

SWN PRODUCTION COMPANY, LLC

Location: Wetzell County, WV
 Field: Wetzell
 Facility: William Ritchea WTZ Pad

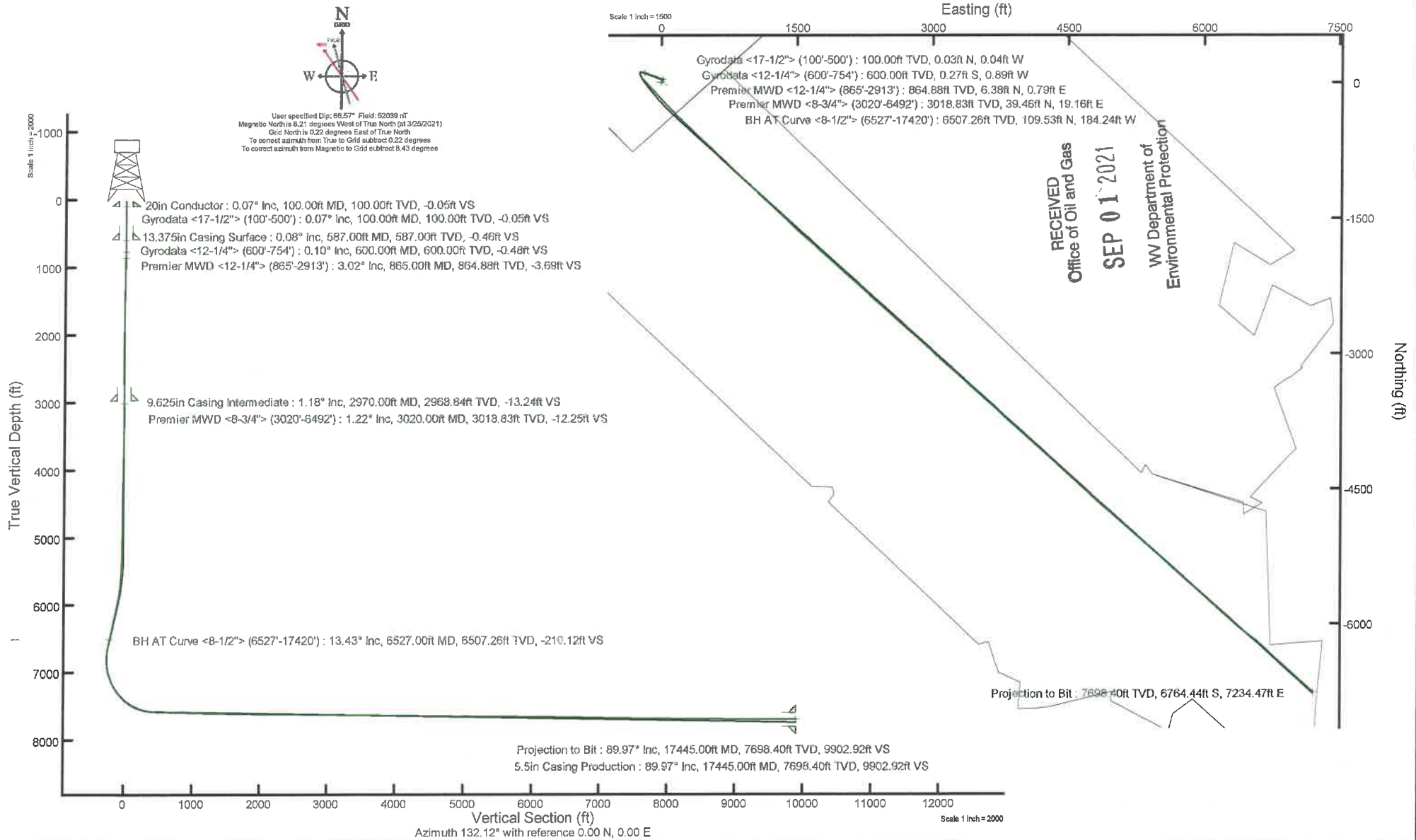
Slot: Slot 10H
 Well: William Ritchea WTZ 10H
 Wellbore: William Ritchea WTZ 10H PWB



Location Information

Facility Name		Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	
William Ritchea WTZ Pad		1736263.630	14406607.520	39°40'10.5672"N	80°39'33.7958"W	
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Slot 10H	-4.05	47.63	1736311.240	14406603.470	39°40'10.5254"N	80°39'33.1879"W
SDC 41 (KB) to Ground level (At Slot: Slot 10H)				26ft		
Mean Sea Level to Ground level (At Slot: Slot 10H)				-1562.8ft		
SDC 41 (KB) to Mean Sea Level				1588.8ft		

API: 47-103-03372-0000
 BH Job #: 110806980
 Rig: SDC 41
 Duration: 03/28/2021 - 03/30/2021





Actual Wellpath Report

William Ritchea WTZ 10H AWP Proj: 17445'
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REFERENCE WELLPATH IDENTIFICATION

Operator	SWN PRODUCTION COMPANY, LLC	Well	William Ritchea WTZ 10H
Field	Wetzel	API/Legal	
Facility	William Ritchea WTZ Pad	Wellbore	William Ritchea WTZ 10H AWB
Slot	Slot 10H		

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	3/31/2021 at 1:07:09 PM
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	-4.05	47.63	1736311.24	14406603.47	39°40'10.5254"N	80°39'33.1879"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 (KB) to Facility Vertical Datum	1588.80ft
Horizontal Reference Pt	Slot	SDC 41 (KB) to Mean Sea Level	1588.80ft
Vertical Reference Pt	SDC 41 (KB)	SDC 41 (KB) to Ground Level at Slot (Slot 10H)	26.00ft
MD Reference Pt	SDC 41 (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	132.12°



Actual Wellpath Report

William Ritchea WTZ 10H AWP Proj: 17445'

