

12-Jul-17

Texas Railroad Commission
Pam Johns, Oil Gas Division
P.O. Box 12967, Capitol Station
Austin, TX 78711

Company:	FELIX ENERGY HOLDINGS II, LLC
RRC Operator #:	265322
Well Name:	UL URAD 1609-21 1H
Drilling Permit #:	825440
Abstract #:	0
County:	WINKLER COUNTY, TX
API #:	42-495-33843
Sperry DS Job #:	904047091

Final Survey for:

Dear Ms. Johns:

Enclosed you will find the original survey performed by Halliburton Energy Services, Inc. (AKA Sperry Drilling Services) on the above referenced well. In addition to the survey, I have included a certified plat on which the bottom hole location is oriented to both the surface location and the nearest lease line (or unit of lines in case of pooling) and a signed letter from the surveyor.

Other information required by your office is as follows:

Name & Title of Surveyor:	PETERS OKOLIE		
Type of Survey:	MWD		
Dates Performed:	5/26/2017	thru	7/1/2017
Drainhole Number:	ORIGINAL		
Surveyed Depths:	159	to	22401

Should you have any questions or require additional information, please do not hesitate to contact me @ 281-871-7767.



Sandra Curvey
Sperry Drilling Services

Felix Energy
UL URAD 1609-21 1H
Winkler, TX
Cactus 129
API# 42-495-33843-0000

May 26, 2017 - July 01, 2017
MO-XX-0904047091

Sperry Drilling
MWD Survey Report

Submitted by: Peters Okolie

3950 Interwood South Parkway Houston, TX 77032

Ph: 281.986.4400

HALLIBURTON

Sperry Drilling



MWD Survey Report
for
Felix Energy

Rig : Cactus 129
Well Name : UL URAD 1609-21 1H
Field Name : Phantom (Wolfcamp)
Country : USA
Job Number : MO-XX-0904047091
Job Start Date : 26-May-17
API Number : 42-495-33843-0000

GENERAL INFORMATION	
Company	: Felix Energy
Rig	: Cactus 129
Well	: UL URAD 1609-21 1H
Field	: Phantom (Wolfcamp)
State	: Texas
County	: Winkler
Country	: USA
API Number	: 42-495-33843-0000
Sperry Drilling Job Number	: MO-XX-0904047091
Job Start Date	: 26-May-17
Job End Date	: 01-Jul-17
North Reference	: Grid
Total Correction (deg)	: 8.384
Dip Angle (deg)	: 59.657
Total Magnetic Field (nT)	: 47742
Date of Magnetic Data	: 26 May, 2017
Well Head coordinates N	: 31 deg. 43 min 50.69 sec North
Well Head coordinates E	: 103 deg. 14 min 15.21 sec West
Vertical section direction (deg)	: 344.40
Unit Number	: 11674750
MWD Engineers	: Peters Okolie, Thomas Nord, Robert Bourgoyne, Curt Orloff, David Mckechnie
Company Representatives	: Ed Asuchak
Company Geologist:	: Chris Persellin, Chris Persellin

