



1371688

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 <i>(Attach Additional Sheets)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Log	Formation (Top), Depth and Datum	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input type="checkbox"/> Yes <input type="checkbox"/> No	Name	Top	Datum
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:				

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				

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

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

DISPOSITION OF GAS: <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	METHOD OF COMPLETION: <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i>	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	KELLI 4
Doc ID	1371688

Tops

Name	Top	Datum
ANHYDRITE	682	+1188
BASE ANHYDRITE	703	+1167
TOPEKA	2864	-994
HEEBNER	3156	-1286
BROWN LIME	3287	-1417
LANSING	3303	-1433
BASE KANSAS CITY	3519	-1649
VIOLA	3552	-1682
SIMPSON	3590	-1720
ARBUCKLE	3642	-1772

Form	ACO1 - Well Completion
Operator	L. D. Drilling, Inc.
Well Name	KELLI 4
Doc ID	1371688

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	7.875	8.625	24	334	A-CONN	150	3%CC
Surface	7.875	8.625	24	334	COMMON	150	2%CC,1/4 #CF
Production	12.25	5.5	15.5	3751	AA-2	150	10%Salt,1/4#CF
Production	12.25	5.5	15.5	3751	60/40 POZMIX	30	@ RATHOLE



**Company: L. D. Drilling, Inc**  
**Lease: Kelli #4**

SEC: 30 TWN: 21S RNG: 12W  
 County: STAFFORD  
 State: Kansas  
 Drilling Contractor: L. D. Drilling, Inc -  
 Rig 1  
 Elevation: 1865 EST  
 Field Name: Gates  
 Pool: Infield  
 Job Number: 58

**DATE**  
 September  
**17**  
 2017

**DST #1 Formation: Lans B/F Test Interval: 3293 - 3385' Total Depth: 3385'**

Time On: 09:00 09/17 Time Off: 16:26 09/17  
 Time On Bottom: 11:27 09/17 Time Off Bottom: 14:27 09/17

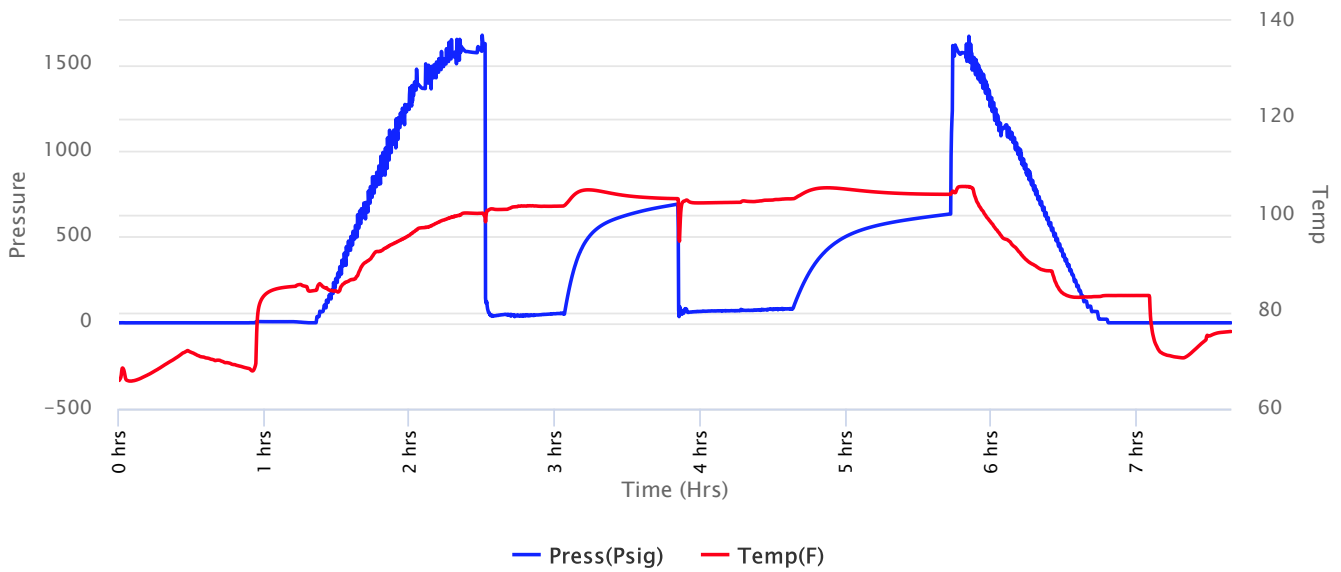
Electronic Volume Estimate:  
 N/A

1st Open  
 Minutes: 30  
 Gas at surface " at 30 min

1st Close  
 Minutes: 45  
 0" at 45 min

2nd Open  
 Minutes: 45  
 Gas at surface " at 45 min

2nd Close  
 Minutes: 60  
 .5" at 60 min





**Company: L. D. Drilling, Inc**  
**Lease: Kelli #4**

SEC: 30 TWN: 21S RNG: 12W  
 County: STAFFORD  
 State: Kansas  
 Drilling Contractor: L. D. Drilling, Inc - Rig 1  
 Elevation: 1865 EST  
 Field Name: Gates  
 Pool: Infield  
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Time On: 09:00 09/17    Time Off: 16:26 09/17  
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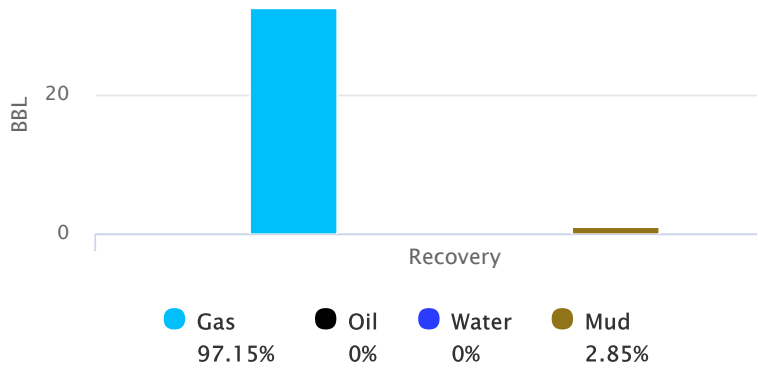
Recovered

Foot	BBLs	Description of Fluid	Gas %	Oil %	Water %	Mud %
3137	32.18562	G	100	0	0	0
124	1.27224	GCM	25	0	0	75

