

API No. <u>42-301-32810</u> Drilling Permit # <u>812338</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>
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1. RRC Operator No. <b>020528</b>	2. Operator's Name (as shown on form P-5, Organization Report) <b>ANADARKO E&amp;P ONSHORE LLC</b>	3. Operator Address (include street, city, state, zip): <b>ATTN FRANK A. DAVIS</b> <b>PO BOX 1330</b> <b>HOUSTON, TX 77251-1330</b>
4. Lease Name <b>UNIVERSITY 19-6</b>		5. Well No. <b>2H</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"/> Amended		<input type="checkbox"/> Amended as Drilled (BHL) (Also File Form W-1D)		<input type="checkbox"/> Field Transfer	
<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 <b>13000</b>	9. Do you have the right to develop the minerals under any right-of-way ?		10. Is this well subject to Statewide Rule 36 (hydrogen sulfide area)?		
	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		

<b>SURFACE LOCATION AND ACREAGE INFORMATION</b>					
11. RRC District No. <b>08</b>		12. County <b>LOVING</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>7.8</u> miles in a <u>NE</u> direction from <u>MENTONE</u> which is the nearest town in the county of the well site.					
15. Section <b>43</b>	16. Block <b>29</b>	17. Survey <b>PSL</b>		18. Abstract No. <b>A-1306</b>	19. Distance to nearest lease line: <b>200</b> ft.
20. Number of contiguous acres in lease, pooled unit, or unitized tract: <b>467.6</b>					
21. Lease Perpendiculars: <u>675</u> ft from the <u>E (OFF LEASE)</u> line and <u>400</u> ft from the <u>S (OFF LEASE)</u> line.					
22. Survey Perpendiculars: <u>675</u> ft from the <u>E</u> line and <u>400</u> ft from the <u>S</u> line.					
23. Is this a pooled unit? <input type="checkbox"/> Yes <input checked="" 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
08	71052900	PHANTOM (WOLFCAMP)	Oil or Gas Well	13000	0.00	1

**BOTTOMHOLE LOCATION INFORMATION** is required for DIRECTIONAL, HORIZONTAL, AND AMENDED AS DRILLED PERMIT APPLICATIONS (see W-1H attachment)

<b>Remarks</b> [FILER Nov 17, 2015 3:53 PM]: PENETRATION POINT WILL BE OFF LEASE ON PROPERTY OPERATED BY ANADARKO E&P ONSHORE LLC. ANADARKO WAIVES ALL OBJECTION.; [RRC STAFF Dec 2, 2015 12:55 PM]: SHL is in A-1306. RRC GIS does not reflect this abstract.	<b>Certificate:</b> I certify that information stated in this application is true and complete, to the best of my knowledge. <div style="text-align: center;"> <b>Carla Ghazizadeh, Staff Regulatory Analyst</b>  <hr/>           Name of filer         </div> <div style="text-align: right;"> <b>Nov 30, 2015</b>  <hr/>           Date submitted         </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <u>(832)636-3315</u>            Phone         </div> <div> <u>carla.ghazizadeh@anadarko.com</u>            E-mail Address (OPTIONAL)         </div> </div>
<b>RRC Use Only</b> Data Validation Time Stamp: Dec 4, 2015 10:07 AM( Current Version )	

**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 # **812338**  
Approved Date: **Dec 02, 2015**

1. RRC Operator No. <b>020528</b>	2. Operator's Name (exactly as shown on form P-5, Organization Report) <b>ANADARKO E&amp;P ONSHORE LLC</b>	3. Lease Name <b>UNIVERSITY 19-6</b>	4. Well No. <b>2H</b>
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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 <b>6</b>	7. Block <b>19</b>	8. Survey <b>UL</b>	9. Abstract	10. County of BHL <b>LOVING</b>
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11. Terminus Lease Line Perpendiculars <b>330</b> ft. from the <b>E</b> line. and <b>60</b> ft. from the <b>S</b> line
12. Terminus Survey Line Perpendiculars <b>330</b> ft. from the <b>E</b> line. and <b>60</b> ft. from the <b>S</b> line
13. Penetration Point Lease Line Perpendiculars <b>675</b> ft. from the <b>E (OFF LEASE)</b> line. and <b>400</b> ft. from the <b>S (OFF LEASE)</b> line





