

API No. <u>42-301-32766</u> Drilling Permit # <u>811257</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 19-10 LOV			5. Well No. 1D				
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 checked="" type="checkbox"/> Vertical <input type="checkbox"/> Horizontal (Also File Form W-1H) <input type="checkbox"/> Directional (Also File Form W-1D) <input type="checkbox"/> Sidetrack							
8. Total Depth 9000		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. 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>12.2</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 10		16. Block 19		17. Survey UL		18. Abstract No. A-	
				19. Distance to nearest lease line: 467 ft.		20. Number of contiguous acres in lease, pooled unit, or unitized tract: 641.07	
21. Lease Perpendiculars: <u>467</u> ft from the <u>NE</u> line and <u>1500</u> ft from the <u>SE</u> line. 22. Survey Perpendiculars: <u>467</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 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		
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	73933500	QUITO, WEST (DELAWARE)			Injection Well	5000	
BOTTOMHOLE LOCATION INFORMATION is required for DIRECTIONAL, HORIZONTAL, AND AMENDED AS DRILLED PERMIT APPLICATIONS							
Remarks 					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> Name of filer <u>(832)337-0549</u> Phone </div> <div> Date submitted <u>Oct 15, 2015</u> E-mail Address (OPTIONAL) <u>george.mullen@shell.com</u> </div> </div>		
RRC Use Only Data Validation Time Stamp: Oct 20, 2015 1:09 PM('As Approved' Version)							

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 align="center">811257</div>	DATE PERMIT ISSUED OR AMENDED <div align="center">Oct 20, 2015</div>	DISTRICT <div align="center">* 08</div>			
API NUMBER <div align="center">42-301-32766</div>	FORM W-1 RECEIVED <div align="center">Oct 15, 2015</div>	COUNTY <div align="center">LOVING</div>			
TYPE OF OPERATION <div align="center">NEW DRILL</div>	WELLBORE PROFILE(S) <div align="center">Vertical</div>	ACRES <div align="center">641.07</div>			
OPERATOR <div align="center">SHELL WESTERN E&P PO BOX 576 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 align="center">(432) 684-5581</div>			
LEASE NAME <div align="center">UNIVERSITY 19-10 LOV</div>		WELL NUMBER <div align="center">1D</div>			
LOCATION <div align="center">12.2 miles SE direction from MENTONE</div>		TOTAL DEPTH <div align="center">9000</div>			
Section, Block and/or Survey SECTION 10 BLOCK 19 ABSTRACT SURVEY UL					
DISTANCE TO SURVEY LINES <div align="center">467 ft. NE 1500 ft. SE</div>		DISTANCE TO NEAREST LEASE LINE <div align="center">467 ft.</div>			
DISTANCE TO LEASE LINES <div align="center">467 ft. NE 1500 ft. SE</div>		DISTANCE TO NEAREST WELL ON LEASE <div align="center">See FIELD(s) Below</div>			
FIELD(s) and LIMITATIONS: <div align="center">* SEE FIELD DISTRICT FOR REPORTING PURPOSES *</div>					
FIELD NAME LEASE NAME		ACRES NEAREST LEASE	DEPTH NEAREST WE	WELL # NEAREST WE	DIST
----- QUITO, WEST (DELAWARE) UNIVERSITY 19-10 LOV		641.07 467	5,000 0	1D 0	08
RESTRICTIONS: Do not use this well for injection/disposal/hydrocarbon storage purposes without approval by the Environmental Services section of the Railroad Commission, Austin, Texas office.					
<p align="center">THE FOLLOWING RESTRICTIONS APPLY TO ALL FIELDS</p> <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>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>					

**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: 20 October 2015**GAU Number:** 17243**Attention:** SHELL WESTERN E&P
PO BOX 576
HOUSTON, TX 77001**Operator No.:** 774719**API Number:** 30132766
County: LOVING
Lease Name: UNIVERSITY 19-10 LOV
Lease Number:
Well Number: 1D
Total Vertical Depth: 9000
Latitude: 31.706922
Longitude: -103.391956
Datum: NAD27**Purpose:** New Drill**Location:** Survey-UL; Abstract-U10; Block-19; Section-10

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 325 feet and the Rustler, which is estimated to occur from 600 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 10/20/2015. 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

