

API No. <u>42-475-37766</u> Drilling Permit # <u>847614</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 Permit Status: Approved
1. RRC Operator No. <u>003125</u>	2. Operator's Name (as shown on form P-5, Organization Report) ABRAXAS PETROLEUM CORPORATION	3. Operator Address (include street, city, state, zip) 18803 MEISNER DR SAN ANTONIO, TX 78258-0000
4. Lease Name <u>WOODBERRY 3</u>	5. Well No. <u>101H</u>	
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 <u>12000</u>	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
SURFACE LOCATION AND ACREAGE INFORMATION		
11. RRC District No. <u>08</u>	12. County <u>WARD</u>	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>1.85</u> miles in a <u>NW</u> direction from <u>PYOTE</u> which is the nearest town in the county of the well site.		
15. Section <u>98</u>	16. Block <u>F</u>	17. Survey <u>G&MMB&A</u>
18. Abstract No. <u>52</u>	19. Distance to nearest lease line: <u>100.0</u> ft.	20. Number of contiguous acres in lease, pooled unit, or unitized tract: <u>640.7</u>
21. Lease Perpendiculars: <u>330.0</u> ft. from the <u>SOUTH</u> line and <u>200.0</u> ft. from the <u>WEST</u> line.		
22. Survey Perpendiculars: <u>330.0</u> ft. from the <u>SOUTH</u> line and <u>200.0</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		
FIELD INFORMATION List all fields of anticipated completion including Wildcat. List one zone per line.		
26. RRC District No. <u>08</u>	27. Field No. <u>71052900</u>	28. Field Name (exactly as shown in RRC records) <u>PHANTOM (WOLFCAMP)</u>
29. Well Type <u>Oil Well</u>	30. Completion Depth <u>12000</u>	31. Distance to Nearest Well in this Reservoir <u>0.0</u>
32. Number of Wells on this lease in this Reservoir <u>1</u>		
BOTTOMHOLE LOCATION INFORMATION is required for DIRECTIONAL, HORIZONTAL, AND AMENDED AS DRILLED PERMIT APPLICATIONS		
Remarks [FILER 12/07/2018 10:47:31 AM]: ALSO PERMITTING THE WOODBERRY 3 #201H; [RRC STAFF 12/07/2018 05:13:37 PM]: All wells being permitted in this group shown on P-16. Well count on W-1 reflects order of submittal.; [RRC STAFF 12/07/2018 05:13:53 PM]: There have been problems identified with this permit (see problem letter attachment). Notification sent.; [RRC STAFF 12/12/2018 08:32:49 AM]: Problems identified with this permit are resolved.; [RRC STAFF 12/12/2018 08:33:04 AM]: Scarlet Holguin sent revised P-16;		Certificate: I certify that information stated in this application is true and complete, to the best of my knowledge RRC User _____ <u>12/07/2018</u> Name of filer _____ Date Submitted _____ Phone _____ Email Address(OPTIONAL)
RRC Use Only Date Validation Time Stamp: <u>Thu, 20 Dec 2018 10:25:01</u>		

RAILROAD COMMISSION OF TEXAS

OIL & GAS DIVISION

APPLICATION FOR PERMIT TO DRILL, RECOMPLETE, OR RE-

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A certification of the automated data is available in the RRC's Austin office.*

FORM W-1H

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.

Permit # **847614**

Approved Date: **12/12/2018**

1. RRC Operator No. 003125	2. Operator's Name (as shown on form P-5, Organization Report) ABRAXAS PETROLEUM CORPORATION	3. Lease Name WOODBERRY 3	4 Well No. 101H
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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 3	7. Block 17	8. Survey UL / A-U42	9. Abstract	10. County of BHL WARD
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11. Terminus Lease Line Perpendiculars
 330.0 ft. from the SOUTH line and 100.0 ft. from the WEST line

