



RAILROAD COMMISSION OF TEXAS

Form W-2

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

Status: Approved
Date: 05/20/2016
Tracking No.: 154696

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

OPERATOR INFORMATION

Operator Name: CONOCOPHILLIPS COMPANY Operator No.: 172232
Operator Address: ATTN AMY JOHNSON EC3 10 W286 600 N DAIRY ASHFORD HOUSTON, TX 77079-0000

WELL INFORMATION

API No.: 42-003-47296 County: ANDREWS
Well No.: 3604HL RRC District No.: 08
Lease Name: UNIVERSITY ANDREWS Field Name: EMBAR (PERMIAN)
RRC Lease No.: 01270 Field No.: 28843666
Location: Section: 36, Block: 11, Survey: UL, Abstract: U356

Latitude: 32.12427 Longitude: -102.74482
This well is located 18.3 miles in a SW
direction from ANDREWS,
which is the nearest town in the county.

FILING INFORMATION

Purpose of filing: Initial Potential
Type of completion: New Well
Well Type: Producing Completion or Recompletion Date: 04/02/2016

Type of Permit Date Permit No.
Permit to Drill, Plug Back, or Deepen 01/11/2016 812132
Rule 37 Exception
Fluid Injection Permit
O&G Waste Disposal Permit
Other:

COMPLETION INFORMATION

Spud date: 01/22/2016 Date of first production after rig released: 04/02/2016
Date plug back, deepening, recompletion, or drilling operation commenced: 01/22/2016 Date plug back, deepening, recompletion, or drilling operation ended: 02/05/2016
Number of producing wells on this lease in this field (reservoir) including this well: 176 Distance to nearest well in lease & reservoir (ft.): 328.8
Total number of acres in lease: 4393.42 Elevation (ft.): 3268 RKB
Total depth TVD (ft.): 6837 Total depth MD (ft.): 11530
Plug back depth TVD (ft.): 6837 Plug back depth MD (ft.): 11428
Was directional survey made other than inclination (Form W-12)? Yes Rotation time within surface casing (hours): 93.5
Is Cementing Affidavit (Form W-15) attached? Yes
Recompletion or reclass? No Multiple completion? No
Type(s) of electric or other log(s) run: Other
Electric Log Other Description: MUD LOG
Location of well, relative to nearest lease boundaries Off Lease : No
of lease on which this well is located: 352.0 Feet from the South Line and
583.0 Feet from the West Line of the
UNIVERSITY ANDREWS Lease.

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

Field & Reservoir Gas ID or Oil Lease No. Well No. Prior Service Type

PACKET: N/A

W2:	N/A
FOR NEW DRILL OR RE-ENTRY, SURFACE CASING DEPTH DETERMINED BY:	
GAU Groundwater Protection Determination	Depth (ft.): 1250.0 Date: 11/30/2015
SWR 13 Exception	Depth (ft.):

INITIAL POTENTIAL TEST DATA FOR NEW COMPLETION OR RECOMPLETION	
Date of test: 04/14/2016	Production method: Pumping
Number of hours tested: 24	Choke size:
Was swab used during this test? No	Oil produced prior to test:
PRODUCTION DURING TEST PERIOD:	
Oil (BBLs): 482.00	Gas (MCF): 506
Gas - Oil Ratio: 1049	Flowing Tubing Pressure:
Water (BBLs): 1178	
CALCULATED 24-HOUR RATE	
Oil (BBLs): 482.0	Gas (MCF): 506
Oil Gravity - API - 60.: 38.8	Casing Pressure:
Water (BBLs): 1178	

CASING RECORD											
Row	Type of Casing	Casing Size (in.)	Hole Size (in.)	Setting Depth (ft.)	Multi - Stage Depth (ft.)	Multi - Stage Shoe Depth (ft.)	Cement Class	Cement Amount (sacks)	Slurry Volume (cu. ft.)	Top of Cement (ft.)	TOC Determined By
1	Surface	10 3/4	13 1/2	1426			C	775	1264.0	0	Circulated to Surface
2	Conventional Production	5 1/2	8 3/4	11515			C	2415	5789.0	0	Circulated to Surface

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

TUBING RECORD			
Row	Size (in.)	Depth	Size (ft.)
1	2 7/8	6319	
			Packer Depth (ft.)/Type
			6222 /

PRODUCING/INJECTION/DISPOSAL INTERVAL			
Row	Open hole?	From (ft.)	To (ft.)
1	No	L1 7040	11418.0

ACID, FRACTURE, CEMENT SQUEEZE, CAST IRON BRIDGE PLUG, RETAINER, ETC.			
Was hydraulic fracturing treatment performed?		Yes	
Is well equipped with a downhole actuation sleeve?		If yes, actuation pressure (PSIG):	
No			
Production casing test pressure (PSIG) prior to hydraulic fracturing treatment:		Actual maximum pressure (PSIG) during hydraulic fracturing:	
11550		10508	
Has the hydraulic fracturing fluid disclosure been reported to FracFocus disclosure registry (SWR29)?		Yes	
Row	Type of Operation	Amount and Kind of Material Used	Depth Interval (ft.)
1	Fracture	PLEASE SEE FRAC FOCUS	7040 11418

