



RAILROAD COMMISSION OF TEXAS

Form W-2

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

Status: Approved
Date: 05/18/2018
Tracking No.: 185810

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

OPERATOR INFORMATION

Operator Name: SHELL WESTERN E&P **Operator No.:** 774719
Operator Address: PO BOX 576 HOUSTON, TX 77001-0000

WELL INFORMATION

API No.: 42-301-33215 **County:** LOVING
Well No.: 1404H **RRC District No.:** 08
Lease Name: UNIVERSITY 19 PW UNIT **Field Name:** PHANTOM (WOLFCAMP)
RRC Lease No.: 42401 **Field No.:** 71052900
Location: Section: 9, Block: 19, Survey: UL, Abstract: U9

Latitude: 31 **Longitude:** -103
This well is located 10.6 **miles in a** SE
direction from MENTONE,
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:** 01/17/2018

<u>Type of Permit</u>	<u>Date</u>	<u>Permit No.</u>
Permit to Drill, Plug Back, or Deepen	02/15/2017	823049
Rule 37 Exception		
Fluid Injection Permit		
O&G Waste Disposal Permit		
Other:		

COMPLETION INFORMATION

Spud date: 06/18/2017 **Date of first production after rig released:** 01/17/2018
Date plug back, deepening, recompletion, or drilling operation commenced: 06/17/2017 **Date plug back, deepening, recompletion, or drilling operation ended:** 10/07/2017
Number of producing wells on this lease in this field (reservoir) including this well: 29 **Distance to nearest well in lease & reservoir (ft.):** 898.0
Total number of acres in lease: 8588.11 **Elevation (ft.):** 2772 GL
Total depth TVD (ft.): 11610 **Total depth MD (ft.):** 21139
Plug back depth TVD (ft.): **Plug back depth MD (ft.):**
Was directional survey made other than inclination (Form W-12)? Yes **Rotation time within surface casing (hours):** 80.0
Is Cementing Affidavit (Form W-15) attached? Yes
Recompletion or reclass? No **Multiple completion?** No
Type(s) of electric or other log(s) run: Gamma Ray (MWD)
Electric Log Other Description:
Location of well, relative to nearest lease boundaries **Off Lease :** No
of lease on which this well is located: 1431.0 **Feet from the** SW **Line and**
3907.0 **Feet from the** NW **Line of the**
UNIVERSITY 19 PW UNIT **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.):** 1000.0 **Date:** 02/01/2017
SWR 13 Exception **Depth (ft.):** 4920.0

INITIAL POTENTIAL TEST DATA FOR NEW COMPLETION OR RECOMPLETION

Date of test: 02/15/2018 **Production method:** Flowing
Number of hours tested: 24 **Choke size:** 20/64
Was swab used during this test? No **Oil produced prior to test:** 18344.00

PRODUCTION DURING TEST PERIOD:

Oil (BBLs): 480.00 **Gas (MCF):** 744
Gas - Oil Ratio: 1550 **Flowing Tubing Pressure:** 2955.00
Water (BBLs): 1800

CALCULATED 24-HOUR RATE

Oil (BBLs): 480.0 **Gas (MCF):** 744
Oil Gravity - API - 60.: 44.5 **Casing Pressure:** 1699.00
Water (BBLs): 1800

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	4891	1218		CLASS C	2806	4988.0	0	Circulated to Surface
2	Intermediate	7	8 3/4	11969			CLASS C AND CLASS H	741	1571.0	1708	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
1	4 1/2	6 1/8	10965	21134	CLASS H	941	1138.0	1096 5	Calculation

TUBING RECORD

Row	Size (in.)	Depth (ft.)	Packer Depth (ft.)/Type
1	2 7/8	10938	10907 / VERSASET PACKER

PRODUCING/INJECTION/DISPOSAL INTERVAL

Row	Open hole?	From (ft.)	To (ft.)
1	No	L1 12067	20847.0

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

Was hydraulic fracturing treatment performed? Yes

Is well equipped with a downhole actuation sleeve? Yes **If yes, actuation pressure (PSIG):** 5483.0

Production casing test pressure (PSIG) prior to hydraulic fracturing treatment: 9500 **Actual maximum pressure (PSIG) during hydraulic fracturing:** 9490

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.)
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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>
RED BLUFF	No			No	FORMATION NOT GEOLOGICALLY PRESENT
BELL CANYON	Yes	5005.0	5019.0	Yes	
BRUSHY CANYON	Yes	7147.0	7161.0	Yes	
DELAWARE	Yes	4979.0	4993.0	Yes	
CHERRY CANYON	Yes	5934.0	5948.0	Yes	
BONE SPRINGS	Yes	8576.0	8590.0	Yes	
WOLFCAMP	Yes	11356.0	11389.0	Yes	
PENNSYLVANIAN	No			No	BELOW WELLBORE DEPTH
STRAWN	No			No	BELOW WELLBORE DEPTH
ATOKA - HIGH PRESSURE	No			No	BELOW WELLBORE DEPTH
MORROW	No			No	BELOW WELLBORE DEPTH
DEVONIAN	No			No	BELOW WELLBORE DEPTH
FUSSELMAN	No			No	BELOW WELLBORE DEPTH
ELLENBURGER	No			No	BELOW WELLBORE DEPTH

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

KOP AT 11062

THE P-6 REVISING THE LEASE ACREAGE TO 13511.2 IS CURRENTLY BEING SUBMITTED TO THE RRC. AD PLAT AND P-16 REFLECT CURRENT ACREAGE.

RRC REMARKS

PUBLIC COMMENTS:

[RRC Staff 2018-04-26 09:04:55.251] EDL=8780 feet, max acres=704, PHANTOM (WOLFCAMP) oil or gas well

CASING RECORD :

DV TOOL SET, BUT NOT OPENED AS APPROVED IN SWR 13.

