



RAILROAD COMMISSION OF TEXAS

Form W-2

1701 N. Congress
P.O. Box 12967
Austin, Texas 78701-2967

Status: Approved
Date: 07/18/2018
Tracking No.: 188279

OIL WELL POTENTIAL TEST, COMPLETION OR RECOMPLETION REPORT, AND LOG

OPERATOR INFORMATION

Operator Name: FDL OPERATING, LLC Operator No.: 263924
Operator Address: ATTN ROBIN SWANNER PO BOX 472 JUDSON, TX 75660-0000

WELL INFORMATION

API No.: 42-383-39908 County: REAGAN
Well No.: 10H RRC District No.: 7C
Lease Name: UNIVERSITY 9-31 Field Name: LIN (WOLFCAMP)
RRC Lease No.: 17728 Field No.: 53613750
Location: Section: 31, Block: 9, Survey: UNIVERSITY LANDS, Abstract:

Latitude: 31 Longitude: -101
This well is located 7 miles in a NW
direction from BIG LAKE,
which is the nearest town in the county.

FILING INFORMATION

Purpose of filing: Initial Potential
Type of completion: New Well
Well Type: Producing Completion or Recompletion Date: 12/18/2017

Type of Permit	Date	Permit No.
Permit to Drill, Plug Back, or Deepen	06/22/2017	827806
Rule 37 Exception		
Fluid Injection Permit		
O&G Waste Disposal Permit		
Other:		

COMPLETION INFORMATION

Spud date: 08/03/2017	Date of first production after rig released: 12/18/2017
Date plug back, deepening, recompletion, or drilling operation commenced: 08/03/2017	Date plug back, deepening, recompletion, or drilling operation ended: 09/27/2017
Number of producing wells on this lease in this field (reservoir) including this well: 11	Distance to nearest well in lease & reservoir (ft.): 60.0
Total number of acres in lease: 1935.30	Elevation (ft.): 2779 GL
Total depth TVD (ft.): 7643	Total depth MD (ft.): 15890
Plug back depth TVD (ft.):	Plug back depth MD (ft.):
Was directional survey made other than inclination (Form W-12)? Yes	Rotation time within surface casing (hours): 211.0
Recompletion or reclass? No	Is Cementing Affidavit (Form W-15) attached? Yes
Type(s) of electric or other log(s) run: Gamma Ray (MWD)	Multiple completion? No
Electric Log Other Description:	
Location of well, relative to nearest lease boundaries	Off Lease : No
of lease on which this well is located: 7477.0 Feet from the South Line and 871.0 Feet from the East Line of the UNIVERSITY 9-31 Lease.	

FORMER FIELD (WITH RESERVOIR) & GAS ID OR OIL LEASE NO.

Field & Reservoir	Gas ID or Oil Lease No.	Well No.	Prior Service Type
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PACKET: N/A

W2:	N/A		
FOR NEW DRILL OR RE-ENTRY, SURFACE CASING DEPTH DETERMINED BY:			
GAU Groundwater Protection Determination	Depth (ft.):	750.0	Date: 10/26/2012
SWR 13 Exception	Depth (ft.):		

INITIAL POTENTIAL TEST DATA FOR NEW COMPLETION OR RECOMPLETION			
Date of test: 02/02/2018		Production method: Flowing	
Number of hours tested: 24		Choke size: OPEN	
Was swab used during this test? No		Oil produced prior to test: 3129.00	
PRODUCTION DURING TEST PERIOD:			
Oil (BBLS): 255.00		Gas (MCF): 171	
Gas - Oil Ratio: 670		Flowing Tubing Pressure: 265.00	
Water (BBLS): 2224			
CALCULATED 24-HOUR RATE			
Oil (BBLS): 255.0		Gas (MCF): 171	
Oil Gravity - API - 60.: 48.2		Casing Pressure: 145.00	
Water (BBLS): 2224			

CASING RECORD											
Row	Type of Casing	Casing Size (in.)	Hole Size (in.)	Setting Depth (ft.)	Multi - Stage Depth (ft.)	Multi - Shoe Depth (ft.)	Cement Class	Cement Amount (sacks)	Slurry Volume (cu. ft.)	Top of Cement (ft.)	TOC Determined By
1	Surface	13 3/8	17 1/2	843			C	785	1225.0	0	Calculation
2	Intermediate	9 5/8	12 1/4	7190			C	1670	3635.0	2214	Calculation
3	Intermediate	9 5/8	12 1/4	7190		2214	C & H	655	1167.0	0	Calculation
4	Conventional Production	5 1/2	8 3/4	15890			H	2560	4470.0	0	Calculation

LINER RECORD									
Row	Liner Size (in.)	Hole Size (in.)	Liner Top (ft.)	Liner Bottom (ft.)	Cement Class	Cement Amount (sacks)	Slurry Volume (cu. ft.)	Top of Cement (ft.)	TOC Determined By
N/A									

TUBING RECORD				
Row	Size (in.)	Depth	Size (ft.)	Packer Depth (ft.)/Type
1	2 7/8	7486		/

PRODUCING/INJECTION/DISPOSAL INTERVAL			
Row	Open hole?	From (ft.)	To (ft.)
1	No	L1 8335	15859.0

ACID, FRACTURE, CEMENT SQUEEZE, CAST IRON BRIDGE PLUG, RETAINER, ETC.			
Was hydraulic fracturing treatment performed?		Yes	
Is well equipped with a downhole actuation sleeve?		No	
If yes, actuation pressure (PSIG):			
Production casing test pressure (PSIG) prior to hydraulic fracturing treatment:		8500	
Actual maximum pressure (PSIG) during hydraulic fracturing:		7390	
Has the hydraulic fracturing fluid disclosure been reported to FracFocus disclosure registry (SWR29)?		Yes	
Row	Type of Operation	Amount and Kind of Material Used	Depth Interval (ft.)
1	Fracture	287140 BBLS SLICKWATER; 11786565# 100 MESH; 3988850# 40/70 SAND	8335 15859

FORMATION RECORD					
Formations	Encountered	Depth TVD (ft.)	Depth MD (ft.)	Is formation isolated?	Remarks
GRAYBURG	Yes	2695.0	2695.0	Yes	ESTIMATED
QUEEN	Yes	2532.0	2532.0	Yes	ESTIMATED
SAN ANDRES - SALTWATER FLOW, POSSIBLY HEAVY	Yes	3071.0	3071.0	Yes	ESTIMATED
CLEARFORK	Yes	5218.0	5218.0	Yes	ESTIMATED
SPRABERRY	Yes	6151.0	6151.0	Yes	ESTIMATED
WOLFCAMP	Yes	7717.0	7717.0	Yes	
STRAWN	No			No	NOT DRILLED TO DEPTH
FUSSELMAN	No			No	NOT DRILLED TO DEPTH
ELLENBURGER	No			No	NOT DRILLED TO DEPTH
Do the producing interval of this well produce H2S with a concentration in excess of 100 ppm (SWR 36)?					No
Is the completion being downhole commingled (SWR 10)?					No