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Slot	Slot 10H		

WELLPATH DATA (198 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	306.980	0.00	0.00	0.00	0.00	1736311.24	14406603.47	39°40'10.5254"N	80°39'33.1879"W	0.00	0.000	0.00	0.00	0.00
26.00	0.000	306.980	26.00	0.00	0.00	0.00	1736311.24	14406603.47	39°40'10.5254"N	80°39'33.1879"W	0.00	0.000	0.00	0.00	0.00
100.00	0.070	306.980	100.00	-0.05	0.03	-0.04	1736311.20	14406603.50	39°40'10.5257"N	80°39'33.1884"W	0.05	306.980	0.09	0.09	0.00
200.00	0.070	253.230	200.00	-0.14	0.05	-0.14	1736311.10	14406603.52	39°40'10.5259"N	80°39'33.1897"W	0.15	287.899	0.06	0.00	-53.70
300.00	0.130	237.060	300.00	-0.20	-0.03	-0.30	1736310.94	14406603.44	39°40'10.5251"N	80°39'33.1917"W	0.30	263.662	0.07	0.06	-16.10
400.00	0.150	239.720	400.00	-0.27	-0.16	-0.51	1736310.73	14406603.31	39°40'10.5238"N	80°39'33.1944"W	0.53	252.360	0.02	0.02	2.60
479.00	0.130	240.150	479.00	-0.33	-0.26	-0.67	1736310.57	14406603.21	39°40'10.5229"N	80°39'33.1965"W	0.72	249.049	0.03	-0.03	0.50
500.00	0.190	244.880	500.00	-0.35	-0.28	-0.72	1736310.52	14406603.19	39°40'10.5226"N	80°39'33.1972"W	0.78	248.591	0.29	0.29	22.50
600.00	0.100	347.740	600.00	-0.48	-0.27	-0.89	1736310.35	14406603.20	39°40'10.5228"N	80°39'33.1993"W	0.93	253.229	0.23	-0.09	102.80
661.00	0.840	18.170	661.00	-0.71	0.21	-0.77	1736310.48	14406603.68	39°40'10.5275"N	80°39'33.1977"W	0.79	285.186	1.24	1.21	49.80
700.00	0.840	14.210	699.99	-0.96	0.76	-0.61	1736310.63	14406604.23	39°40'10.5329"N	80°39'33.1956"W	0.97	321.311	0.15	0.00	-10.10
754.00	1.720	12.540	753.98	-1.54	1.93	-0.33	1736310.91	14406605.40	39°40'10.5445"N	80°39'33.1921"W	1.96	350.227	1.63	1.63	-3.00
865.00	3.020	15.170	864.88	-3.69	6.38	0.79	1736312.03	14406609.85	39°40'10.5884"N	80°39'33.1774"W	6.43	7.097	1.17	1.17	2.30
958.00	3.770	18.800	957.72	-6.01	11.64	2.42	1736313.66	14406615.10	39°40'10.6403"N	80°39'33.1564"W	11.89	11.749	0.84	0.81	3.90
1050.00	4.300	19.390	1049.49	-8.54	17.76	4.54	1736315.78	14406621.22	39°40'10.7007"N	80°39'33.1290"W	18.33	14.345	0.58	0.58	0.60
1141.00	3.550	30.080	1140.28	-10.45	23.41	7.09	1736318.32	14406626.87	39°40'10.7565"N	80°39'33.0962"W	24.46	16.838	1.15	-0.82	11.70
1233.00	2.790	47.070	1232.14	-10.85	27.40	10.15	1736321.39	14406630.86	39°40'10.7958"N	80°39'33.0567"W	29.22	20.330	1.30	-0.83	18.40
1324.00	1.670	48.560	1323.07	-10.51	29.79	12.77	1736324.00	14406633.25	39°40'10.8193"N	80°39'33.0232"W	32.41	23.202	1.23	-1.23	1.60
1416.00	0.740	24.730	1415.05	-10.53	31.21	14.02	1736325.26	14406634.67	39°40'10.8334"N	80°39'33.0071"W	34.22	24.190	1.13	-1.01	-25.90
1509.00	0.910	334.320	1508.04	-11.40	32.43	13.95	1736325.19	14406635.88	39°40'10.8453"N	80°39'33.0079"W	35.30	23.283	0.77	0.18	-54.20
1600.00	0.870	336.340	1599.03	-12.70	33.71	13.36	1736324.60	14406637.17	39°40'10.8581"N	80°39'33.0154"W	36.26	21.623	0.06	-0.04	2.20
1692.00	1.340	328.340	1691.01	-14.37	35.26	12.52	1736323.75	14406638.72	39°40'10.8735"N	80°39'33.0261"W	37.42	19.543	0.54	0.51	-8.70
1785.00	1.030	343.820	1783.99	-16.12	36.99	11.71	1736322.95	14406640.45	39°40'10.8906"N	80°39'33.0363"W	38.80	17.570	0.48	-0.33	16.60
1877.00	0.750	6.400	1875.98	-17.18	38.39	11.55	1736322.79	14406641.84	39°40'10.9043"N	80°39'33.0383"W	40.09	16.747	0.48	-0.30	24.50
1970.00	0.930	0.810	1968.97	-18.03	39.75	11.63	1736322.86	14406643.20	39°40'10.9178"N	80°39'33.0373"W	41.41	16.309	0.21	0.19	-6.00
2063.00	0.660	347.710	2061.96	-18.96	41.02	11.53	1736322.76	14406644.48	39°40'10.9304"N	80°39'33.0385"W	42.61	15.693	0.35	-0.29	-14.00
2155.00	0.560	346.640	2153.95	-19.77	41.98	11.31	1736322.54	14406645.43	39°40'10.9398"N	80°39'33.0412"W	43.47	15.078	0.11	-0.11	-1.10
2248.00	0.590	325.970	2246.95	-20.61	42.82	10.94	1736322.17	14406646.27	39°40'10.9482"N	80°39'33.0460"W	44.19	14.328	0.22	0.03	-22.20
2341.00	0.930	328.160	2339.94	-21.80	43.86	10.27	1736321.51	14406647.31	39°40'10.9584"N	80°39'33.0544"W	45.04	13.180	0.37	0.37	2.30
2434.00	0.330	37.010	2432.94	-22.54	44.71	10.03	1736321.27	14406648.16	39°40'10.9669"N	80°39'33.0574"W	45.82	12.648	0.93	-0.65	74.00

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Field	Wetzel	API/Legal	
Facility	William Ritchea WTZ Pad	Wellbore	William Ritchea WTZ 10H AWB
Slot	Slot 10H		

