



Jagged Peak Energy

Ward County, Texas (NAD-83)

UTL 2932-17 Unit

#2H

OH

Design: OH

RRC

04 January, 2018





Company:	Jagged Peak Energy	Local Co-ordinate Reference:	Well #2H
Project:	Ward County, Texas (NAD-83)	TVD Reference:	RKB= 32' @ 2756.00usft (Nabors X20)
Site:	UTL 2932-17 Unit	MD Reference:	RKB= 32' @ 2756.00usft (Nabors X20)
Well:	#2H	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14 Single User Db

Project		Ward County, Texas (NAD-83)	
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Texas Central Zone		

Site		UTL 2932-17 Unit			
Site Position:		Northing:		10,572,110.78	usft
From:	Lat/Long	Easting:		1,403,373.91	usft
Position Uncertainty:		Slot Radius:		13-3/16	"
				Latitude:	31° 38' 27.679 N
				Longitude:	103° 12' 13.885 W
				Grid Convergence:	-1.48 °

Well		#2H				
Well Position	+N/-S	0.00 usft	Northing:	10,573,463.39 usft	Latitude:	31° 38' 40.967 N
	+E/-W	0.00 usft	Easting:	1,403,004.76 usft	Longitude:	103° 12' 18.558 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	2,724.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	03/31/17	6.77	59.59	47,657.73426791

Design	OH			
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	242.24

Survey Program		Date	10/09/17		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
269.00	22,314.00	MWD Survey (OH)	MWD	MWD - Standard	



RRC



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Site:	UTL 2932-17 Unit	MD Reference:	RKB= 32' @ 2756.00usft (Nabors X20)
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Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14 Single User Db

Survey									
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	V. Sec (usft)	Closure Distance (usft)	Closure Azimuth (°)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
269.00	0.66	80.15	268.99	0.27	1.53	0.25	-1.47	1.55	80.15
First MWD Survey									
358.00	0.51	70.81	357.99	0.48	2.41	0.20	-2.35	2.45	78.65
451.00	0.59	91.84	450.99	0.60	3.28	0.23	-3.18	3.33	79.56
506.00	0.48	77.95	505.98	0.64	3.78	0.31	-3.65	3.84	80.36
563.00	0.77	65.48	562.98	0.85	4.37	0.56	-4.26	4.45	78.96
656.00	0.81	55.87	655.97	1.48	5.48	0.15	-5.54	5.67	74.89
753.00	0.77	48.43	752.96	2.30	6.53	0.11	-6.85	6.93	70.63
862.00	0.86	4.60	861.95	3.60	7.15	0.56	-8.00	8.00	63.28
955.00	0.42	42.15	954.95	4.55	7.43	0.63	-8.69	8.71	58.54
1,045.00	0.29	341.31	1,044.94	5.01	7.58	0.42	-9.04	9.08	56.55
1,106.00	0.42	33.57	1,105.94	5.34	7.65	0.55	-9.26	9.33	55.10
1,170.00	0.37	32.70	1,169.94	5.71	7.90	0.08	-9.65	9.74	54.13
1,360.00	0.18	3.01	1,359.94	6.52	8.24	0.12	-10.33	10.51	51.64
1,455.00	0.40	1.76	1,454.94	7.00	8.26	0.23	-10.57	10.83	49.71
1,644.00	0.37	46.27	1,643.93	8.08	8.72	0.15	-11.48	11.89	47.17
1,832.00	0.53	69.23	1,831.93	8.81	9.97	0.13	-12.93	13.31	48.54
2,021.00	0.64	37.89	2,020.92	9.96	11.44	0.18	-14.76	15.16	48.97
2,211.00	0.59	38.75	2,210.91	11.56	12.70	0.03	-16.62	17.17	47.71
2,402.00	0.73	37.84	2,401.90	13.28	14.06	0.07	-18.63	19.35	46.64
2,597.00	2.68	35.25	2,596.80	17.99	17.46	1.00	-23.83	25.07	44.14
2,791.00	4.46	346.84	2,790.46	29.04	18.36	1.72	-29.77	34.36	32.30
2,981.00	8.04	334.84	2,979.30	48.27	11.03	2.00	-32.24	49.51	12.87
3,171.00	8.53	340.73	3,167.32	73.60	0.73	0.52	-34.92	73.60	0.57
3,362.00	7.03	343.70	3,356.56	98.19	-7.23	0.81	-39.33	98.45	355.79
3,552.00	7.12	345.33	3,545.11	120.74	-13.48	0.12	-44.31	121.49	353.63



