

API No. <u>42-495-33843</u> Drilling Permit # <u>825440</u> SWR Exception Case/Docket No. _____	<b>RAILROAD COMMISSION OF TEXAS</b> <b>OIL &amp; GAS DIVISION</b>  <b>APPLICATION FOR PERMIT TO DRILL, RECOMPLETE, OR RE-ENTER</b> <i>This facsimile W-1 was generated electronically from data submitted to the RRC.</i> <i>A certification of the automated data is available in the RRC's Austin office.</i>	<b>FORM W-1</b> 07/2004  Permit Status: <b>Approved</b>				
1. RRC Operator No. <u>265322</u>	2. Operator's Name (as shown on form P-5, Organization Report) <b>FELIX ENERGY HOLDINGS II, LLC</b>	3. Operator Address (include street, city, state, zip): <b>FELIX ENERGY</b> <b>1530 16TH ST SUITE 500</b> <b>DENVER, CO 80202-0000</b>				
4. Lease Name <b>UL URAD 1609-21</b>	5. Well No. <b>1H</b>					
<b>GENERAL INFORMATION</b>						
6. Purpose of filing (mark ALL appropriate boxes): <input checked="" type="checkbox"/> New Drill <input type="checkbox"/> Recompletion <input type="checkbox"/> Reclass <input type="checkbox"/> Field Transfer <input type="checkbox"/> Re-Enter <input type="checkbox"/> Amended <input type="checkbox"/> Amended as Drilled (BHL) (Also File Form W-1D)						
7. Wellbore Profile (mark ALL appropriate boxes): <input type="checkbox"/> Vertical <input checked="" type="checkbox"/> Horizontal (Also File Form W-1H) <input type="checkbox"/> Directional (Also File Form W-1D) <input type="checkbox"/> Sidetrack						
8. Total Depth <u>14000</u>	9. Do you have the right to develop the minerals under any right-of-way? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10. Is this well subject to Statewide Rule 36 (hydrogen sulfide area)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No				
<b>SURFACE LOCATION AND ACREAGE INFORMATION</b>						
11. RRC District No. <u>08</u>	12. County <b>WINKLER</b>	13. Surface Location <input checked="" type="checkbox"/> Land <input type="checkbox"/> Bay/Estuary <input type="checkbox"/> Inland Waterway <input type="checkbox"/> Offshore				
14. This well is to be located <u>4.61</u> miles in a <u>W</u> direction from <u>Wink</u> which is the nearest town in the county of the well site.						
15. Section <u>16</u>	16. Block <u>21</u>	17. Survey <u>UL</u>				
18. Abstract No. <u>A-</u>	19. Distance to nearest lease line: <u>200</u> ft.	20. Number of contiguous acres in lease, pooled unit, or unitized tract: <u>641.11</u>				
21. Lease Perpendiculars: <u>358</u> ft from the <u>W</u> line and <u>337</u> ft from the <u>S</u> line.		22. Survey Perpendiculars: <u>358</u> ft from the <u>W</u> line and <u>337</u> ft from the <u>S</u> line.				
23. Is this a pooled unit? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	24. Unitization Docket No. _____	25. Are you applying for Substandard Acreage Field? <input type="checkbox"/> Yes (attach Form W-1A) <input checked="" type="checkbox"/> No				
<b>FIELD INFORMATION</b> List all fields of anticipated completion including Wildcat. List one zone per line.						
26. RRC District No.	27. Field No.	28. Field Name (exactly as shown in RRC records)	29. Well Type	30. Completion Depth	31. Distance to Nearest Well in this Reservoir	32. Number of Wells on this lease in this Reservoir
<u>08</u>	<u>71052900</u>	<u>PHANTOM (WOLFCAMP)</u>	<u>Oil or Gas Well</u>	<u>14000</u>	<u>0.00</u>	<u>1</u>
<b>BOTTOMHOLE LOCATION INFORMATION</b> is required for DIRECTIONAL, HORIZONTAL, AND AMENDED AS DRILLED PERMIT APPLICATIONS (see W-1H attachment)						
<b>Remarks</b> [FILER Apr 12, 2017 2:00 PM]: Please cancel permit #816878 per the attached request				<b>Certificate:</b> I certify that information stated in this application is true and complete, to the best of my knowledge.  <div style="display: flex; justify-content: space-between;"> <div style="text-align: center;"> <u>Bill Spencer, Consultant</u>            Name of filer         </div> <div style="text-align: center;"> <u>Apr 12, 2017</u>            Date submitted         </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="text-align: center;"> <u>(512)9181062</u>            Phone         </div> <div style="text-align: center;"> <u>bill@spencerconsulting.org</u>            E-mail Address (OPTIONAL)         </div> </div>		
<b>RRC Use Only</b> Data Validation Time Stamp: <u>Apr 21, 2017 4:40 PM (Current Version)</u>						

