

**RAILROAD COMMISSION OF TEXAS****Form W-2**

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

Status: Submitted
Date: 07/19/2015
Tracking No.: 138957

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.: 42-105-42183 **County:** CROCKETT
Well No.: 2111HC **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: UNIVERSITY LAND, Abstract:

Latitude: **Longitude:**
This well is located 14 miles in a NE
direction from OZONA,
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:** 07/01/2015
Type of Permit **Date** **Permit No.**
Permit to Drill, Plug Back, or Deepen 12/10/2014 801440
Rule 37 Exception
Fluid Injection Permit
O&G Waste Disposal Permit
Other:

COMPLETION INFORMATION

Spud date: 01/06/2015 **Date of first production after rig released:** 07/01/2015
Date plug back, deepening, recompletion, or drilling operation commenced: 01/06/2015 **Date plug back, deepening, recompletion, or drilling operation ended:** 01/29/2015
Number of producing wells on this lease in this field (reservoir) including this well: 83 **Distance to nearest well in lease & reservoir (ft.):** 0.0
Total number of acres in lease: 7780.13 **Elevation (ft.):** 2596 GL
Total depth TVD (ft.): 6430 **Total depth MD (ft.):** 16445
Plug back depth TVD (ft.): 6426 **Plug back depth MD (ft.):** 16332
Was directional survey made other than inclination (Form W-12)? Yes **Rotation time within surface casing (hours):** 227.2
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: 440.0 Feet from the South Line and
3501.0 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.): 750.0

Date: 12/11/2014

SWR 13 Exception

Depth (ft.): 1250.0

INITIAL POTENTIAL TEST DATA FOR NEW COMPLETION OR RECOMPLETION

Date of test: 07/11/2015

Production method: Flowing

Number of hours tested: 24

Choke size: 1.0

Was swab used during this test? No

Oil produced prior to test: 3088.00

PRODUCTION DURING TEST PERIOD:

Oil (BBLs): 753.00

Gas (MCF): 962

Gas - Oil Ratio: 1277

Flowing Tubing Pressure: 107.00

Water (BBLs): 1848

CALCULATED 24-HOUR RATE

Oil (BBLs): 753.0

Gas (MCF): 962

Oil Gravity - API - 60.: 37.5

Casing Pressure: 826.00

Water (BBLs): 1848

CASING RECORD

Row	Type of Casing	Casing Size (in.)	Hole Size (in.)	Setting Depth (ft.)	Multi - Stage Depth (ft.)	Multi - 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	1262			CLASS C	510	997.0	SURF	Circulated to Surface
2	Conventional Production	5 1/2	8 3/4	16418			CLASS H	3275	4588.0	ACE 391	Calculation

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
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N/A

TUBING RECORD

Row	Size (in.)	Depth (ft.)	Packer Depth (ft.)/Type
1	2 7/8	6178	6170 / 2 3/8 X 5 1/2 AS-1X

PRODUCING/INJECTION/DISPOSAL INTERVAL

Row	Open hole?	From (ft.)	To (ft.)
1	No	L1 6488	16300.0

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 hydraulic fracturing treatment: 8500

Actual maximum pressure (PSIG) during hydraulic fracturing: 8000

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	277860BBLs FLUID;111070GALS15%HCL;8089520#100MESH;5177708#40/	6488 16300

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	1188.0	1188.0	Yes	CEMENTED CASING
SAN ANDRES	Yes	1679.0	1679.0	Yes	CEMENTED CASING
LEONARD	Yes	4069.0	4069.0	Yes	CEMENTED CASING
WOLFCAMP	Yes	5434.0	5435.0	Yes	AREA OF PRODUCTION
CANYON	No			Yes	BELOW PRODUCTION
STRAWN	No			Yes	BELOW PRODUCTION
DEVONIAN	No			Yes	BELOW PRODUCTION
ELLENBURGER	No			Yes	BELOW PRODUCTION

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

WILL UPLOAD DISTANCE TO NEAREST WELL AND AS DRILLED PLAT UPON RECEIPT

RRC REMARKS

PUBLIC COMMENTS:

CASING RECORD :

TUBING RECORD:

PRODUCING/INJECTION/DISPOSAL INTERVAL :

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

POTENTIAL TEST DATA:

OPERATOR'S CERTIFICATION

Printed Name: Carol Adler

Title: SR Regulatory Specialist

Telephone No.: (817) 989-9000

Date Certified: 08/24/2015



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, LLC	Operator P-5 No.:	028625
Cementer Name:	NIDE ENERGY	Cementer P-5 No.:	189898

WELL INFORMATION

District No.:	7C	County:	Crockett	Drilling Permit No.:	80440
Well No.:	2111HC	API No.:	42-105-42183	Lease No.:	17265
Lease Name:	University 42	Field No.:	42431300		
Field Name:	HOLT RANCH (CONSOLIDATED)				

I. CASING CEMENTING DATA

Type of casing:	<input type="checkbox"/> Conductor	<input checked="" type="checkbox"/> Surface	<input type="checkbox"/> Intermediate	<input type="checkbox"/> Liner	<input type="checkbox"/> Production
Drilled hole size (in.):	12 1/4	Depth of drilled hole (ft.):	1,263	Est. % wash-out or hole enlargement:	
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?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Setting depth shoe (ft.):	1262	Top of liner (ft.):	
Hrs. waiting on cement before drill-out:	24	Calculated top of cement (ft.):	Surface	Setting depth liner (ft.):	
Cementing date:	1/8/2015				

