Confidentiality Requested:

Yes No

Kansas Corporation Commission Oil & Gas Conservation Division

1371688

Form ACO-1 November 2016 Form must be Typed Form must be Signed All blanks must be Filled

WELL COMPLETION FORM WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License #	API No.:
Name:	Spot Description:
Address 1:	SecTwpS. R
Address 2:	Feet from North / South Line of Section
City: State: Zip:+	Feet from _ East / _ West Line of Section
Contact Person:	Footages Calculated from Nearest Outside Section Corner:
Phone: ()	□NE □NW □SE □SW
CONTRACTOR: License #	GPS Location: Lat:, Long:
Name:	(e.g. xx.xxxxx) (e.gxxx.xxxxx)
Wellsite Geologist:	Datum: NAD27 NAD83 WGS84
Purchaser:	County:
Designate Type of Completion:	Lease Name: Well #:
New Well Re-Entry Workover	Field Name:
□ Oil □ WSW □ SWD	Producing Formation:
Gas DH EOR	Elevation: Ground: Kelly Bushing:
	Total Vertical Depth: Plug Back Total Depth:
CM (Coal Bed Methane)	Amount of Surface Pipe Set and Cemented at: Feet
Cathodic Other (Core, Expl., etc.):	Multiple Stage Cementing Collar Used?
If Workover/Re-entry: Old Well Info as follows:	If yes, show depth set:Feet
Operator:	If Alternate II completion, cement circulated from:
Well Name:	feet depth to:w/sx cmt.
Original Comp. Date: Original Total Depth:	
☐ Deepening ☐ Re-perf. ☐ Conv. to EOR ☐ Conv. to SWD	Drilling Fluid Management Plan
☐ Plug Back ☐ Liner ☐ Conv. to GSW ☐ Conv. to Producer	(Data must be collected from the Reserve Pit)
	Chloride content: ppm Fluid volume: bbls
Commingled Permit #:	Dewatering method used:
Dual Completion Permit #: SWD Permit #:	Location of fluid disposal if headed offsite.
EOR Permit #:	Location of fluid disposal if hauled offsite:
GSW Permit #:	Operator Name:
GOVV Territt#.	Lease Name: License #:
Spud Date or Date Reached TD Completion Date or	Quarter Sec TwpS. R
Recompletion Date Recompletion Date Recompletion Date	Countv: 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:

Page Two

1371688

Operator Name:							_ Lease	Name: _				V	/ell #:	
Sec Tv	vp	S. R		East	Wes	it	Count	y:						
open and closed and flow rates if	d, flowing an gas to surfa ity Log, Fin	nd shut- ace test al Logs	in pressu , along wi run to ob	res, whe ith final c tain Geo	ther shut chart(s). In physical	-in pre Attach Data a	ssure rea extra she and Final E	ched stat et if more Electric Lo	c level space	, hydrosta e is needed	tic pressures d.	s, bottor	n hole tempe	val tested, time tool erature, fluid recovery, v. Digital electronic log
Drill Stem Tests (Attach Addi	Taken	;)		Y	es 🔲 I	No		L	.og	Formatio	on (Top), Dep	oth and	Datum	Sample
Samples Sent to		•	/	Y	es 🔲 l	No		Nam	Name Top Date				Datum	
Cores Taken														
LIST All L. LOGS I	iuii.													
				Repo			RECORD conductor, s			Used ite, producti	on, etc.			
Purpose of S	tring	Size H Drille			e Casing t (In O.D.)			ight ./ Ft.		Setting Depth	Type of Cemen		# Sacks Used	Type and Percent Additives
					ADDIT	IONAL	CEMENT	ING / SQL	JEEZE	RECORD				
Purpose: Depth Top Bottom Type of Cement — Perforate — Protect Casing — Plug Back TD		nt	# Sacks Used Type and Percent Additives				cent Additives							
Plug Off Z														
Did you perform Does the volum Was the hydrau	ne of the total	base flui	id of the hy	draulic fra	acturing tre					Yes Yes Yes	□ No (If N	Vo, skip o	questions 2 an question 3) t Page Three (·
Date of first Produ	uction/Injection	on or Res	umed Prod	duction/	Producir Flow	•	nod:	na 🗆	Gas Li	ft \square C	Other (Explain) .			
Estimated Produ Per 24 Hours		C	Dil Bl	bls.	Gas		Mcf	Wat			bls.	Gas	s-Oil Ratio	Gravity
DIED	OSITION OF	- CAS:					AETHOD O	E COMPLI	TION:				PRODUCTIO	ON INTERVAL:
Vented	Sold	Used or	n Lease		Open Hole		METHOD O	Dually	Comp. ACO-5		nmingled mit ACO-4)		Тор	Bottom
	ed, Submit AC									•				
Shots Per Foot	Perforat Top	ion	Perforati Botton		Bridge Plu Type	ug	Bridge Pl Set At			Acid,	Fracture, Sho (Amount and		nting Squeeze Material Used)	Record
TUBING RECOP	RD:	Size:		Set At:			Packer At:							

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

Tops

Name	Тор	Datum
ANHYDRITE	682	+1188
BASE ANHYDRITE	703	+1167
ТОРЕКА	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		Type and Percent Additives
Surface	7.875	8.625	24	334	A-CONN	150	3%CC
Surface	7.875	8.625	24	334	COMMON		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



County: STAFFORD State: Kansas

Drilling Contractor: L. D. Drilling, Inc -

Rig 1

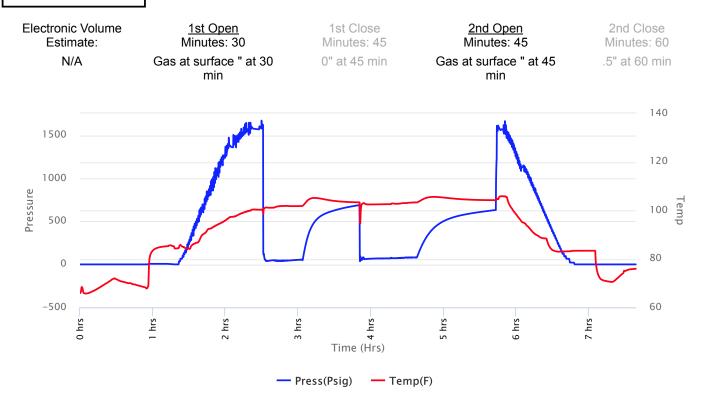
Elevation: 1865 EST Field Name: Gates Pool: Infield Job Number: 58

