Perfs should be 9281-17565
KOP should be 8547

RAILROAD COMMISSION OF TEXAS

Form W-2

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

Status: Approved
Date: 04/04/2019
Tracking No.: 208133

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.: 42-383-40178 **County:** REAGAN
Well No.: 2601HD **RRC District No.:** 7C
Lease Name: UNIVERSITY 10 **Field Name:** LIN (WOLFCAMP)
RRC Lease No.: 17844 **Field No.:** 53613750
Location: Section: 26, Block: 10, Survey: UL, Abstract: U232

Latitude: 31 **Longitude:** -101
This well is located 5.9 **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:** 09/06/2018

Type of Permit	Date	Permit No.
Permit to Drill, Plug Back, or Deepen	05/08/2018	837327
Rule 37 Exception		
Fluid Injection Permit		
O&G Waste Disposal Permit		
Other:		

COMPLETION INFORMATION

Spud date: 05/17/2018 **Date of first production after rig released:** 09/06/2018
Date plug back, deepening, recompletion, or drilling operation commenced: 05/17/2018 **Date plug back, deepening, recompletion, or drilling operation ended:** 07/22/2018
Number of producing wells on this lease in this field (reservoir) including this well: 21 **Distance to nearest well in lease & reservoir (ft.):** 760.0
Total number of acres in lease: 8392.70 **Elevation (ft.):** 2795 GL
Total depth TVD (ft.): 9022 **Total depth MD (ft.):** 17681
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):** 313.0
Is Cementing Affidavit (Form W-15) attached? Yes
Recompletion or reclass? No **Multiple completion?** No
Type(s) of electric or other log(s) run: Gamma Ray (MWD)
Electric Log Other Description:
Location of well, relative to nearest lease boundaries of lease on which this well is located: 2157.0 **Feet from the** South **Line and** 760.0 **Feet from the** West **Line of the** UNIVERSITY 10 **Lease.** **Off Lease :** No

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

Field & Reservoir	Gas ID or Oil Lease No.	Well No.	Prior Service Type

PACKET: N/A

W2: N/A

FOR NEW DRILL OR RE-ENTRY, SURFACE CASING DEPTH DETERMINED BY:

GAU Groundwater Protection Determination **Depth (ft.):** 850.0 **Date:** 03/16/2018

SWR 13 Exception **Depth (ft.):**

INITIAL POTENTIAL TEST DATA FOR NEW COMPLETION OR RECOMPLETION

Date of test: 09/20/2018 **Production method:** Pumping

Number of hours tested: 24 **Choke size:**

Was swab used during this test? No **Oil produced prior to test:** 2942.00

PRODUCTION DURING TEST PERIOD:

Oil (BBLS): 328.00 **Gas (MCF):** 358

Gas - Oil Ratio: 1091 **Flowing Tubing Pressure:**

Water (BBLS): 3865

CALCULATED 24-HOUR RATE

Oil (BBLS): 328.0 **Gas (MCF):** 358

Oil Gravity - API - 60.: 52.0 **Casing Pressure:** 860.00

Water (BBLS): 3865

CASING RECORD

Row	Type of Casing	Casing Size (in.)	Hole Size (in.)	Setting Depth (ft.)	Multi - Stage Tool Depth (ft.)	Multi - Stage 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	875			C	870	1371.0	0	Circulated to Surface
2	Intermediate	9 5/8	12 1/4	7706			C	575	1171.0	4700	Calculation
3	Intermediate	9 5/8	12 1/4	7706	4700		C	1600	4654.0	0	Circulated to Surface
4	Conventional Production	5 1/2	8 3/4	17677			H	2945	5050.0	0	Circulated to Surface

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	9039	/

PRODUCING/INJECTION/DISPOSAL INTERVAL

Row	Open hole?	From (ft.)	To (ft.)
1	No	L1 9043	17565.0

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: 8298

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	484445 BBLS SLICKWATER; 18340400 PROPPANT	9043	17565