SLURRY

Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1	335	35/65 POZ C	Remarks 1	760	2,428
2	175	Class C	Remarks 2	236	754
3					
Total	510			997	3,182

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.):		Tapered string depth of drilled hole (ft.):				
Upper:		Lower:	Upper:		Lower:	
Tapered string size of casing in O.D. (in.):		Tapered string casing weight (lbs/ft) and grade:		Tapered string no. of centralizers used		
Upper:		Lower:	Upper:		Lower:	
Was cement circulated to ground surface (or bottom of cellar) outside casing?	<input type="checkbox"/> YES <input 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.):		Tapered string depth of drilled hole (ft.):				
Upper:		Lower:	Upper:		Lower:	
Tapered string size of casing in O.D. (in.):		Tapered string casing weight (lbs/ft) and grade:		Tapered string no. of centralizers used		
Upper:		Lower:	Upper:		Lower:	
Was cement circulated to ground surface (or bottom of cellar) outside casing?	<input type="checkbox"/> YES <input 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 of 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 6% gel, 2% calcium chloride, 25 pps cello-flake, .4% cpt-503p, .2% cpt-20
- 2 1% calcium chloride
- 3

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

Deseree McCarter / Cementer

Nine Energy Services
Cementing Company

Signature

P.O. Box 117 Jacksboro, TX 76458
Address City State Zip Code940-567-3392
Tel Area Code Number1/7/2015
Date mo day yr

OPERATOR'S CERTIFICATE: I declare under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, that I am authorized to make this certification, that I have knowledge of the well data and information presented in this report, and that 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.

Carol Adler
Sr. Regulatory Specialist
6500 W. Freeway, Ste. 800
Fort Worth, Texas 76116
817-546-8483

Signature

Address City State Zip Code

Tel Area Code

Number Date

Instructions for Form W-15, Cementing Report

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

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



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Form W-15

Rev. 08/2014

CEMENTING REPORT

Cementor: Fill in shade areas.

Operator: Fill in other items.

OPERATOR INFORMATION

Operator Name:	Approach OPERATING, LLC.	Operator P-5 No.:	028625
Cementor Name:	Nine Energy	Cementor P-5 No.:	189898

WELL INFORMATION

District No.:	9C	County:	Crockett		
Well No.:	2111 HC	API No.:	42-105-42183	Drilling Permit No.:	80440
Lease Name:	University 42	Lease No.:	17265		
Field Name:	Holt Ranch (Consolidated)	Field No.:	42841300		

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 3/4	Depth of drilled hole (ft.):	16419	Est. % wash-out or hole enlargement:	
Size of casing in O.D. (in.):	5 1/2	Casing weight (lbs/ft) and grade:	20 P-110 LTC	No. of centralizers used:	305
Was cement circulated to ground surface (or bottom of cellar) outside casing?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Setting depth shoe (ft.):	16418	Top of liner (ft.):	
Hrs. waiting on cement before drill-out:	0	Calculated top of cement (ft.):	391	Setting depth liner (ft.):	
Cementing date: 1/27/2015					

SLURRY

Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1	825	50/50 POZ H	Remarks 1	1,477	5,848
2	2,450	50/50 POZ H	Remarks 2	3,112	12,318
3			Remarks 3		
Total	3,275			4,588	18,164

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.):	4	Depth of drilled hole (ft.):	11850	Est. % wash-out or hole enlargement:		
Size of casing in O.D. (in.):	4	Casing weight (lbs/ft) and grade:		No. of centralizers used:		
Tapered string drilled hole size (in.):		Tapered string depth of drilled hole (ft.):				
Upper:		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:		Upper:		Upper:		
Lower:		Lower:		Lower:		
Was cement circulated to ground surface (or bottom of cellar) outside casing?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	Setting depth shoe (ft.):				
Hrs. waiting on cement before drill-out:		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.):		Tapered string depth of drilled hole (ft.):				
Upper:		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:		Upper:		Upper:		
Lower:		Lower:		Lower:		
Was cement circulated to ground surface (or bottom of cellar) outside casing?	<input type="checkbox"/> YES <input checked="" 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 of 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%Salt 2%Gel .8%CPT-19 .4%CPT-503P .3%CPT-20
- 2 5%Salt .4%CPT-19 .4%CPT-35 .2%CPT-20
- 3

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DeSeree McCarter / Cementer

Name and title of cementer's representative

Nine Energy

Cementing Company

DeSeree McCarter
Signature

P.O. Box 117 Jacksboro, TX 76458

Address City State Zip Code

940-567-3392

Tel Area Code Number

1/27/2015

Date mo day yr

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Carol Adler
Sr. Regulatory Specialist
6500 W. Freeway, Ste. 800
Fort Worth, Texas 76116
817-546-8483

Typed or printed name of operator's representative

Carol Adler
Signature

Address City State Zip Code

Tel Area Code

07/13/2015
Number Date

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.