DATE
September
17
2017

DST #1 Formation: Lans B/F Test Interval: 3293 - 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





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 - Total Depth: 3385'

Time On Bottom: 11:27 09/17 Time Off Bottom: 14:27 09/17

Recovered

<u>Foot</u>	BBLS	Description of Fluid	<u>Gas %</u>	<u>Oil %</u>	Water %	Mud %
3137	32.18562	G	100	0	0	0
124	1.27224	GCM	25	0	0	75

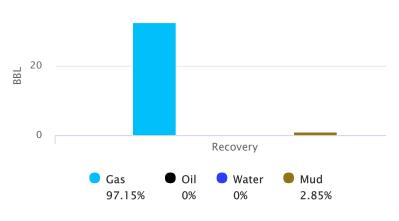
Total Recovered: 3261 ft

Total Barrels Recovered: 33.45786

NO

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

Recovery at a glance





Total Depth: 3385'

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'

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

REMARKS:

10. 2' inch blow/ BOB in 45 seconds.

1C. NOBB

20. 5 inch blow. BOB in 10 Seconds

2C. NOBB

Tool Sample: 20 % G 2% O 1% W 77% M



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 - Total Depth: 3385'

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

Heads Up: 19.76 FT **Packer 1:** 3288.12 FT

Drill Pipe: 3280.31 FT **Packer 2:** 3293.12 FT

ID-3 1/4 Top Recorder: 3277.54 FT

Weight Pipe: 0 FT Bottom Recorder: 3362 FT

Well Bore Size: 7 7/8

Collars: 0 FT

ID-2 1/4

Surface Choke: 1"

Test Tool: 33.57 FT Bottom Choke: 5/8"

ID-3 1/2-FH

ID-2 7/8

Jars

Safety Joint

Total Anchor: 91.88

Anchor Makeup

Packer Sub: 1 FT

Perforations: (top): 3 FT

4 1/2-FH

Change Over: .5 FT

Drill Pipe: (in anchor): 62.38 FT

ID-3 1/4

Change Over: 1 FT

Perforations: (below): 24 FT

4 1/2-FH



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 - Total Depth: 3385'

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

Mud Properties

Mud Type: Chem Weight: 8.7 Viscosity: 65 Filtrate: 8.8 Chlorides: 2700 ppm



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 - 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

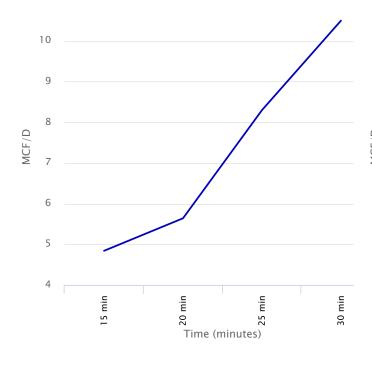
Remarks: 10. GTS in 10 mins 20. GTS in 3 mins Gas Sample taken 15 mins into Second Opening

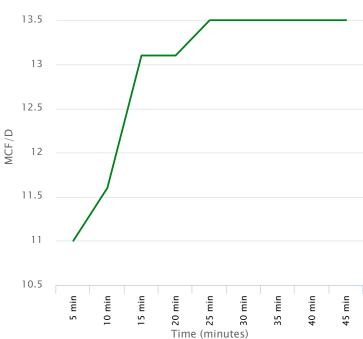
1st Open

Time Orifice PSI MCF/D 15 0.125 4.84 3.0 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







County: STAFFORD State: Kansas

Drilling Contractor: L. D. Drilling, Inc -

Rig 1

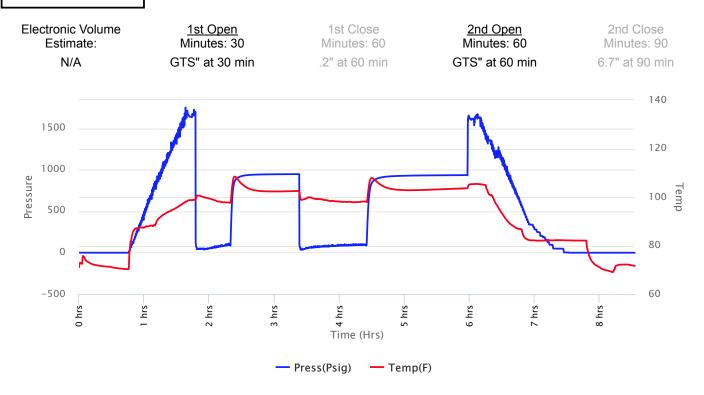
Elevation: 1865 EST Field Name: Gates Pool: Infield Job Number: 58

DATE
September
18
2017

DST #2 Formation: L/KC H-I Test Interval: 3416 - 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





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 - 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

<u>Foot</u>	<u>BBLS</u>	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

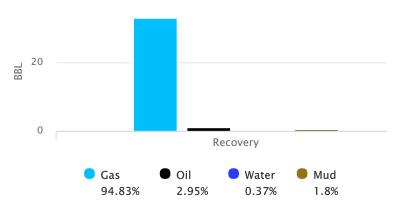
Total Recovered: 3394 ft

Total Barrels Recovered: 34.82244

Reversed Out
NO

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

Recovery at a glance





DST #2

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

Formation: L/KC H-I Test Interval: 3416 -

Total Depth: 3460'

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:

10. 1' Blow (BOB in 35 seconds) GTS in 7 1/2 mins

1C. WBE

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

2C. 6 3/4 inch BB

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



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 - Total Depth: 3460'

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

Heads Up: 21.78 FT Packer 1: 3411 FT

Drill Pipe: 3405.21 FT **Packer 2:** 3416 FT

ID-3 1/4 Top Recorder: 3400.42 FT

Weight Pipe: 0 FT Bottom Recorder: 3453 FT

ID-2 7/8 Well Bore Size: 7 7/8

Collars: 0 FT

ID-2 1/4

Surface Choke: 1"

Test Tool: 33.57 FT Bottom Choke: 5/8"

