



RAILROAD COMMISSION OF TEXAS

Form W-2

1701 N. Congress
 P.O. Box 12967
 Austin, Texas 78701-2967

Status: Approved
 Date: 05/11/2023
 Tracking No.: 290478

OIL WELL POTENTIAL TEST, COMPLETION OR RECOMPLETION REPORT,

OPERATOR INFORMATION			
Operator	PDEH LLC	Operator	646827
Operator	600 W ILLINOIS AVE MIDLAND, TX 79701-0000		

WELL INFORMATION			
API	42-495-33544	County:	WINKLER
Well No.:	1001H	RRC District	08
Lease	UL 20 S BUCKTAIL	Field	PHANTOM (WOLFCAMP)
RRC Lease	57938	Field No.:	71052900
Location	Section: 10, Block: 20, Survey: UL, Abstract:		
Latitude		Longitud	
This well is	9.5	miles in a	W
direction from	WINK,		
which is the nearest town in the			

FILING INFORMATION			
Purpose of	Well Record Only		
Type of	Other/Recompletion		
Well Type:	Producing	Completion or Recompletion	07/13/2014
<u>Type of Permit</u>		<u>Date</u>	<u>Permit No.</u>
Permit to Drill, Plug Back, or		12/31/2013	775589
Rule 37 Exception			
Fluid Injection			
O&G Waste Disposal			
Other:			

COMPLETION INFORMATION			
Spud	02/04/2014	Date of first production after rig	07/13/2014
Date plug back, deepening, drilling operation	02/04/2014	Date plug back, deepening, recompletion, drilling operation	03/15/2014
Number of producing wells on this lease this field (reservoir) including this	6	Distance to nearest well in lease & reservoir	342.0
Total number of acres in	640.70	Elevation	2796 GL
Total depth TVD	11658	Total depth MD	16451
Plug back depth TVD		Plug back depth MD	
Was directional survey made other inclination (Form W-	Yes	Rotation time within surface casing Is Cementing Affidavit (Form W-15)	156.0 No
Recompletion or	Yes	Multiple	No
Type(s) of electric or other log(s)	Resistivity only		
Electric Log Other Description:			
Location of well, relative to nearest lease of lease on which this well is	246.0 Feet from the	Off Lease :	No
	2600.0 Feet from the	NW Line and	
		SW Line of the	
		UL 20 S BUCKTAIL Lease.	

FORMER FIELD (WITH RESERVOIR) & GAS ID OR OIL LEASE NO.			
Field & Reservoir	Gas ID or Oil Lease	Well No.	Prior Service Type
PACKET:	N/A		

W2: N/A

FOR NEW DRILL OR RE-ENTRY, SURFACE CASING DEPTH DETERMINED BY:

GAU Groundwater Protection Determination	Depth	300.0	Date	01/02/2014
SWR 13 Exception	Depth	5102.0		

INITIAL POTENTIAL TEST DATA FOR NEW COMPLETION OR RECOMPLETION

Date of		Production	
Number of hours	24	Choke	
Was swab used during this	No	Oil produced prior to	
PRODUCTION DURING TEST PERIOD:			
Oil		Gas	
Gas - Oil	0	Flowing Tubing	
Water			
CALCULATED 24-HOUR RATE			
Oil		Gas	
Oil Gravity - API - 60.:		Casing	
Water			

CASING RECORD

<u>Ro</u>	<u>Type of Casing</u>	<u>Casing Size (in.)</u>	<u>Hole Size</u>	<u>Setting Depth</u>	<u>Multi - Stage Tool</u>	<u>Multi - Stage Shoe</u>	<u>Cement Class</u>	<u>Cement Amoun</u>	<u>Slurry Volume (cu.)</u>	<u>Top of Cement (ft.)</u>	<u>TOC Determined By</u>
1	Surface	9 5/8	12 1/4	5092	405		C	360	87.0	0	Circulated to Surface
2	Surface	9 5/8	12 1/4	5092			C	2450	4761.0	405	Calculation
3	Intermediate	7	8 3/4	11934			H	720	1602.0	4000	Calculation

LINER RECORD

<u>Ro</u>	<u>Liner Size</u>	<u>Hole Size</u>	<u>Liner Top</u>	<u>Liner Bottom</u>	<u>Cement Class</u>	<u>Cement Amoun</u>	<u>Slurry Volume (cu.)</u>	<u>Top of Cement (ft.)</u>	<u>TOC Determined</u>
1	4 1/2	6 1/8	11111	16456					

TUBING RECORD

<u>Ro</u>	<u>Size (in.)</u>	<u>Depth</u>	<u>Size (ft.)</u>	<u>Packer Depth (ft.)/Type</u>
1	2 7/8	11012		10984 / VERSASET

PRODUCING/INJECTION/DISPOSAL INTERVAL

<u>Ro</u>	<u>Open hole?</u>	<u>From (ft.)</u>	<u>To (ft.)</u>
1	No	L1 11967	16281.0

ACID, FRACTURE, CEMENT SQUEEZE, CAST IRON BRIDGE PLUG, RETAINER, ETC.

Was hydraulic fracturing treatment	Yes		
Is well equipped with a downhole sleeve?	Yes	If yes, actuation pressure	5230.0
Production casing test pressure (PSIG) hydraulic fracturing	4049	Actual maximum pressure (PSIG) during fracturin	8738
Has the hydraulic fracturing fluid disclosure been	Yes		
Ro	Type of Operation	Amount and Kind of Material Used	Depth Interval (ft.)

