

API No. <u>42-301-32849</u> Drilling Permit # <u>813641</u> SWR Exception Case/Docket No. <u>0299591</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. <u>774719</u>		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 B		5. Well No. <u>2304H</u>					
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 <u>12300</u>		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 type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
SURFACE LOCATION AND ACREAGE INFORMATION							
11. RRC District No. <u>08</u>		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>12.4</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 <u>23</u>		16. Block <u>19</u>		17. Survey UNIVERSITY LAND		18. Abstract No. <u>A-</u>	
				19. Distance to nearest lease line: <u>1</u> ft.		20. Number of contiguous acres in lease, pooled unit, or unitized tract: <u>1282.3</u>	
21. Lease Perpendiculars: <u>1478</u> ft from the <u>NE</u> line and <u>1500</u> ft from the <u>SE</u> line. 22. Survey Perpendiculars: <u>1478</u> ft from the <u>NE</u> line and <u>1500</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	11800	1320.00	
BOTTOMHOLE LOCATION INFORMATION is required for DIRECTIONAL, HORIZONTAL, AND AMENDED AS DRILLED PERMIT APPLICATIONS (see W-1H attachment)							
Remarks See W1 Comments attached				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 <u>Feb 02, 2016</u> </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: Feb 3, 2016 4:38 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**

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

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Permit #	813641
Approved Date: Feb 03, 2016	

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 B	4. Well No. 2304H
Lateral Drainhole Location Information			
5. Field as shown on Form W-1 PHANTOM (WOLFCAMP) (Field # 71052900, RRC District 08)			
6. Section 18	7. Block 19	8. Survey UNIVERSITY LAND	9. Abstract
		10. County of BHL LOVING	
11. Terminus Lease Line Perpendiculars 818 ft. from the NE line. and 2798 ft. from the NW line			
12. Terminus Survey Line Perpendiculars 818 ft. from the NE line. and 2491 ft. from the SE line			
13. Penetration Point Lease Line Perpendiculars 818 ft. from the NE line. and 1976 ft. from the SE line			

Permit Status: **Approved**

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

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W-1 Comments

Permit # **813641**

Approved Date: **Feb 03, 2016**

[Feb 2, 2016 10:21 AM]: Commission Staff expresses no opinion as to whether a 100% ownership interest in each of the leases alone or in combination with a "production sharing agreement" confers the right to drill across lease/unit lines or whether a pooling agreement is also required. However, until that issue is directly addressed and ruled upon by a Texas court of competent jurisdiction it appears that a 100% interest in each of the leases and a production sharing agreement constitute a sufficient colorable claim to the right to drill a horizontal well as proposed to authorize the removal of the regulatory bar and the issuance of a drilling permit by the Commission, assuming the proposed well is in compliance with all other relevant Commission requirements.

Issuance of the permit is not an endorsement or approval of the applicant's stated method of allocating production proceeds among component leases or units. All production must be reported to the Commission as production from the lease or pooled unit on which the wellhead is located and reported production volume must be determined by actual measurement of hydrocarbon volumes prior to leaving that tract and may not be based on allocation or estimation. Payment of royalties is a contractual matter between the lessor and lessee. Interpreting the leases and determining whether the proposed proceeds allocation comports with the relevant leases is not a matter within Commission jurisdiction but a matter for the parties to the lease and, if necessary, a Texas court of competent jurisdiction.

The foregoing statements are not, and should not be construed as, a final opinion or decision of the Railroad Commission.; [FILER Feb 2, 2016 10:31 AM]: This well is an Allocation well made up of University 19-23 LOV and University 19-18 LOV, Shell is the Operator of both leases and grants itself an exception to SWR 37. The SHL, PP and FTP are located in Sec. 23, Blk. 19, University Land Survey. The LTP and BHL are located in Sec. 18, Blk. 19, University Land Survey.; [RRC STAFF Feb 3, 2016 1:22 PM]: Changed BHL and LTP lease line call to match plat.