DIRECTIONAL SURVEY DATA						
Tie-in						
0.00	0.00	0.00	0.00	0.00 N	0.00 E	

Measured Depth (ft)	Inclination (deg)	Direction (deg)	Vertical Depth (ft)	Latitude (ft)	Departure (ft)	Vertical Section (ft)	Dogleg (''/100')
0.00	0.00	0.00	0.00	0.00 N	0.00 E	0.00	0.00
159.00	0.72	318.31	159.00	0.75 N	0.66 W	0.90	0.45
250.00	0.92	302.11	249.99	1.56 N	1.66 W	1.95	0.33
467.00	1.48	285.39	466.94	3.23 N	5.84 W	4.68	0.30
649.00	1.49	281.18	648.88	4.32 N	10.44 W	6.96	0.06
924.00	1.05	251.62	923.81	4.22 N	16.35 W	8.46	0.28
1054.00	0.97	231.10	1,053.79	3.15 N	18.33 W	7.97	0.28
1198.00	1.09	232.33	1,197.77	1.55 N	20.37 W	6.97	0.09
1291.00	1.06	186.60	1,290.75	0.15 N	21.17 W	5.84	0.90
1383.00	3.23	146.05	1,382.69	2.84 S	19.82 W	2.59	2.74
1474.00	5.40	139.84	1,473.43	8.24 S	15.63 W	-3.73	2.43
1566.00	7.44	136.74	1,564.84	15.88 S	8.76 W	-12.94	2.25
1658.00	8.40	135.21	1,655.97	24.99 S	0.06 E	-24.08	1.07
1750.00	8.88	136.18	1,746.92	34.88 S	9.70 E	-36.20	0.54
1842.00	9.50	133.31	1,837.74	45.21 S	20.14 E	-48.96	0.84
1934.00	9.36	132.17	1,928.50	55.44 S	31.21 E	-61.79	0.26
2026.00	8.00	134.67	2,019.44	64.97 S	41.31 E	-73.68	1.53
2121.00	8.03	133.76	2,113.51	74.21 S	50.81 E	-85.14	0.14
2216.00	8.94	130.61	2,207.47	83.60 S	61.21 E	-96.98	1.07
2310.00	8.34	128.34	2,300.41	92.58 S	72.10 E	-108.56	0.73
2405.00	7.74	120.39	2,394.48	100.09 S	83.02 E	-118.73	1.33
2500.00	8.57	124.60	2,488.52	107.35 S	94.36 E	-128.77	1.08
2594.00	8.70	134.97	2,581.46	116.35 S	105.16 E	-140.35	1.66
2689.00	8.80	136.08	2,675.35	126.66 S	115.28 E	-153.00	0.21
2785.00	9.17	135.36	2,770.17	137.40 S	125.75 E	-166.15	0.41
2880.00	9.52	131.35	2,863.91	147.97 S	136.97 E	-179.36	0.78
2976.00	8.54	129.02	2,958.72	157.71 S	148.47 E	-191.82	1.09
3070.00	9.79	126.23	3,051.52	166.82 S	160.34 E	-203.80	1.41
3165.00	9.55	132.63	3,145.17	176.93 S	172.65 E	-216.84	1.16
3259.00	8.63	139.46	3,237.99	187.57 S	182.97 E	-229.87	1.51
3354.00	6.84	146.72	3,332.13	197.72 S	190.71 E	-241.72	2.14
3449.00	5.65	147.26	3,426.56	206.39 S	196.34 E	-251.59	1.25
3545.00	5.39	146.59	3,522.12	214.13 S	201.38 E	-260.40	0.28
3641.00	4.91	146.65	3,617.73	221.33 S	206.12 E	-268.60	0.50
3736.00	3.45	151.73	3,712.47	227.24 S	209.71 E	-275.27	1.58
3832.00	1.78	152.63	3,808.37	231.11 S	211.77 E	-279.55	1.74
3926.00	1.36	152.56	3,902.33	233.40 S	212.96 E	-282.07	0.45
4020.00	1.18	150.65	3,996.31	235.23 S	213.94 E	-284.10	0.19
4115.00	1.29	133.15	4,091.29	236.82 S	215.21 E	-285.97	0.41
4210.00	1.40	141.03	4,186.26	238.45 S	216.72 E	-287.95	0.22
4304.00	1.79	123.23	4,280.23	240.15 S	218.66 E	-290.10	0.66