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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&ptac=&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&ptac=&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.
- D. **Estimated % wash-out:** If the estimated % wash-out is 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 II. Casing Cementing Data section by selecting the type of casing and Multi-stage cement shoe. The operator must report the multi-stage cement tool in III. Casing Cementing Data section by selecting the type of casing and Multi-stage cement/DV tool.
- F. **Multiple parallel strings:** An operator should file the Form W-15 as an attachment to the Form W-4, Application for Multiple Completion. An operator may be required to submit multiple Form W-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.

Groundwater
Advisory Unit

GROUNDWATER PROTECTION DETERMINATION

Form GW-2

Date December 11, 2014

GAU File No. 15784

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

API Number 10542183

Attention CAROL ADLER

RRC Lease No. 000000

SC_028625_10542183_000000_15784.pdf

APPROACH OPERATING LLC
6500 W FWY
STE 800
FORT WORTH TX 76116

--Measured--

1790 ft FWL

440 ft FSL

MRL:SECTION

Digital Map Location

X-coord/Long 101.15510

Y-coord/Lat 30.91140

Datum 27 Zone

P-5# 028625

County CROCKETT

Lease & Well No. UNIVERSITY 42 #2111HC&ALL

Purpose ND

Location SUR-UL,BLK-42,SEC-21,--[TD=7800],[RRC 7C],

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

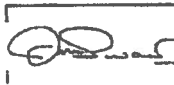
The interval from the land surface to a depth of 750 feet must be protected.

This recommendation is adequate for wells drilled in this S/2 section 21.

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 gw@rrc.state.tx.us, or by mail

Sincerely,


Digitally signed by Jack M. Oswalt
DN: cn=US, st=TEXAS, o=Austin,
ou=Railroad Commission of Texas,
email=Jack.M.Oswalt@rrc.state.tx.us
Date: 2014.12.11 14:58:25 -0600

Jack M. Oswalt, P.G.

GEOLOGIST SEAL



Geologist, Groundwater Advisory Unit
Oil & Gas Division

The seal appearing on this document was authorized by Jack M. Oswalt on 12/11/2014
Note: Alteration of this electronic document will invalidate the digital signature

Form GW-2
Rev 02/2014

P.O. Box 12867 Austin, Texas 78711-2967 512-463-2741 Internet address: www.rrc.state.tx.us



RAILROAD COMMISSION OF TEXAS

STATEWIDE RULE 13 EXCEPTION APPLICATION/ALTERNATIVE REQUEST¹

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

1. Operator: Approach Operating LLC	2. P-5 No.: 028625	3. Lease Name: University 42	4. Well No.: 2111H-C
5. Street Address: One Ridgmar Centre, 6500 W Fwy, Ste 800, Ft Worth, TX 76116	6. RRC District: 7C	7. Drill Permit No.: 801440	
8. Field Name: Holt Ranch (Consolidated)	9. County: Crockett	10. Well Depth: 8,475'	TVD 17,200' MD
11. Well Location: Latitude: 30.9114° N Longitude: 101.1551° W Datum: 27			
Survey Name: University Land Survey 21		Abstract No:	Block: 42 Section:
12. GAU No.: 15784 (attach letter) Recommendation Type (below)		13. Base of Usable-Quality Water (determined by GAU): 750 ft.	
<input checked="" type="checkbox"/> Well <input type="checkbox"/> Lease <input type="checkbox"/> Survey <input type="checkbox"/> Pad <input type="checkbox"/> Radius:		Separation points: ft.	

14. Exception Request: <input type="checkbox"/> Short Surface Csg <input checked="" type="checkbox"/> Excess Surface Csg <input type="checkbox"/> Single-string <input type="checkbox"/> Tubing <input type="checkbox"/> Area-wide ²	
15. Alternate Program Request: <input type="checkbox"/> Drilling Fluid Program <input type="checkbox"/> Non-API Cement <input type="checkbox"/> Other:	
16. Reason for this request: <input type="checkbox"/> Economic <input checked="" type="checkbox"/> Technical <input type="checkbox"/> Other Please explain: First-time requests for exception to tubing requirements outlined in 13(b)(4)(A) will be granted for a period of 180 days, 13(d)(2)	
17. Is this a proposed injection or disposal well ³ ? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	18. Is this a Minimum Separation well ⁴ ? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
19. Nearest town Distance to nearest town: miles. Direction:	
20. Are there any water wells within 1/4 mile of this proposed well location ⁵ ? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, provide information requested below Type of water well: Depth: Distance: Direction:	
21. Are there any INJECTION or DISPOSAL wells within 1/4 mile of the proposed well location ⁶ ? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If Yes, list names and depths of all formations permitted for INJECTION OR DISPOSAL within 1/4 miles of the well location ⁷ :	
22. Have there been any blowouts within one mile of this wellsite ⁸ ? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, name operator(s), lease(s), and date(s) blowout(s) occurred:	
IF CEMENT IS NOT CIRCULATED TO THE GROUND SURFACE AS REQUIRED BY THIS EXCEPTION, YOU MUST CONTACT THE DISTRICT OFFICE IMMEDIATELY AND FOLLOW THE PROCEDURES SET OUT IN 13(b)(1)(H)(III) OR AS REQUIRED BY THE DISTRICT OFFICE.	

