



RAILROAD COMMISSION OF TEXAS

Form W-2

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

Status: Approved
Date: 09/17/2018
Tracking No.: 191629

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.: 42-301-32937 County: LOVING
Well No.: 2003ST RRC District No.: 08
Lease Name: UNIVERSITY 20 PW UNIT Field Name: PHANTOM (WOLFCAMP)
RRC Lease No.: 44020 Field No.: 71052900
Location: Section: 29, Block: 20, Survey: UL, Abstract: U43
Latitude: 31 Longitude: -103
This well is located 15.6 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: Other/Recompletion
Well Type: Producing Completion or Recompletion Date: 03/09/2018
Type of Permit Date Permit No.
Permit to Drill, Plug Back, or Deepen 06/23/2016 816306
Rule 37 Exception
Fluid Injection Permit
O&G Waste Disposal Permit
Other:

COMPLETION INFORMATION

Spud date: 07/29/2016 Date of first production after rig released: 03/09/2018
Date plug back, deepening, recompletion, or drilling operation commenced: 07/29/2016 Date plug back, deepening, recompletion, or drilling operation ended: 12/29/2017
Number of producing wells on this lease in this field (reservoir) including this well: 8 Distance to nearest well in lease & reservoir (ft.): 804.0
Total number of acres in lease: 16027.73 Elevation (ft.): 2779 GL
Total depth TVD (ft.): 11962 Total depth MD (ft.): 20000
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): 65.0
Is Cementing Affidavit (Form W-15) attached? No
Recompletion or reclass? Yes 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: 324.0 Feet from the SE Line and
1653.0 Feet from the NE Line of the
UNIVERSITY 20 ALLOC Lease.

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

Table with 4 columns: Field & Reservoir, Gas ID or Oil Lease No., Well No., Prior Service Type. Row 1: PACKET, PHANTOM (WOLFCAMP), 44020, 2003H

W2: N/A

FOR NEW DRILL OR RE-ENTRY, SURFACE CASING DEPTH DETERMINED BY:

GAU Groundwater Protection Determination	Depth (ft.): 1100.0	Date: 06/14/2016
SWR 13 Exception	Depth (ft.): 5038.0	

INITIAL POTENTIAL TEST DATA FOR NEW COMPLETION OR RECOMPLETION

Date of test: 03/25/2018	Production method: Flowing
Number of hours tested: 24	Choke size: 24/64
Was swab used during this test? No	Oil produced prior to test: 6535.00

PRODUCTION DURING TEST PERIOD:

Oil (BBLs): 696.00	Gas (MCF): 600
Gas - Oil Ratio: 862	Flowing Tubing Pressure: 3050.00
Water (BBLs): 3864	

CALCULATED 24-HOUR RATE

Oil (BBLs): 696.0	Gas (MCF): 600
Oil Gravity - API - 60.: 42.8	Casing Pressure: 3259.00
Water (BBLs): 3864	

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	5000	1267		C	3190	5695.0	0	Circulated to Surface
2	Intermediate	7	8 3/4	12112			C,H	800	1660.0	4000	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	11271	20000	H	800	960.0	11271	Calculation
2	4 1/2	6 1/8	11122	19950	H	849	1023.0	11122	Calculation

TUBING RECORD

Row	Size (in.)	Depth (ft.)	Packer Depth (ft.)/Type
1	2 7/8	11088	11057 / VERSASET PACKER

PRODUCING/INJECTION/DISPOSAL INTERVAL

Row	Open hole?	From (ft.)	To (ft.)
1	No	L1 11812	19508.0

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: 9500 **Actual maximum pressure (PSIG) during hydraulic fracturing:** 9434

Has the hydraulic fracturing fluid disclosure been reported to FracFocus disclosure registry (SWR29)? Yes

<u>Row</u>	<u>Type of Operation</u>	<u>Amount and Kind of Material Used</u>	<u>Depth Interval (ft.)</u>
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1	Other	WHIPSTOCK SET AT 11202	11202	11202
2	Fracture	WELL DATA HAS BEEN UPLOADED TO FRAC FOCUS	11812	19508

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	5133.0	5190.3	Yes	
BRUSHY CANYON	Yes	7363.0	7423.3	Yes	
DELAWARE	Yes	5101.0	5158.4	Yes	
CHERRY CANYON	Yes	6081.0	6139.6	Yes	
BONE SPRINGS	Yes	8737.0	8797.8	Yes	
WOLFCAMP	Yes	11658.0	11754.2	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 11320.
THIS WELL SHOULD BE COMPLETED IN PHANTOM (WOLFCAMP), AS SHOWN IN APPROVED SWR 10 LETTER.
THIS PACKET INCREASES THE LEASE ACREAGE FROM 13103.98 TO 16027.73 ACRES. THIS WELL SHOULD BE ASSIGNED TO LEASE 44020.

