

Location: Wetzel County, WV  
Field: Wetzel  
Facility: Vernon Johnson WTZ Pad

Slot: 601H  
Well: Vernon Johnson WTZ 601H  
Wellbore: Vernon Johnson WTZ 601H PWB

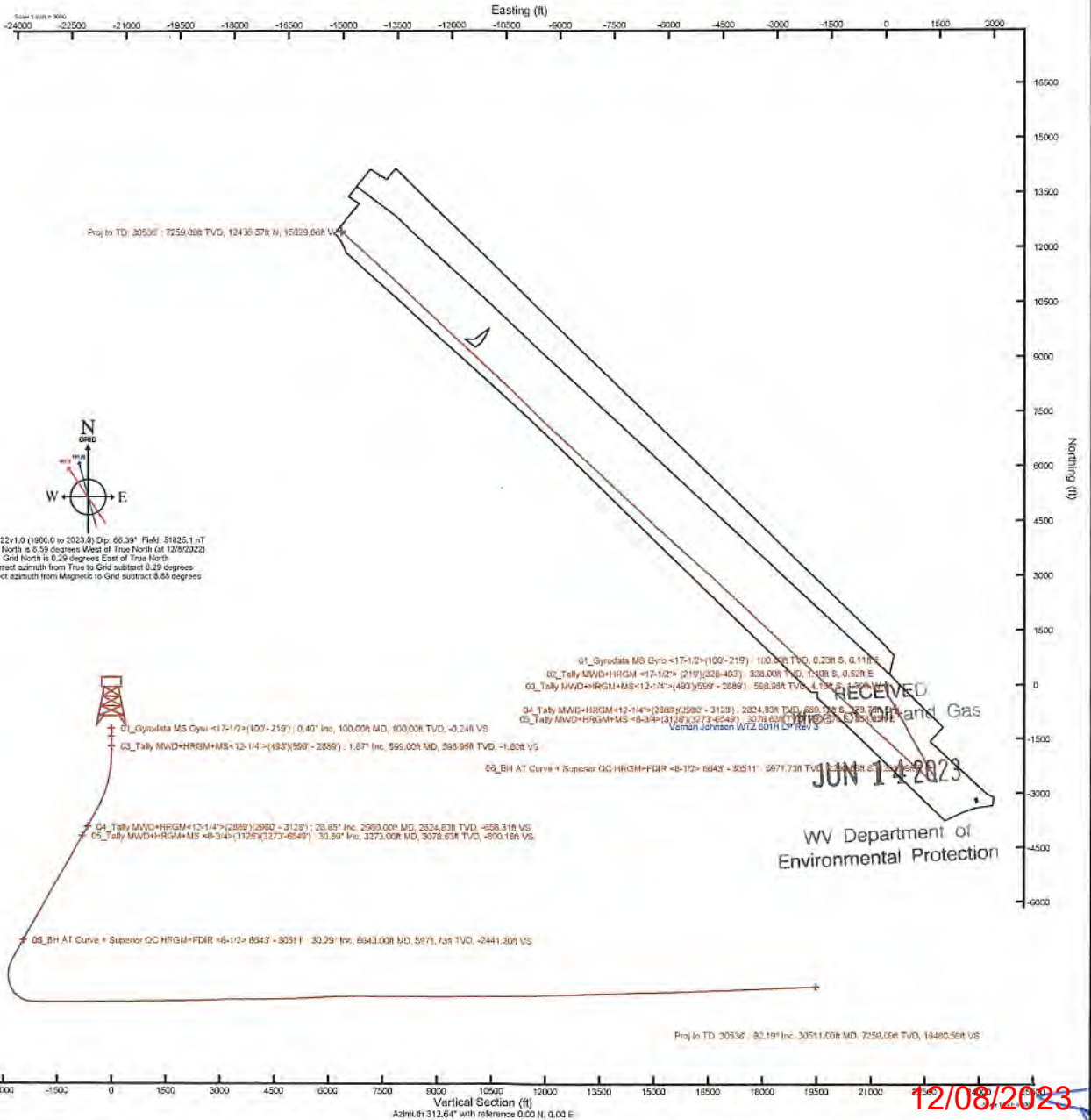
**Location Information**

Facility Name			Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Vernon Johnson WTZ Pad			1768177.130	14424392.640	39°43'5.0033"N	80°32'44.3746"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
601H	-36.92	-52.50	1768124.650	14424355.730	39°43'4.6410"N	80°32'45.0488"W
SDC41 (KB) to Ground level (At Slot: 601H)					26ft	
Mean Sea Level to Ground level (At Slot: 601H)					-1431.5ft	
SDC41 (KB) to Mean Sea Level					1457.5ft	
Plot reference wellpath is Vernon Johnson WTZ 601H AWP Proj: 30536'				Grid System: NAD83 / UTM Zone 17 North, US feet		
True vertical depths are referenced to SDC41 (KB)				North Reference: Grid north		
Reference wellpath measured depths are referenced to SDC41 (KB)				Scale: True distance		
SDC41 (KB) to Mean Sea Level: 1457.5 feet				Coordinates are in feet referenced to Slot		
Mean Sea Level to Ground level (At Slot: 601H): -1431.5 feet				Depths are in feet		
Offset wellpath MDs are referenced to each path's default MD datum				Created by: tranlam on 2023-01-07; Database: WA_MPL_EASTERNUS_Defn		

**Bottom Hole Location**

MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
30536.00	92.190	312.090	7258.13	12453.32	-15048.19	1753082.22	14436804.27	39°45'8.4225"N	80°35'56.9085"W

**API:47-103-03521-0000**  
**BH Job #: 111554958**  
**Rig: SDC 41**  
**Duration: 12.31.2022 to 01.06.2023**





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Environmental Protection  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Vernon Johnson WTZ 601H
Field	Wetzel	API/Legal	
Facility	Vernon Johnson WTZ Pad	Wellbore	Vernon Johnson WTZ 601H AWB
Slot	601H		

REPORT SETUP INFORMATION			
Projection System	NAD83 / UTM Zone 17 North, US feet	Software System	WellArchitect® 6.0
North Reference	Grid	User	Tranlam
Scale	0.999619	Report Generated	1/7/2023 at 10:04:31 PM
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	-36.92	-52.50	1768124.65	14424355.73	39°43'4.6410"N	80°32'45.0488"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

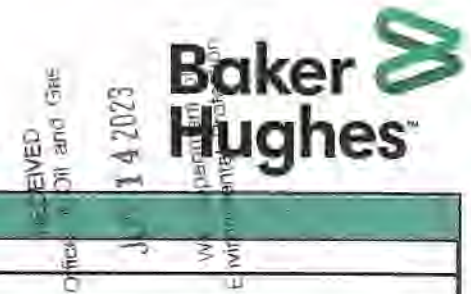
WELLPATH DATUM			
Calculation method	Minimum curvature	SDC41 (KB) to Facility Vertical Datum	1457.50ft
Horizontal Reference Pt	Slot	SDC41 (KB) to Mean Sea Level	1457.50ft
Vertical Reference Pt	SDC41 (KB)	SDC41 (KB) to Ground Level at Slot (601H)	26.00ft
MD Reference Pt	SDC41 (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	312.64°





# Actual Wellpath Report

Vernon Johnson WTZ 601H AWP Proj: 30536'  
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REFERENCE WELLPATH IDENTIFICATION			
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Field	Wetzel	API/Legal	
Facility	Vernon Johnson WTZ Pad	Wellbore	Vernon Johnson WTZ 601H AWB
Slot	601H		

