



August 14, 2017

Railroad Commission of Texas
Oil and Gas Division
P.O. Box 12967
Capitol Station
Austin, Texas 78711

Attention: Regulatory Department

Re: Shell Western Exploration and Production Co.
University 19 PW Unit 1804H
Loving County, TX
API #42-301-33264
Job No. 61606

Enclosed please find the Survey Data Certification, and the original Plat and one copy of the Survey Report performed on the above referenced Well by Phoenix Technology Services, Inc. (P-5 No. 664171). Other information required by your office is as follows:

Name & Title of Surveyor	Drain Hole Number	Surveyed Depths		Dates Performed		Type of Survey
		From	To	Start	End	
Michael San Miguel	1804H	177	4,905	8/9/17	8/12/17	MWD

A certified plat on which the bottom hole location is oriented both to the surface location and to the lease lines (or unit lines in case of pooling) is attached to the survey report. If any other information is required, please contact the undersigned at the letterhead address and phone number.

Best Regards,

Brittany Carley

Brittany Carley
Operations Administrator



SWEPI

**Loving County, Texas (NAD27)
University 19 PW Unit
1804H**

OH / Job #61606

Survey: Phoenix MWD Surveys

Standard Survey Report

13 August, 2017





Phoenix Technology Services LP

Survey Report



Company:	SWEPI	Local Co-ordinate Reference:	Well 1804H
Project:	Loving County, Texas (NAD27)	TVD Reference:	GL + KB @ 2778.90usft (Precision 826)
Site:	University 19 PW Unit	MD Reference:	GL + KB @ 2778.90usft (Precision 826)
Well:	1804H	North Reference:	Grid
Wellbore:	OH / Job #61606	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Precision 826)	Database:	Compass 5000 GCR

Project	Loving County, Texas (NAD27), Loving, Texas		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Texas Central 4203		

Site	University 19 PW Unit		
Site Position:		Northing:	750,929.42 usft
From:	Map	Easting:	1,038,505.07 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	31° 41' 40.73279 N
		Longitude:	103° 25' 30.14063 W
		Grid Convergence:	-1.59 °

Well	1804H		
Well Position	+N/-S	0.00 usft	Northing:
	+E/-W	0.00 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	0.00 usft
		Latitude:	31° 40' 21.36247 N
		Longitude:	103° 24' 25.55289 W
		Ground Level:	2,762.90 usft

Wellbore	OH / Job #61606				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	8/11/2017	7.03	59.52	47,610

Design	Surveys (Precision 826)				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	164.83	

Survey Program	Date	8/13/2017			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
0.00	4,965.00	Phoenix MWD Surveys (OH / Job #61606)	MWD+HDGM+AX	OWSG Rev.2 MWD + HDGM + Axial Correction	

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
177.00	1.19	200.24	176.99	-1.72	-0.64	1.50	0.67	0.67	0.00
First Phoenix MWD Survey									
271.00	1.10	180.71	270.97	-3.54	-0.98	3.16	0.42	-0.10	-20.78
364.00	1.57	344.28	363.96	-3.21	-1.34	2.75	2.84	0.51	175.88
457.00	4.29	357.21	456.83	1.49	-1.86	-1.93	2.99	2.92	13.90
551.00	6.67	358.77	550.39	10.46	-2.14	-10.66	2.54	2.53	1.66
645.00	7.14	15.15	643.72	21.56	-0.73	-21.00	2.15	0.50	17.43
739.00	8.05	25.23	736.90	33.15	3.60	-31.06	1.71	0.97	10.72
846.00	8.75	18.81	842.75	47.64	9.42	-43.51	1.09	0.65	-6.00
1,025.00	8.32	16.19	1,019.77	72.96	17.42	-65.86	0.32	-0.24	-1.46



Phoenix Technology Services LP

Survey Report



Company:	SWEPI	Local Co-ordinate Reference:	Well 1804H
Project:	Loving County, Texas (NAD27)	TVD Reference:	GL + KB @ 2778.90usft (Precision 826)
Site:	University 19 PW Unit	MD Reference:	GL + KB @ 2778.90usft (Precision 826)
Well:	1804H	North Reference:	Grid
Wellbore:	OH / Job #61606	Survey Calculation Method:	Minimum Curvature
Design:	Surveys (Precision 826)	Database:	Compass 5000 GCR

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,203.00	8.69	16.84	1,195.81	98.20	24.90	-88.26	0.21	0.21	0.37
1,382.00	8.59	17.10	1,372.78	123.92	32.75	-111.03	0.06	-0.06	0.15
1,562.00	8.16	17.98	1,550.86	148.92	40.65	-133.09	0.25	-0.24	0.49
1,741.00	9.18	12.25	1,727.82	174.96	47.60	-156.40	0.75	0.57	-3.20
1,919.00	10.24	10.58	1,903.27	204.39	53.52	-183.26	0.62	0.60	-0.94
2,098.00	11.32	15.67	2,079.11	236.94	61.18	-212.67	0.80	0.60	2.84
2,277.00	11.63	19.72	2,254.53	270.84	72.02	-242.56	0.48	0.17	2.26
2,456.00	10.58	13.20	2,430.19	303.83	81.86	-271.82	0.91	-0.59	-3.64
2,635.00	10.22	12.02	2,606.24	335.36	88.92	-300.40	0.23	-0.20	-0.66
2,814.00	9.61	14.42	2,782.57	365.36	95.95	-327.52	0.41	-0.34	1.34
2,993.00	9.24	16.36	2,959.16	393.62	103.71	-352.76	0.27	-0.21	1.08
3,172.00	7.91	19.32	3,136.15	419.03	111.84	-375.17	0.78	-0.74	1.65
3,351.00	8.49	11.08	3,313.33	443.62	118.45	-397.17	0.73	0.32	-4.60
3,530.00	8.35	6.88	3,490.40	469.50	122.55	-421.07	0.35	-0.08	-2.35
3,709.00	9.84	9.27	3,667.14	497.50	126.57	-447.04	0.86	0.83	1.34
3,888.00	11.27	16.28	3,843.12	529.39	133.94	-475.89	1.07	0.80	3.92
4,067.00	10.33	20.59	4,018.95	561.20	144.48	-503.83	0.69	-0.53	2.41
4,246.00	11.25	12.25	4,194.79	593.29	153.83	-532.36	1.01	0.51	-4.66
4,424.00	9.87	8.78	4,369.78	625.34	159.85	-561.72	0.85	-0.78	-1.95
4,602.00	12.29	9.46	4,544.44	659.10	165.29	-592.88	1.36	1.36	0.38
4,782.00	12.14	12.96	4,720.37	696.45	172.68	-626.99	0.42	-0.08	1.94
4,905.00	10.96	15.34	4,840.88	720.33	178.68	-648.47	1.03	-0.96	1.93
Final Phoenix MWD Survey									
4,965.00	10.96	15.34	4,899.79	731.33	181.70	-658.30	0.00	0.00	0.00
Projection to TD									

Survey Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
177.00	176.99	-1.72	-0.64	First Phoenix MWD Survey
4,905.00	4,840.88	720.33	178.68	Final Phoenix MWD Survey
4,965.00	4,899.79	731.33	181.70	Projection to TD

Checked By: _____	Approved By: _____	Date: _____
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Phoenix Technology Services
SURVEY DATA CERTIFICATION



PHOENIX JOB NUMBER

61606

ENERGY COMPANY

Shell Energy E&P

WELL NAME

University 19 PW Unit 1804H

COUNTY & STATE

Loving, Texas

API WELL NUMBER

42-301-33264

PROPOSED DIRECTION

164.83

TIE-IN DATA						
MEASURED	VERTICAL			N-S	E-W	DATA
DEPTH	DEPTH	INCLIN	AZIMUTH	COORD	COORD	SOURCE
.00 ft	.00 ft	0.00	0.00	.00 ft	.00 ft	

FIRST	FIRST		
SURVEY	SURVEY		
DATE	DEPTH	INCLIN	AZIMUTH
9-Aug-17	177.00 ft	1.19	200.24

SURVEY INSTRUMENT
TYPE

Phoenix MWD

LAST	LAST		
SURVEY	SURVEY		
DATE	DEPTH	INCLIN	AZIMUTH
12-Aug-17	4,905.00 ft	10.96	15.34

TO THE BEST OF MY KNOWLEDGE I
CERTIFY THIS SURVEY DATA TO BE
TRUE AND CORRECT.