DIRECTIONAL SURVEY DATA

Measured Depth (ft)	Inclination (deg)	Direction (deg)	Vertical Depth (ft)	Latitude (ft)	Departure (ft)	Vertical Section (ft)	Dogleg (°/100')
4398.00	1.65	109.95	4,374.19	241.41 S	221.16 E	-291.99	0.45
4494.00	1.59	92.49	4,470.15	241.94 S	223.79 E	-293.21	0.52
4588.00	2.70	97.30	4,564.08	242.28 S	227.29 E	-294.48	1.19
4684.00	2.54	100.47	4,659.98	242.95 S	231.62 E	-296.29	0.22
4778.00	0.33	152.50	4,753.95	243.57 S	233.79 E	-297.47	2.50
4872.00	0.62	243.07	4,847.94	244.05 S	233.47 E	-297.84	0.75
4966.00	0.47	235.73	4,941.94	244.49 S	232.69 E	-298.06	0.18
5046.00	0.43	231.21	5,021.94	244.87 S	232.19 E	-298.29	0.07
5127.00	0.52	231.25	5,102.94	245.29 S	231.66 E	-298.55	0.12
5190.00	0.52	219.30	5,165.93	245.69 S	231.26 E	-298.83	0.17
5284.00	0.46	236.07	5,259.93	246.24 S	230.67 E	-299.20	0.17
5378.00	0.38	220.49	5,353.93	246.68 S	230.15 E	-299.49	0.15
5471.00	0.82	327.51	5,446.92	246.35 S	229.60 E	-299.02	1.07
5565.00	1.37	334.72	5,540.91	244.77 S	228.76 E	-297.27	0.61
5659.00	1.13	331.67	5,634.88	242.93 S	227.84 E	-295.25	0.27
5754.00	1.17	327.54	5,729.86	241.29 S	226.87 E	-293.41	0.10
5848.00	1.30	323.60	5,823.84	239.62 S	225.72 E	-291.49	0.16
5943.00	1.43	332.00	5,918.82	237.70 S	224.52 E	-289.33	0.25
6037.00	1.45	331.68	6,012.79	235.62 S	223.41 E	-287.02	0.02
6132.00	1.35	319.58	6,107.76	233.70 S	222.11 E	-284.82	0.33
6226.00	1.47	326.56	6,201.73	231.85 S	220.72 E	-282.66	0.22
6320.00	1.40	326.96	6,295.70	229.88 S	219.43 E	-280.42	0.08
6415.00	1.23	318.16	6,390.67	228.15 S	218.12 E	-278.40	0.28
6509.00	1.37	316.69	6,484.65	226.58 S	216.67 E	-276.50	0.16
6603.00	1.26	317.08	6,578.63	225.00 S	215.20 E	-274.58	0.12
6698.00	1.22	316.06	6,673.60	223.51 S	213.79 E	-272.77	0.05
6792.00	1.20	311.02	6,767.58	222.14 S	212.35 E	-271.06	0.11
6886.00	1.20	313.97	6,861.56	220.81 S	210.90 E	-269.39	0.07
6981.00	1.06	311.93	6,956.54	219.53 S	209.52 E	-267.79	0.15
7074.00	1.14	314.59	7,049.53	218.31 S	208.22 E	-266.26	0.10
7169.00	1.04	297.34	7,144.51	217.25 S	206.79 E	-264.86	0.36
7263.00	1.08	295.84	7,238.49	216.48 S	205.24 E	-263.70	0.05
7358.00	1.07	286.57	7,333.48	215.83 S	203.59 E	-262.63	0.18
7453.00	1.23	275.88	7,428.46	215.48 S	201.72 E	-261.78	0.28
7547.00	1.26	272.69	7,522.44	215.32 S	199.68 E	-261.09	0.08
7641.00	1.65	266.99	7,616.40	215.35 S	197.29 E	-260.47	0.44
7735.00	1.67	257.89	7,710.37	215.70 S	194.61 E	-260.09	0.28
7829.00	1.65	241.58	7,804.33	216.63 S	192.08 E	-260.31	0.50
7924.00	1.46	232.60	7,899.29	218.02 S	189.92 E	-261.06	0.32
8019.00	1.58	224.60	7,994.26	219.69 S	188.04 E	-262.16	0.26
8113.00	1.63	214.97	8,088.22	221.71 S	186.36 E	-263.66	0.29
8207.00	1.39	212.17	8,182.19	223.77 S	184.99 E	-265.27	0.27
8302.00	1.63	214.40	8,277.16	225.86 S	183.61 E	-266.92	0.26
8396.00	0.95	199.16	8,371.13	227.70 S	182.60 E	-268.42	0.80
8490.00	0.35	96.72	8,465.13	228.47 S	182.62 E	-269.17	1.15

