

API No. <u>42-301-32937</u> Drilling Permit # <u>816306</u> SWR Exception Case/Docket No. <u>0300901</u> (R37)		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 20 PW UNIT			5. Well No. 2003H				
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 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 12400		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>15.6</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 29		16. Block 20		17. Survey UL		18. Abstract No. A-U43	
				19. Distance to nearest lease line: 25 ft.		20. Number of contiguous acres in lease, pooled unit, or unitized tract: 13144.15	
21. Lease Perpendiculars: <u>1653</u> ft from the <u>NE (OFFLEASE)</u> line and <u>335</u> ft from the <u>NW (OFFLEASE)</u> line. 22. Survey Perpendiculars: <u>1653</u> ft from the <u>NE (OFFLEASE)</u> line and <u>335</u> ft from the <u>NW (OFFLEASE)</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	
08	71052900	PHANTOM (WOLFCAMP)			Oil Well	11900	
BOTTOMHOLE LOCATION INFORMATION is required for DIRECTIONAL, HORIZONTAL, AND AMENDED AS DRILLED PERMIT APPLICATIONS (see W-1H attachment)							
Remarks [FILER Oct 20, 2017 8:09 AM]: Due to down hole problems on initial lateral an amended permit need to reflect new FTP, LTP and BHL. Shell is the offset Operator and grants itself an off lease PP waiver and SWR 37 waiver. This well was originally permitted as an Allocation well prior to the University 20 PW Unit being formed, it is now in the unit.					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 Name of filer _____ Date submitted Oct 20, 2017 </div> <div style="display: flex; justify-content: space-between;"> <u>(832)337-0549</u> Phone <u>george.mullen@shell.com</u> E-mail Address (OPTIONAL) </div>		
RRC Use Only Data Validation Time Stamp: Oct 27, 2017 3:38 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**

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

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 #	816306
Approved Date:	Oct 27, 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 20 PW UNIT	4. Well No. 2003H
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Lateral Drainhole Location Information

5. Field as shown on Form W-1	PHANTOM (WOLFCAMP) (Field # 71052900, RRC District 08)
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6. Section 17	7. Block 20	8. Survey UL / A-U37	9. Abstract	10. County of BHL LOVING
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11. Terminus Lease Line Perpendiculars 8277 ft. from the SW line. and 7701 ft. from the SE line
12. Terminus Survey Line Perpendiculars 2287 ft. from the NE line. and 2412 ft. from the SE line
13. Penetration Point Lease Line Perpendiculars 2451 ft. from the NE (offlease) line. and 277 ft. from the NW (offlease) line

