



RAILROAD COMMISSION OF TEXAS

Form W-2

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

Status: Approved
Date: 12/22/2017
Tracking No.: 182311

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

OPERATOR INFORMATION

Operator Name: APPROACH OPERATING LLC Operator No.: 028625
Operator Address: ONE RIDGMAR CENTRE 6500 WEST FREEWAY SUITE 800 FORT WORTH, TX 76116-0000

WELL INFORMATION

API No.: 42-105-42381 County: CROCKETT
Well No.: 2119HB RRC District No.: 7C
Lease Name: UNIVERSITY 42 Field Name: HOLT RANCH (CONSOLIDATED)
RRC Lease No.: 17265 Field No.: 42341300
Location: Section: 21, Block: 42, Survey: UL, Abstract: U371
Latitude: 30.9131 Longitude: -101.1498
This well is located 14 miles in a N direction from OZONA, which is the nearest town in the county.

FILING INFORMATION

Purpose of filing: Well Record Only
Type of completion: New Well
Well Type: Shut-In Producer Completion or Recompletion Date: 05/17/2017
Type of Permit Date Permit No.
Permit to Drill, Plug Back, or Deepen 04/13/2017 825013
Rule 37 Exception
Fluid Injection Permit
O&G Waste Disposal Permit
Other:

COMPLETION INFORMATION

Spud date: 05/07/2017 Date of first production after rig released: 05/17/2017
Date plug back, deepening, recompletion, or drilling operation commenced: 05/07/2017 Date plug back, deepening, recompletion, or drilling operation ended: 05/17/2017
Number of producing wells on this lease in this field (reservoir) including this well: 36 Distance to nearest well in lease & reservoir (ft.): 350.0
Total number of acres in lease: 7780.13 Elevation (ft.): 2596 GL
Total depth TVD (ft.): 5944 Total depth MD (ft.): 13655
Plug back depth TVD (ft.): 5943 Plug back depth MD (ft.): 13565
Was directional survey made other than inclination (Form W-12)? No Rotation time within surface casing (hours): 74.5
Is Cementing Affidavit (Form W-15) attached? Yes
Recompletion or reclass? No Multiple completion? No
Type(s) of electric or other log(s) run: None
Electric Log Other Description:
Location of well, relative to nearest lease boundaries Off Lease : No
of lease on which this well is located: 1032.0 Feet from the South Line and
1828.0 Feet from the East Line of the
UNIVERSITY 42 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.): 770.0	Date: 04/13/2017
SWR 13 Exception	Depth (ft.): 1240.0	

INITIAL POTENTIAL TEST DATA FOR NEW COMPLETION OR RECOMPLETION

Date of test:	Production method:
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):	Gas (MCF):
Gas - Oil Ratio: 0	Flowing Tubing Pressure:
Water (BBLs):	

CALCULATED 24-HOUR RATE

Oil (BBLs):	Gas (MCF):
Oil Gravity - API - 60.:	Casing Pressure:
Water (BBLs):	

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	9 5/8	12 1/4	1239			CLASS C	630	1002.0	0	Circulated to Surface
2	Conventional Production	5 1/2	8 3/4	13652			CLASS H	2611	3625.0	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.)	Packer Depth (ft.)/Type
N/A				

PRODUCING/INJECTION/DISPOSAL INTERVAL

Row	Open hole?	From (ft.)	To (ft.)
N/A			

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

Was hydraulic fracturing treatment performed? No

Is well equipped with a downhole actuation sleeve? No **If yes, actuation pressure (PSIG):**

Production casing test pressure (PSIG) prior to hydraulic fracturing treatment: **Actual maximum pressure (PSIG) during hydraulic fracturing:**

Has the hydraulic fracturing fluid disclosure been reported to FracFocus disclosure registry (SWR29)? No

Row	Type of Operation	Amount and Kind of Material Used	Depth Interval (ft.)
N/A			

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>
QUEEN	Yes	1058.0	1058.0	Yes	CEMENTED CASING
SAN ANDRES	Yes	1687.0	1688.0	Yes	CEMENTED CASING
LEONARD	Yes	4087.0	4090.0	Yes	CEMENTED CASING
WOLFCAMP	Yes	5426.0	5431.0	Yes	AREA OF PRODUCTION
CANYON	No			No	BELOW PRODUCTION AREA
STRAWN	No			No	BELOW PRODUCTION AREA
DEVONIAN	No			No	BELOW PRODUCTION AREA
ELLENBURGER	No			No	BELOW PRODUCTION AREA

Do the producing interval of this well produce H2S with a concentration in excess of 100 ppm (SWR 36)? No
 Is the completion being downhole commingled (SWR 10)? No

REMARKS

WELL HAS NOT BEEN COMPLETED.