Permit Status: **Approved**

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

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

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

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

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Permit # **825440**  
Approved Date: **Apr 21, 2017**

1. RRC Operator No. <b>265322</b>	2. Operator's Name (exactly as shown on form P-5, Organization Report) <b>FELIX ENERGY HOLDINGS II, LLC</b>	3. Lease Name <b>UL URAD 1609-21</b>	4. Well No. <b>1H</b>
<b>Lateral Drainhole Location Information</b>			
5. Field as shown on Form W-1 <b>PHANTOM (WOLFCAMP) (Field # 71052900, RRC District 08)</b>			
6. Section <b>9</b>	7. Block <b>21</b>	8. Survey <b>UL</b>	9. Abstract <b>U56</b>
		10. County of BHI. <b>WINKLER</b>	
11. Terminus Lease Line Perpendiculars <b>480</b> ft. from the <b>W</b> line and <b>50</b> ft. from the <b>N</b> line			
12. Terminus Survey Line Perpendiculars <b>480</b> ft. from the <b>W</b> line and <b>50</b> ft. from the <b>N</b> line			
13. Penetration Point Lease Line Perpendiculars <b>358</b> ft. from the <b>W</b> line and <b>337</b> ft. from the <b>S</b> line			





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

**WINKLER (495) County**

Formation	Shallow Top	Deep Top	Remarks	Geological Order	Effective Date
RUSTLER	725	725	possible flow; possible usable quality water	1	12/17/2013
COLBY-QUEEN	2,900	3,200		2	12/17/2013
YATES	2,280	3,200		3	12/17/2013
QUEEN-SEVEN RIVERS	2,700	3,400		4	12/17/2013
SAN ANDRES	3,600	4,400	high flows, H2S, corrosive	5	12/17/2013
HOLT	4,500	4,800		6	12/17/2013
DELAWARE	4,300	5,000		7	12/17/2013
GLORIETA	4,900	5,600		8	12/17/2013
CLEARFORK	4,750	6,200		9	12/17/2013
WICHITA ALBANY	6,600	6,850		10	12/17/2013
BRUSHY CANYON	7,300	7,300		11	12/17/2013
CHERRY CANYON	6,000	7,800		12	12/17/2013
CANYON	8,400	8,400		13	12/17/2013
BONE SPRINGS	9,000	9,800		14	12/17/2013
MONTOYA	10,300	10,300		15	12/17/2013
WADDELL	11,000	11,000		16	12/17/2013
WOLFCAMP	7,600	12,400		17	12/17/2013
ATOKA	12,900	12,900		18	12/17/2013
STRAWN	8,100	14,800		19	12/17/2013
PENNSYLVANIAN	8,000	15,500		20	12/17/2013
MISSISSIPPIAN	10,200	17,300		21	12/17/2013
DEVONIAN	7,900	17,800		22	12/17/2013
SILURIAN	8,500	18,000		23	12/17/2013
FUSSELMAN	9,700	18,800		24	12/17/2013
ELLENBURGER	9,500	21,400		25	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

