

API No. <u>42-371-39502</u> Drilling Permit # <u>824286</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 07/2004 Permit Status: Approved	
1. RRC Operator No. 653787		2. Operator's Name (as shown on form P-5, Organization Report) PERISCOPE OPERATING LLC		3. Operator Address (include street, city, state, zip): 115 E VIRGINIA ST SUITE 201 MCKINNEY, TX 75069-0000			
4. Lease Name CUNNING WOLF UL			5. Well No. 1903H				
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 7700		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. 08		12. County PECOS		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>12</u> miles in a <u>SE</u> direction from <u>Fort Stockton</u> which is the nearest town in the county of the well site.							
15. Section 19	16. Block 23	17. Survey UL		18. Abstract No. A-U182	19. Distance to nearest lease line: 820 ft.	20. Number of contiguous acres in lease, pooled unit, or unitized tract: 10240	
21. Lease Perpendiculars: <u>3376</u> ft from the <u>W</u> line and <u>360</u> ft from the <u>SOUTH</u> line. 22. Survey Perpendiculars: <u>1900</u> ft from the <u>EAST</u> line and <u>360</u> ft from the <u>SOUTH</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	
08	98359800	WOLFBONE (TREND AREA)		Oil or Gas Well	7700	330.00	
BOTTOMHOLE LOCATION INFORMATION is required for DIRECTIONAL, HORIZONTAL, AND AMENDED AS DRILLED PERMIT APPLICATIONS (see W-1H attachment)							
Remarks See W1 Comments attached				Certificate: 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>Sherrie Cannon, regulatory analyst</u> Name of filer </div> <div> <u>Mar 09, 2017</u> Date submitted </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div> <u>(469)698-6411</u> Phone </div> <div> <u>scannon@periscopeoperating.com</u> E-mail Address (OPTIONAL) </div> </div>			
RRC Use Only							
Data Validation Time Stamp: Mar 20, 2017 5:42 PM ('As Approved' 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**

APPLICATION FOR PERMIT TO DRILL, RECOMPLETE, OR RE-ENTER

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Permit #	824286
Approved Date:	Mar 20, 2017

1. RRC Operator No. 653787	2. Operator's Name (exactly as shown on form P-5, Organization Report) PERISCOPE OPERATING LLC	3. Lease Name CUNNING WOLF UL	4. Well No. 1903H
Lateral Drainhole Location Information			
5. Field as shown on Form W-1 WOLFBONE (TREND AREA) (Field # 98359800, RRC District 08)			
6. Section 19 17	7. Block 23	8. Survey UL	9. Abstract 182
10. County of BHL PECOS			
11. Terminus Lease Line Perpendiculars 8903 ft. from the W line. and 8763 ft. from the S line 12. Terminus Survey Line Perpendiculars 1650 ft. from the East line. and 1800 ft. from the North line 13. Penetration Point Lease Line Perpendiculars 3979 ft. from the W line. and 820 ft. from the South line			

Permit Status: **Approved**

*The RRC has not approved this application.
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**RAILROAD COMMISSION OF TEXAS
OIL & GAS DIVISION**

APPLICATION FOR PERMIT TO DRILL, RECOMPLETE, OR RE-ENTER

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W-1 Comments

Permit # **824286**

Approved Date: **Mar 20, 2017**

[RRC STAFF Mar 10, 2017 7:05 AM]: As per Sherrie Cannon: We submitted our first horizontal W-1 yesterday, and found today that we need to replace the P-16 with the attached P-16. The Total Remaining Horizontal/Vertical Acreage were both incorrectly figured in the original submission.

In addition, under Field Details we put the SHL survey information instead of the Terminus survey information, so the correction should be as follows:

6. Section 17

7. Block 23

8. Survey UL

9. Abstract 180; [RRC STAFF Mar 17, 2017 12:05 PM]: There have been problems identified with this permit (see problem letter attachment). Notification sent.; [RRC STAFF Mar 17, 2017 12:05 PM]: Changed lease name to match plat.; [RRC STAFF Mar 17, 2017 12:06 PM]: There have been problems identified with this permit (see problem letter attachment). Notification sent.; [RRC STAFF Mar 20, 2017 7:55 AM]: Problems identified with this permit are resolved.; [RRC STAFF Mar 20, 2017 7:56 AM]: Lease plat and location plat attached.; [RRC STAFF Mar 20, 2017 7:56 AM]: There have been problems identified with this permit (see problem letter attachment). Notification sent.; [RRC STAFF Mar 20, 2017 8:42 AM]: Problems identified with this permit are resolved.; [RRC STAFF Mar 20, 2017 8:46 AM]: Plat attached. Changed lease line calls to match.; [RRC STAFF Mar 20, 2017 8:54 AM]: There have been problems identified with this permit (see problem letter attachment). Notification sent.; [RRC STAFF Mar 20, 2017 2:44 PM]: Problems identified with this permit are resolved.; [RRC STAFF Mar 20, 2017 2:44 PM]: The surveyor claimed that all points were shot on the ground using the University Lands set monuments.