RRC REMARKS

PUBLIC COMMENTS:

CASING RECORD :

SURF - DIDN'T CIRCULATE CEMENT DURING JOB, TEMP SURVEY CONDUCTED TOC -@ 120', TOPPED OUT WITH 95 SKS AND GOT CEMENT TO SURVEY.

TUBING RECORD:

WELL HAS NOT YET BEEN COMPLETED.

PRODUCING/INJECTION/DISPOSAL INTERVAL :

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

POTENTIAL TEST DATA:

OPERATOR'S CERTIFICATION

Printed Name: Erin Childs

Title: Sr Engineering Technician

Telephone No.: (817) 989-9000

Date Certified: 11/27/2017



RAILROAD COMMISSION OF TEXAS

1701 N. Congress
P.O. Box 12987

Austin, Texas 78701-2987

CEMENTING REPORT

Form W-15

Rev 08/2014

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

OPERATOR INFORMATION

Operator Name: Approach Operating	Operator P-5 No.: 028625
Cementor Name: Crest Pumping Technologies	Cementor P-5 No.: 18888

WELL INFORMATION

District No.: 7C	County: Crockett	
Well No.: 2119HB	API No.: 42-105-42381	Drilling Permit No.: 825013
Lease Name: University 42	Lease No.: 17265	
Field Name: Holt Ranch (Consolidated)	Field No.: 42391300	

I. CASING CEMENTING DATA

Type of casing: Conductor Surface Intermediate Liner Production

Drilled hole size (in.): 12 1/4 Depth of drilled hole (ft.): 1240 Est. % wash-out or hole enlargement: 5%

Size of casing in O.D. (in.): 9 5/8 Casing weight (lbs/ft) and grade: 36 J-55 No. of centralizers used: 10

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.): 1239' Top of liner (ft.):

Setting depth liner (ft.):

Hrs. waiting on cement before drill-out: Calculated top of cement (ft.): 120' Cementing date: 5/9/2017

SLURRY					
Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1	360	Class C	See Remarks	767	2,449
2	175	Class C	See Remarks	235	750
3					
Total	535			1,002	3,199

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: 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: 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					



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 shade areas.
Operator: Fill in other items.

OPERATOR INFORMATION

Operator Name: Approach Operating
Operator P-6 No.: 028625
Cementer Name: Great Pumping Technologies
Cementer P-6 No.: 18888

WELL INFORMATION

District No.: 7C
County: Crockett
Well No.: 2119HB
API No.: 42-105-42381
Lease Name: University 42
Lease No.: 17265
Field Name: Holt Ranch (consolidated)
Field No.: 42-341300
Drilling Permit No.: 825013

I CASING CEMENTING DATA

Type of casing: Conductor Surface Intermediate Liner Production
Drilled hole size (in.): 8 3/4
Depth of drilled hole (ft.): 13,655
Est. % wash-out or hole enlargement: 80%
Size of casing in O.D. (in.): 5 1/2
Casing weight (lbs/ft) and grade: 7# P110
No. of centralizers used: 238
Was cement circulated to ground surface (or bottom of cellar) outside casing? YES
Setting depth shoe (ft.): 13,652
Top of liner (ft.):
Setting depth liner (ft.):
Hrs. waiting on cement before drill-out:
Calculated top of cement (ft.): 0
Cementing date: 5/18/2017

SLURRY

Table with 6 columns: Slurry No., No. of Sacks, Class, Additives, Volume (cu. ft.), Height (ft.)

