

SWN PRODUCTION COMPANY, LLC

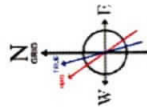
Location: Brooke County, WV
 Field: Brooke
 Facility: State of WV DNR C BRK Pad
 Slot: Slot 8H
 Well: State of WV DNR C BRK 8H
 Wellbore: State of WV DNR C BRK 8H PWB

Grid System: NAD83 UTM Zone 17 North, US feet
 North Reference: Grid north
 Scale: True distance
 Coordinates are in feet referenced to Slot
 DGC 40 (KB) to Mean Sea Level: 1014.6 feet
 Mean Sea Level to Ground level (At Slot: Slot 8H): -988.6 feet
 Offset wellpath MDs are referenced to each path's default MD value

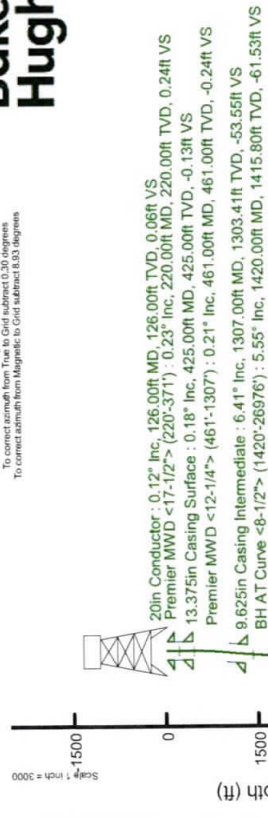
Location Information			
Facility Name	Grid East (US ft)	Grid North (US ft)	Longitude
State of WV DNR C BRK Pad	1769295.332	40°18'5.5200"N	80°32'15.9300"W
Slot	Local N (ft)	Grid North (US ft)	Longitude
Slot 8H	-3.10	14637185.870	80°32'15.9694"W
Slot 40 (KB) to Ground level (At Slot: Slot 8H)		26ft	
Mean Sea Level to Ground level (At Slot: Slot 8H)		-988.6ft	
SDC 40 (KB) to Mean Sea Level		1014.6ft	

Comments

APL: 47-009-00310-0000
 BH Job #: 110778243
 Rig: SDC 40
 Duration: 03/03/2021 - 03/11/2021



User specified Dip: 67.46° Field: 52313 INT
 Magnetic North is 6.63 degrees West of True North (at 2/24/2021)
 Grid North is 0.30 degrees West of True North (at 2/24/2021)
 To convert azimuth from Magnetic to Grid subtract 8.93 degrees



RECEIVED
 Office of Oil and Gas
 AUG 04 2021
 WV Department of
 Environmental Protection

2021/10/16

Projection to Bit : 89.08° Inc, 27001.00ft MD, 5862.36ft TVD, 21402.85ft VS
 5.5in Casing Production : 89.08° Inc, 27001.00ft MD, 5862.36ft TVD, 21402.85ft VS

Vertical Section (ft)
 Azimuth 158.54° with reference 0.00 N, 0.00 E

Scale 1 inch = 3000

Actual Wellpath Report

State of WV DNR C BRK 8H AWP Proj: 27001'
Page 1 of 13

REFERENCE WELLPATH IDENTIFICATION

Operator	SWN PRODUCTION COMPANY, LLC	Well	State of WV DNR C BRK 8H
Field	Brooke	API/Legal	
Facility	State of WV DNR C BRK Pad	Wellbore	State of WV DNR C BRK 8H AWB
Slot	Slot 8H		

REPORT SETUP INFORMATION

Projection System	NAD83 / UTM Zone 17 North, US feet	Software System	WellArchitect® 6.0
North Reference	Grid	User	Atenjen
Scale	0.999619	Report Generated	3/15/2021 at 9:58:59 AM
Convergence at slot	0.30° 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	9.33	-3.10	1769292.23	14637185.87	40°18'8.6123"N	80°32'15.9694"W
Facility Reference Pt			1769295.33	14637176.55	40°18'8.5200"N	80°32'15.9300"W
Field Reference Pt			0.00	0.00	0°00'0.0000"	85°29'19.4780"W

WELLPATH DATUM

Calculation method	Minimum curvature	SDC 40 (KB) to Facility Vertical Datum	1014.60ft
Horizontal Reference Pt	Slot	SDC 40 (KB) to Mean Sea Level	1014.60ft
Vertical Reference Pt	SDC 40 (KB)	SDC 40 (KB) to Ground Level at Slot (Slot 8H)	26.00ft
MD Reference Pt	SDC 40 (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	158.54°

RECEIVED
Office of Oil and Gas
AUG 04 2021
WV Department of Environmental Protection

REFERENCE WELLPATH IDENTIFICATION

Operator	SWN PRODUCTION COMPANY, LLC	Well	State of WV DNR C BRK 8H
Field	Brooke	API/Legal	
Facility	State of WV DNR C BRK Pad	Wellbore	State of WV DNR C BRK 8H AWB
Slot	Slot 8H		

WELLPATH DATA (287 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	106.760	0.00	0.00	0.00	0.00	1769292.23	14637185.87	40°18'8.6123"N	80°32'15.9694"W	0.00	0.000	0.00	0.00	0.00
26.00	0.000	106.760	26.00	0.00	0.00	0.00	1769292.23	14637185.87	40°18'8.6123"N	80°32'15.9694"W	0.00	0.000	0.00	0.00	0.00
220.00	0.230	106.760	220.00	0.24	-0.11	0.37	1769292.60	14637185.76	40°18'8.6112"N	80°32'15.9646"W	0.39	106.760	0.12	0.12	0.00
311.00	0.210	317.100	311.00	0.20	-0.04	0.43	1769292.66	14637185.83	40°18'8.6119"N	80°32'15.9638"W	0.44	95.628	0.47	-0.02	-164.46
371.00	0.160	4.940	371.00	0.02	0.12	0.37	1769292.60	14637185.99	40°18'8.6135"N	80°32'15.9647"W	0.39	71.702	0.26	-0.08	79.73
461.00	0.210	316.520	461.00	-0.24	0.37	0.26	1769292.49	14637186.24	40°18'8.6159"N	80°32'15.9660"W	0.45	35.786	0.18	0.06	-53.80
491.00	0.310	356.480	491.00	-0.37	0.49	0.22	1769292.45	14637186.36	40°18'8.6171"N	80°32'15.9665"W	0.53	24.418	0.67	0.33	133.20
581.00	1.400	8.270	580.99	-1.56	1.82	0.36	1769292.59	14637187.69	40°18'8.6303"N	80°32'15.9646"W	1.85	11.330	1.22	1.21	13.10
672.00	3.400	9.430	671.90	-4.84	5.58	0.97	1769293.20	14637191.45	40°18'8.6674"N	80°32'15.9566"W	5.66	9.824	2.20	2.20	1.27
763.00	4.730	15.970	762.67	-10.14	11.85	2.44	1769294.67	14637197.72	40°18'8.7293"N	80°32'15.9371"W	12.10	11.639	1.55	1.46	7.19
853.00	5.400	17.230	852.32	-16.39	19.46	4.72	1769296.94	14637205.32	40°18'8.8044"N	80°32'15.9072"W	20.03	13.622	0.75	0.74	1.40
944.00	5.750	16.160	942.89	-23.34	27.93	7.25	1769299.48	14637213.79	40°18'8.8879"N	80°32'15.8739"W	28.86	14.558	0.40	0.38	-1.18
1035.00	6.460	19.640	1033.37	-30.81	37.13	10.24	1769302.47	14637222.99	40°18'8.9787"N	80°32'15.8347"W	38.52	15.422	0.88	0.78	3.82
1125.00	7.220	23.120	1122.73	-38.65	47.10	14.17	1769306.39	14637232.95	40°18'9.0770"N	80°32'15.7834"W	49.18	16.738	0.96	0.84	3.87
1216.00	7.000	25.680	1213.03	-46.50	57.36	18.81	1769311.04	14637243.21	40°18'9.1781"N	80°32'15.7227"W	60.36	18.160	0.42	-0.24	2.81
1307.00	6.410	28.310	1303.41	-53.55	66.83	23.63	1769315.85	14637252.67	40°18'9.2714"N	80°32'15.6600"W	70.88	19.470	0.73	-0.65	2.89
1420.00	5.550	22.940	1415.80	-61.53	77.41	28.75	1769320.97	14637263.25	40°18'9.3758"N	80°32'15.5932"W	82.58	20.372	0.91	-0.76	-4.75
1515.00	5.860	19.070	1510.32	-68.50	86.23	32.12	1769324.34	14637272.06	40°18'9.4627"N	80°32'15.5490"W	92.02	20.432	0.52	0.33	-4.07
1610.00	5.800	22.020	1604.83	-75.67	95.26	35.51	1769327.72	14637281.09	40°18'9.5518"N	80°32'15.5047"W	101.66	20.442	0.32	-0.06	3.11
1705.00	5.770	22.080	1699.35	-82.61	104.14	39.10	1769331.32	14637289.97	40°18'9.6393"N	80°32'15.4578"W	111.23	20.580	0.03	-0.03	0.06
1800.00	5.780	21.790	1793.87	-89.56	113.00	42.67	1769334.89	14637298.83	40°18'9.7268"N	80°32'15.4111"W	120.79	20.687	0.03	0.01	-0.31
1895.00	5.790	21.600	1888.38	-96.54	121.90	46.21	1769338.42	14637307.72	40°18'9.8145"N	80°32'15.3648"W	130.37	20.761	0.02	0.01	-0.20
1990.00	5.790	22.280	1982.90	-103.51	130.79	49.79	1769342.90	14637316.61	40°18'9.9022"N	80°32'15.3180"W	139.95	20.842	0.07	0.00	0.72
2085.00	5.370	22.150	2077.45	-110.19	139.34	53.29	1769346.49	14637325.16	40°18'9.9865"N	80°32'15.2723"W	149.18	20.927	0.44	-0.44	-0.14
2180.00	5.440	21.930	2172.03	-116.68	147.64	56.64	1769348.85	14637333.45	40°18'10.0683"N	80°32'15.2284"W	158.13	20.990	0.08	0.07	-0.23
2275.00	5.380	21.650	2266.60	-123.20	155.95	59.97	1769352.18	14637341.76	40°18'10.1503"N	80°32'15.1849"W	167.08	21.033	0.07	-0.06	-0.29
2370.00	5.390	22.340	2361.18	-129.67	164.22	63.31	1769355.51	14637350.03	40°18'10.2318"N	80°32'15.1413"W	176.00	21.082	0.07	0.01	0.73
2465.00	5.410	22.120	2455.76	-136.14	172.49	66.69	1769358.89	14637358.30	40°18'10.3134"N	80°32'15.0971"W	184.94	21.137	0.03	0.02	-0.23
2560.00	5.430	22.250	2550.34	-142.63	180.80	70.08	1769362.28	14637366.60	40°18'10.3963"N	80°32'15.0528"W	193.91	21.186	0.02	0.02	0.14
2655.00	5.410	22.450	2644.91	-149.11	189.10	73.49	1769365.69	14637374.90	40°18'10.4772"N	80°32'15.0082"W	202.88	21.237	0.03	-0.02	0.21