ID-3 1/2-FH

Jars

Safety Joint

Total Anchor: 44

Anchor Makeup

Packer Sub: 1 FT

Perforations: (top): 2 FT

4 1/2-FH

Change Over: .5 FT

Drill Pipe: (in anchor): 31.50 FT

ID-3 1/4

Change Over: 1 FT

Perforations: (below): 8 FT

4 1/2-FH



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 - Total Depth: 3460'

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



County: STAFFORD State: Kansas

Drilling Contractor: L. D. Drilling, Inc -

60 min

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 -Total Depth: 3460' 3460'

Time On: 00:15 09/18 Time Off: 08:33 09/18

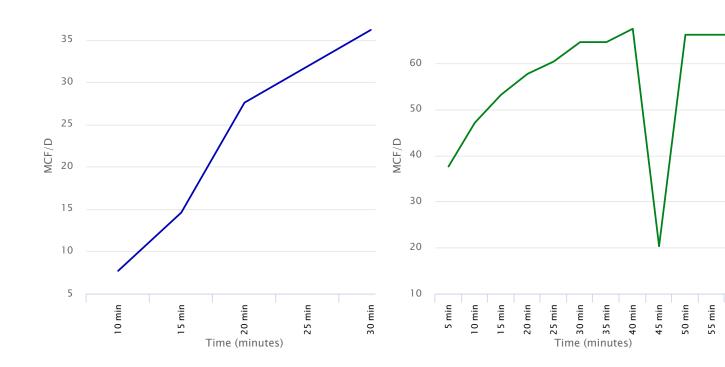
Time On Bottom: 02:00 09/18 Time Off Bottom: 06:00 09/18

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

ist Op	en		1		Zna Op	Jen
е	PSI	MCF/D		Time	Orifice	F

Time	Orifice	PSI	MCF/D	Time	Orifice	PSI	MCF/D
10	0.125	7.0	7.70	5	0.25	14	37.6
15	0.125	20	14.6	10	0.25	20	47.1
20	0.125	40	27.6	15	0.25	24	53.2
25	0.125	50	31.9	20	0.25	27	57.7
30	0.125	60	36.2	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





County: STAFFORD State: Kansas

Drilling Contractor: L. D. Drilling, Inc -

Rig 1

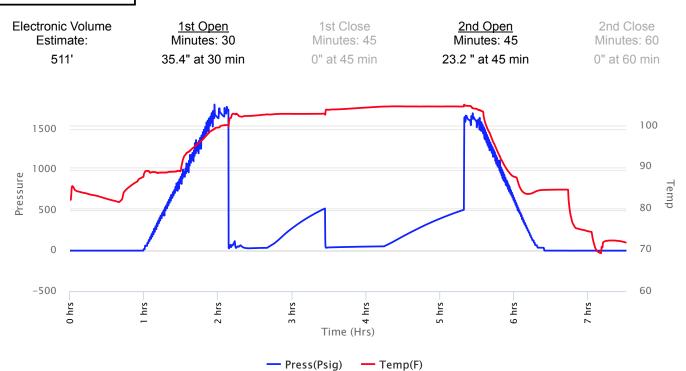
Elevation: 1865 EGL Field Name: Gates Pool: Infield Job Number: 58

DATE
September
19
2017

DST #3 Formation: L/KC J-L Test Interval: 3456 - Total Depth: 3550' Con Sand 3550'

Time On: 19:31 09/18 Time Off: 02:49 09/19

Time On Bottom: 21:36 09/18 Time Off Bottom: 00:36 09/19





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 #3 Formation: L/KC J-L Test Interval: 3456 - Total Depth: 3550'
Con Sand 3550'

Time On: 19:31 09/18 Time Off: 02:49 09/19

Time On Bottom: 21:36 09/18 Time Off Bottom: 00:36 09/19

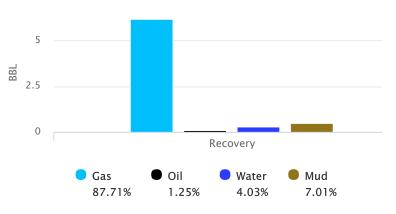
Recovered

<u>Foot</u>	BBLS	Description of Fluid	<u>Gas %</u>	<u>Oil %</u>	Water %	Mud %
590	6.0534	G	100	0	0	0
48	0.49248	SLOCSLGCWCM	15	13	20	52
46	0.47196	SLOCSLGCHWCM	6	5	39	50

Total Recovered: 684 ft Reversed Out Total Barrels Recovered: 7.01784 NO Initial Hydrostatic Pressure 1634 PSI Initial Flow 28 to 35 **PSI Initial Closed in Pressure** 520 **PSI** Final Flow Pressure 37 to 53 **PSI Final Closed in Pressure** 506 PSI Final Hydrostatic Pressure **PSI** 1630 Temperature 105 °F Pressure Change Initial 2.8 %

Close / Final Close

Recovery at a glance





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 #3 Formation: L/KC J-L Test Interval: 3456 - Total Depth: 3550' Con Sand 3550'

Time On: 19:31 09/18 Time Off: 02:49 09/19

Time On Bottom: 21:36 09/18 Time Off Bottom: 00:36 09/19

REMARKS:

10. 1 inch Blow (BOB in 5 1/2 mins)

1C. NOBB

2O. 3 inch Blow (BOB in 10 mins)

2C. NOBB

Tool Sample: 10 % O 75% W 15% M

Ph: 7

RW: 70 @ .15 degrees F

Chlorides: 55,000 ppm



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 #3 Formation: L/KC J-L Test Interval: 3456 - Total Depth: 3550' Con Sand 3550'

Time On: 19:31 09/18 Time Off: 02:49 09/19

Time On Bottom: 21:36 09/18 Time Off Bottom: 00:36 09/19

Down Hole Makeup

Heads Up: 13.79 FT **Packer 1:** 3451.12 FT

Drill Pipe: 3437.34 FT **Packer 2:** 3456.12 FT

ID-3 1/4 Top Recorder: 3440.54 FT

Weight Pipe: 0 FT

ID-2 7/8

Bottom Recorder: 3475 FT

Collars: 0 FT Well Bore Size: 7 7/8

ID-2 1/4 Surface Choke: 1"

