

API No. <u>42-301-33264</u> Drilling Permit # <u>824167</u> SWR Exception Case/Docket No. _____		RAILROAD COMMISSION OF TEXAS OIL & GAS DIVISION APPLICATION FOR PERMIT TO DRILL, RECOMPLETE, OR RE-ENTER <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>				FORM W-1 07/2004 Permit Status: Approved	
1. RRC Operator No. 774719		2. Operator's Name (as shown on form P-5, Organization Report) SHELL WESTERN E&P			3. Operator Address (include street, city, state, zip): PO BOX 576 HOUSTON, TX 77001-0000		
4. Lease Name UNIVERSITY 19 PW UNIT		5. Well No. 1804H					
GENERAL INFORMATION							
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 12000		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			
SURFACE LOCATION AND ACREAGE INFORMATION							
11. RRC District No. 08		12. County LOVING		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>11.5</u> miles in a <u>SE</u> direction from <u>Mentone</u> which is the nearest town in the county of the well site.							
15. Section 18		16. Block 19		17. Survey UNIVERSITY LAND		18. Abstract No. A-	
				19. Distance to nearest lease line: 284 ft.		20. Number of contiguous acres in lease, pooled unit, or unitized tract: 8588.11	
21. Lease Perpendiculars: <u>14061</u> ft from the <u>NE</u> line and <u>14224</u> ft from the <u>NW</u> line. 22. Survey Perpendiculars: <u>1785</u> ft from the <u>SW</u> line and <u>1637</u> ft from the <u>SE</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			
FIELD INFORMATION 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	
08	71052900	PHANTOM (WOLFCAMP)		Oil Well	11650	835.00	
BOTTOMHOLE LOCATION INFORMATION is required for DIRECTIONAL, HORIZONTAL, AND AMENDED AS DRILLED PERMIT APPLICATIONS (see W-1H attachment)							
Remarks [FILER Mar 7, 2017 9:51 AM]: The SHL, PP and FTP are located in Sec. 18, Blk. 19, University Lands Survey, Loving County. The LTP and BHL are located in Sec. 24, Blk. 19, University Lands Survey, Ward County.				Certificate: I certify that information stated in this application is true and complete, to the best of my knowledge. <div style="text-align: center;"> George Mullen, Sr. Regulatory Specialist </div> <div style="display: flex; justify-content: space-between;"> <div> <u>George Mullen, Sr. Regulatory Specialist</u> Name of filer </div> <div> <u>Mar 07, 2017</u> Date submitted </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <u>(832)337-0549</u> Phone </div> <div> <u>george.mullen@shell.com</u> E-mail Address (OPTIONAL) </div> </div>			
RRC Use Only							
Data Validation Time Stamp: Mar 14, 2017 5:43 PM ('As Approved' Version)							

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

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

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

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Permit #	824167
Approved Date:	Mar 14, 2017

1. RRC Operator No. 774719	2. Operator's Name (exactly as shown on form P-5, Organization Report) SHELL WESTERN E&P	3. Lease Name UNIVERSITY 19 PW UNIT	4. Well No. 1804H
Lateral Drainhole Location Information			
5. Field as shown on Form W-1 PHANTOM (WOLFCAMP) (Field # 71052900, RRC District 08)			
6. Section 24	7. Block 19	8. Survey UNIVERSITY LAND	9. Abstract
		10. County of BHL WARD	
11. Terminus Lease Line Perpendiculars 8524 ft. from the NE line. and 24230 ft. from the NW line			
12. Terminus Survey Line Perpendiculars 284 ft. from the SW line. and 3083 ft. from the NW line			
13. Penetration Point Lease Line Perpendiculars 13596 ft. from the NE line. and 13388 ft. from the NW line			

