



RAILROAD COMMISSION OF TEXAS

Form W-2

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

Status: Approved
 Date: 05/09/2017
 Tracking No.: 168156

OIL WELL POTENTIAL TEST, COMPLETION OR RECOMPLETION REPORT,

OPERATOR INFORMATION			
Operator	SHELL WESTERN E&P	Operator	774719
Operator	PO BOX 576 HOUSTON, TX 77001-0000		

WELL INFORMATION			
API	42-301-32938	County:	LOVING
Well No.:	2004H	RRC District	08
Lease	UNIVERSITY 20 B	Field	PHANTOM (WOLFCAMP)
RRC Lease	48423	Field No.:	71052900
Location	Section: 29, Block: 20, Survey: UNIVERSITY LAND, Abstract:		
Latitude	31	Longitud	-103
This well is	15.8	miles in a	SOUTHEAST
direction from	MENTONE,		
which is the nearest town in the			

FILING INFORMATION			
Purpose of	Well Record Only		
Type of	New Well		
Well Type:	Shut-In Producer	Completion or Recompletion	09/08/2016
<u>Type of Permit</u>		<u>Date</u>	<u>Permit No.</u>
Permit to Drill, Plug Back, or		06/28/2016	816416
Rule 37 Exception			0300947
Fluid Injection			
O&G Waste Disposal			
Other:			

COMPLETION INFORMATION			
Spud	08/01/2016	Date of first production after rig	09/08/2016
Date plug back, deepening, drilling operation	08/01/2016	Date plug back, deepening, recompletion, drilling operation	09/08/2016
Number of producing wells on this lease this field (reservoir) including this	3	Distance to nearest well in lease & reservoir	1224.0
Total number of acres in	1282.61	Elevation	2779 GL
Total depth TVD	11967	Total depth MD	19700
Plug back depth TVD		Plug back depth MD	19695
Was directional survey made other inclination (Form W-	Yes	Rotation time within surface casing Is Cementing Affidavit (Form W-15)	69.0 Yes
Recompletion or	No	Multiple	No
Type(s) of electric or other log(s)	Gamma Ray (MWD)		
Electric Log Other Description:			
Location of well, relative to nearest lease of lease on which this well is	337.0 Feet from the	Off Lease :	No
	1633.0 Feet from the	NW Line and	
		NE Line of the	
		UNIVERSITY 20 B Lease.	

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

W2: N/A

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

GAU Groundwater Protection Determination	Depth	1100.0	Date	06/14/2016
SWR 13 Exception	Depth	5048.0		

INITIAL POTENTIAL TEST DATA FOR NEW COMPLETION OR RECOMPLETION

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

CASING RECORD

<u>Ro</u>	<u>Type of Casing</u>	<u>Casing Size (in.)</u>	<u>Hole Size</u>	<u>Setting Depth</u>	<u>Multi - Stage Tool</u>	<u>Multi - Stage Shoe</u>	<u>Cement Class</u>	<u>Cement Amoun</u>	<u>Slurry Volume (cu.)</u>	<u>Top of Cement (ft.)</u>	<u>TOC Determined By</u>
1	Surface	9 5/8	12 1/4	5015	1247		C	3340	5989.0	1247	Calculation
2	Surface	9 5/8	12 1/4	5015	1247		C	1141	2156.0	270	Calculation
3	Surface	9 5/8	12 1/4	5015	1247		C	1785	3373.0	270	Calculation
4	Surface	9 5/8	12 1/4	5015	1247		C	400	1132.0	270	Calculation
5	Surface	9 5/8	12 1/4	5015	1247		C	3570	6747.0	270	Cement Evaluation Log
6	Intermediate	7	8 3/4	11164			C,H	710	1430.0	4000	Calculation

LINER RECORD

<u>Ro</u>	<u>Liner Size</u>	<u>Hole Size</u>	<u>Liner Top</u>	<u>Liner Bottom</u>	<u>Cement Class</u>	<u>Cement Amoun</u>	<u>Slurry Volume (cu.)</u>	<u>Top of Cement (ft.)</u>	<u>TOC Determined</u>
1	4 1/2	6 1/4	10983	19695	H	790	948.0	1098 3	Calculation

TUBING RECORD

<u>Ro</u>	<u>Size (in.)</u>	<u>Depth Size (ft.)</u>	<u>Packer Depth (ft.)/Type</u>
1	2 7/8	10940	10912 / 6.0" HES VERSA SET PACKER

