



PO Box 4482, Midland, TX 79704 | 972-505-0433

Railroad Commission of Texas
Oil & Gas Division
P.O. Box 12967
Austin, TX 78711

Attn: Pam Johns

2/15/2018

Re: Forge Energy, LLC.
Well: UL 21 Bighorn 4H
Field: Phantom (Wolfcamp)
Rig: H&P 602
County: Winkler County, TX
Permit: 833905
API Well No: 42-495-34008

Enclosed please find the original of the surveys performed on the referenced well by True Shot, LLC. (P-5 No. 871488). Other information required by your office is as follows:

Name & Title Of Surveyor	Wellhole Number	Survey Depths	Dates Performed	Type Survey
L. Stewart, Field Service Technician	Original Hole	130' - 790'	1/28/2018 - 1/29/2018	MWD

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

A handwritten signature in black ink, appearing to read 'Dustin Trevino', is written over a horizontal line.

2/15/2018

Dustin Trevino
Vice President

Cc: Forge Energy, LLC.

Minimum Curvature

Proposed Azimuth	0.0
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Depth Reference 25'

Tie Into: Assumed Vertical

Job Date: 1/28/18 - 1/29/18

[illegible]



PO Box 4482, Midland, TX 79704 | 972-505-0433

MWD Survey Certification

State of Texas
County of Winkler

I, Dustin Trevino, certify that: I am employed by True Shot, LLC.; that I did on the day(s) of 1/28/2018 through 1/29/2018 conduct or supervise the taking of MWD surveys from a depth of 130 feet to a depth of 790 feet, that the data is true, correct, complete and within the limitations of the tool as set forth by True Shot, LLC; that I am authorized and qualified to make this report; that these surveys were conducted at the request of Forge Energy, LLC. for the UL 21 Bighorn 4H (API No. 42-495-34008, Permit No. 833905), located in Winkler County, Texas; and that I have reviewed this report and find that it conforms to the principles and procedures as set forth by True Shot, LLC.

A handwritten signature in black ink, appearing to read 'Dustin Trevino', is written over a horizontal line.

2/15/2018

Dustin Trevino
Vice President

Cc: Forge Energy, LLC.



March 26, 2018

Railroad Commission of Texas
Attn: Oil & Gas Division
P.O. Box 12967
Austin, TX 78711-2967

Attn: Pam Johns

Re: Forge Energy, LLC
UL 21 Bighorn #4H
Phantom (Wolfcamp)
Winkler County, Texas
API# 42-495-34008

Enclosed please find the original and one (1) copy of the survey performed on the reference well by STRYKER ENERGY DIRECTIONAL SERVICES, LLC. (P-5 #828149) Other information required by your office is as follows:

<u>Name & Title</u>	<u>Drainhole No.</u>	<u>Survey Depths</u>	<u>Dates Performed</u>	<u>Type Survey</u>
Noah Arch	Original Hole	880ft. to 12,093 ft.	01-30-18 to 02-19-18	MWD Survey
Noah Arch	Sidetrack Hole	11,857ft. to 22,124 ft.	02-26-18 to 03-20-18	MWD Survey

A certified plat on which the bottom-hole location is oriented to both 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.


Todd Estes

Enclosures

CC: Forge Energy, LLC.
Attn: Jeremy Braden
10999 IH 10 West Suite 900
San Antonio, Texas 78230-0000

RRC\ Forge Energy\UL Bighorn #4H\M181003

STRYKER ENERGY DIRECTIONAL SERVICES, LLC.
P.O. Box 1250
Montgomery, TX 77356
Office (936) 582-7296 * Fax (936)-588-4163

Survey Report Landscape

Company: FORGE ENERGY
Project: Winkler County, TX (NAD27) TX
Site: UL 21 Bighorn 4H
Well: #4H
Wellbore: Lateral
Design: Lateral

Local Co-ordinate Reference: Well #4H
TVD Reference: 2766+25 @ 2791.00ft (HP602)
MD Reference: 2766+25 @ 2791.00ft (HP602)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: STRYKER_EDM

Project Winkler County, TX (NAD27) TX

Map System: US State Plane 1927 (Exact solution)
Geo Datum: NAD 1927 (NADCON CONUS)
Map Zone: Texas Central 4203

System Datum: Mean Sea Level

Site UL 21 Bighorn 4H

Site Position:		Northing:	750,051.65 ft	Latitude:	31° 41' 46.998 N
From:	Map	Easting:	1,094,549.63 ft	Longitude:	103° 14' 41.440 W
Position Uncertainty:	0.00 ft	Slot Radius:	13.20 in	Grid Convergence:	-1.50 °

Well #4H

Well Position	+N/-S	0.00 ft	Northing:	750,051.65 ft	Latitude:	31° 41' 46.998 N
	+E/-W	0.00 ft	Easting:	1,094,549.63 ft	Longitude:	103° 14' 41.440 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	2,766.00 ft

Wellbore Lateral

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	01/18/18	6.70	59.62	47,602.22643883

Design Lateral

Audit Notes:		Phase:	ACTUAL	Tie On Depth:	0.00
Version:	1.0				
Vertical Section:		Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
		0.00	0.00	0.00	343.73

Survey Report Landscape

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 Well: #4H
 Wellbore: Lateral
 Design: Lateral

Local Co-ordinate Reference: Well #4H
 TVD Reference: 2766+25 @ 2791.00ft (HP602)
 MD Reference: 2766+25 @ 2791.00ft (HP602)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: STRYKER_EDM

Survey Program Date 03/26/18

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
880.00	12,041.00	Survey #1 (Lateral)	MWD	OWSG MWD - Standard
12,093.00	12,093.00	Survey #3 (Lateral)	Projection	Projection

Survey											
MD (ft)	Inc (°)	Azi (azimuth) (°)	TVD (ft)	N/S (ft)	E/W (ft)	Closure Distance (ft)	Closure Azimuth (°)	DLeg (°/100ft)	Northing (ft)	Easting (ft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	750,051.65	1,094,549.63	
Bighorn 4H SL 880.00	2.20	154.70	879.78	-15.27	7.22	16.89	154.70	0.25	750,036.38	1,094,556.85	
First Stryker Survey 971.00	1.60	145.70	970.73	-17.90	8.68	19.90	154.13	0.73	750,033.75	1,094,558.31	
1,063.00	1.10	120.60	1,062.71	-19.41	10.17	21.91	152.36	0.83	750,032.24	1,094,559.80	
1,155.00	1.00	97.10	1,154.69	-19.96	11.72	23.15	149.58	0.48	750,031.69	1,094,561.35	
1,247.00	1.10	99.00	1,246.68	-20.20	13.39	24.23	146.46	0.12	750,031.45	1,094,563.02	
1,342.00	1.20	95.70	1,341.66	-20.44	15.28	25.52	143.22	0.13	750,031.21	1,094,564.91	
1,436.00	1.50	93.20	1,435.63	-20.61	17.49	27.03	139.68	0.33	750,031.04	1,094,567.12	
1,531.00	1.60	95.20	1,530.60	-20.80	20.05	28.89	136.04	0.12	750,030.85	1,094,569.68	
1,625.00	1.80	95.40	1,624.56	-21.05	22.83	31.05	132.68	0.21	750,030.60	1,094,572.46	
1,720.00	0.70	109.20	1,719.53	-21.38	24.86	32.79	130.70	1.19	750,030.27	1,094,574.49	
1,814.00	0.20	106.10	1,813.53	-21.62	25.56	33.48	130.22	0.53	750,030.03	1,094,575.19	
1,909.00	0.40	87.70	1,908.53	-21.65	26.05	33.87	129.73	0.23	750,030.00	1,094,575.68	
2,004.00	0.40	91.40	2,003.53	-21.65	26.72	34.38	129.02	0.03	750,030.00	1,094,576.35	
2,098.00	0.70	78.00	2,097.52	-21.53	27.61	35.01	127.96	0.35	750,030.12	1,094,577.24	
2,193.00	1.00	68.10	2,192.51	-21.10	28.94	35.82	126.10	0.35	750,030.55	1,094,578.57	
2,287.00	1.30	69.90	2,286.49	-20.43	30.70	36.88	123.64	0.32	750,031.22	1,094,580.33	
2,382.00	1.70	66.20	2,381.46	-19.49	33.01	38.33	120.57	0.43	750,032.16	1,094,582.64	
2,477.00	0.70	46.90	2,476.44	-18.53	34.72	39.35	118.09	1.12	750,033.12	1,094,584.35	
2,572.00	0.70	29.70	2,571.43	-17.63	35.43	39.57	116.45	0.22	750,034.02	1,094,585.06	

