

REFERENCE WELLPATH IDENTIFICATION			
Operator	SOUTHWESTERN ENERGY	Slot	Slot 205
Area	Wetzel County, WV	Well	SWN A Wtz 205H
Field	Wetzel	Wellbore	SWN A Wtz 205H AWB
Facility	SWN A Wtz Pad		

REPORT SETUP INFORMATION			
Projection System	NAD83 / UTM Zone 17 North, US feet	Software System	WellArchitect® 5.1
North Reference	Grid	User	Atenjen
Scale	0.999612	Report Generated	6/21/2019 at 3:00:21 PM
Convergence at slot	0.23° East	Database/Source file	WA_MPL_EASTERNUS_Defm/SWN_A_Wtz_205H_AWP_Proj_25772_.xml

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-15.22	130.09	1741814.82	14411376.32	39°40'57.500"N	80°38'22.535"W
Facility Reference Pt			1741684.77	14411391.54	39°40'57.656"N	80°38'24.198"W
Field Reference Pt			0.00	0.00	0°00'00.000"	85°29'19.478"W

WELLPATH DATUM		
Calculation method	Minimum curvature	SDC 46 (KB) to Facility Vertical Datum
Horizontal Reference Pt	Slot	SDC 46 (KB) to Mean Sea Level
Vertical Reference Pt	SDC 46 (KB)	SDC 46 (KB) to Ground Level at Slot (Slot 205)
MD Reference Pt	SDC 46 (KB)	Section Origin
Field Vertical Reference	Mean Sea Level	Section Azimuth
		1368.10ft
		1368.10ft
		26.00ft
		N 0.00, E 0.00 ft
		315.19°



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WELLPATH DATA (289 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS ["/100ft]	Build Rate ["/100ft]	Turn Rate ["/100ft]
0.00H	0.000	106.330	0.00	0.00	0.00	0.00	1741814.82	14411376.32	39°40'57.500"N	80°38'22.535"W	0.00	0.000	0.00	0.00	0.00
26.00	0.000	106.330	26.00	0.00	0.00	0.00	1741814.82	14411376.32	39°40'57.500"N	80°38'22.535"W	0.00	0.000	0.00	0.00	0.00
50.00	0.250	106.330	50.00	-0.05	-0.01	0.05	1741814.87	14411376.30	39°40'57.500"N	80°38'22.534"W	0.05	106.330	1.04	1.04	443.04
100.00	0.220	343.980	100.00	-0.06	0.05	0.13	1741814.95	14411376.37	39°40'57.501"N	80°38'22.533"W	0.14	69.951	0.82	-0.06	-244.70
150.00	0.190	265.360	150.00	0.08	0.13	0.02	1741814.84	14411376.45	39°40'57.502"N	80°38'22.535"W	0.13	8.298	0.52	-0.06	-157.24
200.00	0.130	169.270	200.00	0.09	0.07	-0.05	1741814.77	14411376.39	39°40'57.501"N	80°38'22.535"W	0.09	322.994	0.48	-0.12	-192.18
250.00	0.030	251.080	250.00	0.05	0.01	-0.05	1741814.76	14411376.33	39°40'57.501"N	80°38'22.535"W	0.06	280.401	0.26	-0.20	163.62
300.00	0.220	342.190	300.00	0.14	0.10	-0.10	1741814.72	14411376.42	39°40'57.501"N	80°38'22.536"W	0.14	315.250	0.45	0.38	182.22
350.00	0.240	50.900	350.00	0.21	0.25	-0.04	1741814.77	14411376.57	39°40'57.503"N	80°38'22.535"W	0.26	350.105	0.52	0.04	137.42
394.00	0.200	45.140	394.00	0.20	0.37	0.08	1741814.90	14411376.69	39°40'57.504"N	80°38'22.534"W	0.38	12.530	0.10	-0.09	-13.09
529.00	0.360	80.340	529.00	-0.04	0.60	0.67	1741815.48	14411376.92	39°40'57.506"N	80°38'22.526"W	0.90	47.811	0.17	0.12	26.07
574.00	0.440	78.640	574.00	-0.22	0.66	0.98	1741815.79	14411376.98	39°40'57.507"N	80°38'22.522"W	1.18	55.835	0.18	0.18	-3.78
619.00	0.330	40.390	619.99	-0.30	0.79	1.23	1741816.05	14411377.11	39°40'57.508"N	80°38'22.519"W	1.46	57.106	0.61	-0.24	-85.00
710.00	0.560	43.440	709.99	-0.27	1.32	1.70	1741816.52	14411377.64	39°40'57.513"N	80°38'22.513"W	2.15	52.301	0.25	0.25	3.35
800.00	1.010	68.810	799.98	-0.57	1.92	2.75	1741817.56	14411378.24	39°40'57.519"N	80°38'22.500"W	3.35	54.996	0.62	0.50	28.19
889.00	1.050	53.140	888.97	-1.00	2.70	4.13	1741818.95	14411379.01	39°40'57.527"N	80°38'22.482"W	4.93	56.865	0.32	0.04	-17.61
979.00	2.690	53.700	978.92	-1.42	4.44	6.49	1741821.31	14411380.76	39°40'57.544"N	80°38'22.452"W	7.87	55.625	1.82	1.82	0.62
1071.00	5.200	52.170	1070.69	-2.25	8.28	11.53	1741826.34	14411384.59	39°40'57.582"N	80°38'22.387"W	14.19	54.318	2.73	2.73	-1.66
1160.00	6.780	54.880	1159.20	-3.63	13.77	19.01	1741833.82	14411390.09	39°40'57.636"N	80°38'22.291"W	23.47	54.075	1.80	1.78	3.04
1251.00	7.920	52.550	1249.46	-5.33	20.68	28.38	1741843.19	14411396.99	39°40'57.704"N	80°38'22.171"W	35.11	53.926	1.29	1.25	-2.56
1341.00	9.120	53.970	1338.46	-7.22	28.64	39.07	1741853.87	14411404.95	39°40'57.782"N	80°38'22.034"W	48.45	53.756	1.35	1.33	1.58
1432.00	9.390	54.250	1428.28	-9.49	37.22	50.93	1741865.73	14411413.53	39°40'57.866"N	80°38'21.881"W	63.08	53.839	0.30	0.30	0.31
1522.00	8.450	58.190	1517.19	-12.13	45.00	62.51	1741877.30	14411421.30	39°40'57.943"N	80°38'21.733"W	77.02	54.251	1.25	-1.04	4.38
1612.00	7.450	62.010	1606.32	-15.31	51.22	73.28	1741888.07	14411427.52	39°40'58.004"N	80°38'21.595"W	89.41	55.047	1.26	-1.11	4.24
1703.00	6.490	65.010	1696.65	-18.76	56.16	83.15	1741897.94	14411432.46	39°40'58.052"N	80°38'21.468"W	100.34	55.964	1.13	-1.05	3.30
1792.00	5.190	64.380	1785.18	-21.79	60.03	91.34	1741906.12	14411436.32	39°40'58.090"N	80°38'21.363"W	109.30	56.687	1.46	-1.46	-0.71
1883.00	4.530	55.220	1875.86	-23.76	63.86	98.00	1741912.78	14411440.15	39°40'58.128"N	80°38'21.278"W	116.97	56.912	1.12	-0.73	-10.07
1973.00	4.190	54.020	1965.60	-24.89	67.82	103.58	1741918.36	14411444.11	39°40'58.167"N	80°38'21.206"W	123.81	56.787	0.39	-0.38	-1.33
2063.00	3.530	51.170	2055.39	-25.68	71.49	108.40	1741923.18	14411447.78	39°40'58.203"N	80°38'21.145"W	129.85	56.597	0.76	-0.73	-3.17
2154.00	3.950	47.490	2146.20	-26.10	75.36	112.89	1741927.67	14411451.65	39°40'58.241"N	80°38'21.087"W	135.74	56.276	0.53	0.46	-4.04

