



RAILROAD COMMISSION OF TEXAS

Form W-2

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

Status: Approved
Date: 07/11/2019
Tracking No.: 201336

OIL WELL POTENTIAL TEST, COMPLETION OR RECOMPLETION REPORT, AND LOG

OPERATOR INFORMATION

Operator Name: ENERGEN RESOURCES CORPORATION Operator No.: 252002
Operator Address: 3510 N A ST BLDGS A AND B MIDLAND, TX 79705-0000

WELL INFORMATION

API No.: 42-495-33809 County: WINKLER
Well No.: 605H RRC District No.: 08
Lease Name: UL 20 STRIPES 38-47 Field Name: PHANTOM (WOLFCAMP)
RRC Lease No.: 51736 Field No.: 71052900
Location: Section: 38, Block: 20, Survey: UL, Abstract: U33

Latitude: 31.673151 Longitude: -103.275308
This well is located 13 miles in a NW
direction from PYOTE,
which is the nearest town in the county.

FILING INFORMATION

Purpose of filing: Initial Potential
Type of completion: New Well
Well Type: Producing Completion or Recompletion Date: 09/22/2018

Type of Permit Date Permit No.
Permit to Drill, Plug Back, or Deepen 03/10/2017 823989
Rule 37 Exception
Fluid Injection Permit
O&G Waste Disposal Permit
Other:

COMPLETION INFORMATION

Spud date: 04/10/2018 Date of first production after rig released: 09/22/2018
Date plug back, deepening, recompletion, or drilling operation commenced: 04/10/2018 Date plug back, deepening, recompletion, or drilling operation ended: 07/18/2018
Number of producing wells on this lease in this field (reservoir) including this well: 5 Distance to nearest well in lease & reservoir (ft.): 923.0
Total number of acres in lease: 1281.40 Elevation (ft.): 2768 GR
Total depth TVD (ft.): 11745 Total depth MD (ft.): 21615
Plug back depth TVD (ft.): Plug back depth MD (ft.):
Was directional survey made other than inclination (Form W-12)? Yes Rotation time within surface casing (hours): 65.0
Is Cementing Affidavit (Form W-15) attached? Yes
Recompletion or reclass? No Multiple completion? No
Type(s) of electric or other log(s) run: Gamma Ray (MWD)
Electric Log Other Description:
Location of well, relative to nearest lease boundaries Off Lease : No
of lease on which this well is located: 250.0 Feet from the NW Line and
1261.0 Feet from the NE Line of the
UL 20 STRIPES 38-47 Lease.

FORMER FIELD (WITH RESERVOIR) & GAS ID OR OIL LEASE NO.

Field & Reservoir Gas ID or Oil Lease No. 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 (ft.):	300.0	Date: 03/15/2017
SWR 13 Exception	Depth (ft.):	4950.0	

INITIAL POTENTIAL TEST DATA FOR NEW COMPLETION OR RECOMPLETION		
Date of test: 10/04/2018		Production method: Flowing
Number of hours tested: 24		Choke size: 46
Was swab used during this test?	No	Oil produced prior to test: 14213.00
PRODUCTION DURING TEST PERIOD:		
Oil (BBLS): 1950.00		Gas (MCF): 1775
Gas - Oil Ratio: 910		Flowing Tubing Pressure: 0.00
Water (BBLS): 6322		
CALCULATED 24-HOUR RATE		
Oil (BBLS): 1950.0		Gas (MCF): 1775
Oil Gravity - API - 60.:	41.0	Casing Pressure: 2059.00
Water (BBLS): 6322		

CASING RECORD											
Row	Type of Casing	Casing Size (in.)	Hole Size (in.)	Setting Depth (ft.)	Multi - Stage Depth (ft.)	Multi - Stage Shoe Depth (ft.)	Cement Class	Cement Amount (sacks)	Slurry Volume (cu. ft.)	Top of Cement (ft.)	TOC Determined By
1	Surface	13 3/8	17 1/2	411			C	455	614.0	0	Circulated to Surface
2	Intermediate	10 3/4	12 1/4	5004			C	1085	1319.0	0	Circulated to Surface
3	Intermediate	7 5/8	9 7/8	11805	4896		C	465	1210.0	0	Circulated to Surface
4	Intermediate	7 5/8	9 7/8	11805			H	960	1141.0	4896	Calculation
5	Tapered Production	5 1/2	6 3/4	11673			H	1440	1756.8	4034	Cement Evaluation Log
6	Tapered Production	4 1/2	6 3/4	21610			H	1440	1756.8	4034	Cement Evaluation Log

LINER RECORD									
Row	Liner Size (in.)	Hole Size (in.)	Liner Top (ft.)	Liner Bottom (ft.)	Cement Class	Cement Amount (sacks)	Slurry Volume (cu. ft.)	Top of Cement (ft.)	TOC Determined By
N/A									

TUBING RECORD			
Row	Size (in.)	Depth	Size (ft.)
1	2 7/8	11135	
			Packer Depth (ft.)/Type
			11121 / TRYTON TX-10

PRODUCING/INJECTION/DISPOSAL INTERVAL			
Row	Open hole?	From (ft.)	To (ft.)
1	No	L1 11974	21526.0

ACID, FRACTURE, CEMENT SQUEEZE, CAST IRON BRIDGE PLUG, RETAINER, ETC.			
Was hydraulic fracturing treatment performed?		Yes	
Is well equipped with a downhole actuation sleeve?		Yes	
If yes, actuation pressure (PSIG):		6000.0	
Production casing test pressure (PSIG) prior to hydraulic fracturing treatment:		4800	
Actual maximum pressure (PSIG) during hydraulic fracturing:		11354	
Has the hydraulic fracturing fluid disclosure been reported to FracFocus disclosure registry (SWR29)?		Yes	
Row	Type of Operation	Amount and Kind of Material Used	Depth Interval (ft.)
1	Fracture	SEE FRAC FOCUS	11974 21526

FORMATION RECORD					
Formations	Encountered	Depth TVD (ft.)	Depth MD (ft.)	Is formation isolated?	Remarks
RUSTLER - POSSIBLE FLOW; POSSIBLE USABLE QUALITY W	Yes	755.0	755.0	Yes	CMT'D BEHIND CSG
COLBY-QUEEN	Yes	2900.0	2900.0	Yes	CMT'D BEHIND CSG
YATES	Yes	2280.0	2280.0	Yes	CMT'D BEHIND CSG
QUEEN-SEVEN RIVERS	Yes	2700.0	2700.0	Yes	CMT'D BEHIND CSG
SAN ANDRES - HIGH FLOWS, H2S, CORROSIVE	Yes	3600.0	3600.0	Yes	CMT'D BEHIND CSG
HOLT	Yes	4500.0	4500.0	Yes	CMT'D BEHIND CSG
DELAWARE	Yes	5015.0	5015.0	Yes	CMT'D BEHIND CSG, EST TOP
GLORIETA	Yes	4900.0	4900.0	Yes	CMT'D BEHIND CSG
CLEARFORK	Yes	4750.0	4750.0	Yes	CMT'D BEHIND CSG
WICHITA ALBANY	Yes	6600.0	6600.0	Yes	CMT'D BEHIND CSG
BRUSHY CANYON	Yes	7355.0	7355.0	Yes	CMT'D BEHIND CSG, EST TOP
CHERRY CANYON	Yes	5795.0	5795.0	Yes	CMT'D BEHIND CSG, EST TOP
CANYON	Yes	8400.0	8400.0	Yes	CMT'D BEHIND CSG
BONE SPRINGS	Yes	8560.0	8560.0	Yes	CMT'D BEHIND CSG, EST TOP
MONTOYA	Yes	10300.0	10300.0	Yes	CMT'D BEHIND CSG
WADDELL	Yes	11000.0	11000.0	Yes	CMT'D BEHIND CSG
WOLFCAMP	Yes	11555.0	11615.0	No	FORMATION EST TOP
ATOKA	No			No	BELOW TD
STRAWN	No			No	BELOW TD
PENNSYLVANIAN	No			No	BELOW TD
MISSISSIPPIAN	No			No	BELOW TD
DEVONIAN	No			No	BELOW TD
SILURIAN	No			No	BELOW TD
FUSSELMAN	No			No	BELOW TD
ELLENBURGER	No			No	BELOW TD
Do the producing interval of this well produce H2S with a concentration in excess of 100 ppm (SWR 36)?					No
Is the completion being downhole commingled (SWR 10)?					No

REMARKS
KOP: 11084' MD. SPUD 4/10/18, SET SURF 4/11/18, SET 1ST INTERMEDIATE 4/18/18 & RELEASED SPUDDER RIG. RESUMED DRLG 6/4/18, SET 2ND INTERMEDIATE 6/18/18, SET PROD CSG 7/17/18 & RE. RIG 7/18/18.

RRC REMARKS
<p>PUBLIC COMMENTS:</p> <p>[RRC Staff 2019-01-11 09:49:08.42] EDL=9550 feet, max acres=704, PHANTOM (WOLFCAMP) oil well;</p> <p>take points: 11974-21526 feet</p> <p>CASING RECORD :</p> <p>TUBING RECORD:</p> <p>PRODUCING/INJECTION/DISPOSAL INTERVAL :</p> <p>ACID, FRACTURE, CEMENT SQUEEZE, CAST IRON BRIDGE PLUG, RETAINER, ETC. :</p> <p>POTENTIAL TEST DATA:</p>

OPERATOR'S CERTIFICATION	
Printed Name: Vonda Freeman	Title: Regulatory Analyst
Telephone No.: (432) 684-3693	Date Certified: 01/07/2019



RAILROAD COMMISSION OF TEXAS

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

CEMENTING REPORT

Form W-15

Rev. 08/2014

Cementer: Fill in shaded areas.
Operator: Fill in other items.

OPERATOR INFORMATION

Operator Name: ENERGEN RESOURCES Operator P-5 No.: 252002
Cementer Name: C&J ENERGY SERVICES Cementer P-5 No.: 120531

WELL INFORMATION

District No.: 08 County: WINKLER
Well No.: 605H API No.: 42-495-33809 Drilling Permit No.: 823989
Lease Name: UL 20 STRIPES 38-47 Lease No.:
Field Name: Phantom (Wolfcamp) Field No.: 71052900

I. CASING CEMENTING DATA

Type of Casing: ☐ Conductor ☒ Surface ☐ Intermediate ☐ Liner ☐ Production
Drilled hole size (in.): 17 1/2 Depth of drilled hole (ft.): 410 Est. % wash-out or hole enlargement: 25
Size of casing in O.D. (in.): 13 3/8 Casing weight (lbs/ft) and grade: 54.5 No. of centralizers used: 5
Was cement circulated to ground surface (or bottom of cellar) outside casing? ☒ YES ☐ NO If no for surface casing, explain in Remarks.
Setting depth shoe (ft.): 411 Top of liner (ft.):
Setting depth liner (ft.):
Hrs. waiting on cement before drill-out: 2 Calculated top of cement (ft.): SURFACE Cementing date: 4/11/2018

SLURRY

Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1	455	C	REMARKS 1	614	884
2					
3					
Total	455			614	884

II. CASING CEMENTING DATA

Type of casing: ☐ Surface ☐ Intermediate ☐ Production ☐ Tapered production ☐ Multi-stage cement shoe ☐ Multiple parallel strings
Drilled hole size (in.): Depth of drilled hole (ft.): Est. % wash-out or hole enlargement:
Size of casing in O.D. (in.): Casing weight (lbs/ft) and grade: No. of centralizers used:
Tapered string drilled hole size (in.) Tapered string depth of drilled hole (ft.)
Upper: Lower: Upper: Lower:
Tapered string size of casing in O.D. (in.) Tapered string casing weight (lbs/ft) and grade Tapered string no. of centralizers used
Upper: Lower: Upper: Lower:
Was cement circulated to ground surface (or bottom of cellar) outside casing? YES ☐ NO ☐
Setting depth shoe (ft.):
Hrs. waiting on cement before drill-out: Calculated top of cement (ft.): Cementing date:

SLURRY

Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1					
2					
3					
Total					

III. CASING CEMENTING DATA

Type of casing: ☐ Surface ☐ Intermediate ☐ Production ☐ Tapered production ☐ Multi-stage cement/DV tool ☐ Multiple parallel strings
Drilled hole size (in.): Depth of drilled hole (ft.): Est. % wash-out or hole enlargement:
Size of casing in O.D. (in.): Casing weight (lbs/ft) and grade: No. of centralizers used:
Tapered string drilled hole size (in.) Tapered string depth of drilled hole (ft.)
Upper: Lower: Upper: Lower:
Tapered string size of casing in O.D. (in.) Tapered string casing weight (lbs/ft) and grade Tapered string no. of centralizers used
Upper: Lower: Upper: Lower:
Was cement circulated to ground surface (or bottom of cellar) outside casing? YES ☐ NO ☐
Setting depth shoe (ft.):
Hrs. waiting on cement before drill-out: Calculated top of cement (ft.): Cementing date:

SLURRY

Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1					
2					
3					
Total					

495-33809

CEMENTING TO SQUEEZE, PLUG BACK OR PLUG AND ABANDON							
	PLUG #1	PLUG #2	PLUG #3	PLUG #4	PLUG #5	PLUG #6	PLUG #7
Cementing Date							
Size of hole or pipe (in.)							
Depth to bottom of tubing or drill pipe (ft.)							
Cement retainer setting depth (ft.)							
CIBP setting depth (ft.)							
Amount of cement on top of CIBP (ft.)							
Sacks of cement used							
Slurry volume pumped (cu. ft.)							
Calculated top of plug (ft.)							
Measured top of plug, if tagged (ft.)							
Slurry weight (lbs/gal)							
Class/type of cement							
Perforate and squeeze (YES/NO)							
REMARKS							
REMARKS 1 2% CACL2							

CEMENTER'S CERTIFICATE: I declare under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, that I am authorized to make this certification, that the cementing of casing and/or the placing of cement plugs in this well as shown in the report was performed by me or under my supervision, and that the cementing data and facts presented on both sides of this form are true, correct, and complete, to the best of my knowledge. This certification covers cementing data only.

WILL ZUMSTEIN SERVICE SUPERVISOR
Name and title of cementer's representative

C&J ENERGY SERVICES
Cementing Company

Will Zumstein
Signature

2611 E I-20 Midland TX 79706
Address City, State, Zip Code

432-686-8559 4/11/2018
Tel: Area Code Number Date: mo. day yr.

OPERATOR'S CERTIFICATE: I declare under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, that I am authorized to make this certification, that I have knowledge of the well data and information presented in this report, and that data and facts presented on both sides of this form are true, correct, and complete, to the best of my knowledge. This certification covers all well data.

Vonda Freeman
Typed or printed name of operator's representative

Regulatory Analyst
Title

Vonda Freeman
Signature

3510 N A BLDES A+B Midland TX 79705
Address City, State, Zip Code

432-684-3693 9-17-18
Tel: Area Code Number Date: mo. day yr.

Instructions for Form W-15, Cementing Report

NOTICE: The Form W-15 must be submitted as an attachment to a Form G-1 (Gas Well Back Pressure Test, Completion or Recompletion Report, and Log), Form W-2 (Oil Well Potential Test, Completion or Recompletion Report, and Log), Form W-3 (Plugging Record), or Form W-4 (Application for Multiple Completion), any time cement is pumped in a wellbore.

A. **What to file:** An operator should file an original and one copy of the completed Form W-15 for each cementing company used on a well. The cementing of different casing strings on a well by one cementing company may be reported on one form.

The Form W-15 should be filed with the Form W-3, Plugging Record, unless the Form W-3 is signed by the cementing company representative. When reporting dry holes, operators must complete Form W-15, in addition to Form W-3, to show any casing cemented in the hole.

B. **How to file:** An oil and gas completion report and Form W-15 may be filed online using the Commission's Online System

(<https://webapps.rrc.state.tx.us/security/login.do>) or a paper copy of the form may be mailed to the Commission in Austin (P.O. Box 12967, Austin, Texas 787112967).

C. **Surface casing:** An operator must set and cement sufficient surface casing to protect all usable-quality water strata, as defined by the Groundwater Advisory Unit in Austin. Sufficient cement shall be used to fill the annular space outside the casing from the shoe to the ground surface or to the bottom of the cellar. Before drilling a well, an operator must obtain a letter from the Groundwater Advisory Unit stating the protection depth. Surface casing should not be set deeper than 200 feet below the specified depth without prior approval from the Commission.

To plug and abandon a well, operators must use only cementers approved by the Commission's Director of Field Operations in accordance with SWR 14 ([http://info.sos.state.tx.us/pls/pub/readtac\\$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=16&pt=1&ch=3&rl=14](http://info.sos.state.tx.us/pls/pub/readtac$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=16&pt=1&ch=3&rl=14)). Cementing companies, service companies, or operators can qualify as approved cementers by demonstrating that they are able to mix and pump cement in compliance with Commission rules and regulations.

D. **Estimated % wash-out:** If the estimated % wash-out is less than 20% (or 30% along the Gulf Coast), provide supporting documentation such as a caliper log to show how the estimated % wash-out was obtained.

E. **Multi-stage cement:** An operator must report the multi-stage cement shoe in II. Casing Cementing Data section by selecting the type of casing and Multi-stage cement shoe. The operator must report the multi-stage cement tool in III. Casing Cementing Data section by selecting the type of casing and Multi-stage cement/DV tool.

F. **Multiple parallel strings:** An operator should file the Form W-15 as an attachment to the Form W-4, Application for Multiple Completion. An operator may be required to submit multiple Form W-15s to show all data for multiple parallel strings.

G. **Slurry data:** If cement job exceeds three slurries, continue the list of slurries in the Slurry table in the subsequent Casing Cementing Data box.



RAILROAD COMMISSION OF TEXAS

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

Form W-15

Rev. 08/2014

CEMENTING REPORT

OPERATOR INFORMATION	
Operator Name: ENERGEN RESOURCES	Operator P-5 No.: 252002
Cementer Name: C&J Energy Services	Cementer P-5 No.: 120531

WELL INFORMATION	
District No.: 08	County: WINKLER
Well No.: #805H	API No.: 42-495-33809
Lease Name: UL 20 STRIPES 38-47	Drilling Permit No.: 823989
Field Name: Phantom Woodcamp	Lease No.: 77052900
	Field No.: 77052900

I. CASING CEMENTING DATA					
Type of casing: <input type="checkbox"/> Conductor <input checked="" type="checkbox"/> Surface <input checked="" type="checkbox"/> Intermediate <input type="checkbox"/> Liner <input type="checkbox"/> Production					
Drilled Hole Size (in.): 12.25	Depth of drilled hole (ft.): 5004	Est. % wash-out or hole enlargement: 25			
Size of casing in O.D. (in.): 10.75	Casing weight (lbs/ft) and grade: 45.5 L-80	No. of centralizers used: 30			
Was cement circulated to ground surface (or bottom of cellar) outside casing? YES		Setting depth shoe (ft.): 5004		Top of liner (ft.): =	
		Setting depth liner (ft.): =			
Hrs. waiting on cement before drill-out:	Calculated top of cement (ft.): Surface	Cementing Date: 4.18.18			
Slurry					
Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1	860	C	see comment #1	1093	3544
2	225	C	see comment #2	226	1460
3					
Total	1085			1319	5004

II. CASING CEMENTING DATA					
Type of casing: <input type="checkbox"/> Surface <input type="checkbox"/> Intermediate <input type="checkbox"/> Production <input type="checkbox"/> Tapered production <input type="checkbox"/> Multi-stage cement shoe <input type="checkbox"/> Multiple parallel strings					
Drilled Hole Size (in.): 12.25	Depth of drilled hole (ft.): 5004	Est. % wash-out or hole enlargement: 27			
Size of casing in O.D. (in.): 10.75	Casing weight (lbs/ft) and grade: 45.5 L-80	No. of centralizers used:			
Tapered string drilled hole size (in.)		Tapered string depth of drilled hole (ft.)			
Upper:	Lower:	Upper:	Lower:		
Tapered string size of casing in O.D. (in.)		Tapered string casing weight (lbs/ft) and grade		Tapered string no. of centralizers used	
Upper:	Lower:	Upper:	Lower:	Upper:	Lower:
Was cement circulated to ground surface (or bottom of cellar) outside casing? <input type="checkbox"/> YES <input type="checkbox"/> NO		Setting depth shoe (ft.): 5004			
Hrs. waiting on cement before drill-out:	Calculated top of cement (ft.): Surface	Cementing Date: 4.18.18			
Slurry					
Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1					
2					
3					
Total					

III. CASING CEMENTING DATA					
Type of casing: <input type="checkbox"/> Surface <input type="checkbox"/> Intermediate <input type="checkbox"/> Production <input type="checkbox"/> Tapered production <input type="checkbox"/> Multi-stage cement shoe <input type="checkbox"/> Multiple parallel strings					
Drilled Hole Size (in.): 12.25	Depth of drilled hole (ft.): 5004	Est. % wash-out or hole enlargement:			
Size of casing in O.D. (in.): 10.75	Casing weight (lbs/ft) and grade: 45.5 L-80	No. of centralizers used:			
Tapered string drilled hole size (in.)		Tapered string depth of drilled hole (ft.)			
Upper:	Lower:	Upper:	Lower:		
Tapered string size of casing in O.D. (in.)		Tapered string casing weight (lbs/ft) and grade		Tapered string no. of centralizers used	
Upper:	Lower:	Upper:	Lower:	Upper:	Lower:
Was cement circulated to ground surface (or bottom of cellar) outside casing? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		Setting depth shoe (ft.): 5004			
Hrs. waiting on cement before drill-out:	Calculated top of cement (ft.): Surface	Cementing Date: 4.18.18			
Slurry					
Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1					
2					
3					
Total				1319	

#1 INT

495 - 33809

CEMENTING TO SQUEEZE, PLUG BACK OR PLUG AND ABANDON

	PLUG #1	PLUG #2	PLUG #3	PLUG #4	PLUG #5	PLUG #6	PLUG #7
Cementing Date							
Size of hole or pipe (in.)							
Depth to bottom of tubing or drill pipe (ft.)							
Cement retainer setting depth (ft.)							
CIBP setting depth (ft.)							
Amount of cement on top of CIBP (ft.)							
Sacks of cement used							
Slurry volume pumped (cu. ft.)							
Calculated top of plug (ft.)							
Measured top of plug, if tagged (ft.)							
Slurry weight (lbs/gal)							
Class/type of cement							
Perforate and squeeze (YES/NO)							

REMARKS

#1 10% GEL + 0.6% SMS + 0.2% O-TX20 + 0.25#/SX CELLO FLAKE + 5% SALT
 #2 0.2% O-TX20
 #3
 #4

CEMENTER'S CERTIFICATE: I declare under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, that I am authorized to make this certification, that the cementing of casing and/or the placing of cement plugs in this well as shown in the report was performed by me or under my supervision, and that the cementing data and facts presented on both sides of this form are true, correct, and complete, to the best of my knowledge. This certification covers cementing data only.

David Heaps Service Supervisor C&J Energy Services
 Name and title of cementer's representative Cementing Company Signature
 185 FM 1934 Pecos TX, 79772 432 755-4999 4/18/2018
 Address City, State, Zip Code Tel: Area Code Number Date: mo. day yr.

OPERATOR'S CERTIFICATE: I declare under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, that I am authorized to make this certification, that I have knowledge of the well data and information presented in this report, and that data and facts presented on both sides of this form are true, correct, and complete, to the best of my knowledge. This certification covers all well data.

Vonda Freeman Regulatory Analyst Vonda Freeman
 Typed or printed name of operator's representative Title Signature
 3510 N. A. BLDGS A+B Midland TX 79705 432 684 3693
 Address City, State, Zip Code Tel: Area Code Number Date: mo. day yr.

Instructions for Form W-15, Cementing Report

NOTICE: The Form W-15 must be submitted as an attachment to a Form G-1 (Gas Well Back Pressure Test, Completion or Recompletion Report, and Log), Form W-2 (Oil Well Potential Test, Completion or Recompletion Report, and Log), Form W-3 (Plugging Record), or Form W-4 (Application for Multiple Completion), any time cement is pumped in a wellbore.