Survey Report Landscape

Company: FORGE ENERGY
Project: Winkler County, TX (NAD27) TX
Site: UL 21 Bighorn 4H
Well: #4H
Wellbore: Lateral
Design: Lateral

Local Co-ordinate Reference: Well #4H
TVD Reference: 2766+25 @ 2791.00ft (HP602)
MD Reference: 2766+25 @ 2791.00ft (HP602)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: STRYKER_EDM

Survey												
MD (ft)	Inc (°)	Azi (azimuth) (°)	TVD (ft)	N/S (ft)	E/W (ft)	Closure Distance (ft)	Closure Azimuth (°)	DLeg (°/100ft)	Northing (ft)	Easting (ft)		
2,666.00	0.90	43.50	2,665.42	-16.59	36.22	39.84	114.61	0.29	750,035.06	1,094,585.86		
2,761.00	1.00	53.60	2,760.41	-15.56	37.40	40.51	112.59	0.20	750,036.09	1,094,587.03		
2,855.00	1.30	37.80	2,854.39	-14.23	38.72	41.25	110.18	0.46	750,037.42	1,094,588.35		
2,950.00	1.60	40.40	2,949.36	-12.37	40.24	42.10	107.09	0.32	750,039.28	1,094,589.87		
3,044.00	2.20	46.40	3,043.31	-10.13	42.39	43.59	103.43	0.67	750,041.52	1,094,592.02		
3,139.00	1.10	53.50	3,138.27	-8.33	44.45	45.22	100.61	1.18	750,043.32	1,094,594.08		
3,234.00	1.10	63.00	3,233.25	-7.37	45.99	46.58	99.10	0.19	750,044.28	1,094,595.62		
3,328.00	1.40	63.00	3,327.23	-6.44	47.82	48.25	97.67	0.32	750,045.21	1,094,597.45		
3,423.00	1.40	56.90	3,422.20	-5.28	49.83	50.11	96.05	0.16	750,046.37	1,094,599.46		
3,518.00	0.80	6.00	3,517.18	-3.98	50.87	51.02	94.48	1.15	750,047.67	1,094,600.50		
3,612.00	1.20	327.10	3,611.17	-2.51	50.40	50.46	92.85	0.81	750,049.14	1,094,600.03		
3,707.00	1.40	330.30	3,706.14	-0.66	49.29	49.29	90.77	0.22	750,050.99	1,094,598.92		
3,801.00	1.50	334.40	3,800.11	1.44	48.19	48.21	88.28	0.15	750,053.09	1,094,597.82		
3,896.00	1.70	350.60	3,895.08	3.96	47.42	47.58	85.23	0.52	750,055.61	1,094,597.05		
3,990.00	1.60	311.30	3,989.04	6.20	46.21	46.62	82.36	1.18	750,057.85	1,094,595.84		
4,085.00	1.70	300.20	4,084.00	7.78	43.99	44.67	79.97	0.35	750,059.43	1,094,593.62		
4,180.00	1.60	266.20	4,178.96	8.40	41.45	42.29	78.54	1.02	750,060.05	1,094,591.08		
4,274.00	1.60	254.70	4,272.93	7.97	38.87	39.68	78.41	0.34	750,059.62	1,094,588.50		
4,369.00	1.10	250.90	4,367.90	7.32	36.73	37.46	78.73	0.53	750,058.97	1,094,586.36		
4,464.00	1.10	241.90	4,462.88	6.59	35.07	35.68	79.35	0.18	750,058.24	1,094,584.70		
4,558.00	0.70	225.10	4,556.87	5.76	33.86	34.35	80.34	0.51	750,057.41	1,094,583.49		
4,653.00	0.50	184.10	4,651.87	4.94	33.42	33.79	81.59	0.48	750,056.59	1,094,583.05		
4,747.00	0.60	194.20	4,745.86	4.05	33.27	33.52	83.05	0.15	750,055.70	1,094,582.90		
4,842.00	0.70	196.40	4,840.86	3.02	32.99	33.13	84.78	0.11	750,054.67	1,094,582.62		
4,937.00	0.80	203.70	4,935.85	1.85	32.56	32.61	86.75	0.15	750,053.50	1,094,582.19		
5,000.00	0.80	214.20	4,998.84	1.08	32.13	32.15	88.07	0.23	750,052.73	1,094,581.76		
5,083.00	1.10	211.70	5,081.83	-0.07	31.39	31.39	90.13	0.36	750,051.58	1,094,581.02		

Survey Report Landscape

Company: FORGE ENERGY
Project: Winkler County, TX (NAD27) TX
Site: UL 21 Bighorn 4H
Well: #4H
Wellbore: Lateral
Design: Lateral

Local Co-ordinate Reference: Well #4H
TVD Reference: 2766+25 @ 2791.00ft (HP602)
MD Reference: 2766+25 @ 2791.00ft (HP602)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: STRYKER_EDM

Survey											
MD (ft)	Inc (°)	Azi (azimuth) (°)	TVD (ft)	N/S (ft)	E/W (ft)	Closure Distance (ft)	Closure Azimuth (°)	DLeg (°/100ft)	Northing (ft)	Easting (ft)	
5,178.00	1.20	214.30	5,176.81	-1.67	30.35	30.40	93.15	0.12	750,049.98	1,094,579.98	
5,272.00	1.20	215.10	5,270.79	-3.29	29.23	29.41	96.42	0.02	750,048.36	1,094,578.86	
5,367.00	1.10	218.50	5,365.77	-4.82	28.09	28.50	99.73	0.13	750,046.83	1,094,577.72	
5,461.00	1.10	220.00	5,459.76	-6.21	26.95	27.65	102.98	0.03	750,045.44	1,094,576.58	
5,556.00	1.10	216.60	5,554.74	-7.64	25.82	26.93	106.49	0.07	750,044.01	1,094,575.45	
5,650.00	1.20	217.70	5,648.72	-9.15	24.68	26.32	110.34	0.11	750,042.50	1,094,574.31	
5,745.00	1.20	217.00	5,743.70	-10.73	23.47	25.81	114.56	0.02	750,040.92	1,094,573.10	
5,839.00	1.20	221.10	5,837.68	-12.26	22.23	25.39	118.87	0.09	750,039.39	1,094,571.86	
5,934.00	1.30	222.50	5,932.66	-13.80	20.85	25.00	123.50	0.11	750,037.85	1,094,570.48	
6,029.00	1.30	217.90	6,027.63	-15.45	19.46	24.84	128.44	0.11	750,036.20	1,094,569.09	
6,123.00	1.30	219.40	6,121.61	-17.11	18.13	24.93	133.35	0.04	750,034.54	1,094,567.76	
6,218.00	1.30	217.10	6,216.58	-18.80	16.79	25.21	138.23	0.05	750,032.85	1,094,566.42	
6,312.00	1.10	218.90	6,310.56	-20.36	15.58	25.64	142.56	0.22	750,031.29	1,094,565.21	
6,407.00	1.20	218.10	6,405.54	-21.85	14.40	26.17	146.62	0.11	750,029.80	1,094,564.03	
6,501.00	1.30	215.50	6,499.52	-23.49	13.17	26.93	150.72	0.12	750,028.16	1,094,562.80	
6,596.00	1.30	217.00	6,594.50	-25.23	11.90	27.89	154.75	0.04	750,026.42	1,094,561.53	
6,691.00	1.30	216.30	6,689.47	-26.96	10.61	28.97	158.52	0.02	750,024.69	1,094,560.24	
6,785.00	1.20	211.60	6,783.45	-28.66	9.46	30.18	161.73	0.15	750,022.99	1,094,559.09	
6,879.00	1.10	217.70	6,877.43	-30.21	8.40	31.35	164.47	0.17	750,021.44	1,094,558.03	
6,974.00	1.20	212.80	6,972.41	-31.77	7.30	32.59	167.06	0.15	750,019.88	1,094,556.93	
7,069.00	1.10	212.10	7,067.39	-33.37	6.28	33.96	169.35	0.11	750,018.28	1,094,555.91	
7,163.00	1.20	219.70	7,161.37	-34.90	5.17	35.28	171.58	0.19	750,016.75	1,094,554.80	
7,258.00	1.20	228.70	7,256.35	-36.32	3.78	36.51	174.05	0.20	750,015.33	1,094,553.41	
7,352.00	1.10	304.40	7,350.34	-36.46	2.30	36.53	176.39	1.50	750,015.19	1,094,551.93	
7,447.00	1.30	303.30	7,445.32	-35.35	0.65	35.36	178.95	0.21	750,016.30	1,094,550.28	
7,542.00	1.20	295.20	7,540.29	-34.34	-1.15	34.35	181.92	0.21	750,017.31	1,094,548.48	
7,636.00	1.10	284.50	7,634.28	-33.69	-2.92	33.82	184.95	0.25	750,017.96	1,094,546.71	