**WELLPATH DATA (335 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	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]
0.00†	0.000	154.260	0.00	0.00	0.00	0.00	1768124.65	14424355.73	39°43'4.6410"N	80°32'45.0488"W	0.00	0.00	0.00
26.00	0.000	154.260	26.00	0.00	0.00	0.00	1768124.65	14424355.73	39°43'4.6410"N	80°32'45.0488"W	0.00	0.00	0.00
100.00	0.400	154.260	100.00	-0.24	-0.23	0.11	1768124.76	14424355.50	39°43'4.6387"N	80°32'45.0474"W	0.54	0.54	0.00
150.00	0.260	162.290	150.00	-0.50	-0.50	0.22	1768124.87	14424355.23	39°43'4.6361"N	80°32'45.0460"W	0.29	-0.28	16.06
200.00	0.170	174.030	200.00	-0.66	-0.68	0.26	1768124.91	14424355.05	39°43'4.6343"N	80°32'45.0455"W	0.20	-0.18	23.48
219.00	0.130	130.850	219.00	-0.70	-0.72	0.28	1768124.93	14424355.01	39°43'4.6338"N	80°32'45.0453"W	0.61	-0.21	-227.26
328.00	0.340	154.810	328.00	-1.12	-1.10	0.52	1768125.16	14424354.63	39°43'4.6301"N	80°32'45.0423"W	0.21	0.19	21.98
419.00	0.170	169.390	419.00	-1.48	-1.47	0.65	1768125.30	14424354.26	39°43'4.6264"N	80°32'45.0406"W	0.20	-0.19	16.02
493.00	1.010	223.090	492.99	-1.56	-2.06	0.23	1768124.88	14424353.67	39°43'4.6207"N	80°32'45.0460"W	1.24	1.14	72.57
599.00	1.870	214.600	598.96	-1.80	-4.16	-1.39	1768123.26	14424351.57	39°43'4.5999"N	80°32'45.0689"W	0.83	0.81	-8.01
692.00	3.630	219.160	691.85	-2.19	-7.69	-4.11	1768120.54	14424348.04	39°43'4.5652"N	80°32'45.1020"W	1.91	1.89	4.90
783.00	6.870	220.980	782.45	-2.52	-14.04	-9.50	1768115.15	14424341.70	39°43'4.5027"N	80°32'45.1713"W	3.56	3.56	2.00
874.00	6.640	214.580	872.82	-3.42	-22.48	-16.06	1768108.60	14424333.26	39°43'4.4196"N	80°32'45.2558"W	0.86	-0.25	-7.03
966.00	6.310	199.650	964.24	-6.14	-31.62	-20.78	1768103.88	14424324.12	39°43'4.3295"N	80°32'45.3168"W	1.86	-0.36	-16.23
1056.00	6.930	189.590	1053.64	-11.03	-41.63	-23.34	1768101.31	14424314.11	39°43'4.2307"N	80°32'45.3503"W	1.46	0.69	-11.18
1147.00	7.960	184.620	1143.88	-17.90	-53.33	-24.77	1768099.89	14424302.42	39°43'4.1152"N	80°32'45.3692"W	1.33	1.13	-5.46
1237.00	9.630	176.170	1232.82	-27.20	-67.05	-24.77	1768099.89	14424288.70	39°43'3.9796"N	80°32'45.3701"W	2.34	1.86	-9.39
1328.00	11.460	163.290	1322.29	-40.50	-83.31	-21.66	1768103.00	14424272.45	39°43'3.8188"N	80°32'45.3314"W	3.27	2.01	-14.16
1420.00	13.600	156.230	1412.10	-58.28	-101.96	-14.67	1768109.99	14424253.81	39°43'3.6341"N	80°32'45.2432"W	2.86	2.33	-7.67
1510.00	13.410	157.250	1499.81	-77.46	-121.27	-6.37	1768118.29	14424234.51	39°43'3.4428"N	80°32'45.1382"W	0.34	-0.21	-1.13
1601.00	13.660	158.530	1588.08	-96.72	-141.00	1.65	1768126.30	14424214.78	39°43'3.2474"N	80°32'45.0369"W	0.43	0.27	1.41
1691.00	15.940	157.140	1675.09	-117.53	-162.28	10.34	1768134.98	14424193.51	39°43'3.0367"N	80°32'44.9271"W	2.56	2.53	-1.54
1783.00	18.620	154.810	1762.93	-142.64	-187.22	21.50	1768146.14	14424168.58	39°43'2.7897"N	80°32'44.7858"W	3.01	2.91	-2.53
1876.00	20.430	154.810	1850.58	-171.42	-215.34	34.73	1768159.36	14424140.47	39°43'2.5111"N	80°32'44.6184"W	1.95	1.95	0.00
1967.00	21.420	154.210	1935.58	-201.58	-244.68	48.72	1768173.35	14424111.15	39°43'2.2205"N	80°32'44.4413"W	1.11	1.09	-0.66
2060.00	23.560	153.510	2021.50	-234.74	-276.61	64.40	1768189.02	14424079.23	39°43'1.9041"N	80°32'44.2427"W	2.32	2.30	-0.75
2152.00	25.320	151.890	2105.26	-270.50	-310.42	81.87	1768206.49	14424045.43	39°43'1.5691"N	80°32'44.0213"W	2.05	1.91	-1.78
2245.00	27.760	151.950	2188.45	-309.72	-347.08	101.43	1768226.04	14424008.78	39°43'1.2058"N	80°32'43.7734"W	2.62	2.62	0.06
2336.00	29.850	151.740	2268.19	-351.13	-385.74	122.12	1768246.72	14423970.14	39°43'0.8228"N	80°32'43.5111"W	2.30	2.30	-0.23
2429.00	30.520	151.380	2348.57	-395.36	-426.85	144.39	1768268.98	14423929.04	39°43'0.4153"N	80°32'43.2288"W	0.75	0.72	-0.39





# Actual Wellpath Report

Vernon Johnson WTZ 601H AWP Proj: 30536'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Vernon Johnson WTZ 601H
Field	Wetzel	API/Legal	
Facility	Vernon Johnson WTZ Pad	Wellbore	Vernon Johnson WTZ 601H AWB
Slot	601H		

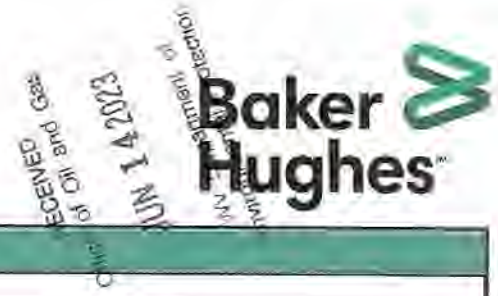
WELLPATH DATA (335 stations)													
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]
2522.00	31.440	150.950	2428.31	-440.75	-468.78	167.48	1768292.06	14423887.13	39°43'0.0000"N	80°32'42.9361"W	1.02	0.99	-0.46
2613.00	30.020	150.080	2506.53	-485.00	-509.26	190.36	1768314.93	14423846.66	39°42'59.5986"N	80°32'42.6459"W	1.64	-1.56	-0.96
2705.00	30.180	151.330	2586.12	-528.86	-549.50	212.93	1768337.50	14423806.44	39°42'59.1998"N	80°32'42.3596"W	0.70	0.17	1.36
2797.00	29.750	151.650	2665.82	-572.35	-589.88	234.87	1768359.43	14423766.08	39°42'58.7996"N	80°32'42.0816"W	0.50	-0.47	0.35
2889.00	30.040	151.390	2745.58	-615.74	-630.18	256.73	1768381.28	14423725.79	39°42'58.4002"N	80°32'41.8044"W	0.35	0.32	-0.26
2980.00	28.850	149.610	2824.83	-658.31	-669.12	278.75	1768403.29	14423686.87	39°42'58.0143"N	80°32'41.5252"W	1.62	-1.31	-1.96
3073.00	29.060	146.340	2906.21	-701.71	-707.28	302.62	1768427.15	14423648.72	39°42'57.6360"N	80°32'41.2222"W	1.72	0.23	-3.52
3128.00	30.500	145.740	2953.94	-728.29	-729.93	317.88	1768442.41	14423626.08	39°42'57.4114"N	80°32'41.0284"W	2.67	2.62	-1.09
3273.00	30.890	147.030	3078.63	-800.18	-791.57	358.85	1768483.36	14423564.46	39°42'56.8002"N	80°32'40.5081"W	0.53	0.27	0.89
3365.00	30.910	149.680	3157.58	-845.65	-831.78	383.68	1768508.18	14423524.27	39°42'56.4015"N	80°32'40.1936"W	1.48	0.02	2.88
3456.00	31.190	148.970	3235.54	-890.61	-872.15	407.58	1768532.07	14423483.91	39°42'56.0014"N	80°32'39.8898"W	0.51	0.31	-0.78
3550.00	31.100	151.020	3315.99	-937.01	-914.25	431.89	1768556.37	14423441.83	39°42'55.5841"N	80°32'39.5814"W	1.13	-0.10	2.18
3642.00	30.470	149.930	3395.03	-981.83	-955.22	455.09	1768579.56	14423400.88	39°42'55.1780"N	80°32'39.2872"W	0.91	-0.68	-1.18
3733.00	29.240	150.130	3473.95	-1025.06	-994.46	477.72	1768602.18	14423361.65	39°42'54.7891"N	80°32'39.0002"W	1.36	-1.35	0.22
3824.00	29.180	152.060	3553.38	-1067.18	-1033.33	499.18	1768623.64	14423322.79	39°42'54.4039"N	80°32'38.7281"W	1.04	-0.07	2.12
3914.00	30.550	151.320	3631.43	-1109.54	-1072.78	520.44	1768644.89	14423283.36	39°42'54.0129"N	80°32'38.4586"W	1.58	1.52	-0.82
4005.00	32.100	150.110	3709.16	-1154.52	-1114.04	543.59	1768668.03	14423242.12	39°42'53.6040"N	80°32'38.1651"W	1.84	1.70	-1.33
4096.00	32.770	154.250	3785.97	-1200.48	-1157.19	566.34	1768690.77	14423198.98	39°42'53.1764"N	80°32'37.8767"W	2.56	0.74	4.55
4187.00	31.030	155.650	3863.23	-1244.97	-1200.74	586.71	1768711.14	14423155.45	39°42'52.7450"N	80°32'37.6189"W	2.08	-1.91	1.54
4281.00	31.170	153.830	3943.72	-1289.95	-1244.65	607.43	1768731.85	14423111.56	39°42'52.3100"N	80°32'37.3566"W	1.01	0.15	-1.94
4371.00	31.860	153.050	4020.44	-1333.93	-1286.73	628.47	1768752.88	14423069.50	39°42'51.8931"N	80°32'37.0901"W	0.89	0.77	-0.87
4460.00	31.750	152.040	4096.08	-1378.04	-1328.35	650.09	1768774.49	14423027.89	39°42'51.4807"N	80°32'36.8161"W	0.61	-0.12	-1.13
4550.00	31.360	149.030	4172.78	-1422.84	-1369.35	673.25	1768797.64	14422986.91	39°42'51.0744"N	80°32'36.5225"W	1.80	-0.43	-3.34
4641.00	30.890	149.650	4250.68	-1467.89	-1409.81	697.24	1768821.62	14422946.46	39°42'50.6733"N	80°32'36.2182"W	0.63	-0.52	0.68
4733.00	31.390	151.850	4329.42	-1513.10	-1451.32	720.47	1768844.85	14422904.97	39°42'50.2619"N	80°32'35.9235"W	1.35	0.54	2.35
4820.00	31.600	150.310	4403.61	-1556.22	-1491.10	742.45	1768866.82	14422865.21	39°42'49.8677"N	80°32'35.6449"W	0.96	0.24	-1.77
4909.00	31.320	148.160	4479.53	-1600.73	-1531.00	766.21	1768890.56	14422825.31	39°42'49.4721"N	80°32'35.3435"W	1.30	-0.31	-2.42
4995.00	30.870	148.720	4553.17	-1643.46	-1568.85	789.45	1768913.80	14422787.48	39°42'49.0969"N	80°32'35.0485"W	0.62	-0.52	0.65
5088.00	31.050	148.590	4632.92	-1689.45	-1609.71	814.34	1768938.68	14422746.64	39°42'48.6919"N	80°32'34.7327"W	0.21	0.19	-0.14
5179.00	29.780	150.870	4711.40	-1733.48	-1649.48	837.57	1768961.90	14422706.88	39°42'48.2976"N	80°32'34.4380"W	1.89	-1.40	2.51





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Field	Wetzel	API/Legal	
Facility	Vernon Johnson WTZ Pad	Wellbore	Vernon Johnson WTZ 601H AWB
Slot	601H		