PRODUCING/INJECTION/DISPOSAL INTERVAL

<u>Ro</u>	<u>Open hole?</u>	<u>From (ft.)</u>	<u>To (ft.)</u>
1	No	L1 12202	19526.0

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

Was hydraulic fracturing treatment	No
Is well equipped with a downhole sleeve? No	If yes, actuation pressure
Production casing test pressure (PSIG) during hydraulic fracturing	Actual maximum pressure (PSIG) during fracturin
Has the hydraulic fracturing fluid disclosure been	No

<u>Ro</u>	<u>Type of Operation</u>	<u>Amount and Kind of Material Used</u>	<u>Depth Interval (ft.)</u>
1	Fracture	WELL DATA HAS BEEN SUBMITTED IN FRACFOCUS	12202 19526

FORMATION RECORD

<u>Formations</u>	<u>Encountere</u>	<u>Depth TVD</u>	<u>Depth MD</u>	<u>Is formation</u>	<u>Remarks</u>
RED BLUFF	No			No	FORMATION NOT GEOLOGICALLY PRESENT
BELL CANYON	Yes	5137.0	5150.0	Yes	
BRUSHY CANYON	Yes	7370.0	5150.0	Yes	
DELAWARE	Yes	5109.0	5122.0	Yes	
CHERRY CANYON	Yes	6085.0	6098.0	Yes	
BONE SPRINGS	Yes	8748.0	8760.0	Yes	
WOLFCAMP	Yes	11660.0	11750.0	Yes	
PENNSYLVANIAN	No			No	BELOW WELLBORE DEPTH
STRAWN	No			No	BELOW WELLBORE DEPTH
ATOKA - HIGH PRESSURE	No			No	BELOW WELLBORE DEPTH
MORROW	No			No	BELOW WELLBORE DEPTH
DEVONIAN	No			No	BELOW WELLBORE DEPTH
FUSSELMAN	No			No	BELOW WELLBORE DEPTH
ELLENBURGER	No			No	BELOW WELLBORE DEPTH

Do the producing interval of this well produce H2S with a concentration in excess of 100 ppm	No
Is the completion being downhole commingled	No

REMARKS

KOP: 11,236'

RRC REMARKS

PUBLIC COMMENTS:

[RRC Staff 2017-02-07 13:20:53.094] EDL=7324 feet, max acres=704, PHANTOM (WOLFCAMP) oil or gas well

CASING RECORD :

SURFACE CASING SET, DV TOOL OPENED, CEMENT NOT CIRCULATED TO SURFACE ON 08/05/2016. SECOND ATTEMPT TO CIRCULATE MADE ON 08/06/16; THIRD ATTEMPT ON 08/07/2016; FOURTH ATTEMPT WAS ON 08/08/16; FINAL TOP JOB ON 08/19/2016 AND ACHIEVED CEMENT TO SURFACE - NO W-15 PROVIDED BY VENDOR.

TUBING RECORD:

PRODUCING/INJECTION/DISPOSAL INTERVAL :

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

POTENTIAL TEST DATA:

OPERATOR'S CERTIFICATION

Printed	Sondra Bienvenu	Title:	Regulatory Specialist
Telephone	(832) 337-0258	Date	05/08/2017



RAILROAD COMMISSION OF TEXAS

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

Form W-15

Rev. 08/2014

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.: 2004H	API No.: 42301329380000	Drilling Permit No.: 816416
Lease Name: UNIVERSITY 20 B	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 type="checkbox"/> Liner <input 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 type="checkbox"/> NO If no for surface casing, explain in Remarks.		Setting depth shoe (ft.):	Top of liner (ft.):		
			Setting depth liner (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					

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 <input type="checkbox"/> Multiple parallel strings					
Drilled hole size (in.):	12 1/4"	Depth of drilled hole (ft.): 5,015		Est. % wash-out or hole enlargement: 200%	
Size of casing in O.D. (in.):	9 5/8"	Casing weight (lbs/ft) and grade: 40, J-55		No. of centralizers used: 8	
Tapered string drilled hole size (in.)		Tapered string depth of drilled hole (ft.)			
Upper:		Lower:		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:		Upper:		Lower:	
Lower:		Lower:		Upper:	
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.): 5015'	
Hrs. waiting on cement before drill-out: +12		Calculated top of cement (ft.): 1247'		Cementing date: 08/05/2016	
SLURRY					
Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1	2,840	C	SEE REMARK #1	5,325	17,002
2	600	C	SEE REMARK #2	884	2,120
3					
Total	3,340			5,999	19,122