RRC REMARKS

PUBLIC COMMENTS:

[RRC Staff 2018-09-17 09:21:00.978] EDL=7650 feet, max acres=704, PHANTOM (WOLFCAMP) oil or gas well;

take points: 11812-19508 feet

CASING RECORD :

MULTI-STAGE TOOL WAS SET BUT NOT OPENED AS APPROVED IN SWR 13 EXCEPTION.

TUBING RECORD:

WELL DRILLED TO TD IN 2016, FISH STUCK IN HOLE DURING INITIAL COMPLETIONS. WELL WAS RE-PERMITTED, AND A WHIPSTOCK WAS SET, AND THE LATERAL WAS RE-DRILLED.

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: 07/26/2018



RAILROAD COMMISSION OF TEXAS

1701 N. Congress
P.O. Box 12967
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 & PRODUCTION CO
Operator P-5 No.: 774719
Cementer Name: BAKER HUGHES OILFIELD OPS, INC.
Cementer P-5 No.: 046292

WELL INFORMATION

District No.: 08
County: LOVING
Well No.: 2003H
API No.: 42301329370000
Drilling Permit No.: 816306
Lease Name: UNIVERSITY 20 A
Lease No.:
Field Name: PHANTOM WOLFCAMP
Field No.:

I. CASING CEMENTING DATA

Type of casing: Conductor Surface Intermediate Liner Production
Drilled hole size (in.): 6-1/8"
Depth of drilled hole (ft.): 20,000
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, P-110
No. of centralizers used:
Was cement circulated to ground surface (or bottom of cellar) outside casing? YES NO
Setting depth shoe (ft.): 20,000
Top of liner (ft.): 11,271'
Setting depth liner (ft.): 20,000
Hrs. waiting on cement before drill-out: N/A
Calculated top of cement (ft.): 11,271'
Cementing date: 09/17/2016

SLURRY

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

II. CASING CEMENTING DATA

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

SLURRY

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

III. CASING CEMENTING DATA

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

SLURRY

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

DAVID PORTER, CHAIRMAN
CHRISTI CRADDICK, COMMISSIONER
RYAN SITTON, 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

RE: Lease: UNIVERSITY 20 A

Address1: PO BOX 576

Well No: 2003H

Address2:

Sec: 29 **Block:** 20

City: HOUSTON

County: LOVING

State: TX

Survey Name: UNIVERSITY LAND

SWR13EX Application Number: 9079

Drilling Permit No: 816306

SWR 13 CASING EXCEPTION APPLICATION/ALTERNATIVE REQUEST APPROVED

The Proposed Casing and Cementing Program submitted for the **LEASE NAME:** UNIVERSITY 20 A ;
WELL NUMBER: 2003H 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 5038 feet of surface casing and circulate cement from the shoe to the ground surface.

Contingency Plan:

Set 5038 feet of surface casing with a multistage tool set at a depth of not less than 1250 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.

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 07/11/2016 .
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: Jeffery Morgan

DATE: 07/19/2016

D. CRAIG PEARSON

DISTRICT DIRECTOR

Tracking No.: 168106

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: 09/18/2016
Field Name PHANTOM (WOLFCAMP)	Drilling Permit No. 816306	
Lease Name UNIVERSITY 20 A	Lease/ID No. 48418	Well No. 2003H
County LOVING	API No. 42- 301-32937	

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). _____

 Signature
 SHELL WESTERN E&P
 Name (print)

 Waste Specialist
 Title
 (832) 337-2100
 Phone
 02/01/2017
 Date

-FOR RAILROAD COMMISSION USE ONLY-



PHOENIX

TECHNOLOGY SERVICES

MD
1:1200
Feet

MWD Gamma / ROP (1")

Client: Shell

Well Name: University 20 A 2003H
API/UWID: 42301329370000
County: Loving **Field:** Wolfcamp B 1
Permit #: 816306
State: Texas **Country:** USA

Longitude: 103° 20' 5.48771 W
Latitude: 31° 41' 12.47899 N

Personnel

Company Representative
Brian

Geologist

Directional Driller(s)
Travis Marlborough
Dustin St Clair

MWD Operator(s)
Shane Metcalf

Rig Name: Precision 565
 Job Number: 60214
 Ground Level: 2779.00 ft
 Kelly Bushing: 2807.50 ft
 Drill Floor: 28.50 ft
 Permanent Datum: Mean Sea Level
 Drilling Measured From: Kelly Bushing
 Spud Date: -
 Bottom Hole Temp: 197.6 °F
 Log Start Depth: 0.00 ft
 Log End Depth: 20050.00 ft