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Site:	UTL 2932-17 Unit	MD Reference:	RKB= 32' @ 2756.00usft (Nabors X20)
Well:	#2H	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14 Single User Db

Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	V. Sec (usft)	Closure Distance (usft)	Closure Azimuth (°)	
3,743.00	8.70	340.99	3,734.29	145.85	-21.18	0.88	-49.19	147.38	351.74	
3,933.00	7.32	343.39	3,922.43	171.04	-29.32	0.75	-53.72	173.53	350.27	
4,123.00	5.91	344.34	4,111.16	192.05	-35.42	0.74	-58.11	195.29	349.55	
4,314.00	5.38	345.24	4,301.24	210.18	-40.36	0.28	-62.18	214.02	349.13	
4,504.00	6.04	339.08	4,490.30	228.13	-46.20	0.47	-65.38	232.76	348.55	
4,695.00	4.15	350.18	4,680.54	244.33	-50.96	1.11	-68.70	249.59	348.22	
4,885.00	5.63	340.82	4,869.84	259.91	-55.20	0.88	-72.21	265.70	348.01	
5,075.00	6.24	327.24	5,058.83	277.39	-63.85	0.80	-72.70	284.65	347.04	
5,266.00	5.93	327.08	5,248.76	294.41	-74.83	0.16	-70.91	303.77	345.74	
5,456.00	5.45	325.76	5,437.82	310.10	-85.24	0.26	-69.01	321.61	344.63	
5,646.00	5.05	327.71	5,627.02	324.63	-94.78	0.23	-67.33	338.19	343.72	
5,837.00	4.61	330.49	5,817.34	338.42	-103.05	0.26	-66.43	353.76	343.06	
6,027.00	5.65	331.39	6,006.58	353.28	-111.29	0.55	-66.06	370.39	342.51	
6,217.00	5.21	330.42	6,195.73	368.99	-120.03	0.24	-65.65	388.02	341.98	
6,408.00	5.03	328.43	6,385.97	383.66	-128.69	0.13	-64.82	404.67	341.46	
6,598.00	4.68	324.70	6,575.28	397.09	-137.53	0.25	-63.25	420.23	340.90	
6,788.00	4.57	326.22	6,764.67	409.70	-146.22	0.09	-61.44	435.02	340.36	
6,979.00	3.89	328.13	6,955.14	421.53	-153.87	0.36	-60.17	448.74	339.95	
7,168.00	3.16	328.73	7,143.79	431.43	-159.96	0.39	-59.39	460.13	339.66	
7,357.00	1.87	328.92	7,332.60	438.52	-164.26	0.68	-58.90	468.28	339.47	
7,546.00	1.43	327.83	7,521.52	443.16	-167.11	0.23	-58.54	473.62	339.34	
7,736.00	1.23	338.95	7,711.47	447.07	-169.10	0.17	-58.59	477.98	339.28	
7,924.00	1.30	339.39	7,899.42	450.95	-170.58	0.04	-59.09	482.13	339.28	
8,090.00	1.80	334.18	8,065.36	455.06	-172.37	0.31	-59.42	486.61	339.25	
8,280.00	2.29	344.22	8,255.24	461.40	-174.71	0.32	-60.31	493.37	339.26	
8,470.00	3.43	355.48	8,445.00	470.72	-176.19	0.67	-63.34	502.61	339.48	
8,658.00	4.61	12.14	8,632.54	483.71	-175.04	0.88	-70.40	514.41	340.11	



Company: Jagged Peak Energy
Project: Ward County, Texas (NAD-83)
Site: UTL 2932-17 Unit
Well: #2H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #2H
TVD Reference: RKB= 32' @ 2756.00usft (Nabors X20)
MD Reference: RKB= 32' @ 2756.00usft (Nabors X20)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.14 Single User Db

