



Permit Status: **Approved**

*The RRC has not approved this application. Duplication or distribution of information is at the user's own risk.*

**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**

Permit # **817372**  
Approved Date: **Aug 02, 2016**

*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.*

1. RRC Operator No. <b>429574</b>	2. Operator's Name (exactly as shown on form P-5, Organization Report) <b>JAGGED PEAK ENERGY LLC</b>	3. Lease Name <b>RK-UTL 3031A-17</b>	4. Well No. <b>1H</b>
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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 <b>31</b>	7. Block <b>17</b>	8. Survey <b>UL / A-U70</b>	9. Abstract	10. County of BHL <b>WARD</b>
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11. Terminus Lease Line Perpendiculars - <b>330</b> ft. from the <b>NORTH</b> line and <b>200</b> ft. from the <b>WEST</b> line
12. Terminus Survey Line Perpendiculars <b>330</b> ft. from the <b>NORTH</b> line and <b>200</b> ft. from the <b>WEST</b> line
13. Penetration Point Lease Line Perpendiculars <b>330</b> ft. from the <b>NORTH</b> line and <b>200</b> ft. from the <b>EAST</b> 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 817372	DATE PERMIT ISSUED OR AMENDED Aug 02, 2016	DISTRICT * 08
API NUMBER 42-495-33736	FORM W-1 RECEIVED Jul 28, 2016	COUNTY WINKLER
TYPE OF OPERATION NEW DRILL	WELLBORE PROFILE(S) Horizontal	ACRES 640.7
OPERATOR JAGGED PEAK ENERGY LLC 1125 17TH STREET SUITE 2400 DENVER, CO 80202-0000	429574	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 RK-UTL 3031A-17		WELL NUMBER 1H
LOCATION 7.3 miles SW direction from WINK		TOTAL DEPTH 15000
Section, Block and/or Survey SECTION ◀ 11                      BLOCK ◀ 17                      ABSTRACT ◀ U3 SURVEY ◀ UL		
DISTANCE TO SURVEY LINES 390 ft. NORTH    520 ft. WEST		DISTANCE TO NEAREST LEASE LINE 200 ft.
DISTANCE TO LEASE LINES 390 ft. NORTH    520 ft. WEST		DISTANCE TO NEAREST WELL ON LEASE See FIELD(s) Below
FIELD(s) and LIMITATIONS: * SEE FIELD DISTRICT FOR REPORTING PURPOSES *		
FIELD NAME LEASE NAME	ACRES NEAREST LEASE	DEPTH NEAREST LEASE
	WELL # NEAREST WE	DIST
<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**

**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

<b>Attention:</b>	JAGGED PEAK ENERGY LLC 1125 17TH STREET SUITE DENVER, CO 80202	<b>API Number:</b>	
<b>Operator No.:</b>	429574	<b>County:</b>	WINKLER
		<b>Lease Name:</b>	RK-UTL 3031A-17
		<b>Lease Number:</b>	
		<b>Well Number:</b>	1H
		<b>Total Vertical Depth:</b>	15000
		<b>Latitude:</b>	31.659775
		<b>Longitude:</b>	-103.210414
		<b>Datum:</b>	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 Allurosa, 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.

