

## RAILROAD COMMISSION OF TEXAS

Form W-2

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

Approved 01/10/2017

166589

Tracking No.:

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

**OPERATOR INFORMATION** 

Operator Name: WARREN AMERICAN OIL COMPANY, LLC **Operator No.:** 897722

Operator Address: PO BOX 470372 TULSA, OK 74147-0372

**WELL INFORMATION** 

API No.: 42-105-42255 County: CROCKETT Well No.: 6 RRC District No.: 7C

Lease Name: UNIVERSITY OF TEXAS - 245 Field Name: FARMER (SAN ANDRES)

RRC Lease No.: 09705 Field No.: 30243500

Location: Section: 4, Block: 46, Survey: UL, Abstract:

Latitude: 30.99021 Longitude: -101.35980

This well is located miles in a 14 SE

direction from BIG LAKE,

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:** 07/03/2016

Type of Permit **Date** Permit No. Permit to Drill, Plug Back, or Deepen 06/01/2015 806873

**Rule 37 Exception** Fluid Injection Permit

**O&G Waste Disposal Permit** 

Other:

**COMPLETION INFORMATION** 

07/03/2016 **Spud date:** 07/21/2015 Date of first production after rig released:

Date plug back, deepening, recompletion, or Date plug back, deepening, recompletion, or drilling operation ended: 07/03/2016 drilling operation commenced: 06/19/2016

Number of producing wells on this lease in Distance to nearest well in lease &

this field (reservoir) including this well: reservoir (ft.): 6 1376.0

Total number of acres in lease: 258.00 Elevation (ft.): 2577 GL

Total depth TVD (ft.): Total depth MD (ft.): Plug back depth TVD (ft.): Plug back depth MD (ft.):

Rotation time within surface casing (hours): Was directional survey made other than 48 N inclination (Form W-12)? Is Cementing Affidavit (Form W-15) attached? No

Recompletion or reclass? No Multiple completion?

Type(s) of electric or other log(s) run: Combo of Induction/Neutron/Density/Sonic

**Electric Log Other Description:** 

Location of well, relative to nearest lease boundaries Off Lease: Nο

of lease on which this well is located: 1058.0 Feet from the West Line and

2320.0 Feet from the North Line of the

UNIVERSITY OF TEXAS - 245 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.): 750.0 Date: 11/28/2012

SWR 13 Exception Depth (ft.):

INITIAL POTENTIAL TEST DATA FOR NEW COMPLETION OR RECOMPLETION

Date of test: 07/04/2016 Production method: Pumping Number of hours tested: 24 Choke size:

Was swab used during this test? No Oil produced prior to test: 59.00

**PRODUCTION DURING TEST PERIOD:** 

Oil (BBLS): 18.00 Gas (MCF): 21

Gas - Oil Ratio: 1166 Flowing Tubing Pressure:

Water (BBLS): 20

**CALCULATED 24-HOUR RATE** 

Oil (BBLS): 18.0 Gas (MCF): 21

Oil Gravity - API - 60.: 34.0 Casing Pressure: 48.00

Water (BBLS): 20

|     | CASING RECORD           |       |        |       |                       |                       |       |                  |           |                |                     |
|-----|-------------------------|-------|--------|-------|-----------------------|-----------------------|-------|------------------|-----------|----------------|---------------------|
|     | Type of                 |       |        |       | Multi -<br>Stage Tool | Multi -<br>Stage Shoe |       | Cement<br>Amount |           | Top of Cement  | TOC<br>Determined   |
| Rov | v <u>Casing</u>         | (in.) | (in.)  | (ft.) | Depth (ft.)           | Depth (ft.)           | Class | (sacks)          | (cu. ft.) | (ft.)          | By                  |
| 1   | Surface                 | 8 5/8 | 12 1/4 | 841   |                       |                       | С     | 530              | 832.0     | SURF Ci<br>ACE | rculated to Surface |
| 2   | Conventional Production | 5 1/2 | 7 7/8  | 2327  |                       |                       | С     | 310              | 427.0     | 1093 Ce        | ment Evaluation Log |

## **LINER RECORD**

Liner Hole Liner Liner Cement Slurry Top of Amount Volume Cement TOC

Row Size (in.) Size (in.) Top (ft.) Bottom (ft.) Class (sacks) (cu. ft.) (ft.) Determined By

N/A

|     |            | TUBING RECORD    |                         |
|-----|------------|------------------|-------------------------|
| Row | Size (in.) | Depth Size (ft.) | Packer Depth (ft.)/Type |
| 1   | 2 3/8      | 2109             | /                       |

| PRODUCING/INJECTION/DISPOSAL INTERVA | L |
|--------------------------------------|---|
|--------------------------------------|---|

 Row
 Open hole?
 From (ft.)
 To (ft.)