Reference Data

North Reference: Grid North
 Magnetic Declination: 7.13
 Grid Convergence: -1.55
 Total Mag Correction: 8.68

Comments:

Main Leg

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Operational Run Summary

60214

	Run 1	Run 2	Run 3	Run 4	Run 5	Run 6
Run Start Depth (ft)	0.00	5000.02	8285.13	9963.10	11346.10	12134.22
Run End Depth (ft)	5000.02	8285.13	9963.10	11346.10	12134.22	16062.25
Run Start Date	7/29/2016	8/9/2016	8/11/2016	8/13/2016	8/14/2016	8/15/2016
Run Start Time	3:00 AM	2:26 AM	7:57 PM	10:53 AM	1:41 PM	3:42 PM
Run End Date	7/31/2016	8/11/2016	8/13/2016	8/14/2016	8/15/2016	9/12/2016
Run End Time	3:08 PM	12:47 PM	3:10 AM	7:26 AM	6:49 AM	12:34 AM

Run 7	
Run Start Depth (ft)	16062.25
Run End Depth (ft)	20000.09
Run Start Date	9/12/2016
Run Start Time	12:37 PM
Run End Date	9/15/2016
Run End Time	5:58 AM

Tool Information Summary

60214

	Run 1	Run 2	Run 3	Run 4	Run 5	Run 6
Gamma Probe Serial No	G0060	G0166	G0166	G0060	G0172	G0182
Probe Cal Ratio	1.52	1.5	1.5	1.53	1.53	1.5
Gamma Scale Factor	16.969	8.7	8.778	8.954	8.954	4.214
Tool Carrier ID (in)	3.250	2.875	2.875	2.875	2.875	2.688
Tool Carrier OD (in)	8.000	6.500	6.500	6.500	6.500	4.500
Survey-to-Bit (PTB) (ft)	63.32	63.48	63.48	60.71	53.80	55.31
Gamma-to-Bit (GTB) (ft)	50.92	51.04	51.04	48.27	41.36	42.43

**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.: 191629

1. Field name exactly as shown on proration schedule PHANTOM (WOLFCAMP)		2. Lease name as shown on proration schedule UNIVERSITY 20 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 44020	6. County LOVING	7. RRC district 08		
8. Operator address including city, state, and zip code PO BOX 576 HOUSTON, TX 77001		9. Well no(s) (see instruction E) 2003ST					
		10. Classification <input checked="" type="checkbox"/> Oil <input type="checkbox"/> Gas <input type="checkbox"/> Other (see instruction A)		11. Effective Date 03/09/2018			
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	Full-well stream
	X	SHELL ENERGY NORTH AM. (US), LP(773822)			0001	100.0	
	X	DELAWARE BASIN JV GATHERING LLC(211490)				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>09/17/2018</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 _____ 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.							
SHELL WESTERN E&P Name (print) <u>Regulatory Specialist</u> Title <u>maureen.kovacic@shell.com</u> E-mail Address (optional)				Maureen Kovacic Signature <input checked="" type="checkbox"/> Authorized Employee of current operator <input type="checkbox"/> Authorized agent of current operator (see instruction G) Date <u>05/01/2018</u> Phone with area code <u>(832) 337-0953</u>			

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



LORI WROTENBERY
DIRECTOR, OIL AND GAS DIVISION
LESLIE SAVAGE
ASSISTANT DIRECTOR, TECHNICAL PERMITTING

RAILROAD COMMISSION OF TEXAS

OIL AND GAS DIVISION

February 28, 2018

SHELL WESTERN E&P
ATTN: REGULATORY DEPARTMENT
PO BOX 576
HOUSTON TX 77001

RE: **APPLICATION FOR EXCEPTION TO SWR 10**
LEASE: UNIVERSITY 20 ALLOC
WELL NO. 2003ST
LOVING COUNTY, DISTRICT 08, TEXAS
API NO. 301-32937

FIELD NAME	FIELD NO.
PHANTOM (WOLFCAMP)	71052900
TWO GEORGES (BONE SPRING)	92100050

HYDROGEN SULFIDE RESTRICTION: YES

The Commission has approved your application to down-hole commingle production within the above-referenced wellbore from the PHANTOM (WOLFCAMP); and TWO GEORGES (BONE SPRING) fields in LOVING County, Texas. For allowable and reporting purposes, the well will be assigned to the **PHANTOM (WOLFCAMP)** field. It will be necessary to have or obtain Commission authority to complete this well in each of the subject zones (Form W-1 approval). The effective date of this SWR 10 Exception is February 12, 2018. This exception to SWR 10 will expire if not used within two (2) years from the date of this permit. This expiration date is February 29, 2020.