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.):
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? YES NO
Setting depth shoe (ft.):
Hrs. waiting on cement before drill-out:
Calculated top of cement (ft.):
Cementing date:

SLURRY

Table with 6 columns: Slurry No., No. of Sacks, Class, Additives, Volume (cu. ft.), Height (ft.)

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.):
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? YES NO
Setting depth tool (ft.):
Hrs. waiting on cement before drill-out:
Calculated top of cement (ft.):
Cementing date:

SLURRY

Table with 6 columns: Slurry No., No. of Sacks, Class, Additives, Volume (cu. ft.), Height (ft.)

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							
1	5 bwow Sodium Chloride, 3% Bentonite Gel, 0.5% CPT-19, 0.4% CPT-503P, 0.15% CPT-20A, 0.15% CPT-51A						
2	5 bwow Sodium Chloride, 2% Bentonite Gel, 0.5% CPT-17, 0.15% CD-3, 0.2% CPT-45, 0.2% CPT-51A, 0.2% CPT-20A						
3							
4							

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.

<u>Charles Overby / Cementer</u> <small>Name and title of cementer's representative</small>	<u>Crest Pumping Technologies</u> <small>Cementing Company</small>	<u><i>Charles Overby</i></u> <small>Signature</small>
<u>P.O. Box 117 Jacksboro, TX 76458</u> <small>Address City State, Zip Code</small>	<u>940-567-3392</u> <small>Tel. Area Code Number</small>	<u>5/16/2017</u> <small>Date: mo day yr</small>

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 the 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.

<u><i>Erin Childs</i></u> <small>Type of position (Name of operator's representative)</small>	<u><i>Business Analyst</i></u> <small>Title</small>	<u><i>Erin Childs</i></u> <small>Signature</small>
<u><i>One Kidgator Centre 6500 W. Hwy, Ste 800</i></u> <small>Address City, State, Zip Code</small>	<u><i>FT Worth, TX 76116</i></u> <small>City, State, Zip Code</small>	<u><i>877-989-9700</i></u> <small>Tel. Area Code Number</small>
		<u><i>11/8/17</i></u> <small>Date</small>

Instructions for Form W-15, Cementing Report

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

- A. **What to file:** An operator should file an original and one copy of the completed Form W-15 for each cementing company used on a well. The cementing of different casing strings on a well by one cementing company may be reported on one form. The Form W-15 should be filed with the form W-3, Plugging Record, unless the Form W-3 is signed by the cementing company representative. When reporting dry holes, operators must complete Form W-15, in addition to Form W-3, to show any casing cemented in the hole.
- B. **How to file:** An oil and gas completion report and Form W-15 may be filed online using the Commission's Online System (<https://webapps.rrc.state.tx.us/secure/login.do>) or a paper copy of the form may be mailed to the Commission in Austin (P.O. Box 12967, Austin, Texas 78711-2967).
- C. **Surface casing:** An operator must set and cement sufficient surface casing to protect all usable quality water strata, as defined by the Groundwater Advisory Unit in Austin. Sufficient cement shall be used to fill the annular space outside the casing from the shoe to the ground surface or to the bottom of the cellar. Before drilling a well, an operator must obtain a letter from the Groundwater Advisory Unit stating the protection depth. Surface casing should not be set deeper than 200 feet below the specified depth without prior approval from the Commission. To plug and abandon a well, operators must use only cementers approved by the Commission's Director of Field Operations in accordance with SWR 14 ([http://info.sos.state.tx.us/pls/pub/readtac\\$ext.TacPage?sl=R&app=0&p_d=r&p_rloc=&p_lloc=&p_ploc=&pg=1&plac=&ti=16&pt=1&ch=3&ri=14](http://info.sos.state.tx.us/pls/pub/readtac$ext.TacPage?sl=R&app=0&p_d=r&p_rloc=&p_lloc=&p_ploc=&pg=1&plac=&ti=16&pt=1&ch=3&ri=14)). Cementing companies, service companies, or operators can qualify as approved cementers by demonstrating that they are able to mix and pump cement in compliance with Commission rules and regulations.
- D. **Estimated % wash-out:** If the estimated % wash-outs less than 20% (or 30% along the Gulf Coast), provide supporting documentation such as caliper log to show how the estimated % wash-out was obtained.
- E. **Multi-stage cement:** An operator must report the multi-stage cement shoe in the 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 the Casing Cementing Data section by selecting the type of casing and Multi-stage cement/DV tool.
- F. **Multiple parallel strings:** An operator should file the Form W-15 as an attachment to the Form W-4, Application for Multiple Completion. An operator may be required to submit multiple Form W-15's to show all data for multiple parallel strings.
- G. **Slurry data:** If cement job exceeds three slurries, continue the list of slurries in the Slurry table in the subsequent Casing Cementing Data box.