 1
 No
 L 2032
 2042.0

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

Was hydraulic fracturing treatment performed? Yes

Is well equipped with a downhole actuation

sleeve? No If yes, actuation pressure (PSIG):

Production casing test pressure (PSIG) prior to Actual maximum pressure (PSIG) during hydraulic

hydraulic fracturing treatment: 3000 fracturing: 1597

Has the hydraulic fracturing fluid disclosure been

reported to FracFocus disclosure registry (SWR29)? Yes

Row 1Type of Operation AcidAmount and Kind of Material Used 3000 GAL 15% HCLDepth Interval (ft.) 2032 2042

|             |             | FORMATION RE    | CORD                                  |               |
|-------------|-------------|-----------------|---------------------------------------|---------------|
| Formations  | Encountered | Depth TVD (ft.) | Is formation Depth MD (ft.) isolated? | Remarks       |
| QUEEN       | Yes         | 1640.0          | Yes                                   |               |
| SAN ANDRES  | Yes         | 1858.0          | Yes                                   |               |
| LEONARD     | No          |                 | No                                    | ZONE BELOW TD |
| WOLFCAMP    | No          |                 | No                                    | ZONE BELOW TD |
| CANYON      | No          |                 | No                                    | ZONE BELOW TD |
| STRAWN      | No          |                 | No                                    | ZONE BELOW TD |
| DEVONIAN    | No          |                 | No                                    | ZONE BELOW TD |
| ELLENBURGER | No          |                 | No                                    | ZONE BELOW TD |

Do the producing interval of this well produce H2S with a concentration in excess of 100 ppm (SWR 36)?

Is the completion being downhole commingled (SWR 10)?

No

**REMARKS** 

ALL ATTACHMENTS (W-12, W-15, L-1, LOG COPY & SURVEY) WERE PREVIOUSLY SUBMITTED AND ARE ATTACHED TO TRACKING #148462

| RRC REMARKS  |
|--|
| PUBLIC COMMENTS:   |
|  |
| CACING RECORD :  |
| CASING RECORD:   |
|  |
| TUBING RECORD:   |
|  |
|  |
| PRODUCING/INJECTION/DISPOSAL INTERVAL :                                  |
|  |
| ACID, FRACTURE, CEMENT SQUEEZE, CAST IRON BRIDGE PLUG, RETAINER, ETC. :  |
| AGID, FRAGIGILL, GENERI GEGELLE, GAGI MON BRIDGE I LOG, RETAINER, LTG. : |
|  |
| POTENTIAL TEST DATA:   |
|  |
|  |
|  |

**OPERATOR'S CERTIFICATION** 

Printed Name:Cheryl DixonTitle:Land ManagerTelephone No.:(918) 481-7942Date Certified:12/29/2016

No

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

# RAILROAD COMMISSION OF TEXAS

Oil and Gas Division

| 1. Operator's Name (As shown on Form P-5. Organization Report) Warren American Oil Company, LLC | 2. RRC Operator No. 897722 | 3. RRC District No.        |        | inty of Well Site<br>Ckett    |
|---|----------------------------|----------------------------|--------|-------------------------------|
| 5. Field Name (Wildcat or exactly as shown on RRC records)  Farmer (San Andres)                 |                            | 6. API No.<br>42-105 422   | 155    | 7. Drilling Permit No. 806873 |
| 8. Lease Name University of Texas 245   | 9. Rule 37 Case No.        | 10. Oil Lease/Gas<br>09705 | ID No. | 11. Well No.                  |