If the commingled well tests as a gas well and the well is not currently on schedule as a multi-completed well or never has been on schedule as a single completion in any of the non-reporting fields listed above, you must file a well-record-only G-1 for the field(s). This completion must be treated as a separate completion. It will not be eligible for allowable status, and will be carried on the proration schedule as a SWR 10 well. The only instances in which the production will be assigned to a field in which the allocation formula has been suspended are when: (1) The allocation formula has been suspended in all of the fields cited in the Rule 10 Exception application, or (2) If the production is less than 200 MCFPD. If the status for any of the fields changes it may be necessary to reassign the production to the prorated field. Contact your proration analyst to inquire as to which forms are necessary to change the reporting field.

Acreage assigned to the referenced well for allocation of allowable shall not be assigned to any other well or wells projected to or completed in the above-referenced fields; such duplicate assignment of acreage is not acceptable, provided, however, that this limitation shall not prevent the reformation of development or proration units so long as no duplicate assignment of acreage occurs, and further, that such reformation does not violate other conservation regulations.

The maximum daily allowable for the combined production will be limited to the top allowable for the reporting field and will become effective upon receipt of Form G-1 or W-2 showing combined completion data and results of a potential test performed after the physical work of down hole commingling has been completed and run in accordance with Statewide Rule 28. Please indicate in "remarks" the reason for filing this report, giving date of Commission approval of this Rule 10 Exception.

Should secondary recovery operations be initiated in either of these reservoirs, it may be necessary to segregate these zones. If surface-commingling authority has been granted, it may be necessary to amend or cancel this authority.

Permit conditions:

The commingled well will be subject to Statewide Rule 36 (operation in hydrogen sulfide areas) because at least one of the commingled fields requires a Certificate of Compliance for Statewide Rule 36. The well must be operated in accordance with Statewide Rule 36.

The completion report for the commingled well must indicate which perforations belong to which field. The Commission may also require a wellbore diagram to be filed with the completion report for the commingled well. If filed, the wellbore diagram must indicate which perforations belong to which field.

Note: The distribution of this document will be by E-MAIL ONLY. E-mail sent to george.mullen@shell.com.

If you have any questions, you may contact the engineering unit in the Austin office at 512-463-1126.

CERTIFICATE OF POOLING AUTHORITY

P-12

Revised 05/2001

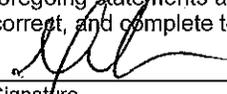
1. Field Name(s) Phantom (Wolfcamp)	2. Lease/ID Number (if assigned) 44020	3. RRC District Number 08
4. Operator Name Shell Western E&P	5. Operator P-5 Number 774719	6. Well Number 1002H
7. Pooled Unit Name University 20 PW Unit	8. API Number 495-33891	9. Purpose of Filing <input type="checkbox"/> Drilling Permit (W-1) <input checked="" type="checkbox"/> Completion Report
10. County Loving, Ward & Winkler	11. Total acres in pooled unit 16,027.73	

DESCRIPTION OF INDIVIDUAL TRACTS CONTAINED WITHIN THE POOLED UNIT

TRACT/PLAT IDENTIFIER	TRACT NAME	ACRES IN TRACT <i>(See inst. #7 below)</i>	INDICATE UNDIVIDED INTERESTS	
			UNLEASED	NON-POOLED
Tr. 1	University Lands	641.29	<input type="checkbox"/>	<input type="checkbox"/>
Tr. 2	University Lands	641.16	<input type="checkbox"/>	<input type="checkbox"/>
Tr. 3	University Lands	640.88	<input type="checkbox"/>	<input type="checkbox"/>
Tr. 4	University Lands	640.98	<input type="checkbox"/>	<input type="checkbox"/>
Tr. 5	University Lands	641.20	<input type="checkbox"/>	<input type="checkbox"/>
Tr. 6	University Lands	641.33	<input type="checkbox"/>	<input type="checkbox"/>
Tr. 8	University Lands	641.29	<input type="checkbox"/>	<input type="checkbox"/>
Tr. 9	University Lands	641.38	<input type="checkbox"/>	<input type="checkbox"/>
Tr. 10	University Lands	641.28	<input type="checkbox"/>	<input type="checkbox"/>
Tr. 11	University Lands	320.63	<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	08/02/2018
maureen.kovacic@shell.com	(832) 337-0953
Title	Date
E-mail (if available)	Phone