Survey Report Landscape

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Survey Calculation Method: Minimum Curvature
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Survey											
MD (ft)	Inc (°)	Azi (azimuth) (°)	TVD (ft)	N/S (ft)	E/W (ft)	Closure Distance (ft)	Closure Azimuth (°)	DLeg (°/100ft)	Northing (ft)	Easting (ft)	
7,731.00	1.10	270.70	7,729.26	-33.45	-4.71	33.78	188.02	0.28	750,018.20	1,094,544.92	
7,826.00	1.50	316.40	7,824.24	-32.54	-6.48	33.18	191.27	1.13	750,019.11	1,094,543.15	
7,920.00	1.10	319.90	7,918.21	-30.96	-7.91	31.95	194.33	0.43	750,020.69	1,094,541.72	
8,015.00	0.70	310.80	8,013.20	-29.88	-8.94	31.19	196.65	0.45	750,021.77	1,094,540.69	
8,109.00	0.70	269.60	8,107.19	-29.51	-9.95	31.14	198.63	0.52	750,022.14	1,094,539.68	
8,204.00	0.60	254.70	8,202.19	-29.65	-11.01	31.62	200.37	0.21	750,022.00	1,094,538.62	
8,298.00	0.80	222.40	8,296.18	-30.26	-11.92	32.52	201.51	0.46	750,021.39	1,094,537.71	
8,393.00	0.90	208.00	8,391.17	-31.41	-12.72	33.89	202.05	0.25	750,020.24	1,094,536.91	
8,488.00	0.90	191.40	8,486.16	-32.80	-13.22	35.36	201.95	0.27	750,018.85	1,094,536.41	
8,582.00	1.30	178.30	8,580.14	-34.59	-13.33	37.07	201.08	0.50	750,017.06	1,094,536.30	
8,681.00	1.80	171.70	8,679.10	-37.25	-13.08	39.48	199.34	0.54	750,014.40	1,094,536.55	
8,776.00	2.20	178.80	8,774.05	-40.55	-12.82	42.53	197.55	0.49	750,011.10	1,094,536.81	
8,871.00	1.60	213.80	8,869.00	-43.47	-13.52	45.53	197.28	1.35	750,008.18	1,094,536.11	
8,965.00	1.10	266.20	8,962.97	-44.62	-15.15	47.13	198.75	1.35	750,007.03	1,094,534.48	
9,060.00	1.10	253.30	9,057.96	-44.95	-16.94	48.03	200.65	0.26	750,006.70	1,094,532.69	
9,154.00	1.70	258.60	9,151.93	-45.48	-19.17	49.36	202.85	0.65	750,006.17	1,094,530.46	
9,249.00	1.90	247.40	9,246.88	-46.37	-22.00	51.32	205.39	0.42	750,005.28	1,094,527.63	
9,343.00	2.70	222.00	9,340.81	-48.61	-24.92	54.63	207.14	1.36	750,003.04	1,094,524.71	
9,438.00	2.20	228.70	9,435.72	-51.48	-27.79	58.50	208.36	0.61	750,000.17	1,094,521.84	
9,533.00	2.70	221.60	9,530.63	-54.35	-30.64	62.40	209.41	0.61	749,997.30	1,094,518.99	
9,627.00	1.20	210.00	9,624.58	-56.86	-32.61	65.55	209.83	1.64	749,994.79	1,094,517.02	
9,722.00	1.10	192.30	9,719.56	-58.61	-33.30	67.41	209.60	0.39	749,993.04	1,094,516.33	
9,817.00	1.50	223.90	9,814.53	-60.40	-34.35	69.49	209.63	0.85	749,991.25	1,094,515.28	
9,911.00	1.30	202.80	9,908.51	-62.27	-35.62	71.74	209.77	0.58	749,989.38	1,094,514.01	
10,006.00	1.00	206.00	10,003.49	-64.01	-36.40	73.64	209.63	0.32	749,987.64	1,094,513.23	
10,100.00	1.30	229.00	10,097.47	-65.45	-37.57	75.46	209.86	0.58	749,986.20	1,094,512.06	
10,195.00	1.60	223.90	10,192.44	-67.11	-39.30	77.77	210.35	0.34	749,984.54	1,094,510.33	

Survey Report Landscape

Company: FORGE ENERGY
Project: Winkler County, TX (NAD27) TX
Site: UL 21 Bighorn 4H
Well: #4H
Wellbore: Lateral
Design: Lateral

Local Co-ordinate Reference: Well #4H
TVD Reference: 2766+25 @ 2791.00ft (HP602)
MD Reference: 2766+25 @ 2791.00ft (HP602)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: STRYKER_EDM

Survey											
MD (ft)	Inc (°)	Azi (azimuth) (°)	TVD (ft)	N/S (ft)	E/W (ft)	Closure Distance (ft)	Closure Azimuth (°)	DLeg (°/100ft)	Northing (ft)	Easting (ft)	
10,290.00	1.90	222.80	10,287.39	-69.22	-41.29	80.60	210.82	0.32	749,982.43	1,094,508.34	
10,384.00	2.00	221.70	10,381.34	-71.59	-43.44	83.74	211.25	0.11	749,980.06	1,094,506.19	
10,479.00	2.40	218.40	10,476.27	-74.38	-45.78	87.34	211.61	0.44	749,977.27	1,094,503.85	
10,574.00	2.00	230.10	10,571.20	-77.01	-48.28	90.89	212.09	0.63	749,974.64	1,094,501.35	
10,668.00	1.90	229.30	10,665.15	-79.07	-50.72	93.95	212.68	0.11	749,972.58	1,094,498.91	
10,763.00	2.30	235.00	10,760.08	-81.19	-53.48	97.22	213.37	0.47	749,970.46	1,094,496.15	
10,858.00	2.00	233.80	10,855.01	-83.27	-56.38	100.56	214.10	0.32	749,968.38	1,094,493.25	
10,952.00	2.00	238.30	10,948.96	-85.10	-59.10	103.61	214.78	0.17	749,966.55	1,094,490.53	
11,039.00	2.40	245.70	11,035.89	-86.65	-62.05	106.57	215.61	0.56	749,965.00	1,094,487.58	
11,083.00	2.00	255.50	11,079.86	-87.22	-63.63	107.96	216.11	1.24	749,964.43	1,094,486.00	
11,128.00	4.00	327.90	11,124.81	-86.08	-65.23	108.00	217.15	8.65	749,965.57	1,094,484.40	
11,178.00	10.30	345.20	11,174.40	-80.28	-67.30	104.76	219.97	13.18	749,971.37	1,094,482.33	
11,224.00	17.10	350.10	11,219.07	-69.63	-69.51	98.39	224.95	14.98	749,982.02	1,094,480.12	
11,273.00	23.30	351.10	11,265.03	-52.94	-72.26	89.57	233.77	12.67	749,998.71	1,094,477.37	
11,319.00	25.80	350.80	11,306.87	-34.07	-75.26	82.61	245.65	5.44	750,017.58	1,094,474.37	
11,367.00	26.90	348.20	11,349.88	-13.13	-79.15	80.24	260.58	3.32	750,038.52	1,094,470.48	
11,413.00	30.70	346.50	11,390.19	8.49	-84.03	84.45	275.77	8.45	750,060.14	1,094,465.60	
11,462.00	36.30	345.50	11,431.03	34.71	-90.58	97.01	290.97	11.48	750,086.36	1,094,459.05	
11,508.00	41.10	346.10	11,466.92	62.59	-97.63	115.97	302.66	10.47	750,114.24	1,094,452.00	
11,556.00	43.60	346.20	11,502.39	93.98	-105.37	141.19	311.73	5.21	750,145.63	1,094,444.26	
11,603.00	47.80	349.70	11,535.21	126.87	-112.35	169.46	318.47	10.40	750,178.52	1,094,437.28	
11,651.00	49.80	352.60	11,566.83	162.55	-117.89	200.80	324.05	6.17	750,214.20	1,094,431.74	
11,697.00	54.40	355.60	11,595.09	198.64	-121.59	232.90	328.53	11.24	750,250.29	1,094,428.04	
11,745.00	57.00	354.00	11,622.14	238.12	-125.19	269.03	332.27	6.08	750,289.77	1,094,424.44	
11,785.00	61.16	350.74	11,642.69	272.12	-129.77	301.48	334.50	12.53	750,323.77	1,094,419.86	
Wellpath Crosses Lease Line @ Heel											
11,792.00	61.90	350.20	11,646.02	278.19	-130.79	307.40	334.82	12.53	750,329.84	1,094,418.84	