REFERENCE WELLPATH IDENTIFICATION

Operator	SWN PRODUCTION COMPANY, LLC	Well	State of WV DNR C BRK 8H
Field	Brooke	API/Legal	
Facility	State of WV DNR C BRK Pad	Wellbore	State of WV DNR C BRK 8H AWB
Slot	Slot 8H		

WELLPATH DATA (287 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]
2750.00	5.440	22.080	2739.49	-155.60	197.41	76.89	1769369.09	14637383.21	40°18'10.5591"N	80°32'14.9637"W	211.86	21.281	0.05	0.03	-0.39
2845.00	5.480	22.410	2834.06	-162.13	205.78	80.31	1769372.51	14637391.57	40°18'10.6416"N	80°32'14.9190"W	220.90	21.320	0.05	0.04	0.35
2940.00	5.400	22.200	2928.63	-168.64	214.11	83.73	1769375.93	14637399.90	40°18'10.7238"N	80°32'14.8743"W	229.90	21.359	0.09	-0.08	-0.22
3034.00	5.410	22.230	3022.21	-175.04	222.31	87.08	1769379.28	14637408.10	40°18'10.8046"N	80°32'14.8305"W	238.76	21.391	0.01	0.01	0.03
3129.00	5.450	22.520	3116.78	-181.52	230.62	90.50	1769382.70	14637416.41	40°18'10.8866"N	80°32'14.7858"W	247.75	21.426	0.05	0.04	0.31
3224.00	5.440	22.510	3211.36	-188.01	238.95	93.96	1769386.15	14637424.73	40°18'10.9687"N	80°32'14.7407"W	256.76	21.465	0.01	-0.01	-0.01
3318.00	5.460	21.770	3304.93	-194.48	247.22	97.32	1769389.51	14637433.00	40°18'11.0502"N	80°32'14.6967"W	265.69	21.487	0.08	0.02	-0.79
3413.00	5.550	22.380	3399.49	-201.08	255.67	100.74	1769392.94	14637441.44	40°18'11.1335"N	80°32'14.6519"W	274.80	21.507	0.11	0.09	0.64
3508.00	5.380	22.010	3494.06	-207.63	264.04	104.16	1769396.35	14637449.81	40°18'11.2161"N	80°32'14.6072"W	283.85	21.529	0.18	-0.18	-0.39
3602.00	5.570	22.540	3587.63	-214.11	272.34	107.56	1769399.75	14637458.11	40°18'11.2979"N	80°32'14.5628"W	292.81	21.552	0.21	0.20	0.56
3697.00	5.420	22.970	3682.20	-220.63	280.73	111.08	1769403.27	14637466.49	40°18'11.3807"N	80°32'14.5168"W	301.91	21.588	0.16	-0.16	0.45
3792.00	5.270	21.720	3776.78	-227.01	288.91	114.45	1769406.63	14637474.67	40°18'11.4614"N	80°32'14.4728"W	310.76	21.610	0.20	-0.16	-1.32
3887.00	5.410	22.150	3871.37	-233.44	297.12	117.75	1769409.94	14637482.87	40°18'11.5422"N	80°32'14.4296"W	319.60	21.619	0.15	0.15	0.45
3982.00	5.260	29.360	3965.96	-239.43	305.06	121.57	1769413.76	14637490.81	40°18'11.6205"N	80°32'14.3798"W	328.39	21.729	0.72	-0.16	7.59
4077.00	4.950	22.200	4060.58	-245.15	312.65	125.26	1769417.44	14637498.40	40°18'11.6953"N	80°32'14.3317"W	336.81	21.833	0.75	-0.33	-7.54
4173.00	5.510	21.980	4156.18	-251.49	320.76	128.55	1769420.73	14637506.51	40°18'11.7753"N	80°32'14.2887"W	345.56	21.839	0.58	0.58	-0.23
4268.00	5.900	20.700	4250.71	-258.42	329.55	131.98	1769424.16	14637515.30	40°18'11.8621"N	80°32'14.2438"W	355.00	21.825	0.43	0.41	-1.35
4363.00	4.900	22.840	4345.29	-264.95	337.86	135.28	1769427.46	14637523.60	40°18'11.9440"N	80°32'14.2006"W	363.94	21.821	1.07	-1.05	2.25
4458.00	5.000	22.750	4439.94	-270.82	345.42	138.46	1769430.63	14637531.16	40°18'12.0185"N	80°32'14.1591"W	372.13	21.843	0.11	0.11	-0.09
4553.00	5.010	22.700	4534.57	-276.76	353.06	141.66	1769433.83	14637538.80	40°18'12.0939"N	80°32'14.1173"W	380.42	21.862	0.01	0.01	-0.05
4648.00	4.990	22.670	4629.21	-282.70	360.70	144.85	1769437.03	14637546.43	40°18'12.1692"N	80°32'14.0756"W	388.70	21.880	0.02	-0.02	-0.03
4743.00	5.010	23.780	4723.85	-288.59	368.31	148.12	1769440.29	14637554.04	40°18'12.2442"N	80°32'14.0329"W	396.98	21.908	0.10	0.02	1.17
4838.00	3.030	72.140	4818.64	-291.35	372.88	152.18	1769444.35	14637558.61	40°18'12.2891"N	80°32'13.9801"W	402.74	22.202	3.95	-2.08	50.91
4933.00	8.380	144.700	4913.22	-284.46	367.99	158.58	1769450.75	14637553.72	40°18'12.2405"N	80°32'13.8979"W	400.71	23.313	8.43	5.63	76.38
5028.00	14.050	155.750	5006.37	-266.21	351.81	167.33	1769459.49	14637553.75	40°18'12.0802"N	80°32'13.7861"W	389.58	25.436	6.36	5.97	11.63
5123.00	19.730	154.790	5097.24	-238.66	326.77	178.90	1769470.06	14637512.51	40°18'11.8321"N	80°32'13.6384"W	372.54	28.700	5.99	5.98	-1.01
5218.00	25.600	154.750	5184.87	-202.15	293.67	194.50	1769480.66	14637479.43	40°18'11.5042"N	80°32'13.4393"W	352.24	33.517	6.18	6.18	-0.04
5313.00	31.870	154.870	5268.12	-156.60	252.36	213.93	1769495.07	14637438.13	40°18'11.0950"N	80°32'13.1914"W	330.83	40.288	6.60	6.60	0.13
5408.00	37.880	154.340	5346.03	-102.43	203.32	237.23	1769509.37	14637389.11	40°18'10.6092"N	80°32'12.8939"W	312.43	49.401	6.33	6.33	-0.56
5503.00	47.040	154.730	5416.04	-38.53	145.47	264.75	1769559.88	14637331.29	40°18'10.0361"N	80°32'12.5425"W	302.09	61.213	9.65	9.64	0.41

REFERENCE WELLPATH IDENTIFICATION

Operator	SWN PRODUCTION COMPANY, LLC	Well	State of WV DNR C BRK 8H
Field	Brooke	API/Legal	
Facility	State of WV DNR C BRK Pad	Wellbore	State of WV DNR C BRK 8H AWB
Slot	Slot 8H		

