

API No. <u>42-495-33736</u> Drilling Permit # <u>817372</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. 429574		2. Operator's Name (as shown on form P-5, Organization Report) JAGGED PEAK ENERGY LLC		3. Operator Address (include street, city, state, zip): 1125 17TH STREET SUITE 2400 DENVER, CO 80202-0000			
4. Lease Name RK-UTL 3031A-17		5. Well No. 1H					
<b>GENERAL INFORMATION</b>							
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 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 15000		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. 08		12. County WINKLER		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>7.3</u> miles in a <u>SW</u> direction from <u>WINK</u> which is the nearest town in the county of the well site.							
15. Section 11		16. Block 17		17. Survey UL		18. Abstract No. A-U3	
				19. Distance to nearest lease line: 200 ft.		20. Number of contiguous acres in lease, pooled unit, or unitized tract: <b>640.7</b>	
21. Lease Perpendiculars: <u>390</u> ft from the <u>NORTH</u> line and <u>520</u> ft from the <u>WEST</u> line.							
22. Survey Perpendiculars: <u>390</u> ft from the <u>NORTH</u> line and <u>520</u> ft from the <u>WEST</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			
<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	71052900	PHANTOM (WOLFCAMP)		Oil or Gas Well	15000	0.00	
<b>BOTTOMHOLE LOCATION INFORMATION</b> is required for DIRECTIONAL, HORIZONTAL, AND AMENDED AS DRILLED PERMIT APPLICATIONS (see W-1H attachment)							
<b>Remarks</b> [RRC STAFF Jul 29, 2016 7:31 AM]: Changed BHL county information to match plat and RRC GIS.; [RRC STAFF Aug 1, 2016 5:04 PM]: Abstract information added for both the SHL and the BHL.				<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>Mike Paluso</u>            Name of filer         </div> <div> <u>Jul 28, 2016</u>            Date submitted         </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <u>(512)3278111</u>            Phone         </div> <div> <u>mpaluso@msmtx.com</u>            E-mail Address (OPTIONAL)         </div> </div>			
<b>RRC Use Only</b> Data Validation Time Stamp:    Aug 2, 2016 10:24 AM( 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 #	817372
Approved Date:	Aug 02, 2016

1. RRC Operator No. 429574	2. Operator's Name (exactly as shown on form P-5, Organization Report) JAGGED PEAK ENERGY LLC	3. Lease Name RK-UTL 3031A-17	4. Well No. 1H
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**Lateral Drainhole Location Information**

5. Field as shown on Form W-1 PHANTOM (WOLFCAMP) (Field # 71052900, RRC District 08)

6. Section 31	7. Block 17	8. Survey UL / A-U70	9. Abstract	10. County of BHL WARD
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11. Terminus Lease Line Perpendiculars 330 ft. from the NORTH line and 200 ft. from the WEST line
12. Terminus Survey Line Perpendiculars 330 ft. from the NORTH line and 200 ft. from the WEST line
13. Penetration Point Lease Line Perpendiculars 330 ft. from the NORTH line and 200 ft. from the EAST 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 <b>817372</b>	DATE PERMIT ISSUED OR AMENDED <b>Aug 02, 2016</b>	DISTRICT <b>* 08</b>	
API NUMBER <b>42-495-33736</b>	FORM W-1 RECEIVED <b>Jul 28, 2016</b>	COUNTY <b>WINKLER</b>	
TYPE OF OPERATION <b>NEW DRILL</b>	WELLBORE PROFILE(S) <b>Horizontal</b>	ACRES <b>640.7</b>	
OPERATOR <b>JAGGED PEAK ENERGY LLC</b> <b>1125 17TH STREET SUITE 2400</b> <b>DENVER, CO 80202-0000</b>		NOTICE This permit and any allowable assigned may be revoked if payment for fee(s) submitted to the Commission is not honored. <b>District Office Telephone No:</b> <b>(432) 684-5581</b>	
LEASE NAME <b>RK-UTL 3031A-17</b>		WELL NUMBER <b>1H</b>	
LOCATION <b>7.3 miles SW direction from WINK</b>		TOTAL DEPTH <b>15000</b>	
Section, Block and/or Survey SECTION ◀ <b>11</b> BLOCK ◀ <b>17</b> ABSTRACT ◀ <b>U3</b> SURVEY ◀ <b>UL</b>			
DISTANCE TO SURVEY LINES <b>390 ft. NORTH. 520 ft. WEST</b>		DISTANCE TO NEAREST LEASE LINE <b>200 ft.</b>	
DISTANCE TO LEASE LINES <b>390 ft. NORTH 520 ft. WEST</b>		DISTANCE TO NEAREST WELL ON LEASE <b>See FIELD(s) Below</b>	
FIELD(s) and LIMITATIONS: <p align="center"><b>* SEE FIELD DISTRICT FOR REPORTING PURPOSES *</b></p>			
FIELD NAME LEASE NAME		ACRES NEAREST LEASE	DEPTH NEAREST WE
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<b>PHANTOM (WOLFCAMP)</b>		<b>640.70</b>	<b>15,000</b>
<b>RK-UTL 3031A-17</b>		<b>200</b>	<b>0</b>
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WELLBORE PROFILE(s) FOR FIELD: <b>Horizontal</b>			
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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			
Lease Lines: 330.0 F NORTH L			
200.0 F EAST L			
Terminus Location			
BH County: WARD			
Section: 31                      Block: 17                      Abstract:			
Survey: UL / A-U70			
Lease Lines: 330.0 F NORTH L			
200.0 F WEST L			
Survey Lines: 330.0 F NORTH L			
200.0 F WEST L			
<p align="center"><b>THE FOLLOWING RESTRICTIONS APPLY TO ALL FIELDS</b></p>			