FORMATION RECORD					
<u>Formations</u>	<u>Encountered</u>	<u>Depth TVD (ft.)</u>	<u>Depth MD (ft.)</u>	<u>Is formation isolated?</u>	<u>Remarks</u>
YATES	Yes	2643.0	2643.0	Yes	
SEVEN RIVERS	Yes	2885.0	2885.0	Yes	
QUEEN	Yes	3505.0	3505.0	Yes	
GRAYBURG	Yes	3827.0	3827.0	Yes	
SAN ANDRES - CO2 FLOOD, HIGH FLOWS, H2S, CORROSIVE	Yes	4107.0	4107.0	Yes	
HOLT	Yes	4821.0	4821.0	Yes	
GLORIETA	Yes	5150.0	5150.0	Yes	
TUBB	Yes	6031.0	6031.0	Yes	
CLEARFORK	Yes	5476.0	5476.0	Yes	
PERMIAN DETRITAL	No			No	NOT ENCOUNTERED - PINCHED OUT
LEON	No			No	NOT ENCOUNTERED - PINCHED OUT
WICHITA ALBANY	Yes	6521.0	6533.0	Yes	
SPRABERRY	No			No	NOT ENCOUNTERED - BELOW TVD
DEAN	No			No	NOT ENCOUNTERED - BELOW TVD
WOLFCAMP	No			No	NOT ENCOUNTERED - BELOW TVD
CANYON	No			No	NOT ENCOUNTERED - BELOW TVD
PENNSYLVANIAN	No			No	NOT ENCOUNTERED - BELOW TVD
MCKEE	No			No	NOT ENCOUNTERED - BELOW TVD
STRAWN	No			No	NOT ENCOUNTERED - BELOW TVD
FUSSELMAN	No			No	NOT ENCOUNTERED - BELOW TVD
DEVONIAN	No			No	NOT ENCOUNTERED - BELOW TVD
SILURIAN	No			No	NOT ENCOUNTERED - BELOW TVD
ELLENBURGER	No			No	NOT ENCOUNTERED - BELOW TVD
Do the producing interval of this well produce H2S with a concentration in excess of 100 ppm (SWR 36)?					Yes
Is the completion being downhole commingled (SWR 10)?					No

REMARKS

RRC REMARKS
PUBLIC COMMENTS: [RRC Staff 2016-05-10 09:40:58.889] EDL=4378 feet, max acres=200
CASING RECORD : KOP @ 6264'
TUBING RECORD:
PRODUCING/INJECTION/DISPOSAL INTERVAL : KOP @ 6264'
ACID, FRACTURE, CEMENT SQUEEZE, CAST IRON BRIDGE PLUG, RETAINER, ETC. :
POTENTIAL TEST DATA: THIS IS A STACKED LATERAL TO THE UNIVERSITY ANDREWS # 3601HK.

OPERATOR'S CERTIFICATION	
Printed Name: Colleen Reda	Title: Regulatory Specialist
Telephone No.: (281) 206-5219	Date Certified: 05/17/2016



RAILROAD COMMISSION OF TEXAS

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

Form W-15

Rev. 08/2014

CEMENTING REPORT

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

OPERATOR INFORMATION

Operator Name: CONOCOPHILLIPS COMPANY Operator P-5 No.: 172232
Cementor Name: Vivian Muñoz Cementor P-5 No.: 046282

WELL INFORMATION

District No.: 08 County: ANDREWS
Well No.: 3804 HL API No.: 42003472900000 Drilling Permit No.: 812132
Lease Name: UNIVERSITY ANDREWS Lease No.: 01270
Field Name: EMBAR Field No.: 28843666

I. CASING CEMENTING DATA

Type of casing: ☐ Conductor ☒ Surface ☐ Intermediate ☐ Liner ☐ Production
Drilled hole size (in.): 13.5 Depth of drilled hole (ft.): 1440 Est. % wash-out or hole enlargement:
Size of casing in O.D. (in.): 10.75 Casing weight (lbs/ft) and grade: 40.5# J55 No. of centralizers used: 13
Was cement circulated to ground surface (or bottom of cellar) outside casing? ☒ YES ☐ NO If no for surface casing, explain in Remarks
Setting depth shoe (ft.): 1426 Top of liner (ft.):
Setting depth liner (ft.):
Hrs. waiting on cement before drill-out: 21.5 Calculated top of cement (ft.): 0' Cementing date: 1/23/16

SLURRY

Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1	555	C	SEE REMARKS	908	2695
2	220	C	SEE REMARKS	206	802
3					
Total	775	C		1284	3467

II. CASING CEMENTING DATA

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

SLURRY

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

III. CASING CEMENTING DATA

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

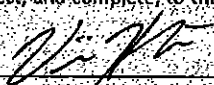
SLURRY

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

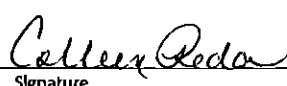
CEMENTING TO SQUEEZE, PLUG BACK OR PLUG AND ABANDON							
	PLUG #1	PLUG #2	PLUG #3	PLUG #4	PLUG #5	PLUG #6	PLUG #7
Cementing Date							
Size of hole or pipe (in.)							
Depth to bottom of tubing or drill pipe (ft.)							
Cement retainer setting depth (ft.)							
CIBP setting depth (ft.)							
Amount 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
LEAD SLURRY C+0.005#STATIC FREE+2%CALCIUM CHLORIDE+0.25#CELLO FLAKE+0.1%CD-32+4%BENTONITE TAIL SLURRY C +0.005#STATIC FREE+1%CALCIUM CHLORIDE+0.25#R-3+0.25#CELLO FLAKE

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.

Vivian Munoz Field Specialist I	Baker Hughes Oil Field Ops, Inc.	
Name and title of cementer's representative	Cementing Company	Signature
2929 Allen Parkway Suite 2100	Houston, Texas, 77019 (713)439-8600	1/23/16
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.

COLLEEN REDA	REGULATORY COORDINATOR	
Typed or printed name of operator's representative	Title	Signature
1000 LAIRY ASHFORD	HOUSTON, TX 77079	281-206-5219
Address	City, State, Zip Code	Tel: Area Code Number Date: mo. day yr.