WELLPATH DATA (287 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]
5598.00	52.450	153.380	5477.41	33.72	80.32	296.49	1769588.61	14637266.16	40°18'9.3907"N	80°32'12.1373"W	307.18	74.843	5.80	5.69	-1.42
5693.00	60.400	152.120	5529.90	112.40	10.03	332.74	1769624.84	14637195.90	40°18'8.6942"N	80°32'11.6742"W	332.89	88.273	8.44	8.37	-1.33
5788.00	68.120	156.560	5571.15	197.66	-67.07	369.66	1769661.75	1463718.83	40°18'7.9305"N	80°32'10.2030"W	375.69	100.283	9.15	8.13	4.67
5883.00	77.850	157.790	5598.91	288.36	-150.70	404.83	1769696.90	14637035.23	40°18'7.1022"N	80°32'10.7547"W	431.97	110.418	10.32	10.24	1.29
5978.00	85.870	156.660	5612.35	382.30	-237.34	441.21	1769733.27	14636948.62	40°18'6.2442"N	80°32'10.2909"W	501.00	118.277	8.52	8.44	-1.19
6073.00	89.510	155.930	5616.18	477.13	-324.24	479.37	1769771.41	14636861.76	40°18'5.3836"N	80°32'9.8043"W	578.72	124.074	3.91	3.83	-0.77
6168.00	89.230	156.710	5617.23	572.06	-411.23	517.52	1769809.55	14636774.80	40°18'4.5219"N	80°32'9.3178"W	661.01	128.471	0.87	-0.29	0.82
6267.00	89.690	159.450	5618.16	671.04	-503.06	554.47	1769846.49	14636683.00	40°18'3.6126"N	80°32'8.8471"W	748.67	132.217	2.81	0.46	2.77
6362.00	89.050	157.840	5619.20	766.03	-591.53	589.06	1769881.07	14636594.57	40°18'2.7366"N	80°32'8.4067"W	834.81	135.120	1.82	-0.67	-1.69
6458.00	88.430	158.450	5621.31	862.00	-680.61	624.79	1769916.78	14636505.52	40°18'1.8545"N	80°32'7.9516"W	923.90	137.448	0.91	-0.65	0.64
6553.00	87.910	157.660	5624.35	956.95	-768.68	660.28	1769952.25	14636417.49	40°18'0.9824"N	80°32'7.4996"W	1013.33	139.338	1.00	-0.55	-0.83
6648.00	88.740	158.390	5627.13	1051.90	-856.74	695.81	1769987.77	14636329.46	40°18'0.1103"N	80°32'7.0469"W	1103.70	140.918	1.16	0.87	0.77
6743.00	89.380	158.040	5628.68	1146.89	-944.94	731.06	1770023.01	14636241.29	40°17'59.2369"N	80°32'6.5979"W	1194.72	142.272	0.77	0.67	-0.37
6838.00	88.890	158.140	5630.12	1241.88	-1033.07	766.51	1770058.44	14636153.20	40°17'58.3642"N	80°32'6.1465"W	1286.37	143.426	0.53	-0.52	0.11
6933.00	88.490	157.150	5632.29	1336.84	-1120.90	802.63	1770094.55	14636065.40	40°17'57.4944"N	80°32'5.6862"W	1378.64	144.395	1.12	-0.42	-1.04
7028.00	89.050	157.530	5634.33	1431.79	-1208.55	839.22	1770131.13	14635977.78	40°17'56.6264"N	80°32'5.2199"W	1471.35	145.224	0.71	0.59	0.40
7123.00	89.380	158.250	5635.63	1526.78	-1296.55	874.97	1770166.87	14635889.81	40°17'55.7549"N	80°32'4.7644"W	1564.17	145.987	0.83	0.35	0.76
7218.00	88.980	158.040	5636.99	1621.77	-1384.72	910.33	1770202.21	14635801.68	40°17'54.8819"N	80°32'4.3141"W	1657.15	146.678	0.48	-0.42	-0.22
7313.00	89.170	157.390	5638.52	1716.74	-1472.61	946.35	1770238.22	14635713.82	40°17'54.0115"N	80°32'3.8551"W	1750.48	147.274	0.71	0.20	-0.68
7408.00	89.140	157.870	5639.93	1811.72	-1560.45	982.51	1770274.36	14635626.02	40°17'53.1416"N	80°32'3.3945"W	1844.00	147.804	0.51	-0.03	0.51
7503.00	88.860	158.360	5641.58	1906.70	-1648.59	1017.91	1770309.75	14635537.91	40°17'52.2688"N	80°32'2.9436"W	1937.52	148.307	0.59	-0.29	0.52
7598.00	89.450	159.090	5642.98	2001.69	-1737.11	1052.38	1770344.20	14635449.43	40°17'51.3923"N	80°32'2.5048"W	2031.02	148.792	0.99	0.62	0.77
7693.00	89.450	159.200	5643.90	2096.68	-1825.88	1086.28	1770378.01	14635360.69	40°17'50.5133"N	80°32'2.0744"W	2124.54	149.252	0.12	0.00	0.12
7788.00	89.320	158.730	5644.92	2191.67	-1914.54	1120.23	1770412.00	14635272.06	40°17'49.6354"N	80°32'1.6403"W	2218.23	149.666	0.51	-0.14	-0.49
7883.00	89.170	158.500	5646.17	2286.67	-2002.99	1154.53	1770446.2	14635183.64	40°17'48.7596"N	80°32'1.1993"W	2312.11	150.032	0.29	-0.16	-0.24
7978.00	88.950	159.300	5647.73	2381.65	-2091.61	1189.53	1770480.94	14635095.06	40°17'47.8821"N	80°32'0.7641"W	2406.00	150.381	0.87	-0.23	0.84
8073.00	88.950	157.950	5649.47	2476.63	-2180.06	1223.38	1770515.0	14635006.65	40°17'47.0063"N	80°32'0.3233"W	2500.04	150.693	1.42	0.00	-1.42
8168.00	89.410	159.080	5650.83	2571.62	-2268.45	1258.83	1770550.28	14634918.29	40°17'46.1310"N	80°31'59.8803"W	2594.18	150.979	1.28	0.48	1.19
8263.00	88.920	158.220	5652.21	2666.61	-2356.92	1293.72	1770585.45	14634829.85	40°17'45.2550"N	80°31'59.4401"W	2688.35	151.249	1.04	-0.52	-0.91
8358.00	89.290	159.320	5653.71	2762.59	-2446.39	1328.87	1770620.59	14634740.42	40°17'44.3691"N	80°31'58.9976"W	2783.54	151.507	1.21	0.39	1.15

6/29/2021

REFERENCE WELLPATH IDENTIFICATION

Operator	SWN PRODUCTION COMPANY, LLC	Well	State of WV DNR C BRK 8H
Field	Brooke	API/Legal	
Facility	State of WV DNR C BRK Pad	Wellbore	State of WV DNR C BRK 8H AWB
Slot	Slot 8H		