CHRISTI CRADDICK, CHAIRMAN
RYAN SITTON, COMMISSIONER
WAYNE CHRISTIAN, COMMISSIONER



LORI WROTENBERY
DIRECTOR, OIL AND GAS DIVISION

BRIAN T. FLOYD
DISTRICT DIRECTOR

RAILROAD COMMISSION OF TEXAS OIL AND GAS DIVISION

OPERATOR Name: APPROACH OPERATING LLC
Address1: ONE RIDGMAR CENTRE
Address2: 6500 WEST FREEWAY SUITE 800
City: FORT WORTH
State: TX

RE: Lease: UNIVERSITY 42
Well No: 2119HB
Sec: 21 **Block:** 42
County: CROCKETT
Survey Name: UL

SWR13EX Application Number: 14432 **Drilling Permit No:** 825013

SWR 13 CASING EXCEPTION APPLICATION/ALTERNATIVE REQUEST APPROVED

The Proposed Casing and Cementing Program submitted for the **LEASE NAME:** UNIVERSITY 42 ;
WELL NUMBER: 2119HB has been approved by the Railroad Commission of Texas District Office.

- a. A copy of this approved letter must be kept on location during all phases of drilling and/or plugging operations. Once approved, changes CANNOT be made to the Proposed Casing Program on the original application without additional approval from the Railroad Commission of Texas District Office.
- b. Any substantive modifications to the cement program require prior approval from the Railroad Commission of Texas District Office, and may require re-submission of the SWR 13 (Statewide Rule 13) Alternate Surface Casing Application. Contact the Railroad Commission of Texas District Office for more information.
- c. The tail slurry must be sufficient to fill the Zone of Critical Cement as described in Statewide Rule 13(b)(1)(H)(i). In addition, all cement slurries must be mixed on location as described in Application for Alternate Surface Casing Program.
- d. The casing and cement program shall adhere to the following specifications:
Set 1250 feet of surface casing and circulate cement from the shoe to the ground surface.

IF CEMENT IS NOT CIRCULATED TO THE GROUND SURFACE AS REQUIRED BY THIS EXCEPTION, YOU MUST CONTACT THE RAILROAD COMMISSION OF TEXAS DISTRICT OFFICE IMMEDIATELY AND FOLLOW THE PROCEDURES SET OUT IN RULE 13(b)(1)(H)(iii) OR AS REQUIRED BY THE RAILROAD COMMISSION OF TEXAS DISTRICT OFFICE.

You must comply with all other provisions of SWR 13 (Statewide Rule 13) and a representative of the cementing company who performs the cementing job for the protection of usable quality water strata must sign the Form W-15 attesting to the information regarding cementing operations performed; including circulation of cement. (Note: If surface casing is set below the approved depth, this can result in denial of future Statewide Rule 13(b)(1)(H)(i) requests.) A condition of the approved drilling permit requires notification to the Railroad Commission of Texas District Office eight (8) hours prior to the time casing is to be set/cemented in the well. If your exception request was submitted after the subject well has been drilled and completed, the operator may be referred for enforcement action.

This authorization shall expire within five (5) years from the date the Groundwater Protection Determination was issued, or at the expiration of the drilling permit (if the well is not spudded prior to expiration) for the referenced well, whichever occurs first. Furthermore, this authorization supersedes any prior authorizations issued for the referenced well.

This exception is based on information provided when the application was submitted on 04/20/2017 .
If any information has changed, you must contact the appropriate Railroad Commission of Texas District Office, and submit a new application if applicable. If you have questions, please contact the appropriate Oil and Gas District office.

