



RAILROAD COMMISSION OF TEXAS

Form W-2

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

Status: Approved
Date: 07/14/2015
Tracking No.: 137321

OIL WELL POTENTIAL TEST, COMPLETION OR RECOMPLETION REPORT,

OPERATOR INFORMATION			
Operator	CONOCOPHILLIPS COMPANY	Operator	172232
Operator	600 W ILLINOIS AVE MIDLAND, TX 79701-0000		

WELL INFORMATION			
API	42-003-46637	County:	ANDREWS
Well No.:	284	RRC District	08
Lease	UNIVERSITY ANDREWS	Field	EMBAR (PERMIAN)
RRC Lease	01270	Field No.:	28843666
Location	Section: 19, Block: 10, Survey: UL, Abstract:		
Latitude	32.13967	Longitud	-102.72294
This well is 16 miles in a SW direction from ANDREWS, which is the nearest town in the			

FILING INFORMATION			
Purpose of	Initial Potential		
Type of	New Well		
Well Type:	Producing	Completion or Recompletion	06/07/2015
Type of Permit	Date	Permit No.	
Permit to Drill, Plug Back, or Rule 37 Exception	08/15/2014	792069	
Fluid Injection			
O&G Waste Disposal			
Other:			

COMPLETION INFORMATION			
Spud	04/03/2015	Date of first production after rig	06/07/2015
Date plug back, deepening, drilling operation	04/03/2015	Date plug back, deepening, recompletion, drilling operation	04/08/2015
Number of producing wells on this lease this field (reservoir) including this	142	Distance to nearest well in lease & reservoir	1460.0
Total number of acres in	4393.42	Elevation	3246 GL
Total depth TVD	7764	Total depth MD	
Plug back depth TVD	7760	Plug back depth MD	
Was directional survey made other inclination (Form W-	Yes	Rotation time within surface casing Is Cementing Affidavit (Form W-15)	62.0 Yes
Recompletion or	No	Multiple	No
Type(s) of electric or other log(s)	Neutron logs		
Electric Log Other Description:			
Location of well, relative to nearest lease of lease on which this well is	4551.0 Feet from the North Line and 5162.0 Feet from the East Line of the UNIVERSITY ANDREWS Lease.	Off Lease :	No

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	1200.0	Date 11/28/2011
SWR 13 Exception	Depth	1600.0	

INITIAL POTENTIAL TEST DATA FOR NEW COMPLETION OR RECOMPLETION			
Date of	06/08/2015	Production	Pumping
Number of hours	24	Choke	
Was swab used during this	No	Oil produced prior to	
PRODUCTION DURING TEST PERIOD:			
Oil	51.00	Gas	99
Gas - Oil	1941	Flowing Tubing	
Water	2		
CALCULATED 24-HOUR RATE			
Oil	51.0	Gas	99
Oil Gravity - API - 60.:	42.2	Casing	
Water	2		

CASING RECORD											
Ro	Type of Casing	Casing	Hole	Setting	Multi -	Multi -	Cement	Cement	Slurry	Top of	TOC
		Size (in.)	Size	Depth	Stage Tool	Stage Shoe	Class	Amoun	Volume (cu.	Cement (ft.)	Determined By
1	Surface	8 5/8	12 1/4	1462			C	874	1425.0	0	Circulated to Surface
2	Conventional Production	5 1/2	7 7/8	7747			C, H	1004	2644.0	0	Circulated to Surface

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>
N/A									

TUBING RECORD				
<u>Ro</u>	<u>Size (in.)</u>	<u>Depth</u>	<u>Size (ft.)</u>	<u>Packer Depth (ft.)/Type</u>
1	2 7/8	7582		7497 / TAC

PRODUCING/INJECTION/DISPOSAL INTERVAL			
<u>Ro</u>	<u>Open hole?</u>	<u>From (ft.)</u>	<u>To (ft.)</u>
1	No	L 6129	6437.0
2	No	L 6530	6759.0
3	No	L 6900	7191.0
4	Yes	L 7745	7760.0

ACID, FRACTURE, CEMENT SQUEEZE, CAST IRON BRIDGE PLUG, RETAINER, ETC.					
Was hydraulic fracturing treatment		Yes			
Is well equipped with a downhole sleeve?		No			
		If yes, actuation pressure			
Production casing test pressure (PSIG)		Actual maximum pressure (PSIG) during			
hydraulic fracturing		6730	fracturin	5463	
Has the hydraulic fracturing fluid disclosure been		Yes			
<u>Ro</u>	<u>Type of Operation</u>	<u>Amount and Kind of Material Used</u>		<u>Depth Interval (ft.)</u>	
1	Acid	ACIDIZED W/ 252 BBLS 15% HCL		7745	7760
2	Fracture	65,314# 20/40 WHT SD / 32,525# 20/40 RCS		6900	7191
3	Fracture	65,314# 20/40 WHT SD / 32,525# 20/40 RCS		6530	6759
4	Fracture	104,120# 20/40 WHT SD / 56,850# 20/40 RCS		6129	6437