|             |  | CASING    | CASING Single Multiple |  | CASING MEDIATE CASING CEMENTI |      | ATE CASING |  | LTI-STAGE<br>TING PROCESS |  |
|-------------|--|-----------|------------------------|--|-------------------------------|------|------------|--|---------------------------|--|
|             |  |           |                        |  | Multiple<br>Parallel Strings  | Tool | Shoe       |  |                           |  |
| 12. (       | Cementing Date   | 7-22-15   |                        |  |                               |      |            |  |                           |  |
| 3.          | •Drilled hole size   | 12 1/4    |                        |  |                               |      |            |  |                           |  |
|             | •Est. % wash or hole enlargement   |           |                        |  |                               |      |            |  |                           |  |
| 4. !        | Size of casing (in. O.D.)  | 8 5/8     |                        |  |                               |      |            |  |                           |  |
| 5. <i>'</i> | Fop of liner (ft.)   |           |                        |  |                               |      |            |  |                           |  |
| 16.         | Setting depth (ft.)  | 841       |                        |  |                               |      |            |  |                           |  |
| 7. 1        | Number of centralizers used  | 8         |                        |  |                               |      |            |  |                           |  |
| 18. 1       | irs. waiting on cement before drill-out                                      | 264       |                        |  |                               |      |            |  |                           |  |
| Ţ.          | 19. API cement used: No. of sacks  | 220       |                        |  |                               |      |            |  |                           |  |
| Slurry      | Class .  | c-lite    |                        |  |                               |      |            |  |                           |  |
| lst         | Additives  | cello     |                        |  |                               |      |            |  |                           |  |
| Ž.          | No. of sacks   | 200       |                        |  |                               |      |            |  |                           |  |
| 2nd Slurry  | Class  | С         |                        |  |                               |      |            |  |                           |  |
| 2nc         | Additives  | cc,cello  |                        |  |                               |      |            |  |                           |  |
| ŗ.          | No. of sacks   | 100       |                        |  |                               |      |            |  |                           |  |
| 3rd Slurry  | Class  | c         |                        |  |                               |      |            |  |                           |  |
| 9           | Additives  | .cc,cello |                        |  |                               |      | -          |  |                           |  |
| یر          | 20. Slurry pumped: Volume (cu. ft.)  | 432       |                        |  |                               |      |            |  |                           |  |
| 1st         | Height (ft.)   | 1046      |                        |  |                               |      |            |  |                           |  |
| ō           | Volume (cu. ft.)   | 266       |                        |  |                               |      |            |  |                           |  |
| 2nd         | Height (ft.)   | 644       |                        |  |                               |      |            |  |                           |  |
| T           | Volume (cu. ft.)   | . 134     |                        |  |                               |      |            |  |                           |  |
| 37          | Height (ft.)   | 324       |                        |  |                               |      |            |  |                           |  |
| 3           | Volume (cu. ft.)   | 832       |                        |  |                               |      |            |  |                           |  |
| Total       | Helght (ft.)   | 2014      |                        |  |                               |      |            |  |                           |  |
| 1. V        | Vas cement circulated to ground surface or bottom of cellar) outside casing? | yes       |                        |  |                               |      |            |  |                           |  |

| CEMENTING TO PLUG AND ABANDON                     | PLUG # 1                  | PLUG # 2  | PLUG # 3   | PLUG # 4 | PLUG * 5     | PLUG # 6       | PLUG # 7 | PLUG # 8   |
|---|---------------------------|-----------|--|----------|--------------|----------------|----------|------------|
| 23. Cementing date                                | -6A                       | सह २० हेर | LESSAMO  | QAGR PAS |              | le             |          |            |
| 24. Size of hole or pipe plugged (in.)            |                           |           | The Late of the La |          |              |                |          |            |
| 25. Depth to bottom of tubing or drill pipe (ft.) | op.                       |           | ttbb.  | Did Co   | ermon i      | n mani         | PER D    |            |
| 26. Sacks of cement used (each plug)              | 761.00 K                  |           |  |          | ethicity Was | mileste of sta | NO WEST  | Tale State |
| 27. Slurry volume pumped (cu. ft.)                |                           | i di gaza | Calley III   |          | - CC 232     | med new        | 7 /261   | 22.7       |
| 28. Calculated top of plug (ft.)                  | 11.150                    |           |  | - 4      | e cra        |                |          |            |
| 29. Measured top of plug, if tagged (ft.)         |                           |           |  |          |              |                |          |            |
| 30. Slurry wt. (lbs/gal)                          |                           |           | 77   |          |              |                |          |            |
| 31. Type cement                                   | Julianas<br>Se is imports | 15,510    |  |          |              |                |          |            |

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.

| certification covers cementing data only.  Michael Tollett   | BASIC                                    | ENERGY SERVI             | ces Whi                           | Nest-   |
|--|--|--------------------------|-----------------------------------|---|
| Name and title of cementer's representative  | Cementin                                 | g Company                | Signature                         | 100001111111111111111111111111111111111                                       |
| P. O. Box 1519   | Eastla                                   | and, TX 76448            | 254-442-2200                      | July 22 2015  |
| OPERATOR'S CERTIFICATE: I declare under present certification, that I have knowledge of the well datrue, correct, and complete, to the best of my knowledge. | ta and information<br>nowledge. This cer | presented in this report | and that data and facts presented | Date: mo. day yr. am authorized to make this d on both sides of this form are |
| Typed or printed name of operator's representative   | Title                                    |                          | Signature                         | C and then then the Ott   |
| P.O. BOD 470372  | Tulsa                                    | OK 7414                  | 7 918 481-7990                    | 8/1/15  |

#### 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 rules:
  - 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 Commission.
- 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 nondeviated 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 (b) (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 feet 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.