Test Tool: 33.57 FT Bottom Choke: 5/8"

ID-3 1/2-FH

Jars

Safety Joint

Total Anchor: 93.88

Anchor Makeup

Packer Sub: 1 FT

Perforations: (top): 3 FT

4 1/2-FH

Change Over: .5 FT

Drill Pipe: (in anchor): 62.38 FT

ID-3 1/4

Change Over: 1 FT

Perforations: (below): 26 FT

4 1/2-FH



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 #3 Formation: L/KC J-L Test Interval: 3456 - Total Depth: 3550' Con Sand 3550'

Time On: 19:31 09/18 Time Off: 02:49 09/19

Time On Bottom: 21:36 09/18 Time Off Bottom: 00:36 09/19

Mud Properties

Mud Type: Chem Weight: 9.3 Viscosity: 56 Filtrate: 11.2 Chlorides: 8100 ppm



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 #3 Formation: L/KC J-L Con Sand Test Interval: 3456 -

Total Depth: 3550'

Sand 3550'

Time On: 19:31 09/18 Time Off: 02:49 09/19

Time On Bottom: 21:36 09/18 Time Off Bottom: 00:36 09/19

Gas Volume Report

1st Open 2nd Open



County: STAFFORD State: Kansas

Drilling Contractor: L. D. Drilling, Inc -

Rig 1

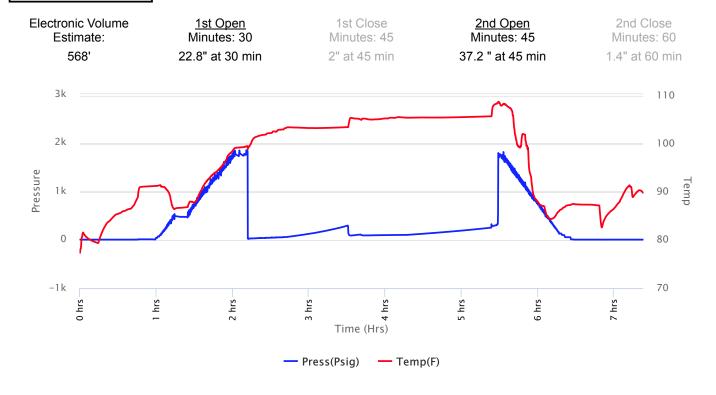
Elevation: 1865 EGL Field Name: Gates Pool: Infield Job Number: 58

DATE
September
19
2017

DST #4 Formation: Arbuckle Test Interval: 3588 - 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





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 - 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

<u>Foot</u>	<u>BBLS</u>	Description of Fluid	<u>Gas %</u>	<u>Oil %</u>	Water %	<u>Mud %</u>
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

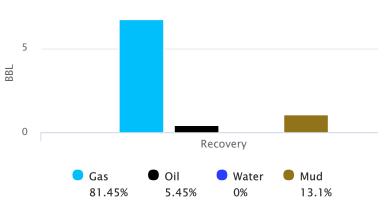
Total Recovered: 806 ft

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	0.0	%
Close / Final Close		

Recovery at a glance





SEC: 30 TWN: 21S RNG: 12W County: STAFFORD

Total Depth: 3658'

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'

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

10. WSB (BOB in 10 mins)

1C. 1 in bb

20. 1" Blow (BOB in 12 1/2 mins)

2C. WBB

Tool Sample: 95 % O 5% M



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 - 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

Down Hole Makeup

Heads Up: 5.86 FT **Packer 1:** 3582.99 FT

Drill Pipe: 3561.28 FT **Packer 2:** 3587.99 FT

ID-3 1/4 Top Recorder: 3572.41 FT

Weight Pipe: 0 FT

ID-2 7/8 Bottom Recorder: 3623 FT

Collars: 0 FT Well Bore Size: 7 7/8

ID-2 1/4 Surface Choke: 1"

Test Tool: 33.57 FT Bottom Choke: 5/8"

ID-3 1/2-FH

Jars

Safety Joint

Total Anchor: 70.01

Anchor Makeup

Packer Sub: 1 FT

Perforations: (top): 0 FT

4 1/2-FH

Change Over: 1 FT

Drill Pipe: (in anchor): 31.01 FT

ID-3 1/4

Change Over: 1 FT

Perforations: (below): 36 FT

4 1/2-FH



County: STAFFORD State: Kansas

Drilling Contractor: L. D. Drilling, Inc -

Rig 1

Elevation: 1865 EGL Field Name: Gates Pool: Infield Job Number: 58

DATE
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19
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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

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



County: STAFFORD State: Kansas

Drilling Contractor: L. D. Drilling, Inc -

Rig 1

Elevation: 1865 EGL Field Name: Gates Pool: Infield Job Number: 58

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September
19
2017

DST #4 Formation: Arbuckle Test I

Test Interval: 3588 -

Total Depth: 3658'

3658'