PROJECTED	PROJECTED		
TD SURVEY	TD SURVEY		
DATE	DEPTH	INCLIN	AZIMUTH
12-Aug-17	4,965.00 ft	10.96	15.34

Michael San Miguel

PRINT YOUR NAME ABOVE

Michael San Miguel

SIGN YOUR NAME ABOVE

MAGNETIC DECLINATION OR TOTAL GRID

TOTAL CORRECTION USED	8.62
DECLINATION OR GRID	GRID

8/12/2017

TODAY'S DATE

MWD SUPERVISOR 1

Michael San Miguel

DIRECTIONAL DRILLER 1

Jeff Arenas

MWD SUPERVISOR 2

DIRECTIONAL DRILLER 2

12329 Cutten Rd., Houston, Texas 777066

(713)337-0600 (Voice), (713)337-0599 (Fax)



SHELL WESTERN
E&P

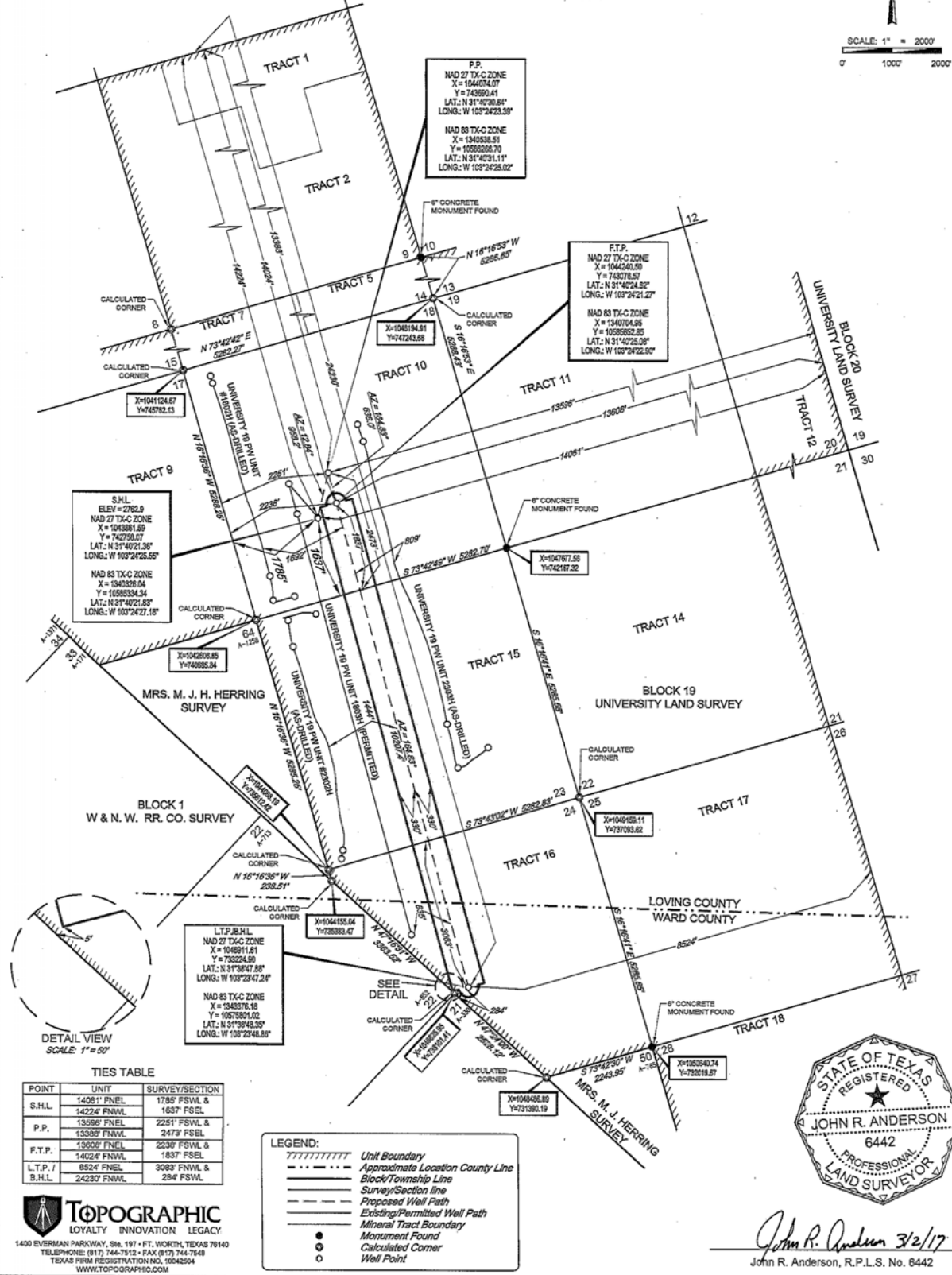
WELL LOCATION
LEASE NAME & WELL NO.:
UNIVERSITY 19 PW UNIT 1804H

UNITLEASE ACREAGE
8588.11 ACRES (MEASURED)

NEAREST TOWN IN COUNTY:
±11.5 MILES SOUTHEAST OF MENTONE, TEXAS

DESCRIPTION:
SECTIONS 18, 23 & 24, BLOCK 19, UNIVERSITY LAND SURVEY
LOVING AND WARD COUNTIES, TEXAS

SCALE: 1" = 2000'
0 1000 2000



TIES TABLE

POINT	UNIT	SURVEY/SECTION
S.H.L.	14224' FSNL	1738' FSNL & 1637' FSEL
P.P.	13396' FSNL	2251' FSNL & 2473' FSEL
F.T.P.	13608' FSNL	2238' FSNL & 1837' FSEL
L.T.P./	14224' FSNL	1837' FSEL
B.H.L.	8534' FSNL	3303' FSNL & 284' FSNL

TOPOGRAPHIC
LOYALTY INNOVATION LEGACY
1400 EVERMAN PARKWAY, SUITE 197 - FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 - FAX: (817) 744-7548
TEXAS FIRM REGISTRATION NO. 10042804
WWW.TOPOGRAPHIC.COM

LEGEND:

- Unit Boundary
- Approximate Location County Line
- Block/Township Line
- Survey/Section line
- Proposed Well Path
- Existing/Permitted Well Path
- Mineral Tract Boundary
- Monument Found
- Calculated Corner
- Well Point



John R. Anderson 3/2/17
John R. Anderson, R.P.L.S. No. 6442

UNIVERSITY 19 PW UNIT 1804H	REVISION:		NOTES:	NOTES CONT'D:
	INT	DATE		
DATE: 03/02/2017			1. ORIGINAL DOCUMENT SIZE 11" X 17"	6. THE PRELIMINARY LOCATION HAS BEEN CAREFULLY SURVEYED ON THE GROUND DURING THE DATE OF FEBRUARY 24, 2017, AT A GROUND LEVEL ELEVATION OF 2792.5 SURVEY FEET.
FILE: LOUNIVERSITY_19_PW_UNIT_1804H			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.	7. S.H.L. = SURFACE HOLE LOCATION
DRAWN BY: O.M.			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 PLAN 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.R.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 PLAN IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.	8. P.P. = POINT OF PENETRATION
SHEET: 1 OF 1			4. ALL ELEVATION VALUES CONTAINED HEREIN ARE ORTHOMETRIC ONLY, BASED UPON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88), U.S. SURVEY FEET.	9. F.T.P. = FIRST TAKE POINT
			5. ALL MINERAL OWNERSHIP DATA SHOWN HEREIN IS BASED ON INFORMATION PROVIDED BY SHELL WESTERN E&P OR ITS SUBSIDIARIES & AFFILIATES.	10. L.T.P. = LAST TAKE POINT
				11. S.H.L. = BOTTOM HOLE LOCATION



NABORS DRILLING TECHNOLOGIES USA, INC.
515 West Greens Road
Houston, TX 77067
Phone: 281.874.0035
Fax: 281.872.5205

Wednesday, October 11, 2017

Railroad Commission of Texas
Oil and Gas Division
PO Box 12967
Capitol Station
Austin, TX 78711-2967


Subject: **Survey Certification Letter**

Attention: **Pam Johns**

Survey Company:	NABORS DRILLING TECH USA, INC.	Operator #:	598880
Job Number:	B0767	Surface:	31.672601, 103.400000
Survey Job Type:	Nabors MWD	A.P.I. No:	42-301-33264
Customer:	Shell Western E&P	Location:	Loving, TX
Well Name:	University PW Unit 1804H	RKB Height:	2789'
Rig Name:	Precision 563	Distance to Bit:	53'

Surveyor Name	Surveyor Title	Borehole Number	Start Depth	End Depth	Start Date	End Date	Type of	TD Straight
								Line Projection
Brandon Fullingim	MWD Supervisor	OH	5027'	22442'	09/15/17	10/11/17	MWD	22500'
Brandon Fullingim	MWD Supervisor	ST1	11315'	11495'	09/26/17	09/29/17	MWD	11555'

The data and calculations for this survey have been checked by me and conform to the calibration standards and operational procedures set forth by NABORS DRILLING TECHNOLOGIES USA, INC. I am authorized and qualified to review the data, calculations and these reports; the reports represents true and correct Directional Surveys of this well based on the original data, the minimum curvature method, corrected to Grid North and obtained at the well site.



Brandon Fullingim
MWD Supervisor
NABORS DRILLING TECHNOLOGIES USA, INC.