TUBING RECORD:

PRODUCING/INJECTION/DISPOSAL INTERVAL :

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

POTENTIAL TEST DATA:

OPERATOR'S CERTIFICATION

Printed Name: Maureen Kovacic

Title: Regulatory Specialist

Telephone No.: (832) 337-0953

Date Certified: 05/02/2018



RAILROAD COMMISSION OF TEXAS

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

Form W-15

Rev. 08/2014

CEMENTING REPORT

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

OPERATOR INFORMATION

Operator Name: SHELL EXPLORATION & PRODUCTION CO	Operator P-5 No.: 774719
Cementer Name: BJ SERVICES, LLC	Cementer P-5 No.: 403101

WELL INFORMATION

District No.: 08	County: LOVING	
Well No.: 1404H	API No.: 4230133215	Drilling Permit No.: 823049
Lease Name: University 19 PW Unit	Lease No.:	
Field Name: Phantom (Wolfcamp)	Field No.: 71052900	

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.): 12.25	Depth of drilled hole (ft.): 4,893	Est. % wash-out or hole enlargement: 12%
Size of casing in O.D. (in.): 9.625	Casing weight (lbs/ft) and grade: 40 LB/FT, J-55	No. of centralizers used: 32
Was cement circulated to ground surface (or bottom of cellar) outside casing? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO If no for surface casing, explain in Remarks.	Setting depth shoe (ft.): 4891	Top of liner (ft.):
Hrs. waiting on cement before drill-out: +12	Calculated top of cement (ft.): 0	Setting depth liner (ft.):
Cementing date: 06/19/2017		

SLURRY

Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1	2,305	C	SEE REMARK #1	4322	13799
2	501	C	SEE REMARK #2	666	2126
3					
Total	2806			4988	15925

II. CASING CEMENTING DATA

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

SLURRY

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

III. CASING CEMENTING DATA

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

SLURRY

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

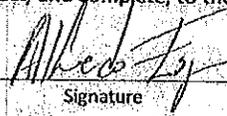
CEMENTING TO SQUEEZE PLUG BACK OR PLUG AND ABANDON

	PLUG #1	PLUG #2	PLUG #3	PLUG #4	PLUG #5	PLUG #6	PLUG #7
Cementing Date							
Size of hole or pipe (in.)							
Depth to bottom of tubing or drill pipe (ft.)							
Cement retainer setting depth (ft.)							
CIBP setting depth (ft.)							
Amount of cement on top of CIBP (ft.)							
Sacks of cement used							
Slurry volume pumped (cu. ft.)							
Calculated top of plug (ft.)							
Measured top of plug, if tagged (ft.)							
Slurry weight (lbs/gal)							
Class/type of cement							
Perforate and squeeze (YES/NO)							

REMARKS

REMARK #1: C65/35POZ+ 4% BENTONITE+ 1% R-3+ 0.65% SMS+ 5% SALT+ 0.01 GAL/SK FP-6L+ 0.005 LB/SK STATIC FREE. REMARK #2: C+ 0.35% R-3+ 0.15% SMS+ 0.01 GAL/SK FP-6L+ 0.005 LB/SK STATIC FREE. CIRCULATED 430 BBLs @ 12.8 PPG (1,288SACKS) BACK TO SURFACE.

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.

JESUS ALFREDO ESPARZA **BJ SERVICES, LLC** 
 Name and title of cementer's representative Cementing Company Signature
 11211 FM 2920 RD. **TOMBALL, TX 77375 (281) 408-2361** **06/19/2017**
 Address City, State, Zip Code Tel: Area Code Number Date: mo. day yr.

OPERATOR'S CERTIFICATE: I declare under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, that I am authorized to make this certification, that I have knowledge of the well data and information presented in this report, and that data and facts presented on both sides of this form are true, correct, and complete, to the best of my knowledge. This certification covers all well data.

Maureen Kovacic **Regulatory Specialist** 
 Typed or printed name of operator's representative Title Signature
 150 N. Dairy Ashford Houston TX 77079 832-337-0953 03/06/2018
 Address City, State, Zip Code Tel: Area Code Number Date: mo. day yr.

Instructions for Form W-15, Cementing Report

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

- 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_floc=&p_tloc=&p_ploc=&p_tac=1&p_tac=&ti=16&pt=1&ch=3&rl=14](http://info.sos.state.tx.us/pls/pub/readtac$ext.TacPage?sl=R&app=9&p_dir=&p_floc=&p_tloc=&p_ploc=&p_tac=1&p_tac=&ti=16&pt=1&ch=3&rl=14)). Cementing companies, service companies, or operators can qualify as approved cementers by demonstrating that they are able to mix and pump cement in compliance with Commission rules and regulations.
- D. Estimated % wash-out:** If the estimated % wash-out is less than 20% (or 30% along the Gulf Coast), provide supporting documentation such as a caliper log to show how the estimated % wash-out was obtained.
- 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-15s 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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Operator: Fill in other items.

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OPERATOR INFORMATION

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Cementer Name: BJ SERVICES, LLC	Cementer P-5 No.: 403101

WELL INFORMATION

District No.: 08	County: LOVING	
Well No.: 1404H	API No.: 42301332160000	Drilling Permit No.: 823049
Lease Name: UNIVERSITY 18 PW UNIT	Lease No.: 42401	
Field Name: Phantom (Wolfcamp)	Field No.: 71052900	

I. CASING CEMENTING DATA

Type of casing: <input type="checkbox"/> Conductor <input type="checkbox"/> Surface <input checked="" type="checkbox"/> Intermediate <input type="checkbox"/> Liner <input type="checkbox"/> Production		
Drilled hole size (in.): 8.75	Depth of drilled hole (ft.): 11,978	Est. % wash-out or hole enlargement: 10%
Size of casing in O.D. (in.): 7	Casing weight (lbs/ft) and grade: 20, P-110	No. of centralizers used: 78
Was cement circulated to ground surface (or bottom of cellar) outside casing? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO If no for surface casing, explain in Remarks.	Setting depth shoe (ft.): 11969	Top of liner (ft.):
		Setting depth liner (ft.):
Hrs. waiting on cement before drill-out: +12	Calculated top of cement (ft.): 1708	Cementing date: 07/11/2017

SLURRY

Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1	275	C	SEE REMARK #1	1,010	8,710
2	466	H	SEE REMARK #2	501	3,731
3					
Total	741			1,571	10,449

II. CASING CEMENTING DATA

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

SLURRY

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

III. CASING CEMENTING DATA

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

SLURRY

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

CEMENTING TO SQUEEZE PLUG BACK OR PLUG AND ABANDON

	PLUG #1	PLUG #2	PLUG #3	PLUG #4	PLUG #5	PLUG #6	PLUG #7
Cementing Date							
Size of hole or pipe (In.)							
Depth to bottom of tubing or drill pipe (ft.)							
Cement retainer setting depth (ft.)							
CIBP setting depth (ft.)							
Amount of cement on top of CIBP (ft.)							
Sacks of cement used							
Slurry volume pumped (cu. ft.)							
Calculated top of plug (ft.)							
Measured top of plug, if tagged (ft.)							
Slurry weight (lbs/gal)							
Class/type of cement							
Perforate and squeeze (YES/NO)							

REMARKS

REMARK #1: C65/35POZ+ 10% BA-80+ 6% BENTONITE+ 5% A-10+ 1.2% R3+ 1% OD32+ 2.25% SMS+ 1.6% FL-62+ 3% POTASSIUM CHLORIDE+ 0.005 LB/SK STATIC FREE+ 0.005 GAL/SK FP-6L. REMARK #2: H50/50POZ+ 2% BENTONITE+ 0.6% FL-66+ 0.35% CD-32+ 0.4% R-3+ 0.35% SMS+ 0.005 LB/SK STATIC FREE+ 0.01 GAL/SK FP-6L.