A. What to file: An operator should file an original and one copy of the completed Form W-15 for each cementing company used on a well. The cementing of different casing strings on a well by one cementing company may be reported on one form.

The Form W-15 should be filed with the Form W-3, Plugging Record, unless the Form W-3 is signed by the cementing company representative. When reporting dry holes, operators must complete Form W-15, in addition to Form W-3, to show any casing cemented in the hole.

B. How to file: An oil and gas completion report and Form W-15 may be filed online using the Commission's Online System (<https://webapps.rrc.texas.gov/security/login.do>) or a paper copy of the form may be mailed to the Commission in Austin (P.O. Box 12967, Austin, Texas 78711-2967).

C. Surface casing: An operator must set and cement sufficient surface casing to protect all usable-quality water strata, as defined by the Groundwater Advisory Unit in Austin. Sufficient cement shall be used to fill the annular space outside the casing from the shoe to the ground surface or to the bottom of the cellar. Before drilling a well, an operator must obtain a letter from the Groundwater Advisory Unit stating the protection depth. Surface casing should not be set deeper than 200 feet below the specified depth without prior approval from the Commission.

To plug and abandon a well, operators must use only cementers approved by the Commission's Director of Field Operations in accordance with SWR 14 ([http://info.sos.state.tx.us/pls/pub/readtac\\$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&poloc=&p_ploc=&pg=1&p_tac=&ti=16&pt=1&ch=3&ri=14](http://info.sos.state.tx.us/pls/pub/readtac$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&poloc=&p_ploc=&pg=1&p_tac=&ti=16&pt=1&ch=3&ri=14)). Cementing companies, service companies, or operators can qualify as approved cementers by demonstrating that they are able to mix and pump cement in compliance with Commission rules and regulations.

D. Estimated % wash-out: If the estimated % wash-out is less than 20% (or 30% along the Gulf Coast), provide supporting documentation such as a caliper log to show how the estimated % wash-out was obtained.

E. Multi-stage cement: An operator must report the multi-stage cement shoe in II. Casing Cementing Data section by selecting the type of casing and Multi-stage cement shoe. The operator must report the multi-stage cement tool in III. Casing Cementing Data section by selecting the type of casing and Multi-stage cement/DV tool.

F. Multiple parallel strings: An operator should file the Form W-15 as an attachment to the Form W-4, Application for Multiple Completion. An operator may be required to submit multiple Form W-15s to show all data for multiple parallel strings.

G. Slurry data: If cement job exceeds three slurries, continue the list of slurries in the Slurry table in the subsequent Casing Cementing Data box.



2nd
Intermediate

RAILROAD COMMISSION OF TEXAS

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

Form W-15

Rev. 08/2014

CEMENTING REPORT

OPERATOR INFORMATION			
Operator Name:	ENERGEN RESOURCES	Operator P-5 No.:	252002
Cementer Name:	C&J Energy Services	Cementer P-5 No.:	120531

WELL INFORMATION			
District No.:	08	County:	WINKLER
Well No.:	605H	API No.:	42-495-33809
Lease Name:	UL 20 STRIPES 38-47	Drilling Permit No.:	823989
Field Name:	Phantom (Wolfcamp)	Lease No.:	71052900
		Field No.:	

I. CASING CEMENTING DATA					
Type of casing:	<input type="checkbox"/> Conductor	<input type="checkbox"/> Surface	<input checked="" type="checkbox"/> Intermediate	<input type="checkbox"/> Liner	<input type="checkbox"/> Production
Drilled Hole Size (in.):	9 7/8	Depth of drilled hole (ft.):	11,820	Est. % wash-out or hole enlargement:	25
Size of casing in O.D. (in.):	7 5/8	Casing weight (lbs/ft) and grade:	29.7	No. of centralizers used:	75
Was cement circulated to ground surface (or bottom of cellar) outside casing?	YES			Setting depth shoe (ft.):	11,805
	NO If no for surface casing, explain in Remarks.			Top of liner (ft.):	
Hrs. waiting on cement before drill-out:		Calculated top of cement (ft.):	4896	Cementing Date:	6/18/2018
Slurry					
Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1	630	50/50/H	REMARKS 1	749	8414
2	330	H	REMARKS 2	392	1770
Total	960			1141	10184

II. CASING CEMENTING DATA					
Type of casing:	<input type="checkbox"/> Surface	<input type="checkbox"/> Intermediate	<input type="checkbox"/> Production	<input type="checkbox"/> Tapered production	<input checked="" type="checkbox"/> Multi-stage cement shoe
Drilled Hole Size (in.):	9 7/8	Depth of drilled hole (ft.):	11,820	Est. % wash-out or hole enlargement:	25
Size of casing in O.D. (in.):	7 5/8	Casing weight (lbs/ft) and grade:	29.7	No. of centralizers used:	75
Tapered string drilled hole size (in.)	Upper:		Lower:		
Tapered string size of casing in O.D. (in.)	Upper:		Lower:		
Tapered string casing weight (lbs/ft) and grade	Upper:		Lower:		
Tapered string no. of centralizers used	Upper:		Lower:		
Was cement circulated to ground surface (or bottom of cellar) outside casing?	YES			Setting depth shoe (ft.):	4896 / shoe @ 11,805'
Hrs. waiting on cement before drill-out:		Calculated top of cement (ft.):	SURFACE		
		Cementing Date:	6/18/2018		
Slurry					
Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1	370	C	REMARKS 3	1084	4313
2	95	C	REMARKS 4	126	
3					
Total	465			1210	4313

III. CASING CEMENTING DATA					
Type of casing:	<input type="checkbox"/> Surface	<input type="checkbox"/> Intermediate	<input type="checkbox"/> Production	<input type="checkbox"/> Tapered production	<input type="checkbox"/> Multi-stage cement shoe
Drilled Hole Size (in.):		Depth of drilled hole (ft.):		Est. % wash-out or hole enlargement:	
Size of casing in O.D. (in.):		Casing weight (lbs/ft) and grade:		No. of centralizers used:	
Tapered string drilled hole size (in.)	Upper:		Lower:		
Tapered string size of casing in O.D. (in.)	Upper:		Lower:		
Tapered string casing weight (lbs/ft) and grade	Upper:		Lower:		
Tapered string no. of centralizers used	Upper:		Lower:		
Was cement circulated to ground surface (or bottom of cellar) outside casing?	YES			Setting depth shoe (ft.):	
Hrs. waiting on cement before drill-out:		Calculated top of cement (ft.):	Cementing Date:		
			6/18/2018		
Slurry					
Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1					
2					
3					
Total					

AND
Intermediate

495-33809

CEMENTING TO SQUEEZE, PLUG BACK OR PLUG AND ABANDON							
	PLUG #1	PLUG #2	PLUG #3	PLUG #4	PLUG #5	PLUG #6	PLUG #7
Cementing Date							
Size of hole or pipe (in.)							
Depth to bottom of tubing or drill pipe (ft.)							
Cement retainer setting depth (ft.)							
CIBP setting depth (ft.)							
Amount of cement on top of CIBP (ft.)							
Sacks of cement used							
Slurry volume pumped (cu. ft.)							
Calculated top of plug (ft.)							
Measured top of plug, if tagged (ft.)							
Slurry weight (lbs/gal)							
Class/type of cement							
Perforate and squeeze (YES/NO)							
REMARKS							
#1	10% GEL + 0.6% SMS + 0.65% O-TX20 + 0.25#/sx CELLO FLAKE + 5# KOLSEAL + 5% SALT						
#2	0.5% FL-17A + 0.05% C-51 + 0.2% O-TX20						
#3	10% GEL + 0.6% SMS + 0.2% O-TX20 + 5% SALT						
#4	0.15% O-TX20						

CEMENTER'S CERTIFICATE: I declare under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, that I am authorized to make this certification, that the cementing of casing and/or the placing of cement plugs in this well as shown in the report was performed by me or under my supervision, and that the cementing data and facts presented on both sides of this form are true, correct, and complete, to the best of my knowledge. This certification covers cementing data only.

JAMES RICHARDS		C&J Energy Services		Signature	
Name and title of cementer's representative		Cementing Company			
185 FM 1934	Pecos	TX, 79772	432	755-4999	6/18/2018
Address	City	State	Zip Code	Tel: Area Code Number	Date: mo. day yr.

OPERATOR'S CERTIFICATE: I declare under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, that I am authorized to make this certification, that I have knowledge of the well data and information presented in this report, and that data and facts presented on both sides of this form are true, correct, and complete, to the best of my knowledge. This certification covers all well data.

Vonda Freeman		Regulatory Analyst		Signature	
Typed or printed name of operator's representative		Title			
3501A, BLUE LAB	Midland	TX	79705	(432) 684-3693	9/17/18
Address	City	State	Zip Code	Tel: Area Code Number	Date: mo. day yr.

Instructions for Form W-15, Cementing Report

NOTICE: The Form W-15 must be submitted as an attachment to a Form G-1 (Gas Well Back Pressure Test, Completion or Recompletion Report, and Log), Form W-2 (Oil Well Potential Test, Completion or Recompletion Report, and Log), Form W-3 (Plugging Record), or Form W-4 (Application for Multiple Completion), any time cement is pumped in a wellbore.

A. What to file: An operator should file an original and one copy of the completed Form W-15 for each cementing company used on a well. The cementing of different casing strings on a well by one cementing company may be reported on one form.

The Form W-15 should be filed with the Form W-3, Plugging Record, unless the Form W-3 is signed by the cementing company representative. When reporting dry holes, operators must complete Form W-15, in addition to Form W-3, to show any casing cemented in the hole.

B. How to file: An oil and gas completion report and Form W-15 may be filed online using the Commission's Online System (<https://webapps.rrc.texas.gov/security/login.do>) or a paper copy of the form may be mailed to the Commission in Austin (P.O. Box 12967, Austin, Texas 78711-2967).

C. Surface casing: An operator must set and cement sufficient surface casing to protect all usable-quality water strata, as defined by the Groundwater Advisory Unit in Austin. Sufficient cement shall be used to fill the annular space outside the casing from the shoe to the ground surface or to the bottom of the cellar. Before drilling a well, an operator must obtain a letter from the Groundwater Advisory Unit stating the protection depth. Surface casing should not be set deeper than 200 feet below the specified depth without prior approval from the Commission.

To plug and abandon a well, operators must use only cements approved by the Commission's Director of Field Operations in accordance with SWR 14 ([http://info.sos.state.tx.us/pls/pub/readtac\\$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=16&pf=1&ch=3&rl=14](http://info.sos.state.tx.us/pls/pub/readtac$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=16&pf=1&ch=3&rl=14)). Cementing companies, service companies, or operators can qualify as approved cements by demonstrating that they are able to mix and pump cement in compliance with Commission rules and regulations.

D. Estimated % wash-out: If the estimated % wash-out is less than 20% (or 30% along the Gulf Coast), provide supporting documentation such as a caliper log to show how the estimated % wash-out was obtained.

E. Multi-stage cement: An operator must report the multi-stage cement shoe in II. Casing Cementing Data section by selecting the type of casing and Multi-stage cement shoe. The operator must report the multi-stage cement tool in III. Casing Cementing Data section by selecting the type of casing and Multi-stage cement/DV tool.

F. Multiple parallel strings: An operator should file the Form W-15 as an attachment to the Form W-4, Application for Multiple Completion. An operator may be required to submit multiple Form W-15s to show all data for multiple parallel strings.

G. Slurry data: If cement job exceeds three slurries, continue the list of slurries in the Slurry table in the subsequent Casing Cementing Data box.



