



RAILROAD COMMISSION OF TEXAS

Form W-2

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

Status: Approved
Date: 05/04/2017
Tracking No.: 168106

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

OPERATOR INFORMATION

Operator Name: SHELL WESTERN E&P Operator No.: 774719
Operator Address: PO BOX 576 HOUSTON, TX 77001-0000

WELL INFORMATION

API No.: 42-301-32937 County: LOVING
Well No.: 2003H RRC District No.: 08
Lease Name: UNIVERSITY 20 A Field Name: PHANTOM (WOLFCAMP)
RRC Lease No.: 48418 Field No.: 71052900
Location: Section: 29, Block: 20, Survey: UL, Abstract: U43

Latitude: Longitude:
This well is located 15.6 miles in a SOUTHEAST
direction from MENTONE,
which is the nearest town in the county.

FILING INFORMATION

Purpose of filing: Well Record Only
Type of completion: New Well
Well Type: Shut-In Producer Completion or Recompletion Date: 09/18/2016

Type of Permit	Date	Permit No.
Permit to Drill, Plug Back, or Deepen	11/03/2016	816306
Rule 37 Exception		0300901
Fluid Injection Permit		
O&G Waste Disposal Permit		
Other:		

COMPLETION INFORMATION

Spud date: 07/29/2016	Date of first production after rig released: 09/18/2016
Date plug back, deepening, recompletion, or drilling operation commenced: 07/29/2016	Date plug back, deepening, recompletion, or drilling operation ended: 09/18/2016
Number of producing wells on this lease in this field (reservoir) including this well: 2	Distance to nearest well in lease & reservoir (ft.): 2211.0
Total number of acres in lease: 1282.61	Elevation (ft.): 2778 GL
Total depth TVD (ft.): 11962	Total depth MD (ft.): 20000
Plug back depth TVD (ft.):	Plug back depth MD (ft.): 20000
Was directional survey made other than inclination (Form W-12)? Yes	Rotation time within surface casing (hours): 65.0
Recompletion or reclass? No	Is Cementing Affidavit (Form W-15) attached? Yes
Type(s) of electric or other log(s) run: Gamma Ray (MWD)	Multiple completion? No
Electric Log Other Description:	
Location of well, relative to nearest lease boundaries	Off Lease : Yes
of lease on which this well is located: 335.0 Feet from the NW Line and 1653.0 Feet from the NE Line of the UNIVERSITY 20 A Lease.	

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

Field & Reservoir	Gas ID or Oil Lease No.	Well No.	Prior Service Type
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W2: N/A

PACKET:	N/A		
FOR NEW DRILL OR RE-ENTRY, SURFACE CASING DEPTH DETERMINED BY:			
GAU Groundwater Protection Determination	Depth (ft.):	1100.0	Date: 06/14/2016
SWR 13 Exception	Depth (ft.):	5038.0	

INITIAL POTENTIAL TEST DATA FOR NEW COMPLETION OR RECOMPLETION		
Date of test:		Production method:
Number of hours tested: 24		Choke size:
Was swab used during this test? No		Oil produced prior to test:
PRODUCTION DURING TEST PERIOD:		
Oil (BBLs):		Gas (MCF):
Gas - Oil Ratio: 0		Flowing Tubing Pressure:
Water (BBLs):		
CALCULATED 24-HOUR RATE		
Oil (BBLs):		Gas (MCF):
Oil Gravity - API - 60.:		Casing Pressure:
Water (BBLs):		

CASING RECORD											
Row	Type of Casing	Casing Size (in.)	Hole Size (in.)	Setting Depth (ft.)	Multi - Stage Depth (ft.)	Multi - Shoe Depth (ft.)	Cement Class	Cement Amount (sacks)	Slurry Volume (cu. ft.)	Top of Cement (ft.)	TOC Determined By
1	Surface	9 5/8	12 1/4	5000	1267		C	3190	5695.0	0	Circulated to Surface
2	Intermediate	7	8 3/4	12112			C,H	800	1660.0	4000	Calculation

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
1	4 1/2	6 1/8	11271	20000	H	800	960.0	11271	Calculation

TUBING RECORD			
Row	Size (in.)	Depth	Size (ft.)
Packer Depth (ft.)/Type			
/			
N/A			