WELLPATH DATA (198 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]
2526.00	0.810	129.670	2524.93	-21.92	44.51	10.69	1736321.93	14406647.96	39°40'10.9649"N	80°39'33.0490"W	45.77	13.510	0.97	0.52	100.7
2619.00	1.150	126.990	2617.92	-20.33	43.53	11.94	1736323.18	14406646.98	39°40'10.9551"N	80°39'33.0330"W	45.13	15.346	0.37	0.37	-2.8
2711.00	1.280	118.450	2709.90	-18.41	42.48	13.59	1736324.82	14406645.93	39°40'10.9447"N	80°39'33.0121"W	44.60	17.734	0.24	0.14	-9.2
2803.00	1.110	119.640	2801.88	-16.55	41.55	15.26	1736326.50	14406645.00	39°40'10.9355"N	80°39'32.9907"W	44.27	20.171	0.19	-0.18	1.2
2895.00	1.200	122.310	2893.86	-14.73	40.59	16.85	1736328.09	14406644.05	39°40'10.9260"N	80°39'32.9704"W	43.95	22.545	0.11	0.10	2.9
2913.00	1.150	119.770	2911.86	-14.36	40.40	17.17	1736328.40	14406643.86	39°40'10.9241"N	80°39'32.9664"W	43.90	23.021	0.40	-0.28	-14.1
3020.00	1.220	111.000	3018.83	-12.25	39.46	19.16	1736330.40	14406642.92	39°40'10.9147"N	80°39'32.9409"W	43.87	25.902	0.18	0.07	-8.2
3112.00	1.340	116.720	3110.81	-10.30	38.63	21.04	1736332.27	14406642.08	39°40'10.9064"N	80°39'32.9170"W	43.99	28.575	0.19	0.13	6.2
3204.00	0.530	231.950	3202.80	-9.34	37.88	21.66	1736332.90	14406641.34	39°40'10.8990"N	80°39'32.9090"W	43.64	29.765	1.78	-0.88	125.2
3295.00	1.360	263.910	3293.79	-10.13	37.51	20.26	1736331.49	14406640.96	39°40'10.8953"N	80°39'32.9270"W	42.63	28.375	1.05	0.91	35.1
3387.00	1.150	262.510	3385.77	-11.45	37.27	18.26	1736329.49	14406640.73	39°40'10.8931"N	80°39'32.9526"W	41.50	26.099	0.23	-0.23	-1.5
3480.00	1.170	264.370	3478.75	-12.70	37.06	16.39	1736327.62	14406640.51	39°40'10.8910"N	80°39'32.9765"W	40.52	23.857	0.05	0.02	2.0
3571.00	1.320	263.230	3569.73	-14.01	36.84	14.42	1736325.66	14406640.30	39°40'10.8890"N	80°39'33.0017"W	39.57	21.379	0.17	0.16	-1.2
3663.00	1.220	267.220	3661.70	-15.40	36.67	12.39	1736323.63	14406640.13	39°40'10.8873"N	80°39'33.0276"W	38.71	18.672	0.15	-0.11	4.3
3754.00	1.290	273.340	3752.68	-16.89	36.68	10.40	1736321.64	14406640.14	39°40'10.8875"N	80°39'33.0531"W	38.13	15.831	0.17	0.08	6.7
3847.00	1.340	276.690	3845.66	-18.59	36.87	8.28	1736319.51	14406640.33	39°40'10.8895"N	80°39'33.0803"W	37.79	12.652	0.10	0.05	3.6
3940.00	1.090	285.730	3938.64	-20.27	37.24	6.35	1736317.58	14406640.69	39°40'10.8932"N	80°39'33.1049"W	37.77	9.671	0.34	-0.27	9.7
4031.00	1.070	289.690	4029.62	-21.83	37.76	4.71	1736315.95	14406641.21	39°40'10.8984"N	80°39'33.1258"W	38.05	7.114	0.08	-0.02	4.3
4123.00	1.050	301.830	4121.60	-23.45	38.49	3.19	1736314.43	14406641.95	39°40'10.9057"N	80°39'33.1453"W	38.62	4.734	0.24	-0.02	13.2
4213.00	0.990	300.890	4211.59	-25.03	39.33	1.82	1736313.06	14406642.78	39°40'10.9140"N	80°39'33.1627"W	39.37	2.649	0.07	-0.07	-1.0
4304.00	1.240	312.740	4302.57	-26.78	40.40	0.42	1736311.66	14406643.85	39°40'10.9246"N	80°39'33.1805"W	40.40	0.598	0.37	0.27	13.0
4394.00	1.410	311.410	4392.55	-28.86	41.79	-1.12	1736310.12	14406645.24	39°40'10.9385"N	80°39'33.2002"W	41.81	358.459	0.19	0.19	-1.4
4485.00	0.480	206.960	4483.54	-29.88	42.19	-2.14	1736309.10	14406645.65	39°40'10.9425"N	80°39'33.2132"W	42.25	357.101	1.76	-1.02	-114.7
4578.00	0.750	186.960	4576.53	-29.43	41.24	-2.39	1736308.85	14406644.69	39°40'10.9331"N	80°39'33.2164"W	41.31	356.688	0.37	0.29	-21.5
4667.00	0.460	213.150	4665.53	-29.04	40.36	-2.65	1736308.59	14406643.82	39°40'10.9244"N	80°39'33.2199"W	40.45	356.240	0.44	-0.33	29.4
4758.00	0.090	292.630	4756.53	-29.05	40.08	-2.92	1736308.32	14406643.54	39°40'10.9217"N	80°39'33.2233"W	40.19	355.836	0.50	-0.41	87.3
4850.00	0.320	335.120	4848.53	-29.35	40.35	-3.09	1736308.15	14406643.80	39°40'10.9243"N	80°39'33.2255"W	40.46	355.616	0.28	0.25	46.1
4943.00	0.620	326.000	4941.52	-30.08	41.00	-3.48	1736307.76	14406644.45	39°40'10.9307"N	80°39'33.2305"W	41.15	355.143	0.33	0.32	-9.8
5034.00	0.810	336.860	5032.52	-31.14	42.00	-4.01	1736307.23	14406645.45	39°40'10.9406"N	80°39'33.2372"W	42.19	354.543	0.26	0.21	11.9
5126.00	1.200	333.130	5124.50	-32.63	43.46	-4.70	1736306.54	14406646.91	39°40'10.9550"N	80°39'33.2459"W	43.71	353.823	0.43	0.42	-4.0