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 checked="" type="checkbox"/> Multi-stage cement/DV tool <input type="checkbox"/> Multiple parallel strings					
Drilled hole size (in.):	12 1/4"	Depth of drilled hole (ft.): 5,015		Est. % wash-out or hole enlargement: 200%	
Size of casing in O.D. (in.):	9 5/8"	Casing weight (lbs/ft) and grade: 40, J-55		No. of centralizers used: 26	
Tapered string drilled hole size (in.)		Tapered string depth of drilled hole (ft.)			
Upper:		Lower:		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:		Upper:		Lower:	
Lower:		Lower:		Upper:	
Was cement circulated to ground surface (or bottom of cellar) outside casing? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO				Setting depth tool (ft.): 1,247'	
Hrs. waiting on cement before drill-out: +12		Calculated top of cement (ft.): 270'		Cementing date: 08/05/2016	
SLURRY					
Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1	1,141	C	SEE REMARK #3	2,166	6,884
2					
3					
Total	1,141			2,166	6,884

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+ 4% BENTONITE+ 0.65% SMS+ 5% SALT+ 1% R3+ 0.005 LB/SK STATIC FREE+ 0.005 GAL/SK FP-6L. REMARK #2: C+ 0.15% SMS+ 0.35% R-3+ 0.005 LB/SK STATIC FREE+ 0.005 GAL/SK FP-6L. REMARK #3: C65/35POZ+ 4% BENTONITE+ 2% SMS+ 5% SALT+ 0.005 LB/SK STATIC FREE+ 0.005 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.

Alfred Esparza
Signature

Name and title of cementer's representative

Cementing Company

Signature

2929 Allen Parkway Suite 2100 Houston, Texas, 77019

(713) 439-8600

08/05/2016

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

Sondra Bienvenu
Signature

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.

- 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 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?si=R&app=9&p_dir=&p_floc=&p_tloc=&p_ploc=&pg=3&p_tac=&ti=16&pt=1&ch=3&rl=14](http://info.sos.state.tx.us/pls/pub/readtac$ext.TacPage?si=R&app=9&p_dir=&p_floc=&p_tloc=&p_ploc=&pg=3&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.



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Form W-15

Rev. 08/2014

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.: 2004H	API No.: 42301320380000
Lease Name: UNIVERSITY 20 B	Drilling Permit No.: 816416
Field Name: PHANTOM WOLFCAMP	Lease No.:
	Field No.:

I. CASING CEMENTING DATA					
Type of casing: <input type="checkbox"/> Conductor <input type="checkbox"/> Surface <input type="checkbox"/> Intermediate <input type="checkbox"/> Liner <input 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 type="checkbox"/> NO If no for surface casing, explain in Remarks.		Setting depth shoe (ft.):	Top of liner (ft.):		
			Setting depth liner (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					

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:		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 checked="" type="checkbox"/> Multi-stage cement/DV tool <input type="checkbox"/> Multiple parallel strings					
Drilled hole size (in.):	12 1/4"	Depth of drilled hole (ft.): 5,015		Est. % wash-out or hole enlargement: 200%	
Size of casing in O.D. (in.):	9 5/8"	Casing weight (lbs/ft) and grade: 40, J-55		No. of centralizers used: 8	
Tapered string drilled hole size (in.)		Tapered string depth of drilled hole (ft.)			
Upper: Lower:		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 checked="" type="checkbox"/> NO		Setting depth tool (ft.): 1,247			
Hrs. waiting on cement before drill-out: +12	Calculated top of cement (ft.): 270		Cementing date: 08/06/2016		
SLURRY					
Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1	1,785	C	SEE REMARK #1	3,373	10,769
2					
3					
Total	1,785			3,373	10,769



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Form W-15

Rev. 08/2014

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.: 048282

WELL INFORMATION	
District No.: 08	County: LOVING
Well No.: 2004H	API No.: 42301320380000
Lease Name: UNIVERSITY 20 B	Drilling Permit No.: 816416
Field Name: PHANTOM WOLFCAMP	Lease No.:
	Field No.:

I. CASING CEMENTING DATA			
Type of casing: <input type="checkbox"/> Conductor <input type="checkbox"/> Surface <input type="checkbox"/> Intermediate <input type="checkbox"/> Liner <input 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 type="checkbox"/> NO If no for surface casing, explain in Remarks.		Setting depth shoe (ft.):	Top of liner (ft.):
		Setting depth liner (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					