DIRECTIONAL SURVEY DATA

Measured Depth (ft)	Inclination (deg)	Direction (deg)	Vertical Depth (ft)	Latitude (ft)	Departure (ft)	Vertical Section (ft)	Dogleg (°/100')
8585.00	0.86	73.20	8,560.12	228.30 S	183.60 E	-269.26	0.59
8678.00	0.75	106.29	8,653.11	228.27 S	184.85 E	-269.57	0.51
8772.00	0.55	149.31	8,747.11	228.83 S	185.66 E	-270.33	0.54
8867.00	0.94	181.09	8,842.10	230.00 S	185.88 E	-271.51	0.58
8961.00	1.19	149.83	8,936.08	231.61 S	186.36 E	-273.20	0.66
9055.00	1.22	150.11	9,030.06	233.33 S	187.35 E	-275.11	0.04
9149.00	1.65	140.53	9,124.03	235.24 S	188.71 E	-277.33	0.52
9243.00	1.92	134.10	9,217.99	237.39 S	190.70 E	-279.93	0.36
9337.00	1.48	146.50	9,311.95	239.50 S	192.51 E	-282.44	0.61
9431.00	1.42	155.47	9,405.92	241.57 S	193.66 E	-284.75	0.25
9525.00	1.41	142.33	9,499.89	243.55 S	194.85 E	-286.97	0.34
9619.00	1.20	160.63	9,593.86	245.39 S	195.88 E	-289.03	0.49
9713.00	1.33	158.40	9,687.84	247.33 S	196.61 E	-291.09	0.14
9807.00	0.65	193.28	9,781.83	248.86 S	196.89 E	-292.64	0.93
9902.00	0.37	220.33	9,876.82	249.62 S	196.57 E	-293.28	0.38
9997.00	0.28	197.72	9,971.82	250.07 S	196.30 E	-293.65	0.17
10090.00	0.92	175.09	10,064.82	251.03 S	196.29 E	-294.57	0.73
10185.00	1.32	171.49	10,159.80	252.88 S	196.52 E	-296.41	0.42
10278.00	0.95	136.78	10,252.78	254.50 S	197.21 E	-298.15	0.82
10373.00	0.46	116.02	10,347.77	255.24 S	198.09 E	-299.11	0.57
10480.00	0.51	83.98	10,454.77	255.38 S	198.95 E	-299.47	0.25
10575.00	0.28	120.67	10,549.77	255.45 S	199.57 E	-299.71	0.34
10668.00	0.52	255.60	10,642.77	255.67 S	199.35 E	-299.86	0.80
10762.00	2.07	250.30	10,736.74	256.35 S	197.35 E	-299.98	1.65
10857.00	2.38	280.19	10,831.67	256.58 S	193.79 E	-299.24	1.25
10951.00	1.43	278.93	10,925.62	256.05 S	190.71 E	-297.90	1.01
11045.00	1.71	262.26	11,019.58	256.06 S	188.16 E	-297.22	0.56
11139.00	1.68	267.98	11,113.54	256.29 S	185.40 E	-296.71	0.18
11234.00	1.86	274.20	11,208.50	256.23 S	182.47 E	-295.86	0.27
11328.00	2.35	278.13	11,302.43	255.85 S	179.05 E	-294.57	0.55
11423.00	2.42	294.58	11,397.35	254.74 S	175.30 E	-292.49	0.72
11516.00	2.40	299.58	11,490.27	252.96 S	171.82 E	-289.84	0.23
11610.00	2.95	300.95	11,584.17	250.74 S	168.03 E	-286.69	0.58
11648.00	2.92	303.13	11,622.12	249.71 S	166.38 E	-285.25	0.30
11706.00	2.81	302.83	11,680.04	248.13 S	163.95 E	-283.08	0.20
11737.00	2.66	299.56	11,711.01	247.36 S	162.68 E	-282.00	0.70
11786.00	6.24	337.45	11,759.86	244.34 S	160.67 E	-278.55	9.08
11831.00	20.56	343.16	11,803.53	234.47 S	157.43 E	-268.17	31.92
11881.00	35.24	343.60	11,847.59	212.10 S	150.78 E	-244.84	29.37
11926.00	44.87	343.66	11,882.00	184.35 S	142.62 E	-215.91	21.39
12019.00	48.94	341.99	11,945.52	119.50 S	122.54 E	-148.05	4.57
12114.00	46.67	341.62	12,009.32	52.63 S	100.56 E	-77.74	2.41
12162.00	45.18	340.96	12,042.71	19.97 S	89.50 E	-43.31	3.27
12209.00	43.36	341.79	12,076.36	11.11 N	79.03 E	-10.55	4.05
12256.00	50.01	343.07	12,108.59	43.70 N	68.73 E	23.61	14.28

