

API No. <u>42-105-42183</u> Drilling Permit # <u>801440</u> SWR Exception Case/Docket No. _____	RAILROAD COMMISSION OF TEXAS OIL & GAS DIVISION APPLICATION FOR PERMIT TO DRILL, RECOMPLETE, OR RE-ENTER <small>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.</small>	FORM W-1 07/2004 Permit Status: Approved
---	---	---

1. RRC Operator No. 028625	2. Operator's Name (as shown on form P-5, Organization Report) APPROACH OPERATING LLC	3. Operator Address (include street, city, state, zip): ONE RIDGMAR CENTRE 6500 WEST FREEWAY SUITE 800 FORT WORTH, TX 76116-0000
4. Lease Name UNIVERSITY 42		5. Well No. 2111HC

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 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 7800	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. 7C	12. County CROCKETT	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</u> miles in a <u>NE</u> direction from <u>OZONA</u> which is the nearest town in the county of the well site.				
15. Section 21	16. Block 42	17. Survey UNIVERSITY LAND	18. Abstract No. A-	19. Distance to nearest lease line: 100 ft.
20. Number of contiguous acres in lease, pooled unit, or unitized tract: 7780.13				
21. Lease Perpendiculars: <u>440</u> ft from the <u>S</u> line and <u>3501</u> ft from the <u>E</u> line.				
22. Survey Perpendiculars: <u>440</u> ft from the <u>S</u> line and <u>1790</u> ft from the <u>W</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	32. Number of Wells on this lease in this Reservoir
7C	42341300	HOLT RANCH (CONSOLIDATED)	Oil or Gas Well	7800	360.00	121

BOTTOMHOLE LOCATION INFORMATION is required for DIRECTIONAL, HORIZONTAL, AND AMENDED AS DRILLED PERMIT APPLICATIONS (see W-1H attachment)

Remarks [RRC STAFF Dec 9, 2014 3:59 PM]: Per Carol Adler:"The lease was consolidated in October/2013. P-4's were filed and G-1 WRO's for the gas wells were submitted and approved in March/2014. All wells should be under RRC I.D. # 17265 after consolidation. "	Certificate: I certify that information stated in this application is true and complete, to the best of my knowledge. <u>Carol Adler, SR Regulatory Specialist</u> <u>Dec 09, 2014</u> <small>Name of filer</small> <small>Date submitted</small> <u>(817)989-9000, x2143</u> <u>cadler@approachresources.com</u> <small>Phone</small> <small>E-mail Address (OPTIONAL)</small>
RRC Use Only Data Validation Time Stamp: Dec 10, 2014 12:18 PM('As Approved' Version)	

**RAILROAD COMMISSION OF TEXAS
OIL & GAS DIVISION**

Form W-1H 07/2004
Supplemental Horizontal Well Information

Permit Status: **Approved**

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

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 #	801440
Approved Date:	Dec 10, 2014

1. RRC Operator No. 028625	2. Operator's Name (exactly as shown on form P-5, Organization Report) APPROACH OPERATING LLC	3. Lease Name UNIVERSITY 42	4. Well No. 2111HC
-------------------------------	--	--------------------------------	-----------------------

Lateral Drainhole Location Information

5. Field as shown on Form W-1 **HOLT RANCH (CONSOLIDATED) (Field # 42341300, RRC District 7C)**

6. Section 16	7. Block 42	8. Survey UNIVERSITY LAND	9. Abstract	10. County of BHL CROCKETT
------------------	----------------	------------------------------	-------------	-------------------------------

11.	Terminus Lease Line Perpendiculars	20	ft. from the	N	line. and	3501	ft. from the	E	line
12.	Terminus Survey Line Perpendiculars	20	ft. from the	N	line. and	1790	ft. from the	W	line
13.	Penetration Point Lease Line Perpendiculars	440	ft. from the	S	line. and	3501	ft. from the	E	line

RAILROAD COMMISSION OF TEXAS
OIL & GAS DIVISION
SWR #13 Formation Data

CROCKETT (105) County

Formation	Shallow Top	Deep Top	Remarks	Geological Order	Effective Date
QUEEN	1,000	2,300		1	12/17/2013
SAN ANDRES	1,000	3,700		2	12/17/2013
LEONARD	3,100	4,200		3	12/17/2013
WOLFCAMP	3,400	6,300		4	12/17/2013
CANYON	4,000	8,800		5	12/17/2013
STRAWN	7,100	11,600		6	12/17/2013
DEVONIAN	8,900	11,900		7	12/17/2013
ELLENBURGER	6,500	13,400		8	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>