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	
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 checked="" type="checkbox"/> Multi-stage cement/DV tool <input type="checkbox"/> Multiple parallel strings			
Drilled hole size (in.):	12 1/4"	Depth of drilled hole (ft.):	5,015
Size of casing in O.D. (in.):	9 5/8"	Casing weight (lbs/ft) and grade:	40, J-55
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:
Was cement circulated to ground surface (or bottom of cellar) outside casing? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		Setting depth tool (ft.):	
Hrs. waiting on cement before drill-out: +12		Calculated top of cement (ft.): 270'	
Cementing date: 08/07/2016			

SLURRY					
Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1	400	C	SEE REMARK #1	1,132	3,614
2					
3					
Total	400			1,132	3,614

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)							

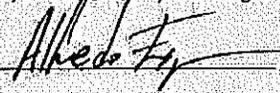
REMARKS

REMARK #1: C+ 12% A-10+ 10% BENTONITE+ 1% SMS+ 0.005 LB/SK STATIC FREE+ 0.005 GAL/SK FP-6L. AFTER THE CEMENT, 30 BBLs OF FRESH WATER AND 570 BBLs BRINE WATER WERE PUMPED, WHEN PUMPING THE BRINE WATER, 24 BBLs OF CEMENT @ 12.0 PPG (48 SACKS) CAME BACK 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	08/07/2016
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
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.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).
- 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_floc=&poloc=&p_ploc=&pg=1&p_tac=&tl=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_floc=&poloc=&p_ploc=&pg=1&p_tac=&tl=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

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.: 048292

WELL INFORMATION		
District No.: 08	County: LOVING	
Well No.: 2004H	API No.: 42301329380000	Drilling Permit No.: 816416
Lease Name: UNIVERSITY 20 B	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 type="checkbox"/> Liner <input 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 type="checkbox"/> NO If no for surface casing, explain in Remarks.			Setting depth shoe (ft.):		Top of liner (ft.):
					Setting depth liner (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					

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 checked="" type="checkbox"/> Multi-stage cement/DV tool <input type="checkbox"/> Multiple parallel strings					
Drilled hole size (in.): 12 1/4"		Depth of drilled hole (ft.): 5,015		Est. % wash-out or hole enlargement: 200%	
Size of casing in O.D. (in.): 9 5/8"		Casing weight (lbs/ft) and grade: 40, J-55		No. of centralizers used: 8	
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 checked="" type="checkbox"/> NO				Setting depth tool (ft.): 1,250 1,247	
Hrs. waiting on cement before drill-out: +12		Calculated top of cement (ft.): 0 270		Cementing date: 08/08/2016	
SLURRY					
Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1	3,570	C	SEE REMARK #1	6,747	21,543
2					
3					
Total	3,570			6,747	21,543



RAILROAD COMMISSION OF TEXAS

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

Form W-15

Rev. 08/2014

CEMENTING REPORT

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

OPERATOR INFORMATION	
Operator Name: SHELL EXPLORATION	Operator P-5 No.: 774719
Cementer Name: BAKER HUGHES	Cementer P-5 No.: 046202

WELL INFORMATION		
District No.: 08	County: LOVING	
Well No.: 2004H	API No.: 42301329380000	Drilling Permit No.: 816416
Lease Name: UNIVERSITY 20 B	Lease No.:	
Field Name: PHANTOM	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.): 11180'	Est. % wash-out or hole enlargement: 40%
Size of casing in O.D. (in.): 7	Casing weight (lbs/ft) and grade: 29# P110	No. of centralizers used: 43
Was cement circulated to ground surface (or bottom of cellar) outside casing? <input type="checkbox"/> YES <input type="checkbox"/> NO If no for surface casing, explain in Remarks.	Setting depth shoe (ft.): 11164	Top of liner (ft.):
		Setting depth liner (ft.):
Hrs. waiting on cement before drill-out: +12	Calculated top of cement (ft.): 4,000'	Cementing date: 8-24-2016

SLURRY					
Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1	470	C	REMARKS #1	1151	7856
2	240	H	REMARKS #2	288	1915
3					
Total	710			1439	9571

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

Remarks #1 65.35,C:Poz+ 6% Bentonite+1% R-3+ 1% SMS+ 1% FL-52D+ 3% BWOW Potassium Chloride+ 0.01gps FP-6L+ 0.005 lb/sk Static Free
 Remarks #2 50.50,H:Poz+ 2% Bentonite+ 0.6% FL-66+ 0.35% CD-32A+ 0.35% R-3+ 0.35% SMS+ 0.01 gps FP-6L + 0.005 lb/sk Static Free
 CIRCULATED-NO CEMENT 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.

