

API No. <u>42-495-34182</u> Drilling Permit # <u>841765</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. <b>774719</b>	2. Operator's Name (as shown on form P-5, Organization Report) <b>SHELL WESTERN E&amp;P</b>	3. Operator Address (include street, city, state, zip): <b>PO BOX 576 HOUSTON, TX 77001-0000</b>				
4. Lease Name <b>UNIVERSITY 20 PW</b>		5. Well No. <b>2502H</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 checked="" 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 <b>11850</b>	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. <b>08</b>	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>7.5</u> miles in a <u>SW</u> direction from <u>Wink</u> which is the nearest town in the county of the well site.						
15. Section <b>36</b>	16. Block <b>20</b>	17. Survey <b>UL</b>				
18. Abstract No. <b>A-U31</b>		19. Distance to nearest lease line: <b>200</b> ft.				
20. Number of contiguous acres in lease, pooled unit, or unitized tract: <b>640.46</b>						
21. Lease Perpendiculars: <u>1318</u> ft from the <u>NE</u> line and <u>469</u> ft from the <u>NW</u> line.						
22. Survey Perpendiculars: <u>1318</u> ft from the <u>NE</u> line and <u>469</u> ft from the <u>NW</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
<b>08</b>	<b>71052900</b>	<b>PHANTOM (WOLFCAMP)</b>	<b>Oil Well</b>	<b>11650</b>	<b>660.00</b>	<b>2</b>
<b>BOTTOMHOLE LOCATION INFORMATION is required for DIRECTIONAL, HORIZONTAL, AND AMENDED AS DRILLED PERMIT APPLICATIONS (see W-1H attachment)</b>						
<b>Remarks</b> [FILER Oct 17, 2018 3:19 PM]: Amended Permit needed to change Total Depth from 9200' to 11850'.				<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>George Mullen, Sr. Regulatory Specialist</b>            Name of filer _____ Date submitted <b>Oct 18, 2018</b> </div> <div style="display: flex; justify-content: space-between;"> <span><u>(832)337-0549</u> Phone</span> <span><u>george.mullen@shell.com</u> E-mail Address (OPTIONAL)</span> </div>		
<b>RRC Use Only</b> Data Validation Time Stamp: Oct 22, 2018 12:24 PM('As Approved' 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**

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A certification of the automated data is available in the RRC's Austin office.*

Permit # **841765**  
Approved Date: **Oct 22, 2018**

1. RRC Operator No. <b>774719</b>	2. Operator's Name (exactly as shown on form P-5, Organization Report) <b>SHELL WESTERN E&amp;P</b>	3. Lease Name <b>UNIVERSITY 20 PW</b>	4. Well No. <b>2502H</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>25</b>	7. Block <b>20</b>	8. Survey <b>UL</b>	9. Abstract	10. County of BHL <b>WINKLER</b>
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11. Terminus Lease Line Perpendiculars <b>990</b> ft. from the <b>NE</b> line. and <b>200</b> ft. from the <b>NW</b> line
12. Terminus Survey Line Perpendiculars <b>990</b> ft. from the <b>NE</b> line. and <b>200</b> ft. from the <b>NW</b> line
13. Penetration Point Lease Line Perpendiculars <b>990</b> ft. from the <b>NE</b> line. and <b>200</b> ft. from the <b>SE</b> line