Time On: 11:37 09/19 Time Off: 18:47 09/19

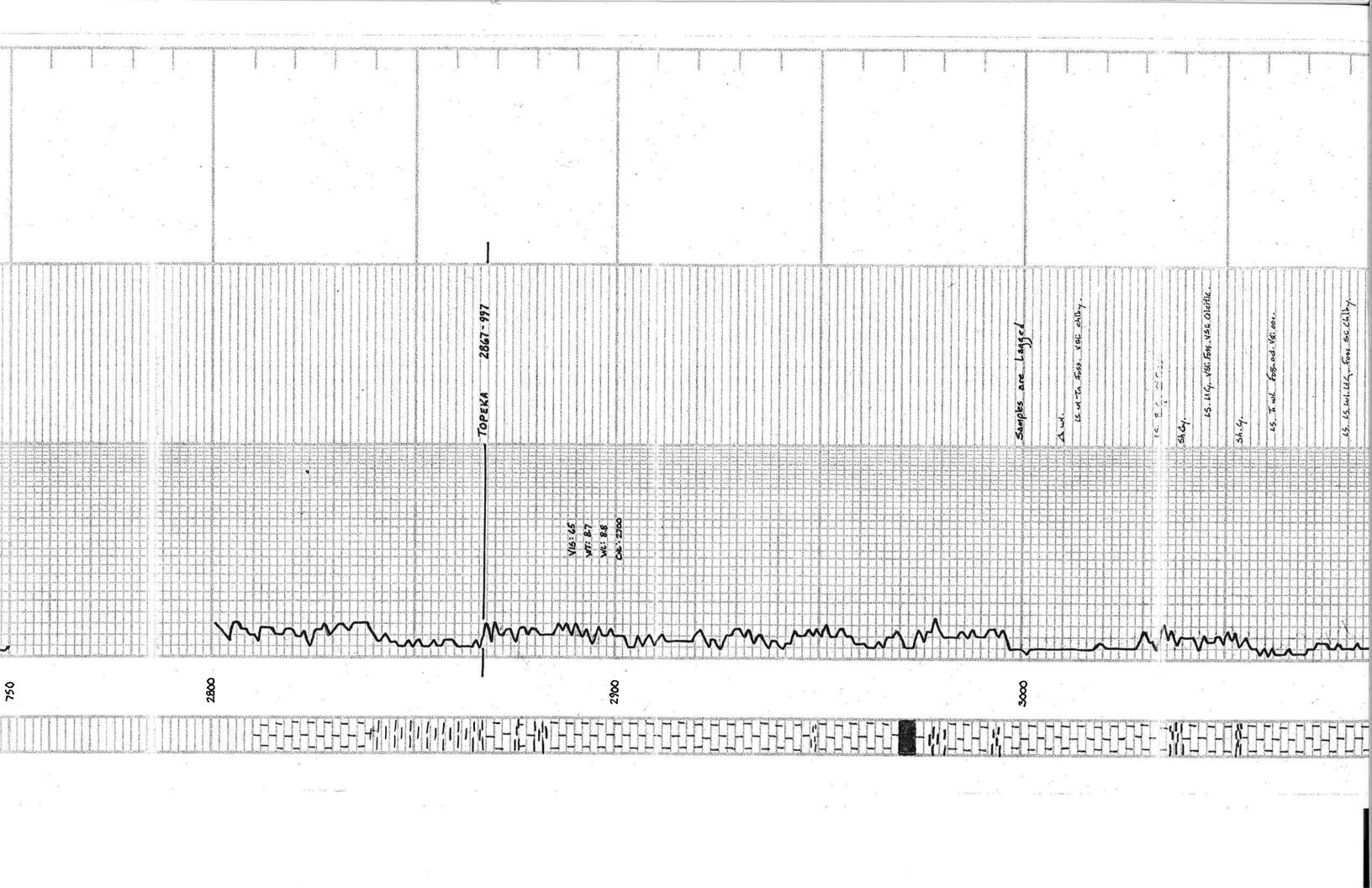
Time On Bottom: 13:45 09/19 Time Off Bottom: 16:45 09/19