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 <div align="center">824286</div>	DATE PERMIT ISSUED OR AMENDED <div align="center">Mar 20, 2017</div>	DISTRICT <div align="center">* 08</div>																															
API NUMBER <div align="center">42-371-39502</div>	FORM W-1 RECEIVED <div align="center">Mar 09, 2017</div>	COUNTY <div align="center">PECOS</div>																															
TYPE OF OPERATION <div align="center">NEW DRILL</div>	WELLBORE PROFILE(S) <div align="center">Horizontal</div>	ACRES <div align="center">10240</div>																															
OPERATOR <div align="center"> PERISCOPE OPERATING LLC 115 E VIRGINIA ST SUITE 201 MCKINNEY, TX 75069-0000 </div>		<div align="center"> 653787 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 </div>																															
LEASE NAME <div align="center">CUNNING WOLF UL</div>		WELL NUMBER <div align="center">1903H</div>																															
LOCATION <div align="center">12 miles SE direction from FORT STOCKTON</div>		TOTAL DEPTH <div align="center">7700</div>																															
Section, Block and/or Survey <div> SECTION ◀ 19 BLOCK ◀ 23 ABSTRACT ◀ U182 SURVEY ◀ UL </div>																																	
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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: 3679.0 F W L 820.0 F SOUTH L																																	
Terminus Location BH County: PECOS Section: 17 Block: 23 Abstract: Survey: UL Lease Lines: 8903.0 F W L 8763.0 F S L Survey Lines: 1650.0 F EAST L 1800.0 F NORTH L																																	
THE FOLLOWING RESTRICTIONS APPLY TO ALL FIELDS																																	

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 <div style="text-align: right;">824286</div>	DATE PERMIT ISSUED OR AMENDED <div style="text-align: center;">Mar 20, 2017</div>	DISTRICT <div style="text-align: center;">* 08</div>										
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OPERATOR <div style="text-align: right;">653787</div> <div style="text-align: center;">PERISCOPE OPERATING LLC</div> <div style="text-align: center;">115 E VIRGINIA ST SUITE 201</div> <div style="text-align: center;">MCKINNEY, TX 75069-0000</div>		NOTICE This permit and any allowable assigned may be revoked if payment for fee(s) submitted to the Commission is not honored. <div style="text-align: center;">District Office Telephone No:</div> <div style="text-align: center;">(432) 684-5581</div>										
LEASE NAME <div style="text-align: center;">CUNNING WOLF UL</div>		WELL NUMBER <div style="text-align: center;">1903H</div>										
LOCATION <div style="text-align: center;">12 miles SE direction from FORT STOCKTON</div>		TOTAL DEPTH <div style="text-align: center;">7700</div>										
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LEASE NAME	NEAREST LEASE		NEAREST WE									
<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> <p>The designated interval for one or more of the fields approved in this permit appears to overlap with the designated interval of another field or fields in this district. In the case of conflicting designated intervals you will be required to be consistent in field designation on this lease. Further, if the designated interval overlap of wells on this lease results in an actual or potential double assignment of reservoir and the applicant cannot conclusively demonstrate that there is no double assignment, the permitted well may not be assigned an allowable until the conflict is resolved. Because of the overlapping designated intervals in this area, issuance of this permit does not guarantee that the completion of the well will be approved or that the well will receive an allowable in any given field, even if that field is listed on the approved permit application.</p>												