Matthew Valenzuela-Field Specialist

BAKER HUGHES, INC

Name and title of cementer's representative: Matthew Valenzuela-Field Specialist Cementing Company: BAKER HUGHES, INC Signature: 
 Address: 2929 ALLEN PARKWAY SUITE 2100 HOUSTON, TEXAS 77019 City, State, Zip Code: HOUSTON, TX 77019 Tel: Area Code: (713) 439-8600 Number: 8-24-16 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: Sondra Bienvenu Title: Onshore Waste SME Signature: 
 Address: 150 N. Dairy Ashford City, State, Zip Code: Houston, TX 77079 Tel: Area Code: 832-337-2100 Number: 02/01/2017 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 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.



RAILROAD COMMISSION OF TEXAS

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

Form W-15

Rev. 08/2014

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

CEMENTING REPORT

OPERATOR INFORMATION

Operator Name: Shell Exploration & Production Co	Operator P-5 No.: 774719
Cementor Name: Baker Hughes Inc	Cementor P-5 No.: 048292

WELL INFORMATION

District No.: 08	County: LOVING	
Well No.: 2004H	API No.: 423013293800000	Drilling Permit No.: 816416
Lease Name: UNIVERSITY 20 B	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 1/4"	Depth of drilled hole (ft.): 19700	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) P110	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.): 19,695'	Top of liner (ft.): 10983'
		Setting depth liner (ft.): 19,695'
Hrs. waiting on cement before drill-out: N/A	Calculated top of cement (ft.): 10983'	Cementing date: 9/8/2016

SLURRY

Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1	790	H	SEE REMARKS	848	10066
2					
3					
Total	790			848	1068

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, PLUGBACK 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

SLURRY: 50% FLY ASH + 50% CLASS 'H' + 2% BENTONITE + .65% FL-66 + .3% CD-32A + 0.35% SMS + 0.6% R-3 + .005 gps FP-6L + .005 lb/sk STATIC FREE

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.

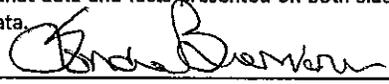
Field Specialist-GUADALUPE E GARCIA BAKER HUGHES, INC



Name and title of cementer's representative: 2929 ALLEN PARKWAY SUITE 2100 HOUSTON, TEXAS 77019 City, State, Zip Code
 Cementing Company: BAKER HUGHES, INC
 Tel: Area Code: (713) 439-8600 Number: 9/8/2016 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: 150 N. Dairy Ashford City, State, Zip Code: Houston, TX 77079
 Title: Onshore Waste SME
 Tel: Area Code: 832-337-2100 Number: 02/09/2017 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 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.

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 B

Address1: PO BOX 576

Address2:

Well No: 2004H

City: HOUSTON

Sec: 29 **Block:** 20

State: TX

County: LOVING

Survey Name: UNIVERSITY LAND

SWR13EX Application Number: 9080

Drilling Permit No: 816416

SWR 13 CASING EXCEPTION APPLICATION/ALTERNATIVE REQUEST APPROVED

The Proposed Casing and Cementing Program submitted for the **LEASE NAME:** UNIVERSITY 20 B ;
WELL NUMBER: 2004H 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 5048 feet of surface casing and circulate cement from the shoe to the ground surface.

Contingency Plan:

Set 5048 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.: 168156

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: 09/08/2016
Field Name PHANTOM (WOLFCAMP)	Drilling Permit No. 816416	
Lease Name UNIVERSITY 20 B	Lease/ID No. 48423	Well No. 2004H
County LOVING	API No. 42- 301-32938	

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)

Regulatory Specialist
Title
(832) 337-0258
Phone
02/08/2017
Date

-FOR RAILROAD COMMISSION USE ONLY-



PHOENIX

TECHNOLOGY SERVICES

MD
1:1200
Feet

MWD Gamma / ROP (1")

Client: Shell

Well Name: University 20B 2004H

API/UWID: 42301329380000

County: Loving

Field: Wolfcamp B 1

Permit #: 816416

State: Texas

Country: USA

Longitude: 103° 20' 5.2635 W
Latitude: 31° 41' 12.52813 N

Personnel

Company Representative

Tyrome Russell

Geologist

Directional Driller(s)

John Spencer
Travis Malbrough

MWD Operator(s)

Shane Metcalf
Blaine Amphion

Rig Name: Precision 565
Job Number: 60215
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: August 1, 2016
Bottom Hole Temp: 195.8 °F
Log Start Depth: 100.00 ft
Log End Depth: 19700.00 ft