23. Proposed Casing and Cementing Program (for additional casing strings or to report Multi-Stage Tool depths use page 3)

	Surface Casing/Single-String	Intermediate Casing	Production Casing
Hole Size (in.), Casing O.D. (in.)	9-5/8"		
Grade, Weight (lb./ft.)	J-55 LTC 36#		
Setting Depth (ft.)	1250'		
Centralizers (no. & placement)	10:1 on shoe then every 3rd ft to sur		
Cement Type	65/35/6 Class C		
# of Sacks and Yield (cu. ft./sk)	409 1.87 ft ³ /sk		
Cement Additives	6% Gel, 5% Salt, 1/4pps Cello, 1/4pps plexifiberA, 0.2% C41P		
24/72-Hr. Comp. Strength (psi)	828 psi 1323 psi		
Height/TOC (ft.), % Excess	950' / Surface 130%		
Free Water Content ⁹ (mL water per 250 mL cement)			
Cement Type	Class C Premium Plus		
# of Sacks and Yield (cu. ft./sk)	179 1.32 ft ³ /sk		
Cement Additives			
24/72-Hr. Comp. Strength (psi)	1610 psi 2239 psi		
Height/TOC (ft.), % Excess	300' / 950' 130%		
Free Water Content ⁹ (mL water per 250 mL cement)			

PROVISIONS APPLICABLE TO RULE 13 EXCEPTIONS:

1. REQUESTS FOR EXCEPTIONS TO STATEWIDE RULE 13 SUBMITTED AFTER THE WELL HAS BEEN DRILLED OR COMPLETED MAY RESULT IN ENFORCEMENT ACTION AGAINST THE OPERATOR.
2. For area-wide exception requests, please provide a map which clearly defines the area to be exempted. Area-wide approvals are NOT allowed for short surface casing applications. District Offices are not required to grant area-wide exceptions.
3. Caution: If this well is being drilled for injection or disposal purposes, a(n) injection/disposal well permit may be denied unless surface casing is set and cemented through all zones of usable-quality groundwater.
4. A Minimum Separation Well, further defined in section 13(a)(2)(L), is a well in which hydraulic fracturing treatments will be conducted AND for which: the vertical distance between BUQW and the top of the formation to be fracture stimulated is less than 1000 ft. or for which the District Director has determined there to be inadequate separation between the BUQW and the top of the formation to be fracture stimulated.
5. Review applications 1-3 (Groundwater Database, Submitted Driller's Report and Brackish Groundwater Database) at the following link to determine location(s) of water wells within ¼ mile of the proposed well: <http://wgd.twdb.texas.gov>
6. Refer to the Railroad Commission of Texas Public GIS map viewer to locate injection and disposal wells within ¼ mile of the well(s) mentioned on this application: <http://www.rrc.state.tx.us/about-us/resource-center/research/gis-viewers>
7. Review W-14 or H-1/H-1A applications at <http://www.rrc.state.tx.us/about-us/resource-center/research/online-research-queries/imagery-records-menu> to determine permitted injection/disposal zones for wells within ¼ mile of the proposed well. Additionally, refer to Rule 13 Formation Tables provided on the RRC website for information regarding saltwater, H2S, and other notable formation depths by county: <http://www.rrc.state.tx.us/oil-gas/compliance-enforcement/rule-13-geologic-formation-info> Statewide Rule 13 may require cementing across these formations.
8. Blowout records can be found at the following URL: <http://www.rrc.state.tx.us/oil-gas/compliance-enforcement/blowouts-and-well-control-problems>
9. Free water content for tail and critical cement may be provided based on lab data available at the time of submission. If additional lab analyses are required by the District Office, slurries must be tested according to API RP 10B-2, per 13(b)(1)(D)(iii).
10. Notify District Office at least 8 hours prior to setting and cementing casing.
11. The alternative surface casing program authorized by approval of this application is subject to the condition that drilling fluid used while drilling to the base of usable quality groundwater have a salinity of 3000 ppm TDS or less and be conditioned to form a filter cake sufficient to prevent infiltration into the protected water while drilling with fluid having a salinity greater than 3000 ppm TDS below the base of usable quality groundwater to the approved surface casing depth. *The use of oil-based and emulsion drilling fluids are prohibited until casing is set and cemented across the base of usable quality groundwater.*
12. Note: The following attachments may be requested by the District Office:
 - a. Additional form is required for requests to set surface casing below 3,500' per §13(b)(1)(A)
 - b. Proposed wellbore diagram or cementing proposal
 - c. Lab reports containing compressive strength and free water data for Lead and/or Tail Slurry
 - d. Any other information be required by the District Office
13. Please note that a copy of the approved application form must be kept on location during all phases of drilling and/or plugging operations. Once approved, changes CANNOT be made to the Proposed Casing and Cementing Program on the original application without additional approval from the District Office.