DIRECTIONAL SURVEY DATA

Measured Depth (ft)	Inclination (deg)	Direction (deg)	Vertical Depth (ft)	Latitude (ft)	Departure (ft)	Vertical Section (ft)	Dogleg ("'/100')
12303.00	55.06	346.85	12,137.18	79.72 N	59.10 E	60.89	12.49
12397.00	56.03	345.43	12,190.36	154.96 N	40.53 E	138.36	1.61
12444.00	54.76	344.13	12,217.05	192.29 N	30.37 E	177.04	3.54
12490.00	56.60	342.72	12,242.99	228.70 N	19.53 E	215.02	4.74
12540.00	61.17	343.25	12,268.82	269.62 N	7.01 E	257.80	9.19
12592.00	75.56	343.97	12,287.94	315.87 N	6.58 W	306.01	27.69
12631.00	83.33	343.77	12,295.08	352.68 N	17.22 W	344.31	19.93
12713.00	87.35	347.35	12,301.75	431.79 N	37.59 W	426.00	6.56
12759.00	87.71	347.64	12,303.73	476.66 N	47.54 W	471.89	1.02
12807.00	87.93	347.23	12,305.55	523.48 N	57.97 W	519.78	0.96
12854.00	88.24	347.47	12,307.12	569.31 N	68.26 W	566.70	0.82
12902.00	88.86	348.39	12,308.34	616.24 N	78.29 W	614.59	2.32
12949.00	89.56	349.22	12,308.99	662.34 N	87.41 W	661.44	2.31
12995.00	89.75	349.15	12,309.26	707.52 N	96.04 W	707.28	0.45
13042.00	92.13	345.84	12,308.49	753.39 N	106.22 W	754.20	8.66
13089.00	92.84	344.92	12,306.45	798.82 N	118.07 W	801.15	2.47
13183.00	91.29	345.39	12,303.06	889.62 N	142.13 W	895.07	1.72
13277.00	92.34	344.83	12,300.08	980.42 N	166.27 W	989.02	1.26
13372.00	92.68	347.26	12,295.91	1,072.52 N	189.16 W	1083.88	2.58
13465.00	91.82	346.95	12,292.26	1,163.10 N	209.90 W	1176.70	0.99
13560.00	88.27	346.04	12,292.18	1,255.46 N	232.08 W	1271.62	3.85
13654.00	86.40	345.83	12,296.55	1,346.54 N	254.90 W	1365.49	2.01
13748.00	86.39	345.70	12,302.47	1,437.47 N	277.96 W	1459.27	0.14
13842.00	88.34	344.78	12,306.79	1,528.27 N	301.88 W	1553.16	2.30
13936.00	87.71	342.19	12,310.03	1,618.33 N	328.58 W	1647.08	2.83
14030.00	90.46	344.10	12,311.53	1,708.27 N	355.83 W	1741.03	3.56
14125.00	93.05	344.60	12,308.62	1,799.70 N	381.44 W	1835.98	2.77
14220.00	93.55	343.71	12,303.15	1,890.94 N	407.33 W	1930.82	1.08
14314.00	90.59	341.70	12,299.75	1,980.61 N	435.26 W	2024.70	3.81
14408.00	93.08	346.41	12,296.75	2,070.92 N	461.06 W	2118.62	5.66
14502.00	93.51	354.50	12,291.33	2,163.39 N	476.61 W	2211.86	8.60
14595.00	90.71	350.90	12,287.91	2,255.55 N	488.41 W	2303.80	4.90
14690.00	90.86	343.45	12,286.60	2,348.10 N	509.48 W	2398.61	7.85
14784.00	89.88	341.11	12,285.99	2,437.63 N	538.09 W	2492.54	2.70
14878.00	93.14	339.92	12,283.51	2,526.20 N	569.43 W	2586.28	3.70
14972.00	92.56	339.73	12,278.84	2,614.33 N	601.82 W	2679.86	0.65
15067.00	90.77	339.60	12,276.08	2,703.36 N	634.81 W	2774.49	1.89
15160.00	93.80	340.84	12,272.37	2,790.80 N	666.25 W	2867.16	3.52
15254.00	95.11	342.64	12,265.07	2,879.79 N	695.61 W	2960.77	2.37
15347.00	92.56	340.41	12,258.85	2,967.79 N	725.01 W	3053.43	3.64
15442.00	91.94	339.01	12,255.12	3,056.82 N	757.92 W	3148.04	1.61
15537.00	94.46	342.43	12,249.81	3,146.33 N	789.23 W	3242.67	4.46
15631.00	94.53	340.25	12,242.44	3,235.11 N	819.22 W	3336.24	2.32
15724.00	94.75	339.84	12,234.92	3,322.24 N	850.86 W	3428.67	0.50
15818.00	92.75	345.15	12,228.77	3,411.66 N	879.06 W	3522.38	6.03