<b>Date Issued:</b>	13 April 2017	<b>GAU Number:</b>	170425
<b>Attention:</b>	FELIX ENERGY HOLDINGS II, FELIX ENERGY DENVER, CO 80202	<b>API Number:</b>	
<b>Operator No.:</b>	265322	<b>County:</b>	WINKLER
		<b>Lease Name:</b>	UL Rad 1609-21
		<b>Lease Number:</b>	
		<b>Well Number:</b>	1H
		<b>Total Vertical Depth:</b>	14000
		<b>Latitude:</b>	31.730747
		<b>Longitude:</b>	-103.237559
		<b>Datum:</b>	NAD27

**Purpose:** New Drill  
**Location:** Survey-UL; Block-21; Section-16

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 the base of the Allurosa, which is estimated to occur at a depth between 900 and 950 feet, must be protected.

This recommendation is applicable to all wells within a radius of 2000 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 04/12/2017. 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

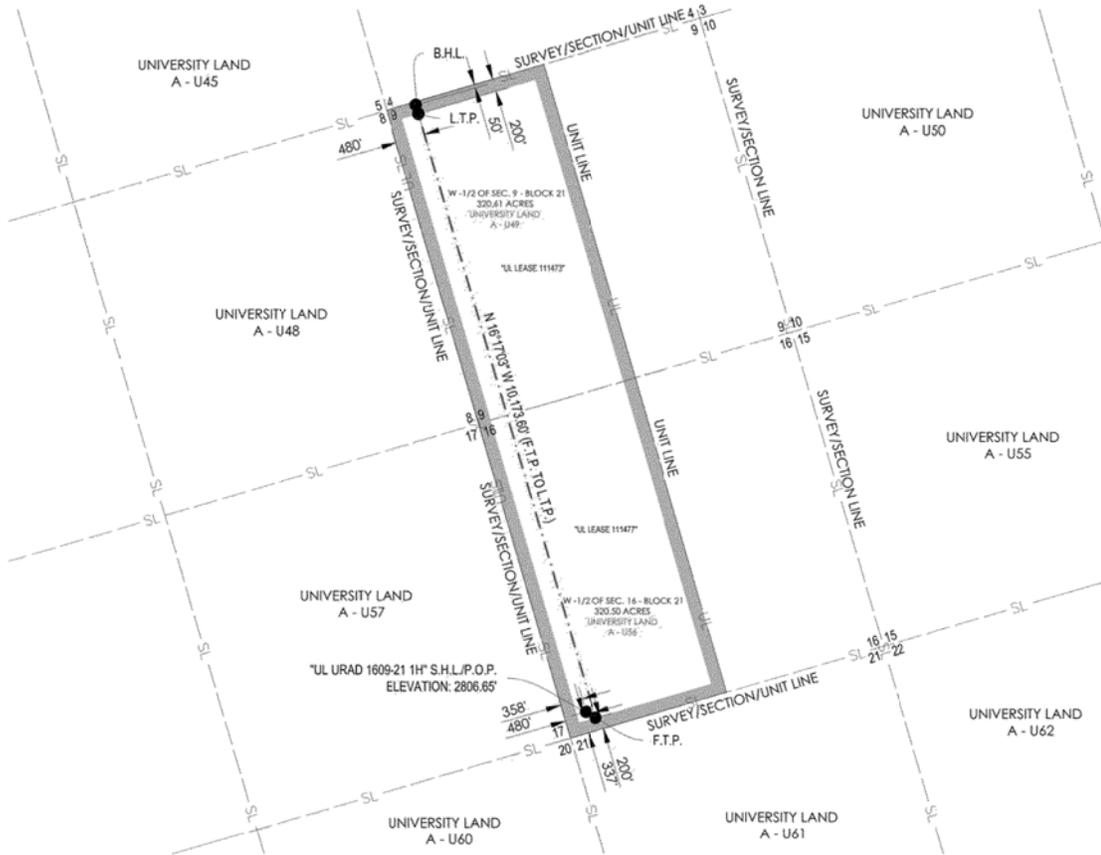
Form GW-2 P.O. Box 12967 Austin, Texas 78771-2967 512-463-2741 Internet address: www.rrc.texas.gov  
 Rev. 02/2014