PRODUCING/INJECTION/DISPOSAL INTERVAL			
Row	Open hole?	From (ft.)	To (ft.)
L			
N/A			

ACID, FRACTURE, CEMENT SQUEEZE, CAST IRON BRIDGE PLUG, RETAINER, ETC.			
Was hydraulic fracturing treatment performed? No			
Is well equipped with a downhole actuation sleeve? No			
If yes, actuation pressure (PSIG):			
Production casing test pressure (PSIG) prior to hydraulic fracturing treatment:			
Actual maximum pressure (PSIG) during hydraulic fracturing:			
Has the hydraulic fracturing fluid disclosure been reported to FracFocus disclosure registry (SWR29)? No			
Row	Type of Operation	Amount and Kind of Material Used	Depth Interval (ft.)

OPERATOR'S CERTIFICATION	
Printed Name: Sondra Bienvenu	Title: Waste Specialist
Telephone No.: (832) 337-2100	Date Certified: 02/01/2017

**RAILROAD COMMISSION OF TEXAS**1701 N. Congress
P.O. Box 12967
Austin, Texas 78701-2967**Form W-15**

Rev. 08/2014

CEMENTING REPORTCementer: Fill in shaded areas.
Operator: Fill in other items.

OPERATOR INFORMATION					
Operator Name: SHELLEXPLORATION & PRODUCTION			Operator P-5 No.: 774719		
Cementer Name: LUIS RIOS			Cementer P-5 No.: 040282		
WELL INFORMATION					
District No.: 08			County: LOVING		
Well No.: 2003H			API No.: 42-301-32937		Drilling Permit No.: 816306
Lease Name: UNIVERSITY 20 A			Lease No.:		
Field Name: Phantom Wolfcamp			Field No.:		
I. CASING CEMENTING DATA					
Type of casing: <input type="checkbox"/> Conductor <input checked="" type="checkbox"/> Surface <input type="checkbox"/> Intermediate <input type="checkbox"/> Liner <input type="checkbox"/> Production					
Drilled hole size (in.): 12 1/4"		Depth of drilled hole (ft.): 5000'		Est. % wash-out or hole enlargement: 200%	
Size of casing in O.D. (in.): 9 5/8"		Casing weight (lbs/ft) and grade: 40# J55 LTC		No. of centralizers used: 34	
Was cement circulated to ground surface (or bottom of cellar) outside casing? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO If no for surface casing, explain in Remarks.			Setting depth shoe (ft.): 5000'		Top of liner (ft.):
Hrs. waiting on cement before drill-out: +12			Calculated top of cement (ft.): 0		Cementing date: 8/1/2016
SLURRY					
Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1	2,890	C	REMARK1	5,030	18,060
2	500	C	REMARK2	865	2,123
3					
Total	3,190			5,895	18,183
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.):		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:	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.):	
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: <input type="checkbox"/> Surface <input type="checkbox"/> Intermediate <input type="checkbox"/> Production <input type="checkbox"/> Tapered production <input type="checkbox"/> Multi-stage cement/DV tool <input type="checkbox"/> 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:	Upper:	Lower:
Was cement circulated to ground surface (or bottom of cellar) outside casing? <input type="checkbox"/> YES <input type="checkbox"/> NO				Setting depth tool (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					

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
REMARK#1 35:65 POZ + .005 LBS/SK STATIC FREE+5% SODIUM CHLORIDE+.8%R-3+4% GEL+.65%SMS REMARK #2.005 LBS/SK STATIC FREE +.35% R-3 + .15% SMS

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.

FEILD SPECIALIST - LUIS RIOS

BAKER HUGHES

Name and title of cementer's representative: 2929 ALLEN PARKWAY SUITE 2100 HOUSTON, TEXAS, 77019 (713) 439 8600
 City, State, Zip Code Tel: Area Code Number Date: mo. day yr. 8/1/2016

OPERATOR'S CERTIFICATE: I declare under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, 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.

Sondra Bienvenu Onshore Waste SME
 Typed or printed name of operator's representative Title
 150 N. Dairy Ashford Houston, TX 77079 832-337-2100
 Address City, State, Zip Code Tel: Area Code Number Date: mo. day yr. 08/01/2017

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.