Reference Data

North Reference: Grid North
Magnetic Declination: 7.13
Grid Convergence: -1.55
Total Mag Correction: 8.68

Comments:

Main Leg

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Operational Run Summary

60215

	Run 1	Run 2	Run 3	Run 4	Run 5	Run 6
Run Start Depth (ft)	0.00	3531.55	5015.00	8446.12	10527.01	11180.05
Run End Depth (ft)	3531.55	5015.00	8446.12	10527.01	11180.05	11247.63
Run Start Date	8/2/2016	8/3/2016	8/5/2016	8/21/2016	8/22/2016	8/24/2016
Run Start Time	6:30 PM	3:30 AM	8:08 AM	7:00 AM	8:52 PM	1:24 AM
Run End Date	8/2/2016	8/5/2016	8/21/2016	8/22/2016	8/23/2016	8/26/2016
Run End Time	10:43 PM	8:08 AM	3:42 AM	5:23 PM	3:51 PM	3:10 PM

	Run 7	Run 8	Run 9	Run 10	Run 11
Run Start Depth (ft)	11247.63	11340.47	11564.95	15058.04	15417.59
Run End Depth (ft)	11340.47	11564.95	15058.04	15417.59	19700.02
Run Start Date	8/26/2016	8/27/2016	8/29/2016	9/2/2016	9/3/2016
Run Start Time	9:48 PM	4:53 PM	7:37 PM	4:48 AM	10:49 AM
Run End Date	8/27/2016	8/29/2016	9/2/2016	9/3/2016	9/6/2016
Run End Time	2:04 PM	3:40 PM	12:19 AM	7:06 AM	8:11 PM

Tool Information Summary

60215

	Run 1	Run 2	Run 3	Run 4	Run 5	Run 6
Gamma Probe Serial No	G0166	G0060	G0172	G0060	G0172	G0195
Probe Cal Ratio	1.5	1.52	1.53	1.53	1.53	1.5
Gamma Scale Factor	16.794	17.312	9.944	8.954	8.954	4.229
Tool Carrier ID (in)	3.250	3.250	2.875	2.875	2.875	2.625
Tool Carrier OD (in)	8.000	8.000	6.750	6.500	6.500	4.500
Survey-to-Bit (PTB) (ft)	68.27	61.16	61.55	59.24	57.79	50.54
Gamma-to-Bit (GTB) (ft)	55.87	48.76	49.11	46.80	45.35	38.10

CERTIFICATE OF COMPLIANCE
 AND TRANSPORTATION AUTHORITY

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.: 168156

1. Field name exactly as shown on proration schedule PHANTOM (WOLFCAMP)		2. Lease name as shown on proration schedule UNIVERSITY 20 B		
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 48423	6. County LOVING
8. Operator address including city, state, and zip code PO BOX 576 HOUSTON, TX 77001		9. Well no(s) (see instruction E) 2004H		
		10. Classification <input checked="" type="checkbox"/> Oil <input type="checkbox"/> Gas <input type="checkbox"/> Other (see instruction A)		11. Effective Date 09/08/2016
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 <input type="checkbox"/> other well (specify) _____ 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"/> consolidation, unitization, or subdivision (oil lease only)				
13. Authorized GAS WELL GAS or CASINGHEAD GAS Gatherer(s) and/or Purchaser(s). (See instruction G).				
Gatherer	Purchaser	Name of GAS WELL GAS or CASINGHEAD GAS Gatherer(s) or Purchaser(s) As Indicated in Columns to the Left <i>(Attach an additional sheet in same format if more space is needed)</i>		Purchaser's RRC Assigned System Code
				Percent of Take
X		WILLIAMS MLP OPERATING LLC(925429)		
	X	SHELL ENERGY NORTH AM. (US), LP(773822)		100.0
				100.0
14. Authorized OIL or CONDENSATE Gatherer(s). (See instruction G).				
Name of OIL or CONDENSATE Gatherer(s) - List Highest Volume Gatherer First <i>(Attach an additional sheet in same format if more space is needed)</i>				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>05/09/2017</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 _____		Signature _____		
Name (print) _____		<input type="checkbox"/> Authorized Employee of previous operator		<input type="checkbox"/> Authorized agent of previous operator (see instruction G)
Title _____		Date _____		Phone with area code _____
16. CURRENT OPERATOR CERTIFICATION. By signing this certificate as the Current Operator, I certify that all statements on this form are true and correct and I acknowledge responsibility for the regulatory compliance of the subject lease including plugging of well(s) pursuant to Rule 14. I further acknowledge that I assume responsibility for the physical operation, control, and proper plugging of each well designated in this filing. I also acknowledge that I will remain designated as the Current Operator until a new certificate designating a new Current Operator is approved by the Commission.				
SHELL WESTERN E&P _____		Sondra Bienvenu _____		
Name (print) _____		Signature _____		
Regulatory Specialist _____		<input checked="" type="checkbox"/> Authorized Employee of current operator		<input type="checkbox"/> Authorized agent of current operator (see instruction G)
Title _____		Date <u>02/01/2017</u>		Phone with area code <u>(832) 337-0258</u>
E-mail Address (optional) <u>m.boutwell@shell.com</u>		Date _____		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:
Well No.: 2004H API No.: 42-301-32938
Total Lease Acres: 1282.61 Drilling Permit No.: 816416
Lease Name: University 20 B 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.