Instructions for Form W-15, Cementing Report

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

- What to file:** An operator should file an original and one copy of the completed Form W-15 for each cementing company used on a well. The cementing of different casing strings on a well by one cementing company may be reported on one form.
The Form W-15 should be filed with the Form W-3, Plugging Record, unless the Form W-3 is signed by the cementing company representative. When reporting dry holes, operators must complete Form W-15, in addition to Form W-3, to show any casing cemented in the hole.
- How to file:** An oil and gas completion report and Form W-15 may be filed online using the Commission's Online System (<https://webapps.rrc.state.tx.us/security/login.do>) or a paper copy of the form may be mailed to the Commission in Austin (P.O. Box 12967, Austin, Texas 78711-2967).
- Surface casing:** An operator must set and cement sufficient surface casing to protect all usable-quality water strata, as defined by the Groundwater Advisory Unit in Austin. Sufficient cement shall be used to fill the annular space outside the casing from the shoe to the ground surface or to the bottom of the cellar. Before drilling a well, an operator must obtain a letter from the Groundwater Advisory Unit stating the protection depth. Surface casing should not be set deeper than 200 feet below the specified depth without prior approval from the Commission.
To plug and abandon a well, operators must use only cementers approved by the Commission's Director of Field Operations in accordance with SWR 14 ([http://info.sos.state.tx.us/pls/pub/readtac\\$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&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_rloc=&p_tloc=&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.
- Estimated % wash-out:** If the estimated % wash-out is less than 20% (or 30% along the Gulf Coast), provide supporting documentation such as a caller log to show how the estimated % wash-out was obtained.
- Multi-stage cement:** An operator must report the multi-stage cement shoe in II. Casing Cementing Data section by selecting the type of casing and Multi-stage cement shoe. The operator must report the multi-stage cement tool in III. Casing Cementing Data section by selecting the type of casing and Multi-stage cement/DV tool.
- Multiple parallel strings:** An operator should file the Form W-15 as an attachment to the Form W-4, Application for Multiple Completion. An operator may be required to submit multiple Form W-15s to show all data for multiple parallel strings.
- Slurry data:** If cement job exceeds three slurries, continue the list of slurries in the Slurry table in the subsequent Casing Cementing Data box.

**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: CONOCOPHILLIPS COMPANY	Operator P-5 No.: 172232
Cementer Name: VICTOR M ROSAS FIELD SPECIALIST III	Cementer P-5 No.: 048292

WELL INFORMATION

District No.: 08	County: Andrews
Well No.: 3804HL	API No.: 42009472900000 Drilling Permit No.: 812132
Lease Name: UNIVERSITY ANDREWS	Lease No.: 01270
Field Name: EMBAR (PERMIAN)	Field No.: 28843666

I. CASING CEMENTING DATA

Type of casing: <input type="checkbox"/> Conductor <input type="checkbox"/> Surface <input type="checkbox"/> Intermediate <input type="checkbox"/> Liner <input checked="" type="checkbox"/> Production		
Drilled hole size (in.): 8.5	Depth of drilled hole (ft.): 11,530'	Est. % wash-out or hole enlargement:
Size of casing in O.D. (in.): 5.5	Casing weight (lbs/ft) and grade: 23/P-110	No. of centralizers used: 117
Was cement circulated to ground surface (or bottom of cellar) outside casing? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO If no for surface casing, explain in Remarks.	Setting depth shoe (ft.): 11,515'	Top of liner (ft.):
	Setting depth liner (ft.):	
Hrs. waiting on cement before drill-out:	Calculated top of cement (ft.):	Cementing date: 02-04-16

SLURRY

Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1	1085	C	SEE REMARKS	4220	16708
2	1330	C	SEE REMARKS	1589	6211
3					
Total	2415	C		5789	22917

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
 LEAD SLURRY: 60:40:POZ,C,16#SK BA-90,0.005#SKSF,3%SALT,0.5%CD-32,4#SK LCM-1,0.5%FL-52,1%ASA 301,5%A-10,3%SMS,1%BA-10A,1.25%R-21,4%MPA-2
 TAIL SLURRY:50:50:POZ,C,0.005#SK SF,0.4% R-3,1%CD-32,0.5%SMS,0.5%BA-10A,

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 III VICTOR M ROSAS BAKER HUGHES

Name and title of cementer's representative: 2929 ALLEN PARKWAY SUIT 2100 HOUSTON TX 77019 Cementing Company: (713) 739 8600 Signature:  Date: 02-04-16

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.

Colleen Renda Regulatory Coordinator Colleen Renda
 Type or printed name of operator's representative Title Signature

WDO N. DAIRY ASHFORD HOUSTON TX 77079 281-206-5219 4-20-16
 Address City, State, Zip Code Tel: Area Code Number Date: mo. day yr.

Instructions for Form W-15, Cementing Report

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

- What to file:** An operator should file an original and one copy of the completed Form W-15 for each cementing company used on a well. The cementing of different casing strings on a well by one cementing company may be reported on one form.
The Form W-15 should be filed with the Form W-3, Plugging Record, unless the Form W-3 is signed by the cementing company representative. When reporting dry holes, operators must complete Form W-15, in addition to Form W-3, to show any casing cemented in the hole.
- How to file:** An oil and gas completion report and Form W-15 may be filed online using the Commission's Online System (<https://webapps.rrc.state.tx.us/security/login.do>) or a paper copy of the form may be mailed to the Commission in Austin (P.O. Box 12967, Austin, Texas 78711-2967).
- Surface casing:** An operator must set and cement sufficient surface casing to protect all usable-quality water strata, as defined by the Groundwater Advisory Unit in Austin. Sufficient cement shall be used to fill the annular space outside the casing from the shoe to the ground surface or to the bottom of the cellar. Before drilling a well, an operator must obtain a letter from the Groundwater Advisory Unit stating the protection depth. Surface casing should not be set deeper than 200 feet below the specified depth without prior approval from the Commission.
To plug and abandon a well, operators must use only cementers approved by the Commission's Director of Field Operations in accordance with SWR 14 ([http://info.sos.state.tx.us/pls/pub/readtac\\$ext.TacPage?sl=R&app=9&p_dlr=&p_rloc=&poloc=&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_dlr=&p_rloc=&poloc=&p_ploc=&pg=1&p_tac=&ti=16&pt=1&ch=3&rl=14)). Cementing companies, service companies, or operators can qualify as approved cementers by demonstrating that they are able to mix and pump cement in compliance with Commission rules and regulations.
- Estimated % wash-out:** If the estimated % wash-out is less than 20% (or 30% along the Gulf Coast), provide supporting documentation such as a caliper log to show how the estimated % wash-out was obtained.
- Multi-stage cement:** An operator must report the multi-stage cement shoe in II. Casing Cementing Data section by selecting the type of casing and Multi-stage cement shoe. The operator must report the multi-stage cement tool in III. Casing Cementing Data section by selecting the type of casing and Multi-stage cement/DV tool.
- Multiple parallel strings:** An operator should file the Form W-15 as an attachment to the Form W-4, Application for Multiple Completion. An operator may be required to submit multiple Form W-15s to show all data for multiple parallel strings.
- Slurry data:** If cement job exceeds three slurries, continue the list of slurries in the Slurry table in the subsequent Casing Cementing Data box.