OPERATOR CONTACT INFORMATION			
Signature: <u>X Thomas Boddy</u>	Name: <u>Thomas Boddy</u>	Title: <u>Drilling Engineer</u>	
Date: <u>12/23/14</u>	Phone: <u>817-989-9000</u>	Fax: <u>817-989-9001</u>	
Email Address (optional): <u>schilts@approachresources.com</u>			

RRC District Office Action —FOR RRC USE ONLY.		Ref. No:
TUBING EXCEPTION: <input type="checkbox"/> Approved <input type="checkbox"/> Additional Data Required <input type="checkbox"/> Denied	By: _____	Date: _____
SURFACE CASING EXCEPTION: <input checked="" type="checkbox"/> Approved <input type="checkbox"/> Additional Data Required <input type="checkbox"/> Denied	By: <u>Brian J. Lopez</u>	Date: <u>12-23-14</u>
DRILLING FLUID PROGRAM: <input type="checkbox"/> Approved <input type="checkbox"/> Additional Data Required <input type="checkbox"/> Denied	By: _____	Date: _____
ALTERNATE CEMENT PROGRAM: <input type="checkbox"/> Approved <input type="checkbox"/> Additional Data Required <input type="checkbox"/> Denied	By: _____	Date: _____
Additional Data Request/D.O. Remarks:		

Tracking No.: 138957

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: 07/01/2015
Field Name HOLT RANCH (CONSOLIDATED)	Drilling Permit No. 801440	
Lease Name UNIVERSITY 42	Lease/ID No. 17265	Well No. 2111HC
County CROCKETT	API No. 42- 105-42183	

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). _____

Carol Adler

Signature

Name (print)

SR Regulatory Specialist

Title

(817) 989-9000 EXT 2143

Phone

07/19/2015

Date

-FOR RAILROAD COMMISSION USE ONLY-

CERTIFICATE OF COMPLIANCE
AND TRANSPORTATION AUTHORITY

P-4

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.: 138957

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) 2111HC					
		10. Classification <input checked="" type="checkbox"/> Oil <input type="checkbox"/> Gas <input type="checkbox"/> Other (see instruction A)			11. Effective Date 07/01/2015		
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 Due to: <input checked="" type="checkbox"/> new completion or recompletion <input type="checkbox"/> reclass oil to gas <input type="checkbox"/> reclass gas to oil <input type="checkbox"/> other well (specify) _____ <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, LP(195918)			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: _____ Approval date: _____							
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 _____ Name (print) _____ Title _____				Signature <input type="checkbox"/> Authorized Employee of previous operator <input type="checkbox"/> Authorized agent of previous operator (see instruction G) _____ 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) SR Regulatory Specialist Title cadler@approachresources.com E-mail Address (optional)				Signature <input checked="" type="checkbox"/> Authorized Employee of current operator <input type="checkbox"/> Authorized agent of current operator (see instruction G) 07/19/2015 Date _____ Phone with area code (817) 989-9000 EXT 2143			

STATEMENT OF PRODUCTIVITY OF ACREAGE
ASSIGNED TO PRORATION UNITS

Form P-15

Tracking No.: 138957

This facsimile P-15 was generated electronically
from data submitted to the RRC.

The undersigned states that he is authorized to make this statement; that he has knowledge of the facts concerning the APPROACH OPERATING LLC ,

UNIVERSITY 42 , No. 2111HC ; that such well is
LEASE OPERATOR WELL

completed in the HOLT RANCH (CONSOLIDATED) Field, CROCKETT County,

Texas and that the acreage claimed, and assigned to such well for proration purposes as authorized by special rule and as shown on the attached certified plat embraces _____

242.795 acres which can reasonably be considered to be productive of hydrocarbons.

- CERTIFICATE

I declare under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, that I am authorized to make this report, that this report was prepared by me or under my supervision and direction,

Date 07/19/2015 Signature Carol Adler

Telephone (817) 989-9000 EXT 2143 Title SR Regulatory Specialist
AREA CODE

WELL NAME	WELL #	PERMIT	API	LEASE ID	FIELD NAME	ACRES	DATE
University 42	1103	723399	105-41324	17265	Holt Ranch (Consolidated)	160.000	W-2 IP 7/8/2012
University 42	1201	662109	105-40677	256802	Holt Ranch (Consolidated)	113.485	G-1 IP 7/19/2010
University 42	1202	666360	105-40791	247118	Holt Ranch (Consolidated)	113.485	G-1 IP 3/25/2009
University 42	1203	676912	105-40966	249468	Holt Ranch (Consolidated)	113.485	W-2 IP 7/19/2012
University 42	1204	689022	105-41068	256781	Holt Ranch (Consolidated)	113.485	G-1 IP 7/1/2010
University 42	1205	716014	105-41284	263325	Holt Ranch (Consolidated)	113.485	G-1 IP 11/15/2011
University 42	1301	662110	105-40683	243913	Holt Ranch (Consolidated)	45.453	G-1 IP 10/21/2008
University 42	1303	666235	105-40786	246751	Holt Ranch (Consolidated)	45.453	G-1 IP 2/12/2009
University 42	1304	666236	105-40787	247116	Holt Ranch (Consolidated)	45.453	G-1 IP 2/12/2009
University 42	1305	666453	105-40793	17265	Holt Ranch (Consolidated)	45.453	W-2 IP 12/10/2009
University 42	1306	674847	105-40912	17265	Holt Ranch (Consolidated)	45.453	W-2 IP 12/10/2009
University 42	1307	675973	105-40934	247121	Holt Ranch (Consolidated)	45.453	G-1 IP 3/25/2009
University 42	1308	685420	105-40997	17265	Holt Ranch (Consolidated)	45.453	W-2 IP 12/10/2009
University 42	1309	701376	105-41197	17265	Holt Ranch (Consolidated)	45.453	W-2 IP 3/5/2011
University 42	1310	689024	105-41067	256801	Holt Ranch (Consolidated)	45.453	G-1 IP 7/19/2010
University 42	1311	697027	105-41145	17265	Holt Ranch (Consolidated)	45.453	W-2 IP 11/10/2010