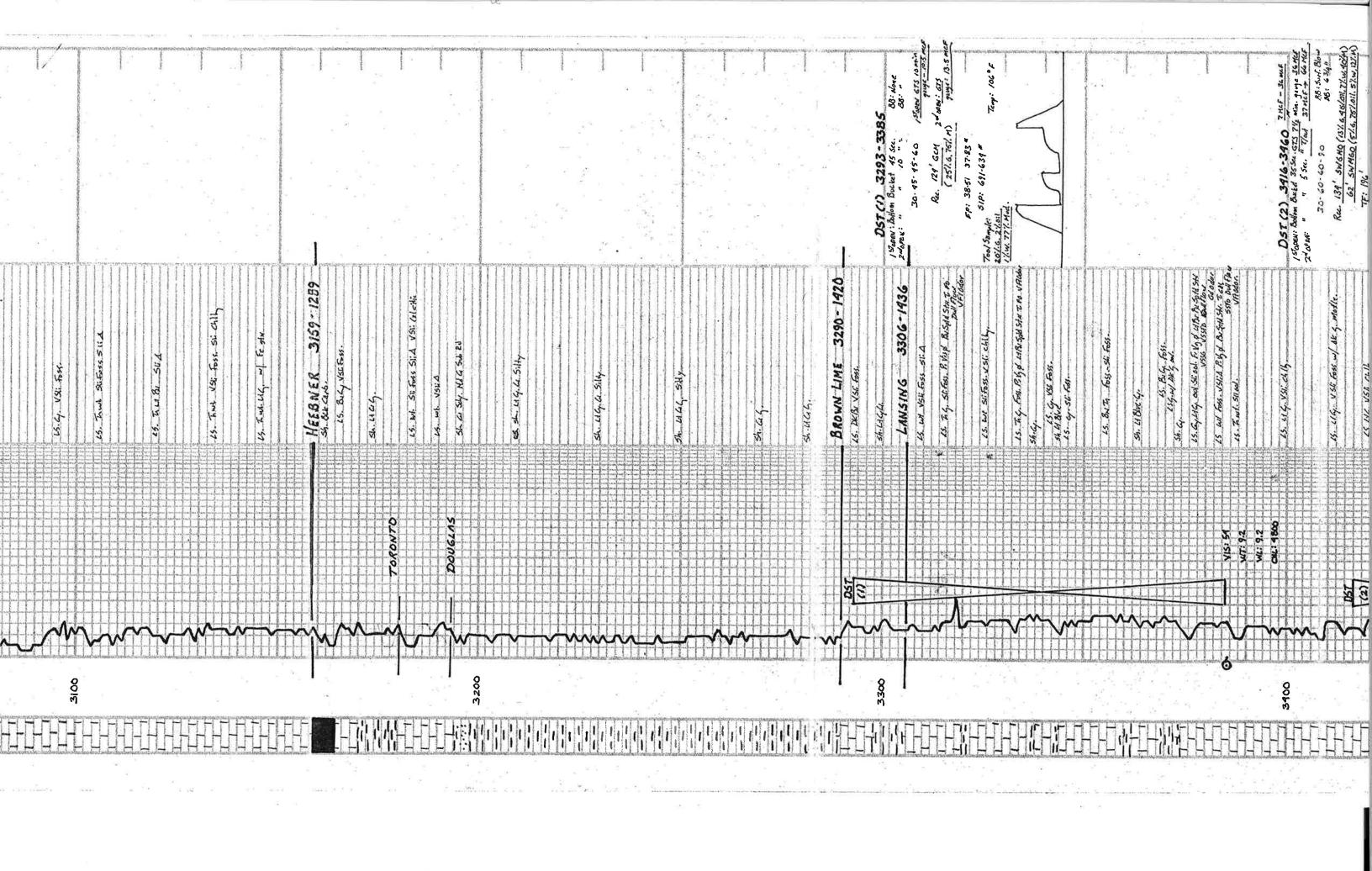
Gas Volume Report

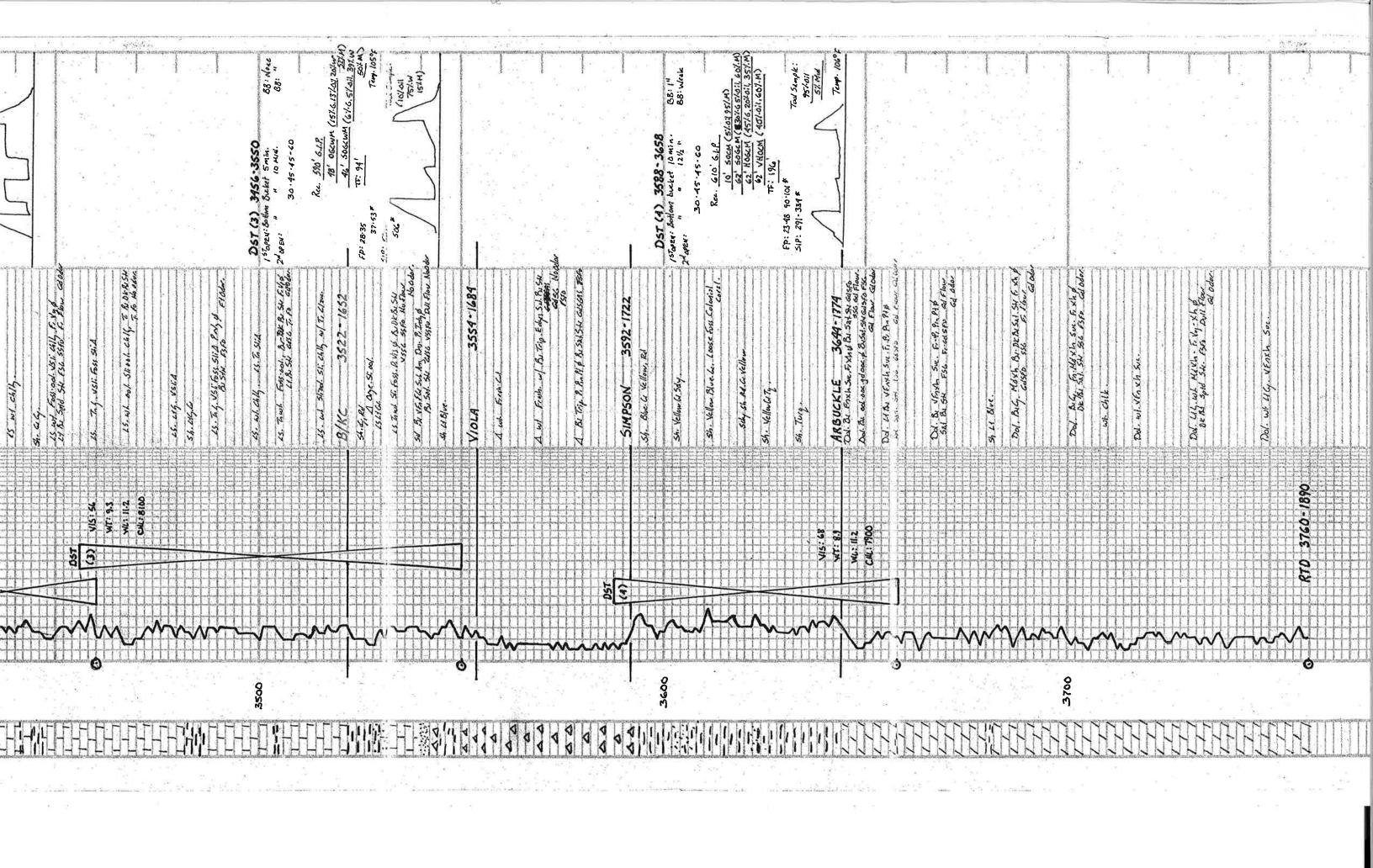
1st Open 2nd Open

Time Orifice PSI MCF/E	Time	Orifice	PSI	MCF/D
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KIM B. SHOEMAKER CONSULTING GEOLOGIST 316-684-9709 * WICHITA,KS 15-185-23997 GEOLOGIST'S REPORT DRILLING THE AND SHIPLE LOG CACAMONS L.D. DRILLING, INC. x4 KELLI 1870 HELD GATES 1700' FSL # 2088' FWL 1865 30 18 216 12W Medeurements Avc. All STAFFORD KANSAS 1870 KB CASING CONTRACTOR L.D. DRILLING. INC. SURFACE 85/8"@ 334" SPAD 9-12-17 COMP 9-20-17 PRODUCTION 51/2"0 ELECTRON SURVEYS 3760 3758 DUAL IND., DENS.- N. MICEC MAD DE 2815 TYPE OF CHEMICAL 3000 3760 SAMPLES SEWED FROM ORILING TIME KEPT FROM 2800 3760 SAUPLES EXAMINED FROM 3000 70 3760 GEOLOGICAL SUPERVISION FROM ____ 3200 3760 OF CHOCKET ON WILL KIM B. SHOEMAKER SAMPLES FORMATION TOPS 1.00 685 + 1185 ANHYDRITE 682+1188 706 + 1164 B/ANH. 703+ 1167 2867- 997 TOPEKA Z864 - 994 3159 - 1289 KEEBNER 3156- 1286 3287-1417 3290- 1420 BROWN LIME 3306-1436 3303 - 1433 LANSING 35 22- 1652 B/KC 3519-1649 3552-1682 3554-1684 VIOLA 3590-1720 3592- 1722 SIMPSON 3644-1774 ARBUCKLE 3642-1772









