

API No. <u>42-301-35218</u> Drilling Permit # <u>865689</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 TG UNIT		5. Well No. 1308H					
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 12000		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>12.1</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 13	16. Block 19	17. Survey UL		18. Abstract No. A-U13	19. Distance to nearest lease line: ft.	20. Number of contiguous acres in lease, pooled unit, or unitized tract: 12830.08	
21. Lease Perpendiculars: <u>6469</u> ft from the <u>NE</u> line and <u>10842</u> ft from the <u>NW</u> line. 22. Survey Perpendiculars: <u>1187</u> ft from the <u>NE</u> line and <u>269</u> ft from the <u>NW</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	92100050	TWO GEORGES (BONE SPRING)		Oil Well	11700	123.00	
BOTTOMHOLE LOCATION INFORMATION is required for DIRECTIONAL, HORIZONTAL, AND AMENDED AS DRILLED PERMIT APPLICATIONS (see W-1H attachment)							
Remarks [FILER Jan 6, 2021 9:22 AM]: Amending permit to change field from Phantom (Wolfcamp) to Two Georges (Bone Spring) and update well location. API# 301-35217 (1309H) is not located on P-16 as a permit amendment has been filed to amend from Two Georges (Bone Spring) to Phantom (Wolfcamp). The SHL & FTP are located in Sec. 13, Block 19, UL Survey. PP is located in Sec. 10, Block 19, UL Survey. LTP & BHL are located in Sec. 19, Block 19, UL Survey.; [RRC STAFF Jan 11, 2021 9:54 AM]: There have been problems identified with this permit (see problem letter attachment). Notification sent.; [RRC STAFF Jan 20, 2021 11:03 AM]: Problems identified with this permit are resolved.				Certificate: I certify that information stated in this application is true and complete, to the best of my knowledge. <div style="display: flex; justify-content: space-between;"> <div> <u>Michael Boutwell, Regulatory Specialist</u> Name of filer </div> <div> <u>Jan 06, 2021</u> Date submitted </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <u>(832)3370258</u> Phone </div> <div> <u>M.boutwell@shell.com</u> E-mail Address (OPTIONAL) </div> </div>			
RRC Use Only Data Validation Time Stamp: Jan 20, 2021 11:32 AM('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

*This facsimile W-1 was generated electronically from data submitted to the RRC.
A certification of the automated data is available in the RRC's Austin office.*

Permit #	865689
Approved Date:	Jan 20, 2021

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 TG UNIT	4. Well No. 1308H
Lateral Drainhole Location Information			
5. Field as shown on Form W-1 TWO GEORGES (BONE SPRING) (Field # 92100050, RRC District 08)			
6. Section 19	7. Block 19	8. Survey UL / A-U19	9. Abstract
		10. County of BHL LOVING	
11. Terminus Lease Line Perpendiculars 3438 ft. from the NE line. and 16057 ft. from the SE line			
12. Terminus Survey Line Perpendiculars 797 ft. from the NE line. and 200 ft. from the SE line			
13. Penetration Point Lease Line Perpendiculars 3766 ft. from the NE line. and 10326 ft. from the NW line			