FORMATION RECORD					
<u>Formations</u>	<u>Encountere</u>	<u>Depth TVD</u>	<u>Depth MD</u>	<u>Is formation</u>	<u>Remarks</u>
SANTA ROSA	Yes	1131.0		Yes	
RUSTLER	Yes	1394.0		Yes	
TANSILL	Yes	2472.0		Yes	
SALADO	Yes	2472.0		Yes	
YATES	Yes	2609.0		Yes	
SEVEN RIVERS	Yes	2803.0		Yes	
QUEEN	Yes	3501.0		Yes	
GRAYBURG	Yes	3787.0		Yes	
SAN ANDRES - CO2 FLOOD, HIGH FLOWS, H2S, CORROSIVE	Yes	4059.0		Yes	
HOLT	No			No	NOT ENCOUNTERED - PINCHED OUT
GLORIETA	Yes	5112.0		Yes	
TUBB	Yes	5925.0		Yes	
CLEARFORK	Yes	5454.0		Yes	
PERMIAN DETRITAL	No			No	NOT ENCOUNTERED - PINCHED OUT
LEON	No			No	NOT ENCOUNTERED - PINCHED OUT
WICHITA ALBANY	Yes	6465.0		Yes	
SPRABERRY	No			No	NOT ENCOUNTERED - PINCHED OUT
DEAN	No			No	NOT ENCOUNTERED - PINCHED OUT
WOLFCAMP	Yes	7302.0		Yes	
CANYON	No			No	NOT ENCOUNTERED - PINCHED OUT
PENNSYLVANIAN	No			No	NOT ENCOUNTERED - PINCHED OUT
MCKEE	No			No	NOT ENCOUNTERED - PINCHED OUT
STRAWN	No			No	NOT ENCOUNTERED - PINCHED OUT
FUSSELMAN	No			No	NOT ENCOUNTERED - PINCHED OUT
DEVONIAN	No			No	NOT ENCOUNTERED - PINCHED OUT

SILURIAN	No		No	NOT ENCOUNTERED - PINCHED OUT
ELLENBURGER	Yes	7708.0	Yes	
Do the producing interval of this well produce H2S with a concentration in excess of 100 ppm				Yes
Is the completion being downhole commingled		No		

REMARKS

RRC REMARKS
PUBLIC COMMENTS:
CASING RECORD :
TUBING RECORD:
PRODUCING/INJECTION/DISPOSAL INTERVAL :
ACID, FRACTURE, CEMENT SQUEEZE, CAST IRON BRIDGE PLUG, RETAINER, ETC. :
POTENTIAL TEST DATA:

OPERATOR'S CERTIFICATION			
Printed	Colleen Reda	Title:	Regulatory Specialist
Telephone	(281) 206-5219	Date	06/18/2015

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

RAILROAD COMMISSION OF TEXAS
Oil and Gas Division

Form W-15
Cementing Report
Rev. 4/28/2014
046292

1. Operator's Name (As shown on Form P-5, Organization Report) ConocoPhillips Company	2. RRC Operator No. 172232	3. RRC District No. 08	4. County of Well Site Andrews
5. Field Name (Wildcat or exactly as shown on RRC Records) Embar (Permian)		6. API No. 42-003-46637	7. Drilling Permit No. 792069
8. Lease Name University Andrews	9. Rule 37 Case No.	10. Oil Lease/Gas ID No. 01270	11. Well No. 284

CASING CEMENTING DATA:		SURFACE CASING	INTER-MEDIATE CASING	PRODUCTION CASING		MULTI-STAGE CEMENTING PROCESS	
				Single String	Multiple Parallel Strings	Tool	Shoe
12. Cementing Date		04-04-2015					
13. • Drilled Hole Size		12 1/4"					
• Est. % wash or hole enlargement							
14. Size of casing (in. O.D.)		8 5/8"					
15. Top of liner (ft.)							
16. Setting depth (ft.)		1462'					
17. Number of centralizers used		11					
18. Hrs. Waiting on cement before drill-out		12.25					
1 st Slurry	19. API cement used: No. of sacks ▶	622					
	Class ▶	C					
	Additives ▶	Remarks #1					
2 nd Slurry	No. of sacks ▶	252					
	Class ▶	C					
	Additives ▶	Remarks #2					
3 rd Slurry	No. of sacks ▶						
	Class ▶						
	Additives ▶						
1 st	20. Slurry pumped: Volume (cu. ft.) ▶	1088					
	Height (ft.) ▶	2636					
2 nd	Volume (cu. ft.) ▶	337					
	Height (ft.) ▶	780					
3 rd	Volume (cu. ft.) ▶						
	Height (ft.) ▶						
Total	Volume (cu. ft.) ▶	1425					
	Height (ft.) ▶	3416					
21. Was cement circulated to ground surface (or bottom of cellar) outside casing ?		Yes					
(22). Remarks #1 4% Bentonite II + 2% Calcium Chloride + 0.25% R-3 + 0.1% CD-32 + 0.25 #/sk Cell0 Flake + 0.005 gps FP-6L + 0.005 #/sk Static Free Remarks #2 1% Calcium Chloride + 0.2% R-3 + 0.25 #/sk Cello Flake + 0.005 gps FP-6L + 0.005 #/sk Static Free							
Circulated 115 bbls or 369 sacks of cement to surface							