RAILROAD COMMISSION OF TEXAS

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

Form W-15

Rev. 08/2014

CEMENTING REPORT

OPERATOR INFORMATION			
Operator Name:	ENERGEN RESOURCES	Operator P-5 No.:	252002
Cementer Name:	C&J Energy Services	Cementer P-5 No.:	120531

WELL INFORMATION			
District No.:	08	County:	WINKLER
Well No.:	605H	API No.:	42-495-33809
Lease Name:	UL 20 STRIPES 38-47	Drilling Permit No.:	823989
Field Name:	PHANTOM (WOLFECAMP)	Lease No.:	
		Field No.:	71052900

I. CASING CEMENTING DATA					
Type of casing:	<input type="checkbox"/> Conductor	<input type="checkbox"/> Surface	<input type="checkbox"/> Intermediate	<input type="checkbox"/> Inner	<input checked="" type="checkbox"/> Production
Drilled Hole Size (in.):	Depth of drilled hole (ft.):		Est. % wash-out or hole enlargement:		
Size of casing in O.D. (in.):	Casing weight (lbs/ft) and grade:		No. of centralizers used:		
Was cement circulated to ground surface (or bottom of cellar) outside casing? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO If no for surface casing, explain in Remarks.			Setting depth shoe (ft.):		Top of liner (ft.):
Hrs. waiting on cement before drill-out:			Calculated top of cement (ft.):		Cementing Date: 7/17/2018
Slurry					
Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1					
2					
3					
Total					

II. CASING CEMENTING DATA					
Type of casing:	<input type="checkbox"/> Surface	<input type="checkbox"/> Intermediate	<input type="checkbox"/> Production	<input checked="" type="checkbox"/> Tapered production	<input type="checkbox"/> Multi-stage cement shoe
Drilled Hole Size (in.):	6 3/4	Depth of drilled hole (ft.):	21615	Est. % wash-out or hole enlargement: 25	
Size of casing in O.D. (in.):	Casing weight (lbs/ft) and grade:		No. of centralizers used: 0		
Tapered string drilled hole size (in.)			Tapered string depth of drilled hole (ft.)		
Upper: 6 3/4	Lower: 6 3/4	Upper: 11673	Lower: 21610		
Tapered string size of casing in O.D. (in.)			Tapered string casing weight (lbs/ft) and grade		
Upper: 5 1/2	Lower: 4 1/2	Upper: 23	Lower: 15.1	Tapered string no. of centralizers used	
Was cement circulated to ground surface (or bottom of cellar) outside casing? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			Setting depth shoe (ft.): 21610		
Hrs. waiting on cement before drill-out:			Calculated top of cement (ft.): 4034 CBL		Cementing Date: 7/17/2018
Slurry					
Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1	1440	H	SEE REMARKS	1756.8	11513
2					
3					
Total	1440			1756.8	11513

III. CASING CEMENTING DATA					
Type of casing:	<input type="checkbox"/> Surface	<input type="checkbox"/> Intermediate	<input type="checkbox"/> Production	<input type="checkbox"/> Tapered production	<input type="checkbox"/> Multi-stage cement shoe
Drilled Hole Size (in.):	Depth of drilled hole (ft.):		Est. % wash-out or hole enlargement:		
Size of casing in O.D. (in.):	Casing weight (lbs/ft) and grade:		No. of centralizers used:		
Tapered string drilled hole size (in.)			Tapered string depth of drilled hole (ft.)		
Upper:	Lower:	Upper:	Lower:		
Tapered string size of casing in O.D. (in.)			Tapered string casing weight (lbs/ft) and grade		
Upper:	Lower:	Upper:	Lower:	Tapered string no. of centralizers used	
Was cement circulated to ground surface (or bottom of cellar) outside casing? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			Setting depth shoe (ft.):		
Hrs. waiting on cement before drill-out:			Calculated top of cement (ft.):		Cementing Date: 7/17/2018
Slurry					
Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1					
2					
3					
Total					

495-33809

CEMENTING TO SQUEEZE, PLUG BACK OR PLUG AND ABANDON

	PLUG #1	PLUG #2	PLUG #3	PLUG #4	PLUG #5	PLUG #6	PLUG #7
Cementing Date							
Size of hole or pipe (in.)							
Depth to bottom of tubing or drill pipe (ft.)							
Cement retainer setting depth (ft.)							
CIBP setting depth (ft.)							
Amount of cement on top of CIBP (ft.)							
Sacks of cement used							
Slurry volume pumped (cu. ft.)							
Calculated top of plug (ft.)							
Measured top of plug, if tagged (ft.)							
Slurry weight (lbs/gal)							
Class/type of cement							
Perforate and squeeze (YES/NO)							

REMARKS

#1
#2
#3
#4

2% GEL + 0.5% FL-17A

CEMENTER'S CERTIFICATE: I declare under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, that I am authorized to make this certification, that the cementing of casing and/or the placing of cement plugs in this well as shown in the report was performed by me or under my supervision, and that the cementing data and facts presented on both sides of this form are true, correct, and complete, to the best of my knowledge. This certification covers cementing data only.

CODY LAMBERT SERVICE SUPERVISOR

C&J Energy Services

Name and title of cementer's representative

Cementing Company

Signature

185 FM 1934

Pecos

TX, 79772

432

755-4999

7/17/2018

Address

City,

State, Zip Code

Tel: Area Code

Number

Date: mo. day yr.

OPERATOR'S CERTIFICATE: I declare under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, that I am authorized to make this certification, that I have knowledge of the well data and information presented in this report, and that data and facts presented on both sides of this form are true, correct, and complete, to the best of my knowledge. This certification covers all well data.

Vonda Freeman

Secretary Analyst

Vonda Freeman

Typed or printed name of operator's representative

Title

Signature

350 N A BILLS AVE

Midland

TX 79701

432

684-3693

7/17/18

Address

City,

State, Zip Code

Tel: Area Code

Number

Date: mo. day yr.

Instructions for Form W-15, Cementing Report

NOTICE: The Form W-15 must be submitted as an attachment to a Form G-1 (Gas Well Back Pressure Test, Completion or Recompletion Report, and Log), Form W-2 (Oil Well Potential Test, Completion or Recompletion Report, and Log), Form W-3 (Plugging Record), or Form W-4 (Application for Multiple Completion), any time cement is pumped in a wellbore.

A. What to file: An operator should file an original and one copy of the completed Form W-15 for each cementing company used on a well. The cementing of different casing strings on a well by one cementing company may be reported on one form.

The Form W-15 should be filed with the Form W-3, Plugging Record, unless the Form W-3 is signed by the cementing company representative. When reporting dry holes, operators must complete Form W-15, in addition to Form W-3, to show any casing cemented in the hole.

B. How to file: An oil and gas completion report and Form W-15 may be filed online using the Commission's Online System (<https://webapps.rrc.texas.gov/security/login.do>) or a paper copy of the form may be mailed to the Commission in Austin (P.O. Box 12967, Austin, Texas 78711-2967).

C. Surface casing: An operator must set and cement sufficient surface casing to protect all usable-quality water strata, as defined by the Groundwater Advisory Unit in Austin. Sufficient cement shall be used to fill the annular space outside the casing from the shoe to the ground surface or to the bottom of the cellar. Before drilling a well, an operator must obtain a letter from the Groundwater Advisory Unit stating the protection depth. Surface casing should not be set deeper than 200 feet below the specified depth without prior approval from the Commission.

To plug and abandon a well, operators must use only cementers approved by the Commission's Director of Field Operations in accordance with SWR 14 ([http://info.sos.state.tx.us/pls/pub/readtac\\$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=16&pt=1&ch=3&rl=14](http://info.sos.state.tx.us/pls/pub/readtac$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=16&pt=1&ch=3&rl=14)). Cementing companies, service companies, or operators can qualify as approved cementers by demonstrating that they are able to mix and pump cement in compliance with Commission rules and regulations.

D. Estimated % wash-out: If the estimated % wash-out is less than 20% (or 30% along the Gulf Coast), provide supporting documentation such as a caliper log to show how the estimated % wash-out was obtained.

E. Multi-stage cement: An operator must report the multi-stage cement shoe in II. Casing Cementing Data section by selecting the type of casing and Multi-stage cement shoe. The operator must report the multi-stage cement tool in III. Casing Cementing Data section by selecting the type of casing and Multi-stage cement/DV tool.

F. Multiple parallel strings: An operator should file the Form W-15 as an attachment to the Form W-4, Application for Multiple Completion. An operator may be required to submit multiple Form W-15s to show all data for multiple parallel strings.

G. Slurry data: If cement job exceeds three slurries, continue the list of slurries in the Slurry table in the subsequent Casing Cementing Data box.

CHRISTI CRADDICK, CHAIRMAN
RYAN SITTON, COMMISSIONER
WAYNE CHRISTIAN, COMMISSIONER



LORI WROTENBERY
DIRECTOR, OIL AND GAS DIVISION

D. CRAIG PEARSON
DISTRICT DIRECTOR

RAILROAD COMMISSION OF TEXAS

OIL AND GAS DIVISION

OPERATOR Name: ENERGEN RESOURCES
Address1: 3510 N A ST BLDGS A AND B
Address2:
City: MIDLAND
State: TX

RE: Lease: UL 20 STRIPES 38-47
Well No: 605H
Sec: 38 **Block:** 20
County: WINKLER
Survey Name: UL

SWR13EX Application Number: 22371

Drilling Permit No: 823989

SWR 13 CASING EXCEPTION APPLICATION/ALTERNATIVE REQUEST APPROVED

The Proposed Casing and Cementing Program submitted for the **LEASE NAME:** UL 20 STRIPES 38-47 ;
WELL NUMBER: 605H has been approved by the Railroad Commission of Texas District Office.

- a. A copy of this approved letter must be kept on location during all phases of drilling and/or plugging operations. Once approved, changes CANNOT be made to the Proposed Casing Program on the original application without additional approval from the Railroad Commission of Texas District Office.
- b. Any substantive modifications to the cement program require prior approval from the Railroad Commission of Texas District Office, and may require re-submission of the SWR 13 (Statewide Rule 13) Alternate Surface Casing Application. Contact the Railroad Commission of Texas District Office for more information.
- c. The tail slurry must be sufficient to fill the Zone of Critical Cement as described in Statewide Rule 13(b)(1)(H)(i). In addition, all cement slurries must be mixed on location as described in Application for Alternate Surface Casing Program.
- d. The casing and cement program shall adhere to the following specifications:

Set 4950 feet of surface casing with a multistage tool set at a depth of not less than 350 feet. Circulate cement from the multistage tool to the ground surface. If cement does not circulate to surface during the first stage, the multistage tool MUST be opened and neat cement be circulated from the tool to the surface.

Must not drill into the Delaware formation before setting the surface casing.

Please contact the Midland District office immediately if any flows, H₂S or otherwise, are encountered before setting the surface casing.

The proposed alternative drilling fluid program for the fresh water protected interval is hereby approved.

IF CEMENT IS NOT CIRCULATED TO THE GROUND SURFACE AS REQUIRED BY THIS EXCEPTION, YOU MUST CONTACT THE RAILROAD COMMISSION OF TEXAS DISTRICT OFFICE IMMEDIATELY AND FOLLOW THE PROCEDURES SET OUT IN RULE 13(b)(1)(H)(iii) OR AS REQUIRED BY THE RAILROAD COMMISSION OF TEXAS DISTRICT OFFICE.

You must comply with all other provisions of SWR 13 (Statewide Rule 13) and a representative of the cementing company who performs the cementing job for the protection of usable quality water strata must sign the Form W-15 attesting to the information regarding cementing operations performed; including circulation of cement. (Note: If surface casing is set below the approved depth, this can result in denial of future Statewide Rule 13(b)(1)(H)(i) requests.) A condition of the approved drilling permit requires notification to the Railroad Commission of Texas District Office eight (8) hours prior to the time casing is to be set/cemented in the well. If your exception request was submitted after the subject well has been drilled and completed, the operator may be referred for enforcement action.

This authorization shall expire within five (5) years from the date the Groundwater Protection Determination was issued, or at the expiration of the drilling permit (if the well is not spudded prior to expiration) for the referenced well, whichever occurs first. Furthermore, this authorization supersedes any prior authorizations issued for the referenced well.

This exception is based on information provided when the application was submitted on 11/30/2017.
If any information has changed, you must contact the appropriate Railroad Commission of Texas District Office, and submit a new application if applicable. If you have questions, please contact the appropriate Oil and Gas District office.