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WELLPATH DATA (289 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]
2245.00	3.490	45.570	2237.01	-26.24	79.42	117.18	1741931.95	14411455.71	39°40'58.281"N	80°38'21.032"W	141.56	55.874	0.52	-0.51	-2.11
2335.00	3.650	55.380	2326.83	-26.77	82.96	121.50	1741936.27	14411459.25	39°40'58.315"N	80°38'20.977"W	147.12	55.673	0.70	0.18	10.90
2426.00	3.600	60.240	2417.65	-28.02	86.03	126.36	1741941.13	14411462.31	39°40'58.346"N	80°38'20.914"W	152.86	55.753	0.34	-0.05	5.34
2516.00	3.450	57.720	2507.48	-29.34	88.87	131.10	1741945.87	14411465.16	39°40'58.374"N	80°38'20.853"W	158.39	55.966	0.24	-0.17	-2.80
2607.00	3.290	51.110	2598.32	-30.21	91.98	135.45	1741950.21	14411468.26	39°40'58.404"N	80°38'20.798"W	163.73	55.822	0.46	-0.18	-7.26
2697.00	2.950	50.640	2688.19	-30.69	95.07	139.25	1741954.01	14411471.35	39°40'58.434"N	80°38'20.749"W	168.61	55.679	0.38	-0.38	-0.52
2787.00	2.180	37.730	2778.10	-30.69	97.89	142.09	1741958.85	14411474.17	39°40'58.462"N	80°38'20.712"W	172.54	55.436	1.06	-0.86	-14.34
2885.00	2.160	24.710	2876.03	-29.80	101.04	144.00	1741958.76	14411477.32	39°40'58.493"N	80°38'20.688"W	175.91	54.944	0.50	-0.02	-13.29
2975.00	4.960	41.430	2965.85	-28.95	105.50	147.29	1741962.05	14411481.78	39°40'58.537"N	80°38'20.646"W	181.17	54.386	3.29	3.11	18.58
3066.00	8.060	42.690	3056.25	-28.42	113.14	154.22	1741968.97	14411489.42	39°40'58.612"N	80°38'20.556"W	191.27	53.734	3.41	3.41	1.38
3156.00	10.240	47.980	3145.10	-28.53	123.13	164.44	1741979.19	14411499.41	39°40'58.711"N	80°38'20.425"W	205.43	53.173	2.59	2.42	5.88
3247.00	11.400	56.590	3234.49	-30.70	133.50	177.96	1741992.70	14411509.77	39°40'58.813"N	80°38'20.252"W	222.47	53.123	2.18	1.27	9.46
3337.00	12.540	64.850	3322.54	-35.75	142.55	194.23	1742008.97	14411518.82	39°40'58.902"N	80°38'20.043"W	240.93	53.723	2.28	1.27	9.18
3427.00	13.500	71.820	3410.23	-43.75	149.98	213.05	1742027.79	14411526.24	39°40'58.974"N	80°38'19.802"W	260.55	54.856	2.04	1.07	7.74
3518.00	13.920	79.290	3498.64	-54.64	155.33	233.90	1742048.63	14411531.59	39°40'59.026"N	80°38'19.535"W	280.78	56.412	2.00	0.46	8.21
3608.00	13.750	78.290	3586.03	-66.55	159.51	255.01	1742069.73	14411535.77	39°40'59.067"N	80°38'19.265"W	300.79	57.973	0.33	-0.19	-1.11
3698.00	13.600	75.820	3673.48	-77.79	164.28	275.74	1742090.45	14411540.53	39°40'59.113"N	80°38'18.999"W	320.97	59.215	0.67	-0.17	-2.74
3789.00	13.260	72.750	3761.99	-88.07	169.99	296.08	1742110.79	14411546.25	39°40'59.169"N	80°38'18.739"W	341.41	60.138	0.87	-0.37	-3.37
3879.00	14.460	76.540	3849.37	-98.69	175.67	316.87	1742131.57	14411551.92	39°40'59.224"N	80°38'18.473"W	362.31	60.996	1.67	1.33	4.21
3969.00	14.500	74.590	3936.52	-110.07	181.28	338.66	1742153.35	14411557.53	39°40'59.278"N	80°38'18.194"W	384.13	61.841	0.54	0.04	-2.17
4060.00	15.520	79.170	4024.41	-122.46	186.59	361.60	1742176.28	14411562.84	39°40'59.330"N	80°38'17.900"W	406.91	62.705	1.72	1.12	5.03
4150.00	15.500	77.330	4111.14	-135.59	191.49	385.16	1742199.83	14411567.74	39°40'59.378"N	80°38'17.598"W	430.14	63.564	0.55	-0.02	-2.04
4241.00	15.360	73.850	4198.86	-147.84	197.51	408.60	1742223.26	14411573.76	39°40'59.436"N	80°38'17.298"W	453.84	64.201	1.03	-0.15	-3.82
4331.00	14.990	79.450	4285.72	-160.11	202.96	431.50	1742246.15	14411579.20	39°40'59.489"N	80°38'17.005"W	476.85	64.809	1.68	-0.41	6.22
4422.00	14.760	77.960	4373.68	-173.01	207.53	454.40	1742269.04	14411583.77	39°40'59.533"N	80°38'16.712"W	499.55	65.453	0.49	-0.25	-1.64
4512.00	14.320	74.510	4460.79	-184.67	212.90	476.34	1742290.97	14411589.13	39°40'59.585"N	80°38'16.431"W	521.75	65.918	1.08	-0.49	-3.83
4603.00	15.400	75.910	4548.75	-196.35	218.85	498.91	1742313.53	14411595.08	39°40'59.643"N	80°38'16.142"W	544.79	66.315	1.25	1.19	1.54
4693.00	14.650	72.900	4635.67	-207.75	225.10	521.38	1742335.99	14411601.33	39°40'59.704"N	80°38'15.855"W	567.89	66.648	1.20	-0.83	-3.34
4784.00	15.840	74.270	4723.47	-219.13	231.85	544.33	1742358.94	14411608.08	39°40'59.770"N	80°38'15.561"W	591.65	66.929	1.37	1.31	1.51
4874.00	17.060	79.620	4809.79	-232.57	237.56	569.14	1742383.74	14411613.79	39°40'59.826"N	80°38'15.243"W	616.73	67.344	2.16	1.36	5.94