Total Recovered: 3261 ft  
 Total Barrels Recovered: 33.45786

Reversed Out  
 NO

**Recovery at a glance**



Initial Hydrostatic Pressure	1574	PSI
Initial Flow	38 to 51	PSI
<b>Initial Closed in Pressure</b>	<b>691</b>	<b>PSI</b>
Final Flow Pressure	37 to 83	PSI
<b>Final Closed in Pressure</b>	<b>634</b>	<b>PSI</b>
Final Hydrostatic Pressure	1579	PSI
Temperature	106	°F
Pressure Change Initial Close / Final Close	8.3	%





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County: STAFFORD  
State: Kansas  
Drilling Contractor: L. D. Drilling, Inc -  
Rig 1  
Elevation: 1865 EST  
Field Name: Gates  
Pool: Infield  
Job Number: 58

<b>DATE</b> September <b>17</b> 2017
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**DST #1**      **Formation: Lans B/F**      **Test Interval: 3293 - 3385'**      **Total Depth: 3385'**

Time On: 09:00 09/17      Time Off: 16:26 09/17  
Time On Bottom: 11:27 09/17      Time Off Bottom: 14:27 09/17

**Down Hole Makeup**

<b>Heads Up:</b> 19.76 FT	<b>Packer 1:</b> 3288.12 FT
<b>Drill Pipe:</b> 3280.31 FT <i>ID-3 1/4</i>	<b>Packer 2:</b> 3293.12 FT
<b>Weight Pipe:</b> 0 FT <i>ID-2 7/8</i>	<b>Top Recorder:</b> 3277.54 FT
<b>Collars:</b> 0 FT <i>ID-2 1/4</i>	<b>Bottom Recorder:</b> 3362 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> 91.88	<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> 3 FT <i>4 1/2-FH</i>	
<b>Change Over:</b> .5 FT	
<b>Drill Pipe: (in anchor):</b> 62.38 FT <i>ID-3 1/4</i>	
<b>Change Over:</b> 1 FT	
<b>Perforations: (below):</b> 24 FT <i>4 1/2-FH</i>	







**Company: L. D. Drilling, Inc**  
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SEC: 30 TWN: 21S RNG: 12W  
 County: STAFFORD  
 State: Kansas  
 Drilling Contractor: L. D. Drilling, Inc - Rig 1  
 Elevation: 1865 EST  
 Field Name: Gates  
 Pool: Infield  
 Job Number: 58

**DATE**  
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**DST #1 Formation: Lans B/F Test Interval: 3293 - 3385' Total Depth: 3385'**

Time On: 09:00 09/17 Time Off: 16:26 09/17  
 Time On Bottom: 11:27 09/17 Time Off Bottom: 14:27 09/17

**Gas Volume Report**

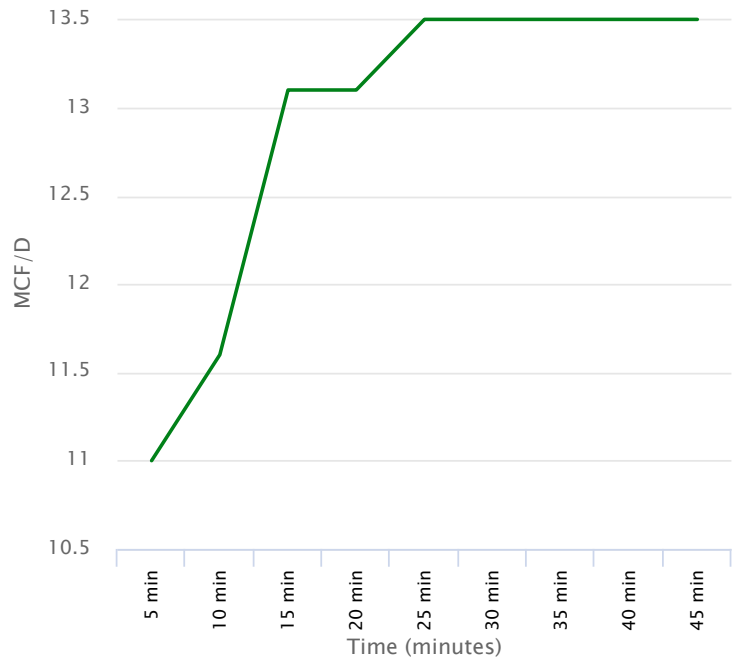
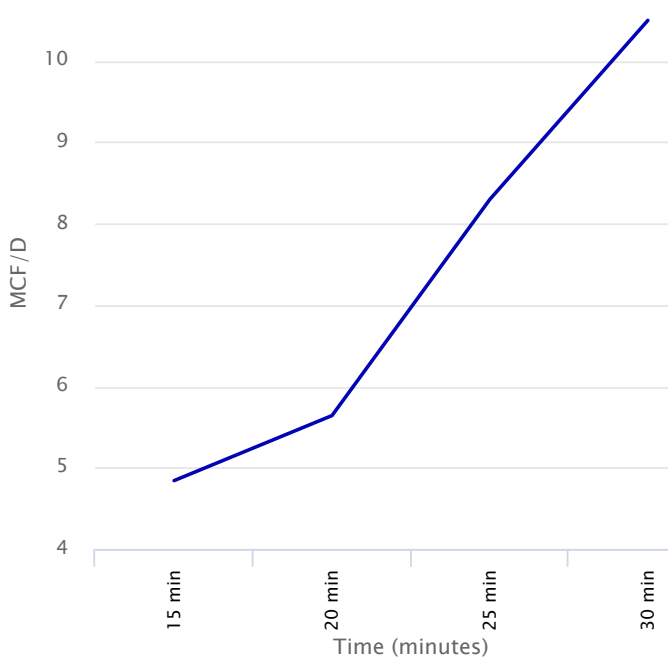
Remarks: 10. GTS in 10 mins 20. GTS in 3 mins Gas Sample taken 15 mins into Second Opening

1st Open

Time	Orifice	PSI	MCF/D
15	0.125	3.0	4.84
20	0.125	4.0	5.64
25	0.125	8.0	8.30
30	0.125	12	10.5

