

REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY		Well	Vernon Johnson WTZ 1H
Field	Wetzel		API/Legal	
Facility	Vernon Johnson WTZ Pad		Wellbore	Vernon Johnson WTZ 1H AWB
Slot	Slot #1H			

REPORT SETUP INFORMATION

Projection System	NAD83 / UTM Zone 17 North, US feet			Software System	WellArchitect® 6.0
North Reference	Grid			User	Atenjen
Scale	0.999619			Report Generated	12/27/2019 at 9:55:44 AM
Convergence at slot	0.29° East			Database	WA_MPL_EASTERNUS_Defn

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-31.64	-24.15	1768152.99	14424361.01	39°43'4.6918"N	80°32'44.6857"W
Facility Reference Pt			1768177.13	14424392.64	39°43'5.0033"N	80°32'44.3746"W
Field Reference Pt			0.00	0.00	0°00'0.0000"	85°29'19.4780"W

WELLPATH DATUM

Calculation method	Minimum curvature	SDC 46 (KB) to Facility Vertical Datum	1457.50ft
Horizontal Reference Pt	Slot	SDC 46 (KB) to Mean Sea Level	1457.50ft
Vertical Reference Pt	SDC 46 (KB)	SDC 46 (KB) to Ground Level at Slot (Slot #1H)	26.00ft
MD Reference Pt	SDC 46 (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	317.62°

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Actual Wellpath Report

Vernon Johnson WTZ 1H AWP Proj: 27775'
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Field	Wetzel	API/Legal	
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Slot	Slot #1H		

WELLPATH DATA (323 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)
0.00†	0.000	126.210	0.00	0.00	0.00	0.00	1768152.99	14424361.01	39°43'4.6918"N	80°32'44.6857"W	0.00	0.000	0.00	0.00	0.00
26.00	0.000	126.210	26.00	0.00	0.00	0.00	1768152.99	14424361.01	39°43'4.6918"N	80°32'44.6857"W	0.00	0.000	0.00	0.00	0.00
100.00	0.340	126.210	100.00	-0.22	-0.13	0.18	1768153.17	14424360.88	39°43'4.6905"N	80°32'44.6834"W	0.22	126.210	0.46	0.46	0.00
125.00	0.370	123.020	125.00	-0.37	-0.22	0.30	1768153.29	14424360.80	39°43'4.6896"N	80°32'44.6818"W	0.37	125.523	0.14	0.12	-12.76
150.00	0.370	127.920	150.00	-0.52	-0.31	0.44	1768153.43	14424360.70	39°43'4.6887"N	80°32'44.6801"W	0.54	125.507	0.13	0.00	19.60
175.00	0.370	128.980	175.00	-0.68	-0.41	0.56	1768153.55	14424360.60	39°43'4.6877"N	80°32'44.6785"W	0.70	126.188	0.03	0.00	4.24
200.00	0.050	93.630	200.00	-0.77	-0.46	0.64	1768153.63	14424360.55	39°43'4.6872"N	80°32'44.6776"W	0.79	126.047	1.32	-1.28	-141.40
225.00	0.210	86.800	225.00	-0.81	-0.46	0.69	1768153.68	14424360.55	39°43'4.6872"N	80°32'44.6769"W	0.83	123.648	0.64	0.64	-27.32
250.00	0.210	94.320	250.00	-0.87	-0.46	0.78	1768153.77	14424360.55	39°43'4.6872"N	80°32'44.6757"W	0.91	120.504	0.11	0.00	30.08
275.00	0.100	112.480	275.00	-0.92	-0.47	0.85	1768153.84	14424360.54	39°43'4.6871"N	80°32'44.6749"W	0.97	119.134	0.48	-0.44	72.64
300.00	0.110	116.100	300.00	-0.96	-0.49	0.89	1768153.88	14424360.52	39°43'4.6869"N	80°32'44.6743"W	1.02	118.921	0.05	0.04	14.48
325.00	0.150	123.800	325.00	-1.02	-0.52	0.94	1768153.93	14424360.49	39°43'4.6866"N	80°32'44.6737"W	1.08	119.006	0.17	0.16	30.80
350.00	0.140	141.110	350.00	-1.08	-0.56	0.99	1768153.98	14424360.45	39°43'4.6862"N	80°32'44.6731"W	1.14	119.724	0.18	-0.04	69.24
375.00	0.070	6.580	375.00	-1.10	-0.57	1.01	1768154.00	14424360.44	39°43'4.6861"N	80°32'44.6728"W	1.16	119.580	0.78	-0.28	-538.12
400.00	0.060	69.830	400.00	-1.10	-0.55	1.02	1768154.01	14424360.46	39°43'4.6863"N	80°32'44.6727"W	1.16	118.394	0.27	-0.04	253.00
425.00	0.180	79.970	425.00	-1.12	-0.54	1.07	1768154.06	14424360.47	39°43'4.6864"N	80°32'44.6720"W	1.20	116.762	0.49	0.48	40.56
450.00	0.130	148.360	450.00	-1.17	-0.56	1.13	1768154.12	14424360.45	39°43'4.6862"N	80°32'44.6713"W	1.26	116.367	0.72	-0.20	273.56
475.00	0.120	172.010	475.00	-1.22	-0.61	1.14	1768154.13	14424360.40	39°43'4.6857"N	80°32'44.6711"W	1.30	117.986	0.21	-0.04	94.60
500.00	0.170	165.930	500.00	-1.28	-0.67	1.16	1768154.15	14424360.34	39°43'4.6851"N	80°32'44.6709"W	1.34	120.074	0.21	0.20	-24.32
525.00	0.180	177.560	525.00	-1.34	-0.75	1.17	1768154.16	14424360.27	39°43'4.6844"N	80°32'44.6708"W	1.39	122.544	0.15	0.04	46.52
548.00	0.160	185.490	548.00	-1.39	-0.81	1.17	1768154.16	14424360.20	39°43'4.6837"N	80°32'44.6708"W	1.42	124.890	0.13	-0.09	34.48
620.00	0.280	161.870	620.00	-1.62	-1.08	1.21	1768154.20	14424359.93	39°43'4.6811"N	80°32'44.6703"W	1.62	131.731	0.21	0.17	-32.81
710.00	0.550	174.580	709.99	-2.16	-1.72	1.32	1768154.31	14424359.29	39°43'4.6747"N	80°32'44.6689"W	2.17	142.472	0.32	0.30	14.12
801.00	1.100	165.920	800.98	-3.28	-3.00	1.57	1768154.56	14424358.01	39°43'4.6621"N	80°32'44.6657"W	3.39	152.319	0.62	0.60	-9.52
891.00	1.630	163.250	890.96	-5.19	-5.07	2.15	1768155.14	14424355.95	39°43'4.6416"N	80°32'44.6585"W	5.50	156.965	0.59	0.59	-2.97
981.00	2.640	164.020	980.89	-8.20	-8.28	3.09	1768156.08	14424352.73	39°43'4.6098"N	80°32'44.6467"W	8.84	159.524	1.12	1.12	0.86
1072.00	2.370	168.260	1071.81	-11.70	-12.14	4.05	1768157.04	14424348.88	39°43'4.5716"N	80°32'44.6346"W	12.80	161.539	0.36	-0.30	4.66
1163.00	1.520	175.920	1162.75	-14.27	-15.19	4.52	1768157.51	14424345.83	39°43'4.5415"N	80°32'44.6288"W	15.85	163.419	0.97	-0.93	8.42
1253.00	1.410	155.620	1252.73	-16.26	-17.39	5.06	1768158.05	14424343.63	39°43'4.5197"N	80°32'44.6220"W	18.11	163.761	0.59	-0.12	-22.56
1344.00	0.890	95.610	1343.71	-17.85	-18.48	6.23	1768159.22	14424341.54	39°43'4.5089"N	80°32'44.6072"W	19.50	161.367	1.36	-0.57	-65.95