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;">813641</div>	DATE PERMIT ISSUED OR AMENDED <div style="text-align: center;">Feb 03, 2016</div>	DISTRICT <div style="text-align: center;">* 08</div>
API NUMBER <div style="text-align: right;">42-301-32849</div>	FORM W-1 RECEIVED <div style="text-align: center;">Feb 02, 2016</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: center;">1282.3</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 19 B</div>		WELL NUMBER <div style="text-align: center;">2304H</div>
LOCATION <div style="text-align: center;">12.4 miles SE direction from MENTONE</div>		TOTAL DEPTH <div style="text-align: center;">12300</div>
Section, Block and/or Survey <div style="display: flex; justify-content: space-between;"> <div>SECTION ◀ 23</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>		
DISTANCE TO SURVEY LINES <div style="display: flex; justify-content: space-around;"> <div>1478 ft. NE</div> <div>1500 ft. SE</div> </div>		DISTANCE TO NEAREST LEASE LINE <div style="text-align: center;">1 ft.</div>
DISTANCE TO LEASE LINES <div style="display: flex; justify-content: space-around;"> <div>1478 ft. NE</div> <div>1500 ft. SE</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. 0299591 </div>		
FIELD NAME LEASE NAME -----		ACRES NEAREST LEASE -----
** PHANTOM (WOLFCAMP) UNIVERSITY 19 B -----		DEPTH 11,800 -----
		WELL # NEAREST WE -----
		DIST 08 -----
----- WELLBORE PROFILE(s) FOR FIELD: Horizontal -----		
RESTRICTIONS: Permitted for oil only. Lateral: TH1 Penetration Point Location <div style="display: flex; justify-content: space-between;"> <div>Lease Lines:</div> <div>818.0 F NE L</div> <div>1976.0 F SE L</div> </div> Terminus Location BH County: LOVING <div style="display: flex; justify-content: space-between;"> <div>Section: 18</div> <div>Block: 19</div> <div>Abstract:</div> </div> Survey: UNIVERSITY LAND <div style="display: flex; justify-content: space-between;"> <div>Lease Lines:</div> <div>818.0 F NE L</div> <div>2798.0 F NW L</div> </div> <div style="display: flex; justify-content: space-between;"> <div>Survey Lines:</div> <div>818.0 F NE L</div> <div>2491.0 F SE L</div> </div>		
' ** ' PRECEDING FIELD NAME INDICATES RULE (R37)		
THE FOLLOWING RESTRICTIONS APPLY TO ALL FIELDS 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.		

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;">813641</div>	DATE PERMIT ISSUED OR AMENDED <div style="text-align: center;">Feb 03, 2016</div>	DISTRICT <div style="text-align: center;">* 08</div>										
API NUMBER <div style="text-align: right;">42-301-32849</div>	FORM W-1 RECEIVED <div style="text-align: center;">Feb 02, 2016</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: center;">1282.3</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 19 B</div>		WELL NUMBER <div style="text-align: center;">2304H</div>										
LOCATION <div style="text-align: center;">12.4 miles SE direction from MENTONE</div>		TOTAL DEPTH <div style="text-align: center;">12300</div>										
Section, Block and/or Survey SECTION ◀ 23 BLOCK ◀ 19 ABSTRACT ◀ SURVEY ◀ UNIVERSITY LAND												
DISTANCE TO SURVEY LINES <div style="text-align: center;">1478 ft. NE 1500 ft. SE</div>		DISTANCE TO NEAREST LEASE LINE <div style="text-align: center;">1 ft.</div>										
DISTANCE TO LEASE LINES <div style="text-align: center;">1478 ft. NE 1500 ft. SE</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. 0299591 </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> <p>This well must comply to the new SWR 3.13 requirements concerning the isolation of any potential flow zones and zones with corrosive formation fluids. See approved permit for those formations that have been identified for the county in which you are drilling the well in.</p> <p>No allowable shall be assigned until the acreage has been reassigned to accommodate University 19 B #2304H.</p>			FIELD NAME	ACRES	DEPTH	WELL #	DIST	LEASE NAME	NEAREST LEASE		NEAREST WE	
FIELD NAME	ACRES	DEPTH	WELL #	DIST								
LEASE NAME	NEAREST LEASE		NEAREST WE									

**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: 01 February 2016**GAU Number:** 150534**Attention:** SHELL WESTERN E&P
PO BOX 576
HOUSTON, TX 77001**Operator No.:** 774719**API Number:**
County: LOVING
Lease Name: University 19 A
Lease Number:
Well Number: 2303H
Total Vertical Depth: 12300
Latitude: 31.660075
Longitude: -103.395619
Datum: NAD27**Purpose:** New Drill**Location:** Survey-UL; Abstract-U23; Block-19; Section-23

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 350 feet and the Rustler, which is estimated to occur from 675 to 1075 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 02/01/2016. 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 19 B 2304H
WELL LOCATION
1282.30 ACRES (MEASURED)
SECTIONS 18 & 23, BLOCK 19, UNIVERSITY LAND
LOVING COUNTY, TEXAS

