

API No. <u>42-003-47556</u> Drilling Permit # <u>826299</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. <div style="text-align: center;">950523</div>		2. Operator's Name (as shown on form P-5, Organization Report) <div style="text-align: center;">ZARVONA ENERGY LLC</div>		3. Operator Address (include street, city, state, zip): <div style="text-align: center;">1010 LAMAR ST SUITE 500 HOUSTON, TX 77002-6334</div>			
4. Lease Name <div style="text-align: center;">ULS 5-9 UNIT</div>		5. Well No. <div style="text-align: center;">6</div>					
GENERAL INFORMATION							
6. Purpose of filing (mark ALL appropriate boxes): <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <input checked="" type="checkbox"/> New Drill <input type="checkbox"/> Recompletion <input type="checkbox"/> Reclass <input type="checkbox"/> Field Transfer <input type="checkbox"/> Re-Enter </div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <input type="checkbox"/> Amended <input type="checkbox"/> Amended as Drilled (BHL) (Also File Form W-1D) </div>							
7. Wellbore Profile (mark ALL appropriate boxes): <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <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 </div>							
8. Total Depth <div style="text-align: center;">13500</div>		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. <div style="text-align: center;">08</div>		12. County <div style="text-align: center;">ANDREWS</div>		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>16</u> miles in a <u>NE</u> direction from <u>Andrews</u> which is the nearest town in the county of the well site.							
15. Section <div style="text-align: center;">4</div>		16. Block <div style="text-align: center;">5</div>		17. Survey <div style="text-align: center;">UNIVERSITY LANDS</div>		18. Abstract No. <div style="text-align: center;">A-</div>	
				19. Distance to nearest lease line: <div style="text-align: center;">467 ft.</div>		20. Number of contiguous acres in lease, pooled unit, or unitized tract: <div style="text-align: center;">640</div>	
21. Lease Perpendiculars: <u>467</u> ft from the <u>EAST</u> line and <u>467</u> ft from the <u>SOUTH</u> line. 22. Survey Perpendiculars: <u>467</u> ft from the <u>SOUTH</u> line and <u>467</u> ft from the <u>EAST</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	28899581	EMMA (MISSISSIPPIAN)		Oil Well	13500	0.00	
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="display: flex; justify-content: space-between; margin-top: 20px;"> <div> <u>Daniel Brownlee</u> Name of filer </div> <div> <u>May 05, 2017</u> Date submitted </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <u>(713)6000655</u> Phone </div> <div> <u>dbrownlee@zarvonaenergy.com</u> E-mail Address (OPTIONAL) </div> </div>			
RRC Use Only Data Validation Time Stamp: May 18, 2017 8:19 AM(Current 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 style="text-align: right;">826299</div>	DATE PERMIT ISSUED OR AMENDED <div style="text-align: right;">May 11, 2017</div>	DISTRICT <div style="text-align: right;">* 08</div>																					
API NUMBER <div style="text-align: right;">42-003-47556</div>	FORM W-1 RECEIVED <div style="text-align: right;">May 05, 2017</div>	COUNTY <div style="text-align: right;">ANDREWS</div>																					
TYPE OF OPERATION <div style="text-align: right;">NEW DRILL</div>	WELLBORE PROFILE(S) <div style="text-align: right;">Vertical</div>	ACRES <div style="text-align: right;">640</div>																					
OPERATOR <div style="text-align: right;">950523</div> ZARVONA ENERGY LLC 1010 LAMAR ST SUITE 500 HOUSTON, TX 77002-6334		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: right;">ULS 5-9 UNIT</div>		WELL NUMBER <div style="text-align: right;">6</div>																					
LOCATION <div style="text-align: right;">16 miles NE direction from ANDREWS</div>		TOTAL DEPTH <div style="text-align: right;">13500</div>																					
Section, Block and/or Survey SECTION ◀ 4 BLOCK ◀ 5 ABSTRACT ◀ SURVEY ◀ UNIVERSITY LANDS																							
DISTANCE TO SURVEY LINES <div style="text-align: right;">467 ft. SOUTH 467 ft. EAST</div>		DISTANCE TO NEAREST LEASE LINE <div style="text-align: right;">467 ft.</div>																					
DISTANCE TO LEASE LINES <div style="text-align: right;">467 ft. EAST 467 ft. SOUTH</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>																							
<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;">FIELD NAME LEASE NAME</th> <th style="width: 10%;">ACRES NEAREST LEASE</th> <th style="width: 10%;">DEPTH</th> <th style="width: 10%;">WELL # NEAREST WE</th> <th style="width: 10%;">DIST</th> </tr> </thead> <tbody> <tr> <td>-----</td> <td>-----</td> <td>-----</td> <td>-----</td> <td>---</td> </tr> <tr> <td>EMMA (MISSISSIPPIAN)</td> <td style="text-align: right;">640.00</td> <td style="text-align: right;">13,500</td> <td style="text-align: right;">6</td> <td style="text-align: right;">08</td> </tr> <tr> <td>ULS 5-9 UNIT</td> <td style="text-align: right;">467</td> <td></td> <td style="text-align: right;">0</td> <td></td> </tr> </tbody> </table>				FIELD NAME LEASE NAME	ACRES NEAREST LEASE	DEPTH	WELL # NEAREST WE	DIST	-----	-----	-----	-----	---	EMMA (MISSISSIPPIAN)	640.00	13,500	6	08	ULS 5-9 UNIT	467		0	
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-----	-----	-----	-----	---																			
EMMA (MISSISSIPPIAN)	640.00	13,500	6	08																			
ULS 5-9 UNIT	467		0																				
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.																							
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.																							

