20 @ 4505'  
 9-21 @ 4658'  
 9-22 @ 4710'

### LEGEND

- Dolomite
- Chert
- Coquina
- Limestone
- Carb sh
- Shale
- Sandstone
- Salt
- Anhydrite



SAMPLE DESCRIPTIONS

REMARKS

SHOED1-11

2450

3400

3500

3600

Samples are logged

ls. T. l. V. St. Foss. w/ Dr. Br. S. H. G. T. F. D. M. D. R.

Sh. Gy. L. Gy.

**STOTLER 3532-631**

ls. L. Br. V. St. Foss.

ls. Gy. Foss. w/ Dr. Gy. Foss.

ls. L. Gy. V. St. Foss.

ls. Gy. V. St. Foss.

Sh. L. Gy. Silty-Sdy.

ls. W. Foss. Galentic

Sh. L. Gy. Silty.

ls. T. Foss. St. Foss.

ls. Gy. St. Foss.

Sh. Gy.

ls. T. Foss. Galentic



ls. G. Foss.

Sh. DEg.

ls. To wt. Foss. Sil.A

Sh. Lfg. Sdy.

ls. Lf. & Sl. Foss.

ls. Dol. ls. V. Foss. in Sca.

Δ T. G.

ls. Lfg. V. Sl. Foss.

ls. wt. Foss.

Sh. DEg.

ls. G. V. Sl. Foss.

Sh. G. Lfg.

ls. G. Sl. G. V. Foss. in G. S. L. P.

Sh. Lfg.

ls. wt. Foss. Calcitic

Sh. Rd.

ls. To wt. Sl. Foss. Sil. chly.

Sh. Lfg.

ls. wt. Sl. Foss. chly.

ls. wt. V. Sl. Foss. V. chly.

Sh. Rd.

ls. To wt. Foss. Calcitic

**HEERER** 3880-979  
Sh. DEg. Calc.

ls. To wt. Foss.

Sh. Lfg.

ls. To wt. V. Sl. Foss. V. Calcitic

Sh. Rd.

**LANSING** 3922-1021

ls. To wt. Sil. A

Δ T. G.

ls. To wt. V. Sl. chly.

ls. To wt. Sl. Foss. Sil. A. Sil. G. Lfg. & Sl. Foss. in G. S. L. P. No Dol. (3950.30)

Sh. DEg.

Sh. DEg. - 21

ls. wt. Sl. Foss. Sil. A

ls. wt. chly.

Sh. Rd.

ls. wt. Lfg. Sl. Foss. Sil. A

Sh. DEg.

ls. wt. chly. ls. wt. V. Sl. Foss. Calcitic Sil. A

PRE-STR. Bd 388.83  
Slip 370.36  
53 Long.

**DST (1) 3912-3950**

1st DEN. Bottom bucket 3 min.

2nd DEN. " " 4 "

30.45-45-60

188: None

28: "

Tool Sample:

57' Mid

95' Lwr.

Rec. 18' Mid (20' Lwr 30' Lwr)

189' 54" W (20' Lwr 10' Lwr)

1638' V. Sl. W (90' Lwr 17' M)

63' " (97' Lwr 37' M)

TF: 1908'

M: 7

RF: 150720 f

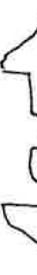
R: 815 @ 721 f

Calc: 520,000

PP: 51.915 418.739 \*

SIP: 1022-1028 \*

Temp: 121° F



V65 53 W11 90

V65 7.2 CAL 7200

3700

3800

3900

4000



Sh. G.

15. Ltg. W. VSi Foss Si. A. Calcitic

Sh. G.

15. Foss. VSi Foss Si. A. Calcitic

15. Ltg. W. VSi Foss VSi Chly.

15. W. VSi Foss Chly.

15. Ltg. VSi Calcitic

15. Ltg. F. Si. A

### MUNCIE CREEK 4087-4186

Sh. Calc. Br. G. VSi Foss.

Sh. Ltg. G.

15. W. Ltg. VSi Foss Si. A

15. G. Si. Foss Si. A

Sh. Ltg.

15. Br. VSi Foss.

A. Br.

15. W. Ltg. VSi Foss Si. Chly.

15. Foss Calcitic Si. A

Sh. Ltg. - Br.

15. T. G. Si. Foss. pr. VSi. Br. VSi Foss. Shell Foss. (4170)

15. T. G. VSi Foss VSi. A

### STARK 4169-4268

Sh. Calc. Br. G. VSi Foss.

15. T. G. Foss. Si. Foss. Calcitic. F. P. V. Br. L. Br. Si. A. VSi. Foss. Foss. (4190)

15. W. Si. Foss. Si. Chly.

### HENSHUCKNEY 4293-4302

Sh. Calc. Br. G.

15. Br. G. VSi Foss.

Sh. Ltg.

15. T. G. VSi Foss.

### BICK 4230-4329

15. Ltg. VSi Foss Si. Chly.

Sh. Ltg.

15. Br. Dn. Si. Calcitic

15. Br. Dn. VSi Foss.

Sh. R. T. Br. Silty. Silty.

### MARMATON 4248-4367

15. T. Br. G. VSi Foss. Calcitic. AT

Sh. Br. G.

Sh. Calc. Silty.

15. T. Br. G. Si. Foss. Foss.

15. Ltg. Si. Chly.

Sh. Ltg.

15. W. VSi Foss. Si. A

Sh. Br. G.