INSTRUCTIONS — Reference: Statewide Rules 31, 38 and 40

1. 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.
2. 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.
3. If within an individual tract, a non-pooled and/or unleased interest exists, indicate by checking the appropriate box.
4. 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.
5. If the Purpose of Filing is to file completion paperwork, enter the applicable field name in box #1 for the completion.
6. Identify the drill site tract with an * to the left of the tract identifier.
7. 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

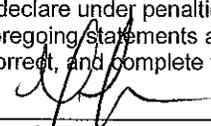
1. Field Name(s) Phantom (Wolfcamp)	2. Lease/ID Number (if assigned) 44020	3. RRC District Number 08
4. Operator Name Shell Western E&P	5. Operator P-5 Number 774719	6. Well Number 1002H
7. Pooled Unit Name University 20 PW Unit	8. API Number 495-33891	9. Purpose of Filing <input type="checkbox"/> Drilling Permit (W-1) <input checked="" type="checkbox"/> Completion Report
10. County Loving, Ward & Winkler	11. Total acres in pooled unit 16,027.73	

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. 12	University Lands	320.62	<input type="checkbox"/>	<input type="checkbox"/>
Tr. 13	University Lands	641.30	<input type="checkbox"/>	<input type="checkbox"/>
Tr. 14	University Lands	641.33	<input type="checkbox"/>	<input type="checkbox"/>
Tr. 15	University Lands	641.37	<input type="checkbox"/>	<input type="checkbox"/>
Tr. 16	University Lands	641.29	<input type="checkbox"/>	<input type="checkbox"/>
Tr. 17	University Lands	160.25	<input type="checkbox"/>	<input type="checkbox"/>
Tr. 18	University Lands	480.74	<input type="checkbox"/>	<input type="checkbox"/>
Tr. 19	University Lands	640.97	<input type="checkbox"/>	<input type="checkbox"/>
Tr. 20	University Lands	640.97	<input type="checkbox"/>	<input type="checkbox"/>
Tr. 21	University Lands	640.98	<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:  _____
 Reg. Specialist: maureen.kovacic@shell.com
 Title: _____
 Print Name: Maureen Kovacic
 Date: 08/02/2018
 Phone: (832) 337-0953
 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.
- 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

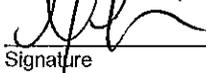
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10. County Loving, Ward & Winkler	11. Total acres in pooled unit 16,027.73	

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	641.18	<input type="checkbox"/>	<input type="checkbox"/>
Tr. 24	University Lands	320.59	<input type="checkbox"/>	<input type="checkbox"/>
Tr. 25	University Lands	641.14	<input type="checkbox"/>	<input type="checkbox"/>
Tr. 28	University Lands	640.95	<input type="checkbox"/>	<input type="checkbox"/>
Tr. 29	University Lands	640.96	<input type="checkbox"/>	<input type="checkbox"/>
Tr. 30	University Lands	640.88	<input type="checkbox"/>	<input type="checkbox"/>
Tr. 31	University Lands	640.23	<input type="checkbox"/>	<input type="checkbox"/>
Tr. 32	University Lands	320.56	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>
			<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

Maureen Kovacic

Reg. Specialist maureen.kovacic@shell.com

Print Name

08/02/2018

(832) 337-0549

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.
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- 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.

GROUNDWATER PROTECTION DETERMINATION

Form GW-2



Groundwater Advisory Unit

Date Issued:	14 June 2016	GAU Number:	156203
Attention:	SHELL WESTERN E&P PO BOX 576 HOUSTON, TX 77001	API Number:	
Operator No.:	774719	County:	LOVING
		Lease Name:	University 20 A
		Lease Number:	
		Well Number:	2003H
		Total Vertical Depth:	12400
		Latitude:	31.686800
		Longitude:	-103.334858
		Datum:	NAD27

Purpose: New Drill
Location: Survey-UL; Block-20; Section-29

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

Water-bearing strata from the land surface to a depth of 300 feet and the Rustler, which is estimated to occur from 700 to 1100 feet must be protected.

Please send Gamma Ray/Porosity log of this well when it is available.

This recommendation is applicable to all wells within a radius of 200 feet of this location.

