

API No. <u>42-103-32997</u> Drilling Permit # <u>811291</u> SWR Exception Case/Docket No. _____		<b>RAILROAD COMMISSION OF TEXAS</b> <b>OIL &amp; GAS DIVISION</b> <b>APPLICATION FOR PERMIT TO DRILL, RECOMPLETE, OR RE-ENTER</b> <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>				<b>FORM W-1</b> 07/2004 Permit Status: <b>Approved</b>	
1. RRC Operator No. <b>027200</b>		2. Operator's Name (as shown on form P-5, Organization Report) <b>APACHE CORPORATION</b>		3. Operator Address (include street, city, state, zip): <b>ATTN REGULATORY STE 3000</b> <b>303 VETERANS AIRPARK LN</b> <b>MIDLAND, TX 79705-0000</b>			
4. Lease Name <b>UNIVERSITY 38B</b>		5. Well No. <b>1</b>					
<b>GENERAL INFORMATION</b>							
6. Purpose of filing (mark ALL appropriate boxes): <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <span><input type="checkbox"/> New Drill</span> <span><input checked="" type="checkbox"/> Recompletion</span> <span><input type="checkbox"/> Reclass</span> <span><input type="checkbox"/> Field Transfer</span> <span><input type="checkbox"/> Re-Enter</span> </div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <span><input type="checkbox"/> Amended</span> <span><input type="checkbox"/> Amended as Drilled (BHL) (Also File Form W-1D)</span> </div>							
7. Wellbore Profile (mark ALL appropriate boxes): <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <span><input checked="" type="checkbox"/> Vertical</span> <span><input type="checkbox"/> Horizontal (Also File Form W-1H)</span> <span><input type="checkbox"/> Directional (Also File Form W-1D)</span> <span><input type="checkbox"/> Sidetrack</span> </div>							
8. Total Depth <b>9300</b>		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			
<b>SURFACE LOCATION AND ACREAGE INFORMATION</b>							
11. RRC District No. <b>08</b>		12. County <b>CRANE</b>		13. Surface Location <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <span><input checked="" type="checkbox"/> Land</span> <span><input type="checkbox"/> Bay/Estuary</span> <span><input type="checkbox"/> Inland Waterway</span> <span><input type="checkbox"/> Offshore</span> </div>			
14. This well is to be located <u>5.4</u> miles in a <u>NW</u> direction from <u>CRANE</u> which is the nearest town in the county of the well site.							
15. Section <b>38</b>		16. Block <b>31</b>		17. Survey <b>UL</b>		18. Abstract No. <b>A-</b>	
				19. Distance to nearest lease line: <b>659</b> ft.		20. Number of contiguous acres in lease, pooled unit, or unitized tract: <b>160</b>	
21. Lease Perpendiculars: <u>659</u> ft from the <u>NORTH</u> line and <u>660</u> ft from the <u>WEST</u> line. 22. Survey Perpendiculars: <u>1980</u> ft from the <u>SOUTH</u> line and <u>660</u> ft from the <u>WEST</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			
<b>FIELD INFORMATION</b> 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	09358900	BLOCK 31 (PENN. 7620)		Oil Well	9300	1328.00	
08	09358090	BLOCK 31 (ATOKA 7900)		Oil or Gas Well	9300	0.00	
08	09358450	BLOCK 31 (DEVONIAN)		Oil or Gas Well	9300	0.00	
<b>BOTTOMHOLE LOCATION INFORMATION is required for DIRECTIONAL, HORIZONTAL, AND AMENDED AS DRILLED PERMIT APPLICATIONS</b>							
<b>Remarks</b> [FILER Oct 16, 2015 11:11 AM]: NEW RECOMPLETION PERMIT TO ADD FIELDS. ORIGINAL #491241 HAS EXPIRED. THANK YOU.				<b>Certificate:</b> 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>Vicki Brown, Drlg. Engineering Tech</u>            Name of filer   <u>(432)8181117</u>            Phone         </div> <div> <u>Oct 16, 2015</u>            Date submitted   <u>vicki.brown@apachecorp.com</u>            E-mail Address (OPTIONAL)         </div> </div>			
<b>RRC Use Only</b>							
Data Validation Time Stamp: Oct 19, 2015 3:53 PM( Current Version )							

# Railroad Commission of Texas

## PERMIT TO DRILL, RE-COMPLETE, OR RE-ENTER ON REGULAR OR ADMINISTRATIVE EXCEPTION LOCATION

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### CONDITIONS AND INSTRUCTIONS

**Permit Invalidation.** It is the operator's responsibility to make sure that the permitted location complies with Commission density and spacing rules in effect on the spud date. The permit becomes invalid automatically if, because of a field rule change or the drilling of another well, the stated location is not in compliance with Commission field rules on the spud date. If this occurs, application for an exception to Statewide Rules 37 and 38 must be made and a special permit granted prior to spudding. Failure to do so may result in an allowable not being assigned and/or enforcement procedures being initiated.