WELL NAME	WELL #	PERMIT	API	LEASE ID	FIELD NAME	ACRES	DATE
University 42	1312	697405	105-41155	17265	Holt Ranch (Consolidated)	45.453	W-2 IP 11/10/2010
University 42	1313	701377	105-41198	17265	Holt Ranch (Consolidated)	45.453	W-2 IP 05/18/2011
University 42	1314	707354	105-41236	17265	Holt Ranch (Consolidated)	45.453	W-2 IP 5/25/2011
University 42	1315	707357	105-41237	17265	Holt Ranch (Consolidated)	45.453	W-2 IP 6/7/2011
University 42	1317	707358	105-41238	17265	Holt Ranch (Consolidated)	45.453	W-2 IP 8/4/2011
University 42	1318	707360	105-41239	17265	Holt Ranch (Consolidated)	20.000	W-2 IP 8/4/2011
University 42	1401	650721	105-40502	239761	Holt Ranch (Consolidated)	60.073	G-1 IP 5/28/2008
University 42	1402	653085	105-40527	240948	Holt Ranch (Consolidated)	60.073	G-1 IP 6/20/2008
University 42	1403	657107	105-40599	242419	Holt Ranch (Consolidated)	60.073	G-1 IP 10/9/2008
University 42	1404	660403	105-40657	243914	Holt Ranch (Consolidated)	60.073	G-1 IP 10/9/2008
University 42	1405	660404	105-40659	246756	Holt Ranch (Consolidated)	60.073	G-1 IP 7/10/2008
University 42	1407	691130	105-41091	17265	Holt Ranch (Consolidated)	60.073	W-2 IP 9/5/2012
University 42	1408	691131	105-41088	258236	Holt Ranch (Consolidated)	60.073	G-1 IP 9/23/2010
University 42	1409	697325	105-41147	17265	Holt Ranch (Consolidated)	60.073	W-2 IP 9/23/2010
University 42	1410	701379	105-41199	17265	Holt Ranch (Consolidated)	60.073	W-2 IP 9/5/2012
University 42	1411	701380	105-41200	17265	Holt Ranch (Consolidated)	60.073	W-2 IP 8/9/2012

WELL NAME	WELL #	PERMIT	API	LEASE ID	FIELD NAME	ACRES	DATE
University 42	1414	729342	105-41360	17265	Holt Ranch (Consolidated)	60.073	W-2 IP 8/9/2012
University 42	1501	653086	105-40528	240943	Holt Ranch (Consolidated)	80.000	G-1 IP 3/26/2012
University 42	1502	705388	105-40775	17265	Holt Ranch (Consolidated)	40.000	W-2 IP 11/10/2010
University 42	1503	695552	105-41131	17265	Holt Ranch (Consolidated)	40.000	W-2 IP 6/1/2010
University 42	1504	698867	105-41171	260171	Holt Ranch (Consolidated)	80.000	G-1 IP 1/21/2011
University 42	1505	698890	105-41173	17265	Holt Ranch (Consolidated)	40.000	W-2 IP 3/10/2011
University 42	1506	702589	105-41205	17265	Holt Ranch (Consolidated)	40.000	W-2 IP 3/15/2011
University 42	2201	648326	105-40467	237560	Holt Ranch (Consolidated)	40.613	G-1 IP 3/13/2008
University 42	2202	649991	105-40492	239764	Holt Ranch (Consolidated)	40.613	G-1 IP 5/20/2008
University 42	2203	653688	105-40532	241402	Holt Ranch (Consolidated)	40.613	G-1 IP 8/8/2008
University 42	2204	672998	105-40887	247117	Holt Ranch (Consolidated)	40.613	G-1 IP 3/25/2009
University 42	2205	685421	105-40998	17265	Holt Ranch (Consolidated)	40.613	W-2 IP 12/10/2009
University 42	2206	687663	105-41044	256243	Holt Ranch (Consolidated)	40.613	G-1 IP 5/27/2010
University 42	2207	689025	105-41069	256804	Holt Ranch (Consolidated)	40.613	G-1 IP 7/20/2010
University 42	2208	689026	105-41070	256803	Holt Ranch (Consolidated)	40.613	G-1 IP 7/20/2010
University 42	2209	689027	105-41071	258301	Holt Ranch (Consolidated)	40.613	G-1 IP 8/13/2010