VIS: 97  
WT: 92  
WL: 8.8  
CAL: 4500



4100

4200

4300

DST (3)

VIS: 77  
WT: 94  
WL: 10.4  
CAL: 5000

### DST (2) 4137-4200

15' OPEN: Blow will to 6" BB: None

2' OPEN: " " " " BB: "

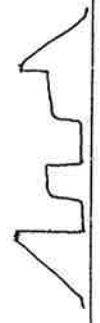
30-45-45-60

Rec: 68' 6.1.P. Grav. 35@40F  
20' Chond  
98' 11.4 (207.4 @ 30/LA)  
6.3' 11.4 (70.7 @ 30/LA)

PI: 7

SI: 2 @ 72°F  
" : 118 @ 121°F  
CAL: 36000

Temp: 121°F



### DST (3) 4324-4380

15' OPEN: Bottom bucket 6 1/2" min. BB: None

2' OPEN: " " " " BB: 1 1/4"

30-45-45-60

Rec: 68' 6.1.P.  
5' Grav. 27' Grav. 60F  
6.3' 15.0@40F (91.6 @ 30/LA)  
12.6' 50.6@40F (287.6 @ 30/LA)  
12.6' 50.6@40F (287.6 @ 30/LA)  
6.3' 50.6@40F (91.6 @ 30/LA)  
52.7' 50.6@40F (510.1 @ 30/LA)  
TF: 950  
SI: 33-244 240-1443  
CAL: 35000

Temp: 127°F



45. Tan Ltg. cool. Sil. Foss. Sil. A. P. V. 1/2  
 46. Tan Ltg. cool. Sil. Foss. Sil. A. P. V. 1/2  
 47. Tan Ltg. cool. Sil. Foss. Sil. A. P. V. 1/2

**PAWNEE** 4363-1462  
 Sh. clay.

48. Tan Ltg. cool. Sil. Foss. Sil. A. P. V. 1/2  
 49. Tan Ltg. cool. Sil. Foss. Sil. A. P. V. 1/2

50. Tan Ltg. cool. Sil. Foss. Sil. A. P. V. 1/2

**MYRIK STATION** 4404-1503  
 A. G. H.

51. Tan Ltg. cool. Sil. Foss. Sil. A. P. V. 1/2

**FORTSCOTT** 4419-1518  
 A. G. H.

52. Tan Ltg. cool. Sil. Foss. Sil. A. P. V. 1/2

53. Tan Ltg. cool. Sil. Foss. Sil. A. P. V. 1/2

**CHEROKEE** 4446-1545  
 Sh. Blk. Carb.

54. Tan Ltg. cool. Sil. Foss. Sil. A. P. V. 1/2

55. Tan Ltg. cool. Sil. Foss. Sil. A. P. V. 1/2

56. Tan Ltg. cool. Sil. Foss. Sil. A. P. V. 1/2

57. Tan Ltg. cool. Sil. Foss. Sil. A. P. V. 1/2

**JOHNSON** 4492-1591  
 Sh. Yellow. Lt. G. Blue.

58. Tan Ltg. cool. Sil. Foss. Sil. A. P. V. 1/2

59. Tan Ltg. cool. Sil. Foss. Sil. A. P. V. 1/2

60. Tan Ltg. cool. Sil. Foss. Sil. A. P. V. 1/2

61. Tan Ltg. cool. Sil. Foss. Sil. A. P. V. 1/2

62. Tan Ltg. cool. Sil. Foss. Sil. A. P. V. 1/2

**MISSISSIPPI** 4559-1658  
 Sh. Clay.

63. Tan Ltg. cool. Sil. Foss. Sil. A. P. V. 1/2

64. Tan Ltg. cool. Sil. Foss. Sil. A. P. V. 1/2

65. Tan Ltg. cool. Sil. Foss. Sil. A. P. V. 1/2

66. Tan Ltg. cool. Sil. Foss. Sil. A. P. V. 1/2

67. Tan Ltg. cool. Sil. Foss. Sil. A. P. V. 1/2

68. Tan Ltg. cool. Sil. Foss. Sil. A. P. V. 1/2

69. Tan Ltg. cool. Sil. Foss. Sil. A. P. V. 1/2

70. Tan Ltg. cool. Sil. Foss. Sil. A. P. V. 1/2

71. Tan Ltg. cool. Sil. Foss. Sil. A. P. V. 1/2

72. Tan Ltg. cool. Sil. Foss. Sil. A. P. V. 1/2

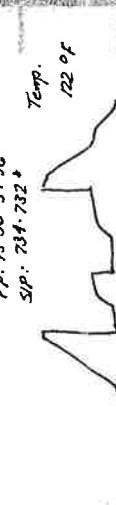
**DST (4) 4392-4463**  
 1' OPEN: Blow drill to 10.7"  
 2' OPEN: Bottom bucket 22.5 min.  
 30.45-45-60

Rec. 338 6.1.2 26.7 travel 60° F  
 10' Core 0.2  
 30' HOLE (20% 60% M)  
 63' HOLE (20% 60% M)  
 7F: 214'



**DST (5) 4466-4531**  
 1' OPEN: Blow drill to Bottom bucket 14 min. 08.1"  
 2' OPEN: " " " " 14 " 20.14"

30.45-45-60  
 Rec. 572 6.1.2 28.5 travel 60° F  
 25' Core 0.1  
 63' HOLE (20% 60% M)  
 63' HOLE (20% 60% M)  
 63' HOLE (20% 60% M)  
 7F: 214'



4400  
 V/S: 65 WT: 93  
 W/L: 8.0 CAL: 4500



4500  
 V/S: 57  
 WT: 96  
 W/L: 10.4  
 CAL: 5000



4600

15. To G. cool. Sdy. Hd. to G. RL 504 PA.

16. sh. cool. Sdy.

17. To RL 1081 A. Si. Calcitic

MISS. SPERGEN 406-1785

18. To L. G. Y. En. In. Svc.

19. To B. G. cool. Si. chly

20. L. G. B. cool. w/ B. G. cool.

4700

RTD 4710-1809

⊙