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

Page 3 of 4

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 <div style="text-align: right;">816306</div>	DATE PERMIT ISSUED OR AMENDED (AMENDED) Oct 27, 2017	DISTRICT <div style="text-align: right;">* 08</div>										
API NUMBER <div style="text-align: right;">42-301-32937</div>	FORM W-1 RECEIVED <div style="text-align: center;">Oct 20, 2017</div>	COUNTY <div style="text-align: center;">LOVING</div>										
TYPE OF OPERATION <div style="text-align: center;">NEW DRILL</div>	WELLBORE PROFILE(S) <div style="text-align: center;">Horizontal</div>	ACRES <div style="text-align: right;">13144.15</div>										
OPERATOR <div style="text-align: right;">774719</div> <div style="text-align: center;">SHELL WESTERN E&P</div> <div style="text-align: center;">PO BOX 576</div> <div style="text-align: center;">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: center;">(432) 684-5581</div>										
LEASE NAME <div style="text-align: center;">UNIVERSITY 20 PW UNIT</div>		WELL NUMBER <div style="text-align: right;">2003H</div>										
LOCATION <div style="text-align: center;">15.6 miles SE direction from MENTONE</div>		TOTAL DEPTH <div style="text-align: right;">12400</div>										
Section, Block and/or Survey <div style="display: flex; justify-content: space-between;"> <div>SECTION 29</div> <div>BLOCK 20</div> <div>ABSTRACT U43</div> </div> <div style="display: flex; justify-content: space-between;"> <div>SURVEY UL</div> <div></div> <div></div> </div>												
DISTANCE TO SURVEY LINES <div style="display: flex; justify-content: space-between;"> <div>1653 ft. NE (OFFLEASE)</div> <div>335 ft. NW (OFFLEASE)</div> </div>		DISTANCE TO NEAREST LEASE LINE <div style="text-align: center;">25 ft.</div>										
DISTANCE TO LEASE LINES <div style="display: flex; justify-content: space-between;"> <div>1653 ft. NE (OFFLEASE)</div> <div>335 ft. NW (OFFLEASE)</div> </div>		DISTANCE TO NEAREST WELL ON LEASE <div style="text-align: center;">See FIELD(s) Below</div>										
FIELD(s) and LIMITATIONS: <div style="text-align: center;"> * SEE FIELD DISTRICT FOR REPORTING PURPOSES * ** THIS PERMIT IS GRANTED PURSUANT TO STATEWIDE RULE 37(h)(2)(B) ** CASE NO. 0300901 </div>												
<table style="width: 100%; border: none;"> <tr> <td style="width: 60%;">FIELD NAME</td> <td style="width: 15%;">ACRES</td> <td style="width: 15%;">DEPTH</td> <td style="width: 10%;">WELL #</td> <td style="width: 10%;">DIST</td> </tr> <tr> <td>LEASE NAME</td> <td>NEAREST LEASE</td> <td></td> <td>NEAREST WE</td> <td></td> </tr> </table>			FIELD NAME	ACRES	DEPTH	WELL #	DIST	LEASE NAME	NEAREST LEASE		NEAREST WE	
FIELD NAME	ACRES	DEPTH	WELL #	DIST								
LEASE NAME	NEAREST LEASE		NEAREST WE									
<div style="text-align: center;">' ** ' PRECEDING FIELD NAME INDICATES RULE (R37)</div>												
<div style="text-align: center;">THE FOLLOWING RESTRICTIONS APPLY TO ALL FIELDS</div> <p>This well shall be completed and produced in compliance with applicable special field or statewide spacing and density rules. If this well is to be used for brine mining, underground storage of liquid hydrocarbons in salt formations, or underground storage of gas in salt formations, a permit for that specific purpose must be obtained from Environmental Services prior to construction, including drilling, of the well in accordance with Statewide Rules 81, 95, and 97.</p> <p>The designated interval for one or more of the fields approved in this permit appears to overlap with the designated interval of another field or fields in this district. In the case of conflicting designated intervals you will be required to be consistent in field designation on this lease. Further, if the designated interval overlap of wells on this lease results in an actual or potential double assignment of reservoir and the applicant cannot conclusively demonstrate that there is no double assignment, the permitted well may not be assigned an allowable until the conflict is resolved. Because of the overlapping designated intervals in this area, issuance of this permit does not guarantee that the completion of the well will be approved or that the well will receive an allowable in any given field, even if that field is listed on the approved permit application.</p> <p>Currently there are no identified formations listed for this county. It is still the operators responsibility to isolate and report any potential flow zones that are encountered in the completion of this well.</p>												

GROUNDWATER PROTECTION DETERMINATION

Form GW-2



Groundwater Advisory Unit

Date Issued: 14 June 2016**GAU Number:** 156203**Attention:** SHELL WESTERN E&P
PO BOX 576
HOUSTON, TX 77001**Operator No.:** 774719**API Number:**
County: LOVING
Lease Name: University 20 A
Lease Number:
Well Number: 2003H
Total Vertical Depth: 12400
Latitude: 31.686800
Longitude: -103.334858
Datum: NAD27**Purpose:** New Drill**Location:** Survey-UL; Block-20; Section-29

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 700 to 1100 feet must be protected.

Please send Gamma Ray/Porosity log of this well when it is available.

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 06/14/2016. 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