WELL NAME	WELL #	PERMIT	API	LEASE ID	FIELD NAME	ACRES	DATE
University 42	2210	689028	105-41072	258296	Holt Ranch (Consolidated)	40.613	G-1 IP 8/13/2010
University 42	2211	695622	105-41134	17265	Holt Ranch (Consolidated)	40.613	W-2 IP 11/10/2010
University 42	2212	695580	105-41133	258244	Holt Ranch (Consolidated)	40.613	W-2 IP 9/23/2010
University 42	2213	695629	105-41135	259162	Holt Ranch (Consolidated)	40.613	G-1 IP 11/10/2010
University 42	2214	695538	105-41130	17265	Holt Ranch (Consolidated)	40.613	W-2 IP 09/28/2012
University 42	2215	697403	105-41152	17265	Holt Ranch (Consolidated)	40.613	W-2 IP 3-11-2011
University 42	2217	707993	105-41246	17265	Holt Ranch (Consolidated)	40.612	W-2 IP 7/15/2011
University 42	2301	653088	105-40529	240944	Holt Ranch (Consolidated)	43.120	G-1 IP 6/20/2008
University 42	2302	662111	105-40684	244872	Holt Ranch (Consolidated)	43.120	G-1 IP 11/13/2008
University 42	2303	666454	105-40795	248169	Holt Ranch (Consolidated)	43.120	G-1 IP 3/3/2009
University 42	2304	666455	105-40794	17265	Holt Ranch (Consolidated)	43.120	W-2 IP 3/12/2009
University 42	2305	666456	105-40796	17265	Holt Ranch (Consolidated)	43.120	W-2 IP 3/12/2009
University 42	2306	672903	105-40885	247077	Holt Ranch (Consolidated)	43.120	G-1 IP 3/12/2009
University 42	2307	672904	105-40886	17265	Holt Ranch (Consolidated)	43.120	W-2 IP 3/12/2009
University 42	2308	674135	105-40906	248473	Holt Ranch (Consolidated)	43.120	G-1 IP 05/20/2009
University 42	2309	687664	105-41045	256780	Holt Ranch (Consolidated)	43.120	G-1 IP 7/1/2010

WELL NAME	WELL #	PERMIT	API	LEASE ID	FIELD NAME	ACRES	DATE
University 42	2310	41084	105-41084	17265	Holt Ranch (Consolidated)	43.120	W-2 IP 8/13/2010
University 42	2311	697472	105-41159	17265	Holt Ranch (Consolidated)	43.120	W-2 IP 11/28/2012
University 42	2312	697406	105-41156	17265	Holt Ranch (Consolidated)	43.120	W-2 IP 8/11/2011
University 42	2313	703637	105-41224	17265	Holt Ranch (Consolidated)	43.120	W-2 IP 11/01/2011
University 42	2314	707988	105-41244	17265	Holt Ranch (Consolidated)	43.120	W-2 IP 11/7/2011
University 42	2315	707990	105-41245	17265	Holt Ranch (Consolidated)	43.120	W-2 IP 7/15/2011
University 42	2401	675974	105-40935	248472	Holt Ranch (Consolidated)	160.000	G-1 IP 5/20/2009
University 42	2402	675975	105-40936	248477	Holt Ranch (Consolidated)	160.000	G-1 IP 5/20/2009
University 42	1001HC	720739	105-41307	17265	Holt Ranch (Consolidated)	440.000	W-2 IP 2/15/2012
University 42	101HB	729607	105-41362	17265	Holt Ranch (Consolidated)	573.000	W-2 WRO 9/6/2012 W-2 IP 4/10/2013
University 42	1101X	669843	105-40835	247150	Holt Ranch (Consolidated)	340.800	G-1 IP 3/3/2009
University 42	1102R	702637	105-41206	17265	Holt Ranch (Consolidated)	160.000	W-2 WRO 5/12/2011 W-2 IP 6/28/2011
University 42	2101HB	709797	105-41255	17265	Holt Ranch (Consolidated)	300.000	W-2 IP 6/7/2011

WELL NAME	WELL #	PERMIT	API	LEASE ID	FIELD NAME	ACRES	DATE
University 42	2131HB	766266	105-41827	17265	Holt Ranch (Consolidated)	350.000	W-2 WRO 11/8/2013 W-2 IP 1/22/2014
University 42	1320HB	768090	105-41859	17265	Holt Ranch (Consolidated)	132.900	WRO 10/31/2013 WRO 11/15/2013 W-2 IP 1/28/2014
University 42	1215HC	801755	105-42185	17265	Holt Ranch (Consolidated)	242.795	W-2 7/19/2015
University 42	1217HB	801759	105-42186	17265	Holt Ranch (Consolidated)	242.795	W-2 7/19/2015
University 42	1439HC	802594	105-42202	17265	Holt Ranch (Consolidated)	242.795	W-2 7/19/2015
University 42	2111HC	801440	105-42183	17265	Holt Ranch (Consolidated)	242.795	W-2 7/19/2015
					TOTAL LEASE ACREAGE	7780.13	
					REMAINING LEASE ACRES	485.620	

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 = 453,651 ft.
 X = 1,742,301 ft.
 Latitude : 30.9114° N
 Longitude : 101.1551° W
 440 ft. FSL and 1790 ft. FWL
 University Land Survey 21, Block 42
 440 ft. FSL and 3501 ft. FEL of lease

REPORTED PENETRATION POINT

MD = 5434'
 23 ft. from Surf. 2111HC
 Y = 453,637 ft.
 X = 1,742,283 ft.
 Latitude : 30.9114° N
 Longitude : 101.1552° W
 426 ft. FSL and 1771 ft. FWL
 University Land Survey 21, Block 42
 426 ft. FSL and 3519 ft. FEL of lease

REPORTED 1st TAKE POINT

MD = 6488'
 421 ft. from PP 2111HC
 848 ft. FSL and 3520 ft. FEL of lease
 848 ft. FSL and 1770 ft. FWL
 University Land Survey 21, Block 42
 Y = 454,058 ft.
 X = 1,742,282 ft.
 Latitude : 30.9125° N
 Longitude : 101.1552° W