RRC APPROVAL BY: Bill Spraggins

DATE: 04/21/2017

BRIAN T. FLOYD
DISTRICT DIRECTOR

Tracking No.: 182311

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: APPROACH OPERATING LLC	District No. 7C	Completion Date: 05/17/2017
Field Name HOLT RANCH (CONSOLIDATED)	Drilling Permit No. 825013	
Lease Name UNIVERSITY 42	Lease/ID No. 17265	Well No. 2119HB
County CROCKETT	API No. 42- 105-42381	

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). _____

Erin Childs

 Signature

Sr Engineering Technician

 Title

 Name (print)

(817) 989-9000

 Phone

11/17/2017

 Date

-FOR RAILROAD COMMISSION USE ONLY-



Oper. Company: Approach Resources, LLC

State: Texas

Well: University 42 2119HB

County: Crockett

Field: Holt Ranch (Consolidated)

Country: USA

Rig: Nomac #133

Location: X 1743975 / Y 454230

Well ID: 42-105-42381

Start Date: 05/09/2017 20:00:00

Job Number: 4189

End Date: 05/15/2017 09:30:00

Latitude: 30° 54' 46.993 N

Elev GL: 2596'

Longitude: 101° 8' 59.208 W

Elev DF: 2618.5'

Elev KB: 2618.5'

Operator 1: Joe Sammarco

Operator 2: Jim Taylor

Tool Run Data	Run #1	Run #2	Run #3	Run #4	Run #5
Tool S/N	590	590	590		
Bit Size	8 3/4"	8 3/4"	8 3/4"		
Cal Factor	4.0	4.0	4.0		
Survey Offset	62.00	51.00	52.00		
Gamma Offset	53.00	42.00	43.00		
Resistivity Offset	0.00	0.00	0.00		
Start Depth	1354.00	5201.00	12805.00		
StartDate	5/9/2017	5/14/2017	5/14/2017		
StartTime	08:00	10:30	16:00		
EndDepth	5200.00	12804.00	13655.00		
EndDate	5/11/2017	5/14/2017	5/15/2017		
EndTime	01:30	13:30	09:30		
Mud Type	Oilbase	Oilbase	Oilbase		
Mud Weight	9.05	9.1	9.2		
Funnel Viscosity	64	61	77		
Plastic Viscosity	22	24	20		
Yield Point	14	16	13		
Gel Strength	14 / 23	16 / 24	13 / 21		
Solids Content	9.2	9.8	10.1		
Sand Content	0	0	0		
Mud Alkalinity	3.4	3.5	3.6		
Filtrate Alkalinity	12	14	12		
Chlorides	52000	53000	53000		
Temperature	151	203	189		

Hole Data

Casing Data

Size	From	To	Size	From	To
12 1/4"	0.00	1240.00	9 625	0.00	1240.00
8 3/4"	1241.00	13655.00			

All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation and we shall not be liable or responsible for any loss, cost, damages or expenses incurred or sustained by anyone resulting from an interpretation made by any of our officers, agents, or employees

0.00	GR(API)	150.00	MD	0.00	ROP(FT/HR)	200.00
150.00	2	300.00	FT	200.00	2	400.00
				400.00	3	600.00
				600.00	4	800.00

**CERTIFICATE OF COMPLIANCE
 AND TRANSPORTATION AUTHORITY**

This facsimile P-4 was generated electronically from data submitted to the RRC.
 A certification of the automated data is available in the RRC's Austin office.