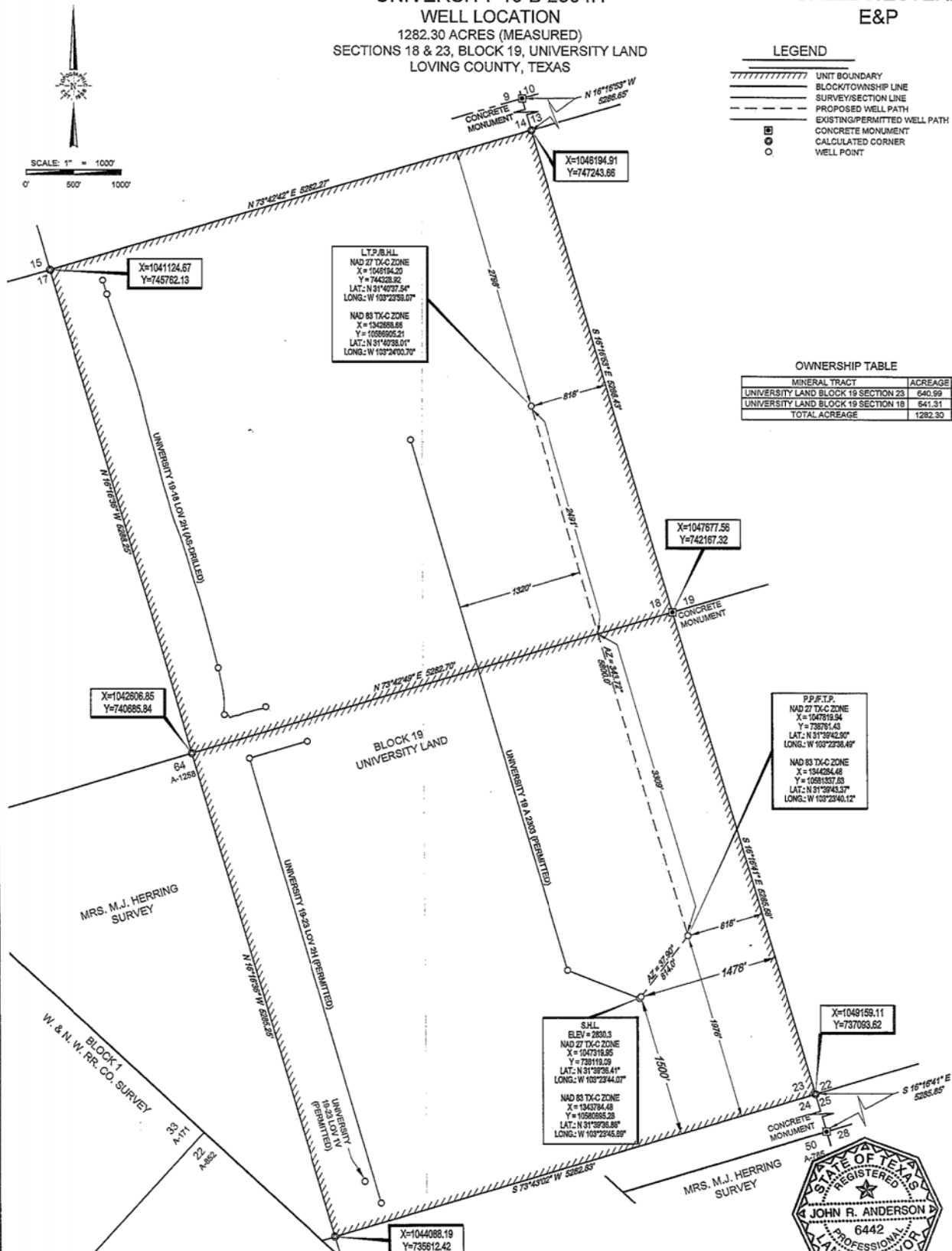
SHELL WESTERN
E&P

LEGEND

	UNIT BOUNDARY
	BLOCK/SECTION 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 19 SECTION 23	640.99
UNIVERSITY LAND BLOCK 19 SECTION 18	841.31
TOTAL ACREAGE	1282.30



TIES TABLE

POINT	UNIT	SURVEY/SECTION
S.H.L.	1478' FSEL	1478' FSEL & 1500' FSEL
P.P./I	818' FSEL	818' FSEL & 1976' FSEL
F.T.P.	1976' FSEL	1976' FSEL
L.T.P./I	518' FSEL	518' FSEL & 2491' FSEL
B.H.L.	2491' FSEL	2491' 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. 10042504
WWW.TOPOGRAPHIC.COM



John R. Anderson 2/2/16
John R. Anderson, R.P.L.S. No. 6442
FEBRUARY 2, 2016

UNIVERSITY 19 B 2304H	REVISION:		NOTES:
	INT	DATE	
	O.M.	02/02/2016	1. ORIGINAL DOCUMENT SIZE: 11" X 17"
DATE: 02/01/2016			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 1983, UNLESS OTHERWISE NOTED.
FILE: UN_UNIVERSITY_19_B_2304H_REV1			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.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. THIS PLAN IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.
DRAWN BY: O.M.			4. ALL ELEVATION VALUES CONTAINED HEREIN ARE ORTHOMETRIC ONLY, BASED UPON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88), U.S. SURVEY FEET.
SHEET: 1 OF 1			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 12.4 MILES SOUTHEAST OF THE CITY/TOWNSHIP/MUNICIPALITY OF MENTONE WITHIN THE COUNTY OF LOVING IN THE STATE OF TEXAS. 7. THE PRELIMINARY LOCATION HAS BEEN CAREFULLY SURVEYED ON THE GROUND DURING THE DATE OF JANUARY 16, 2016, AT A GROUND LEVEL ELEVATION OF 2830.3 SURVEY FEET. 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