WELLPATH DATA (335 stations)													
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5270.00	30.200	149.710	4790.21	-1776.83	-1688.98	860.12	1768984.44	14422667.39	39°42'47.9061"N	80°32'34.1521"W	0.79	0.46	-1.27
5356.00	31.110	150.100	4864.20	-1818.70	-1726.92	882.10	1769006.42	14422629.47	39°42'47.5301"N	80°32'33.8733"W	1.08	1.06	0.45
5446.00	30.850	149.120	4941.36	-1863.01	-1766.88	905.54	1769029.84	14422589.52	39°42'47.1340"N	80°32'33.5760"W	0.63	-0.29	-1.09
5538.00	31.020	148.210	5020.27	-1908.46	-1807.28	930.13	1769054.43	14422549.14	39°42'46.7335"N	80°32'33.2639"W	0.54	0.18	-0.99
5631.00	31.810	151.580	5099.64	-1954.73	-1849.21	954.43	1769078.71	14422507.23	39°42'46.3179"N	80°32'32.9558"W	2.07	0.85	-3.62
5723.00	30.600	149.430	5178.33	-2000.09	-1890.70	977.88	1769102.15	14422465.76	39°42'45.9067"N	80°32'32.6585"W	1.79	-1.32	-2.34
5816.00	29.340	150.710	5258.90	-2044.41	-1930.95	1001.06	1769125.33	14422425.52	39°42'45.5077"N	80°32'32.3644"W	1.52	-1.35	1.38
5910.00	29.840	153.210	5340.64	-2088.20	-1971.91	1022.87	1769147.13	14422384.57	39°42'45.1018"N	80°32'32.0880"W	1.42	0.53	2.66
6002.00	30.400	154.190	5420.22	-2131.28	-2013.30	1043.32	1769167.57	14422343.20	39°42'44.6917"N	80°32'31.8290"W	0.81	0.61	1.07
6094.00	31.030	152.800	5499.31	-2175.19	-2053.35	1064.30	1769188.54	14422301.17	39°42'44.2752"N	80°32'31.5634"W	1.03	0.68	-1.51
6184.00	31.950	150.730	5576.06	-2219.61	-2096.75	1086.54	1769210.78	14422259.78	39°42'43.8648"N	80°32'31.2814"W	1.58	1.02	-2.30
6277.00	31.130	148.650	5655.33	-2266.11	-2138.75	1111.08	1769235.31	14422217.80	39°42'43.4485"N	80°32'30.9702"W	1.46	-0.88	-2.24
6369.00	30.320	150.340	5734.41	-2311.09	-2179.24	1134.95	1769259.16	14422177.32	39°42'43.0472"N	80°32'30.6674"W	1.29	-0.88	1.84
6461.00	29.720	150.430	5814.07	-2354.93	-2219.26	1157.69	1769281.90	14422137.32	39°42'42.6506"N	80°32'30.3790"W	0.65	-0.65	0.10
6549.00	29.940	151.780	5890.41	-2396.45	-2257.58	1178.84	1769303.04	14422099.02	39°42'42.2708"N	80°32'30.1109"W	0.80	0.25	-1.58
6643.00	30.290	149.440	5971.73	-2441.30	-2298.66	1201.99	1769326.18	14422057.95	39°42'41.8636"N	80°32'29.8174"W	1.30	0.37	-2.49
6733.00	30.340	146.000	6049.43	-2485.15	-2337.05	1226.24	1769350.42	14422019.57	39°42'41.4630"N	80°32'29.5096"W	1.93	0.06	-3.82
6825.00	30.450	146.610	6128.78	-2530.38	-2375.78	1252.06	1769376.23	14421980.86	39°42'41.0989"N	80°32'29.1817"W	0.36	0.12	0.66
6916.00	30.430	146.860	6207.24	-2575.09	-2414.33	1277.35	1769401.51	14421942.32	39°42'40.7167"N	80°32'28.8606"W	0.14	-0.02	0.27
7009.00	30.320	148.650	6287.47	-2620.49	-2454.10	1302.44	1769426.59	14421902.57	39°42'40.3224"N	80°32'28.5422"W	0.98	-0.12	1.92
7100.00	30.060	148.560	6366.13	-2664.49	-2493.16	1326.28	1769450.42	14421863.52	39°42'39.9351"N	80°32'28.2397"W	0.29	-0.29	-0.10
7191.00	29.890	148.710	6444.96	-2708.19	-2531.98	1349.94	1769474.08	14421824.72	39°42'39.5503"N	80°32'27.9395"W	0.20	-0.19	0.16
7282.00	26.760	148.670	6525.05	-2749.68	-2568.87	1372.38	1769496.50	14421787.85	39°42'39.1846"N	80°32'27.6548"W	3.44	-3.44	-0.04
7373.00	24.990	151.450	6606.93	-2787.57	-2603.26	1392.22	1769516.34	14421753.47	39°42'38.8438"N	80°32'27.4032"W	2.36	-1.95	3.05
7463.00	19.090	158.010	6690.33	-2818.90	-2633.63	1406.83	1769530.94	14421723.11	39°42'38.5428"N	80°32'27.2182"W	7.09	-6.56	7.29
7556.00	14.200	168.940	6779.43	-2841.85	-2658.95	1414.72	1769538.83	14421697.80	39°42'38.2922"N	80°32'27.1189"W	6.22	-5.26	11.75
7646.00	10.080	193.050	6867.45	-2854.65	-2677.48	1415.06	1769539.17	14421679.28	39°42'38.1091"N	80°32'27.1158"W	7.17	-4.58	26.79
7738.00	9.070	229.070	6958.25	-2857.81	-2690.08	1407.76	1769531.87	14421666.68	39°42'37.9849"N	80°32'27.2101"W	6.49	-1.10	39.15
7828.00	11.070	264.970	7046.94	-2851.19	-2695.49	1393.78	1769517.89	14421661.27	39°42'37.9321"N	80°32'27.3893"W	7.18	2.22	39.89
7921.00	15.610	282.130	7137.44	-2834.39	-2698.65	1372.63	1769496.75	14421663.12	39°42'37.9515"N	80°32'27.6598"W	6.43	4.88	18.45





REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Vernon Johnson WTZ 601H
Field	Wetzel	API/Legal	
Facility	Vernon Johnson WTZ Pad	Wellbore	Vernon Johnson WTZ 601H AWB
Slot	601H		

WELLPATH DATA (335 stations)													
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]
8013.00	21.260	292.000	7224.71	-2808.09	-2684.79	1345.03	1769469.17	14421671.97	39°42'38.0404"N	80°32'28.0123"W	7.00	6.14	10.73
8104.00	27.330	296.420	7307.62	-2772.55	-2669.30	1310.99	1769435.14	14421687.46	39°42'38.1952"N	80°32'28.4468"W	6.96	6.67	4.86
8196.00	34.270	297.120	7386.59	-2727.26	-2648.06	1268.97	1769393.14	14421708.68	39°42'38.4072"N	80°32'28.9831"W	7.55	7.54	0.76
8286.00	42.270	305.390	7457.24	-2672.69	-2618.92	1221.64	1769345.82	14421737.82	39°42'38.6976"N	80°32'29.5869"W	10.54	8.89	9.19
8378.00	49.880	310.750	7521.04	-2606.72	-2577.96	1169.67	1769293.87	14421778.76	39°42'39.1050"N	80°32'30.2492"W	9.27	8.27	5.83
8469.00	58.220	314.850	7574.43	-2533.15	-2527.87	1115.78	1769240.00	14421828.83	39°42'39.6028"N	80°32'30.9355"W	9.86	9.16	4.51
8562.00	65.880	311.210	7618.00	-2451.08	-2471.93	1055.72	1769179.97	14421884.74	39°42'40.1586"N	80°32'31.7003"W	8.93	8.24	-3.91
8652.00	74.530	310.450	7648.45	-2366.52	-2416.63	991.70	1769115.97	14421940.03	39°42'40.7084"N	80°32'32.5159"W	9.64	9.61	-0.84
8744.00	80.020	313.390	7668.71	-2276.83	-2356.69	924.98	1769049.27	14421999.95	39°42'41.3041"N	80°32'33.3658"W	6.73	5.97	3.20
8834.00	85.200	313.080	7680.28	-2187.61	-2295.57	859.97	1768984.29	14422061.04	39°42'41.9114"N	80°32'34.1936"W	5.77	5.76	-0.34
8926.00	90.160	312.730	7684.01	-2095.72	-2233.01	792.66	1768917.01	14422123.57	39°42'42.5330"N	80°32'35.0508"W	5.40	5.39	-0.38
9017.00	89.580	312.890	7684.21	-2004.72	-2171.17	725.90	1768850.27	14422185.39	39°42'43.1476"N	80°32'35.9010"W	0.66	-0.64	0.18
9107.00	89.730	312.120	7684.76	-1914.72	-2110.36	659.55	1768783.95	14422246.17	39°42'43.7518"N	80°32'36.7460"W	0.87	0.17	-0.86
9199.00	89.460	312.130	7685.41	-1822.73	-2048.66	591.32	1768715.74	14422307.86	39°42'44.3651"N	80°32'37.6151"W	0.29	-0.29	0.01
9291.00	89.300	311.640	7686.40	-1730.74	-1987.24	522.83	1768647.28	14422369.25	39°42'44.9755"N	80°32'38.4875"W	0.56	-0.17	-0.53
9382.00	89.580	312.180	7687.29	-1639.75	-1926.46	455.11	1768579.59	14422430.01	39°42'45.5796"N	80°32'39.3501"W	0.67	0.31	0.59
9474.00	89.490	312.570	7688.04	-1547.76	-1864.45	387.15	1768511.65	14422491.99	39°42'46.1958"N	80°32'40.2157"W	0.44	-0.10	0.42
9566.00	88.960	312.600	7689.28	-1455.77	-1802.20	319.42	1768443.95	14422554.22	39°42'46.8144"N	80°32'41.0783"W	0.58	-0.58	0.03
9658.00	90.040	312.920	7690.08	-1363.77	-1739.75	251.88	1768376.43	14422616.65	39°42'47.4350"N	80°32'41.9385"W	1.22	1.17	0.35
9749.00	90.770	309.080	7689.44	-1272.83	-1680.06	183.21	1768307.79	14422676.32	39°42'48.0283"N	80°32'42.8133"W	4.30	0.80	-4.22
9841.00	90.430	310.260	7688.48	-1180.96	-1621.33	112.40	1768237.01	14422735.02	39°42'48.6123"N	80°32'43.7156"W	1.33	-0.37	1.28
9931.00	90.220	312.100	7687.97	-1091.00	-1562.08	44.67	1768169.30	14422794.25	39°42'49.2012"N	80°32'44.5785"W	2.06	-0.23	2.04
10022.00	90.740	312.480	7687.21	-1000.00	-1500.85	-22.64	1768102.01	14422855.46	39°42'49.8097"N	80°32'45.4359"W	0.71	0.57	0.42
10113.00	89.970	312.230	7686.64	-909.00	-1439.54	-89.89	1768034.79	14422916.74	39°42'50.4190"N	80°32'46.2924"W	0.89	-0.85	-0.27
10203.00	90.190	311.190	7686.52	-819.02	-1379.66	-157.08	1767967.63	14422976.60	39°42'51.0141"N	80°32'47.1483"W	1.18	0.24	-1.16
10294.00	90.990	311.790	7685.58	-728.04	-1319.38	-225.24	1767899.50	14423036.86	39°42'51.6133"N	80°32'48.0166"W	1.10	0.88	0.66
10386.00	90.340	314.280	7684.51	-636.06	-1256.60	-292.47	1767832.29	14423099.61	39°42'52.2370"N	80°32'48.8729"W	2.80	-0.71	2.71
10477.00	90.280	314.060	7684.02	-545.09	-1193.19	-357.74	1767767.04	14423162.99	39°42'52.8669"N	80°32'49.7040"W	0.25	-0.07	-0.24
10570.00	90.250	313.740	7683.59	-452.12	-1128.71	-424.75	1767700.06	14423227.45	39°42'53.5076"N	80°32'50.5573"W	0.35	-0.03	-0.34
10660.00	90.500	314.010	7683.00	-362.14	-1066.33	-489.63	1767635.21	14423289.81	39°42'54.1272"N	80°32'51.3835"W	0.41	0.28	0.30