**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 <b>817372</b>	DATE PERMIT ISSUED OR AMENDED <b>Aug 02, 2016</b>	DISTRICT <b>* 08</b>
API NUMBER <b>42-495-33736</b>	FORM W-1 RECEIVED <b>Jul 28, 2016</b>	COUNTY <b>WINKLER</b>
TYPE OF OPERATION <b>NEW DRILL</b>	WELLBORE PROFILE(S) <b>Horizontal</b>	ACRES <b>640.7</b>
OPERATOR <b>JAGGED PEAK ENERGY LLC</b> <b>1125 17TH STREET SUITE 2400</b> <b>DENVER, CO 80202-0000</b>		NOTICE This permit and any allowable assigned may be revoked if payment for fee(s) submitted to the Commission is not honored. <b>District Office Telephone No:</b> <b>(432) 684-5581</b>
LEASE NAME <b>RK-UTL 3031A-17</b>		WELL NUMBER <b>1H</b>
LOCATION <b>7.3 miles SW direction from WINK</b>		TOTAL DEPTH <b>15000</b>
Section, Block and/or Survey SECTION ◀ <b>11</b> BLOCK ◀ <b>17</b> ABSTRACT ◀ <b>U3</b> SURVEY ◀ <b>UL</b>		
DISTANCE TO SURVEY LINES <b>390 ft. NORTH    520 ft. WEST</b>		DISTANCE TO NEAREST LEASE LINE <b>200 ft.</b>
DISTANCE TO LEASE LINES <b>390 ft. NORTH    520 ft. WEST</b>		DISTANCE TO NEAREST WELL ON LEASE <b>See FIELD(s) Below</b>
FIELD(s) and LIMITATIONS: <p align="center"><b>* SEE FIELD DISTRICT FOR REPORTING PURPOSES *</b></p>		
FIELD NAME LEASE NAME	ACRES NEAREST LEASE	DEPTH NEAREST WE
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**

**WINKLER (495) County**

Formation	Shallow Top	Deep Top	Remarks	Geological Order	Effective Date
RUSTLER	725	725	possible flow; possible usable quality water	1	12/17/2013
COLBY-QUEEN	2,900	3,200		2	12/17/2013
YATES	2,280	3,200		3	12/17/2013
QUEEN-SEVEN RIVERS	2,700	3,400		4	12/17/2013
SAN ANDRES	3,600	4,400	high flows, H2S, corrosive	5	12/17/2013
HOLT	4,500	4,800		6	12/17/2013
DELAWARE	4,300	5,000		7	12/17/2013
GLORIETA	4,900	5,600		8	12/17/2013
CLEARFORK	4,750	6,200		9	12/17/2013
WICHITA ALBANY	6,600	6,850		10	12/17/2013
BRUSHY CANYON	7,300	7,300		11	12/17/2013
CHERRY CANYON	6,000	7,800		12	12/17/2013
CANYON	8,400	8,400		13	12/17/2013
BONE SPRINGS	9,000	9,800		14	12/17/2013
MONTOYA	10,300	10,300		15	12/17/2013
WADDELL	11,000	11,000		16	12/17/2013
WOLFCAMP	7,600	12,400		17	12/17/2013
ATOKA	12,900	12,900		18	12/17/2013
STRAWN	8,100	14,800		19	12/17/2013
PENNSYLVANIAN	8,000	15,500		20	12/17/2013
MISSISSIPPIAN	10,200	17,300		21	12/17/2013
DEVONIAN	7,900	17,800		22	12/17/2013
SILURIAN	8,500	18,000		23	12/17/2013
FUSSELMAN	9,700	18,800		24	12/17/2013
ELLENBURGER	9,500	21,400		25	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:** 28 July 2016**GAU Number:** 158048**Attention:** JAGGED PEAK ENERGY LLC  
1125 17TH STREET SUITE  
DENVER, CO 80202**Operator No.:** 429574**API Number:**  
**County:** WINKLER  
**Lease Name:** RK-UTL 3031A-17  
**Lease Number:**  
**Well Number:** 1H  
**Total Vertical Depth:** 15000  
**Latitude:** 31.659775  
**Longitude:** -103.210414  
**Datum:** NAD27**Purpose:** New Drill**Location:** Survey-UL; Abstract-U3; Block-17; Section-11