Tracking No.: 154696

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

Instructions

When to File Form L-1:

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

When is Form L-1 NOT required:

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

Where to File Form L-1:

- with the appropriate Commission district office

Filling out Form L-1:

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

Type of log required:

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

SECTION I. IDENTIFICATION

Operator Name: CONOCOPHILLIPS COMPANY	District No. 08	Completion Date: 04/02/2016
Field Name EMBAR (PERMIAN)	Drilling Permit No. 812132	
Lease Name UNIVERSITY ANDREWS	Lease/ID No. 01270	Well No. 3604HL
County ANDREWS	API No. 42- 003-47296	

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

04/29/2016

Date

-FOR RAILROAD COMMISSION USE ONLY-

SELMAN

AND ASSOCIATES, LTD.

GEOLOGICAL CONSULTING / SURFACE LOGGING SERVICES

CORPUS CHRISTI TEXAS P.O. BOX 61150 MIDLAND TEXAS 79711 ROCK SPRINGS WYOMING

OFFICE (432) 563-0084 --- 24 HOURS (800) 578-1006

ConocoPhillips

COMPANY: CONOCOPHILLIPS COMPANY

WELL: UNIVERSITY ANDREWS 3604HL

FIELD: EMBAR (PERMIAN)

LOCATION: 2304' FNL & 583' FWL, SEC 36, BLK 11, UL SVY, A-U356

COUNTY: ANDREWS STATE: TEXAS LAT: 32.111589

INTERVAL: 5000' TO: 7000' LONG: -102.740033

DATE: 1/23/2016 TO: 1/28/2016 JOB #: 9272

LOGGER(S): T ZIMMERMAN A LAWAL

DRILLING CO: H&P

RIG #: 305

API: 42-003-47296

GL (FT): 3252'

DF (FT):

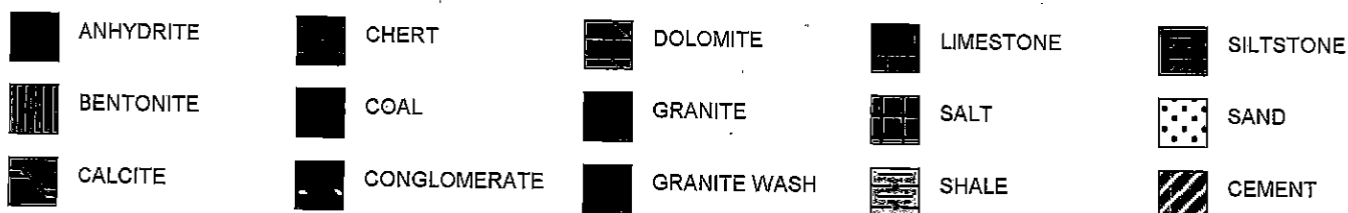
KB (FT): 3268'

UNIT #: 72

PHONE #: 432-271-2672, 432-385-4413

5 INCH IMAGE HYDROCARBON WELL LOG [5" = 100']

CUTTINGS



POROSITY - % FLUORESCENCE - TYPE CUT



SYMBOLS

FOSSIL		MINERAL		TEXTURE		STRINGER	
ALGAE	ALGAE	ANHY	ANHY	BOUNDST	BOUNDST	ANHYSTRG	ANHYSTRG
AMPH	AMPH	ARG	ARG	CHALKY	CHALKY	ARGSTRG	ARGSTRG
BELM	BELM	ARGGRN	ARGGRN	CRXLN	CRXLN	BENTSTRG	BENTSTRG
BIOCLST	BIOCLST	BENT	BENT	EARTHY	EARTHY	COALSTRG	COALSTRG
BRACH	BRACH	BIT	BIT	FINEXLN	FINEXLN	DOLSTRG	DOLSTRG
BRYOZOA	BRYOZOA	BRECFRAG	BRECFRAG	GRAINST	GRAINST	GYPSTRG	GYPSTRG
CEPHAL	CEPHAL	CALC	CALC	LITHOGR	LITHOGR	LSSTRG	LSSTRG
CORAL	CORAL					MRST	MRST
CRIN	CRIN					SLTSTRG	SLTSTRG
ECHIN	ECHIN					SSSTRG	SSSTRG
FISH	FISH						
FORAM	FORAM						
FOSSIL	FOSSIL						
GASTRO	GASTRO						
OOLITE	OOLITE						
OSTRA	OSTRA						
PELEC	PELEC						
PELLET	PELLET						
PISOLITE	PISOLITE						
PLANT	PLANT						
STROM	STROM						
CARB	CARB						
CHTDK	CHTDK						
CHTLT	CHTLT						
DOL	DOL						
FELDSPAR	FELDSPAR						
FERR	FERR						
FERRPEL	FERRPEL						
GLAU	GLAU						
GYP	GYP						
HVYMIN	HVYMIN						
KAOL	KAOL						
MARL	MARL						
MINXL	MINXL						
NODULE	NODULE						
PHOS	PHOS						
PYR	PYR						
SALT	SALT						
SANDY	SANDY						
SIL	SIL						
SILT	SILT						
SULPHUR	SULPHUR						
TUFF	TUFF						
MICROXLN	MICROXLN						
MUDST	MUDST						
PACKST	PACKST						
WACKEST	WACKEST						

DRILLING INFO

DRILL RATE [MIN/FT]
WOB [KLS]
GAMMA RAY [GAP]

DEPTH

POROSITY
SLIDE / ROTATE

CUTTINGS
[%]

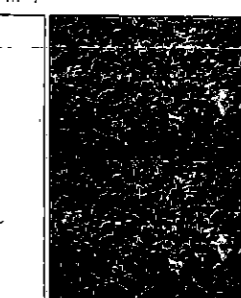
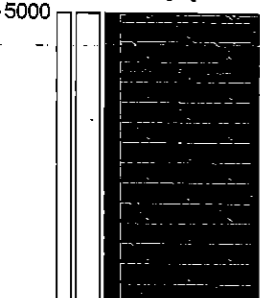
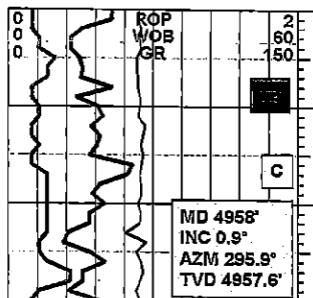
% FLUOR TYPE
CUT