12. Terminus Survey Line Perpendiculars
 330.0 ft. from the SOUTH line and 100.0 ft. from the WEST line

13. Penetration Point Lease Line Perpendiculars
 330.0 ft. from the SOUTH line and 200.0 ft. from the WEST line

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

WARD (475) County

Formation	Shallow Top	Deep Top	Remarks	Geological Order	Effective Date
RUSTLER	1,700	1,700		1	12/17/2013
YATES	2,000	2,800		2	12/17/2013
SEVEN RIVERS	2,375	2,375		3	12/17/2013
QUEEN	2,200	3,200		4	12/17/2013
GLORIETA	3,900	4,000		5	12/17/2013
SAN ANDRES	2,000	4,500	high flows, H2S, corrosive	6	12/17/2013
HOLT	4,600	4,800		7	12/17/2013
CLEARFORK	4,500	5,000		8	12/17/2013
DELAWARE	2,300	5,000		9	12/17/2013
TUBB	4,600	5,300		10	12/17/2013
WICHITA ALBANY	6,000	6,200		11	12/17/2013
CHERRY CANYON	4,800	7,800		12	12/17/2013
WADDELL	7,600	9,700		13	12/17/2013
BONE SPRINGS	4,700	9,800		14	12/17/2013
WOLFCAMP	6,000	12,750		15	12/17/2013
MONTOYA	14,500	14,500		16	12/17/2013
PENNSYLVANIAN	7,500	14,900		17	12/17/2013
ATOKA	12,000	15,000		18	12/17/2013
FUSSELMAN	6,400	17,500		19	12/17/2013
DEVONIAN	6,200	17,800		20	12/17/2013
ELLENBURGER	7,900	20,800		21	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: 08 November 2018 **GAU Number:** 220504

Attention:	ABRAXAS PETROLEUM 18803 MEISNER DR SAN ANTONIO, TX 78258	API Number:	
Operator No.:	003125	County:	WARD
		Lease Name:	WOODBERRY
		Lease Number:	
		Well Number:	101H
		Total Vertical Depth:	12000
		Latitude:	31.559369
		Longitude:	-103.137970
		Datum:	NAD27

Purpose: New Production Well

Location: Survey-G&MMB&A; Abstract-52; Block-F; Section-98

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 Santa Rosa, which is estimated to occur at a depth of 1400 feet, must be protected.

This recommendation is applicable to all wells within a radius of 200 feet of this location.

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

Note: Unless stated otherwise, this recommendation is intended to apply only to the subject well and not for area-wide use. Unless stated otherwise, this recommendation is for normal drilling, production, and plugging operations only.

This determination is based on information provided when the application was submitted on 11/06/2018. 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

ABRAXAS PETROLEUM CORP.

LEASE NAME & WELL NO.:
WOODBERRY 3 #101H

TOPOGRAPHY & VEGETATION:
NATURAL MESQUITE PASTURE

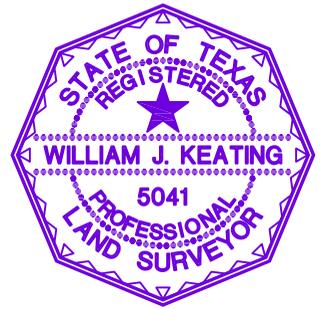
NEAREST TOWN IN COUNTY:
±1.85 MILES NORTHWEST OF PYOTE, TEXAS

DESCRIPTION:
SHL/PP: SECTION 98, BLOCK F, G. & M.M.B. & A. SURVEY, A-52
FTP/LTP/BHL: SECTION 3, BLOCK 17, UNIVERSITY LAND SURVEY,
WARD COUNTY, TEXAS

SPECIAL NOTES:

Original Document Size: 8.5"x14"
All Coordinates are in NAD 27 TX-C Zone unless otherwise noted.

CERTIFICATION:
This well location shown on this permit plat was surveyed on the ground under my direct supervision. This plat is for Texas Railroad Commission permit purpose only and should not be considered a boundary survey.