FORMATION RECORD

Formations	Encountered	Depth TVD (ft.)	Depth MD (ft.)	Is formation isolated?	Remarks
GRAYBURG	No			No	NOT RECORDED IN WELLBORE
QUEEN	Yes	2610.0	2610.0	Yes	ESTIMATED
SAN ANDRES - SALTWATER FLOW, POSSIBLY HEAVY	Yes	3054.0	3054.0	Yes	ESTIMATED
CLEARFORK	Yes	5120.0	5120.0	Yes	ESTIMATED
SPRABERRY	Yes	6092.0	6092.0	Yes	
WOLFCAMP	Yes	7619.0	7619.0	Yes	
STRAWN	No			No	NOT DRILLED TO TVD
FUSSELMAN	No			No	NOT DRILLED TO TVD
ELLENBURGER	No			No	NOT DRILLED TO TVD

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 - 8768'

RRC REMARKS

PUBLIC COMMENTS:

[RRC Staff 2019-03-21 16:25:12.658] EDL=8500 feet, max acres=340, LIN (WOLFCAMP) oil or gas well;

take points: 9043-17565 feet

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:** 02/16/2019

RAILROAD COMMISSION OF TEXAS

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

CEMENTING REPORT

Form W-15
Rev. 08/2014

Cementer: Fill in
Operator:Fill in other

OPERATOR INFORMATION

Operator Name: FDL Operating, LLC	Operator P-5 No.: 263924
Cementer Name: Crest Pumping Technologies	Cementer P-5 No.: 189898

WELL INFORMATION

District No.: 7C	County: Reagan	
Well No.: 2601HD	API No.: 42-383-40178	Drilling Permit No.: 837327
Lease Name: University 10	Lease No.: 17844	
Field Name: Lin (Wolfcamp)	Field No.: 53613750	

I. CASING CEMENTING DATA

Type of Casing: ☐ Conductor ☑ Surface ☐ Intermediate ☐ Liner ☐ Production

Drilled hole size (in.): 17 1/2	Depth of drilled hole (ft.): 880	Est. % wash-out or hole enlargement: 10%
Size of casing in O.D. (in.): 13 3/8	Casing weight (lbs/ft) and grade: 48/J55	No. of centralizers used: 5
Was cement circulated to ground surface (or bottom of cellar) outside casing? ☑ YES ☐ NO If no for surface casing, explain in Remarks.	Setting depth shoe (ft.): 875	Top of liner (ft.): / Setting depth liner (ft.):
Hrs. waiting on cement before drill-out: +/- 12	Calculated top of cement (ft.): 0	Cementing date: 05/19/2018

SLURRY

Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1	520	Class C	See Remarks	905	1,303
2	350	Class C	See Remarks	466	671
Total	870			1,371	1,974

II. CASING CEMENTING DATA

Type of Casing: ☐ Surface ☐ Intermediate ☐ Production ☐ Tapered Production ☐ Multi-stage cement shoe ☐ 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? ☐ YES ☐ 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: ☐ Surface ☐ Intermediate ☐ Production ☐ Tapered Production ☐ Multi-stage cement/DV Tool ☐ 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? ☐ YES ☐ 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

1 % Calcium Chloride, 4 % Bentonite Gel, 0.4 % CPT-503P, 0.25 lbs/sk Cellophane Flake,

1 % 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.

Rockey White/Cementer	Crest Pumping Technologies	Rockey White	
Name and title of cementer's representative	Cementing Company	Signature	
P.O. Box 117 Jacksboro, TX 76458		940-567-3392	05/19/2018
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	Robin Swanner	
Typed or printed name of operator's representative	Title	Signature	
P.O. Box 472 Judson, TX 75660		903-930-1532	02/07/2019
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=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=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

CEMENTING REPORT

Form W-15
Rev. 08/2014

Cementer: Fill in
Operator:Fill in other

OPERATOR INFORMATION

Operator Name: FDL Operating, LLC	Operator P-5 No.: 263924
Cementer Name: Crest Pumping Technologies	Cementer P-5 No.: 189898

WELL INFORMATION

District No.: 7C	County: Reagan	
Well No.: 2601 HD	API No.: 42-383-40178	Drilling Permit No.: 837327
Lease Name: University 10	Lease No.: 17844	
Field Name: Lin (Wolfcamp)	Field No.: 53613750	