Tracking No.: 182311

1. Field name exactly as shown on proration schedule HOLT RANCH (CONSOLIDATED)		2. Lease name as shown on proration schedule UNIVERSITY 42					
3. Current operator name exactly as shown on P-5 Organization Report APPROACH OPERATING LLC		4. Operator P-5 no. 028625	5. Oil Lse/Gas ID no. 17265	6. County CROCKETT	7. RRC district 7C		
8. Operator address including city, state, and zip code ONE RIDGMAR CENTRE 6500 WEST FREEWAY SUITE 800 FORT WORTH, TX 76116		9. Well no(s) (see instruction E) 2119HB			11. Effective Date 05/17/2017		
		10. Classification <input checked="" type="checkbox"/> Oil <input type="checkbox"/> Gas <input type="checkbox"/> Other (see instruction A)					
12. Purpose of Filing. (Complete section a or b below.) (See instructions B and G)							
a. Change of: <input type="checkbox"/> operator <input type="checkbox"/> oil or condensate gatherer <input type="checkbox"/> gas gatherer <input type="checkbox"/> gas purchaser <input type="checkbox"/> gas purchaser system code <input type="checkbox"/> field name from _____ <input type="checkbox"/> lease name from _____							
- - - OR - - -							
b. New RRC Number for: <input checked="" type="checkbox"/> oil lease <input type="checkbox"/> gas well <input type="checkbox"/> other well (specify) _____ Due to: <input type="checkbox"/> new completion or recompletion <input type="checkbox"/> reclass oil to gas <input type="checkbox"/> reclass gas to oil <input type="checkbox"/> consolidation, unitization, or subdivision (oil lease only)							
13. Authorized GAS WELL GAS or CASINGHEAD GAS Gatherer(s) and/or Purchaser(s). (See instruction G).							
Gatherer	Purchaser	Name of GAS WELL GAS or CASINGHEAD GAS Gatherer(s) or Purchaser(s) As Indicated in Columns to the Left (Attach an additional sheet in same format if more space is needed)			Purchaser's RRC Assigned System Code	Percent of Take	Full-well stream
	X	DCP MIDSTREAM MARKETING, LLC(195936)			0001	100.0	
	X	APPROACH SERVICES, LLC(028627)				100.0	
14. Authorized OIL or CONDENSATE Gatherer(s). (See instruction G).							
Name of OIL or CONDENSATE Gatherer(s) - List Highest Volume Gatherer First (Attach an additional sheet in same format if more space is needed)						Percent of Take	
APPROACH SERVICES, LLC(028627)						100.0	
RRC USE ONLY: Reviewer's initials: <u>RRC Staff</u> Approval date: <u>12/22/2017</u>							
15. PREVIOUS OPERATOR CERTIFICATION FOR CHANGE OF OPERATOR P-4 FILING. Being the PREVIOUS OPERATOR, I certify that operating responsibility for the well(s) designated in this filing, located on the subject lease has been transferred in its entirety to the above named Current Operator. I understand, as Previous Operator, that designation of the above named operator as Current Operator is not effective until this certificate is approved by the Commission.							
Name of Previous Operator _____				Signature _____			
Name (print) _____				<input type="checkbox"/> Authorized Employee of previous operator		<input type="checkbox"/> Authorized agent of previous operator (see instruction G)	
Title _____				Date _____		Phone with area code _____	
16. CURRENT OPERATOR CERTIFICATION. By signing this certificate as the Current Operator, I certify that all statements on this form are true and correct and I acknowledge responsibility for the regulatory compliance of the subject lease including plugging of well(s) pursuant to Rule 14. I further acknowledge that I assume responsibility for the physical operation, control, and proper plugging of each well designated in this filing. I also acknowledge that I will remain designated as the Current Operator until a new certificate designating a new Current Operator is approved by the Commission.							
Name (print) _____				Signature _____			
<u>Sr Engineering Technician</u>				<input checked="" type="checkbox"/> Authorized Employee of current operator		<input type="checkbox"/> Authorized agent of current operator (see instruction G)	
Title _____				Date _____		Phone with area code _____	
<u>echilds@approachresources.com</u>				<u>11/17/2017</u>		<u>(817) 989-9000</u>	
E-mail Address (optional) _____				Date _____		Phone with area code _____	

GROUNDWATER PROTECTION DETERMINATION

Form GW-2



Groundwater Advisory Unit

Date Issued:	13 April 2017	GAU Number:	170390
Attention:	APPROACH OPERATING LLC ONE RIDGMAR CENTRE FORT WORTH, TX 76116	API Number:	10542382
Operator No.:	028625	County:	CROCKETT
		Lease Name:	UNIVERSITY 42
		Lease Number:	
		Well Number:	2121HC
		Total Vertical Depth:	7800
		Latitude:	30.913054
		Longitude:	-101.149684
		Datum:	NAD27

Purpose: New Drill
Location: Survey-UL; Block-42; Section-21

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 20 feet below the base of the Cretaceous-age beds must be protected. The base of the Cretaceous is estimated to occur at a depth of 750 feet.