Shell

Loving Co., TX

University 19

PW Unit 1804H ST1

ST1 Surveys

Design: Wellbore #1

Completion Report

17 October, 2017





Nabors Corporate Services
Completion Report



Company:	Shell	Local Co-ordinate Reference:	Well PW Unit 1804H ST1
Project:	Loving Co., TX	TVD Reference:	RT-26 @ 2788.90ft (Original Well Elev)
Site:	University 19	MD Reference:	RT-26 @ 2788.90ft (Original Well Elev)
Well:	PW Unit 1804H ST1	North Reference:	Grid
Wellbore:	ST1 Surveys	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	RyanUSA_Compass

Project		Loving Co., TX	
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Texas Central 4203		

Site		University 19			
Site Position:		Northing:		752,319.000 usft	
From:	Map	Easting:		1,041,948.090 usft	
Position Uncertainty:		Slot Radius:		13-3/16 "	
				Latitude:	31° 41' 55.42507 N
				Longitude:	103° 24' 50.75045 W
				Grid Convergence:	-1.59 °

Well	PW Unit 1804H ST1					
Well Position	+N/-S	0.00 ft	Northing:	742,758.040 usft	Latitude:	31° 40' 21.36217 N
	+E/-W	0.00 ft	Easting:	1,043,861.589 usft	Longitude:	103° 24' 25.55289 W
Position Uncertainty		2.00 ft	Wellhead Elevation:	ft	Ground Level:	2,762.90 ft

Wellbore	ST1 Surveys				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	8/22/2017	7.12	59.48	47,554.20000000

Design		Wellbore #1			
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(ft)	(ft)	(ft)	(°)	
	0.00	0.00	0.00	164.83	



Nabors Corporate Services
Completion Report



Company:	Shell	Local Co-ordinate Reference:	Well PW Unit 1804H ST1
Project:	Loving Co., TX	TVD Reference:	RT-26 @ 2788.90ft (Original Well Elev)
Site:	University 19	MD Reference:	RT-26 @ 2788.90ft (Original Well Elev)
Well:	PW Unit 1804H ST1	North Reference:	Grid
Wellbore:	ST1 Surveys	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	RyanUSA_Compass

Survey Program		Date	10/17/2017			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description		
187.00	4,915.00	Survey #1 Spudder Rig Surveys (ST1 Surv	MWD+HRGM+AX	OWSG MWD + HRGM + Axial Correction		
4,915.00	11,271.00	Survey #2 NDS Surveys (ST1 Surveys)	MWD+HRGM	OWSG MWD + HRGM		
11,315.00	11,555.00	Survey #3 NDS ST Surveys (ST1 Surveys)	MWD+HRGM	OWSG MWD + HRGM		

Survey										
MD (ft)	Inc (°)	Azi (azimuth) (°)	TVD (ft)	V. Sec (ft)	N/S (ft)	E/W (ft)	Closure Distance (ft)	Closure Azimuth (°)	DLeg (°/100ft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
187.00	1.19	200.24	186.99	1.58	-1.82	-0.67	1.94	200.24	0.64	
281.00	1.10	180.71	280.97	3.25	-3.64	-1.02	3.78	195.66	0.42	
374.00	1.57	344.28	373.96	2.83	-3.31	-1.38	3.58	202.61	2.84	
467.00	4.29	357.21	466.83	-1.84	1.40	-1.89	2.35	306.42	2.99	
561.00	6.67	358.77	560.39	-10.58	10.37	-2.18	10.59	348.12	2.54	
655.00	7.14	15.15	653.72	-20.92	21.46	-0.77	21.48	357.94	2.15	
749.00	8.05	25.23	746.90	-30.97	33.06	3.56	33.25	6.15	1.71	
856.00	8.75	18.81	852.75	-43.43	47.54	9.38	48.46	11.16	1.09	
1,035.00	8.32	16.19	1,029.77	-65.78	72.86	17.38	74.91	13.42	0.32	
1,213.00	8.69	16.84	1,205.81	-88.18	98.10	24.87	101.21	14.22	0.21	
1,392.00	8.59	17.10	1,382.78	-110.95	123.82	32.72	128.07	14.80	0.06	
1,572.00	8.16	17.98	1,560.86	-133.01	148.82	40.61	154.26	15.26	0.25	
1,751.00	9.18	12.25	1,737.82	-156.32	174.86	47.56	181.21	15.22	0.75	
1,929.00	10.24	10.58	1,913.26	-183.17	204.29	53.48	211.17	14.67	0.62	
2,108.00	11.32	15.67	2,089.11	-212.59	236.84	61.15	244.61	14.48	0.80	
2,287.00	11.63	19.72	2,264.53	-242.47	270.74	71.98	280.15	14.89	0.48	
2,466.00	10.58	13.20	2,440.18	-271.73	303.73	81.82	314.56	15.08	0.91	
2,645.00	10.22	12.02	2,616.24	-300.32	335.26	88.88	346.84	14.85	0.23	
2,824.00	9.61	14.42	2,792.57	-327.44	365.26	95.91	377.64	14.71	0.41	



Nabors Corporate Services
Completion Report



Company:	Shell	Local Co-ordinate Reference:	Well PW Unit 1804H ST1
Project:	Loving Co., TX	TVD Reference:	RT-26 @ 2788.90ft (Original Well Elev)
Site:	University 19	MD Reference:	RT-26 @ 2788.90ft (Original Well Elev)
Well:	PW Unit 1804H ST1	North Reference:	Grid
Wellbore:	ST1 Surveys	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	RyanUSA_Compass

Survey										
MD (ft)	Inc (°)	Azi (azimuth) (°)	TVD (ft)	V. Sec (ft)	N/S (ft)	E/W (ft)	Closure Distance (ft)	Closure Azimuth (°)	DLeg (°/100ft)	
3,003.00	9.24	16.36	2,969.15	-352.68	393.52	103.68	406.95	14.76	0.27	
3,182.00	7.91	19.32	3,146.15	-375.08	418.94	111.80	433.60	14.94	0.78	
3,361.00	8.49	11.08	3,323.33	-397.08	443.53	118.42	459.06	14.95	0.73	
3,540.00	8.35	6.88	3,500.40	-420.98	469.40	122.51	485.12	14.63	0.35	
3,719.00	9.84	9.27	3,677.14	-446.96	497.40	126.53	513.24	14.27	0.86	
3,898.00	11.27	16.28	3,853.12	-475.80	529.29	133.90	545.96	14.20	1.07	
4,077.00	10.33	20.59	4,028.95	-503.75	561.10	144.45	579.40	14.44	0.69	
4,256.00	11.25	12.25	4,204.79	-532.27	593.19	153.80	612.81	14.54	1.01	
4,434.00	9.87	8.78	4,379.77	-561.63	625.24	159.81	645.34	14.34	0.85	
4,612.00	12.29	9.46	4,554.44	-592.80	659.01	165.25	679.41	14.08	1.36	
4,792.00	12.14	12.96	4,730.37	-626.91	696.35	172.65	717.43	13.92	0.42	
4,915.00	10.96	15.34	4,850.88	-648.39	720.23	178.64	742.06	13.93	1.03	
5,027.00	10.14	13.14	4,960.98	-666.24	740.10	183.70	762.56	13.94	0.82	
5,116.00	9.98	11.34	5,048.62	-680.04	755.29	187.00	778.10	13.91	0.40	
5,206.00	9.70	12.36	5,137.29	-693.74	770.34	190.15	793.47	13.87	0.37	
5,295.00	6.88	18.32	5,225.36	-704.84	782.73	193.44	806.28	13.88	3.31	
5,385.00	6.99	18.70	5,314.70	-713.88	793.04	196.89	817.11	13.94	0.13	
5,474.00	4.65	24.56	5,403.23	-721.15	801.45	200.12	826.05	14.02	2.71	
5,563.00	4.60	23.92	5,491.94	-726.70	807.99	203.07	833.12	14.11	0.08	
5,653.00	4.68	22.39	5,581.65	-732.41	814.68	205.93	840.31	14.19	0.16	
5,742.00	4.13	24.59	5,670.39	-737.75	820.96	208.65	847.05	14.26	0.65	
5,832.00	2.42	56.50	5,760.24	-740.84	824.95	211.58	851.65	14.38	2.71	
5,921.00	2.59	59.11	5,849.16	-741.97	827.02	214.87	854.48	14.56	0.23	
6,010.00	2.35	57.87	5,938.07	-743.05	829.02	218.14	857.24	14.74	0.28	
6,100.00	2.31	59.02	6,028.00	-744.08	830.94	221.26	859.89	14.91	0.07	
6,190.00	2.13	58.93	6,117.93	-745.04	832.74	224.25	862.40	15.07	0.20	
6,279.00	2.05	59.59	6,206.87	-745.91	834.40	227.04	864.73	15.22	0.09	



Nabors Corporate Services
Completion Report



Company:	Shell	Local Co-ordinate Reference:	Well PW Unit 1804H ST1
Project:	Loving Co., TX	TVD Reference:	RT-26 @ 2788.90ft (Original Well Elev)
Site:	University 19	MD Reference:	RT-26 @ 2788.90ft (Original Well Elev)
Well:	PW Unit 1804H ST1	North Reference:	Grid
Wellbore:	ST1 Surveys	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	RyanUSA_Compass