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WELLPATH DATA (323 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]
1434.00	1.500	37.710	1433.69	-18.16	-17.61	7.65	1768160.63	14424343.41	39°43'4.5174"N	80°32'44.5890"W	19.20	156.533	1.42	0.68	-64.33
1524.00	2.310	30.960	1523.64	-17.44	-15.12	9.30	1768162.28	14424345.89	39°43'4.5419"N	80°32'44.5677"W	17.75	148.414	0.93	0.90	-7.50
1614.00	1.250	55.560	1613.60	-17.06	-13.01	11.04	1768164.03	14424348.00	39°43'4.5626"N	80°32'44.5452"W	17.07	139.685	1.43	-1.18	27.33
1705.00	1.310	97.570	1704.58	-17.99	-12.59	12.89	1768165.88	14424348.43	39°43'4.5667"N	80°32'44.5215"W	18.02	134.320	1.01	0.07	46.16
1795.00	0.780	130.720	1794.56	-19.38	-13.12	14.38	1768167.36	14424347.89	39°43'4.5614"N	80°32'44.5026"W	19.47	132.394	0.87	-0.59	36.83
1886.00	0.920	164.410	1885.55	-20.65	-14.23	15.04	1768168.03	14424346.79	39°43'4.5504"N	80°32'44.4941"W	20.71	133.416	0.56	0.15	37.02
1976.00	1.130	167.000	1975.54	-22.07	-15.79	15.44	1768168.42	14424345.23	39°43'4.5350"N	80°32'44.4892"W	22.08	135.656	0.24	0.23	2.88
2066.00	0.580	172.330	2065.53	-23.22	-17.11	15.70	1768168.68	14424343.91	39°43'4.5219"N	80°32'44.4859"W	23.22	137.466	0.62	-0.61	5.92
2156.00	0.810	182.180	2155.52	-24.05	-18.20	15.73	1768168.72	14424342.82	39°43'4.5112"N	80°32'44.4856"W	24.05	139.153	0.29	0.26	10.94
2247.00	1.050	182.840	2246.51	-25.09	-19.67	15.67	1768168.65	14424341.35	39°43'4.4966"N	80°32'44.4865"W	25.15	141.466	0.26	0.26	0.73
2337.00	1.200	191.170	2336.49	-26.23	-21.42	15.44	1768168.43	14424339.60	39°43'4.4793"N	80°32'44.4895"W	26.41	144.209	0.25	0.17	9.26
2427.00	1.080	195.390	2426.48	-27.24	-23.16	15.04	1768168.02	14424337.86	39°43'4.4621"N	80°32'44.4948"W	27.61	147.010	0.16	-0.13	4.69
2518.00	1.210	212.880	2517.46	-27.95	-24.80	14.29	1768167.27	14424336.23	39°43'4.4460"N	80°32'44.5045"W	28.62	150.051	0.41	0.14	19.22
2608.00	1.230	204.990	2607.44	-28.56	-26.47	13.36	1768166.35	14424334.55	39°43'4.4295"N	80°32'44.5164"W	29.65	153.214	0.19	0.02	-8.77
2698.00	1.310	199.650	2697.42	-29.41	-28.31	12.61	1768165.59	14424332.71	39°43'4.4114"N	80°32'44.5262"W	30.99	155.996	0.16	0.09	-5.93
2789.00	1.270	200.730	2788.39	-30.36	-30.24	11.90	1768164.89	14424330.79	39°43'4.3924"N	80°32'44.5354"W	32.49	158.514	0.05	-0.04	1.19
2878.00	0.930	210.690	2877.38	-31.01	-31.78	11.18	1768164.17	14424329.24	39°43'4.3772"N	80°32'44.5446"W	33.69	160.612	0.44	-0.38	11.19
2974.00	1.030	222.860	2973.36	-31.31	-33.08	10.20	1768163.18	14424327.94	39°43'4.3643"N	80°32'44.5573"W	34.62	162.865	0.24	0.10	12.68
3065.00	1.560	57.440	3064.35	-31.59	-33.02	10.69	1768163.67	14424328.01	39°43'4.3650"N	80°32'44.5511"W	34.70	162.063	2.82	0.58	-181.78
3155.00	4.150	47.650	3154.23	-31.80	-30.16	14.13	1768167.11	14424330.86	39°43'4.3930"N	80°32'44.5069"W	33.31	154.903	2.92	2.88	-10.88
3245.00	6.540	44.310	3243.84	-31.51	-24.30	20.11	1768173.10	14424336.72	39°43'4.4506"N	80°32'44.4299"W	31.55	140.383	2.68	2.66	-3.71
3336.00	8.660	41.650	3334.03	-30.50	-15.47	28.29	1768181.27	14424345.55	39°43'4.5375"N	80°32'44.3247"W	32.24	118.674	2.36	2.33	-2.92
3426.00	10.290	43.700	3422.80	-29.24	-4.60	38.35	1768191.32	14424356.42	39°43'4.6445"N	80°32'44.1953"W	38.62	96.835	1.85	1.81	2.28
3517.00	11.590	46.530	3512.15	-28.51	7.57	50.60	1768203.57	14424368.58	39°43'4.7641"N	80°32'44.0377"W	51.16	81.491	1.55	1.43	3.11
3607.00	12.880	52.550	3600.10	-29.20	19.89	65.12	1768218.09	14424380.90	39°43'4.8851"N	80°32'43.8510"W	68.09	73.016	2.01	1.43	6.69
3697.00	13.690	58.900	3687.70	-32.15	31.49	82.21	1768235.16	14424392.49	39°43'4.9989"N	80°32'43.6317"W	88.03	69.039	1.85	0.90	7.06
3787.00	14.970	62.980	3774.90	-37.31	42.27	101.68	1768254.63	14424403.27	39°43'5.1045"N	80°32'43.3817"W	110.12	67.425	1.81	1.42	4.53
3878.00	16.790	59.640	3862.42	-43.16	54.26	123.50	1768276.44	14424415.25	39°43'5.2218"N	80°32'43.1018"W	134.89	66.282	2.24	2.00	-3.67
3968.00	16.390	62.750	3948.68	-49.18	66.64	146.90	1768298.93	14424427.63	39°43'5.3431"N	80°32'42.8130"W	160.49	65.466	1.08	-0.44	3.46
4059.00	17.630	65.490	4035.70	-56.76	78.24	169.96	1768322.88	14424439.22	39°43'5.4565"N	80°32'42.5057"W	187.10	65.281	1.62	1.36	3.01

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4149.00	19.950	68.570	4120.90	-66.44	89.50	196.65	1768349.57	14424450.48	39°43'5.5665"N	80°32'42.1633"W	216.06	65.528	2.80	2.58	3.42
4239.00	22.820	68.470	4204.69	-78.14	101.52	227.19	1768380.09	14424462.50	39°43'5.6837"N	80°32'41.7718"W	248.84	65.922	3.19	3.19	-0.11
4330.00	23.870	69.180	4288.24	-91.19	114.54	260.81	1768413.70	14424475.51	39°43'5.8107"N	80°32'41.3406"W	284.86	66.290	1.19	1.15	0.78
4420.00	24.700	68.040	4370.28	-104.44	128.05	295.27	1768448.15	14424489.01	39°43'5.9424"N	80°32'40.8988"W	321.84	66.556	1.06	0.92	-1.27
4511.00	25.110	65.330	4452.82	-116.95	143.22	330.45	1768483.32	14424504.17	39°43'6.0906"N	80°32'40.4476"W	360.15	66.568	1.33	0.45	-2.98
4601.00	24.860	63.850	4534.40	-128.05	159.52	364.79	1768517.64	14424520.48	39°43'6.2500"N	80°32'40.0071"W	398.15	66.380	0.75	-0.28	-1.64
4691.00	22.790	63.370	4616.72	-138.07	175.68	397.36	1768550.19	14424536.62	39°43'6.4080"N	80°32'39.5893"W	434.46	66.149	2.31	-2.30	-0.53
4782.00	21.870	63.240	4700.90	-147.41	191.21	428.25	1768581.07	14424552.15	39°43'6.5600"N	80°32'39.1930"W	468.99	65.940	1.01	-1.01	-0.14
4872.00	20.880	64.090	4784.71	-156.47	205.76	457.64	1768610.45	14424566.70	39°43'6.7024"N	80°32'38.8159"W	501.77	65.790	1.15	-1.10	0.94
4962.00	20.760	64.270	4868.83	-165.59	219.70	486.44	1768639.24	14424580.63	39°43'6.8386"N	80°32'38.4465"W	533.75	65.694	0.15	-0.13	0.20
5053.00	21.480	63.140	4953.72	-174.67	234.23	515.83	1768668.62	14424595.15	39°43'6.9807"N	80°32'38.0694"W	566.52	65.578	0.91	0.79	-1.24
5143.00	22.000	64.000	5037.32	-183.83	249.06	545.68	1768698.46	14424609.98	39°43'7.1258"N	80°32'37.6884"W	599.83	65.467	0.68	0.58	0.96
5234.00	21.300	64.760	5121.90	-193.51	263.58	575.95	1768728.72	14424624.49	39°43'7.2678"N	80°32'37.2981"W	633.40	65.409	0.83	-0.77	0.84
5324.00	21.800	65.370	5205.60	-203.42	277.52	605.93	1768758.68	14424638.42	39°43'7.4040"N	80°32'36.9136"W	666.46	65.392	0.61	0.56	0.63
5414.00	23.280	63.070	5288.73	-213.26	292.54	636.98	1768789.72	14424653.44	39°43'7.5509"N	80°32'36.5152"W	700.94	65.333	1.91	1.64	-2.56
5504.00	23.320	64.590	5371.39	-223.19	308.24	668.93	1768821.66	14424669.13	39°43'7.7044"N	80°32'36.1054"W	736.53	65.260	0.67	0.04	1.69
5595.00	23.540	64.860	5454.89	-233.84	323.69	701.65	1768854.37	14424684.57	39°43'7.8554"N	80°32'35.6857"W	772.71	65.235	0.27	0.24	0.30
5685.00	23.850	65.920	5537.30	-244.88	338.74	734.53	1768887.24	14424699.63	39°43'8.0026"N	80°32'35.2639"W	808.88	65.242	0.59	0.34	1.18
5775.00	22.970	64.610	5619.89	-255.72	353.70	767.01	1768919.70	14424714.58	39°43'8.1488"N	80°32'34.8473"W	844.63	65.244	1.14	-0.98	-1.46
5866.00	22.480	63.560	5703.83	-265.69	369.06	798.62	1768951.31	14424729.93	39°43'8.2990"N	80°32'34.4416"W	879.78	65.198	0.70	-0.54	-1.15
5957.00	22.680	64.110	5787.85	-275.45	384.47	829.99	1768982.66	14424745.33	39°43'8.4497"N	80°32'34.0393"W	914.71	65.146	0.32	0.22	0.60
6047.00	23.110	64.830	5870.76	-285.60	399.55	861.58	1769014.24	14424760.41	39°43'8.5972"N	80°32'33.6340"W	949.72	65.121	0.57	0.48	0.80
6137.00	23.640	62.520	5953.38	-295.46	415.39	893.58	1769046.22	14424776.25	39°43'8.7521"N	80°32'33.2235"W	985.41	65.068	1.18	0.59	-2.57
6228.00	22.530	63.930	6037.09	-305.05	431.47	925.42	1769078.06	14424792.32	39°43'8.9094"N	80°32'32.8149"W	1021.07	65.003	1.36	-1.22	1.55
6318.00	22.390	63.520	6120.26	-314.59	446.69	956.25	1769108.88	14424807.54	39°43'9.0583"N	80°32'32.4194"W	1055.44	64.961	0.23	-0.16	-0.46
6408.00	23.190	61.860	6203.24	-323.64	462.70	987.22	1769139.83	14424823.53	39°43'9.2148"N	80°32'32.0220"W	1090.27	64.888	1.14	0.89	-1.84
6498.00	22.920	63.760	6286.05	-332.88	478.80	1018.57	1769171.17	14424839.63	39°43'9.3724"N	80°32'31.6198"W	1125.49	64.823	0.88	-0.30	2.11
6588.00	22.450	64.740	6369.09	-342.81	493.88	1049.83	1769202.42	14424854.71	39°43'9.5199"N	80°32'31.2188"W	1160.20	64.806	0.67	-0.52	1.09
6679.00	21.530	65.300	6453.46	-352.99	508.28	1080.71	1769233.29	14424869.09	39°43'9.6606"N	80°32'30.8226"W	1194.27	64.812	1.04	-1.01	0.62
6769.00	20.350	67.710	6537.52	-363.88	521.11	1110.20	1769262.76	14424881.93	39°43'9.7860"N	80°32'30.4444"W	1226.42	64.855	1.62	-1.31	2.68

