



Actual Wellpath Report

William Ritchea WTZ 5H AWP Proj: 18318'
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 SEP 01 2021
 WV Department of
 Environmental Protection



REFERENCE WELLPATH IDENTIFICATION

Operator	SWN PRODUCTION COMPANY, LLC	Well	William Ritchea WTZ 5H
Field	Wetzel	API/Legal	
Facility	William Ritchea WTZ Pad	Wellbore	William Ritchea WTZ 5H AWB
Slot	Slot 5H		

REPORT SETUP INFORMATION

Projection System	NAD83 / UTM Zone 17 North, US feet	Software System	WellArchitect® 6.0
North Reference	Grid	User	Atenjen
Scale	0.999611	Report Generated	3/15/2021 at 10:18:50 AM
Convergence at slot	0.22° 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	-5.26	58.21	1736321.82	14406602.26	39°40'10.5130"N	80°39'33.0526"W
Facility Reference Pt			1736263.63	14406607.52	39°40'10.5672"N	80°39'33.7968"W
Field Reference Pt			0.00	0.00	0°00'0.0000"	85°29'19.4780"W

WELLPATH DATUM

Calculation method	Minimum curvature	SDC 41 (RKB) to Facility Vertical Datum	1588.80ft
Horizontal Reference Pt	Slot	SDC 41 (RKB) to Mean Sea Level	1588.80ft
Vertical Reference Pt	SDC 41 (RKB)	SDC 41 (RKB) to Ground Level at Slot (Slot 5H)	26.00ft
MD Reference Pt	SDC 41 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	312.83°

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WELLPATH DATA (205 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	260.720	0.00	0.00	0.00	0.00	1736321.82	14406602.26	39°40'10.5130"N	80°39'33.0526"W	0.00	0.000	0.00	0.00	0.00
26.00	0.000	260.720	26.00	0.00	0.00	0.00	1736321.82	14406602.26	39°40'10.5130"N	80°39'33.0526"W	0.00	0.000	0.00	0.00	0.00
131.00	0.600	260.720	131.00	0.34	-0.09	-0.54	1736321.28	14406602.17	39°40'10.5122"N	80°39'33.0596"W	0.55	260.720	0.57	0.57	0.00
223.00	0.590	255.810	222.99	0.89	-0.28	-1.48	1736320.34	14406601.98	39°40'10.5103"N	80°39'33.0715"W	1.50	259.175	0.06	-0.01	-5.30
313.00	0.340	250.280	312.99	1.27	-0.49	-2.18	1736319.64	14406601.77	39°40'10.5083"N	80°39'33.0805"W	2.23	257.416	0.28	-0.28	-6.10
405.00	0.480	264.180	404.99	1.65	-0.62	-2.82	1736319.00	14406601.64	39°40'10.5071"N	80°39'33.0887"W	2.88	257.644	0.19	0.15	15.10
496.00	0.600	227.350	495.98	1.94	-0.98	-3.55	1736318.27	14406601.28	39°40'10.5035"N	80°39'33.0980"W	3.68	254.576	0.40	0.13	-40.40
537.00	0.560	270.140	536.98	2.10	-1.12	-3.91	1736317.92	14406601.14	39°40'10.5021"N	80°39'33.1026"W	4.06	253.950	1.04	-0.10	104.30
677.00	0.510	223.530	676.98	2.61	-1.57	-5.02	1736316.80	14406600.69	39°40'10.4977"N	80°39'33.1169"W	5.26	252.591	0.30	-0.04	-33.20
765.00	0.170	70.680	764.98	2.55	-1.81	-5.17	1736316.66	14406600.45	39°40'10.4953"N	80°39'33.1188"W	5.48	250.646	0.76	-0.39	-173.60
855.00	1.040	60.440	854.97	2.25	-1.37	-4.33	1736317.49	14406600.89	39°40'10.4997"N	80°39'33.1080"W	4.54	252.471	0.97	0.97	-11.30
944.00	2.790	44.600	943.92	1.93	0.57	-2.11	1736319.72	14406602.83	39°40'10.5188"N	80°39'33.0795"W	2.18	285.234	2.04	1.97	-17.80
1034.00	4.350	44.190	1033.74	1.79	4.58	1.81	1736323.63	14406606.84	39°40'10.5583"N	80°39'33.0292"W	4.93	21.578	1.73	1.73	-0.40
1123.00	5.200	44.600	1122.43	1.58	9.87	7.00	1736328.81	14406612.13	39°40'10.6104"N	80°39'32.9627"W	12.10	35.323	0.96	0.96	0.40
1213.00	5.650	43.630	1212.03	1.39	15.98	12.92	1736334.73	14406618.24	39°40'10.6705"N	80°39'32.8867"W	20.55	38.943	0.51	0.50	-1.00
1303.00	6.010	37.070	1301.56	1.80	22.95	18.81	1736340.63	14406625.20	39°40'10.7391"N	80°39'32.8109"W	29.68	39.345	0.84	0.40	-7.20
1392.00	6.680	37.620	1390.02	2.74	30.77	24.78	1736346.59	14406633.02	39°40'10.8162"N	80°39'32.7342"W	39.51	38.851	0.76	0.75	0.60
1482.00	7.710	40.810	1479.31	3.43	39.48	31.92	1736353.73	14406641.73	39°40'10.9021"N	80°39'32.6425"W	50.77	38.957	1.23	1.14	3.50
1573.00	8.340	45.380	1569.42	3.35	48.74	40.61	1736362.41	14406650.98	39°40'10.9932"N	80°39'32.5309"W	63.44	39.802	0.98	0.69	5.00
1661.00	8.630	55.640	1656.46	1.60	56.95	50.60	1736372.40	14406659.19	39°40'11.0740"N	80°39'32.4027"W	76.18	41.624	1.75	0.33	11.60
1751.00	8.780	62.150	1745.42	-2.17	63.97	62.25	1736384.05	14406666.20	39°40'11.1429"N	80°39'32.2534"W	89.26	44.221	1.11	0.17	7.20
1842.00	9.290	72.820	1835.30	-8.14	69.38	75.41	1736397.20	14406671.62	39°40'11.1959"N	80°39'32.0849"W	102.47	47.384	1.92	0.56	11.70
1932.00	9.330	86.470	1924.13	-16.80	71.98	89.63	1736411.42	14406674.21	39°40'11.2210"N	80°39'31.9029"W	114.96	51.235	2.45	0.04	15.10
2025.00	9.610	97.350	2015.87	-28.33	71.45	104.86	1736426.64	14406673.68	39°40'11.2152"N	80°39'31.7082"W	126.89	55.730	1.95	0.30	11.70
2113.00	9.480	101.450	2102.65	-40.50	69.07	119.25	1736441.02	14406671.30	39°40'11.1912"N	80°39'31.5243"W	137.81	59.919	0.79	-0.15	4.60
2203.00	9.370	102.490	2191.43	-53.15	66.02	133.66	1736455.43	14406668.25	39°40'11.1604"N	80°39'31.3401"W	149.08	63.716	0.23	-0.12	1.10
2293.00	9.530	104.120	2280.21	-66.00	62.61	148.04	1736469.80	14406664.85	39°40'11.1263"N	80°39'31.1564"W	160.74	67.074	0.35	0.18	1.80
2382.00	10.090	100.960	2367.91	-79.09	59.33	162.84	1736484.60	14406661.57	39°40'11.0933"N	80°39'30.9673"W	173.31	69.980	0.87	0.63	-3.50
2472.00	10.020	100.110	2456.53	-92.37	56.46	178.29	1736500.04	14406658.70	39°40'11.0643"N	80°39'30.7699"W	187.02	72.428	0.18	-0.08	-0.90
2561.00	10.110	100.220	2544.16	-105.46	53.72	193.60	1736515.34	14406655.95	39°40'11.0366"N	80°39'30.5742"W	200.91	74.493	0.10	0.10	0.10