Survey										
MD (ft)	Inc (°)	Azi (azimuth) (°)	TVD (ft)	V. Sec (ft)	N/S (ft)	E/W (ft)	Closure Distance (ft)	Closure Azimuth (°)	DLeg (°/100ft)	
6,306.61	2.09	58.15	6,234.46	-746.18	834.91	227.89	865.45	15.27	0.23	
Unit 1804H - POP										
6,369.00	2.17	55.07	6,296.81	-746.91	836.19	229.82	867.19	15.37	0.23	
6,458.00	2.07	56.86	6,385.75	-747.97	838.03	232.55	869.70	15.51	0.13	
6,547.00	2.16	61.21	6,474.69	-748.86	839.72	235.37	872.08	15.66	0.21	
6,637.00	2.04	60.22	6,564.63	-749.67	841.33	238.24	874.41	15.81	0.14	
6,726.00	2.02	63.99	6,653.57	-750.36	842.80	241.03	876.59	15.96	0.15	
6,816.00	2.05	61.56	6,743.52	-751.03	844.27	243.87	878.78	16.11	0.10	
6,905.00	1.79	58.22	6,832.47	-751.79	845.76	246.45	880.93	16.25	0.32	
6,994.00	1.52	60.74	6,921.43	-752.48	847.06	248.66	882.81	16.36	0.31	
7,084.00	1.35	66.10	7,011.40	-752.93	848.08	250.67	884.35	16.47	0.24	
7,173.00	1.26	63.47	7,100.38	-753.28	848.94	252.51	885.70	16.56	0.12	
7,263.00	0.86	66.24	7,190.36	-753.58	849.65	254.01	886.81	16.64	0.45	
7,352.00	0.94	58.54	7,279.35	-753.88	850.30	255.24	887.79	16.71	0.16	
7,441.00	0.78	62.55	7,368.34	-754.21	850.96	256.40	888.75	16.77	0.19	
7,531.00	0.91	66.66	7,458.33	-754.45	851.53	257.60	889.64	16.83	0.16	
7,620.00	0.56	117.22	7,547.33	-754.25	851.61	258.64	890.02	16.89	0.79	
7,709.00	0.37	126.89	7,636.32	-753.73	851.24	259.26	889.84	16.94	0.23	
7,799.00	0.57	303.20	7,726.32	-753.84	851.31	259.11	889.87	16.93	1.04	
7,888.00	0.98	302.72	7,815.31	-754.73	851.96	258.10	890.20	16.85	0.46	
8,063.00	1.21	83.79	7,990.30	-755.56	852.97	258.68	891.33	16.87	1.18	
8,242.00	1.19	295.96	8,169.28	-756.48	853.99	258.89	892.37	16.86	1.29	
8,421.00	1.52	292.11	8,348.23	-759.15	855.70	255.02	892.89	16.60	0.19	
8,600.00	1.58	281.20	8,527.17	-761.68	857.07	250.40	892.90	16.29	0.17	
8,779.00	1.88	275.66	8,706.09	-763.82	857.84	245.06	892.16	15.94	0.19	
8,957.00	1.71	266.18	8,884.00	-765.38	857.95	239.50	890.75	15.60	0.19	
9,136.00	1.75	268.39	9,062.92	-766.55	857.70	234.10	889.07	15.27	0.04	



Nabors Corporate Services
Completion Report



Company:	Shell	Local Co-ordinate Reference:	Well PW Unit 1804H ST1
Project:	Loving Co., TX	TVD Reference:	RT-26 @ 2788.90ft (Original Well Elev)
Site:	University 19	MD Reference:	RT-26 @ 2788.90ft (Original Well Elev)
Well:	PW Unit 1804H ST1	North Reference:	Grid
Wellbore:	ST1 Surveys	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	RyanUSA_Compass

Survey										
MD (ft)	Inc (°)	Azi (azimuth) (°)	TVD (ft)	V. Sec (ft)	N/S (ft)	E/W (ft)	Closure Distance (ft)	Closure Azimuth (°)	DLeg (°/100ft)	
9,315.00	2.22	269.01	9,241.81	-768.04	857.56	227.90	887.33	14.88	0.26	
9,494.00	2.88	268.32	9,420.63	-769.94	857.37	219.94	885.13	14.39	0.37	
9,583.00	2.61	274.20	9,509.53	-771.13	857.45	215.69	884.16	14.12	0.44	
9,672.00	3.23	285.58	9,598.42	-773.08	858.27	211.25	883.89	13.83	0.95	
9,762.00	3.74	283.90	9,688.25	-775.81	859.66	205.96	883.99	13.47	0.58	
9,851.00	3.87	287.76	9,777.05	-778.85	861.27	200.28	884.25	13.09	0.32	
9,941.00	2.29	294.81	9,866.92	-781.66	862.95	195.76	884.88	12.78	1.80	
10,030.00	1.98	281.01	9,955.86	-783.48	863.99	192.63	885.21	12.57	0.67	
10,120.00	2.01	255.99	10,045.81	-784.19	863.91	189.58	884.46	12.38	0.96	
10,209.00	2.36	233.22	10,134.74	-783.55	862.43	186.59	882.39	12.21	1.04	
10,298.00	2.59	228.01	10,223.66	-781.97	859.99	183.63	879.38	12.05	0.36	
10,376.00	2.56	223.75	10,301.58	-780.27	857.55	181.12	876.47	11.93	0.25	
10,555.00	2.65	228.00	10,480.40	-776.34	851.90	175.28	869.74	11.63	0.12	
10,734.00	2.27	223.76	10,659.23	-772.65	846.57	169.75	863.42	11.34	0.24	
10,824.00	2.39	237.84	10,749.16	-771.18	844.28	166.93	860.62	11.18	0.65	
10,913.00	2.38	233.33	10,838.08	-769.96	842.19	163.88	857.98	11.01	0.21	
11,003.00	2.26	223.84	10,928.01	-768.36	839.79	161.15	855.11	10.86	0.45	
11,092.00	2.50	205.13	11,016.93	-765.98	836.77	159.11	851.76	10.77	0.91	
11,181.00	10.45	159.52	11,105.33	-756.44	827.43	161.11	842.97	11.02	9.98	
11,271.00	19.82	147.57	11,192.13	-733.69	806.86	172.18	825.02	12.05	10.92	
11,315.00	23.16	144.08	11,233.07	-718.47	793.55	181.26	813.99	12.87	8.12	
11,405.00	16.90	114.67	11,317.79	-693.45	773.69	203.60	800.03	14.74	12.97	
11,495.00	31.84	128.75	11,399.60	-665.70	753.24	234.20	788.81	17.27	17.70	
11,555.00	40.50	140.00	11,448.05	-635.14	728.33	259.14	773.06	19.59	18.14	
PTB - Unit 1804H - BHL - Unit 1804H - FTP										



Company:	Shell	Local Co-ordinate Reference:	Well PW Unit 1804H ST1
Project:	Loving Co., TX	TVD Reference:	RT-26 @ 2788.90ft (Original Well Elev)
Site:	University 19	MD Reference:	RT-26 @ 2788.90ft (Original Well Elev)
Well:	PW Unit 1804H ST1	North Reference:	Grid
Wellbore:	ST1 Surveys	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	RyanUSA_Compass

Design Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
11,555.00	11,448.05	728.33	259.14	PTB

Checked By: _____	Approved By: _____	Date: _____
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Shell

Loving Co., TX
University 19
PW Unit 1804H
Wellbore #1

Design: Wellbore #1

Completion Report

17 October, 2017





Nabors Corporate Services
Completion Report



Company:	Shell	Local Co-ordinate Reference:	Well PW Unit 1804H
Project:	Loving Co., TX	TVD Reference:	RT-26 @ 2788.90ft (Original Well Elev)
Site:	University 19	MD Reference:	RT-26 @ 2788.90ft (Original Well Elev)
Well:	PW Unit 1804H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	RyanUSA_Compass

Project		Loving Co., TX	
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Texas Central 4203		

Site	University 19				
Site Position:		Northing:	752,319.000 usft	Latitude:	31° 41' 55.42507 N
From:	Map	Easting:	1,041,948.090 usft	Longitude:	103° 24' 50.75045 W
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence:	-1.59 °

Well		PW Unit 1804H				
Well Position	+N/-S	0.00 ft	Northing:	742,758.070 usft	Latitude:	31° 40' 21.36247 N
	+E/-W	0.00 ft	Easting:	1,043,861.590 usft	Longitude:	103° 24' 25.55289 W
Position Uncertainty		2.00 ft	Wellhead Elevation:	ft	Ground Level:	2,762.90 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	8/22/2017	7.12	59.48	47,554.20000000

Design		Wellbore #1			
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(ft)	(ft)	(ft)	(°)	
	0.00	0.00	0.00	13.93	



Nabors Corporate Services

Completion Report



Company:	Shell	Local Co-ordinate Reference:	Well PW Unit 1804H
Project:	Loving Co., TX	TVD Reference:	RT-26 @ 2788.90ft (Original Well Elev)
Site:	University 19	MD Reference:	RT-26 @ 2788.90ft (Original Well Elev)
Well:	PW Unit 1804H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	RyanUSA_Compass

Survey Program		Date 10/16/2017		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
187.00	4,915.00	Survey #1 Spudder Rig Surveys (Wellbore	MWD+HRGM+AX	OWSG MWD + HRGM + Axial Correction
4,915.00	22,500.00	Survey #2 NDS Surveys (Wellbore #1)	MWD+HRGM	OWSG MWD + HRGM

Survey										
MD (ft)	Inc (°)	Azi (azimuth) (°)	TVD (ft)	V. Sec (ft)	N/S (ft)	E/W (ft)	Closure Distance (ft)	Closure Azimuth (°)	DLeg (°/100ft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
187.00	1.19	200.24	186.99	-1.93	-1.82	-0.67	1.94	200.24	0.64	
281.00	1.10	180.71	280.97	-3.78	-3.64	-1.02	3.78	195.66	0.42	
374.00	1.57	344.28	373.96	-3.54	-3.31	-1.38	3.58	202.61	2.84	
467.00	4.29	357.21	466.83	0.90	1.40	-1.89	2.35	306.42	2.99	
561.00	6.67	358.77	560.39	9.54	10.37	-2.18	10.59	348.12	2.54	
655.00	7.14	15.15	653.72	20.65	21.46	-0.77	21.48	357.94	2.15	
749.00	8.05	25.23	746.90	32.94	33.06	3.56	33.25	6.15	1.71	
856.00	8.75	18.81	852.75	48.40	47.54	9.38	48.46	11.16	1.09	
1,035.00	8.32	16.19	1,029.77	74.91	72.86	17.38	74.91	13.42	0.32	
1,213.00	8.69	16.84	1,205.81	101.20	98.10	24.87	101.21	14.22	0.21	
1,392.00	8.59	17.10	1,382.78	128.06	123.82	32.72	128.07	14.80	0.06	
1,572.00	8.16	17.98	1,560.86	154.22	148.82	40.61	154.26	15.26	0.25	
1,751.00	9.18	12.25	1,737.82	181.17	174.86	47.56	181.21	15.22	0.75	
1,929.00	10.24	10.58	1,913.26	211.15	204.29	53.48	211.17	14.67	0.62	
2,108.00	11.32	15.67	2,089.11	244.60	236.84	61.15	244.61	14.48	0.80	
2,287.00	11.63	19.72	2,264.53	280.11	270.74	71.98	280.15	14.89	0.48	
2,466.00	10.58	13.20	2,440.18	314.49	303.73	81.82	314.56	15.08	0.91	
2,645.00	10.22	12.02	2,616.24	346.80	335.26	88.88	346.84	14.85	0.23	
2,824.00	9.61	14.42	2,792.57	377.61	365.26	95.91	377.64	14.71	0.41	
3,003.00	9.24	16.36	2,969.15	406.91	393.52	103.68	406.95	14.76	0.27	