**Notice Requirements.** Per H.B 630, signed May 8, 2007, the operator is required to provide notice to the surface owner no later than the 15th business day after the Commission issues a permit to drill. Please refer to subchapter Q Sec. 91.751-91.755 of the Texas Natural Resources Code for applicability.

**Permit expiration.** This permit expires two (2) years from the date of issuance shown on the original permit. The permit period will not be extended.

**Drilling Permit Number.** The drilling permit number shown on the permit **MUST** be given as a reference with any notification to the district (see below), correspondence, or application concerning this permit.

**Rule 37 Exception Permits.** This Statewide Rule 37 exception permit is granted under either provision Rule 37 (h)(2)(A) or 37(h)(2)(B). Be advised that a permit granted under Rule 37(h)(2)(A), notice of application, is subject to the General Rules of Practice and Procedures and if a protest is received under Section 1.3, "Filing of Documents," and/or Section 1.4, "Computation of Time," the permit may be deemed invalid.

#### Before Drilling

**Fresh Water Sand Protection.** The operator must set and cement sufficient surface casing to protect all usable-quality water, as defined by the Railroad Commission of Texas (RRC) Groundwater Advisory Unit (GWAU). Before drilling a well, the operator must obtain a letter from the Railroad Commission of Texas stating the depth to which water needs protection, Write: Railroad Commission of Texas, Groundwater Advisory Unit (GWAU), P.O. Box 12967, Austin, TX 78711-3087. File a copy of the letter with the appropriate district office.

**Accessing the Well Site.** If an OPERATOR, well equipment TRANSPORTER or WELL service provider must access the well site from a roadway on the state highway system (Interstate, U.S. Highway, State Highway, Farm-to-Market Road, Ranch-to-Market Road, etc.), an access permit is required from TxDOT. Permit applications are submitted to the respective TxDOT Area Office serving the county where the well is located.

**Water Transport to Well Site.** If an operator intends to transport water to the well site through a temporary pipeline laid above ground on the state's right-of-way, an additional TxDOT permit is required. Permit applications are submitted to the respective TxDOT Area Office serving the county where the well is located.

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#### \*NOTIFICATION

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The operator is **REQUIRED** to notify the district office when setting surface casing, intermediate casing, and production casing, or when plugging a dry hole. The district office **MUST** also be notified if the operator intends to re-enter a plugged well or re-complete a well into a different regulatory field. Time requirements are given below. The drilling permit number **MUST** be given with such notifications.

#### During Drilling

**Permit at Drilling Site.** A copy of the Form W-1 Drilling Permit Application, the location plat, a copy of Statewide Rule 13 alternate surface casing setting depth approval from the district office, if applicable, and this drilling permit must be kept at the permitted well site throughout drilling operations.

**\*Notification of Setting Casing.** The operator **MUST** call in notification to the appropriate district office (phone number shown on permit) a minimum of eight (8) hours prior to the setting of surface casing, intermediate casing, AND production casing. The individual giving notification **MUST** be able to advise the district office of the drilling permit number.

**\*Notification of Re-completion/Re-entry.** The operator MUST call in notification to the appropriate district office (phone number shown on permit) a minimum of eight (8) hours prior to the initiation of drilling or re-completion operations. The individual giving notification MUST be able to advise the district office of the drilling permit number.