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

**WINKLER (495) County**

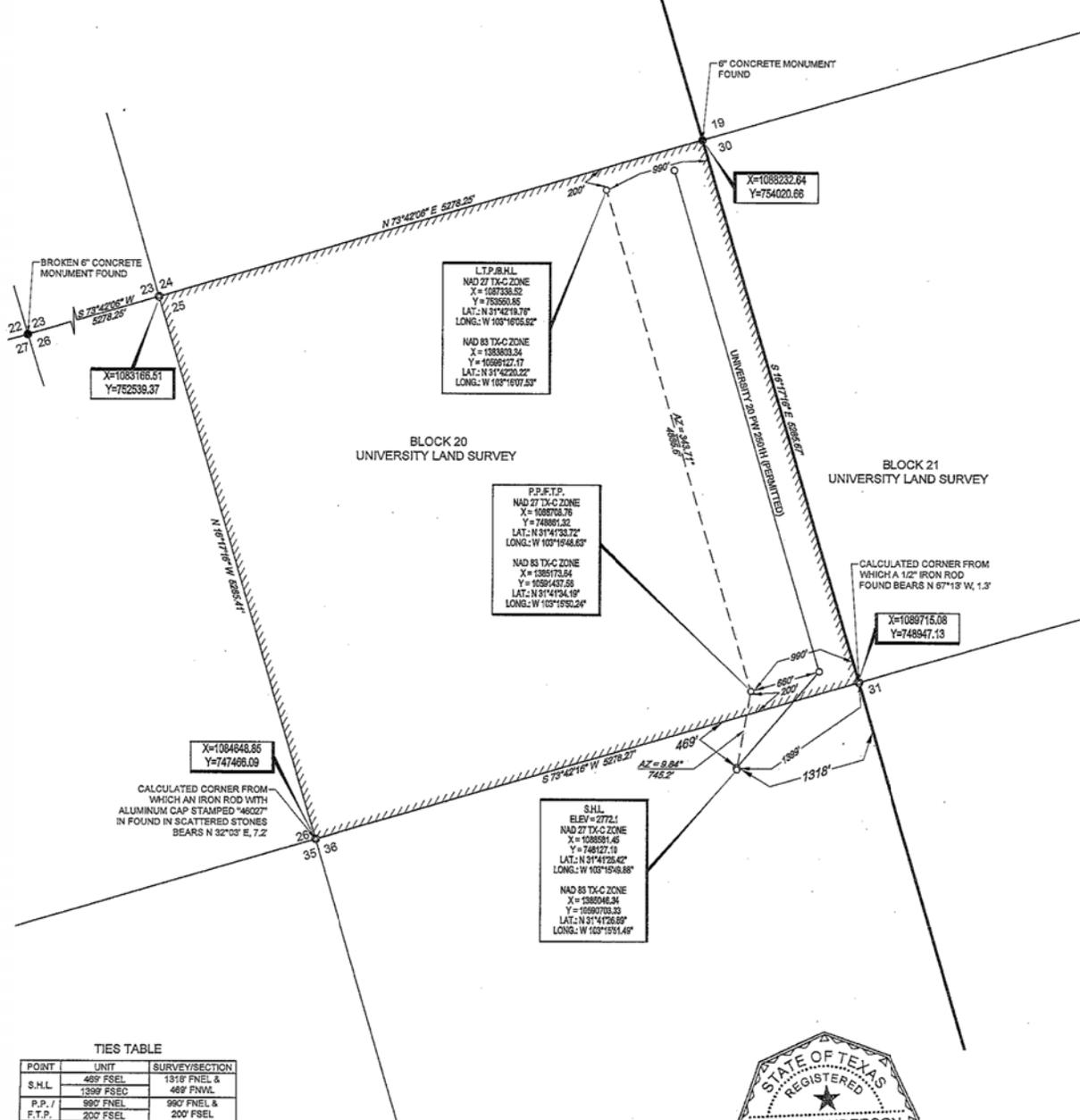
Formation	Shallow Top	Deep Top	Remarks	Geological Order	Effective Date
RUSTLER	725	725	possible flow; possible usable quality water	1	12/17/2013
COLBY-QUEEN	2,900	3,200		2	12/17/2013
YATES	2,280	3,200		3	12/17/2013
QUEEN-SEVEN RIVERS	2,700	3,400		4	12/17/2013
SAN ANDRES	3,600	4,400	high flows, H2S, corrosive	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>



SHELL WESTERN  
E&P

WELL LOCATION  
LEASE NAME & WELL NO.:  
UNIVERSITY 20 PW 2502H  
UNITLEASE ACREAGE:  
640.46 ACRES (MEASURED)  
NEAREST TOWN IN COUNTY:  
±7.6 MILES SOUTHWEST OF WINK, TEXAS  
DESCRIPTION:  
SECTION 25, BLOCK 20, UNIVERSITY LAND SURVEY  
WINKLER COUNTY, TEXAS



TIES TABLE

POINT	UNIT	SURVEY/SECTION
S.H.L.	489' FSEL	1519' FNEL & 489' FSEL
P.P.F.	990' FNEL	990' FNEL & 200' FSEL
F.T.P.	200' FSEL	200' FSEL
L.T.P.	990' FNEL	990' FNEL & 200' FNWL
B.H.L.	200' FNWL	200' FNWL

**TOPOGRAPHIC**  
LOYALTY INNOVATION LEGACY  
1400 EVERMAN PARKWAY, Ste. 145 • FT. WORTH, TEXAS 76140  
TELEPHONE: (817) 744-7512 • FAX: (817) 744-7554  
TEXAS FIRM REGISTRATION NO. 10042504  
WWW.TOPOGRAPHIC.COM

**LEGEND:**

- Unit Boundary
- Block/Township Line
- Section line
- Proposed Well Path
- Existing/Permitted Well Path
- Monument Found
- Calculated Corner
- Well Point



*John R. Anderson* 5/4/18  
John R. Anderson, R.P.L.S. No. 6442

UL-20-36-P1  
UNIVERSITY 20 PW 2502H  
DATE: 05/04/2018  
FILE: U:\UL-20-36-P1\UNIVERSITY\_20\_PW\_2502H.dwg  
DRAWN BY: O.M./A.C.L.  
SHEET: 1 OF 1

REVISION:	
INT	DATE

**NOTES:**

1. ORIGINAL DOCUMENT SIZE: 11" X 17"
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.
3. THIS LOCATION AND/OR UNITLEASE 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.S.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 AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.
4. ALL ELEVATION VALUES CONTAINED HEREIN ARE ORTHOMETRIC ONLY, BASED UPON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88), U.S. SURVEY FEET.
5. ALL MINERAL OWNERSHIP DATA SHOWN HEREIN IS BASED ON INFORMATION PROVIDED BY SHELL WESTERN E&P OR ITS SUBSIDIARIES & AFFILIATES.

**NOTES CONT'D:**

6. THE PRELIMINARY LOCATION HAS BEEN CAREFULLY SURVEYED ON THE GROUND DURING THE DATE OF MARCH 7, 2018.
7. S.H.L. = SURFACE HOLE LOCATION
8. P.P.F. = POINT OF PENETRATION
9. F.T.P. = FIRST TAKE POINT
10. L.T.P. = LAST TAKE POINT
11. B.H.L. = BOTTOM HOLE LOCATION