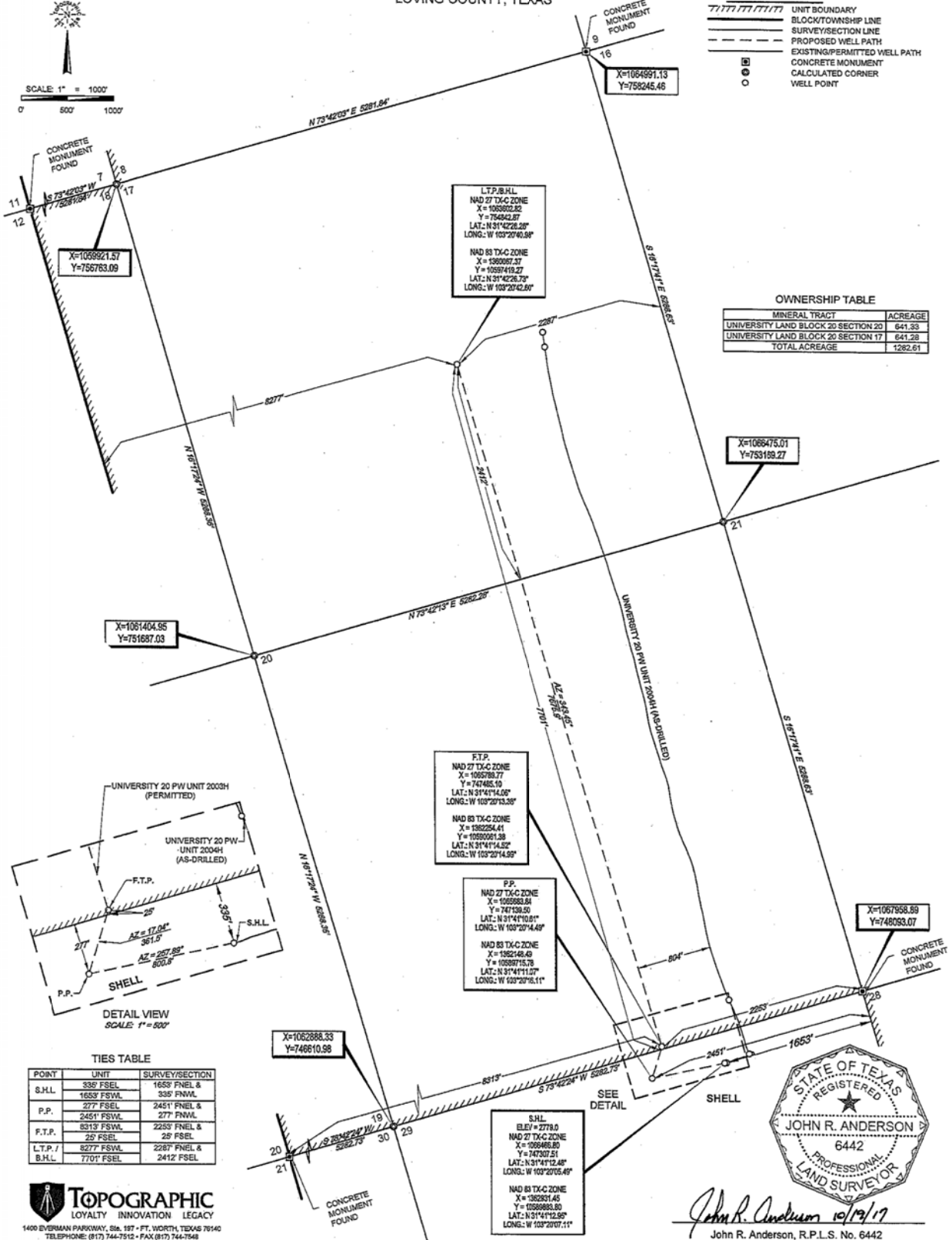
UNIVERSITY 20 PW UNIT 2003H
WELL LOCATION
 13144.15 ACRES (MEASURED)
 SECTIONS 17 & 20, BLOCK 20, UNIVERSITY LAND SURVEY
 LOVING COUNTY, TEXAS

SHELL WESTERN
E&P



LEGEND

	UNIT BOUNDARY
	BLOCK/TOWNSHIP LINE
	SURVEY/SECTION LINE
	PROPOSED WELL PATH
	EXISTING/PERMITTED WELL PATH
	CONCRETE MONUMENT
	CALCULATED CORNER
	WELL POINT



TIES TABLE

POINT	UNIT	SURVEY/SECTION
S.H.L.	335' FSEL	1653' FSEL & 335' FSEL
P.P.	245' FSEL	245' FSEL & 277' FSEL
F.T.P.	8313' FSEL	2253' FSEL & 25' FSEL
L.T.P./B.H.L.	8277' FSEL	2267' FSEL & 2412' FSEL

TOPOGRAPHIC
 LOYALTY INNOVATION LEGACY
 1400 EVERMAN PARKWAY, Ste. 197 • FT. WORTH, TEXAS 76140
 TELEPHONE: (817) 744-7512 • FAX: (817) 744-7548
 TEXAS FIRM REGISTRATION NO. 10042594
 WWW.TOPOGRAPHIC.COM



John R. Anderson 10/19/17
 John R. Anderson, R.P.L.S. No. 6442

UNIVERSITY 20 PW UNIT 2003H	REVISION:	
	INT	DATE
	O.M.	07/28/2016
	O.M.	10/13/2016
DATE: 05/04/2016	O.M.	08/25/2017
FILE: 10-UNIVERSITY 20 PW UNIT 2003H REV	J.R.A.	09/19/2017
DRAWN BY: O.M.	O.M.	10/18/2017
SHEET: 1 OF 1	O.M.	10/19/2017

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 UNIT/LEASE 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.E.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.
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 LEASE AND WELL SHOWN HEREON ARE LOCATED APPROXIMATELY 15.8 MILES SOUTHEAST OF THE CITY/TOWNSHIP/MUNICIPALITY OF MENTONE WITHIN THE COUNTY OF LOVING IN THE STATE OF TEXAS.
7. THIS PRELIMINARY LOCATION HAS BEEN CAREFULLY SURVEYED ON THE GROUND DURING THE DATE OF APRIL 28, 2016.
8. S.H.L. = SURFACE HOLE LOCATION
9. P.P. = POINT OF PENETRATION
10. F.T.P. = FIRST TAKE POINT
11. L.T.P. = LAST TAKE POINT
12. B.H.L. = BOTTOM HOLE LOCATION