REMARKS
KOP 7340

RRC REMARKS	
PUBLIC COMMENTS: [RRC Staff 2018-04-12 08:35:03.445] Cement was circulated to ground surface.	
CASING RECORD :	
TUBING RECORD:	
PRODUCING/INJECTION/DISPOSAL INTERVAL :	
ACID, FRACTURE, CEMENT SQUEEZE, CAST IRON BRIDGE PLUG, RETAINER, ETC. :	
POTENTIAL TEST DATA:	

OPERATOR'S CERTIFICATION	
Printed Name: Robin Swanner	Title: Consulting Agent
Telephone No.: (903) 930-1532	Date Certified: 04/10/2018



RAILROAD COMMISSION OF TEXAS

1701 N. Congress
P.O. Box 12967
Austin, Texas 78701-2967

Form W-15

Rev. 08/2014

CEMENTING REPORT

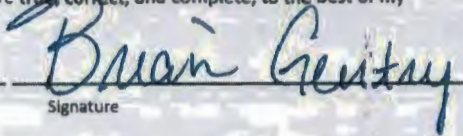
Cementer: Fill in
Operator: Fill in other

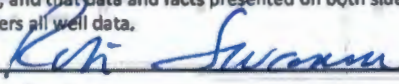
OPERATOR INFORMATION					
Operator Name: FDL Operating			Operator P-5 No.: 263924		
Cementer Name: Crest Pumping Technologies			Cementer P-5 No.: 189898		
WELL INFORMATION					
District No.: 7C			County: Reagan		
Well No.: 10H			API No.: 42-383-39908		Drilling Permit No.: 827806
Lease Name: University 9-31			Lease No.: 17728		
Field Name: Lin (Wolfcamp)			Field No.: 53613750		
I. CASING CEMENTING DATA					
Type of Casing: <input type="checkbox"/> Conductor <input checked="" type="checkbox"/> Surface <input type="checkbox"/> Intermediate <input type="checkbox"/> Liner <input type="checkbox"/> Production					
Drilled hole size (in.): 17 1/2		Depth of drilled hole (ft.): 843		Est. % wash-out or hole enlargement: 20	
Size of casing in O.D. (in.): 13 3/8		Casing weight (lbs/ft) and grade: 48# J-55		No. of centralizers used: 5	
Was cement circulated to ground surface (or bottom of cellar) outside casing? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO If no for surface casing, explain in Remarks.			Setting depth shoe (ft.): 843		Top of liner (ft.):
					Setting depth liner (ft.):
Hrs. waiting on cement before drill-out: 12		Calculated top of cement (ft.): 0		Cementing date: 08/05/2017	
SLURRY					
Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1	440	Class C	See Remarks	766	1,103
2	345	Class C	See Remarks	459	661
Total	785			1,225	1,764
II. CASING CEMENTING DATA					
Type of Casing: <input type="checkbox"/> Surface <input type="checkbox"/> Intermediate <input type="checkbox"/> Production <input type="checkbox"/> Tapered Production <input type="checkbox"/> Multi-stage cement shoe <input type="checkbox"/> Multiple parallel strings					
Drilled hole size (in.):		Depth of drilled hole (ft.):		Est. % wash-out or hole enlargement:	
Size of casing in O.D. (in.):		Casing weight (lbs/ft) and grade:		No. of centralizers used:	
Tapered string drilled hole size (in.) Upper: Lower:		Tapered string depth of drilled hole (ft.) Upper: Lower:			
Tapered string size of casing in O.D. (in.) Upper: Lower:		Tapered string casing weight (lbs/ft) and grade Upper: Lower:		Tapered string no. of centralizers used Upper: Lower:	
Was cement circulated to ground surface (or bottom of cellar) outside casing? <input type="checkbox"/> YES <input type="checkbox"/> NO If no for surface casing, explain in Remarks.				Setting depth shoe (ft.):	
Hrs. waiting on cement before drill-out:		Calculated top of cement (ft.):		Cementing date:	
SLURRY					
Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
Total					
III. CASING CEMENTING DATA					
Type of Casing: <input type="checkbox"/> Surface <input type="checkbox"/> Intermediate <input type="checkbox"/> Production <input type="checkbox"/> Tapered Production <input type="checkbox"/> Multi-stage cement/DV Tool <input type="checkbox"/> Multiple parallel strings					
Drilled hole size (in.):		Depth of drilled hole (ft.):		Est. % wash-out or hole enlargement:	
Size of casing in O.D. (in.):		Casing weight (lbs/ft) and grade:		No. of centralizers used:	
Tapered string drilled hole size (in.) Upper: Lower:		Tapered string depth of drilled hole (ft.) Upper: Lower:			
Tapered string size of casing in O.D. (in.) Upper: Lower:		Tapered string casing weight (lbs/ft) and grade Upper: Lower:		Tapered string no. of centralizers used Upper: Lower:	
Was cement circulated to ground surface (or bottom of cellar) outside casing? <input type="checkbox"/> YES <input type="checkbox"/> NO If no for surface casing, explain in Remarks.				Setting depth shoe (ft.):	
Hrs. waiting on cement before drill-out:		Calculated top of cement (ft.):		Cementing date:	
SLURRY					
Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
Total					

CEMENTING TO SQUEEZE, PLUG BACK OR PLUG AND ABANDON							
	PLUG #1	PLUG #2	PLUG #3	PLUG #4	PLUG #5	PLUG #6	PLUG #7
Cementing Date							
Size of hole or pipe (in.)							
Depth to bottom of tubing or drill pipe (ft.)							
Cement retainer setting depth (ft.)							
CIBP setting depth (ft.)							
Amount of cement on top of CIBP (ft.)							
Sacks of cement used							
Slurry volume pumped (cu. ft.)							
Calculated top of plug (ft.)							
Measured top of plug, if tagged (ft.)							
Slurry weight (lbs/gal)							
Class/type of cement							
Perforate and squeeze (YES/NO)							
REMARKS							

2 % Calcium Chloride, 4 % Bentonite Gel, 0.4 % CPT-503P, 0.25 % Cellophane Flake,
2 % Calcium Chloride, 0.25 lbs/sk Cellophane Flake,

CEMENTER'S CERTIFICATE: I declare under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, that I am authorized to make this certification, that the cementing of casing and/or the placing of cement plugs in this well as shown in the report was performed by me or under my supervision, and that the cementing data and facts presented on both sides of this form are true, correct, and complete, to the best of my knowledge. This certification covers cementing data only.

