

API No. <u>42-003-47585</u> Drilling Permit # <u>827643</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. 664930		2. Operator's Name (as shown on form P-5, Organization Report) PIEDRA OPERATING, LLC			3. Operator Address (include street, city, state, zip): PO BOX 10485 MIDLAND, TX 79702-0000		
4. Lease Name UNIVERSITY 8-4		5. Well No. 9					
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 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 12500		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 ANDREWS		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>14.1</u> miles in a <u>NW</u> direction from <u>Andrews</u> which is the nearest town in the county of the well site.							
15. Section 4		16. Block 8		17. Survey UL		18. Abstract No. A-U222	
				19. Distance to nearest lease line: 448 ft.		20. Number of contiguous acres in lease, pooled unit, or unitized tract: 647.3	
21. Lease Perpendiculars: <u>1831</u> ft from the <u>WEST</u> line and <u>448</u> ft from the <u>SOUTH</u> line. 22. Survey Perpendiculars: <u>1831</u> ft from the <u>WEST</u> line and <u>448</u> ft from the <u>SOUTH</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	31. Distance to Nearest Well in this Reservoir	
08	00018001	WILDCAT		Exploratory Test Well	12500	0.00	
08	85280300	SPRABERRY (TREND AREA)		Oil or Gas Well	12500	0.00	
BOTTOMHOLE LOCATION INFORMATION is required for DIRECTIONAL, HORIZONTAL, AND AMENDED AS DRILLED PERMIT APPLICATIONS (see W-1H attachment)							
Remarks [RRC STAFF Jun 20, 2017 9:48 AM]: There have been problems identified with this permit (see problem letter attachment). Notification sent.; [RRC STAFF Jun 22, 2017 11:49 AM]: Problems identified with this permit are resolved.; [RRC STAFF Jun 23, 2017 9:06 AM]: There have been problems identified with this permit (see problem letter attachment). Notification sent.; [RRC STAFF Jun 26, 2017 12:34 PM]: Problems identified with this permit are resolved.; [RRC STAFF Jun 26, 2017 12:34 PM]: Revised P16 attached.				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>Katharine Brown, Engineering Tech</u> Name of filer </div> <div> <u>Jun 08, 2017</u> Date submitted </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <u>(432)6859005, x221</u> Phone </div> <div> <u>kbrown@piedrallc.com</u> E-mail Address (OPTIONAL) </div> </div>			
RRC Use Only Data Validation Time Stamp: Jun 26, 2017 3:23 PM(Current 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 #	827643
Approved Date:	Jun 26, 2017

1. RRC Operator No. 664930	2. Operator's Name (exactly as shown on form P-5, Organization Report) PIEDRA OPERATING, LLC	3. Lease Name UNIVERSITY 8-4	4. Well No. 9
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Lateral Drainhole Location Information