2nd Open

Time	Orifice	PSI	MCF/D
5	0.125	13	11.0
10	0.125	14	11.6
15	0.125	17	13.1
20	0.125	17	13.1
25	0.125	18	13.5
30	0.125	18	13.5
35	0.125	18	13.5
40	0.125	18	13.5
45	0.125	18	13.5





**Company: L. D. Drilling, Inc**  
**Lease: Kelli #4**

SEC: 30 TWN: 21S RNG: 12W  
 County: STAFFORD  
 State: Kansas  
 Drilling Contractor: L. D. Drilling, Inc - Rig 1  
 Elevation: 1865 EST  
 Field Name: Gates  
 Pool: Infield  
 Job Number: 58

**DATE**  
 September  
**18**  
 2017

**DST #2**    **Formation: L/KC H-I**    **Test Interval: 3416 - 3460'**    **Total Depth: 3460'**

Time On: 00:15 09/18    Time Off: 08:33 09/18  
 Time On Bottom: 02:00 09/18    Time Off Bottom: 06:00 09/18

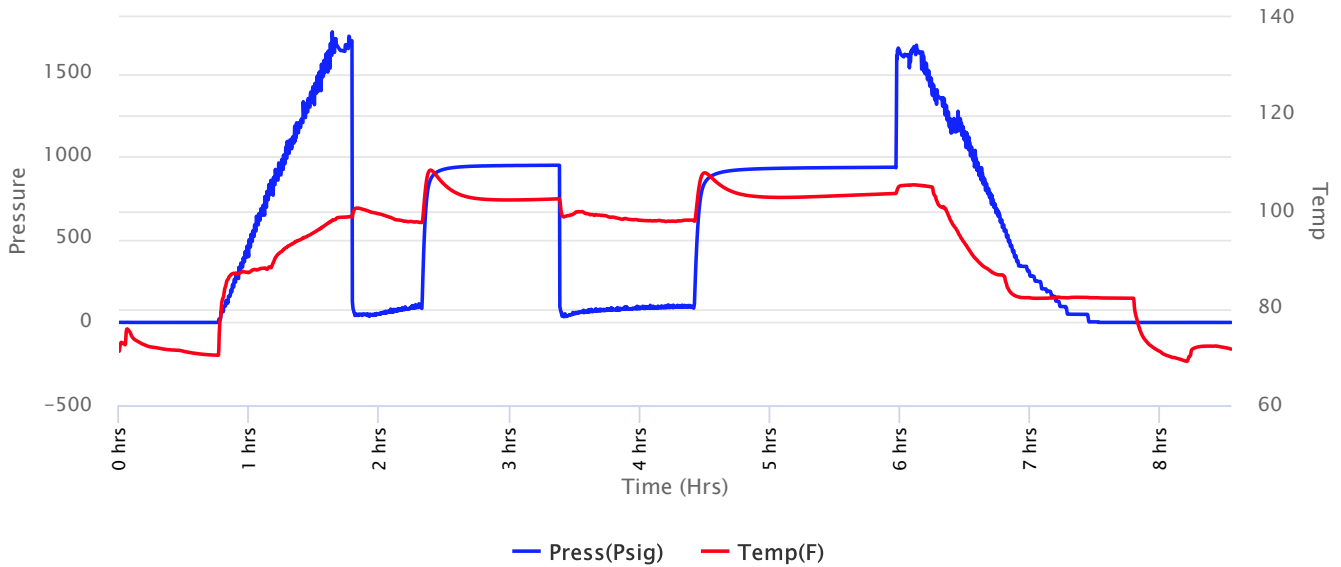
Electronic Volume Estimate:  
 N/A

1st Open  
 Minutes: 30  
 GTS" at 30 min

1st Close  
 Minutes: 60  
 .2" at 60 min

2nd Open  
 Minutes: 60  
 GTS" at 60 min

2nd Close  
 Minutes: 90  
 6.7" at 90 min





**Company: L. D. Drilling, Inc**  
**Lease: Kelli #4**

SEC: 30 TWN: 21S RNG: 12W  
 County: STAFFORD  
 State: Kansas  
 Drilling Contractor: L. D. Drilling, Inc - Rig 1  
 Elevation: 1865 EST  
 Field Name: Gates  
 Pool: Infield  
 Job Number: 58

**DATE**  
 September  
**18**  
 2017

**DST #2**    **Formation: L/KC H-I**    **Test Interval: 3416 - 3460'**    **Total Depth: 3460'**

Time On: 00:15 09/18    Time Off: 08:33 09/18  
 Time On Bottom: 02:00 09/18    Time Off Bottom: 06:00 09/18

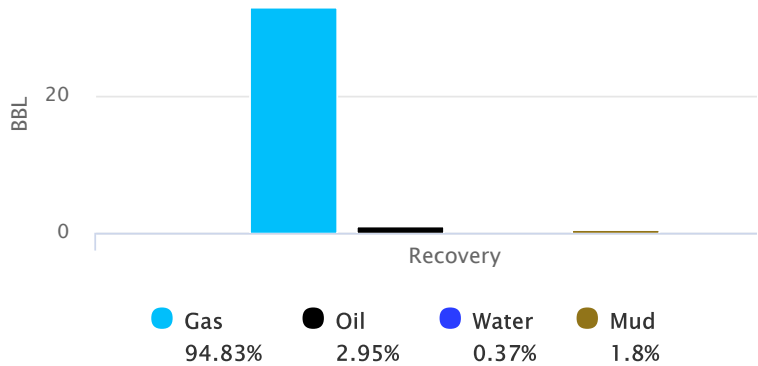
Recovered

Foot	BBLs	Description of Fluid	Gas %	Oil %	Water %	Mud %
3198	32.81148	G	100	0	0	0
134	1.37484	SLWCSLGCHMCO	13	40	7	40
62	0.63612	SLWCSLGCSLMCO	5	75	5	12

Total Recovered: 3394 ft  
 Total Barrels Recovered: 34.82244

Reversed Out  
 NO

**Recovery at a glance**



Initial Hydrostatic Pressure	1638	PSI
Initial Flow	42 to 98	PSI
<b>Initial Closed in Pressure</b>	<b>949</b>	<b>PSI</b>
Final Flow Pressure	38 to 98	PSI
<b>Final Closed in Pressure</b>	<b>938</b>	<b>PSI</b>
Final Hydrostatic Pressure	1635	PSI
Temperature	108	°F
Pressure Change Initial Close / Final Close	1.2	%