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	V. Sec (usft)	Closure Distance (usft)	Closure Azimuth (°)
8,754.00	7.80	2.19	8,727.97	493.99	-173.98	3.49	-76.13	523.74	340.60
8,849.00	11.25	2.30	8,821.65	509.70	-173.36	3.63	-83.99	538.38	341.22
8,944.00	11.34	2.03	8,914.81	528.29	-172.66	0.11	-93.28	555.79	341.90
9,039.00	10.15	1.72	9,008.14	545.99	-172.08	1.25	-102.04	572.47	342.51
9,133.00	8.22	3.50	9,100.93	560.98	-171.42	2.08	-109.60	586.59	343.01
9,227.00	6.88	14.40	9,194.12	573.14	-169.61	2.08	-116.87	597.71	343.52
9,322.00	6.97	12.46	9,288.43	584.28	-166.95	0.26	-124.41	607.67	344.05
9,417.00	6.18	9.15	9,382.80	594.96	-164.89	0.92	-131.20	617.39	344.51
9,513.00	5.27	9.07	9,478.32	604.42	-163.38	0.95	-136.95	626.11	344.87
9,608.00	6.13	9.96	9,572.85	613.72	-161.81	0.91	-142.66	634.69	345.23
9,703.00	6.37	10.80	9,667.29	623.89	-159.95	0.27	-149.05	644.07	345.62
9,798.00	5.96	13.48	9,761.74	633.87	-157.81	0.53	-155.59	653.21	346.02
9,893.00	5.14	17.95	9,856.29	642.71	-155.35	0.98	-161.89	661.22	346.41
9,989.00	4.75	20.59	9,951.93	650.52	-152.62	0.47	-167.94	668.19	346.80
10,084.00	5.21	17.22	10,046.57	658.32	-149.96	0.57	-173.92	675.19	347.17
10,179.00	4.48	18.07	10,141.23	665.97	-147.54	0.77	-179.63	682.12	347.51
10,274.00	4.26	39.83	10,235.96	672.21	-144.12	1.75	-185.56	687.49	347.90
10,369.00	4.57	45.05	10,330.68	677.59	-139.19	0.53	-192.44	691.74	348.39
10,465.00	4.42	42.10	10,426.39	683.04	-134.00	0.29	-199.56	696.06	348.90
10,560.00	4.37	40.48	10,521.11	688.51	-129.20	0.14	-206.36	700.53	349.37
10,632.00	4.48	41.66	10,592.89	692.70	-125.55	0.20	-211.54	703.98	349.73
10,743.00	1.47	136.65	10,703.77	694.90	-121.68	4.36	-215.98	705.47	350.07
10,765.00	1.91	157.51	10,725.76	694.36	-121.35	3.41	-216.03	704.88	350.09
10,860.00	4.83	200.69	10,820.60	689.15	-122.16	3.87	-212.89	699.89	349.95
10,954.00	7.52	248.88	10,914.10	683.23	-129.30	5.96	-203.81	695.36	349.28
11,049.00	7.67	254.39	11,008.27	679.28	-141.20	0.78	-191.44	693.80	348.26
11,144.00	13.08	243.48	11,101.69	672.77	-156.94	6.03	-174.48	690.83	346.87



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Well: #2H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #2H
TVD Reference: RKB= 32' @ 2756.00usft (Nabors X20)
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11,239.00	22.35	238.64	11,192.09	658.54	-182.04	9.87	-145.64	683.24	344.55
11,326.00	28.02	240.27	11,270.79	639.78	-213.94	6.57	-108.67	674.60	341.51
11,421.00	39.05	240.14	11,349.86	613.74	-259.41	11.61	-56.31	666.31	337.09
11,516.00	48.43	244.57	11,418.43	583.50	-317.60	10.38	9.27	664.34	331.44
11,611.00	54.92	243.84	11,477.31	551.07	-384.65	6.86	83.71	672.04	325.08
11,706.00	60.08	240.62	11,528.35	513.70	-455.48	6.14	163.79	686.55	318.44
11,800.00	68.37	243.50	11,569.19	474.15	-530.22	9.24	248.35	711.30	311.80
11,894.00	74.45	246.07	11,599.15	436.24	-610.79	6.97	337.31	750.59	305.54
11,988.00	84.76	245.58	11,616.09	398.43	-695.03	10.98	429.46	801.13	299.82
12,082.00	85.35	245.38	11,624.19	359.56	-780.23	0.66	522.96	859.09	294.74
12,145.00	84.98	245.19	11,629.50	333.31	-837.26	0.66	585.65	901.16	291.71
12,264.00	86.14	243.67	11,638.71	282.11	-944.27	1.60	704.20	985.51	286.63
12,359.00	86.76	243.69	11,644.60	240.07	-1,029.26	0.65	798.98	1,056.89	283.13
12,454.00	88.19	243.31	11,648.78	197.72	-1,114.19	1.56	893.87	1,131.60	280.06
12,549.00	88.96	242.70	11,651.14	154.61	-1,198.82	1.03	988.83	1,208.75	277.35
12,644.00	92.23	243.09	11,650.16	111.34	-1,283.37	3.47	1,083.80	1,288.19	274.96
12,740.00	92.56	245.08	11,646.15	69.42	-1,369.63	2.10	1,179.66	1,371.39	272.90
12,835.00	91.79	247.36	11,642.54	31.14	-1,456.50	2.53	1,274.36	1,456.83	271.22
12,930.00	93.20	250.39	11,638.40	-3.06	-1,545.02	3.52	1,368.62	1,545.02	269.89
13,025.00	92.63	253.48	11,633.57	-32.48	-1,635.21	3.30	1,462.13	1,635.53	268.86
13,120.00	92.03	256.02	11,629.71	-57.44	-1,726.78	2.75	1,554.79	1,727.73	268.09
13,216.00	88.54	255.45	11,629.23	-81.09	-1,819.80	3.68	1,648.12	1,821.61	267.45
13,311.00	92.38	257.27	11,628.47	-103.49	-1,912.10	4.47	1,740.23	1,914.90	266.90
13,440.00	93.11	256.47	11,622.29	-132.76	-2,037.58	0.84	1,864.90	2,041.90	266.27
13,536.00	93.11	256.36	11,617.08	-155.27	-2,130.76	0.11	1,957.84	2,136.41	265.83
13,631.00	91.83	255.13	11,612.99	-178.65	-2,222.74	1.87	2,050.13	2,229.91	265.40
13,726.00	91.70	254.66	11,610.06	-203.39	-2,314.42	0.51	2,142.77	2,323.34	264.98