5. Field as shown on Form W-1	SPRABERRY (TREND AREA) (Field # 85280300, RRC District 08)
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6. Section 4	7. Block 8	8. Survey UL	9. Abstract	10. County of BHL ANDREWS
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11. Terminus Lease Line Perpendiculars	1831 ft. from the west line. and 338 ft. from the north line			
12. Terminus Survey Line Perpendiculars	1831 ft. from the west line. and 338 ft. from the north line			
13. Penetration Point Lease Line Perpendiculars	1831 ft. from the West line. and 448 ft. from the South 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 align="center">827643</div>	DATE PERMIT ISSUED OR AMENDED <div align="center">Jun 26, 2017</div>	DISTRICT <div align="center">* 08</div>			
API NUMBER <div align="center">42-003-47585</div>	FORM W-1 RECEIVED <div align="center">Jun 08, 2017</div>	COUNTY <div align="center">ANDREWS</div>			
TYPE OF OPERATION <div align="center">NEW DRILL</div>	WELLBORE PROFILE(S) <div align="center">Horizontal, Vertical</div>	ACRES <div align="center">647.3</div>			
OPERATOR <div align="center"> PIEDRA OPERATING, LLC PO BOX 10485 MIDLAND, TX 79702-0000 </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 8-4</div>		WELL NUMBER <div align="center">9</div>			
LOCATION <div align="center">14.1 miles NW direction from ANDREWS</div>		TOTAL DEPTH <div align="center">12500</div>			
Section, Block and/or Survey SECTION ◀ 4 BLOCK ◀ 8 ABSTRACT ◀ U222 SURVEY ◀ UL					
DISTANCE TO SURVEY LINES <div align="center">1831 ft. WEST 448 ft. SOUTH</div>		DISTANCE TO NEAREST LEASE LINE <div align="center">448 ft.</div>			
DISTANCE TO LEASE LINES <div align="center">1831 ft. WEST 448 ft. SOUTH</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 LEASE	WELL # NEAREST WE	DIST
----- WILDCAT <div align="center">UNIVERSITY 8-4</div> -----		647.30 <div align="center">448</div>	12,500 <div align="center">0</div>	9 <div align="center">0</div>	08
----- WELLBORE PROFILE(s) FOR FIELD: Vertical -----					
RESTRICTIONS: For exploratory test only 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.					
----- SPRABERRY (TREND AREA) <div align="center">UNIVERSITY 8-4</div> -----		647.30 <div align="center">448</div>	12,500 <div align="center">0</div>	9 <div align="center">0</div>	08
----- WELLBORE PROFILE(s) FOR FIELD: Horizontal, Vertical -----					
RESTRICTIONS: For exploratory test only Lateral: TH1 Penetration Point Location Lease Lines: 1831.0 F WEST L 448.0 F SOUTH L Terminus Location BH County: ANDREWS Section: 4 Block: 8 Abstract: Survey: UL					

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 827643	DATE PERMIT ISSUED OR AMENDED Jun 26, 2017	DISTRICT * 08
API NUMBER 42-003-47585	FORM W-1 RECEIVED Jun 08, 2017	COUNTY ANDREWS
TYPE OF OPERATION NEW DRILL	WELLBORE PROFILE(S) Horizontal, Vertical	ACRES 647.3
OPERATOR PIEDRA OPERATING, LLC PO BOX 10485 MIDLAND, TX 79702-0000		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 UNIVERSITY 8-4		WELL NUMBER 9
LOCATION 14.1 miles NW direction from ANDREWS		TOTAL DEPTH 12500
Section, Block and/or Survey SECTION 4 BLOCK 8 ABSTRACT U222 SURVEY UL		
DISTANCE TO SURVEY LINES 1831 ft. WEST 448 ft. SOUTH		DISTANCE TO NEAREST LEASE LINE 448 ft.
DISTANCE TO LEASE LINES 1831 ft. WEST 448 ft. SOUTH		DISTANCE TO NEAREST WELL ON LEASE See FIELD(s) Below
FIELD(s) and LIMITATIONS: <p align="center">* SEE FIELD DISTRICT FOR REPORTING PURPOSES *</p>		
FIELD NAME LEASE NAME	ACRES NEAREST LEASE	DEPTH NEAREST WE
WELL # NEAREST WE	DIST	
Lease Lines: 1831.0 F WEST L 338.0 F NORTH L Survey Lines: 1831.0 F WEST L 338.0 F NORTH L		
<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**