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

This determination is based on information provided when the application was submitted on 06/14/2016. 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

UNIVERSITY 20 PW UNIT

16,027.73 ACRES (MEASURED)

SECTIONS 3, 4, 5, 8, 9, 10, 15, 16, 17, 18, 19, 20, 21, 22, 27, 28, 29, 30, 31, 33, 34, 39,
42, 46, E/2 OF SECTION 40 AND E/2 OF SECTION 43
BLOCK 20, UNIVERSITY LANDS
LOVING, WINKLER & WARD COUNTIES, TEXAS

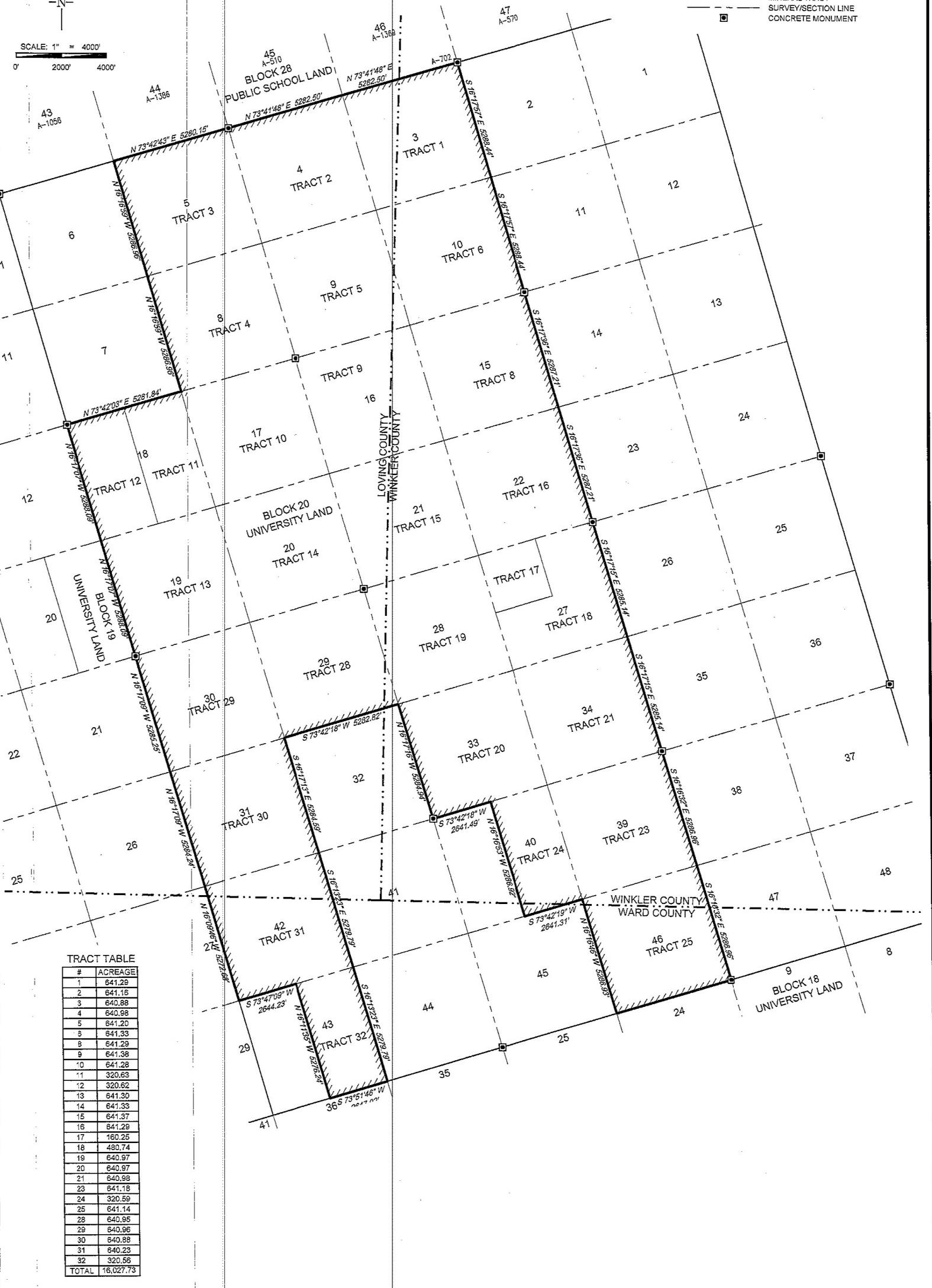
SHELL WESTERN
E&P

LEGEND

- UNIT BOUNDARY
- COUNTY LINE
- BLOCK/TOWNSHIP LINE
- MINERAL TRACT
- SURVEY/SECTION LINE
- CONCRETE MONUMENT

SCALE: 1" = 4000'

0' 2000' 4000'