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Slot	601H		

WELLPATH DATA (335 stations)													
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]
10753.00	90.430	314.110	7682.24	-269.17	-1001.66	-556.46	1767568.40	14423354.45	39°42'54.7697"N	80°32'52.2345"W	0.13	-0.08	0.11
10845.00	90.000	313.760	7681.90	-177.19	-937.83	-622.71	1767502.18	14423418.26	39°42'55.4038"N	80°32'53.0781"W	0.60	-0.47	-0.38
10937.00	90.830	314.380	7681.23	-85.23	-873.84	-688.81	1767436.11	14423482.22	39°42'56.0395"N	80°32'53.9198"W	1.13	0.90	0.67
11029.00	90.650	314.570	7680.04	6.72	-809.39	-754.45	1767370.49	14423546.65	39°42'56.6797"N	80°32'54.7557"W	0.28	-0.20	0.21
11121.00	90.220	312.660	7679.35	98.70	-745.93	-821.05	1767303.91	14423610.08	39°42'57.3101"N	80°32'55.6039"W	2.13	-0.47	-2.08
11212.00	90.250	312.550	7678.97	189.70	-684.33	-886.03	1767236.96	14423671.66	39°42'57.9222"N	80°32'56.4570"W	0.13	0.03	-0.12
11304.00	90.830	312.560	7678.11	281.69	-622.12	-955.80	1767169.22	14423733.85	39°42'58.5405"N	80°32'57.3202"W	0.63	0.63	0.01
11395.00	91.820	313.780	7676.00	372.66	-559.88	-1022.15	1767102.90	14423796.07	39°42'59.1589"N	80°32'58.1652"W	1.73	1.09	1.34
11486.00	90.470	313.120	7674.18	463.63	-497.31	-1088.20	1767036.87	14423858.61	39°42'59.7805"N	80°32'59.0064"W	1.65	-1.48	-0.73
11578.00	90.900	312.840	7673.08	555.62	-434.59	-1155.50	1766969.60	14423921.30	39°43'0.4036"N	80°32'59.8636"W	0.56	0.47	-0.30
11669.00	91.480	313.700	7671.19	646.60	-372.23	-1221.74	1766903.38	14423983.64	39°43'1.0232"N	80°33'0.7073"W	1.14	0.64	0.95
11759.00	90.590	313.320	7669.57	736.57	-310.28	-1287.00	1766838.14	14424045.57	39°43'1.6387"N	80°33'1.5385"W	1.08	-0.99	-0.42
11850.00	90.500	313.680	7668.70	827.56	-247.64	-1353.01	1766772.16	14424108.18	39°43'2.2610"N	80°33'2.3792"W	0.41	-0.10	0.40
11941.00	90.340	312.480	7668.03	918.55	-185.49	-1419.47	1766705.72	14424170.31	39°43'2.8785"N	80°33'3.2257"W	1.33	-0.18	-1.32
12032.00	90.740	312.910	7667.18	1009.54	-123.79	-1486.35	1766638.87	14424231.99	39°43'3.4916"N	80°33'4.0776"W	0.65	0.44	0.47
12124.00	90.830	312.740	7665.92	1101.54	-61.25	-1553.82	1766571.42	14424294.50	39°43'4.1129"N	80°33'4.9370"W	0.21	0.10	-0.18
12215.00	90.990	313.410	7664.47	1192.52	0.89	-1620.28	1766504.99	14424356.62	39°43'4.7303"N	80°33'5.7835"W	0.76	0.18	0.74
12306.00	90.710	312.860	7663.12	1283.51	63.10	-1686.68	1766438.61	14424418.80	39°43'5.3484"N	80°33'6.6293"W	0.68	-0.31	-0.60
12397.00	90.470	312.630	7662.18	1374.50	124.86	-1753.51	1766371.81	14424480.54	39°43'5.9621"N	80°33'7.4805"W	0.37	-0.26	-0.26
12488.00	90.800	313.620	7661.18	1465.49	187.06	-1819.92	1766305.43	14424542.72	39°43'6.5801"N	80°33'8.3264"W	1.15	0.36	1.09
12579.00	90.310	313.350	7660.29	1556.48	249.68	-1885.94	1766239.43	14424605.32	39°43'7.2022"N	80°33'9.1673"W	0.61	-0.54	-0.30
12670.00	90.710	313.270	7659.48	1647.47	312.10	-1952.16	1766173.24	14424667.71	39°43'7.8223"N	80°33'10.0106"W	0.45	0.44	-0.09
12762.00	90.070	313.670	7658.86	1739.46	375.39	-2018.92	1766106.50	14424730.98	39°43'8.4511"N	80°33'10.8610"W	0.82	-0.70	0.43
12852.00	90.070	313.200	7658.75	1829.45	437.27	-2084.28	1766041.17	14424792.83	39°43'9.0659"N	80°33'11.6934"W	0.52	0.00	-0.52
12944.00	90.650	312.300	7658.17	1921.44	499.72	-2151.83	1765973.64	14424855.26	39°43'9.6883"N	80°33'12.5540"W	1.16	0.63	-0.98
13034.00	90.830	313.130	7657.01	2011.43	560.76	-2217.95	1765907.55	14424916.28	39°43'10.2929"N	80°33'13.3962"W	0.94	0.20	0.92
13125.00	91.140	313.420	7655.44	2102.42	623.13	-2284.20	1765841.33	14424978.63	39°43'10.9125"N	80°33'14.2400"W	0.47	0.34	0.32
13216.00	91.600	312.690	7653.27	2193.39	685.24	-2350.67	1765774.88	14425040.71	39°43'11.5296"N	80°33'15.0867"W	0.95	0.51	-0.80
13307.00	91.360	313.920	7650.92	2284.35	747.63	-2416.87	1765708.71	14425103.08	39°43'12.1495"N	80°33'15.9299"W	1.38	-0.26	1.36
13398.00	90.990	312.010	7649.05	2375.32	809.64	-2483.44	1765642.16	14425165.06	39°43'12.7655"N	80°33'16.7780"W	2.14	-0.41	-2.10



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Field	Wetzel	API/Legal	
Facility	Vernon Johnson WTZ Pad	Wellbore	Vernon Johnson WTZ 601H AWB
Slot	601H		