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Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14 Single User Db

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13,821.00	92.21	253.51	11,606.82	-229.42	-2,405.72	1.32	2,235.69	2,416.63	264.55	
13,917.00	90.65	252.02	11,604.43	-257.86	-2,497.37	2.25	2,330.04	2,510.65	264.11	
14,012.00	91.73	251.65	11,602.45	-287.47	-2,587.62	1.20	2,423.69	2,603.54	263.66	
14,107.00	91.68	251.60	11,599.63	-317.40	-2,677.74	0.07	2,517.38	2,696.48	263.24	
14,202.00	90.01	251.36	11,598.22	-347.57	-2,767.80	1.78	2,611.13	2,789.54	262.84	
14,297.00	91.44	252.31	11,597.02	-377.19	-2,858.06	1.81	2,704.79	2,882.84	262.48	
14,392.00	90.08	252.18	11,595.76	-406.15	-2,948.52	1.44	2,798.34	2,976.36	262.16	
14,487.00	89.26	252.55	11,596.31	-434.93	-3,039.06	0.95	2,891.86	3,070.02	261.86	
14,583.00	91.68	252.60	11,595.52	-463.68	-3,130.64	2.52	2,986.29	3,164.79	261.58	
14,678.00	91.97	252.59	11,592.50	-492.08	-3,221.24	0.31	3,079.70	3,258.61	261.31	
14,868.00	89.86	251.82	11,589.46	-550.13	-3,402.12	1.18	3,266.79	3,446.31	260.81	
14,963.00	90.52	252.79	11,589.15	-579.01	-3,492.62	1.23	3,360.33	3,540.29	260.59	
15,058.00	89.81	253.19	11,588.87	-606.80	-3,583.47	0.86	3,453.66	3,634.48	260.39	
15,153.00	89.68	252.11	11,589.30	-635.13	-3,674.14	1.15	3,547.09	3,728.63	260.19	
15,249.00	90.16	253.08	11,589.43	-663.84	-3,765.74	1.13	3,641.53	3,823.81	260.00	
15,344.00	90.36	252.61	11,589.00	-691.87	-3,856.52	0.54	3,734.91	3,918.09	259.83	
15,439.00	89.13	252.36	11,589.42	-720.46	-3,947.11	1.32	3,828.39	4,012.32	259.66	
15,534.00	89.62	252.64	11,590.46	-749.02	-4,037.71	0.59	3,921.86	4,106.59	259.49	
15,629.00	91.79	254.93	11,589.29	-775.54	-4,128.91	3.32	4,014.92	4,201.11	259.36	
15,725.00	89.77	253.59	11,587.98	-801.58	-4,221.29	2.52	4,108.80	4,296.73	259.25	
15,820.00	89.79	252.65	11,588.35	-829.17	-4,312.20	0.99	4,202.09	4,391.19	259.12	
15,915.00	90.19	253.12	11,588.36	-857.12	-4,402.99	0.65	4,295.46	4,485.64	258.98	
16,010.00	89.33	253.14	11,588.76	-884.69	-4,493.90	0.91	4,388.74	4,580.16	258.86	
16,105.00	89.64	253.33	11,589.62	-912.09	-4,584.86	0.38	4,482.00	4,674.70	258.75	
16,200.00	89.59	252.74	11,590.25	-939.81	-4,675.72	0.62	4,575.31	4,769.24	258.64	
16,295.00	90.30	252.56	11,590.35	-968.14	-4,766.40	0.77	4,668.75	4,863.73	258.52	
16,391.00	91.88	253.51	11,588.52	-996.15	-4,858.20	1.92	4,763.03	4,959.28	258.41	