DIRECTIONAL SURVEY DATA

Measured Depth (ft)	Inclination (deg)	Direction (deg)	Vertical Depth (ft)	Latitude (ft)	Departure (ft)	Vertical Section (ft)	Dogleg (°/100')
15912.00	90.31	343.50	12,226.26	3,502.12 N	904.44 W	3616.33	3.13
16006.00	93.11	343.43	12,223.45	3,592.19 N	931.17 W	3710.27	2.99
16099.00	93.05	342.61	12,218.45	3,681.00 N	958.29 W	3803.11	0.89
16193.00	94.13	342.56	12,212.56	3,770.51 N	986.38 W	3896.87	1.15
16287.00	93.55	341.72	12,206.27	3,859.78 N	1,015.14 W	3990.59	1.09
16382.00	93.58	342.54	12,200.37	3,950.02 N	1,044.24 W	4085.33	0.86
16476.00	92.43	342.76	12,195.44	4,039.62 N	1,072.24 W	4179.15	1.24
16569.00	91.45	344.68	12,192.29	4,128.83 N	1,098.29 W	4272.09	2.32
16664.00	93.15	346.96	12,188.49	4,220.85 N	1,121.54 W	4366.97	2.99
16758.00	94.72	348.37	12,182.04	4,312.46 N	1,141.58 W	4460.60	2.25
16852.00	94.90	346.45	12,174.15	4,403.87 N	1,161.99 W	4554.13	2.04
16946.00	97.88	344.42	12,163.68	4,494.28 N	1,185.47 W	4647.51	3.83
17041.00	93.89	344.45	12,153.95	4,585.29 N	1,210.82 W	4742.00	4.20
17135.00	89.47	342.22	12,151.19	4,675.28 N	1,237.76 W	4835.91	5.26
17229.00	87.97	342.92	12,153.29	4,764.93 N	1,265.91 W	4929.83	1.77
17322.00	89.69	344.48	12,155.19	4,854.17 N	1,292.01 W	5022.80	2.50
17417.00	88.25	347.53	12,156.89	4,946.32 N	1,314.98 W	5117.74	3.55
17512.00	90.25	345.26	12,158.14	5,038.64 N	1,337.32 W	5212.66	3.18
17605.00	90.34	343.12	12,157.67	5,128.11 N	1,362.65 W	5305.65	2.30
17700.00	89.97	341.56	12,157.41	5,218.64 N	1,391.47 W	5400.59	1.69
17793.00	89.57	340.92	12,157.79	5,306.69 N	1,421.38 W	5493.44	0.81
17888.00	93.64	342.60	12,155.12	5,396.86 N	1,451.09 W	5588.28	4.64
17981.00	91.79	341.44	12,150.72	5,485.22 N	1,479.76 W	5681.09	2.35
18076.00	89.38	340.79	12,149.75	5,575.09 N	1,510.50 W	5775.92	2.62
18170.00	91.97	343.29	12,148.63	5,664.49 N	1,539.49 W	5869.82	3.83
18263.00	93.31	344.30	12,144.35	5,753.70 N	1,565.41 W	5962.71	1.80
18357.00	91.05	342.11	12,140.78	5,843.61 N	1,592.55 W	6056.61	3.35
18451.00	80.50	337.35	12,147.70	5,931.41 N	1,624.95 W	6149.89	12.30
18545.00	85.30	339.94	12,159.31	6,018.26 N	1,658.89 W	6242.67	5.79
18639.00	87.26	340.40	12,165.41	6,106.49 N	1,690.71 W	6336.21	2.14
18762.00	89.35	343.49	12,169.05	6,223.36 N	1,728.80 W	6459.02	3.04
18856.00	91.42	345.28	12,168.42	6,313.89 N	1,754.09 W	6553.01	2.91
18951.00	92.44	345.48	12,165.22	6,405.76 N	1,778.06 W	6647.94	1.09
19045.00	93.98	345.07	12,159.96	6,496.52 N	1,801.91 W	6741.78	1.70
19140.00	94.16	348.31	12,153.22	6,588.73 N	1,823.73 W	6836.45	3.40
19233.00	93.17	345.31	12,147.27	6,679.07 N	1,844.91 W	6929.17	3.39
19327.00	90.99	345.76	12,143.86	6,770.03 N	1,868.37 W	7023.08	2.37
19421.00	91.51	345.98	12,141.81	6,861.16 N	1,891.32 W	7117.03	0.60
19516.00	92.16	346.43	12,138.77	6,953.37 N	1,913.96 W	7211.93	0.83
19610.00	92.71	346.37	12,134.78	7,044.66 N	1,936.04 W	7305.79	0.59
19704.00	90.52	344.58	12,132.13	7,135.61 N	1,959.60 W	7399.72	3.00
19798.00	89.48	344.20	12,132.13	7,226.14 N	1,984.90 W	7493.72	1.19
19892.00	91.11	344.30	12,131.64	7,316.60 N	2,010.42 W	7587.72	1.74
19985.00	89.85	343.08	12,130.87	7,405.85 N	2,036.53 W	7680.70	1.89
20080.00	88.86	344.14	12,131.94	7,496.99 N	2,063.33 W	7775.69	1.52