TRACT TABLE

#	ACREAGE
1	641.29
2	641.18
3	640.88
4	640.98
5	641.20
6	641.33
8	641.29
9	641.38
10	641.28
11	320.63
12	320.62
13	641.30
14	641.33
15	641.37
16	641.29
17	160.25
18	480.74
19	640.97
20	640.97
21	640.98
23	641.18
24	320.59
25	641.14
28	640.95
29	640.95
30	640.98
31	640.23
32	320.56
TOTAL	16,027.73



**SHELL WESTERN
E&P**

AS-DRILLED LOCATION

LEASE NAME & WELL NO.:

UNIVERSITY 20 ALLOC 2003ST

UNITLEASE ACREAGE:

13103.98 ACRES (MEASURED)

ALLOCATION UNIT 80.00 ACRES (MEASURED)

NEAREST TOWN IN COUNTY:

±15.6 MILES SOUTHEAST OF MENTONE, TEXAS

DESCRIPTION:

SECTION 17 & 20, NORTH 80 ACRES OF SECTION 29, BLOCK 20, UNIVERSITY LAND SURVEY
LOVING COUNTY, TEXAS



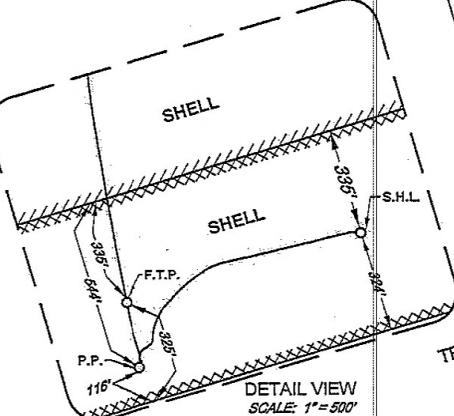
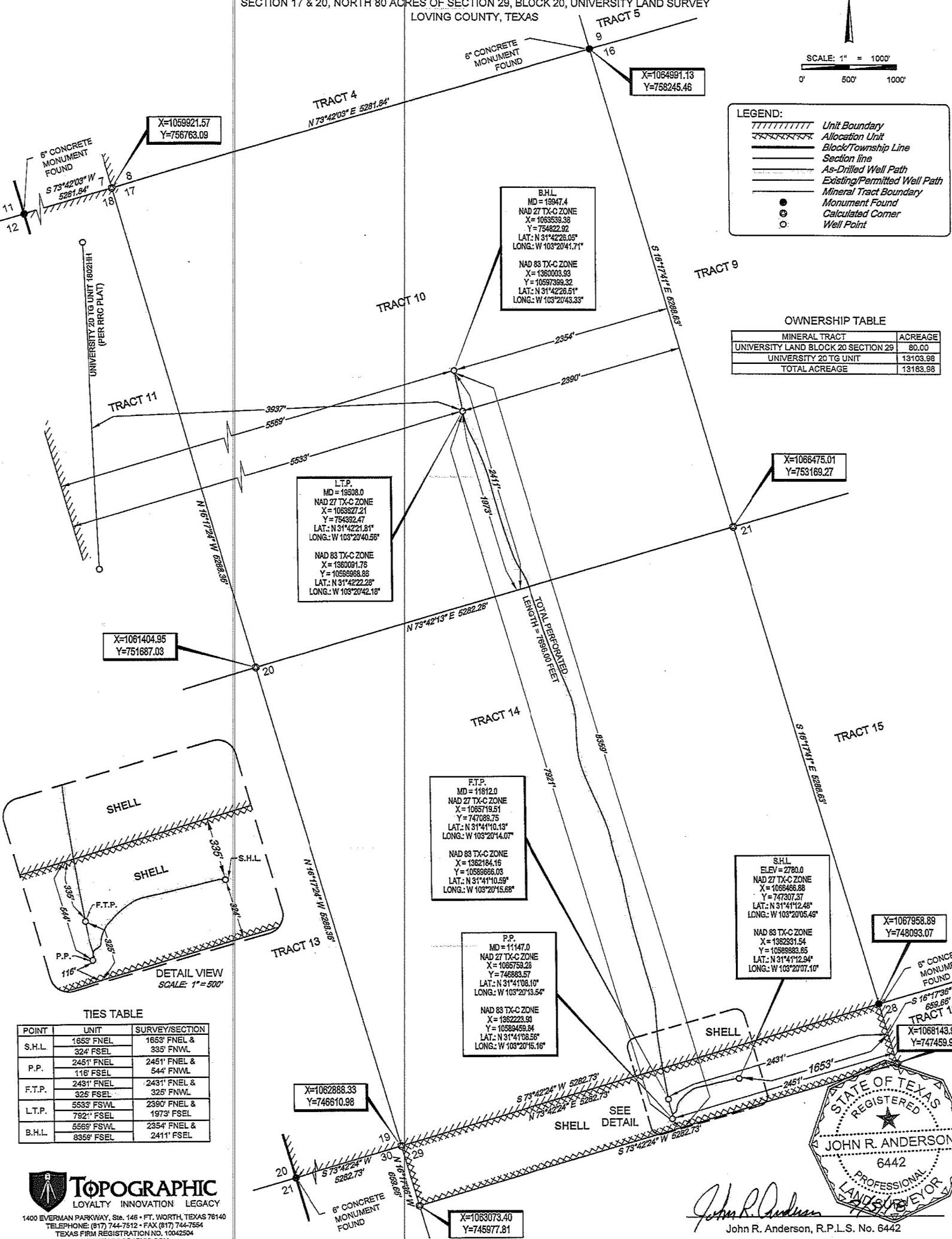
SCALE: 1" = 1000'
0' 500' 1000'