I. CASING CEMENTING DATA

Type of Casing: ☐ Conductor ☐ Surface ☐ Intermediate ☐ Liner ☐ 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? ☐ YES ☐ 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: 06/13/2018	

SLURRY

Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
Total					

II. CASING CEMENTING DATA

Type of Casing: ☐ Surface ☐ Intermediate ☐ Production ☐ Tapered Production ☑ Multi-stage cement shoe ☐ Multiple parallel strings

Drilled hole size (in.): 12 1/4	Depth of drilled hole (ft.): 7706	Est. % wash-out or hole enlargement: 20%	
Size of casing in O.D. (in.): 9 5/8	Casing weight (lbs/ft) and grade: 40/N80	No. of centralizers used: 59	
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? ☐ YES ☑ NO If no for surface casing, explain in Remarks.		Setting depth shoe (ft.): 7706	
Hrs. waiting on cement before drill-out: +/- 12	Calculated top of cement (ft.): 4700	Cementing date: 06/12/2018	

SLURRY

Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1	200	Class C	See Remarks	672	2,146
2	375	Class C	See Remarks	499	1,593
Total	575			1,171	3,739

III. CASING CEMENTING DATA

Type of Casing: ☐ Surface ☐ Intermediate ☐ Production ☐ Tapered Production ☑ Multi-stage cement/DV Tool ☐ Multiple parallel strings

Drilled hole size (in.): 12 1/4	Depth of drilled hole (ft.): 7706	Est. % wash-out or hole enlargement: 20%	
Size of casing in O.D. (in.): 9 5/8	Casing weight (lbs/ft) and grade: 40# N80	No. of centralizers used: 59	
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? ☐ YES ☑ NO If no for surface casing, explain in Remarks.		Setting depth shoe (ft.): 4700	
Hrs. waiting on cement before drill-out: +/-12	Calculated top of cement (ft.): 0	Cementing date: 06/12/2018	

SLURRY

Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1	1250	Class C	See Remarks	4,188	13,372
2	350	Class C	See Remarks	466	1,488
Total	1,600			4,654	14,860

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 bwow Sodium Chloride, 4 % Bentonite Gel, 0.5 % CPT-19, 4 % CPT-45, 0.4 % CPT-503P, 0.25 lbs/sk Dura Fiber, 5 % Gypsum, 0.35 % CPT-20, 0.35 % Citric Acid,

0.2 % CPT-12, 0.4 % CD-3, 0.25 lbs/sk Dura Fiber, 0.2 % CPT-24,

5 bwow Sodium Chloride, 4 % Bentonite Gel, 0.5 % CPT-19, 4 % CPT-45, 0.4 % CPT-503P, 0.25 lbs/sk Dura Fiber, 5 % Gypsum,

0.2 % CD-3, 0.25 % CPT-24,

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.

Braydan Besselaar/Cementer Deseree McCarter/Cementer	Crest Pumping Technologies	Braydan Besselaar
Name and title of cementer's representative	Cementing Company	Signature

P.O. Box 117 Jacksboro, TX 76458	940-567-3392	06/13/2018
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	Robin Swanner
Typed or printed name of operator's representative	Title	Signature

P.O. Box 472 Judson, TX 75660	9039301532	02/07/2019
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=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=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

CEMENTING REPORT

Form W-15
Rev. 08/2014

Cementer: Fill in
Operator:Fill in other

OPERATOR INFORMATION		
Operator Name: FDL Operating, LLC	Operator P-5 No.: 263924	
Cementer Name: Crest Pumping Technologies	Cementer P-5 No.: 189898	
WELL INFORMATION		
District No.: 7C	County: Reagan	
Well No.: 2601 HD	API No.: 42-383-40178	Drilling Permit No.: 837327
Lease Name: University 10	Lease No.: 17844	
Field Name: Lin (Wolfcamp)	Field No.: 53613750	