**Company: L. D. Drilling, Inc**  
**Lease: Kelli #4**

SEC: 30 TWN: 21S RNG: 12W  
County: STAFFORD  
State: Kansas  
Drilling Contractor: L. D. Drilling, Inc -  
Rig 1  
Elevation: 1865 EST  
Field Name: Gates  
Pool: Infield  
Job Number: 58

<p><b>DATE</b> September <b>18</b> 2017</p>
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**DST #2**      **Formation: L/KC H-I**      **Test Interval: 3416 - 3460'**      **Total Depth: 3460'**

Time On: 00:15 09/18

Time Off: 08:33 09/18

Time On Bottom: 02:00 09/18

Time Off Bottom: 06:00 09/18

**REMARKS:**

1O. 1' Blow (BOB in 35 seconds) GTS in 7 1/2 mins

1C. WBB

2O. 8' Blow (BOB in 5 seconds) GTS

2C. 6 3/4 inch BB

Tool Sample: 5% G 85% O 7% W 3% M



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**Lease: Kelli #4**

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 County: STAFFORD  
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 Drilling Contractor: L. D. Drilling, Inc -  
 Rig 1  
 Elevation: 1865 EST  
 Field Name: Gates  
 Pool: Infield  
 Job Number: 58

<p><b>DATE</b>          September  <b>18</b>          2017</p>
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**DST #2      Formation: L/KC H-I      Test Interval: 3416 - 3460'      Total Depth: 3460'**

Time On: 00:15 09/18      Time Off: 08:33 09/18  
 Time On Bottom: 02:00 09/18      Time Off Bottom: 06:00 09/18

**Down Hole Makeup**

<b>Heads Up:</b> 21.78 FT	<b>Packer 1:</b> 3411 FT
<b>Drill Pipe:</b> 3405.21 FT <i>ID-3 1/4</i>	<b>Packer 2:</b> 3416 FT
<b>Weight Pipe:</b> 0 FT <i>ID-2 7/8</i>	<b>Top Recorder:</b> 3400.42 FT
<b>Collars:</b> 0 FT <i>ID-2 1/4</i>	<b>Bottom Recorder:</b> 3453 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> 44	<b>Surface Choke:</b> 1"
<u><b>Anchor Makeup</b></u>	<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> .5 FT	
<b>Drill Pipe: (in anchor):</b> 31.50 FT <i>ID-3 1/4</i>	
<b>Change Over:</b> 1 FT	
<b>Perforations: (below):</b> 8 FT <i>4 1/2-FH</i>	



**Company: L. D. Drilling, Inc**  
**Lease: Kelli #4**

SEC: 30 TWN: 21S RNG: 12W  
County: STAFFORD  
State: Kansas  
Drilling Contractor: L. D. Drilling, Inc -  
Rig 1  
Elevation: 1865 EST  
Field Name: Gates  
Pool: Infield  
Job Number: 58

<p><b>DATE</b> September <b>18</b> 2017</p>
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**DST #2**      **Formation: L/KC H-I**      **Test Interval: 3416 - 3460'**      **Total Depth: 3460'**

Time On: 00:15 09/18      Time Off: 08:33 09/18  
Time On Bottom: 02:00 09/18      Time Off Bottom: 06:00 09/18

**Mud Properties**

**Mud Type:** Chem      **Weight:** 9.2      **Viscosity:** 54      **Filtrate:** 9.2      **Chlorides:** 4800 ppm



**Company: L. D. Drilling, Inc**  
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 County: STAFFORD  
 State: Kansas  
 Drilling Contractor: L. D. Drilling, Inc -  
 Rig 1  
 Elevation: 1865 EST  
 Field Name: Gates  
 Pool: Infield  
 Job Number: 58

**DATE**  
 September  
**18**  
 2017

**DST #2 Formation: L/KC H-I Test Interval: 3416 - 3460' Total Depth: 3460'**

Time On: 00:15 09/18 Time Off: 08:33 09/18  
 Time On Bottom: 02:00 09/18 Time Off Bottom: 06:00 09/18

**Gas Volume Report**

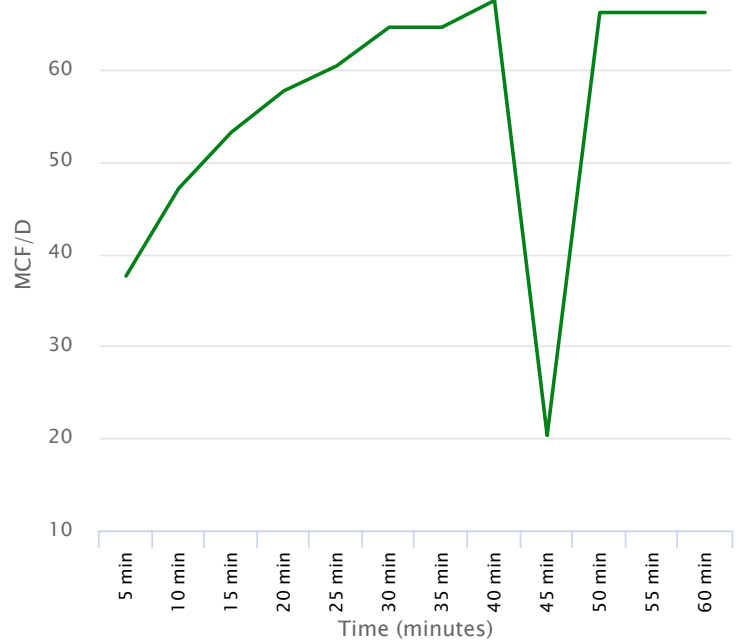
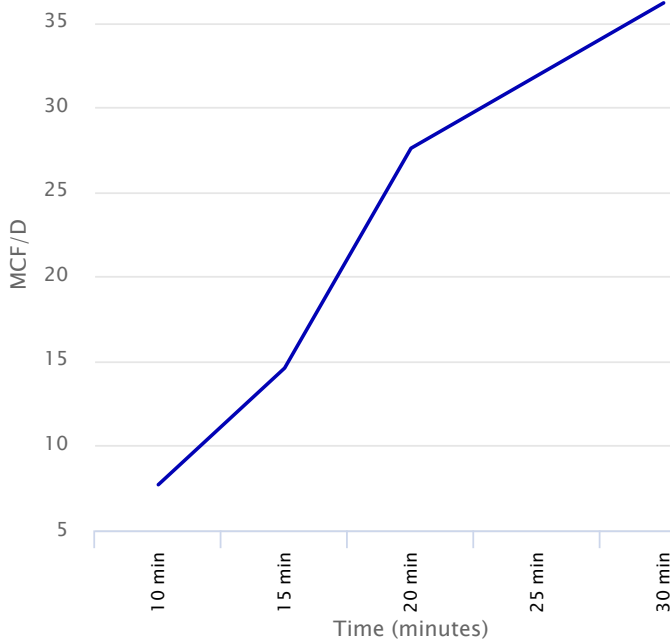
**Remarks:** 10. Gas at surface in 7 1/2 mins 20. Gas at surface. Gas sample taken 15 min on second opening