- 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.
- 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 78711-2967).
- 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&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.
- 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.
- 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.
- 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.
- Slurry data:** If cement job exceeds three slurries, continue the list of slurries in the Slurry table in the subsequent Casing Cementing Data box.



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Form W-15

Rev. 08/2014

CEMENTING REPORT

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

OPERATOR INFORMATION					
Operator Name: SHELL EXPLORATION & PRODUCTION CO			Operator P-5 No.: 774719		
Cementer Name: BAKER HUGHES OILFIELD OPS, INC.			Cementer P-5 No.: 046292		

WELL INFORMATION			
District No.: 08		County: LOVING	
Well No.: 2003H		API No.: 42301329370000	Drilling Permit No.: 816306
Lease Name: UNIVERSITY 20 A		Lease No.:	
Field Name: PHANTOM WOLFCAMP		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.): 8-3/4		Depth of drilled hole (ft.): 12,134		Est. % wash-out or hole enlargement: 40%	
Size of casing in O.D. (in.): 7		Casing weight (lbs/ft) and grade: 29, P-110		No. of centralizers used: 60	
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.): 12,112		Top of liner (ft.):	
				Setting depth liner (ft.):	
Hrs. waiting on cement before drill-out: +12		Calculated top of cement (ft.): 4000'		Cementing date: 08/16/2016	

SLURRY					
Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1	560	C	SEE REMARK #1	1,372	9,126
2	240	H	SEE REMARK #2	288	1,916
3					
Total	800			1,660	11,041

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.):		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 depth of drilled hole (ft.) 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? <input type="checkbox"/> YES <input type="checkbox"/> 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: <input type="checkbox"/> Surface <input type="checkbox"/> Intermediate <input type="checkbox"/> Production <input type="checkbox"/> Tapered production <input type="checkbox"/> Multi-stage cement/DV tool <input type="checkbox"/> 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.) Upper: Lower:		Tapered string depth of drilled hole (ft.) 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? <input type="checkbox"/> YES <input type="checkbox"/> NO		Setting depth tool (ft.): 1,250			
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					

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
REMARK #1: C65/35POZ+ 6% BENTONITE+ 1% R3+ 1% SMS+ 1% FL-52D+ 3% POTASSIUM CHLORIDE+ 0.005 LB/SK STATIC FREE+ 0.01 GAL/SK FP-6L.
REMARK #2: H50/50POZ+ 2% BENTONITE+ 0.6% FL-66+ 0.35% GD-32A+ 0.35% R3+ 0.35% SMS+ 0.005 LB/SK STATIC FREE+ 0.01 GAL/SK FP-6L.

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.

JESUS ALFREDO ESPARZA

BAKER HUGHES OILFIELD OPS, INC.

[Signature]

Name and title of cementer's representative	Cementing Company	Signature
2929 Allen Parkway Suite 2100 Houston, Texas, 77019	(713) 439-8600	08/16/2016
Address	City, State, Zip Code	Tel: Area Code Number Date: mo. day yr.

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Sondra Bienvenu

Onshore Waste SME

[Signature]

Typed or printed name of operator's representative	Title	Signature
150 N. Dairy Ashford	Houston, TX 77079	832-337-2100
Address	City, State, Zip Code	Tel: Area Code Number Date: mo. day yr.

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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/readac\\$ext.YacPage?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/readac$ext.YacPage?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.
- 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.
- 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.
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- Slurry data:** If cement job exceeds three slurries, continue the list of slurries in the Slurry table in the subsequent Casing Cementing Data box.