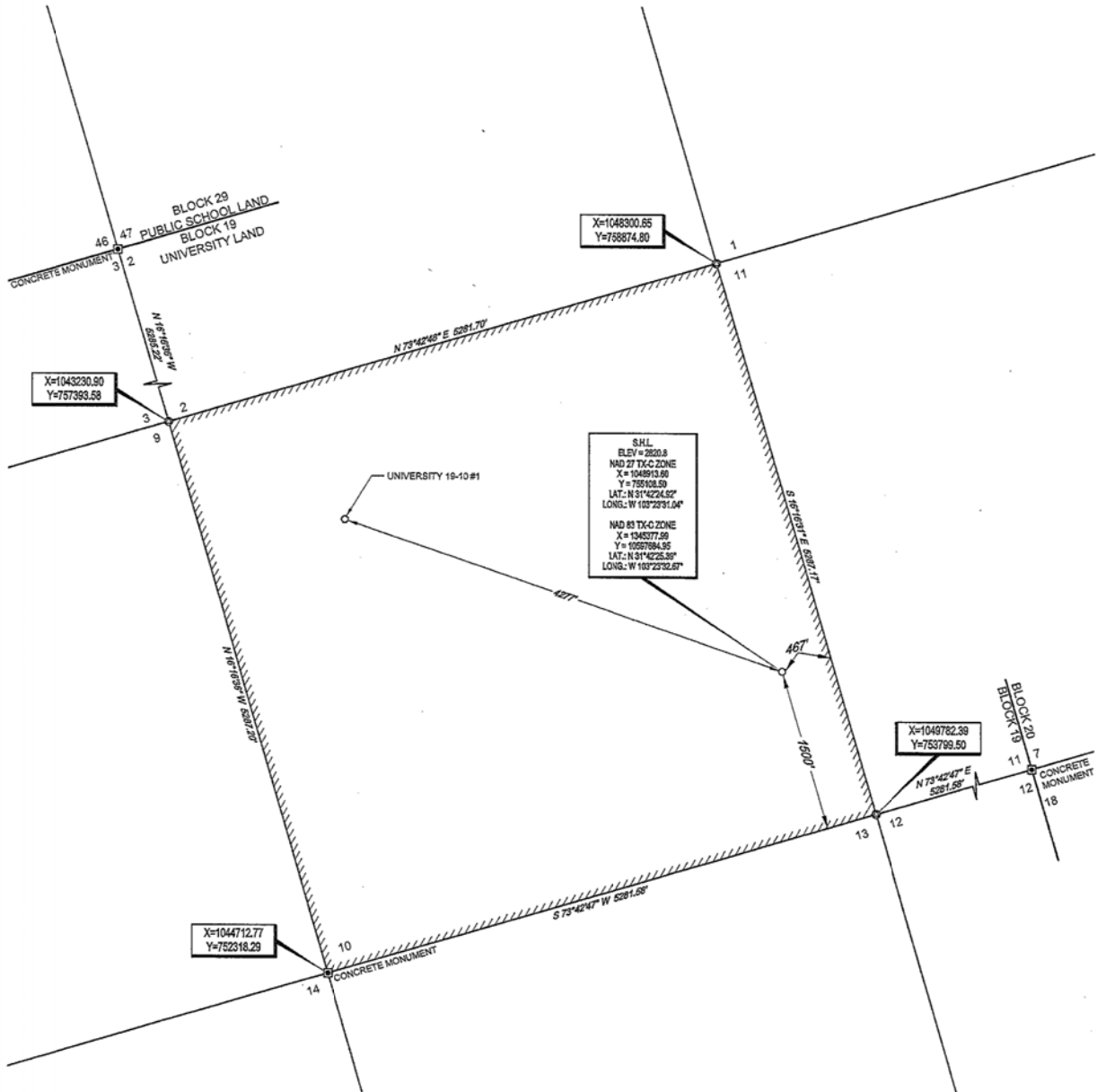
UNIVERSITY19-10 LOV 1D
WELL LOCATION
641.07 ACRES (MEASURED)
SECTION 10, BLOCK 19, UNIVERSITY LAND
LOVING COUNTY, TEXAS

SHELL WESTERN
E&P

LEGEND

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

SCALE: 1" = 1000'
0 500' 1000'



TIES TABLE		
POINT	UNIT	SURVEY/SECTION
S.H.L.	467' FSEL	1500' FSEL

TOPOGRAPHIC
LOYALTY INNOVATION LEGACY
1400 EVERMAN PARKWAY, Ste. 197 • FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7812 • FAX: (817) 744-7548
TEXAS FIRM REGISTRATION NO. 10042504
WWW.TOPOGRAPHIC.COM



John R. Anderson, R.P.L.S. No. 6442
SEPTEMBER 9, 2015

UNIVERSITY19-10 LOV 1D	REVISION:		NOTES:
	INT	DATE	
DATE: 09/09/2015			<p>NOTES CONT'D:</p> <p>6. THE LEASE AND WELL KNOWN HEREON ARE LOCATED APPROXIMATELY 12.2 MILES SOUTHEAST OF THE CITY/TOWNSHIP/MUNICIPALITY OF MENTONE WITHIN THE COUNTY OF LOVING IN THE STATE OF TEXAS.</p> <p>7. THE PRELIMINARY LOCATION HAS BEEN CAREFULLY SURVEYED ON THE GROUND DURING THE DATE OF JULY 23, 2015, AT A GROUND LEVEL ELEVATION OF 2820.8 SURVEY FEET.</p> <p>8. S.H.L. = SURFACE HOLE LOCATION</p> <p>9. P.P. = POINT OF PENETRATION</p> <p>10. F.T.P. = FIRST TAKE POINT</p> <p>11. L.T.P. = LAST TAKE POINT</p> <p>12. B.H.L. = BOTTOM HOLE LOCATION</p>
FILE: LO_UNIVERSITY_19_10_LOV_1D			
DRAWN BY: O.M.			
SHEET: 1 OF 1			