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WELLPATH DATA (205 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]
2652.00	10.330	101.840	2633.72	-119.19	50.62	209.45	1736531.18	14406652.86	39°40'11.0055"N	80°39'30.3717"W	215.48	76.412	0.40	0.24	1.7
2742.00	10.610	101.420	2722.22	-133.18	47.33	225.46	1736547.20	14406649.57	39°40'10.9723"N	80°39'30.1670"W	230.38	78.145	0.32	0.31	-0.4
2835.00	10.820	102.100	2813.60	-147.99	43.80	242.39	1736564.12	14406646.05	39°40'10.9368"N	80°39'29.9507"W	246.32	79.757	0.26	0.23	0.7
2896.00	10.630	100.790	2873.53	-157.68	41.55	253.52	1736575.24	14406643.79	39°40'10.9141"N	80°39'29.8086"W	256.90	80.692	0.51	-0.31	-2.1
3004.00	9.830	94.960	2979.81	-173.40	38.89	272.49	1736594.20	14406641.13	39°40'10.8871"N	80°39'29.5661"W	275.25	81.878	1.21	-0.74	-5.4
3048.00	9.830	92.660	3023.17	-179.23	38.39	279.98	1736601.69	14406640.63	39°40'10.8819"N	80°39'29.4703"W	282.60	82.193	0.89	0.00	-5.2
3138.00	10.280	97.060	3111.79	-191.62	37.04	295.63	1736617.33	14406639.29	39°40'10.8680"N	80°39'29.2703"W	297.94	82.858	0.99	0.50	4.8
3225.00	10.630	95.840	3197.34	-204.33	35.27	311.31	1736633.01	14406637.52	39°40'10.8500"N	80°39'29.0698"W	313.30	83.536	0.48	0.40	-1.4
3311.00	10.520	97.330	3281.88	-217.06	33.47	326.99	1736648.68	14406635.71	39°40'10.8315"N	80°39'28.8694"W	328.70	84.156	0.34	-0.13	1.7
3402.00	11.200	105.590	3371.26	-231.68	30.03	343.74	1736665.43	14406632.28	39°40'10.7969"N	80°39'28.6553"W	345.05	85.007	1.86	0.75	9.0
3494.00	11.010	106.840	3461.54	-247.52	25.08	360.76	1736682.44	14406627.33	39°40'10.7474"N	80°39'28.4380"W	361.63	86.023	0.33	-0.21	1.3
3586.00	10.740	101.860	3551.89	-262.77	20.78	377.56	1736699.23	14406623.03	39°40'10.7042"N	80°39'28.2234"W	378.13	86.850	1.06	-0.29	-5.4
3676.00	10.210	97.420	3640.39	-276.46	18.02	393.67	1736715.34	14406620.28	39°40'10.6764"N	80°39'28.0174"W	394.09	87.379	1.07	-0.59	-4.9
3767.00	11.140	98.510	3729.81	-290.29	15.68	410.37	1736732.02	14406617.93	39°40'10.6526"N	80°39'27.8040"W	410.66	87.812	1.05	1.02	1.2
3858.00	11.310	94.810	3819.07	-304.58	13.63	427.95	1736749.60	14406615.89	39°40'10.6317"N	80°39'27.5792"W	428.17	88.176	0.81	0.19	-4.0
3950.00	11.510	101.930	3909.26	-319.57	10.98	445.92	1736767.57	14406613.23	39°40'10.6048"N	80°39'27.3496"W	446.06	88.590	1.55	0.22	7.7
4041.00	10.460	99.380	3998.59	-334.25	7.75	462.96	1736784.59	14406610.01	39°40'10.5723"N	80°39'27.1319"W	463.02	89.040	1.27	-1.15	-2.8
4133.00	9.420	93.340	4089.21	-347.03	5.95	478.71	1736800.35	14406608.21	39°40'10.5539"N	80°39'26.9305"W	478.75	89.287	1.60	-1.13	-6.5
4225.00	11.070	96.960	4179.74	-360.00	4.45	495.00	1736816.62	14406606.70	39°40'10.5384"N	80°39'26.7223"W	495.02	89.485	1.92	1.79	3.9
4316.00	11.600	102.960	4268.97	-375.01	1.33	512.59	1736834.21	14406603.59	39°40'10.5070"N	80°39'26.4975"W	512.59	89.851	1.42	0.58	6.5
4409.00	11.470	99.100	4360.09	-390.81	-2.22	530.83	1736852.44	14406600.04	39°40'10.4711"N	80°39'26.2644"W	530.83	90.240	0.84	-0.14	-4.1
4500.00	11.390	93.960	4449.29	-405.33	-4.28	548.73	1736870.33	14406597.99	39°40'10.4501"N	80°39'26.0356"W	548.74	90.446	1.12	-0.09	-5.6
4593.00	9.860	97.980	4540.69	-419.01	-6.02	565.78	1736887.37	14406596.25	39°40'10.4323"N	80°39'25.8177"W	565.81	90.609	1.83	-1.65	4.3
4686.00	9.300	94.390	4632.40	-431.44	-7.70	581.15	1736902.75	14406594.57	39°40'10.4151"N	80°39'25.6211"W	581.20	90.759	0.88	-0.60	-3.8
4776.00	9.270	98.960	4721.22	-443.15	-9.38	595.57	1736917.15	14406592.88	39°40'10.3979"N	80°39'25.4369"W	595.64	90.903	0.82	-0.03	5.0
4869.00	8.250	96.580	4813.13	-454.75	-11.31	609.59	1736931.17	14406590.95	39°40'10.3783"N	80°39'25.2576"W	609.70	91.063	1.16	-1.10	-2.5
4959.00	7.950	98.880	4902.24	-465.12	-13.01	622.16	1736943.73	14406589.25	39°40'10.3610"N	80°39'25.0970"W	622.29	91.198	0.49	-0.33	2.5
5052.00	9.570	110.130	4994.15	-477.59	-16.67	635.77	1736957.34	14406585.60	39°40'10.3244"N	80°39'24.9231"W	635.99	91.502	2.53	1.74	12.1
5144.00	11.240	103.470	5084.64	-492.46	-21.39	651.67	1736973.24	14406580.88	39°40'10.2771"N	80°39'24.7200"W	652.02	91.880	2.23	1.82	-7.2
5236.00	10.040	94.310	5175.06	-506.55	-24.08	668.39	1736989.95	14406578.19	39°40'10.2499"N	80°39'24.5063"W	668.83	92.063	2.25	-1.30	-9.9