I. CASING CEMENTING DATA

Type of Casing: ☐ Conductor ☐ Surface ☐ Intermediate ☐ Liner ☑ Production

Drilled hole size (in.): 8 3/4	Depth of drilled hole (ft.): 17677	Est. % wash-out or hole enlargement: 20%	
Size of casing in O.D. (in.): 5 1/2	Casing weight (lbs/ft) and grade: 20# P110	No. of centralizers used: 75	
Was cement circulated to ground surface (or bottom of cellar) outside casing? ☑ YES ☐ NO If no for surface casing, explain in Remarks.	Setting depth shoe (ft.): 17677	Top of liner (ft.):	Setting depth liner (ft.):
Hrs. waiting on cement before drill-out: +/- 72	Calculated top of cement (ft.): 0	Cementing date: 07/16/2018	

SLURRY

Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1	1110	Class H	See Remarks	2,242	8,876
2	1835	Class H	See Remarks	2,808	11,117
Total	2,945			5,050	19,993

II. CASING CEMENTING DATA

Type of Casing: ☐ Surface ☐ Intermediate ☐ Production ☐ Tapered Production ☐ Multi-stage cement shoe ☐ 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? ☐ YES ☐ 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: ☐ Surface ☐ Intermediate ☐ Production ☐ Tapered Production ☐ Multi-stage cement/DV Tool ☐ 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? ☐ YES ☐ 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

5 bwow Sodium Chloride, 2 % Bentonite Gel, 0.75 % CPT-19, 0.4 % CPT-503P, 4 lbs/sk Kol Seal, 0.2 % CPT-20A,
3 bwow Sodium Chloride, 1 % Bentonite Gel, 0.7 % CPT-19, 0.4 % CD-3, 0.25 % CPT-503P, 0.25 % 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.

James West/Cementer Rockey White/Cementer	Crest Pumping Technologies	James West
Name and title of cementer's representative	Cementing Company	Signature

P.O. Box 117 Jacksboro, TX 76458	940-567-3392	07/16/2018
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	Robin Swanner
Typed or printed name of operator's representative	Title	Signature

P.O. Box 472 Judson, TX 75660	9039301532	02/07/2019
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=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=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
Oil and Gas Division

ELECTRIC LOG STATUS REPORT

FORM L-1

Tracking No.: 208133

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: 09/06/2018
Field Name LIN (WOLFCAMP)	Drilling Permit No. 837327	
Lease Name UNIVERSITY 10	Lease/ID No. 17844	Well No. 2601HD
County REAGAN	API No. **42-** 383-40178	

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

02/08/2019
Date

-FOR RAILROAD COMMISSION USE ONLY-

API # 42-383-40178

Start Date: July 11, 2018

End Date: July 20, 2019

COMPANY: Fleur de Lis
WELL: University 10 2601HD
COUNTY: Reagan County,Texas
DATUM: NAD 1927 (NADCON CONUS)
RIG: Trinidad 101
GRID CORRECTION: To convert a Magnetic Direction to a Grid Direction, Add 6.44°

OFFICE: 936.582.7296

MWD Log

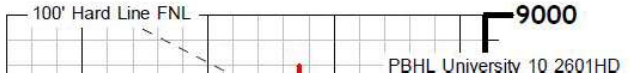
GEODETIC ZONE: Texas Central 4203
2795 + 25 @ 2820.0usft (Trinidad 101)
GROUND ELEVATION: 2795.0

+N/-S	+E/-W	Northing	Easting	Latittude	Longitude	Slot
0.0	0.0	572479.72	1620171.70	31° 14' 6.243 N	101° 32' 55.226 W	

PLAN SECTIONS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	11061.0	92.20	4.90	9042.0	1839.3	-418.8	0.00	0.00	1851.8	
2	11209.0	92.21	1.27	9036.3	1937.0	-410.9	2.45	-89.88	1999.1	
3	11429.7	90.00	1.27	9032.0	2207.6	-406.0	1.00	-179.81	2219.4	
4	17630.6	90.00	1.27	9032.0	8406.9	-268.9	0.00	0.00	8411.2	PBHL University 10 2601HD