Brian Gentry/Cementor	Crest Pumping Technologies	
Name and title of cementer's representative	Cementing Company	Signature
P.O. Box 117 Jacksboro, TX 76458	940-567-3392	08/05/2017

Address City, State, Zip Code	Tel: Area Code Number	Date: mo, day yr.
OPERATOR'S CERTIFICATE: I declare under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, that I am authorized to make this certification, that I have knowledge of the well data and information presented in this report, and that data and facts presented on both sides of this form are true, correct, and complete, to the best of my knowledge. This certification covers all well data.		
Robin Swanner - Consultant		

Typed or printed name of operator's representative	Title	Signature
P.O. Box 472 Judson, TX 75660	(903)930-1532	04/08/2018
Address City, State, Zip Code	Tel: Area Code Number	Date: mo, day yr.

Instructions for Form W-15, Cementing Report

NOTICE: The Form W-15 must be submitted as an attachment to a Form G-1 (Gas Well Back Pressure Test, Completion or Recompletion Report, and Log), Form W-2 (Oil Well Potential Test, Completion or Recompletion Report, and Log), Form W-3 (Plugging Record), or Form W-4 (Application for Multiple Completion), any time cement is pumped in a wellbore.

- A. What to file:** An operator should file an original and one copy of the completed Form W-15 for each cementing company used on a well. The cementing of different casing strings on a well by one cementing company may be reported on one form. The Form W-15 should be filed with the Form W-3, Plugging Record, unless the Form W-3 is signed by the cementing company representative. When reporting dry holes, operators must complete Form W-15, in addition to Form W-3, to show any casing cemented in the hole.
- B. How to file:** An oil and gas completion report and Form W-15 may be filed online using the Commission's Online System (<https://webapps.rrc.state.tx.us/security/login.do>) or a paper copy of the form may be mailed to the Commission in Austin (P.O. Box 12967, Austin, Texas 78711-2967).
- C. Surface casing:** An operator must set and cement sufficient surface casing to protect all usable-quality water strata, as defined by the Groundwater Advisory Unit in Austin. Sufficient cement shall be used to fill the annular space outside the casing from the shoe to the ground surface or to the bottom of the cellar. Before drilling a well, an operator must obtain a letter from the Groundwater Advisory Unit stating the protection depth. Surface casing should not be set deeper than 200 feet below the specified depth without prior approval from the Commission. To plug and abandon a well, operators must use only cementers approved by the Commission's Director of Field Operations in accordance with SWR 14 ([http://info.sos.state.tx.us/pls/pub/readtac\\$ext.TacPage?sl=R&app=9&p_dir=&p_loc=&p_tloc=&p_ploc=&pg=1&p_tac=&tt=16&pt=1&ch=3&rl=14](http://info.sos.state.tx.us/pls/pub/readtac$ext.TacPage?sl=R&app=9&p_dir=&p_loc=&p_tloc=&p_ploc=&pg=1&p_tac=&tt=16&pt=1&ch=3&rl=14)). Cementing companies, service companies, or operators can qualify as approved cementers by demonstrating that they are able to mix and pump cement in compliance with Commission rules and regulations.
- D. Estimated % wash-out:** If the estimated % wash-out is less than 20% (or 30% along the Gulf Coast), provide supporting documentation such as a caliper log to show how the estimated % wash-out was obtained.
- E. Multi-stage cement:** An operator must report the multi-stage cement shoe in II. Casing Cementing Data section by selecting the type of casing and Multi-stage cement shoe. The operator must report the multi-stage cement tool in III. Casing Cementing Data section by selecting the type of casing and Multi-stage cement/DV tool, and Multi-stage cement shoe. The operator must
- F. Multiple parallel strings:** An operator should file the Form W-15 as an attachment to the Form W-4, Application for Multiple Completion. An operator may be required to submit multiple Form W-15s to show all data for multiple parallel strings.
- G. Slurry data:** If cement job exceeds three slurries, continue the list of slurries in the Slurry table in the subsequent Casing Cementing Data box.



RAILROAD COMMISSION OF TEXAS

1701 N. Congress
P.O. Box 12967
Austin, Texas 78701-2967

Form W-15

Rev. 08/2014

CEMENTING REPORT

Cement: Fill in
Operator: Fill in other

OPERATOR INFORMATION					
Operator Name: FDL Operating			Operator P-5 No.: 263924		
Cement Name: Crest Pumping Technologies			Cement P-5 No.: 189898		
WELL INFORMATION					
District No.: 7C			County: Reagan		
Well No.: 10H			API No.: 42-383-39908		Drilling Permit No.: 827806
Lease Name: University 9-31			Lease No.: 17728		
Field Name: Lin (Wolfcamp)			Field No.: 536137500		
I. CASING CEMENTING DATA					
Type of Casing: <input type="checkbox"/> Conductor <input type="checkbox"/> Surface <input type="checkbox"/> Intermediate <input type="checkbox"/> Liner <input type="checkbox"/> Production					
Drilled hole size (in.):		Depth of drilled hole (ft.):		Est. % wash-out or hole enlargement:	
Size of casing in O.D. (in.):		Casing weight (lbs/ft) and grade:		No. of centralizers used:	
Was cement circulated to ground surface (or bottom of cellar) outside casing? <input type="checkbox"/> YES <input type="checkbox"/> NO If no for surface casing, explain in Remarks.				Setting depth shoe (ft.):	
				Top of liner (ft.):	
				Setting depth liner (ft.):	
Hrs. waiting on cement before drill-out:		Calculated top of cement (ft.):		Cementing date: 08/14/2017	
SLURRY					
Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
Total					
II. CASING CEMENTING DATA					
Type of Casing: <input type="checkbox"/> Surface <input checked="" type="checkbox"/> Intermediate <input type="checkbox"/> Production <input type="checkbox"/> Tapered Production <input checked="" type="checkbox"/> Multi-stage cement shoe <input type="checkbox"/> Multiple parallel strings					
Drilled hole size (in.): 12 1/4		Depth of drilled hole (ft.): 7190		Est. % wash-out or hole enlargement: 20	
Size of casing in O.D. (in.): 9 5/8		Casing weight (lbs/ft) and grade: 40# L-80		No. of centralizers used: 32	
Tapered string drilled hole size (in.)		Tapered string depth of drilled hole (ft.)			
Upper:		Lower:			
Tapered string size of casing in O.D. (in.)		Tapered string casing weight (lbs/ft) and grade		Tapered string no. of centralizers used	
Upper:		Lower:		Upper:	
Lower:		Lower:		Lower:	
Was cement circulated to ground surface (or bottom of cellar) outside casing? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO If no for surface casing, explain in Remarks.				Setting depth shoe (ft.): 2214	
Hrs. waiting on cement before drill-out: 12		Calculated top of cement (ft.): 0		Cementing date: 08/16/2017	
SLURRY					
Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1	320	Class H	See Remarks	768	2,452
2	335	Class C	See Remarks	399	1,274
Total	655			1,167	3,726
III. CASING CEMENTING DATA					
Type of Casing: <input type="checkbox"/> Surface <input type="checkbox"/> Intermediate <input type="checkbox"/> Production <input type="checkbox"/> Tapered Production <input checked="" type="checkbox"/> Multi-stage cement/DV Tool <input type="checkbox"/> Multiple parallel strings					
Drilled hole size (in.): 12 1/4		Depth of drilled hole (ft.): 7190		Est. % wash-out or hole enlargement: 20	
Size of casing in O.D. (in.): 9 5/8		Casing weight (lbs/ft) and grade: 40# L-80		No. of centralizers used: 32	
Tapered string drilled hole size (in.)		Tapered string depth of drilled hole (ft.)			
Upper:		Lower:			
Tapered string size of casing in O.D. (in.)		Tapered string casing weight (lbs/ft) and grade		Tapered string no. of centralizers used	
Upper:		Lower:		Upper:	
Lower:		Lower:		Lower:	
Was cement circulated to ground surface (or bottom of cellar) outside casing? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO If no for surface casing, explain in Remarks.				Setting depth shoe (ft.): 7190	
Hrs. waiting on cement before drill-out: 12		Calculated top of cement (ft.): 2214		Cementing date: 08/16/2017	
SLURRY					
Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1	1350	Class C	See Remarks	3,254	10,390
2	320	Class C	See Remarks	381	1,217
Total	1,670			3,635	11,607