WELLPATH DATA (287 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]	Buidl Rate ["/100ft]	Turn Rate ["/100ft]
8454.00	89.260	158.960	5654.91	2857.58	-2535.16	1361.70	1770653.41	14634651.68	40°17'43.4901"N	80°31'58.5671"W	2877.71	151.759	0.38	-0.03	-0.38
8549.00	89.450	159.160	5655.98	2952.57	-2623.88	1395.65	1770687.34	14634563.00	40°17'42.6117"N	80°31'58.1350"W	2971.96	151.991	0.29	0.20	0.21
8644.00	88.800	158.910	5657.43	3047.56	-2712.58	1429.63	1770721.32	14634474.33	40°17'41.7334"N	80°31'57.7024"W	3066.26	152.209	0.73	-0.68	-0.26
8739.00	89.540	158.950	5658.81	3142.54	-2801.21	1463.78	1770755.45	14634385.73	40°17'40.8557"N	80°31'57.2678"W	3160.61	152.411	0.78	0.78	0.04
8834.00	89.850	158.730	5659.31	3237.54	-2889.81	1498.08	1770789.73	14634297.17	40°17'39.9785"N	80°31'56.8313"W	3255.03	152.598	0.40	0.33	-0.23
8929.00	89.450	158.630	5659.90	3332.54	-2978.31	1532.62	1770824.26	14634208.71	40°17'39.1022"N	80°31'56.3916"W	3349.51	152.770	0.43	-0.42	-0.11
9024.00	89.510	158.560	5660.76	3427.53	-3066.75	1567.28	1770858.91	14634120.30	40°17'38.2264"N	80°31'55.9502"W	3444.03	152.930	0.10	0.06	-0.07
9119.00	89.600	158.650	5661.50	3522.53	-3155.20	1601.94	1770893.56	14634031.88	40°17'37.3506"N	80°31'55.5090"W	3538.57	153.082	0.13	0.09	0.09
9214.00	89.540	158.360	5662.21	3617.53	-3243.59	1636.75	1770928.35	14633943.52	40°17'36.4753"N	80°31'55.0658"W	3633.16	153.224	0.31	-0.06	-0.31
9309.00	89.940	158.600	5662.64	3712.53	-3331.97	1671.60	1770963.19	14633855.18	40°17'35.6002"N	80°31'54.6221"W	3727.76	153.358	0.49	0.42	0.25
9404.00	89.230	158.610	5663.33	3807.52	-3420.42	1706.25	1770997.83	14633766.76	40°17'34.7243"N	80°31'54.1809"W	3822.37	153.488	0.75	-0.75	0.01
9499.00	89.910	159.210	5664.04	3902.52	-3509.05	1740.43	1771032.00	14633678.16	40°17'33.8467"N	80°31'53.7459"W	3916.96	153.619	0.95	0.72	0.63
9594.00	89.080	157.770	5664.88	3997.51	-3597.43	1775.26	1771066.81	14633589.82	40°17'32.9716"N	80°31'53.3024"W	4011.61	153.735	1.75	-0.87	-1.52
9689.00	89.260	158.210	5666.25	4092.50	-3685.49	1810.86	1771102.40	14633501.79	40°17'32.0994"N	80°31'52.8490"W	4106.35	153.833	0.50	0.19	0.46
9784.00	89.350	158.260	5667.41	4187.49	-3773.71	1846.09	1771137.61	14633413.60	40°17'31.2258"N	80°31'52.4005"W	4201.07	153.932	0.11	0.09	0.05
9879.00	89.540	158.160	5667.99	4282.48	-3862.23	1880.58	1771172.09	14633325.12	40°17'30.3494"N	80°31'51.9615"W	4295.74	154.038	1.13	0.62	0.95
9974.00	89.540	158.790	5668.43	4377.48	-3950.90	1914.66	1771206.16	14633236.48	40°17'29.4713"N	80°31'51.5277"W	4390.39	154.145	0.57	-0.42	-0.39
10069.00	89.380	159.100	5669.32	4472.47	-4039.56	1948.79	1771240.27	14633147.86	40°17'28.5935"N	80°31'51.0933"W	4485.06	154.246	0.37	-0.17	0.33
10165.00	89.320	159.050	5670.41	4568.46	-4129.22	1983.07	1771274.54	14633058.23	40°17'27.7057"N	80°31'50.6571"W	4580.72	154.347	0.08	-0.06	-0.05
10260.00	89.110	158.640	5671.71	4663.45	-4217.81	2017.36	1771308.81	14632969.68	40°17'26.8285"N	80°31'50.2207"W	4675.43	154.438	0.48	-0.22	-0.43
10355.00	89.290	158.540	5673.04	4758.44	-4306.24	2052.03	1771343.48	14632881.28	40°17'25.9528"N	80°31'49.7793"W	4770.17	154.521	0.22	0.19	-0.11
10450.00	88.800	158.850	5674.62	4853.43	-4394.74	2086.54	1771377.97	14632792.82	40°17'25.0765"N	80°31'49.3400"W	4864.91	154.602	0.61	-0.52	0.33
10545.00	89.080	157.890	5676.38	4948.41	-4483.09	2121.55	1771412.97	14632704.55	40°17'24.2022"N	80°31'48.8943"W	4959.69	154.675	1.05	0.29	-1.01
10640.00	89.510	158.670	5677.55	5043.40	-4571.25	2156.71	1771448.11	14632616.34	40°17'23.3283"N	80°31'48.4667"W	5054.50	154.742	0.94	0.45	0.82
10735.00	89.140	160.740	5678.67	5138.37	-4660.34	2191.66	1771483.05	14632527.28	40°17'22.4462"N	80°31'48.0276"W	5149.14	154.834	2.21	-0.39	2.18
10830.00	90.060	158.600	5679.33	5233.34	-4749.15	2226.66	1771518.04	14632438.24	40°17'21.5643"N	80°31'47.6078"W	5243.80	154.921	2.45	0.97	-2.25
10925.00	89.480	158.540	5679.71	5328.34	-4837.68	2261.71	1771554.73	14632349.85	40°17'20.6886"N	80°31'47.1660"W	5338.61	154.986	0.61	-0.61	-0.06
11020.00	89.480	158.920	5680.57	5423.34	-4926.40	2296.83	1771591.18	14632261.36	40°17'19.8120"N	80°31'46.7274"W	5433.41	155.052	0.40	0.00	0.40
11115.00	89.690	159.620	5681.26	5518.33	-5015.15	2331.94	1771627.54	14632172.54	40°17'18.9323"N	80°31'46.2996"W	5528.15	155.124	0.77	0.22	0.74
11210.00	88.830	158.300	5682.49	5613.31	-5103.90	2367.06	1771664.88	14632083.92	40°17'18.0544"N	80°31'45.8656"W	5622.93	155.189	1.66	-0.91	-1.39

09/10/2021

REFERENCE WELLPATH IDENTIFICATION

Operator	SWN PRODUCTION COMPANY, LLC	Well	State of WV DNR C BRK 8H
Field	Brooke	API/Legal	
Facility	State of WV DNR C BRK Pad	Wellbore	State of WV DNR C BRK 8H AWB
Slot	Slot 8H		

WELLPATH DATA (287 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]
11305.00	89.540	158.140	5683.84	5708.30	-5192.11	2394.80	1771686.11	14631995.75	40°17'17.1809"N	80°31'45.4168"W	5717.79	155.239	0.77	0.75	-0.17
11400.00	89.140	158.940	5684.93	5803.29	-5280.52	2429.55	1771720.85	14631907.37	40°17'16.3055"N	80°31'44.9744"W	5812.63	155.293	0.94	-0.42	0.84
11495.00	89.170	158.440	5686.34	5898.28	-5369.01	2464.08	1771755.36	14631818.91	40°17'15.4292"N	80°31'44.5351"W	5907.45	155.348	0.53	0.03	-0.53
11590.00	89.320	157.800	5687.59	5993.27	-5457.16	2499.48	1771790.75	14631730.80	40°17'14.5563"N	80°31'44.0843"W	6002.33	155.391	0.69	0.16	-0.67
11685.00	89.750	158.950	5688.36	6088.27	-5545.47	2534.48	1771825.74	14631642.52	40°17'13.6818"N	80°31'43.6386"W	6097.20	155.438	1.29	0.45	1.21
11780.00	88.830	158.230	5689.54	6183.26	-5633.91	2569.16	1771860.41	14631554.12	40°17'12.8061"N	80°31'43.1973"W	6192.05	155.486	1.23	-0.97	-0.76
11875.00	89.320	158.710	5691.07	6278.25	-5722.27	2604.02	1771895.25	14631465.79	40°17'11.9311"N	80°31'42.7535"W	6286.91	155.531	0.72	0.52	0.51
11970.00	88.710	158.880	5692.70	6373.23	-5810.82	2638.38	1771929.59	14631377.27	40°17'11.0542"N	80°31'42.3163"W	6381.75	155.580	0.67	-0.64	0.18
12065.00	88.610	157.910	5694.92	6468.20	-5899.12	2673.34	1771964.55	14631289.01	40°17'10.1798"N	80°31'41.8711"W	6476.61	155.621	1.03	-0.11	-1.02
12160.00	89.290	158.640	5696.67	6563.18	-5987.36	2708.50	1771999.70	14631200.80	40°17'9.3061"N	80°31'41.4235"W	6571.49	155.659	1.05	0.72	0.77
12255.00	89.010	158.260	5698.07	6658.17	-6075.71	2743.39	1772034.57	14631112.49	40°17'8.4312"N	80°31'40.9794"W	6666.37	155.699	0.50	-0.29	-0.40
12350.00	89.230	158.660	5699.53	6753.16	-6164.06	2778.27	1772069.43	14631024.17	40°17'7.5563"N	80°31'40.5355"W	6761.25	155.738	0.48	0.23	0.42
12445.00	89.380	159.020	5700.69	6848.15	-6252.65	2812.56	1772103.71	14630935.61	40°17'6.6791"N	80°31'40.0991"W	6856.10	155.781	0.41	0.16	0.38
12540.00	89.290	158.110	5701.79	6943.15	-6341.07	2847.27	1772138.41	14630847.23	40°17'5.8035"N	80°31'39.6572"W	6950.98	155.819	0.96	-0.09	-0.96
12635.00	89.970	158.760	5702.40	7038.14	-6429.42	2882.19	1772173.32	14630758.91	40°17'4.9286"N	80°31'39.2128"W	7045.88	155.854	0.99	0.72	0.68
12730.00	89.970	158.630	5702.45	7133.14	-6517.93	2916.71	1772207.82	14630670.44	40°17'4.0522"N	80°31'38.7735"W	7140.77	155.892	0.14	0.00	-0.14
12825.00	89.880	159.450	5702.58	7228.14	-6606.64	2950.69	1772241.79	14630581.76	40°17'3.1738"N	80°31'38.3411"W	7235.62	155.933	0.87	-0.09	0.86
12920.00	89.630	158.570	5702.98	7323.13	-6695.34	2984.72	1772275.80	14630493.10	40°17'2.2955"N	80°31'37.9081"W	7330.49	155.973	0.96	-0.26	-0.93
13015.00	89.970	158.830	5703.31	7418.13	-6783.85	3019.23	1772310.30	14630404.62	40°17'1.4191"N	80°31'37.4690"W	7425.38	156.008	0.45	0.36	0.27
13110.00	89.720	159.140	5703.57	7513.13	-6872.53	3053.29	1772344.35	14630315.98	40°17'0.5410"N	80°31'37.0355"W	7520.25	156.046	0.42	-0.26	0.33
13205.00	90.890	158.240	5703.07	7608.12	-6961.07	3087.82	1772378.86	14630227.51	40°16'59.6646"N	80°31'36.5962"W	7615.15	156.079	1.55	1.23	-0.95
13301.00	89.230	158.550	5702.96	7704.12	-7050.25	3123.16	1772414.20	14630138.29	40°16'58.7808"N	80°31'36.1462"W	7711.07	156.107	1.76	-1.73	0.32
13396.00	89.480	158.060	5704.03	7799.11	-7138.54	3158.28	1772449.30	14630050.06	40°16'57.9067"N	80°31'35.6992"W	7805.99	156.134	0.58	0.26	-0.52
13491.00	89.510	158.720	5704.87	7894.11	-7226.65	3193.27	1772484.27	14629961.78	40°16'57.0321"N	80°31'35.2539"W	7900.92	156.161	0.70	0.03	0.69
13586.00	89.450	158.500	5705.73	7989.10	-7314.82	3227.91	1772518.91	14629873.36	40°16'56.1562"N	80°31'34.8130"W	7995.83	156.190	0.24	-0.06	-0.23
13681.00	89.450	158.450	5706.65	8084.10	-7405.99	3262.70	1772553.75	14629785.02	40°16'55.2811"N	80°31'34.3693"W	8090.75	156.217	0.05	0.00	-0.05
13774.00	89.940	159.330	5707.14	8177.10	-7497.44	3296.25	1772587.23	14629698.30	40°16'54.4221"N	80°31'33.9432"W	8183.65	156.248	1.08	0.53	0.95
13869.00	89.720	159.380	5707.43	8274.09	-7589.21	3330.26	1772621.41	14629607.56	40°16'53.5233"N	80°31'33.5082"W	8280.50	156.284	0.23	-0.23	0.05
13964.00	89.320	159.110	5708.22	8369.07	-7679.04	3364.72	1772655.07	14629518.76	40°16'52.6437"N	80°31'33.0799"W	8375.37	156.317	0.51	-0.42	-0.28
14059.00	89.970	158.970	5708.81	8464.07	-7758.76	3398.11	1772689.03	14629430.09	40°16'51.7653"N	80°31'32.6476"W	8470.27	156.348	0.70	0.68	-0.15