CEMENTING TO PLUG AND ABANDON	PLUG #1	PLUG #2	PLUG #3	PLUG #4	PLUG #5	PLUG #6	PLUG #7	PLUG #8
23. Cementing date								
24. Size of hole or pipe plugged (in.)								
25. Depth to bottom of tubing or drill pipe (ft.)								
26. Sacks of cement used (each plug)								
27. Slurry volume pumped (cu. ft.)								
28. Calculated top of plug (ft.)								
29. Measured top of plug, if tagged (ft.)								
30. Slurry wt. (lb/gal)								
31. Type cement								

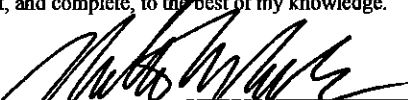
CEMENTER'S CERTIFICATE: I declare under penalties in Sec. 91.143, Texas Natural Resources Code, that I am authorized to make this Certification, that the cementing of casing and/or the placing of cement plugs in this well as shown in the report was performed by me or under my Supervision, and that the 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.

Phillip M. Bowen- Field Specialist

Name and title of cementer's representative

Baker Hughes Oilfield Ops, INC

Cementing Company


Signature

2929 Allen Parkway, Suite 2100

Address

Houston,

City,

Texas

State,

77019

Zip Code

(713) 439-8600

Tel.: Area Code Number

04-04-2015

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.

COLLEEN REDA

Typed or printed name of operator's representative

Regulatory Specialist

Title


Signature

6000 N. DAIKIN AVE, HOUSTON, TX 77079

Address

City,

State,

Zip Code

281-206-5219

Tel.: Area Code Number

6/17/15

Date: mo. day yr.

Instructions to Form W-15, Cementing Report

IMPORTANT: Operators and cementing companies must comply with the requirements of the Commission's Statewide Rules 8 (Water Protection), 13 (Casing, Cementing, Drilling, and Completion), and 14 (Well Plugging). For offshore operations, see the requirements of Rule 13 (c).

- 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. Form W-15 should be filed with the following.
- An initial oil or gas completion report, Form W-2 or G-1, as required by Statewide or special field rates;
 - Form W-4, Application for Multiple Completion, if the well is a multiple parallel casing completion; and
 - Form W-3, Plugging Record, unless the 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. Where to file. The appropriate Commission District Office for the county in which the well is located.
- C. Surface Casing. An operator must set and cement sufficient surface casing to protect all usable-quality water strata, as defined by the Texas Department of Water Resources, Austin. Before drilling a well in any field or area in which no field rules are in effect or in which surface casing requirements are not specified in the applicable rules, an operator must obtain a letter from the Department of Water Resources stating the protection depth. Surface casing should not be set deeper than 200 feet below the specified depth without prior approval from the Committee.
- D. Centralizers. Surface Casing must be centralized at the shoe, above and below a stage collar or diverting tool, if run, and through usable-quality water zones. In Non-deviated holes, a centralizer must be placed every fourth joint from the cement shoe to the ground surface or to the bottom of the cellar. All centralizers must meet API specifications.
- E. Exceptions and alternative casing programs. The District Director may grant an exception to the requirements of Statewide Rule 13. In a written application, an operator must state the reason for the requested exception and outline an alternate program for casing and cementing through the protection depth for strata containing usable-quality water. The District Director may approve, modify, or reject a proposed program. An operator must obtain approval of any exception before beginning casing and cementing operations.
- F. Intermediate and production casing. For specific technical requirements, operators should consult Statewide Rule 13 (3) and (4).
- G. Plugging and abandoning. Cement plugs must be placed in the wellbore as required by Statewide Rule 14. The District Director may require additional cement plugs. For onshore or inland wells, a 10-foot cement plug must be placed in the top of the well, and the casing must be cut off three foot below the ground surface. All cement plugs, except the top plug, must have sufficient slurry volume to fill 100 feet of hole, plus ten percent for each 1,000 feet of depth from the ground surface to the bottom of the plug.

To plug and abandon a well, operators must use only cementers approved by the Director of Field Operations, 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.