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 the base of the Allurossa, which is estimated to occur at a depth of 950 feet, must be protected.

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

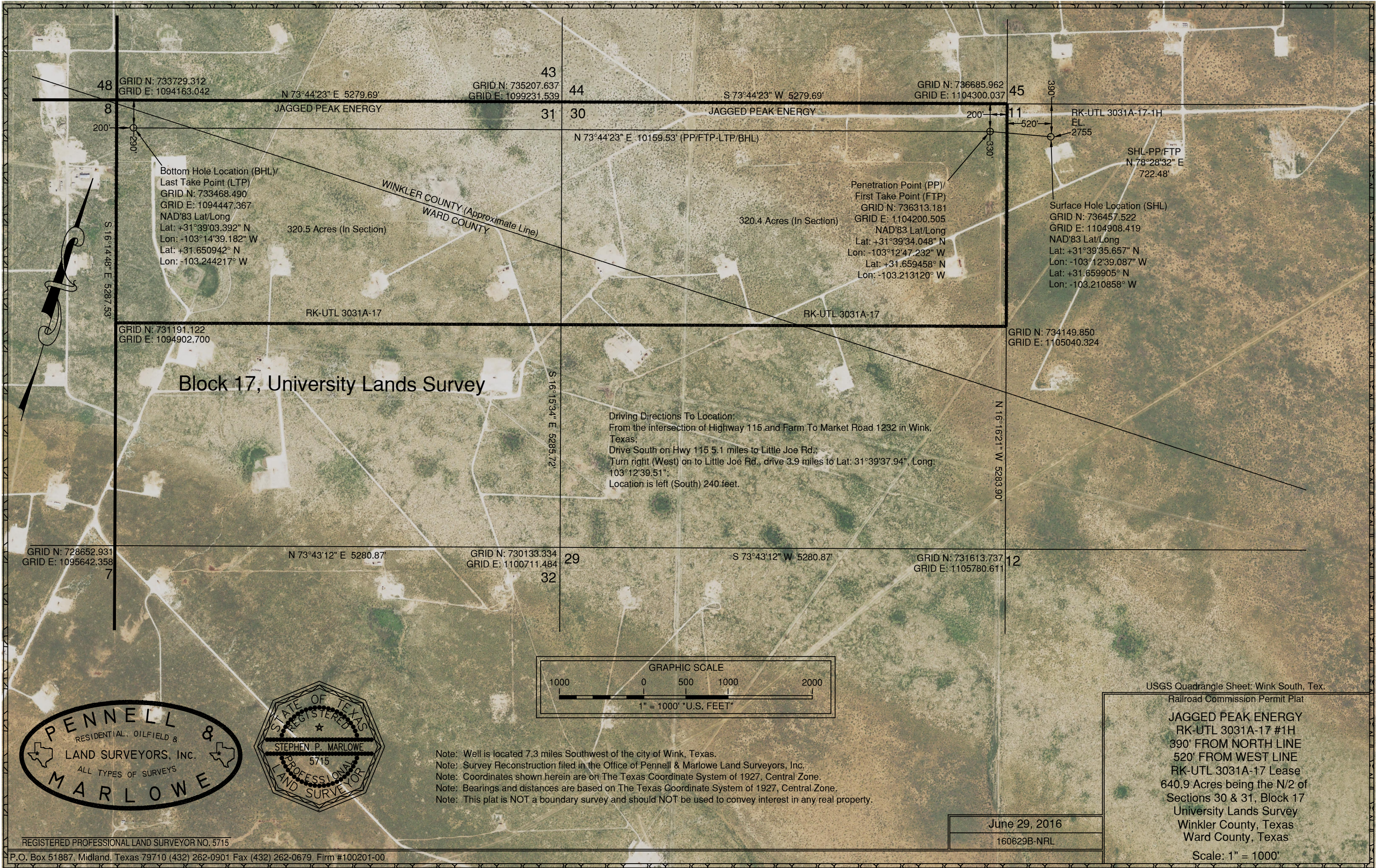
This recommendation is applicable for all wells drilled in this N 1/2 Section 11 on this Lease.

