

**RAILROAD COMMISSION OF TEXAS
OIL & GAS DIVISION**

Form W-1H 07/2004
Supplemental Horizontal Well Information

Permit Status: **Approved**
The RRC has not approved this application. Duplication or distribution of information is at the user's own risk.

APPLICATION FOR PERMIT TO DRILL, RECOMPLETE, OR RE-ENTER

*This facsimile W-1 was generated electronically from data submitted to the RRC.
A certification of the automated data is available in the RRC's Austin office.*

Permit # **819007**
Approved Date: **Mar 09, 2017**

1. RRC Operator No. 265322	2. Operator's Name (exactly as shown on form P-5, Organization Report) FELIX ENERGY HOLDINGS II, LLC	3. Lease Name UL ECHO CANYON 20-17	4. Well No. 2H
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Lateral Drainhole Location Information

5. Field as shown on Form W-1 **PHANTOM (WOLFCAMP) (Field # 71052900, RRC District 08)**

6. Section 20	7. Block 17	8. Survey UL	9. Abstract	10. County of BHL WARD
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11. Terminus Lease Line Perpendiculars 50 ft. from the E line. and 330 ft. from the N line
12. Terminus Survey Line Perpendiculars 50 ft. from the E line. and 330 ft. from the N line
13. Penetration Point Lease Line Perpendiculars 526 ft. from the E (offlease) line. and 240 ft. from the N (offlease) line

**RAILROAD COMMISSION OF TEXAS
OIL & GAS DIVISION
SWR #13 Formation Data**

WARD (475) County

Formation	Shallow Top	Deep Top	Remarks	Geological Order	Effective Date
RUSTLER	1,700	1,700		1	12/17/2013
YATES	2,000	2,800		2	12/17/2013
SEVEN RIVERS	2,375	2,375		3	12/17/2013
QUEEN	2,200	3,200		4	12/17/2013
GLORIETA	3,900	4,000		5	12/17/2013
SAN ANDRES	2,000	4,500	high flows, H2S, corrosive	6	12/17/2013
HOLT	4,600	4,800		7	12/17/2013
CLEARFORK	4,500	5,000		8	12/17/2013
DELAWARE	2,300	5,000		9	12/17/2013
TUBB	4,600	5,300		10	12/17/2013
WICHITA ALBANY	6,000	6,200		11	12/17/2013
CHERRY CANYON	4,800	7,800		12	12/17/2013
WADDELL	7,600	9,700		13	12/17/2013
BONE SPRINGS	4,700	9,800		14	12/17/2013
WOLFCAMP	6,000	12,750		15	12/17/2013
MONTOYA	14,500	14,500		16	12/17/2013
PENNSYLVANIAN	7,500	14,900		17	12/17/2013
ATOKA	12,000	15,000		18	12/17/2013
FUSSELMAN	6,400	17,500		19	12/17/2013
DEVONIAN	6,200	17,800		20	12/17/2013
ELLENBURGER	7,900	20,800		21	12/17/2013

The above list may not be all inclusive, and may also include formations that do not intersect all wellbores. Formation "TOP" information listed reflects an estimated range based on geologic variances across the county. To clarify, the "Deep Top" is not the bottom of the formation; it is the deepest depth at which the "TOP" of the formation has been or might be encountered. This is a dynamic list subject to updates and revisions. It is the operator's responsibility to make sure that at the time of spudding the well the most current list is being referenced. Refer to the RRC website at the following address for the most recent information.
<http://www.rrc.texas.gov/oil-gas/compliance-enforcement/rule-13-geologic-formation-info>

GROUNDWATER PROTECTION DETERMINATION

Form GW-2



Groundwater Advisory Unit

Date Issued: 04 October 2016 **GAU Number:** 161077

Attention:	FELIX ENERGY HOLDINGS II, FELIX ENERGY DENVER, CO 80202	API Number:	
Operator No.:	265322	County:	WARD
		Lease Name:	UL Loveland 1902-17
		Lease Number:	
		Well Number:	1H
		Total Vertical Depth:	14000
		Latitude:	31.534915
		Longitude:	-103.167257
		Datum:	NAD27

Purpose: New Drill
Location: Survey-UL; Block-17; Section-21

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 1075 feet must be protected.