Survey Report Landscape

Company: FORGE ENERGY
Project: Winkler County, TX (NAD27) TX
Site: UL 21 Bighorn 4H
Well: #4H
Wellbore: Lateral
Design: Lateral

Local Co-ordinate Reference: Well #4H
TVD Reference: 2766+25 @ 2791.00ft (HP602)
MD Reference: 2766+25 @ 2791.00ft (HP602)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: STRYKER_EDM

Survey											
MD (ft)	Inc (°)	Azi (azimuth) (°)	TVD (ft)	N/S (ft)	E/W (ft)	Closure Distance (ft)	Closure Azimuth (°)	DLeg (°/100ft)	Northing (ft)	Easting (ft)	
11,840.00	64.60	349.00	11,667.63	320.34	-138.53	349.01	336.61	6.05	750,371.99	1,094,411.10	
11,886.00	69.80	347.20	11,685.45	361.81	-147.28	390.64	337.85	11.87	750,413.46	1,094,402.35	
11,934.00	73.80	345.70	11,700.44	406.13	-157.97	435.77	338.75	8.85	750,457.78	1,094,391.66	
11,980.00	77.80	346.30	11,711.72	449.39	-168.75	480.03	339.42	8.79	750,501.04	1,094,380.88	
12,029.00	82.80	348.40	11,719.97	496.50	-179.32	527.89	340.14	11.04	750,548.15	1,094,370.31	
12,041.00	83.70	349.10	11,721.39	508.19	-181.65	539.68	340.33	9.48	750,559.84	1,094,367.98	
Bighorn 4H LP											
12,093.00	88.00	349.10	11,725.15	559.11	-191.45	590.98	341.10	8.27	750,610.76	1,094,358.18	
Bighorn 4H PBHL											

Design Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
880.00	879.78	-15.27	7.22	First Stryker Survey
11,785.00	11,642.69	272.12	-129.77	Wellpath Crosses Lease Line @ Heel

Checked By: _____ Approved By: _____ Date: _____

UNIVERSITY LAND
SECTION 18, BLOCK 21

UNIVERSITY LAND
SECTION 13, BLOCK 20

BOTTOM HOLE LOCATION

UNIVERSITY LAND
SECTION 17, BLOCK 21



0 1000' 2000'
1" = 2000 FEET

UNIVERSITY LAND
SECTION 24, BLOCK 20

UNIVERSITY LAND
SECTION 19, BLOCK 21

UL LEASE #115753
840.700 ACRES

UNIVERSITY LAND
SECTION 20, BLOCK 21

UNIVERSITY LAND
SECTION 29, BLOCK 21

UNIVERSITY LAND
SECTION 25, BLOCK 20

UNIVERSITY LAND
SECTION 30, BLOCK 21

UL LEASE #115755
840.700 ACRES

UNIVERSITY LAND
SECTION 32, BLOCK 21

UNIVERSITY LAND
SECTION 31, BLOCK 21

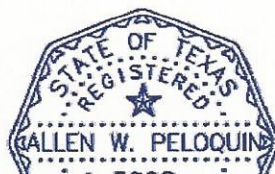
UNIVERSITY LAND
SECTION 36, BLOCK 20

LEGEND

- SURVEY LINE
- CONCRETE MONUMENT WITH BRASS DISK
- ⊗ CALCULATED CORNER

DRIVING DIRECTIONS TO LOCATION:
FROM THE INTERSECTION OF STATE HIGHWAY 115 AND FM 1232 IN WINK, HEAD NORTHWEST ON FM 1232 FOR 1.5 MILES THEN TURN LEFT (WEST) ONTO CR 201. HEAD WEST ON CR 201 FOR 6.8 MILES AND TURN LEFT (SOUTH) ON A LEASE ROAD. HEAD SOUTH ON LEASE ROAD FOR 3.0 MILES AND THE LOCATION WILL BE APPROXIMATELY 1.5 MILES ON THE LEFT (EAST).

I HEREBY STATE THAT THIS PLAT SHOWS THE SUBJECT SURFACE LOCATION AS STAKED ON THE GROUND.



WELL LOCATION INFORMATION:

SURFACE HOLE LOCATION/PP: NAD 83, TEXAS CENTRAL ZONE COORD'S T = 10,592,627.65, X = 1,391,014.11 LAT: N 31.69852°, LONG: W 103.24528° SHL: 330' FELL & 200' FELL	LAST TAKE/TERMINUS LOCATION: NAD 83, TEXAS CENTRAL ZONE COORD'S Y = 10,602,869.38, X = 1,388,026.62 LAT: N 31.72445°, LONG: W 103.25526° LT/TERMINUS: 330' FELL & 200' FELL LT/TERMINUS: 330' FELL & 200' FELL
NAD 27, TEXAS CENTRAL ZONE COORD'S T = 750,051.65, X = 1,094,549.63 LAT: N 31.69639°, LONG: W 103.24484°	NAD 27, TEXAS CENTRAL ZONE COORD'S Y = 750,243.24, X = 1,091,580.29 LAT: N 31.72432°, LONG: W 103.25531°
FIRST TAKE LOCATION: NAD 83, TEXAS CENTRAL ZONE COORD'S T = 10,593,105.35, X = 1,390,875.68 LAT: N 31.69782°, LONG: W 103.24577° FT: 330' FELL & 200' FELL	
NAD 27, TEXAS CENTRAL ZONE COORD'S Y = 750,529.34, X = 1,094,411.20 LAT: N 31.69770°, LONG: W 103.24532°	

GENERAL NOTES

- COORDINATES SHOWN ARE BASED ON TEXAS PLANE COORDINATE SYSTEM OF NAD 27, TEXAS CENTRAL ZONE 4203
- VERTICAL DATUM IS NAVD 88
- LATITUDE AND LONGITUDE ARE NAD 27 AS SHOWN
- AREA, DISTANCES, AND COORDINATES ARE "GRID".
- UNITS ARE UNITED STATES SURVEY FOOT.
- ALL LEASE AND TRACT INFORMATION SHOWN HERE ON IS DONE SO BY LIMITED DEED RECORD INFORMATION ONLY. ALL ACRES SHOWN ARE BY DEED AND

Survey Report Landscape

Company: FORGE ENERGY
Project: Winkler County, TX (NAD27) TX
Site: UL 21 Bighorn 4H
Well: #4H
Wellbore: Lateral 2 (ST)
Design: Lateral 2 (ST)

Local Co-ordinate Reference: Well #4H
TVD Reference: 2766+25 @ 2791.00ft (HP602)
MD Reference: 2766+25 @ 2791.00ft (HP602)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: STRYKER_EDM

Project Winkler County, TX (NAD27) TX

Map System: US State Plane 1927 (Exact solution)
Geo Datum: NAD 1927 (NADCON CONUS)
Map Zone: Texas Central 4203