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5327.00	10.570	96.100	5264.60	-519.45	-25.56	684.60	1737006.15	14406576.71	39°40'10.2346"N	80°39'24.2991"W	685.08	92.138	0.68	0.58	1.9
5420.00	10.980	99.530	5355.96	-533.69	-27.94	701.82	1737023.36	14406574.33	39°40'10.2105"N	80°39'24.0791"W	702.37	92.280	0.82	0.44	3.6
5513.00	9.980	93.320	5447.41	-547.31	-29.87	718.60	1737040.14	14406572.40	39°40'10.1908"N	80°39'23.8646"W	719.22	92.380	1.62	-1.08	-6.6
5605.00	9.280	100.480	5538.11	-559.72	-31.68	733.85	1737055.38	14406570.59	39°40'10.1723"N	80°39'23.6696"W	734.53	92.472	1.51	-0.76	7.7
5698.00	9.510	96.290	5629.87	-572.23	-33.89	748.86	1737070.39	14406568.39	39°40'10.1499"N	80°39'23.4777"W	749.63	92.591	0.78	0.25	-4.5
5791.00	9.510	96.730	5721.59	-584.61	-35.63	764.13	1737085.65	14406566.65	39°40'10.1322"N	80°39'23.2826"W	764.96	92.670	0.08	0.00	0.4
5884.00	9.550	98.240	5813.31	-597.17	-37.63	779.39	1737100.91	14406564.64	39°40'10.1117"N	80°39'23.0875"W	780.30	92.764	0.27	0.04	1.6
5976.00	10.710	100.240	5903.87	-610.66	-40.25	795.36	1737116.87	14406562.03	39°40'10.0853"N	80°39'22.8834"W	796.38	92.897	1.32	1.26	2.1
6069.00	11.430	106.060	5995.14	-626.17	-44.33	812.72	1737134.22	14406557.94	39°40'10.0443"N	80°39'22.6616"W	813.93	93.122	1.43	0.77	6.2
6161.00	10.390	101.550	6085.48	-641.40	-48.52	829.61	1737151.10	14406553.76	39°40'10.0023"N	80°39'22.4459"W	831.02	93.347	1.46	-1.13	-4.9
6254.00	11.100	97.750	6176.85	-655.89	-51.40	846.69	1737168.18	14406550.88	39°40'9.9731"N	80°39'22.2275"W	848.25	93.474	1.08	0.76	-4.0
6347.00	10.780	93.500	6268.16	-669.94	-53.14	864.25	1737185.73	14406549.14	39°40'9.9553"N	80°39'22.0031"W	865.88	93.519	0.93	-0.34	-4.5
6438.00	9.490	87.290	6357.74	-681.78	-53.31	880.24	1737201.71	14406548.97	39°40'9.9530"N	80°39'21.7987"W	881.85	93.466	1.86	-1.42	-6.8
6531.00	9.550	92.740	6449.46	-693.05	-53.31	895.60	1737217.07	14406548.97	39°40'9.9524"N	80°39'21.6022"W	897.19	93.407	0.97	0.06	5.8
6622.00	8.770	89.710	6539.30	-703.89	-53.64	910.08	1737231.54	14406548.64	39°40'9.9486"N	80°39'21.4171"W	911.66	93.373	1.01	-0.86	-3.3
6708.00	7.740	87.250	6624.41	-712.73	-53.33	922.42	1737243.88	14406548.95	39°40'9.9512"N	80°39'21.2592"W	923.96	93.309	1.27	-1.20	-2.8
6798.00	7.080	72.410	6713.67	-719.71	-51.36	933.76	1737255.21	14406550.92	39°40'9.9703"N	80°39'21.1141"W	935.17	93.148	2.24	-0.73	-16.4
6891.00	7.420	25.330	6806.00	-720.74	-44.19	941.80	1737263.25	14406558.08	39°40'10.0408"N	80°39'21.0109"W	942.84	92.687	6.22	0.37	-50.6
6984.00	9.780	345.490	6898.03	-712.27	-31.11	942.39	1737263.84	14406571.17	39°40'10.1701"N	80°39'21.0027"W	942.90	91.891	6.72	2.54	-42.8
7075.00	14.340	330.580	6987.02	-695.02	-13.80	934.91	1737256.37	14406588.47	39°40'10.3415"N	80°39'21.0975"W	935.01	90.845	6.03	5.01	-16.3
7167.00	20.750	328.720	7074.69	-668.47	10.08	920.84	1737242.30	14406612.34	39°40'10.5780"N	80°39'21.2763"W	920.89	89.373	6.99	6.97	-2.0
7259.00	26.260	319.080	7159.06	-632.52	39.42	899.02	1737220.49	14406641.67	39°40'10.8688"N	80°39'21.5539"W	899.89	87.489	7.29	5.99	-10.4
7351.00	32.400	318.080	7239.23	-587.70	73.17	869.20	1737190.67	14406675.41	39°40'11.2035"N	80°39'21.9337"W	872.27	85.188	6.69	6.67	-1.0
7443.00	38.360	318.470	7314.20	-534.70	112.92	833.77	1737155.26	14406715.14	39°40'11.5976"N	80°39'22.3847"W	841.38	82.287	6.48	6.48	0.4
7534.00	46.880	317.060	7381.11	-473.36	158.46	792.34	1737113.85	14406760.66	39°40'12.0492"N	80°39'22.9123"W	808.03	78.691	9.42	9.36	-1.5
7626.00	56.200	315.370	7438.27	-401.53	210.36	742.50	1737064.03	14406812.54	39°40'12.5640"N	80°39'23.5471"W	771.73	74.182	10.23	10.13	-1.8
7718.00	66.120	313.380	7482.59	-321.07	266.60	684.93	1737006.48	14406868.75	39°40'13.1220"N	80°39'24.2806"W	734.99	68.732	10.95	10.78	-2.1
7811.00	74.400	312.270	7513.98	-233.61	326.03	620.77	1736942.35	14406928.16	39°40'13.7118"N	80°39'25.0982"W	701.18	62.291	8.97	8.90	-1.1
7903.00	78.540	311.690	7535.50	-144.20	385.84	554.29	1736875.89	14406987.95	39°40'14.3054"N	80°39'25.9454"W	675.36	55.158	4.54	4.50	-0.6
7994.00	81.860	311.740	7550.98	-54.55	445.50	487.36	1736808.99	14407047.59	39°40'14.8975"N	80°39'26.7984"W	660.30	47.569	3.65	3.65	0.0