WINKLER COUNTY, TEXAS  
S.H.L. 358' FWL - 337' FSL, SECTION 16, BLOCK 21

LEGEND

- UL — UNIT LINE
- SL — SECTION LINE
- - - - PROPOSED WELL PATH
- - - - NEAREST PROPOSED WELL PATH
- S.H.L. SURFACE HOLE LOCATION
- P.O.P. POINT OF PENETRATION
- F.T.P. FIRST TAKE POINT
- T.P. TURNING POINT
- L.T.P. LAST TAKE POINT
- B.H.L. BOTTOM HOLE LOCATION

GRID NORTH (NAD 83)  
TEXAS - CENTRAL ZONE



OPERATOR: FELIX ENERGY, LLC

WELL NAME: UL URAD 1609-21

WELL NO: 1H



TOPOGRAPHIC & VEGETATION: FLAT LOCATION WITH LOW LYING BRUSH

GOOD DRILL SITE: YES  
REFERENCE STAKES OR ALTERNATE LOCATION STAKES SET: NONE

BEST ACCESSIBILITY TO LOCATION: FROM SOUTH

**DISTANCE & DIRECTION**  
FROM HWY JCT OR TOWN: ±4.61 MILES WEST OF WINK, TX  
FROM THE INTERSECTION OF FARM TO MARKET 1232 AND HENDRICKS BLVD. IN WINK TEXAS  
HEAD WEST ON FARM TO MARKET 1232 FOR ±1.5 MILES. TURN LEFT ONTO COUNTY ROAD 201  
FOR ABOUT ±3.3 MILES. TURN LEFT ON EXISTING LEASE ROAD FOLLOW THAT FOR ABOUT ±0.4  
MILES. TURN RIGHT ON EXISTING LEASE ROAD ±1.15 MILES. TURN LEFT ON EXISTING LEASE  
ROAD AND FOLLOW FOR ±0.32 MILES THAT THE PAD WILL BE ON THE RIGHT.

WELL PATH DATA

LINE	BEARING	DISTANCE
S.H.L./P.O.P. TO F.T.P.	S 57°55'20" E	183.43'
F.T.P. TO L.T.P.	N 16°17'03" W	10,173.60'
L.T.P. TO B.H.L.	N 16°17'03" W	150.00'

CALLS FROM SECTION LINE

S.H.L./P.O.P.	358' FWL, 337' FSL (SEC. 16)
F.T.P.	480' FWL, 200' FSL (SEC. 16)
L.T.P.	480' FWL, 200' FNL (SEC. 9)
B.H.L.	480' FWL, 50' FNL (SEC. 9)

**SURFACE HOLE LOCATION / POINT OF PENETRATION:**

358' FWL & 337' FSL (SEC. 16)  
GROUND ELEVATION: 2,806.65'  
**NAD 27 TEXAS CENTRAL ZONE**  
NORTHING: 762484.58, EASTING: 1097139.29  
LATITUDE: N 31.73074620°, LONGITUDE: W 103.23755787°  
**NAD 83 TEXAS CENTRAL ZONE**  
NORTHING: 10605060.99, EASTING: 1393604.15  
LATITUDE: N 31.73087518°, LONGITUDE: W 103.23800444°

**FIRST TAKE POINT:**

480' FWL & 200' FSL (SEC. 16)  
**NAD 27 TEXAS CENTRAL ZONE**  
NORTHING: 762387.16, EASTING: 1097294.72  
LATITUDE: N 31.73048964°, LONGITUDE: W 103.23704997°