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

18

FIELD SERVICE TICKET 1718 **15412** A

		PING & WIRELINE			NEW WELL	OLD □ F	DATE PROD □INJ	TICKET		JSTOMER RDER NO.:				
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CUSTOMER L	D.D	LEASE Kell, 9 WELL NO.												
ADDRESS					COUNTY		fford		ATE)	< S				
CITY		STATE			SERVICE CREW Pra 4 K5									
AUTHORIZED BY			3		JOB TYPE:	85/8	· Sunf	ace	242					
EQUIPMENT#	HRS	EQUIPMENT#	HRS	EQL	JIPMENT#	HRS	TRUCK CAL		9- P2"	E AM J	ME			
84981-1984						-	ARRIVED AT	JOB	8.12	AM ZI				
19960-21010	2		-			-	START OPE	RATION	9-13	AM 24				
							FINISH OPE	RATION	9-13	AM 24				
	-					1	RELEASED		9-13	AM O				
				-			MILES FROM	/ STATIO		18 %				
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20102		ellflake	CVGITO	<u></u>			75 Lbs			211	50			
2 C 130		2-51				+	15 Lb5			375	50			
20131		Sugar					100 Lbs			500	1-			
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EIOI	-	Truck mile	Lage	l	way		80 mi			600	-			
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SERVICE REPRESENTATIVE	DL5	coll			RIAL AND SER TOMER AND F		BY: Dele	10 h)))					



TREATMENT REPORT

Customer Representative Rick wilson Station Manager J Westerman Treater D Scot Service Units Vap 84981 19843 19960 21010 Driver Names Scott Time Pressure Pressure Bbls. Pumped Rate Service Log 2130 Called Out	Customer	2.1.	Time		Leas	e No.				Date			
Service Long Treater Scoth Service Service Log	Lease K	11 (1)	- VI		Well	#	4			(9-13-	17	101
PIPE DATA PERFORATING DATA PERFORATING DATA FILUID USED TREATMENT RESUME TO SPOKE 15 FM			Pra	# K	5		Casing	5/8 Dept	34	County	Staffo	rd	State 45
PIED DATA PERFORATING DATA FLUID USED TREATMENT RESUME TITIEN TO STATE COMMAN TO STATE PRESS SMITH TO STATE COMMAN TO STATE COMMAN	Type Job 8	15/8							1		Leg	al Description	126
Casing 1888 Tubing Size Shots 17 130ski A-Con RATE PRESS ISIP 1890 PR 98th From To 1880 C. 25CF Max 10 Min.					NG D/	ATA	FLUID (JSED			TREATME	NT RESUM	ИE
Both PB PB PB From To Bost Comment Max Shin. Young Cas Max Preas From To Bost Comment Min 10 Min. Well Commeton Annulus Vol. From To Bost Comment Man Min 15 Min. Preasure Person To Bost Comment Man Min 15 Min. Preasure Preasure Packer Depth From To Flush Had Gas Volume Total Load Customer Representative Rick Wilson Station Manager Twosterman Treater D Scot Service Units Vap 84981 19843 19860 21010 Service Units Casing Tubing Bubs. Pumped Rate Called Out On Loc WTrk's Safety Mtg Cag on Bottom Break Citc. 2405 200 65.9 5 Mix Lead Cmt 2 12.0 ppg 1503ki 2416 150 32.0 5 Mix Lead Cmt 2 15.6 ppg 1503ki 2412 100 2430 300 20.9 0 Disp To Close To W.H. Cinc. 12 Bbls Cmt = 28 skr	Casing Size	Tubing Siz	ze Shots	i/Ft			Acid o. ski	1-Con		RATE	PRESS	ISIP	
Service Units Page From To PBOSIC COMMEN Min 10 Min.		Danilla	From	1	Го		Par 2	SCF	Max			5 Min.	
Max Press From To Figo CC 14 CF Avg Well Connection Annulus Vol. From To From To Fish H20 Gas Volume Total Load Annulus Pressure Proposentative R: c/C W: Son Station Manager T Westerman N Service Units Van 84931 19960 21010 Driver Warnes Casing Tubing Pressure Pressur				1	Го	Ī			Min	-9.545		10 Mir	1.
Well Connection Annulus Vol. Prom To To Flush Had Gas Volume Total Load Plug Depth Packer Depth From To Flush Had Gas Volume Total Load Customer Representative R: clk wison Station Manager T Westerman Treater D Scot Service Units Vap 84981 9843 19860 21010 Diver Names Scoth Time Pressure Pressure Bibls. Pumped Flate Call ed Dut On Loc W Tak's Safety mtg Csg on Bottom Break Circ 2405 200 65.9 5 Mix Lead Cmt D 13.0 ppg 1503ki 2416 150 32.0 5 Mix Lead Cmt D 15.6 ppg 1503ki 2422 100 4 5t Dissp W H20 2430 300 20.9 0 Dissp Tn Close In W.H. Circ 12 Bb is Cmt = 28 sk.		Max Press	s From	1	Го		5% CC 10	ICF	Avg			15 Mir	1.
Customer Representative Rick Wilson Station Manager Twesterman Troater D Scot Service Units VAD 84981 19843 19960 21010 Driver Names Scoth Time Pressure Pressure 2200		on Annulus V	ol. From		Го			9	HHP Use	d			
Service Units Vap	Plug Depth	Packer De	epth From	7			ות			me		Total L	.oad
Driver Scott Tibring Tubing Pressure Bbis. Pumped Rate Called Out C	Customer Rep	oresentative /	Rick 1	wilsor	1 5	Station I	Manager Ju	estern	ΛαΝ	Trea	ter D S	cot	
Names Service Casing Tubing Pressure Pressu	Service Units	Vap	8498	1 1984	3 10	1960	21010						
Time Pressure Pressure Bbls. Pumped Hate Called Out 2200 On Loc & Trk's Safety mtg Csg on Bottom Break Circ 2405 200 65.9 5 Mix Lead Cmt 2 12.0 ppg 150ski 2416 150 32.0 5 Mix Tail Cmt 2 15.6 ppg 150ski 2422 100 20.9 O Disp Tn Close In W.H. Circ 2 Bbls Cmt = 28 ski	Driver Names												
2200 On Loc W Trk's Safety mtg Csq on Bottom Break Circ 2405 200 65.9 5 Mix Lead Cmt 2 12.0ppg 150ski 2416 150 32.0 5 Mix Tail Cmt 2 15.6ppg 150ski 2422 100 2430 300 20.9 0 Disp In Close In W.H. Circ 12 Bbls Cmt = 28 ski Thank you Sco Hx	Time			Bbls. I	umpe	d	Rate	- 1	-1-			g	
Csq on Bottom Break Circ 2405 200 65.9 5 Mix Lead Cmt 2 12.0ppg 150ski 2416 150 32.0 5 Mix Tail Cmt 2 15.6ppg 150ski 2422 100 4 St Disp W H20 2430 300 20.9 0 Disp In Close In W.H. Circ 12 Bbls Cmt = 28 ski	2130					_			ed ()ut	,	0.	
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2422 100 2430 300 20.9 Disp In Close In W.H. Cinc / 2 Bbli Cm+ = 28 ski	411	100		15	0		5	My	a 1 (0 !	\bigcirc 12	Conc	1 < 0 = k!
2422 100 2430 300 20.9 Disp In Close In W.H. Cinc / 2 Bbli Cm+ = 28 ski			n		W-5	-		T 500 1 CB			@ 15	6000	150.5K!
2430 300 20.9 Disp In Close In W.H. Circ/2 Bbls Cm+ = 28 ski	A			کی ا	,0	+					120	TPS	10000
Circ/2 Bb/s Cm+ = 28 ski		- S3		20	. 9		7	1	,			112.1	7.
Job Complete Thank you Scotty	2430	300		7	7 1 1			0134	1-41	(),00	,	1 //	1.4.50
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10244 NE Hiway 61 • P.O. Box 8613 • Pratt. KS 67124-8613 • (620) 672-1201 • Fax (620) 672-5383						_			-11				
	1024	A NE Hiv	(a) 61	PO B	ox 86	13 0	Pratt KS	7124-86	13 • (62	0) 672	2-1201 •	Fax (620	0) 672-5383