REFERENCE WELLPATH IDENTIFICATION

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Field	Wetzel	API/Legal	
Facility	William Ritchea Wtz Pad	Wellbore	William Ritchea Wtz 5H AWB
Slot	Slot 5H		

WELLPATH DATA (205 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]
8085.00	85.850	311.930	7560.72	35.89	505.84	419.97	1736741.62	14407107.90	39°40'15.4964"N	80°39'27.6574"W	657.45	39.701	4.39	4.38	0.2
8175.00	91.120	311.490	7563.10	125.81	565.68	352.83	1736674.51	14407167.72	39°40'16.0903"N	80°39'28.5131"W	666.69	31.953	5.88	5.86	-0.4
8266.00	91.180	311.800	7561.27	216.77	626.14	284.84	1736606.55	14407228.15	39°40'16.6903"N	80°39'29.3796"W	687.88	24.461	0.35	0.07	0.3
8357.00	91.550	311.920	7559.11	307.73	686.85	217.08	1736538.82	14407288.84	39°40'17.2929"N	80°39'30.2431"W	720.34	17.540	0.43	0.41	0.1
8449.00	91.490	312.110	7556.67	399.69	748.40	148.75	1736470.52	14407350.37	39°40'17.9038"N	80°39'31.1139"W	763.04	11.242	0.22	-0.07	0.2
8538.00	91.120	312.510	7554.64	488.66	808.30	82.95	1736404.74	14407410.24	39°40'18.4982"N	80°39'31.9525"W	812.54	5.860	0.61	-0.42	0.4
8630.00	91.370	312.380	7552.64	580.64	870.37	15.08	1736336.90	14407472.29	39°40'19.1142"N	80°39'32.8175"W	870.50	0.993	0.31	0.27	-0.1
8722.00	91.890	311.720	7550.02	672.59	931.96	-53.21	1736268.63	14407533.86	39°40'19.7255"N	80°39'33.6878"W	933.48	356.733	0.91	0.57	-0.7
8814.00	92.140	312.570	7546.79	764.53	993.66	-121.38	1736200.49	14407595.53	39°40'20.3377"N	80°39'34.5566"W	1001.04	353.036	0.96	0.27	0.9
8906.00	90.750	312.580	7544.47	856.50	1055.88	-189.10	1736132.79	14407657.73	39°40'20.9552"N	80°39'35.4197"W	1072.68	349.846	1.51	-1.51	0.0
8998.00	91.240	312.230	7542.87	948.48	1117.91	-257.02	1736064.90	14407719.74	39°40'21.5708"N	80°39'36.2853"W	1147.08	347.052	0.65	0.53	-0.3
9089.00	92.140	311.530	7540.19	1039.43	1178.63	-324.75	1735997.20	14407780.43	39°40'22.1734"N	80°39'37.1485"W	1222.55	344.596	1.25	0.99	-0.7
9179.00	91.670	312.510	7537.19	1129.37	1238.85	-391.57	1735930.40	14407840.62	39°40'22.7710"N	80°39'38.0001"W	1299.26	342.459	1.21	-0.52	1.0
9270.00	90.970	313.440	7535.10	1220.34	1300.86	-458.13	1735863.87	14407902.61	39°40'23.3864"N	80°39'38.8484"W	1379.18	340.599	1.28	-0.77	1.0
9361.00	90.840	313.130	7533.66	1311.33	1363.25	-524.37	1735797.66	14407964.97	39°40'24.0054"N	80°39'39.6924"W	1460.62	338.961	0.37	-0.14	-0.3
9453.00	91.550	313.100	7531.74	1403.30	1426.11	-591.51	1735730.54	14408027.81	39°40'24.6292"N	80°39'40.5481"W	1543.92	337.473	0.77	0.77	-0.0
9545.00	91.060	313.950	7529.65	1495.27	1489.45	-658.20	1735663.88	14408091.13	39°40'25.2576"N	80°39'41.3979"W	1628.40	336.159	1.07	-0.53	0.9
9635.00	90.470	312.930	7528.45	1585.26	1551.33	-723.54	1735598.56	14408152.98	39°40'25.8716"N	80°39'42.2306"W	1711.76	334.996	1.31	-0.66	-1.1
9727.00	91.640	312.960	7526.75	1677.24	1613.99	-790.87	1735531.26	14408215.62	39°40'26.4934"N	80°39'43.0887"W	1797.35	333.895	1.27	1.27	0.0
9818.00	90.410	314.320	7525.12	1768.21	1676.78	-856.72	1735465.44	14408278.39	39°40'27.1164"N	80°39'43.9277"W	1882.97	332.936	2.01	-1.35	1.4
9908.00	91.000	313.400	7524.02	1858.19	1739.14	-921.60	1735400.58	14408340.72	39°40'27.7351"N	80°39'44.7545"W	1968.24	332.080	1.21	0.66	-1.0
9998.00	90.940	313.480	7522.49	1948.17	1801.01	-986.94	1735335.26	14408402.57	39°40'28.3490"N	80°39'45.5872"W	2053.70	331.278	0.11	-0.07	0.0
10090.00	90.720	313.330	7521.16	2040.16	1864.22	-1053.77	1735268.46	14408465.75	39°40'28.9762"N	80°39'46.4389"W	2141.44	330.522	0.29	-0.24	-0.1
10180.00	91.770	313.340	7519.20	2130.13	1925.97	-1119.22	1735203.04	14408527.48	39°40'29.5888"N	80°39'47.2729"W	2227.56	329.838	1.17	1.17	0.0
10272.00	91.180	313.450	7516.84	2222.10	1989.16	-1186.05	1735136.24	14408590.64	39°40'30.2158"N	80°39'48.1245"W	2315.91	329.194	0.65	-0.64	0.1
10364.00	91.240	315.060	7514.89	2314.04	2053.34	-1251.92	1735070.39	14408654.80	39°40'30.8525"N	80°39'48.9640"W	2404.90	328.629	1.75	0.07	1.7
10455.00	90.720	312.540	7513.34	2405.01	2116.31	-1317.59	1735004.75	14408717.75	39°40'31.4773"N	80°39'49.8007"W	2492.96	328.094	2.83	-0.57	-2.7
10547.00	91.670	312.670	7511.42	2496.99	2178.58	-1385.29	1734937.07	14408779.99	39°40'32.0951"N	80°39'50.6636"W	2581.71	327.549	1.04	1.03	0.1
10637.00	91.740	313.580	7508.74	2586.95	2240.07	-1450.95	1734871.44	14408841.46	39°40'32.7053"N	80°39'51.5004"W	2668.93	327.068	1.01	0.08	1.0
10729.00	91.610	313.950	7506.05	2678.89	2303.68	-1517.36	1734805.05	14408905.04	39°40'33.3364"N	80°39'52.3467"W	2758.50	326.628	0.43	-0.14	0.4