Nabors Corporate Services
Completion Report



Company:	Shell	Local Co-ordinate Reference:	Well PW Unit 1804H
Project:	Loving Co., TX	TVD Reference:	RT-26 @ 2788.90ft (Original Well Elev)
Site:	University 19	MD Reference:	RT-26 @ 2788.90ft (Original Well Elev)
Well:	PW Unit 1804H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	RyanUSA_Compass

Survey										
MD (ft)	Inc (°)	Azi (azimuth) (°)	TVD (ft)	V. Sec (ft)	N/S (ft)	E/W (ft)	Closure Distance (ft)	Closure Azimuth (°)	DLeg (°/100ft)	
3,182.00	7.91	19.32	3,146.15	433.53	418.94	111.80	433.60	14.94	0.78	
3,361.00	8.49	11.08	3,323.33	458.99	443.53	118.42	459.06	14.95	0.73	
3,540.00	8.35	6.88	3,500.40	485.09	469.40	122.51	485.12	14.63	0.35	
3,719.00	9.84	9.27	3,677.14	513.23	497.40	126.53	513.24	14.27	0.86	
3,898.00	11.27	16.28	3,853.12	545.96	529.29	133.90	545.96	14.20	1.07	
4,077.00	10.33	20.59	4,028.95	579.38	561.10	144.45	579.40	14.44	0.69	
4,256.00	11.25	12.25	4,204.79	612.77	593.19	153.80	612.81	14.54	1.01	
4,434.00	9.87	8.78	4,379.77	645.32	625.24	159.81	645.34	14.34	0.85	
4,612.00	12.29	9.46	4,554.44	679.41	659.01	165.25	679.41	14.08	1.36	
4,792.00	12.14	12.96	4,730.37	717.43	696.35	172.65	717.43	13.92	0.42	
4,915.00	10.96	15.34	4,850.88	742.06	720.23	178.64	742.06	13.93	1.03	
5,027.00	10.14	13.14	4,960.98	762.56	740.10	183.70	762.56	13.94	0.82	
5,116.00	9.98	11.34	5,048.62	778.10	755.29	187.00	778.10	13.91	0.40	
5,206.00	9.70	12.36	5,137.29	793.47	770.34	190.15	793.47	13.87	0.37	
5,295.00	6.88	18.32	5,225.36	806.28	782.73	193.44	806.28	13.88	3.31	
5,385.00	6.99	18.70	5,314.70	817.11	793.04	196.89	817.11	13.94	0.13	
5,474.00	4.65	24.56	5,403.23	826.05	801.45	200.12	826.05	14.02	2.71	
5,563.00	4.60	23.92	5,491.94	833.11	807.99	203.07	833.12	14.11	0.08	
5,653.00	4.68	22.39	5,581.65	840.30	814.68	205.93	840.31	14.19	0.16	
5,742.00	4.13	24.59	5,670.39	847.04	820.96	208.65	847.05	14.26	0.65	
5,832.00	2.42	56.50	5,760.24	851.63	824.95	211.58	851.65	14.38	2.71	
5,921.00	2.59	59.11	5,849.16	854.43	827.02	214.87	854.48	14.56	0.23	
6,010.00	2.35	57.87	5,938.07	857.16	829.02	218.14	857.24	14.74	0.28	
6,100.00	2.31	59.02	6,028.00	859.77	830.94	221.26	859.89	14.91	0.07	
6,190.00	2.13	58.93	6,117.93	862.23	832.74	224.25	862.40	15.07	0.20	
6,279.00	2.05	59.59	6,206.87	864.51	834.40	227.04	864.73	15.22	0.09	



Nabors Corporate Services
Completion Report



Company:	Shell	Local Co-ordinate Reference:	Well PW Unit 1804H
Project:	Loving Co., TX	TVD Reference:	RT-26 @ 2788.90ft (Original Well Elev)
Site:	University 19	MD Reference:	RT-26 @ 2788.90ft (Original Well Elev)
Well:	PW Unit 1804H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	RyanUSA_Compass

Survey										
MD (ft)	Inc (°)	Azi (azimuth) (°)	TVD (ft)	V. Sec (ft)	N/S (ft)	E/W (ft)	Closure Distance (ft)	Closure Azimuth (°)	DLeg (°/100ft)	
6,306.61	2.09	58.15	6,234.46	865.22	834.91	227.89	865.45	15.27	0.23	
Unit 1804H - POP										
6,369.00	2.17	55.07	6,296.81	866.92	836.19	229.82	867.19	15.37	0.23	
6,458.00	2.07	56.86	6,385.75	869.37	838.03	232.55	869.70	15.51	0.13	
6,547.00	2.16	61.21	6,474.69	871.68	839.72	235.37	872.08	15.66	0.21	
6,637.00	2.04	60.22	6,564.63	873.94	841.33	238.24	874.41	15.81	0.14	
6,726.00	2.02	63.99	6,653.57	876.04	842.80	241.03	876.59	15.96	0.15	
6,816.00	2.05	61.56	6,743.52	878.14	844.27	243.87	878.78	16.11	0.10	
6,905.00	1.79	58.22	6,832.47	880.21	845.76	246.45	880.93	16.25	0.32	
6,994.00	1.52	60.74	6,921.43	882.02	847.06	248.66	882.81	16.36	0.31	
7,084.00	1.35	66.10	7,011.40	883.48	848.08	250.67	884.35	16.47	0.24	
7,173.00	1.26	63.47	7,100.38	884.76	848.94	252.51	885.70	16.56	0.12	
7,263.00	0.86	66.24	7,190.36	885.82	849.65	254.01	886.81	16.64	0.45	
7,352.00	0.94	58.54	7,279.35	886.74	850.30	255.24	887.79	16.71	0.16	
7,441.00	0.78	62.55	7,368.34	887.66	850.96	256.40	888.75	16.77	0.19	
7,531.00	0.91	66.66	7,458.33	888.50	851.53	257.60	889.64	16.83	0.16	
7,620.00	0.56	117.22	7,547.33	888.83	851.61	258.64	890.02	16.89	0.79	
7,709.00	0.37	126.89	7,636.32	888.62	851.24	259.26	889.84	16.94	0.23	
7,799.00	0.57	303.20	7,726.32	888.65	851.31	259.11	889.87	16.93	1.04	
7,888.00	0.98	302.72	7,815.31	889.04	851.96	258.10	890.20	16.85	0.46	
8,063.00	1.21	83.79	7,990.30	890.16	852.97	258.68	891.33	16.87	1.18	
8,242.00	1.19	295.96	8,169.28	891.20	853.99	258.89	892.37	16.86	1.29	
8,421.00	1.52	292.11	8,348.23	891.92	855.70	255.02	892.89	16.60	0.19	
8,600.00	1.58	281.20	8,527.17	892.15	857.07	250.40	892.90	16.29	0.17	
8,779.00	1.88	275.66	8,706.09	891.61	857.84	245.06	892.16	15.94	0.19	
8,957.00	1.71	266.18	8,884.00	890.38	857.95	239.50	890.75	15.60	0.19	
9,136.00	1.75	268.39	9,062.92	888.83	857.70	234.10	889.07	15.27	0.04	



Nabors Corporate Services
Completion Report



Company:	Shell	Local Co-ordinate Reference:	Well PW Unit 1804H
Project:	Loving Co., TX	TVD Reference:	RT-26 @ 2788.90ft (Original Well Elev)
Site:	University 19	MD Reference:	RT-26 @ 2788.90ft (Original Well Elev)
Well:	PW Unit 1804H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	RyanUSA_Compass