LEGEND:

- Unit Boundary
- Allocation Unit
- Block/Township Line
- Section line
- As-Drilled Well Path
- Existing/Permitted Well Path
- Mineral Tract Boundary
- Monument Found
- Calculated Corner
- Well Point

OWNERSHIP TABLE

MINERAL TRACT	ACREAGE
UNIVERSITY LAND BLOCK 20 SECTION 29	80.00
UNIVERSITY 20 TG UNIT	13103.98
TOTAL ACREAGE	13183.98



TIES TABLE

POINT	UNIT	SURVEY/SECTION
S.H.L.	1653' FNEL	1653' FNEL & 324' FSEL
P.P.	116' FSEL	338' FNVL & 544' FNVL
F.T.P.	2431' FNEL	2431' FNEL & 325' FSEL
L.T.P.	5533' FSVL	2390' FSEL & 7921' FSEL
B.H.L.	8359' FSEL	2354' FSEL & 2411' FSEL



John R. Anderson
John R. Anderson, R.P.L.S. No. 6442

TOPOGRAPHIC
LOYALTY INNOVATION LEGACY
1400 EVERMAN PARKWAY, Ste. 146 • FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 • FAX (817) 744-7554
TEXAS FIRM REGISTRATION NO. 10042504
WWW.TOPOGRAPHIC.COM

UNIVERSITY 20 ALLOC 2003ST	REVISION:	
	INT	DATE
	O.M.	07/03/2018
DATE: 05/04/2018		
FILE: AD_UNIVERSITY_20_ALLOC_2003ST_REV1		
DRAWN BY: A.C.L.		
SHEET: 1 OF 1		

NOTES:

1. ORIGINAL DOCUMENT SIZE: 11" X 17"
2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE TEXAS STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, U.S. SURVEY FEET, NORTH AMERICAN DATUM 1927, UNLESS OTHERWISE NOTED.
3. THIS LOCATION AND/OR UNITLEASE BOUNDARY HAS BEEN CAREFULLY SURVEYED ON THE GROUND UNDER MY SUPERVISION AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE ACCORDING TO THE EVIDENCE, OFFICIAL SURVEY RECORDS, MAPS, AND OTHER DATA PROVIDED BY SHELL WESTERN E&P. THIS PLAT WAS CREATED FOR THE SOLE PURPOSE OF FILING A PERMIT WITH THE RAILROAD COMMISSION OF TEXAS AND SHOULD NOT BE CONSTRUED AS A "BOUNDARY SURVEY" IN COMPLIANCE WITH T.B.P.L.S. MINIMUM STANDARDS OF PROCEDURES FOR BOUNDARY SURVEYS. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.
4. ALL ELEVATION VALUES CONTAINED HEREON ARE ORTHOMETRIC ONLY, BASED UPON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88), U.S. SURVEY FEET.
5. ALL MINERAL OWNERSHIP DATA SHOWN HEREIN IS BASED ON INFORMATION PROVIDED BY SHELL WESTERN E&P OR ITS SUBSIDIARIES & AFFILIATES.

6. THE PRELIMINARY LOCATION HAS BEEN CAREFULLY SURVEYED ON THE GROUND DURING THE DATE OF JULY 16, 2016.
7. S.H.L. = SURFACE HOLE LOCATION
8. P.P. = POINT OF PENETRATION
9. F.T.P. = FIRST TAKE POINT
10. L.T.P. = LAST TAKE POINT
11. B.H.L. = BOTTOM HOLE LOCATION