

Confidentiality Requested:

Yes No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

Form ACO-1

January 2018

Form must be Typed

Form must be Signed

All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # _____

Name: _____

Address 1: _____

Address 2: _____

City: _____ State: _____ Zip: _____ + _____

Contact Person: _____

Phone: (_____) _____

CONTRACTOR: License # _____

Name: _____

Wellsite Geologist: _____

Purchaser: _____

Designate Type of Completion:

New Well Re-Entry Workover

Oil WSW SWD

Gas DH EOR

OG GSW

CM (Coal Bed Methane)

Cathodic Other (Core, Expl., etc.): _____

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

Operator: _____

Well Name: _____

Original Comp. Date: _____ Original Total Depth: _____

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

Plug Back Liner Conv. to GSW Conv. to Producer

Commingled Permit #: _____

Dual Completion Permit #: _____

SWD Permit #: _____

EOR Permit #: _____

GSW Permit #: _____

Spud Date or Date Reached TD Completion Date or Recompletion Date

API No.: _____

Spot Description: _____

_____ - _____ - _____ Sec. _____ Twp. _____ S. R. _____ East West

_____ Feet from North / South Line of Section

_____ Feet from East / West Line of Section

Footages Calculated from Nearest Outside Section Corner:

NE NW SE SW

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

Datum: NAD27 NAD83 WGS84

County: _____

Lease Name: _____ Well #: _____

Field Name: _____

Producing Formation: _____

Elevation: Ground: _____ Kelly Bushing: _____

Total Vertical Depth: _____ Plug Back Total Depth: _____

Amount of Surface Pipe Set and Cemented at: _____ Feet

Multiple Stage Cementing Collar Used? Yes No

If yes, show depth set: _____ Feet

If Alternate II completion, cement circulated from: _____

feet depth to: _____ w/ _____ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: _____ ppm Fluid volume: _____ bbls

Dewatering method used: _____

Location of fluid disposal if hauled offsite:

Operator Name: _____

Lease Name: _____ License #: _____

Quarter _____ Sec. _____ Twp. _____ S. R. _____ East West

County: _____ Permit #: _____

AFFIDAVIT

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

Submitted Electronically

KCC Office Use ONLY

Confidentiality Requested

Date: _____

Confidential Release Date: _____

Wireline Log Received Drill Stem Tests Received

Geologist Report / Mud Logs Received

UIC Distribution

ALT I II III Approved by: _____ Date: _____

Operator Name: _____ Lease Name: _____ Well #: _____

Sec. _____ Twp. _____ S. R. _____ East West County: _____

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

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

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

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

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

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

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

TUBING RECORD:	Size:	Set At:	Packer At:	
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Form	ACO1 - Well Completion
Operator	Larson Engineering, Inc. dba Larson Operating Company
Well Name	TDM 1-15
Doc ID	1364935

Tops

Name	Top	Datum
Anhydrite	2175	+670
Base Anhydrite	2201	+644
Heebner	3965	-1120
Lansing	4007	-1162
Stark Sh	4297	-1452
Pawnee	4488	-1643
Ft Scott	4536	-1691
Cherokee Sh	4557	-1712

Form	ACO1 - Well Completion
Operator	Larson Engineering, Inc. dba Larson Operating Company
Well Name	TDM 1-15
Doc ID	1364935

Perforations

Shots Per Foot	Perforation Top	Perforation Bottom	BridgePlugType	BridgePlugSet At	Material Record
4	4450	4453	CIBP	4432	
4	4350	4353			150 gal 15% MCA, re-Ac 150 gal 15% MCA SQZ: w/ 50 sx Class A
4	4344	4346			4344-46, 4338-41 w/ 250 gal 15%MCA
4	4338	4341			SQZ: 4344-46, 4338-41, 4291-95 w/ 50 sx Class A
4	4291	4295			
4	4291	4295			250 gal 15% MCA
4	4246	4252			250 gal 15% MCA



CHARGE TO: **LARSON ENGINEERING INC.**
 ADDRESS:
 CITY, STATE, ZIP CODE:

TICKET 30069

PAGE 1 OF 1

SERVICE LOCATIONS: 1. **NESS CITY, KS**
 WELL/PROJECT NO. **1-15** LEASE **TDM** COUNTY/PARISH **LANE** STATE **Ks** CITY **LANE** DATE **6-2-17** OWNER **SAME**
 TICKET TYPE SERVICE SALES CONTRACTOR **SOUTHWIND DRIG.** RIG NAME/NO. **LOCATION** SHIPPED VIA **CT** DELIVERED TO **LOCATION** ORDER NO.
 WELL TYPE **OIL** WELL CATEGORY **DEVELOPMENT** JOB PURPOSE **CEMENT 8 5/8" SURFACE** WELL PERMIT NO. WELL LOCATION **S/ DREIGHTON, Ks - 6s, 2w, 14N, W 2ND**
 REFERRAL LOCATION INVOICE INSTRUCTIONS

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.		UM		UNIT PRICE	AMOUNT
		LOC	ACCT	DF							
575		1			MILEAGE # 114	40		MI		5.00	200.00
576S		1			PUMP CHARGE - SHALLOW SURFACE	1		STB	253	800.00	800.00
325		1			STANDARD CEMENT	165		SYS		12.25	2021.25
276		1			FLOCCLE	50		WKS		2.25	112.50
278		1			CALCIUM CHLORIDE	7		SYS		40.00	280.00
279		1			BENTONITE GEL	3		SYS		25.00	75.00
290		1			D-ADR	2		GAL		42.00	84.00
581		1			SCRUBBER CHARGE CEMENT	165		SYS		1.50	247.50
582		1			MEDIUM DEBRIS CHARGE	162	10	WKS	324.2	250.00	250.00

LEGAL TERMS: Customer hereby acknowledges and agrees to the terms and conditions on the reverse side hereof which include, but are not limited to, **PAYMENT, RELEASE, INDEMNITY, and LIMITED WARRANTY** provisions.
 MUST BE SIGNED BY CUSTOMER OR CUSTOMER'S AGENT PRIOR TO START OF WORK OR DELIVERY OF GOODS
 X *Pat Hale*
 DATE SIGNED **6-2-17** TIME SIGNED **2:00 P.M.**

REMIT PAYMENT TO:
SWIFT SERVICES, INC.
 P.O. BOX 466
 NESS CITY, KS 67560
 785-798-2300

SURVEY	AGREE	UN-DECIDED	DIS-AGREE	PAGE TOTAL
OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?				4070.25
WE UNDERSTOOD AND MET YOUR NEEDS?				- 407.03
OUR SERVICE WAS PERFORMED WITHOUT DELAY?				3163.22
WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?				173.66
ARE YOU SATISFIED WITH OUR SERVICE?	<input type="checkbox"/> YES	<input type="checkbox"/> NO		
<input type="checkbox"/> CUSTOMER DID NOT WISH TO RESPOND				TOTAL
				3836.88

CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES The customer hereby acknowledges receipt of the materials and services listed on this ticket.
 SWIFT OPERATOR *Wayne Wilson* APPROVAL *Wayne Wilson* **Thank You!**



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

TICKET CONTINUATION

TICKET No. #30584

CUSTOMER Larson Engineering WELL TDM # 1-15 DATE 6-9-17 PAGE 2 OF 2

PRICE REFERENCE	SECONDARY REFERENCE / PART NUMBER	ACCOUNTING			TIME	DESCRIPTION	QTY		U/M		UNIT PRICE		AMOUNT	
		LOC	ACCT	DF			QTY	U/M	QTY	U/M				
325		1				Standard Cement (EA-2)					175	skts	12.25	2143.75
284		1				Calseal	5	%			8	skts	30.00	240.00
283		1				Salt	10	%			900	lbs	00.20	180.00
292		1				Halad 322	1	%			150	lbs	8.00	1200.00
276		1				Flocele	1/8	lb			25	lbs	2.25	56.25
277		1				Coal Seal (Gilsomite)	7	lb			1200	lbs	00.75	900.00
290		1				D-Air					2	gal	42.00	84.00
280		1				Flocheck 21					500	gal	3.00	1500.00
221		1				Liquid KCL					2	gal	25.00	50.00
581		1				SERVICE CHARGE					175		1.50	262.50
583		1				MILEAGE CHARGE					391		00.75	293.25
											CONTINUATION TOTAL		6409.75	

CUBIC FEET 175 MILEAGE CHARGE TOTAL WEIGHT 19525 LOADED MILES 40 TON MILES

JOB LOG

SWIFT Services, Inc.