1st Open

Time	Orifice	PSI	MCF/D
10	0.125	7.0	7.70
15	0.125	20	14.6
20	0.125	40	27.6
25	0.125	50	31.9
30	0.125	60	36.2

2nd Open

Time	Orifice	PSI	MCF/D
5	0.25	14	37.6
10	0.25	20	47.1
15	0.25	24	53.2
20	0.25	27	57.7
25	0.25	29	60.4
30	0.25	32	64.6
35	0.25	32	64.6
40	0.25	33	67.5
45	0.25	33	20.3
50	0.25	33	66.2
55	0.25	33	66.2
60	0.25	33	66.2



















**Company: L. D. Drilling, Inc**  
**Lease: Kelli #4**

SEC: 30 TWN: 21S RNG: 12W  
 County: STAFFORD  
 State: Kansas  
 Drilling Contractor: L. D. Drilling, Inc - Rig 1  
 Elevation: 1865 EGL  
 Field Name: Gates  
 Pool: Infield  
 Job Number: 58

**DATE**  
 September  
**19**  
 2017

**DST #4 Formation: Arbuckle Test Interval: 3588 - 3658' Total Depth: 3658'**

Time On: 11:37 09/19 Time Off: 18:47 09/19  
 Time On Bottom: 13:45 09/19 Time Off Bottom: 16:45 09/19

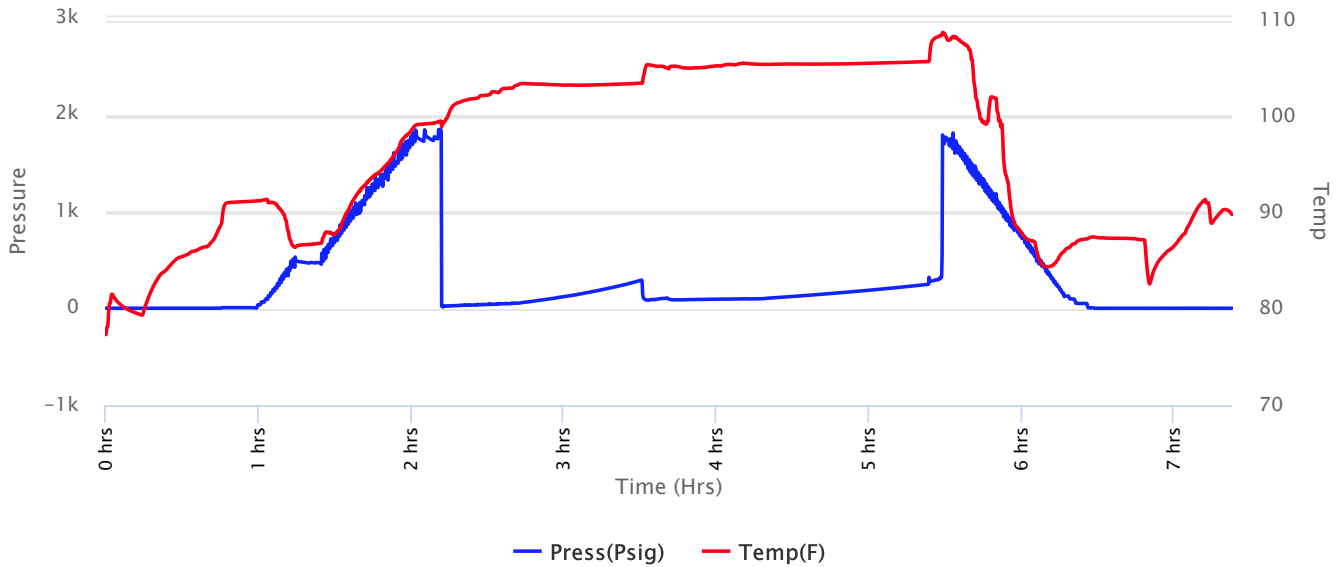
Electronic Volume Estimate:  
 568'

1st Open  
 Minutes: 30  
 22.8" at 30 min

1st Close  
 Minutes: 45  
 2" at 45 min

2nd Open  
 Minutes: 45  
 37.2 " at 45 min

2nd Close  
 Minutes: 60  
 1.4" at 60 min





**Company: L. D. Drilling, Inc**  
**Lease: Kelli #4**

SEC: 30 TWN: 21S RNG: 12W  
 County: STAFFORD  
 State: Kansas  
 Drilling Contractor: L. D. Drilling, Inc - Rig 1  
 Elevation: 1865 EGL  
 Field Name: Gates  
 Pool: Infield  
 Job Number: 58

**DATE**  
 September  
**19**  
 2017

**DST #4 Formation: Arbuckle Test Interval: 3588 - 3658' Total Depth: 3658'**

Time On: 11:37 09/19 Time Off: 18:47 09/19  
 Time On Bottom: 13:45 09/19 Time Off Bottom: 16:45 09/19

Recovered

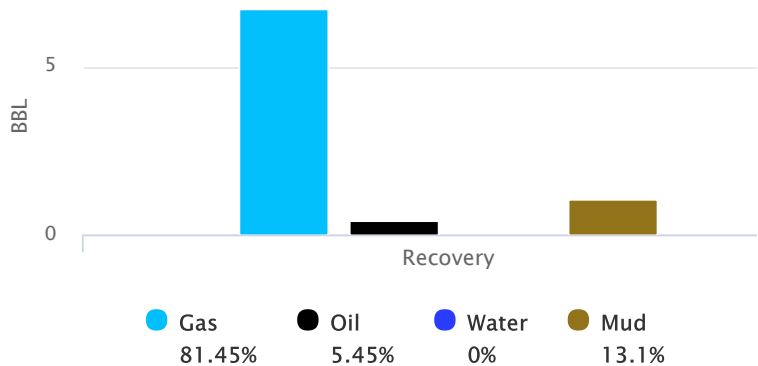
Foot	BBLs	Description of Fluid	Gas %	Oil %	Water %	Mud %
610	6.2586	G	100	0	0	0
10	0.1026	SLOCM	0	5	0	95
62	0.63612	SLOCHGCM	30	10	0	60
62	0.63612	OCHMCG	45	20	0	35
62	0.63612	HOCM	0	40	0	60