REFERENCE WELLPATH IDENTIFICATION

Operator	SWN PRODUCTION COMPANY, LLC	Well	State of WV DNR C BRK 8H
Field	Brooke	API/Legal	
Facility	State of WV DNR C BRK Pad	Wellbore	State of WV DNR C BRK 8H AWB
Slot	Slot 8H		

WELLPATH DATA (287 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]
14156.00	89.480	158.850	5709.27	8559.07	-7847.39	3432.29	1772723.21	14629341.48	40°16'50.8876"N	80°31'32.2127"W	8565.17	156.376	0.53	-0.52	-0.13
14251.00	89.230	158.900	5710.34	8654.06	-7936.00	3466.53	1772757.43	14629252.91	40°16'50.0102"N	80°31'31.7771"W	8660.08	156.404	0.27	-0.26	0.05
14346.00	88.980	158.280	5711.82	8749.05	-8024.43	3501.20	1772792.09	14629164.51	40°16'49.1345"N	80°31'31.3358"W	8755.00	156.428	0.70	-0.26	-0.65
14441.00	89.720	158.220	5712.90	8844.04	-8112.66	3536.40	1772827.28	14629076.31	40°16'48.2608"N	80°31'30.8877"W	8849.94	156.447	0.78	0.78	-0.06
14536.00	89.450	158.810	5713.59	8939.03	-8201.06	3571.19	1772862.06	14628987.95	40°16'47.3854"N	80°31'30.4449"W	8944.88	156.469	0.68	-0.28	0.62
14631.00	89.540	158.560	5714.43	9034.03	-8289.56	3605.72	1772896.57	14628899.49	40°16'46.5091"N	80°31'30.0055"W	9039.80	156.492	0.28	0.09	-0.26
14726.00	89.480	158.370	5715.24	9129.03	-8377.92	3640.60	1772931.43	14628811.16	40°16'45.6340"N	80°31'29.5617"W	9134.74	156.513	0.21	-0.06	-0.20
14821.00	89.970	157.930	5715.69	9224.02	-8466.10	3675.95	1772966.77	14628723.02	40°16'44.7609"N	80°31'29.1117"W	9229.70	156.530	0.69	0.52	-0.46
14916.00	90.030	158.390	5715.69	9319.02	-8554.28	3711.29	1773002.10	14628634.87	40°16'43.8876"N	80°31'28.6618"W	9324.67	156.546	0.49	0.06	0.48
15011.00	90.000	158.540	5715.67	9414.02	-8642.65	3746.16	1773036.96	14628546.53	40°16'43.0125"N	80°31'28.2180"W	9419.61	156.566	0.16	-0.03	0.16
15106.00	89.540	158.490	5716.05	9509.02	-8731.04	3780.96	1773071.74	14628458.17	40°16'42.1372"N	80°31'27.7752"W	9514.56	156.585	0.49	-0.48	-0.05
15201.00	89.910	158.430	5716.51	9604.02	-8819.41	3815.84	1773106.61	14628369.84	40°16'41.2621"N	80°31'27.3313"W	9609.51	156.604	0.39	0.39	-0.06
15297.00	89.940	158.470	5716.63	9700.02	-8908.70	3851.10	1773141.85	14628280.58	40°16'40.3779"N	80°31'26.8825"W	9705.46	156.622	0.05	0.03	0.04
15392.00	89.630	158.640	5716.99	9795.02	-8997.12	3885.83	1773176.57	14628192.20	40°16'39.5023"N	80°31'26.4406"W	9800.40	156.641	0.37	-0.33	0.18
15487.00	90.430	159.680	5716.94	9890.01	-9085.90	3919.63	1773210.36	14628103.45	40°16'38.6232"N	80°31'26.0107"W	9895.31	156.665	1.38	0.84	1.09
15582.00	89.480	158.230	5717.01	9985.00	-9174.56	3953.74	1773244.46	14628014.82	40°16'37.7453"N	80°31'25.5767"W	9990.23	156.687	1.82	-1.00	-1.53
15677.00	89.940	158.490	5717.49	10080.00	-9262.87	3988.77	1773279.48	14627926.55	40°16'36.8708"N	80°31'25.1308"W	10085.19	156.702	0.56	0.48	0.27
15772.00	89.570	158.600	5717.90	10175.00	-9351.28	4023.52	1773314.21	14627838.17	40°16'35.9953"N	80°31'24.6887"W	10180.14	156.720	0.41	-0.39	0.12
15867.00	89.750	158.440	5718.46	10270.00	-9439.68	4058.31	1773348.98	14627749.80	40°16'35.1199"N	80°31'24.2460"W	10275.09	156.736	0.25	0.19	-0.17
15962.00	89.820	158.440	5718.82	10365.00	-9528.04	4093.22	1773383.88	14627661.48	40°16'34.2450"N	80°31'23.8017"W	10370.05	156.752	0.07	0.07	0.00
16057.00	89.660	158.310	5719.25	10460.00	-9616.35	4128.23	1773418.88	14627573.21	40°16'33.3704"N	80°31'23.3562"W	10465.01	156.767	0.22	-0.17	-0.14
16152.00	89.450	158.140	5719.99	10554.99	-9704.57	4163.47	1773454.10	14627485.02	40°16'32.4968"N	80°31'22.9077"W	10559.98	156.780	0.28	-0.22	-0.18
16247.00	90.250	157.950	5720.24	10649.99	-9792.68	4198.99	1773489.61	14627396.94	40°16'31.6243"N	80°31'22.4555"W	10654.95	156.791	0.87	0.84	-0.20
16342.00	89.690	158.930	5720.29	10744.99	-9880.03	4233.90	1773524.50	14627308.63	40°16'30.7493"N	80°31'22.0113"W	10749.91	156.805	1.19	-0.59	1.03
16437.00	89.420	158.600	5721.03	10839.98	-9968.57	4268.80	1773558.90	14627220.11	40°16'29.8725"N	80°31'21.5735"W	10844.85	156.823	0.45	-0.28	-0.35
16532.00	89.720	158.390	5721.76	10937.98	-10056.75	4304.23	1773594.81	14627128.99	40°16'28.9696"N	80°31'21.1644"W	10942.81	156.838	0.37	0.31	-0.21
16627.00	89.750	158.880	5722.19	11029.98	-10144.43	4339.74	1773628.31	14627043.33	40°16'28.1212"N	80°31'20.6900"W	11034.76	156.853	0.53	0.03	0.53
16722.00	89.630	157.690	5722.70	11124.98	-10232.68	4375.89	1773663.45	14626955.11	40°16'27.2472"N	80°31'20.2427"W	11129.73	156.865	1.26	-0.13	-1.25
16817.00	89.420	157.550	5723.49	11219.98	-10320.82	4412.06	1773699.60	14626867.30	40°16'26.3773"N	80°31'19.7821"W	11224.72	156.871	0.27	-0.22	-0.15
16912.00	89.230	158.900	5724.61	11314.96	-10410.74	4444.30	1773734.83	14626779.12	40°16'25.5037"N	80°31'19.3337"W	11319.68	156.883	1.43	-0.20	1.42

REFERENCE WELLPATH IDENTIFICATION

Operator	SWN PRODUCTION COMPANY, LLC	Well	State of WV DNR C BRK 8H
Field	Brooke	API/Legal	
Facility	State of WV DNR C BRK Pad	Wellbore	State of WV DNR C BRK 8H AWB
Slot	Slot 8H		