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JESUS ALFREDO ESPARZA

BJ SERVICES, LLC

Name and title of cementer's representative

Cementing Company

Signature

11211 FM 2920 RD.

TOMBALL, TX 77375

(281) 408-2361

07/11/2017

Address

City, State, Zip Code

Tel: Area Code Number

Date: mo. day yr.

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Maureen Koyacic

Regulatory Specialist

Typed or printed name of operator's representative

Title

Signature

150 N. Dairy Ashford

Houston TX 770079

832-337-0953

03/06/2018

Address

City, State, Zip Code

Tel: Area Code Number

Date: mo. day yr.

Instructions for Form W-15, Cementing Report

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

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



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Austin, Texas 78701-2967

Form W-15

Rev. 08/2014

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

CEMENTING REPORT

OPERATOR INFORMATION

Operator Name: SHELL EXPLORATION	Operator P-5 No.: 774719
Cementer Name: BJ SERVICES, LLC	Cementer P-5 No.: 403101

WELL INFORMATION

District No.: 08	County:	
Well No.: UNIT 1404H	API No.: 42-301-33215	Drilling Permit No.: 823049
Lease Name: UNIVERSITY	Lease No.: 19 PLU	
Field Name: Phantom (Wolfcamp)	Field No.: 71052900	

I. CASING CEMENTING DATA

Type of casing: Conductor Surface Intermediate Liner Production

Drilled hole size (in.): 6 1/8" Depth of drilled hole (ft.): 21,139 Est. % wash-out or hole enlargement: 15%

Size of casing in O.D. (in.): 4 1/2" Casing weight (lbs/ft) and grade: 11.6/P110 No. of centralizers used:

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.): 21134 Top of liner (ft.): 10965

Hrs. waiting on cement before drill-out: n/a Calculated top of cement (ft.): 10965' Setting depth liner (ft.): 21134 Cementing date: 08-25-17

SLURRY

Slurry No.	No. of Sacks	Class	Additives	Volume (cu. ft.)	Height (ft.)
1	941	H	REMARKS 1	1138	12034
2					
3					
Total	941			1138	12034

II. CASING CEMENTING DATA

Type of casing: Surface Intermediate Production Tapered production Multi-stage cement shoe Multiple parallel strings

Drilled hole size (in.): Depth of drilled hole (ft.): Est. % wash-out or hole enlargement:

Size of casing in O.D. (in.): Casing weight (lbs/ft) and grade: No. of centralizers used:

Tapered string drilled hole size (in.) Tapered string depth of drilled hole (ft.)

Upper: Lower: Upper: Lower:

Tapered string size of casing in O.D. (in.) Tapered string casing weight (lbs/ft) and grade Tapered string no. of centralizers used

Upper: Lower: Upper: Lower:

Was cement circulated to ground surface (or bottom of cellar) outside casing? YES NO Setting depth shoe (ft.):

Hrs. waiting on cement before drill-out: Calculated top of cement (ft.): Cementing date:

SLURRY

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

III. CASING CEMENTING DATA

Type of casing: Surface Intermediate Production Tapered production Multi-stage cement/DV tool Multiple parallel strings

Drilled hole size (in.): Depth of drilled hole (ft.): Est. % wash-out or hole enlargement:

Size of casing in O.D. (in.): Casing weight (lbs/ft) and grade: No. of centralizers used:

Tapered string drilled hole size (in.) Tapered string depth of drilled hole (ft.)

Upper: Lower: Upper: Lower:

Tapered string size of casing in O.D. (in.) Tapered string casing weight (lbs/ft) and grade Tapered string no. of centralizers used

Upper: Lower: Upper: Lower:

Was cement circulated to ground surface (or bottom of cellar) outside casing? YES NO Setting depth tool (ft.):

Hrs. waiting on cement before drill-out: Calculated top of cement (ft.): Cementing date:

SLURRY

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

CEMENTING TO SQUEEZE, PLUGBACK OR PLUG AND ABANDON

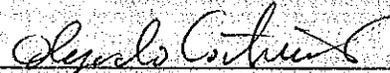
	PLUG #1	PLUG #2	PLUG #3	PLUG #4	PLUG #5	PLUG #6	PLUG #7
Cementing Date							
Size of hole or pipe (in.)							
Depth to bottom of tubing or drill pipe (ft.)							
Cement retainer setting depth (ft.)							
CIBP setting depth (ft.)							
Amount of cement on top of CIBP (ft.)							
Sacks of cement 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

REMARKS 1: CLASS H+.65%FL-66+.30%CD-32+.35%SMS+.005#/SK STATIC FREE

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.

Service Specialist- Alejandro Contreras BJ SERVICES, LLC



Name and title of cementer's representative	Cementing Company	Signature
11211 FM 2920 RD	TOMBALL, TEXAS 77375	(281) 408-2361
Address	City, State, Zip Code	Tel: Area Code Number Date: mo. day yr.

OPERATOR'S CERTIFICATE: I declare under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, that I am authorized to make this certification, that I have knowledge of the well data and information presented in this report, and that data and facts presented on both sides of this form are true, correct, and complete, to the best of my knowledge. This certification covers all well data.

Maureen Kovacic Regulatory Specialist



Typed or printed name of operator's representative	Title	Signature
150 N. Dairy Ashford	Houston TX 77079	832-337-0953
Address	City, State, Zip Code	Tel: Area Code Number Date: mo. day yr.

Instructions for Form W-15, Cementing Report

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

- 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&p_tac=&ti=16&pt=1&ch=3&rl=14](http://info.sos.state.tx.us/pls/pub/readtac$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=16&pt=1&ch=3&rl=14)). Cementing companies, service companies, or operators can qualify as approved cementers by demonstrating that they are able to mix and pump cement in compliance with Commission rules and regulations.
- D. **Estimated % wash-out:** If the estimated % wash-out is less than 20% (or 30% along the Gulf Coast), provide supporting documentation such as a caliper log to show how the estimated % wash-out was obtained.
- 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-15s 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
D. CRAIG PEARSON
DISTRICT DIRECTOR

RAILROAD COMMISSION OF TEXAS OIL AND GAS DIVISION

OPERATOR Name: SHELL WESTERN E&P
Address1: PO BOX 576
Address2:
City: HOUSTON
State: TX

RE: Lease: UNIVERSITY 19 PW UNIT
Well No: 1404H
Sec: 9 **Block:** 19
County: LOVING
Survey Name: UL

SWR13EX Application Number: 13170

Drilling Permit No: 823049

SWR 13 CASING EXCEPTION APPLICATION/ALTERNATIVE REQUEST APPROVED

The Proposed Casing and Cementing Program submitted for the **LEASE NAME:** UNIVERSITY 19 PW UNIT ;
WELL NUMBER: 1404H 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 4900 feet of surface casing with a multistage tool set at a depth of not less than 1160 feet. Circulate cement from the multistage tool to the ground surface. If cement does not circulate to surface during the first stage, the multistage tool MUST be opened and neat cement be circulated from the tool to the surface.