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 07/28/2016. 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





GRID N: 733729.312  
GRID E: 1094163.042

N 73°44'23" E 5279.69'  
JAGGED PEAK ENERGY

43  
GRID N: 735207.637  
GRID E: 1099231.539

44

S 73°44'23" W 5279.69'  
JAGGED PEAK ENERGY

GRID N: 736685.962  
GRID E: 1104300.037

45

390'  
RK-UTL 3031A-17-1H  
EL. 2755

SHL-PP/FTP  
N 78°28'32" E  
722.48'

Bottom Hole Location (BHL)/  
Last Take Point (LTP)  
GRID N: 733468.490  
GRID E: 1094447.367  
NAD'83 Lat/Long  
Lat: +31°39'03.392" N  
Lon: -103°14'39.182" W  
Lat: +31.650942° N  
Lon: -103.244217° W

320.5 Acres (In Section)

WINKLER COUNTY (Approximate Line)  
WARD COUNTY

Penetration Point (PP)/  
First Take Point (FTP)  
GRID N: 736313.181  
GRID E: 1104200.505  
NAD'83 Lat/Long  
Lat: +31°39'34.048" N  
Lon: -103°12'47.232" W  
Lat: +31.659458° N  
Lon: -103.213120° W

320.4 Acres (In Section)

Surface Hole Location (SHL)  
GRID N: 736457.522  
GRID E: 1104908.419  
NAD'83 Lat/Long  
Lat: +31°39'35.657" N  
Lon: -103°12'39.087" W  
Lat: +31.659905° N  
Lon: -103.210858° W

GRID N: 731191.122  
GRID E: 1094902.700

Block 17, University Lands Survey

Driving Directions To Location:  
From the intersection of Highway 115 and Farm To Market Road 1232 in Wink,  
Texas;  
Drive South on Hwy 115 5.1 miles to Little Joe Rd.;  
Turn right (West) on to Little Joe Rd., drive 3.9 miles to Lat: 31°39'37.94", Long:  
103°12'39.51";  
Location is left (South) 240 feet.

GRID N: 728652.931  
GRID E: 1095642.358

N 73°43'12" E 5280.87'

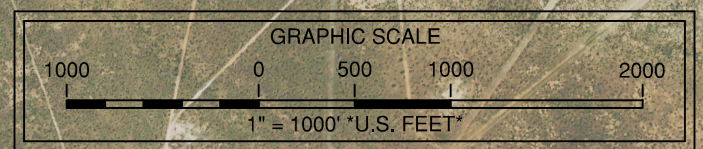
GRID N: 730133.334  
GRID E: 1100711.484

29

S 73°43'12" W 5280.87'

GRID N: 731613.737  
GRID E: 1105780.611

12



Note: Well is located 7.3 miles Southwest of the city of Wink, Texas.  
Note: Survey Reconstruction filed in the Office of Pennell & Marlowe Land Surveyors, Inc.  
Note: Coordinates shown herein are on The Texas Coordinate System of 1927, Central Zone.  
Note: Bearings and distances are based on The Texas Coordinate System of 1927, Central Zone.  
Note: This plat is NOT a boundary survey and should NOT be used to convey interest in any real property.

USGS Quadrangle Sheet: Wink South, Tex.  
Railroad Commission Permit Plat

JAGGED PEAK ENERGY  
RK-UTL 3031A-17 #1H  
390' FROM NORTH LINE  
520' FROM WEST LINE  
RK-UTL 3031A-17 Lease  
640.9 Acres being the N/2 of  
Sections 30 & 31, Block 17  
University Lands Survey  
Winkler County, Texas  
Ward County, Texas

June 29, 2016

160629B-NRL

Scale: 1" = 1000'