FORMATION RECORD

<u>Formations</u>	<u>Encountere</u>	<u>Depth TVD</u>	<u>Depth MD</u>	<u>Is formation</u>	<u>Remarks</u>
RUSTLER - POSSIBLE FLOW; POSSIBLE USABLE QUALITY W COLBY-QUEEN	No			No	NOT ENCOUNTERED
YATES	No			No	NOT ENCOUNTERED
QUEEN-SEVEN RIVERS	No			No	NOT ENCOUNTERED
SAN ANDRES - HIGH FLOWS, H2S, CORROSIVE HOLT	No			No	NOT ENCOUNTERED
DELAWARE	Yes	5157.0	5166.0	Yes	
GLORIETA	No			No	NOT ENCOUNTERED
CLEARFORK	No			No	NOT ENCOUNTERED
WICHITA ALBANY	No			No	NOT ENCOUNTERED
BRUSHY CANYON	Yes	7472.0	7481.0	Yes	
CHERRY CANYON	Yes	6136.0	6145.0	Yes	
CANYON	No			No	NOT ENCOUNTERED
BONE SPRINGS	Yes	9535.0	9545.0	Yes	
MONTOYA	No			No	NOT ENCOUNTERED
WADDELL	No			No	NOT ENCOUNTERED
WOLFCAMP	Yes	11700.0	11937.0	Yes	
ATOKA	No			No	NOT ENCOUNTERED
STRAWN	No			No	NOT ENCOUNTERED
PENNSYLVANIAN	No			No	NOT ENCOUNTERED
MISSISSIPPIAN	No			No	NOT ENCOUNTERED
DEVONIAN	No			No	NOT ENCOUNTERED
SILURIAN	No			No	NOT ENCOUNTERED
FUSSELMAN	No			No	NOT ENCOUNTERED
ELLENBURGER	No			No	NOT ENCOUNTERED

Do the producing interval of this well produce H2S with a concentration in excess of 100 ppm

No

Is the completion being downhole commingled

No

REMARKS

ATTACH P16 SHOWS NEW ACREAGE ALLOCATION.

RRC REMARKS

PUBLIC COMMENTS:

[RRC Staff 2023-04-20 08:47:24.742] EDL=4306 feet, max acres=640, PHANTOM (WOLFCAMP) oil or gas well

CASING RECORD :

TUBING RECORD:

PRODUCING/INJECTION/DISPOSAL INTERVAL :

ACID, FRACTURE, CEMENT SQUEEZE, CAST IRON BRIDGE PLUG, RETAINER, ETC. :

POTENTIAL TEST DATA:

OPERATOR'S CERTIFICATION

Printed	Martha Finley	Title:	Regulatory Coordinator
Telephone	(432) 688-6036	Date	04/19/2023



RAILROAD COMMISSION OF TEXAS

STATEWIDE RULE 13 EXCEPTION APPLICATION/ALTERNATIVE REQUEST

Surface Casing: 13(b)(1)(H), Tubing: 13(b)(4)(B), Drilling Fluid: 13(a)(6)(C), or Non-standard Cement 13(b)(1)(D)

1. Operator: Shell Western E&P		2. P-5 No.: 774719		3. Lease Name: University 20-10 WNK		4. Well No.: 1H	
5. Street Address: 150 N. Dairy Ashford, Houston TX 77079				6. RRC District: 08		7. Drill Permit No.: 775589	
8. Field Name: Phantom (Wolfcamp)		9. County: Winkler		10. Proposed Depth: _____ <input type="checkbox"/> TVD <input type="checkbox"/> MD			
11. Survey: UL		12. Abstract No:		13. Block/Township: 10		14. Section: 20	
15. GPS Datum: 27		Coordinates: N 31.736619		W 103.321397			
16. GAU No.: 6151 (attach letter)		Recommendation Type (below)		17. Usable-Quality Water (determined by GAU): 300' ft.			
<input type="checkbox"/> Well <input type="checkbox"/> Lease <input type="checkbox"/> Survey <input type="checkbox"/> Pad <input type="checkbox"/> Radius: _____		Separation points: _____ ft.					

18. Exception Request: Short Surface Csg Excess Surface Csg Single-string Tubing Area-wide²

19. Alternate Program Request: Drilling Fluid Program Non-API Cement Other: _____

20. Reason for this request: Economic Technical Other Please explain: _____
 If this application includes a request for exception to tubing requirements outlined in 13(b)(4)(A), indicate requested duration: _____

21. Is this a proposed injection or disposal well³? Yes No

22. Is this a Minimum Separation well⁴? Yes No

23. Are there any water wells within 1/4 mile of this proposed well location⁵? Yes No If Yes, provide information requested below
 Type of water well: _____ Depth: _____ Distance: _____ Direction: _____

24. Are there any INJECTION or DISPOSAL wells within 1/4 mile of the proposed well location⁶? Yes No
 If Yes, list names and depths of all formations permitted for INJECTION OR DISPOSAL within 1/4 miles of the well location⁷: _____

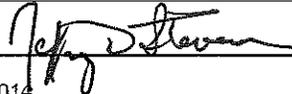
25. Have there been any blowouts within a mile of this wellsite⁸? Yes No If yes, name operator(s), lease(s), and date(s) blowout(s) occurred: _____

IF CEMENT IS NOT CIRCULATED TO THE GROUND SURFACE AS REQUIRED BY THIS EXCEPTION, YOU MUST CONTACT THE DISTRICT OFFICE IMMEDIATELY AND FOLLOW THE PROCEDURES SET OUT IN RULE 13(B)(2)(g)(III) OR AS REQUIRED BY THE DISTRICT OFFICE.

		Surface Casing			Intermediate Casing			Production Casing		
26. Proposed Casing and Cementing Program		12 1/4			8 3/4			6 1/8		
Hole Size (in.)		9 5/8			7			4.5		
O.D. (in.), Grade, Weight (lb/ft.)		J55 40			P110 29			J110 13.5		
Setting Depth (ft.)		5102'			12132'			16632'		
Multi-Stage Tool Depth (ft.)		400'								
LEAD/FILLER CEMENT	Type and Free Water Content	Class C .8%			Class H .6%					
	# of Sacks and Yield (cu. ft/sk)	1933 2.09			604 2.31					
	Cement Additives	See attached			See attached					
	24/72-Hr. Comp. Strength (psi)	499 psi > 729 psi			229 psi > 321 psi					
	Cement Height (TOC) (ft.)	400' (DV tool)			4102" (1000" above prev shoe)					
	% Excess	200%			50%					
TAIL/CRITICAL CEMENT	Type and Free Water Content	Class C .4%			Class H 0%			Class H .4%		
	# of Sacks and Yield (cu. ft/sk)	809 1.35			140 1.94			530 1.23		
	Cement Additives	See attached			See attached			See attached		
	24/72-Hr. Comp. Strength (psi)	1597 psi > 2203 psi			1120 psi > 1255 psi			64 psi > 1334 psi		
	Cement Height (TOC) (ft.)	4102'			10632'			11100'		
	Centralizers No. & Placement ⁹	See attachment								
% Excess	200%			20%			15%			

PROVISIONS APPLICABLE TO RULE 13 EXCEPTIONS:

1. REQUESTS FOR EXCEPTIONS TO STATEWIDE RULE 13 SUBMITTED AFTER THE WELL HAS BEEN DRILLED OR COMPLETED MAY RESULT IN ENFORCEMENT ACTION AGAINST THE OPERATOR.
2. For area-wide exception requests, please provide additional information which clearly defines the area to be exempted. Area-wide approvals are NOT allowed for short surface casing applications (only approved on a well-by-well basis). Note: District Offices are not required to grant area-wide exceptions.
3. **Caution:** If this well is being drilled for injection or disposal purposes, a(n) injection/disposal well permit may be denied unless surface casing is set and cemented through all zones of usable-quality groundwater.
4. A **Minimum Separation Well**, further defined in section 13(a)(2)(L), is a well in which hydraulic fracturing treatments will be conducted AND for which: the vertical distance between BUQW and the top of the formation to be fracture stimulated is less than 1000 ft. or for which the District Director has determined there to be inadequate separation between the BUQW and the top of the formation to be fracture stimulated.
5. Review applications 1-3 (Groundwater Database, Submitted Driller's Report, and Brackish Groundwater Database) at the following link to determine location(s) of water wells within ¼ mile of the proposed well: <http://wiid.twdb.texas.gov/>.
6. Refer to the Railroad Commission of Texas Public GIS map viewer to locate injection and disposal wells within ¼ mile of the well(s) mentioned on this application: <http://www.rrc.state.tx.us/data/online/gis/index.php>.
7. Review W-14 or H-1a applications at (<http://www.rrc.state.tx.us/data/online/OGIImagedRecordsQuery.php>) to determine permitted injection/disposal zones for wells within ¼ mile of the proposed well. Additionally, refer to Rule 13 Formation Tables provided on the RRC website for information regarding saltwater, H2S, and other notable formation depths by county. (<http://www.rrc.state.tx.us/environmental/rule13/index.php>). Statewide Rule 13 may require additional cementing across these formations.
8. Blowout and well-control problem records can be found at the following URL: <http://www.rrc.state.tx.us/data/drilling/blowouts/index.php>.
9. Centralizers must be used through all usable-quality waters. Refer to Rule 13(b)(1)(G).
10. Notify District Office at least 8 hours prior to setting and cementing casing.
11. The alternative surface casing program authorized by this letter is subject to the condition that drilling fluid used while drilling to the base of usable quality groundwater have a salinity of 3000 ppm TDS or less and be conditioned to form a filter cake sufficient to prevent infiltration into the protected water while drilling with fluid having a salinity greater than 3000 ppm TDS below the base of usable quality groundwater to the approved surface casing depth. *The use of oil-based and emulsion drilling fluids are prohibited until casing is set and cemented across the base of usable quality groundwater.*
12. **Note:** The following attachments may be requested by the District Office:
 - a. Proposed wellbore diagram or cementing proposal
 - b. Lab reports containing compressive strength and free water data for Lead and/or Tail Slurry
 - c. Any other information that may be required by the District Office.
13. **Please note that a copy of the approved application form must be kept on location during all phases of drilling and/or plugging operations. Once approved, changes CANNOT be made to the Proposed Casing and Cementing Program on the original application without additional approval from the District Office.**

OPERATOR CONTACT INFORMATION			
Signature: X		Name: Jeffrey Stevenson	Title: Regulatory and Environmental Team Lead
Date: Jan 10, 2014	Phone: 832-337-0694	Fax: _____	
Email Address (optional): jeff.stevenson@shell.com			

RRC
Use
Only ▶

RRC District Office Action:	By:	Date:
TUBING EXCEPTION: <input type="checkbox"/> Approved <input type="checkbox"/> Approved as Modified <input type="checkbox"/> Denied		
SURFACE CASING EXCEPTION: <input checked="" type="checkbox"/> Approved <input type="checkbox"/> Approved as Modified <input type="checkbox"/> Denied		1-14-14
DRILLING FLUID PROGRAM: <input type="checkbox"/> Approved <input checked="" type="checkbox"/> Approved as Modified <input type="checkbox"/> Denied		1-14-14
ALTERNATE CEMENT PROGRAM: <input type="checkbox"/> Approved <input type="checkbox"/> Approved as Modified <input type="checkbox"/> Denied		
Remarks/Modifications: Fresh water mud system required to top of salt sections		

13b Information

Well Name	University 20-3 WNK 1HN								
County	Winkler, Tx								
Field Rules	Phantom (Wolfcamp)								
Engineer	Mark Blanchard								
Date	1/9/2014								

	Surface			Intermediate			Production		
Hole Size (in.)	12-1/4			8-3/4			6-1/8		
O.D. (in.), Grade, Weight (lb/ft.)	9-5/8	J55	40	7	P110	29	4.5	P110	13.5
Setting Depth (ft.)	5102			12132			16632		
Multi-Stage Tool Depth (ft.)	400								
Type and Free Water Content	Class C 0.8%			Class H 0.6%					
# of Sacks and Yield (cu. ft/sk)	1933 2.09			609 2.31					

LEAD /
FILLER
CEMENT

Cement Additives	Class C / Pozmix (65/35) + 6% BWOC Bentonite + 5% salt + 3lbm/sk Kol-Seal (Lost Circulation)+ 0.5% BWOC of HR-800 (retarder)			Class H / Pozmix (65/35) + 8% BWOC Bentonite + 3lbm/sk Kol-Seal (Lost Circulation)+ 0.45 % BWOC of HR-601					
24/72-Hr. Comp. Strength (psi)	499 psi > 729 psi			229 psi > 321 psi					
Cement Height (TOC) (ft.)	400' (DV tool)			4102' (1000' above prev shoe)					
% Excess	200%			50%					

TAIL /
CRITICAL
CEMENT

Type and Free Water Content	Class C 0.4%			Class H 0%			Class H 0.4%		
# of Sacks and Yield (cu. ft/sk)	809 1.35			140 1.94			529 1.23		
Cement Additives	Class C + 0.2% BWOC of HR-800 (retarder) + 3 lb/sk Kol-Seal (LCM)			Class H / Pozmix / Silicalite blend (65/5/30) + 0.5% BWOC Halad 344 (Fluid loss) + 3 lbm/sk Salt (Salt) + 3 lbm/sk Kol-Seal (Lost Circulation)+ 0.1% BWOC of SA-1015 (Suspension agent)			Class H / Pozmix (50/50) + 2% BWOC Bentonite (viscosant) + 0.6% BWOC Halad 344 (Fluid loss) + 0.4% BWOC of HR800 (Retarder)		
24/72-Hr. Comp. Strength (psi)	1597 psi > 2203			1120 psi > 1255 psi			64 psi > 1334 psi		
Cement Height (TOC) (ft.)	4102' (TOC: 0')			10632 (1500ft coverage)			11100' (TOC)		
Centralizers No. & Placement	2 on shoe track; 1 on 3rd jt; 1 every 4 jt to surface								
% Excess	200%			20%			15%		