RRC APPROVAL BY: Sue Hannaman

DATE: 11/30/2017

D. CRAIG PEARSON

DISTRICT DIRECTOR



APPLICATION FOR APPROVAL OF SURFACE CASING > 3500 FEET
Statewide Rule 13(b)(1)(A)
RAILROAD COMMISSION OF TEXAS

Operator's Name and Address:

Energen Resources Corporation
3510 N A St Bldgs. A & B
Midland, TX 79705

P5 Number: 252002

Area for review: Set surface casing no deeper than 5100'

Lease Name: UL 20 Stripes 38-47 #605H

Field Name: Phantom (Wolfcamp) County: Reeves

Survey: UL Abstract: U33

Drilling Permits: 823989

Note: Attach a map if the request is for more than one pad.

How will the operator maintain well control during drilling operations:

The well will be drilling with a blowout prevention system after the surface casing is set. Prior to setting surface casing a diverter with a rotating head will be used from the surface where the surface casing is set.

How will the operator ensure cement is circulated to surface and that there is adequate bonding of cement:

The returns from the annulus will be monitored for cement returns. During displacement of the cement the casing will be reciprocated to prevent channeling.

How will the operator prevent the migration of formation fluids thru the annular space:

The density of the cement will be high enough to insure the hydrostatic pressure of the cement is greater than the formation pressure.

Signature: Vonda Freeman Name: Vonda Freeman Date: 11/30/17 Phone: 432-684-3693
Vonda.freeman@energen.com

RRC Use Only ▶

RRC District Office Action:			
<input checked="" type="checkbox"/> Approved	<input type="checkbox"/> Approved as Modified	<input type="checkbox"/> Denied	By: <u>Susan K. Hannaman</u> Date: <u>11/30/17</u>
Remarks/Modifications:			

Tracking No.: 201336

This facsimile L-1 was generated electronically from data submitted to the RRC.

Instructions

When to File Form L-1:

- with Forms G-1, W-2, and GT-1 for new and deepened gas, oil, and geothermal wells
- with Form W-3 for plugged dry holes
- when sending in a log which was held under a request for confidentiality and the period for confidentiality has not yet expired.

When is Form L-1 NOT required:

- with Forms W-2, G-1, and GT-1 filed for injection wells, disposal wells, water supply wells, service wells, re-test wells, re-classifications, and plugbacks of oil, gas or geothermal wells
- with Form W-3 for plugging of other than a dry hole

Where to File Form L-1:

- with the appropriate Commission district office

Filling out Form L-1:

- Section I and the signature section must be filled out for all wells
- complete only the appropriate part of Section II

Type of log required:

- any wireline survey run for the purpose of obtaining lithology, porosity, or resistivity information
- no more than one such log is required but it must be of the subject well
- if such log is NOT run on the subject well, do NOT substitute any other type of log; just select Section II, Part A below

SECTION I. IDENTIFICATION

Operator Name: ENERGEN RESOURCES CORPORATION	District No. 08	Completion Date: 09/22/2018
Field Name PHANTOM (WOLFCAMP)	Drilling Permit No. 823989	
Lease Name UL 20 STRIPES 38-47	Lease/ID No. 51736	Well No. 605H
County WINKLER	API No. 42- 495-33809	

SECTION II. LOG STATUS (Complete either A or B)

☐ A. BASIC ELECTRIC LOG NOT RUN

☒ B. BASIC ELECTRIC LOG RUN. (Select one)

- ☒ 1. Confidentiality is requested and a copy of the header for each log that has been run on the well is attached.
- ☐ 2. Confidentiality already granted on basic electric log covering this interval (applicable to deepened wells only).
- ☐ 3. Basic electric log covering this interval already on file with Commission (applicable to deepened wells only).
- ☐ 4. Log attached to (select one):

☐ (a) Form L-1 (this form). If the company/lease name on log is different from that shown in Section I, please enter name on log here: _____

Check here if attached log is being submitted after being held confidential. ☐

☐ (b) Form P-7, Application for Discovery Allowable and New Field Designation.

☐ (c) Form W-4, Application for Multiple Completion:

Lease or ID No(s). _____

Well No(s). _____

Vonda Freeman

Signature

ENERGEN RESOURCES CORPORATION

Name (print)

Regulatory Analyst

Title

(432) 684-3693

Phone

11/19/2018

Date

-FOR RAILROAD COMMISSION USE ONLY-



PHOENIX

TECHNOLOGY SERVICES

CONFIDENTIAL

MD
1:240
Feet

MWD Gamma / ROP (5")

Client: Energen

Well Name: UL Stripes 38-47 605H

API/UWID: 42-495-33809

County: Winkler

Permit #: 823989

State: Texas

Field: Phantom (Wolfcamp)

Country: USA

Longitude: 103° 16' 29.49925 W

Latitude: 31° 40' 22.87562 N

Personnel

Rig Name: Scan Texas

Job Number: 62843

Ground Level: 2768.00 ft

Kelly Bushing: 2793.00 ft

Permanent Datum: Mean Sea Level

Drilling Measured From: Kelly Bushing

Spud Date:

Bottom Hole Temp: 185.2 °F

Log Start Depth: 5000.00 ft

Log End Depth: 21630.00 ft

Company Representative

Nick Newland

Geologist

Albert Bondurant

Directional Driller(s)

John McIntyre

Heath Goin

Jonathon Nichols

MWD Operator(s)

Brooks Thibodeaux

Eric Arme

Gene Powell

Comments:

Main Leg

PHOENIX TECHNOLOGY SERVICES LP ("PHOENIX") DOES NOT MAKE AND EXPRESSLY DISCLAIMS ALL WARRANTIES, REPRESENTATIONS AND CONDITIONS, WITH RESPECT TO THE INFORMATION CONTAINED IN THIS DOCUMENT, WHETHER ORAL OR WRITTEN, EXPRESS OR IMPLIED OR ARISING FROM CONTRACT OR STATUTE INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY, ACCURACY AND FITNESS FOR A PARTICULAR PURPOSE. ANYONE USING THIS INFORMATION DOES SO AT THEIR OWN RISK AND ACKNOWLEDGES AND AGREES THAT PHOENIX SHALL NOT BE LIABLE FOR ANY ERROR, OMISSION, DEFECT, DEFICIENCY, OR NONCONFORMITY IN THE INFORMATION AND WITHOUT LIMITING THE FOREGOING, PHOENIX DOES NOT WARRANT THAT THE INFORMATION (OR THE USE THEREOF) WILL BE FREE OF ALL ERRORS OR THAT IT DOES NOT INFRINGE ANY THIRD PARTY RIGHTS. ANYONE USING THE INFORMATION AGREES TO INDEMNIFY AND HOLD PHOENIX HARMLESS FROM ALL CLAIMS, ACTIONS, COSTS (INCLUDING LEGAL COSTS ON A SOLICITOR AND HIS OWN CLIENT BASIS) AND LIABILITIES ARISING FROM OR IN CONNECTION WITH THE USE OF THE INFORMATION.

Operational Run Summary

62843

	Run 1	Run 2	Run 3	Run 4	Run 5	Run 6
Run Start Depth (ft)	0.00	8739.21	9164.39	9345.71	10631.02	11820.00
Run End Depth (ft)	8739.21	9164.39	9345.71	10631.02	11820.00	12580.72
Run Start Date	6/4/2018	6/7/2018	6/9/2018	6/10/2018	6/13/2018	6/17/2018
Run Start Time	8:27 AM	7:57 PM	3:00 AM	2:30 AM	9:45 AM	7:01 PM
Run End Date	6/7/2018	6/9/2018	6/10/2018	6/13/2018	6/15/2018	6/21/2018
Run End Time	6:05 PM	1:53 AM	2:05 AM	6:08 AM	7:29 PM	3:55 AM

	Run 7	Run 8	Run 9	Run 10	Run 11	Run 12
Run Start Depth (ft)	12580.72	12659.49	12663.53	12665.36	15818.45	18573.22
Run End Depth (ft)	12659.49	12663.53	12665.36	15818.45	18573.22	21615.01
Run Start Date	6/21/2018	6/22/2018	6/22/2018	6/23/2018	6/29/2018	7/8/2018
Run Start Time	4:28 AM	12:12 AM	8:25 PM	11:46 PM	12:59 PM	6:45 PM
Run End Date	6/21/2018	6/22/2018	6/23/2018	6/29/2018	7/5/2018	7/14/2018
Run End Time	10:20 PM	5:17 PM	11:18 AM	7:43 AM	8:08 PM	7:09 AM

Tool Information Summary

62843

	Run 1	Run 2	Run 3	Run 4	Run 5	Run 6
Gamma Probe Serial No	EGNF0007	EGNF0007	EGNF0007	EGNF0007	VCMG024	EGNFG066

CERTIFICATE OF COMPLIANCE AND TRANSPORTATION AUTHORITY

P-4

This facsimile P-4 was generated electronically from data submitted to the RRC.

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

Tracking No.: 201336

1. Field name exactly as shown on proration schedule PHANTOM (WOLFCAMP)		2. Lease name as shown on proration schedule UL 20 STRIPES 38-47					
3. Current operator name exactly as shown on P-5 Organization Report ENERGEN RESOURCES CORPORATION		4. Operator P-5 no. 252002	5. Oil Lse/Gas ID no 51736	6. County WINKLER	7. RRC district 08		
8. Operator address including city, state, and zip code 3510 N A ST BLDGS A AND B MIDLAND, TX 79705		9. Well no(s) (see instruction E) 605H					
12. Purpose of Filing. (Complete section a or b below.) (See instructions B and G) a. Change of: <input type="checkbox"/> operator <input type="checkbox"/> oil or condensate gatherer <input type="checkbox"/> gas gatherer <input type="checkbox"/> gas purchaser <input type="checkbox"/> gas purchaser system code <input type="checkbox"/> field name from _____ <input type="checkbox"/> lease name from _____ --- OR --- b. New RRC Number for: <input checked="" type="checkbox"/> oil lease <input type="checkbox"/> gas well Due to: <input checked="" type="checkbox"/> new completion or recompletion <input type="checkbox"/> reclass oil to gas <input type="checkbox"/> reclass gas to oil <input type="checkbox"/> other well (specify) _____ <input type="checkbox"/> consolidation, unitization, or subdivision (oil lease only)		10. Classification <input checked="" type="checkbox"/> Oil <input type="checkbox"/> Gas <input type="checkbox"/> Other (see instruction A)		11. Effective Date 09/22/2018			
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		ENERGY TRANSFER COMPANY(252017)				100.0	
	X	ENERGY TRANSFER COMPANY(252017)			0001	100.0	
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	
PLAINS MARKETING, L.P.(667883)						50.0	
PLAINS PIPELINE L.P.(667884)						50.0	
RRC USE ONLY: Reviewer's initials: <u>RRC Staff</u> Approval date: <u>07/11/2019</u>							
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 _____ Name (print) _____ Title _____				Signature <input type="checkbox"/> Authorized Employee of previous operator <input type="checkbox"/> Authorized agent of previous operator (see instruction G) _____ 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.							
ENERGEN RESOURCES CORPORATION Name (print) <u>Regulatory Analyst</u> Title <u>vfreeman@diamondbackenergy.com</u> E-mail Address (optional)				Vonda Freeman Signature <input checked="" type="checkbox"/> Authorized Employee of current operator <input type="checkbox"/> Authorized agent of current operator (see instruction G) _____ Date <u>11/19/2018</u> Phone with area code <u>(432) 684-3693</u>			

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

Rev. 02/2019

Date: 07/10/19
mo. day yr.

WAYNE CHRISTIAN, *CHAIRMAN*
CHRISTI CRADDICK, *COMMISSIONER*
RYAN SITTON, *COMMISSIONER*



DANA AVANT LEWIS, *DIRECTOR*

RAILROAD COMMISSION OF TEXAS HEARINGS DIVISION

June 20, 2019

To: Service List

Re: **Oil & Gas Docket No. 08-0315102:** Application of Oasis Petroleum Permian LLC (617484) for an Exception to Statewide Rule 40 for the UL 20 Tensleep (49659) Lease, Well No. 1H, Phantom (Wolfcamp) Field, Ward County, Texas; **Final Order**

To the Parties:

The Railroad Commission of Texas has acted upon the above-referenced case. Please refer to the attached Final Order and Master Order for the terms and date of such action.