William J. Keating
Texas Reg. No. 5041



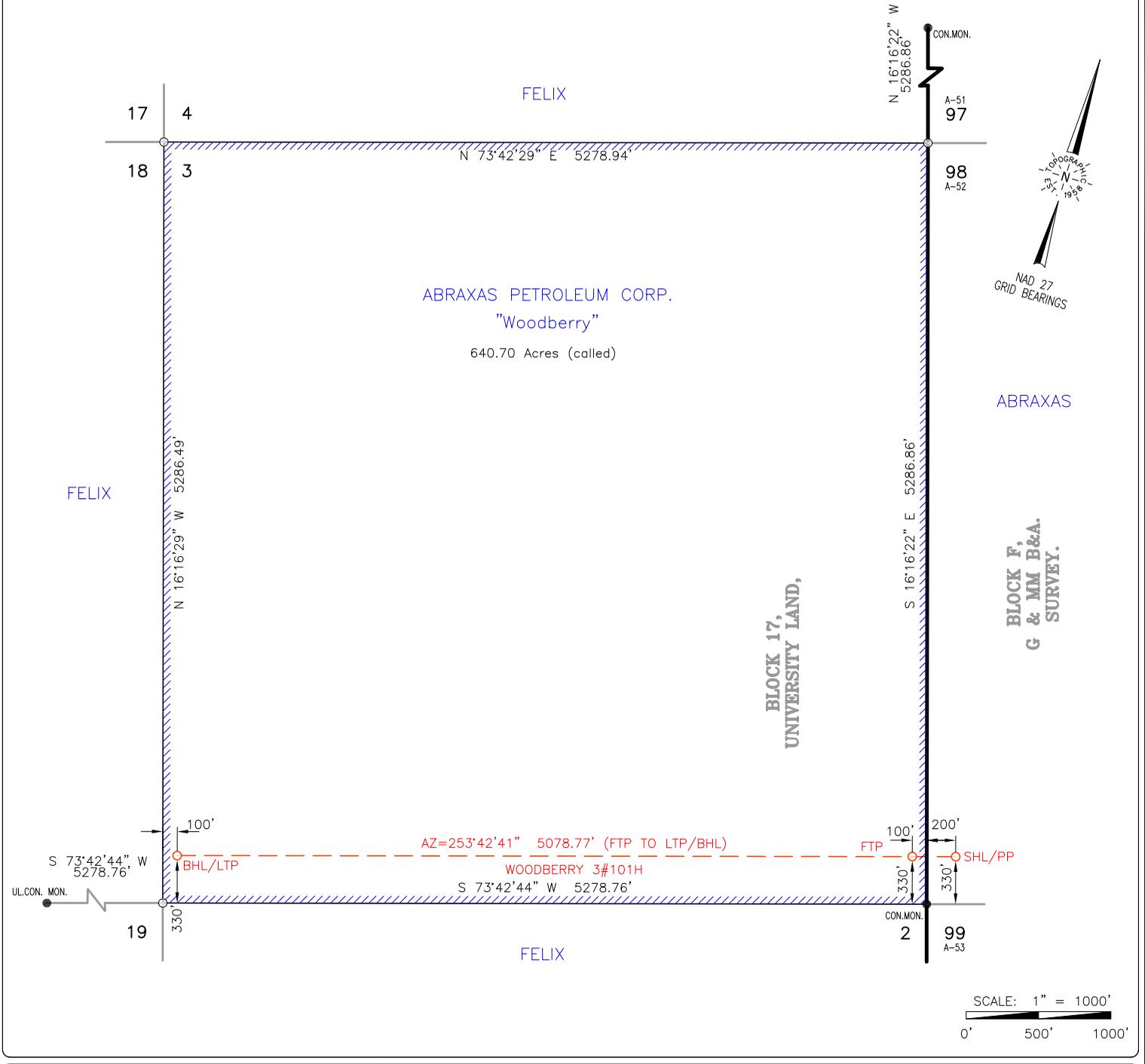
2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705
TELEPHONE: (432) 682-1653 OR (800) 767-1653 • FAX (432) 682-1743
WWW.TOPOGRAPHIC.COM
Texas FIRM Registration NO. 10042500
LO_WOODBERRY_3_#101H

**Surface Hole Location/
Penetration Point:**
330' FSL & 200' FWL (SEC.98)
SHL Ground Elevation: 2653'
X = 1126385 Y = 699424
LAT.: N 31.5595027 LONG.: W 103.1384100
NAD 83 TX-C ZONE
X = 1422851 Y = 10541999
LAT.: N 31.5596354 LONG.: W 103.1388498

First Take Point:
330' FSL & 100' FEL (SEC.3)
X = 1126097 Y = 699340
LAT.: N 31.5592515 LONG.: W 103.1393274
NAD 83 TX-C ZONE
X = 1422563 Y = 10541915
LAT.: N 31.5593842 LONG.: W 103.1397672

**Last Take Point/
Bottom Hole Location:**
330' FSL & 100' FWL (SEC.3)
X = 1121222 Y = 697915
LAT.: N 31.5549976 LONG.: W 103.1548575
NAD 83 TX-C ZONE
X = 1417688 Y = 10540491
LAT.: N 31.5551303 LONG.: W 103.1552978

LEGEND	
	Section Line
	Block Line
	Abstract Line
	Tract Line
	Lease Road
	County Road
	Unit/Lease Boundary
	Found Monument
	Set 1/2" Rebar w/cap
	Calculated Corner



Surveyed: 10/09/2018	COGO: 575-120469	Drawn By: YB; 10/10/2018
Scale: 1"=1000'		Revision: 1(YB) Date Revised: 11/09/18