WELLPATH DATA (287 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]
17007.00	89.200	157.580	5725.91	11409.93	-10498.96	4479.51	1773770.03	14626690.93	40°16'24.6301"N	80°31'18.8855"W	11414.65	156.894	1.39	-0.03	-1.39
17102.00	89.450	159.120	5727.03	11504.92	-10587.25	4514.56	1773805.06	14626602.68	40°16'23.7557"N	80°31'18.4395"W	11509.61	156.906	1.64	0.26	1.62
17197.00	88.920	158.740	5728.38	11599.91	-10675.89	4548.71	1773839.20	14626514.07	40°16'22.8780"N	80°31'18.0051"W	11604.54	156.922	0.69	-0.56	-0.40
17292.00	88.770	157.960	5730.29	11694.89	-10764.16	4583.75	1773874.22	14626425.83	40°16'22.0038"N	80°31'17.5592"W	11699.49	156.934	0.84	-0.16	-0.82
17387.00	89.170	158.780	5732.00	11789.88	-10852.46	4618.76	1773909.22	14626337.57	40°16'21.1294"N	80°31'17.1137"W	11794.44	156.946	0.96	0.42	0.86
17483.00	88.680	159.000	5733.80	11885.86	-10942.00	4653.33	1773943.78	14626248.06	40°16'20.2428"N	80°31'16.6739"W	11890.37	156.961	0.56	-0.51	0.23
17578.00	89.320	158.400	5735.46	11980.84	-11030.50	4687.83	1773978.27	14626159.60	40°16'19.3664"N	80°31'16.2350"W	11985.31	156.975	0.92	0.67	-0.63
17673.00	89.200	158.720	5736.69	12075.83	-11118.92	4722.56	1774012.98	14626071.21	40°16'18.4908"N	80°31'15.7932"W	12080.27	156.988	0.36	-0.13	0.34
17768.00	89.170	158.880	5738.04	12170.82	-11207.48	4756.91	1774047.32	14625982.68	40°16'17.6139"N	80°31'15.3562"W	12175.21	157.002	0.17	-0.03	0.17
17863.00	89.260	158.290	5739.34	12265.81	-11295.91	4791.59	1774081.99	14625894.29	40°16'16.7381"N	80°31'14.9150"W	12270.16	157.014	0.63	0.09	-0.62
17958.00	89.420	158.750	5740.44	12360.81	-11384.31	4826.37	1774116.76	14625805.92	40°16'15.8628"N	80°31'14.4724"W	12365.13	157.025	0.51	0.17	0.48
18053.00	89.230	158.560	5741.55	12455.80	-11472.78	4860.95	1774151.32	14625717.48	40°16'14.9866"N	80°31'14.0325"W	12460.08	157.038	0.28	-0.20	-0.20
18148.00	89.380	158.400	5742.71	12550.79	-11561.15	4895.80	1774186.15	14625629.14	40°16'14.1115"N	80°31'13.5892"W	12555.04	157.049	0.23	0.16	-0.17
18243.00	89.350	158.870	5743.76	12645.79	-11649.62	4930.40	1774220.75	14625540.71	40°16'13.2355"N	80°31'13.1489"W	12650.00	157.061	0.50	-0.03	0.49
18338.00	89.320	158.700	5744.86	12740.78	-11738.18	4964.78	1774255.11	14625452.19	40°16'12.3586"N	80°31'12.7116"W	12744.95	157.074	0.18	-0.03	-0.18
18433.00	89.290	158.190	5746.01	12835.77	-11826.53	4999.68	1774289.99	14625363.87	40°16'11.4836"N	80°31'12.2676"W	12839.92	157.084	0.54	-0.03	-0.54
18528.00	89.420	158.320	5747.08	12930.76	-11914.76	5034.87	1774325.17	14625275.67	40°16'10.6099"N	80°31'11.8197"W	12934.89	157.092	0.19	0.14	0.14
18623.00	89.200	158.100	5748.23	13025.75	-12002.97	5070.13	1774360.42	14625187.50	40°16'09.7363"N	80°31'11.3710"W	13029.87	157.100	0.33	-0.23	-0.23
18719.00	89.660	159.440	5749.18	13121.75	-12092.44	5104.89	1774395.17	14625098.06	40°16'08.8503"N	80°31'10.9288"W	13125.82	157.113	1.48	0.48	1.40
18814.00	89.320	158.400	5750.03	13216.74	-12181.08	5139.06	1774429.32	14625009.45	40°16'07.9726"N	80°31'10.4943"W	13220.77	157.126	1.15	-0.36	-1.09
18909.00	89.290	158.570	5751.18	13311.73	-12269.46	5173.90	1774464.15	14624921.11	40°16'07.0974"N	80°31'10.0510"W	13315.73	157.135	0.18	-0.03	0.18
19003.00	89.140	158.230	5752.47	13405.92	-12356.85	5208.50	1774498.73	14624833.76	40°16'06.2320"N	80°31'09.6108"W	13409.70	157.144	0.40	-0.16	-0.36
19098.00	89.320	157.930	5753.75	13500.94	-12444.97	5243.96	1774534.18	14624745.67	40°16'05.3593"N	80°31'09.1595"W	13504.68	157.151	0.37	0.19	-0.32
19194.00	89.260	158.750	5754.94	13595.99	-12534.13	5279.39	1774569.60	14624656.49	40°16'04.4758"N	80°31'08.7087"W	13600.65	157.159	0.86	-0.06	0.85
19289.00	89.140	158.010	5756.26	13690.99	-12622.99	5314.39	1774604.58	14624568.21	40°16'03.6013"N	80°31'08.2634"W	13695.62	157.168	0.79	-0.13	-0.78
19384.00	89.350	158.680	5757.51	13785.68	-12710.79	5349.44	1774639.62	14624479.96	40°16'02.7270"N	80°31'07.8174"W	13790.59	157.176	0.74	0.22	0.71
19479.00	89.380	158.900	5758.57	13879.68	-12799.44	5383.81	1774673.98	14624391.43	40°16'01.8500"N	80°31'07.3803"W	13885.55	157.187	0.23	0.03	0.23
19574.00	89.230	158.030	5759.72	13974.67	-12887.70	5418.68	1774708.83	14624303.11	40°16'00.9750"N	80°31'06.9366"W	13980.52	157.196	0.93	-0.16	-0.92
19669.00	89.110	158.270	5761.09	14069.65	-12975.86	5454.03	1774744.17	14624214.98	40°16'00.1019"N	80°31'06.4868"W	14075.49	157.202	0.28	-0.13	0.25
19764.00	89.320	158.390	5762.40	14166.65	-13064.14	5489.11	1774779.24	14624126.73	40°15'59.2277"N	80°31'06.0405"W	14170.47	157.210	0.25	0.22	0.13

REFERENCE WELLPATH IDENTIFICATION

Operator	SWN PRODUCTION COMPANY, LLC	Well	State of WV DNR C BRK 8H
Field	Brooke	API/Legal	
Facility	State of WV DNR C BRK Pad	Wellbore	State of WV DNR C BRK 8H AWB
Slot	Slot 8H		