This recommendation is applicable to all wells within a radius of 500 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).

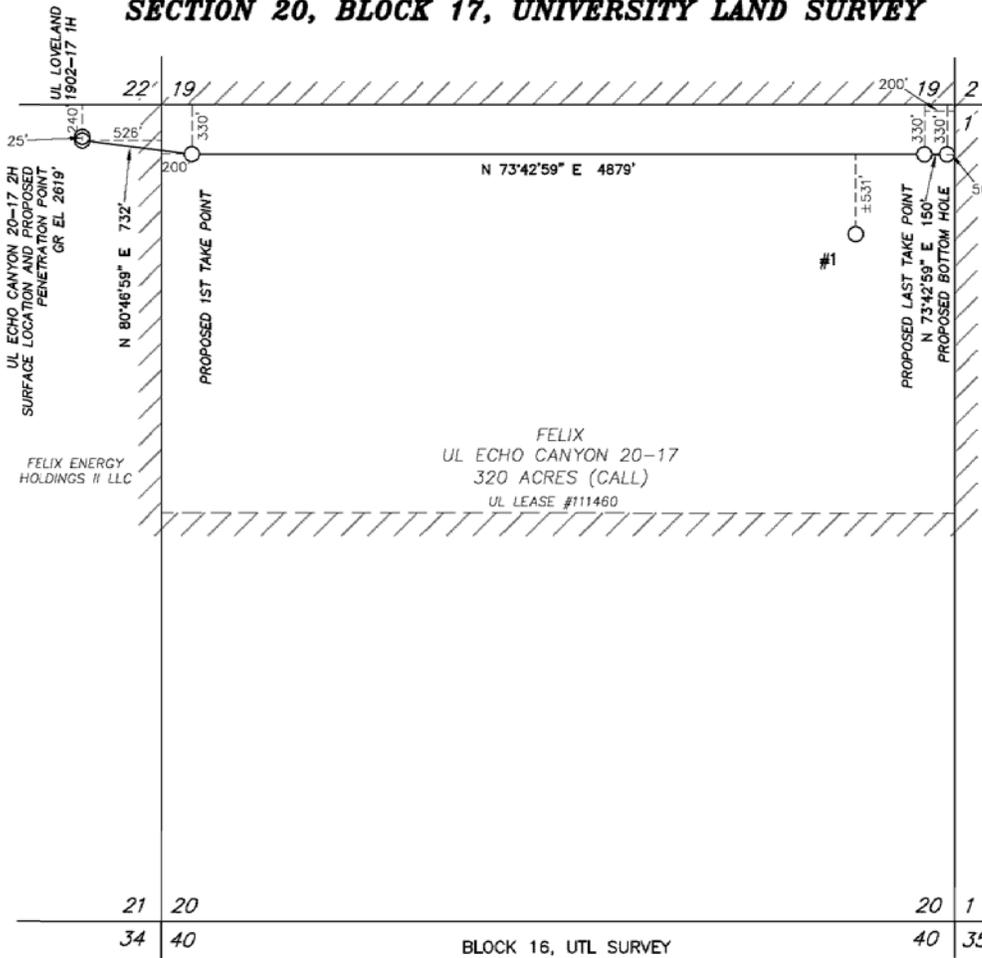
This determination is based on information provided when the application was submitted on 10/03/2016. If the location information has changed, you must contact the Groundwater Advisory Unit, and submit a new application if necessary. If you have questions, please contact us at 512-463-2741 or gau@rrc.texas.gov.

Groundwater Advisory Unit, Oil and Gas Division

Form GW-2 P.O. Box 12967 Austin, Texas 78771-2967 512-463-2741 Internet address: www.rrc.texas.gov
Rev. 02/2014