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4965.00	16.330	77.330	4896.95	-246.92	242.77	594.75	1742409.34	14411619.00	39°40'59.876"N	80°38'14.915"W	642.39	67.995	1.08	-0.80	-2.52
5055.00	15.520	73.920	4983.50	-259.44	248.88	618.67	1742433.25	14411625.11	39°40'59.935"N	80°38'14.609"W	666.85	68.086	1.37	-0.90	-3.79
5146.00	15.290	79.200	5071.24	-272.01	254.50	642.15	1742456.72	14411630.72	39°40'59.990"N	80°38'14.308"W	690.75	68.380	1.56	-0.25	5.80
5236.00	14.640	78.030	5158.18	-284.81	259.09	664.94	1742479.50	14411635.30	39°41'00.034"N	80°38'14.017"W	713.63	68.712	0.80	-0.72	-1.30
5327.00	13.750	75.030	5246.41	-296.43	264.27	686.64	1742501.19	14411640.48	39°41'00.085"N	80°38'13.739"W	735.73	68.950	1.27	-0.98	-3.30
5417.00	14.820	77.110	5333.62	-307.84	269.60	708.19	1742522.73	14411645.81	39°41'00.137"N	80°38'13.463"W	757.77	69.159	1.32	1.19	2.31
5508.00	14.510	75.740	5421.66	-319.79	275.00	730.58	1742545.12	14411651.21	39°41'00.189"N	80°38'13.176"W	780.63	69.373	0.51	-0.34	-1.51
5598.00	15.500	76.480	5508.59	-331.76	280.59	753.20	1742567.73	14411656.80	39°41'00.243"N	80°38'12.886"W	803.77	69.568	1.12	1.10	0.82
5643.00	15.540	76.070	5551.95	-337.98	283.45	764.90	1742579.42	14411659.65	39°41'00.271"N	80°38'12.737"W	815.73	69.667	0.26	0.09	-0.91
5733.00	15.350	72.290	5638.70	-349.59	289.97	787.95	1742602.46	14411666.18	39°41'00.335"N	80°38'12.442"W	839.61	69.796	1.14	-0.21	-4.20
5823.00	15.580	72.210	5725.44	-360.51	297.29	810.81	1742625.31	14411673.49	39°41'00.406"N	80°38'12.149"W	863.59	69.864	0.26	0.26	-0.09
5914.00	14.530	73.290	5813.32	-371.44	304.30	833.38	1742647.87	14411680.51	39°41'00.475"N	80°38'11.860"W	887.20	69.941	1.19	-1.15	1.19
6004.00	14.930	78.360	5900.36	-383.10	309.89	855.55	1742670.03	14411686.09	39°41'00.529"N	80°38'11.576"W	909.94	70.089	1.50	0.44	5.63
6095.00	14.210	79.810	5988.43	-395.86	314.23	878.02	1742692.50	14411690.43	39°41'00.571"N	80°38'11.288"W	932.56	70.308	0.89	-0.79	1.59
6185.00	13.310	77.700	6075.85	-407.71	318.39	899.02	1742713.48	14411694.59	39°41'00.611"N	80°38'11.019"W	953.73	70.498	1.14	-1.00	-2.34
6275.00	13.300	74.360	6163.44	-418.32	323.39	919.11	1742733.57	14411699.58	39°41'00.660"N	80°38'10.762"W	974.34	70.615	0.85	-0.01	-3.71
6364.00	12.940	74.940	6250.11	-428.25	328.74	938.59	1742753.04	14411704.93	39°41'00.712"N	80°38'10.513"W	994.49	70.697	0.43	-0.40	0.65
6455.00	13.200	74.960	6338.76	-438.47	334.08	958.46	1742772.90	14411710.27	39°41'00.764"N	80°38'10.258"W	1015.02	70.783	0.29	0.29	0.02
6545.00	13.250	74.950	6426.37	-448.69	339.43	978.34	1742792.78	14411715.62	39°41'00.816"N	80°38'10.004"W	1035.55	70.866	0.06	0.06	-0.01
6635.00	13.190	73.690	6513.98	-458.71	344.99	998.16	1742812.59	14411721.17	39°41'00.870"N	80°38'09.750"W	1056.10	70.934	0.33	-0.07	-1.40
6726.00	13.430	68.100	6602.54	-467.78	351.85	1017.93	1742832.35	14411728.03	39°41'00.937"N	80°38'09.497"W	1077.02	70.932	1.44	0.26	-6.14
6816.00	13.460	41.080	6690.16	-471.10	363.65	1034.53	1742848.94	14411739.83	39°41'01.053"N	80°38'09.284"W	1096.58	70.633	6.92	0.03	-30.02
6907.00	13.540	16.570	6778.72	-465.23	381.86	1044.53	1742868.94	14411758.03	39°41'01.233"N	80°38'09.155"W	1112.14	69.919	6.24	0.09	-26.93
6997.00	14.550	337.540	6866.22	-449.70	402.45	1043.21	1742887.63	14411778.62	39°41'01.436"N	80°38'09.171"W	1118.15	68.904	10.39	1.12	-43.37
7087.00	20.450	322.190	6952.06	-423.60	425.35	1029.24	1742843.65	14411801.51	39°41'01.663"N	80°38'09.348"W	1113.67	67.546	8.27	6.56	-17.06
7177.00	26.590	318.840	7034.55	-387.85	452.97	1006.32	1742820.74	14411829.11	39°41'01.937"N	80°38'09.640"W	1103.57	65.766	6.98	6.82	-3.72
7268.00	32.330	314.400	7113.76	-343.16	485.36	975.50	1742789.94	14411861.49	39°41'02.258"N	80°38'10.032"W	1089.57	63.548	6.74	6.31	-4.88
7358.00	43.000	310.350	7184.91	-288.35	522.18	934.79	1742749.25	14411898.29	39°41'02.624"N	80°38'10.551"W	1070.75	60.812	12.16	11.86	-4.50
7448.00	53.050	311.960	7245.03	-221.69	566.21	884.53	1742699.00	14411942.31	39°41'03.061"N	80°38'11.192"W	1050.23	57.376	11.24	11.17	1.79
7539.00	63.090	313.150	7293.10	-144.64	618.40	827.74	1742642.24	14411994.48	39°41'03.579"N	80°38'11.915"W	1033.24	53.237	11.09	11.03	1.31

Actual Wellpath Report

SWN A WTZ 205H AWP Proj: 25772



REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot 205
Area	Wetzel County, WV	Well	SWN A WTZ 205H
Field	Wetzel	Wellbore	SWN A WTZ 205H AWB
Facility	SWN A WTZ Pad		

WELLPATH DATA (289 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]
7629.00	70.910	312.930	7328.24	-61.91	674.90	767.24	1742581.76	14412050.95	39°41'04.140"N	80°38'12.686"W	1021.83	48.664	8.69	8.69	-0.24
7719.00	76.870	310.920	7353.20	24.37	732.62	702.92	1742517.47	14412108.66	39°41'04.713"N	80°38'13.506"W	1015.30	43.815	6.96	6.62	-2.23
7809.00	84.850	311.370	7367.49	112.93	791.04	636.07	1742450.64	14412167.06	39°41'05.293"N	80°38'14.368"W	1015.05	38.802	8.88	8.87	0.50
7900.00	90.740	310.340	7370.99	203.56	850.50	567.32	1742381.92	14412226.49	39°41'05.883"N	80°38'15.235"W	1022.35	33.705	6.57	6.47	-1.13
7990.00	90.990	307.750	7369.63	293.03	907.18	497.43	1742312.06	14412283.15	39°41'06.446"N	80°38'16.126"W	1034.61	28.737	2.89	0.28	-2.88
8081.00	90.890	306.980	7368.13	383.17	962.40	425.12	1742239.77	14412338.35	39°41'06.995"N	80°38'17.048"W	1052.11	23.832	0.85	-0.11	-0.85
8171.00	90.920	307.950	7366.71	472.34	1017.14	353.69	1742168.37	14412393.06	39°41'07.538"N	80°38'17.968"W	1076.88	19.174	1.08	0.03	1.08
8261.00	90.890	310.280	7365.29	561.82	1073.91	283.88	1742098.59	14412449.81	39°41'08.102"N	80°38'18.849"W	1110.79	14.807	2.59	-0.03	2.59
8352.00	90.990	311.710	7363.80	652.56	1133.59	215.21	1742029.94	14412509.47	39°41'08.695"N	80°38'19.724"W	1153.84	10.749	1.58	0.11	1.57
8442.00	91.880	313.370	7361.54	742.43	1194.42	148.92	1741963.68	14412570.27	39°41'09.299"N	80°38'20.569"W	1203.67	7.107	2.09	0.99	1.84
8533.00	92.090	313.250	7358.39	833.33	1256.80	82.74	1741897.53	14412632.63	39°41'09.918"N	80°38'21.412"W	1259.52	3.767	0.27	0.23	-0.13
8623.00	92.120	313.070	7355.09	923.21	1318.33	17.13	1741831.95	14412694.13	39°41'10.528"N	80°38'22.248"W	1318.44	0.745	0.20	0.03	-0.20
8714.00	91.970	313.080	7351.84	1014.09	1380.43	-49.30	1741765.54	14412756.22	39°41'11.145"N	80°38'23.094"W	1381.31	357.955	0.17	-0.16	0.01
8804.00	92.430	313.300	7348.38	1103.97	1441.99	-114.87	1741700.00	14412817.74	39°41'11.756"N	80°38'23.930"W	1446.55	355.446	0.57	0.51	0.24
8895.00	92.490	313.700	7344.48	1194.84	1504.57	-180.81	1741634.08	14412880.30	39°41'12.377"N	80°38'24.770"W	1515.40	353.147	0.44	0.07	0.44
8986.00	92.430	313.470	7340.57	1285.72	1567.25	-246.67	1741568.25	14412942.96	39°41'12.999"N	80°38'25.609"W	1586.54	351.056	0.26	-0.07	-0.25
9076.00	92.460	313.160	7336.73	1375.59	1628.93	-312.09	1741502.85	14413004.62	39°41'13.611"N	80°38'26.443"W	1658.56	349.154	0.35	0.03	-0.34
9167.00	92.370	312.570	7332.90	1466.44	1690.78	-378.73	1741436.23	14413066.44	39°41'14.225"N	80°38'27.292"W	1732.68	347.374	0.66	-0.10	-0.65
9257.00	92.430	311.790	7329.13	1556.23	1751.16	-445.37	1741369.63	14413126.80	39°41'14.824"N	80°38'28.142"W	1806.91	345.731	0.87	0.07	-0.87
9348.00	92.430	311.560	7325.27	1646.98	1811.61	-513.28	1741301.74	14413187.23	39°41'15.425"N	80°38'29.007"W	1882.92	344.181	0.25	0.00	-0.25
9438.00	92.400	311.240	7321.48	1736.70	1871.08	-580.73	1741234.32	14413246.67	39°41'16.015"N	80°38'29.867"W	1959.13	342.757	0.36	-0.03	-0.36
9528.00	92.090	310.960	7317.95	1826.41	1930.20	-648.49	1741166.58	14413305.76	39°41'16.602"N	80°38'30.731"W	2036.22	341.429	0.46	-0.34	-0.31
9618.00	92.120	310.590	7314.65	1916.08	1988.94	-716.60	1741098.49	14413364.48	39°41'17.185"N	80°38'31.599"W	2114.09	340.186	0.41	0.03	-0.41
9709.00	92.120	310.750	7311.28	2006.73	2048.20	-785.58	1741029.55	14413423.72	39°41'17.773"N	80°38'32.478"W	2193.68	339.016	0.18	0.00	0.18
9799.00	92.370	311.120	7307.75	2096.42	2107.12	-853.52	1740961.64	14413482.62	39°41'18.358"N	80°38'33.344"W	2273.42	337.949	0.50	0.28	0.41
9889.00	92.190	311.160	7304.17	2186.12	2166.29	-921.24	1740893.94	14413541.76	39°41'18.946"N	80°38'34.208"W	2354.04	336.962	0.20	-0.20	0.04
9979.00	92.090	310.580	7300.81	2275.80	2225.14	-989.25	1740825.95	14413600.59	39°41'19.530"N	80°38'35.075"W	2435.13	336.031	0.65	-0.11	-0.64
10070.00	92.090	310.550	7297.49	2366.44	2284.28	-1058.34	1740756.90	14413659.70	39°41'20.117"N	80°38'35.955"W	2517.54	335.141	0.03	0.00	-0.03
10160.00	91.970	311.210	7294.31	2456.13	2343.14	-1126.34	1740688.92	14413718.55	39°41'20.702"N	80°38'36.822"W	2599.80	334.327	0.74	-0.13	0.73
10250.00	92.120	311.520	7291.10	2545.87	2402.58	-1193.84	1740621.44	14413777.96	39°41'21.292"N	80°38'37.683"W	2682.84	333.577	0.38	0.17	0.34



REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot 205
Area	Wetzel County, WV	Well	SWN A WTZ 205H
Field	Wetzel	Wellbore	SWN A WTZ 205H AWB
Facility	SWN A WTZ Pad		

WELLPATH DATA (289 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]
10341.00	92.090	311.960	7287.75	2636.65	2463.12	-1261.70	1740553.61	14413838.48	39°41'21.893"N	80°38'38.548"W	2767.46	332.877	0.48	-0.03	0.48
10431.00	92.310	313.100	7284.30	2726.48	2523.91	-1327.97	1740487.36	14413899.25	39°41'22.496"N	80°38'39.392"W	2851.96	332.249	1.29	0.24	1.27
10521.00	92.090	313.370	7280.84	2816.36	2585.52	-1393.49	1740421.87	14413960.83	39°41'23.107"N	80°38'40.227"W	2937.13	331.677	0.39	-0.24	0.30
10611.00	91.850	313.550	7277.75	2906.27	2647.39	-1458.78	1740356.61	14414022.67	39°41'23.721"N	80°38'41.059"W	3022.70	331.144	0.33	-0.27	0.20
10701.00	92.120	313.370	7274.63	2996.18	2709.26	-1524.07	1740291.34	14414084.52	39°41'24.335"N	80°38'41.891"W	3108.51	330.640	0.36	0.30	-0.20
10792.00	92.030	313.410	7271.34	3087.07	2771.73	-1590.15	1740225.28	14414146.97	39°41'24.955"N	80°38'42.734"W	3195.48	330.157	0.11	-0.10	0.04
10882.00	92.090	313.710	7268.10	3176.98	2833.71	-1655.33	1740160.13	14414208.92	39°41'25.571"N	80°38'43.564"W	3281.77	329.708	0.34	0.07	0.33
10973.00	92.120	313.560	7264.76	3267.88	2896.46	-1721.15	1740094.34	14414271.65	39°41'26.193"N	80°38'44.403"W	3369.25	329.280	0.17	0.03	-0.16
11063.00	91.570	313.550	7261.86	3357.80	2958.44	-1786.34	1740029.18	14414333.61	39°41'26.808"N	80°38'45.234"W	3455.92	328.876	0.61	-0.61	-0.01
11154.00	91.570	313.030	7259.37	3448.71	3020.82	-1852.55	1739962.99	14414395.96	39°41'27.427"N	80°38'46.078"W	3543.63	328.481	0.57	0.00	-0.57
11244.00	91.540	312.900	7256.93	3538.61	3082.14	-1918.39	1739897.18	14414457.25	39°41'28.036"N	80°38'46.917"W	3630.39	328.101	0.15	-0.03	-0.14
11334.00	91.140	312.470	7254.82	3628.50	3143.14	-1984.53	1739831.07	14414518.23	39°41'28.641"N	80°38'47.760"W	3717.21	327.732	0.65	-0.44	-0.48
11424.00	91.020	312.630	7253.12	3718.39	3203.99	-2050.82	1739764.80	14414579.06	39°41'29.245"N	80°38'48.605"W	3804.13	327.377	0.22	-0.13	0.18
11515.00	90.980	311.750	7251.54	3809.25	3265.09	-2118.23	1739697.42	14414640.14	39°41'29.852"N	80°38'49.464"W	3892.01	327.026	0.97	-0.04	-0.97
11605.00	91.230	311.640	7249.80	3899.07	3324.94	-2185.42	1739630.25	14414699.97	39°41'30.446"N	80°38'50.320"W	3978.86	326.684	0.30	0.28	-0.12
11695.00	90.980	311.200	7248.07	3988.85	3384.47	-2252.90	1739562.80	14414759.47	39°41'31.037"N	80°38'51.180"W	4065.74	326.350	0.56	-0.28	-0.49
11786.00	90.680	311.250	7246.75	4079.63	3444.44	-2321.33	1739494.39	14414819.41	39°41'31.632"N	80°38'52.053"W	4153.64	326.023	0.33	-0.33	0.05
11876.00	90.740	310.870	7245.63	4169.39	3503.55	-2389.19	1739426.56	14414878.50	39°41'32.219"N	80°38'52.918"W	4240.65	325.709	0.43	0.07	-0.42
11967.00	90.770	311.350	7244.43	4260.15	3563.38	-2457.75	1739358.03	14414938.31	39°41'32.813"N	80°38'53.792"W	4328.76	325.405	0.53	0.03	0.53
12057.00	90.710	312.450	7243.27	4349.99	3623.48	-2524.73	1739291.08	14414998.38	39°41'33.409"N	80°38'54.646"W	4416.32	325.132	1.22	-0.07	1.22
12147.00	90.770	312.420	7242.11	4439.88	3684.20	-2591.15	1739224.68	14415059.08	39°41'34.012"N	80°38'55.492"W	4504.15	324.881	0.07	0.07	-0.03
12238.00	90.890	312.400	7240.79	4530.76	3745.57	-2658.33	1739157.53	14415120.43	39°41'34.621"N	80°38'56.349"W	4593.04	324.636	0.13	0.13	-0.02
12328.00	91.020	313.450	7239.29	4620.68	3806.85	-2724.22	1739091.66	14415181.69	39°41'35.229"N	80°38'57.189"W	4681.18	324.412	1.18	0.14	1.17
12418.00	90.770	312.320	7237.88	4710.59	3868.09	-2790.16	1739025.75	14415242.90	39°41'35.837"N	80°38'58.029"W	4769.39	324.196	1.29	-0.28	-1.26
12509.00	90.710	312.520	7236.71	4801.48	3928.47	-2857.33	1738958.61	14415304.26	39°41'36.446"N	80°38'58.885"W	4858.50	323.977	0.23	-0.07	0.22
12599.00	90.770	312.510	7235.55	4891.37	3990.29	-2923.66	1738892.30	14415365.05	39°41'37.050"N	80°38'59.731"W	4946.73	323.770	0.07	0.07	-0.01
12690.00	90.740	312.240	7234.35	4982.26	4051.61	-2990.88	1738825.10	14415426.35	39°41'37.659"N	80°39'00.588"W	5035.96	323.565	0.30	-0.03	-0.30
12780.00	90.740	312.360	7233.18	5072.13	4112.18	-3057.44	1738758.57	14415486.89	39°41'38.260"N	80°39'01.436"W	5124.25	323.369	0.13	0.00	0.13
12871.00	90.830	312.450	7231.94	5163.02	4173.54	-3124.63	1738691.41	14415548.23	39°41'38.869"N	80°39'02.293"W	5213.61	323.179	0.14	0.10	0.10
12961.00	90.710	312.140	7230.73	5252.89	4234.10	-3191.20	1738624.87	14415608.77	39°41'39.470"N	80°39'03.141"W	5302.01	322.995	0.37	-0.13	-0.34

REFERENCE WELLPATH IDENTIFICATION

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Facility	SWN A WTZ Pad		

WELLPATH DATA (289 stations)

MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
13052.00	90.770	312.440	7229.55	5343.77	4295.33	-3258.51	1738557.58	14415669.97	39°41'40.07"N	80°39'03.999"W	5391.45	322.815	0.34	0.07	0.33
13142.00	91.020	313.260	7228.15	5433.68	4356.53	-3324.48	1738491.63	14415731.15	39°41'40.685"N	80°39'04.840"W	5480.10	322.653	0.95	0.28	0.91
13232.00	90.800	312.890	7226.72	5523.61	4417.98	-3390.21	1738425.93	14415792.58	39°41'41.295"N	80°39'05.678"W	5568.85	322.499	0.48	-0.24	-0.41
13322.00	90.800	312.290	7225.46	5613.51	4478.89	-3456.47	1738359.70	14415853.46	39°41'41.899"N	80°39'06.523"W	5657.52	322.342	0.67	0.00	-0.67
13413.00	90.890	311.640	7224.12	5704.35	4539.73	-3524.12	1738292.07	14415914.28	39°41'42.503"N	80°39'07.385"W	5747.05	322.178	0.72	0.10	-0.71
13503.00	90.890	311.610	7222.72	5794.17	4599.50	-3591.39	1738224.83	14415974.03	39°41'43.096"N	80°39'08.243"W	5835.54	322.017	0.03	0.00	-0.03
13594.00	90.770	311.290	7221.40	5884.97	4659.74	-3659.59	1738156.66	14416034.24	39°41'43.694"N	80°39'09.112"W	5925.01	321.855	0.38	-0.13	-0.35
13684.00	90.800	310.140	7220.17	5974.68	4718.44	-3727.80	1738088.47	14416092.91	39°41'44.277"N	80°39'09.982"W	6013.33	321.690	1.28	0.03	-1.28
13774.00	90.740	309.680	7218.96	6064.29	4776.17	-3796.83	1738019.47	14416150.63	39°41'44.850"N	80°39'10.862"W	6101.45	321.517	0.52	-0.07	-0.51
13865.00	90.830	309.620	7217.71	6154.86	4834.23	-3866.89	1737949.44	14416208.67	39°41'45.427"N	80°39'11.755"W	6190.53	321.344	0.12	0.10	-0.07
13955.00	90.430	309.870	7216.72	6244.45	4891.77	-3936.08	1737880.27	14416266.19	39°41'45.998"N	80°39'12.638"W	6278.71	321.179	0.52	-0.44	0.28
14046.00	90.520	310.050	7215.97	6335.06	4950.22	-4005.83	1737810.55	14416324.61	39°41'46.578"N	80°39'13.527"W	6367.99	321.019	0.22	0.10	0.20
14136.00	90.580	309.880	7215.11	6424.69	5008.02	-4074.81	1737741.60	14416382.39	39°41'47.152"N	80°39'14.407"W	6456.34	320.866	0.20	0.07	-0.19
14227.00	90.460	310.010	7214.28	6515.30	5066.45	-4144.57	1737671.86	14416440.79	39°41'47.732"N	80°39'15.296"W	6545.71	320.715	0.19	-0.13	0.14
14317.00	90.490	309.770	7213.53	6604.91	5124.16	-4213.62	1737602.84	14416498.48	39°41'48.305"N	80°39'16.177"W	6634.13	320.569	0.27	0.03	-0.27
14408.00	90.520	310.390	7212.73	6695.55	5182.75	-4283.25	1737533.24	14416557.05	39°41'48.887"N	80°39'17.065"W	6723.63	320.428	0.68	0.03	0.68
14498.00	90.520	311.020	7211.92	6785.27	5241.44	-4351.47	1737465.04	14416615.72	39°41'49.470"N	80°39'17.935"W	6812.35	320.300	0.70	0.00	0.70
14589.00	90.490	312.080	7211.11	6876.08	5301.80	-4419.57	1737396.97	14416676.05	39°41'50.059"N	80°39'18.803"W	6902.30	320.185	1.17	-0.03	1.16
14679.00	90.770	313.710	7210.12	6966.00	5363.05	-4485.50	1737331.07	14416737.28	39°41'50.676"N	80°39'19.643"W	6991.57	320.092	1.84	0.31	1.81
14769.00	90.710	313.520	7209.96	7055.96	5425.13	-4550.65	1737265.94	14416799.33	39°41'51.292"N	80°39'20.474"W	7081.00	320.010	0.22	-0.07	-0.21
14860.00	90.710	313.770	7209.83	7146.92	5487.93	-4616.50	1737200.12	14416862.11	39°41'51.916"N	80°39'21.313"W	7171.43	319.929	0.27	0.00	0.27
14950.00	90.800	314.230	7209.65	7236.89	5550.45	-4681.23	1737135.41	14416924.60	39°41'52.536"N	80°39'22.138"W	7260.95	319.856	0.52	0.10	0.51
15040.00	90.890	314.510	7209.32	7326.87	5613.38	-4745.56	1737071.11	14416987.50	39°41'53.160"N	80°39'22.958"W	7350.53	319.789	0.33	0.10	0.31
15131.00	90.920	314.820	7209.88	7417.85	5677.34	-4810.28	1737006.42	14417051.44	39°41'53.795"N	80°39'23.783"W	7441.16	319.726	0.34	0.03	0.34
15221.00	91.020	313.820	7209.36	7507.83	5740.21	-4874.66	1736942.06	14417114.29	39°41'54.419"N	80°39'24.603"W	7530.75	319.662	1.12	0.11	-1.11
15312.00	90.950	313.780	7209.80	7598.79	5803.18	-4940.33	1736876.42	14417177.24	39°41'55.043"N	80°39'25.440"W	7621.27	319.592	0.09	-0.08	-0.04
15402.00	90.990	313.280	7199.27	7688.74	5865.16	-5005.57	1736811.20	14417239.19	39°41'55.658"N	80°39'26.272"W	7710.76	319.521	0.56	0.04	-0.56
15492.00	91.080	311.670	7197.65	7778.62	5925.92	-5071.94	1736744.86	14417299.93	39°41'56.261"N	80°39'27.118"W	7800.07	319.440	1.79	0.10	-1.79
15582.00	90.740	311.020	7196.22	7868.41	5985.37	-5139.50	1736677.33	14417359.35	39°41'56.851"N	80°39'27.980"W	7889.17	319.348	0.81	-0.38	-0.72
15673.00	90.830	310.650	7194.97	7959.13	6044.86	-5208.34	1736608.51	14417418.83	39°41'57.442"N	80°39'28.858"W	7979.17	319.251	0.42	0.10	-0.41

REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot 205
Area	Wetzel County, WV	Well	SWN A WTZ 205H
Field	Wetzel	Wellbore	SWN A WTZ 205H AWB
Facility	SWN A WTZ Pad		

WELLPATH DATA (289 stations)

MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
15763.00	90.920	310.890	7193.60	8048.86	6103.63	-5276.49	1736540.39	1441747.57	39°41'58.025"N	80°39'29.727"W	8068.19	319.157	0.28	0.10	0.27
15853.00	90.770	311.510	7192.31	8138.63	6162.91	-5344.20	1736472.70	14417536.82	39°41'58.614"N	80°39'30.590"W	8157.32	319.070	0.73	-0.23	0.69
15944.00	90.770	311.240	7191.14	8229.42	6223.05	-5412.48	1736404.45	14417596.94	39°41'59.211"N	80°39'31.461"W	8247.50	318.985	0.30	0.07	-0.30
16034.00	90.950	310.800	7189.79	8319.17	6282.11	-5480.38	1736336.58	14417655.98	39°41'59.797"N	80°39'32.326"W	8336.63	318.899	0.53	0.20	-0.49
16125.00	90.800	310.220	7188.40	8409.86	6341.22	-5549.56	1736267.43	14417715.06	39°42'00.384"N	80°39'33.209"W	8426.66	318.809	0.66	-0.16	-0.64
16215.00	90.860	310.560	7187.10	8499.53	6399.52	-5618.10	1736198.91	14417773.35	39°42'00.962"N	80°39'34.083"W	8515.69	318.720	0.37	0.07	0.37
16305.00	90.800	311.190	7185.79	8589.26	6458.41	-5686.15	1736130.88	14417832.21	39°42'01.547"N	80°39'34.950"W	8604.85	318.638	0.71	-0.07	0.71
16396.00	90.710	311.100	7184.59	8680.03	6518.28	-5754.67	1736062.39	14417892.05	39°42'02.141"N	80°39'35.824"W	8695.07	318.560	0.14	-0.10	-0.10
16486.00	90.860	311.080	7183.36	8769.79	6577.42	-5822.50	1735994.59	14417951.18	39°42'02.728"N	80°39'36.689"W	8784.30	318.484	0.17	0.17	-0.02
16577.00	90.680	310.750	7182.14	8860.53	6637.02	-5891.26	1735925.86	14418010.75	39°42'03.320"N	80°39'37.566"W	8874.51	318.407	0.41	-0.20	-0.36
16667.00	90.620	311.970	7181.12	8950.32	6696.48	-5958.80	1735858.34	14418070.19	39°42'03.910"N	80°39'38.427"W	8963.83	318.336	1.36	-0.07	1.36
16758.00	90.710	313.000	7180.06	9041.21	6757.94	-6025.91	1735791.26	14418131.62	39°42'04.520"N	80°39'39.283"W	9054.35	318.277	1.14	0.10	1.13
16845.00	90.680	312.810	7179.00	9128.14	6817.16	-6089.63	1735727.57	14418190.82	39°42'05.107"N	80°39'40.095"W	9140.97	318.226	0.22	-0.03	-0.22
16936.00	90.740	312.850	7177.88	9219.05	6879.02	-6156.36	1735660.86	14418252.66	39°42'05.721"N	80°39'40.946"W	9231.56	318.173	0.08	0.07	0.04
17026.00	90.770	312.890	7176.69	9308.97	6940.25	-6222.32	1735594.93	14418313.86	39°42'06.329"N	80°39'41.787"W	9321.17	318.122	0.06	0.03	0.04
17116.00	90.860	312.860	7175.41	9398.89	7001.48	-6288.27	1735529.01	14418375.07	39°42'06.936"N	80°39'42.628"W	9410.79	318.072	0.11	0.10	-0.03
17207.00	91.600	313.830	7173.46	9489.82	7063.92	-6354.43	1735462.87	14418437.49	39°42'07.556"N	80°39'43.471"W	9501.46	318.027	1.34	0.81	1.07
17297.00	91.630	314.270	7170.92	9579.76	7126.48	-6419.09	1735398.24	14418500.01	39°42'08.177"N	80°39'44.295"W	9591.21	317.989	0.49	0.03	0.49
17387.00	91.630	314.140	7168.36	9669.72	7189.20	-6483.58	1735333.77	14418562.71	39°42'08.799"N	80°39'45.117"W	9680.98	317.954	0.14	0.00	-0.14
17478.00	91.600	313.050	7165.80	9760.64	7251.92	-6549.46	1735267.92	14418625.41	39°42'09.421"N	80°39'45.957"W	9771.68	317.914	1.20	-0.03	-1.20
17569.00	91.050	312.270	7163.69	9851.53	7313.57	-6616.36	1735201.04	14418687.04	39°42'10.033"N	80°39'46.810"W	9862.28	317.865	1.05	-0.60	-0.86
17658.00	89.940	311.090	7162.92	9940.36	7372.75	-6682.82	1735134.60	14418746.19	39°42'10.620"N	80°39'47.658"W	9950.76	317.810	1.82	-1.25	-1.33
17749.00	90.030	311.390	7162.95	10031.14	7432.74	-6751.25	1735066.20	14418806.16	39°42'11.216"N	80°39'48.530"W	10041.17	317.751	0.34	0.10	0.33
17849.00	89.320	310.280	7163.51	10130.85	7498.12	-6826.91	1734990.57	14418871.52	39°42'11.865"N	80°39'49.495"W	10140.44	317.683	1.32	-0.71	-1.11
17943.00	89.480	310.760	7164.50	10224.53	7559.19	-6898.36	1734919.15	14418932.56	39°42'12.471"N	80°39'50.406"W	10233.71	317.617	0.54	0.17	0.51
18038.00	89.350	311.730	7165.47	10319.30	7621.82	-6969.79	1734847.79	14418995.17	39°42'13.092"N	80°39'51.317"W	10328.12	317.559	1.03	-0.14	1.02
18133.00	89.750	312.640	7166.21	10414.16	7685.61	-7040.18	1734777.35	14419058.93	39°42'13.725"N	80°39'52.215"W	10422.70	317.510	1.05	0.42	0.96
18228.00	89.850	312.870	7166.55	10509.08	7750.11	-7109.93	1734707.66	14419123.40	39°42'14.365"N	80°39'53.104"W	10517.38	317.467	0.26	0.11	0.24
18322.00	90.150	313.140	7166.55	10603.01	7814.22	-7178.67	1734638.95	14419187.49	39°42'15.002"N	80°39'53.981"W	10611.10	317.427	0.43	0.32	0.29
18417.00	90.120	313.660	7166.32	10697.96	7879.49	-7247.70	1734569.95	14419252.74	39°42'15.649"N	80°39'54.861"W	10705.86	317.392	0.55	-0.03	0.55

REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot 205
Area	Wetzel County, WV	Well	SWN A WTZ 205H
Field	Wetzel	Wellbore	SWN A WTZ 205H AWB
Facility	SWN A WTZ Pad		

WELLPATH DATA (289 stations)

MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
18512.00	90.150	312.620	7166.10	10792.90	7944.45	-7317.02	1734500.66	14419317.67	39°42'16.294"N	80°39'55.744"W	10800.60	317.354	1.10	0.03	-1.09
18606.00	90.090	312.070	7165.90	10886.78	8007.77	-7386.49	1734431.21	14419380.96	39°42'16.922"N	80°39'56.630"W	10894.25	317.311	0.59	-0.06	-0.59
18701.00	90.490	311.390	7165.42	10981.61	8071.00	-7457.39	1734360.34	14419444.17	39°42'17.550"N	80°39'57.534"W	10988.80	317.263	0.83	0.42	-0.72
18796.00	90.550	311.300	7164.56	11076.39	8133.75	-7528.71	1734289.05	14419506.90	39°42'18.172"N	80°39'58.444"W	11083.29	317.212	0.11	0.06	-0.09
18890.00	90.580	312.110	7163.63	11170.21	8196.29	-7598.88	1734218.90	14419569.41	39°42'18.793"N	80°39'59.339"W	11176.86	317.166	0.86	0.03	0.86
18985.00	90.890	312.160	7162.41	11265.07	8260.02	-7669.32	1734148.49	14419633.11	39°42'19.425"N	80°40'00.237"W	11271.49	317.124	0.33	0.33	0.05
19080.00	90.830	311.030	7160.99	11359.87	8323.08	-7740.36	1734077.48	14419696.15	39°42'20.051"N	80°40'01.143"W	11366.04	317.078	1.19	-0.06	-1.19
19174.00	90.800	310.360	7159.65	11453.57	8384.36	-7811.62	1734006.24	14419757.41	39°42'20.659"N	80°40'02.052"W	11459.45	317.025	0.71	-0.03	-0.71
19269.00	90.860	310.200	7158.27	11548.21	8445.77	-7884.09	1733933.81	14419818.80	39°42'21.269"N	80°40'02.976"W	11553.79	316.970	0.18	0.06	-0.17
19364.00	90.890	310.480	7156.82	11642.86	8507.26	-7956.49	1733861.43	14419880.26	39°42'21.879"N	80°40'03.900"W	11648.14	316.916	0.30	0.03	0.29
19458.00	90.860	311.150	7155.39	11736.57	8568.69	-8027.62	1733790.33	14419941.67	39°42'22.489"N	80°40'04.807"W	11741.60	316.867	0.71	-0.03	0.71
19553.00	90.860	310.720	7153.96	11831.30	8630.93	-8099.38	1733718.59	14420003.88	39°42'23.107"N	80°40'05.722"W	11836.09	316.820	0.45	0.00	-0.45
19648.00	90.890	310.530	7152.51	11925.99	8692.78	-8171.48	1733646.53	14420065.71	39°42'23.721"N	80°40'06.642"W	11930.53	316.771	0.20	0.03	-0.20
19742.00	90.920	310.240	7151.03	12019.65	8753.68	-8243.07	1733574.96	14420126.58	39°42'24.325"N	80°40'07.555"W	12023.94	316.721	0.31	-0.03	-0.31
19837.00	90.830	311.020	7149.58	12114.33	8815.53	-8315.16	1733502.90	14420188.41	39°42'24.939"N	80°40'08.474"W	12118.39	316.673	0.83	-0.09	0.82
19932.00	90.860	312.000	7148.17	12209.13	8878.48	-8386.29	1733431.80	14420251.34	39°42'25.564"N	80°40'09.381"W	12213.00	316.633	1.03	0.03	1.03
20026.00	90.800	314.120	7146.81	12303.05	8942.65	-8454.96	1733363.16	14420315.48	39°42'26.200"N	80°40'10.257"W	12306.80	316.606	2.26	-0.06	2.26
20121.00	90.830	315.120	7145.46	12398.03	9009.37	-8522.57	1733295.57	14420382.18	39°42'26.862"N	80°40'11.119"W	12401.74	316.590	1.05	0.03	1.05
20216.00	90.950	315.260	7143.99	12493.02	9076.76	-8589.52	1733228.65	14420449.54	39°42'27.531"N	80°40'11.972"W	12496.70	316.580	0.19	0.13	0.15
20311.00	90.890	315.500	7142.46	12588.01	9144.37	-8656.24	1733161.96	14420517.12	39°42'28.201"N	80°40'12.823"W	12591.66	316.571	0.26	-0.06	0.25
20405.00	90.890	314.270	7141.00	12681.99	9210.70	-8722.83	1733095.39	14420583.42	39°42'28.859"N	80°40'13.672"W	12685.61	316.558	1.31	0.00	-1.31
20500.00	90.980	313.370	7139.45	12776.95	9276.47	-8791.36	1733026.89	14420649.17	39°42'29.512"N	80°40'14.546"W	12780.49	316.538	0.95	0.09	-0.95
20595.00	91.390	312.550	7137.48	12871.86	9341.19	-8860.87	1732957.41	14420713.87	39°42'30.154"N	80°40'15.432"W	12875.28	316.512	0.96	0.43	-0.86
20689.00	90.980	312.450	7135.54	12965.73	9404.69	-8930.16	1732888.14	14420777.33	39°42'30.784"N	80°40'16.316"W	12969.03	316.483	0.45	-0.44	-0.11
20784.00	90.980	312.030	7133.92	13060.61	9468.75	-9000.29	1732818.04	14420841.37	39°42'31.420"N	80°40'17.210"W	13063.78	316.453	0.08	0.00	-0.08
20879.00	90.920	312.030	7132.34	13155.47	9532.55	-9070.66	1732747.70	14420905.15	39°42'32.053"N	80°40'18.107"W	13158.51	316.422	0.36	-0.06	-0.36
20973.00	90.860	311.120	7130.88	13249.27	9614.92	-9140.97	1732677.42	14420967.50	39°42'32.672"N	80°40'19.004"W	13252.16	316.388	0.97	-0.06	-0.97
21068.00	90.950	310.810	7129.38	13344.00	9657.20	-9212.69	1732605.72	14421029.75	39°42'33.290"N	80°40'19.919"W	13346.73	316.349	0.34	0.09	-0.33
21163.00	90.800	309.770	7127.93	13438.64	9718.62	-9285.15	1732533.29	14421091.15	39°42'33.899"N	80°40'20.843"W	13441.19	316.307	1.11	-0.16	-1.09
21258.00	90.830	308.410	7126.58	13533.09	9778.51	-9358.88	1732459.59	14421151.02	39°42'34.494"N	80°40'21.784"W	13535.43	316.256	1.43	0.03	-1.43