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

**LOVING (301) County**

Formation	Shallow Top	Deep Top	Remarks	Geological Order	Effective Date
RED BLUFF	3,900	3,900		1	12/17/2013
BELL CANYON	4,700	4,700		2	12/17/2013
BRUSHY CANYON	6,000	6,000		3	12/17/2013
DELAWARE	3,000	6,500		4	12/17/2013
CHERRY CANYON	3,700	7,800		5	12/17/2013
BONE SPRINGS	8,200	9,800		6	12/17/2013
WOLFCAMP	11,000	12,900		7	12/17/2013
PENNSYLVANIAN	14,900	15,000		8	12/17/2013
STRAWN	14,700	15,000		9	12/17/2013
ATOKA	15,200	16,000	high pressure	10	12/17/2013
MORROW	15,700	17,000		11	12/17/2013
DEVONIAN	17,800	17,800		12	12/17/2013
FUSSELMAN	18,900	19,000		13	12/17/2013
ELLENBURGER	21,000	21,000		14	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.state.tx.us/oil-gas/compliance-enforcement/rule-13-geologic-formation-info>

## GROUNDWATER PROTECTION DETERMINATION

Form GW-2



## Groundwater Advisory Unit

**Date Issued:** 30 November 2015      **GAU Number:** 147078

<b>Attention:</b>	ANADARKO E&P ONSHORE ATTN FRANK A. DAVIS HOUSTON, TX 77251	<b>API Number:</b>	
<b>Operator No.:</b>	020528	<b>County:</b>	LOVING
		<b>Lease Name:</b>	UNIVERSITY 19-6
		<b>Lease Number:</b>	
		<b>Well Number:</b>	2H
		<b>Total Vertical Depth:</b>	13000
		<b>Latitude:</b>	31.713686
		<b>Longitude:</b>	-103.466595
		<b>Datum:</b>	NAD27

**Purpose:** New Drill  
**Location:** Survey-UL; Abstract-1306; Block-29; Section-43

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

Water-bearing strata from the land surface to a depth of 300 feet and the Rustler, which is estimated to occur from 550 to 1000 feet must be protected.