Total Recovered: 806 ft  
 Total Barrels Recovered: 8.26956

Reversed Out  
 NO

Initial Hydrostatic Pressure 1722 PSI  
 Initial Flow 23 to 48 PSI  
**Initial Closed in Pressure 291 PSI**  
 Final Flow Pressure 90 to 101 PSI  
**Final Closed in Pressure 334 PSI**  
 Final Hydrostatic Pressure 1702 PSI  
 Temperature 106 °F  
 Pressure Change Initial Close / Final Close 0.0 %

**Recovery at a glance**







**Company: L. D. Drilling, Inc**  
**Lease: Kelli #4**

SEC: 30 TWN: 21S RNG: 12W  
County: STAFFORD  
State: Kansas  
Drilling Contractor: L. D. Drilling, Inc -  
Rig 1  
Elevation: 1865 EGL  
Field Name: Gates  
Pool: Infield  
Job Number: 58

<p><b>DATE</b> September <b>19</b> 2017</p>
---

**DST #4      Formation: Arbuckle      Test Interval: 3588 -      Total Depth: 3658'**  
**3658'**

Time On: 11:37 09/19      Time Off: 18:47 09/19  
Time On Bottom: 13:45 09/19      Time Off Bottom: 16:45 09/19

**REMARKS:**

Bucket Blows

- 1O. WSB (BOB in 10 mins)
- 1C. 1 in bb
- 2O. 1" Blow (BOB in 12 1/2 mins)
- 2C. WBB

Tool Sample: 95 % O 5% M



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SEC: 30 TWN: 21S RNG: 12W  
 County: STAFFORD  
 State: Kansas  
 Drilling Contractor: L. D. Drilling, Inc -  
 Rig 1  
 Elevation: 1865 EGL  
 Field Name: Gates  
 Pool: Infield  
 Job Number: 58

<p><b>DATE</b>          September  <b>19</b>          2017</p>
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**DST #4    Formation: Arbuckle    Test Interval: 3588 - 3658'    Total Depth: 3658'**

Time On: 11:37 09/19                      Time Off: 18:47 09/19  
 Time On Bottom: 13:45 09/19    Time Off Bottom: 16:45 09/19

**Down Hole Makeup**

<b>Heads Up:</b> 5.86 FT	<b>Packer 1:</b> 3582.99 FT
<b>Drill Pipe:</b> 3561.28 FT <i>ID-3 1/4</i>	<b>Packer 2:</b> 3587.99 FT
<b>Weight Pipe:</b> 0 FT <i>ID-2 7/8</i>	<b>Top Recorder:</b> 3572.41 FT
<b>Collars:</b> 0 FT <i>ID-2 1/4</i>	<b>Bottom Recorder:</b> 3623 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> 70.01	<b>Surface Choke:</b> 1"
<u><b>Anchor Makeup</b></u>	<b>Bottom Choke:</b> 5/8"
<b>Packer Sub:</b> 1 FT	
<b>Perforations: (top):</b> 0 FT <i>4 1/2-FH</i>	
<b>Change Over:</b> 1 FT	
<b>Drill Pipe: (in anchor):</b> 31.01 FT <i>ID-3 1/4</i>	
<b>Change Over:</b> 1 FT	
<b>Perforations: (below):</b> 36 FT <i>4 1/2-FH</i>	



**Company: L. D. Drilling, Inc**  
**Lease: Kelli #4**

SEC: 30 TWN: 21S RNG: 12W  
County: STAFFORD  
State: Kansas  
Drilling Contractor: L. D. Drilling, Inc -  
Rig 1  
Elevation: 1865 EGL  
Field Name: Gates  
Pool: Infield  
Job Number: 58

<b>DATE</b> September <b>19</b> 2017
---

**DST #4    Formation: Arbuckle    Test Interval: 3588 -    Total Depth: 3658'**  
**3658'**

Time On: 11:37 09/19                      Time Off: 18:47 09/19  
Time On Bottom: 13:45 09/19    Time Off Bottom: 16:45 09/19

### **Mud Properties**

**Mud Type:** Chem                      **Weight:** 8.9 Gas Cut                      **Viscosity:** 68                      **Filtrate:** 11.2                      **Chlorides:** 7900 ppm



**Company: L. D. Drilling, Inc**  
**Lease: Kelli #4**

SEC: 30 TWN: 21S RNG: 12W  
 County: STAFFORD  
 State: Kansas  
 Drilling Contractor: L. D. Drilling, Inc -  
 Rig 1  
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<p><b>DATE</b>          September  <b>19</b>          2017</p>
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**DST #4    Formation: Arbuckle    Test Interval: 3588 -    Total Depth: 3658'**  
**3658'**

Time On: 11:37 09/19                      Time Off: 18:47 09/19  
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**Gas Volume Report**

1st Open

2nd Open

Time	Orifice	PSI	MCF/D
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Time	Orifice	PSI	MCF/D
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# KIM B. SHOEMAKER

CONSULTING GEOLOGIST

316-684-9709 \* WICHITA, KS

## GEOLOGIST'S REPORT

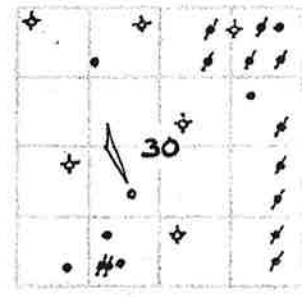
DRILLING TIME AND SAMPLE LOG

COMPANY L. D. DRILLING, INC.  
 LEASE # 4 KELLI  
 FIELD GATES  
 LOCATION 1700' FSL & 2088' FWL  
 SEC 30 TWP 21s RGE 12W  
 COUNTY STAFFORD STATE KANSAS  
 CONTRACTOR L. D. DRILLING, INC.  
 SPUD 9-12-17 COMP 9-20-17  
 RTD 3760 LTD 3758  
 MUD UP 2815 TYPE MUD CHEMICAL