Company: Jagged Peak Energy
Project: Ward County, Texas (NAD-83)
Site: UTL 2932-17 Unit
Well: #2H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #2H
TVD Reference: RKB= 32' @ 2756.00usft (Nabors X20)
MD Reference: RKB= 32' @ 2756.00usft (Nabors X20)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.14 Single User Db

Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	V. Sec (usft)	Closure Distance (usft)	Closure Azimuth (°)	
16,486.00	89.09	251.70	11,587.72	-1,024.54	-4,948.84	3.50	4,856.46	5,053.78	258.30	
16,581.00	89.90	252.26	11,588.55	-1,053.93	-5,039.18	1.04	4,950.09	5,148.21	258.19	
16,676.00	90.85	253.06	11,587.93	-1,082.24	-5,129.86	1.31	5,043.52	5,242.77	258.09	
16,772.00	90.71	252.78	11,586.62	-1,110.44	-5,221.61	0.33	5,137.85	5,338.38	257.99	
16,866.00	89.70	252.32	11,586.29	-1,138.62	-5,311.29	1.18	5,230.33	5,431.96	257.90	
16,961.00	90.36	252.64	11,586.24	-1,167.22	-5,401.88	0.77	5,323.81	5,526.54	257.81	
17,057.00	90.96	252.56	11,585.13	-1,195.93	-5,493.48	0.63	5,418.24	5,622.15	257.72	
17,152.00	90.38	252.44	11,584.02	-1,224.49	-5,584.07	0.62	5,511.71	5,716.75	257.63	
17,247.00	90.36	252.61	11,583.41	-1,253.02	-5,674.69	0.18	5,605.19	5,811.38	257.55	
17,342.00	91.24	252.71	11,582.08	-1,281.33	-5,765.36	0.93	5,698.61	5,906.03	257.47	
17,437.00	90.98	252.88	11,580.24	-1,309.43	-5,856.09	0.33	5,791.98	6,000.70	257.40	
17,533.00	91.68	253.01	11,578.01	-1,337.57	-5,947.85	0.74	5,886.29	6,096.39	257.33	
17,672.00	89.37	252.30	11,576.74	-1,379.01	-6,080.51	1.74	6,022.98	6,234.92	257.22	
17,767.00	90.05	252.93	11,577.22	-1,407.39	-6,171.17	0.98	6,116.43	6,329.62	257.15	
17,862.00	89.97	253.15	11,577.20	-1,435.10	-6,262.04	0.25	6,209.74	6,424.38	257.09	
17,956.00	89.92	253.04	11,577.29	-1,462.44	-6,351.97	0.13	6,302.06	6,518.15	257.03	
18,050.00	90.12	253.33	11,577.26	-1,489.63	-6,441.96	0.37	6,394.35	6,611.94	256.98	
18,145.00	89.86	252.96	11,577.28	-1,517.18	-6,532.87	0.48	6,487.64	6,706.73	256.93	
18,240.00	89.86	252.28	11,577.51	-1,545.55	-6,623.54	0.72	6,581.08	6,801.47	256.87	
18,335.00	90.10	253.21	11,577.54	-1,573.73	-6,714.26	1.01	6,674.49	6,896.22	256.81	
18,429.00	89.95	253.12	11,577.50	-1,600.96	-6,804.23	0.19	6,766.78	6,990.04	256.76	
18,524.00	89.97	252.91	11,577.57	-1,628.71	-6,895.09	0.22	6,860.11	7,084.84	256.71	
18,618.00	89.68	252.96	11,577.86	-1,656.29	-6,984.95	0.31	6,952.47	7,178.63	256.66	
18,712.00	90.01	252.91	11,578.11	-1,683.88	-7,074.81	0.36	7,044.84	7,272.44	256.61	
18,807.00	89.99	252.88	11,578.11	-1,711.82	-7,165.61	0.04	7,138.20	7,367.24	256.56	
18,901.00	89.77	253.15	11,578.31	-1,739.28	-7,255.51	0.37	7,230.55	7,461.06	256.52	
18,996.00	89.75	253.46	11,578.70	-1,766.57	-7,346.50	0.33	7,323.78	7,555.91	256.48	