CEMENTING TO SQUEEZE, PLUG BACK OR PLUG AND ABANDON							
	PLUG #1	PLUG #2	PLUG #3	PLUG #4	PLUG #5	PLUG #6	PLUG #7
Cementing Date							
Size of hole or pipe (in.)							
Depth to bottom of tubing or drill pipe (ft.)							
Cement retainer setting depth (ft.)							
CIBP setting depth (ft.)							
Amount of cement on top of CIBP (ft.)							
Sacks of cement used							
Slurry volume pumped (cu. ft.)							
Calculated top of plug (ft.)							
Measured top of plug, if tagged (ft.)							
Slurry weight (lbs/gal)							
Class/type of cement							
Perforate and squeeze (YES/NO)							
REMARKS							

5 bbow Sodium Chloride, 7 % Bentonite Gel, 0.5 % CPT-4, 1 % CPT-45, 0.4 % CPT-503P, 4 lbs/sk Kol Seal,
 0.6 % CPT-30, 0.3 % CD-3, 0.25 % CPT-503P, 0.2 % CPT-20A,
 5 bbow Sodium Chloride, 7 % Bentonite Gel, 0.5 % CPT-4, 1.5 % CPT-45, 0.4 % CPT-503P, 4 lbs/sk Kol Seal,
 0.6 % CPT-16A, 0.3 % CD-3, 0.25 % CPT-503P,

CEMENTER'S CERTIFICATE: I declare under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, that I am authorized to make this certification, that the cementing of casing and/or the placing of cement plugs in this well as shown in the report was performed by me or under my supervision, and that the cementing data and facts presented on both sides of this form are true, correct, and complete, to the best of my knowledge. This certification covers cementing data only.

Timothy Chandler/Cementar
 Name and title of cementer's representative

Crest Pumping Technologies
 Cementing Company

Timothy Chandler
 Signature

P.O. Box 117 Jacksboro, TX 76458

940-567-3392

08/14/2017

Address City, State, Zip Code

Tel: Area Code Number

Date: mo. day yr.

OPERATOR'S CERTIFICATE: I declare under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, that I am authorized to make this certification, that I have knowledge of the well data and information presented in this report, and that data and facts presented on both sides of this form are true, correct, and complete, to the best of my knowledge. This certification covers all well data.

Robin Swanner - Consultant

Typed or printed name of operator's representative

Title

Signature

P.O. Box 472 Judson, TX 75860

(903) 930-1532

04/08/2018

Address City, State, Zip Code

Tel: Area Code Number

Date: mo. day yr.

Instructions for Form W-15, Cementing Report

NOTICE: The Form W-15 must be submitted as an attachment to a Form G-1 (Gas Well Back Pressure Test, Completion or Recompletion Report, and Log), Form W-2 (Oil Well Potential Test, Completion or Recompletion Report, and Log), Form W-3 (Plugging Record), or Form W-4 (Application for Multiple Completion), any time cement is pumped in a wellbore.

A. What to file: An operator should file an original and one copy of the completed Form W-15 for each cementing company used on a well. The cementing of different casing strings on a well by one cementing company may be reported on one form.

The Form W-15 should be filed with the Form W-3, Plugging Record, unless the Form W-3 is signed by the cementing company representative. When reporting dry holes, operators must complete Form W-15, in addition to Form W-3, to show any casing cemented in the hole.

B. How to file: An oil and gas completion report and Form W-15 may be filed online using the Commission's Online System

(<https://webapps.rrc.state.tx.us/security/login.do>) or a paper copy of the form may be mailed to the Commission in Austin (P.O. Box 12967, Austin, Texas 78711-2967).

C. Surface casing: An operator must set and cement sufficient surface casing to protect all usable-quality water strata, as defined by the Groundwater Advisory Unit in Austin. Sufficient cement shall be used to fill the annular space outside the casing from the shoe to the ground surface or to the bottom of the cellar.

Before drilling a well, an operator must obtain a letter from the Groundwater Advisory Unit stating the protection depth. Surface casing should not be set deeper than 200 feet below the specified depth without prior approval from the Commission.

To plug and abandon a well, operators must use only cementers approved by the Commission's Director of Field Operations in accordance with SWR 14

([http://info.sos.state.tx.us/pls/pub/readtac\\$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&poloc=&p_loc=&pg=1&p_tac=&ti=16&pt=1&ch=3&ri=14](http://info.sos.state.tx.us/pls/pub/readtac$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&poloc=&p_loc=&pg=1&p_tac=&ti=16&pt=1&ch=3&ri=14)). Cementing companies, service companies, or operators can qualify as approved cementers by demonstrating that they are able to mix and pump cement in compliance with Commission rules and regulations.

D. Estimated % wash-out: If the estimated % wash-out is less than 20% (or 30% along the Gulf Coast), provide supporting documentation such as a caliper log to show how the estimated % wash-out was obtained.

E. Multi-stage cement: An operator must report the multi-stage cement shoe in II, Casing Cementing Data section by selecting the type of casing and Multi-stage cement shoe. The operator must report the multi-stage cement tool in III, Casing Cementing Data section by selecting the type of casing and Multi-stage cement/DV tool, and Multi-stage cement shoe. The operator must

F. Multiple parallel strings: An operator should file the Form W-15 as an attachment to the Form W-4, Application for Multiple Completion. An operator may be required to submit multiple Form W-15s to show all data for multiple parallel strings.

G. Slurry data: If cement job exceeds three slurries, continue the list of slurries in the Slurry table in the subsequent Casing Cementing Data box.