2nd Stage

Type and Free Water Content	Class C 0.4%								
# of Sacks and Yield (cu. ft/sk)	377 1.34								
Cement Additives	Class C + 3 lb/sk Kol-Seal (LCM)								
24/72-Hr. Comp. Strength (psi)	1167 psi 1731 psi (48h)								
Cement Height (TOC) (ft.)	TOC @ 0' (surface)								
Centralizers No. & Placement									
% Excess	250%								



University 20-3 WNK 1HN

Patterson 274

SHL (off lease / all ref points regard sec 10)				Well Information			
245' FNL	2,620' FWL	NAD 27		Network #:			
Section 10	Block 20	X	1071163	Y	765302	API #:	
County Winkler		LAT	N31°44'11.73"	LONG	W103°19'16.75"	Lease:	
BHI (ref points regard sec 3)				Permit TVD:			
200' FNL	2,620' FWL	X	1069666	Y	770421	UNIVERSITY 20-3 WNK	
Section 3	Block 20	LAT	N31°45'01.99"	LONG	W103°19'35.67"	28,500	
				RKB GROUND ELEV.: 28,50' 2796.0'			

Directional	Formation	MD	TVDRKB	Casing Program	Cement Program	Mud Program									
KOP Build at 2 deg/100		200	200	12-1/4" Hole	Stage 2 Details (250% excess) Primary: 377 sks 400' Fill 14.8 ppg / Yield: 1.35 TOC @ Surface:	Fresh Water / Spud Mud MW: < 9 ppg to top of salts									
Usable Water		300	300	9-5/8" 40# J55 LTC TOC (Surf): Surface	Stage 1 Details (200% excess) Lead: 1933 sks 3702' Fill 12.5 ppg / Yield: 2.09 Tail: 808 sks 1000' Fill 14.8 ppg / Yield: 1.35 TOC @ DV Tool	Saturated Brine MW: 10.2 ppg from salts to section TD at 5102'									
DV Tool @ 400' (100' deeper than water table) Hold at 8 deg.		600	598												
Drop at 2 deg/100		1,000	995	<table border="1"> <thead> <tr> <th>From</th> <th>To</th> <th>Footage</th> </tr> </thead> <tbody> <tr> <td>0'</td> <td>5,102'</td> <td>5,102'</td> </tr> </tbody> </table>			From	To	Footage	0'	5,102'	5,102'			
From	To	Footage													
0'	5,102'	5,102'													
Begin vertical hold		1,400	1,394												
Surface Casing Point		5,102	5,102	9-5/8" 40# J55 LTC (8.75" Special Drift) FIT to 12.5 ppg EMW Test Surface Casing: 30 min / 1500 psi.											
Top of Delaware		5,152	5,152	<table border="1"> <thead> <tr> <th>From</th> <th>To</th> <th>Footage</th> </tr> </thead> <tbody> <tr> <td>0'</td> <td>12,037'</td> <td>12,037'</td> </tr> </tbody> </table>			From	To	Footage	0'	12,037'	12,037'			
From	To	Footage													
0'	12,037'	12,037'													
Cherry Canyon Sandstone		-	6,140												
Brushy Canyon Sandstone		-	7,443	8-3/4" Hole 7" 29# P110 LTC TOC (7" csg): 4102', 1000' inside 9-5/8" casing;											
Upper Avalon Carbonate		-	8,755	7" Cement Details Lead: 593 sks 6435' Fill 50% Excess 11.9 ppg / Yield: 2.31 Top of Lead: 4102' Tail: 140 sks 1500' Fill 20% Excess 12.5 ppg / Yield: 1.93 Top of Tail: 10537'											
Build at 12 deg/100 and turn		11,283	11,253	<table border="1"> <thead> <tr> <th>From</th> <th>To</th> <th>Footage</th> </tr> </thead> <tbody> <tr> <td>0'</td> <td>12,037'</td> <td>12,037'</td> </tr> </tbody> </table>			From	To	Footage	0'	12,037'	12,037'			
From	To	Footage													
0'	12,037'	12,037'													
Third BSPG Sandstone		-	11,357												
Hold 90 deg INC, 344 deg AZI Int. Casing point @ ~90° Inc.		12,037	11,742	7" 29# P110 LTC (6.125" Special Drift)											
Top Target: 3rd BSPG B Sand @ 90° Inc		-	11,726	OBM: TBD ppg Vis: TBD; PV: TBD; YP: TBD											
Base Target: 3rd BSPG B Sand @ 90° Inc		-	11,745												
Expected TD		16,877	14,742	<table border="1"> <thead> <tr> <th>From</th> <th>To</th> <th>Footage</th> </tr> </thead> <tbody> <tr> <td>11,233'</td> <td>11,243'</td> <td>10'</td> </tr> <tr> <td>11,243'</td> <td>16,877'</td> <td>5,634'</td> </tr> </tbody> </table>			From	To	Footage	11,233'	11,243'	10'	11,243'	16,877'	5,634'
From	To	Footage													
11,233'	11,243'	10'													
11,243'	16,877'	5,634'													

6-1/8" Hole:
 TOC (4.5" csg): -50', 50'
 above KOP
 4.5" x 7" Liner Hanger and 10K ZXPN Top Packer
 4.5" 13.5# P110 DQX/DWC // KOP to TD

Groundwater
Advisory Unit

GROUNDWATER PROTECTION DETERMINATION

Date **January 2, 2014**

GAU File No.: SC- **6152**

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

API Number **49533545**

Attention: **GEORGE MULLEN**

RRC Lease No. **000000**

SC_774719_49533545_000000_6152.pdf

**SHELL WESTERN E&P
150 DAIRY ASHFORD
HOUSTON TX 77079**

P-5# 774719

--Measured--

2620 ft FWL

230 ft FNL

MRL: SECTION

Digital Map Location:	
X-coord/Long	103.32100
Y-coord/Lat	31.73660
Datum	27
Zone	

County **WINKLER** Lease & Well No. **UNIVERSITY 20 3 WNK #1HN** Purpose **ND**

Location **SUR-UL, BLK-20, SEC-3, -- [TD=12500] , [RRC 8] ,**

To protect usable-quality groundwater at this location, the Groundwater Advisory Unit of the Texas Railroad Commission recommends:

The interval from the land surface to a depth of 300 feet must be protected.