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

RAILROAD COMMISSION OF TEXAS
Oil and Gas Division

Form W-15
Cementing Report
Rev. 04/28/2014
046292

1. Operator's Name (As shown on Form P-5, Organization Report) CONOCOPHILLIPS	2. RRC Operator No. 172232	3. RRC District No. 08	4. County of Well Site ANDREWS
5. Field Name (Wildcat or exactly as shown on RRC Records) Embar (Permian)		6. API No. 42-003-44637	7. Drilling Permit No. 792069
8. Lease Name UNIVERSITY ANDREWS	9. Rule 37 Case No.	10. Oil Lease/Gas ID No. 01270	11. Well No. 284

CASING CEMENTING DATA:		SURFACE CASING	INTER-MEDIATE CASING	PRODUCTION CASING		MULTI-STAGE CEMENTING PROCESS	
				Single String	Multiple Parallel Strings	Tool	Shoe
12. Cementing Date				4-8-2015			
13. • Drilled Hole Size				77 1/8"			
• Est. % wash or hole enlargement							
14. Size of casing (in. O.D.)				5 1/2"			
15. Top of liner (ft.)							
16. Setting depth (ft.)				7747'			
17. Number of centralizers used				62			
18. Hrs. Waiting on cement before drill-out				280			
1 st Slurry	19. API cement used: No. of sacks ▶			480			
	Class ▶			CLASS C			
	Additives ▶			REMARK1			
2 nd Slurry	No. of sacks ▶			524			
	Class ▶			CLASS H			
	Additives ▶						
3 rd Slurry	No. of sacks ▶						
	Class ▶						
	Additives ▶						
1 st	20. Slurry pumped: Volume (cu. ft.) ▶			1771			
	Height (ft.) ▶			10219			
2 nd	Volume (cu. ft.) ▶			873			
	Height (ft.) ▶			5038			
3 rd	Volume (cu. ft.) ▶						
	Height (ft.) ▶						
Total	Volume (cu. ft.) ▶			2644			
	Height (ft.) ▶			15,257			
21. Was cement circulated to ground surface (or bottom of cellar) outside casing ?				YES			
(22).Remarks #1 60):40 POZ + 15 IBS/SK BA-90 + .005 LBS/SK STATIC FREE +8 LBS/SK LCM-1 +0.5% FL-52 + .8% ASA -301 +5% A-10 +3% SMS +1% BA-10A+ 1.75 % R-3 +4% MPA-5 REMARK #2 14.8) 61.1 POZ+ 2% R-3 + 3 LBS/SK LCM -1 + 2% FL-62 +.75% SMS + .5% BA-10A + 11LBS/SK CSE-2							

CEMENTING TO PLUG AND ABANDON	PLUG #1	PLUG #2	PLUG #3	PLUG #4	PLUG #5	PLUG #6	PLUG #7	PLUG #8
23. Cementing date								
24. Size of hole or pipe plugged (in.)								
25. Depth to bottom of tubing or drill pipe (ft.)								
26. Sacks of cement used (each plug)								
27. Slurry volume pumped (cu. ft.)								
28. Calculated top of plug (ft.)								
29. Measured top of plug, if tagged (ft.)								
30. Slurry wt. (lb/gal)								
31. Type cement								

CEMENTER'S CERTIFICATE: I declare under penalties 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-LUIS RIOS

Name and title of cementer's representative

BAKER HUGHES OILFIELD OPS, INC.

Cementing Company

Luis Rios
Signature

2929 Allen Parkway Suite 2100

Address

Houston,

City,

Texas,

State,

77019

Zip Code

(713) 439-8600

Tel: Area Code

Number

4-8-2015

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.

COLLEEN REDA

Typed or printed name of operator's representative

Regulatory Specialist
Title

Colleen Reda
Signature

600 N. DAIRY ASHFORD

Address

HOUSTON TX

City,

State,

77079

Zip Code

281-206-5219

Tel: Area Code

Number

6-17-15

Date: mo. day

yr.

Instructions to Form W-15, Cementing Report

IMPORTANT: Operators and cementing companies must comply with the requirements of the Commission's Statewide Rules 8 (Water Protection), 13 (Casing, Cementing, Drilling, and Completion), and 14 (Well Plugging). For offshore operations, see the requirements of Rule 13 (c).

- 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. Form W-15 should be filed with the following.
 - An initial oil or gas completion report, Form W-2 or G-1, as required by Statewide or special field rates;
 - Form W-4, Application for Multiple Completion, if the well is a multiple parallel casing completion; and
 - Form W-3, Plugging Record, unless the 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. Where to file. The appropriate Commission District Office for the county in which the well is located.
- C. Surface Casing. An operator must set and cement sufficient surface casing to protect all usable-quality water strata, as defined by the Texas Department of Water Resources, Austin. Before drilling a well in any field or area in which no field rules are in effect or in which surface casing requirements are not specified in the applicable rules, an operator must obtain a letter from the Department of Water Resources stating the protection depth. Surface casing should not be set deeper than 200 feet below the specified depth without prior approval from the Committee.
- D. Centralizers. Surface Casing must be centralized at the shoe, above and below a stage collar or diverting tool, if run, and through usable-quality water zones. In Non-deviated holes, a centralizer must be placed every fourth joint from the cement shoe to the ground surface or to the bottom of the cellar. All centralizers must meet API specifications.
- E. Exceptions and alternative casing programs. The District Director may grant an exception to the requirements of Statewide Rule 13. In a written application, an operator must state the reason for the requested exception and outline an alternate program for casing and cementing through the protection depth for strata containing usable-quality water. The District Director may approve, modify, or reject a proposed program. An operator must obtain approval of any exception before beginning casing and cementing operations.
- F. Intermediate and production casing. For specific technical requirements, operators should consult Statewide Rule 13 (3) and (4).
- G. Plugging and abandoning. Cement plugs must be placed in the wellbore as required by Statewide Rule 14. The District Director may require additional cement plugs. For onshore or inland wells, a 10-foot cement plug must be placed in the top of the well, and the casing must be cut off three foot below the ground surface. All cement plugs, except the top plug, must have sufficient slurry volume to fill 100 feet of hole, plus ten percent for each 1,000 feet of depth from the ground surface to the bottom of the plug.