Company:	Jagged Peak Energy	Local Co-ordinate Reference:	Well #2H
Project:	Ward County, Texas (NAD-83)	TVD Reference:	RKB= 32' @ 2756.00usft (Nabors X20)
Site:	UTL 2932-17 Unit	MD Reference:	RKB= 32' @ 2756.00usft (Nabors X20)
Well:	#2H	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14 Single User Db

Survey									
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	V. Sec (usft)	Closure Distance (usft)	Closure Azimuth (°)
19,091.00	89.86	253.58	11,579.03	-1,793.52	-7,437.60	0.17	7,416.94	7,650.79	256.44
19,186.00	89.57	252.84	11,579.50	-1,820.96	-7,528.55	0.84	7,510.20	7,745.64	256.40
19,281.00	89.07	252.82	11,580.63	-1,849.00	-7,619.30	0.53	7,603.58	7,840.45	256.36
19,376.00	89.70	252.91	11,581.65	-1,876.99	-7,710.08	0.67	7,696.95	7,935.27	256.32
19,469.00	89.22	252.96	11,582.52	-1,904.28	-7,798.98	0.52	7,788.33	8,028.10	256.28
19,565.00	89.77	251.89	11,583.37	-1,933.27	-7,890.50	1.25	7,882.81	8,123.88	256.23
19,660.00	89.73	251.28	11,583.78	-1,963.28	-7,980.63	0.64	7,976.54	8,218.57	256.18
19,755.00	89.13	250.68	11,584.73	-1,994.24	-8,070.44	0.89	8,070.44	8,313.18	256.12
19,850.00	89.59	250.88	11,585.79	-2,025.51	-8,160.14	0.53	8,164.38	8,407.77	256.06
19,944.00	89.51	250.88	11,586.53	-2,056.30	-8,248.95	0.09	8,257.31	8,501.38	256.00
20,039.00	89.33	250.59	11,587.49	-2,087.64	-8,338.63	0.36	8,351.26	8,595.98	255.94
20,134.00	89.24	250.55	11,588.68	-2,119.24	-8,428.21	0.10	8,445.25	8,690.56	255.89
20,229.00	89.86	251.58	11,589.42	-2,150.06	-8,518.06	1.27	8,539.12	8,785.22	255.83
20,324.00	89.62	251.00	11,589.85	-2,180.54	-8,608.04	0.66	8,632.94	8,879.93	255.79
20,419.00	89.70	250.78	11,590.42	-2,211.64	-8,697.80	0.25	8,726.85	8,974.58	255.73
20,514.00	89.64	250.72	11,590.96	-2,242.96	-8,787.49	0.09	8,820.81	9,069.23	255.68
20,610.00	89.81	250.91	11,591.43	-2,274.50	-8,878.16	0.27	8,915.73	9,164.88	255.63
20,705.00	89.64	250.93	11,591.88	-2,305.56	-8,967.94	0.18	9,009.64	9,259.56	255.58
20,800.00	89.51	252.46	11,592.59	-2,335.39	-9,058.13	1.62	9,103.35	9,354.34	255.54
20,895.00	89.20	251.76	11,593.66	-2,364.57	-9,148.53	0.81	9,196.94	9,449.17	255.51
20,990.00	89.55	252.67	11,594.69	-2,393.59	-9,238.98	1.03	9,290.49	9,544.00	255.48
21,086.00	89.29	252.47	11,595.66	-2,422.34	-9,330.57	0.34	9,384.93	9,639.88	255.45
21,181.00	89.04	252.12	11,597.05	-2,451.23	-9,421.06	0.45	9,478.46	9,734.73	255.42
21,276.00	89.86	252.61	11,597.96	-2,480.01	-9,511.59	1.01	9,571.98	9,829.59	255.39
21,371.00	90.52	252.87	11,597.64	-2,508.20	-9,602.31	0.75	9,665.39	9,924.48	255.36
21,466.00	90.71	252.88	11,596.63	-2,536.17	-9,693.09	0.20	9,758.75	10,019.39	255.34
21,562.00	90.74	252.74	11,595.41	-2,564.54	-9,784.80	0.15	9,853.11	10,115.29	255.31



Company: Jagged Peak Energy
Project: Ward County, Texas (NAD-83)
Site: UTL 2932-17 Unit
Well: #2H
Wellbore: OH
Design: OH

Local Co-ordinate Reference: Well #2H
TVD Reference: RKB= 32' @ 2756.00usft (Nabors X20)
MD Reference: RKB= 32' @ 2756.00usft (Nabors X20)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.14 Single User Db