This recommendation is applicable to all wells within a radius of 2500 feet of this location.

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

This determination is based on information provided when the application was submitted on 04/12/2017. 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

- = Surface Location (S.L.)
- PP = Penetration Point
- = Surface well (as drilled)
- FTP = 1st Take Point
- LTP = Last Take Point
- BHL = Bottom Hole Location

SURFACE LOCATION

Y = 454,230 ft.
 X = 1,743,975 ft.
 Latitude : 30.9131° N.
 Longitude : 101.1498° W.
 1032 ft. FSL and 1828 ft. FEL
 University Land Survey 21, Block 42
 1032 ft. FSL and 1828 ft. FEL of lease

PROPOSED PENETRATION POINT

48 ft. from Surf. 2119HB
 Y = 454,230 ft.
 X = 1,744,023 ft.
 Latitude : 30.9131° N.
 Longitude : 101.1498° W.
 1032 ft. FSL and 1780 ft. FEL
 University Land Survey 21, Block 42
 1032 ft. FSL and 1780 ft. FEL of lease

PROPOSED 1st TAKE POINT

550 ft. from PP 2119HB
 Y = 454,780 ft.
 X = 1,744,025 ft.
 Latitude : 30.9145° N.
 Longitude : 101.1498° W.
 1582 ft. FSL and 1780 ft. FEL
 University Land Survey 21, Block 42
 1582 ft. FSL and 1780 ft. FEL of lease

PROPOSED LAST TAKE POINT

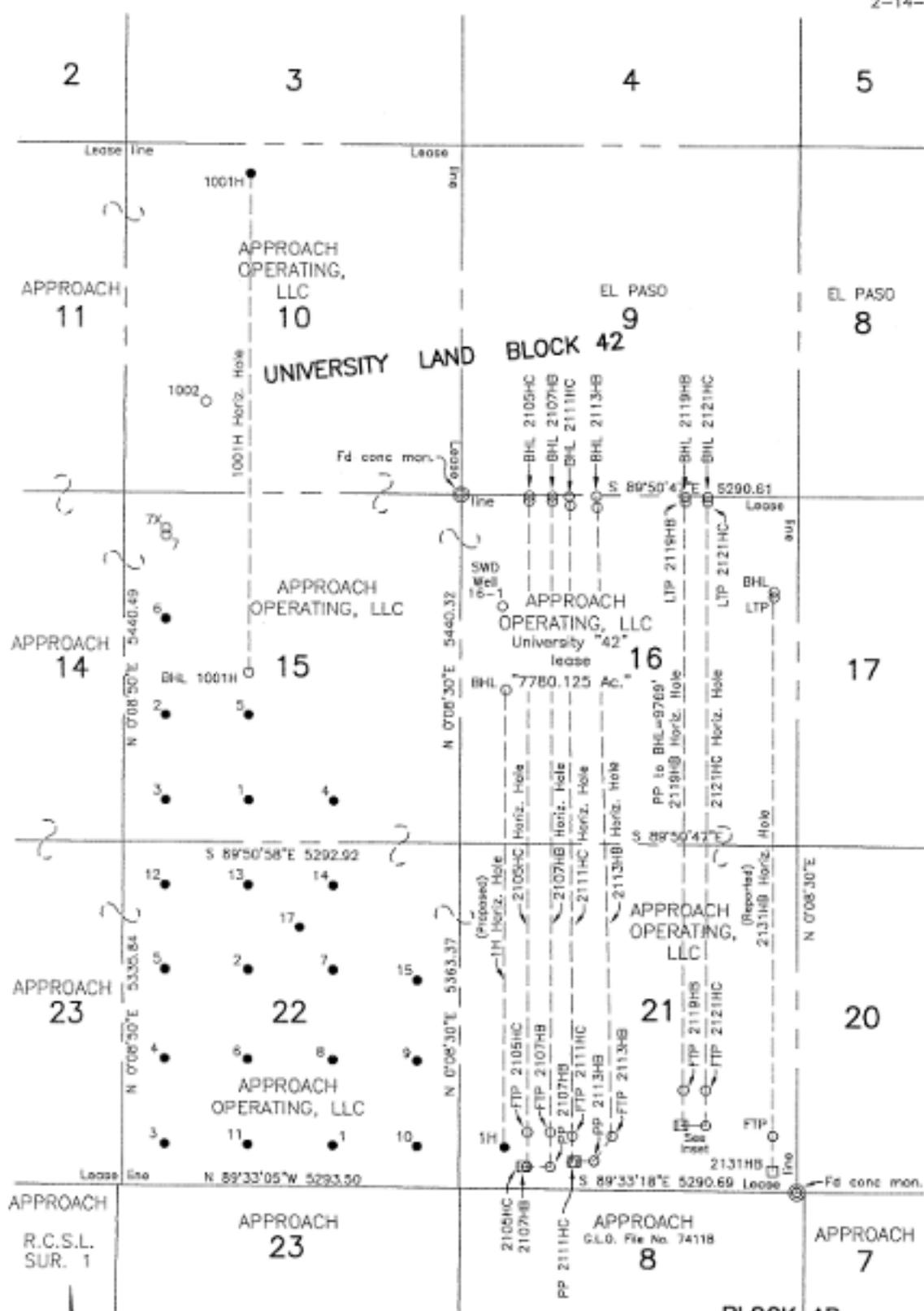
80 ft. from BHL 2119HB
 Y = 463,919 ft.
 X = 1,744,047 ft.
 Latitude : 30.9397° N.
 Longitude : 101.1498° W.
 100 ft. FNL and 1780 ft. FEL
 University Land Survey 16, Block 42
 100 ft. FNL and 1780 ft. FEL of lease