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).

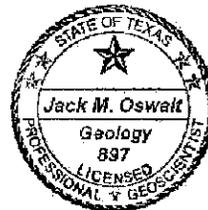
If you have any questions, please contact us at 512-463-2741, gau@rrc.state.tx.us, or by mail.

Sincerely,

*Digitally signed by Jack M. Oswalt
DN: cn=US, st=TEXAS, l=Austin, o=Railroad
Commission of Texas, ou=Groundwater
Advisory Unit, cn=Jack Oswalt,
email=jack.oswalt@rrc.state.tx.us
Date: 2014.01.02 08:24:48 -0600*

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 1/2/2014
Note: Alteration of this electronic document will invalidate the digital signature.

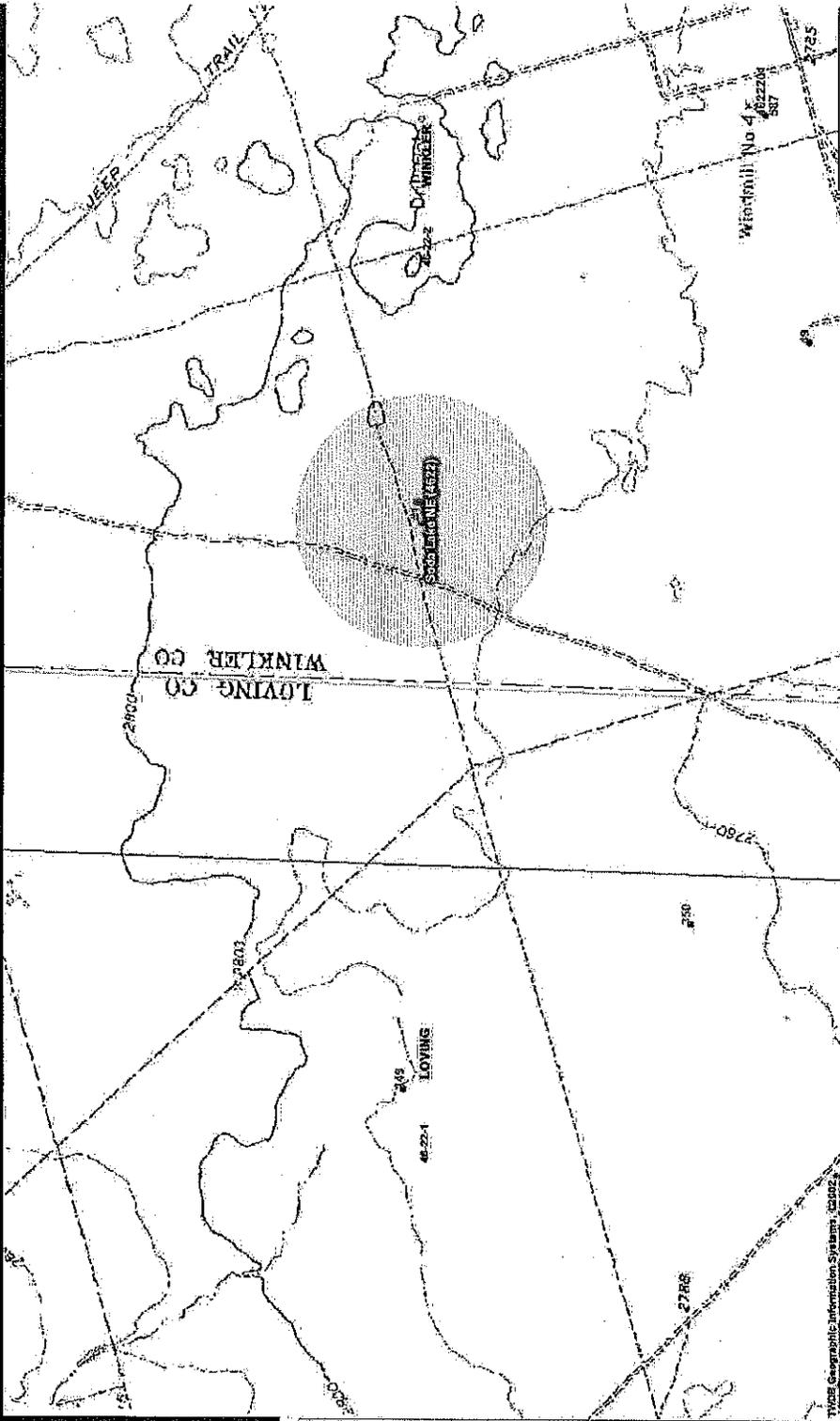
Wells in TWDB Groundwater Database - Texas

TWDB WITH WaterWell Data



Map navigation controls including zoom in (+), zoom out (-), home, and search icons.

- [Layers]**
- TWDB
 - Groundwater Data
 - Submitted Drillers Reports
 - Brackish Groundwater Database
 - Submitted Drillers Reports - D.I.M.S. Groundwater Districts (updated Sept. 2013)
 - Major Aquifers
 - Minor Aquifers
 - Regional Water Planning Areas
 - Groundwater Management Areas
 - River Basins
 - State Hwy
 - FM & RMI Roads
 - Other State Roads
 - Interstate Hwy
 - US Hwy
 - 7.5 USGS Grid
 - 2.5 State Grid
 - Counties
 - DRG



Winkler No. 4 x 162204 587

Winkler Trail

303 LINDALE (303)

LOVING

WINKLER CO

LOVING CO

2780

2790

2800

2810

2820

2830

2840

2850

2860

2870

2880

2890

2900

2910

2920

2930

2940

2950

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2970

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2990

3000

3010

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3100

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3120

3130

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3150

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3460

3470

3480

3490

3500

Longitude: -103.321785, 31.736766

Latitude: 31.736766

Buffer Size: 0.25 Miles

Show Buffer

Create buffer around this point:

1031913, 314412

in DMS TO Deg. Min. Sec

CERTIFICATE OF COMPLIANCE
AND TRANSPORTATION AUTHORITY

REFER TO INSTRUCTIONS

1. Field name exactly as shown on proration schedule Phantom (Wolfcamp)		2. Lease name as shown on proration schedule UL 20 S Bucktail				
3. Current operator name exactly as shown on P-5 Organization Report PDEH LLC		4. Operator P-5 no. 646827	5. Oil Lse/Gas ID no. 57938	6. County Winkler	7. RRC District 08	
8. Operator address including city, state, and zip code 600 W. Illinois Midland, TX 79701		9. Well no(s) (see instruction E) 1001H				
10. Classification <input checked="" type="checkbox"/> Oil <input type="checkbox"/> Gas <input type="checkbox"/> Other (see instruction A)				11. Effective Date 08/01/22		

12. Purpose of Filing. (See instructions B and G)

a. Change of: operator oil or condensate gatherer gas gatherer gas purchaser gas purchaser system code

field name from: _____ Docket #: _____

lease name from: UNIVERSITY 20 PW UNIT 1001H

b. New RRC Number for: oil lease gas well other well (specify) _____

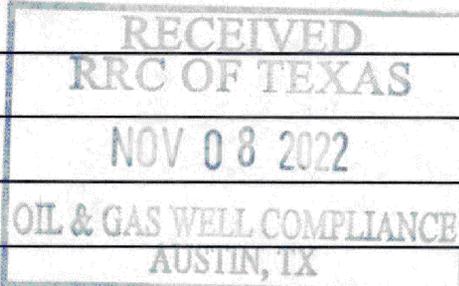
Due to: new completion or recompletion reclass oil to gas reclass gas to oil

consolidation unitization

field transfer subdivision (oil lease only)

13. Authorized GAS WELL GAS or CASINGHEAD GAS Gatherer(s) and/or Purchaser(s). (See instruction G).

Gatherer	Purchaser	Name of GAS WELL GAS or CASINGHEAD GAS Gatherer(s) or Purchaser(s) As Indicated in Columns to the Left (Attach an additional sheet in same format if more space is needed)	Purchaser's RRC Assigned System Code	Percent of Take	Full-well Stream
X	X	Brazos Midstream Operating (089903)	0001	100	



14. Authorized OIL or CONDENSATE Gatherer(s). (See instruction G).

Name of OIL or CONDENSATE Gatherer(s) - List Highest Volume Gatherer First (Attach an additional sheet in same format if more space is needed)	Percent of Take	RRC USE ONLY
Plains Marketing L.P. (667883)	100	Reviewer's initials: <i>[Signature]</i> Approval date: <i>[Signature]</i>

15. PREVIOUS OPERATOR CERTIFICATION FOR CHANGE OF OPERATOR P-4 FILING. Being the PREVIOUS OPERATOR, I certify that operating responsibility for the well(s) designated in this filing, located on the subject lease has been transferred in its entirety to the above named Current Operator. I understand, as Previous Operator, that designation of the above named operator as Current Operator is not effective until this certificate is approved by the Commission.

Name of Previous Operator	Signature
Name (print)	<input type="checkbox"/> Authorized Employee of previous operator <input type="checkbox"/> Authorized agent of previous operator (see instruction G)
Title	Date Phone with area code

16. CURRENT OPERATOR CERTIFICATION. By signing this certificate as the Current Operator, I certify that all statements on this form are true and correct and I acknowledge responsibility for the regulatory compliance of the subject lease including plugging of well(s) pursuant to Rule 14. I further acknowledge that I assume responsibility for the physical operation, control, and proper plugging of each well designated in this filing. I also acknowledge that I will remain designated as the Current Operator until a new certificate designating a new Current Operator is approved by the Commission.

Chasity Jackson	Chasity Jackson
Name (print)	Signature
Sr. Regulatory Coordinator	<input checked="" type="checkbox"/> Authorized Employee of current operator <input type="checkbox"/> Authorized agent of current operator (see instruction G)
Title	Date Phone with area code
Chasity.Jackson@conocophillips.com	7/20/2022 432-686-3087
E-mail Address (optional)	Date Phone with area code

**REQUEST FOR PERMISSION TO SUBDIVIDE OR
 CONSOLIDATE OIL LEASE(S)**

P-6

5/02
 WWW-1

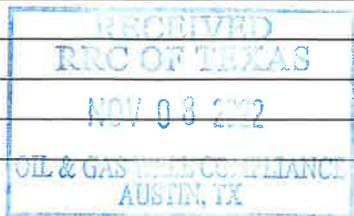
READ INSTRUCTIONS ON BACK

1. Receiving Operator name, exactly as shown on P-5 Organization Report	2. Operator P-5 no.	3. RRC district no.	5. Purpose of Filing: <input type="checkbox"/> Consolidation <input type="checkbox"/> Subdivision	
		4. County		
6. Operator address including city, state, and zip code		7. Field name exactly as shown on proration schedule		
8. Are any of the leases being subdivided or consolidated currently overproduced or in violation of statewide rules? (check one) <input type="checkbox"/> No <input type="checkbox"/> Yes				
9. Lease to be subdivided or leases to be consolidated. List lease names and well numbers exactly as listed on current Commission Oil Proration Schedule.				
LEASE NAME	LEASE NUMBER	LEASE ACRES	WELL NUMBERS (e.g.: 1, 2, 3-U, 3-L, 4, etc.)	
(1)				
(2)				
(3)				
10. Lease(s) resulting from subdivision or after consolidation (how the leases/wells are to be listed on the Commission Oil Proration Schedule). For well number changes, give both old and new number; if there is no well number change, show the number under "old".				
LEASE NAME	LEASE NUMBER	LEASE ACRES	WELL NUMBERS	API NUMBER 42-
			Old New	
(1)				
(2)				
(3)				
11. Is the ownership, working interest, and the royalty interest for all leases listed in Items 9 or 10 identical? (check one) <input type="checkbox"/> No <input type="checkbox"/> Yes (See instruction D)				
12. Is the acreage listed for the resulting leases in Item 10 contiguous? (Check one) <input type="checkbox"/> No <input type="checkbox"/> Yes (See instruction F)				RRC USE ONLY
OPERATOR CERTIFICATION: I certify that I am authorized to make this request, that it was prepared by me or under my supervision and direction, and that the data and facts stated herein are true, correct, and complete to the best of my knowledge.				Reviewer's initials: _____
Signature _____				Approval date: _____
Date _____				
Name (print or type) _____				
Title _____				
Phone number (with area code) _____				
E-mail address (optional) _____				