System Datum: Mean Sea Level

Site UL 21 Bighorn 4H

Site Position:		Northing:	750,051.65 ft	Latitude:	31° 41' 46.998 N
From:	Map	Easting:	1,094,549.63 ft	Longitude:	103° 14' 41.440 W
Position Uncertainty:	0.00 ft	Slot Radius:	13.20 in	Grid Convergence:	-1.50 °

Well #4H

Well Position	+N/-S	0.00 ft	Northing:	750,051.65 ft	Latitude:	31° 41' 46.998 N
	+E/-W	0.00 ft	Easting:	1,094,549.63 ft	Longitude:	103° 14' 41.440 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	2,766.00 ft

Wellbore Lateral 2 (ST)

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	02/19/18	6.69	59.62	47,593.26091227

Design Lateral 2 (ST)

Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth: 11,840.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	343.89

Survey Report Landscape

Company: FORGE ENERGY
Project: Winkler County, TX (NAD27) TX
Site: UL 21 Bighorn 4H
Well: #4H
Wellbore: Lateral 2 (ST)
Design: Lateral 2 (ST)

Local Co-ordinate Reference: Well #4H
TVD Reference: 2766+25 @ 2791.00ft (HP602)
MD Reference: 2766+25 @ 2791.00ft (HP602)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: STRYKER_EDM

Survey Program **Date** 03/26/18

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
880.00	11,840.00	Survey #1 (Lateral)	MWD	OWSG MWD - Standard
11,857.00	22,124.00	Survey #1 (Lateral 2 (ST))	MWD	OWSG MWD - Standard
22,188.00	22,188.00	Survey #2 (Lateral 2 (ST))	Projection	Projection

Survey											
MD (ft)	Inc (°)	Azi (azimuth) (°)	TVD (ft)	N/S (ft)	E/W (ft)	Closure Distance (ft)	Closure Azimuth (°)	DLeg (°/100ft)	Northing (ft)	Easting (ft)	
11,857.00	61.30	349.40	11,675.36	335.21	-141.37	363.80	337.13	19.52	750,386.86	1,094,408.26	
11,889.00	59.40	344.30	11,691.20	362.28	-147.68	391.22	337.82	15.07	750,413.93	1,094,401.95	
11,935.00	65.10	343.70	11,712.60	401.39	-158.90	431.70	338.40	12.44	750,453.04	1,094,390.73	
11,983.00	71.80	343.40	11,730.23	444.18	-171.54	476.16	338.88	13.97	750,495.83	1,094,378.09	
12,029.00	76.70	341.90	11,742.71	486.43	-184.74	520.33	339.20	11.10	750,538.08	1,094,364.89	
12,078.00	83.80	343.50	11,751.00	532.51	-199.09	568.50	339.50	14.84	750,584.16	1,094,350.54	
12,159.05	89.00	345.12	11,756.09	610.35	-220.95	649.11	340.10	6.72	750,662.00	1,094,328.68	
Bighorn 4H LP L2 (ST)											
12,173.00	89.90	345.40	11,756.22	623.84	-224.50	663.01	340.21	6.72	750,675.49	1,094,325.13	
12,268.00	89.80	347.20	11,756.47	716.14	-247.00	757.53	340.97	1.90	750,767.79	1,094,302.63	
12,363.00	92.10	348.40	11,754.89	808.97	-267.07	851.91	341.73	2.73	750,860.62	1,094,282.56	
12,458.00	90.20	349.70	11,752.99	902.22	-285.11	946.19	342.46	2.42	750,953.87	1,094,264.52	
12,553.00	86.50	347.20	11,755.72	995.23	-304.12	1,040.66	343.01	4.70	751,046.88	1,094,245.51	
12,648.00	90.50	348.50	11,758.21	1,088.05	-324.10	1,135.29	343.41	4.43	751,139.70	1,094,225.53	
12,743.00	86.90	344.10	11,760.37	1,180.29	-346.58	1,230.12	343.64	5.98	751,231.94	1,094,203.05	
12,838.00	88.80	344.00	11,763.93	1,271.56	-372.67	1,325.05	343.67	2.00	751,323.21	1,094,176.96	
12,933.00	89.90	343.30	11,765.01	1,362.71	-399.41	1,420.04	343.66	1.37	751,414.36	1,094,150.22	
13,028.00	91.50	344.70	11,763.85	1,454.02	-425.59	1,515.02	343.69	2.24	751,505.67	1,094,124.04	
13,122.00	91.80	344.70	11,761.14	1,544.65	-450.38	1,608.97	343.74	0.32	751,596.30	1,094,099.25	
13,217.00	88.30	341.10	11,761.06	1,635.42	-478.31	1,703.93	343.70	5.28	751,687.07	1,094,071.32	
13,311.00	90.20	338.80	11,762.29	1,723.71	-510.53	1,797.72	343.50	3.17	751,775.36	1,094,039.10	

Survey Report Landscape

Company: FORGE ENERGY
Project: Winkler County, TX (NAD27) TX
Site: UL 21 Bighorn 4H
Well: #4H
Wellbore: Lateral 2 (ST)
Design: Lateral 2 (ST)

Local Co-ordinate Reference: Well #4H
TVD Reference: 2766+25 @ 2791.00ft (HP602)
MD Reference: 2766+25 @ 2791.00ft (HP602)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: STRYKER_EDM

Survey											
MD (ft)	Inc (°)	Azi (azimuth) (°)	TVD (ft)	N/S (ft)	E/W (ft)	Closure Distance (ft)	Closure Azimuth (°)	DLeg (°/100ft)	Northing (ft)	Easting (ft)	
13,406.00	88.70	341.80	11,763.20	1,813.13	-542.55	1,892.56	343.34	3.53	751,864.78	1,094,007.08	
13,501.00	90.30	344.50	11,764.03	1,904.03	-570.08	1,987.55	343.33	3.30	751,955.68	1,093,979.55	
13,597.00	89.00	343.10	11,764.62	1,996.22	-596.86	2,083.54	343.35	1.99	752,047.87	1,093,952.77	
13,692.00	87.30	342.30	11,767.68	2,086.87	-625.10	2,178.48	343.33	1.98	752,138.52	1,093,924.53	
13,787.00	88.40	341.30	11,771.25	2,177.05	-654.75	2,273.38	343.26	1.56	752,228.70	1,093,894.88	
13,882.00	90.70	344.20	11,771.99	2,267.76	-682.91	2,368.35	343.24	3.90	752,319.41	1,093,866.72	
13,976.00	89.30	347.40	11,771.99	2,358.87	-705.97	2,462.25	343.34	3.72	752,410.52	1,093,843.66	
14,014.95	89.18	347.56	11,772.51	2,396.89	-714.41	2,501.09	343.40	0.53	752,448.54	1,093,835.22	
Bighorn 4H 2500vs											
14,071.00	89.00	347.80	11,773.40	2,451.64	-726.36	2,556.98	343.50	0.53	752,503.29	1,093,823.27	
14,166.00	88.10	344.70	11,775.81	2,543.88	-748.93	2,651.84	343.60	3.40	752,595.53	1,093,800.70	
14,260.00	90.60	348.30	11,776.87	2,635.26	-770.87	2,745.69	343.69	4.66	752,686.91	1,093,778.76	
14,393.00	87.10	343.40	11,779.54	2,764.14	-803.36	2,878.51	343.79	4.53	752,815.79	1,093,746.27	
14,488.00	87.20	343.50	11,784.27	2,855.09	-830.39	2,973.39	343.78	0.15	752,906.74	1,093,719.24	
14,583.00	87.00	343.60	11,789.07	2,946.08	-857.25	3,068.27	343.78	0.24	752,997.73	1,093,692.38	
14,677.00	89.30	341.80	11,792.11	3,035.77	-885.19	3,162.19	343.74	3.11	753,087.42	1,093,664.44	
14,773.00	89.30	341.20	11,793.28	3,126.80	-915.65	3,258.12	343.68	0.62	753,178.45	1,093,633.98	
14,868.00	90.70	343.60	11,793.28	3,217.35	-944.37	3,353.08	343.64	2.92	753,269.00	1,093,605.26	
14,962.00	89.90	344.70	11,792.79	3,307.77	-970.04	3,447.08	343.66	1.45	753,359.42	1,093,579.59	
15,057.00	87.70	342.70	11,794.78	3,398.92	-996.70	3,542.05	343.66	3.13	753,450.57	1,093,552.93	
15,152.00	88.80	343.80	11,797.68	3,489.85	-1,024.06	3,637.00	343.65	1.64	753,541.50	1,093,525.57	
15,246.00	87.30	343.70	11,800.88	3,580.04	-1,050.35	3,730.94	343.65	1.60	753,631.69	1,093,499.28	
15,341.00	88.30	344.70	11,804.52	3,671.38	-1,076.20	3,825.86	343.66	1.49	753,723.03	1,093,473.43	
15,436.00	90.10	346.80	11,805.85	3,763.44	-1,099.58	3,920.78	343.71	2.91	753,815.09	1,093,450.05	
15,530.00	89.90	346.30	11,805.85	3,854.86	-1,121.44	4,014.67	343.78	0.57	753,906.51	1,093,428.19	
15,625.00	88.50	343.20	11,807.18	3,946.49	-1,146.42	4,109.63	343.80	3.58	753,998.14	1,093,403.21	
15,719.00	89.80	344.70	11,808.57	4,036.81	-1,172.41	4,203.62	343.81	2.11	754,088.46	1,093,377.22	