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5218.00	1.380	335.420	5216.48	-34.55	45.32	-5.60	1736305.64	14406648.77	39°40'10.9735"N	80°39'33.2573"W	45.67	352.957	0.20	0.20	2.4
5308.00	1.520	278.100	5306.45	-36.54	46.48	-7.23	1736304.01	14406649.93	39°40'10.9850"N	80°39'33.2781"W	47.04	351.155	1.55	0.16	-63.6
5399.00	1.660	272.260	5397.42	-38.55	46.70	-9.74	1736301.50	14406650.15	39°40'10.9873"N	80°39'33.3102"W	47.70	348.214	0.24	0.15	-6.4
5489.00	2.460	285.290	5487.36	-41.27	47.26	-12.91	1736298.34	14406650.71	39°40'10.9929"N	80°39'33.3507"W	48.99	344.721	1.02	0.89	14.4
5582.00	4.420	292.000	5580.19	-46.42	49.13	-18.16	1736293.09	14406652.58	39°40'11.0116"N	80°39'33.4177"W	52.38	339.715	2.15	2.11	7.2
5673.00	5.980	289.620	5670.81	-54.09	52.03	-25.87	1736285.38	14406655.48	39°40'11.0406"N	80°39'33.5163"W	58.11	333.560	1.73	1.71	-2.6
5764.00	6.980	290.490	5761.23	-63.61	55.56	-35.52	1736275.73	14406659.01	39°40'11.0758"N	80°39'33.6394"W	65.94	327.410	1.10	1.10	0.9
5856.00	9.360	292.470	5852.29	-75.85	60.38	-47.67	1736263.59	14406663.82	39°40'11.1239"N	80°39'33.7946"W	76.93	321.707	2.60	2.59	2.1
5946.00	11.620	291.800	5940.78	-91.25	66.54	-62.85	1736248.41	14406669.99	39°40'11.1854"N	80°39'33.9884"W	91.53	316.633	2.51	2.51	-0.7
6037.00	12.550	291.860	6029.76	-109.12	73.63	-80.54	1736230.73	14406677.07	39°40'11.2561"N	80°39'34.2143"W	109.12	312.433	1.02	1.02	0.0
6127.00	13.580	286.990	6117.43	-127.86	80.35	-99.72	1736211.56	14406683.79	39°40'11.3233"N	80°39'34.4592"W	128.07	308.863	1.67	1.14	-5.4
6218.00	13.090	282.920	6205.98	-146.53	85.78	-119.98	1736191.31	14406689.22	39°40'11.3777"N	80°39'34.7181"W	147.49	305.563	1.16	-0.54	-4.4
6309.00	12.660	288.550	6294.70	-164.66	91.26	-139.48	1736171.82	14406694.69	39°40'11.4325"N	80°39'34.9672"W	166.68	303.196	1.46	-0.47	6.1
6401.00	12.360	293.930	6384.52	-183.26	98.46	-158.04	1736153.26	14406701.89	39°40'11.5044"N	80°39'35.2041"W	186.20	301.923	1.31	-0.33	5.8
6492.00	13.440	292.610	6473.22	-202.48	106.48	-176.70	1736134.61	14406709.90	39°40'11.5843"N	80°39'35.4424"W	206.30	301.072	1.23	1.19	-1.4
6527.00	13.430	291.570	6507.26	-210.12	109.53	-184.24	1736127.07	14406712.96	39°40'11.6148"N	80°39'35.5386"W	214.34	300.733	0.69	-0.03	-2.9
6599.00	12.100	286.630	6577.48	-224.76	114.77	-199.25	1736112.07	14406718.19	39°40'11.6671"N	80°39'35.7303"W	229.94	299.942	2.39	-1.85	-6.8
6690.00	10.400	278.350	6666.74	-240.20	118.69	-216.51	1736094.81	14406722.11	39°40'11.7065"N	80°39'35.9509"W	246.91	298.731	2.57	-1.87	-9.1
6781.00	6.540	251.400	6756.76	-249.57	118.23	-229.56	1736081.77	14406721.65	39°40'11.7025"N	80°39'36.1178"W	258.22	297.250	5.98	-4.24	-29.6
6872.00	6.420	196.080	6847.26	-249.87	111.68	-235.89	1736075.44	14406715.11	39°40'11.6380"N	80°39'36.1991"W	260.99	295.336	6.60	-0.13	-60.7
6963.00	10.160	163.700	6937.34	-240.79	99.08	-235.04	1736076.29	14406702.51	39°40'11.5134"N	80°39'36.1889"W	255.07	292.857	6.42	4.11	-35.5
7053.00	14.800	155.380	7025.20	-223.46	81.00	-228.02	1736083.31	14406684.44	39°40'11.3345"N	80°39'36.1000"W	241.98	289.556	5.52	5.16	-9.2
7145.00	22.630	147.120	7112.28	-195.52	55.41	-213.49	1736097.83	14406658.86	39°40'11.0810"N	80°39'35.9154"W	220.57	284.549	8.96	8.51	-8.9
7237.00	29.020	138.470	7195.08	-156.19	23.79	-189.05	1736122.26	14406627.26	39°40'10.7677"N	80°39'35.6044"W	190.55	277.174	8.05	6.95	-9.4
7329.00	34.990	136.830	7273.06	-107.68	-12.18	-156.18	1736155.12	14406591.29	39°40'10.4109"N	80°39'35.1858"W	156.66	265.540	6.56	6.49	-1.7
7419.00	42.630	137.270	7343.14	-51.52	-53.45	-117.79	1736193.50	14406550.04	39°40'10.0016"N	80°39'34.6968"W	129.35	245.593	8.49	8.49	0.4
7510.00	50.340	137.220	7405.75	14.16	-101.87	-73.02	1736238.25	14406501.64	39°40'9.5214"N	80°39'34.1267"W	125.34	215.634	8.47	8.47	-0.0
7601.00	54.920	136.620	7460.97	86.21	-154.67	-23.63	1736287.62	14406448.86	39°40'8.9977"N	80°39'33.4976"W	156.46	188.687	5.06	5.03	-0.6
7691.00	63.930	136.930	7506.70	163.36	-211.08	29.37	1736340.60	14406392.47	39°40'8.4382"N	80°39'32.8225"W	213.11	172.077	10.02	10.01	0.3
7784.00	71.450	136.160	7541.98	249.08	-273.48	88.52	1736399.72	14406330.10	39°40'7.8193"N	80°39'32.0692"W	287.45	162.065	8.12	8.09	-0.8

Actual Wellpath Report

William Ritchea WTZ 10H AWP Proj: 17445'

REFERENCE WELLPATH IDENTIFICATION

Operator	SWN PRODUCTION COMPANY, LLC	Well	William Ritchea WTZ 10H
Field	Wetzel	API/Legal	
Facility	William Ritchea WTZ Pad	Wellbore	William Ritchea WTZ 10H AWB
Slot	Slot 10H		