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

#### RAILROAD COMMISSION OF TEXAS Oil and Gas Division

Form W-15 Cementing Report Rev. 4/1/83 483-045

2. RRC Operator No. 3. RRC District No. 4. County of Well Site 1. Operator's Name (As shown on Form P-5, Organization Report) Warren American Oil Co., LLC TC Crockett 897722 7. Drilling Permit No. 5. Field Name (Wildcat or exactly as shown on RRC records) 6. API No. 42-10542255 806873 11. Well No. 8. Lease Name University Of Texas 245 9. Rule 37 Case No. 10. Oil Lease/Gas ID No.

09705

| CAS        | SING CEMENTING DATA:   | SURFACE<br>CASING | ASING MEDIATE CASING |                  | SING MEDIATE CASING          |           |      | STAGE<br>G PROCESS |
|------------|--|-------------------|----------------------|------------------|------------------------------|-----------|------|--------------------|
|            |  |                   | CASING               | Single<br>String | Multiple<br>Parallel Strings | Tool      | Shoe |                    |
| 12.        | Cementing Date   | Na riborezhoù e   | američa da finicio   | 8-7-15           | reg gir i en i               | I Diophiu |      |                    |
| 13.        | •Drilled hole size   |                   |                      | 7 7/8            |                              |           |      |                    |
| -177       | Est. % wash or hole enlargement  | 1/1/25            | (4)                  |                  |                              |           |      |                    |
| 14.        | Size of casing (in. O.D.)  |                   |                      | 5 1/2            |                              |           |      |                    |
| 15. '      | Top of liner (ft.)   |                   |                      |                  |                              |           |      |                    |
| 16.        | Setting depth (ft.)  |                   |                      | 2327             |                              |           |      |                    |
| 17.        | Number of centralizers used  |                   |                      | 13               |                              |           |      |                    |
| 18.        | Hrs. waiting on cement before drill-out                                      |                   |                      |                  |                              |           |      |                    |
| 5          | 19. API cement used: No. of sacks  |                   |                      | 110              |                              |           |      |                    |
| 1st Slurry | Class  | in the sage       | 1-107 -              | c-lite           |                              |           |      |                    |
| 1st        | Additives  |                   |                      | cello            |                              |           |      |                    |
| è          | No. of sacks   |                   |                      | 200              |                              |           |      |                    |
| 2nd Slurry | Class  | in Report         | e mañ a              | С                | bustant                      |           |      |                    |
| 2nc        | Additives  |                   |                      | cc,cello         |                              |           |      |                    |
| Y.         | No. of sacks   |                   |                      |                  |                              |           |      |                    |
| 3rd Slurry | Class  |                   |                      |                  |                              |           |      |                    |
| 310        | Additives  |                   |                      |                  |                              |           |      |                    |
| ŗ          | 20. Slurry pumped: Volume (cu. ft.)  |                   |                      | 226              |                              |           |      |                    |
| 1st        | Height (ft.)   |                   |                      | 1304             |                              |           |      |                    |
| P          | Volume (cu. ft.)   |                   |                      | 201              |                              |           |      |                    |
| 2nd        | Height (ft.)   |                   |                      | 1160             |                              |           |      |                    |
| 77         | Volume (cu. ft.)   |                   |                      |                  |                              |           |      |                    |
| 3rd        | Height (ft.)   |                   |                      |                  |                              |           |      |                    |
| al         | Volume (cu. ft.)   |                   |                      | 427              |                              |           |      |                    |
| Total      | Height (ft.)   |                   | <del></del>          | 2464             |                              |           |      |                    |
| 1. \       | Was cement circulated to ground surface or bottom of cellar) outside casing? |                   |                      | no               |                              |           |      |                    |

| CEMENTING TO PLUG AND ABANDON                     | PLUG # 1   | PLUG # 2     | PLUG # 3      | PLUG # 4     | PLUG # 5 | PLUG # 6          | PLUG # 7         | PLUG # 8       |
|---|--|--------------|---------------|--------------|----------|-------------------|------------------|----------------|
| 23. Cementing date                                | 88   | ar som       | BERMADO.      | CAU SOAD     |          |                   |                  |                |
| 24. Size of hole or pipe plugged (in.)            |  | - Louisi     | F 1-12 0110 1 |              |          | D-co.             | AT THE TRANSPORT | and the second |
| 25. Depth to bottom of tubing or drill pipe (ft.) | - T  | 15 66        | 89.77         | rive Belging | ay Lin   | applitat          | A hours          |                |
| 26. Sacks of cement used (each plug)              | the state of the s | 1            |               |              | ence mu  | interests and the | ve argenting     | - at   94      |
| 27. Slurry volume pumped (cu. ft.)                |  | 199 min 3    | Ex. 18.19     | 29.1         | Posterio | 100               | L-72003          |                |
| 28. Calculated top of plug (ft.)                  | 17.63  |              |               |              | 2 6173   |                   | L Livy Lu        |                |
| 29. Measured top of plug, if tagged (ft.)         |  |              |               |              |          |                   |                  |                |
| 30. Slurry wt. (lbs/gal)                          | 2007   | (1)( )<br>() | PTAIGS        |              | 25       |                   | SPECTIVE'S       | 1/2            |
| 31. Type cement                                   |  | - Salah Sa   |               |              |          |                   |                  |                |