To plug and abandon a well, operators must use only cementers approved by the Director of Field Operations, 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.



RAILROAD COMMISSION OF TEXAS

STATEWIDE RULE 13 EXCEPTION APPLICATION/ALTERNATIVE REQUEST

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

1. Operator: ConocoPhillips Company	2. P-5 No.: 172232	3. Lease Name: University Andrews	4. Well No.: 284
5. Street Address: Attn: Colleen Reda, 600 N Dairy Ashford, P10-03-3093, Houston TX, 7707		6. RRC District: 08	7. Drill Permit No.: 792069
8. Field Name: Embar	9. County: Andrews	10. Proposed Depth: 9000	<input checked="" type="checkbox"/> TVD <input type="checkbox"/> MD
11. Survey: UL	12. Abstract No:	13. Block/Township: 10	14. Section: 19
15. GPS Datum: NAD 27		Coordinates: N 32.13986, W 102.72052	
16. GAU No.: 14843 (attach letter)	Recommendation Type (below)	17. Usable-Quality Water (determined by GAU): 1200 ft.	
<input checked="" type="checkbox"/> Well <input type="checkbox"/> Lease <input type="checkbox"/> Survey <input type="checkbox"/> Pad <input type="checkbox"/> Radius:		Separation points: 0 - 250 & 925-1200 ft.	

18. Exception Request: <input type="checkbox"/> Short Surface Csg <input checked="" type="checkbox"/> Excess Surface Csg <input type="checkbox"/> Single-string <input type="checkbox"/> Tubing <input type="checkbox"/> Area-wide ²	
19. Alternate Program Request: <input type="checkbox"/> Drilling Fluid Program <input type="checkbox"/> Non-API Cement <input type="checkbox"/> Other: _____	
20. Reason for this request: <input type="checkbox"/> Economic <input checked="" type="checkbox"/> Technical <input type="checkbox"/> Other Please explain: To set surface casing deep enough to cover the Trias If this application includes a request for exception to tubing requirements outlined in 13(b)(4)(A), indicate requested duration: _____	
21. Is this a proposed injection or disposal well ³ ? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	22. Is this a Minimum Separation well ⁴ ? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
23. Are there any water wells within ¼ mile of this proposed well location ⁵ ? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, provide information requested below Type of water well: _____ Depth: _____ Distance: _____ Direction: _____	
24. Are there any INJECTION or DISPOSAL wells within ¼ mile of the proposed well location ⁶ ? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, list names and depths of all formations permitted for INJECTION OR DISPOSAL within ¼ miles of the well location ⁷ : _____	
25. Have there been any blowouts within a mile of this wellsite ⁸ ? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, name operator(s), lease(s), and date(s) blowout(s) occurred: _____	

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

26. Proposed Casing and Cementing Program		Surface Casing			Intermediate Casing			Production Casing		
LEAD/FILLER CEMENT	Hole Size (in.)	12.25						7.875		
	O.D. (in.), Grade, Weight (lb/ft.)	8.625	J55	24				5.5	L-80	17
	Setting Depth (ft.)	1437 - 1600						~ 8500		
	Multi-Stage Tool Depth (ft.)	N/A						N/A		
	Type and Free Water Content	13.5 ppg Class C 0						10.8 ppg 60:40 <input checked="" type="checkbox"/> 0		
	# of Sacks and Yield (cu. ft/sk)	~550			1.75			~450		
	Cement Additives	2% bwoc Calcium Chloride, .25 lbs/sk						15 lbs/sk BA-90, 8 lbs/sk LCM-1, C <input checked="" type="checkbox"/>		
	24/72-Hr. Comp. Strength (psi)	690			1417			113		
TAIL/CRITICAL CEMENT	Cement Height (TOC) (ft.)	Surface						Surface		
	% Excess	115						250		
	Type and Free Water Content	14.8 ppg Class C 0						13.2 ppg 14.8:85 <input checked="" type="checkbox"/> 0		
	# of Sacks and Yield (cu. ft/sk)	~250			1.34			~440		
	Cement Additives	2% bwoc Calcium Chloride, 56.4% f						.005 lbs/sk Static Free, 3 lbs/sk LCM <input checked="" type="checkbox"/>		
	24/72-Hr. Comp. Strength (psi)	1205			2109			540		
	Cement Height (TOC) (ft.)	1000						3900		
Centralizers No. & Placement ⁹	1 20' above shoe, 1 on joint above fl						1 20' above shoe, 1 on joint above <input checked="" type="checkbox"/>			
% Excess	150						25			