WELLPATH DATA (198 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]
7829.00	74.670	136.760	7555.09	292.00	-304.68	118.17	1736429.36	14406298.91	39°40'7.5099"N	80°39'31.6916"W	326.79	158.802	7.27	7.16	1.3
7874.00	78.370	136.740	7565.58	335.61	-336.55	148.15	1736459.33	14406267.05	39°40'7.1938"N	80°39'31.3098"W	367.71	156.241	8.22	8.22	-0.0
7967.00	85.380	133.630	7578.72	427.47	-401.80	213.00	1736524.16	14406201.83	39°40'6.5465"N	80°39'30.4836"W	454.76	152.071	8.23	7.54	-3.3
8058.00	88.550	133.170	7583.54	518.31	-464.23	279.02	1736590.15	14406139.43	39°40'5.9271"N	80°39'29.6424"W	541.62	148.992	3.52	3.48	-0.5
8151.00	88.340	133.910	7586.06	611.25	-528.27	346.41	1736657.51	14406075.41	39°40'5.2916"N	80°39'28.7837"W	631.71	146.745	0.83	-0.23	0.8
8243.00	88.580	132.670	7588.53	703.19	-591.32	413.35	1736724.43	14406012.38	39°40'4.6659"N	80°39'27.9308"W	721.47	145.046	1.37	0.26	-1.3
8335.00	88.370	133.350	7590.98	795.15	-654.06	480.60	1736791.65	14405949.67	39°40'4.0434"N	80°39'27.0739"W	811.64	143.692	0.77	-0.23	0.7
8427.00	88.610	133.430	7593.40	887.09	-717.24	547.43	1736858.46	14405886.51	39°40'3.4165"N	80°39'26.2223"W	902.28	142.647	0.27	0.26	0.0
8520.00	88.490	133.540	7595.76	980.04	-781.21	614.89	1736925.89	14405822.56	39°40'2.7817"N	80°39'25.3628"W	994.17	141.794	0.18	-0.13	0.1
8611.00	88.310	133.580	7598.30	1070.97	-843.90	680.80	1736991.78	14405759.90	39°40'2.1597"N	80°39'24.5230"W	1084.28	141.106	0.20	-0.20	0.0
8704.00	88.580	133.050	7600.82	1163.92	-907.67	748.45	1737059.39	14405696.15	39°40'1.5268"N	80°39'23.6611"W	1176.45	140.492	0.64	0.29	-0.5
8796.00	89.080	133.460	7602.70	1255.88	-970.70	815.44	1737126.36	14405633.15	39°40'0.9014"N	80°39'22.8075"W	1267.75	139.968	0.70	0.54	0.4
8888.00	88.860	133.500	7604.35	1347.84	-1034.00	882.18	1737193.08	14405569.88	39°40'0.2733"N	80°39'21.9571"W	1359.19	139.530	0.24	-0.24	0.0
8981.00	88.800	133.260	7606.25	1440.80	-1097.86	949.76	1737260.63	14405506.04	39°39'59.6396"N	80°39'21.0961"W	1451.67	139.137	0.27	-0.06	-0.2
9072.00	88.890	133.270	7608.09	1531.76	-1160.22	1016.01	1737326.86	14405443.71	39°39'59.0209"N	80°39'20.2519"W	1542.20	138.791	0.10	0.10	0.0
9163.00	88.770	133.200	7609.95	1622.72	-1222.54	1082.30	1737393.11	14405381.41	39°39'58.4024"N	80°39'19.4074"W	1632.78	138.482	0.15	-0.13	-0.0
9253.00	88.980	133.280	7611.71	1712.69	-1284.18	1147.85	1737458.64	14405319.79	39°39'57.7907"N	80°39'18.5722"W	1722.41	138.208	0.25	0.23	0.0
9346.00	89.320	133.000	7613.09	1805.66	-1347.77	1215.70	1737526.47	14405256.23	39°39'57.1598"N	80°39'17.7076"W	1815.05	137.949	0.47	0.37	-0.3
9434.00	89.290	133.500	7614.16	1893.64	-1408.06	1279.79	1737590.53	14405195.96	39°39'56.5615"N	80°39'16.8910"W	1902.76	137.732	0.57	-0.03	0.5
9527.00	89.630	133.050	7615.04	1986.62	-1471.81	1347.50	1737658.21	14405132.24	39°39'55.9289"N	80°39'16.0284"W	1995.49	137.525	0.61	0.37	-0.4
9618.00	89.910	133.710	7615.40	2077.59	-1534.31	1413.64	1737724.33	14405069.76	39°39'55.3087"N	80°39'15.1857"W	2086.26	137.344	0.79	0.31	0.7
9709.00	89.080	133.150	7616.20	2168.57	-1596.86	1479.72	1737790.38	14405007.23	39°39'54.6879"N	80°39'14.3438"W	2177.05	137.180	1.10	-0.91	-0.6
9798.00	89.910	133.100	7616.99	2257.55	-1657.70	1544.68	1737855.31	14404946.42	39°39'54.0842"N	80°39'13.5162"W	2265.83	137.021	0.93	0.93	-0.0
9887.00	89.510	132.230	7617.44	2346.54	-1718.02	1610.12	1737920.73	14404886.13	39°39'53.4857"N	80°39'12.6823"W	2354.58	136.857	1.08	-0.45	-0.9
9977.00	88.920	131.250	7618.67	2436.53	-1777.93	1677.27	1737987.85	14404826.24	39°39'52.8910"N	80°39'11.8266"W	2444.23	136.669	1.27	-0.66	-1.0
10065.00	89.850	132.430	7619.62	2524.52	-1836.62	1742.82	1738053.38	14404767.57	39°39'52.3084"N	80°39'10.9913"W	2531.92	136.501	1.71	1.06	1.3
10154.00	88.860	131.240	7620.62	2613.51	-1895.98	1809.13	1738119.66	14404708.23	39°39'51.7193"N	80°39'10.1463"W	2620.63	136.343	1.74	-1.11	-1.3
10244.00	89.010	131.700	7622.29	2703.49	-1955.57	1876.55	1738187.06	14404648.67	39°39'51.1278"N	80°39'9.2871"W	2710.30	136.181	0.54	0.17	0.5
10335.00	89.410	132.390	7623.55	2794.48	-2016.51	1944.12	1738254.60	14404587.75	39°39'50.5230"N	80°39'8.4261"W	2801.06	136.047	0.88	0.44	0.7
10426.00	89.510	132.150	7624.40	2885.48	-2077.71	2011.46	1738321.91	14404526.57	39°39'49.9155"N	80°39'7.5681"W	2891.86	135.928	0.29	0.11	-0.2

Actual Wellpath Report

William Ritchea WTZ 10H AWP Proj: 17445'

REFERENCE WELLPATH IDENTIFICATION

Operator	SWN PRODUCTION COMPANY, LLC	Well	William Ritchea WTZ 10H
Field	Wetzel	API/Legal	
Facility	William Ritchea WTZ Pad	Wellbore	William Ritchea WTZ 10H AWB
Slot	Slot 10H		