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REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Well	Vernon Johnson WTZ 1H
Field	Wetzel	API/Legal	
Facility	Vernon Johnson WTZ Pad	Wellbore	Vernon Johnson WTZ 1H AWB
Slot	Slot #1H		

WELLPATH DATA (323 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]
6857.00	19.830	71.240	6620.17	-374.62	531.72	1138.49	1769291.04	14424892.53	39°43'9.893"N	80°32'30.081"W	1256.54	64.966	1.50	-0.59	4.01
6913.00	18.800	72.930	6673.02	-382.28	537.42	1156.11	1769308.66	14424898.23	39°43'9.944"N	80°32'29.855"W	1274.92	65.069	2.09	-1.84	3.02
7003.00	20.700	71.570	6757.72	-394.94	546.71	1185.07	1769337.60	14424907.51	39°43'10.035"N	80°32'29.484"W	1305.10	65.235	2.17	2.11	-1.51
7094.00	22.780	66.540	6842.25	-407.19	558.81	1216.49	1769369.02	14424919.61	39°43'10.153"N	80°32'29.081"W	1338.70	65.328	3.07	2.29	-5.53
7185.00	23.750	60.580	6925.86	-417.01	574.83	1248.62	1769401.13	14424935.62	39°43'10.309"N	80°32'28.669"W	1374.58	65.280	2.80	1.07	-6.55
7275.00	23.570	50.070	7008.33	-421.85	595.29	1278.22	1769430.72	14424956.07	39°43'10.510"N	80°32'28.289"W	1410.04	65.028	4.69	-0.20	-11.68
7366.00	23.900	40.230	7091.67	-420.25	621.05	1304.09	1769456.58	14424981.82	39°43'10.763"N	80°32'27.956"W	1444.42	64.535	4.36	0.36	-10.81
7456.00	25.570	21.870	7173.53	-409.45	653.04	1323.13	1769475.61	14425013.80	39°43'11.079"N	80°32'27.710"W	1475.51	63.731	8.70	1.86	-20.40
7546.00	27.480	6.250	7254.15	-387.26	691.76	1332.64	1769485.11	14425052.51	39°43'11.461"N	80°32'27.586"W	1501.48	62.567	8.01	2.12	-17.36
7637.00	30.980	355.410	7333.61	-354.84	736.02	1333.05	1769485.53	14425096.75	39°43'11.898"N	80°32'27.578"W	1522.74	61.095	6.96	3.85	-11.91
7727.00	38.040	346.850	7407.77	-312.26	786.20	1324.87	1769477.35	14425146.92	39°43'12.394"N	80°32'27.679"W	1540.58	59.314	9.50	7.84	-9.51
7818.00	46.100	340.160	7475.30	-257.39	844.47	1307.33	1769459.82	14425205.16	39°43'12.971"N	80°32'27.900"W	1556.35	57.139	10.12	8.86	-7.35
7908.00	53.700	336.850	7533.24	-193.10	908.42	1282.02	1769434.52	14425269.09	39°43'13.604"N	80°32'28.220"W	1571.25	54.679	8.90	8.44	-3.68
7953.00	58.480	333.640	7558.34	-157.51	942.31	1266.37	1769418.87	14425302.96	39°43'13.940"N	80°32'28.418"W	1578.49	53.347	12.16	10.62	-7.13
7998.00	63.030	329.850	7580.32	-119.45	976.86	1247.76	1769400.27	14425337.50	39°43'14.283"N	80°32'28.654"W	1584.67	51.943	12.50	10.11	-8.42
8043.00	66.430	327.110	7599.53	-79.49	1011.53	1226.48	1769379.00	14425372.16	39°43'14.628"N	80°32'28.924"W	1589.80	50.486	9.35	7.56	-6.09
8089.00	66.720	323.830	7617.82	-37.69	1046.30	1202.56	1769355.09	14425406.91	39°43'14.971"N	80°32'29.228"W	1594.02	48.975	6.57	5.93	-7.13
8134.00	69.480	319.850	7634.61	3.94	1079.11	1176.76	1769329.30	14425439.71	39°43'15.297"N	80°32'29.556"W	1596.64	47.479	10.24	6.13	-8.84
8179.00	72.150	316.600	7649.40	46.43	1110.79	1148.45	1769301.00	14425471.38	39°43'15.616"N	80°32'29.916"W	1597.74	45.955	9.04	5.93	-7.22
8224.00	75.900	313.600	7661.79	89.63	1141.42	1117.91	1769270.47	14425501.99	39°43'15.918"N	80°32'30.302"W	1597.67	44.404	10.51	8.33	-6.67
8270.00	79.490	312.730	7671.59	134.43	1172.16	1085.13	1769237.71	14425532.72	39°43'16.221"N	80°32'30.722"W	1597.33	42.792	8.02	7.80	-1.89
8315.00	84.150	311.360	7677.99	178.75	1201.98	1052.06	1769204.65	14425562.53	39°43'16.517"N	80°32'31.143"W	1597.37	41.195	10.78	10.36	-3.04
8360.00	86.250	310.510	7681.76	223.28	1231.95	1018.19	1769170.79	14425591.90	39°43'16.809"N	80°32'31.575"W	1597.79	39.587	5.03	4.67	-1.89
8451.00	89.450	310.910	7685.17	313.55	1290.66	949.27	1769101.89	14425651.18	39°43'17.399"N	80°32'32.453"W	1602.16	36.334	3.54	3.52	0.44
8541.00	90.100	311.830	7685.52	403.01	1350.14	881.73	1769034.38	14425710.63	39°43'17.990"N	80°32'33.314"W	1612.55	33.147	1.25	0.72	1.02
8632.00	90.100	312.250	7685.37	493.58	1411.08	814.14	1768966.82	14425771.55	39°43'18.596"N	80°32'34.175"W	1629.10	29.984	0.46	0.00	0.46
8722.00	90.160	312.190	7685.16	583.18	1471.56	747.49	1768900.20	14425832.00	39°43'19.197"N	80°32'35.024"W	1650.52	26.929	0.09	0.07	-0.07
8813.00	90.100	312.290	7684.95	673.78	1532.73	680.12	1768832.85	14425893.15	39°43'19.805"N	80°32'35.882"W	1676.85	23.928	0.13	-0.07	0.11
8903.00	90.160	312.470	7684.75	763.40	1593.39	613.64	1768766.40	14425953.79	39°43'20.408"N	80°32'36.729"W	1707.47	21.063	0.21	0.07	0.20
8993.00	89.980	312.220	7684.64	853.62	1654.02	547.12	1768699.90	14426014.39	39°43'21.014"N	80°32'37.576"W	1742.16	18.303	0.34	-0.20	-0.28

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Actual Wellpath Report

Vernon Johnson WTZ 1H AWP Proj: 27775'
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Operator	SOUTHWESTERN ENERGY	Well	Vernon Johnson WTZ 1H
Field	Wetzel	API/Legal	
Facility	Vernon Johnson WTZ Pad	Wellbore	Vernon Johnson WTZ 1H AWB
Slot	Slot #1H		