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;">865689</div>	DATE PERMIT ISSUED OR AMENDED (AMENDED) Jan 20, 2021	DISTRICT <div style="text-align: right;">* 08</div>			
API NUMBER <div style="text-align: right;">42-301-35218</div>	FORM W-1 RECEIVED <div style="text-align: center;">Jan 06, 2021</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;">12830.08</div>			
OPERATOR <div style="text-align: right;">774719</div> SHELL WESTERN E&P PO BOX 576 HOUSTON, TX 77001-0000		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: (432) 684-5581			
LEASE NAME <div style="text-align: center;">UNIVERSITY 19 TG UNIT</div>		WELL NUMBER <div style="text-align: right;">1308H</div>			
LOCATION <div style="text-align: center;">12.1 miles SE direction from MENTONE</div>		TOTAL DEPTH <div style="text-align: right;">12000</div>			
Section, Block and/or Survey SECTION ⤵ 13 BLOCK ⤵ 19 ABSTRACT ⤵ U13 SURVEY ⤵ UL					
DISTANCE TO SURVEY LINES <div style="text-align: right;">1187 ft. NE 269 ft. NW</div>		DISTANCE TO NEAREST LEASE LINE <div style="text-align: right;">ft.</div>			
DISTANCE TO LEASE LINES <div style="text-align: right;">6469 ft. NE 10842 ft. NW</div>		DISTANCE TO NEAREST WELL ON LEASE <div style="text-align: right;">See FIELD(s) Below</div>			
FIELD(s) and LIMITATIONS: <div style="text-align: center;">* SEE FIELD DISTRICT FOR REPORTING PURPOSES *</div>					
FIELD NAME LEASE NAME		ACRES NEAREST LEASE	DEPTH NEAREST LEASE	WELL # NEAREST WE	DIST
----- TWO GEORGES (BONE SPRING) UNIVERSITY 19 TG UNIT -----		12830.08	11,700	1308H 123	08
----- WELLBORE PROFILE(s) FOR FIELD: Horizontal -----					
RESTRICTIONS: This is a hydrogen sulfide field. Hydrogen Sulfide Fields with perforations must be isolated and tested per State Wide Rule 36 and a Form H-9 filed with the district office. Fields with SWR 10 authority to downhole commingle must be isolated and tested individually prior to commingling production. Lateral: TH1 Penetration Point Location <div style="margin-left: 40px;"> Lease Lines: 3766.0 F NE L 10326.0 F NW L </div> Terminus Location BH County: LOVING Section: 19 Block: 19 Abstract: Survey: UL / A-U19 <div style="margin-left: 40px;"> Lease Lines: 3438.0 F NE L 16057.0 F SE L Survey Lines: 797.0 F NE L 200.0 F SE L </div>					
THE FOLLOWING RESTRICTIONS APPLY TO ALL FIELDS					

RAILROAD COMMISSION OF TEXAS
OIL & GAS DIVISION

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

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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>															
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<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;">FIELD NAME</th> <th style="width: 10%;">ACRES</th> <th style="width: 10%;">DEPTH</th> <th style="width: 10%;">WELL #</th> <th style="width: 10%;">DIST</th> </tr> <tr> <th>LEASE NAME</th> <th>NEAREST LEASE</th> <th></th> <th>NEAREST WE</th> <th></th> </tr> </thead> <tbody> <tr> <td colspan="5"> <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> <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> </td> </tr> </tbody> </table>			FIELD NAME	ACRES	DEPTH	WELL #	DIST	LEASE NAME	NEAREST LEASE		NEAREST WE		<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> <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>				
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**RAILROAD COMMISSION OF TEXAS
OIL & GAS DIVISION
SWR #13 Formation Data**

LOVING (301) County

Formation	Remarks	Geological Order	Effective Date
RED BLUFF		1	02/09/2020
DELAWARE		2	02/09/2020
BELL CANYON		3	02/09/2020
CHERRY CANYON		4	02/09/2020
BRUSHY CANYON		5	02/09/2020
BONE SPRING		6	02/09/2020
WOLFCAMP		7	02/09/2020
PENNSYLVANIAN		8	02/09/2020
STRAWN		9	02/09/2020
ATOKA	high pressure	10	02/09/2020
MORROW		11	02/09/2020
DEVONIAN		12	02/09/2020
FUSSELMAN		13	02/09/2020
ELLENBURGER		14	02/09/2020
PRECAMBRIAN (UNDIFFERENTIATED)		15	02/09/2020

The above list may not be all inclusive, and may also include formations that do not intersect all wellbores. The listing order of the Formation information reflects the general stratigraphic order and relative geologic age. 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>

GROUNDWATER PROTECTION DETERMINATION

Form GW-2



Groundwater Advisory Unit

Date Issued: 04 November 2020**GAU Number:** 289601**Attention:** SHELL WESTERN E&P
PO BOX 576
HOUSTON, TX 77001**API Number:** 30135217
County: LOVING
Lease Name: UNIVERSITY 19 TG UNIT**Operator No.:** 774719**Lease Number:**
Well Number: 1309H
Total Vertical: 11900
Latitude: 31.701531
Longitude: -103.392353
Datum: NAD27**Purpose:** New Production Well**Location:** Survey-UL; Abstract-U13; Block-19; Section-13

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 225 feet and the Rustler, which is estimated to occur from 600 to 1000 feet must be protected.