PROPOSED BOTTOMHOLE LOC.

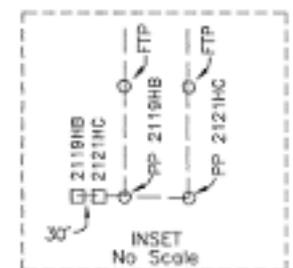
Y = 463,989 ft.
 X = 1,744,047 ft.
 Latitude : 30.9399° N.
 Longitude : 101.1498° W.
 20 ft. FNL and 1780 ft. FEL
 University Land Survey 16, Block 42
 20 ft. FNL and 1780 ft. FEL of lease

Perpendicular distances off 2119HB Univ. 42° horizontal hole

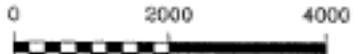
FTP 2121HC (proposed) = 350'
 2113HB Horiz hole = 1135'



BLOCK AB



Located: N 10°E 14 miles from Ozona, Texas.
 "Ac" = Acreage claimed by operator to be in lease.



SCALE: 1" = 2000'

FIELD COUNTY : Crockett
 OPERATOR : Approach Operating, LLC
 LEASE : University "42"
 WELL NO. : 2119HB
 ELEVATION : 2595 ft. grd.
 LOCATION : 1032 ft. FSL and 1828 ft. FEL of University Land Survey 21, Block 42, Crockett County, Texas.

NOTES

Courses, distances and coordinates shown hereon are of the Texas Coordinate System of 1927 - Central Zone.

The survey construction shown hereon is sufficient for staking this location and no other purpose.

The lease information shown hereon is based on information provided by operator or its representatives and was relied upon by surveyor for the purpose of staking this location. Said surveyor was not requested to verify lease and accepts no responsibility for the accuracy or status of this information.

Position of surveys shown hereon is based on Frank Friends survey of University Lands Blocks 38 to 57 dated July 24, 1937 on file in the General Land Office.

The above sketch represents the location as staked on the ground and is for permit purposes only.
 Staked the 2nd day of February, 2017.



Thomas J. Houston
 Thomas J. Houston
 Registered Professional Land Surveyor No. 4261
 FPM NO. 10045600
 OFFICE OF
WILSON LAND SURVEYING, INC.
 1514 W. BEAUREGARD AVE.
 P. O. BOX 3326 PH. 325-853-3916
 SAN ANGELO, TEXAS 76902