Contact for Additional Information – In accordance with Tex. Gov't Code § 2001.061 and 16 Tex. Admin. Code § 1.7, ex parte communications with the Administrative Law Judges, Examiners, and Commissioners are prohibited. Any persons or entities desiring additional information may contact the Commission by writing to the Director, Hearings Division, Railroad Commission of Texas, 1701 North Congress Avenue, P. O. Box 12967, Capitol Station, Austin, Texas 78711-2967. Any persons or entities having clerical questions, such as questions regarding the number of copies of filings, the service list or reviewing the record, may contact **David Cornett at (512) 463-1290**.

Enclosure:

Service List

Final Order

Hearings Division Unprotested Master Order

Service List

Oil & Gas Docket No. 08-0315102: Application of Oasis Petroleum Permian LLC (617484) for an Exception to Statewide Rule 40 for the UL 20 Tensleep (49659) Lease, Well No. 1H, Phantom (Wolfcamp) Field, Ward County, Texas

Via First-Class Mail and Email

Doug Dashiell,
Scott, Douglass & McConnico
303 Colorado Street, Suite 2400
Austin TX 78701
ddashiell@scottdoug.com

Jason Weddle
Nathan Gabelman
1001 Fannin, Ste 1500
Houston TX 77002
jweddle@oasispetroleum.com
ngabelman@oasispetroleum.com

Sandra Buch
McElroy, Sullivan, Miller & Weber, L.L.P.
P. O. Box 12127
Austin TX 78711
sbuch@msmt.com

Brian Sullivan
McElroy, Sullivan, Miller & Weber, L.L.P.
1201 Spyglass, #200
Austin TX 78746
bsullivan@msmtx.com

Joe Sanders
Sanders Bajwa LLP
919 Congress Ave, Ste 750
Austin TX 78701
jsanders@sandersbajwa.com

Via Email

Jason Clark – RRC, Austin
Joe Stasulli – RRC, Austin
Sharon Frischen – RRC, Austin
Docket Services – RRC, Austin



David Cornett, Hearings Division
Railroad Commission of Texas

Rule §1.7 Ex Parte Communications

- (a) *Ex parte communications are prohibited in contested cases as provided in the APA and other applicable rules including the Texas Disciplinary Rules of Professional Conduct.*
- (b) *Each party shall provide all other parties with a copy of all documents submitted to an examiner.*
 - (1) *The attachment of a certificate of service stating that a document was served on a party creates a rebuttable presumption that the named party was provided a copy.*
 - (2) *Failure to provide a copy to all other parties may result in rejection and return of the document without consideration.*

**RAILROAD COMMISSION OF TEXAS
HEARINGS DIVISION**

OIL & GAS DOCKET NO. 08-0315102

**APPLICATION OF OASIS PETROLEUM PERMIAN LLC (617484) FOR AN
EXCEPTION TO STATEWIDE RULE 40 FOR THE UL 20 TENSLEEP (49659) LEASE,
WELL NO. 1H, PHANTOM (WOLFCAMP) FIELD, WARD COUNTY, TEXAS**

FINAL ORDER

The Railroad Commission of Texas ("Commission") finds that notice in the above-numbered docket was provided to all parties entitled to notice. A hearing in the above numbered docket was heard on November 14, 2018, by a Commission Technical Examiner and Administrative Law Judge (collectively, "Examiners"). This proceeding was duly submitted to the Commission at a conference held in its offices in Austin, Texas. After considering the evidence and record in this case, the Commission adopts the following findings of fact and conclusions of law.

Findings of Fact

1. Oasis Petroleum Permian, LLC ("Oasis") requests an exception to Statewide Rule 40 (16 Tex. Admin. Code § 3.40) for the University Lands ("UL") 20 Tensleep (49659) Lease, Well No. 1H (API No. 42-475-37120), Phantom (Wolfcamp) Field, Ward County, Texas.
2. Statewide Rule 40 prohibits the "double assignment" of acreage to non-stacked lateral, horizontal wells in the same field.
3. Notice of Oasis' request was provided to all operators of record in the Phantom (Wolfcamp), the Two Georges (Bone Spring) and the Wolfbone (Trend Area) Fields.
4. No protest was received for the Statewide Rule 40 exception requested by Oasis.
5. The correlative interval for the Phantom (Wolfcamp) Field (Field No.71052900) is 9,515 feet to 12,447 feet. The Field consists of the Third Bone Spring formation and the entire Wolfcamp formation.
6. The UL 20 Tensleep (49659) Lease is a 640.7-acre lease comprised of the entire acreage of Section 47, Block 20, Ward and Winkler Counties, Texas. In Section 47, Energen Resources Corporation ("Energen") has mineral interest rights from the surface to 11,886 feet deep and Oasis has mineral interest rights below 11,886 feet. Mineral ownership is owned by University Lands.
7. Oasis has drilled and completed its UL 20 Tensleep Well No. 1H, as a horizontal drainhole well with all take points within the boundary of Section 47. The well is completed in the Wolfcamp formation below a subsurface depth of 11,886 feet. Oasis seeks to assign this well to the Phantom (Wolfcamp) field.

8. The UL 20 Tensleep Lease agreement has a depth severance clause. These clauses, also known as “Pugh Clauses”, require the release of depths when not timely developed by a lessee. The Pugh Clause associated with the UL 20 Tensleep Lease agreement, includes all of Section 47, Block 20 and establishes a depth severance for the following operators:
 - Energen owns the mineral rights from the surface to 11,886 feet; and
 - Oasis Petroleum Permian, LLC owns mineral rights below 11,886 feet.
9. Energen operates the following in Section 47:
 - The University 20 (39471) Lease located in Section 47, Block 20, Winkler County, Texas. The University 20 Lease includes Well No. 4701 (API No. 42-475-35473) and Well No. 4702 (API No. 42-475-35508). Both wells are completed in the Bone Spring 3 formation above a subsurface depth of 11,886 feet in accordance with the Pugh Clause associated with the UL 20 Tensleep Lease.
 - University 20 Stripes 38-47 pooled unit is in Sections 38 and 47, Winkler County, Texas. The wells on the UL 20 Stripes 38-47 Lease, includes Well Nos. 601-606, with the well head on Section 38 and the toe (terminus) of the six wells (Nos 601-606) located in Section 47, Block 20, above the 11,886 severance point as required by the Lease. These Energen wells are completed in the Wolfcamp formation in Sections 38 and 47 and are permitted in the Phantom (Wolfcamp) Field.
10. Oasis operates the following in Section 47, Block 20, on the UL 20 Tensleep Lease:
 - The UL 20 Tensleep (49659) Lease includes Well No. 1H (No. 42-475-37120) completed into the Wolfcamp formation and seeks to assign the well to the Phantom (Wolfcamp) Field.
11. The Wolfcamp formation contains a series of stacked “benches” that are the primary targets of horizontal drilling and production in the Phantom (Wolfcamp) Field. Without an exception to Statewide Rule 40, operators who lease the deeper benches in the same Commission designated field cannot obtain permits to drill and produce from these lower benches.
12. The average 10,000-foot (Wolfcamp) horizontal well in the Phantom (Wolfcamp) Field will produce approximately 2 million barrels of oil equivalent. Without an exception to Statewide Rule 40, much of this production may be unrecovered.
13. An exception to Rule 40 is necessary for Oasis to produce its fair share of the hydrocarbons from its leasehold estate.
14. Granting a Rule 40 exception in this Docket is necessary to prevent waste and to protect correlative rights.

15. In the Phantom (Wolfcamp) Field, the Commission has granted a Statewide Rule 40 exception in Final Order Oil and Gas Docket Nos. 08-0311740, 08-0311741, 08-0311742, and 08-0311743.
16. This well is necessary from a geologic standpoint in order to develop hydrocarbons in the Wolfcamp formation. A Statewide Rule 40 exception is necessary for Oasis to drill, complete, and produce the Field below the severance point at 11,886, as established by the UL 20 Tensleep Lease agreement.
17. A Rule 40 exception will allow Oasis to produce hydrocarbons that would otherwise go unproduced and unrecovered.
18. The correlative rights of Energen will also be protected, as Energen may continue to assign the entirety of the acreage in Section 47 to its own well or wells in the Two Georges (Bone Spring), Phantom (Wolfcamp) and other fields.

CONCLUSIONS OF LAW

1. Oasis' application for an exception to Statewide Rule 40 for the UL 20 Tensleep Lease (496559), Well No. 1H is necessary to prevent waste and protect correlative rights.
2. The Commission has jurisdiction in this case. See, e.g., 16 Tex. Admin. Code § 81.051.
3. Oasis' application for an exception to Statewide Rule 40 for the UL 20 Tensleep Lease (496559), Well No. 2H is necessary to prevent waste and protect correlative rights.

Therefore, it is **ORDERED** that the UL 20 Tensleep Lease, Well No. 1H (API No. 42-475-37120) is **GRANTED** an exception to Statewide Rule 40 (16 Tex. Admin. Code § 3.40) in the Phantom (Wolfcamp) Field. All acreage from the 640.7 acre lease may be assigned for drilling, development or for allocation of allowables or other purposes to this well, or to any one or more additional wells on the same lease or pooled unit, or to any production sharing unit or allocation well including this lease or unit so long as the well density complies with §3.38 and §3.40 of the Commission's statewide rules and/or special field rules, and any amendments and/or revisions thereof.

Pursuant to § 2001.144(a)(4)(A), of the Texas Government Code, and by agreement of the parties in writing or on the record, **the parties have waived the right to file a motion for rehearing and the Final Order in this case is final and effective on the date the Master Order relating to the Final Order is signed.**

Signed on June 18, 2019

**RAILROAD COMMISSION OF TEXAS
(Order approved and signatures affixed
by Hearings Division's Unprotested
Master Order dated June 18, 2019)**

RAILROAD COMMISSION OF TEXAS HEARINGS DIVISION

HEARINGS DIVISION'S UNPROTESTED MASTER ORDER

June 18, 2019

At a public conference held at its offices in Austin, Texas, the Commission finds that after statutory notice, the below referenced proceedings were heard by the examiners and that no party appeared in protest to the requested relief. The Final Orders for each of the below referenced dockets are incorporated by reference into this order, and by signing this Master Order, the Commission approves each of the Final Orders and adopts the provisions contained therein.