WELLPATH DATA (287 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]
19859.00	89.510	158.790	5763.37	14261.64	-13152.58	5523.79	1774813.90	14624038.33	40°15'58.3519"N	80°31'5.5994"W	14265.43	157.219	0.47	0.20	0.42
19954.00	89.290	158.700	5764.36	14356.64	-13241.11	5558.22	1774848.32	14623949.83	40°15'57.4752"N	80°31'5.1613"W	14360.40	157.229	0.25	-0.23	-0.09
20049.00	89.320	158.610	5765.51	14451.63	-13329.59	5592.80	1774882.89	14623861.38	40°15'56.5990"N	80°31'4.7215"W	14455.36	157.238	0.10	0.03	-0.09
20144.00	89.320	158.730	5766.64	14546.62	-13418.08	5627.35	1774917.43	14623772.93	40°15'55.7227"N	80°31'4.2820"W	14550.32	157.248	0.13	0.00	0.13
20240.00	89.140	158.550	5767.93	14642.61	-13507.48	5662.31	1774952.38	14623683.57	40°15'54.8375"N	80°31'3.8373"W	14646.29	157.257	0.27	-0.19	-0.19
20335.00	89.200	158.470	5769.31	14737.60	-13595.86	5697.11	1774987.16	14623595.22	40°15'53.9622"N	80°31'3.3946"W	14741.25	157.265	0.11	0.06	-0.08
20430.00	89.380	158.560	5770.48	14832.59	-13684.25	5731.90	1775021.94	14623506.86	40°15'53.0868"N	80°31'2.9520"W	14836.22	157.273	0.21	0.19	0.09
20525.00	89.170	158.300	5771.69	14927.59	-13772.59	5766.83	1775056.85	14623418.55	40°15'52.2120"N	80°31'2.5078"W	14931.20	157.280	0.35	-0.22	-0.27
20620.00	89.260	158.640	5772.99	15022.58	-13860.96	5801.69	1775091.70	14623330.22	40°15'51.3370"N	80°31'2.0643"W	15026.17	157.288	0.37	0.09	0.36
20715.00	89.380	158.520	5774.12	15117.57	-13949.39	5836.38	1775126.37	14623241.82	40°15'50.4612"N	80°31'1.6230"W	15121.14	157.296	0.18	0.13	-0.13
20811.00	89.260	158.560	5775.25	15213.56	-14038.73	5871.50	1775161.48	14623152.52	40°15'49.5765"N	80°31'1.1763"W	15217.11	157.304	0.13	-0.12	0.04
20906.00	89.380	158.770	5776.38	15308.56	-14127.21	5906.06	1775196.03	14623064.07	40°15'48.7003"N	80°31'0.7367"W	15312.07	157.312	0.25	0.13	0.22
21001.00	89.420	158.680	5777.38	15403.55	-14215.73	5940.53	1775230.48	14622975.58	40°15'47.8237"N	80°31'0.2983"W	15407.04	157.321	0.10	0.04	-0.09
21096.00	89.140	158.920	5778.57	15498.54	-14304.29	5974.88	1775264.82	14622887.05	40°15'46.9467"N	80°30'59.8614"W	15502.00	157.330	0.39	-0.29	0.25
21191.00	89.260	158.040	5779.90	15593.53	-14392.66	6009.72	1775299.65	14622798.72	40°15'46.0716"N	80°30'59.4182"W	15596.97	157.337	0.93	0.13	-0.93
21286.00	89.380	158.840	5781.02	15688.53	-14481.01	6044.63	1775334.55	14622710.41	40°15'45.1967"N	80°30'58.9741"W	15691.95	157.343	0.85	0.13	0.84
21381.00	89.140	158.140	5782.25	15783.52	-14569.38	6079.46	1775369.36	14622622.07	40°15'44.3215"N	80°30'58.5311"W	15786.92	157.350	0.78	-0.25	-0.74
21476.00	89.380	158.490	5783.48	15878.51	-14657.65	6114.56	1775404.45	14622533.83	40°15'43.4474"N	80°30'58.0845"W	15881.90	157.356	0.45	0.25	0.37
21571.00	88.950	158.080	5784.86	15973.50	-14745.90	6149.71	1775439.58	14622445.62	40°15'42.5734"N	80°30'57.6374"W	15976.87	157.362	0.63	-0.45	-0.43
21666.00	88.980	158.170	5786.58	16068.48	-14834.05	6185.10	1775474.96	14622357.50	40°15'41.7005"N	80°30'57.1871"W	16071.85	157.366	0.10	0.03	0.09
21761.00	89.050	158.550	5788.21	16163.46	-14922.34	6220.12	1775509.97	14622269.25	40°15'40.8261"N	80°30'56.7415"W	16166.82	157.372	0.41	0.07	0.40
21856.00	89.110	158.510	5789.74	16258.45	-15010.74	6254.89	1775544.73	14622180.88	40°15'39.9508"N	80°30'56.2993"W	16261.79	157.379	0.08	0.06	-0.04
21951.00	88.980	158.530	5791.32	16353.44	-15099.12	6289.67	1775579.49	14622092.53	40°15'39.0754"N	80°30'55.8569"W	16356.76	157.385	0.14	-0.14	0.02
22046.00	88.830	157.840	5793.14	16448.42	-15187.31	6324.97	1775614.78	14622004.38	40°15'38.2022"N	80°30'55.4079"W	16451.73	157.390	0.74	-0.16	-0.73
22141.00	88.770	158.060	5795.13	16543.39	-15275.34	6360.63	1775650.42	14621916.38	40°15'37.3303"N	80°30'54.9541"W	16546.71	157.393	0.24	-0.06	0.23
22236.00	89.050	158.040	5796.93	16638.37	-15363.43	6396.13	1775685.91	14621828.32	40°15'36.4579"N	80°30'54.5024"W	16641.68	157.397	0.30	0.29	-0.02
22331.00	88.860	158.460	5798.67	16733.62	-15451.66	6431.33	1775721.09	14621740.13	40°15'35.5842"N	80°30'54.0546"W	16736.66	157.402	0.49	-0.20	0.44
22426.00	89.010	158.110	5800.43	16828.72	-15539.91	6466.47	1775756.22	14621651.92	40°15'34.7103"N	80°30'53.6076"W	16831.63	157.407	0.40	0.16	-0.37
22521.00	89.080	158.030	5802.01	16923.52	-15628.14	6501.95	1775791.69	14621563.84	40°15'33.8376"N	80°30'53.1562"W	16926.61	157.411	0.11	0.07	-0.08
22616.00	88.830	158.490	5803.75	17018.30	-15716.29	6537.13	1775826.85	14621475.65	40°15'32.9639"N	80°30'52.7087"W	17021.58	157.415	0.55	-0.26	0.48

09/19/2021 Gas

REFERENCE WELLPATH IDENTIFICATION

Operator	SWN PRODUCTION COMPANY, LLC		Well	State of WV DNR C BRK 8H	
Field	Brooke		API/Legal		
Facility	State of WV DNR C BRK Pad		Wellbore	State of WV DNR C BRK 8H AWB	
Slot	Slot 8H				

WELLPATH DATA (287 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]
22711.00	89.010	158.490	5805.54	17113.29	-15804.61	6571.95	1775861.67	14621387.31	40°15'32.0888"N	80°30'52.2657"W	17116.55	157.421	0.19	0.19	0.00
22806.00	88.980	158.430	5807.20	17208.27	-15892.96	6606.83	1775896.53	14621299.00	40°15'31.2138"N	80°30'51.8221"W	17211.52	157.427	0.07	-0.03	-0.06
22902.00	89.080	158.950	5808.83	17304.26	-15982.38	6641.71	1775931.40	14621209.61	40°15'30.3283"N	80°30'51.3785"W	17307.48	157.434	0.55	0.10	0.54
22997.00	89.140	158.100	5810.30	17399.24	-16070.78	6676.48	1775966.16	14621121.25	40°15'29.4529"N	80°30'50.9363"W	17402.45	157.440	0.90	0.06	-0.89
23092.00	89.630	158.360	5811.32	17494.24	-16159.00	6711.72	1776001.38	14621033.06	40°15'28.5793"N	80°30'50.4881"W	17497.44	157.444	0.58	0.52	0.27
23187.00	89.350	158.410	5812.17	17589.23	-16247.31	6746.71	1776036.36	14620944.78	40°15'27.7047"N	80°30'50.0430"W	17592.42	157.449	0.30	-0.29	0.05
23282.00	89.380	158.380	5813.22	17684.23	-16335.63	6781.69	1776071.32	14620856.49	40°15'26.8300"N	80°30'49.5981"W	17687.40	157.454	0.04	0.03	-0.03
23377.00	88.830	159.030	5814.71	17779.21	-16424.13	6816.18	1776105.80	14620768.03	40°15'25.9536"N	80°30'49.1594"W	17782.37	157.461	0.90	-0.58	0.68
23472.00	89.080	158.180	5816.44	17874.20	-16512.57	6850.83	1776140.44	14620679.62	40°15'25.0778"N	80°30'48.7187"W	17877.33	157.467	0.93	0.26	-0.89
23567.00	89.380	158.630	5817.72	17969.19	-16600.90	6885.79	1776175.39	14620591.33	40°15'24.2031"N	80°30'48.2741"W	17972.31	157.472	0.57	0.32	0.47
23662.00	89.510	158.180	5818.64	18064.18	-16689.22	6920.76	1776210.34	14620503.04	40°15'23.3284"N	80°30'47.8294"W	18067.29	157.477	0.49	0.14	-0.47
23757.00	89.230	158.590	5819.68	18159.18	-16777.54	6955.75	1776245.32	14620414.76	40°15'22.4538"N	80°30'47.3843"W	18162.27	157.482	0.52	-0.29	0.43
23852.00	89.380	158.520	5820.83	18254.17	-16865.95	6990.48	1776280.03	14620326.38	40°15'21.5782"N	80°30'46.9426"W	18257.25	157.487	0.17	0.16	-0.07
23947.00	89.450	158.490	5821.80	18349.16	-16954.34	7025.29	1776314.83	14620238.02	40°15'20.7029"N	80°30'46.5000"W	18352.23	157.493	0.08	0.07	-0.03
24042.00	89.290	158.980	5822.85	18444.16	-17042.87	7059.74	1776349.27	14620149.53	40°15'19.8262"N	80°30'46.0619"W	18447.20	157.499	0.54	-0.17	0.52
24137.00	89.170	158.470	5824.12	18539.15	-17131.39	7094.21	1776383.72	14620061.05	40°15'18.9497"N	80°30'45.6236"W	18542.17	157.505	0.55	-0.13	-0.54
24232.00	89.200	158.220	5825.48	18634.14	-17219.67	7129.26	1776418.76	14619972.79	40°15'18.0753"N	80°30'45.1778"W	18637.15	157.510	0.27	0.03	-0.26
24328.00	89.260	158.720	5826.77	18730.13	-17308.97	7164.49	1776453.97	14619883.53	40°15'17.1910"N	80°30'44.7298"W	18733.13	157.514	0.52	0.06	0.52
24423.00	89.480	158.380	5827.81	18825.12	-17397.38	7199.23	1776488.70	14619795.15	40°15'16.3155"N	80°30'44.2880"W	18828.11	157.520	0.43	0.23	-0.36
24518.00	89.110	158.540	5828.98	18920.12	-17485.74	7234.10	1776523.56	14619706.83	40°15'15.4404"N	80°30'43.8444"W	18923.09	157.524	0.42	-0.39	0.17
24613.00	89.350	158.600	5830.26	19015.11	-17574.16	7268.81	1776558.26	14619618.44	40°15'14.5648"N	80°30'43.4031"W	19018.06	157.530	0.26	0.25	0.06
24708.00	89.350	158.520	5831.33	19110.10	-17662.58	7303.53	1776592.96	14619530.05	40°15'13.6891"N	80°30'42.9615"W	19113.04	157.535	0.08	0.00	-0.08
24803.00	89.480	158.770	5832.30	19205.70	-17751.06	7338.12	1776627.54	14619441.61	40°15'12.8130"N	80°30'42.5217"W	19208.02	157.540	0.30	0.14	0.26
24899.00	89.480	158.910	5833.18	19300.79	-17840.58	7372.78	1776662.18	14619352.12	40°15'11.9265"N	80°30'42.0811"W	19303.99	157.547	0.15	0.00	0.15
24994.00	89.350	158.530	5834.14	19395.79	-17929.90	7407.25	1776696.65	14619263.64	40°15'11.0499"N	80°30'41.6428"W	19398.97	157.552	0.42	-0.14	-0.40
25090.00	89.450	158.680	5835.14	19490.08	-18019.55	7441.91	1776731.29	14619175.23	40°15'10.1740"N	80°30'41.2021"W	19493.95	157.558	0.19	0.11	0.16
25184.00	89.350	158.200	5836.13	19585.07	-18109.79	7476.81	1776766.18	14619086.91	40°15'9.2990"N	80°30'40.7582"W	19588.93	157.562	0.52	-0.11	-0.51
25279.00	89.420	158.350	5837.15	19681.04	-18200.14	7511.98	1776801.33	14618998.70	40°15'8.4251"N	80°30'40.3110"W	19683.92	157.565	0.17	0.07	0.16
25374.00	89.480	158.630	5838.07	19776.06	-18290.52	7546.81	1776836.15	14618910.35	40°15'7.5499"N	80°30'39.8680"W	19778.90	157.570	0.30	0.06	0.29
25469.00	89.290	158.280	5839.09	19871.92	-18380.88	7581.69	1776871.02	14618822.03	40°15'6.6748"N	80°30'39.4244"W	19873.88	157.574	0.42	-0.20	-0.37