This recommendation is applicable to all wells within a radius of 200 feet of this location.

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

Note: Unless stated otherwise, this recommendation is intended to apply only to the subject well and not for area-wide use. Unless stated otherwise, this recommendation is for normal drilling, production, and plugging operations only.

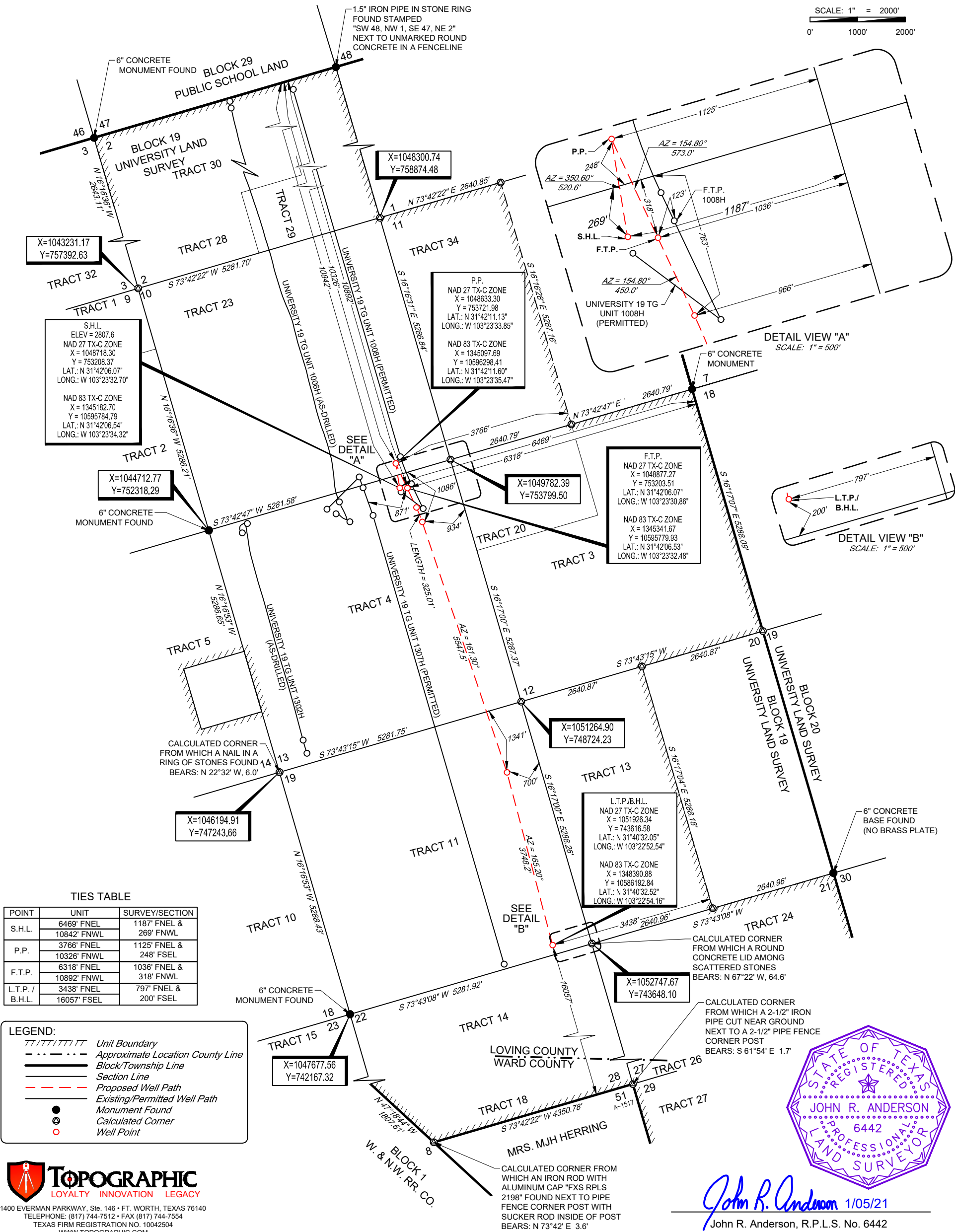
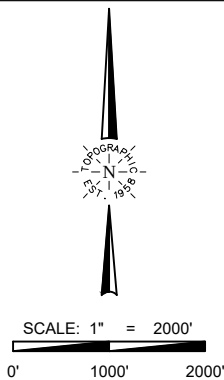
This determination is based on information provided when the application was submitted on 11/03/2020. If the location information has changed, you must contact the Groundwater Advisory Unit, and submit a new application if necessary. If you have questions, please contact us at 512-463-2741 or gau@rrc.texas.gov.