A-U59

SECTION 20, BLOCK 17, UNIVERSITY LAND SURVEY



NAD 83, TEXAS CENTRAL ZONE		NAD 27, TEXAS CENTRAL ZONE	
S/L: N=10533262.5', E=1413647.6'	LAT=31.5349828 N, LONG=103.1676744 W	S/L: N=690687.1', E=1117181.7'	LAT=31.5348498 N, LONG=103.1672338 W
1ST/P: N=10533379.6', E=1414369.7'	LAT=31.5353554 N, LONG=103.1653667 W	1ST/P: N=690804.2', E=1117903.7'	LAT=31.5352222 N, LONG=103.1649264 W
L/P: N=10534747.8', E=1419053.3'	LAT=31.5394422 N, LONG=103.1504493 W	L/P: N=692172.3', E=1122587.3'	LAT=31.5393092 N, LONG=103.1500094 W
B/H: N=10534789.8', E=1419197.3'	LAT=31.5395678 N, LONG=103.1499907 W	B/H: N=692214.4', E=1122731.3'	LAT=31.5394348 N, LONG=103.1495508 W

APPROXIMATELY 2.4 MILES W OF PYOTE, TEXAS

- NOTES:
- COORDINATES AND BEARINGS ARE BASED ON LAMBERT CONICAL PROJECTION OF THE STATE PLANE COORDINATE SYSTEM NAD 83, CORS 96, TEXAS CENTRAL ZONE WITH A CONVERGENCE ANGLE OF -01.46967452° AND DISTANCES ARE OF GRID VALUE WITH A CENTRAL COMBINED SCALE FACTOR OF 0.99980548.
 - THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE REPORT AND REVIEW OF THE ABSTRACT OF TITLE. THERE MAY BE EASEMENTS AND/OR COVENANTS AFFECTING THIS PROPERTY NOT SHOWN HEREON. LOCATION OF IMPROVEMENTS AND/OR EASEMENTS WERE BEYOND COMMISSIONED SCOPE OF THIS PROJECT AND HAVE BEEN SPECIFICALLY OMITTED. VESTING DOCUMENTS NOT FURNISHED FOR THIS SURVEY.
 - SEE DOCUMENTS AND ELECTRONIC DATA FILED IN THE OFFICE OF WPG INC FOR COMPLETE RECONSTRUCTION OF THESE SECTIONS OR BLOCKS.
 - REVISED 2/21/17 TO CHANGE UNIT AND LATERAL.

I, THE UNDERSIGNED, DO HEREBY CERTIFY THAT THE SURVEY INFORMATION FOUND ON THIS PLAT WAS DERIVED FROM ACTUAL FIELD NOTES OF ON-THE-GROUND SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. NO WARRANTY IS MADE OR INTENDED FOR THE LOCATION OF ANY OR ALL EASEMENTS THAT MAY EXIST WITHIN THE BOUNDS OF THIS SURVEY. THE INFORMATION PRESENTED HEREON IS FOR THE PRIVATE USE OF THE PARTY NAMED IN THE "REFERENCE PORTION" OF THE TITLE BLOCK AND DOES NOT CONSTITUTE A COMPLETE BOUNDARY SURVEY AS DEFINED BY THE "PROFESSIONAL LAND SURVEYING PRACTICES ACT."



- ☼ GAS WELL
- ▲ WATER INJECTION WELL
- OIL WELL
- LOCATED WELL
- DRY HOLE
- ⊗ WATER WELL
- ⊘ SHUT IN WELL

9/30/16, REVISED 2/21/17

1000 0 1000 2000 FEET

Thais Watson Ahlstrand TEXAS R.P.L.S. No. 6359
FILE: T:\WARD\BLOCK 17.dwg

Watson Professional Group Inc

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MIDLAND, TEXAS 79702
(432) 520-9200
FAX (432) 520-9212
tahlstrand@wpg-usa.com

PERMIT PLAT

FELIX ENERGY HOLDINGS II LLC
UL ECHO CANYON 20-17 2H
S/L & PROPOSED P/P: 240' FNL & 526' FEL
SECTION 21, BLOCK 17, UNIVERSITY LAND SURVEY
PROPOSED 1ST T/P: 330' FNL & 200' FWL
PROPOSED LAST T/P: 330' FNL & 200' FEL
PROPOSED B/H: 330' FNL & 50' FEL
SEC. 20, BLK. 17, UNIVERSITY LAND SURVEY, WARD COUNTY, TEXAS

DATE: SEPTEMBER 27, 2016 DATE SURVEYED: 9/16/16
JOB NO.: 16-1202-00 FIELD BOOK 817/33 DRAFT TA REV. 1