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

PECOS (371) County

Formation	Shallow Top	Deep Top	Remarks	Geological Order	Effective Date
TOBORG	100	500		1	12/17/2013
SOMA	700	900		2	12/17/2013
RUSTLER	1,300	1,300		3	12/17/2013
YATES	700	2,900		4	12/17/2013
SEVEN RIVERS	1,400	1,800		5	12/17/2013
GRAYBURG	1,600	2,200		6	12/17/2013
O'BRIEN	2,500	2,500		7	12/17/2013
GLORIETA	2,900	2,900		8	12/17/2013
TUBB	3,200	3,200		9	12/17/2013
QUEEN	1,100	3,400		10	12/17/2013
SAN ANDRES	1,200	3,800	usable quality water zone; low volume H2S	11	12/17/2013
PERMIAN GENERAL	3,900	3,900		12	12/17/2013
CLEARFORK	2,500	4,200		13	12/17/2013
SULLIVAN	4,800	4,800		14	12/17/2013
WICHITA ALBANY	2,700	4,800		15	12/17/2013
DELAWARE	4,000	5,200		16	12/17/2013
MONTOYA	5,300	5,300		17	12/17/2013
WADDELL	6,000	6,000		18	12/17/2013
CANYON	6,000	6,900		19	12/17/2013
BONE SPRINGS	7,100	7,100		20	12/17/2013
CABBALLOS	7,300	7,300		21	12/17/2013
STRAWN	7,000	8,300		22	12/17/2013
ZONE	9,800	9,800	unidentified	23	12/17/2013
MULTIPAY	12,000	12,000	unidentified	24	12/17/2013
WOLFCAMP	4,400	12,000		25	12/17/2013
PENNSYLVANIAN	7,700	12,900		26	12/17/2013
MISSISSIPPIAN	15,000	15,000		27	12/17/2013
ATOKA	16,400	16,400		28	12/17/2013
ELLENBURGER	4,700	20,500		29	12/17/2013

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

PECOS (371) County

Formation	Shallow Top	Deep Top	Remarks	Geological Order	Effective Date
DEVONIAN	5,100	21,200		30	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: 09 March 2017**GAU Number:** 168630**Attention:** PERISCOPE OPERATING LLC
115 E VIRGINIA ST SUITE 201
MCKINNEY, TX 75069**Operator No.:** 653787**API Number:**
County: PECOS
Lease Name: Cunning Wolf UL
Lease Number: 43061
Well Number: 1903H
Total Vertical Depth: 7700
Latitude: 30.820244
Longitude: -102.701397
Datum: NAD27**Purpose:** New Drill**Location:** Survey-UL; Abstract-U182; Block-23; Section-19

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, and the Rustler, the top of which is estimated to occur from 1150 to 1200 feet depth and the base of which is estimated to occur from 1500 to 1550 feet depth by reconnaissance-level evaluation, must be protected.

This recommendation is applicable for all wells drilled in this S/2 of sec. 19.

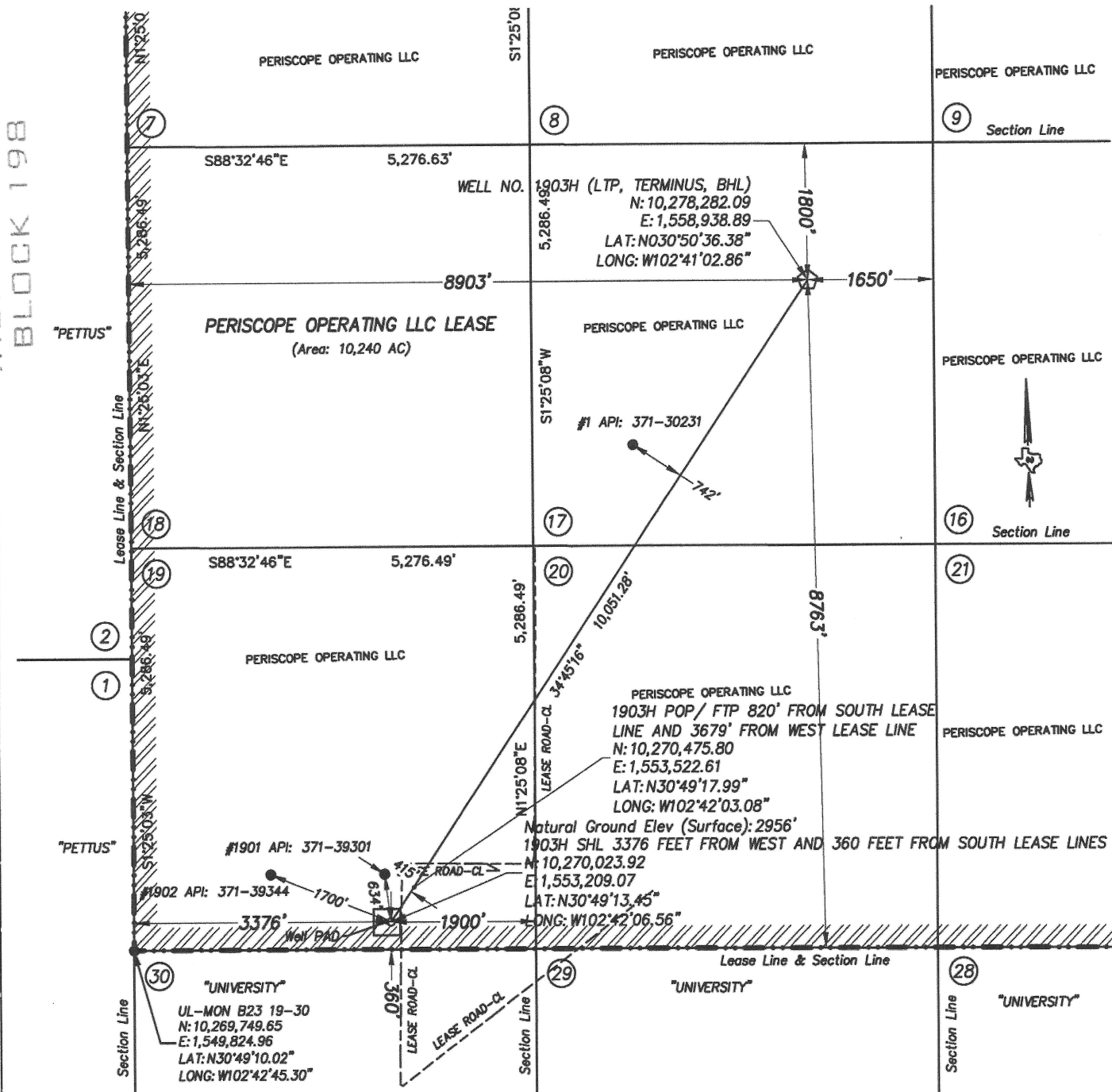
Note: Unless stated otherwise, this recommendation is intended to apply only to the subject well and not for area-wide use. This recommendation is for normal drilling, production, and plugging operations only. It does not apply to saltwater disposal operation into a nonproductive zone (RRC Form W-14).