<div><div>HALLIBURTON</div><div>Sperry Drilling</div></div>							
DIRECTIONAL SURVEY DATA							
Measured Depth (ft)	Inclination (deg)	Direction (deg)	Vertical Depth (ft)	Latitude (ft)	Departure (ft)	Vertical Section (ft)	Dogleg (°/100')
20173.00	90.06	344.97	12,132.82	7,586.62 N	2,088.10 W	7868.68	1.57
20268.00	88.46	343.62	12,134.04	7,678.06 N	2,113.80 W	7963.67	2.20
20362.00	88.34	344.12	12,136.67	7,768.33 N	2,139.90 W	8057.63	0.55
20455.00	87.23	343.63	12,140.27	7,857.60 N	2,165.71 W	8150.55	1.31
20550.00	87.56	342.46	12,144.59	7,948.38 N	2,193.39 W	8245.42	1.27
20644.00	89.82	343.07	12,146.74	8,038.12 N	2,221.23 W	8339.35	2.48
20738.00	91.36	344.19	12,145.78	8,128.30 N	2,247.72 W	8433.34	2.03
20832.00	91.29	343.58	12,143.61	8,218.59 N	2,273.81 W	8527.31	0.65
20927.00	91.05	342.96	12,141.67	8,309.54 N	2,301.16 W	8622.27	0.71
21021.00	90.83	343.63	12,140.13	8,399.56 N	2,328.18 W	8716.24	0.75
21116.00	89.63	344.09	12,139.74	8,490.82 N	2,354.58 W	8811.23	1.36
21210.00	88.03	344.69	12,141.66	8,581.33 N	2,379.87 W	8905.21	1.82
21305.00	89.48	345.60	12,143.73	8,673.13 N	2,404.22 W	9000.17	1.80
21399.00	87.87	345.45	12,145.90	8,764.12 N	2,427.70 W	9094.13	1.71
21492.00	85.96	345.99	12,150.91	8,854.11 N	2,450.61 W	9186.96	2.14
21587.00	85.80	344.79	12,157.73	8,945.80 N	2,474.50 W	9281.70	1.27
21682.00	86.02	341.65	12,164.51	9,036.51 N	2,501.86 W	9376.43	3.31
21776.00	85.84	341.86	12,171.18	9,125.56 N	2,531.22 W	9470.09	0.30
21870.00	89.75	344.71	12,174.80	9,215.49 N	2,558.23 W	9563.97	5.15
21964.00	87.38	341.03	12,177.15	9,305.27 N	2,585.90 W	9657.89	4.66
22058.00	90.52	342.75	12,178.86	9,394.58 N	2,615.11 W	9751.77	3.81
22152.00	89.32	342.16	12,178.99	9,484.21 N	2,643.45 W	9845.71	1.42
22247.00	88.46	343.01	12,180.83	9,574.84 N	2,671.87 W	9940.64	1.27
22341.00	89.97	344.33	12,182.12	9,665.03 N	2,698.30 W	10034.62	2.13
22401.00	89.66	344.28	12,182.31	9,722.79 N	2,714.53 W	10094.62	0.52
22453.00	89.66	344.28	12,182.62	9,772.85 N	2,728.61 W	10146.62	0.01
SURVEY FOOTER							
SURVEYS CALCULATED USING THE SHORT COLLAR METHOD TIE-ON SURVEY ASSUMED VERTICAL AT SURFACE WELL ASSUMED VERTICAL AT WELLHEAD SURVEYS FROM 159' MD TO 22401' MD PROVIDED BY SPERRY DRILLING MWD SURVEY AT 22401' MD HAS BEEN PROJECTED TO TD AT 22453' MD ENGINEERS: P. OKOLIE, T. NORD, R. BOURGOYNE, D MCKECHNIE, C. ORLOFF.							

DIRECTIONAL SURVEY DATA NOTES

- Calculation based on minimum curvature method.
- Survey coordinates relative to well system reference point.
- TVD values given relative to drilling measurement point.
- Vertical section relative to well head.
- Vertical section is computed along a direction of 344.40 degrees (Grid)
- A total correction of 8.38 deg from Magnetic north to Grid north has been applied
- Horizontal displacement is relative to the well head.
- Horizontal displacement (closure) at 22,453.00 feet is 10,146.62 feet along 344.40 degrees (Grid)

WARRANTY

HALLIBURTON ENERGY SERVICES, INC. WILL USE ITS BEST EFFORTS TO FURNISH CUSTOMERS WITH ACCURATE INFORMATION AND INTERPRETATIONS THAT ARE PART OF, AND INCIDENT TO, THE SERVICES PROVIDED. HOWEVER, HALLIBURTON ENERGY SERVICES, INC. CANNOT AND DOES NOT WARRANT THE ACCURACY OR CORRECTNESS OF SUCH INFORMATION AND INTERPRETATIONS. UNDER NO CIRCUMSTANCES SHOULD ANY SUCH INFORMATION OR INTERPRETATION BE RELIED UPON AS THE SOLE BASIS FOR ANY DRILLING, COMPLETION, PRODUCTION, OR FINANCIAL DECISION OR ANY PROCEDURE INVOLVING ANY RISK TO THE SAFETY OF ANY DRILLING VENTURE, DRILLING RIG OR ITS CREW OR ANY THIRD PARTY. THE CUSTOMER HAS FULL RESPONSIBILITY FOR ALL DRILLING, COMPLETION, AND PRODUCTION OPERATION. HALLIBURTON ENERGY SERVICES, INC. MAKES NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, WITH RESPECT TO THE SERVICES RENDERED. IN NO EVENT WILL HALLIBURTON ENERGY SERVICES, INC. SERVICES BE LIABLE FOR FAILURE TO OBTAIN ANY PARTICULAR RESULTS OR FOR ANY DAMAGES, INCLUDING, BUT NOT LIMITED TO, INDIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES, RESULTING FROM THE USE OF ANY INFORMATION OR INTERPRETATION PROVIDED BY HALLIBURTON ENERGY SERVICES, INC.