SampleCam®
PHOTOS

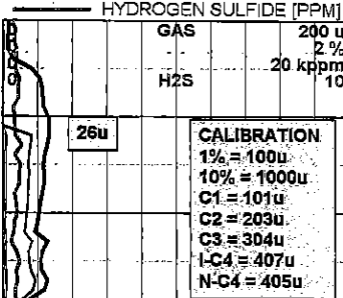
LITHOLOGY DESCRIPTIONS
AND OTHER REMARKS

GAS ANALYSIS

TOTAL GAS
C1 - METHANE
C2 - ETHANE
C3 - PROPANE
C4 - BUTANE
HYDROGEN SULFIDE [PPM]

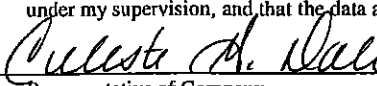


CALL TO LOCATION BY CO-MAN @ 20:00 HRS ON 1/23/16. BEGAN TWO-MAN LOGGING OPERATION @ 5,000' MD ON 1/25/16. DRILLING W/BIT #2, 8.75" VAREL TYPE RS816PDU, 10.75" SURFACE CASING SET @ 1440', LAST SURVEY @ 4958' 0.9", DRILLING W/BRINE ON H&P 305



**RAILROAD COMMISSION OF TEXAS
OIL AND GAS DIVISION
CERTIFICATE OF COMPLIANCE STATEWIDE RULE 36**

FORM H-9
12/12/77
DBC0697
FILE WITH
DISTRICT OFFICE
IN TRIPLICATE

1. Operator ConocoPhillips Company			2. Operator Number (See Instruction 13) 172232			3. RRC Dist. 08					
4. Street or P.O. Box No. 4001 Penbrook Street			5. City Odessa			6. State TX					
7. Zip Code 79762			8. Name of Lease, Facility or Operation University Andrews			9. Field or Area Name Embar (Ellenburger), *					
10. County Andrews			11. General Operation Type - Circle One: <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <input checked="" type="radio"/> A - Oil Field Production <input type="radio"/> C - Pipeline or Gathering Sys. <input type="radio"/> E - Drilling or Workover <input type="radio"/> G - Combination (explain) </div> <div style="width: 45%;"> <input type="radio"/> B - Gas Field Production <input type="radio"/> D - Gasoline Plant <input type="radio"/> F - Sweetening Unit <input type="radio"/> H - Other (explain) </div> </div>			Other Explanation *Also include Embar (Permian), Embar (5600), Goldsmith, N. (San Andres Con.), Tenacity (Glorieta)					
12. RRC ID# of Operation(s) to be Covered by This Certificate			13. Hydrogen Sulfide Concentration 1938 PPM			14. Maximum Escape Volume 293 MCF/Day					
15. 100 PPM Radius of Exposure (ROE) 71 Ft.			16. 500 PPM Radius of Exposure (ROE) 32 Ft.			17. Operation is Existing <input checked="" type="checkbox"/> New <input type="checkbox"/>					
18. Modification Resulting in Certificate Change			19. Workover or Drilling Well with 100 PPM ROE Greater than 3000 feet on Rule 36 Certified Well/Lease			Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>					
20. Previous Certificate Number if Available (For Amended Certificates)			21. The 100 PPM ROE includes any part of a public area except a public road			Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>					
22. The 500 PPM ROE includes any part of a public road			23. Injection of fluid containing Hydrogen Sulfide (See Instruction 14)			Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>					
24. Date (or Depth) of Compliance with all applicable provisions of Rule 36			01/01/2003 Mo Day Year								
25. Contingency Plan Location of Plan (See Instruction 15) 4001 Penbrook Street Odessa, Texas 79762			JAN 20 2004 Permian Basin Regulatory Affairs			RECEIVED RRC OF TEXAS OCT 24 2003 OIL & GAS DIVISION AUSTIN, TEXAS					
26. Location of data used to prepare this certificate (See Instruction 15) 4001 Penbrook Street Odessa, Texas 79762			CERTIFICATE			RECEIVED R.R.C. OF TEXAS SEP 29 2003 O.G. MIDLAND, TEXAS					
<p>I declare under penalties prescribed in section 91.143, Natural Resource Code, that I am authorized to make this report, that this report was prepared by me or under my supervision, and that I am qualified to make this certification by virtue of my training and experience, and by my analysis of the operation being certified, or by the analysis of qualified person working under my supervision, and that the data and facts stated therein are true, correct, and complete, to the best of my knowledge.</p>											
 Regulatory Analyst			(432) 368-1667			09/26/2003					
Representative of Company			Title			Phone No. Date					

RAILROAD COMMISSION USE ONLY

This operation and the equipment used therein is approved on the basis of the above certification and is subject to further Commission audit for compliance with the required provisions of Statewide Rule 36. This approval may be cancelled if investigation determines that the operation does not comply with the provisions of Statewide Rule 36.

APPROVED BY: 

DATE: **10-17-03**

REMARKS:

CERTIFICATION NUMBER: **48187**



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: ConocoPhillips Company Operator P-5 No.: 172232
Operator Address: 600 N. Dairy Ashford, Houston, TX 77079

SECTION II. WELL INFORMATION

District No.: 08	County: Andrews	Purpose of Filing: <input type="checkbox"/> Drilling Permit Application (Form W-1) <input checked="" type="checkbox"/> Completion Report (Form G-1/W-2)
Well No.: 3604HL	API No.: 42-003-47296	
Total Lease Acres: 4393.42	Drilling Permit No.: 812132	
Lease Name: University Andrews	Lease No.: 01270	
Field Name: Embar (Permian)	Field No.: 28843666	