**LAST TAKE POINT:**

480' FWL & 200' FNL (SEC. 9)  
**NAD 27 TEXAS CENTRAL ZONE**  
NORTHING: 772152.43, EASTING: 1094442.21  
LATITUDE: N 31.75712066°, LONGITUDE: W 103.24704396°

UNIT CORNERS

LOCATION	NAD27	
	STATE PLANE TEXAS CENTRAL (22039)	GEOGRAPHIC (4267)
NE CORNER OF WEST -1/2 OF BLK.21-SEC.9	N = 772950.93 E = 1096460.63	LAT. 31.75946016° LONG. -103.24061962°
	N = 767876.06 E = 1097943.50	LAT. 31.74562034° LONG. -103.23542449°
SE CORNER OF WEST -1/2 OF BLK.21-SEC.9	N = 762801.64 E = 1099424.79	LAT. 31.73178134° LONG. -103.23023600°
	N = 762060.48 E = 1099890.09	LAT. 31.72956283° LONG. -103.23832348°
SW CORNER BLK.21-SEC.16	N = 767134.61 E = 1095408.58	LAT. 31.74340070° LONG. -103.24351371°
	N = 772209.72 E = 1093925.35	LAT. 31.75724084° LONG. -103.24871093°

**BOTTOM HOLE LOCATION:**

480' FWL & 50' FNL (SEC. 9)  
**NAD 27 TEXAS CENTRAL ZONE**  
NORTHING: 772296.41, EASTING: 1094400.15  
LATITUDE: N 31.75751330°, LONGITUDE: W 103.24719136°



CONTACT INFORMATION:  
Shannon D. Ozment  
Crafton Tull (10193715)  
1000 Ledgelawn Dr.  
Conway, AR 72034

GENERAL NOTES

- THE LOCATIONS OF UNDERGROUND UTILITIES AS SHOWN HEREON ARE BASED ON REASONABLE VISUAL OBSERVATION. LOCATIONS OF UNDERGROUND UTILITIES/ STRUCTURES MAY VARY FROM LOCATIONS SHOWN HEREIN. ADDITIONAL BURIED UTILITIES/ STRUCTURES MAY BE ENCOUNTERED. NO EXCAVATIONS WERE MADE DURING THE PROGRESS OF THIS SURVEY TO LOCATE BURIED UTILITIES/ STRUCTURES. BEFORE EXCAVATIONS ARE BEGUN, THE OFFICES OF THE VARIOUS UTILITIES SERVICING THIS AREA SHOULD BE CONTACTED FOR THEIR UTILITY LOCATION.
- BASES OF BEARINGS: TEXAS STATE PLANE GRID CENTRAL ZONE, NAD83 AS DETERMINED BY GPS OBSERVATION.
- COMBINED SCALE FACTOR AT S.H.L. - 0.9998283'
- VERTICAL DATUM IS NAVD 83
- AREAS, DISTANCES, AND COORDINATES ARE "GRID" BASED ON U.S. SURVEY FEET.
- THIS PLAT DOES NOT REPRESENT A BOUNDARY SURVEY.

1000 Ledgelawn Dr  
Conway, Arkansas 72034

501.328.3316 | 501.328.3325 | www.craftontull.com

REVISION	
3/30	MOVE UNIT LINES
4/4	MOVE LATERAL TO 480' FWL

"UL URAD 1609-21 1H"

WEST -1/2 OF SECTION 16, BLOCK 21 - 320.50 ACRES  
WEST -1/2 OF SECTION 9, BLOCK 21 - 320.61 ACRES  
PROPOSED DRILL SITE  
WINKLER COUNTY, TEXAS



SCALE: 1" = 2000'  
PLOT DATE: 04-05-2017

CHECKED BY:  
DRAWN BY:

L.DOW  
JWB

APPROVED BY:  
SHEET NO.: 1 OF 1

NGUYEN