**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: 17 May 2017**GAU Number:** 172261**Attention:** ZARVONA ENERGY LLC
1010 LAMAR ST SUITE 500
HOUSTON, TX 77002**Operator No.:** 950523**API Number:** 00347556
County: ANDREWS
Lease Name: ULS 5-9 UNIT
Lease Number:
Well Number: 6
Total Vertical Depth: 13500
Latitude: 32.494184
Longitude: -102.366169
Datum: NAD27**Purpose:** New Drill**Location:** Survey-UL; Block-5; 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 300 feet, and the zone from 1200 to 1725 feet must be protected.

This recommendation is applicable for all wells drilled in this Section 4.

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 05/15/2017. 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

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

BLOCK A-19
PUBLIC SCHOOL LAND SURVEY

12

13

13

05

04

Zarvona Energy LLC

04

03

BLOCK 5
UNIVERSITY LANDS SURVEY
ANDREWS COUNTY, TEXAS



05

04

A-U108

640 Acres - Called -
"ULS 5-9 Unit"

Gr. Elev.: 3030' - 467' -
#6
467'

04

03

08

09

09

10

	State Plane Coordinate		Geodetic (D.M.S.)		Geodetic (D.D.)	
Surface Location	X = 500,180.55	Y = 335,795.34	Lat = 32°29'39.06" N	Long = 102°21'58.21" W	Lat = 32.49418355° N	Long = 102.36616943° W

The ULS 5-9 Unit #6 is located approximately
16 miles Northeast of Andrews, Texas



Legend

- Denotes Proposed Well Bore
- Denotes Unit Boundary
- Denotes Tract Line
- - Denotes Proposed Well Location
- - Denotes Proposed Penetration/ Take Points
- ⊗ - Denotes Proposed Bottom Hole Location

NOTE:

- 1) Plane Coordinates shown hereon are Lambert Grid and Conform to the "Texas Coordinate System", Texas North Central Zone, North American Datum of 1927, unless otherwise noted. Scale factor is 1.000217847.
- 2) Geodetic Coordinate shown hereon references the North American Datum of 1927, unless otherwise noted.
- 3) This plat is provided only for filing purposes with the Texas Railroad Commission and should not be construed as a boundary survey.

CERTIFICATION:

I hereby certify that this plat was made from notes taken in
the field in a bona fide survey made under my supervision.

Lindsay Gygax

Texas R.P.L.S. No. 6434



05-03-17

WEST COMPANY

Land Surveyors ■ Civil Engineers

110 W. Louisiana Ave., Suite 110, Midland, Texas 79701
(432) 687-0865 - FAX (432) 687-0868
FIRM Registration Number: 100682-00

ZARVONA ENERGY LLC

Location of the
ULS 5-9 UNIT #6
467' FSL & 467' FEL
Section 4, Block 5
University Lands Survey,
Andrews County, Texas

Scale: 1"= 1000'

W.O.: 2017-0303

Surveyed: 04/28/2017

Drawn By: SC

File: J:\2017\2017-0303\2017-0303 The ULS 5-9 Unit #6.dwg