ELEVATIONS  
 KB 1870  
 DE  
 RL 1865  
 Measurements Are All  
 From 1870 KB  
 CASING  
 SURFACE 8 5/8" @ 334'  
 PRODUCTION 5 1/2" @  
 ELECTRICAL SURVEYS  
 DUAL IND., DENS., N., MICRO

SAMPLES SAWED FROM 3000 TO 3760  
 DRILLING TIME KEPT FROM 2800 TO 3760  
 SAMPLES EXAMINED FROM 3000 TO 3760  
 GEOLOGICAL SUPERVISION FROM 3200 TO 3760  
 GEOLOGIST ON WELL KIM B. SHOEMAKER

FORMATION TOPS	LOG	SAMPLES
ANHYDRITE	682+1188	685+1185
B/ANH.	703+1167	706+1164
TOPEKA	2864-994	2867-997
HEEBNER	3156-1286	3159-1289
BROWN LIME	3287-1417	3290-1420
LANSING	3303-1433	3306-1436
B/KC	3519-1649	3522-1652
VIOLA	3552-1682	3554-1684
SIMPSON	3590-1720	3592-1722
ARBUCKLE	3642-1772	3644-1774



REMARKS  
 9-12-17 SPUD  
 9-13 @ 338'  
 9-14 @ 1157'  
 9-15 @ 2075'  
 9-16 @ 2830'  
 9-17 @ 3385'  
 9-18 @ 3460'  
 9-19 @ 3615'  
 9-20 @ 3760'

API: 15-185-23997

### LEGEND

- Dolomite
- Chert
- Col. Lime
- Limestone
- Carb. sh
- Single
- Sandstone
- Salt
- Anhydrite

DRILLING TIME IN MINUTES  
 PER FOOT  
 Rate of Penetration increases



SAMPLE DESCRIPTIONS

REMARKS

ANHYDRITE 685+1185

B/ANH. 706+1164

LITHOLOGY



750

2800

2900

3000

TOPEKA 2867-997

Vis: 65  
WT: 87  
Wt: 88  
CAL: 2700

Samples are Lagged

Δ wt.

LS. w/ Ta. Foss. vsli. chily.

LS. B. G. Foss.

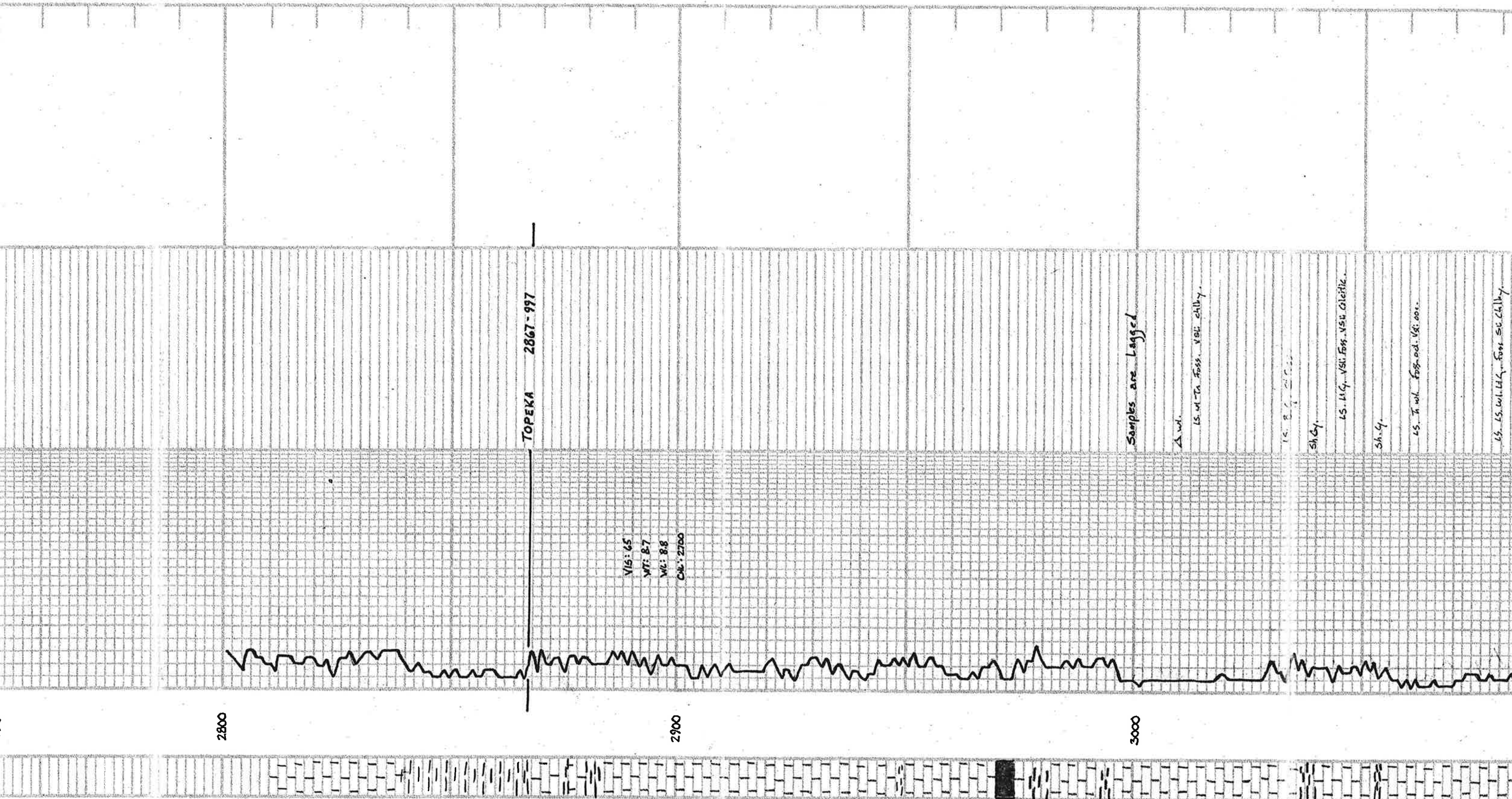
Sh. G.