Survey										
MD (ft)	Inc (°)	Azi (azimuth) (°)	TVD (ft)	V. Sec (ft)	N/S (ft)	E/W (ft)	Closure Distance (ft)	Closure Azimuth (°)	DLeg (°/100ft)	
9,315.00	2.22	269.01	9,241.81	887.20	857.56	227.90	887.33	14.88	0.26	
9,494.00	2.88	268.32	9,420.63	885.10	857.37	219.94	885.13	14.39	0.37	
9,583.00	2.61	274.20	9,509.53	884.16	857.45	215.69	884.16	14.12	0.44	
9,672.00	3.23	285.58	9,598.42	883.89	858.27	211.25	883.89	13.83	0.95	
9,762.00	3.74	283.90	9,688.25	883.96	859.66	205.96	883.99	13.47	0.58	
9,851.00	3.87	287.76	9,777.05	884.16	861.27	200.28	884.25	13.09	0.32	
9,941.00	2.29	294.81	9,866.92	884.70	862.95	195.76	884.88	12.78	1.80	
10,030.00	1.98	281.01	9,955.86	884.96	863.99	192.63	885.21	12.57	0.67	
10,120.00	2.01	255.99	10,045.81	884.14	863.91	189.58	884.46	12.38	0.96	
10,209.00	2.36	233.22	10,134.74	881.99	862.43	186.59	882.39	12.21	1.04	
10,298.00	2.59	228.01	10,223.66	878.90	859.99	183.63	879.38	12.05	0.36	
10,376.00	2.56	223.75	10,301.58	875.93	857.55	181.12	876.47	11.93	0.25	
10,555.00	2.65	228.00	10,480.40	869.04	851.90	175.28	869.74	11.63	0.12	
10,734.00	2.27	223.76	10,659.23	862.53	846.57	169.75	863.42	11.34	0.24	
10,824.00	2.39	237.84	10,749.16	859.64	844.28	166.93	860.62	11.18	0.65	
10,913.00	2.38	233.33	10,838.08	856.87	842.19	163.88	857.98	11.01	0.21	
11,003.00	2.26	223.84	10,928.01	853.89	839.79	161.15	855.11	10.86	0.45	
11,092.00	2.50	205.13	11,016.93	850.46	836.77	159.11	851.76	10.77	0.91	
11,181.00	10.45	159.52	11,105.33	841.88	827.43	161.11	842.97	11.02	9.98	
11,271.00	19.82	147.57	11,192.13	824.58	806.86	172.18	825.02	12.05	10.92	
11,360.00	27.59	142.83	11,273.56	801.18	777.65	192.75	801.18	13.92	8.98	
11,450.00	33.17	142.95	11,351.18	772.57	741.37	220.20	773.38	16.54	6.20	
11,539.00	39.02	144.76	11,423.06	738.90	699.01	251.06	742.73	19.76	6.68	
11,629.00	45.02	146.61	11,489.90	698.76	649.25	284.96	709.03	23.70	6.81	
11,719.00	53.29	150.68	11,548.72	650.81	591.10	320.21	672.27	28.45	9.80	
11,808.00	64.76	154.50	11,594.46	593.53	523.42	355.14	632.53	34.16	13.40	
11,898.00	76.26	162.08	11,624.48	524.64	444.73	386.26	589.05	40.98	15.03	



Nabors Corporate Services

Completion Report



Company:	Shell	Local Co-ordinate Reference:	Well PW Unit 1804H
Project:	Loving Co., TX	TVD Reference:	RT-26 @ 2788.90ft (Original Well Elev)
Site:	University 19	MD Reference:	RT-26 @ 2788.90ft (Original Well Elev)
Well:	PW Unit 1804H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	RyanUSA_Compass

Survey										
MD (ft)	Inc (°)	Azi (azimuth) (°)		TVD (ft)	V. Sec (ft)	N/S (ft)	E/W (ft)	Closure Distance (ft)	Closure Azimuth (°)	DLeg (°/100ft)
11,957.00	84.39	166.25		11,634.39	474.19	388.83	402.09	559.34	45.96	15.44
12,020.53	89.35	166.91		11,637.86	417.87	327.14	416.80	529.85	51.87	7.88
Unit 1804H - FTP										
12,027.00	89.86	166.98		11,637.90	412.10	320.84	418.26	527.15	52.51	7.88
12,117.00	89.51	165.55		11,638.39	332.40	233.42	439.63	497.75	62.03	1.64
12,206.00	90.14	169.15		11,638.67	252.82	146.59	459.12	481.95	72.29	4.11
12,296.00	89.74	172.08		11,638.76	170.18	57.81	473.79	477.31	83.04	3.29
12,386.00	89.60	175.02		11,639.28	85.82	-31.61	483.90	484.93	93.74	3.27
12,476.00	90.26	174.72		11,639.39	0.76	-121.25	491.95	506.67	103.85	0.81
12,566.00	90.52	170.62		11,638.78	-83.10	-210.49	503.43	545.66	112.69	4.56
12,655.00	90.95	168.82		11,637.63	-164.26	-298.05	519.31	598.76	119.85	2.08
12,745.00	90.09	165.10		11,636.82	-244.45	-385.71	539.61	663.29	125.56	4.24
12,835.00	88.39	163.41		11,638.01	-322.64	-472.32	564.03	735.67	129.94	2.66
12,925.00	89.54	168.97		11,639.64	-402.25	-559.67	585.50	809.96	133.71	6.31
13,014.00	89.63	172.51		11,640.28	-484.04	-647.49	599.82	882.63	137.19	3.98
13,104.00	90.29	173.25		11,640.35	-568.03	-736.80	610.97	957.16	140.33	1.10
13,194.00	89.37	169.98		11,640.61	-651.28	-825.82	624.09	1,035.12	142.92	3.77
13,284.00	89.25	164.02		11,641.70	-731.48	-913.47	644.33	1,117.85	144.80	6.62
13,374.00	90.03	164.38		11,642.26	-809.63	-1,000.07	668.83	1,203.11	146.23	0.95
13,464.00	90.03	166.94		11,642.22	-888.88	-1,087.26	691.12	1,288.32	147.56	2.84
13,554.00	90.20	168.11		11,642.04	-969.49	-1,175.13	710.56	1,373.26	148.84	1.31
13,643.00	90.23	166.38		11,641.70	-1,049.01	-1,261.93	730.21	1,457.97	149.94	1.94
13,733.00	91.24	167.49		11,640.55	-1,129.19	-1,349.59	750.56	1,544.26	150.92	1.67
13,823.00	90.26	161.83		11,639.37	-1,207.66	-1,436.34	774.35	1,631.78	151.67	6.38
13,913.00	90.83	161.47		11,638.51	-1,283.75	-1,521.76	802.69	1,720.48	152.19	0.75
14,002.00	90.49	165.72		11,637.49	-1,360.54	-1,607.11	827.81	1,807.78	152.75	4.79
14,092.00	90.20	161.93		11,636.94	-1,438.38	-1,693.53	852.88	1,896.17	153.27	4.22



Nabors Corporate Services
Completion Report



Company:	Shell	Local Co-ordinate Reference:	Well PW Unit 1804H
Project:	Loving Co., TX	TVD Reference:	RT-26 @ 2788.90ft (Original Well Elev)
Site:	University 19	MD Reference:	RT-26 @ 2788.90ft (Original Well Elev)
Well:	PW Unit 1804H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	RyanUSA_Compass

Survey										
MD (ft)	Inc (°)	Azi (azimuth) (°)	TVD (ft)	V. Sec (ft)	N/S (ft)	E/W (ft)	Closure Distance (ft)	Closure Azimuth (°)	DLeg (°/100ft)	
14,182.00	89.63	163.34	11,637.08	-1,515.28	-1,779.43	879.74	1,985.02	153.69	1.69	
14,272.00	89.40	162.51	11,637.84	-1,592.42	-1,865.46	906.17	2,073.90	154.09	0.96	
14,362.00	89.83	165.06	11,638.44	-1,670.24	-1,951.87	931.29	2,162.66	154.49	2.87	
14,451.00	89.97	168.21	11,638.60	-1,749.32	-2,038.44	951.87	2,249.73	154.97	3.54	
14,541.00	89.37	168.06	11,639.12	-1,830.35	-2,126.52	970.37	2,337.46	155.47	0.69	
14,631.00	90.00	167.87	11,639.61	-1,911.26	-2,214.54	989.13	2,425.40	155.93	0.73	
14,721.00	89.94	165.88	11,639.66	-1,991.41	-2,302.18	1,009.57	2,513.82	156.32	2.21	
14,811.00	90.23	171.51	11,639.53	-2,072.79	-2,390.40	1,027.21	2,601.76	156.75	6.26	
14,900.00	89.97	169.02	11,639.37	-2,154.29	-2,478.11	1,042.25	2,688.37	157.19	2.81	
14,990.00	89.51	164.11	11,639.78	-2,234.20	-2,565.62	1,063.16	2,777.18	157.49	5.48	
15,080.00	90.35	160.42	11,639.89	-2,310.78	-2,651.33	1,090.57	2,866.86	157.64	4.20	
15,170.00	89.77	155.57	11,639.80	-2,383.63	-2,734.75	1,124.28	2,956.83	157.65	5.43	
15,259.00	89.45	151.44	11,640.40	-2,451.37	-2,814.38	1,163.98	3,045.58	157.53	4.65	
15,349.00	89.54	153.33	11,641.19	-2,518.72	-2,894.12	1,205.69	3,135.22	157.38	2.10	
15,439.00	90.06	159.97	11,641.51	-2,590.29	-2,976.70	1,241.34	3,225.17	157.36	7.40	
15,529.00	90.55	166.09	11,641.03	-2,667.48	-3,062.74	1,267.60	3,314.69	157.52	6.82	
15,619.00	90.43	167.01	11,640.26	-2,747.39	-3,150.27	1,288.53	3,403.60	157.75	1.03	
15,708.00	90.37	170.48	11,639.64	-2,827.91	-3,237.54	1,305.90	3,491.00	158.03	3.90	
15,798.00	89.77	166.27	11,639.53	-2,909.09	-3,325.68	1,324.03	3,579.55	158.29	4.73	
15,888.00	90.63	165.80	11,639.21	-2,988.63	-3,413.02	1,345.75	3,668.75	158.48	1.09	
15,978.00	91.58	167.41	11,637.48	-3,068.57	-3,500.55	1,366.59	3,757.85	158.67	2.08	
16,068.00	89.86	167.33	11,636.35	-3,149.06	-3,588.36	1,386.27	3,846.82	158.88	1.91	
16,157.00	91.06	166.42	11,635.63	-3,228.32	-3,675.03	1,406.48	3,934.97	159.06	1.69	
16,247.00	88.31	159.74	11,636.13	-3,305.53	-3,761.07	1,432.65	4,024.70	159.15	8.03	
16,337.00	85.02	155.67	11,641.37	-3,377.99	-3,844.18	1,466.72	4,114.48	159.12	5.81	
16,427.00	86.17	155.43	11,648.28	-3,448.33	-3,925.86	1,503.86	4,204.05	159.04	1.31	
16,516.00	86.67	156.01	11,653.84	-3,518.12	-4,006.83	1,540.39	4,292.73	158.97	0.86	



