



RAILROAD COMMISSION OF TEXAS

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

Form W-15

Rev. 08/2014

CEMENTING REPORT

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

Operator Name: PERMIAN DELAWARE ENTERPRISES HOLDIN PDEH LLC		Operator P-5 No.: 646827
Cement Name: HALLIBURTON ENERGY SERVICES		Cement P-5 No.: 347151

District No.: 08		County: LOVING
Well No.: 503H	API No.: 42-301-36079	Drilling Permit No.: 883697
Lease Name: UL 20 PADDLE TAIL B		Lease No.:
Field Name: Phantom (Wolfcamp)	Field No.: 71052900	

I. CASING CEMENTING DATA					
Type of casing: <input type="checkbox"/> Conductor <input type="checkbox"/> Surface <input type="checkbox"/> Intermediate <input type="checkbox"/> 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	0			0	0

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.): 9 7/8		Depth of drilled hole (ft.): 1255-8439		Est. % wash-out or hole enlargement: 20	
Size of casing in O.D. (in.): 7 5/8		Casing weight (lbs/ft) and grade: 29.7 P-110		No. of centralizers used: 51	
Tapered string drilled hole size (in.)		Tapered string depth of drilled hole (ft.)			
Upper:	Lower:	Upper:		Lower:	
Tapered string size of casing in O.D. (in.)		Tapered string casing weight(lbs/ft) and grade		Tapered string no. of centralizers used	
Upper:	Lower:	Upper:		Lower:	
Was cement circulated to ground surface (or bottom of cellar) outside casing? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO				Setting depth shoe (ft.):	
Hrs. waiting on cement before drill-out: 12+		Calculated top of cement (ft.):		Cementing date: 4/3/2023	
SLURRY					
Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1	1325	NEOCCEM	BRIDGEMAKER II	3325	16139
2	185	HALCEM	HALAD(R)-344, HR-601	200	1788
3					
Total	1510			3526	17927

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.): 8 3/4		Depth of drilled hole (ft.): 8439-11435		Est. % wash-out or hole enlargement: 20	
Size of casing in O.D. (in.): 7 5/8		Casing weight (lbs/ft) and grade: 29.7 P-110		No. of centralizers used: 51	
Tapered string drilled hole size (in.)		Tapered string depth of drilled hole (ft.)			
Upper:	Lower:	Upper:		Lower:	
Tapered string size of casing in O.D. (in.)		Tapered string casing weight(lbs/ft) and grade		Tapered string no. of centralizers used	
Upper:	Lower:	Upper:		Lower:	
Was cement circulated to ground surface (or bottom of cellar) outside casing? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO				Setting depth tool (ft.):	
Hrs. waiting on cement before drill-out: 12+		Calculated top of cement (ft.): 0		Cementing date: 4/3/2023	
SLURRY					
Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1	820	ECONOCCEM	SALT D-AIR 5000	607	7316
2	145	HALCEM	HR-800	193	890
3					
Total	965			800	8206

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

27 BBLS (76 SKS) OF CEMENT CIRCULATED 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.

(FRANK LUEVANO)-SERVICE SUPERVISOR

Halliburton

Name and title of cementer's representative

Cementing Company

Signature

6155 W. Murphy St.

Odessa, TX, 79763

432-571-8600

4/3/2023

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.

Martha Finley

Sr. Regulatory Coordinator

Martha Finley

Typed or printed name of operator's representative

Title

Signature

600 W Illinois

Midland

TX

79701

435-688-6036

09/14/2023

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_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.