REPORTED LAST TAKE POINT

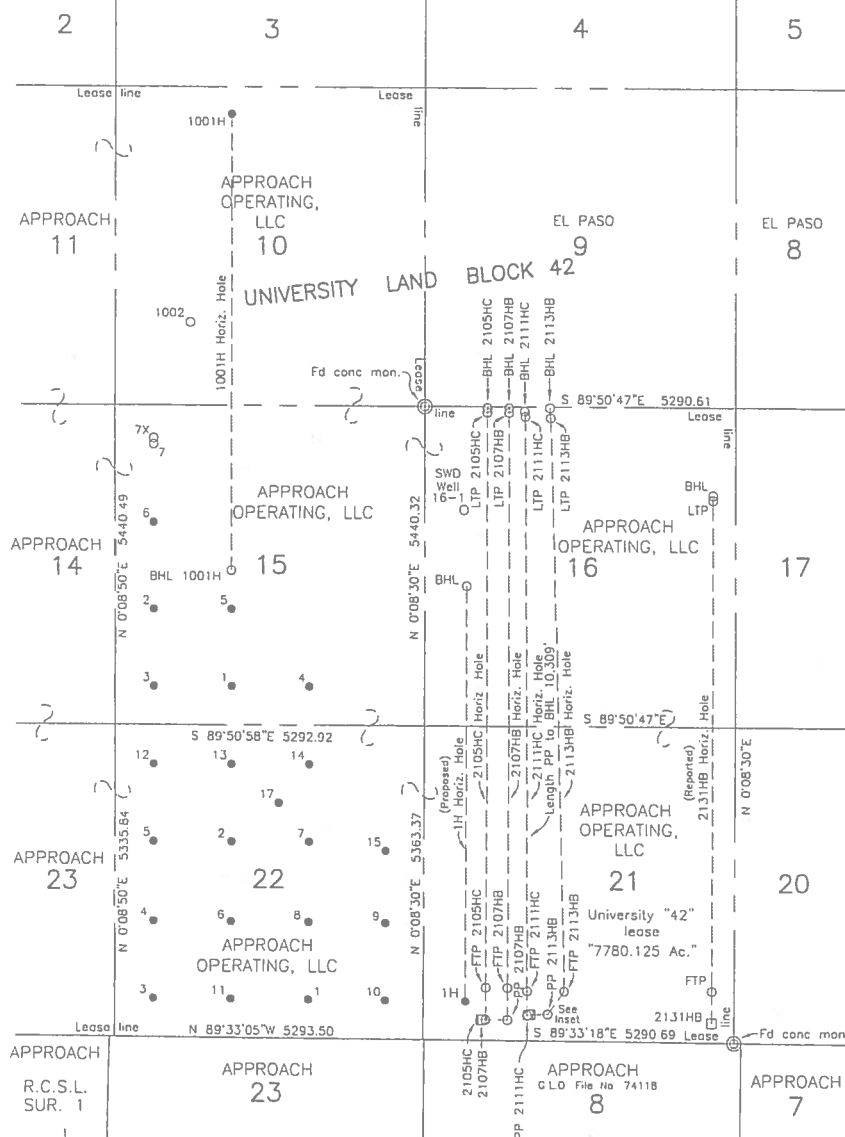
MD = 16,300'
 90 ft. from BHL 2111HC
 167 ft. FNL and 3578 ft. FEL of lease
 167 ft. FNL and 1713 ft. FWL
 University Land Survey 16, Block 42
 Y = 463,857 ft.
 X = 1,742,249 ft.
 Latitude : 30.9395° N
 Longitude : 101.1555° W

REPORTED BOTTOMHOLE LOC.

MD = 16,390'
 Y = 463,946 ft.
 X = 1,742,236 ft.
 Latitude : 30.9397° N
 Longitude : 101.1556° W
 78 ft. FNL and 1699 ft. FWL
 University Land Survey 16, Block 42
 78 ft. FNL and 3591 ft. FEL of lease

Perpendicular distances off 2111HC
 Univ. "42" horizontal hole

FTP 2107HB (proposed) = 340'
 LTP 2107HB (proposed) = 270'



Located: N 10°E 14 miles from Ozona, Texas.

"Ac." = Acreage claimed by operator to be in lease.

0 2000 4000

SCALE: 1"=2000'

FIELD COUNTY : Crockett
 OPERATOR : Approach Operating, LLC
 LEASE : University "42"
 WELL NO. : 2111HC
 ELEVATION : 2596 ft. grd.
 LOCATION : 440 ft. FSL and 1790 ft. FWL 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.

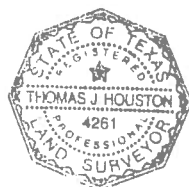
The lease information shown hereon is based on information provided by operator or its representatives and was relied upon by surveyor for the purpose of staking this location. Said surveyor was not requested to verify lease and accepts no responsibility for the accuracy or status of this information.

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.

Reported positions and take point information as shown are based on survey report provided by operator.

The above sketch represents the location as staked on the ground and is for permit purposes only.

Staked the 2nd day of December, 2014.



Thomas J. Houston
 Registered Professional Land Surveyor No 4261

FIRM NO 10045600

OFFICE OF

WILSON LAND SURVEYING, INC.

1514 W. BEAUREGARD AVE.
 P. O. BOX 3326 PH. 325-653-3916
 SAN ANGELO, TEXAS 76902

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