

API No. <u>42-301-32937</u> Drilling Permit # <u>816306</u> SWR Exception Case/Docket No. <u>0300901 (R37)</u>	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
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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 ?		10. Is this well subject to Statewide Rule 36 (hydrogen sulfide area)?		
	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		<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	31. Distance to Nearest Well in this Reservoir	32. Number of Wells on this lease in this Reservoir
08	71052900	PHANTOM (WOLFCAMP)	Oil Well	11900	804.00	12

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 <hr/> Name of filer </div> <div style="text-align: right;"> Oct 20, 2017 <hr/> Date submitted </div> <div style="text-align: center;"> (832)337-0549 <hr/> Phone </div> <div style="text-align: right;"> george.mullen@shell.com <hr/> E-mail Address (OPTIONAL) </div>
RRC Use Only Data Validation Time Stamp: Oct 27, 2017 3:38 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 # **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)**

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

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	API Number:	
Operator No.:	774719	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

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

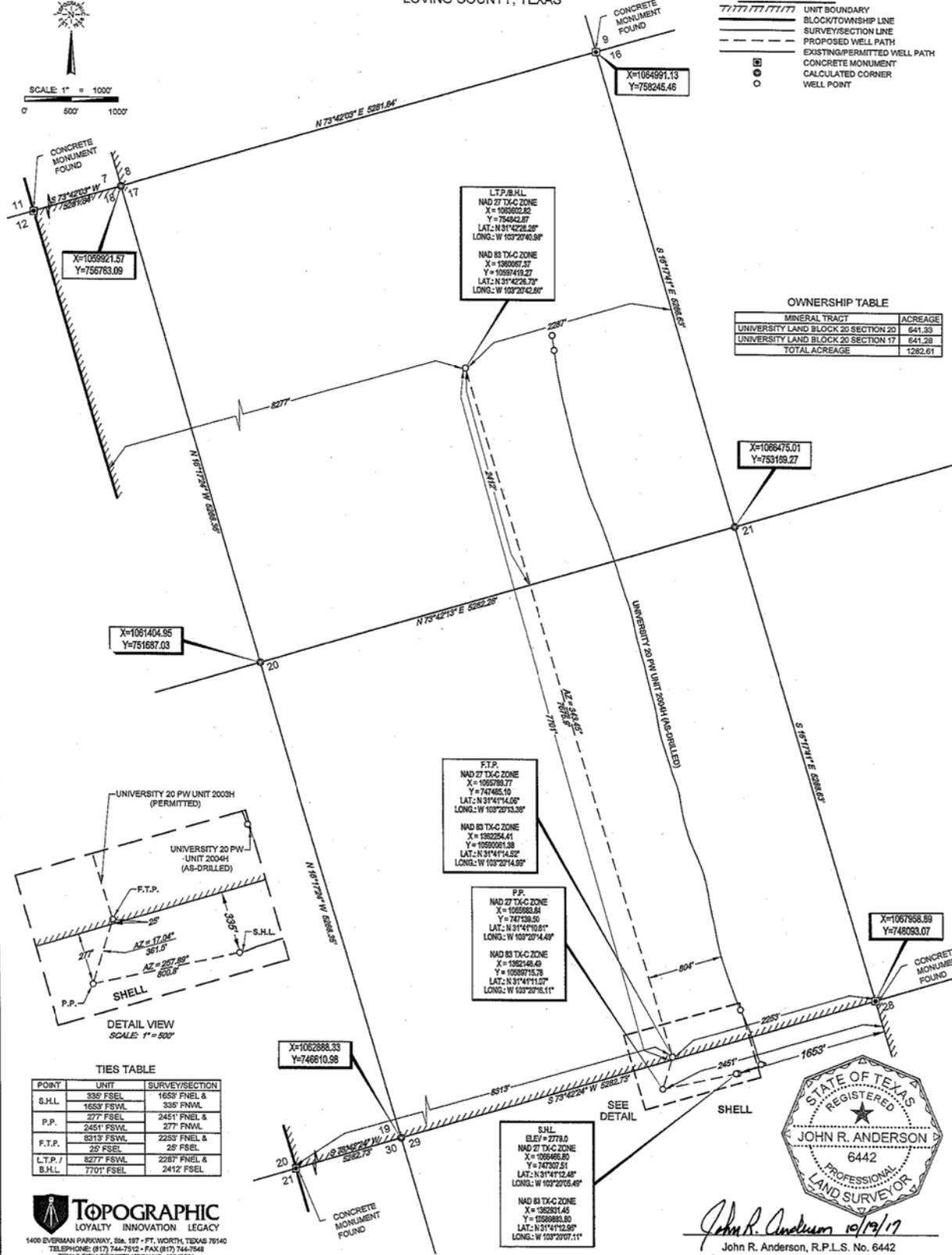
UNIVERSITY 20 PW UNIT 2003H
WELL LOCATION
 13144.15 ACRES (MEASURED)
 SECTIONS 17 & 20, BLOCK 20, UNIVERSITY LAND SURVEY
 LOVING COUNTY, TEXAS

SHELL WESTERN
E&P



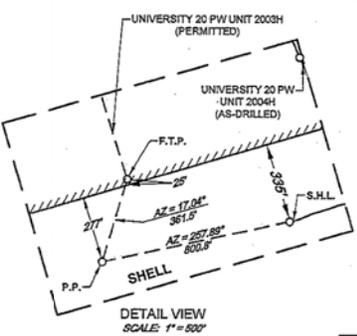
LEGEND

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



OWNERSHIP TABLE

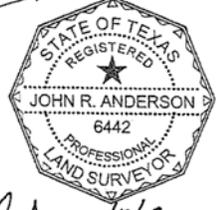
MINERAL TRACT	ACREAGE
UNIVERSITY LAND BLOCK 20 SECTION 20	641.33
UNIVERSITY LAND BLOCK 20 SECTION 17	641.28
TOTAL ACREAGE	1282.61



TIES TABLE

POINT	UNIT	SURVEY/SECTION
S.H.L.	335' FSEL	1633' FSEL & 335' FSEL
P.P.	277' FSEL	2451' FSEL & 277' FSEL
F.T.P.	8313' FSWL	2253' FSEL & 25' FSEL
L.T.P./ B.H.L.	8277' FSWL	2287' 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: LO UNIVERSITY 20 PW UNIT 2003H REV3	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 CONSIDERED AS A BOUNDARY SURVEY IN COMPLIANCE WITH T.B.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 15.6 MILES SOUTH-EAST 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