WELLPATH DATA (335 stations)													
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]
13490.00	92.100	312.420	7646.57	2467.28	871.43	-2551.55	1765574.07	14425226.83	39°43'13.3795"N	80°33'17.6457"W	1.29	1.21	0.45
13580.00	92.000	313.350	7643.35	2557.23	932.64	-2617.46	1765508.20	14425288.01	39°43'13.9877"N	80°33'18.4852"W	1.04	-0.11	1.03
13672.00	92.340	312.850	7639.87	2649.16	995.46	-2684.58	1765441.10	14425350.80	39°43'14.6117"N	80°33'19.3402"W	0.66	0.37	-0.54
13764.00	91.880	313.710	7636.48	2741.09	1058.48	-2751.51	1765374.19	14425413.81	39°43'15.2379"N	80°33'20.1928"W	1.06	-0.50	0.93
13856.00	90.990	311.420	7634.18	2833.05	1120.69	-2819.25	1765306.48	14425476.99	39°43'15.8560"N	80°33'21.0557"W	2.67	-0.97	-2.49
13947.00	92.560	312.680	7631.36	2924.00	1181.61	-2886.78	1765238.97	14425536.89	39°43'16.4613"N	80°33'21.9161"W	2.21	1.73	1.38
14038.00	91.880	313.540	7627.83	3014.92	1243.75	-2953.17	1765172.62	14425599.00	39°43'17.0787"N	80°33'22.7617"W	1.20	-0.75	0.95
14130.00	90.830	312.610	7625.66	3106.89	1306.56	-3020.35	1765105.46	14425661.79	39°43'17.7027"N	80°33'23.6175"W	1.52	-1.14	-1.01
14221.00	91.020	312.590	7624.19	3197.88	1368.15	-3087.33	1765038.51	14425723.36	39°43'18.3147"N	80°33'24.4708"W	0.21	0.21	-0.02
14313.00	90.740	312.930	7622.77	3289.87	1430.60	-3154.86	1764971.00	14425785.79	39°43'18.9352"N	80°33'25.3312"W	0.48	-0.30	0.37
14404.00	90.160	312.710	7622.06	3380.87	1492.45	-3221.61	1764904.28	14425847.61	39°43'19.5497"N	80°33'26.1814"W	0.68	-0.64	-0.24
14496.00	90.280	313.090	7621.71	3472.87	1555.08	-3289.00	1764836.91	14425910.21	39°43'20.1719"N	80°33'27.0400"W	0.43	0.13	0.41
14588.00	90.370	313.140	7621.18	3564.86	1617.96	-3356.16	1764769.78	14425973.07	39°43'20.7966"N	80°33'27.8955"W	0.11	0.10	0.05
14679.00	90.280	313.420	7620.67	3655.85	1680.34	-3422.41	1764703.55	14426035.43	39°43'21.4163"N	80°33'28.7394"W	0.32	-0.10	0.31
14771.00	90.000	313.180	7620.44	3747.85	1743.44	-3489.36	1764636.63	14426098.50	39°43'22.0431"N	80°33'29.5922"W	0.40	-0.30	-0.26
14862.00	90.430	313.700	7620.10	3838.84	1806.01	-3555.44	1764570.58	14426161.05	39°43'22.6647"N	80°33'30.4339"W	0.74	0.47	0.57
14953.00	90.130	313.300	7619.66	3929.83	1868.65	-3621.44	1764504.59	14426223.66	39°43'23.2870"N	80°33'31.2747"W	0.55	-0.33	-0.44
15044.00	90.100	313.080	7619.48	4020.82	1930.93	-3687.79	1764438.27	14426285.92	39°43'23.9057"N	80°33'32.1199"W	0.24	-0.03	-0.24
15136.00	90.680	313.150	7618.85	4112.82	1993.81	-3754.95	1764371.14	14426348.77	39°43'24.5304"N	80°33'32.9754"W	0.64	0.63	0.08
15227.00	91.170	312.730	7617.38	4203.80	2055.79	-3821.56	1764304.56	14426410.73	39°43'25.1462"N	80°33'33.8240"W	0.71	0.54	-0.46
15319.00	91.420	312.970	7615.30	4295.78	2118.34	-3888.99	1764237.15	14426473.26	39°43'25.7676"N	80°33'34.6830"W	0.38	0.27	0.26
15412.00	91.450	313.140	7612.97	4388.75	2181.81	-3956.92	1764169.24	14426536.71	39°43'26.3982"N	80°33'35.5485"W	0.19	0.03	0.18
15502.00	91.450	313.180	7610.69	4478.71	2243.36	-4022.55	1764103.64	14426598.23	39°43'27.0096"N	80°33'36.3845"W	0.04	0.00	0.04
15594.00	91.670	313.130	7608.19	4570.68	2306.26	-4089.64	1764036.58	14426661.11	39°43'27.6345"N	80°33'37.2392"W	0.25	0.24	-0.05
15685.00	91.630	312.720	7605.57	4661.64	2368.21	-4156.25	1763970.00	14426723.03	39°43'28.2499"N	80°33'38.0878"W	0.45	-0.04	-0.45
15776.00	91.700	313.000	7602.93	4752.60	2430.08	-4222.92	1763903.35	14426784.88	39°43'28.8646"N	80°33'38.9372"W	0.32	0.08	0.31
15869.00	92.220	313.210	7599.74	4845.54	2493.59	-4290.78	1763835.51	14426848.37	39°43'29.4956"N	80°33'39.8017"W	0.60	0.56	0.23
15959.00	92.280	313.620	7596.21	4935.46	2555.40	-4356.11	1763770.21	14426910.15	39°43'30.1096"N	80°33'40.6339"W	0.46	0.07	0.46
16050.00	91.510	313.090	7593.20	5026.40	2617.84	-4422.24	1763704.11	14426972.57	39°43'30.7298"N	80°33'41.4764"W	1.03	-0.85	-0.58
16142.00	92.900	313.250	7589.66	5118.33	2680.73	-4489.29	1763637.09	14427035.44	39°43'31.3546"N	80°33'42.3305"W	1.52	1.51	0.17





# Actual Wellpath Report

Vernon Johnson WTZ 601H AWP Proj: 30536'  
Page 8 of 15



RECEIVED  
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 returned of  
 final plate  
 11/1/23

REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Vernon Johnson WTZ 601H
Field	Wetzel	API/Legal	
Facility	Vernon Johnson WTZ Pad	Wellbore	Vernon Johnson WTZ 601H AWB
Slot	601H		

WELLPATH DATA (335 stations)													
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]
16233.00	92.250	313.310	7585.57	5209.23	2743.06	-4555.47	1763570.93	14427097.74	39°43'31.9737"N	80°33'43.1736"W	0.72	-0.71	0.07
16325.00	92.280	312.230	7581.94	5301.16	2805.48	-4622.95	1763503.47	14427160.14	39°43'32.5939"N	80°33'44.0334"W	1.17	0.03	-1.17
16417.00	92.190	311.990	7578.35	5393.08	2867.12	-4691.15	1763435.30	14427221.76	39°43'33.2064"N	80°33'44.9024"W	0.28	-0.10	-0.26
16508.00	91.970	312.350	7575.05	5484.02	2928.18	-4758.55	1763367.93	14427282.78	39°43'33.8130"N	80°33'45.7612"W	0.46	-0.24	0.40
16598.00	93.240	312.250	7570.96	5573.92	2988.68	-4825.05	1763301.45	14427343.27	39°43'34.4142"N	80°33'46.6085"W	1.42	1.41	-0.11
16690.00	92.840	311.870	7566.08	5665.79	3050.23	-4893.25	1763233.27	14427404.79	39°43'35.0257"N	80°33'47.4776"W	0.60	-0.43	-0.41
16782.00	92.800	311.570	7561.55	5757.67	3111.38	-4961.84	1763164.71	14427465.92	39°43'35.6333"N	80°33'48.3516"W	0.33	-0.04	-0.33
16873.00	92.440	312.170	7557.39	5848.56	3172.05	-5029.53	1763097.04	14427526.57	39°43'36.2362"N	80°33'49.2142"W	0.77	-0.40	0.66
16965.00	92.810	312.040	7553.18	5940.46	3233.67	-5097.72	1763028.89	14427588.16	39°43'36.8485"N	80°33'50.0830"W	0.43	0.40	-0.14
17054.00	92.560	311.640	7549.01	6029.36	3292.97	-5163.95	1762962.68	14427647.44	39°43'37.4377"N	80°33'50.9270"W	0.53	-0.28	-0.45
17146.00	92.900	311.860	7544.63	6121.24	3354.17	-5232.51	1762894.15	14427708.61	39°43'38.0458"N	80°33'51.8007"W	0.44	0.37	0.24
17237.00	92.310	311.550	7540.49	6212.13	3414.65	-5300.38	1762826.30	14427769.07	39°43'38.6467"N	80°33'52.6656"W	0.73	-0.65	-0.34
17327.00	91.730	311.970	7537.32	6302.07	3474.55	-5367.47	1762759.24	14427828.95	39°43'39.2419"N	80°33'53.5206"W	0.80	-0.64	0.47
17418.00	91.200	311.430	7534.99	6393.02	3535.06	-5435.39	1762691.34	14427889.44	39°43'39.8432"N	80°33'54.3861"W	0.83	-0.58	-0.59
17509.00	92.220	312.170	7532.26	6483.97	3595.68	-5503.20	1762623.56	14427950.04	39°43'40.4456"N	80°33'55.2502"W	1.38	1.12	0.81
17600.00	90.500	312.570	7530.12	6574.94	3657.00	-5570.41	1762556.38	14428011.33	39°43'41.0547"N	80°33'56.1066"W	1.94	-1.89	0.44
17690.00	90.400	312.140	7529.41	6664.94	3717.63	-5636.92	1762489.90	14428071.93	39°43'41.6571"N	80°33'56.9541"W	0.49	-0.11	-0.48
17781.00	90.030	311.960	7529.07	6755.93	3778.58	-5704.49	1762422.35	14428132.86	39°43'42.2627"N	80°33'57.8151"W	0.45	-0.41	-0.20
17873.00	89.850	311.840	7529.16	6847.92	3840.02	-5772.96	1762353.90	14428194.28	39°43'42.8732"N	80°33'58.6878"W	0.24	-0.20	-0.13
17963.00	89.880	312.210	7529.38	6937.92	3900.27	-5839.82	1762287.07	14428254.51	39°43'43.4718"N	80°33'59.5397"W	0.41	0.03	0.41
18054.00	89.540	312.040	7529.84	7028.91	3961.31	-5907.31	1762219.60	14428315.52	39°43'44.0783"N	80°34'0.3998"W	0.42	-0.37	-0.19
18145.00	89.450	311.850	7530.64	7119.90	4022.13	-5974.99	1762151.95	14428376.32	39°43'44.6826"N	80°34'1.2623"W	0.23	-0.10	-0.21
18235.00	89.200	311.460	7531.70	7209.88	4081.95	-6042.23	1762084.73	14428436.11	39°43'45.2769"N	80°34'2.1192"W	0.51	-0.28	-0.43
18327.00	90.000	311.950	7532.34	7301.87	4143.15	-6110.92	1762016.08	14428497.29	39°43'45.8851"N	80°34'2.9945"W	1.02	0.87	0.53
18417.00	89.850	311.700	7532.46	7391.86	4203.17	-6177.98	1761949.03	14428557.29	39°43'46.4814"N	80°34'3.8492"W	0.32	-0.17	-0.28
18508.00	89.200	311.650	7533.21	7482.84	4263.67	-6245.95	1761881.09	14428617.77	39°43'47.0826"N	80°34'4.7154"W	0.72	-0.71	-0.05
18598.00	89.390	312.490	7534.32	7572.83	4323.97	-6312.76	1761814.31	14428678.04	39°43'47.6817"N	80°34'5.5667"W	0.96	0.21	0.93
18690.00	89.330	311.900	7535.35	7664.82	4385.76	-6380.91	1761746.19	14428739.81	39°43'48.2955"N	80°34'6.4352"W	0.64	-0.07	-0.64
18782.00	90.100	312.540	7535.81	7756.82	4447.58	-6449.04	1761678.08	14428801.60	39°43'48.9097"N	80°34'7.3034"W	1.09	0.84	0.70
18875.00	89.600	311.000	7536.05	7849.80	4509.53	-6518.40	1761608.75	14428863.53	39°43'49.5253"N	80°34'8.1874"W	1.74	-0.54	-1.66





REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Vernon Johnson WZ 601H
Field	Wetzel	API/Legal	
Facility	Vernon Johnson WZ Pad	Wellbore	Vernon Johnson WZ 601H AWB
Slot	601H		