Survey

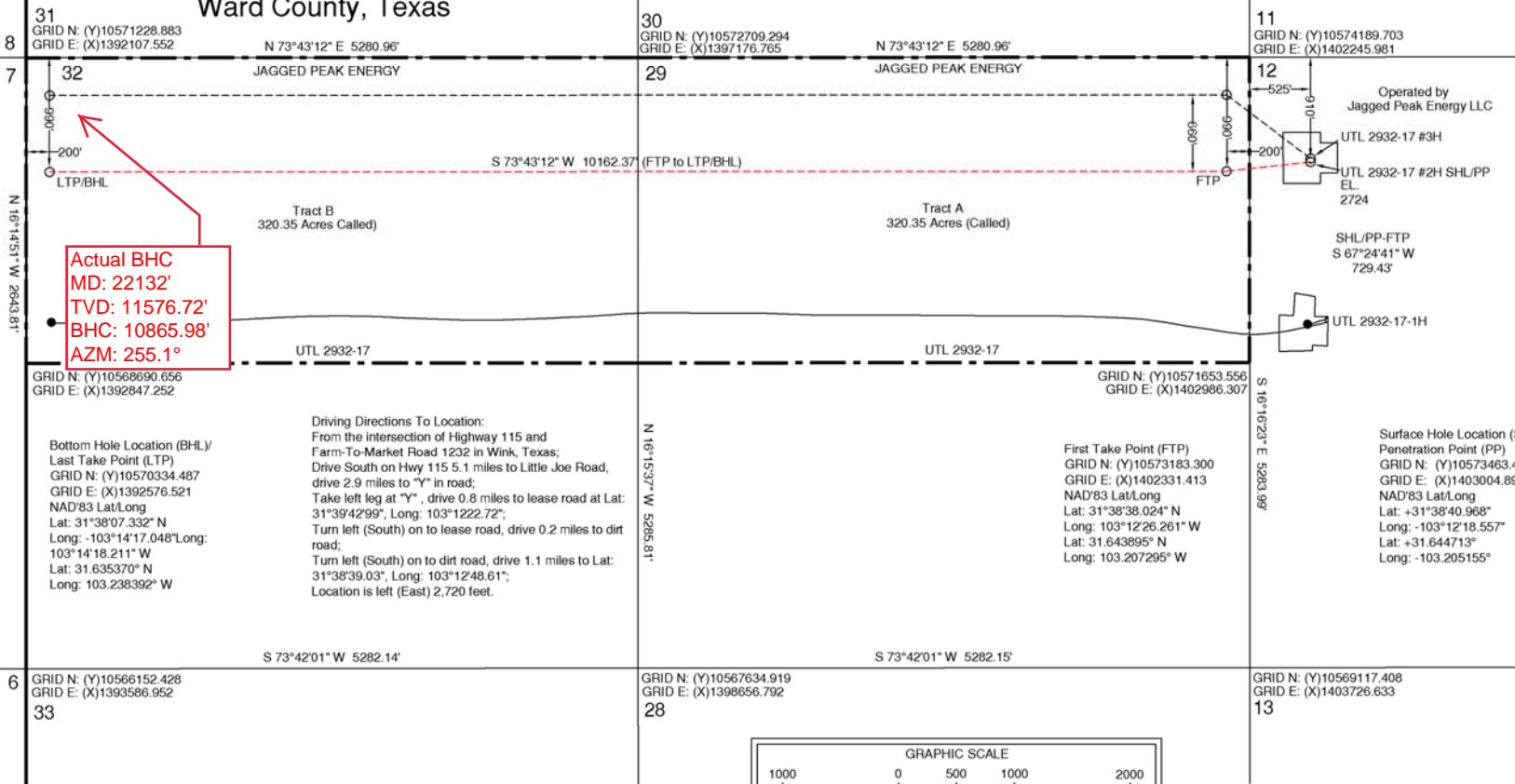
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	V. Sec (usft)	Closure Distance (usft)	Closure Azimuth (°)
21,657.00	90.47	252.66	11,594.41	-2,592.79	-9,875.49	0.30	9,946.53	10,210.19	255.29
21,752.00	91.64	252.94	11,592.66	-2,620.88	-9,966.23	1.27	10,039.90	10,305.08	255.27
21,847.00	91.51	252.89	11,590.05	-2,648.78	-10,057.00	0.15	10,133.22	10,399.97	255.24
21,942.00	91.48	252.79	11,587.57	-2,676.79	-10,147.74	0.11	10,226.57	10,494.85	255.22
22,037.00	91.26	252.23	11,585.30	-2,705.34	-10,238.32	0.63	10,320.02	10,589.72	255.20
22,132.00	91.88	251.22	11,582.69	-2,735.12	-10,328.50	1.25	10,413.68	10,684.51	255.17
Last MWD Survey									
22,314.00	91.88	251.22	11,576.72	-2,793.68	-10,500.71	0.00	10,593.36	10,865.98	255.10
PTB @ 22314'									