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.

| Austin Busby   | BASIC ENERGY SERVICES OUS Bush             |  |   |  |  |  |  |
|--|--|--|---|--|--|--|--|
| Name and title of cementer's representative  | Cementing Company                          | Signature                                    | rate hil year beets to  |  |  |  |  |
| P. O. Box 1519   | Eastland, TX 76448                         | 254-442-2200                                 | August 7 2015   |  |  |  |  |
| OPERATOR'S CERTIFICATE: I declare under p certification, that I have knowledge of the well dat true, correct, and complete, to the best of my kn | a and information presented in this report | and that data and facts presente             | Date: mo. day yr.  I am authorized to make this don both sides of this form are |  |  |  |  |
| Typed or printed name of operator's representative  P.D. BOK 470372  | Tulsa Ok 74147                             | Signature  OR 481-799  Tel: Area Code Number | Date: mo. day vr.   |  |  |  |  |

### 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 rules:
- · 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 Commission.
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- 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 (b) (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 feet 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.

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# RAILROAD COMMISSION OF TEXAS OIL AND GAS DIVISION

Form W-12 (1-1-71) FOD1296

|   |  |  |  |   | 6. RRC District 7C  |  |  |
|---|--|--|--|---|---|--|--|
|   | INCL   | INATION R  | EPORT  |   | 7. RRC Lease Number.<br>(Oil completions only)  |  |  |
| . FIELD WANTE                               |  | ust Be Filed With Each Cor   |  |   | 09105   |  |  |
| 1. FIELD NAME (as per                       | RRC Records or Wildcat)  | 2. LEAS  | University of Te   | vas 245   | 8. Well Number  |  |  |
| 3. OPERATOR                                 | (San Andres)   |  | Chiversity of Te   | Aug 242   | RRC Identification  |  |  |
|   | an Oil Company, LLC  | 2  |  |   | Number  |  |  |
| 4. ADDRESS<br>6585 S. Yale S                | uita 800   |  |  |   | (Gas completions only)  |  |  |
| Tulsa, OK 7413                              |  |  |  |   | 10. County  |  |  |
| 5. LOCATION (Section                        | , Block, and Survey)   |  |  |   |   |  |  |
| 14 miles SE dire                            | ection from Big Lake   |  |  |   | Crockett  |  |  |
|   | R  | ECORD OF   | INCLINATI  | ON  |   |  |  |
| *11. Measured Depth (feet)                  | 12. Course Length<br>(Hundreds of feet)                            | *13. Angle of<br>Inclination<br>(Degrees)  | 14. Displacement per<br>Hundred Feet<br>(Sine of Angle x100)           | 15. Course<br>Displacement (feet)                                   | 16. Accumulative<br>Displacement (feet)   |  |  |
| 475   | 475  | 0.500  | .873   | 4.145   | 4.15  |  |  |
| 916   | 441  | 0.500  | .873   | 3.848   | 7.99  |  |  |
| 1388  | 472  | 0.500  | .873   | 4.119   | 12.11   |  |  |
| 1860  | 472  | 0.500  | .87  | 4.12  | 16.23   |  |  |
| 2300  | 440  | 0.500  | .87  | 3.84  | 20.07   |  |  |
| 2343  | 43   | 0.500  | .87  | .38   | 20.45   |  |  |
|   |  |  |  |   |   |  |  |
|   |  |  |  |   |   |  |  |
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|   |  | 1 64: 6  |  |   |   |  |  |
|   | is needed, use the reverse side of<br>shown on the reverse side of |  | XX no  |   |   |  |  |
|   | displacement of well bore a  | office and the same state of t | 2343 feet =  | 20.45   | feet.   |  |  |
| *19. Inclination measure                    | 17   | Tubing   | ☐ Open hole  | ☑ Drill Pipe  |   |  |  |
| 20. Distance from surfa                     | ace location of well to the ne                                     | arest lease line   |  | <u> </u>  | 1058 feet.  |  |  |
| 21. Minimum distance                        | to lease line as prescribed by                                     | y field rules  |  |   | 330 feet.   |  |  |
| 22. Was the subject we                      | ell at any time intentionally d                                    | eviated from the vertical in   | any manner whatsoever?   |   | No  |  |  |
| (If the answer to th                        | ne above question is "yes," at                                     | tach written explanation of  | the circumstances.)  |   |   |  |  |
| INCLINATION DATA                            | CERTIFICATION  |  | OPERATOR CERTIFIC  | CATION  |   |  |  |
| am authorized to make this c                | 11   | knowledge of the inclination data and facts are true, correct,   | and in this report, and that all dat<br>by to the best of my knowledge | fication, that I have personal k<br>a presented on both sides of th | exas Natural Resources Code, that I am<br>cnowledge of all information presented<br>his form are true, correct, and complete<br>data and information presented herein<br>tern numbers on this form. |  |  |
| Signature of Authorize                      | R. Shillys d Representative  |  | Signature of Author  |   |   |  |  |
| James R. Phillips,                          |  |  | John Bu  | Name of Person and Title (type or print)                            |   |  |  |
| Name of Person and Ti<br>Blue Line Drilling |  |  |  | Warren American Dil Co, LLC   |   |  |  |
| Name of Company                             | , 00, 220  |  | Operator   |   | •   |  |  |
| Telephone: (325) 65                         | 53-1891  |  | Telephone: 9   | 18 481-799  | 0   |  |  |
| Area Coo                                    |  |  | Area C   |   |   |  |  |
| Railroad Commission Use                     | e Only:  |  |  |   |   |  |  |
| Approved By:                                | conty.   | Title:   |  | Date:   |   |  |  |