LS. w/ G. vsli. Foss. vsli. chily.

Sh. G.

LS. T. w/ Foss. od. vsli. oor.

LS. LS. w/ L.H.G. Foss. vsli. chily.



















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

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

TTMH 30  
FIELD SERVICE TICKET

1718 13985 A

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

DATE OF JOB <u>9/20/17</u> DISTRICT _____		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>L.D. Drilling Inc</u>		LEASE <u>Kelli</u>				WELL NO. <u>4</u>				
ADDRESS _____		COUNTY <u>Stafford</u>		STATE <u>Ks</u>						
CITY _____ STATE _____		SERVICE CREW <u>Scotty, Scott, McGraw, Rik</u>								
AUTHORIZED BY <u>Mark Davis</u>		JOB TYPE: <u>5 1/2 Long Slugs 242</u>								
EQUIPMENT#	HRS	EQUIPMENT#	HRS	EQUIPMENT#	HRS	TRUCK CALLED	DATE	AM	PM	TIME
<u>86779</u>	<u>1</u>									
<u>19918</u>	<u>.25</u>									
ARRIVED AT JOB							<u>9/20/17</u>	AM	PM	<u>8:00</u>
START OPERATION							<u>9/20/17</u>	AM	PM	<u>6:18</u>
FINISH OPERATION							<u>9/20/17</u>	AM	PM	<u>7:30</u>
RELEASED							<u>9/20/17</u>	AM	PM	<u>8:00</u>
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
CP105	AA2 Cement	SK	150		2550 00
CP103	60/10 P02	SK	30		360 00
CC111	Salt	lb	816		408 00
CC102	Cellulose	lb	38		140 60
CC113	Gypsum	lb	705		528 75
CC129	FIA 322	lb	113		847 50
CC201	Gilsonite	lb	901		603 67
CF1251	Auto fill Float Shoe 5 1/2	EA	1		360 00
CF607	Latch down Plug + Baffle	EA	1		400 00
CF1651	Tribolizers 5 1/2	EA	8		880 00
CF1901	Bucket 5 1/2	EA	1		290 00
CC151	Mud Wash	Gal	1000		1500 00
CC131	Sugar	lb	50		250 00
E100	Unit Mileage Pick up	M1	40		180 00
E101	Heavy Equip Mileage	M1	80		600 00
E113	Prop + Bulk Delivery	TM	334		835 00
CE204	Depth Charge 3001-4000'	4hr	1		2160 00
CE240	Blending + Mixing	SK	180		252 00
5003	Service Supervisor	EA	1		175 00
SUB TOTAL					13,320 52

CHEMICAL / ACID DATA:			

SERVICE & EQUIPMENT	%TAX ON \$	
MATERIALS	%TAX ON \$	
TOTAL		7,326 29

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>L.D. Drilling Inc.</i>		Lease No.		Date	
Lease <i>Kelli</i>		Well # <i>41</i>			
Field Order # <i>13985 A</i>	Station <i>Pratt KS</i>	Casing <i>5 1/2</i>	Depth <i>3753</i>	County <i>Stuffed</i>	State <i>KS</i>
Type Job <i>5 1/2 Long String 242</i>			Formation	Legal Description	

PIPE DATA		PERFORATING DATA		FLUID USED		TREATMENT RESUME		
Casing Size	Tubing Size	Shots/Ft		Acid		RATE	PRESS	ISIP
<i>5 1/2</i>	<i>4 1/2</i>	From	To	Pre Pad		Max		5 Min.
<i>3753</i>	<i>3753</i>	From	To	Pad		Min		10 Min.
<i>6758</i>	<i>6758</i>	From	To	Frac		Avg		15 Min.
<i>2000</i>	<i>2000</i>	From	To			HHP Used		Annulus Pressure
<i>5 1/2</i>	<i>5 1/2</i>	From	To	Flush		Gas Volume		Total Load

Customer Representative <i>Mark Davis</i>	Station Manager <i>Justin Westerman</i>	Treater <i>Scott Graves</i>
--	--	--------------------------------

Service Units <i>75956 79957 86775 73708 19918</i>									
Driver Names <i>Scott McLean - Ryan - Scotty</i>									

Time	Casing Pressure	Tubing Pressure	Bbls. Pumped	Rate	Service Log
<i>3:00</i>					<i>On Location Safety Meeting Picked</i>
<i>3:15</i>					<i>Run Street Equipment</i>
<i>5:00</i>					<i>Break Circulation</i>
<i>6:18</i>	<i>300</i>			<i>5</i>	<i>Pump 1170 Spacers</i>
<i>6:19</i>	<i>300</i>		<i>5</i>	<i>5</i>	<i>Pump 1000 gallon Flush</i>
<i>6:24</i>	<i>300</i>		<i>24</i>	<i>5</i>	<i>Pump 1170 Spacers</i>
<i>6:25</i>	<i>200</i>		<i>5</i>	<i>6</i>	<i>Start Cement 1500 lbs AA7 14.5 #</i>
<i>6:33</i>	<i>0</i>		<i>41.14</i>	<i>0</i>	<i>Start clean</i>
<i>6:34</i>					<i>Wash pump &amp; lines clean</i>
<i>6:40</i>					<i>Release Plug</i>
<i>6:41</i>	<i>200</i>			<i>7</i>	<i>Start Displacement</i>
<i>6:50</i>	<i>300</i>		<i>64</i>	<i>7</i>	<i>1st Pressure</i>
<i>6:53</i>	<i>500</i>		<i>16</i>	<i>2.6</i>	<i>Reduce Rate</i>
<i>6:57</i>	<i>500</i>		<i>9</i>	<i>2.6</i>	<i>Plug landed</i>
<i>6:57</i>	<i>1700</i>			<i>2.6</i>	<i>Increase Pressure</i>
<i>6:57</i>	<i>1700</i>			<i>4</i>	<i>Start clean</i>
<i>6:59</i>	<i>0</i>				<i>Release Pressure 110 P-frames</i>
<i>7:05</i>	<i>0</i>			<i>3</i>	<i>Plug Red hole 50 shots 11000 P-2</i>
<i>7:10</i>	<i>0</i>		<i>7.5</i>	<i>0</i>	<i>Start clean</i>
<i>7:12</i>					<i>Wash up equipment</i>
<i>7:30</i>					<i>Job Complete</i>