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

CEMENTING REPORT

OPERATOR INFORMATION					
Operator Name: SHELL EXPLORATION & PRODUCTION CO			Operator P-5 No.: 774719		
Cementer Name: BAKER HUGHES OILFIELD OPS, INC.			Cementer P-5 No.: 046292		

WELL INFORMATION			
District No.: 08		County: LOVING	
Well No.: 2003H		API No.: 42301329370000	Drilling Permit No.: 816306
Lease Name: UNIVERSITY 20 A		Lease No.:	
Field Name: PHANTOM WOLFCAMP		Field No.:	

I. CASING CEMENTING DATA					
Type of casing: <input type="checkbox"/> Conductor <input type="checkbox"/> Surface <input type="checkbox"/> Intermediate <input checked="" type="checkbox"/> Liner <input type="checkbox"/> Production					
Drilled hole size (in.): 6-1/8"		Depth of drilled hole (ft.): 20,000		Est. % wash-out or hole enlargement: 15%	
Size of casing in O.D. (in.): 4-1/2"		Casing weight (lbs/ft) and grade: 11.6, P-110		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.): 20,000		Top of liner (ft.): 11,271'
			Setting depth liner (ft.): 20,000		
Hrs. waiting on cement before drill-out: N/A		Calculated top of cement (ft.): 11,271'		Cementing date: 09/17/2016	

SLURRY					
Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1	800	H	SEE REMARK #1	960	9,733
2					
3					
Total	800			960	9,733

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.):		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 depth of drilled hole (ft.) 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? <input type="checkbox"/> YES <input type="checkbox"/> 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					

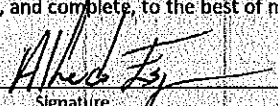
III. CASING CEMENTING DATA					
Type of casing: <input type="checkbox"/> Surface <input type="checkbox"/> Intermediate <input type="checkbox"/> Production <input type="checkbox"/> Tapered production <input type="checkbox"/> Multi-stage cement/DV tool <input type="checkbox"/> Multiple parallel strings					
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.) Upper: Lower:			Tapered string depth of drilled hole (ft.) 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? <input type="checkbox"/> YES <input type="checkbox"/> NO				Setting depth tool (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					

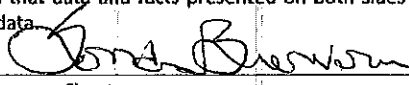
CEMENTING TO SQUEEZE, PLUG BACK OR PLUG AND ABANDON							
	PLUG #1	PLUG #2	PLUG #3	PLUG #4	PLUG #5	PLUG #6	PLUG #7
Cementing Date							
Size of hole or pipe (in.)							
Depth to bottom of tubing or drill pipe (ft.)							
Cement retainer setting depth (ft.)							
CIBP setting depth (ft.)							
Amount 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
REMARK #1: H50/50POZ+ 2% BENTONITE+ 0.65% FL-66+ 0.45% R-3+ 0.35% SMS+ 0.3% CD-32A+ 0.01 GAL/SK FP-6L+ 0.005 LB/SK STATIC FREE. RIG CIRCULATED 12 BBLs @ 14.5 PPG (56 SACKS) FROM THE TOP OF THE LINER TO SURFACE

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.

JESUS ALFREDO ESPARZA **BAKER HUGHES OILFIELD OPS, INC.** 
 Name and title of cementer's representative Cementing Company Signature
 2929 Allen Parkway Suite 2100 Houston, Texas, 77019 (713) 439-8600 09/17/2016
 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.

Sondra Bienvenu **Onshore Waste SME** 
 Typed or printed name of operator's representative Title Signature
 150 N. Dairy Ashford Houston, TX 77079 832-337-2100 02/01/2017
 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.

- 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.
- 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 78711-2967).
- 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.
- 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.
- 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.
- 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.
- Slurry data:** If cement job exceeds three slurries, continue the list of slurries in the Slurry table in the subsequent Casing Cementing Data box.

DAVID PORTER, CHAIRMAN
CHRISTI CRADDICK, COMMISSIONER
RYAN SITTON, COMMISSIONER



LORI WROTENBERY
DIRECTOR, OIL AND GAS DIVISION
D. CRAIG PEARSON
DISTRICT DIRECTOR

RAILROAD COMMISSION OF TEXAS OIL AND GAS DIVISION

OPERATOR Name: SHELL WESTERN E&P

RE: Lease: UNIVERSITY 20 A

Address1: PO BOX 576

Address2:

City: HOUSTON

State: TX

Well No: 2003H

Sec: 29 **Block:** 20

County: LOVING

Survey Name: UNIVERSITY LAND

SWR13EX Application Number: 9079

Drilling Permit No: 816306

SWR 13 CASING EXCEPTION APPLICATION/ALTERNATIVE REQUEST APPROVED

The Proposed Casing and Cementing Program submitted for the **LEASE NAME:** UNIVERSITY 20 A ;
WELL NUMBER: 2003H 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 5038 feet of surface casing and circulate cement from the shoe to the ground surface.