RAILROAD COMMISSION OF TEXAS

1701 N. Congress
P.O. Box 12967
Austin, Texas 78701-2967

Form W-15

Rev. 08/2014

CEMENTING REPORT

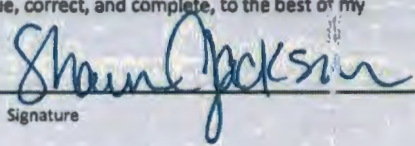
Cement: Fill in
Operator: Fill in other

OPERATOR INFORMATION					
Operator Name: FDL Operating			Operator P-5 No.: 263924		
Cement Name: Crest Pumping Technologies			Cement P-5 No.: 189898		
WELL INFORMATION					
District No.: 7C			County: Reagan		
Well No.: 10H			API No.: 42-383-39908		Drilling Permit No.: 827806
Lease Name: University 9-31			Lease No.: 17728		
Field Name: Lin (Wolfcamp)			Field No.: 536137500		
I. CASING CEMENTING DATA					
Type of Casing: <input type="checkbox"/> Conductor <input type="checkbox"/> Surface <input type="checkbox"/> Intermediate <input type="checkbox"/> Liner <input checked="" type="checkbox"/> Production					
Drilled hole size (in.): 8 3/4		Depth of drilled hole (ft.): 15890		Est. % wash-out or hole enlargement: 20	
Size of casing in O.D. (in.): 5 1/2		Casing weight (lbs/ft) and grade: 17# P-110		No. of centralizers used: 72	
Was cement circulated to ground surface (or bottom of cellar) outside casing? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO If no for surface casing, explain in Remarks.			Setting depth shoe (ft.): 15890		Top of liner (ft.):
					Setting depth liner (ft.):
Hrs. waiting on cement before drill-out: 72		Calculated top of cement (ft.): 1700		Cementing date: 09/26/2017	
SLURRY					
Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1	890	Class H	See Remarks	1,798	7,118
2	1670	Class H	See Remarks	2,672	10,578
Total	2,560			4,470	17,696
II. CASING CEMENTING DATA					
Type of Casing: <input type="checkbox"/> Surface <input type="checkbox"/> Intermediate <input type="checkbox"/> Production <input type="checkbox"/> Tapered Production <input type="checkbox"/> Multi-stage cement shoe <input type="checkbox"/> Multiple parallel strings					
Drilled hole size (in.):		Depth of drilled hole (ft.):		Est. % wash-out or hole enlargement:	
Size of casing in O.D. (in.):		Casing weight (lbs/ft) and grade:		No. of centralizers used:	
Tapered string drilled hole size (in.) Upper: Lower:		Tapered string depth of drilled hole (ft.) Upper: Lower:			
Tapered string size of casing in O.D. (in.) Upper: Lower:		Tapered string casing weight (lbs/ft) and grade Upper: Lower:		Tapered string no. of centralizers used Upper: Lower:	
Was cement circulated to ground surface (or bottom of cellar) outside casing? <input type="checkbox"/> YES <input type="checkbox"/> NO If no for surface casing, explain in Remarks.				Setting depth shoe (ft.):	
Hrs. waiting on cement before drill-out:		Calculated top of cement (ft.):		Cementing date:	
SLURRY					
Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
Total					
III. CASING CEMENTING DATA					
Type of Casing: <input type="checkbox"/> Surface <input type="checkbox"/> Intermediate <input type="checkbox"/> Production <input type="checkbox"/> Tapered Production <input type="checkbox"/> Multi-stage cement/DV Tool <input type="checkbox"/> Multiple parallel strings					
Drilled hole size (in.):		Depth of drilled hole (ft.):		Est. % wash-out or hole enlargement:	
Size of casing in O.D. (in.):		Casing weight (lbs/ft) and grade:		No. of centralizers used:	
Tapered string drilled hole size (in.) Upper: Lower:		Tapered string depth of drilled hole (ft.) Upper: Lower:			
Tapered string size of casing in O.D. (in.) Upper: Lower:		Tapered string casing weight (lbs/ft) and grade Upper: Lower:		Tapered string no. of centralizers used Upper: Lower:	
Was cement circulated to ground surface (or bottom of cellar) outside casing? <input type="checkbox"/> YES <input type="checkbox"/> NO If no for surface casing, explain in Remarks.				Setting depth shoe (ft.):	
Hrs. waiting on cement before drill-out:		Calculated top of cement (ft.):		Cementing date:	
SLURRY					
Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
Total					

CEMENTING TO SQUEEZE, PLUG BACK OR PLUG AND ABANDON							
	PLUG #1	PLUG #2	PLUG #3	PLUG #4	PLUG #5	PLUG #6	PLUG #7
Cementing Date							
Size of hole or pipe (in.)							
Depth to bottom of tubing or drill pipe (ft.)							
Cement retainer setting depth (ft.)							
CIBP setting depth (ft.)							
Amount of cement on top of CIBP (ft.)							
Sacks of cement used							
Slurry volume pumped (cu. ft.)							
Calculated top of plug (ft.)							
Measured top of plug, if tagged (ft.)							
Slurry weight (lbs/gal)							
Class/type of cement							
Perforate and squeeze (YES/NO)							
REMARKS							

0.1 gal/bbl CPT-503L, 2 lb/bbl CFS-1, 119.49 lb/bbl Barite, 1 gal/bbl Plexaid 830L,
 5 bbow Sodium Chloride, 2 % Bentonite Gel, 0.5 % CPT-19, 0.4 % CPT-503P, 4 lbs/sk Kol Seal, 0.1 % CPT-20A,
 3 bbow Sodium Chloride, 1 % Bentonite Gel, 0.5 % CPT-19, 0.1 % CD-3, 0.25 % CPT-503P, 0.15 % CPT-20A,

CEMENTER'S CERTIFICATE: I declare under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, that I am authorized to make this certification, that the cementing of casing and/or the placing of cement plugs in this well as shown in the report was performed by me or under my supervision, and that the cementing data and facts presented on both sides of this form are true, correct, and complete, to the best of my knowledge. This certification covers cementing data only.

Shaun Jackson/Cementer Randy Herrera/Cementer	Crest Pumping Technologies	
Name and title of cementer's representative	Cementing Company	Signature
P.O. Box 117 Jacksboro, TX 76458	940-567-3392	09/26/2017
Address City, State, Zip Code	Tel: Area Code Number	Date: mo. day yr.

OPERATOR'S CERTIFICATE: I declare under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, that I am authorized to make this certification, that I have knowledge of the well data and information presented in this report, and that data and facts presented on both sides of this form are true, correct, and complete, to the best of my knowledge. This certification covers all well data.

Robin Swanner - Consultant

Typed or printed name of operator's representative	Title	Signature
P.O. Box 472 Judson, TX 75660	(903)930-1532	
Address City, State, Zip Code	Tel: Area Code Number	Date: mo. day yr.