ANDREWS (003) County

Formation	Shallow Top	Deep Top	Remarks	Geological Order	Effective Date
YATES	2,500	3,200		1	12/17/2013
SEVEN RIVERS	3,000	3,000		2	12/17/2013
QUEEN	3,600	4,800		3	12/17/2013
GRAYBURG	3,100	5,000		4	12/17/2013
SAN ANDRES	3,700	5,300	CO2 flood, high flows, H2S, corrosive	5	12/17/2013
HOLT	5,000	5,500		6	12/17/2013
GLORIETA	5,100	6,000		7	12/17/2013
TUBB	6,100	6,300		8	12/17/2013
CLEARFORK	5,600	7,600		9	12/17/2013
PERMIAN DETRITAL	7,800	7,900		10	12/17/2013
LEON	7,900	7,900		11	12/17/2013
WICHITA ALBANY	6,500	8,100		12	12/17/2013
SPRABERRY	7,300	8,600		13	12/17/2013
DEAN	9,200	9,500		14	12/17/2013
WOLFCAMP	7,500	9,900		15	12/17/2013
CANYON	8,600	10,200		16	12/17/2013
PENNSYLVANIAN	8,700	10,200		17	12/17/2013
MCKEE	8,300	10,600		18	12/17/2013
STRAWN	8,800	11,000		19	12/17/2013
FUSSELMAN	8,400	11,900		20	12/17/2013
DEVONIAN	7,600	12,500		21	12/17/2013
SILURIAN	8,000	12,500		22	12/17/2013
ELLENBURGER	7,900	13,900		23	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.texas.gov/oil-gas/compliance-enforcement/rule-13-geologic-formation-info>

GROUNDWATER PROTECTION DETERMINATION

Form GW-2



Groundwater Advisory Unit

Date Issued: 30 May 2017**GAU Number:** 172863**Attention:** PIEDRA OPERATING, LLC
PO BOX 10485
MIDLAND, TX 79702**Operator No.:** 664930**API Number:**
County: ANDREWS
Lease Name: University 8-4
Lease Number: 39620
Well Number: 9
Total Vertical Depth: 12500
Latitude: 32.393899
Longitude: -102.344360
Datum: NAD27**Purpose:** New Drill**Location:** Survey-UL; Block-8; Section-4

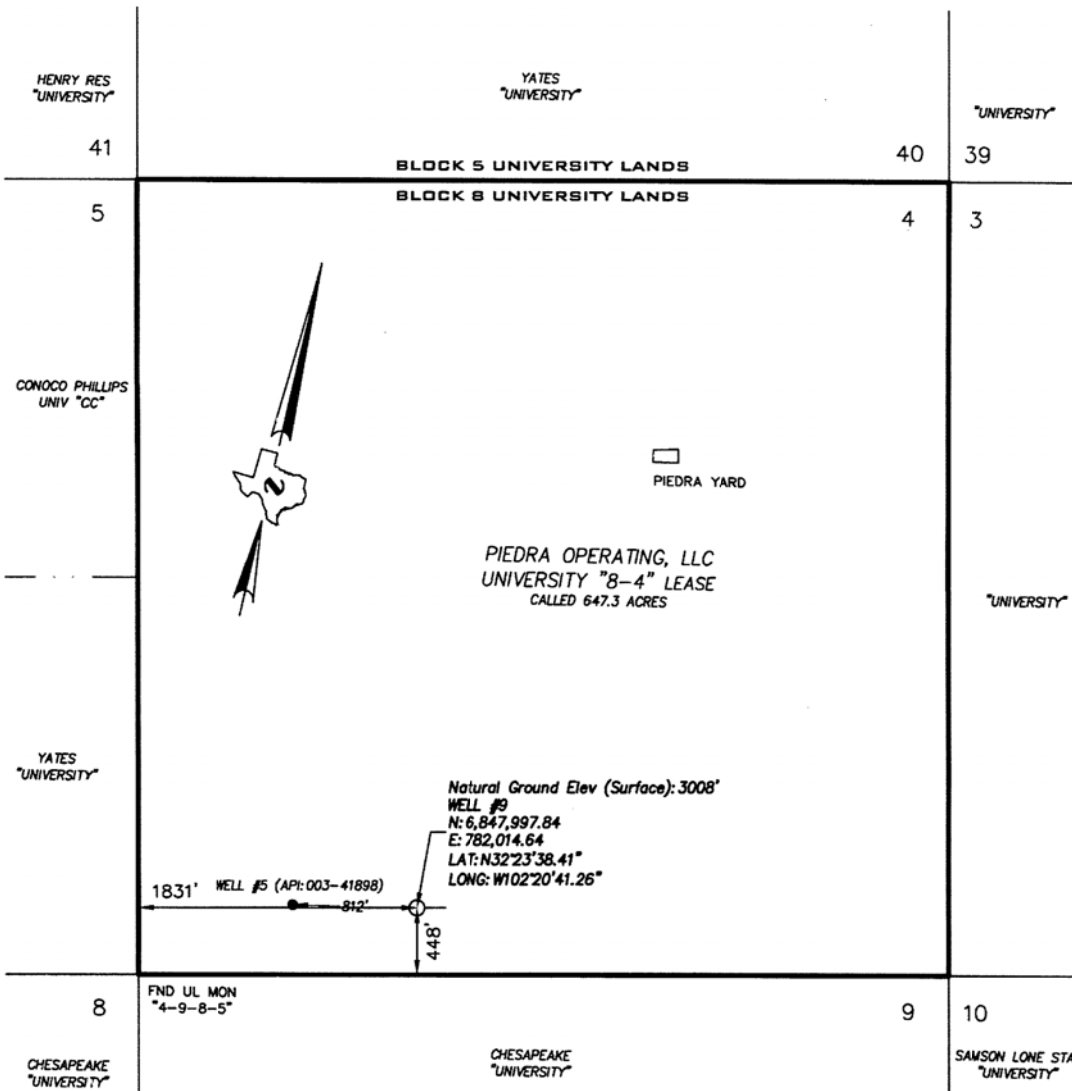
To protect usable-quality groundwater at this location, the Groundwater Advisory Unit of the Railroad Commission of Texas recommends:

The interval from the land surface to a depth of 250 feet, and the zone from 1300 to 1750 feet must be protected.

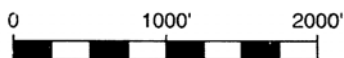
Note: Unless stated otherwise, this recommendation is intended to apply only to the subject well and not for area-wide use. This recommendation is for normal drilling, production, and plugging operations only. It does not apply to saltwater disposal operation into a nonproductive zone (RRC Form W-14).

This determination is based on information provided when the application was submitted on 05/25/2017. 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



GRAPHIC SCALE



(IN FEET)
1 inch = 1000 ft.

NOTES:

- COURSES, DISTANCES, COORDINATES AND ACREAGE SHOWN HEREON ARE LAMBERT GRID AND CONFORM TO THE "TEXAS COORDINATE SYSTEM", TEXAS NORTH CENTRAL ZONE, NORTH AMERICAN DATUM OF 1983. ALL DISTANCES AND COORDINATES ARE SHOWN IN GRID FEET.
- DISTANCE TO THE NEAREST WELL IN THIS FIELD AS SHOWN.

THIS WELL IS TO BE LOCATED 14.1 MILES IN A NORTHWEST DIRECTION FROM ANDREWS, TEXAS WHICH IS THE NEAREST TOWN IN THE COUNTY OF THE WELL SITE.

LOCATION PLAT

PIEDRA OPERATING, LLC

WELL NO. 9
UNIVERSITY "8-4" LEASE

448 FEET FROM THE SOUTH LINE AND
1831 FEET FROM THE WEST LINE

SECTION 4, BLOCK 8,
UNIVERSITY LANDS SURVEY,

ANDREWS COUNTY, TEXAS

DATED THIS 22ND DAY OF MAY, 2017

RJ DAUM
TEXAS RPLS 18826



SCHUMANN ENGINEERING CO., INC.

REGISTERED PROFESSIONAL LAND SURVEYORS

REGISTERED PROFESSIONAL CIVIL ENGINEERS

Civil Engineering ~ Land Surveying

TEXAS FIRM No. F1880

TEXAS FIRM No. 10149500

408 N. PECOS STREET - P. O. BOX 504
MIDLAND, TEXAS 79702-0504

Office (432) 684-5548
Fax (432) 684-6973

QUAD: FIVE WELLS RANCH
SCALE: 1" = 1000'

PROJECT: 755623PO
JOB NO: 75623-B