Contingency Plan:

Set 5038 feet of surface casing with a multistage tool set at a depth of not less than 1250 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.

Please notify the Midland District Office immediately if any gas, H2S or otherwise, is encountered before surface casing is set.

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 07/11/2016 .
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: Jeffery Morgan

DATE: 07/19/2016

D. CRAIG PEARSON

DISTRICT DIRECTOR

Tracking No.: 168106

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: SHELL WESTERN E&P	District No. 08	Completion Date: 09/18/2016
Field Name PHANTOM (WOLFCAMP)	Drilling Permit No. 816306	
Lease Name UNIVERSITY 20 A	Lease/ID No. 48418	Well No. 2003H
County LOVING	API No. 42- 301-32937	

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). _____

Sondra Bienvenu

Signature

SHELL WESTERN E&P

Name (print)

Waste Specialist

Title


(832) 337-2100

Phone

02/01/2017

Date

-FOR RAILROAD COMMISSION USE ONLY-

<div></div> <div>PHOENIX TECHNOLOGY SERVICES</div>		<div>MD 1:1200 Feet</div>	
MWD Gamma / ROP (1")			
Client: Shell			
Well Name: University 20 A 2003H			
API/UWID: 42301329370000			
County: Loving		Field: Wolfcamp B 1	
Permit #: 816306			
State: Texas		Country: USA	
Longitude: 103° 20' 5.48771 W Latitude: 31° 41' 12.47899 N		Personnel	
<div>Rig Name: Precision 565 Job Number: 60214 Ground Level: 2779.00 ft Kelly Bushing: 2807.50 ft Drill Floor: 28.50 ft Permanent Datum: Mean Sea Level Drilling Measured From: Kelly Bushing Spud Date: - Bottom Hole Temp: 197.6 °F Log Start Depth: 0.00 ft Log End Depth: 20050.00 ft</div>		Company Representative Brian	
		Geologist	
		Directional Driller(s) Travis Marlborough Dustin St Clair	
		MWD Operator(s) Shane Metcalf	
Reference Data			
North Reference: Grid North Magnetic Declination: 7.13 Grid Convergence: -1.55 Total Mag Correction: 8.68			
Comments: -		Main Leg	
<div>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.</div>			

Operational Run Summary							60214
	Run 1	Run 2	Run 3	Run 4	Run 5	Run 6	
Run Start Depth (ft)	0.00	5000.02	8285.13	9963.10	11346.10	12134.22	
Run End Depth (ft)	5000.02	8285.13	9963.10	11346.10	12134.22	16062.25	
Run Start Date	7/29/2016	8/9/2016	8/11/2016	8/13/2016	8/14/2016	8/15/2016	
Run Start Time	3:00 AM	2:26 AM	7:57 PM	10:53 AM	1:41 PM	3:42 PM	
Run End Date	7/31/2016	8/11/2016	8/13/2016	8/14/2016	8/15/2016	9/12/2016	
Run End Time	3:08 PM	12:47 PM	3:10 AM	7:26 AM	6:49 AM	12:34 AM	
	Run 7						
Run Start Depth (ft)	16062.25						
Run End Depth (ft)	20000.09						
Run Start Date	9/12/2016						
Run Start Time	12:37 PM						
Run End Date	9/15/2016						
Run End Time	5:58 AM						
Tool Information Summary							60214

	Run 1	Run 2	Run 3	Run 4	Run 5	Run 6	
Gamma Probe Serial No	G0060	G0166	G0166	G0060	G0172	G0182	
Probe Cal Ratio	1.52	1.5	1.5	1.53	1.53	1.5	
Gamma Scale Factor	16.969	8.7	8.778	8.954	8.954	4.214	
Tool Carrier ID (in)	3.250	2.875	2.875	2.875	2.875	2.688	
Tool Carrier OD (in)	8.000	6.500	6.500	6.500	6.500	4.500	
Survey-to-Bit (PTB) (ft)	63.32	63.48	63.48	60.71	53.80	55.31	
Gamma-to-Bit (GTB) (ft)	50.92	51.04	51.04	48.27	41.36	42.43	