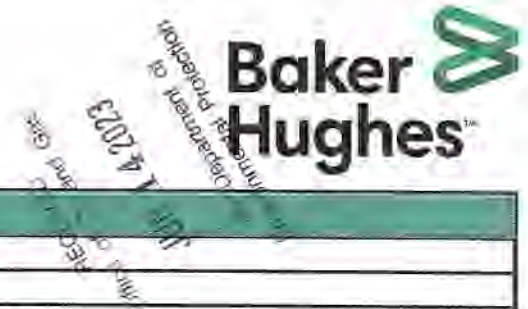
WELLPATH DATA (335 stations)													
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]
18965.00	90.000	312.890	7536.36	7939.79	4569.68	-6585.34	1761541.84	14428923.66	39°43'50.1229"N	80°34'9.0404"W	2.15	0.44	2.10
19057.00	89.670	312.800	7536.63	8031.79	4632.24	-6652.79	1761474.41	14428986.20	39°43'50.7444"N	80°34'9.8999"W	0.37	-0.36	-0.10
19147.00	90.370	313.060	7536.60	8121.79	4693.54	-6718.69	1761408.54	14429047.47	39°43'51.3533"N	80°34'10.7396"W	0.83	0.78	0.29
19238.00	89.940	313.120	7536.35	8212.78	4755.71	-6785.14	1761342.11	14429109.61	39°43'51.9708"N	80°34'11.5864"W	0.48	-0.47	0.07
19325.00	89.880	313.040	7536.49	8299.78	4815.13	-6848.69	1761278.59	14429169.01	39°43'52.5611"N	80°34'12.3961"W	0.11	-0.07	-0.08
19415.00	90.430	313.480	7536.25	8389.77	4876.81	-6914.23	1761213.07	14429230.67	39°43'53.1738"N	80°34'13.2312"W	0.78	0.61	0.49
19507.00	90.000	312.970	7535.90	8481.77	4939.81	-6981.27	1761146.06	14429293.65	39°43'53.7996"N	80°34'14.0854"W	0.73	-0.47	-0.58
19595.00	89.970	313.380	7535.92	8569.76	5000.03	-7045.44	1761081.91	14429353.84	39°43'54.3977"N	80°34'14.9031"W	0.47	-0.03	0.47
19683.00	89.910	312.960	7536.02	8657.76	5060.23	-7109.62	1761017.75	14429414.02	39°43'54.9957"N	80°34'15.7209"W	0.48	-0.07	-0.48
19778.00	89.880	312.940	7536.19	8752.76	5124.96	-7179.16	1760948.25	14429478.73	39°43'55.6387"N	80°34'16.6069"W	0.04	-0.03	-0.02
19874.00	89.820	312.830	7536.44	8848.76	5190.29	-7249.50	1760877.93	14429544.03	39°43'56.2877"N	80°34'17.5033"W	0.13	-0.06	-0.11
19969.00	89.820	313.490	7536.74	8943.75	5255.28	-7318.79	1760808.66	14429608.99	39°43'56.9332"N	80°34'18.3863"W	0.69	0.00	0.69
20064.00	89.880	312.480	7536.99	9038.75	5320.05	-7388.29	1760739.19	14429673.74	39°43'57.5765"N	80°34'19.2718"W	1.07	0.06	-1.06
20159.00	90.030	312.640	7537.06	9133.75	5384.30	-7458.26	1760669.25	14429737.97	39°43'58.2149"N	80°34'20.1635"W	0.23	0.16	0.17
20254.00	89.820	312.700	7537.19	9228.75	5448.69	-7528.11	1760599.42	14429802.33	39°43'58.8545"N	80°34'21.0537"W	0.23	-0.22	0.06
20347.00	89.910	313.180	7537.41	9321.75	5512.04	-7596.20	1760531.37	14429865.66	39°43'59.4838"N	80°34'21.9213"W	0.53	0.10	0.52
20441.00	89.700	312.840	7537.73	9415.74	5576.16	-7664.93	1760462.66	14429929.75	39°44'0.1207"N	80°34'22.7972"W	0.43	-0.22	-0.36
20535.00	89.790	313.090	7538.14	9509.74	5640.23	-7733.72	1760393.90	14429993.80	39°44'0.7571"N	80°34'23.6737"W	0.28	0.10	0.27
20630.00	89.540	312.450	7538.70	9604.74	5704.74	-7803.45	1760324.19	14430058.28	39°44'1.3979"N	80°34'24.5624"W	0.72	-0.26	-0.67
20725.00	89.630	312.590	7539.39	9699.74	5768.94	-7873.47	1760254.20	14430122.46	39°44'2.0357"N	80°34'25.4547"W	0.18	0.09	0.15
20820.00	89.630	312.800	7540.00	9794.73	5833.36	-7943.29	1760184.40	14430186.85	39°44'2.6756"N	80°34'26.3445"W	0.22	0.00	0.22
20915.00	89.820	312.780	7540.46	9889.73	5897.89	-8013.01	1760114.72	14430251.36	39°44'3.3166"N	80°34'27.2329"W	0.20	0.20	-0.02
21009.00	90.770	312.660	7539.97	9983.73	5961.66	-8082.06	1760045.68	14430315.11	39°44'3.9501"N	80°34'28.1130"W	1.02	1.01	-0.13
21104.00	90.340	312.540	7539.05	10078.73	6025.96	-8151.99	1759975.79	14430379.38	39°44'4.5888"N	80°34'29.0041"W	0.47	-0.45	-0.13
21199.00	90.430	313.200	7538.41	10173.72	6090.59	-8221.61	1759906.19	14430443.99	39°44'5.2308"N	80°34'29.8914"W	0.70	0.09	0.69
21294.00	90.100	312.780	7537.98	10268.72	6155.37	-8291.10	1759836.73	14430508.74	39°44'5.8742"N	80°34'30.7769"W	0.56	-0.35	-0.44
21389.00	90.280	312.650	7537.66	10363.72	6219.81	-8360.90	1759766.95	14430573.16	39°44'6.5144"N	80°34'31.6665"W	0.23	0.19	-0.14
21484.00	90.620	312.980	7536.91	10458.72	6284.37	-8430.59	1759697.29	14430637.70	39°44'7.1557"N	80°34'32.5545"W	0.50	0.36	0.35
21578.00	90.310	313.030	7536.15	10552.71	6348.49	-8499.33	1759628.58	14430701.78	39°44'7.7925"N	80°34'33.4305"W	0.33	-0.33	0.05
21673.00	90.310	312.800	7535.64	10647.71	6413.17	-8568.90	1759559.04	14430766.44	39°44'8.4350"N	80°34'34.3172"W	0.24	0.00	-0.24



REFERENCE WELLPATH IDENTIFICATION			
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Field	Wetzel	API/Legal	
Facility	Vernon Johnson WTZ Pad	Wellbore	Vernon Johnson WTZ 601H AWB
Slot	601H		

WELLPATH DATA (335 stations)													
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]
21769.00	90.830	312.850	7534.68	10743.70	6478.43	-8639.31	1759488.66	14430831.67	39°44'9.0832"N	80°34'35.2145"W	0.54	0.54	0.05
21863.00	91.230	312.880	7532.99	10837.69	6542.36	-8708.19	1759419.80	14430895.58	39°44'9.7182"N	80°34'36.0924"W	0.43	0.43	0.03
21959.00	91.270	313.370	7530.90	10933.66	6607.97	-8778.24	1759349.77	14430961.17	39°44'10.3699"N	80°34'36.9851"W	0.51	0.04	0.51
22050.00	92.190	313.260	7528.15	11024.61	6670.37	-8844.42	1759283.62	14431023.54	39°44'10.9897"N	80°34'37.8284"W	1.02	1.01	-0.12
22145.00	91.730	312.960	7524.90	11119.55	6735.25	-8913.74	1759214.33	14431088.40	39°44'11.6341"N	80°34'38.7118"W	0.58	-0.48	-0.32
22240.00	91.910	312.960	7521.88	11214.50	6799.96	-8983.22	1759144.87	14431153.08	39°44'12.2769"N	80°34'39.5973"W	0.19	0.19	0.00
22336.00	91.600	312.630	7518.94	11310.46	6865.15	-9053.64	1759074.49	14431218.25	39°44'12.9244"N	80°34'40.4947"W	0.47	-0.32	-0.34
22431.00	91.600	313.130	7516.29	11405.42	6929.77	-9123.22	1759004.93	14431282.84	39°44'13.5662"N	80°34'41.3816"W	0.53	0.00	0.53
22526.00	91.700	312.360	7513.56	11500.38	6994.22	-9192.96	1758935.22	14431347.27	39°44'14.2064"N	80°34'42.2703"W	0.82	0.11	-0.81
22620.00	91.850	311.920	7510.64	11594.33	7057.26	-9262.63	1758865.57	14431410.28	39°44'14.8327"N	80°34'43.1583"W	0.49	0.16	-0.47
22715.00	91.910	312.650	7507.53	11689.28	7121.14	-9332.87	1758795.36	14431474.14	39°44'15.4673"N	80°34'44.0537"W	0.77	0.06	0.77
22809.00	91.480	312.980	7504.75	11783.23	7185.00	-9401.79	1758726.46	14431537.98	39°44'16.1015"N	80°34'44.9321"W	0.58	-0.46	0.35
22904.00	91.570	313.970	7502.22	11878.19	7250.34	-9470.71	1758657.57	14431603.29	39°44'16.7505"N	80°34'45.8103"W	1.05	0.09	1.04
22998.00	91.330	313.780	7499.84	11972.14	7315.47	-9538.45	1758589.86	14431668.40	39°44'17.3973"N	80°34'46.6735"W	0.33	-0.26	-0.20
23092.00	91.480	314.090	7497.54	12066.08	7380.67	-9606.12	1758522.22	14431733.57	39°44'18.0448"N	80°34'47.5358"W	0.37	0.16	0.33
23187.00	91.420	314.090	7495.13	12161.02	7446.75	-9674.33	1758454.03	14431799.62	39°44'18.7010"N	80°34'48.4050"W	0.06	-0.06	0.00
23282.00	91.510	314.330	7492.70	12255.96	7512.97	-9742.40	1758385.98	14431865.82	39°44'19.3585"N	80°34'49.2725"W	0.27	0.09	0.25
23376.00	91.450	313.600	7490.28	12349.90	7578.20	-9810.04	1758318.37	14431931.03	39°44'20.0064"N	80°34'50.1343"W	0.78	-0.06	-0.78
23471.00	91.510	314.260	7487.82	12444.84	7644.09	-9878.43	1758250.01	14431996.89	39°44'20.6607"N	80°34'51.0059"W	0.70	0.06	0.69
23565.00	91.260	314.360	7485.55	12538.78	7709.73	-9945.68	1758182.79	14432062.51	39°44'21.3125"N	80°34'51.8628"W	0.29	-0.27	0.11
23660.00	91.570	314.210	7483.20	12633.71	7776.05	-10013.66	1758114.83	14432128.80	39°44'21.9710"N	80°34'52.7291"W	0.36	0.33	-0.16
23754.00	91.630	314.040	7480.58	12727.64	7841.47	-10081.11	1758047.40	14432194.19	39°44'22.6206"N	80°34'53.5886"W	0.19	0.06	-0.18
23848.00	91.690	313.740	7477.86	12821.58	7906.61	-10148.83	1757979.71	14432259.31	39°44'23.2675"N	80°34'54.4515"W	0.33	0.06	-0.32
23943.00	91.660	313.870	7475.08	12916.52	7972.34	-10217.36	1757911.21	14432325.01	39°44'23.9203"N	80°34'55.3249"W	0.14	-0.03	0.14
24038.00	91.480	312.700	7472.48	13011.47	8037.45	-10286.49	1757842.11	14432390.10	39°44'24.5669"N	80°34'56.2059"W	1.25	-0.19	-1.23
24132.00	91.570	312.980	7469.97	13105.44	8101.34	-10355.39	1757773.23	14432453.96	39°44'25.2015"N	80°34'57.0841"W	0.31	0.10	0.30
24227.00	91.730	313.310	7467.24	13200.40	8166.28	-10424.67	1757703.97	14432518.88	39°44'25.8465"N	80°34'57.9672"W	0.39	0.17	0.35
24321.00	91.790	312.860	7464.35	13294.35	8230.36	-10493.29	1757635.38	14432583.03	39°44'26.4839"N	80°34'58.8418"W	0.48	0.06	-0.48
24415.00	91.790	313.000	7461.42	13388.30	8294.45	-10562.09	1757566.61	14432647.00	39°44'27.1195"N	80°34'59.7186"W	0.15	0.00	0.15
24509.00	91.670	312.750	7458.58	13482.26	8358.38	-10630.94	1757497.78	14432710.90	39°44'27.7544"N	80°35'0.5962"W	0.29	-0.13	-0.27





REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Vernon Johnson WTZ 601H
Field	Wetzel	API/Legal	
Facility	Vernon Johnson WTZ Pad	Wellbore	Vernon Johnson WTZ 601H AWB
Slot	601H		

WELLPATH DATA (335 stations)													
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]
24602.00	91.540	312.750	7455.97	13575.22	8421.48	-10699.21	1757429.55	14432773.98	39°44'28.3812"N	80°35'1.4664"W	0.14	-0.14	0.00
24696.00	91.630	313.070	7453.37	13669.18	8485.46	-10768.03	1757360.75	14432837.93	39°44'29.0166"N	80°35'2.3436"W	0.35	0.10	0.34
24789.00	91.570	312.990	7450.78	13762.15	8548.89	-10835.98	1757292.82	14432901.35	39°44'29.6466"N	80°35'3.2097"W	0.11	-0.06	-0.09
24883.00	91.760	313.050	7448.05	13856.10	8613.00	-10904.68	1757224.15	14432965.43	39°44'30.2833"N	80°35'4.0853"W	0.21	0.20	0.06
24977.00	91.630	313.210	7445.27	13950.06	8677.23	-10973.25	1757155.61	14433029.64	39°44'30.9213"N	80°35'4.9593"W	0.22	-0.14	0.17
25072.00	91.630	312.950	7442.56	14045.02	8742.09	-11042.61	1757086.27	14433094.47	39°44'31.5654"N	80°35'5.8434"W	0.27	0.00	-0.27
25166.00	91.600	313.280	7439.91	14138.98	8806.31	-11111.20	1757017.71	14433158.67	39°44'32.2032"N	80°35'6.7177"W	0.35	-0.03	0.35
25261.00	91.420	313.120	7437.41	14233.94	8871.32	-11180.43	1756948.51	14433223.65	39°44'32.8489"N	80°35'7.6000"W	0.25	-0.19	-0.17
25355.00	91.450	312.950	7435.06	14327.91	8935.45	-11249.12	1756879.85	14433287.76	39°44'33.4858"N	80°35'8.4755"W	0.18	0.03	-0.18
25450.00	91.360	313.210	7432.73	14422.88	9000.32	-11318.48	1756810.51	14433352.60	39°44'34.1300"N	80°35'9.3597"W	0.29	-0.09	0.27
25544.00	91.420	312.900	7430.45	14516.85	9064.48	-11387.15	1756741.87	14433416.73	39°44'34.7672"N	80°35'10.2350"W	0.34	0.06	-0.33
25638.00	91.450	313.080	7428.09	14610.82	9128.55	-11455.89	1756673.16	14433480.78	39°44'35.4036"N	80°35'11.1111"W	0.19	0.03	0.19
25733.00	91.480	312.820	7425.66	14705.78	9193.26	-11525.40	1756603.67	14433545.47	39°44'36.0462"N	80°35'11.9972"W	0.28	0.03	-0.27
25827.00	91.360	312.880	7423.33	14799.75	9257.17	-11594.29	1756534.80	14433609.35	39°44'36.6809"N	80°35'12.8754"W	0.14	-0.13	0.06
25921.00	91.330	313.050	7421.13	14893.73	9321.22	-11663.06	1756466.06	14433673.37	39°44'37.3170"N	80°35'13.7519"W	0.18	-0.03	0.18
26016.00	91.390	313.310	7418.87	14988.69	9386.21	-11732.31	1756396.83	14433738.34	39°44'37.9625"N	80°35'14.6347"W	0.28	0.06	0.27
26110.00	91.360	313.110	7416.62	15082.66	9450.55	-11800.81	1756328.37	14433802.65	39°44'38.6014"N	80°35'15.5077"W	0.22	-0.03	-0.21
26205.00	91.570	313.390	7414.19	15177.63	9515.62	-11869.98	1756259.22	14433867.70	39°44'39.2477"N	80°35'16.3894"W	0.37	0.22	0.29
26300.00	91.450	313.100	7411.69	15272.59	9580.68	-11939.16	1756190.07	14433932.74	39°44'39.8938"N	80°35'17.2712"W	0.33	-0.13	-0.31
26395.00	91.390	313.200	7409.33	15367.56	9645.63	-12008.44	1756120.81	14433997.66	39°44'40.5388"N	80°35'18.1544"W	0.12	-0.06	0.11
26490.00	91.170	313.340	7407.21	15462.53	9710.73	-12077.60	1756051.68	14434062.74	39°44'41.1853"N	80°35'19.0359"W	0.27	-0.23	0.15
26584.00	91.480	313.220	7405.04	15556.49	9775.16	-12146.01	1755983.29	14434127.14	39°44'41.8251"N	80°35'19.9080"W	0.35	0.33	-0.13
26678.00	91.260	312.840	7402.79	15650.47	9839.28	-12214.71	1755914.63	14434191.24	39°44'42.4620"N	80°35'20.7836"W	0.47	-0.23	-0.40
26773.00	91.420	312.870	7400.57	15745.44	9903.88	-12284.33	1755845.03	14434255.81	39°44'43.1035"N	80°35'21.6711"W	0.17	0.17	0.03
26867.00	91.510	313.510	7398.16	15839.40	9968.19	-12352.84	1755776.54	14434320.10	39°44'43.7422"N	80°35'22.5445"W	0.69	0.10	0.66
26961.00	92.280	313.360	7395.05	15933.34	10032.79	-12421.06	1755708.35	14434384.67	39°44'44.3837"N	80°35'23.4140"W	0.83	0.82	-0.16
27054.00	92.310	312.900	7391.33	16026.26	10096.31	-12488.88	1755640.56	14434448.17	39°44'45.0146"N	80°35'24.2785"W	0.50	0.03	-0.49
27149.00	92.190	313.010	7387.60	16121.19	10161.00	-12558.36	1755571.11	14434512.83	39°44'45.6570"N	80°35'25.1642"W	0.17	-0.13	0.12
27243.00	92.160	313.350	7384.03	16215.12	10225.28	-12626.85	1755502.64	14434577.09	39°44'46.2953"N	80°35'26.0373"W	0.36	-0.03	0.36
27337.00	92.250	313.480	7380.42	16309.04	10289.83	-12695.08	1755434.43	14434641.62	39°44'46.9364"N	80°35'26.9071"W	0.17	0.10	0.14





**REFERENCE WELLPATH IDENTIFICATION**

Operator	SWN PRODUCTION COMPANY, LLC	Well	Vernon Johnson WTZ 601H
Field	Wetzel	API/Legal	
Facility	Vernon Johnson WTZ Pad	Wellbore	Vernon Johnson WTZ 601H AWB
Slot	601H		