Survey Report Landscape

Company: FORGE ENERGY
Project: Winkler County, TX (NAD27) TX
Site: UL 21 Bighorn 4H
Well: #4H
Wellbore: Lateral 2 (ST)
Design: Lateral 2 (ST)

Local Co-ordinate Reference: Well #4H
TVD Reference: 2766+25 @ 2791.00ft (HP602)
MD Reference: 2766+25 @ 2791.00ft (HP602)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: STRYKER_EDM

Survey											
MD (ft)	Inc (°)	Azi (azimuth) (°)	TVD (ft)	N/S (ft)	E/W (ft)	Closure Distance (ft)	Closure Azimuth (°)	DLeg (°/100ft)	Northing (ft)	Easting (ft)	
15,814.00	89.30	343.30	11,809.32	4,128.13	-1,198.59	4,298.61	343.81	1.56	754,179.78	1,093,351.04	
15,909.00	87.40	343.50	11,812.05	4,219.13	-1,225.72	4,393.56	343.80	2.01	754,270.78	1,093,323.91	
16,003.00	89.30	344.00	11,814.76	4,309.33	-1,252.01	4,487.52	343.80	2.09	754,360.98	1,093,297.62	
16,098.00	88.30	342.50	11,816.75	4,400.27	-1,279.38	4,582.49	343.79	1.90	754,451.92	1,093,270.25	
16,193.00	87.60	343.50	11,820.15	4,491.06	-1,307.14	4,677.42	343.77	1.28	754,542.71	1,093,242.49	
16,287.00	89.40	344.10	11,822.61	4,581.30	-1,333.35	4,771.38	343.77	2.02	754,632.95	1,093,216.28	
16,382.00	90.80	345.10	11,822.44	4,672.88	-1,358.58	4,866.37	343.79	1.81	754,724.53	1,093,191.05	
16,476.00	91.10	345.70	11,820.88	4,763.83	-1,382.27	4,960.32	343.82	0.71	754,815.48	1,093,167.36	
16,571.00	89.00	344.30	11,820.80	4,855.59	-1,406.86	5,055.29	343.84	2.66	754,907.24	1,093,142.77	
16,666.00	89.30	342.80	11,822.21	4,946.69	-1,433.75	5,150.28	343.84	1.61	754,998.34	1,093,115.88	
16,761.00	89.90	341.70	11,822.87	5,037.16	-1,462.72	5,245.24	343.81	1.32	755,088.81	1,093,086.91	
16,856.00	89.20	342.00	11,823.62	5,127.43	-1,492.31	5,340.18	343.77	0.80	755,179.08	1,093,057.32	
16,950.00	90.20	342.90	11,824.11	5,217.05	-1,520.65	5,434.15	343.75	1.43	755,268.70	1,093,028.98	
17,045.00	91.60	344.00	11,822.62	5,308.10	-1,547.71	5,529.14	343.74	1.87	755,359.75	1,093,001.92	
17,140.00	91.50	342.80	11,820.05	5,399.11	-1,574.84	5,624.10	343.74	1.27	755,450.76	1,092,974.79	
17,235.00	89.20	342.90	11,819.47	5,489.88	-1,602.85	5,719.08	343.72	2.42	755,541.53	1,092,946.78	
17,330.00	89.50	346.30	11,820.55	5,581.45	-1,628.07	5,814.05	343.74	3.59	755,633.10	1,092,921.56	
17,424.00	89.90	344.70	11,821.04	5,672.45	-1,651.61	5,908.00	343.77	1.75	755,724.10	1,092,898.02	
17,519.00	89.50	342.40	11,821.54	5,763.55	-1,678.50	6,002.99	343.76	2.46	755,815.20	1,092,871.13	
17,614.00	89.50	341.90	11,822.37	5,853.97	-1,707.62	6,097.95	343.74	0.53	755,905.62	1,092,842.01	
17,709.00	89.20	343.00	11,823.44	5,944.54	-1,736.27	6,192.92	343.72	1.20	755,996.19	1,092,813.36	
17,804.00	87.70	343.10	11,826.01	6,035.38	-1,763.95	6,287.87	343.71	1.58	756,087.03	1,092,785.68	
17,899.00	87.40	342.20	11,830.08	6,125.98	-1,792.26	6,382.77	343.69	1.00	756,177.63	1,092,757.37	
17,994.00	90.30	342.10	11,831.98	6,216.37	-1,821.37	6,477.71	343.67	3.05	756,268.02	1,092,728.26	
18,089.00	89.60	342.30	11,832.06	6,306.83	-1,850.41	6,572.68	343.65	0.77	756,358.48	1,092,699.22	
18,183.00	88.90	340.80	11,833.30	6,395.98	-1,880.15	6,666.60	343.62	1.76	756,447.63	1,092,669.48	
18,279.00	89.10	342.00	11,834.97	6,486.95	-1,910.77	6,762.51	343.59	1.27	756,538.60	1,092,638.86	

Survey Report Landscape

Company: FORGE ENERGY
Project: Winkler County, TX (NAD27) TX
Site: UL 21 Bighorn 4H
Well: #4H
Wellbore: Lateral 2 (ST)
Design: Lateral 2 (ST)

Local Co-ordinate Reference: Well #4H
TVD Reference: 2766+25 @ 2791.00ft (HP602)
MD Reference: 2766+25 @ 2791.00ft (HP602)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: STRYKER_EDM