This determination is based on information provided when the application was submitted on 03/09/2017. 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.

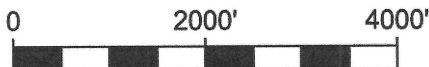
Groundwater Advisory Unit, Oil and Gas Division

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

BLOCK 198



GRAPHIC SCALE

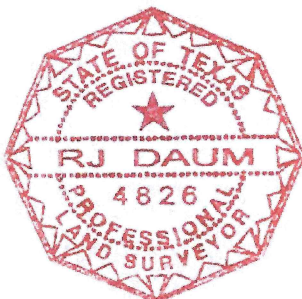


(IN FEET)
1 inch = 2000 ft.

THE UNDERSIGNED DOES HEREBY CERTIFY THAT THIS LOCATION WAS THIS DAY MADE ON THE GROUND BY ME OR UNDER MY SUPERVISION AND THAT THIS PLAT IS A CORRECT REPRESENTATION THEREOF.

DATED THIS 9th DAY OF MARCH, 2017

RJ DAUM
TEXAS RPLS 4826



SCHUMANN ENGINEERING CO., INC.

REGISTERED PROFESSIONAL LAND SURVEYORS

REGISTERED PROFESSIONAL CIVIL ENGINEERS

Civil Engineering ~ Land Surveying

TEXAS FIRM No. F1880

TEXAS FIRM No. 10149500

408 N. PECOS STREET - P. O. BOX 504
MIDLAND, TEXAS 79702-0504

Office (432) 684-5548
Fax (432) 684-6973

NOTE:

COURSES, DISTANCES AND COORDINATES SHOWN HEREON ARE LAMBERT GRID AND CONFORM TO THE "TEXAS COORDINATE SYSTEM", TEXAS CENTRAL ZONE, NORTH AMERICAN DATUM OF 1983. ALL DISTANCES AND COORDINATES ARE SHOWN IN GRID FEET.

THIS WELL IS TO BE LOCATED 12.3 MILES IN A SOUTHEAST DIRECTION FROM FT. STOCKTON WHICH IS THE NEAREST TOWN IN THE COUNTY OF THE WELL SITE.

LOCATION PLAT

PERISCOPE OPERATING LLC

WELL NO. 1903H
CUNNING WOLF UL LEASE
SURFACE LOCATION:

360 FEET FROM THE SOUTH LINE AND
1900 FEET FROM THE EAST LINE
SECTION 19, A-U182, BLOCK 23
UNIVERSITY LANDS SURVEY

BOTTOM HOLE LOCATION:
1800 FEET FROM THE NORTH LINE AND
1650 FEET FROM THE EAST LINE
SECTION 17, A-U180, BLOCK 23
UNIVERSITY LANDS SURVEY

PECOS COUNTY, TEXAS

QUAD: EAST MESA SW PROJECT: 75534PR
SCALE: 1" = 2000' REV 3 3/20/17 JOB NO: 75,534AR-2