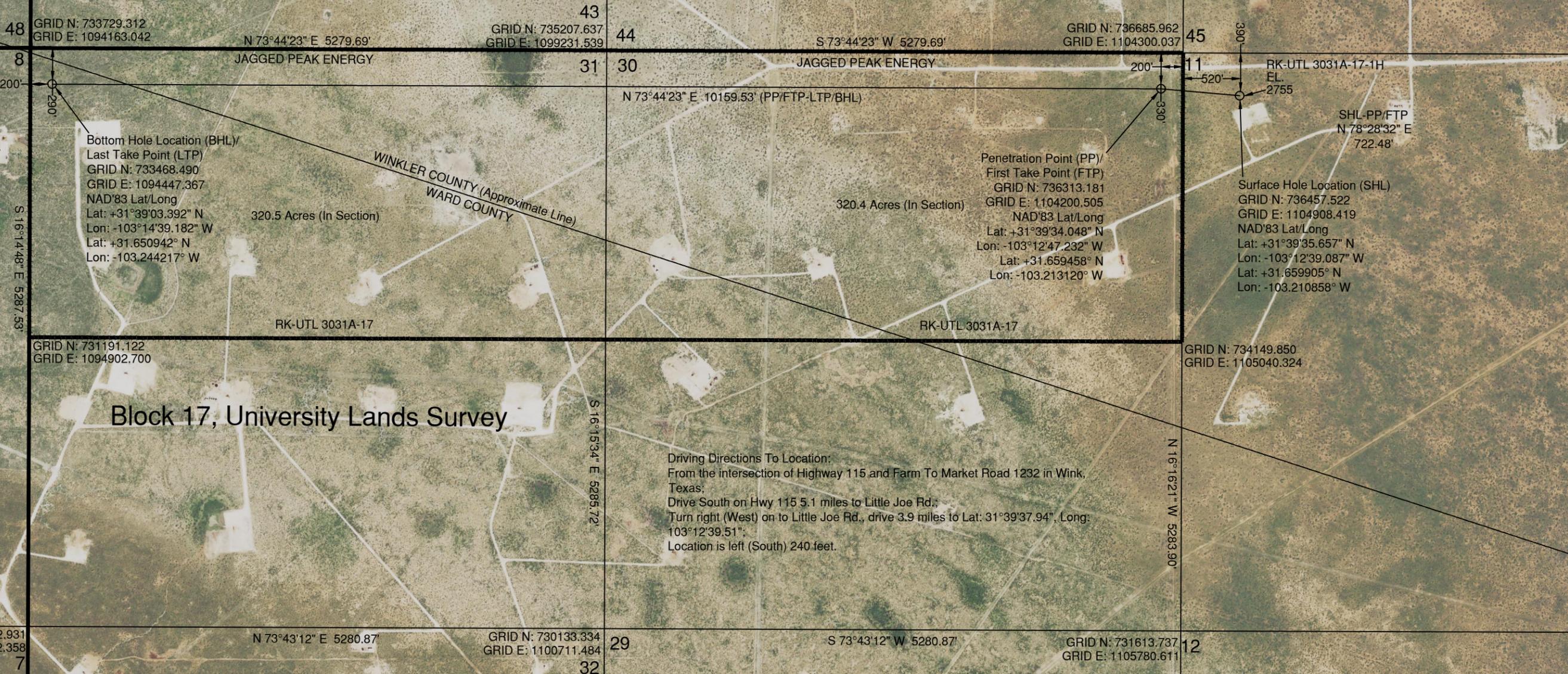
This recommendation is applicable for all wells drilled in this N 1/2 Section 11 on this Lease.

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

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



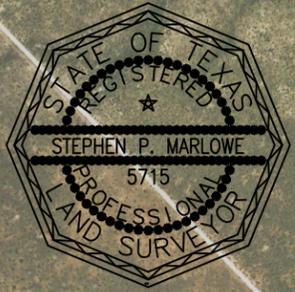
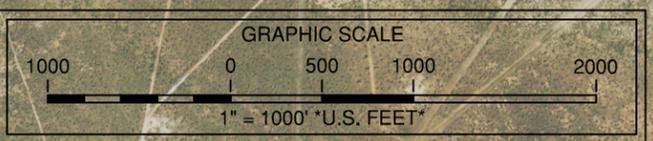
Bottom Hole Location (BHL)/  
Last Take Point (LTP)  
GRID N: 733468.490  
GRID E: 1094447.367  
NAD'83 Lat/Long  
Lat: +31°39'03.392" N  
Lon: -103°14'39.182" W  
Lat: +31.650942° N  
Lon: -103.244217° W

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

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

**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.



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'