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.
Rev. 02/2014



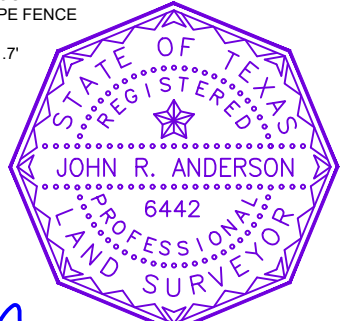
WELL LOCATION
LEASE NAME & WELL NO.:
UNIVERSITY 19 TG UNIT 1308H
UNIT/LEASE ACREAGE:
12830.08 ACRES (MEASURED)
NEAREST TOWN IN COUNTY:
±12.1 MILES SOUTHEAST OF MENTONE, TEXAS
DESCRIPTION:
SECTIONS 10, 13 & 19 BLOCK 19, UNIVERSITY LAND SURVEY
LOVING COUNTY, TEXAS



TIES TABLE		
POINT	UNIT	SURVEY/SECTION
S.H.L.	6469' FNEL	1187' FNEL & 269' FNWL
	10842' FNWL	
P.P.	3766' FNEL	1125' FNEL & 248' FSEL
	10326' FNWL	
F.T.P.	6318' FNEL	1036' FNEL & 318' FNWL
	10892' FNWL	
L.T.P. / B.H.L.	3438' FNEL	797' FNEL & 200' FSEL
	16057' FSEL	

LEGEND:	
	Unit Boundary
	Approximate Location County Line
	Block/Township Line
	Section Line
	Proposed Well Path
	Existing/Permitted Well Path
	Monument Found
	Calculated Corner
	Well Point

TOPOGRAPHIC
LOYALTY INNOVATION LEGACY
1400 EVERMAN PARKWAY, Ste. 146 • FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 • FAX (817) 744-7554
TEXAS FIRM REGISTRATION NO. 10042504
WWW.TOPOGRAPHIC.COM



John R. Anderson 1/05/21
John R. Anderson, R.P.L.S. No. 6442

UL-19-13-P1 UNIVERSITY 19 TG UNIT 1308H	REVISION:		NOTES:
	INT	DATE	
DATE: 12/23/2020			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 PLAT 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 PLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY. 4. ALL ELEVATION VALUES CONTAINED HEREON 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.
FILE: LO_UNIVERSITY_19_13_UL-19-13-P1_TG_UNIT_1308H			
DRAWN BY: O.M.			
SHEET: 1 OF 1			
			NOTES CONT'D: 6. THE PRELIMINARY LOCATION HAS BEEN CAREFULLY SURVEYED ON THE GROUND DURING THE DATE OF SEPTEMBER 25, 2020. 7. S.H.L. = SURFACE HOLE LOCATION 8. P.P. = POINT OF PENETRATION 9. F.T.P. = FIRST TAKE POINT 10. L.T.P. = LAST TAKE POINT 11. B.H.L. = BOTTOM HOLE LOCATION