RAILROAD COMMISSION OF TEXAS
OIL & GAS DIVISION

PERMIT TO DRILL, DEEPEN, PLUG BACK, OR RE-ENTER ON A REGULAR OR ADMINISTRATIVE EXCEPTION LOCATION

PERMIT NUMBER 824167	DATE PERMIT ISSUED OR AMENDED Mar 14, 2017	DISTRICT * 08																																				
API NUMBER 42-301-33264	FORM W-1 RECEIVED Mar 07, 2017	COUNTY LOVING																																				
TYPE OF OPERATION NEW DRILL	WELLBORE PROFILE(S) Horizontal	ACRES 8588.11																																				
OPERATOR SHELL WESTERN E&P PO BOX 576 HOUSTON, TX 77001-0000		NOTICE This permit and any allowable assigned may be revoked if payment for fee(s) submitted to the Commission is not honored. District Office Telephone No: (432) 684-5581																																				
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LOCATION 11.5 miles SE direction from MENTONE		TOTAL DEPTH 12000																																				
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RESTRICTIONS: Permitted for oil only. This is a hydrogen sulfide field. Hydrogen Sulfide Fields with perforations must be isolated and tested per State Wide Rule 36 and a Form H-9 filed with the district office. Fields with SWR 10 authority to downhole commingle must be isolated and tested individually prior to commingling production. Lateral: TH1 Penetration Point Location Lease Lines: 13596.0 F NE L 13388.0 F NW L Terminus Location BH County: WARD Section: 24 Block: 19 Abstract: Survey: UNIVERSITY LAND Lease Lines: 8524.0 F NE L 24230.0 F NW L Survey Lines: 284.0 F SW L 3083.0 F NW L																																						
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RAILROAD COMMISSION OF TEXAS
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OPERATOR <div style="text-align: right;">774719</div> <div style="text-align: right;">SHELL WESTERN E&P</div> <div style="text-align: right;">PO BOX 576</div> <div style="text-align: right;">HOUSTON, TX 77001-0000</div>		NOTICE This permit and any allowable assigned may be revoked if payment for fee(s) submitted to the Commission is not honored. District Office Telephone No: <div style="text-align: right;">(432) 684-5581</div>															
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LOCATION <div style="text-align: right;">11.5 miles SE direction from MENTONE</div>		TOTAL DEPTH <div style="text-align: right;">12000</div>															
Section, Block and/or Survey <div style="display: flex; justify-content: space-between;"> <div>SECTION 18</div> <div>BLOCK 19</div> <div>ABSTRACT </div> </div> <div style="display: flex; justify-content: space-between;"> <div>SURVEY UNIVERSITY LAND</div> <div></div> </div>																	
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**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.texas.gov/oil-gas/compliance-enforcement/rule-13-geologic-formation-info>

GROUNDWATER PROTECTION DETERMINATION

Form GW-2



Groundwater Advisory Unit

Date Issued: 07 March 2017**GAU Number:** 168500**Attention:** SHELL WESTERN E&P
PO BOX 576
HOUSTON, TX 77001**Operator No.:** 774719**API Number:**
County: LOVING
Lease Name: University 19 PW Unit
Lease Number:
Well Number: 1803H
Total Vertical Depth: 12000
Latitude: 31.672653
Longitude: -103.407117
Datum: NAD27**Purpose:** New Drill**Location:** Survey-UL; Block-19; Section-18

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 350 feet, and the Rustler, the top of which is estimated to occur from 650 to 700 feet depth and the base of which is estimated to occur from 1000 to 1050 feet depth by reconnaissance-level evaluation, must be protected.

This recommendation is applicable to all wells within a radius of 800 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 03/07/2017. 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



SHELL WESTERN
E&P

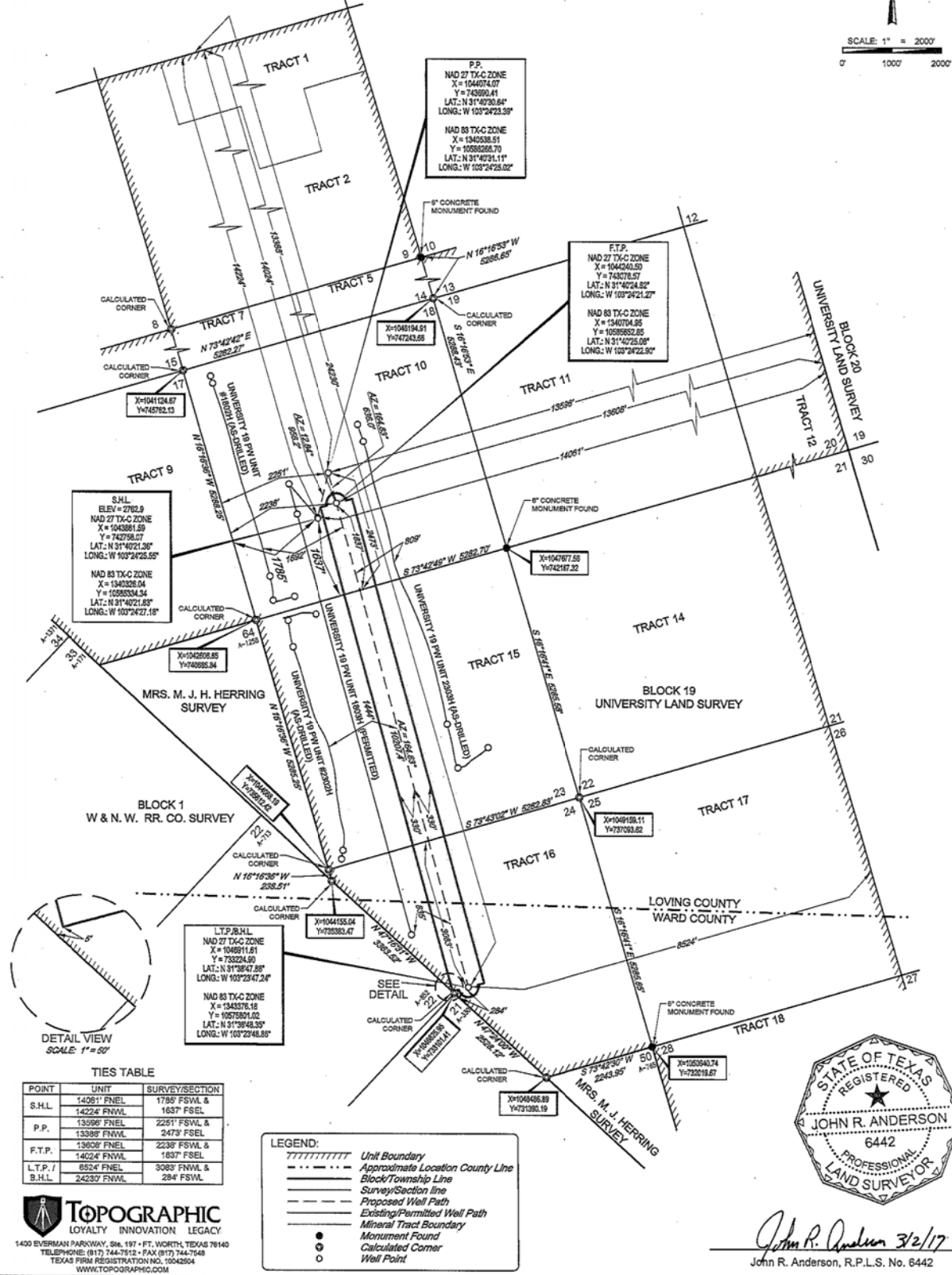
WELL LOCATION
LEASE NAME & WELL NO.:
UNIVERSITY 19 PW UNIT 1804H