Nabors Corporate Services
Completion Report



Company:	Shell	Local Co-ordinate Reference:	Well PW Unit 1804H
Project:	Loving Co., TX	TVD Reference:	RT-26 @ 2788.90ft (Original Well Elev)
Site:	University 19	MD Reference:	RT-26 @ 2788.90ft (Original Well Elev)
Well:	PW Unit 1804H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	RyanUSA_Compass

Survey										
MD (ft)	Inc (°)	Azi (azimuth) (°)	TVD (ft)	V. Sec (ft)	N/S (ft)	E/W (ft)	Closure Distance (ft)	Closure Azimuth (°)	DLeg (°/100ft)	
16,606.00	86.95	153.73	11,658.84	-3,587.89	-4,088.18	1,578.54	4,382.36	158.89	2.55	
16,696.00	90.57	154.03	11,660.79	-3,656.75	-4,168.96	1,618.15	4,471.98	158.79	4.04	
16,786.00	91.24	154.33	11,659.37	-3,725.94	-4,249.96	1,657.35	4,561.69	158.70	0.82	
16,876.00	92.30	155.65	11,656.59	-3,795.91	-4,331.48	1,695.38	4,651.45	158.62	1.88	
16,965.00	88.31	152.60	11,656.12	-3,864.25	-4,411.53	1,734.20	4,740.16	158.54	5.64	
17,056.00	92.70	156.80	11,655.31	-3,934.71	-4,493.76	1,773.07	4,830.91	158.47	6.68	
17,145.00	93.19	157.68	11,650.74	-4,005.98	-4,575.72	1,807.46	4,919.77	158.45	1.13	
17,235.00	93.39	156.91	11,645.58	-4,078.08	-4,658.61	1,842.14	5,009.60	158.42	0.88	
17,325.00	93.44	160.97	11,640.21	-4,151.66	-4,742.43	1,874.42	5,099.42	158.43	4.50	
17,415.00	92.35	161.81	11,635.67	-4,227.43	-4,827.61	1,903.10	5,189.19	158.49	1.53	
17,504.00	92.61	164.60	11,631.82	-4,303.86	-4,912.73	1,928.79	5,277.80	158.56	3.15	
17,594.00	93.24	166.08	11,627.22	-4,382.78	-4,999.68	1,951.54	5,367.06	158.68	1.79	
17,684.00	91.03	167.08	11,623.87	-4,462.66	-5,087.16	1,972.41	5,456.15	158.81	2.69	
17,774.00	90.43	165.20	11,622.72	-4,542.27	-5,174.53	1,993.97	5,545.42	158.93	2.19	
17,863.00	90.00	165.31	11,622.39	-4,620.35	-5,260.60	2,016.62	5,633.88	159.03	0.50	
17,953.00	90.23	165.20	11,622.21	-4,699.31	-5,347.63	2,039.53	5,723.36	159.12	0.28	
18,043.00	90.83	165.87	11,621.38	-4,778.48	-5,434.77	2,062.01	5,812.80	159.22	1.00	
18,133.00	91.29	165.89	11,619.71	-4,857.89	-5,522.04	2,083.96	5,902.19	159.32	0.51	
18,222.00	89.57	164.13	11,619.04	-4,935.78	-5,608.00	2,106.98	5,990.75	159.41	2.76	
18,312.00	90.55	166.82	11,618.95	-5,014.90	-5,695.12	2,129.55	6,080.24	159.50	3.18	
18,402.00	89.14	165.96	11,619.19	-5,094.70	-5,782.59	2,150.72	6,169.60	159.60	1.84	
18,492.00	89.31	165.92	11,620.41	-5,174.16	-5,869.88	2,172.58	6,259.04	159.69	0.19	
18,582.00	88.68	166.02	11,621.99	-5,253.65	-5,957.18	2,194.40	6,348.50	159.78	0.71	
18,671.00	88.16	166.14	11,624.44	-5,332.31	-6,043.54	2,215.80	6,436.93	159.87	0.60	
18,761.00	87.45	166.19	11,627.89	-5,411.88	-6,130.86	2,237.31	6,526.33	159.95	0.79	
18,851.00	86.18	166.10	11,632.89	-5,491.38	-6,218.10	2,258.83	6,615.67	160.04	1.41	
18,941.00	86.70	166.25	11,638.48	-5,570.87	-6,305.33	2,280.29	6,704.99	160.12	0.60	



Nabors Corporate Services
Completion Report



Company:	Shell	Local Co-ordinate Reference:	Well PW Unit 1804H
Project:	Loving Co., TX	TVD Reference:	RT-26 @ 2788.90ft (Original Well Elev)
Site:	University 19	MD Reference:	RT-26 @ 2788.90ft (Original Well Elev)
Well:	PW Unit 1804H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	RyanUSA_Compass

Survey										
MD (ft)	Inc (°)	Azi (azimuth) (°)	TVD (ft)	V. Sec (ft)	N/S (ft)	E/W (ft)	Closure Distance (ft)	Closure Azimuth (°)	DLeg (°/100ft)	
19,031.00	88.57	166.59	11,642.19	-5,650.62	-6,392.73	2,301.40	6,794.37	160.20	2.11	
19,121.00	91.00	167.33	11,642.53	-5,730.83	-6,480.41	2,321.71	6,883.75	160.29	2.82	
19,210.00	91.15	168.32	11,640.86	-5,810.73	-6,567.39	2,340.47	6,971.97	160.39	1.12	
19,300.00	90.00	167.11	11,639.96	-5,891.47	-6,655.32	2,359.62	7,061.24	160.48	1.85	
19,390.00	91.03	168.21	11,639.15	-5,972.17	-6,743.23	2,378.86	7,150.53	160.57	1.67	
19,480.00	90.40	165.95	11,638.02	-6,052.45	-6,830.94	2,398.98	7,239.95	160.65	2.61	
19,570.00	88.65	165.45	11,638.77	-6,131.74	-6,918.15	2,421.20	7,329.60	160.71	2.02	
19,660.00	89.40	165.90	11,640.30	-6,211.00	-7,005.33	2,443.47	7,419.25	160.77	0.97	
19,750.00	90.42	162.48	11,640.44	-6,289.13	-7,091.92	2,467.99	7,509.08	160.81	3.97	
19,839.00	91.61	165.28	11,638.87	-6,366.15	-7,177.39	2,492.69	7,597.93	160.85	3.42	
19,929.00	91.03	164.99	11,636.79	-6,445.00	-7,264.36	2,515.77	7,687.65	160.90	0.72	
20,019.00	91.69	165.09	11,634.66	-6,523.78	-7,351.28	2,539.00	7,777.39	160.95	0.74	
20,109.00	92.84	165.78	11,631.10	-6,602.81	-7,438.32	2,561.61	7,867.05	161.00	1.49	
20,198.00	89.43	163.31	11,629.34	-6,680.32	-7,524.07	2,585.32	7,955.84	161.04	4.73	
20,288.00	89.08	161.70	11,630.51	-6,757.11	-7,609.89	2,612.37	8,045.80	161.05	1.83	
20,378.00	90.83	162.55	11,630.58	-6,833.59	-7,695.54	2,640.00	8,135.78	161.07	2.16	
20,467.00	92.18	163.87	11,628.24	-6,910.07	-7,780.72	2,665.70	8,224.69	161.09	2.12	
20,557.00	89.23	162.38	11,627.13	-6,987.36	-7,866.82	2,691.82	8,314.61	161.11	3.67	
20,647.00	89.34	161.57	11,628.26	-7,063.71	-7,952.40	2,719.66	8,404.59	161.12	0.91	
20,737.00	91.69	162.88	11,627.45	-7,140.27	-8,038.09	2,747.14	8,494.57	161.13	2.99	
20,827.00	89.94	161.05	11,626.17	-7,216.61	-8,123.65	2,774.99	8,584.54	161.14	2.81	
20,916.00	89.83	159.86	11,626.35	-7,290.84	-8,207.52	2,804.77	8,673.53	161.13	1.34	
21,006.00	91.06	160.93	11,625.65	-7,365.86	-8,292.30	2,834.96	8,763.52	161.13	1.81	
21,096.00	90.40	160.53	11,624.50	-7,441.16	-8,377.25	2,864.66	8,853.51	161.12	0.86	
21,186.00	90.69	162.28	11,623.64	-7,517.04	-8,462.54	2,893.36	8,943.50	161.12	1.97	
21,276.00	90.29	162.22	11,622.87	-7,593.62	-8,548.26	2,920.80	9,033.48	161.14	0.45	
21,365.00	90.57	163.11	11,622.21	-7,669.69	-8,633.21	2,947.31	9,122.44	161.15	1.05	