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

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

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)
01270	3R	V	University Andrews	42-003-04749	10	N	
01270	22	V	University Andrews	42-003-04636	10	N	
01270	31	V	University Andrews	42-003-04605	40	N	
01270	34	V	University Andrews	42-003-04613	10	N	
01270	40R	V	University Andrews	42-003-04766	10	N	
01270	67	V	University Andrews	42-003-04595	10	N	
01270	68L	V	University Andrews	42-003-04685	10	N	
01270	71U	V	University Andrews	42-003-04687	10	N	
01270	72L	V	University Andrews	42-003-04644	10	N	
01270	73L	V	University Andrews	42-003-04782	10	N	
01270	75	V	University Andrews	42-003-04692	10	N	
01270	76	V	University Andrews	42-003-04630	10	N	
01270	77	V	University Andrews	42-003-04784	10	N	
01270	78	V	University Andrews	42-003-04785	10	N	
01270	86	V	University Andrews	42-003-04584	10	N	
01270	88	V	University Andrews	42-003-04792	10	N	
01270	89	V	University Andrews	42-003-04793	10	N	

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

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

Attachment to Tracking # 154696

Attach Additional Pages As Needed. ☐ No additional pages ☒ Additional Pages: 4 (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.

Colleen Reda
Signature

Colleen Reda, Sr. Regulatory Coordinator
Name and title (type or print)

Colleen.Redda@contractor.cop.com
Email (Include email address only if you affirmatively consent to its public release)

600 North Dairy Ashford
Address

Houston TX 77079
City, State, Zip Code

281
Tel: Area Code

206-5219
Number

5/12/16
Date: mo. day yr.



RAILROAD COMMISSION OF TEXAS

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

Form P-16

Attachment

Page 1A

Rev. 01/2016

Acreage Designation Attachment

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SECTION III (CONTINUED). 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

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)
01270	96	V	University Andrews	42-003-04799	10	N	
01270	97	V	University Andrews	42-003-04800	10	N	
01270	98	V	University Andrews	42-003-04801	10	N	
01270	100	V	University Andrews	42-003-04647	10	N	
01270	102	V	University Andrews	42-003-04804	10	N	
01270	112	V	University Andrews	42-003-33443	10	N	
01270	117A	V	University Andrews	42-003-36455	10	N	
01270	122	V	University Andrews	42-003-37009	10	N	
01270	123	V	University Andrews	42-003-39281	10	N	
01270	124	V	University Andrews	42-003-39282	10	N	
01270	126	V	University Andrews	42-003-39330	10	N	
01270	127	V	University Andrews	42-003-39306	10	N	
01270	128	V	University Andrews	42-003-39388	10	N	
01270	129	V	University Andrews	42-003-39383	10	N	
01270	131	V	University Andrews	42-003-39442	10	N	
01270	132	V	University Andrews	42-003-39454	10	N	
01270	133	V	University Andrews	42-003-39450	10	N	
01270	134	V	University Andrews	42-003-39496	10	N	
01270	136	V	University Andrews	42-003-39497	10	N	
01270	137	V	University Andrews	42-003-39493	10	N	
01270	138	V	University Andrews	42-003-39564	10	N	
01270	139	V	University Andrews	42-003-39565	40	N	
01270	140	V	University Andrews	42-003-39569	10	N	
01270	141	V	University Andrews	42-003-39570	10	N	
01270	143	V	University Andrews	42-003-39704	10	N	
01270	144	V	University Andrews	42-003-39699	10	N	
01270	145	V	University Andrews	42-003-39700	10	N	
01270	146	V	University Andrews	42-003-40579	40	N	
01270	147	V	University Andrews	42-003-40580	40	N	
01270	148	V	University Andrews	42-003-40687	40	N	
01270	149	V	University Andrews	42-003-40589	10	N	
01270	150	V	University Andrews	42-003-40592	10	N	
01270	151	V	University Andrews	42-003-40689	40	N	
01270	152	V	University Andrews	42-003-40597	40	N	
01270	153	V	University Andrews	42-003-40688	10	N	
01270	154	V	University Andrews	42-003-40690	10	N	
01270	155	V	University Andrews	42-003-40602	40	N	
01270	156	V	University Andrews	42-003-40753	10	N	
01270	157	V	University Andrews	42-003-40610	10	N	

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



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Page 1A

Rev. 01/2016

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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)
01270	158	V	University Andrews	42-003-40611	10	N	
01270	159	V	University Andrews	42-003-40612	10	N	
01270	160	V	University Andrews	42-003-40614	40	N	
01270	161	V	University Andrews	42-003-40714	10	N	
01270	162	V	University Andrews	42-003-42306	10	N	
01270	163	V	University Andrews	42-003-42376	10	N	
01270	165	V	University Andrews	42-003-42380	10	N	
01270	166	V	University Andrews	42-003-40717	10	N	
01270	167	V	University Andrews	42-003-42381	10	N	
01270	168	V	University Andrews	42-003-40718	10	N	
01270	169	V	University Andrews	42-003-40720	10	N	
01270	170	V	University Andrews	42-003-40721	10	N	
01270	172	V	University Andrews	42-003-41165	10	N	
01270	173	V	University Andrews	42-003-41166	10	N	
01270	174	V	University Andrews	42-003-41176	10	N	
01270	175	V	University Andrews	42-003-43584	10	N	
01270	176	V	University Andrews	42-003-41309	10	N	
01270	177	V	University Andrews	42-003-41288	40	N	
01270	178	V	University Andrews	42-003-41310	40	N	
01270	179	V	University Andrews	42-003-44021	40	N	
01270	180	V	University Andrews	42-003-41290	40	N	
01270	181	V	University Andrews	42-003-41033	10	N	
01270	182	V	University Andrews	42-003-41028	10	N	
01270	184	V	University Andrews	42-003-41153	10	N	
01270	185	V	University Andrews	42-003-41259	10	N	
01270	186	V	University Andrews	42-003-41260	10	N	
01270	187	V	University Andrews	42-003-41261	10	N	
01270	188	V	University Andrews	42-003-41029	10	N	
01270	189	V	University Andrews	42-003-41030	10	N	
01270	190	V	University Andrews	42-003-41031	10	N	
01270	191	V	University Andrews	42-003-43620	10	N	
01270	192	V	University Andrews	42-003-43621	10	N	
01270	193	V	University Andrews	42-003-43617	10	N	
01270	194	V	University Andrews	42-003-43628	40	N	
01270	195	V	University Andrews	42-003-42585	10	N	
01270	196	V	University Andrews	42-003-42592	10	N	
01270	197	V	University Andrews	42-003-43627	40	N	
01270	198	V	University Andrews	42-003-43625	10	N	
01270	199	V	University Andrews	42-003-44096	40	N	