ITEM NO.	DOCKET NO.	APPLICANT	LEASE, WELL, OR SITE	ORDER TERMS
<u>Field Rules:</u>				
12.	08-0317446 (John Moore/ Jennifer Cook)	Blackbeard Operating, LLC (073056)	Monahans, North Field ("Field"), Winkler County, Texas	Grant the application
13.	03-0314553 (Petar Buva and Jennifer Cook)	H.E.X.T. Operating, Ltd. (340446)	Sally Withers Lake (Miocene) Field, Jasper County, Texas	Grant the application
<u>Field Consolidation and Field Rules:</u>				
14.	08-0315323 (Petar Buva and Jennifer Cook)	Occidental Permian Ltd. (617544)	Inez (Consolidated) Field, Andrews County, Texas	Grant the application
<u>Net Gas-Oil Ratio:</u>				
15.	03-0318564 (John Moore/ Ezra Johnson)	Petrodome Operating, LLC (660286)	SW Riverside Unit (27002) Lease, Well No. 1, Southwest Riverside (Hackberry) Field, Orange County, Texas	Grant the application
<u>Statewide Rule 32:</u>				
16.	05-0317020 (Robert Musick/ Dee Marlo Chico)	Hawkwood Energy Operating, LLC (367676)	Herring (04276) Lease, Well No.1H, and Pike (04251) Lease, Well No. 1H, Aguila Vado (Eagle Ford) Field, Burleson County, Texas	Grant Exception to Statewide Rule 32
17.	08-0318487 (John Moore/ Jennifer Cook)	WPX Energy Permian, LLC (942623)	CBR 9-4M (Gas ID No. 285324) Lease, Sandbar (Bone Spring) Field, Loving County, Texas	Grant Exception to Statewide Rule 32
18.	08-0318483 John Moore/ Jennifer Cook)	WPX Energy Permian, LLC (942623)	CBR 11-2 (Gas ID No. 284847) Lease, Sandbar (Bone Spring) Field, Loving County, Texas	Grant Exception to Statewide Rule 32
19.	08-0318480 (John Moore/ Jennifer Cook)	WPX Energy Permian, LLC (942623)	CBR 9-4A Lease & CBR 9-4B Lease, Central Flare Stack, Phantom (Wolfcamp) Field, Loving County, Texas	Grant Exception to Statewide Rule 32
20.	08-0318488 (John Moore/ Jennifer Cook)	WPX Energy Permian, LLC (942623)	YMC 9 Central Flare Point, Phantom (Wolfcamp) Field, Loving County, Texas	Grant Exception to Statewide Rule 32
21.	01-0317867 (John Moore/ Jennifer Cook)	EXCO Operating Company, LP (256915)	Calvert Ranch FRO Central Facility, Calvert Ranch FRO (17100) Lease, Briscoe Ranch (Eagleford) Field, Frio County, Texas	Grant Exception to Statewide Rule 32
22.	01-0318015 (John Moore/ Jennifer Cook)	EXCO Operating Company, LP (256915)	Boll Fro (17440) Lease, Briscoe Ranch (Eagleford) Field, Frio County, Texas	Grant Exception to Statewide Rule 32
23.	8A-0318196 (John Moore/ Jennifer Cook)	Windy Cove Energy II, LLC (931787)	Saphire Facility (70806) Lease, Platang (San Andres) Field, Cochran County, Texas	Grant Exception to Statewide Rule 32

**HEARINGS DIVISION'S UNPROTESTED MASTER ORDER
JUNE 18, 2019 CONFERENCE
PAGE 2**

ITEM NO.	DOCKET NO.	APPLICANT	LEASE, WELL, OR SITE	ORDER TERMS
<u>Statewide Rule 32 (Continued):</u>				
24.	10-0317983 (John Moore/ Jennifer Cook)	Valpoint Operating, LLC (881377)	Saphire Facility (70806) Lease, Platang (San Andres) Field, Cochran County, Texas	Grant Exception to Statewide Rule 32
25.	08-0316361 (Austin Gaskamp/ Jennifer Cook)	Anadarko E&P Onshore LLC (020528)	Various Facilities, Phantom (Wolfcamp) Field, Loving, Reeves, & Ward Counties, Texas	Grant Exception to Statewide Rule 32
26.	08-0316363 (Austin Gaskamp/ Jennifer Cook)	Anadarko E&P Onshore LLC (020528)	Various Facilities, Sandbar (Bone Spring) Field, Loving, Reeves, & Ward Counties, Texas	Grant Exception to Statewide Rule 32
27.	03-0315929 (Austin Gaskamp Ezra Johnson)	Armor Lonestar, LLC (031580)	E F.W. Luecke (26657) Lease, Southern Bay (Eagle Ford) Field, Lee County, Texas	Grant Exception to Statewide Rule 32
28.	8A-0317448 (Robert Musick/ Kristi Reeve)	Mammoth Exploration LLC (523592)	Hudson (70797) Lease, Well No. 601H, Sable (San Andres) Field, Cochran County, Texas	Grant Exception to Statewide Rule 32
29.	08-0318142 (Petar Buva/ Dee Marlo Chico)	WPX Energy Permian, LLC (942623)	Covington 46 Lease, Well Nos. 9H, 10H and 11H, Phantom (Wolfcamp) Field, Reeves County, Texas	Grant Exception to Statewide Rule 32
30.	08-0318112 (Petar Buva/ Dee Marlo Chico)	WPX Energy Permian, LLC (942623)	Bighorn 56-1-19 Lease, Well Nos. 1H, 2H, and 3H Phantom (Wolfcamp) Field, Loving County, Texas	Grant Exception to Statewide Rule 32
31.	08-0318176 (Petar Buva/ Kristi M. Reeve)	Callon Petroleum Operating Co. (124828)	Sluice Box 4-2 (41762) Lease, Phantom (Wolfcamp) Field, Reeves County, Texas	Grant Exception to Statewide Rule 32
<u>Statewide Rule 40:</u>				
32.	08-0315102 (Robert Musick/ Kristi M. Reeve)	Oasis Petroleum Permian LLC (617484)	UL 20 Tensleep (49659) Lease, Well No. 1H, Phantom (Wolfcamp) Field, Ward County, Texas	Grant the application
33.	08-0313949 (Robert Musick/ Kristi M. Reeve)	Oasis Petroleum Permian LLC (617484)	UL 20 Pitchfork (50037) Lease, Well No. 2H, Phantom (Wolfcamp) Field, Winkler County, Texas	Grant the application
<u>Statewide Rule 106 – Sour Gas Pipeline:</u>				
34.	08-0318388 (John Moore)	APR Operating, LLC (028612)	Maverick Sour Gas Gathering System, Culberson & Reeves Counties, Texas	Grant the application
35.	05-0319086 (Petar Buva)	Kudu Midstream LLC (478441)	Golf Lake Gathering 16 to Plant Line, Bald Prairie (CV Consolidated) Area, Robertson County, Texas	Grant the application
36.	05-0319087 (Petar Buva)	Kudu Midstream LLC (478441)	Gold Lake #1 to Enbridge 6 Line, Bald Prairie (CV Consolidated) Area, Robertson County, Texas	Grant the application
37.	05-0319089 (Petar Buva)	Kudu Midstream LLC (478441)	Currie #1 to Plant Line, Bald Prairie (CV Consolidated) Area, Robertson County, Texas	Grant the application

HEARINGS DIVISION'S UNPROTESTED MASTER ORDER
JUNE 18, 2019 CONFERENCE
PAGE 3

ITEM NO.	DOCKET NO.	APPLICANT	LEASE, WELL, OR SITE	ORDER TERMS
<u>Single Signature P-4:</u>				
38.	01-0319496 (Jennifer Cook)	Patterson Energy Corporation (643402)	Miller (17899) Lease, Well No. 1H, Briscoe Ranch (Eagleford) Field, Dimmit County, Texas	Approve change of operator from Gambit Resources, Inc. (Operator No. 293427) to Patterson Energy Corporation
39.	8A-0319570 (Kristi M. Reeve)	Apache Corporation (027200)	Mallet Land & Cattle Company (65946) Lease, Well Nos. 3 and 4, Mallet (Fusselman) Field, Cochran County, Texas	Approve change of operator from Miocene Oil & Gas, Ltd. (Operator No. 570315) to Apache Corporation
40.	08-0319503 (Kristi M. Reeve)	Arch Oil & Gas, LLC (029272)	Olcott, D. (07232) Lease, All Wells, Ward, South Field, Ward County, Texas	Approve change of operator from 7S Oil & Gas, LLC (Operator No. 954992) to Arch Oil & Gas, LLC
41.	8A-0319664 (Kristi M. Reeve)	Borderline Operating Corp. (082999)	Smithey-Rackley "A" Unit (69032) Lease, Well No. 1, Girard, N. (Tannehill) Field, Dickens County, Texas	Approve change of operator from TKP Petroleum, Inc. (Operator No. 860891) to Borderline Operating Corp.
42.	8A-0319665 (Kristi M. Reeve)	Borderline Operating Corp. (082999)	Smithey (69110) Lease, Well No. 1, Girard, N. (Tannehill) Field, Dickens County, Texas	Approve change of operator from TKP Petroleum, Inc. (Operator No. 860891) to Borderline Operating Corp.
43.	8A-0319666 (Kristi M. Reeve)	Borderline Operating Corp. (082999)	Smithey-Rackley Unit (67907) Lease, Well No. 1, Girard, N. (Tannehill) Field, Dickens County, Texas	Approve change of operator from TKP Petroleum, Inc. (Operator No. 860891) to Borderline Operating Corp.
<u>Good Faith Claim Review:</u>				
44.	09-0319133 (Jennifer Cook)	Vanco Oil & Gas Corp. (881484)	Hoeck (Gas ID No. 258588) Lease, Newark, East (Barnett Shale) Field, Erath County, Texas	Deny the application to change the operator of record from Alaron Energy, Inc. to Vanco Oil & Gas Corp.
45.	09-0319134 (Jennifer Cook)	Vanco Oil & Gas Corp. (881484)	Moe (Gas ID No. 217189) Lease, Newark, East (Barnett Shale) Field, Bosque County, Texas	Deny the application to change the operator of record from Alaron Energy, Inc. to Vanco Oil & Gas Corp.
46.	7C-0319135 (Jennifer Cook)	Vanco Oil & Gas Corp. (881484)	Pearson, Frank Reef Unit (07561) Lease, Frank Pearson (Strawn Reef) Field, Coke County, Texas	Deny the application to change the operator of record from Alaron Energy, Inc. to Vanco Oil & Gas Corp.
47.	04-0319136 (Jennifer Cook)	Vanco Oil & Gas Corp. (881484)	Schmidt, H.G. (Gas ID No. 079420) Lease, Wade City (2300) Field, Jim Wells County, Texas	Deny the application to change the operator of record from Alaron Energy, Inc. to Vanco Oil & Gas Corp.

HEARINGS DIVISION'S UNPROTESTED MASTER ORDER
JUNE 18, 2019 CONFERENCE
PAGE 4

ITEM NO.	DOCKET NO.	APPLICANT	LEASE, WELL, OR SITE	ORDER TERMS
<u>Good Faith Claim Review (Continued):</u>				
48.	04-0319137 (Jennifer Cook)	Vanco Oil & Gas Corp. (881484)	Bruns (Gas ID No. 257960) Lease, Quinto Creek (Kohler) Field, Jim Wells County, Texas	Deny the application to change the operator of record from Alaron Energy, Inc. to Vanco Oil & Gas Corp.
49.	09-0319368 (Kristi M. Reeve)	Bitter Creek Petroleum Co. (072587)	Styles (28261) Lease, Well Nos. 1 and 5, Styles (Tannehill) Field, Knox County, Texas	Find Bitter Creek does not have a good faith claim and order the wells plugged and abandoned.
50.	7B-0319051 (Kristi M. Reeve)	TAM2 Squared Energy Services, LLC (835624)	Dawson-Conway 195 "B" (12820) Lease, Well Nos. 1 A, 1 B, 1 C, 2 C, 3 B, 4 B, 5 B, 6, 7, and 8; the Dawson & Conway 195B -A- (30148) Lease, Well No. 9A; and the Dawson- Conway 195 "B"-B (30184) Lease, Well No. 12, Shackelford County Regular Field, Shackelford County, Texas	Find TAM2 does not have a good faith claim and order the wells plugged and abandoned.
51.	7B-0319052 (Kristi M. Reeve)	TAM2 Squared Energy Services, LLC (835624)	Conway (03562) Lease, Well Nos. 1G, 3, 9, 10, 11, 13, 14, 16, 17, and 18, Conway (Bluff Creek) Field, Shackelford County; and the Dawson-Conway 183 (16162) Lease, Well No. 2 G; the Dawson-Conway 195 "S" (16202) Lease, Well Nos. 2, 4, 5, 6, 7, and 8; and the Dawson-Conway "196" -M- (13262) Lease, Well Nos. 1, 2, 3, 4, 5, 10, 11, 12, & 13, Shackelford County Regular Field, Shackelford County, Texas	Find TAM2 does not have a good faith claim and order the wells plugged and abandoned.
<u>Motion for Rehearing:</u>				
52.	20-0319156 (Joseph Menefe)	Trivista Operating LLC (871169)	N/A	Grant Motion for Rehearing; dismiss underlying docket as moot.
53.	20-0319539 (Joseph Menefe)	Diamond S Masada LLC (216984)	N/A	Grant Motion for Rehearing; dismiss underlying docket as moot.
54.	20-0319543 (Joseph Menefe)	PNP Operating Company LLC (668542)	N/A	Grant Motion for Rehearing; dismiss underlying docket as moot.
55.	20-0319544 (Joseph Menefe)	Progenies Operating LLC (681161)	N/A	Grant Motion for Rehearing; dismiss underlying docket as moot.
56.	20-0319550 (Joseph Menefe)	West Oil Resources, LLC (910254)	N/A	Grant Motion for Rehearing; dismiss underlying docket as moot.
57.	20-0319551 (Joseph Menefe)	Wineridge Inc. (931800)	N/A	Grant Motion for Rehearing; dismiss underlying docket as moot.