Survey											
MD (ft)	Inc (°)	Azi (azimuth) (°)	TVD (ft)	N/S (ft)	E/W (ft)	Closure Distance (ft)	Closure Azimuth (°)	DLeg (°/100ft)	Northing (ft)	Easting (ft)	
18,371.00	90.20	345.40	11,835.53	6,575.24	-1,936.58	6,854.50	343.59	3.88	756,626.89	1,092,613.05	
18,466.00	90.50	346.10	11,834.95	6,667.31	-1,959.97	6,949.43	343.62	0.80	756,718.96	1,092,589.66	
18,560.00	90.90	346.10	11,833.80	6,758.55	-1,982.55	7,043.33	343.65	0.43	756,810.20	1,092,567.08	
18,654.00	91.90	347.60	11,831.51	6,850.06	-2,003.93	7,137.16	343.69	1.92	756,901.71	1,092,545.70	
18,749.00	89.50	347.20	11,830.35	6,942.76	-2,024.65	7,231.95	343.74	2.56	756,994.41	1,092,524.98	
18,844.00	86.10	344.70	11,833.99	7,034.83	-2,047.69	7,326.79	343.77	4.44	757,086.48	1,092,501.94	
18,939.00	87.60	344.10	11,839.21	7,126.19	-2,073.19	7,421.63	343.78	1.70	757,177.84	1,092,476.44	
19,034.00	87.80	343.70	11,843.03	7,217.39	-2,099.52	7,516.56	343.78	0.47	757,269.04	1,092,450.11	
19,129.00	90.80	344.20	11,844.19	7,308.67	-2,125.78	7,611.54	343.78	3.20	757,360.32	1,092,423.85	
19,224.00	91.20	344.60	11,842.53	7,400.15	-2,151.32	7,706.52	343.79	0.60	757,451.80	1,092,398.31	
19,319.00	90.00	343.90	11,841.53	7,491.58	-2,177.11	7,801.51	343.80	1.46	757,543.23	1,092,372.52	
19,355.00	89.80	343.70	11,841.60	7,526.15	-2,187.15	7,837.51	343.80	0.79	757,577.80	1,092,362.48	
19,450.00	89.00	343.80	11,842.59	7,617.35	-2,213.73	7,932.50	343.80	0.85	757,669.00	1,092,335.90	
19,544.00	88.50	342.50	11,844.64	7,707.29	-2,240.97	8,026.47	343.79	1.48	757,758.94	1,092,308.66	
19,639.00	87.60	343.60	11,847.88	7,798.11	-2,268.65	8,121.41	343.78	1.50	757,849.76	1,092,280.98	
19,734.00	88.10	341.10	11,851.44	7,888.56	-2,297.43	8,216.30	343.76	2.68	757,940.21	1,092,252.20	
19,829.00	90.40	340.70	11,852.68	7,978.32	-2,328.51	8,311.17	343.73	2.46	758,029.97	1,092,221.12	
19,924.00	90.70	342.90	11,851.77	8,068.56	-2,358.18	8,406.11	343.71	2.34	758,120.21	1,092,191.45	
20,018.00	87.90	341.60	11,852.92	8,158.06	-2,386.83	8,500.06	343.69	3.28	758,209.71	1,092,162.80	
20,113.00	89.90	342.30	11,854.74	8,248.37	-2,416.26	8,594.99	343.67	2.23	758,300.02	1,092,133.37	
20,208.00	89.00	344.30	11,855.66	8,339.35	-2,443.56	8,689.98	343.67	2.31	758,391.00	1,092,106.07	
20,302.00	90.20	343.60	11,856.31	8,429.68	-2,469.55	8,783.97	343.67	1.48	758,481.33	1,092,080.08	
20,397.00	88.40	341.70	11,857.47	8,520.35	-2,497.87	8,878.94	343.66	2.75	758,572.00	1,092,051.76	
20,492.00	91.70	342.40	11,857.39	8,610.71	-2,527.14	8,973.89	343.64	3.55	758,662.36	1,092,022.49	
20,587.00	88.80	344.20	11,856.97	8,701.69	-2,554.44	9,068.88	343.64	3.59	758,753.34	1,091,995.19	
20,684.00	89.30	344.60	11,858.58	8,795.10	-2,580.52	9,165.85	343.65	0.66	758,846.75	1,091,969.11	
20,778.00	87.40	344.20	11,861.29	8,885.60	-2,605.79	9,259.80	343.66	2.07	758,937.25	1,091,943.84	

Survey Report Landscape

Company: FORGE ENERGY
Project: Winkler County, TX (NAD27) TX
Site: UL 21 Bighorn 4H
Well: #4H
Wellbore: Lateral 2 (ST)
Design: Lateral 2 (ST)

Local Co-ordinate Reference: Well #4H
TVD Reference: 2766+25 @ 2791.00ft (HP602)
MD Reference: 2766+25 @ 2791.00ft (HP602)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: STRYKER_EDM

Survey											
MD (ft)	Inc (°)	Azi (azimuth) (°)	TVD (ft)	N/S (ft)	E/W (ft)	Closure Distance (ft)	Closure Azimuth (°)	DLeg (°/100ft)	Northing (ft)	Easting (ft)	
20,873.00	89.80	342.00	11,863.61	8,976.45	-2,633.39	9,354.76	343.65	3.43	759,028.10	1,091,916.24	
20,966.00	89.50	345.10	11,864.18	9,065.63	-2,659.72	9,447.74	343.65	3.35	759,117.28	1,091,889.91	
21,061.00	89.70	344.20	11,864.84	9,157.24	-2,684.87	9,542.73	343.66	0.97	759,208.89	1,091,864.76	
21,156.00	88.10	343.70	11,866.67	9,248.52	-2,711.13	9,637.70	343.66	1.76	759,300.17	1,091,838.50	
21,251.00	90.00	346.20	11,868.24	9,340.24	-2,735.79	9,732.65	343.67	3.30	759,391.89	1,091,813.84	
21,345.00	87.60	344.50	11,870.21	9,431.15	-2,759.56	9,826.58	343.69	3.13	759,482.80	1,091,790.07	
21,440.00	89.60	344.10	11,872.53	9,522.57	-2,785.26	9,921.55	343.70	2.15	759,574.22	1,091,764.37	
21,534.00	88.00	344.20	11,874.50	9,612.98	-2,810.92	10,015.52	343.70	1.71	759,664.63	1,091,738.71	
21,629.00	90.10	344.90	11,876.07	9,704.53	-2,836.22	10,110.49	343.71	2.33	759,756.18	1,091,713.41	
21,724.00	89.00	346.10	11,876.82	9,796.49	-2,860.01	10,205.44	343.73	1.71	759,848.14	1,091,689.62	
21,819.00	88.20	345.60	11,879.14	9,888.58	-2,883.23	10,300.34	343.74	0.99	759,940.23	1,091,666.40	
21,913.00	91.00	348.40	11,879.80	9,980.15	-2,904.37	10,394.17	343.77	4.21	760,031.80	1,091,645.26	
22,008.00	88.60	348.10	11,880.13	10,073.16	-2,923.71	10,488.88	343.81	2.55	760,124.81	1,091,625.92	
22,103.00	88.70	349.00	11,882.37	10,166.24	-2,942.56	10,583.53	343.86	0.95	760,217.89	1,091,607.07	
22,124.00	89.10	348.40	11,882.77	10,186.83	-2,946.68	10,604.45	343.87	3.43	760,238.48	1,091,602.95	
22,185.89	89.10	348.40	11,883.74	10,247.44	-2,959.12	10,666.14	343.89	0.00	760,299.09	1,091,590.51	
Bighorn 4H PBHL L2 (ST) p1											
22,188.00	89.10	348.40	11,883.78	10,249.51	-2,959.55	10,668.24	343.89	0.00	760,301.16	1,091,590.08	
TD @ 201'FNL, 300'FEL											

Design Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
22,188.00	11,883.78	10,249.51	-2,959.55	TD @ 201'FNL, 300'FEL

Checked By: _____ Approved By: _____ Date: _____

UNIVERSITY LAND
SECTION 18, BLOCK 21

UNIVERSITY LAND
SECTION 13, BLOCK 20

BOTTOM HOLE LOCATION

NAD 83
Y = 10,603,154.27
X = 1,388,285.75
NAD 27
Y = 760,577.86
X = 1,081,820.97

UNIVERSITY LAND
SECTION 17, BLOCK 21



0 1000' 2000'
1" = 2000 FEET

NAD 83
Y = 10,601,671.40
X = 1,383,216.12
NAD 27
Y = 759,094.99
X = 1,086,751.38

SURVEY/LEASE LINE

UNIVERSITY LAND
SECTION 19, BLOCK 21

UL LEASE #115753
640.700 ACRES

UNIVERSITY LAND
SECTION 24, BLOCK 20

NAD 83
Y = 10,596,597.15
X = 1,384,697.65
NAD 27
Y = 754,020.82
X = 1,088,233.04

UNIVERSITY LAND
SECTION 30, BLOCK 21

UL LEASE #115755
640.700 ACRES

UNIVERSITY LAND
SECTION 25, BLOCK 20

UNIVERSITY LAND
SECTION 29, BLOCK 21

Bottom Hole Location
Shylar Energy Services, Inc.
Original Hole - MVD Survey
12941.0' MD @ 539.68' Displacement
340.35' Azimuth
API 42-495-34008

NAD 83
Y = 10,591,523.40
X = 1,386,179.44
NAD 27
Y = 748,947.14
X = 1,089,714.56

SURFACE HOLE LOCATION
UL 21 BIGHORN 4H
ELEV. 2766'

UNIVERSITY LAND
SECTION 31, BLOCK 21

UNIVERSITY LAND
SECTION 32, BLOCK 21

LEGEND

- SURVEY LINE
- CONCRETE MONUMENT WITH BRASS DISK
- ⊗ CALCULATED CORNER

DRIVING DIRECTIONS TO LOCATION:
FROM THE INTERSECTION OF STATE HIGHWAY 115 AND FM 1232 IN WINK, HEAD NORTHWEST ON FM 1232 FOR 1.5 MILES THEN TURN LEFT (WEST) ONTO CR 201. HEAD WEST ON CR 201 FOR 6.8 MILES AND TURN LEFT (SOUTH) ON A LEASE ROAD. HEAD SOUTH ON LEASE ROAD FOR 3.0 MILES AND THE LOCATION WILL BE APPROXIMATELY 1.5 MILES ON THE LEFT (EAST).