SHL: 2157' FSL; 760' FWL
Section 26 Blk 10,
PBHL: 100' FNL; 320' FWL
Section 26 Blk. 10



FDL Operating, LLC

March 26, 2019

Railroad Commission of Texas
1701 North Congress Avenue
P.O. Box 12967
Austin, TX 78711-2967

Re: 30 Day Waiver Request
FDL Operating, LLC #263924
Tracking # 208133
API# 383-40178
District 7C Lease #17844

Gentlemen,

FDL Operating, LLC respectfully request a 30 day waiver on the above referenced well/lease in District 7C. If you have any questions concerning this explanation, please give me a call.

Sincerely,

Robin Swanner
Consulting Agent
for FDL Operating, LLC
Telephone: (903) 930-1532

909 Lake Carolyn Pkwy, Suite 500 | Irving, TX 75039
Main 972.332.1419 | Fax 855-299-5083
FDLEnergy.com

RAILROAD COMMISSION OF TEXAS
Oil and Gas Division
PO Box 12967
Austin TX 78711-2967
www.rrc.texas.gov

CERTIFICATE OF COMPLIANCE AND TRANSPORTATION AUTHORITY

P-4

This facsimile P-4 was generated electronically from data submitted to the RRC.
A certification of the automated data is available in the RRC's Austin office.

Tracking No.: 208133

1. Field name exactly as shown on proration schedule	2. Lease name as shown on proration schedule			
LIN (WOLFCAMP)	UNIVERSITY 10			
3. Current operator name exactly as shown on P-5 Organization Report	4. Operator P-5 no.	5. Oil Lse/Gas ID no	6. County	7. RRC district
FDL OPERATING, LLC	263924	17844	REAGAN	7C
8. Operator address including city, state, and zip code	9. Well no(s) *(see instruction E)*			
ATTN ROBIN SWANNER PO BOX 472 JUDSON, TX 75660	2601HD			
	10. Classification: ☒ Oil ☐ Gas ☐ Other *(see instruction A)*		11. Effective Date: 09/06/2018	

12. Purpose of Filing. (Complete section a or b below.) *(See instructions B and G)*

a. Change of: ☐ operator ☐ oil or condensate gatherer ☐ gas gatherer ☐ gas purchaser ☐ gas purchaser system code
☐ field name from _____
☐ lease name from _____

OR

b. New RRC Number for: ☒ oil lease ☐ gas well ☐ other well (specify) _____ **Due to:** ☒ new completion or recompletion ☐ reclass oil to gas ☐ reclass gas to oil ☐ consolidation, unitization, or subdivision (oil lease only)

13. Authorized GAS WELL GAS or CASINGHEAD GAS Gatherer(s) and/or Purchaser(s). *(See instruction G).*

Gatherer	Purchaser	Name of GAS WELL GAS or CASINGHEAD GAS Gatherer(s) or Purchaser(s) As Indicated in Columns to the Left *(Attach an additional sheet in same format if more space is needed)*	Purchaser's RRC Assigned System Code	Percent of Take	Full-well stream
X		DCP OPERATING COMPANY, LP(195959)		100.0	
	X	COKINOS ENERGY, L.L.C.(167016)	0001	100.0	

14. Authorized OIL or CONDENSATE Gatherer(s). *(See instruction G).*

Name of OIL or CONDENSATE Gatherer(s) - List Highest Volume Gatherer First *(Attach an additional sheet in same format if more space is needed)*	Percent of Take
PLAINS MARKETING, L.P.(667883)	80.0
PLAINS PIPELINE L.P.(667884)	10.0
SHELL TRADING (US) COMPANY(774715)	10.0

RRC USE ONLY: Reviewer's initials: RRC Staff Approval date: 04/04/2019

15. PREVIOUS OPERATOR CERTIFICATION FOR CHANGE OF OPERATOR P-4 FILING. Being the PREVIOUS OPERATOR, I certify that operating responsibility for the well(s) designated in this filing, located on the subject lease has been transferred in its entirety to the above named Current Operator. I understand, as Previous Operator, that designation of the above named operator as Current Operator is not effective until this certificate is approved by the Commission.