WELLPATH DATA (323 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]
9084.00	90.040	313.030	7684.62	943.67	1715.64	480.16	1768632.97	14426076.00	39°43'21.6228"N	80°32'38.4294"W	1781.57	15.636	0.89	0.07	0.89
9175.00	90.070	312.720	7684.54	1034.36	1777.56	413.48	1768566.31	14426137.89	39°43'22.2381"N	80°32'39.2788"W	1825.01	13.095	0.34	0.03	-0.34
9266.00	90.960	313.650	7683.72	1125.08	1839.83	347.13	1768499.98	14426200.14	39°43'22.8568"N	80°32'40.1239"W	1872.29	10.685	1.41	0.98	1.02
9356.00	91.120	313.340	7682.09	1214.84	1901.76	281.85	1768434.73	14426262.05	39°43'23.4722"N	80°32'40.9553"W	1922.54	8.430	0.39	0.18	-0.34
9447.00	90.780	313.620	7680.58	1305.59	1964.37	215.83	1768368.73	14426324.63	39°43'24.0942"N	80°32'41.7962"W	1976.19	6.270	0.48	-0.37	0.31
9538.00	90.810	313.290	7679.31	1396.34	2026.96	149.78	1768302.71	14426387.19	39°43'24.7160"N	80°32'42.6374"W	2032.48	4.226	0.36	0.03	-0.36
9628.00	91.210	313.970	7677.73	1486.10	2089.05	84.64	1768237.60	14426449.26	39°43'25.3329"N	80°32'43.4670"W	2090.76	2.320	0.88	0.44	0.76
9719.00	90.720	312.990	7676.20	1576.85	2151.65	18.62	1768171.61	14426511.84	39°43'25.9549"N	80°32'44.3078"W	2151.73	0.496	1.20	-0.54	-1.08
9809.00	90.810	313.230	7674.99	1666.57	2213.15	-47.07	1768105.93	14426573.32	39°43'26.5660"N	80°32'45.1447"W	2213.65	358.781	0.28	0.10	0.27
9900.00	90.900	312.820	7673.64	1757.26	2275.24	-113.59	1768039.44	14426635.38	39°43'27.1829"N	80°32'45.9919"W	2278.07	357.142	0.46	0.10	-0.45
9991.00	90.720	312.840	7672.35	1847.94	2337.10	-180.32	1767972.74	14426697.21	39°43'27.7976"N	80°32'46.8420"W	2344.04	355.588	0.20	-0.20	0.02
10080.00	90.780	313.110	7671.18	1936.64	2397.76	-245.43	1767907.65	14426757.85	39°43'28.4003"N	80°32'47.6713"W	2410.29	354.156	0.31	0.07	0.30
10171.00	90.780	312.980	7669.95	2027.34	2459.87	-311.93	1767841.18	14426819.94	39°43'29.0175"N	80°32'48.5184"W	2479.57	352.773	0.14	0.00	-0.14
10261.00	90.720	313.190	7668.77	2117.05	2521.34	-377.66	1767775.48	14426881.39	39°43'29.6283"N	80°32'49.3556"W	2549.47	351.481	0.24	-0.07	0.23
10352.00	90.750	313.140	7667.60	2207.77	2583.59	-444.03	1767709.13	14426943.61	39°43'30.2467"N	80°32'50.2009"W	2621.47	350.248	0.06	0.03	-0.05
10441.00	90.900	313.090	7666.32	2296.48	2644.41	-508.99	1767644.20	14427004.41	39°43'30.8511"N	80°32'51.0284"W	2692.95	349.105	0.18	0.17	-0.06
10532.00	90.660	312.830	7665.08	2387.17	2706.42	-575.58	1767577.63	14427066.39	39°43'31.4672"N	80°32'51.8767"W	2766.95	347.994	0.39	-0.26	-0.29
10622.00	90.930	313.950	7663.83	2476.92	2768.24	-640.97	1767512.26	14427128.19	39°43'32.0814"N	80°32'52.7096"W	2841.48	346.963	1.28	0.30	1.24
10713.00	90.720	313.140	7662.52	2567.68	2830.92	-706.93	1767446.33	14427190.85	39°43'32.7042"N	80°32'53.5497"W	2917.85	345.979	0.92	-0.23	-0.89
10803.00	90.720	313.990	7661.39	2657.44	2892.94	-772.13	1767381.15	14427252.85	39°43'33.3204"N	80°32'54.3802"W	2994.21	345.056	0.94	0.00	0.94
10894.00	91.300	313.680	7659.79	2748.23	2955.96	-837.76	1767315.55	14427315.84	39°43'33.9464"N	80°32'55.2161"W	3072.38	344.176	0.72	0.64	-0.34
10984.00	91.180	313.990	7658.04	2838.01	3018.28	-902.67	1767250.67	14427378.13	39°43'34.5655"N	80°32'56.0428"W	3150.37	343.350	0.37	-0.13	0.34
11075.00	90.960	313.080	7656.06	2928.76	3080.95	-968.63	1767184.73	14427440.78	39°43'35.1881"N	80°32'56.8829"W	3229.62	342.547	1.01	-0.13	-1.00
11165.00	90.930	312.970	7654.50	3018.46	3142.34	-1034.41	1767118.97	14427502.15	39°43'35.7982"N	80°32'57.7209"W	3308.22	341.779	0.19	-0.14	-0.12
11255.00	93.860	314.200	7650.74	3108.15	3204.33	-1099.54	1767053.87	14427564.11	39°43'36.4140"N	80°32'58.5505"W	3387.73	341.061	3.53	3.26	1.37
11345.00	93.270	313.540	7645.14	3197.78	3266.58	-1164.30	1766989.14	14427626.34	39°43'37.0324"N	80°32'59.3763"W	3467.87	340.383	0.98	-0.66	-0.73
11435.00	93.090	312.970	7640.15	3287.38	3328.16	-1229.74	1766923.72	14427687.90	39°43'37.6442"N	80°33'0.2089"W	3548.08	339.721	0.66	-0.20	-0.63
11526.00	92.500	313.040	7635.71	3377.98	3390.15	-1296.21	1766857.28	14427749.86	39°43'38.2601"N	80°33'1.0557"W	3629.50	339.076	0.65	-0.65	0.08
11616.00	92.190	312.870	7632.03	3467.60	3451.43	-1362.03	1766791.49	14427811.12	39°43'38.8690"N	80°33'1.8941"W	3710.45	338.454	0.39	-0.34	-0.19
11706.00	91.520	310.450	7629.11	3557.06	3511.22	-1429.22	1766724.31	14427870.88	39°43'39.4632"N	80°33'2.7503"W	3790.95	337.851	2.79	-0.74	-2.69

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Slot	Slot #1H		

WELLPATH DATA (323 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]
1197.00	91.920	309.430	7626.38	3647.20	3569.61	-1498.96	1766654.60	14427929.25	39°43'40.0437"N	80°33'3.6391"W	3871.56	337.221	1.20	0.44	-1.12
11887.00	93.120	311.210	7622.42	3736.38	3627.78	-1587.51	1766586.08	14427987.41	39°43'40.6220"N	80°33'4.5128"W	3951.95	336.632	2.38	1.33	1.98
11977.00	93.180	312.850	7617.48	3825.82	3687.95	-1634.26	1766519.35	14428047.55	39°43'41.2199"N	80°33'5.3632"W	4033.83	336.100	1.82	0.07	1.82
12067.00	92.690	312.950	7612.87	3915.39	3749.13	-1700.10	1766453.54	14428108.71	39°43'41.8278"N	80°33'6.2020"W	4116.59	335.607	0.56	-0.54	0.11
12158.00	92.320	312.920	7608.89	4006.00	3811.06	-1766.66	1766387.00	14428170.61	39°43'42.4431"N	80°33'7.0499"W	4200.63	335.129	0.41	-0.41	-0.03
12248.00	91.580	313.560	7605.83	4095.69	3872.68	-1832.19	1766321.50	14428232.21	39°43'43.0553"N	80°33'7.8846"W	4284.22	334.681	1.09	-0.82	0.71
12338.00	91.640	313.700	7603.30	4185.43	3934.75	-1897.31	1766256.41	14428294.26	39°43'43.6720"N	80°33'8.7141"W	4368.30	334.257	0.17	0.07	0.16
12429.00	90.810	313.270	7601.36	4276.18	3997.36	-1963.32	1766190.43	14428356.84	39°43'44.2940"N	80°33'9.5550"W	4453.48	333.842	1.03	-0.91	-0.47
12519.00	91.150	313.980	7599.82	4365.94	4059.45	-2028.45	1766125.31	14428418.90	39°43'44.9107"N	80°33'10.3847"W	4538.03	333.449	0.87	0.38	0.79
12609.00	90.660	313.260	7598.40	4455.71	4121.53	-2093.60	1766060.19	14428480.96	39°43'45.5275"N	80°33'11.2146"W	4622.78	333.071	0.97	-0.54	-0.80
12700.00	90.960	314.100	7597.11	4546.49	4184.37	-2159.40	1765994.41	14428543.77	39°43'46.1517"N	80°33'12.0528"W	4708.71	332.703	0.98	0.33	0.92
12790.00	90.660	313.620	7595.84	4636.28	4246.72	-2224.29	1765929.55	14428606.11	39°43'46.7712"N	80°33'12.8793"W	4793.96	332.356	0.63	-0.33	-0.53
12880.00	90.350	314.080	7595.04	4726.08	4309.07	-2289.19	1765864.68	14428668.43	39°43'47.3905"N	80°33'13.7060"W	4879.39	332.021	0.62	-0.34	0.51
12971.00	90.630	312.220	7594.27	4816.80	4371.30	-2355.58	1765798.32	14428730.64	39°43'48.0088"N	80°33'14.5517"W	4965.58	331.681	2.07	0.31	-2.04
13061.00	90.410	311.480	7593.45	4906.34	4431.34	-2422.61	1765731.30	14428790.66	39°43'48.6055"N	80°33'15.4059"W	5050.33	331.335	0.86	-0.24	-0.82
13151.00	90.690	312.380	7592.58	4995.89	4491.48	-2489.57	1765664.38	14428850.77	39°43'49.2031"N	80°33'16.2590"W	5135.30	331.001	1.05	0.31	1.00
13242.00	90.750	312.480	7591.44	5086.51	4552.87	-2556.73	1765597.24	14428912.14	39°43'49.8131"N	80°33'17.1148"W	5221.64	330.683	0.13	0.07	0.11
13332.00	91.030	312.780	7590.04	5176.16	4613.82	-2622.94	1765531.06	14428973.06	39°43'50.4186"N	80°33'17.9683"W	5307.27	330.382	0.46	0.31	0.33
13423.00	90.690	312.850	7588.68	5266.83	4675.66	-2689.68	1765464.34	14429034.88	39°43'51.0331"N	80°33'18.8087"W	5394.08	330.090	0.38	-0.37	0.08
13513.00	91.210	312.760	7587.19	5356.50	4736.80	-2755.70	1765398.34	14429096.00	39°43'51.6406"N	80°33'19.6498"W	5480.07	329.811	0.59	0.58	-0.10
13603.00	92.070	311.910	7584.61	5446.08	4797.39	-2822.20	1765331.87	14429156.56	39°43'52.2426"N	80°33'20.4972"W	5565.95	329.533	1.34	0.96	-0.94
13694.00	91.980	312.780	7581.39	5536.63	4858.60	-2889.46	1765264.63	14429217.75	39°43'52.8508"N	80°33'21.3542"W	5652.87	329.260	0.87	-0.10	0.87
13784.00	92.070	312.280	7578.21	5626.21	4919.35	-2955.79	1765198.34	14429278.48	39°43'53.4545"N	80°33'22.1992"W	5739.05	329.000	0.48	0.10	-0.47
13874.00	91.890	312.100	7575.10	5715.76	4979.76	-3022.43	1765131.72	14429338.86	39°43'54.0547"N	80°33'23.0484"W	5825.21	328.745	0.28	-0.20	-0.20
13965.00	91.980	312.120	7572.03	5806.28	5040.75	-3089.90	1765064.27	14429399.83	39°43'54.6607"N	80°33'23.9081"W	5912.41	328.492	0.10	0.10	0.02
14055.00	92.160	312.070	7568.78	5895.81	5101.04	-3156.64	1764997.56	14429460.10	39°43'55.2598"N	80°33'24.7585"W	5998.75	328.250	0.21	0.20	-0.06
14145.00	92.930	311.340	7564.78	5985.24	5160.86	-3223.77	1764930.46	14429519.89	39°43'55.8543"N	80°33'25.6139"W	6084.99	328.009	1.18	0.86	-0.81
14235.00	92.190	310.600	7560.76	6074.54	5219.81	-3291.65	1764862.60	14429578.82	39°43'56.4402"N	80°33'26.4791"W	6171.01	327.764	1.16	-0.82	-0.82
14325.00	92.750	311.220	7556.89	6163.84	5278.69	-3359.60	1764794.67	14429637.68	39°43'57.0254"N	80°33'27.3452"W	6257.12	327.525	0.93	0.62	0.69
14416.00	92.840	312.560	7552.45	6254.28	5339.38	-3427.27	1764727.04	14429698.34	39°43'57.6284"N	80°33'28.2074"W	6344.69	327.304	1.47	0.10	1.47