The proposed alternative drilling fluid program for the fresh water protected interval is hereby approved.

Please notify the Midland District Office immediately if any gas, H₂S or otherwise, is encountered before surface casing is set.

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 02/21/2017
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: Erik Hanson

DATE: 02/27/2017

D. CRAIG PEARSON

DISTRICT DIRECTOR



APPLICATION FOR APPROVAL OF SURFACE CASING > 3500 FEET
Statewide Rule 13(b)(1)(A)
RAILROAD COMMISSION OF TEXAS

Operator's Name and Address: Shell Western E&P
 150 N. Dairy Ashford
 Houston, Texas 77079

P5 Number: 774719

Area for review: District 8
 Lease Name: UNIVERSITY 19 PW UNIT 1404H
 Field Name: Phantom (Wolfcamp) County: Loving
 Survey: UL Abstract: U9
 Drilling Permits: 823049

Note: Attach a map if the request is for more than one pad.

How will the operator maintain well control during drilling operations:

While drilling the surface hole Shell utilizes drilling fluid of sufficient weight to overbalance the formations being penetrated.
In the event that flow is encountered a low-pressure rotating head is rigged-up under the rig floor to divert flow to the reserve pit.

How will the operator ensure cement is circulated to surface and that there is adequate bonding of cement:

A DV tool is placed below the water table (as defined by the GAU), and Shell pumps a minimum of 250% excess cement for the second stage of the surface cement job. Depending on nearby offsets the amount of excess pumped has been as high as 300%. Adequate bonding of cement is achieved by utilizing the centralizer program as outlined in RRC Rule 3.13 (b) (1) (G). A second stage of cement is only included in this request plan as a contingency measure to achieve cement returns to surface, in which case the DV tool would be opened.

How will the operator prevent the migration of formation fluids thru the annular space:

All cement slurries pumped by Shell comply with RRC Rule 3.13 (b) (1) (D) and Rule 3.13 (b) (1) (E). These slurries have been effective in preventing migration of formation fluids after the cement has been placed in the 100+ wells Shell has drilled in the Permian.

Signature: Sondra Bienvenu Name: Sondra Bienvenu Date: 02/21/2017 Phone: 832-337-3100

RRC District Office Action:			
<input checked="" type="checkbox"/> Approved	<input type="checkbox"/> Approved as Modified	<input type="checkbox"/> Denied	By <u>Erik Hanson</u> Date: <u>2-27-17</u>
Remarks/Modifications:			

RRC Use Only ▶

Tracking No.: 185810

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: SHELL WESTERN E&P	District No. 08	Completion Date: 01/17/2018
Field Name PHANTOM (WOLFCAMP)	Drilling Permit No. 823049	
Lease Name UNIVERSITY 19 PW UNIT	Lease/ID No. 42401	Well No. 1404H
County LOVING	API No. 42- 301-33215	

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). _____

Maureen Kovacic

 Signature
 SHELL WESTERN E&P

 Name (print)

Regulatory Specialist

 Title
 (832) 337-0953

 Phone
 03/06/2018

 Date

-FOR RAILROAD COMMISSION USE ONLY-



PHOENIX TECHNOLOGY SERVICES

MD
1:1200
Feet

MWD Gamma / ROP (1")

Client: SWEPI

Well Name: UNIVERSITY 19 PW UNIT 1404H

API/UWID: 42301332150000

County: LOVING

Field: Permian

Permit #: 823049

State: TEXAS

Country: USA

Longitude: 103° 25' 6.08351 W

Latitude: 31° 41' 57.46848 N

Personnel

Rig Name: ENSIGN 775
Job Number: 60916
Ground Level: 2772.10 ft
Kelly Bushing: 2800.00 ft
Drill Floor: 27.90 ft
Permanent Datum: Mean Sea Level
Drilling Measured From: Kelly Bushing
Spud Date: June 17, 2017
Bottom Hole Temp: N/A °F
Log Start Depth: 100.00 ft
Log End Depth: 21150.00 ft

Company Representative
TRAMPUS STEWART

Geologist

Directional Driller(s)
JARED SPITTLE
BRIAN TYLER
CLAYTON MIECH

MWD Operator(s)
SEAN BURROUGHS
JERAD STEEL
KYLE CLARK

Reference Data

North Reference: Grid North
Magnetic Declination: 7.02
Grid Convergence: -1.59
Total Mag Correction: 8.61

Comments:

Main Leg

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Operational Run Summary

60916

	Run 1	Run 2	Run 3	Run 4	Run 5	Run 6
Run Start Depth (ft)	0.00	4893.05	10014.91	11032.00	11978.36	14863.69
Run End Depth (ft)	4893.05	10014.91	11032.00	11978.36	14863.69	18304.83
Run Start Date	6/16/2017	7/5/2017	7/8/2017	7/9/2017	8/14/2017	8/18/2017
Run Start Time	7:32 AM	7:08 AM	10:39 AM	8:26 AM	11:03 AM	5:56 PM
Run End Date	6/18/2017	7/8/2017	7/9/2017	7/10/2017	8/18/2017	8/21/2017
Run End Time	6:05 PM	9:39 AM	6:35 AM	9:17 AM	2:08 PM	6:51 AM

Run 7						
Run Start Depth (ft)	18304.83					
Run End Depth (ft)	21139.21					
Run Start Date	8/21/2017					
Run Start Time	11:05 AM					
Run End Date	8/24/2017					
Run End Time	12:35 AM					

Tool Information Summary

60916

	Run 1	Run 2	Run 3	Run 4	Run 5	Run 6
Gamma Probe Serial No	EB-0039 / EGNF0110	EB0039 / EGNF0110	EB0039 / EGNF0110	EB0045 / EGNF0061	EB0026 / EGNF0165	EB0026 / EGNF0165