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.: 168106

1. Field name exactly as shown on proration schedule PHANTOM (WOLFCAMP)		2. Lease name as shown on proration schedule UNIVERSITY 20 A					
3. Current operator name exactly as shown on P-5 Organization Report SHELL WESTERN E&P		4. Operator P-5 no. 774719	5. Oil Lse/Gas ID no 48418	6. County LOVING	7. RRC district 08		
8. Operator address including city, state, and zip code PO BOX 576 HOUSTON, TX 77001		9. Well no(s) (see instruction E) 2003H					
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 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 09/18/2016			
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		WILLIAMS MLP OPERATING LLC(925429)				100.0	
	X	SHELL ENERGY NORTH AM. (US), LP(773822)			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	
SHELL TRADING (US) COMPANY(774715)						50.0	
PLAINS MARKETING, L.P.(667883)						50.0	
RRC USE ONLY: Reviewer's initials: <u>RRC Staff</u> Approval date: <u>05/04/2017</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.							
SHELL WESTERN E&P Name (print) <u>Waste Specialist</u> Title <u>sondra.bienvenu@shell.com</u> E-mail Address (optional)				Sondra Bienvenu Signature <input checked="" type="checkbox"/> Authorized Employee of current operator <input type="checkbox"/> Authorized agent of current operator (see instruction G) <u>02/01/2017</u> Date <u>(832) 337-2100</u> Phone with area code			

RAILROAD COMMISSION OF TEXAS

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

Form P-16

Page 1

Rev. 01/2016

Acreage Designation

SECTION I. OPERATOR INFORMATION

Operator Name: Shell Western E&P	Operator P-5 No.: 774719
Operator Address: P.O. Box 576, Houston, Texas 77001	

SECTION II. WELL INFORMATION

District No.: 08	County: Loving	Purpose of Filing: <input type="checkbox"/> Drilling Permit Application (Form W-1) <input checked="" type="checkbox"/> Completion Report (Form G-1/W-2)
Well No.: 2003H	API No.: 42-301-32937	
Total Lease Acres: 1282.61	Drilling Permit No.: 816306	
Lease Name: University 20 A	Lease No.:	
Field Name: Phantom (Wolfcamp)	Field No.: 71052900	

Filer is the owner or lessee, or has been authorized by the owner or lessee, of all or an undivided portion of the mineral estate under each tract for which filer is listed as operator below. For all leases operated by other entities, the number of assigned acres shown are reflected on current Commission records or the filer has been authorized by the current operator to change the assigned acreage of that operator as shown below.

SECTION III. LISTING OF ALL WELLS IN THE APPLIED-FOR FIELD ON THE SAME ACREAGE AS THE LEASE, POOLED UNIT, OR UNITIZED TRACT DESIGNATED IN SECTION II ABOVE BY FILER

[illegible]

Total Well Count >		< A. Total Assigned Horiz. Acreage		< C. Total Assigned Acreage
		< Total Remaining Horiz. Acreage		< Total Remaining Acreage
		< B. Total Assigned Vert./Dir. Acreage		
		< Total Remaining Vert./Dir. Acreage		

SECTION IV. REMARKS / PURPOSE OF FILING (see instructions)

This well is being drilled as an Allocation well on two (2) tracts, University 20-20 LOV and Sec. 17, Blk. 20, University Lands.

Attach Additional Pages As Needed. ☒ No additional pages ☐ Additional Pages: _____ (No. of additional pages)

CERTIFICATION: I declare under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, that this report was prepared by me or under my supervision or direction, that I am authorized to make this report, and that the information contained in this report is true, correct, and complete to the best of my knowledge.

Andre Kervorn
Signature

Sondra Bienvenu, Onshore Waste SME
Name and title (type or print)

sondra.bienvenu@shell.com

Email (include email address *only* if you affirmatively consent to its public release)

150 N. Dairy Ashford
Address

Houston	TX	77079
City,	State,	Zip Code

832
Tel: Area Code

337-2100
Number

02/01/2017

Date: mo. day yr.