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Actual Wellpath Report

Vernon Johnson WTZ 1H AWP Proj: 27775
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REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Well	Vernon Johnson WTZ 1H
Field	Wetzel	API/Legal	
Facility	Vernon Johnson WTZ Pad	Wellbore	Vernon Johnson WTZ 1H AWB
Slot	Slot #1H		

WELLPATH DATA (323 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]
14506.00	92.970	314.380	7547.89	6343.92	5401.21	-3492.49	1764661.83	14429760.15	39°43'58.2427"N	80°33'29.0384"W	6432.00	327.113	2.02	0.14	2.02
14597.00	92.810	312.780	7543.30	6434.58	5463.86	-3558.33	1764596.02	14429822.78	39°43'58.8651"N	80°33'29.8771"W	6520.39	326.926	1.76	-0.18	-1.76
14687.00	92.810	313.800	7538.89	6524.21	5525.50	-3623.76	1764530.62	14429884.39	39°43'59.4774"N	80°33'30.7107"W	6607.78	326.742	1.13	0.00	1.13
14778.00	92.720	313.850	7534.50	6614.91	5588.44	-3689.34	1764465.07	14429947.31	39°44'0.1026"N	80°33'31.5461"W	6696.41	326.568	0.11	-0.10	0.05
14868.00	92.810	312.960	7530.15	6704.56	5650.21	-3754.65	1764399.78	14430009.06	39°44'0.7163"N	80°33'32.3782"W	6783.97	326.395	0.99	0.10	-0.99
14958.00	92.750	313.240	7525.79	6794.17	5711.63	-3820.28	1764334.17	14430070.46	39°44'1.3265"N	80°33'33.2145"W	6871.49	326.223	0.32	-0.07	0.31
15049.00	92.870	313.230	7521.33	6884.80	5773.89	-3886.50	1764267.98	14430132.69	39°44'1.9450"N	80°33'34.0582"W	6960.08	326.055	0.13	0.13	-0.01
15139.00	92.350	313.590	7517.23	6974.46	5835.68	-3951.81	1764202.69	14430194.45	39°44'2.5587"N	80°33'34.8903"W	7047.83	325.895	0.70	-0.58	0.40
15230.00	92.290	313.510	7513.55	7065.16	5898.32	-4017.72	1764136.81	14430257.08	39°44'3.1811"N	80°33'35.7299"W	7136.68	325.739	0.11	-0.07	-0.09
15321.00	91.670	312.890	7510.40	7155.83	5960.58	-4084.01	1764070.54	14430319.31	39°44'3.7995"N	80°33'36.5745"W	7225.49	325.582	0.96	-0.68	-0.68
15411.00	91.830	313.360	7507.65	7245.51	6022.43	-4149.67	1764004.91	14430380.78	39°44'4.4104"N	80°33'37.4111"W	7313.35	325.430	0.55	0.18	0.52
15502.00	91.640	313.190	7504.90	7336.21	6084.43	-4215.89	1763938.71	14430443.11	39°44'5.0299"N	80°33'38.2548"W	7402.30	325.282	0.28	-0.21	-0.19
15592.00	91.790	313.240	7502.20	7425.90	6146.02	-4281.45	1763873.18	14430504.68	39°44'5.6418"N	80°33'39.0902"W	7490.29	325.138	0.18	0.17	0.06
15682.00	91.760	312.610	7499.42	7515.56	6207.29	-4347.32	1763807.33	14430565.92	39°44'6.2504"N	80°33'39.9295"W	7578.24	324.994	0.70	-0.03	-0.70
15773.00	91.700	313.600	7496.67	7606.23	6269.44	-4413.73	1763740.95	14430628.05	39°44'6.8679"N	80°33'40.7756"W	7667.26	324.854	1.09	-0.07	1.09
15863.00	91.890	313.090	7493.85	7695.94	6331.19	-4479.15	1763675.56	14430689.77	39°44'7.4813"N	80°33'41.6091"W	7755.43	324.722	0.60	0.21	-0.57
15954.00	91.640	312.870	7491.05	7786.60	6393.20	-4545.69	1763609.04	14430751.76	39°44'8.0973"N	80°33'42.4570"W	7844.51	324.586	0.37	-0.27	-0.24
16057.00	91.270	312.590	7488.43	7889.19	6463.06	-4621.33	1763533.43	14430821.60	39°44'8.7914"N	80°33'43.4208"W	7945.31	324.434	0.45	-0.36	-0.27
16152.00	90.630	312.980	7486.86	7983.84	6527.58	-4691.04	1763463.75	14430886.09	39°44'9.4324"N	80°33'44.3091"W	8038.36	324.297	0.79	-0.67	0.41
16247.00	90.630	312.730	7485.81	8078.50	6592.19	-4760.68	1763394.14	14430950.68	39°44'10.0743"N	80°33'45.1964"W	8131.49	324.164	0.26	0.00	-0.26
16342.00	90.750	313.450	7484.67	8173.20	6657.09	-4830.05	1763324.79	14431015.55	39°44'10.7190"N	80°33'46.0804"W	8224.73	324.037	0.77	0.13	0.76
16436.00	90.160	313.930	7483.92	8266.97	6722.02	-4898.02	1763256.85	14431080.45	39°44'11.3639"N	80°33'46.9463"W	8317.21	323.921	0.81	-0.63	0.51
16531.00	90.260	313.580	7483.57	8361.76	6787.71	-4966.64	1763188.26	14431146.13	39°44'12.0165"N	80°33'47.8206"W	8410.74	323.807	0.38	0.11	-0.37
16626.00	89.700	312.650	7483.61	8456.46	6852.64	-5035.98	1763118.94	14431211.03	39°44'12.6615"N	80°33'48.7042"W	8504.11	323.688	1.14	-0.59	-0.98
16721.00	89.730	313.540	7484.08	8551.16	6917.55	-5105.35	1763049.59	14431275.91	39°44'13.3062"N	80°33'49.5881"W	8597.50	323.572	0.94	0.03	0.94
16815.00	89.460	312.640	7484.74	8644.86	6981.76	-5174.00	1762980.98	14431340.10	39°44'13.9444"N	80°33'50.4628"W	8689.95	323.459	1.00	-0.29	-0.96
16910.00	89.610	313.840	7485.52	8739.58	7046.84	-5243.20	1762911.80	14431405.15	39°44'14.5906"N	80°33'51.3446"W	8783.45	323.349	1.27	0.16	1.26
17005.00	89.490	313.040	7486.26	8834.33	7112.46	-5312.18	1762842.85	14431470.44	39°44'15.2394"N	80°33'52.2235"W	8877.05	323.243	0.85	-0.13	-0.84
17099.00	89.390	313.810	7487.18	8928.07	7185.77	-5380.44	1762774.61	14431535.03	39°44'15.8813"N	80°33'53.0933"W	8969.68	323.141	0.83	-0.11	0.82
17194.00	89.460	313.670	7488.13	9022.85	7262.45	-5449.07	1762706.00	14431600.68	39°44'16.5336"N	80°33'53.9678"W	9063.41	323.043	0.16	0.07	-0.15

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REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY		Well	Vernon Johnson WTZ 1H	
Field	Wetzel		API/Legal		
Facility	Vernon Johnson WTZ Pad		Wellbore	Vernon Johnson WTZ 1H AWB	
Slot	Slot #1H				