WELLPATH DATA (198 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]
10518.00	89.050	132.230	7625.56	2977.47	-2139.49	2079.62	1738390.05	14404464.81	39°39'49.3023"N	80°39'6.6996"W	2983.66	135.813	0.51	-0.50	0.00
10610.00	89.450	131.710	7626.76	3069.46	-2201.01	2148.01	1738458.41	14404403.32	39°39'48.6917"N	80°39'5.8281"W	3075.46	135.698	0.71	0.43	-0.50
10702.00	89.630	132.220	7627.50	3161.46	-2262.53	2216.42	1738526.79	14404341.83	39°39'48.0811"N	80°39'4.9565"W	3167.26	135.590	0.59	0.20	0.50
10790.00	89.540	132.530	7628.14	3249.45	-2321.84	2281.43	1738591.77	14404282.54	39°39'47.4925"N	80°39'4.1281"W	3255.13	135.503	0.37	-0.10	0.30
10882.00	89.320	132.130	7629.06	3341.45	-2383.79	2349.44	1738659.76	14404220.62	39°39'46.8777"N	80°39'3.2616"W	3346.98	135.416	0.50	-0.24	-0.40
10974.00	89.410	132.270	7630.07	3433.44	-2445.58	2417.59	1738727.88	14404158.85	39°39'46.2643"N	80°39'2.3932"W	3438.84	135.330	0.18	0.10	0.10
11064.00	89.410	131.480	7631.00	3523.44	-2505.65	2484.60	1738794.86	14404098.80	39°39'45.6681"N	80°39'1.5394"W	3528.67	135.242	0.88	0.00	-0.80
11154.00	89.750	132.820	7631.66	3613.43	-2566.05	2551.32	1738861.56	14404038.43	39°39'45.0686"N	80°39'0.6892"W	3618.54	135.165	1.54	0.38	1.40
11245.00	88.920	131.660	7632.72	3704.42	-2627.21	2618.68	1738928.90	14403977.28	39°39'44.4615"N	80°38'59.8309"W	3709.42	135.093	1.57	-0.91	-1.20
11335.00	89.110	131.940	7634.26	3794.41	-2687.19	2685.77	1738995.95	14403917.33	39°39'43.8662"N	80°38'58.9761"W	3799.26	135.015	0.38	0.21	0.30
11426.00	89.110	131.350	7635.68	3885.39	-2747.66	2753.76	1739063.92	14403856.89	39°39'43.2660"N	80°38'58.1097"W	3890.09	134.936	0.65	0.00	-0.60
11516.00	89.480	131.870	7636.79	3975.38	-2807.42	2821.05	1739131.18	14403797.15	39°39'42.6728"N	80°38'57.2523"W	3979.94	134.861	0.71	0.41	0.50
11608.00	89.450	132.020	7637.64	4067.38	-2868.91	2889.47	1739199.58	14403735.68	39°39'42.0625"N	80°38'56.3805"W	4071.82	134.795	0.17	-0.03	0.10
11697.00	89.110	131.910	7638.76	4156.37	-2928.42	2955.64	1739265.73	14403676.20	39°39'41.4718"N	80°38'55.5374"W	4160.70	134.735	0.40	-0.38	-0.10
11789.00	89.570	132.160	7639.82	4248.36	-2990.01	3023.97	1739334.03	14403614.63	39°39'40.8604"N	80°38'54.6668"W	4252.60	134.677	0.57	0.50	0.20
11881.00	89.450	132.580	7640.61	4340.36	-3052.01	3091.94	1739401.97	14403552.65	39°39'40.2451"N	80°38'53.8008"W	4344.52	134.628	0.47	-0.13	0.40
11971.00	89.140	130.150	7641.72	4430.34	-3111.48	3159.47	1739469.48	14403493.21	39°39'39.6547"N	80°38'52.9402"W	4434.36	134.562	2.72	-0.34	-2.70
12062.00	89.260	132.560	7642.99	4521.31	-3171.59	3227.77	1739537.74	14403433.12	39°39'39.0580"N	80°38'52.0700"W	4525.21	134.497	2.65	0.13	2.60
12152.00	89.350	131.290	7644.08	4611.30	-3231.72	3294.72	1739604.67	14403373.01	39°39'38.4611"N	80°38'51.2169"W	4615.11	134.447	1.41	0.10	-1.40
12244.00	89.110	132.250	7645.32	4703.29	-3293.00	3363.33	1739673.26	14403311.76	39°39'37.8529"N	80°38'50.3427"W	4707.00	134.395	1.08	-0.26	1.00
12335.00	89.110	132.090	7646.73	4794.28	-3354.09	3430.77	1739740.67	14403250.70	39°39'37.2466"N	80°38'49.4835"W	4797.92	134.352	0.18	0.00	-0.10
12428.00	88.400	130.080	7648.75	4887.24	-3415.19	3500.85	1739810.72	14403189.62	39°39'36.6400"N	80°38'48.5905"W	4890.75	134.290	2.29	-0.76	-2.10
12520.00	92.460	134.260	7648.06	4979.20	-3476.92	3569.00	1739878.85	14403127.91	39°39'36.0273"N	80°38'47.7222"W	4982.64	134.251	6.33	4.41	4.50
12611.00	88.980	131.330	7646.92	5070.16	-3538.72	3635.75	1739945.57	14403066.13	39°39'35.4139"N	80°38'46.8718"W	5073.58	134.225	5.00	-3.82	-3.20
12702.00	89.380	131.870	7648.22	5161.15	-3599.13	3703.80	1740013.59	14403005.75	39°39'34.8142"N	80°38'46.0048"W	5164.48	134.179	0.74	0.44	0.50
12793.00	89.970	132.450	7648.73	5252.14	-3660.21	3771.25	1740081.01	14402944.69	39°39'34.2080"N	80°38'45.1454"W	5255.42	134.144	0.91	0.65	0.60
12886.00	89.450	132.870	7649.21	5345.14	-3723.23	3839.64	1740149.38	14402881.70	39°39'33.5825"N	80°38'44.2741"W	5348.39	134.118	0.72	-0.56	0.40
12979.00	89.450	132.000	7650.10	5438.13	-3785.98	3908.28	1740217.99	14402818.97	39°39'32.9597"N	80°38'43.3997"W	5441.35	134.089	0.94	0.00	-0.90
13070.00	89.350	131.840	7651.05	5529.13	-3846.77	3975.98	1740285.67	14402758.20	39°39'32.3562"N	80°38'42.5371"W	5532.28	134.054	0.21	-0.11	-0.10
13163.00	89.350	131.820	7652.11	5622.12	-3908.79	4045.28	1740354.93	14402696.21	39°39'31.7406"N	80°38'41.6542"W	5625.20	134.017	0.02	0.00	-0.00