PROVISIONS APPLICABLE TO RULE 13 EXCEPTIONS:

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

OPERATOR CONTACT INFORMATION		
Signature: X <u>Colleen Reda</u>	Name: <u>Colleen Reda</u>	Title: <u>Regulatory Specialist</u>
Date: <u>2/1/15</u>	Phone: <u>(281) 206-5219</u>	Fax: <u>(281) 206-5715</u>
Email Address (optional): <u>Colleen.Red@contractor.conocophillips.com</u>		

RRC
Use
Only ▶

RRC District Office Action:		Ref. No:	
TUBING EXCEPTION: <input type="checkbox"/> Approved <input type="checkbox"/> Approved as Modified <input type="checkbox"/> Denied	By:	Date:	
SURFACE CASING EXCEPTION: <input checked="" type="checkbox"/> Approved <input type="checkbox"/> Approved as Modified <input type="checkbox"/> Denied	By: <u>[Signature]</u>	Date: <u>3-20-15</u>	
DRILLING FLUID PROGRAM: <input type="checkbox"/> Approved <input type="checkbox"/> Approved as Modified <input type="checkbox"/> Denied	By:	Date:	
ALTERNATE CEMENT PROGRAM: <input type="checkbox"/> Approved <input type="checkbox"/> Approved as Modified <input type="checkbox"/> Denied	By:	Date:	
Remarks/Modifications:			

Groundwater
Advisory Unit

GROUNDWATER PROTECTION DETERMINATION

Date **November 28, 2011**

GAU File No.: SC- **14843**

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

API Number **00304608**

Attention: **DORIAN K. FUENTES**

RRC Lease No. **000000**

SC_172232_00304608_000000_14843.pdf

CONOCOPHILLIPS CO
P O BOX 51810
MIDLAND TX 79710

P-5# 172232

--Measured--

1980 ft FEL

660 ft FSL

MRL: SURVEY

Digital Map Location:

X-coord/Long **102.72052**

Y-coord/Lat **32.13986**

Datum **27** Zone

County **ANDREWS**

Lease & Well No. **UNIVERSITY ANDREWS #28&ALL**

Purpose **H15**

Location **SUR-UL, BLK-10, SEC-19, -- [TD=8010], [RRC 8],**

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

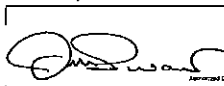
The interval from the land surface to a depth of 250 feet and the ZONE from 925 feet to 1200 feet must be protected.

This recommendation is applicable to all wells drilled in this section 19.

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

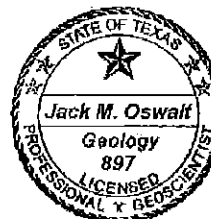
If you have any questions, please contact us at 512-463-2741, gau@rrc.state.tx.us, or by mail.

Sincerely,


Digitally signed by Jack Oswalt
DN: c=US, st=TEXAS, l=Austin,
o=Railroad Commission of Texas,
cn=Jack Oswalt,
email=jack.oswalt@rrc.state.tx.us
Date: 2011.11.28 15:36:08 -06'00'

Jack M. Oswalt, P.G.

GEOLOGIST SEAL



Geologist, Groundwater Advisory Unit
Oil & Gas Division

The seal appearing on this document was authorized by Jack M. Oswalt on 11/28/2011.
Note: Alteration of this electronic document will invalidate the digital signature.

Tracking No.: 137321

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: CONOCOPHILLIPS COMPANY	District No. 08	Completion Date: 06/07/2015
Field Name EMBAR (PERMIAN)	Drilling Permit No. 792069	
Lease Name UNIVERSITY ANDREWS	Lease/ID No. 01270	Well No. 284
County ANDREWS	API No. 42- 003-46637	

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). _____

Colleen Reda

Signature

CONOCOPHILLIPS COMPANY

Name (print)

Regulatory Specialist

Title

(281) 206-5219

Phone

06/18/2015

Date

-FOR RAILROAD COMMISSION USE ONLY-

Company: ConocoPhillips
Well: University Andrews 284
Field: Embar
County: Andrews State: Texas