**WELLPATH DATA (335 stations)**

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]
27431.00	92.250	313.410	7376.73	16402.96	10354.42	-12763.28	1755366.27	14434706.18	39°44'47.5778"N	80°35'27.7763"W	0.07	0.00	-0.07
27526.00	92.100	312.810	7373.12	16497.88	10419.30	-12832.58	1755296.99	14434771.04	39°44'48.2220"N	80°35'28.6598"W	0.65	-0.16	-0.63
27620.00	92.370	312.990	7369.45	16591.81	10483.24	-12901.39	1755228.21	14434834.95	39°44'48.8570"N	80°35'29.5370"W	0.35	0.29	0.19
27714.00	92.220	312.800	7365.69	16685.74	10547.17	-12970.20	1755159.43	14434898.86	39°44'49.4919"N	80°35'30.4142"W	0.26	-0.16	-0.20
27808.00	91.940	312.350	7362.28	16779.67	10610.72	-13039.37	1755090.28	14434962.39	39°44'50.1231"N	80°35'31.2961"W	0.56	-0.30	-0.48
27903.00	92.000	312.720	7359.01	16874.62	10674.91	-13109.33	1755020.34	14435026.55	39°44'50.7606"N	80°35'32.1880"W	0.39	0.06	0.39
27999.00	92.160	313.330	7355.53	16970.55	10740.37	-13179.47	1754950.24	14435091.98	39°44'51.4107"N	80°35'33.0821"W	0.66	0.17	0.64
28093.00	92.280	313.200	7351.89	17064.47	10804.74	-13247.87	1754881.86	14435156.33	39°44'52.0499"N	80°35'33.9540"W	0.19	0.13	-0.14
28188.00	92.160	313.330	7348.21	17159.40	10869.81	-13316.99	1754812.76	14435221.37	39°44'52.6960"N	80°35'34.8352"W	0.19	-0.13	0.14
28283.00	92.250	313.350	7344.55	17254.32	10934.96	-13386.03	1754743.75	14435286.50	39°44'53.3430"N	80°35'35.7154"W	0.10	0.09	0.02
28377.00	92.310	312.660	7340.81	17348.24	10999.02	-13454.72	1754675.09	14435350.53	39°44'53.9792"N	80°35'36.5910"W	0.74	0.06	-0.73
28472.00	92.190	312.830	7337.08	17443.17	11063.45	-13524.43	1754605.40	14435414.94	39°44'54.6191"N	80°35'37.4798"W	0.22	-0.13	0.18
28566.00	92.030	312.690	7333.62	17537.11	11127.23	-13593.40	1754536.46	14435478.69	39°44'55.2524"N	80°35'38.3591"W	0.23	-0.17	-0.15
28661.00	92.030	312.700	7330.26	17632.05	11191.61	-13663.18	1754466.71	14435543.05	39°44'55.8918"N	80°35'39.2487"W	0.01	0.00	0.01
28756.00	92.220	313.140	7326.73	17726.98	11256.25	-13732.70	1754397.21	14435607.67	39°44'56.5338"N	80°35'40.1350"W	0.50	0.20	-0.46
28851.00	92.220	313.060	7323.05	17821.91	11321.12	-13802.01	1754327.93	14435672.51	39°44'57.1779"N	80°35'41.0186"W	0.08	0.00	-0.08
28945.00	92.190	312.720	7319.44	17915.83	11385.04	-13870.83	1754259.13	14435736.41	39°44'57.8128"N	80°35'41.8960"W	0.36	-0.03	-0.36
29040.00	92.280	312.910	7315.73	18010.76	11449.56	-13940.47	1754189.53	14435800.90	39°44'58.4535"N	80°35'42.7838"W	0.22	0.09	0.20
29135.00	92.280	313.170	7311.95	18105.68	11514.35	-14009.85	1754120.17	14435865.66	39°44'59.0968"N	80°35'43.6683"W	0.27	0.00	0.27
29230.00	92.220	313.050	7308.22	18200.61	11579.22	-14079.15	1754050.90	14435930.51	39°44'59.7411"N	80°35'44.5518"W	0.14	-0.06	-0.13
29325.00	92.190	311.670	7304.57	18295.53	11643.18	-14149.29	1753980.78	14435994.45	39°45'0.3763"N	80°35'45.4462"W	1.45	-0.03	-1.45
29420.00	92.130	311.740	7300.99	18390.45	11706.34	-14220.17	1753909.94	14436057.58	39°45'1.0036"N	80°35'46.3499"W	0.10	-0.06	0.07
29515.00	92.220	312.230	7297.38	18485.38	11769.84	-14290.73	1753839.40	14436121.06	39°45'1.6343"N	80°35'47.2497"W	0.52	0.09	0.52
29610.00	92.190	311.850	7293.73	18580.30	11833.41	-14361.23	1753768.92	14436184.61	39°45'2.2657"N	80°35'48.1487"W	0.40	-0.03	-0.40
29704.00	92.220	311.920	7290.11	18674.23	11896.12	-14431.16	1753699.02	14436247.29	39°45'2.8886"N	80°35'49.0404"W	0.08	0.03	0.07
29800.00	92.190	311.920	7286.42	18770.15	11960.21	-14502.54	1753627.67	14436311.36	39°45'3.5251"N	80°35'49.9506"W	0.03	-0.03	0.00
29894.00	92.160	312.160	7282.85	18864.07	12023.11	-14572.30	1753557.93	14436374.24	39°45'4.1499"N	80°35'50.8401"W	0.26	-0.03	0.26
29989.00	92.250	312.420	7279.19	18959.00	12086.99	-14642.53	1753487.74	14436438.09	39°45'4.7843"N	80°35'51.7356"W	0.29	0.09	0.27
30084.00	92.220	312.240	7275.49	19053.93	12150.92	-14712.70	1753417.59	14436501.99	39°45'5.4191"N	80°35'52.6304"W	0.19	-0.03	-0.19
30180.00	92.190	311.860	7271.80	19149.85	12215.17	-14783.94	1753346.38	14436566.21	39°45'6.0572"N	80°35'53.5387"W	0.40	-0.03	-0.40



RECEIVED  
Office of Oil and Gas  
JUN 14 2022  
Environmental Protection Department

REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Vernon Johnson WTZ 601H
Field	Wetzel	API/Legal	
Facility	Vernon Johnson WTZ Pad	Wellbore	Vernon Johnson WTZ 601H AWB
Slot	601H		

WELLPATH DATA (335 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	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]
30275.00	92.160	312.210	7268.19	19244.78	12278.73	-14854.45	1753275.90	14436629.75	39°45'6.6886"N	80°35'54.4378"W	0.37	-0.03	0.37
30370.00	92.190	311.880	7264.59	19339.70	12342.31	-14924.94	1753205.43	14436693.31	39°45'7.3200"N	80°35'55.3368"W	0.35	0.03	-0.35
30465.00	92.280	312.040	7260.88	19434.62	12405.78	-14995.53	1753134.87	14436756.75	39°45'7.9504"N	80°35'56.2369"W	0.19	0.09	0.17
30511.00	92.190	312.090	7259.09	19480.59	12436.57	-15029.66	1753100.76	14436787.54	39°45'8.2562"N	80°35'56.6721"W	0.22	-0.20	0.11
30536.00‡	92.190	312.090	7258.13	19505.57	12453.32	-15048.19	1753082.22	14436804.27	39°45'8.4225"N	80°35'56.9085"W	0.00	0.00	0.00

HOLE & CASING SECTIONS - Ref Wellbore: Vernon Johnson WTZ 601H AWB Ref Wellpath: Vernon Johnson WTZ 601H AWP Proj: 30536'									
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	110.00	84.00	26.00	110.00	0.00	0.00	-0.29	0.14
17.5in Open Hole	110.00	566.00	456.00	110.00	565.97	-0.29	0.14	-3.35	-0.81
13.375in Casing Surface	26.00	26.00	0.00	26.00	26.00	0.00	0.00	0.00	0.00
12.25in Open Hole	566.00	3197.00	2631.00	565.97	3013.34	-3.35	-0.81	-759.06	337.49
9.625in Casing Intermediate	26.00	26.00	0.00	26.00	26.00	0.00	0.00	0.00	0.00
8.75in Open Hole	3197.00	6617.00	3420.00	3013.34	5949.26	-759.06	337.49	-2287.35	1195.39
8.5in Open Hole	6617.00	25000.00	18383.00	5949.26	7444.61	-2287.35	1195.39	8692.97	-10990.02
5.5in Casing Production	26.00	20536.00	20510.00	26.00	7538.15	0.00	0.00	5640.91	-7734.45






REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Vernon Johnson WTZ 601H
Field	Wetzel	API/Legal	
Facility	Vernon Johnson WTZ Pad	Wellbore	Vernon Johnson WTZ 601H AWB
Slot	601H		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Vernon Johnson WTZ 601H BHL Rev 5	7219.00	12454.15	-15049.12	1753081.30	14436805.11	39°45'8.4308"N	80°35'56.9203"W	point
Vernon Johnson WTZ 601H BHL Rev 4	7239.00	12454.15	-15049.12	1753081.30	14436805.11	39°45'8.4308"N	80°35'56.9203"W	point
Vernon Johnson WTZ 601H LP Rev 3	7670.00	-2299.91	857.83	1768982.15	14422056.70	39°42'41.8686"N	80°32'34.2213"W	point
Vernon Johnson WTZ 601H LP Rev 2	7690.00	-2299.91	857.83	1768982.15	14422056.70	39°42'41.8686"N	80°32'34.2213"W	point

WELLPATH COMPOSITION - Ref Wellbore: Vernon Johnson WTZ 601H AWB Ref Wellpath: Vernon Johnson WTZ 601H AWP Proj: 30536'					
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
26.00	219.00	Gyrodata 2015 - CT+WIR+DPIPE	01_Gyrodata MS Gyro <17-1/2>(100'- 219')	Vernon Johnson WTZ 601H AWB	12/25/2022
219.00	493.00	OWSG MWD rev2 + HRGM	02_Tally MWD+HRGM <17-1/2"> (219')(328-493')	Vernon Johnson WTZ 601H AWB	12/25/2022
493.00	2889.00	OWSG MWD rev2 +HRGM + Multi-Station Correction	03_Tally MWD+HRGM+MS<12-1/4">(493')(599' - 2889')	Vernon Johnson WTZ 601H AWB	12/25/2022
2889.00	3128.00	OWSG MWD rev2 + HRGM	04_Tally MWD+HRGM<12-1/4">(2889')(2980' - 3128')	Vernon Johnson WTZ 601H AWB	12/30/2022
3128.00	6549.00	OWSG MWD rev2 +HRGM + Multi-Station Correction	05_Tally MWD+HRGM+MS <8-3/4>(3128')(3273'-6549')	Vernon Johnson WTZ 601H AWB	12/25/2022
6549.00	30536.00	OWSG MWD rev2 +HRGM + Multi-Station Correction	06_BH AT Curve + Superior QC HRGM+FDIR <8-1/2> 6643' - 30511'	Vernon Johnson WTZ 601H AWB	1/7/2023



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Oil and Gas  
JUN 14 2023  
WV Department of Environmental Protection

**Baker Hughes** 

REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Vernon Johnson WTZ 601H
Field	Wetzel	API/Legal	
Facility	Vernon Johnson WTZ Pad	Wellbore	Vernon Johnson WTZ 601H AWB
Slot	601H		

COMMENTS
<p><b>Wellpath general comments</b>            API:47-103-03521-0000            BH Job #: 111554958            Rig: SDC 41            Duration:12.31.2022 to 01.06.2023</p>