Instructions for Form W-15, Cementing Report

NOTICE: The Form W-15 must be submitted as an attachment to a Form G-1 (Gas Well Back Pressure Test, Completion or Recompletion Report, and Log), Form W-2 (Oil Well Potential Test, Completion or Recompletion Report, and Log), Form W-3 (Plugging Record), or Form W-4 (Application for Multiple Completion), any time cement is pumped in a wellbore.

- What to file:** An operator should file an original and one copy of the completed Form W-15 for each cementing company used on a well. The cementing of different casing strings on a well by one cementing company may be reported on one form. The Form W-15 should be filed with the Form W-3, Plugging Record, unless the Form W-3 is signed by the cementing company representative. When reporting dry holes, operators must complete Form W-15, in addition to Form W-3, to show any casing cemented in the hole.
- How to file:** An oil and gas completion report and Form W-15 may be filed online using the Commission's Online System (<https://webapps.rrc.state.tx.us/security/login.do>) or a paper copy of the form may be mailed to the Commission in Austin (P.O. Box 12967, Austin, Texas 78711-2967).
- Surface casing:** An operator must set and cement sufficient surface casing to protect all usable-quality water strata, as defined by the Groundwater Advisory Unit in Austin. Sufficient cement shall be used to fill the annular space outside the casing from the shoe to the ground surface or to the bottom of the cellar. Before drilling a well, an operator must obtain a letter from the Groundwater Advisory Unit stating the protection depth. Surface casing should not be set deeper than 200 feet below the specified depth without prior approval from the Commission. To plug and abandon a well, operators must use only cementers approved by the Commission's Director of Field Operations in accordance with SVR 14 ([http://info.sos.state.tx.us/pls/pub/readtac\\$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&poloc=&p_ploc=&pg=1&p_tac=&ti=16&pt=1&ch=3&ri=14](http://info.sos.state.tx.us/pls/pub/readtac$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&poloc=&p_ploc=&pg=1&p_tac=&ti=16&pt=1&ch=3&ri=14)). Cementing companies, service companies, or operators can qualify as approved cementers by demonstrating that they are able to mix and pump cement in compliance with Commission rules and regulations.
- Estimated % wash-out:** If the estimated % wash-out is less than 20% (or 30% along the Gulf Coast), provide supporting documentation such as a caliper log to show how the estimated % wash-out was obtained.
- Multi-stage cement:** An operator must report the multi-stage cement shoe in II. Casing Cementing Data section by selecting the type of casing and Multi-stage cement shoe. The operator must report the multi-stage cement tool in III. Casing Cementing Data section by selecting the type of casing and Multi-stage cement/DV tool. and Multi-stage cement shoe. The operator must
- Multiple parallel strings:** An operator should file the Form W-15 as an attachment to the Form W-4, Application for Multiple Completion. An operator may be required to submit multiple Form W-15s to show all data for multiple parallel strings.
- Slurry data:** If cement job exceeds three slurries, continue the list of slurries in the Slurry table in the subsequent Casing Cementing Data box.

Tracking No.: 188279

This facsimile L-1 was generated electronically from data submitted to the RRC.

Instructions

When to File Form L-1:

- with Forms G-1, W-2, and GT-1 for new and deepened gas, oil, and geothermal wells
- with Form W-3 for plugged dry holes
- when sending in a log which was held under a request for confidentiality and the period for confidentiality has not yet expired.

When is Form L-1 NOT required:

- with Forms W-2, G-1, and GT-1 filed for injection wells, disposal wells, water supply wells, service wells, re-test wells, re-classifications, and plugbacks of oil, gas or geothermal wells
- with Form W-3 for plugging of other than a dry hole

Where to File Form L-1:

- with the appropriate Commission district office

Filling out Form L-1:

- Section I and the signature section must be filled out for all wells
- complete only the appropriate part of Section II

Type of log required:

- any wireline survey run for the purpose of obtaining lithology, porosity, or resistivity information
- no more than one such log is required but it must be of the subject well
- if such log is NOT run on the subject well, do NOT substitute any other type of log; just select Section II, Part A below

SECTION I. IDENTIFICATION

Operator Name: FDL OPERATING, LLC	District No. 7C	Completion Date: 12/18/2017
Field Name LIN (WOLFCAMP)	Drilling Permit No. 827806	
Lease Name UNIVERSITY 9-31	Lease/ID No. 17728	Well No. 10H
County REAGAN	API No. 42- 383-39908	

SECTION II. LOG STATUS (Complete either A or B)

☐ A. BASIC ELECTRIC LOG NOT RUN☒ B. BASIC ELECTRIC LOG RUN. (Select one)

- ☒ 1. Confidentiality is requested and a copy of the header for each log that has been run on the well is attached.
- ☐ 2. Confidentiality already granted on basic electric log covering this interval (applicable to deepened wells only).
- ☐ 3. Basic electric log covering this interval already on file with Commission (applicable to deepened wells only).
- ☐ 4. Log attached to (select one):

☐ (a) Form L-1 (this form). If the company/lease name on log is different from that shown in Section I, please enter name on log here: _____

Check here if attached log is being submitted after being held confidential. ☐

☐ (b) Form P-7, Application for Discovery Allowable and New Field Designation.

☐ (c) Form W-4, Application for Multiple Completion:

Lease or ID No(s). _____

Well No(s). _____

Robin Swanner

Signature

Name (print)

Consulting Agent

Title

(903) 930-1532

Phone

02/28/2018

Date

-FOR RAILROAD COMMISSION USE ONLY-

**Integrity Directional Services**

6701 Corporation Pkwy #150
Fort Worth, TX. 76126
United States

(817) 731-8881

University 9-31 10H**Scale 2":100' - MD****9/24/2017 1:30 PM****Oper. Company:** Fleur de Lis Energy, LLC.**Well:** University 9-31 10H**Field:** Permian Basin**Rig:** Trinidad 101**Well ID:** 42-383-39908**Job Number:** TX17216FL**State:** Texas**County:** Reagan**Country:** USA**Location:** Big Lake**Start Date:** 08/08/2017 08:00:00**End Date:**

All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not except in the case of gross or willful negligence on our part, be liable or responsible for any loss, cost damages or expenses incurred or sustained by anyone resulting from an interpretation made by any of our officers, agents, or employees.