County: Andrews Field: Embar Location: 2,450' FEL & 800' FSL Well: University Andrews 284 Company: ConocoPhillips	COMPENSATED NEUTRON LOG			
	Spectral Gamma Ray			
	Tracking # 137321			
	Location: 2,450' FEL & 800' FSL Sec: 19, Blk: 10 Survey: UL		Elev.: K.B. 3260.00 ft G.L. 3246.00 ft D.F. 3259.00 ft	
Permanent Datum: Ground Level Log Measured From: Kelly Bushing Drilling Measured From: Kelly Bushing		Elev.: 3246.00 f 14.00 ft above Perm.Datum		
API Serial No. 42-003-46637		Section: 19	Block 10	Abstract
Logging Date		20-Apr-2015		
Run Number		Run 1		
Depth Driller		7701.00 ft		
Schlumberger Depth		7694.00 ft		
Bottom Log Interval		7694.00 ft		
Top Log Interval		200.00 ft		
Casing Fluid Type		Fresh Water		
Salinity				
Density		8.4 lbm/gal		
Fluid Level		8.00 ft		
BIT/CASING/TUBING STRING				
Bit Size		7.88 in		
From		0.00 ft		
To		7694.00 ft		
Casing/Tubing Size		5.5 in		
Weight		17 lbm/ft		
Grade		L80		
From		0.00 ft		
To		7694.00 ft		
Max Recorded Temperatures		120 degF		
Logger on Bottom		Time 20-Apr-2015 12:00:00		
Unit Number	Location: 9113		Midland, TX	
Recorded By		Nanut Green & Stephanie Anderson		
Witnessed By		George Castillo		

Disclaimer

THE USE OF AND RELIANCE UPON THIS RECORDED-DATA BY THE HEREIN NAMED COMPANY (AND ANY OF ITS AFFILIATES, PARTNERS, REPRESENTATIVES, AGENTS, CONSULTANTS AND EMPLOYEES) IS SUBJECT TO THE TERMS AND CONDITIONS AGREED UPON BETWEEN SCHLUMBERGER AND THE COMPANY, INCLUDING: (a) RESTRICTIONS ON USE OF THE RECORDED-DATA; (b) DISCLAIMERS AND WAIVERS OF WARRANTIES AND REPRESENTATIONS REGARDING COMPANY'S USE AND RELIANCE UPON THE RECORDED-DATA; AND (c) CUSTOMER'S FULL AND SOLE RESPONSIBILITY FOR ANY INFERENCE DRAWN OR DECISION MADE IN CONNECTION WITH THE USE OF THIS RECORDED-DATA.

Contents

- 1. Header
- 2. Disclaimer
- 3. Contents
- 4. Remarks and Equipment Summary
- 5. Depth Summary
- 6. Run 1 Main Pass 2" = 100'
 - 6.1 Integration Summary
 - 6.2 Software Version
 - 6.3 Composite Summary
 - 6.4 Log (CH CNL 2-1)
 - 6.5 Parameter Listing
- 7. Run 1 Main Pass 5" = 100'
 - 7.1 Integration Summary
 - 7.2 Software Version
 - 7.3 Composite Summary
 - 7.4 Log (CH CNL 5)
 - 7.5 Parameter Listing
- 8. Run 1 Repeat Analysis 5" = 100'
 - 8.1 Composite Summary
 - 8.2 Log (CH CNL 5 RA)
- 9. Tail
- 10. Run 1 Main Pass 1" = 100'
 - 10.1 Integration Summary
 - 10.2 Software Version

- 10.3 Composite Summary
- 10.4 Log (CH CNL 2)
- 10.5 Parameter Listing

Remarks and Equipment Summary

Run 1: Toolstring		Run 1: Remarks	
Equip. name LEH-OC	Length 30.52	MP name	Offset
		Tool String run as per toolsketch.	
		Main pass run from PBTD up to surface; Repeat pass run from PBTD up 300 ft	

RAILROAD COMMISSION OF TEXAS
OIL AND GAS DIVISION

Form W-12

(1-1-71)

INCLINATION REPORT (One Copy Must Be Filed With Each Completion Report.)		6. RRC District <div style="text-align: center;">8</div>
1. FIELD NAME (as per RRC Records or Wildcat) <div style="font-size: 1.2em;">Embar (Permian)</div>	2. LEASE NAME <div style="font-size: 1.2em;">UNIVERSITY ANDREWS</div>	7. RRC Lease Number. (Oil completions only) <div style="font-size: 1.2em;">01270</div>
3. OPERATOR <div style="font-size: 1.2em;">CONOCO PHILLIPS COMPANY</div>		8. Well Number <div style="text-align: center;">284</div>
4. ADDRESS <div style="font-size: 1.2em;">600 NORTH DAIRY ASHFORD HOUSTON, TX 77079</div>		9. RRC Identification Number (Gas completions only)
5. LOCATION (Section, Block, and Survey) <div style="font-size: 1.2em;">Sec. 19, Blk 10 UL</div>		
		10. County <div style="text-align: center;">Upton</div>

RECORD OF INCLINATION

*11. Measured Depth (feet)	12. Course Length (Hundreds of feet)	*13. Angle of Inclination (Degrees)	14. Displacement per Hundred Feet (Sine of Angle x100)	15. Course Displacement (feet)	16. Accumulative Displacement (feet)
500	5.00	0.98	1.71	8.55	8.55
1000	5.00	0.56	0.98	4.89	13.44
1473	4.73	1.14	1.99	9.41	22.85
1539	0.66	1.40	2.44	1.61	24.46
1987	4.48	1.40	2.44	10.95	35.41
2434	4.47	0.90	1.57	7.02	42.43
2882	4.48	0.70	1.22	5.47	47.90
3778	8.96	0.50	0.87	7.82	55.72
4226	4.48	0.40	0.70	3.13	58.85
4450	2.24	0.30	0.52	1.17	60.02
4674	2.24	0.10	0.17	0.39	60.41
5122	4.48	0.40	0.70	3.13	63.54
5570	4.48	0.60	1.05	4.69	68.23
6018	4.48	1.10	1.92	8.60	76.83
6466	4.48	1.10	1.92	8.60	85.43
6914	4.48	0.80	1.40	6.26	91.69

If additional space is needed, use the reverse side of this form.