<sup>\*</sup> Designates items certified by company that conducted the inclination surveys.

#### RECORD OF INCLINATION (Continued from reverse side)

| *11. Measured Depth<br>(feet)  | 12. Course Length<br>(Hundreds of feet) | *13. Angle of<br>Inclination (Degrees)  | 14. Displacement per<br>Hundred Feet<br>(Sine of Angle x100) | 15. Course<br>Displacement (feet)     | 16. Accumulative Displacement (feet) |  |
|--|---|---|--|---------------------------------------|--------------------------------------|--|
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|  |   |   |  |                                       |                                      |  |
| If additional space is needed, attach separate sheet and check here.  REMARKS: |   |   |  |                                       |                                      |  |
|  |   |   |  |                                       |                                      |  |
|  |   |   |  | · · · · · · · · · · · · · · · · · · · |                                      |  |

#### - INSTRUCTIONS -

An inclination survey made by persons or concerns approved by the Commission shall be filed on a form prescribed by the Commission for each well drilled or deepened with rotary tools or when, as a result of any operation, the course of the well is changed. No inclination survey is required on wells that are drilled and completed as dry holes that are plugged and abandoned. (Inclination surveys are required on re-entry of abandoned wells.) Inclination surveys must be made in accordance with the provisions of Statewide Rule 11.

This report shall be filed in the District Office of the Commission for the district in which the well is drilled, by attaching one copy to each 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.

# RAILROAD COMMISSION OF TEXAS Oil and Gas Division

## ELECTRIC LOG STATUS REPORT

Instructions

FORM L-1

Tracking No.: 148462 This facsimile L-1 was generated electronically from data submitted to the RRC.

### 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, reclassifications, 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

|   | other type or log, j  | ust select Section II, Part A below  |
|---|---|--|
| SECTION   | I. IDENTIFICATION   |  |
| perator<br>ame: WARREN AMERICAN OIL COMPANY, LLC  | District No. 7C   | Completion Date: 08/08/2015  |
| eld<br>ame FARMER (SAN ANDRES)  | Drilling Permit<br>No. 806873   |  |
| ease ame UNIVERSITY OF TEXAS - 245  | Lease/ID<br>No. 09705   | Well<br>No. 6  |
| CROCKETT  | API<br>No. <b>42-</b> 105-42255   |  |
| SECTION II. LOG   | STATUS (Complete either   | A or B)  |
| A. BASIC ELECTRIC LOG NOT RUN   |   |  |
| B. BASIC ELECTRIC LOG RUN. (Select one)  X 1. Confidentiality is requested and a copy of the  2. Confidentiality already granted on basic electric log covering this interval alread  4. Log attached to (select one):  (a) Form L-1 (this form). If the companiplease enter name on log here:  Check here if attached log is being s  (b) Form P-7, Application for Discover  (c) Form W-4, Application for Multiple Lease or ID No(s).  Well No(s). | ric log covering this interval (apply on file with Commission (appli<br>ny/lease name on log is different<br>submitted after being held confide<br>y Allowable and New Field Desi | licable to deepened wells only).  cable to deepened wells only).  from that shown in Section I,  ential. |
|   |   | <del></del>  |
| Cheryl Dixon Signature  | Land Manager  | Title  |
| Digitatore  | (040) 404 7040  | 01/06/2016   |
| WARREN AMERICAN OIL COMPANY, LLC  | (918) 481-7942  | 01/00/2010   |