Name of Previous Operator

Signature

Name (print)

☐ **Authorized Employee of previous operator**

☐ **Authorized agent of previous operator** *(see instruction G)*

Title

Date

Phone with area code

16. CURRENT OPERATOR CERTIFICATION. By signing this certificate as the Current Operator, I certify that all statements on this form are true and correct and I acknowledge responsibility for the regulatory compliance of the subject lease including plugging of well(s) pursuant to Rule 14. I further acknowledge that I assume responsibility for the physical operation, control, and proper plugging of each well designated in this filing. I also acknowledge that I will remain designated as the Current Operator until a new certificate designating a new Current Operator is approved by the Commission.

Name (print): Consulting Agent

Signature: Robin Swanner

Title

☐ **Authorized Employee of current operator**

☒ **Authorized agent of current operator** *(see instruction G)*

E-mail Address (optional): robinswanner@sbcglobal.net

Date: 02/08/2019

Phone with area code: (903) 930-1532

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:**
Well No.: 2601HD	**API No.:** 42-383-40178	☐ Drilling Permit Application (Form W-1)
Total Lease Acres: 8392.70	**Drilling Permit No.:** 837327	■ Completion Report (Form G-1/W-2)
Lease Name: University 10	**Lease No.:** 17844	
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)
17844	2801HR	H	University 10	38337619	280	N	
17844	3601H	H	University 10	38337818	320	N	
17844	2802H	H	University 10	38337911	320	N	
17844	3602H	H	University 10	38338152	320	N	
17844	3603H	H	University 10	38338153	320	N	
17844	3604H	H	University 10	38338154	320	N	
17844	3605H	H	University 10	38338155	320	N	
17844	2803H	H	University 10	38338215	320	N	
17844	2804H	H	University 10	38338216	320	N	
17844	2805H	H	University 10	38338217	320	N	
17844	2806H	H	University 10	38338218	320	N	
17844	2807H	H	University 10	38338219	320	N	
17844	2808H	H	University 10	38338220	320	N	
17844	2701H	V	University 10	38338224	40	N	
17844	2703H	H	University 10	38338225	320	N	
17844	2704H	H	University 10	38338226	320	N	
17844	2702H	H	University 10	38338227	280	N	

Total Well Count >	17	5040	**< A. Total Assigned Horiz. Acreage**	5080	**< C. Total Assigned Acreage**
			< Total Remaining Horiz. Acreage	3312.7	**< Total Remaining Acreage**
		40	**< B. Total Assigned Vert./Dir. Acreage**		
			< Total Remaining Vert./Dir. Acreage		

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

New Drill

Attach Additional Pages As Needed. ☐ **No additional pages** ■ **Additional Pages:** 1 **(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	Name and title (type or print)	Email (include email address *only* if you affirmatively consent to its public release)
	Robin Swanner - Consultant	robinswanner@sbcglobal.net

Address	City,	State,	Zip Code	Tel: Area Code	Number	Date: mo. day yr.
P.O. Box 472	Judson	TX	75660	903	930-1532	02/07/2019

RAILROAD COMMISSION OF TEXAS

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

Acreage Designation Attachment

Form P-16
Attachment
Page 1A
Rev. 01/2016

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 (CONTINUED). 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)
17844	2706H	V	University 10	38338228	40	N	
17844	2705H	V	University 10	38338230	40	N	
17844	3606HR	H	University 10	38338405	320	N	
17844	2601HD	H	University 10	pending	320	N	

Total Well Count >	21	5680	< A. Total Assigned Horiz. Acreage	5800	< C. Total Assigned Acreage	
			< Total Remaining Horiz. Acreage	2592.7	< Total Remaining Acreage	
		120	< B. Total Assigned Vert./Dir. Acreage			
			< Total Remaining Vert./Dir. Acreage			

GROUNDWATER PROTECTION DETERMINATION

Form GW-2

Groundwater Advisory Unit

Date Issued:	16 March 2018	**GAU Number:**	191300

Attention:	FDL OPERATING, LLC ATTN ROBIN SWANNER JUDSON, TX 75660	**API Number:**	
		County:	REAGAN
		Lease Name:	University 10
		Lease Number:	
Operator No.:	263924	**Well Number:**	2601HB
		Total Vertical Depth:	9000
		Latitude:	31.235067
		Longitude:	-101.548737
		Datum:	NAD27

Purpose: New Drill

Location: Survey-University Lands; Abstract-U232; Block-10; Section-26

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

The interval from the land surface to a depth of 850 feet must be protected.