DATE 6-9-17 PAGE NO. 1

CUSTOMER Larson Engineering WELL NO. #1-15 LEASE TDM JOB TYPE Longstring TICKET NO. #30584

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		DESCRIPTION OF OPERATION AND MATERIALS
				T	C	TUBING	CASING	
	1400							on location 5 1/2" 15.5"
								RTD-4600' LTD-4597'
								TP-4599' SS-42.44'
								P.C.-2142
								Rig Running Pipe
	1520							Drop Ball Circulate Rotate
	1530	6 1/2	15		✓	350		Pump 15 bbl 14CL Flush
		6 1/2	12		✓	350		Pump 500gal Flocheck 21
		6 1/2	5		✓	350		Pump 5 bbl 14CL Flush
			7.5					Plug RH-MH (30-20)
	1645	4 1/2	32		✓	200		mix 125 sts EA-2 w/ 7" Gibsonite @ 15.3ppg
								wash out Pump/Lines
								Release latch Down Plug
	1705	6 1/2	0		✓	100		Start Displacement
		6 1/2	90		✓	300		Lift Pressure
		6 1/2	108		✓	750		Max Lift Pressure
	1725	6 1/2	108.5		✓	1500		Land Latch Down Plug
								Release Pressure #Plug Hold#
								wash up truck
	1800							Job Complete
								Thank You Dave Proston Wayne



CHARGE TO: Larson Engineering
 ADDRESS: _____
 CITY, STATE, ZIP CODE: _____

TICKET 30391

SERVICE LOCATIONS: 1. 1200 Hwy KS

WELL/PROJECT NO. <u>#1</u>	LEASE <u>TDM</u>	COUNTY/PARISH <u>LANE</u>	STATE <u>KS</u>	CITY <u>Dighton</u>	DATE <u>16 Nov 17</u>	OWNER
TICKET TYPE <input type="checkbox"/> SERVICE <input type="checkbox"/> SALES	CONTRACTOR <u>Cherokee</u>	RIG NAME/NO.	SHIPPED VIA <u>CT</u>	DELIVERED TO <u>location</u>	ORDER NO.	
WELL TYPE <u>oil</u>	WELL CATEGORY <u>Development</u>	JOB PURPOSE <u>cement sand collar</u>	WELL PERMIT NO.	WELL LOCATION		

REFERRAL LOCATION: _____ INVOICE INSTRUCTIONS: _____

PRICE REFERENCE	SECONDARY REFERENCE/ PART NUMBER	ACCOUNTING			DESCRIPTION	QTY.		UM		UNIT PRICE	AMOUNT
		LOC	ACCT	DF							
575		1			MILEAGE <u>TRK 114</u>	40		mi		5.00	200.00
576D		1			<u>Pump Charge</u>	1		hr		1250.00	1250.00
336		1			<u>Sand cement</u>	160		sk		15.75	2520.00
276		1			<u>Flare</u>	40		lb		2.25	90.00
290		1			<u>D-Air</u>	2		gal		42.00	84.00
581		1			<u>service charge</u>	240		sk		1.50	360.00
583		1			<u>Drayage</u>	2392		lb	472.6	0.75	358.24

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MUST BE SIGNED BY CUSTOMER OR CUSTOMER'S AGENT PRIOR TO START OF WORK OR DELIVERY OF GOODS

X _____
 DATE SIGNED _____ TIME SIGNED _____ A.M. P.M.

REMIT PAYMENT TO:

 SWIFT SERVICES, INC.
 P.O. BOX 466
 NESS CITY, KS 67560
 785-798-2300

SURVEY			AGREE	UN-DECIDED	DIS-AGREE	PAGE TOTAL	4802.24	
OUR EQUIPMENT PERFORMED WITHOUT BREAKDOWN?						1020 Disc	-480.00	
WE UNDERSTOOD AND MET YOUR NEEDS?						30%	4376.12	
OUR SERVICE WAS PERFORMED WITHOUT DELAY?						Lease TAX	181.85	
WE OPERATED THE EQUIPMENT AND PERFORMED JOB CALCULATIONS SATISFACTORILY?								
ARE YOU SATISFIED WITH OUR SERVICE?	<input type="checkbox"/> YES	<input type="checkbox"/> NO				TOTAL	4557.187	
<input type="checkbox"/> CUSTOMER DID NOT WISH TO RESPOND								

CUSTOMER ACCEPTANCE OF MATERIALS AND SERVICES The customer hereby acknowledges receipt of the materials and services listed on this ticket

SWIFT OPERATOR: _____ APPROVAL: _____

Thank You!