WELLPATH DATA (323 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)
17289.00	88.840	313.040	7489.54	9117.57	7307.66	-5518.14	1762636.96	14431665.87	39°44'17.1814"N	80°33'54.8478"W	9157.06	322.943	0.93	-0.65	-0.66
17384.00	89.030	313.520	7491.31	9212.28	7372.77	-5587.29	1762567.84	14431730.96	39°44'17.8283"N	80°33'55.7289"W	9250.71	322.844	0.54	0.20	0.51
17478.00	88.930	312.400	7492.98	9305.96	7436.82	-5656.07	1762499.09	14431794.99	39°44'18.4645"N	80°33'56.6054"W	9343.31	322.745	1.20	-0.11	-1.19
17573.00	88.900	313.010	7494.78	9400.59	7501.24	-5725.87	1762429.32	14431859.38	39°44'19.1045"N	80°33'57.4949"W	9436.85	322.645	0.64	-0.03	0.64
17668.00	89.610	313.160	7496.02	9495.28	7566.13	-5795.25	1762359.97	14431924.24	39°44'19.7491"N	80°33'58.3789"W	9530.54	322.550	0.76	0.75	0.16
17763.00	89.520	313.940	7496.74	9590.04	7631.58	-5864.10	1762291.14	14431989.67	39°44'20.3992"N	80°33'59.2562"W	9624.38	322.461	0.83	-0.09	0.82
17858.00	89.640	313.520	7497.43	9684.82	7697.25	-5932.74	1762222.52	14432055.31	39°44'21.0515"N	80°34'0.1309"W	9718.29	322.376	0.46	0.13	-0.44
17952.00	89.610	312.950	7498.05	9778.54	7761.64	-6001.22	1762154.07	14432119.67	39°44'21.6910"N	80°34'1.0036"W	9811.10	322.289	0.61	-0.03	-0.61
18047.00	89.790	313.520	7498.55	9873.26	7826.71	-6070.43	1762084.88	14432184.72	39°44'22.3374"N	80°34'1.8855"W	9904.93	322.203	0.63	0.19	0.60
18142.00	89.490	312.950	7499.14	9967.98	7891.78	-6139.65	1762015.70	14432249.77	39°44'22.9838"N	80°34'2.7674"W	9998.77	322.118	0.68	-0.32	-0.60
18237.00	89.580	313.910	7499.91	10062.72	7957.09	-6208.63	1761946.74	14432315.05	39°44'23.6325"N	80°34'3.6465"W	10092.69	322.036	1.01	0.09	1.01
18331.00	89.610	314.240	7500.58	10156.54	8022.47	-6276.16	1761879.23	14432380.41	39°44'24.2819"N	80°34'4.5069"W	10185.79	321.963	0.35	0.03	0.35
18426.00	89.240	313.190	7501.53	10251.31	8088.12	-6344.82	1761810.60	14432446.03	39°44'24.9340"N	80°34'5.3818"W	10279.81	321.887	1.17	-0.39	-1.11
18521.00	89.670	313.360	7502.44	10346.04	8153.24	-6413.99	1761741.46	14432511.13	39°44'25.5808"N	80°34'6.2632"W	10373.74	321.809	0.49	0.45	0.18
18616.00	89.730	313.530	7502.93	10440.78	8218.57	-6482.96	1761672.52	14432576.43	39°44'26.2297"N	80°34'7.1421"W	10467.74	321.733	0.19	0.06	0.18
18710.00	89.610	313.260	7503.47	10534.53	8283.15	-6551.26	1761604.24	14432640.98	39°44'26.8712"N	80°34'8.0125"W	10560.75	321.659	0.31	-0.13	-0.29
18805.00	90.010	313.340	7503.79	10629.25	8348.30	-6620.40	1761535.13	14432706.11	39°44'27.5183"N	80°34'8.8935"W	10654.75	321.585	0.43	0.42	0.08
18900.00	90.100	313.580	7503.70	10724.00	8413.64	-6689.36	1761466.20	14432771.43	39°44'28.1674"N	80°34'9.7722"W	10748.81	321.513	0.27	0.09	0.25
18994.00	90.840	314.020	7502.93	10817.79	8478.70	-6757.20	1761398.38	14432836.47	39°44'28.8136"N	80°34'10.6367"W	10841.96	321.447	0.92	0.79	0.47
19089.00	90.500	312.860	7501.82	10912.53	8544.02	-6826.17	1761329.43	14432901.76	39°44'29.4623"N	80°34'11.5156"W	10936.04	321.377	1.27	-0.36	-1.22
19184.00	90.560	313.290	7500.94	11007.23	8608.90	-6895.56	1761260.07	14432966.61	39°44'30.1088"N	80°34'12.3999"W	11030.04	321.306	0.46	0.06	0.45
19278.00	90.560	313.350	7500.02	11100.96	8673.38	-6963.95	1761191.71	14433031.07	39°44'30.7473"N	80°34'13.2714"W	11123.14	321.239	0.06	0.00	0.06
19372.00	90.560	312.670	7499.10	11194.65	8737.50	-7032.68	1761123.01	14433095.16	39°44'31.3842"N	80°34'14.1473"W	11216.17	321.170	0.72	0.00	-0.72
19467.00	90.630	311.550	7498.11	11289.20	8801.20	-7103.15	1761052.56	14433158.84	39°44'32.0171"N	80°34'15.0456"W	11309.99	321.094	1.18	0.07	-1.18
19561.00	90.530	312.730	7497.16	11382.77	8864.26	-7172.85	1760982.89	14433221.88	39°44'32.6436"N	80°34'15.9339"W	11402.85	321.021	1.26	-0.11	1.26
19656.00	90.630	312.330	7496.20	11477.39	8928.48	-7242.85	1760912.91	14433286.07	39°44'33.2815"N	80°34'16.8262"W	11496.81	320.951	0.43	0.11	-0.42
19750.00	90.590	312.590	7495.20	11571.00	8991.93	-7312.20	1760843.60	14433349.50	39°44'33.9119"N	80°34'17.7100"W	11589.78	320.882	0.28	-0.04	0.28
19844.00	90.630	312.460	7494.20	11664.62	9055.46	-7381.47	1760774.35	14433413.00	39°44'34.5430"N	80°34'18.5929"W	11682.79	320.815	0.14	0.04	-0.14
19939.00	90.630	312.830	7493.15	11758.26	9119.82	-7451.34	1760704.50	14433477.33	39°44'35.1823"N	80°34'19.4835"W	11776.82	320.749	0.39	0.00	0.39
20033.00	90.780	312.310	7492.00	11852.89	9183.40	-7520.56	1760635.31	14433540.89	39°44'35.8140"N	80°34'20.3657"W	11869.87	320.685	0.58	0.16	-0.55