09/10/2021



Actual Wellpath Report

State of WV DNR C BRK 8H AWP Proj: 27001*

Page 11 of 13



REFERENCE WELLPATH IDENTIFICATION

Operator	SWN PRODUCTION COMPANY, LLC	Well	State of WV DNR C BRK 8H
Field	Brooke	API/Legal	
Facility	State of WV DNR C BRK Pad	Wellbore	State of WV DNR C BRK 8H AWB
Slot	Slot 8H		

WELLPATH DATA (287 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]
25565.00	89.380	158.080	5840.20	19967.05	-18459.99	7617.37	1776906.69	14618732.95	40°15'5.7923"N	80°30'38.9706"W	19969.87	157.577	0.23	0.09	-0.21
25660.00	89.170	158.540	5841.40	20062.04	-18548.26	7652.48	1776941.78	14618644.71	40°15'4.9181"N	80°30'38.5241"W	20064.85	157.580	0.53	-0.22	0.48
25755.00	89.510	158.510	5842.50	20157.03	-18636.66	7687.26	1776976.54	14618556.35	40°15'4.0427"N	80°30'38.0819"W	20159.84	157.585	0.36	0.36	-0.03
25850.00	89.480	159.090	5843.33	20252.03	-18725.23	7721.61	1777010.88	14618467.82	40°15'3.1656"N	80°30'37.6451"W	20254.81	157.591	0.61	-0.03	0.61
25945.00	89.450	158.750	5844.22	20347.02	-18813.86	7755.78	1777045.04	14618379.21	40°15'2.2879"N	80°30'37.2108"W	20349.78	157.597	0.36	-0.03	-0.36
26040.00	89.510	158.500	5845.08	20442.02	-18902.33	7790.40	1777079.65	14618290.78	40°15'1.4118"N	80°30'36.7706"W	20444.76	157.601	0.27	0.06	-0.26
26135.00	88.920	158.680	5846.38	20537.01	-18990.76	7825.08	1777114.31	14618202.38	40°15'0.5360"N	80°30'36.3297"W	20539.74	157.606	0.65	-0.62	0.19
26231.00	89.080	157.980	5848.06	20632.99	-19079.96	7860.52	1777149.74	14618113.22	40°14'59.6526"N	80°30'35.8789"W	20635.71	157.609	0.75	0.17	-0.73
26326.00	89.010	158.620	5849.64	20727.98	-19168.22	7895.64	1777184.85	14618024.99	40°14'58.7786"N	80°30'35.4323"W	20730.69	157.613	0.68	-0.07	0.67
26421.00	88.800	158.490	5851.46	20822.96	-19256.62	7930.37	1777219.56	14617936.62	40°14'57.9031"N	80°30'34.9908"W	20825.66	157.617	0.26	-0.22	-0.14
26516.00	88.920	158.790	5853.35	20917.94	-19345.08	7964.96	1777254.14	14617848.20	40°14'56.0271"N	80°30'34.5509"W	20920.63	157.622	0.34	0.13	0.32
26611.00	88.950	158.460	5855.11	21012.93	-19433.53	7999.58	1777288.75	14617759.78	40°14'56.1512"N	80°30'34.1108"W	21015.60	157.626	0.35	0.03	-0.35
26706.00	88.890	157.960	5856.91	21107.91	-19521.73	8034.84	1777323.99	14617671.62	40°14'55.2777"N	80°30'33.6624"W	21110.58	157.629	0.53	-0.06	-0.53
26801.00	88.920	158.110	5858.72	21202.89	-19609.82	8070.37	1777359.50	14617583.57	40°14'54.4053"N	80°30'33.2105"W	21205.56	157.631	0.16	0.03	0.16
26897.00	88.890	158.680	5860.56	21298.87	-19699.05	8105.71	1777394.83	14617494.36	40°14'53.5215"N	80°30'32.7611"W	21301.53	157.634	0.59	-0.03	0.59
26976.00	89.080	158.460	5861.95	21377.85	-19772.58	8134.57	1777423.68	14617420.86	40°14'52.7934"N	80°30'32.3942"W	21380.51	157.637	0.37	0.24	-0.28
27001.00†	89.080	158.460	5862.36	21402.85	-19795.83	8143.74	1777432.85	14617397.62	40°14'52.5631"N	80°30'32.2775"W	21405.50	157.638	0.00	0.00	0.00

RECEIVED
Office of Oil and Gas
AUG 04 2021
WV Department of
Environmental Protection

09/10/2021

REFERENCE WELLPATH IDENTIFICATION

Operator	SWN PRODUCTION COMPANY, LLC		Well	State of WV DNR C BRK 8H	
Field	Brooke		API/Legal		
Facility	State of WV DNR C BRK Pad		Wellbore	State of WV DNR C BRK 8H AWB	
Slot	Slot 8H				

HOLE & CASING SECTIONS - Ref Wellbore: State of WV DNR C BRK 8H AWB Ref Wellpath: State of WV DNR C BRK 8H AWP Proj: 27001'

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	126.00	100.00	26.00	126.00	0.00	0.00	-0.03	0.10
17.5in Open Hole	126.00	425.00	299.00	126.00	425.00	-0.03	0.10	0.27	0.33
13.375in Casing Surface	26.00	425.00	399.00	26.00	425.00	0.00	0.00	0.27	0.33
12.25in Open Hole	425.00	1410.00	985.00	425.00	1405.84	0.27	0.33	76.52	28.36
9.625in Casing Intermediate	26.00	1307.00	1281.00	26.00	1303.41	0.00	0.00	66.83	23.63
8.5in Open Hole	1410.00	27001.00	25591.00	1405.84	5862.36	76.52	28.36	-19795.83	8143.74
5.5in Casing Production	26.00	27001.00	26975.00	26.00	5862.36	0.00	0.00	-19795.83	8143.74

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
State of WV DNR C BRK 8H LP Rev-3	5615.00	-260.08	447.45	1769739.51	14636925.89	40°18'6.0192"N	80°32'10.2120"W	point
State of WV DNR C BRK 8H BHL Rev-6	5862.00	-19801.23	8130.37	1777419.49	14617392.22	40°14'52.5105"N	80°30'32.4503"W	point

WELLPATH COMPOSITION - Ref Wellbore: State of WV DNR C BRK 8H AWB Ref Wellpath: State of WV DNR C BRK 8H AWP Proj: 27001'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
26.00	371.00	OWSG MWD rev2 + HRGM	01 Premier MWD <17-1/2"> (220'-371')	State of WV DNR C BRK 8H AWB	1/25/2021
371.00	1307.00	OWSG MWD rev2 + HRGM	02 Premier MWD <12-1/4"> (461'-1307')	State of WV DNR C BRK 8H AWB	1/25/2021
1307.00	27001.00	BH AutoTrak Casing (2019), (HRGM, Short spacing)	03 BH AT Curve <8-1/2"> (1420'-26976')	State of WV DNR C BRK 8H AWB	3/2/2021

RECEIVED
 Department of Environmental Protection
 Office of Oil and Gas
 AUG 04 2021

10/2021

REFERENCE WELLPATH IDENTIFICATION

Operator	SWN PRODUCTION COMPANY, LLC	Well	State of WV DNR C BRK 8H
Field	Brooke	API/Legal	
Facility	State of WV DNR C BRK Pad	Wellbore	State of WV DNR C BRK 8H AWB
Slot	Slot 8H		

COMMENTS

Wellpath general comments
 API: 47-009-00310-0000
 BH Job #: 110778243
 Rig: SDC 40
 Duration: 03/03/2021 - 03/11/2021

RECEIVED
 Office of Oil and Gas
 AUG 04 2021
 WV Department of
 Environmental Protection