RAILROAD COMMISSION OF TEXAS
OIL & GAS DIVISION

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

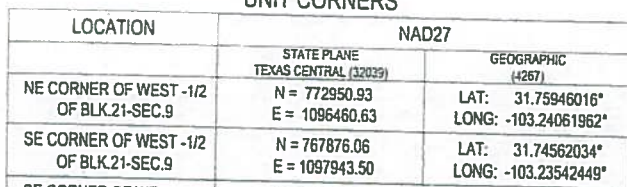
PERMIT NUMBER 825440	DATE PERMIT ISSUED OR AMENDED Apr 21, 2017	DISTRICT * 08
API NUMBER 42-495-33843	FORM W-1 RECEIVED Apr 12, 2017	COUNTY WINKLER
TYPE OF OPERATION NEW DRILL	WELLBORE PROFILE(S) Horizontal	ACRES 641.11
OPERATOR FELIX ENERGY HOLDINGS II, LLC FELIX ENERGY 1530 16TH ST SUITE 500 DENVER, CO 80202-0000 265322		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: (432) 684-5581
LEASE NAME UL URAD 1609-21		WELL NUMBER 1H
LOCATION 4.61 miles W direction from WINK		TOTAL DEPTH 14000
Section, Block and/or Survey SECTION ◀ 16 BLOCK ◀ 21 ABSTRACT ◀ SURVEY ◀ UL		
DISTANCE TO SURVEY LINES 358 ft. W 337 ft. S		DISTANCE TO NEAREST LEASE LINE 200 ft.
DISTANCE TO LEASE LINES 358 ft. W 337 ft. S		DISTANCE TO NEAREST WELL ON LEASE See FIELD(s) Below
FIELD(s) and LIMITATIONS: * SEE FIELD DISTRICT FOR REPORTING PURPOSES *		
FIELD NAME LEASE NAME		
ACRES DEPTH WELL # DIST NEAREST LEASE NEAREST WE		
Survey: UL Lease Lines: 480.0 F W L 50.0 F N L Survey Lines: 480.0 F W L 50.0 F N L		
THE FOLLOWING RESTRICTIONS APPLY TO ALL FIELDS This well shall be completed and produced in compliance with applicable special field or statewide spacing and density rules. If this well is to be used for brine mining, underground storage of liquid hydrocarbons in salt formations, or underground storage of gas in salt formations, a permit for that specific purpose must be obtained from Environmental Services prior to construction, including drilling, of the well in accordance with Statewide Rules 81, 95, and 97. This well must comply to the new SWR 3.13 requirements concerning the isolation of any potential flow zones and zones with corrosive formation fluids. See approved permit for those formations that have been identified for the county in which you are drilling the well in. The designated interval for one or more of the fields approved in this permit appears to overlap with the designated interval of another field or fields in this district. In the case of conflicting designated intervals you will be required to be consistent in field designation on this lease. Further, if the designated interval overlap of wells on this lease results in an actual or potential double assignment of reservoir and the applicant cannot conclusively demonstrate that there is no double assignment, the permitted well may not be assigned an allowable until the conflict is resolved. Because of the overlapping designated intervals in this area		

$$ST \phi \phi$$

TVD: 12,182,31

From Surf Loc: 9,722.79 N
2714.53 W

SPERRY DRILLING JOB NO. 904047091
DATE SURVEYED 5/26/17
SURVEYED FROM 159 TO 22401
TIE-ON COORDINATES FROM Surf
BHL AT 22,453.00 FT. (MD) = 10,146.62 FT.
AT 344.40° * Grid
FROM SURFACE LOCATION NW
BHL _____ = TO NW LEASE LINE



GENERAL NOTES:

HALLIBURTON

3950 Interwood South Parkway • Houston, TX 77032

PHONE 281.986.4400 • FAX 281.986.4499

State of Texas, Winkler County

I, Peters Okolie, certify that I am employed by Halliburton Energy Services, Inc. (AKA Sperry Drilling) and that on the dates May 26th, 2017 through July 1st, 2017, I did conduct or supervise the taking of MWD Directional surveys for the well UL URAD 1609-21 1H from 159' MD to 22401' MD. This data is true, correct, complete and within the limitations of the tools as set forth by Halliburton Energy Services, Inc. (AKA Sperry Drilling). I am authorized and qualified to make this report and this survey was conducted at the request of Felix Energy for the UL URAD 1609-21 1H well, API No. 42-495-33843-0000 in Winkler County, Texas. I have reviewed this report and find that it conforms to the principles and procedures as set forth by Halliburton Energy Services, Inc. (AKA Sperry Drilling).



Peters Okolie
MWD Field Engineer