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Slot	Slot #1H		

WELLPATH DATA (323 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)
20128.00	90.440	311.810	7490.99	11947.44	9247.04	-7591.09	1760564.81	14433604.51	39°44'36.4462"N	80°34'21.2647"W	11963.80	320.617	0.64	-0.36	-0.53
20222.00	90.990	312.300	7489.81	12040.98	9310.00	-7660.88	1760495.05	14433667.44	39°44'37.0717"N	80°34'22.1543"W	12056.75	320.550	0.78	0.59	0.52
20317.00	91.090	312.410	7488.09	12135.57	9373.99	-7731.07	1760424.88	14433731.41	39°44'37.7075"N	80°34'23.0490"W	12150.77	320.486	0.16	0.11	0.12
20412.00	91.120	312.330	7486.26	12230.15	9438.00	-7801.25	1760354.73	14433795.40	39°44'38.3433"N	80°34'23.9434"W	12244.81	320.424	0.09	0.03	-0.08
20506.00	91.550	311.350	7484.07	12323.65	9500.69	-7871.26	1760284.75	14433858.06	39°44'38.9661"N	80°34'24.8359"W	12337.74	320.358	1.14	0.46	-1.04
20601.00	90.960	310.870	7481.99	12418.01	9563.14	-7942.82	1760213.22	14433920.48	39°44'39.5867"N	80°34'25.7482"W	12431.49	320.288	0.80	-0.62	-0.51
20696.00	90.810	312.370	7480.52	12512.48	9626.27	-8013.83	1760142.24	14433983.55	39°44'40.2135"N	80°34'26.6534"W	12525.40	320.223	1.59	-0.16	1.58
20790.00	91.270	312.390	7478.81	12606.07	9689.57	-8083.25	1760072.84	14434046.87	39°44'40.8428"N	80°34'27.5383"W	12618.51	320.164	0.49	0.49	0.02
20885.00	91.950	311.400	7476.14	12700.56	9752.99	-8153.94	1760002.18	14434110.26	39°44'41.4728"N	80°34'28.4394"W	12712.49	320.103	1.26	0.72	-1.04
20980.00	92.010	311.280	7472.86	12794.93	9815.70	-8225.22	1759930.92	14434172.95	39°44'42.0959"N	80°34'29.3481"W	12806.33	320.038	0.14	0.06	-0.13
21074.00	92.040	311.610	7469.54	12888.33	9877.88	-8295.64	1759860.53	14434235.10	39°44'42.7137"N	80°34'30.2459"W	12899.23	319.976	0.35	0.03	0.35
21168.00	91.270	311.850	7466.82	12981.79	9940.42	-8365.76	1759790.44	14434297.62	39°44'43.3351"N	80°34'31.1398"W	12992.22	319.916	0.86	-0.82	0.26
21263.00	91.490	312.490	7464.54	13076.33	10004.18	-8436.15	1759720.07	14434361.36	39°44'43.9685"N	80°34'32.0370"W	13086.33	319.860	0.71	0.23	0.67
21357.00	91.550	313.220	7462.04	13169.97	10068.09	-8505.03	1759651.22	14434425.24	39°44'44.6033"N	80°34'32.9150"W	13179.60	319.810	0.78	0.06	0.78
21451.00	91.800	312.300	7459.30	13263.59	10131.88	-8574.02	1759582.26	14434489.01	39°44'45.2369"N	80°34'33.7943"W	13272.86	319.761	1.01	0.27	-0.98
21545.00	91.580	312.340	7456.52	13357.15	10195.14	-8643.49	1759512.81	14434552.24	39°44'45.8654"N	80°34'34.6799"W	13366.03	319.709	0.24	-0.23	0.04
21639.00	91.390	312.960	7454.09	13450.77	10258.80	-8712.60	1759443.72	14434615.88	39°44'46.4978"N	80°34'35.5608"W	13459.29	319.659	0.69	-0.20	0.66
21734.00	91.460	312.000	7451.72	13545.35	10322.94	-8782.65	1759373.71	14434680.00	39°44'47.1349"N	80°34'36.4537"W	13553.52	319.609	1.01	0.07	-1.01
21828.00	91.460	312.430	7449.33	13638.91	10386.08	-8852.24	1759304.14	14434743.11	39°44'47.7621"N	80°34'37.3408"W	13646.72	319.558	0.46	0.00	0.46
21923.00	91.460	313.260	7446.91	13733.54	10450.66	-8921.87	1759234.54	14434807.67	39°44'48.4036"N	80°34'38.2284"W	13741.04	319.512	0.87	0.00	0.87
22018.00	91.460	314.880	7444.49	13828.33	10516.71	-8990.10	1759166.33	14434873.69	39°44'49.0595"N	80°34'39.0979"W	13835.58	319.475	1.70	0.00	1.71
22112.00	91.490	313.610	7442.07	13922.13	10582.28	-9057.42	1759099.04	14434939.23	39°44'49.7106"N	80°34'39.9557"W	13929.16	319.440	1.35	0.03	-1.35
22207.00	91.550	313.380	7439.55	14016.85	10647.64	-9126.31	1759030.18	14435004.57	39°44'50.3598"N	80°34'40.8338"W	14023.62	319.399	0.25	0.06	-0.24
22302.00	91.980	314.820	7436.62	14111.63	10713.72	-9194.50	1758962.01	14435070.62	39°44'51.0160"N	80°34'41.7028"W	14118.16	319.364	1.58	0.45	1.52
22396.00	91.820	313.230	7433.51	14205.39	10779.01	-9262.05	1758894.49	14435135.89	39°44'51.6644"N	80°34'42.5637"W	14211.70	319.329	1.70	-0.17	-1.69
22491.00	91.950	313.360	7430.38	14300.06	10844.12	-9331.16	1758825.41	14435200.97	39°44'52.3111"N	80°34'43.4445"W	14306.13	319.289	0.19	0.14	0.14
22586.00	91.430	314.730	7427.58	14394.84	10910.13	-9399.41	1758757.18	14435266.97	39°44'52.9666"N	80°34'44.3143"W	14400.69	319.254	1.54	-0.55	1.44
22681.00	91.520	314.210	7425.13	14489.66	10976.66	-9467.18	1758689.44	14435333.47	39°44'53.6273"N	80°34'45.1780"W	14495.33	319.223	0.56	0.09	-0.55
22775.00	91.460	314.180	7422.69	14583.46	11042.17	-9534.55	1758622.09	14435398.95	39°44'54.2778"N	80°34'46.0366"W	14588.94	319.190	0.07	-0.06	-0.03
22870.00	91.490	314.370	7420.24	14678.27	11108.47	-9602.55	1758554.12	14435465.22	39°44'54.9361"N	80°34'46.9031"W	14683.56	319.159	0.20	0.03	0.20

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Field	Wetzel	API/Legal	
Facility	Vernon Johnson WTZ Pad	Wellbore	Vernon Johnson WTZ 1H AWB
Slot	Slot #1H		

WELLPATH DATA (323 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]
22985.00	91.330	313.840	7417.91	14773.06	11174.56	-9670.75	1758485.95	14435531.29	39°44'55.5925"N	80°34'47.7723"W	14778.17	319.126	0.58	-0.17	-0.56
23059.00	91.550	314.250	7415.54	14866.85	11239.89	-9738.29	1758418.43	14435596.60	39°44'56.2413"N	80°34'48.6331"W	14871.77	319.094	0.49	0.23	0.44
23154.00	91.700	313.510	7412.85	14961.61	11305.72	-9806.74	1758350.01	14435662.40	39°44'56.8949"N	80°34'49.5055"W	14966.34	319.061	0.79	0.16	-0.78
23249.00	91.860	313.360	7409.90	15056.31	11371.00	-9875.69	1758281.09	14435727.65	39°44'57.5433"N	80°34'50.3843"W	15060.84	319.026	0.23	0.17	-0.16
23343.00	91.950	313.300	7406.77	15149.99	11435.47	-9944.03	1758212.77	14435792.10	39°44'58.1836"N	80°34'51.2554"W	15154.33	318.991	0.12	0.10	-0.06
23438.00	91.760	313.240	7403.70	15244.67	11500.55	-10013.16	1758143.66	14435857.15	39°44'58.8300"N	80°34'52.1367"W	15248.81	318.955	0.21	-0.20	-0.06
23533.00	91.860	313.840	7400.70	15339.38	11565.96	-10081.99	1758074.86	14435922.54	39°44'59.4795"N	80°34'53.8832"W	15343.34	318.921	0.64	0.11	0.63
23627.00	91.610	313.080	7397.85	15433.09	11630.59	-10150.19	1758006.69	14435987.14	39°45'0.1214"N	80°34'53.8832"W	15436.87	318.888	0.85	-0.27	-0.81
23722.00	91.830	313.740	7395.00	15527.79	11695.84	-10219.18	1757937.73	14436052.37	39°45'0.7695"N	80°34'54.7625"W	15531.40	318.855	0.73	0.23	0.69
23817.00	91.640	312.430	7392.12	15622.45	11760.70	-10288.52	1757868.41	14436117.21	39°45'1.4137"N	80°34'55.6465"W	15625.87	318.820	1.39	-0.20	-1.38
23911.00	91.730	313.500	7389.36	15716.09	11824.74	-10357.28	1757799.68	14436181.22	39°45'2.0497"N	80°34'56.5230"W	15719.34	318.785	1.14	0.10	1.14
24006.00	91.700	311.500	7386.52	15810.67	11888.89	-10427.29	1757729.70	14436245.34	39°45'2.6869"N	80°34'57.4155"W	15813.73	318.747	2.10	-0.03	-2.11
24101.00	91.580	311.960	7383.80	15905.13	11952.10	-10498.15	1757658.86	14436308.53	39°45'3.3148"N	80°34'58.3190"W	15907.98	318.705	0.50	-0.13	0.48
24195.00	91.700	312.650	7381.11	15998.68	12015.34	-10567.65	1757589.39	14436371.75	39°45'3.9430"N	80°34'59.2050"W	16001.36	318.668	0.74	0.13	0.73
24290.00	91.700	312.580	7378.29	16093.28	12079.63	-10637.53	1757519.54	14436436.02	39°45'4.5816"N	80°35'0.0958"W	16095.79	318.632	0.07	0.00	-0.07
24385.00	91.890	312.130	7375.31	16187.83	12143.61	-10707.70	1757449.40	14436499.96	39°45'5.2171"N	80°35'0.9904"W	16190.18	318.596	0.51	0.20	-0.47
24479.00	91.860	311.480	7372.24	16281.30	12206.23	-10777.73	1757379.39	14436562.57	39°45'5.8392"N	80°35'1.8833"W	16283.47	318.556	0.69	-0.03	-0.69
24574.00	91.730	311.070	7369.26	16375.67	12268.87	-10849.09	1757308.06	14436625.18	39°45'6.4615"N	80°35'2.7933"W	16377.66	318.514	0.45	-0.14	-0.43
24669.00	91.760	312.860	7366.37	16470.16	12332.36	-10919.69	1757237.48	14436688.65	39°45'7.0922"N	80°35'3.6934"W	16472.00	318.477	1.88	0.03	1.88
24763.00	91.610	311.820	7363.61	16563.72	12395.65	-10989.14	1757168.06	14436751.91	39°45'7.7208"N	80°35'4.5789"W	16565.42	318.442	1.12	-0.16	-1.11
24858.00	92.410	313.430	7360.27	16658.30	12459.94	-11059.00	1757098.23	14436816.17	39°45'8.3594"N	80°35'5.4694"W	16659.88	318.409	1.89	0.84	1.69
24953.00	92.290	312.750	7356.38	16752.92	12524.78	-11128.32	1757028.94	14436880.99	39°45'9.0034"N	80°35'6.3531"W	16754.39	318.379	0.73	-0.13	-0.72
25048.00	92.230	312.720	7352.63	16847.50	12589.20	-11198.04	1756959.24	14436945.39	39°45'9.6432"N	80°35'7.2420"W	16848.86	318.347	0.07	-0.06	-0.03
25142.00	92.350	312.250	7348.88	16941.05	12652.63	-11267.30	1756890.00	14437008.80	39°45'10.2733"N	80°35'8.1251"W	16942.29	318.315	0.52	0.13	-0.50
25237.00	92.410	312.340	7344.93	17035.56	12716.51	-11337.51	1756819.82	14437072.65	39°45'10.9077"N	80°35'9.0202"W	17036.69	318.281	0.11	0.06	0.09
25332.00	92.350	312.150	7340.99	17130.06	12780.32	-11407.78	1756749.58	14437136.44	39°45'11.5416"N	80°35'9.9161"W	17131.09	318.248	0.21	-0.06	-0.20
25426.00	92.350	313.110	7337.13	17223.62	12843.93	-11476.88	1756680.51	14437200.02	39°45'12.1734"N	80°35'10.7971"W	17224.56	318.217	1.02	0.00	1.02
25521.00	92.290	313.320	7333.29	17318.26	12908.93	-11546.06	1756611.36	14437264.99	39°45'12.8189"N	80°35'11.6790"W	17319.12	318.190	0.23	-0.06	0.22
25616.00	92.260	313.240	7329.51	17412.92	12974.01	-11615.16	1756542.28	14437330.05	39°45'13.4651"N	80°35'12.5599"W	17413.70	318.163	0.09	-0.03	-0.08
25710.00	92.290	313.240	7325.78	17506.57	13038.37	-11683.57	1756473.90	14437394.39	39°45'14.1044"N	80°35'13.4319"W	17507.28	318.137	0.05	0.03	0.04