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.: 185810

1. Field name exactly as shown on proration schedule PHANTOM (WOLFCAMP)		2. Lease name as shown on proration schedule UNIVERSITY 19 PW UNIT		
3. Current operator name exactly as shown on P-5 Organization Report SHELL WESTERN E&P		4. Operator P-5 no. 774719	5. Oil Lse/Gas ID no. 42401	6. County LOVING
8. Operator address including city, state, and zip code PO BOX 576 HOUSTON, TX 77001		9. Well no(s) (see instruction E) 1404H		7. RRC district 08
		10. Classification <input checked="" type="checkbox"/> Oil <input type="checkbox"/> Gas <input type="checkbox"/> Other (see instruction A)		11. Effective Date 01/17/2018
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 checked="" 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
X		DELAWARE G&P LLC(211538)		100.0
	X	SHELL ENERGY NORTH AM. (US), LP(773822)		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
SHELL WESTERN E&P(774719)				100.0
RRC USE ONLY: Reviewer's initials: <u>RRC Staff</u> Approval date: <u>05/18/2018</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.				
SHELL WESTERN E&P		Maureen Kovacic		
Name (print)		Signature		
Regulatory Specialist		<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
maureen.kovacic@shell.com		01/16/2018		(832) 337-0953
E-mail Address (optional)		Date		Phone with area code

**CERTIFICATE OF
 POOLING AUTHORITY**

P-12

Revised 05/2001

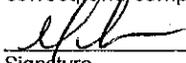
1. Field Name(s) Phantom (Wolfcamp)	2. Lease/ID Number (if assigned) 42401	3. RRC District Number 08
4. Operator Name Shell Western E&P	5. Operator P-5 Number 774719	6. Well Number 1404H
7. Pooled Unit Name University 19 PW Unit	8. API Number 301-33215	9. Purpose of Filing <input type="checkbox"/> Drilling Permit (W-1) <input checked="" type="checkbox"/> Completion Report
10. County Loving & Ward	11. Total acres in pooled unit 13511.20	

DESCRIPTION OF INDIVIDUAL TRACTS CONTAINED WITHIN THE POOLED UNIT

TRACT/PLAT IDENTIFIER	TRACT NAME	ACRES IN TRACT (See inst. #7 below)	INDICATE UNDIVIDED INTERESTS	
			UNLEASED	NON-POOLED
Tr. 1	University Lands	160.24	<input type="checkbox"/>	<input type="checkbox"/>
Tr. 2	University Lands	480.71	<input type="checkbox"/>	<input type="checkbox"/>
Tr. 3	University Lands	520.93	<input type="checkbox"/>	<input type="checkbox"/>
Tr. 4	University Lands	641.05	<input type="checkbox"/>	<input type="checkbox"/>
Tr. 5	University Lands	280.46	<input type="checkbox"/>	<input type="checkbox"/>
Tr. 6	University Lands (below 11710')	40.07	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Tr. 7	University Lands	320.50	<input type="checkbox"/>	<input type="checkbox"/>
Tr. 8	University Lands	641.06	<input type="checkbox"/>	<input type="checkbox"/>
Tr. 9	University Lands	566.27	<input type="checkbox"/>	<input type="checkbox"/>
Tr. 10	University Lands	641.31	<input type="checkbox"/>	<input type="checkbox"/>

CERTIFICATION:

I declare under penalties prescribed pursuant to the Sec. 91.143, Texas Natural Resources Code, that I am authorized to make the foregoing statements and that the information provided by me or under my direction on this Certificate of Pooling Authority is true, correct, and complete to the best of my knowledge.

	Maureen Kovacic
Signature	Print Name
Reg. Specialist	03/06/2018
maureen.kovacic@shell.com	(832) 337-0953
Title	Date
E-mail (if available)	Phone

INSTRUCTIONS — Reference: Statewide Rules 31, 38 and 40

- When two or more tracts are pooled to form a unit to obtain a drilling permit, file completion paperwork, or reform a pooled unit pursuant to Rule 38(d)(3) the operator must file an original Certificate of Pooling Authority and certified plat.
- The certified plat shall designate each tract with an outline and a tract identifier. The tract identifier on the plat shall correspond to the tract identifier and associated information listed on the Certificate.
- If within an individual tract, a non-pooled and/or unleased interest exists, indicate by checking the appropriate box.
- If the Purpose of Filing is to obtain a drilling permit, in box #1 list all applicable fields separately or enter "All Fields" if the Certificate pertains to all fields requested on Form W-1.
- If the Purpose of Filing is to file completion paperwork, enter the applicable field name in box #1 for the completion.
- Identify the drill site tract with an * to the left of the tract identifier.
- The total number of acres in the pooled unit in #11 should equal the total of all acres in the individual tracts listed.

**CERTIFICATE OF
 POOLING AUTHORITY**

P-12

Revised 05/2001

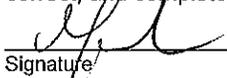
1. Field Name(s) Phantom (Wolfcamp)	2. Lease/ID Number (if assigned) 42401	3. RRC District Number 08
4. Operator Name Shell Western E&P	5. Operator P-5 Number 774719	6. Well Number 1404H
7. Pooled Unit Name University 19 PW Unit	8. API Number 301-33215	9. Purpose of Filing <input type="checkbox"/> Drilling Permit (W-1) <input checked="" type="checkbox"/> Completion Report
10. County Loving & Ward	11. Total acres in pooled unit 13511.20	

DESCRIPTION OF INDIVIDUAL TRACTS CONTAINED WITHIN THE POOLED UNIT

TRACT/PLAT IDENTIFIER	TRACT NAME	ACRES IN TRACT (See inst. #7 below)	INDICATE UNDIVIDED INTERESTS	
			UNLEASED	NON-POOLED
Tr. 1	University Lands	160.24	<input type="checkbox"/>	<input type="checkbox"/>
Tr. 2	University Lands	480.71	<input type="checkbox"/>	<input type="checkbox"/>
Tr. 3	University Lands	520.93	<input type="checkbox"/>	<input type="checkbox"/>
Tr. 4	University Lands	641.05	<input type="checkbox"/>	<input type="checkbox"/>
Tr. 5	University Lands	280.46	<input type="checkbox"/>	<input type="checkbox"/>
Tr. 6	University Lands (below 11710')	40.07	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Tr. 7	University Lands	320.50	<input type="checkbox"/>	<input type="checkbox"/>
Tr. 8	University Lands	641.06	<input type="checkbox"/>	<input type="checkbox"/>
Tr. 9	University Lands	566.27	<input type="checkbox"/>	<input type="checkbox"/>
Tr. 10	University Lands	641.31	<input type="checkbox"/>	<input type="checkbox"/>

CERTIFICATION:

I declare under penalties prescribed pursuant to the Sec. 91.143, Texas Natural Resources Code, that I am authorized to make the foregoing statements and that the information provided by me or under my direction on this Certificate of Pooling Authority is true, correct, and complete to the best of my knowledge.