**REQUEST FOR PERMISSION TO SUBDIVIDE OR
 CONSOLIDATE OIL LEASE(S)**

P-6
 5/02

10. Lease(s) resulting from subdivision or after consolidation (how the leases/wells are to be listed on the Commission Oil Proration Schedule). For well number changes, give both old and new number; if there is no well number change, show the number under "old".					
LEASE NAME	LEASE NUMBER	LEASE ACRES	WELL NUMBERS		API NUMBER 42-
			Old	New	
<i>(1) * Indicates PSA well after P-6/W-2 approval..</i>					
UL 20 N Twitch	57934	640.7	0403H		301-32740
UL 20 N Paddle Tail	57935	640.7	0503H		301-31794
UL 20 S Bucktail	57938	640.7	1001H		495-33544
*UL Popper A	57940	300	1002H		495-33891
*UL 20 Popper B	57941	300	1003H		495-33892
*UL 20 Bucktail A1	57942	80	1005H		495-33889
*UL 20 Bucktail A	57943	320	1007H		495-33890
*UL 20 Bucktail C	57944	320	1009H		495-34399
*UL 20 Bucktail D	57945	260.7	1010H		495-34404
*UL Spinner A	57946	200.875	1503H		495-33705
UL 20 SW Topwater	57947	320.35	1803H		301-32609
UL 20 N Gold Spoon	57949	640.7	2002H		301-31788
*UL 20 N Gold Spoon A	57950	640.7	2003ST	2003H	301-32937
*UL 20 N Gold Spoon B	57954	640.7	2004H		301-32938
*UL 20 S Chatter A	57955	319	2701H		495-34175
*UL 20 S Chatter C	57956	319	2703H		495-34174
*UL 20 N Chatter A	57957	309	2704H		495-34170
*UL 20 N Chatter C	57958	314.7	2706H		495-34169
*UL 20 Rat Tail B	57959	200.225	2708H		495-34454
*UL 20 Silver Spoon A	57960	160	3902H		495-34004
*UL 20 Silver Spoon B	57961	160	3903H		495-33993
*UL 20 Silver Spoon C	57962	160	3904H		495-34006
*UL 20 Silver Spoon D	57963	160	3905H		495-33994
*UL 20 Silver Spoon E	57964	160	3906H		495-34449
*UL 20 Silver Spoon G	57965	140	3908H		495-34448
*UL 20 Silver Spoon H	57966	80	3909H		495-34550
*UL 20 Silver Spoon J	57967	60	3910H		495-34551
*UL 20 Silver Spoon I	57968	161.4	3911H		495-34571



Groundwater
Advisory Unit

GROUNDWATER PROTECTION DETERMINATION

Date **January 2, 2014**

GAU File No.: SC- **6151**

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

API Number **49533544**

Attention: **GEORGE MULLEN**

RRC Lease No. **000000**

SC_774719_49533544_000000_6151.pdf

**SHELL WESTERN E&P
150 DAIRY ASHFORD
HOUSTON TX 77079**

P-5# 774719

--Measured--
2600 ft FWL
230 ft FNL
MRL: SECTION

Digital Map Location:
X-coord/Long **103.32100**
Y-coord/Lat **31.73660**
Datum **27** Zone

County **WINKLER**

Lease & Well No. **UNIVERSITY 20 10 WNK #1H**

Purpose **ND**

Location **SUR-UL, BLK-20, SEC-10, -- [TD=12500], [RRC 8],**

To protect usable-quality groundwater at this location, the Groundwater Advisory Unit of the Texas Railroad Commission recommends:

The interval from the land surface to a depth of 300 feet must be protected.

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).

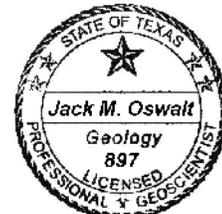
If you have any questions, please contact us at 512-463-2741, gau@rrc.state.tx.us, or by mail.

Sincerely,


Digitally signed by Jack Oswalt
DN: c=US, st=TEXAS, l=Austin, o=Railroad
Commission of Texas, ou=Groundwater
Advisory Unit, cn=Jack Oswalt,
email=jack.oswalt@rrc.state.tx.us
Date: 2014.01.02 08:23:02 -06'00'

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 1/2/2014
Note: Alteration of this electronic document will invalidate the digital signature.

OPERATOR: PDEH LLC

AS-DRILLED LOCATION

LEASE NAME & WELL NO.:

UL 20 S BUCKTAIL 1001H

API #: 4249533544

LEASE WELL ACREAGE:

640.700 ACRES (CALLED)

NEAREST TOWN IN COUNTY:

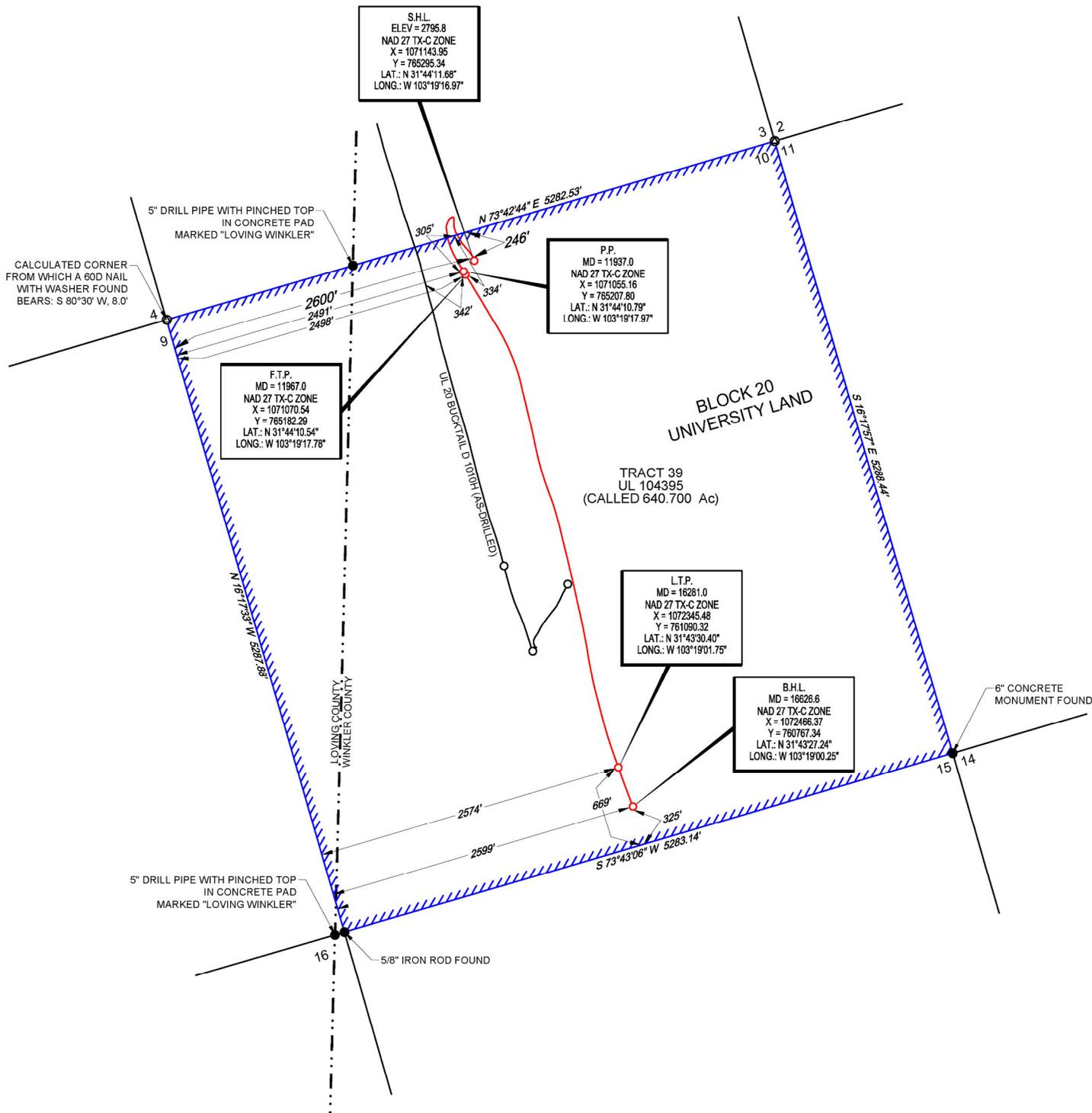
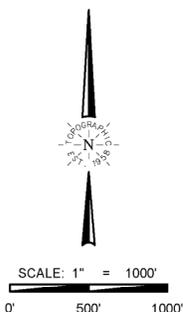
±9.5 MILES EAST OF WINKLER, TEXAS

DESCRIPTION:

S.H.L./P.P./F.T.P.: SECTION 10, BLOCK 20, UNIVERSITY LAND SURVEY

L.T./B.H.L.: SECTION 10, BLOCK 20, UNIVERSITY LAND SURVEY

WINKLER COUNTY, TEXAS



TIES TABLE

POINT	LEASE WELL	SURVEY/SECTION
S.H.L.	246' FNWL	246' FNWL & 2600' FSWL
	2600' FSWL	2600' FSWL
P.P.	305' FNWL	305' FNWL & 2491' FSWL
	2491' FSWL	2491' FSWL
F.T.P.	334' FNWL	334' FNWL & 2498' FSWL
	2498' FSWL	2498' FSWL
L.T.P.	2574' FSWL	2574' FSWL & 669' FSEL
	669' FSEL	669' FSEL
B.H.L.	2599' FSWL	2599' FSWL & 325' FSEL
	325' FSEL	325' FSEL

PRODUCTIVE LATERAL

LENGTH (F.T.P. TO L.T.P.)	
1	4,314.00'
TOTAL	4,314.00'

LEGEND:

- Lease Well Boundary
- Approximate Location County Line
- Survey/Section Line
- As-Drilled Well Path
- Monument Found
- Calculated Corner
- Well Point



John R. Anderson 4/12/2023
 John R. Anderson, R.P.L.S. No. 6442

TOPOGRAPHIC
 LOYALTY INNOVATION LEGACY
 481 WINSOTT ROAD, Ste. 200 • BENBROOK, TEXAS 76126
 TELEPHONE: (817) 744-7512 • FAX: (817) 744-7554
 TEXAS FIRM REGISTRATION NO. 10042504
 WWW.TOPOGRAPHIC.COM

UL 20 S BUCKTAIL
 1001H
 AS-DRILLED

DATE: DECEMBER 1, 2014

FILE: AD_UL_20_S_BUCKTAIL_1001H_REV2_PDEH

DRAWN BY: O.M.

SHEET: 1 OF 1

REVISION:	
A.C.L.	07/19/2022
O.M.	03/22/2023

NOTES:

- ORIGINAL DOCUMENT SIZE: 11" X 17"
- ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE TEXAS STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, U.S. SURVEY FEET, NORTH AMERICAN DATUM 1927, UNLESS OTHERWISE NOTED.
- THIS LOCATION AND/OR UNIT/LEASE BOUNDARY HAS BEEN CAREFULLY SURVEYED ON THE GROUND UNDER MY SUPERVISION AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE ACCORDING TO THE EVIDENCE, OFFICIAL SURVEY RECORDS, MAPS, AND OTHER DATA PROVIDED BY PERMIAN DELAWARE ENTERPRISES HOLDINGS, LLC. THIS PLAT WAS CREATED FOR THE SOLE PURPOSE OF FILING A PERMIT WITH THE RAILROAD COMMISSION OF TEXAS AND SHOULD NOT BE CONSTRUED AS A "BOUNDARY SURVEY" IN COMPLIANCE WITH T.B.P.L.S. MINIMUM STANDARDS OF PROCEDURES FOR BOUNDARY SURVEYS. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.
- ALL ELEVATION VALUES CONTAINED HEREON ARE ORTHOMETRIC ONLY, BASED UPON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88), U.S. SURVEY FEET.
- ALL MINERAL OWNERSHIP DATA SHOWN HEREIN IS BASED ON INFORMATION PROVIDED BY PERMIAN DELAWARE ENTERPRISES HOLDINGS, LLC OR ITS SUBSIDIARIES & AFFILIATES.

NOTES CONT'D:

- THE AS-DRILLED SURFACE LOCATION HAS BEEN CAREFULLY SURVEYED ON THE GROUND DURING THE DATE OF OCTOBER 20, 2014
- THE SUBSURFACE WELL PATH DATA SHOWN HEREIN IS BASED ON INFORMATION PROVIDED BY PERMIAN DELAWARE ENTERPRISES HOLDINGS, LLC OR ITS SUBSIDIARIES & AFFILIATES.
- S.H.L. = SURFACE HOLE LOCATION
- P.P. = POINT OF PENETRATION
- F.T.P. = FIRST TAKE POINT
- L.T.P. = LAST TAKE POINT
- B.H.L. = BOTTOM HOLE LOCATION