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Slot	Slot 5H		

WELLPATH DATA (205 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]
10819.00	92.140	312.710	7503.11	2768.84	2365.41	-1582.79	1734739.65	14408966.74	39°40'33.9488"N	80°39'53.1805"W	2846.12	326.212	1.50	0.59	-1.30
10910.00	91.830	313.320	7499.95	2859.79	2427.45	-1649.29	1734673.18	14409028.76	39°40'34.5644"N	80°39'54.0280"W	2934.73	325.807	0.75	-0.34	0.60
11001.00	91.000	313.600	7497.71	2950.75	2490.02	-1715.32	1734607.17	14409091.31	39°40'35.1853"N	80°39'54.8696"W	3023.66	325.438	0.96	-0.91	0.30
11094.00	91.610	313.670	7495.59	3043.72	2554.18	-1782.61	1734539.91	14409155.44	39°40'35.8218"N	80°39'55.7271"W	3114.73	325.088	0.66	0.66	0.00
11185.00	90.470	312.720	7493.94	3134.70	2616.46	-1848.94	1734473.60	14409217.69	39°40'36.4397"N	80°39'56.5724"W	3203.81	324.753	1.63	-1.25	-1.00
11275.00	90.780	313.550	7492.96	3224.69	2677.99	-1914.61	1734407.96	14409279.20	39°40'37.0502"N	80°39'57.4094"W	3292.01	324.437	0.98	0.34	0.90
11366.00	90.070	312.630	7492.28	3315.69	2740.15	-1981.06	1734341.53	14409341.34	39°40'37.6670"N	80°39'58.2564"W	3381.28	324.134	1.28	-0.78	-1.00
11458.00	92.290	313.890	7490.39	3407.66	2803.18	-2048.04	1734274.58	14409404.34	39°40'38.2924"N	80°39'59.1100"W	3471.64	323.848	2.77	2.41	1.30
11547.00	91.180	313.930	7487.69	3496.60	2864.88	-2112.13	1734210.52	14409466.01	39°40'38.9045"N	80°39'59.9267"W	3559.30	323.600	1.25	-1.25	0.00
11640.00	92.040	314.330	7485.08	3589.54	2929.60	-2178.86	1734143.82	14409530.72	39°40'39.5466"N	80°40'0.7770"W	3651.03	323.360	1.02	0.92	0.40
11731.00	89.890	311.180	7483.55	3680.51	2991.36	-2245.65	1734077.05	14409592.45	39°40'40.1594"N	80°40'1.6284"W	3740.48	323.104	4.19	-2.36	-3.40
11823.00	91.950	313.380	7482.07	3772.48	3053.24	-2313.70	1734009.02	14409654.30	39°40'40.7734"N	80°40'2.4958"W	3830.86	322.846	3.28	2.24	2.30
11915.00	91.860	313.060	7479.01	3864.43	3116.21	-2380.71	1733942.04	14409717.25	39°40'41.3982"N	80°40'3.3498"W	3921.55	322.621	0.36	-0.10	-0.30
12008.00	91.920	313.300	7475.94	3957.37	3179.81	-2448.49	1733874.29	14409780.82	39°40'42.0292"N	80°40'4.2137"W	4013.26	322.403	0.27	0.06	0.20
12099.00	91.980	313.050	7472.85	4048.32	3242.04	-2514.81	1733807.99	14409843.03	39°40'42.6467"N	80°40'5.0590"W	4103.06	322.200	0.28	0.07	-0.20
12192.00	90.970	312.790	7470.45	4141.29	3305.35	-2582.90	1733739.94	14409906.31	39°40'43.2748"N	80°40'5.9268"W	4194.84	321.995	1.12	-1.09	-0.20
12283.00	90.660	313.180	7469.16	4232.28	3367.39	-2649.46	1733673.40	14409968.33	39°40'43.8904"N	80°40'6.7752"W	4284.73	321.804	0.55	-0.34	0.40
12376.00	90.200	313.170	7468.46	4325.27	3431.02	-2717.28	1733605.61	14410031.93	39°40'44.5217"N	80°40'7.6396"W	4376.70	321.622	0.49	-0.49	-0.00
12468.00	90.870	313.460	7467.60	4417.27	3494.13	-2784.21	1733538.70	14410095.02	39°40'45.1478"N	80°40'8.4927"W	4467.75	321.451	0.79	0.73	0.30
12560.00	91.980	312.770	7465.31	4509.23	3556.98	-2851.35	1733471.59	14410157.85	39°40'45.7715"N	80°40'9.3484"W	4558.76	321.284	1.42	1.21	-0.70
12652.00	89.730	311.470	7463.94	4601.21	3618.68	-2919.58	1733403.39	14410219.52	39°40'46.3837"N	80°40'10.2181"W	4649.60	321.103	2.82	-2.45	-1.40
12745.00	91.670	313.490	7462.80	4694.19	3681.47	-2988.15	1733334.84	14410282.29	39°40'47.0067"N	80°40'11.0923"W	4741.55	320.935	3.01	2.09	2.10
12837.00	90.470	312.960	7461.09	4786.17	3744.46	-3055.18	1733267.84	14410345.26	39°40'47.6317"N	80°40'11.9465"W	4832.71	320.788	1.43	-1.30	-0.50
12928.00	91.890	313.270	7459.21	4877.15	3806.65	-3121.59	1733201.45	14410407.42	39°40'48.2487"N	80°40'12.7930"W	4922.89	320.647	1.60	1.56	0.30
13019.00	91.180	314.400	7456.77	4968.10	3869.65	-3187.21	1733135.86	14410470.39	39°40'48.8737"N	80°40'13.6293"W	5013.23	320.524	1.47	-0.78	1.20
13110.00	91.430	314.640	7454.70	5059.04	3933.44	-3252.07	1733071.02	14410534.16	39°40'49.5064"N	80°40'14.4560"W	5103.71	320.417	0.38	0.27	0.20
13203.00	90.600	314.760	7453.05	5151.97	3998.84	-3318.17	1733004.95	14410599.53	39°40'50.1552"N	80°40'15.2982"W	5196.24	320.315	0.90	-0.89	0.10
13291.00	90.870	314.510	7451.93	5239.92	4060.66	-3380.78	1732942.36	14410661.33	39°40'50.7685"N	80°40'16.0962"W	5283.81	320.220	0.42	0.31	-0.20
13384.00	90.840	315.160	7450.54	5332.85	4126.23	-3446.72	1732876.44	14410726.87	39°40'51.4188"N	80°40'16.9366"W	5376.40	320.127	0.70	-0.03	0.70
13474.00	91.580	313.940	7448.64	5422.79	4189.35	-3510.85	1732812.35	14410789.97	39°40'52.0450"N	80°40'17.7537"W	5465.96	320.036	1.59	0.82	-1.30