Maureen Kovacic

Signature

Print Name

Reg. Specialist

maureen.kovacic@shell.com

03/06/2018

(832) 337-0953

Title

E-mail (if available)

Date

Phone

INSTRUCTIONS — Reference: Statewide Rules 31, 38 and 40

- When two or more tracts are pooled to form a unit to obtain a drilling permit, file completion paperwork, or reform a pooled unit pursuant to Rule 38(d)(3) the operator must file an original Certificate of Pooling Authority and certified plat.
- The certified plat shall designate each tract with an outline and a tract identifier. The tract identifier on the plat shall correspond to the tract identifier and associated information listed on the Certificate.
- If within an individual tract, a non-pooled and/or unleased interest exists, indicate by checking the appropriate box.
- If the Purpose of Filing is to obtain a drilling permit, in box #1 list all applicable fields separately or enter "All Fields" if the Certificate pertains to all fields requested on Form W-1.
- If the Purpose of Filing is to file completion paperwork, enter the applicable field name in box #1 for the completion.
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**CERTIFICATE OF
 POOLING AUTHORITY**

P-12

Revised 05/2001

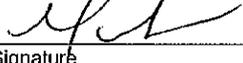
1. Field Name(s) Phantom (Wolfcamp)	2. Lease/ID Number (if assigned) 42401	3. RRC District Number 08
4. Operator Name Shell Western E&P	5. Operator P-5 Number 774719	6. Well Number 1404H
7. Pooled Unit Name University 19 PW Unit	8. API Number 301-33215	9. Purpose of Filing <input type="checkbox"/> Drilling Permit (W-1) <input checked="" type="checkbox"/> Completion Report
10. County Loving & Ward	11. Total acres in pooled unit 13511.20	

DESCRIPTION OF INDIVIDUAL TRACTS CONTAINED WITHIN THE POOLED UNIT

TRACT/PLAT IDENTIFIER	TRACT NAME	ACRES IN TRACT (See inst. #7 below)	INDICATE UNDIVIDED INTERESTS	
			UNLEASED	NON-POOLED
Tr. 23	University Lands	640.99	<input type="checkbox"/>	<input type="checkbox"/>
Tr. 24	University Lands	640.90	<input type="checkbox"/>	<input type="checkbox"/>
Tr. 25	University Lands	640.86	<input type="checkbox"/>	<input type="checkbox"/>
Tr. 26	University Lands	639.62	<input type="checkbox"/>	<input type="checkbox"/>
Tr. 27	University Lands	638.33	<input type="checkbox"/>	<input type="checkbox"/>
Tr. 28	University Lands	200.31	<input type="checkbox"/>	<input type="checkbox"/>
Tr. 29	University Lands	120.19	<input type="checkbox"/>	<input type="checkbox"/>
Tr. 30	University Lands	320.50	<input type="checkbox"/>	<input type="checkbox"/>
Tr. 32	University Lands	320.48	<input type="checkbox"/>	<input type="checkbox"/>
Tr. 34	University Lands	320.52	<input type="checkbox"/>	<input type="checkbox"/>

CERTIFICATION:

I declare under penalties prescribed pursuant to the Sec. 91.143, Texas Natural Resources Code, that I am authorized to make the foregoing statements and that the information provided by me or under my direction on this Certificate of Pooling Authority is true, correct, and complete to the best of my knowledge.


 Signature _____ Print Name Maureen Kovacic
 Reg. Specialist _____ E-mail (if available) Maureen.kovacic@shell.com
 Title _____ Date 03/06/2018 Phone (832) 337-0549

INSTRUCTIONS — Reference: Statewide Rules 31, 38 and 40

- When two or more tracts are pooled to form a unit to obtain a drilling permit, file completion paperwork, or reform a pooled unit pursuant to Rule 38(d)(3) the operator must file an original Certificate of Pooling Authority and certified plat.
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- The total number of acres in the pooled unit in #11 should equal the total of all acres in the individual tracts listed.



RAILROAD COMMISSION OF TEXAS

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

Form P-16

Page 1

Rev. 01/2016

Acreage Designation

SECTION I. OPERATOR INFORMATION

Operator Name: Shell Western E&P
Operator P-5 No.: 774719
Operator Address: P.O. Box 576, Houston, Texas 77001

SECTION II. WELL INFORMATION

District No.: 08
County: Loving and Ward
Well No.: 1404H
API No.: 42-301-33215
Total Lease Acres: 8588.11
Drilling Permit No.: 823049
Lease Name: University 19 PW Unit
Lease No.: 42401
Field Name: Phantom (Wolfcamp)
Field No.: 71052900
Purpose of Filing: [X] Completion Report (Form G-1/W-2)

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

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

Table with 8 columns: RRC ID No. or Lease No., Well No., H-Horizontal D-Directional V-Vertical, Lease Name, API No., Acres Assigned, SWR 38 Except. (Y/N), Operator Name and Operator No. (if different from filing operator). Rows list multiple wells under University 19 PW Unit.

Summary table for Section III: Total Well Count > 29, Total Assigned Horiz. Acreage < 7598.45, Total Remaining Horiz. Acreage < 989.66, Total Assigned Vert./Dir. Acreage < , Total Remaining Vert./Dir. Acreage < .

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

This well should be assigned to University 19 PW Unit, lease ID 42401

Attach Additional Pages As Needed. [] No additional pages [X] Additional Pages: 1 (No. of additional pages)

CERTIFICATION: I declare under penalties prescribed in Sec. 91.143, Texas Natural Resources Code, that this report was prepared by me or under my supervision or direction, that I am authorized to make this report, and that the information contained in this report is true, correct, and complete to the best of my knowledge.

Signature: [Handwritten Signature]
Name and title (type or print): Maureen Kovacic, Regulatory Specialist
Email (include email address only if you affirmatively consent to its public release): maureen.kovacic@shell.com

150 N. Dairy Ashford
Houston TX 77079 832 337-0953 04/23/2018
Address City, State, Zip Code Tel: Area Code Number Date: mo. day yr.