RAILROAD COMMISSION OF TEXAS

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

Form P-16

Page 2

Rev. 01/2016

Acreage Designation

Filer is the owner or lessee of all or an undivided portion of the minerals under each tract listed below and has the legal right to drill on each tract traversed by the well that will have perforations or other take points open in the interval of the applied-for field(s). All tracts listed will actually be traversed by the wellbore or the filer has pooling authority or other contractual authority, such as a production sharing agreement, authorizing inclusion of the non-drillsite tract in the acreage assigned to the well.

SECTION V. LISTING OF ALL TRACTS CONTRIBUTING ACREAGE TO AN RRC DESIGNATED DRILLSITE DEVELOPMENTAL UNIT THAT IS NOT A SINGLE LEASE, POOLED UNIT, OR GROUP OF TRACTS UNITIZED BY CONTRACT FOR PURPOSES OF SECONDARY RECOVERY

RRC ID No. or Lease No.	Lease Name	Beginning Lease Acreage	Allocated Lease Acreage	Ending Lease Acreage	Operator Name and Operator No. (if different from filing operator)
44605	University 20-20 LOV	641.33	427.55	213.77	
	Sec. 17, Blk. 20, UL	641.28	641.28	0	
Total Allocated Acreage >			1068.83	213.77	< Total Lease Acreage

Filer is the owner or lessee, or has been authorized by the owner or lessee, of all or an undivided portion of the mineral estate under each tract for which filer is listed as operator below. For all leases operated by other entities, the number of assigned acres shown are reflected on current Commission records or the filer has been authorized by the current operator to change the assigned acreage of that operator as shown below.

SECTION VI. LISTING OF ALL WELLS IN THE APPLIED FOR FIELD ON THE SAME ACREAGE AS THE LEASE OR POOLED UNIT DESIGNATED FOR THE TRACTS LISTED IN SECTION V BY FILER

[illegible]

SECTION VII. REMARKS

GROUNDWATER PROTECTION DETERMINATION

Form GW-2



Groundwater Advisory Unit

Date Issued: 14 June 2016**GAU Number:** 156203**Attention:** SHELL WESTERN E&P
PO BOX 576
HOUSTON, TX 77001**Operator No.:** 774719**API Number:**
County: LOVING
Lease Name: University 20 A
Lease Number:
Well Number: 2003H
Total Vertical Depth: 12400
Latitude: 31.686800
Longitude: -103.334858
Datum: NAD27**Purpose:** New Drill**Location:** Survey-UL; Block-20; Section-29

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

Water-bearing strata from the land surface to a depth of 300 feet and the Rustler, which is estimated to occur from 700 to 1100 feet must be protected.

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

This recommendation is applicable to all wells within a radius of 200 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 06/14/2016. 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

UNIVERSITY 20 A 2003H
WELL LOCATION
1282.61 ACRES (MEASURED)
SECTIONS 17 & 20, BLOCK 20, UNIVERSITY LAND SURVEY
LOVING COUNTY, TEXAS

SHELL WESTERN
E&P

LEGEND

	UNIT BOUNDARY
	BLOCK/TOWNSHIP LINE
	SURVEY/SECTION LINE
	PROPOSED WELL PATH
	EXISTING/PERMITTED WELL PATH
	CONCRETE MONUMENT
	CALCULATED CORNER
	WELL POINT

OWNERSHIP TABLE

MINERAL TRACT	ACREAGE
UNIVERSITY LAND BLOCK 20 SECTION 20	641.33
UNIVERSITY LAND BLOCK 20 SECTION 17	641.28
TOTAL ACREAGE	1282.61

L.T.P./B.H.L.
NAD 27 TX-C ZONE
X = 1065921.57
Y = 755763.09
LAT: N 31°42'23.25"
LONG: W 103°20'40.86"

NAD 83 TX-C ZONE
X = 1360067.62
Y = 10597418.40
LAT: N 31°42'23.25"
LONG: W 103°20'40.86"

X=1066475.01
Y=753169.27

X=1061404.95
Y=751887.03

F.T.P.
NAD 27 TX-C ZONE
X = 1065739.91
Y = 747352.84
LAT: N 31°41'16.70"
LONG: W 103°20'14.01"