Total Well Count >

< A. Total Assigned Horiz. Acreage

< C. Total Assigned Acreage

< Total Remaining Horiz. Acreage

< Total Remaining Acreage

< B. Total Assigned Vert./Dir. Acreage

< Total Remaining Vert./Dir. Acreage



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Page 1A

Rev. 01/2016

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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)
01270	200	V	University Andrews	42-003-44407	40	N	
01270	201	V	University Andrews	42-003-42594	10	N	
01270	202	V	University Andrews	42-003-43916	10	N	
01270	203	V	University Andrews	42-003-43700	40	N	
01270	205	V	University Andrews	42-003-44416	10	N	
01270	206	V	University Andrews	42-003-44251	40	N	
01270	207	V	University Andrews	42-003-44127	10	N	
01270	208	V	University Andrews	42-003-44469	10	N	
01270	209	V	University Andrews	42-003-44234	40	N	
01270	210	V	University Andrews	42-003-44394	10	N	
01270	212	V	University Andrews	42-003-44131	40	N	
01270	213	V	University Andrews	42-003-44249	10	N	
01270	216R	V	University Andrews	42-003-45511	10	N	
01270	218	V	University Andrews	42-003-45711	40	N	
01270	220	V	University Andrews	42-003-44534	10	N	
01270	222	V	University Andrews	42-003-44426	40	N	
01270	223	V	University Andrews	42-003-45742	40	N	
01270	224	V	University Andrews	42-003-44476	40	N	
01270	225	V	University Andrews	42-003-44472	10	N	
01270	227	V	University Andrews	42-003-44427	40	N	
01270	228	V	University Andrews	42-003-45714	40	N	
01270	229	V	University Andrews	42-003-44982	40	N	
01270	230	V	University Andrews	42-003-44993	40	N	
01270	231	V	University Andrews	42-003-45077	40	N	
01270	232	V	University Andrews	42-003-46634	40	N	
01270	236	V	University Andrews	42-003-45088	10	N	
01270	237	V	University Andrews	42-003-45747	10	N	
01270	238	V	University Andrews	42-003-45107	40	N	
01270	239	V	University Andrews	42-003-45084	40	N	
01270	241	V	University Andrews	42-003-46698	40	N	
01270	244	V	University Andrews	42-003-46689	40	N	
01270	245	V	University Andrews	42-003-46690	40	N	
01270	246	V	University Andrews	42-003-47096	40	N	
01270	247	V	University Andrews	42-003-45109	10	N	
01270	248	V	University Andrews	42-003-45569	10	N	
01270	249	V	University Andrews	42-003-45570	10	N	
01270	250	V	University Andrews	42-003-46639	40	N	
01270	251	V	University Andrews	42-003-46692	40	N	
01270	252	V	University Andrews	42-003-46635	40	N	

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

GROUNDWATER PROTECTION DETERMINATION

Form GW-2



Groundwater Advisory Unit

Date Issued: 30 November 2015**GAU Number:** 19234**Attention:** CONOCOPHILLIPS COMPANY
ATTN JUDITH CLIFFORD
HOUSTON, TX 77252**API Number:** 00346988
County: ANDREWS
Lease Name: UNIVERSITY ANDREWS**Operator No.:** 172232**Lease Number:**
Well Number: 3601HK
Total Vertical Depth: 6327
Latitude: 32.111411
Longitude: -102.740711
Datum: NAD27**Purpose:** Recompletion (RC)**Location:** Survey-UL; Abstract-U356; Block-11; Section-36

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

The interval from the land surface to a depth of 250 feet, and the zone from 900 to 1250 feet must be protected.

This recommendation is applicable for all wells drilled in this Section 36 on this lease.

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 11/20/2015. 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

LEGEND:

- = PROPOSED WELLHEAD
- = AS-DRILLED BOTTOM HOLE
- ◇ = AS-DRILLED TAKE POINT
- = AS-DRILLED PENETRATION POINT
- ▲ = SECTION CORNERS LOCATED
- △ = SECTION CORNERS RE-ESTABLISHED (Not Set on Ground)
- * = PRODUCING WELLS
- = PRODUCING BOTTOM HOLE
- ◆ = ABANDONED WELLS
- = PROPOSED WELLS
- = PROPOSED BOTTOM HOLE
- ⊗ = INJECTION WELLS