WELL LOCATION INFORMATION:

SURFACE HOLE LOCATION/PP: NAD 83, TEXAS CENTRAL ZONE COORDS Y = 10,592,627.65, X = 1,391,014.11 LAT: N 31.69652°, LONG: W 103.24528° SHL: 330' FELL & 297' FNL	LAST TAKE/TERMINUS LOCATION: NAD 83, TEXAS CENTRAL ZONE COORDS Y = 10,602,889.39, X = 1,388,824.62 LAT: N 31.72445°, LONG: W 103.25526° LT/TERMINUS: 330' FELL & 200' FNL LT/TERMINUS: 330' FELL & 200' FNL
NAD 27, TEXAS CENTRAL ZONE COORDS Y = 750,051.65, X = 1,094,548.63 LAT: N 31.69639°, LONG: W 103.24484°	NAD 27, TEXAS CENTRAL ZONE COORDS Y = 760,793.24, X = 1,091,560.29 LAT: N 31.72432°, LONG: W 103.25531°
FIRST TAKE LOCATION: NAD 83, TEXAS CENTRAL ZONE COORDS Y = 10,593,105.35, X = 1,390,875.68 LAT: N 31.69782°, LONG: W 103.24577° FT: 330' FELL & 200' FNL	
NAD 27, TEXAS CENTRAL ZONE COORDS Y = 750,529.34, X = 1,094,411.20 LAT: N 31.69770°, LONG: W 103.24532°	

GENERAL NOTES

- COORDINATES SHOWN ARE BASED ON TEXAS PLANE COORDINATE SYSTEM OF NAD 27, TEXAS CENTRAL ZONE 4203
- VERTICAL DATUM IS NAVD 88
- LATITUDE AND LONGITUDE ARE NAD 27 AS SHOWN
- AREA, DISTANCES, AND COORDINATES ARE "GRID"
- UNITS ARE UNITED STATES SURVEY FOOT
- ALL LEASE AND TRACT INFORMATION SHOWN HERE ON IS DONE SO BY LIMITED DEED RECORD INFORMATION ONLY. ALL ACRES SHOWN ARE BY DEED AND

I HEREBY STATE THAT THIS PLAT SHOWS THE SUBJECT SURFACE LOCATION AS STAKED ON THE GROUND.





March 26, 2018

Survey Certification Report

STATE OF TEXAS

COUNTY OF Montgomery

I, Todd Estes, certify that I am employed by STRYKER ENERGY DIRECTIONAL SERVICES, L.L.C., and that I did on the day(s) of January 30, 2018 through February 19, 2018, conduct or supervise the taking of a SEDS MWD Original Hole Survey from a depth of 880 feet to a depth of 12,041 feet; and that I did on the day(s) of February 26, 2018 through March 20, 2018, conduct or supervise the taking of a SEDS MWD Sidetrack Hole Survey from a depth of 11,857 feet to a depth of 22,124 feet; that I am authorized and qualified to make this report; that this survey was conducted at the request of Forge Energy, LLC, for the UL 21 Bighorn #4H well, API # **42-495-34008** in Winkler County, Texas; and that I have reviewed this report and find that it conforms to the principles as set forth by STRYKER ENERGY DIRECTIONAL SERVICES, L.L.C..

A handwritten signature in blue ink that reads "Todd Estes". The signature is written over a horizontal line.

Todd Estes

STRYKER ENERGY DIRECTIONAL SERVICES, L.L.C.

STRYKER ENERGY DIRECTIONAL SERVICES, LLC.

P.O. Box 1250

Montgomery, TX 77356

Office (936) 582-7296 * Fax (936)-588-4163

**RAILROAD COMMISSION OF TEXAS
OIL & GAS DIVISION**

PERMIT TO DRILL, DEEPEN, PLUG BACK, OR RE-ENTER ON A REGULAR OR ADMINISTRATIVE EXCEPTION LOCATION

PERMIT NUMBER <div align="center">833905</div>	DATE PERMIT ISSUED OR AMENDED <div align="center">Dec 22, 2017</div>	DISTRICT <div align="center">* 08</div>															
API NUMBER <div align="center">42-495-34008</div>	FORM W-1 RECEIVED <div align="center">Dec 05, 2017</div>	COUNTY <div align="center">WINKLER</div>															
TYPE OF OPERATION <div align="center">NEW DRILL</div>	WELLBORE PROFILE(S) <div align="center">Horizontal</div>	ACRES <div align="center">1281.4</div>															
OPERATOR <div align="center"> FORGE ENERGY, LLC 15727 ANTHEM PKWY STE 501 SAN ANTONIO, TX 78249-0000 </div>		NOTICE This permit and any allowable assigned may be revoked if payment for fee(s) submitted to the Commission is not honored. District Office Telephone No: <div align="center">(432) 684-5581</div>															
LEASE NAME <div align="center">UL 21 BIGHORN</div>		WELL NUMBER <div align="center">4H</div>															
LOCATION <div align="center">7 miles SW direction from WINK</div>		TOTAL DEPTH <div align="center">12500</div>															
Section, Block and/or Survey <div> SECTION ◀ 31 BLOCK ◀ 21 ABSTRACT ◀ U71 SURVEY ◀ UL </div>																	
DISTANCE TO SURVEY LINES <div align="center">331 ft. EAST 297 ft. NORTH</div>		DISTANCE TO NEAREST LEASE LINE <div align="center">200 ft.</div>															
DISTANCE TO LEASE LINES <div align="center">331 ft. EAST 297 ft. NORTH</div>		DISTANCE TO NEAREST WELL ON LEASE <div align="center">See FIELD(s) Below</div>															
FIELD(s) and LIMITATIONS: <div align="center">* SEE FIELD DISTRICT FOR REPORTING PURPOSES *</div>																	
<table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:60%;">FIELD NAME LEASE NAME</th> <th style="width:10%;">ACRES NEAREST LEASE</th> <th style="width:10%;">DEPTH</th> <th style="width:10%;">WELL # NEAREST WE</th> <th style="width:10%;">DIST</th> </tr> </thead> <tbody> <tr> <td>PHANTOM (WOLFCAMP)</td> <td align="center">1281.40</td> <td align="center">12,500</td> <td align="center">4H</td> <td align="center">08</td> </tr> <tr> <td>UL 21 BIGHORN</td> <td align="center">200</td> <td></td> <td align="center">1920</td> <td></td> </tr> </tbody> </table>			FIELD NAME LEASE NAME	ACRES NEAREST LEASE	DEPTH	WELL # NEAREST WE	DIST	PHANTOM (WOLFCAMP)	1281.40	12,500	4H	08	UL 21 BIGHORN	200		1920	
FIELD NAME LEASE NAME	ACRES NEAREST LEASE	DEPTH	WELL # NEAREST WE	DIST													
PHANTOM (WOLFCAMP)	1281.40	12,500	4H	08													
UL 21 BIGHORN	200		1920														
WELLBORE PROFILE(s) FOR FIELD: Horizontal																	
RESTRICTIONS: This is a hydrogen sulfide field. Hydrogen Sulfide Fields with perforations must be isolated and tested per State Wide Rule 36 and a Form H-9 filed with the district office. Fields with SWR 10 authority to downhole commingle must be isolated and tested individually prior to commingling production. <div> Lateral: TH1 Penetration Point Location Lease Lines: 331.0 F EAST L 297.0 F NORTH L Terminus Location BH County: WINKLER Section: 19 Block: 21 Abstract: Survey: UL / A-U59 Lease Lines: 330.0 F EAST L 200.0 F NORTH L Survey Lines: 330.0 F EAST L 200.0 F NORTH L </div>																	
THE FOLLOWING RESTRICTIONS APPLY TO ALL FIELDS																	