0.00	GR(API)	200.00	MD	0.00	ROP(FT/HR)	300.00	(MD/INC/AZ/TVD/VS)
200.00	2	400.00	FT	300.00	2	600.00	
			781				MD: 781.00 INC: 1.19 AZ: 346.87 TVD: 780.87 VS: 13.35
			800				
			820				
			840				
			860				MD: 862.00 INC: 1.30 AZ: 355.80 TVD: 861.85 VS: 15.10
			880				
			900				
			920				
			940				
			960				MD: 955.00 INC: 1.80 AZ: 335.80 TVD: 954.82 VS: 17.56
			980				
			1,000				
			1,020				
			1,040				MD: 1047.00 INC: 3.90 AZ: 288.30 TVD: 1046.71 VS: 20.37
			1,060				
			1,080				
			1,100				
			1,120				

RAILROAD COMMISSION OF TEXAS

**1701 N. Congress
P.O. Box 12967
Austin, Texas 78701-2967**

Form P-16

Page 1

Rev. 01/2016

Acreage Designation

SECTION I. OPERATOR INFORMATION

Operator Name: FDL Operating, LLC	Operator P-5 No.: 263924
Operator Address: 909 Lake Carolyn Parkway, Suite 500 Irving, TX 75039	

SECTION II. WELL INFORMATION

District No.: 7C	County: Reagan	Purpose of Filing: <input type="checkbox"/> Drilling Permit Application (Form W-1) <input checked="" type="checkbox"/> Completion Report (Form G-1/W-2)
Well No.: 10H	API No.: 42-383-39908	
Total Lease Acres: 1935.3	Drilling Permit No.: 827806	
Lease Name: University 9-31	Lease No.: 17728	
Field Name: Lin (Wolfcamp)	Field No.: 53613750	

Filer is the owner or lessee, or has been authorized by the owner or lessee, of all or an undivided portion of the mineral estate under each tract for which filer is listed as operator below. For all leases operated by other entities, the number of assigned acres shown are reflected on current Commission records or the filer has been authorized by the current operator to change the assigned acreage of that operator as shown below.

SECTION III. LISTING OF ALL WELLS IN THE APPLIED-FOR FIELD ON THE SAME ACREAGE AS THE LEASE, POOLED UNIT, OR UNITIZED TRACT DESIGNATED IN SECTION II ABOVE BY FILER

RRC ID No. or Lease No.	Well No.	H-Horizontal D-Directional V-Vertical	Lease Name	API No.	Acres Assigned	SWR 38 Except. (Y/N)	Operator Name and Operator No. (If different from filing operator)
17728	1H	H	University 9-31	38337374	190	N	
17728	2H	H	University 9-31	38337870	190	N	
17728	3H	H	University 9-31	38337910	190	N	
17728	4H	H	University 9-31	38338081	190	N	
17728	5H	H	University 9-31	38338082	190	N	
17728	6H	H	University 9-31	38338083	190	N	
17728	7H	H	University 9-31	38338084	190	N	
17728	8H	H	University 9-31	38338085	0	N	plugged 6/2017
17728	8HR	H	University 9-31	38338404	190	N	
17728	9H	H	University 9-31	38338086	190	N	
17728	10H	H	University 9-31	38339908	225.3	N	

Total Well Count >	11	1935.3	< A. Total Assigned Horiz. Acreage	1935.3	< C. Total Assigned Acreage
		0	< Total Remaining Horiz. Acreage		< Total Remaining Acreage
		0	< B. Total Assigned Vert./Dir. Acreage		
			< Total Remaining Vert./Dir. Acreage		

SECTION IV. REMARKS / PURPOSE OF FILING (see instructions)

Initial completion

Attach Additional Pages As Needed. ☒ No additional pages ☐ Additional Pages: _____ (No. of additional pages)

CERTIFICATION: I declare under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, that this report was prepared by me or under my supervision or direction, that I am authorized to make this report, and that the information contained in this report is true, correct, and complete to the best of my knowledge.

Signature Ki Swanna

Robin Swanner - Consultant
Name and title (type or print)

robinswanner@sbcglobal.net

Email (Include email address *only* if you affirmatively consent to its public release)

P.O. Box 472
Address

Judson TX	75660	
City.	State.	Zip Code

903	930-1532	02/27/2018
Tel: Area Code	Number	Date: mo. day yr.

Groundwater
Advisory Unit

GROUNDWATER PROTECTION DETERMINATION

Date **October 26, 2012**

GAU File No.: SC- **11134**

***** EXPEDITED APPLICATION *****

API Number **38300000**

Attention: **JOHNATHAN JOHNSON**

RRC Lease No. **000000**

SC_216378_38300000_000000_11134.pdf

**DEVON ENERGY PRODUCTION CO L P
333 W SHERIDAN AVE
OKLAHOMA CITY OK 73102**

--Measured--

850 ft FEL

500 ft FNL

MRL:SECTION

P-5# 216378

Digital Map Location:

X-coord/Long **101.57118**

Y-coord/Lat **31.22808**

Datum **83** Zone

County **REAGAN**

Lease & Well No. **UNIVERSITY 9-31 #8H&PAD**

Purpose **ND**

Location **SUR-UL, BLK-9, SEC-31, --[TD=8165], [RRC 7C],**

To protect usable-quality groundwater at this location, the Groundwater Advisory Unit of the Texas Railroad Commission recommends:

The interval from the land surface to a depth of 750 feet must be protected.


This recommendation is applicable to all wells drilled on this PAD.

University 9-31 #10H

Note: Unless stated otherwise, this recommendation is intended to apply only to the subject well and not for area-wide use. This recommendation is intended for natural drilling, production, and plugging operations only. It does not apply to wastewater disposal operation into a nonproductive zone (RRC Form GW-14).

If you have any questions, please contact us at 512-463-2741, gaau@rrc.state.tx.us, or by mail.

Sincerely,


Digitally signed by Jack Oswalt
DN: cn=US, o=TEXAS, ou=Austin, c=United States of America
Email=jack.oswalt@rrc.state.tx.us
Date: 2012.10.26 16:26:58 -0500

Jack M. Oswalt, P.G.

Geologist, Groundwater Advisory Unit
Oil & Gas Division

GEOLOGIST SEAL



The seal appearing on this document was authorized by Jack M. Oswalt on 10/26/2012.
Note: Alteration of this electronic document will invalidate the digital signature.