REFERENCE WELLPATH IDENTIFICATION

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Slot	Slot 10H		

WELLPATH DATA (198 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]
13256.00	89.260	131.830	7653.23	5715.11	-3970.80	4114.57	1740424.20	14402634.22	39°39'31.1250"N	80°38'40.7713"W	5718.13	133.981	0.10	-0.10	0.0
13347.00	89.380	131.780	7654.31	5806.10	-4031.46	4182.40	1740492.00	14402573.59	39°39'30.5229"N	80°38'39.9071"W	5809.06	133.947	0.14	0.13	-0.0
13437.00	88.950	131.740	7655.63	5896.09	-4091.39	4249.53	1740559.10	14402513.68	39°39'29.9279"N	80°38'39.0519"W	5898.98	133.914	0.48	-0.48	-0.0
13526.00	89.200	132.230	7657.06	5985.08	-4150.92	4315.67	1740625.22	14402454.17	39°39'29.3371"N	80°38'38.2092"W	5987.92	133.885	0.62	0.28	0.5
13615.00	89.660	132.230	7657.95	6074.07	-4210.74	4381.57	1740691.10	14402394.38	39°39'28.7433"N	80°38'37.3696"W	6076.88	133.861	0.52	0.52	0.0
13704.00	89.380	131.950	7658.69	6163.07	-4270.39	4447.62	1740757.11	14402334.75	39°39'28.1512"N	80°38'36.5282"W	6165.83	133.835	0.44	-0.31	-0.3
13792.00	89.570	132.400	7659.50	6251.07	-4329.47	4512.83	1740822.30	14402275.69	39°39'27.5648"N	80°38'35.6974"W	6253.79	133.812	0.56	0.22	0.5
13881.00	88.920	132.550	7660.67	6340.06	-4389.56	4578.47	1740887.91	14402215.62	39°39'26.9683"N	80°38'34.8612"W	6342.76	133.793	0.75	-0.73	0.1
13969.00	88.950	132.400	7662.31	6428.04	-4448.98	4643.36	1740952.78	14402156.23	39°39'26.3786"N	80°38'34.0345"W	6430.72	133.775	0.17	0.03	-0.1
14059.00	89.410	132.600	7663.60	6518.03	-4509.77	4709.71	1741019.11	14402095.46	39°39'25.7751"N	80°38'33.1893"W	6520.69	133.758	0.56	0.51	0.2
14147.00	88.740	132.130	7665.02	6606.02	-4569.07	4774.72	1741084.09	14402036.19	39°39'25.1866"N	80°38'32.3611"W	6608.65	133.739	0.93	-0.76	-0.5
14236.00	89.320	132.800	7666.52	6695.00	-4629.14	4840.37	1741149.71	14401976.14	39°39'24.5903"N	80°38'31.5248"W	6697.62	133.722	1.00	0.65	0.7
14328.00	88.340	131.270	7668.40	6786.98	-4690.73	4908.68	1741218.00	14401914.58	39°39'23.9789"N	80°38'30.6545"W	6789.56	133.699	1.97	-1.07	-1.6
14418.00	89.170	131.690	7670.36	6876.95	-4750.33	4976.09	1741285.38	14401855.00	39°39'23.3873"N	80°38'29.7957"W	6879.47	133.670	1.03	0.92	0.4
14511.00	88.950	131.930	7671.88	6969.94	-4812.32	5045.40	1741354.66	14401793.04	39°39'22.7719"N	80°38'28.9127"W	6972.41	133.646	0.35	-0.24	0.2
14601.00	88.430	131.060	7673.94	7059.91	-4871.93	5112.79	1741422.03	14401733.44	39°39'22.1801"N	80°38'28.0541"W	7062.32	133.618	1.13	-0.58	-0.9
14690.00	88.800	130.790	7676.09	7148.86	-4930.22	5180.02	1741489.23	14401675.18	39°39'21.6014"N	80°38'27.1975"W	7151.20	133.585	0.51	0.42	-0.3
14779.00	88.610	130.740	7678.10	7237.81	-4988.31	5247.41	1741556.59	14401617.11	39°39'21.0246"N	80°38'26.3389"W	7240.07	133.550	0.22	-0.21	-0.0
14869.00	90.520	132.880	7678.79	7327.80	-5048.31	5314.48	1741623.64	14401557.14	39°39'20.4290"N	80°38'25.4844"W	7330.01	133.529	3.19	2.12	2.3
14960.00	88.580	131.940	7679.50	7418.79	-5109.67	5381.66	1741690.80	14401495.80	39°39'19.8199"N	80°38'24.6286"W	7420.99	133.515	2.37	-2.13	-1.0
15049.00	89.200	133.230	7681.23	7507.77	-5169.89	5447.18	1741756.29	14401435.61	39°39'19.2222"N	80°38'23.7940"W	7509.96	133.504	1.61	0.70	1.4
15142.00	89.600	130.620	7682.20	7600.75	-5232.02	5516.36	1741825.44	14401373.50	39°39'18.6055"N	80°38'22.9126"W	7602.91	133.485	2.84	0.43	-2.8
15230.00	89.230	132.970	7683.10	7688.74	-5290.66	5581.96	1741891.02	14401314.88	39°39'18.0233"N	80°38'22.0769"W	7690.86	133.465	2.70	-0.42	2.6
15321.00	88.890	132.160	7684.59	7779.73	-5352.20	5648.97	1741958.00	14401253.36	39°39'17.4124"N	80°38'21.2233"W	7781.84	133.455	0.97	-0.37	-0.8
15413.00	89.010	131.930	7686.28	7871.71	-5413.81	5717.28	1742026.29	14401191.78	39°39'16.8009"N	80°38'20.3531"W	7873.79	133.438	0.28	0.13	-0.2
15503.00	90.030	133.240	7687.03	7961.70	-5474.70	5783.54	1742092.52	14401130.91	39°39'16.1964"N	80°38'19.5091"W	7963.78	133.429	1.84	1.13	1.4
15594.00	89.570	131.570	7687.35	8052.70	-5536.07	5850.73	1742159.68	14401069.57	39°39'15.5873"N	80°38'18.6532"W	8054.76	133.417	1.90	-0.51	-1.8
15685.00	89.410	130.920	7688.16	8143.68	-5596.06	5919.15	1742228.08	14401009.60	39°39'14.9917"N	80°38'17.7815"W	8145.69	133.393	0.74	-0.18	-0.7
15776.00	88.920	132.420	7689.49	8234.67	-5656.55	5987.12	1742296.02	14400949.13	39°39'14.3911"N	80°38'16.9157"W	8236.64	133.374	1.73	-0.54	1.6
15867.00	89.380	133.810	7690.84	8325.64	-5718.74	6053.54	1742362.41	14400886.97	39°39'13.7739"N	80°38'16.0697"W	8327.62	133.371	1.61	0.51	1.5

REFERENCE WELLPATH IDENTIFICATION

Operator	SWN PRODUCTION COMPANY, LLC	Well	William Ritchea WTZ 10H
Field	Wetzel	API/Legal	
Facility	William Ritchea WTZ Pad	Wellbore	William Ritchea WTZ 10H AWB
Slot	Slot 10H		