Actual Wellpath Report

SWN A WTZ 205H AWP Proj: 25772

REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot 205
Area	Wetzel County, WV	Well	SWN A WTZ 205H
Field	Wetzel	Wellbore	SWN A WTZ 205H AWB
Facility	SWN A WTZ Pad		

WELLPATH DATA (289 stations)

MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	N orth (ft)	East (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
21352.00	90.920	308.030	7125.14	13626.38	9836.66	-9432.72	1732385.78	14421209.14	39°42'35.07"N	80°40'22.726"W	13628.50	316.201	0.42	0.10	-0.40
21447.00	90.250	308.040	7124.17	13720.64	9895.19	-9507.54	1732310.99	14421267.65	39°42'35.652"N	80°40'23.680"W	13722.54	316.145	0.71	-0.71	0.01
21541.00	90.280	308.120	7123.74	13813.91	9953.17	-9581.53	1732237.03	14421325.60	39°42'36.228"N	80°40'24.624"W	13815.62	316.090	0.09	0.03	0.09
21636.00	90.220	308.280	7123.32	13908.21	10011.92	-9656.18	1732162.40	14421384.33	39°42'36.811"N	80°40'25.577"W	13909.72	316.036	0.18	-0.06	0.17
21731.00	90.150	310.260	7123.02	14002.69	10072.05	-9729.73	1732088.89	14421444.43	39°42'37.408"N	80°40'26.515"W	14004.06	315.990	2.09	-0.07	2.08
21825.00	90.310	312.330	7122.64	14096.47	10134.08	-9800.35	1732018.30	14421506.44	39°42'38.024"N	80°40'27.416"W	14097.74	315.959	2.21	0.17	2.20
21920.00	90.370	312.630	7122.08	14191.36	10198.23	-9870.41	1731948.26	14421570.57	39°42'38.660"N	80°40'28.309"W	14192.56	315.936	0.32	0.06	0.32
22015.00	90.310	312.310	7121.51	14286.25	10262.37	-9940.48	1731878.21	14421634.69	39°42'39.297"N	80°40'29.203"W	14287.39	315.913	0.34	-0.06	-0.34
22110.00	90.180	313.230	7121.11	14381.17	10326.88	-10010.22	1731808.50	14421699.17	39°42'39.937"N	80°40'30.092"W	14382.25	315.892	0.98	-0.14	0.97
22204.00	90.620	313.910	7120.45	14475.13	10391.67	-10078.32	1731740.43	14421763.93	39°42'40.579"N	80°40'30.961"W	14476.17	315.877	0.86	0.47	0.72
22299.00	90.550	314.160	7119.48	14570.10	10457.70	-10146.62	1731672.16	14421829.94	39°42'41.234"N	80°40'31.832"W	14571.11	315.865	0.27	-0.07	0.26
22393.00	90.680	313.780	7118.47	14664.08	10522.96	-10214.26	1731604.54	14421895.17	39°42'41.882"N	80°40'32.694"W	14665.06	315.853	0.43	0.14	-0.40
22488.00	90.520	313.110	7117.48	14759.03	10588.28	-10283.23	1731535.60	14421960.47	39°42'42.530"N	80°40'33.574"W	14759.97	315.837	0.73	-0.17	-0.71
22582.00	90.220	311.040	7116.87	14852.88	10651.27	-10353.00	1731465.86	14422023.43	39°42'43.155"N	80°40'34.464"W	14853.76	315.814	2.23	-0.32	-2.20
22677.00	90.310	310.920	7116.43	14947.62	10713.57	-10424.72	1731394.17	14422085.71	39°42'43.773"N	80°40'35.379"W	14948.42	315.793	0.16	0.09	-0.13
22772.00	90.180	311.080	7116.02	15042.37	10775.89	-10496.42	1731322.50	14422148.01	39°42'44.391"N	80°40'36.293"W	15043.09	315.753	0.22	-0.14	0.17
22866.00	90.120	310.660	7115.78	15136.10	10837.40	-10567.50	1731251.44	14422209.49	39°42'45.002"N	80°40'37.200"W	15136.75	315.722	0.45	-0.06	-0.45
22961.00	89.850	310.440	7115.80	15230.79	10899.16	-10639.68	1731179.29	14422271.23	39°42'45.615"N	80°40'38.121"W	15231.37	315.690	0.37	-0.28	-0.23
23056.00	89.750	311.600	7116.13	15325.53	10961.51	-10711.36	1731107.64	14422333.55	39°42'46.234"N	80°40'39.035"W	15326.05	315.661	1.23	-0.11	1.22
23150.00	89.750	313.350	7116.54	15419.42	11024.98	-10780.69	1731038.34	14422397.00	39°42'46.863"N	80°40'39.919"W	15419.90	315.642	1.86	0.00	1.86
23245.00	89.720	312.800	7116.98	15514.36	11089.86	-10850.08	1730968.97	14422461.85	39°42'47.507"N	80°40'40.804"W	15514.81	315.626	0.58	-0.03	-0.58
23340.00	90.340	312.490	7116.93	15609.26	11154.22	-10919.96	1730899.12	14422526.19	39°42'48.145"N	80°40'41.695"W	15609.68	315.608	0.73	0.65	-0.33
23435.00	90.280	312.070	7116.42	15704.14	11218.13	-10990.24	1730828.86	14422590.07	39°42'48.780"N	80°40'42.592"W	15704.52	315.588	0.45	-0.06	-0.44
23529.00	90.250	312.240	7115.98	15798.01	11281.22	-11059.93	1730759.21	14422653.13	39°42'49.405"N	80°40'43.481"W	15798.35	315.567	0.18	-0.03	0.18
23624.00	90.250	312.410	7115.57	15892.89	11345.18	-11130.16	1730689.00	14422717.08	39°42'50.040"N	80°40'44.376"W	15893.20	315.548	0.18	0.00	0.18
23719.00	90.220	313.300	7115.18	15987.81	11409.80	-11199.80	1730619.38	14422781.66	39°42'50.681"N	80°40'45.265"W	15988.03	315.532	0.94	-0.03	0.94
23813.00	90.340	313.710	7114.72	16081.76	11474.51	-11267.98	1730551.23	14422846.35	39°42'51.323"N	80°40'46.134"W	16082.00	315.520	0.45	0.13	0.44
23908.00	90.180	312.590	7114.29	16176.70	11539.48	-11337.29	1730481.95	14422911.29	39°42'51.968"N	80°40'47.018"W	16176.95	315.506	1.19	-0.17	-1.18
24003.00	90.370	311.910	7113.83	16271.58	11603.35	-11407.61	1730411.66	14422975.14	39°42'52.601"N	80°40'47.915"W	16271.79	315.487	0.74	0.20	-0.72
24097.00	90.340	310.970	7113.25	16365.37	11665.56	-11478.07	1730341.22	14423037.33	39°42'53.219"N	80°40'48.814"W	16365.56	315.464	1.00	-0.03	-1.00

REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot 205
Area	Wetzel County, WV	Well	SWN A WTZ 205H
Field	Wetzel	Wellbore	SWN A WTZ 205H AWB
Facility	SWN A WTZ Pad		

WELLPATH DATA (289 stations)

MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	N orth (ft)	East (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
24192.00	90.250	310.020	7112.76	16460.05	11727.25	-11550.32	1730269.01	14423098.99	39°42'53.83"N	80°40'49.735"W	16460.20	315.435	1.00	-0.09	-1.00
24287.00	90.220	309.780	7112.37	16554.64	11788.19	-11623.20	1730196.16	14423159.91	39°42'54.436"N	80°40'50.665"W	16554.76	315.404	0.25	-0.03	-0.25
24381.00	90.310	310.400	7111.94	16648.27	11848.72	-11695.11	1730124.27	14423220.42	39°42'55.036"N	80°40'51.583"W	16648.36	315.374	0.67	0.10	0.66
24476.00	90.250	310.630	7111.47	16742.95	11910.44	-11767.33	1730052.08	14423282.11	39°42'55.649"N	80°40'52.504"W	16743.02	315.346	0.25	-0.06	0.24
24571.00	90.180	311.840	7111.12	16837.72	11973.05	-11838.77	1729980.67	14423344.70	39°42'56.270"N	80°40'53.415"W	16837.77	315.323	1.28	-0.07	1.27
24665.00	90.250	312.140	7110.76	16931.58	12035.94	-11908.64	1729910.83	14423407.56	39°42'56.894"N	80°40'54.307"W	16931.61	315.305	0.33	0.07	0.32
24760.00	90.280	311.460	7110.32	17026.41	12099.26	-11979.45	1729840.04	14423470.86	39°42'57.522"N	80°40'55.210"W	17026.43	315.285	0.72	0.03	-0.72
24855.00	90.310	313.040	7109.84	17121.28	12163.13	-12049.77	1729769.75	14423534.70	39°42'58.156"N	80°40'56.107"W	17121.30	315.268	1.66	0.03	1.66
24950.00	89.940	312.080	7109.63	17216.18	12227.38	-12119.75	1729699.80	14423598.93	39°42'58.794"N	80°40'57.000"W	17216.19	315.253	1.08	-0.39	-1.01
25044.00	89.970	312.540	7109.70	17310.06	12290.66	-12189.26	1729630.32	14423662.18	39°42'59.421"N	80°40'57.886"W	17310.07	315.237	0.49	0.03	0.49
25139.00	89.970	312.750	7109.75	17404.97	12355.02	-12259.14	1729560.46	14423726.52	39°43'00.060"N	80°40'58.778"W	17404.97	315.223	0.22	0.00	0.22
25233.00	90.030	312.830	7109.75	17498.88	12418.87	-12328.12	1729491.51	14423790.35	39°43'00.693"N	80°40'59.657"W	17498.88	315.210	0.11	0.06	0.09
25328.00	89.940	312.940	7109.78	17593.81	12483.52	-12397.73	1729421.93	14423854.97	39°43'01.335"N	80°41'00.545"W	17593.81	315.198	0.15	-0.09	0.12
25423.00	89.880	312.840	7109.93	17688.73	12548.18	-12467.33	1729352.35	14423919.60	39°43'01.976"N	80°41'01.433"W	17688.73	315.185	0.12	-0.06	-0.11
25517.00	89.910	312.980	7110.10	17782.66	12612.18	-12536.18	1729283.53	14423983.58	39°43'02.611"N	80°41'02.311"W	17782.66	315.173	0.15	0.03	0.15
25612.00	89.940	312.440	7110.22	17877.57	12676.62	-12605.98	1729213.75	14424047.99	39°43'03.250"N	80°41'03.202"W	17877.57	315.160	0.57	0.03	-0.57
25706.00	90.060	313.360	7110.22	17971.49	12740.60	-12674.84	1729144.92	14424111.95	39°43'03.885"N	80°41'04.080"W	17971.49	315.148	0.99	0.13	0.98
25747.00	90.030	313.180	7110.19	18012.47	12768.71	-12704.70	1729115.08	14424140.04	39°43'04.164"N	80°41'04.461"W	18012.47	315.144	0.45	-0.07	-0.44
25772.00	90.030	313.180	7110.18	18037.45	12785.81	-12722.93	1729096.86	14424157.14	39°43'04.333"N	80°41'04.693"W	18037.46	315.141	0.00	0.00	0.00

REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot 205
Area	Wetzel County, WV	Well	SWN A WTZ 205H
Field	Wetzel	Wellbore	SWN A WTZ 205H AWB
Facility	SWN A WTZ Pad		

HOLE & CASING SECTIONS - Ref Wellbore: SWN A WTZ 205H AWB Ref Wellpath: SWN A WTZ 205H AWP Proj: 25772'

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
20in Conductor	26.00	100.00	74.00	26.00	100.00	0.00	0.00	0.05	0.13
17.5in Open Hole	100.00	406.00	306.00	100.00	406.00	0.05	0.13	0.40	0.11
13.375in Casing Surface	26.00	406.00	380.00	26.00	406.00	0.00	0.00	0.40	0.11
12.25in Open Hole	406.00	2834.00	2428.00	406.00	2825.07	0.40	0.11	99.35	143.10
9.625in Casing Intermediate	26.00	2834.00	2808.00	26.00	2825.07	0.00	0.00	99.35	143.10
8.75in Open Hole	2834.00	5670.00	2836.00	2825.07	5577.96	99.35	143.10	285.25	771.89
8.5in Open Hole	5670.00	25772.00	20102.00	5577.96	7110.18	285.25	771.89	12785.81	-12722.93
5.5in Casing Production	26.00	25772.00	25746.00	26.00	7110.18	0.00	0.00	12785.81	-12722.93

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SWN A WTZ 205H BHL Rev-3	7122.00	12797.54	-12711.48	1729108.30	14424168.87	39°43'04.449"N	80°41'04.546"W	point
SWN A WTZ 205H LP Rev-4	7370.00	802.65	608.12	1742422.70	14412178.66	39°41'05.409"N	80°38'14.715"W	point

WELLPATH COMPOSITION - Ref Wellbore: SWN A WTZ 205H AWB Ref Wellpath: SWN A WTZ 205H AWP Proj: 25772'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
26.00	394.00	VESSI GyroFlex v4	01 VESSI Gyroflex <17 1/2"> (50'-394')	SWN A WTZ 205H AWB
394.00	2787.00	OWSG MWD rev2 + HRGM	02 Premier MWD <12 1/4"> (529'-2787')	SWN A WTZ 205H AWB
2787.00	5598.00	OWSG MWD rev2 + HRGM	03 Premier MWD <8 3/4"> (2885'-5598')	SWN A WTZ 205H AWB
5598.00	25747.00	BHI AutoTrak Curve (Short)	04 BH AT Curve <8 1/2"> (5643'-25747')	SWN A WTZ 205H AWB
25747.00	25772.00	Blind Drilling (std)	Projection to bit	SWN A WTZ 205H AWB

REFERENCE WELLPATH IDENTIFICATION			
Operator	SOUTHWESTERN ENERGY	Slot	Slot 205
Area	Wetzel County, WV	Well	SWN A WTZ 205H
Field	Wetzel	Wellbore	SWN A WTZ 205H AWB
Facility	SWN A WTZ Pad		

COMMENTS

Wellpath general comments
 API: 47-103-03251-0000
 BH Job #: 109796719
 Rig: SDC 46
 Duration: 05/24/2019 - 06/01/2019