Groundwater
Advisory Unit

GROUNDWATER PROTECTION DETERMINATION

Form GW-2

Date **December 11, 2014**

GAU File No.: **15784**

***** EXPEDITED APPLICATION *****

API Number **10542183**

Attention: **CAROL ADLER**

RRC Lease No. **000000**

SC_028625_10542183_000000_15784.pdf

APPROACH OPERATING LLC
6500 W FWY
STE 800
FORT WORTH TX 76116

--Measured--

1790 ft FWL

440 ft FSL

MRL:SECTION

P-5# 028625

Digital Map Location:

X-coord/Long **101.15510**

Y-coord/Lat **30.91140**

Datum **27**

Zone

County **CROCKETT**

Lease & Well No. **UNIVERSITY 42 #2111HC&ALL**

Purpose **ND**

Location **SUR-UL, BLK-42, SEC-21, -- [TD=7800], [RRC 7C],**

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 750 feet must be protected.

This recommendation is adequate for wells drilled in this S/2 section 21.

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

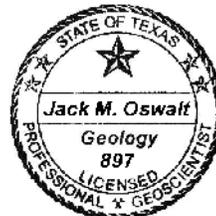
If you have any questions, please contact us at 512-463-2741, gau@rrc.state.tx.us, or by mail.

Sincerely,

[Signature Box]

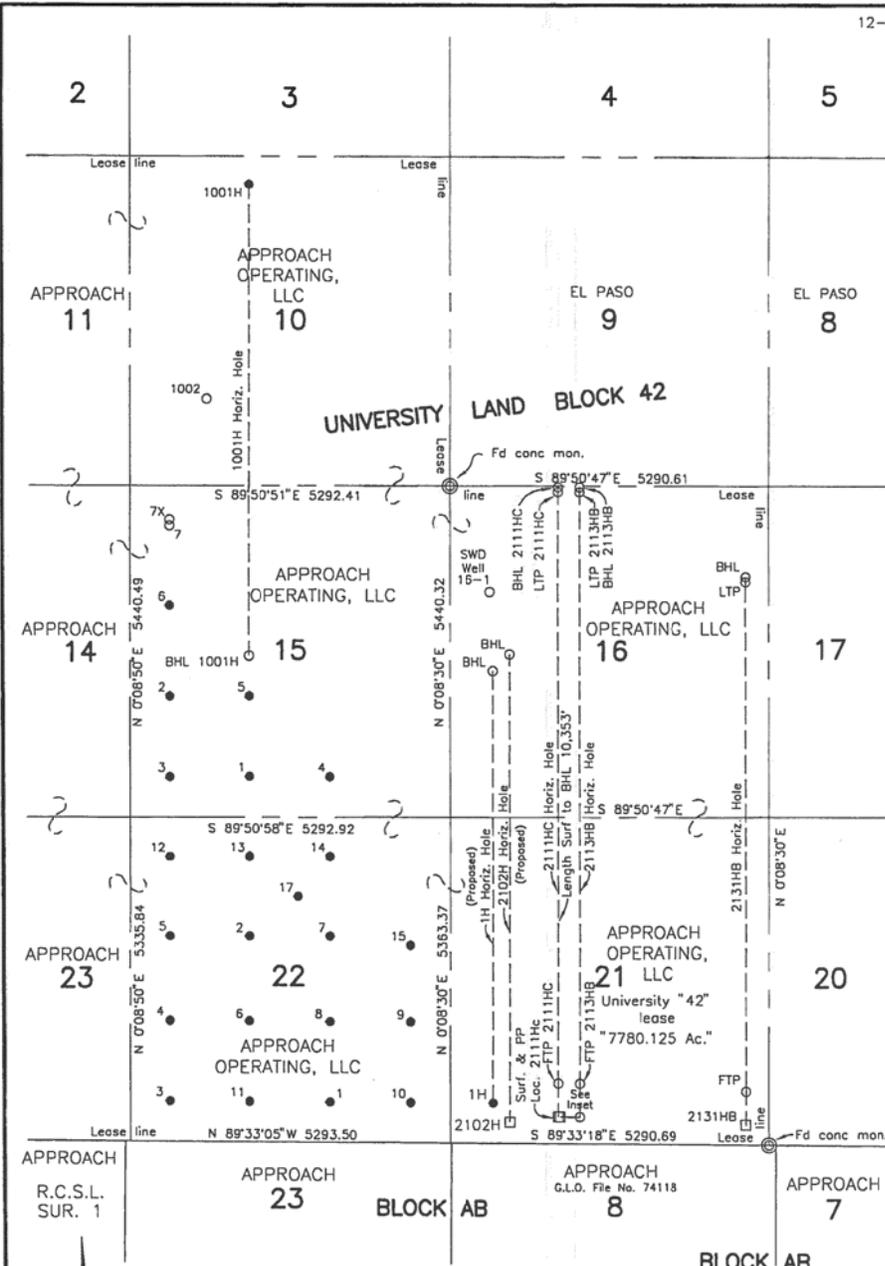
Jack M. Oswalt, P.G.