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Slot	Slot 5H		

WELLPATH DATA (205 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]
13566.00	91.150	315.740	7446.45	5514.70	4254.20	-3576.06	1732747.16	14410854.79	39°40'52.6882"N	80°40'18.5848"W	5557.55	319.950	2.01	-0.47	1.90
13654.00	91.800	314.240	7444.18	5602.61	4316.39	-3638.27	1732684.97	14410916.96	39°40'53.3051"N	80°40'19.3776"W	5645.20	319.873	1.86	0.74	-1.70
13744.00	91.060	314.660	7441.93	5692.54	4379.40	-3702.50	1732620.77	14410979.94	39°40'53.9301"N	80°40'20.1962"W	5734.77	319.788	0.95	-0.82	0.40
13833.00	90.630	313.660	7440.62	5781.51	4441.39	-3766.34	1732556.95	14411041.91	39°40'54.5451"N	80°40'21.0098"W	5823.34	319.702	1.22	-0.48	-1.10
13922.00	89.980	314.330	7440.15	5870.49	4503.21	-3830.37	1732492.95	14411103.71	39°40'55.1583"N	80°40'21.8258"W	5911.90	319.616	1.05	-0.73	0.70
14010.00	90.440	314.370	7439.83	5958.46	4564.72	-3893.29	1732430.05	14411165.20	39°40'55.7685"N	80°40'22.6278"W	5999.54	319.539	0.52	0.52	0.00
14100.00	90.320	314.370	7439.23	6048.42	4627.66	-3957.63	1732365.74	14411228.11	39°40'56.3928"N	80°40'23.4477"W	6089.17	319.463	0.13	-0.13	0.00
14192.00	90.600	314.400	7438.49	6140.38	4692.01	-4023.37	1732300.02	14411292.43	39°40'57.0311"N	80°40'24.2857"W	6180.82	319.387	0.31	0.30	0.00
14283.00	89.890	313.910	7438.10	6231.36	4755.40	-4088.66	1732234.76	14411355.80	39°40'57.6600"N	80°40'25.1178"W	6271.44	319.311	0.95	-0.78	-0.50
14374.00	90.200	313.620	7438.03	6322.35	4818.34	-4154.38	1732169.07	14411418.72	39°40'58.2844"N	80°40'25.9554"W	6362.02	319.232	0.47	0.34	-0.30
14467.00	90.440	313.830	7437.51	6415.33	4882.62	-4221.59	1732101.89	14411482.97	39°40'58.9221"N	80°40'26.8121"W	6454.59	319.153	0.34	0.26	0.20
14558.00	91.460	314.410	7436.00	6506.30	4945.96	-4286.90	1732036.60	14411546.29	39°40'59.5504"N	80°40'27.6446"W	6545.23	319.083	1.29	1.12	0.60
14647.00	91.890	313.860	7433.40	6595.23	5007.91	-4350.75	1731972.77	14411608.21	39°41'0.1649"N	80°40'28.4584"W	6633.87	319.017	0.78	0.48	-0.60
14738.00	90.720	313.980	7431.33	6686.19	5071.02	-4416.28	1731907.27	14411671.29	39°41'0.7909"N	80°40'29.2936"W	6724.49	318.948	1.29	-1.29	0.10
14831.00	90.380	313.800	7430.43	6779.17	5135.49	-4483.30	1731840.28	14411735.74	39°41'1.4305"N	80°40'30.1478"W	6817.13	318.879	0.41	-0.37	-0.10
14920.00	91.120	314.620	7429.27	6868.14	5197.54	-4547.09	1731776.51	14411797.77	39°41'2.0460"N	80°40'30.9609"W	6905.83	318.819	1.24	0.83	0.90
15010.00	91.090	313.710	7427.53	6958.09	5260.24	-4611.63	1731711.99	14411860.44	39°41'2.6679"N	80°40'31.7836"W	6995.52	318.759	1.01	-0.03	-1.00
15101.00	91.120	314.240	7425.78	7049.06	5323.41	-4677.11	1731646.54	14411923.58	39°41'3.2946"N	80°40'32.6181"W	7086.19	318.698	0.58	0.03	0.50
15191.00	91.210	314.370	7423.95	7139.01	5386.26	-4741.50	1731582.17	14411986.41	39°41'3.9180"N	80°40'33.4389"W	7175.91	318.643	0.18	0.10	0.10
15283.00	91.240	314.450	7421.98	7230.95	5450.62	-4807.21	1731516.49	14412050.75	39°41'4.5565"N	80°40'34.2763"W	7267.64	318.589	0.09	0.03	0.00
15372.00	90.660	313.870	7420.51	7319.92	5512.62	-4871.05	1731452.68	14412112.72	39°41'5.1714"N	80°40'35.0900"W	7356.36	318.536	0.92	-0.65	-0.60
15464.00	90.660	312.760	7419.45	7411.91	5575.73	-4937.98	1731385.77	14412175.80	39°41'5.7975"N	80°40'35.9433"W	7447.98	318.471	1.21	0.00	-1.20
15554.00	91.520	313.380	7417.74	7501.89	5637.17	-5003.71	1731320.06	14412237.23	39°41'6.4071"N	80°40'36.7812"W	7537.57	318.407	1.18	0.96	0.60
15645.00	91.030	313.770	7415.71	7592.86	5699.88	-5069.63	1731254.18	14412299.91	39°41'7.0292"N	80°40'37.6214"W	7628.22	318.349	0.69	-0.54	0.40
15737.00	91.030	313.670	7414.06	7684.83	5763.46	-5136.11	1731187.73	14412363.46	39°41'7.6599"N	80°40'38.4688"W	7719.91	318.294	0.11	0.00	-0.10
15828.00	91.300	313.500	7412.21	7775.81	5826.18	-5202.01	1731121.85	14412426.16	39°41'8.2821"N	80°40'39.3089"W	7810.59	318.239	0.35	0.30	-0.10
15918.00	91.030	313.240	7410.38	7865.78	5887.97	-5267.42	1731056.46	14412487.93	39°41'8.8951"N	80°40'40.1427"W	7900.25	318.184	0.42	-0.30	-0.20
16008.00	90.630	313.090	7409.07	7955.77	5949.54	-5333.06	1730990.85	14412549.47	39°41'9.5058"N	80°40'40.9795"W	7989.90	318.128	0.47	-0.44	-0.10
16100.00	92.500	315.270	7406.56	8047.70	6013.62	-5399.00	1730924.93	14412613.53	39°41'10.1415"N	80°40'41.8201"W	8081.64	318.083	3.12	2.03	2.30
16192.00	92.040	313.150	7402.92	8139.60	6077.72	-5464.89	1730859.07	14412677.60	39°41'10.7773"N	80°40'42.6600"W	8173.35	318.039	2.36	-0.50	-2.30