NAD 83 TX-C ZONE
X = 1362204.55
Y = 10580229.13
LAT: N 31°41'16.70"
LONG: W 103°20'15.82"

P.P.
NAD 27 TX-C ZONE
X = 1065573.91
Y = 747195.61
LAT: N 31°41'11.21"
LONG: W 103°20'12.29"

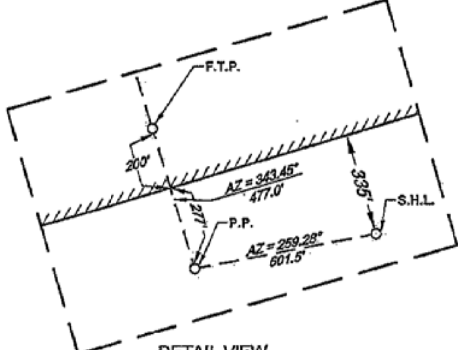
NAD 83 TX-C ZONE
X = 1362240.46
Y = 10589771.89
LAT: N 31°41'11.88"
LONG: W 103°20'13.91"

S.H.L.
ELEV = 2779.0
NAD 27 TX-C ZONE
X = 1066465.00
Y = 747307.51
LAT: N 31°41'12.43"
LONG: W 103°20'05.49"

NAD 83 TX-C ZONE
X = 1362931.45
Y = 10589863.50
LAT: N 31°41'12.95"
LONG: W 103°20'07.11"

X=1062888.33
Y=746610.98

X=1067958.89
Y=748093.07

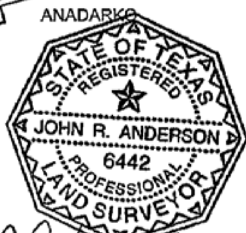


DETAIL VIEW
SCALE: 1" = 500'

TIES TABLE

POINT	UNIT	SURVEY/SECTION
S.H.L.	335' FSEL	1653' FNEL & 335' FNWL
P.P.	277' FSEL	2251' FNEL & 277' FNWL
F.T.P.	2253' FNEL	2253' FNEL & 200' FSEL
L.T.P./B.H.L.	2287' FNEL	2287' FNEL & 2411' FSEL

TOPOGRAPHIC
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WWW.TOPOGRAPHIC.COM



John R. Anderson, R.P.L.S. No. 6442
JUNE 22, 2016

UNIVERSITY 20 A 2003H

REVISION:

INT	DATE
O.M.	05/23/2016
J.R.A.	06/22/2016

DATE: 05/04/2016

FILE: LO_UNIVERSITY_20_A_2003_H_REV2

DRAWN BY: O.M.

SHEET: 1 OF 1

NOTES:

1. ORIGINAL DOCUMENT SIZE: 11" X 17"
2. 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 1983, UNLESS OTHERWISE NOTED.
3. 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 SHELL WESTERN E&P. THIS PLAN 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 PLAN. THIS PLAN IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.
4. ALL ELEVATION VALUES CONTAINED HEREIN ARE ORTHOMETRIC ONLY, BASED UPON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88), U.S. SURVEY FEET.
5. ALL MINERAL OWNERSHIP DATA SHOWN HEREIN IS BASED ON INFORMATION PROVIDED BY SHELL WESTERN E&P OR ITS SUBSIDIARIES & AFFILIATES.

NOTES CONT'D:

6. THE LEASE AND WELL SHOWN HEREON ARE LOCATED APPROXIMATELY 15.8 MILES SOUTHEAST OF THE CITY/TOWNSHIP/MUNICIPALITY OF MENTONE WITHIN THE COUNTY OF LOVING IN THE STATE OF TEXAS.
7. THE PRELIMINARY LOCATION HAS BEEN CAREFULLY SURVEYED ON THE GROUND DURING THE DATE OF APRIL 25, 2016. AT A GROUND LEVEL CALCULATED ELEVATION OF 2779.0 SURVEY FEET.
8. S.H.L. = SURFACE HOLE LOCATION
9. P.P. = POINT OF PENETRATION
10. F.T.P. = FIRST TAKE POINT
11. L.T.P. = LAST TAKE POINT
12. B.H.L. = BOTTOM HOLE LOCATION