UNIVERSITY 19 PW UNIT

13511.20 ACRES (MEASURED)

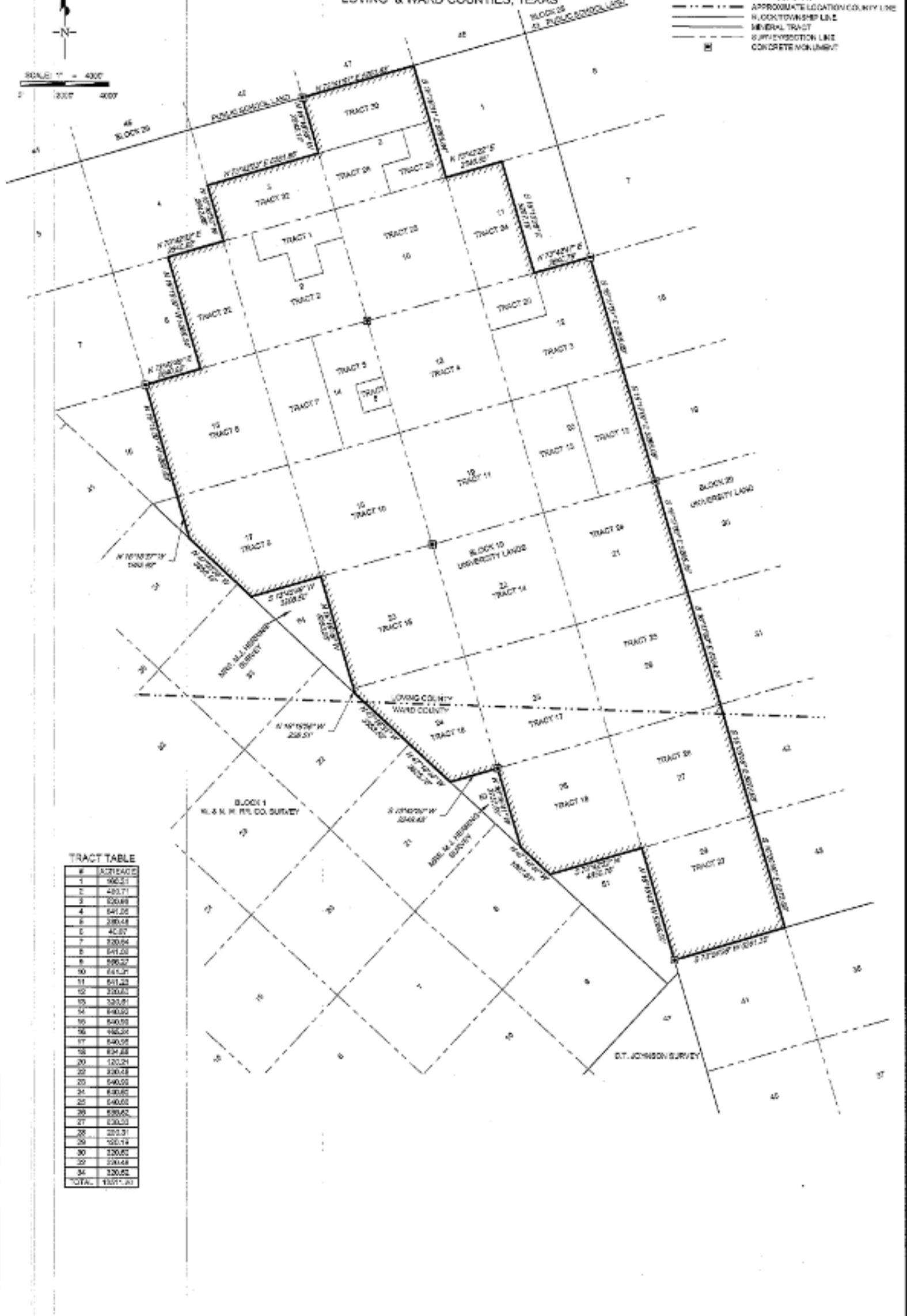
SECTIONS 2, 9, 10, 12, 13, 14, 15, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28 & 29,
S/2 OF SECTION 3, E/2 OF SECTION 8, W/2 OF SECTION 11
BLOCK 19, UNIVERSITY LAND
LOVING & WARD COUNTIES, TEXAS

SHELL WESTERN
E&P

LEGEND

- UNIT BOUNDARY
- APPROXIMATE LOCATION COUNTY LINE
- BLOCK/TOWNSHIP LINE
- GENERAL TRACT
- SURVEY SECTION LINE
- CONCRETE MONUMENT

SCALE: 1" = 400'



TRACT TABLE

#	ACREAGE
1	962.31
2	489.71
3	220.89
4	641.22
5	280.48
6	42.87
7	230.84
8	641.22
9	686.27
10	641.21
11	611.23
12	230.03
13	320.81
14	640.00
15	640.00
16	640.00
17	640.00
18	640.00
19	640.00
20	120.21
21	230.48
22	640.00
23	640.00
24	640.00
25	640.00
26	640.00
27	640.00
28	220.31
29	220.14
30	230.62
31	230.48
32	230.48
33	230.48
TOTAL	13511.20

GROUNDWATER PROTECTION DETERMINATION

Form GW-2



Groundwater Advisory Unit

Date Issued: 01 February 2017 **GAU Number:** 166499

Attention:	SHELL WESTERN E&P PO BOX 576 HOUSTON, TX 77001	API Number:	
Operator No.:	774719	County:	LOVING
		Lease Name:	University 19 PW Unit
		Lease Number:	
		Well Number:	1407H
		Total Vertical Depth:	12000
		Latitude:	31.699414
		Longitude:	-103.410281
		Datum:	NAD27

Purpose: New Drill
Location: Survey-UL; Block-19; Section-9

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 300 feet, and the Rustler, the top of which is estimated to occur from 500 to 550 feet depth and the base of which is estimated to occur from 950 to 1000 feet depth by reconnaissance-level evaluation, must be protected.

This recommendation is applicable for all wells drilled in this sec. 9.

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 01/25/2017. 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.