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

Table with 8 columns: RRC ID No. or Lease No., Well No., H-Horizontal D-Directional V-Vertical, Lease Name, API No., Acres Assigned, SWR 38 Except. (Y/N), Operator Name and Operator No. (if different from filing operator)

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

Signature: [Handwritten 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.

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	API Number:	
Operator No.:	774719	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

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

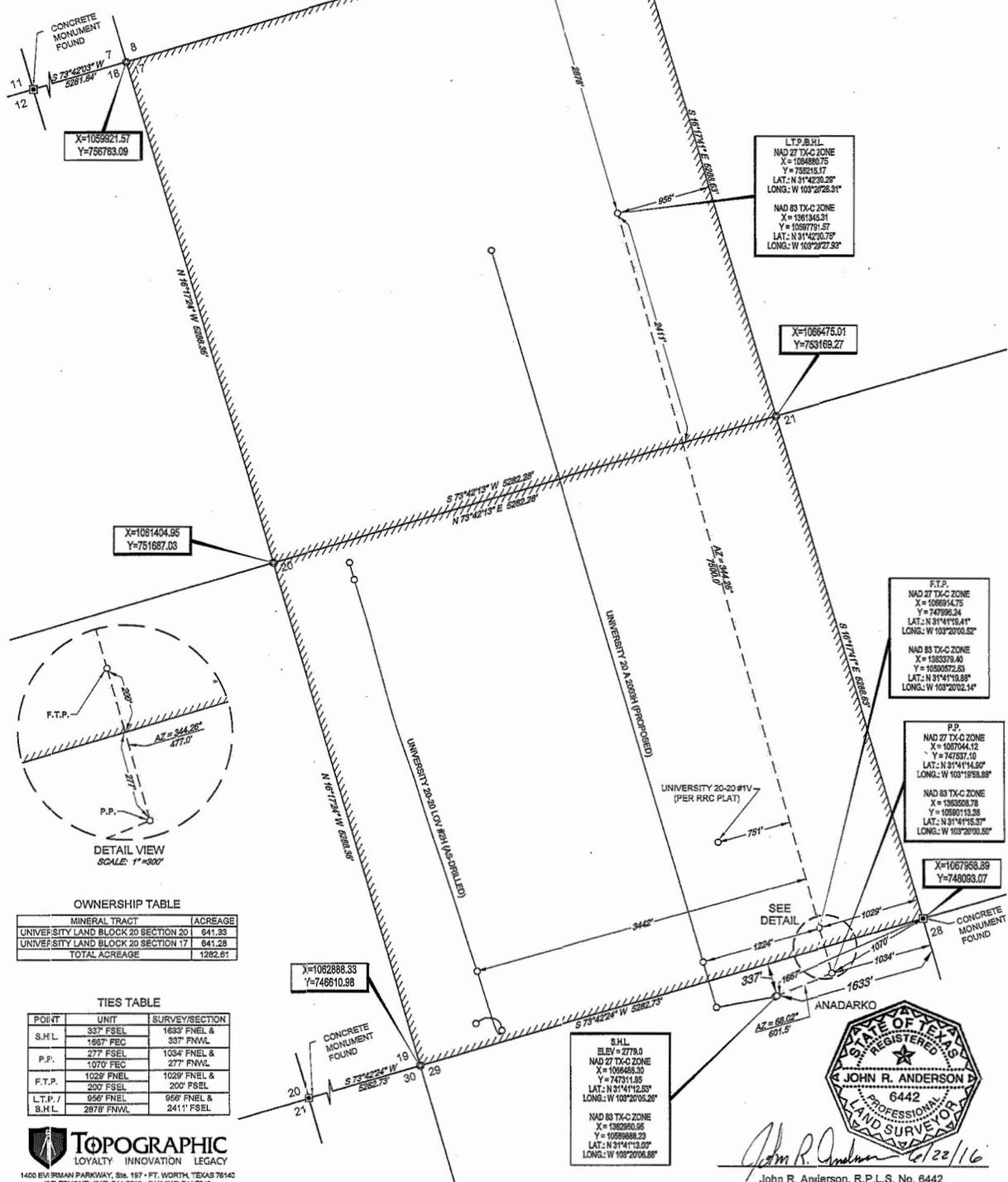
UNIVERSITY 20 B 2004H
WELL LOCATION
 1282.61 ACRES (MEASURED)
 SECTIONS 17 & 20, BLOCK 20, UNIVERSITY LAND SURVEY
 LOVING COUNTY, TEXAS