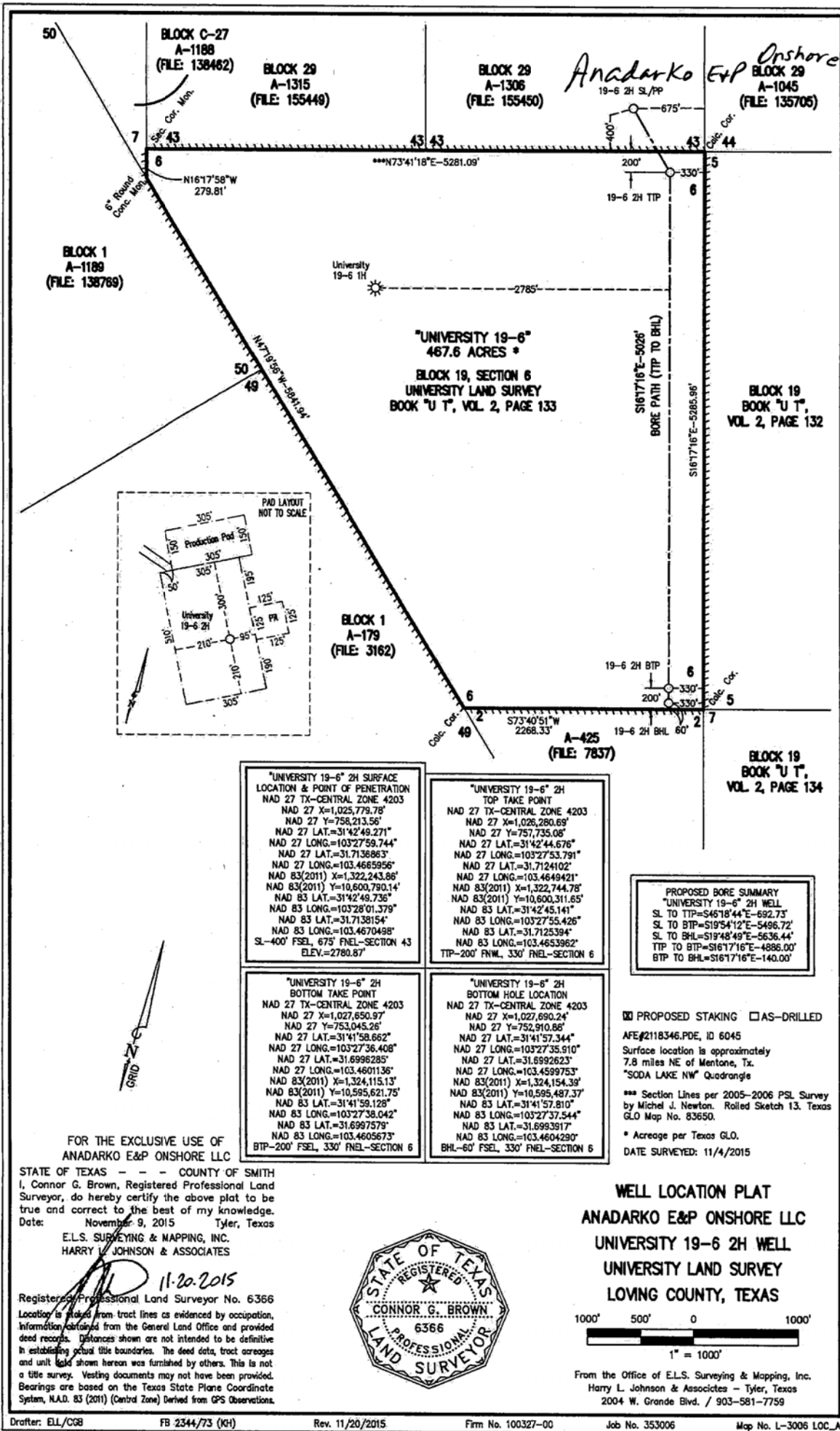
This recommendation is applicable to all wells within a radius of 200 feet of this location.

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 11/30/2015. 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



"UNIVERSITY 19-6" 2H SURFACE LOCATION & POINT OF PENETRATION  
 NAD 27 TX-CENTRAL ZONE 4203  
 NAD 27 X=1,025,779.78'  
 NAD 27 Y=758,213.56'  
 NAD 27 LAT.=31°42'49.271"  
 NAD 27 LONG.=103°27'59.744"  
 NAD 27 LONG.=103.4665956°  
 NAD 83(2011) X=1,322,243.86'  
 NAD 83(2011) Y=10,600,790.14'  
 NAD 83 LAT.=31°42'49.736"  
 NAD 83 LONG.=103°28'01.379"  
 NAD 83 LONG.=103.4670498°  
 SL-400' FSEL, 675' FNEL-SECTION 43  
 ELEV.=2780.87'

"UNIVERSITY 19-6" 2H TOP TAKE POINT  
 NAD 27 TX-CENTRAL ZONE 4203  
 NAD 27 X=1,026,280.69'  
 NAD 27 Y=757,735.08'  
 NAD 27 LAT.=31°42'44.676"  
 NAD 27 LONG.=103°27'53.791"  
 NAD 27 LONG.=103.4649421°  
 NAD 83(2011) X=1,322,744.78'  
 NAD 83(2011) Y=10,600,311.65'  
 NAD 83 LAT.=31°42'45.141"  
 NAD 83 LONG.=103°27'55.426"  
 NAD 83 LONG.=103.4653962°  
 TTP-200' FNLW, 330' FNEL-SECTION 6