10244 NE Hwy. 61 P.O. Box 8613

TTMH 30 FIELD SERVICE TICKET

1718 13985 A

Pratt, Kansas 67124 ENERGY SERVICES Phone 620-672-1201														
	PRESSU	RE PUM	PING & WIRELINE		DATE TICKET NO									
DATE OF JOB	20/	17 [DISTRICT		NEW OLD PROD INJ WDW CUSTOMER WELL WELL ORDER NO.;									
CUSTOMER	D	7	Drilling In	~		LEASE Kelli WELL NO. 4								
ADDRESS			0	COUNTY Stafford STATE										
CITY			STATE	SERVICE CREW Scott, Scott, Magnes R. le										
AUTHORIZED E	BY M	100	K Dunis	JOB TYPE:	1/2	Long	5/1	ra	24	>				
EQUIPMENT	T#	HRS	EQUIPMENT#	JIPMENT#	HRS	TRUCK CAL	LED	DAT	TE AM TIN	16				
86779	1	1		ARRIVED AT JOB 9/20/17 PM \$ 080										
19919	2	,25						START OPE	RATION 9/2	0/1	7 AM 6 1	2		
<u> </u>						FINISH OPE	RATION 9/	20/1	7 AM 7.3	0				
								RELEASED	9/2	0/1	7 AM 8 0	0		
								MILES FRO	M STATION TO	WEL				
products, and/or su	ipplies inc	rized to e	TRACT CONDITIONS: (This c execute this contract as an ag of and only those terms and co t the written consent of an office	ent of the cu anditions app	ustomer. As pearing on	s such, the undersi the front and back	gned agre of this do	ees and acknow cument. No add	eledges that this citional or substitute	e terms	for services, mate and/or conditions	s shall		
ITEM/PRICE REF. NO.	MATERIAL, EQUIPMENT AND SERVICES USED							QUANTITY	UNIT PRIC	CE	\$ AMOUN	Т		
CP105	AA	7	(rmont				SK	150.	/	1 ~	2550	06		
CP103	60	14/0	POZ				SK	30-	_		360	06		
CC 111	Sal	4			-		15	816-			408	00		
CC102	Cr/1	1/10	he				16	38 -	/		146	60		
CC113	6,	1050	in				15	705			528	75		
0179	F1	1	327				16	113	/		847	50		
((201	Gil	son	40			7	16	901 -		1100	603	6.1		
F1751	AL	10;	III Floor S	her		12	50	1 -		_	360	100		
CF 607	10	1ch	down Pl	497	1,15	Hle	10	/ -		-	400	60		
CF 1651	741	60/1	78.05	05%	1		56	8 -		-	880	00		
F 1901	150	5K	0/1, 5/2				Fa	1			290	00		
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					SEF	IVICE & EQUIPM	MENT	%TA	X ON \$			= 77		
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									TO	OTAL	7,326	29		
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SERVICE		1-	T	HE ABOVI	E MATER	RIAL AND SERV	ICE	0	1.0 . 10	1	Book			

REPRESENTATIVE FIELD SERVICE ORDER NO. THE ABOVE MATERIAL AND SERVICE ORDERED BY CUSTOMER AND RECEIVED BY:

(WELL OWNER OPERATOR CONTRACTOR OR AGENT)



TREATMENT REPORT

Customer	2.1112	a In		Lease No				Date							
Lease	O	///		Well # 4											
Field Order #	Station	Part	H			Casing	1/2	Depth	7752	County	1	16.	al .	State	
Type Job	Long	5/0	cor	24	2		Fo	rmation	, ,) ///	Legal	Description		
PIPE	DATA	PERI	FORATIN	NG DATA		FLUID	USED)		TF	REA	TMEN	T RESUM	 Е	
Casing Size Tubing Size Shots/Ft					Acid							SS	I ISIP		
5 /2 /6// Depth	Depth	From	Т	<u> </u>	Pre	Pad			Max				5 Min.		
olume 5.8	Volume	From	T		Pad				Min	_			10 Min.		
lax Press	Max Press	From	T.		Frac	;			Avg				15 Min.		
ell Connection	Annulus Vo		T				HHP Use		HHP Used	d			Annulus	Pressure	
lug Depth	Packer Dep		To		Flus	h			Gas Volum	ne			Total Load		
Sustomer Repre	esentative				n Mana	iger		Zi)	Laure	Treate	rk	xx Jo	16	w o a	
ervice Units		79987	367	15 777	08	19918			1017736	1		611		405	
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