Nabors Corporate Services
Completion Report



Company:	Shell	Local Co-ordinate Reference:	Well PW Unit 1804H
Project:	Loving Co., TX	TVD Reference:	RT-26 @ 2788.90ft (Original Well Elev)
Site:	University 19	MD Reference:	RT-26 @ 2788.90ft (Original Well Elev)
Well:	PW Unit 1804H	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	RyanUSA_Compass

Survey										
MD (ft)	Inc (°)	Azi (azimuth) (°)	TVD (ft)	V. Sec (ft)	N/S (ft)	E/W (ft)	Closure Distance (ft)	Closure Azimuth (°)	DLeg (°/100ft)	
21,455.00	90.17	162.57	11,621.63	-7,746.76	-8,719.20	2,973.87	9,212.40	161.17	0.75	
21,545.00	91.92	163.28	11,619.98	-7,823.89	-8,805.22	3,000.29	9,302.34	161.18	2.10	
21,635.00	90.34	162.49	11,618.21	-7,900.97	-8,891.21	3,026.77	9,392.28	161.20	1.96	
21,725.00	90.34	162.97	11,617.68	-7,977.96	-8,977.15	3,053.49	9,482.25	161.21	0.53	
21,815.00	91.09	162.13	11,616.55	-8,054.78	-9,063.00	3,080.47	9,572.21	161.23	1.25	
21,909.00	90.69	161.08	11,615.09	-8,134.20	-9,152.19	3,110.13	9,666.20	161.23	1.20	
22,003.00	88.91	159.00	11,615.42	-8,212.23	-9,240.53	3,142.22	9,760.17	161.22	2.91	
22,097.00	90.98	159.59	11,615.51	-8,289.56	-9,328.45	3,175.45	9,854.11	161.20	2.29	
22,191.00	91.18	160.56	11,613.74	-8,367.61	-9,416.81	3,207.48	9,948.08	161.19	1.05	
22,245.53	91.08	159.79	11,612.66	-8,412.93	-9,468.10	3,225.97	10,002.59	161.19	1.43	
Unit 1804H - BHL										
22,286.00	91.00	159.21	11,611.93	-8,446.31	-9,506.00	3,240.14	10,043.03	161.18	1.43	
22,380.00	89.43	157.05	11,611.58	-8,522.54	-9,593.22	3,275.15	10,136.89	161.15	2.84	
22,442.00	89.51	155.21	11,612.15	-8,571.52	-9,649.92	3,300.24	10,198.65	161.12	2.97	
22,500.00	89.51	155.21	11,612.65	-8,616.77	-9,702.57	3,324.56	10,256.34	161.09	0.00	

Checked By: _____	Approved By: _____	Date: _____
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SHELL WESTERN
E&P

WELL LOCATION
LEASE NAME & WELL NO.:
UNIVERSITY 19 PW UNIT 1804H

UNIT/LEASE ACREAGE:
8588.11 ACRES (MEASURED)

NEAREST TOWN IN COUNTY:

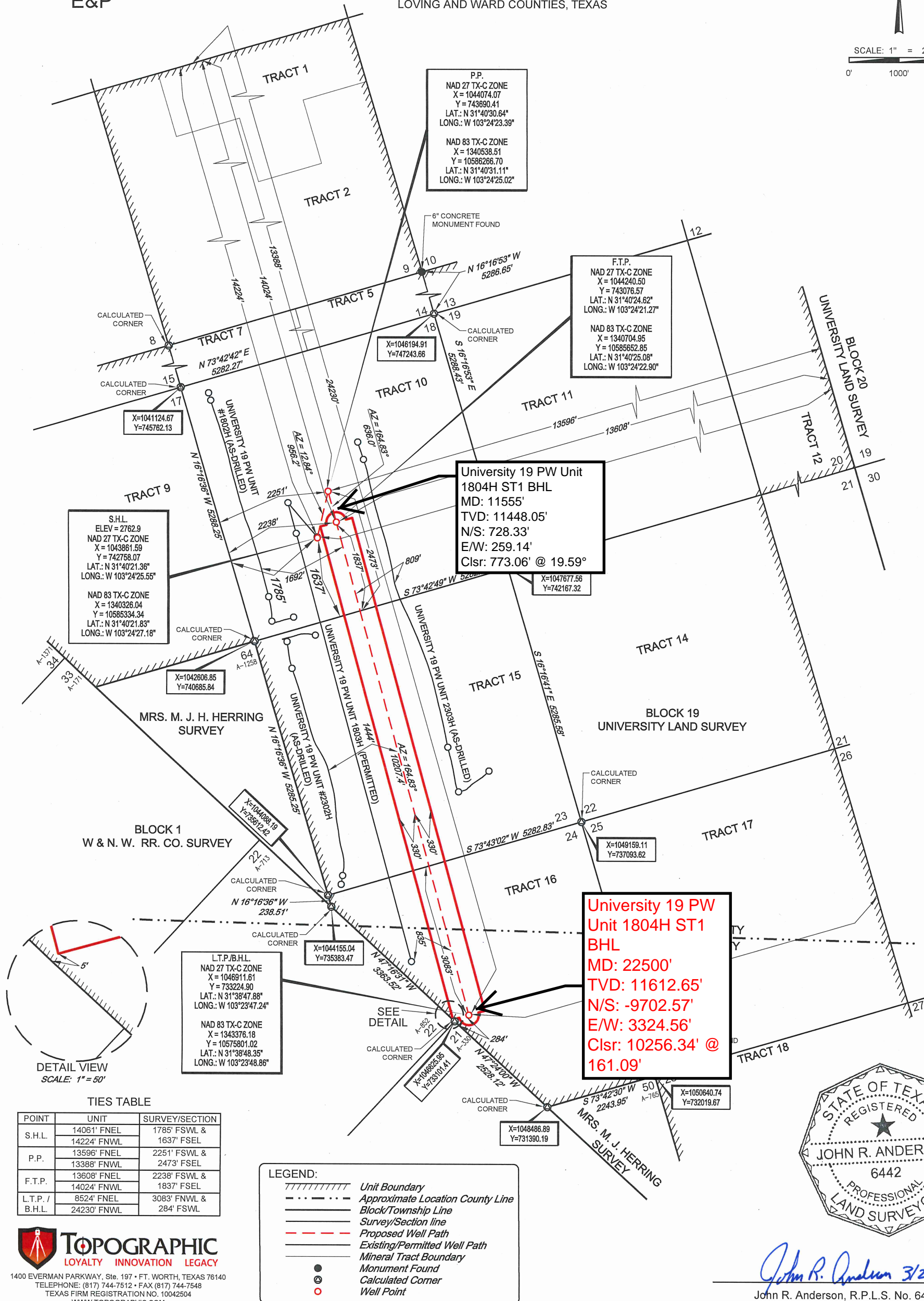
±11.5 MILES SOUTHEAST OF MENTONE, TEXAS

DESCRIPTION:

SECTIONS 18, 23 & 24, BLOCK 19, UNIVERSITY LAND SURVEY
LOVING AND WARD COUNTIES, TEXAS



SCALE: 1" = 2000'
0' 1000' 2000'



TIES TABLE

POINT	UNIT	SURVEY/SECTION
S.H.L.	14061' FNEL 14224' FFWL	1785' FSWL & 1637' FSEL
P.P.	13596' FNEL 13388' FFWL	2251' FSWL & 2473' FSEL
F.T.P.	13608' FNEL 14024' FFWL	2238' FSWL & 1837' FSEL
L.T.P. / B.H.L.	8524' FNEL 24230' FFWL	3083' FFWL & 284' FSWL

LEGEND:

- Unit Boundary
- Approximate Location County Line
- Block/Township Line
- Survey/Section line
- Proposed Well Path
- Existing/Permitted Well Path
- Mineral Tract Boundary
- Monument Found
- Calculated Corner
- Well Point



1400 EVERMAN PARKWAY, Ste. 197 • FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 • FAX (817) 744-7548
TEXAS FIRM REGISTRATION NO. 10042504
WWW.TOPOGRAPHIC.COM



John R. Anderson 3/2/17
John R. Anderson, R.P.L.S. No. 6442

NOTES:

- ORIGINAL DOCUMENT SIZE: 11" X 17"
- 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.
- THIS LOCATION AND/OR UNIT/LEASE 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.
- ALL ELEVATION VALUES CONTAINED HEREON ARE ORTHOMETRIC ONLY, BASED UPON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88), U.S. SURVEY FEET.
- ALL MINERAL OWNERSHIP DATA SHOWN HEREIN IS BASED ON INFORMATION PROVIDED BY SHELL WESTERN E&P OR ITS SUBSIDIARIES & AFFILIATES.

NOTES CONT'D:

- THE PRELIMINARY LOCATION HAS BEEN CAREFULLY SURVEYED ON THE GROUND DURING THE DATE OF FEBRUARY 24, 2017, AT A GROUND LEVEL ELEVATION OF 2762.9 SURVEY FEET.
- S.H.L. = SURFACE HOLE LOCATION
- P.P. = POINT OF PENETRATION
- F.T.P. = FIRST TAKE POINT
- L.T.P. = LAST TAKE POINT
- B.H.L. = BOTTOM HOLE LOCATION

UNIVERSITY 19 PW
UNIT 1804H

REVISION:

INT DATE

DATE: 03/02/2017

FILE: LO_UNIVERSITY_19_PW_UNIT_1804H

DRAWN BY: O.M.

SHEET: 1 OF 1