Equipment/Base

Recorded By

Witnessed By

J. ADAMS

N, BUCHANAN

# **DUAL LATEROLOG / MSFL** RESISTIVITY LOG

y warren american oil compar University of texas 245 #6 Farmer(san andres) Crockett Texas USA 42-105-42255 File No ABL-60688 WARREN AMERICAN OIL COMPANY,LLC Company: UNIVERSITY OF TEXAS 245 #6 Well FARMER(SAN ANDRES) Field CROCKETT County **TEXAS** State USA Country 42-105-42255 API No Location: 1720' FEL & 2320' FNL Company Well Field County State Country API No. OF SURVEY UL BLK. 46 Rge: Sect: 4 Twp: LSD: Services: Elevations: GL Permanent Datum: CNT CST KB 2586.00 Ft KB Drilling Measured From: LDT DLT ΚB DF 2685.00 Ft Log Measured From: MLT Ft Above Permanent Datum: 9.00 Ft GL 2577.00 08-06-2015 Date 1 Run Number 2343.0 Ft Depth--Driller Depth--Logger 2344.0 Ft First Reading 2343.0 Ft 844.0 Ft Last Reading 836.0 Ft Casing--Driller 844.0 Ft Casing--Logger 7.875 In Bit Size 8.625 In Casing Size SWG/STARCH/LIME Hole Fluid Type 9.7 ppg Density 0.0 Fluid Loss 29.0 sec/qt 13.0 PH/Viscosity MEASURED Sample Source 0.200 @ 90 RM@Measured Temp. RMF@Measured Temp 0.160 @ 90 F @ 90 RMC@Measured Temp. 0.240 CALCULATED CALCULATED Source RMF/RMC 0.020 @ 105 F RM@BHT 08-06-2015 2:00 pm Time Circulation Stopped 105 Max Recorded Temp. ABILENE, TX TRK-127



# COMPENSATED NEUTRON PEL DENSITY LOG

Rge:

CST

y WARREN AMERICAN OIL COMPAT UNIVERSITY OF TEXAS 245 #6 FARMER(SAN ANDRES) CROCKETT TEXAS USA 42-105-42255

File No : ABL-60688

Company: WARREN AMERICAN OIL COMPANY, LLC

Well: UNIVERSITY OF TEXAS 245 #6

Field : FARMER(SAN ANDRES)

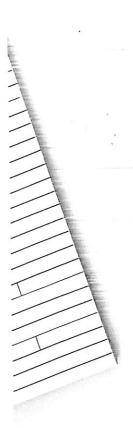
County : CROCKETT State : TEXAS Country : USA

API No : 42-105-42255

Location:

1720' FEL & 2320' FNL OF SURVEY UL BLK. 46

LDT DLT DF 2685.00 Ft KB Log Measured From: MLT GL 2577.00 Ft Above Permanent Datum: 9.00 Ft 08-06-2015 Date 1 Run Number Depth--Driller 2343.0 Ft Depth--Logger 2344.0 Ft Ft 2343.0 First Reading Last Reading 844.0 Ft 836.0 Ft Casing--Driller Casing--Logger 844.0 Ft In 7.875 Bit Size 8.625 In Casing Size SWG/STARCH/LIME Hole Fluid Type 9.7 ppg Density 0.0 Fluid Loss 29.0 sec/qt 13.0 PH/Viscosity MEASURED Sample Source @ 90 RM@Measured Temp. 0.200 @ 90 RMF@Measured Temp 0.160 @ 90 0.240 RMC@Measured Temp. CALCULATED CALCULATED Source RMF/RMC @ 105 F 0.020 RM@BHT 08-06-2015 2:00 pm Time Circulation Stopped 105 Max Recorded Temp. ABILENE, TX TRK-127 Equipment/Base Recorded By J. ADAMS N, BUCHANAN Witnessed By





# **BOREHOLE COMPENSATED SONIC LOG**

iany WARREN AMERICAN OIL COMPAI UNIVERSITY OF TEXAS 245 #6 FARMER(SAN ANDRES) ty CROCKETT TEXAS try USA 0. 42-105-42255 File No Company:

ABL-60688

WARREN AMERICAN OIL COMPANY, LLC

Well Field

UNIVERSITY OF TEXAS 245 #6 FARMER(SAN ANDRES)

County State

CROCKETT

Country:

TEXAS USA : 42-105-42255

API No Location:

1720' FEL & 2320' FNL OF SURVEY UL BLK. 46

| pan<br>do.                                     | JHVEY UL          | _ DL         | .N. 40      |       |     |        |      |  |
|--|-------------------|--------------|-------------|-------|-----|--------|------|--|
| Company Well Field County State County API No. |                   | Se           | ect:4       |       | Twp | :      | Rge: |  |
| Permanent Datum:                               | GL                | GL Elevation |             | ons:  |     | Servic |      |  |
| Drilling Measured From:                        | : KB              | - 1          | KB 258      | 36.00 | Ft  | CNT    | CST  |  |
| Log Measured From:                             | KB                |              | DF 268      |       | Ft  | LDT    | DLT  |  |
| Above Permanent Datum                          | <b>n</b> : 9.00 F | t            | GL 257      | 77.00 | Ft  | MLT    |      |  |
| Date   | -80               | 06-20        | 15          |       |     |        |      |  |
| Run Number                                     | 1                 |              |             |       |     |        |      |  |
| DepthDriller                                   | 2343.0            | )            | Ft          |       |     |        |      |  |
| DepthLogger                                    | 2344.0            |              | Ft          |       |     |        |      |  |
| First Reading                                  | 2307.0            | 0            | Ft          |       |     |        |      |  |
| Last Reading                                   | 844.0             |              | Ft          |       |     |        |      |  |
| CasingDriller                                  | 836.              | 0            | Ft          |       |     |        |      |  |
| CasingLogger                                   | 844.              |              | Ft          |       |     |        |      |  |
| Bit Size                                       |                   | 875          | In          |       |     |        |      |  |
| Casing Size                                    |                   | 625          | In          |       |     |        |      |  |
| Hole Fluid Type                                | SWG/STA           |              | /LIME       |       |     |        |      |  |
| Density  | 9.7               |              | pg          |       |     |        |      |  |
| Fluid Loss                                     | 0.0               | Action and   |             |       |     |        |      |  |
| PH/Viscosity                                   | 13.0              | _            | 29.0 sec/qt |       |     |        | _    |  |
| Sample Source                                  | MEASUF            |              |             |       |     |        |      |  |
| RM@Measured Temp.                              | 0                 | <u>ම</u> 90  | F           |       |     |        |      |  |
| RMF@Measured Temp                              | 01100             | @ 90         | F           |       |     |        |      |  |
| RMC@Measured Temp.                             |                   | <u>@ 90</u>  | F           |       |     |        |      |  |
| Source RMF/RMC                                 | CALCULATE         |              |             |       |     |        |      |  |
| RM@BHT   |                   | @ 105        |             |       |     |        |      |  |
| Time Circulation Stopped                       | 08-06-2015        | 2:00         |             |       |     |        |      |  |
| Max Recorded Temp.                             | 105               |              | F           |       |     |        |      |  |
| Equipment/Base                                 | TRK-127           | ABI          | LENE, TX    |       |     |        |      |  |
| Recorded By                                    | J. ADAMS          |              |             |       |     |        |      |  |
| Witnessed By                                   | N, BUCHAN         | AN           |             |       |     |        |      |  |

# Groundwater

#### **GROUNDWATER PROTECTION DETERMINATION**

| Advisory Unit                            |                              |                | ·                  |  |
|--|------------------------------|----------------|--------------------|--|
| Da                                       | ite November 28, 2012        | GAU File       | lo.: SC- 15032     |  |
| ****                                     | ** EXPEDITED APPLICATION *** | **<br>API Numb | er 10500000        |  |
| Attention: JOHN BURROUGHS                | <del></del>                  | RRC Lease      | No. 09705          |  |
| sc_897500                                | 0_10500000_09705_15032.pdf   |                |                    |  |
|  | Measured                     | Digital N      | ital Map Location: |  |
|  | 1719 ft FEL                  | X-coord/Long   | 1678414            |  |
| WARREN AMERICAN OIL CO<br>P O BOX 470472 | 330 ft FNL                   | Y-coord/Lat    | 484839             |  |
| TULSA OK 74147                           | MRL: SECTION                 | Datum 27       | Zone C             |  |
| P-5#                                     | 897500                       |                |                    |  |
| ounty CROCKETT Lease & Well No.          | NIVERSITY OF TEXAS 245 #3&A  | LL             | Purpose ND         |  |
| cation SUR-UL, BLK-46, SEC-4, [TD=250    | 00],[RRC 7C],                |                | <u> </u>           |  |

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

The interval from land surface to the base of the SANTA ROSA, which is estimated to occur at a depth between 750 and 800 feet, must be protected.

This recommendation is adequate for all wells drilled in this NE/4 section 4.

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=Raliroad Commission of Texas, cnedack Oswalt. Date: 2012.11.28 10:03:41 -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. Oswatt on 11/28/2012 Note: Alteration of this electronic document will invalidate the digital signature.

0061R Transition Form Rev. 9/1/2011

P.O. Box 12967 Auslin, Texas 78711-2967

512-463-2741

Internet address: www.rrc.state.tx.us