PROPOSED BORE SUMMARY  
 "UNIVERSITY 19-6" 2H WELL  
 SL TO TTP=S46°18'44"E-692.73'  
 SL TO BTP=S19°54'12"E-5496.72'  
 SL TO BHL=S19°48'49"E-5636.44'  
 TTP TO BTP=S1617°16"E-4886.00'  
 BTP TO BHL=S1617°16"E-140.00'

"UNIVERSITY 19-6" 2H BOTTOM TAKE POINT  
 NAD 27 TX-CENTRAL ZONE 4203  
 NAD 27 X=1,027,690.97'  
 NAD 27 Y=753,045.26'  
 NAD 27 LAT.=31°41'58.662"  
 NAD 27 LONG.=103°27'36.408"  
 NAD 27 LONG.=103.4699285°  
 NAD 83(2011) X=1,324,115.13'  
 NAD 83(2011) Y=10,595,621.75'  
 NAD 83 LAT.=31°41'59.129"  
 NAD 83 LONG.=103°27'38.042"  
 NAD 83 LONG.=103.4605673°  
 BTP-200' FSEL, 330' FNEL-SECTION 6

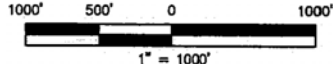
"UNIVERSITY 19-6" 2H BOTTOM HOLE LOCATION  
 NAD 27 TX-CENTRAL ZONE 4203  
 NAD 27 X=1,027,690.24'  
 NAD 27 Y=752,910.88'  
 NAD 27 LAT.=31°41'57.344"  
 NAD 27 LONG.=103°27'35.910"  
 NAD 27 LONG.=103.4599753°  
 NAD 83(2011) X=1,324,154.39'  
 NAD 83(2011) Y=10,595,487.37'  
 NAD 83 LAT.=31°41'57.810"  
 NAD 83 LONG.=103°27'37.544"  
 NAD 83 LONG.=103.4604290°  
 BHL-60' FSEL, 330' FNEL-SECTION 6

PROPOSED STAKING  AS-DRILLED  
 AFE#2118346.PDE, ID 6045  
 Surface location is approximately 7.8 miles NE of Mentone, Tx.  
 "SODA LAKE NW" Quadrangle  
 \*\*\* Section Lines per 2005-2006 PSL Survey by Michel J. Newton. Rolled Sketch 13. Texas GLO Map No. 83650.  
 \* Acreage per Texas GLO.  
 DATE SURVEYED: 11/4/2015

FOR THE EXCLUSIVE USE OF ANADARKO E&P ONSHORE LLC  
 STATE OF TEXAS - - - COUNTY OF SMITH  
 I, Connor G. Brown, Registered Professional Land Surveyor, do hereby certify the above plat to be true and correct to the best of my knowledge.  
 Date: November 9, 2015 Tyler, Texas  
 E.L.S. SURVEYING & MAPPING, INC.  
 HARRY L. JOHNSON & ASSOCIATES  
 Registered Professional Land Surveyor No. 6366  
 Location is staked from tract lines as evidenced by occupation, information obtained from the General Land Office and provided deed records. Distances shown are not intended to be definitive in establishing actual title boundaries. The deed data, tract acreages and unit held shown hereon was furnished by others. This is not a title survey. Vesting documents may not have been provided. Bearings are based on the Texas State Plane Coordinate System, N.A.D. 83 (2011) (Central Zone) Derived from GPS Observations.  
 11.20.2015



WELL LOCATION PLAT  
 ANADARKO E&P ONSHORE LLC  
 UNIVERSITY 19-6 2H WELL  
 UNIVERSITY LAND SURVEY  
 LOVING COUNTY, TEXAS



From the Office of E.L.S. Surveying & Mapping, Inc.  
 Harry L. Johnson & Associates - Tyler, Texas  
 2004 W. Grande Blvd. / 903-581-7759