Actual Wellpath Report

William Ritchea WZ 5H AWP Proj: 18318'
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 Environmental Protection

REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	William Ritchea WZ 5H
Field	Wetzel	API/Legal	
Facility	William Ritchea WZ Pad	Wellbore	William Ritchea WZ 5H AWB
Slot	Slot 5H		

WELLPATH DATA (205 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]
16284.00	92.170	310.930	7399.54	8231.52	6139.28	-5533.17	1730790.82	14412739.14	39°41'11.3881"N	80°40'43.5305"W	8264.79	317.973	2.42	0.14	-2.4
16377.00	92.140	311.200	7396.04	8324.41	6200.33	-5603.24	1730720.78	14412800.16	39°41'11.9939"N	80°40'44.4240"W	8357.05	317.896	0.29	-0.03	0.2
16468.00	92.780	311.070	7392.13	8415.29	6260.14	-5671.71	1730652.33	14412859.95	39°41'12.5874"N	80°40'45.2971"W	8447.35	317.823	0.72	0.70	-0.1
16558.00	93.550	311.180	7387.16	8505.11	6319.24	-5739.40	1730584.66	14412919.03	39°41'13.1739"N	80°40'46.1603"W	8536.60	317.753	0.86	0.86	0.1
16650.00	91.550	310.860	7383.07	8596.97	6379.56	-5808.74	1730515.35	14412979.32	39°41'13.7725"N	80°40'47.0445"W	8627.88	317.681	2.20	-2.17	-0.3
16743.00	90.540	312.400	7381.37	8689.93	6441.33	-5878.24	1730445.88	14413041.07	39°41'14.3854"N	80°40'47.9306"W	8720.35	317.617	1.98	-1.09	1.6
16835.00	91.060	313.380	7380.09	8781.92	6503.94	-5945.64	1730378.51	14413103.65	39°41'15.0065"N	80°40'48.7899"W	8812.03	317.568	1.21	0.57	1.0
16922.00	90.930	313.770	7378.58	8868.90	6563.90	-6008.66	1730315.52	14413163.59	39°41'15.6013"N	80°40'49.5932"W	8898.80	317.529	0.47	-0.15	0.4
17008.00	91.150	313.700	7377.02	8954.87	6623.34	-6070.79	1730253.41	14413223.01	39°41'16.1910"N	80°40'50.3853"W	8984.60	317.492	0.27	0.26	-0.0
17100.00	90.900	313.330	7375.37	9046.85	6686.68	-6137.49	1730186.73	14413286.32	39°41'16.8192"N	80°40'51.2357"W	9076.37	317.452	0.49	-0.27	-0.4
17192.00	91.240	313.520	7373.65	9138.83	6749.91	-6204.30	1730119.95	14413349.52	39°41'17.4465"N	80°40'52.0873"W	9168.13	317.412	0.42	0.37	0.2
17285.00	91.030	313.240	7371.81	9231.81	6813.77	-6271.88	1730052.40	14413413.36	39°41'18.0800"N	80°40'52.9489"W	9260.88	317.371	0.38	-0.23	-0.3
17377.00	91.090	313.370	7370.11	9323.79	6876.86	-6338.82	1729985.48	14413476.43	39°41'18.7058"N	80°40'53.8023"W	9352.64	317.331	0.16	0.07	0.1
17463.00	91.270	312.590	7368.34	9409.77	6935.48	-6401.72	1729922.61	14413535.02	39°41'19.2874"N	80°40'54.6042"W	9438.37	317.292	0.93	0.21	-0.9
17550.00	90.840	311.520	7366.74	9496.74	6993.74	-6466.31	1729858.05	14413593.26	39°41'19.8654"N	80°40'55.4278"W	9524.99	317.244	1.33	-0.49	-1.2
17637.00	90.840	309.190	7365.46	9583.65	7050.07	-6532.59	1729791.79	14413649.57	39°41'20.4244"N	80°40'56.2731"W	9611.36	317.182	2.68	0.00	-2.6
17724.00	91.000	307.810	7364.07	9670.39	7104.22	-6600.67	1729723.74	14413703.70	39°41'20.9619"N	80°40'57.1415"W	9697.36	317.104	1.60	0.18	-1.5
17814.00	90.500	307.490	7362.89	9760.01	7159.19	-6671.92	1729652.51	14413758.64	39°41'21.5077"N	80°40'58.0504"W	9786.14	317.018	0.66	-0.56	-0.3
17903.00	90.070	307.660	7362.44	9848.63	7213.46	-6742.46	1729582.00	14413812.89	39°41'22.0465"N	80°40'58.9503"W	9873.94	316.933	0.52	-0.48	0.1