### Completion and Plugging Reports

**Hydraulic Fracture Stimulation using Diesel Fuel:** Most operators in Texas do not use diesel fuel in hydraulic fracturing fluids. Section 322 of the Energy Policy Act of 2005 amended the Underground Injection Control (UIC) portion of the federal Safe Drinking Water Act (42 USC 300h(d)) to define "underground injection" to *EXCLUDE* " ...the underground injection of fluids or propping agents (*other than diesel fuels*) pursuant to hydraulic fracturing operations related to oil, gas, or geothermal production activities." (italic and underlining added.) Therefore, hydraulic fracturing may be subject to regulation under the federal UIC regulations if diesel fuel is injected or used as a propping agent. EPA defined "diesel fuel" using the following five (5) Chemical Abstract Service numbers: 68334-30-5 Primary Name: Fuels, diesel; 68476-34-6 Primary Name: Fuels, diesel, No. 2; 68476-30-2 Primary Name: Fuel oil No. 2; 68476-31-3 Primary Name: Fuel oil, No. 4; and 8008-20-6 Primary Name: Kerosene. As a result, an injection well permit would be required before performing hydraulic fracture stimulation using diesel fuel as defined by EPA on any well in Texas. Hydraulic fracture stimulation using diesel fuel as defined by EPA on a well in Texas without an injection well permit could result in enforcement action.

**Producing Well.** Statewide Rule 16 states that the operator of a well shall file with the Commission the appropriate completion report within thirty (30) days after completion of the well or within ninety (90) days after the date on which the drilling operation is completed, whichever is earlier. Completion of the well in a field authorized by this permit voids the permit for all other fields included in the permit unless the operator indicates on the initial completion report that the well is to be a dual or multiple completion and promptly submits an application for multiple completion. All zones are required to be completed before the expiration date on the existing permit. Statewide Rule 40(d) requires that upon successful completion of a well in the same reservoir as any other well previously assigned the same acreage, proration plats and P-15s (if required) must be submitted with no double assignment of acreage.

**Dry or Noncommercial Hole.** Statewide Rule 14(b)(2) prohibits suspension of operations on each dry or non-commercial well without plugging unless the hole is cased and the casing is cemented in compliance with Commission rules. If properly cased, Statewide Rule 14(b)(2) requires that plugging operations must begin within a period of one (1) year after drilling or operations have ceased. Plugging operations must proceed with due diligence until completed. An extension to the one-year plugging requirement may be granted under the provisions stated in Statewide Rule 14(b)(2).

**Intention to Plug.** The operator must file a Form W-3A (Notice of Intention to Plug and Abandon) with the district office at least five (5) days prior to beginning plugging operations. If, however, a drilling rig is already at work on location and ready to begin plugging operations, the district director or the director's delegate may waive this requirement upon request, and verbally approve the proposed plugging procedures.

**\*Notification of Plugging a Dry Hole.** The operator MUST call in notification to the appropriate district office (phone number shown on permit) a minimum of four (4) hours prior to beginning plugging operations. The individual giving the notification MUST be able to advise the district office of the drilling permit number and all water protection depths for that location as stated in the Texas Commission on Environmental Quality letter.

DIRECT INQUIRIES TO: DRILLING PERMIT SECTION, OIL AND GAS DIVISION

PHONE  
(512) 463-6751

MAIL:  
PO Box 12967  
Austin, Texas, 78711-2967

**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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<p style="text-align: center;"><b>THE FOLLOWING RESTRICTIONS APPLY TO ALL FIELDS</b></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**

**CRANE (103) County**

Formation	Shallow Top	Deep Top	Remarks	Geological Order	Effective Date
RUSTLER	1,000	1,000		1	12/17/2013
YATES	1,200	3,000		2	12/17/2013
GRAYBURG	2,100	3,100	Active CO2 flood	3	12/17/2013
SAN ANDRES	1,850	3,500	Usable Quality Water/Active CO2 flood	4	12/17/2013
SAN ANGELO	3,600	3,700		5	12/17/2013
SEVEN RIVERS	1,300	3,970		6	12/17/2013
GLORIETA	2,700	4,200		7	12/17/2013
PERMIAN GENERAL	3,900	4,200		8	12/17/2013
QUEEN	2,100	4,370		9	12/17/2013
CLEARFORK	2,900	4,400		10	12/17/2013
MONTOYA	5,300	5,300		11	12/17/2013
TUBB	3,350	5,400		12	12/17/2013
WICHITA ALBANY	5,400	6,000		13	12/17/2013
FUSSELMAN	6,400	7,400		14	12/17/2013
WOLFCAMP	5,000	7,500		15	12/17/2013
WADDELL	6,100	7,600		16	12/17/2013
BEND	7,700	7,700		17	12/17/2013
PENNSYLVANIAN	7,200	8,000		18	12/17/2013
CISCO	7,400	8,500		19	12/17/2013
STRAWN	8,600	8,600		20	12/17/2013
DEVONIAN	4,900	9,700	Active CO2 flood	21	12/17/2013
ELLENBURGER	5,400	11,700		22	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>