The BASE OF UNDERGROUND SOURCES OF DRINKING WATER (USDW) is estimated to occur at a depth of 850 feet at the site of the referenced well.

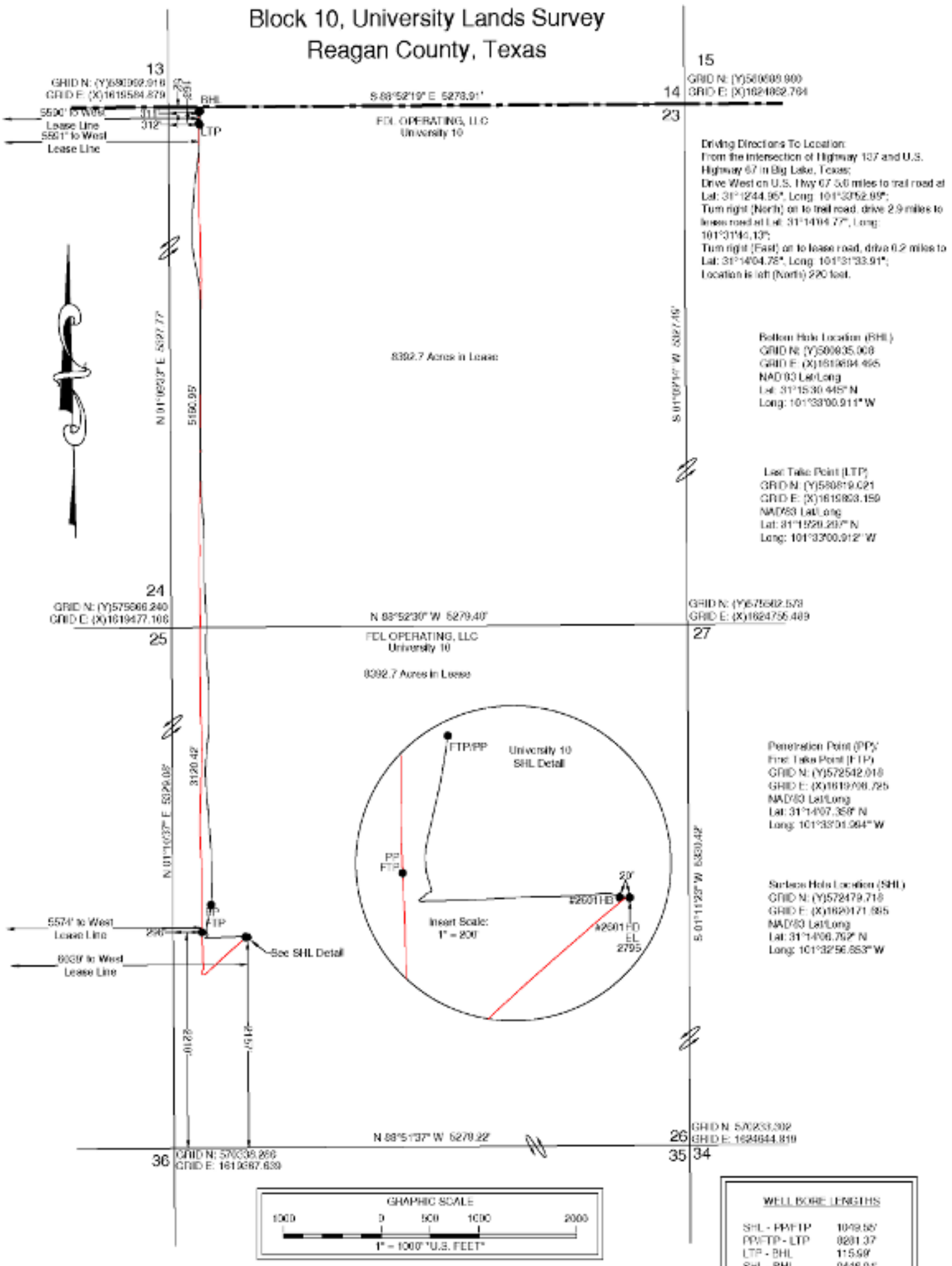
This recommendation is applicable to all wells within a radius of 200 feet of this location.