WELLPATH DATA (198 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]
15959.00	89.510	130.660	7691.73	8417.62	-5780.57	6121.64	1742430.49	14400825.16	39°39'13.1601"N	80°38'15.2022"W	8419.59	133.359	3.43	0.14	-3.4
16051.00	89.570	133.780	7692.47	8509.61	-5842.38	6189.77	1742498.58	14400763.38	39°39'12.5465"N	80°38'14.3344"W	8511.56	133.346	3.39	0.07	3.3
16143.00	89.780	132.390	7692.99	8601.59	-5905.22	6256.95	1742565.75	14400700.56	39°39'11.9228"N	80°38'13.4786"W	8603.55	133.343	1.53	0.23	-1.5
16234.00	89.780	131.960	7693.34	8692.59	-5966.32	6324.39	1742633.16	14400639.49	39°39'11.3163"N	80°38'12.6196"W	8694.53	133.331	0.47	0.00	-0.4
16325.00	89.660	130.780	7693.78	8783.58	-6026.46	6392.68	1742701.42	14400579.37	39°39'10.7192"N	80°38'11.7496"W	8785.48	133.311	1.30	-0.13	-1.3
16418.00	88.640	129.220	7695.16	8876.50	-6086.23	6463.91	1742772.62	14400519.62	39°39'10.1257"N	80°38'10.8420"W	8878.31	133.276	2.00	-1.10	-1.6
16508.00	88.210	126.640	7697.64	8966.22	-6141.53	6534.87	1742843.55	14400464.35	39°39'9.5763"N	80°38'9.9377"W	8967.88	133.223	2.91	-0.48	-2.8
16600.00	88.980	129.800	7699.89	9057.97	-6198.42	6607.12	1742915.77	14400407.47	39°39'9.0111"N	80°38'9.0170"W	9059.49	133.172	3.53	0.84	3.4
16691.00	90.550	132.320	7700.26	9148.94	-6258.19	6675.73	1742984.35	14400347.73	39°39'8.4177"N	80°38'8.1429"W	9150.42	133.151	3.26	1.73	2.7
16783.00	91.020	132.380	7699.00	9240.93	-6320.16	6743.71	1743052.31	14400285.78	39°39'7.8026"N	80°38'7.2770"W	9242.40	133.143	0.52	0.51	0.0
16873.00	90.180	132.570	7698.06	9330.92	-6380.93	6810.09	1743118.66	14400225.04	39°39'7.1993"N	80°38'6.4315"W	9332.39	133.137	0.96	-0.93	0.2
16964.00	89.630	131.970	7698.21	9421.92	-6442.14	6877.43	1743185.97	14400163.85	39°39'6.5917"N	80°38'5.5738"W	9423.38	133.128	0.89	-0.60	-0.6
17055.00	90.060	132.060	7698.46	9512.92	-6503.05	6945.04	1743253.56	14400102.97	39°39'5.9870"N	80°38'4.7126"W	9514.36	133.118	0.48	0.47	0.1
17145.00	89.850	132.200	7698.53	9602.92	-6563.42	7011.78	1743320.28	14400042.62	39°39'5.3877"N	80°38'3.8624"W	9604.35	133.108	0.28	-0.23	0.1
17237.00	90.030	132.120	7698.63	9694.92	-6625.17	7079.98	1743388.45	14399980.89	39°39'4.7747"N	80°38'2.9937"W	9696.34	133.099	0.21	0.20	-0.0
17328.00	90.150	131.970	7698.48	9785.92	-6686.11	7147.56	1743456.00	14399919.97	39°39'4.1697"N	80°38'2.1329"W	9787.32	133.090	0.21	0.13	-0.1
17420.00	89.970	132.060	7698.39	9877.92	-6747.69	7215.91	1743524.33	14399858.42	39°39'3.5583"N	80°38'1.2623"W	9879.31	133.080	0.22	-0.20	0.1
17445.00	89.970	132.060	7698.40	9902.92	-6764.44	7234.47	1743542.88	14399841.68	39°39'3.3921"N	80°38'1.0258"W	9904.30	133.077	0.00	0.00	0.0

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Field	Wetzel	API/Legal	
Facility	William Ritchea WTZ Pad	Wellbore	William Ritchea WTZ 10H AWB
Slot	Slot 10H		

HOLE & CASING SECTIONS - Ref Wellbore: William Ritchea WTZ 10H AWB Ref Wellpath: William Ritchea WTZ 10H AWP Proj: 17445'

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	0.03	-0.04
7.5in Open Hole	100.00	587.00	487.00	100.00	587.00	0.03	-0.04	-0.29	-0.89
3.375in Casing Surface	26.00	587.00	561.00	26.00	587.00	0.00	0.00	-0.29	-0.89
2.25in Open Hole	587.00	2970.00	2383.00	587.00	2968.84	-0.29	-0.89	39.87	18.20
3.625in Casing Intermediate	26.00	2970.00	2944.00	26.00	2968.84	0.00	0.00	39.87	18.20
3.75in Open Hole	2970.00	6560.00	3590.00	2968.84	6539.40	39.87	18.20	112.16	-191.25
3.5in Open Hole	6560.00	17445.00	10885.00	6539.40	7698.40	112.16	-191.25	-6764.44	7234.44
3.5in Casing Production	26.00	17445.00	17419.00	26.00	7698.40	0.00	0.00	-6764.44	7234.44

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
William Ritchea WTZ 10H LP Rev-2	7578.00	-424.00	204.53	1736515.69	14406179.63	39°40'6.3274"N	80°39'30.5929"W	point
William Ritchea WTZ 10H BHL Rev-4	7743.30	-6774.27	7227.41	1743535.82	14399831.85	39°39'3.2952"N	80°38'1.1167"W	point

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Field	Wetzel	API/Legal	
Facility	William Ritchea WTZ Pad	Wellbore	William Ritchea WTZ 10H AWB
Slot	Slot 10H		

WELLPATH COMPOSITION - Ref Wellbore: William Ritchea WTZ 10H AWB Ref Wellpath: William Ritchea WTZ 10H AWP Proj: 17445'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
26.00	500.00	Gyrodata 2015 - GC+WIR+DPIPE	01 Gyrodata <17-1/2"> (100'-500')	William Ritchea WTZ 10H AWB	3/25/2021
500.00	754.00	Gyrodata 2015 - GC+WIR+DPIPE	02 Gyrodata <12-1/4"> (600'-754')	William Ritchea WTZ 10H AWB	3/25/2021
754.00	2913.00	OWSG MWD rev2 + HRGM	03 Premier MWD <12-1/4"> (865'-2913')	William Ritchea WTZ 10H AWB	3/25/2021
2913.00	6492.00	OWSG MWD rev2 + HRGM	04 Premier MWD <8-3/4"> (3020'-6492')	William Ritchea WTZ 10H AWB	3/25/2021
6492.00	17445.00	BH AutoTrak Curve/eXpress (2019) (HRGM, Short spacing)	05 BH AT Curve <8-1/2"> (6527'-17420')	William Ritchea WTZ 10H AWB	3/25/2021

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Facility	William Ritchea WTZ Pad	Wellbore	William Ritchea WTZ 10H AWB
Slot	Slot 10H		

COMMENTS

Wellpath general comments
 API: 47-103-03372-0000
 BH Job #: 110806980
 Rig: SDC 41
 Duration: 03/28/2021 - 03/30/2021