17. Is any information shown on the reverse side of this form? ☒ yes ☐ no
18. Accumulative total displacement of well bore at total depth of 7711 ¹/₀ 107.60 ⁰/₀
- *19. Inclination measurements were made in - ☐ Tubing ☐ Casing ☐ Open hole ☒ Drill Pipe
20. Distance from surface location of well to the nearest lease line 3000 feet.
21. Minimum distance to lease line as prescribed by field rules 330 feet.
22. Was the subject well at any time intentionally deviated from the vertical in any manner whatsoever? NO
(If the answer to the above question is "yes", attach written explanation of the circumstances.)

<p>INCLINATION DATA CERTIFICATION</p> <p>I declare under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, that I am authorized to make this certification, that I have personal knowledge of the inclination data and facts placed on both sides of this form and that such data and facts are true, correct, and complete to the best of my knowledge. This certification covers all data as indicated by asterisks (*) by the item numbers on this form.</p> <div style="text-align: center; margin-top: 20px;"> </div> <p>Signature of Authorized Representative Mike Lujan, Drilling Superintendent Name of Person and Title (type or print) Precision Drilling Company, LP Name of Company</p> <p>Telephone: <u>432</u> <u>681-1919</u> Area Code</p>	<p>OPERATOR CERTIFICATION</p> <p>I declare under penalties prescribed in 91.143, Texas Natural Resources Code, that I am authorized to make this certification, that I have personal knowledge of all information presented in this report, and that all data presented on both sides of this form are true, correct, and complete to the best of my knowledge. This certification covers all data and information presented herein except inclination data as indicated by asterisks (*) by the item numbers on this form.</p> <div style="text-align: center; margin-top: 20px;"> </div> <p>Signature of Authorized Representative COLLEEN REDA, REG. Spec. Name of Person and Title (type or print) CONOCO PHILLIPS COMPANY Operator</p> <p>Telephone: <u>281</u> <u>386-9856</u> Area Code</p>
---	---

Railroad Commission Use Only:

Approved By: _____ Title: _____ Date: _____

*Designated items certified by company that conducted the inclination surveys.

$\delta_1 = \dots = \delta_{n-1} = 0$

[illegible]REMARKS: _____

On the entry of abandoned wells, information surveys must be made in accordance with the provisions of Statewide Rule 11.

appropriate completion for the well (except Plugging Report)

The Commission may require the submittal of the original charts, graphs, or discs, resulting from the surveys.

Groundwater
Advisory Unit

GROUNDWATER PROTECTION DETERMINATION

Date November 28, 2011

GAU File No.: SC- 14843

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

API Number 00304608

Attention: DORIAN K. FUENTES

RRC Lease No. 000000

SC_172232_00304608_000000_14843.pdf

CONOCOPHILLIPS CO
P O BOX 51810
MIDLAND TX 79710

--Measured--

1980 ft FEL

660 ft FSL

MRL: SURVEY

Digital Map Location:

X-coord/Long 102.72052

Y-coord/Lat 32.13986

Datum 27

Zone

P-5# 172232

County ANDREWS

Lease & Well No. UNIVERSITY ANDREWS #28&ALL

Purpose H15

Location SUR-UL, BLK-10, SEC-19, -- [TD=8010], [RRC 8],

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

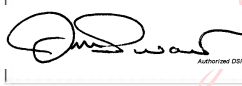
The interval from the land surface to a depth of 250 feet and the ZONE from 925 feet to 1200 feet must be protected.

This recommendation is applicable to all wells drilled in this section 19.

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

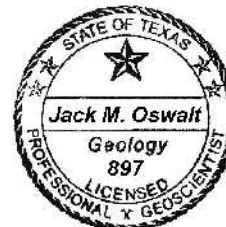
If you have any questions, please contact us at 512-463-2741, gau@rrc.state.tx.us, or by mail.

Sincerely,

 Digitally signed by Jack Oswalt
DN: c=US, st=TEXAS, l=Austin,
o=Railroad Commission of Texas,
cn=Jack Oswalt,
email=jack.oswalt@rrc.state.tx.us
Date: 2011.11.28 15:36:08 -06'00'

Jack M. Oswalt, P.G.

GEOLOGIST SEAL



Geologist, Groundwater Advisory Unit
Oil & Gas Division

The seal appearing on this document was authorized by Jack M. Oswalt on 11/28/2011
Note: Alteration of this electronic document will invalidate the digital signature.