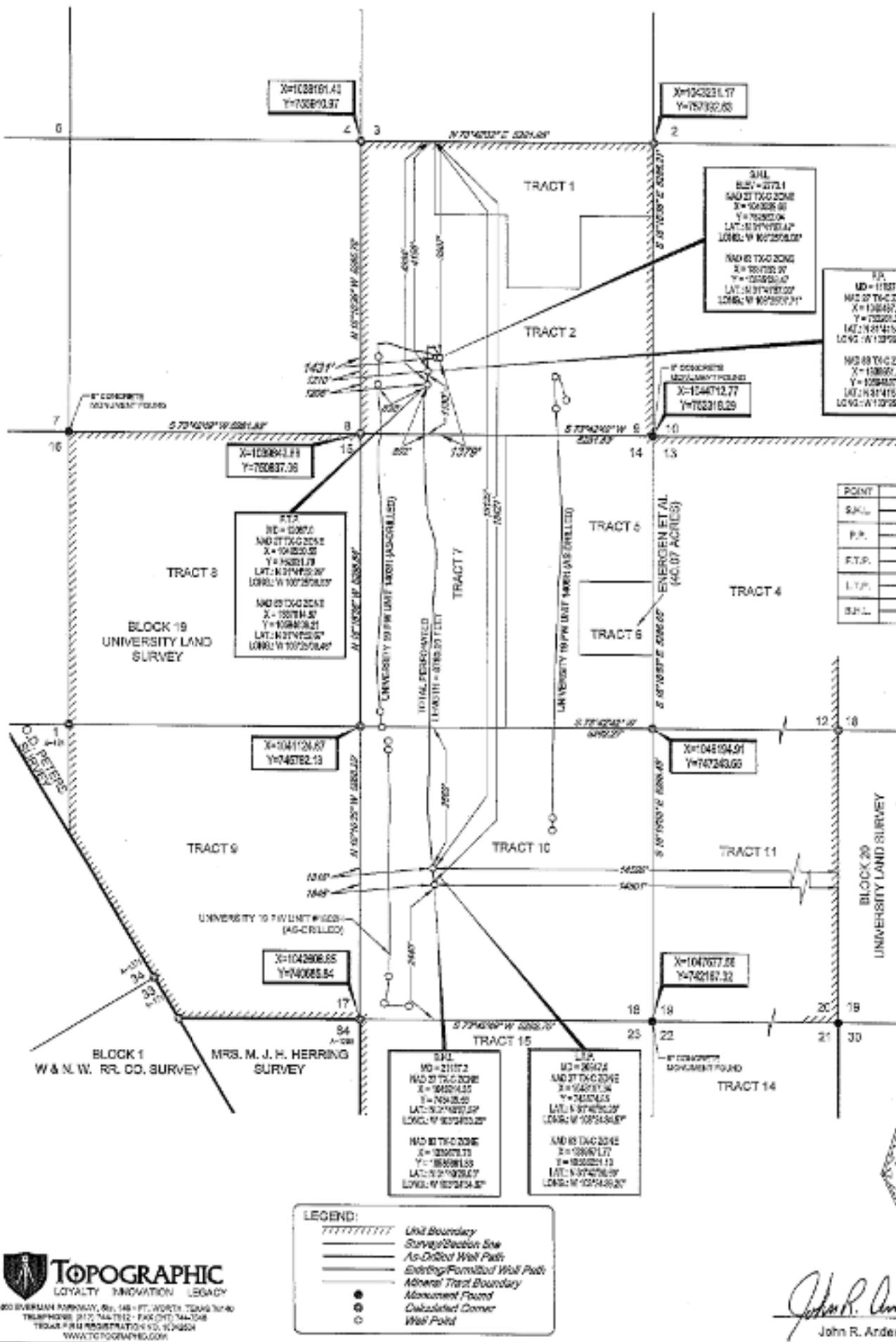
Groundwater Advisory Unit, Oil and Gas Division

Form GW-2 P.O. Box 12967 Austin, Texas 78771-2967 512-463-2741 Internet address: www.rrc.texas.gov
Rev. 02/2014



SHELL WESTERN
E&P

AS-DRILLED LOCATION
UNIVERSITY 19 PW UNIT 1404H
UNIVERSITY ACRES
8588.11 ACRES (MEASURED)
HARRIS COUNTY
~10.5 MILES SOUTHEAST OF MENTONE, TEXAS
DESCRIPTION
SECTIONS 9, 14 & 19, BLOCK 19, UNIVERSITY LAND SURVEY
LOVING COUNTY, TEXAS



TIES TABLE

POINT	UNIT	SURVEY SECTION
S.P.L.	2627 FEWL	1431 FEWL & 1432 FEEL
P.P.	4188 FEWL	1212 FEWL & 1213 FEEL
P.T.P.	4324 FEWL	1130 FEWL & 1132 FEEL
L.T.P.	1210 FEWL	2582 FEWL & 1218 FEWL
S.P.L.	1242 FEWL	1849 FEWL & 2647 FEEL

LEGEND:

- Unit Boundary
- Survey Section Line
- As-Drilled Well Path
- Existing/Proposed Well Path
- Adjoining Tract Boundary
- Monument Found
- Calculated Corner
- Well Point



John R. Anderson 3/20/10
John R. Anderson, R.P.L.S. No. 6442

TOPOGRAPHIC
LOYALTY INNOVATION LEGACY
1000 BERKMAN HIGHWAY, SUITE 148 - FT. WORTH, TEXAS 76116
TELEPHONE: (817) 744-7112 FAX: (817) 744-7124
TRUCK FIRM REGISTRATION NO. 1038224
WWW.TOPOGRAPHIC.COM

UNIVERSITY 19 PW UNIT 1404H

REVISION:	INT	DATE

DATE: 03/29/2018
DRAWN BY: T.D.H.
SHEET: 1 OF 1

NOTES:

- ORIGINAL DOCUMENT OVER 17X17 FT.
- ALL DATA WAS OBTAINED FROM THE ORIGINAL SURVEY RECORDS AND THE SURVEY RECORDS WERE CHECKED FOR ACCURACY AND CONSISTENCY.
- THIS LOCATION AND/OR SURVEY DATA WAS CAREFULLY SURVEYED ON THE GROUND USING MODERN SURVEYING AND INSTRUMENTS TO THE BEST OF MY INDIVIDUAL ABILITY TO THE EXTENT OF MY KNOWLEDGE, SKILL, AND ATTENTION PROVIDED BY SHELL WESTERN ENERGY SERVICES. THIS SURVEY WAS CONDUCTED IN ACCORDANCE WITH THE NATIONAL COMMISSION OF SURVEYORS AND AS CALLED FOR IN THE SURVEY RECORDS AND COMPLIANCE WITH T.D.P.L.S. MINIMUM STANDARDS OF PROCEDURES FOR BOUNDARY SURVEYS. THIS SURVEY WAS MADE AND LABELED TO THESE WORKS OR ENTIRE EVEN ON THE FACE OF THIS PLAT FOR TRANSPORTATION ONLY.
- ALL DATA ON THIS PLAT WAS OBTAINED FROM THE ORIGINAL SURVEY RECORDS AND CHECKED FOR ACCURACY AND CONSISTENCY ONLY, BASED UPON THE NORTH AMERICAN HORIZONTAL DATUM OF 1983 (NAD 83), U.S. SURVEY FEET.
- ALL HORIZONTAL AND VERTICAL DATA SHOWN HEREIN IS BASED ON INFORMATION PROVIDED BY SHELL WESTERN ENERGY SERVICES AND I ACCEPT NO LIABILITY FOR INFORMATION PROVIDED BY SHELL WESTERN ENERGY SERVICES OR ANY OTHER PARTY.

NOTES CONT'D:

- THE AS-DRILLED SURFACE LOCATION HAS BEEN CAREFULLY SURVEYED ON THE GROUND DURING THE DATE OF THIS PLAT.
- THE SURFACE LOCATION HAS BEEN CAREFULLY SURVEYED ON THE GROUND DURING THE DATE OF THIS PLAT.
- S.P.L. = SURFACE POINT LOCATION
- P.P. = POINT OF PERSPECTIVE
- P.T.P. = POINT TARGET POINT
- L.T.P. = LAST TARGET POINT
- S.P.L. = SURFACE POINT LOCATION