JOB LOG

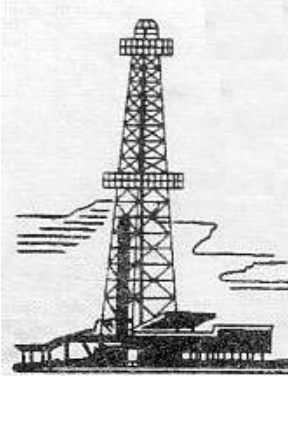
SWIFT Services, Inc.

DATE 16 Jun 17
 PAGE NO. 1
 TICKET NO. 30391

CUSTOMER		WELL NO.		LEASE		JOB TYPE		DESCRIPTION OF OPERATION AND MATERIALS
Lardon Engineering		#1		TDM		Cement port collar		
CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS		PRESSURE (PSI)		
				T	C	TUBING	CASING	
								240 sb SMD cement @ 1/4" floccule 2 3/8 x 5 1/2 2140' port collar
	0830							on loc TRK 114
	0847					1000	1000	test to 1000 psi - held open port collar
	0858	3 1/2	2			400		inj rate
	0903	3 1/2				400		Mix SMD cement @ 1 1/2 ppq
		3 1/2	12			400		circ flood to surface
		3 1/2	86			500		→ cement to surface ← (160 sk mixed) 15 to port
	0925		7					Displace w/ H ₂ O shot in 2 3/8 close port collar test to 1000 psi - held Run 5 joints
	0947		20					Reverse hole clean Wash truck Pull tool Rack up
	1030							job complete shuts blow fluid & ISACC

WELLSITE GEOLOGIST'S REPORT

VERNON C. SCHRAAG
CONSULTANT GEOLOGIST



Scale 1:240 (5"=100') Imperial

Well Name: **TDM #1-15**
 Location: **NW NE SE SE SEC. 15-19S-29W**
 Licence Number: **API: 15-101-22594**
 Spud Date: **June 02, 2017**
 Surface Coordinates: **1153' FSL & 439' FEL**

Region: **Lane Co., KS**
 Drilling Completed: **June 09, 2017**

Bottom Hole Coordinates:
 Ground Elevation (ft): **2835'**
 Logged Interval (ft): **3800'**
 Formation: **Cherokee Lime**
 Type of Drilling Fluid: **Chemical Premix (Displaced)**

K.B. Elevation (ft): **2845'**
 Total Depth (ft): **4600'**
 To: **RTD** Total Depth (ft): **4600'**
 Printed by MUD.LOG from WellSight Systems 1-800-447-1534 www.WellSight.com

OPERATOR:

Company: **Larson Engineering Inc.**
 Address: **562 West State Road 4**
Olmitz, KS 67564-8561

DRILLING CONTRACTOR:

Southwind Drilling Co., Rig #1

DP 4.5" XH (16.6#); DC 6-1/4" x 2-3/8" x 461.93', Kelly 40.00', Tool Joint 5.5" ; Bit: JZ-ENP0121, 7-7/8", standard jets 14-14-14; rpm 80, WOB 35k; Kelly Bushing 10' above ground level; Larry Beavers (tool pusher).

CASING:

Ran 6 jts new 8-5/8" 20# R3 STC 8rd csg. Tallied 253', set @ 263' KB.

Ran 109 jts new MWP 5-1/2" 15.5# R3 LTC 8rd csg. Tallied 4600.90', set @ 4596' KB.

CIRCULATION SYSTEM:

Pump: BH-800, triplex, 6 x 8.5, 110 spm, Chemical, premix, displaced, earth pits, MudCo/Service Mud, Inc., Jason Whiting

OPEN HOLE LOGS:

Stack: DN, DI (SP), ML (Run-1); Guard (Run-2) due to tool problems; No Sonic; 5" detail LTD-3600; 2" DI to surface casing; Pioneer Wireline Services, Hays, KS, Dan Schmidt, LTD 4597, RTD 4600. Difference probably due to fill on bottom.

DRILL STEM TESTS:

None.