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Facility	Vernon Johnson WTZ Pad	Wellbore	Vernon Johnson WTZ 1H AWB
Slot	Slot #1H		

WELLPATH DATA (323 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)
25805.00	92.320	312.830	7321.96	17601.19	13103.18	-11752.93	1756404.57	14437459.17	39°45'14.7480"N	80°35'14.3162"W	17601.83	318.109	0.47	0.03	-0.47
25900.00	92.290	313.440	7318.14	17695.82	13168.08	-11822.20	1756335.33	14437524.04	39°45'15.3925"N	80°35'15.1992"W	17696.40	318.083	0.64	-0.03	0.64
25995.00	92.350	313.260	7314.30	17790.48	13233.24	-11891.22	1756266.33	14437589.18	39°45'16.0396"N	80°35'16.0792"W	17791.00	318.058	0.20	0.06	-0.19
26089.00	92.410	313.160	7310.39	17884.12	13297.54	-11959.67	1756197.90	14437653.46	39°45'16.6782"N	80°35'16.9519"W	17884.59	318.032	0.12	0.06	-0.11
26184.00	92.320	313.290	7306.47	17978.76	13362.55	-12028.84	1756128.76	14437718.44	39°45'17.3238"N	80°35'17.8336"W	17979.17	318.007	0.17	-0.09	0.14
26279.00	92.350	313.900	7302.60	18073.45	13428.00	-12097.58	1756060.04	14437783.87	39°45'17.9738"N	80°35'18.7099"W	18073.81	317.984	0.64	0.03	0.64
26374.00	92.220	314.780	7298.81	18168.22	13494.34	-12165.47	1755992.18	14437850.19	39°45'18.6325"N	80°35'19.5753"W	18168.55	317.965	0.94	-0.14	0.93
26468.00	92.290	314.130	7295.11	18262.00	13560.13	-12232.52	1755925.16	14437915.94	39°45'19.2856"N	80°35'20.4299"W	18262.30	317.947	0.69	0.07	-0.69
26563.00	92.320	313.560	7291.29	18356.72	13625.88	-12300.98	1755856.73	14437981.67	39°45'19.9386"N	80°35'21.3026"W	18356.98	317.925	0.60	0.03	-0.60
26658.00	92.260	313.670	7287.50	18451.41	13691.36	-12369.70	1755788.03	14438047.12	39°45'20.5888"N	80°35'22.1787"W	18451.64	317.903	0.13	-0.06	0.12
26752.00	91.700	313.550	7284.25	18545.12	13756.16	-12437.72	1755720.04	14438111.90	39°45'21.2322"N	80°35'23.0458"W	18545.32	317.881	0.61	-0.60	-0.13
26847.00	91.700	312.460	7281.43	18639.77	13820.92	-12507.16	1755650.62	14438176.64	39°45'21.8754"N	80°35'23.9311"W	18639.93	317.857	1.15	0.00	-1.15
26942.00	91.820	313.720	7278.51	18734.43	13885.79	-12576.51	1755581.31	14438241.48	39°45'22.5196"N	80°35'24.8152"W	18734.56	317.833	1.33	0.13	1.33
27036.00	91.520	313.390	7275.77	18828.15	13950.53	-12644.60	1755513.24	14438306.20	39°45'23.1626"N	80°35'25.6833"W	18828.26	317.811	0.47	-0.32	-0.35
27131.00	91.460	313.540	7273.30	18922.87	14015.86	-12713.53	1755444.34	14438371.50	39°45'23.8113"N	80°35'26.5620"W	18922.95	317.789	0.17	-0.06	0.16
27226.00	91.390	313.320	7270.94	19017.59	14081.15	-12782.50	1755375.39	14438436.77	39°45'24.4596"N	80°35'27.4413"W	19017.65	317.768	0.24	-0.07	-0.23
27320.00	91.490	313.300	7268.58	19111.29	14145.61	-12850.87	1755307.04	14438501.20	39°45'25.0997"N	80°35'28.3131"W	19111.34	317.746	0.11	0.11	-0.02
27415.00	91.360	313.990	7266.22	19206.03	14211.16	-12919.60	1755238.35	14438566.72	39°45'25.7506"N	80°35'29.1892"W	19206.07	317.726	0.74	-0.14	0.73
27510.00	91.490	313.720	7263.85	19300.80	14276.96	-12988.08	1755169.89	14438632.50	39°45'26.4040"N	80°35'30.0622"W	19300.82	317.706	0.32	0.14	-0.28
27604.00	92.100	313.560	7260.91	19394.53	14341.80	-13056.07	1755101.92	14438697.31	39°45'27.0478"N	80°35'30.9291"W	19394.54	317.687	0.67	0.65	-0.17
27699.00	92.070	313.870	7257.45	19489.24	14407.40	-13124.69	1755033.33	14438762.89	39°45'27.6993"N	80°35'31.8039"W	19489.25	317.667	0.33	-0.03	0.33
27750.00	92.130	313.870	7255.59	19540.10	14442.73	-13161.43	1754996.60	14438798.20	39°45'28.0500"N	80°35'32.2723"W	19540.10	317.658	0.12	0.12	0.00
27775.00#	92.130	313.870	7254.66	19565.03	14460.04	-13179.44	1754978.60	14438815.51	39°45'28.2219"N	80°35'32.5019"W	19565.03	317.653	0.00	0.00	0.00

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Field	Wetzel			API/Legal			
Facility	Vernon Johnson WTZ Pad			Wellbore	Vernon Johnson WTZ 1H AWP		
Slot	Slot #1H						

HOLE & CASING SECTIONS - Ref Wellbore: Vernon Johnson WTZ 1H AWP Ref Wellpath: Vernon Johnson WTZ 1H AWP Proj: 27775'

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	-0.13	0.18
17.5in Open Hole	100.00	564.00	464.00	100.00	564.00	-0.13	0.18	-0.86	1.17
13.375in Casing Surface	26.00	564.00	538.00	26.00	564.00	0.00	0.00	-0.86	1.17
12.25in Open Hole	564.00	2940.00	2376.00	564.00	2939.37	-0.86	1.17	-32.63	10.59
9.625in Casing Intermediate	26.00	2940.00	2914.00	26.00	2939.37	0.00	0.00	-32.63	10.59
8.75in Open Hole	2940.00	6923.00	3983.00	2939.37	6682.48	-32.63	10.59	538.38	1159.21
8.5in Open Hole	6923.00	27775.00	20852.00	6682.48	7254.66	538.38	1159.21	14460.04	-13179.44
5.5in Casing Production	26.00	27775.00	27749.00	26.00	7254.66	0.00	0.00	14460.04	-13179.44

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Vernon Johnson WTZ 1H BHL Rev-7	7251.91	14430.28	-13212.68	1754945.37	14438785.76	39°45'27.9293"N	80°35'32.9292"W	point
Vernon Johnson WTZ 1H BHL Rev-6	7252.00	14451.83	-13189.07	1754988.98	14438807.30	39°45'28.1412"N	80°35'32.6256"W	point
Vernon Johnson WTZ 1H LP Rev-6	7669.38	1253.86	997.73	1769150.34	14425614.39	39°43'17.0331"N	80°32'31.8358"W	point
Vernon Johnson WTZ 1H LP Rev-7	7680.00	1253.86	997.73	1769150.34	14425614.39	39°43'17.0331"N	80°32'31.8358"W	point

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REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Well	Vernon Johnson WTZ 1H
Field	Wetzel	API/Legal	
Facility	Vernon Johnson WTZ Pad	Wellbore	Vernon Johnson WTZ 1H AWB
Slot	Slot #1H		

WELLPATH COMPOSITION - Ref Wellbore: Vernon Johnson WTZ 1H AWB Ref Wellpath: Vernon Johnson WTZ 1H AWP Proj: 27775'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
26.00	548.00	Gyrodata 2015 - GC+WIR+DPIPE	01_Gyrodata GC WYR Drillpipe <17 1/2"> (100'-548')	Vernon Johnson WTZ 1H AWB	12/10/2019
548.00	2878.00	OWSG MWD rev2 +HRGM + Multi-Station Correction	05_Superior QC MSA <12 1/4"> (620'-2878')	Vernon Johnson WTZ 1H AWB	12/11/2019
2878.00	6857.00	OWSG MWD rev2 +HRGM + Multi-Station Correction	06_Superior QC MSA <8 3/4"> (2974'-6857')	Vernon Johnson WTZ 1H AWB	12/11/2019
6857.00	27775.00	OWSG MWD rev2 +HRGM + Multi-Station Correction	07_BH AT Curve MSA Corrected <8 1/2"> (6913'-27750')	Vernon Johnson WTZ 1H AWB	12/13/2019

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REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Well	Vernon Johnson WTZ 1H
Field	Wetzel	API/Legal	
Facility	Vernon Johnson WTZ Pad	Wellbore	Vernon Johnson WTZ 1H AWB
Slot	Slot #1H		

COMMENTS

Wellpath general comments
 API: 47-103-03308-0000
 BH Job #: 110080380A
 Rig: SDC 46
 Duration: 12/11/2019 - 12/18/2019

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