GEOLOGIST SEAL



Geologist, Groundwater Advisory Unit
Oil & Gas Division

The seal appearing on this document was authorized by Jack M. Oswalt on 12/11/2014
Note: Alteration of this electronic document will invalidate the digital signature.



LEGEND

- = Surface Location (S.L.)
- PP = Penetration Point
- = Surface well (as drilled)
- FTP = 1st Take Point
- LTP = Last Take Point
- BHL = Bottom Hole Location

SURFACE LOCATION

Y = 453,651 ft.
 X = 1,742,301 ft.
 Latitude : 30.9114° N.
 Longitude : 101.1551° W.
 440 ft. FSL and 1790 ft. FWL
 University Land Survey 21, Block 42
 440 ft. FSL and 3501 ft. FEL of lease

PROPOSED PENETRATION POINT

Y = 453,651 ft.
 X = 1,742,301 ft.
 Latitude : 30.9114° N.
 Longitude : 101.1551° W.
 440 ft. FSL and 1790 ft. FWL
 University Land Survey 21, Block 42
 440 ft. FSL and 3501 ft. FEL of lease

PROPOSED 1st TAKE POINT

550 ft. from Surf. 2111HC
 990 ft. FSL and 3501 ft. FEL of lease
 990 ft. FSL and 1790 ft. FWL
 University Land Survey 21, Block 42
 Y = 454,201 ft.
 X = 1,742,303 ft.
 Latitude : 30.9129° N.
 Longitude : 101.1551° W.

PROPOSED LAST TAKE POINT

80 ft. from BHL 2111HC
 100 ft. FNL and 3501 ft. FEL of lease
 100 ft. FNL and 1790 ft. FWL
 University Land Survey 18, Block 42
 Y = 463,923 ft.
 X = 1,742,327 ft.
 Latitude : 30.9397° N.
 Longitude : 101.1553° W.

PROPOSED BOTTOMHOLE LOC.

Y = 464,003 ft.
 X = 1,742,327 ft.
 Latitude : 30.9399° N.
 Longitude : 101.1553° W.
 20 ft. FNL and 1790 ft. FWL
 University Land Survey 16, Block 42
 20 ft. FNL and 3501 ft. FEL of lease

Perpendicular distances off 2111HC Univ. 42' horizontal hole

- FTP 2113HB (proposed) = 360'
- LTP 2113HB (proposed) = 360'
- BHL 2113HB (proposed) = 360'
- BHL 2102H (proposed) = 800'



Located: N 10°E 14 miles from Ozona, Texas.

" Ac " = Acreage claimed by operator to be in lease.



SCALE: 1" = 2000'

FIELD COUNTY : Crockett
 OPERATOR : Approach Operating, LLC
 LEASE : University "42"
 WELL NO. : 2111HC
 ELEVATION : 2596 ft. grd.
 LOCATION : 440 ft. FSL and 1790 ft. FWL of University Land Survey 21, Block 42, Crockett County, Texas.

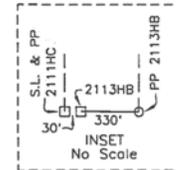
NOTES

Courses, distances and coordinates shown hereon are of the Texas Coordinate System of 1927 - Central Zone.

The survey construction shown hereon is sufficient for staking this location and no other purpose.

The lease information shown hereon is based on information provided by operator or its representatives and was relied upon by surveyor for the purpose of staking this location. Said surveyor was not requested to verify lease and accepts no responsibility for the accuracy or status of this information.

Position of surveys shown hereon is based on Frank Friends survey of University Lands Blocks 38 to 57 dated July 24, 1937 on file in the General Land Office.



The above sketch represents the location as staked on the ground and is for permit purposes only.
 Staked the 2nd day of December, 2014.



Thomas J. Houston
 Thomas J. Houston
 Registered Professional Land Surveyor No. 4261
 FIRM NO. 10045600
 OFFICE OF

WILSON LAND SURVEYING, INC.
 1514 W. BEAUREGARD AVE.
 P. O. BOX 3326 PH. 325-653-3916
 SAN ANGELO, TEXAS 76902