UNRELEASED ACREAGE
8588.11 ACRES (MEASURED)

NEAREST TOWN IN COUNTY:
±11.5 MILES SOUTHEAST OF MENTONE, TEXAS

DESCRIPTION:
SECTIONS 18, 23 & 24, BLOCK 19, UNIVERSITY LAND SURVEY
LOVING AND WARD COUNTIES, TEXAS

SCALE: 1" = 2000'
0 1000 2000



John R. Anderson 3/2/17
John R. Anderson, R.P.L.S. No. 6442

TOPOGRAPHIC
LOYALTY INNOVATION LEGACY
1400 EVERMAN PARKWAY, SUITE 197 - FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 - FAX: (817) 744-7548
TEXAS FIRM REGISTRATION NO. 10042804
WWW.TOPOGRAPHIC.COM

UNIVERSITY 19 PW UNIT 1804H	REVISION:		NOTES:	NOTES CONT'D:
	INT	DATE		
DATE: 03/02/2017			1. ORIGINAL DOCUMENT SIZE 11" X 17"	6. THE PRELIMINARY LOCATION HAS BEEN CAREFULLY SURVEYED ON THE GROUND DURING THE DATE OF FEBRUARY 24, 2017, AT A GROUND LEVEL ELEVATION OF 2792.5 SURVEY FEET.
FILE: LOUNIVERSITY_19_PW_UNIT_1804H			2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE TEXAS STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, U.S. SURVEY FEET, NORTH AMERICAN DATUM 1927, UNLESS OTHERWISE NOTED.	7. S.H.L. = SURFACE HOLE LOCATION
DRAWN BY: O.M.			3. THIS LOCATION AND/OR UNRELEASED ACREAGE BOUNDARY HAS BEEN CAREFULLY SURVEYED ON THE GROUND UNDER MY SUPERVISION AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE ACCORDING TO THE EVIDENCE, OFFICIAL SURVEY RECORDS, MAPS, AND OTHER DATA PROVIDED BY SHELL WESTERN E&P. THIS PLAN WAS CREATED FOR THE SOLE PURPOSE OF FILING A PERMIT WITH THE RAILROAD COMMISSION OF TEXAS AND SHOULD NOT BE CONSTRUED AS A "BOUNDARY SURVEY" IN COMPLIANCE WITH T.R.P.L.S. MINIMUM STANDARDS OF PROCEDURES FOR BOUNDARY SURVEYS. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAN IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.	8. P.P. = POINT OF PENETRATION
SHEET: 1 OF 1			4. ALL ELEVATION VALUES CONTAINED HEREIN ARE ORTHOMETRIC ONLY, BASED UPON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88), U.S. SURVEY FEET.	9. F.T.P. = FIRST TAKE POINT
			5. ALL MINERAL OWNERSHIP DATA SHOWN HEREIN IS BASED ON INFORMATION PROVIDED BY SHELL WESTERN E&P OR ITS SUBSIDIARIES & AFFILIATES.	10. L.T.P. = LAST TAKE POINT
				11. S.H.L. = BOTTOM HOLE LOCATION