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

This determination is based on information provided when the application was submitted on 03/09/2018. If the location information has changed, you must contact the Groundwater Advisory Unit, and submit a new application if necessary. If you have questions, please contact us at 512-463-2741 or gau@rrc.texas.gov.

Groundwater Advisory Unit, Oil and Gas Division

Block 10, University Lands Survey
Reagan County, Texas



Driving Directions To Location:
From the intersection of Highway 137 and U.S. Highway 67 in Big Lake, Texas:
Drive West on U.S. Hwy 67 5.0 miles to trail road at Lat: 31°12'44.96", Long: 101°37'52.95";
Turn right (North) on to trail road, drive 2.9 miles to lease road at Lat: 31°14'04.77", Long: 101°37'46.13";
Turn right (East) on to lease road, drive 0.2 miles to Lat: 31°14'04.78", Long: 101°37'33.91";
Location is left (North) 220 feet.

Bottom Hole Location (BHL)
GRID N: (Y)580635.008
GRID E: (X)1619694.495
NAD 83 Lat/Long
Lat: 31°15'30.445" N
Long: 101°38'00.911" W

Last Take Point (LTP)
GRID N: (Y)580619.021
GRID E: (X)1619823.159
NAD83 Lat/Long
Lat: 31°15'29.287" N
Long: 101°37'59.912" W

Penetration Point (PP)/
First Take Point (FTP)
GRID N: (Y)579542.018
GRID E: (X)1619706.725
NAD83 Lat/Long
Lat: 31°14'07.358" N
Long: 101°38'01.984" W

Surface Hole Location (SHL)
GRID N: (Y)579479.718
GRID E: (X)1620171.805
NAD83 Lat/Long
Lat: 31°14'06.762" N
Long: 101°32'56.853" W

GRAPHIC SCALE
1000 0 500 1000 2000
1" = 1000' "U.S. FEET"

WELL BORE LENGTHS	
SHL - PP/FTP	1049.55'
PP/FTP - LTP	8281.37'
LTP - BHL	115.59'
SHL - BHL	9446.91'

Note: Well is located 5.9 miles Northwest of the city of Big Lake, Texas.
Note: Well bore location determined from survey report provided by client.
Note: Survey Reconstruction filed in the Office of Pennell & Marlowe Land Surveyors, Inc.
Note: Coordinates shown hereon 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.

USGS Quadrangle Sheet: Gardener Draw, Tex.
USGS Quadrangle Sheet: Best, Tex.
Railroad Commission Permit Plat

PENNELL & MARLOWE
RESIDENTIAL, OILFIELD & LAND SURVEYORS, INC.
ALL TYPES OF SURVEYS

STATE OF TEXAS
REGISTERED
STEPHEN P. MARLOWE
5715
PROFESSIONAL LAND SURVEYOR

Stephen P. Marlowe
REGISTERED PROFESSIONAL LAND SURVEYOR NO. 5715

January 08, 2019
19310RM-KRM

FDL OPERATING, LLC
University 10 #2601HD (As-Drilled)
2157' FROM SOUTH LINE
760' FROM WEST LINE
University 10 Lease
8392.7 Acres out of
Sections 21,22,23,24,25,26,27,28,33,34 35 & 36,
Block 10 &
Section 1, Block 11
University Lands Survey
Reagan County, Texas
Scale: 1" = 1000'

P.O. Box 51867, Midland, Texas 79710 (432) 262-0301 Fax (432) 262-0679 Firm #100201-00