NAD 83 (SURFACE LOCATION)	SURVEY PERP
Latitude = 32°06'42.12" (32.111700)	2304' FNL
Longitude = 102°44'25.69" (102.740469)	583' FWL
STATE PLANE NAD 83 (NORTH CENTRAL)	LEASE PERP
N: 6750077.05 E: 655830.32	352' FSL
NAD 27 (SURFACE LOCATION)	SURVEY
Latitude = 32°06'41.72" (32.111589)	583' FWL
Longitude = 102°44'24.12" (102.740633)	UNIVERSITY
STATE PLANE NAD 27 (NORTH CENTRAL)	LANDS SURVEY
N: 202326.42 E: 378103.32	
NAD 83 (AS-DRILLED PENETRATION POINT)	SURVEY PERP
Latitude = 32°06'42.27" (32.111742)	2297' FNL
Longitude = 102°44'25.38" (102.740383)	613' FWL
STATE PLANE NAD 83 (NORTH CENTRAL)	LEASE PERP
N: 6750091.03 E: 655857.63	360' FSL
NAD 27 (AS-DRILLED PENETRATION POINT)	SURVEY
Latitude = 32°06'41.87" (32.111631)	613' FWL
Longitude = 102°44'23.81" (102.739947)	UNIVERSITY
STATE PLANE NAD 27 (NORTH CENTRAL)	LANDS SURVEY
N: 202340.14 E: 378130.76	
NAD 83 (AS-DRILLED FIRST TAKE POINT)	SURVEY PERP
Latitude = 32°06'46.08" (32.112800)	1844' FNL
Longitude = 102°44'28.91" (102.741364)	422' FWL
STATE PLANE NAD 83 (NORTH CENTRAL)	LEASE PERP
N: 6750487.80 E: 655569.71	812' FSL
NAD 27 (AS-DRILLED FIRST TAKE POINT)	SURVEY
Latitude = 32°06'45.68" (32.112689)	422' FWL
Longitude = 102°44'27.34" (102.740928)	UNIVERSITY
STATE PLANE NAD 27 (NORTH CENTRAL)	LANDS SURVEY
N: 202739.63 E: 377846.64	
NAD 83 (AS-DRILLED LAST TAKE POINT)	SURVEY PERP
Latitude = 32°07'27.68" (32.124356)	2779' FNL
Longitude = 102°44'42.80" (102.745222)	388' FWL
STATE PLANE NAD 83 (NORTH CENTRAL)	LEASE PERP
N: 6754736.96 E: 654545.88	126' FNL
NAD 27 (AS-DRILLED LAST TAKE POINT)	SURVEY
Latitude = 32°07'27.29" (32.124347)	388' FWL
Longitude = 102°44'41.23" (102.744786)	UNIVERSITY
STATE PLANE NAD 27 (NORTH CENTRAL)	LANDS SURVEY
N: 206998.36 E: 376883.47	
NAD 83 (AS-DRILLED BOTTOM HOLE)	SURVEY PERP
Latitude = 32°07'28.75" (32.124653)	2267' FNL
Longitude = 102°44'43.14" (102.745317)	388' FWL
STATE PLANE NAD 83 (NORTH CENTRAL)	LEASE PERP
N: 6754846.15 E: 654530.98	14' FNL
NAD 27 (AS-DRILLED BOTTOM HOLE)	SURVEY
Latitude = 32°07'28.36" (32.124544)	388' FWL
Longitude = 102°44'41.57" (102.744881)	UNIVERSITY
STATE PLANE NAD 27 (NORTH CENTRAL)	LANDS SURVEY
N: 2071707.78 E: 376859.61	

SECTION 23, BLOCK 11,
UNIVERSITY LANDS SURVEY

SECTION 24, BLOCK 11,
UNIVERSITY LANDS SURVEY

N74°03'35"E - 5423.12' (Meas.)

SECTION 19,
BLOCK 10,
UNIVERSITY LANDS SURVEY

SECTION 26, BLOCK 11,
UNIVERSITY LANDS SURVEY

SECTION 25, BLOCK 11,
UNIVERSITY LANDS SURVEY

N15°38'44"W - 5306.95' (Meas.)

SECTION 30, BLOCK 10,
UNIVERSITY LANDS SURVEY

SECTION 35, BLOCK 11,
UNIVERSITY LANDS SURVEY

SECTION 36, BLOCK 11,
UNIVERSITY LANDS SURVEY

N15°38'44"W - 5313.66' (Meas.)

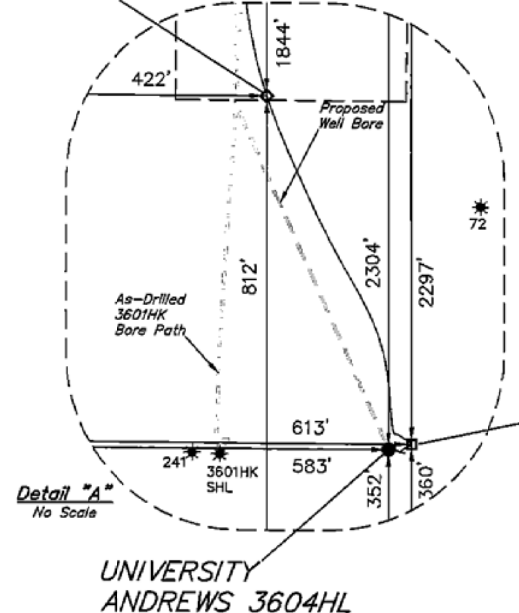
SECTION 31, BLOCK 10,
UNIVERSITY LANDS SURVEY

SECTION 102, WEST PART 102,
W.F. COWDEN SURVEY

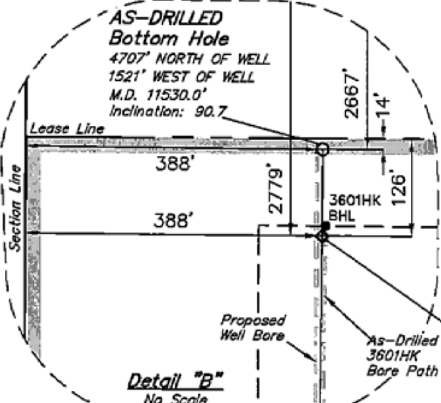
N74°04'39"E - 5422.79' (Meas.)

SECTION 102, WEST PART 102,
W.F. COWDEN SURVEY

AS-DRILLED
First Take Point
399' NORTH OF WELL
279' WEST OF WELL
M.D. 7040.0'
Inclination: 81.6



AS-DRILLED
Penetration Point
15' NORTH OF WELL
27' EAST OF WELL
M.D. 4576.0'
Inclination: 0.8



AS-DRILLED
Last Take Point
4599' NORTH OF WELL
1491' WEST OF WELL
M.D. 11418'
Inclination: 90.5

NOTES:
Distances referenced on plat to section lines and lease lines are perpendicular.
Basis of bearing is a G.P.S. observation (Vertical Control Datum: NAVD88)



UELS, LLC
Regional Office * 111 NE 3rd Street
Seminole, TX 79360 * (432) 955-6100
Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017



ConocoPhillips Company

UNIVERSITY ANDREWS 3604HL
2304' FNL 583' FWL
SECTION 36, BLOCK 11, UNIVERSITY LANDS SURVEY
ANDREWS COUNTY, TEXAS

SURVEYED BY	DATE	REVISED BY	DATE
J.A.V., P.R.	10-06-15	C.D.	04-27-16
DRAWN BY	DATE		
C.D.	03-16-16		
SCALE	1" = 1000'		

WELL LOCATION PLAT

TP2LS Firm No. 10193884