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



X=1055821.57
Y=756763.09

X=1064991.13
Y=758245.46

L.T.P. B.H.L.
 NAD 27 TX-C ZONE
 X = 1064989.75
 Y = 758216.17
 LAT.: N 31°42'30.28"
 LONG.: W 103°20'05.31"
 NAD 83 TX-C ZONE
 X = 1307184.51
 Y = 1029779.57
 LAT.: N 31°42'30.79"
 LONG.: W 103°20'27.53"

X=1069475.01
Y=763169.27

X=1061404.95
Y=751687.03

F.T.P.
 NAD 27 TX-C ZONE
 X = 1069544.75
 Y = 747956.24
 LAT.: N 31°41'19.41"
 LONG.: W 103°20'00.52"
 NAD 83 TX-C ZONE
 X = 1383379.40
 Y = 1050972.33
 LAT.: N 31°41'19.88"
 LONG.: W 103°20'02.14"

P.P.
 NAD 27 TX-C ZONE
 X = 1067944.72
 Y = 747937.10
 LAT.: N 31°41'14.50"
 LONG.: W 103°19'58.89"
 NAD 83 TX-C ZONE
 X = 1383558.78
 Y = 1050971.28
 LAT.: N 31°41'15.57"
 LONG.: W 103°20'00.50"

X=1067958.59
Y=748093.07

S.H.L.
 ELEV = 2779.0
 NAD 27 TX-C ZONE
 X = 1069468.30
 Y = 74781.55
 LAT.: N 31°41'12.58"
 LONG.: W 103°20'05.26"
 NAD 83 TX-C ZONE
 X = 1329260.59
 Y = 1029968.23
 LAT.: N 31°41'13.00"
 LONG.: W 103°20'06.88"

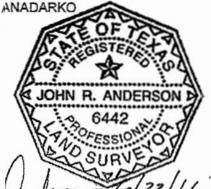
OWNERSHIP TABLE

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

TIES TABLE

POINT	UNIT	SURVEY/SECTION
S.H.L.	337' FS&L	1633' FN&L & 337' FNWL
P.P.	277' FS&L	1034' FN&L & 277' FNWL
F.T.P.	1029' FN&L	1029' FN&L & 200' FS&L
L.T.P./	956' FN&L	956' FN&L & B.H.L.
B.H.L.	2878' FNWL	2411' FS&L

TOPOGRAPHIC
 LOYALTY INNOVATION LEGACY
 1400 EVERMAN PARKWAY, Ste. 197 • FT. WORTH, TEXAS 76142
 TELEPHONE: (817) 744-7912 • FAX: (817) 744-7548
 TEXAS FIRM REGISTRATION NO. 10042904
 WWW.TOPOGRAPHIC.COM



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

UNIVERSITY 20 B 2004H	REVISION:	
	INT	DATE
	O.M.	05/23/2016
	J.R.A.	06/22/2016
DATE:	05/04/2016	
FILE:	LO_UNIVERSITY_20_B_2004_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 1927, 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 PLAT WAS CREATED FOR THE SOLE PURPOSE OF FILING A PERMIT WITH THE RAILROAD COMMISSION OF TEXAS AND SHOULD NOT BE CONSTRUED AS A "SECONDARY SURVEY" IN COMPLIANCE WITH T.B.P.L.S. MINIMUM STANDARDS OF PROCEDURES FOR BOUNDARY SURVEYS. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT 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 INTERNAL 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 HEREIN ARE LOCATED APPROXIMATELY 11.6 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