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
269.00	268.99	0.27	1.53	First MWD Survey
22,132.00	11,582.69	-2,735.12	-10,328.50	Last MWD Survey
22,314.00	11,576.72	-2,793.68	-10,500.71	PTB @ 22314'

Checked By: _____ Approved By: _____ Date: _____

Block 17, University Lands Survey Ward County, Texas



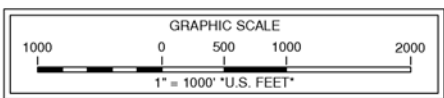
Actual BHC
MD: 22132'
TVD: 11576.72'
BHC: 10865.98'
AZM: 255.1°

Bottom Hole Location (BHL)/
Last Take Point (LTP)
GRID N: (Y)10570334.487
GRID E: (X)1392576.521
NAD'83 Lat/Long
Lat: 31°38'07.332" N
Long: -103°14'17.048" W
103°14'18.211" W
Lat: 31.635370° N
Long: 103.238392° W

Driving Directions To Location:
From the intersection of Highway 115 and
Farm-To-Market Road 1232 in Wink, Texas;
Drive South on Hwy 115 5.1 miles to Little Joe Road,
drive 2.9 miles to "Y" in road;
Take left leg at "Y", drive 0.8 miles to lease road at Lat:
31°39'42.99", Long: 103°1222.72";
Turn left (South) on to lease road, drive 0.2 miles to dirt
road;
Turn left (South) on to dirt road, drive 1.1 miles to Lat:
31°38'39.03", Long: 103°12'48.61";
Location is left (East) 2,720 feet.

First Take Point (FTP)
GRID N: (Y)10573183.300
GRID E: (X)1402331.413
NAD'83 Lat/Long
Lat: 31°38'38.024" N
Long: 103°12'26.261" W
Lat: 31.643895° N
Long: 103.207295° W

Surface Hole Location (SHL)/
Penetration Point (PP)
GRID N: (Y)10573463.483
GRID E: (X)1403004.891
NAD'83 Lat/Long
Lat: +31°38'40.968"
Long: -103°12'18.557"
Lat: +31.644713° N
Long: -103.205155°



Note: Well is located 8.2 miles South-Southwest of the city of Wink, Texas.
Note: Survey Reconstruction filed in the Office of Pennell & Marlowe Land Surveyors, Inc.
Note: Coordinates shown herein are on The Texas Coordinate System of 1983, Central Zone.
Note: Bearings and distances are based on The Texas Coordinate System of 1983, Central Zone.
Note: Example: (S-99999) indicates General Land Office file number.



REGISTERED PROFESSIONAL LAND SURVEYOR NO. 5715
P.O. Box 51887, Midland, Texas 79710 (432) 262-0901 Fax (432) 262-0679 Firm #100201-00

March 7, 2017
170307JR-BLS

Revised: 03/28/2017-KRM
USGS Quadrangle Sheet: Wink South, Tex.
Railroad Commission Permit Plat

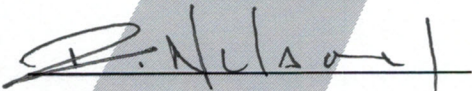
JAGGED PEAK ENERGY
UTL 2932-17#2H
910' FROM NORTH LINE
525' FROM WEST LINE
UTL 2932-17 Lease
640.7 Acres (Called) being the N/2 of
Sections 29 & 32, Block 17
University Lands Survey
Ward County, Texas

Scale: 1" = 1000'

State of Texas

I, Ryan Nelson, an authorized employee of Altitude Energy Partners, Inc.,
have verified the Measurement While Drilling surveys performed on 04/04/2017
through 07/29/2017, from 269 ft. to a depth of 22,314 ft.
I certify that the data is true, correct, complete, and within the limitations of the tool as
set forth by Altitude Energy Partners Inc. This survey was conducted at the request of
Jagged Peak Energy LLC for the UTL 2932-17-2H well in
Ward County, State of Texas.

Sincerely,



Ryan Nelson
Operations Coordinator