HEARINGS DIVISION'S UNPROTESTED MASTER ORDER
JUNE 18, 2019 CONFERENCE
PAGE 5

ITEM NO.	DOCKET NO.	APPLICANT	LEASE, WELL, OR SITE	ORDER TERMS
<u>Motion for Rehearing (Continued):</u>				
58.	20-0319158 (Joseph Menefe)	VT Vistatex Energy (887723)	N/A	Grant Motion for Rehearing; dismiss underlying docket as moot.
59.	20-0319537 (Joseph Menefe)	Caribbean Energy, L.L.C. (131775)	N/A	Grant Motion for Rehearing; dismiss underlying docket as moot.
60.	20-0319540 (Joseph Menefe)	Global XRC Corp (310348)	N/A	Grant Motion for Rehearing; dismiss underlying docket as moot.

HEARINGS DIVISION'S UNPROTESTED MASTER ORDER
JUNE 18, 2019 CONFERENCE
PAGE 6

IT IS ORDERED that each referenced Final Order shall become effective when this Order is signed and that a copy of this Order shall be affixed to each Final Order.

Signed on June 18, 2019.

RAILROAD COMMISSION OF TEXAS



CHAIRMAN CHRISTI CRADDICK

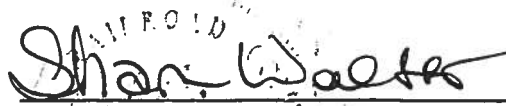


COMMISSIONER RYAN SITTON

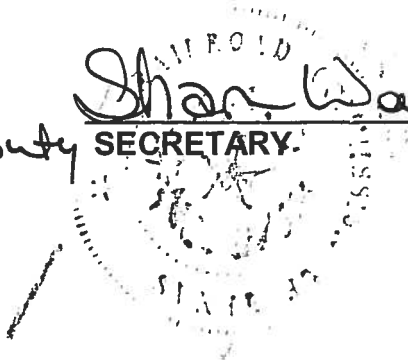


COMMISSIONER WAYNE CHRISTIAN

ATTEST:



deputy SECRETARY.



GROUNDWATER PROTECTION DETERMINATION

Form GW-2



Groundwater Advisory Unit

Date Issued: 15 March 2017**GAU Number:** 168309**Attention:** ENERGEN RESOURCES
3510 N A ST BLDGS A AND B
MIDLAND, TX 79705**Operator No.:** 252002**API Number:**
County: WINKLER
Lease Name: UL 20 STRIPES 38-47
Lease Number:
Well Number: 605H
Total Vertical Depth: 12500
Latitude: 31.673021
Longitude: -103.274861
Datum: NAD27**Purpose:** New Drill**Location:** Survey-UL; Abstract-U33; Block-20; Section-38

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 Alluvium, which is estimated to occur at a depth between 250 and 300 feet, must be protected.

This recommendation is applicable to all wells within a radius of 1000 feet of this location.

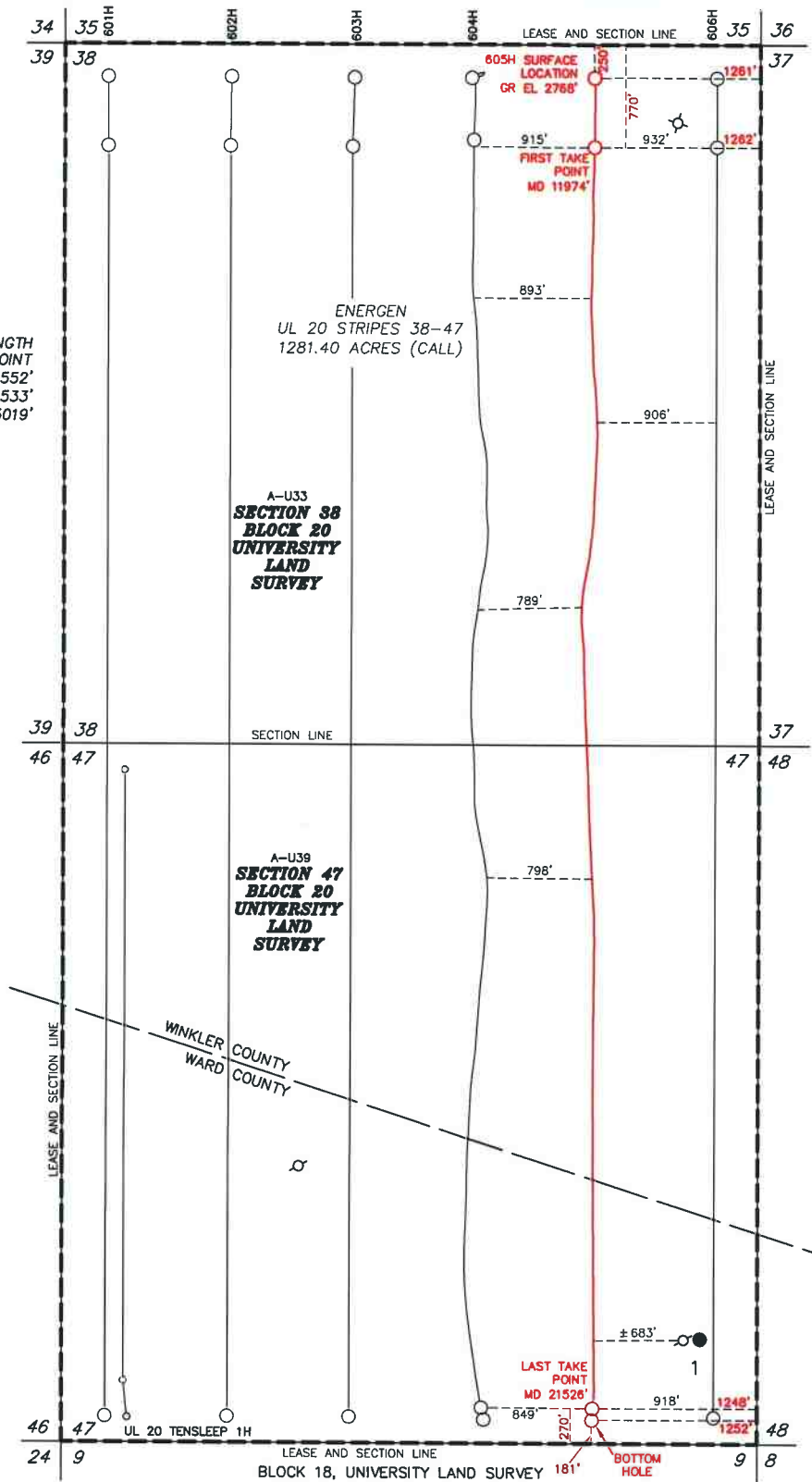
Note: Unless stated otherwise, this recommendation is intended to apply only to the subject well and not for area-wide use. This recommendation is for normal drilling, production, and plugging operations only. It does not apply to saltwater disposal operation into a nonproductive zone (RRC Form W-14).

This determination is based on information provided when the application was submitted on 03/02/2017. 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

TOTAL LATERAL LENGTH
BETWEEN FIRST TAKE POINT
AND LAST TAKE POINT: 9552'
SECTION 38: 4533'
SECTION 47: 5019'



NAD 83, TEXAS CENTRAL ZONE		NAD 27, TEXAS CENTRAL ZONE	
S/L: N=10584374.9', E=1381455.0'	LAT=31.6731511 N, LONG=103.2753080 W	S/L: N=741798.7', E=1084990.1'	LAT=31.6730210 N, LONG=103.2748609 W
1ST/P: N=10583875.8', E=1381600.1'	LAT=31.6717892 N, LONG=103.2747990 W	1ST/P: N=741299.6', E=1085135.2'	LAT=31.6716600 N, LONG=103.2743523 W
LTP: N=10574729.8', E=1384287.1'	LAT=31.6468510 N, LONG=103.2653903 W	LTP: N=732153.8', E=1087822.1'	LAT=31.6467205 N, LONG=103.2649441 W
B/H: N=10574643.3', E=1384308.0'	LAT=31.6466148 N, LONG=103.2653159 W	B/H: N=732067.3', E=1087843.0'	LAT=31.6464843 N, LONG=103.2648697 W

APPROXIMATELY 13.0 MILES NW OF PYOTE, TEXAS

FILE: T:\WINKLER\BLOCK 20.DWG

I, THE UNDERSIGNED, DO HEREBY CERTIFY THAT THE SURVEY INFORMATION FOUND ON THIS PLAT WAS DERIVED FROM ACTUAL FIELD NOTES OF ON-THE-GROUND SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. NO WARRANTY IS MADE OR INTENDED FOR THE LOCATION OF ANY OR ALL EASEMENTS THAT MAY EXIST WITHIN THE BOUNDS OF THIS SURVEY. THE INFORMATION PRESENTED HEREON IS FOR THE PRIVATE USE OF THE PARTY NAMED IN THE "REFERENCE PORTION" OF THE TITLE BLOCK AND DOES NOT CONSTITUTE A COMPLETE BOUNDARY SURVEY AS DEFINED BY THE "PROFESSIONAL LAND SURVEYING PRACTICES ACT."

Thais Watson Ahlstrand TEXAS R.P.L.S. No. 6359

AUGUST 28, 2018
DATE



Watson Professional Group Inc



P.O. DRAWER 11186
MIDLAND, TEXAS 79702
(432) 520-9200
FAX (432) 520-9212
tahlstrand@wpg-us.com

- ☼ GAS WELL
- ⚙ WATER INJECTION WELL
- OIL WELL
- LOCATED WELL
- DRY HOLE
- ⊙ WATER WELL
- ⊙ PLUGGED WELL

CONSULTING ENGINEERS, LAND SURVEYORS & PLANNERS

NOTES:

- COORDINATES AND BEARINGS SHOWN HEREON ARE NAD 83, LAMBERT GRID COORDINATES AND CONFORM TO THE TEXAS COORDINATE SYSTEM "TEXAS CENTRAL ZONE," WITH REFERENCE TO USGS TRI-STATION "ANGLE" WITH A CENTRAL COMBINED SCALE FACTOR OF 0.99980780. THE POSITIONAL TOLERANCE OF THIS SURVEY EXCEEDS THE REQUIREMENTS FOR A RURAL SURVEY.
- THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE REPORT AND REVIEW OF THE ABSTRACT OF TITLE. THERE MAY BE EASEMENTS AND/OR COVENANTS AFFECTING THIS PROPERTY NOT SHOWN HEREON. LOCATION OF IMPROVEMENTS AND/OR EASEMENTS WERE BEYOND COMMISSIONED SCOPE OF THIS PROJECT AND HAVE BEEN SPECIFICALLY OMITTED. VESTING DOCUMENTS NOT FURNISHED FOR THIS SURVEY.
- SEE DOCUMENTS AND ELECTRONIC DATA FILED IN THE OFFICE OF WPG INC FOR COMPLETE RECONSTRUCTION OF THESE SECTIONS OR BLOCKS.
- DOWNHOLE INFORMATION PROVIDED BY ENERGEN PERSONNEL.
- SURFACE LOCATION IN "AS-STAKED" POSITION.

1000' 0 1000'
SCALE: 1" = 1000'

AS-DRILLED

ENERGEN RESOURCES CORPORATION

UL 20 STRIPES 38-47 605H

SURFACE LOCATION: 250' FNWL & 1261' FNEL

1ST TAKE POINT: 770' FNWL & 1262' FNEL

SECTION 38, BLOCK 20, UNIVERSITY LAND SURVEY

LAST TAKE POINT: 270' FSEL & 1248' FNEL

BOTTOM HOLE: 181' FSEL & 1252' FNEL

SECTION 47, BLOCK 20, UNIVERSITY LAND SURVEY

WINKLER & WARD COUNTIES, TEXAS

DATE: AUGUST 2, 2018

DATE SURVEYED: 1/11/17

JOB NO.: 17-1011-00 FIELD BOOK 824/20

DRAFT DM REV. 0