17993.00	90.630	308.010	7361.89	9938.29	7268.66	-6813.53	1729510.95	14413868.08	39°41'22.5946"N	80°40'59.8570"W	9962.82	316.851	0.73	0.62	0.3
18084.00	90.600	307.800	7360.92	10028.95	7324.56	-6885.33	1729439.18	14413923.96	39°41'23.1495"N	80°41'0.7729"W	10052.71	316.770	0.23	-0.03	-0.2
18175.00	90.440	307.600	7360.09	10119.58	7380.21	-6957.33	1729367.21	14413979.58	39°41'23.7020"N	80°41'1.6914"W	10142.58	316.689	0.28	-0.18	-0.2
18263.00	91.610	306.710	7358.52	10207.13	7433.35	-7027.45	1729297.12	14414032.70	39°41'24.2296"N	80°41'2.5860"W	10229.36	316.608	1.67	1.33	-1.0
18293.00	90.380	306.620	7358.00	10236.95	7451.26	-7051.51	1729273.07	14414050.61	39°41'24.4075"N	80°41'2.8930"W	10258.91	316.579	4.11	-4.10	-0.3
18318.00	90.380	306.620	7357.83	10261.81	7466.17	-7071.58	1729253.01	14414065.51	39°41'24.5555"N	80°41'3.1490"W	10283.53	316.555	0.00	0.00	0.0

REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	William Ritchea WTZ 5H
Field	Wetzel	API/Legal	
Facility	William Ritchea WTZ Pad	Wellbore	William Ritchea WTZ 5H AWB
Slot	Slot 5H		

HOLE & CASING SECTIONS - Ref Wellbore: William Ritchea WTZ 5H AWB Ref Wellpath: William Ritchea WTZ 5H AWP Proj: 18318'									
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]
2.0in Conductor	26.00	100.00	74.00	26.00	100.00	0.00	0.00	-0.04	-0.27
7.5in Open Hole	100.00	611.00	511.00	100.00	610.98	-0.04	-0.27	-1.25	-4.56
3.375in Casing Surface	26.00	591.00	565.00	26.00	590.98	0.00	0.00	-1.19	-4.40
2.25in Open Hole	611.00	2967.00	2356.00	610.98	2943.37	-1.25	-4.56	39.56	266.12
3.625in Casing Intermediate	26.00	2967.00	2941.00	26.00	2943.37	0.00	0.00	39.56	266.12
3.75in Open Hole	2967.00	6687.00	3720.00	2943.37	6603.61	39.56	266.12	-53.45	919.55
3.5in Open Hole	6687.00	18318.00	11631.00	6603.61	7357.83	-53.45	919.55	7466.17	-7071.58
3.5in Casing Production	26.00	18318.00	18292.00	26.00	7357.83	0.00	0.00	7466.17	-7071.58

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
William Ritchea WTZ 5H BHL Rev-5	7343.34	7453.49	-7084.27	1729240.33	14414052.83	39°41'24.4306"N	80°41'3.3118"W	point
William Ritchea WTZ 5H LP Rev-5	7564.00	469.38	448.82	1736770.47	14407071.46	39°40'15.1350"N	80°39'27.2901"W	point

WELLPATH COMPOSITION - Ref Wellbore: William Ritchea WTZ 5H AWB Ref Wellpath: William Ritchea WTZ 5H AWP Proj: 18318'					
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
26.00	537.00	OWSG MWD rev2 + HRGM	01 Premier MWD <17-1/2"> (131'-537')	William Ritchea WTZ 5H AWB	3/3/2021
537.00	2896.00	Superior QC MWD+HRGM_FDIR (Custom)	04 Superior QC FDIR <12-1/4"> (677'-2896')	William Ritchea WTZ 5H AWB	3/3/2021
2896.00	6622.00	Superior QC MWD+HRGM_FDIR (Custom)	06 Superior QC FDIR <8-3/4"> (3004'-6622')	William Ritchea WTZ 5H AWB	3/5/2021
6622.00	18318.00	Superior QC MWD+HRGM_FDIR (Custom)	07 BH ATC + Superior QC FDIR <8-1/2"> (6708'-18293')	William Ritchea WTZ 5H AWB	3/5/2021

REFERENCE WELLPATH IDENTIFICATION

Operator	SWN PRODUCTION COMPANY, LLC	Well	William Ritchea WTZ 5H
Field	Wetzel	API/Legal	
Facility	William Ritchea WTZ Pad	Wellbore	William Ritchea WTZ 5H AWB
Slot	Slot 5H		

COMMENTS

Wellpath general comments
 API: 47-103-03367-0000
 3H Job #: 110792212
 Rig: SDC41
 Duration: 03/05/2021 - 03/07/2021