1

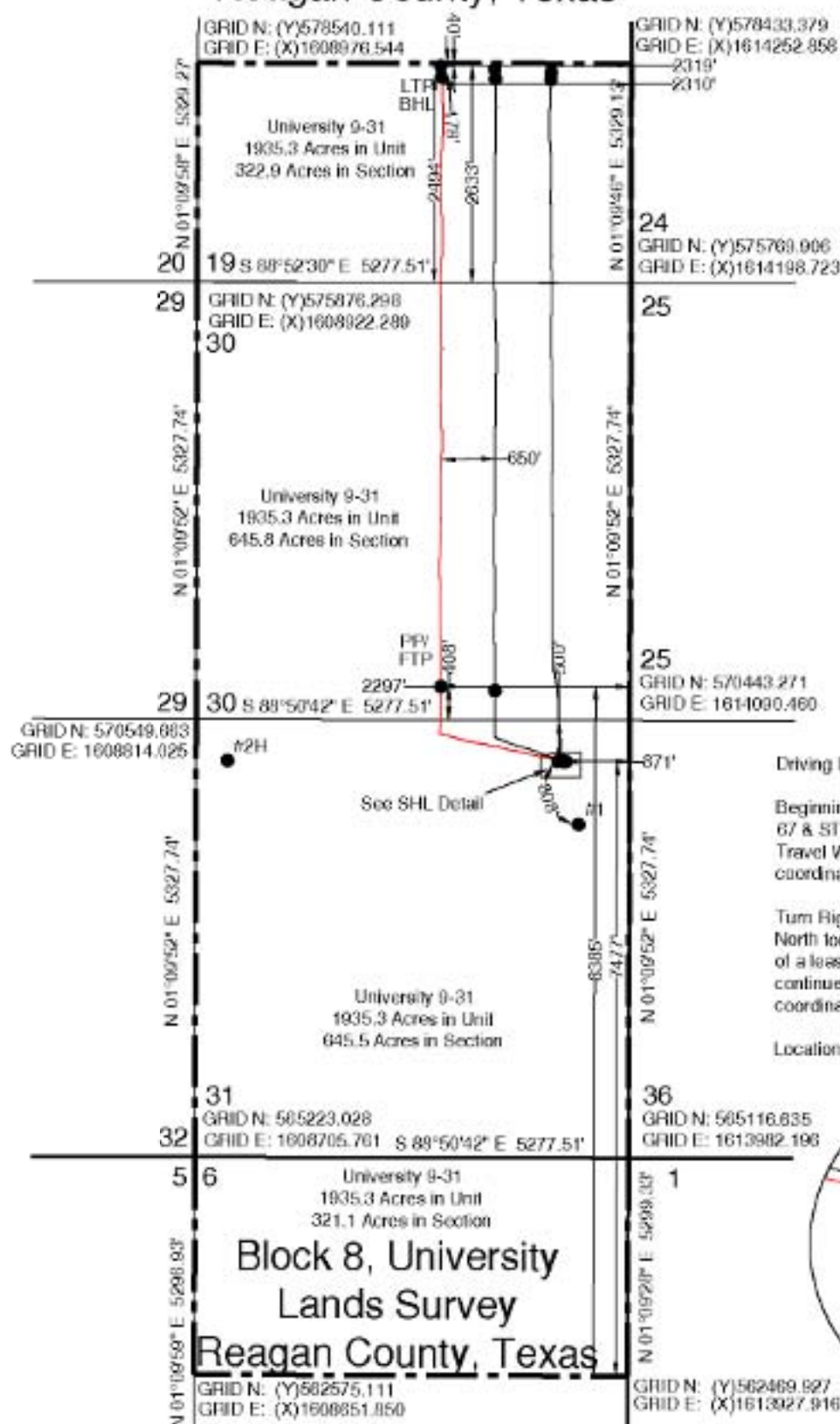


FOL OPERATING, LLC
University 10 42702-1 (First As-Orled)
2234' FROM SCUTLINE
811' FROM EAST LINE
of Section 27, Block 10
University 10 Lease
7908 26 Acres in Lease



Note: Well is located 4.7 miles Northwest of the city of Big Lake, Texas.
 Note: Survey Reconstitution Block in the 28th of Pondera & Markov Land Surveyors, Inc.
 Note: Control taken from herein as per The Texas Coordinate System of 1987, Central Zone
 Latitude and Longitude shown are as NAD83 Datum.
 Note: The adjoining 25.41 acre shown herein were not surveyed in the field. Their positions were supplied in the form of a Letter by FDL Operator.
 Note: Bearings and distances are based on The Texas Coordinate System of 1987, Central Zone.

Block 9, University Lands Survey Reagan County, Texas



Bottom Hole Location (BHL)

GRID N: (Y)578447.764
GRID E: (X)1611933.375
NAD83 Lat/Long
Lat: +31°15'04.957"N
Lon: -101°34'32.312"W

Last Take Point (LTP)

GRID N: (Y)578309.975
GRID E: (X)1611939.482
NAD83 Lat/Long
Lat: +31°15'03.594"N
Lon: -101°34'32.224"W

Penetration Point (PPV) First Take Point (FTP)

GRID N: (Y)570897.305
GRID E: (X)1611802.033
NAD83 Lat/Long
Lat: +31°13'50.215"N
Lon: -101°34'32.854"W

Surface Hole Location (SHL)

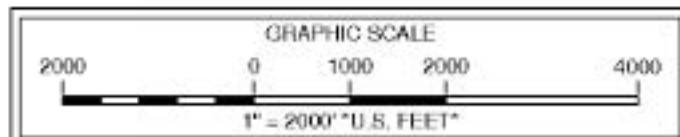
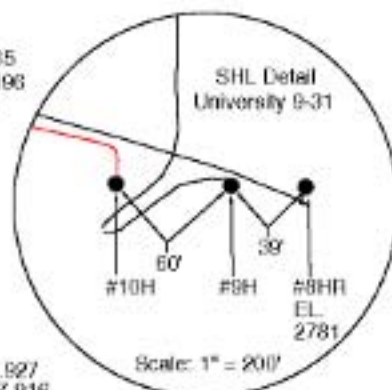
GRID N: (Y)569961.137
GRID E: (X)1613209.982
NAD83 Lat/Long
Lat: +31°13'41.105"N
Lon: -101°34'16.517"W

Driving Directions:

Beginning at the Intersection of US Highway 67 & ST Highway 137 in Big Lake, Texas, Travel West for 6.7 Miles to a lease road at coordinates 31°12'54.98" N, 101°34'39.02" N.

Turn Right (North) on lease road and travel North for 1/2 of a mile to the first intersection of a lease road to the right. Turn right (East) & continue for a total distance of 1 mile to coordinates 31°13'34.81" N, 101°34'16.75" W.

Location is 650.5 feet to the left (North).



WELL BORE LENGTHS

SHL - PPV/FTP	2075.16
PPV/FTP - LTP	7415.40
LTP - BHL	137.93
SHL - BHL	9628.49

Note: Well is located 7.0 miles Northwest of the city of Big Lake, Texas.
Note: Survey Reconstruction filed in the Office of Pennell & Marlowe Land Surveyors, Inc.
Note: Coordinates shown herein are on The Texas Coordinate System of 1927, Central Zone.
Note: Bearings and distances are based on The Texas Coordinate System of 1927, Central Zone.
Note: Example: (S-99999) indicates General Land Office file number.
Note: Well bore location determined from survey report provided by client.



March 12, 2018

180312M3-BCL

USGS Quadrangle Sheet: Best, Tex.

Railroad Commission Permit Hat

FDL OPERATING, LLC.

University 9-31 #10H (Final As-Drilled)

500' FROM NORTH LINE

871' FROM EAST LINE

University 9-31 Unit

1935.3 Acres (Called) in Unit Sections 19, 30

& 31, Block 9, &

Section 6, Block 8

University Lands Survey

Reagan County, Texas

Scale: 1" = 2000'

P.O. Box 51887, Midland, Texas 79710 (432) 262-0901 Fax (432) 262-0679 Firm #100201-00