

Location: Brooke County, WV

Slot: 406H

Field: Brooke

Well: State of WV DNR C BRK 406H

Facility: State of WV DNR C BRK Pad

Wellbore: State of WV DNR C BRK 406H PWB

Plot reference wellpath is State of WV DNR C BRK 406H awp Proj: 31311'

Grid System: NAD83 / UTM Zone 17 North, US feet

True vertical depths are referenced to SDC 501 (KB)

North Reference: Grid north

Reference wellpath measured depths are referenced to SDC 501 (KB)

Scale: True distance

SDC 501 (KB) to Mean Sea Level: 1015 feet

Coordinates are in feet referenced to Slot

Mean Sea Level to Ground level (At Slot: 406H): -989 feet

Depths are in feet

Offset wellpath MDs are referenced to each path's default MD datum

Created by: tranlam on 2024-07-23; Database: WA_MPL_EASTERNUS_Defn

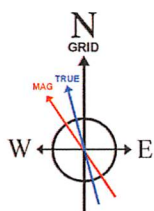
Location Information

Facility Name			Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
State of WV DNR C BRK Pad			1769295.332	14637176.548	40°18'8.5200"N	80°32'15.9300"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
406H	-44.82	16.04	1769311.370	14637131.750	40°18'8.0763"N	80°32'15.7259"W
SDC 501 (KB) to Ground level (At Slot: 406H)					26ft	
Mean Sea Level to Ground level (At Slot: 406H)					-989ft	
SDC 501 (KB) to Mean Sea Level					1015ft	

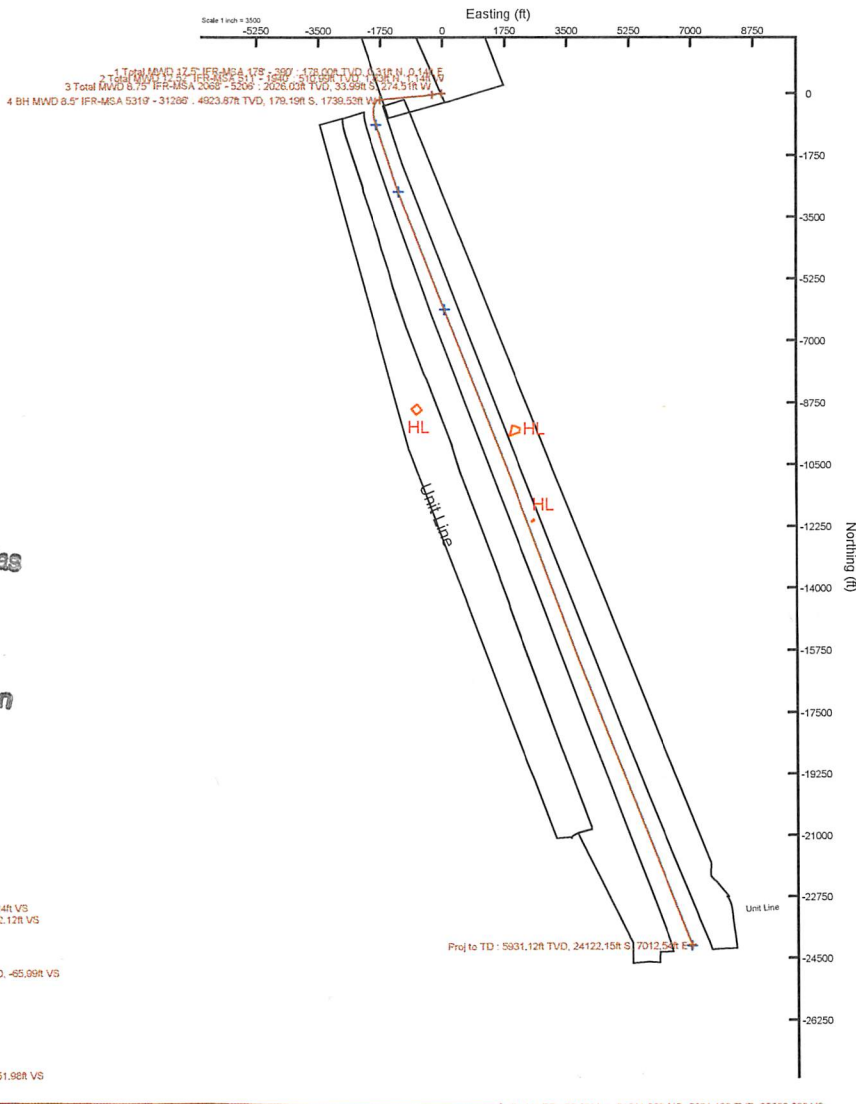
Bottom Hole Location

MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
31311.00	89.290	158.400	5931.12	-24122.15	7012.54	1776321.22	14613018.84	40°14'9.3372"N	80°30'46.9289"W

API: 47009003420000
BH JOB: 112302109
DURATION: 07.13.2024 to 07.18.2024
RIG: SDC 501



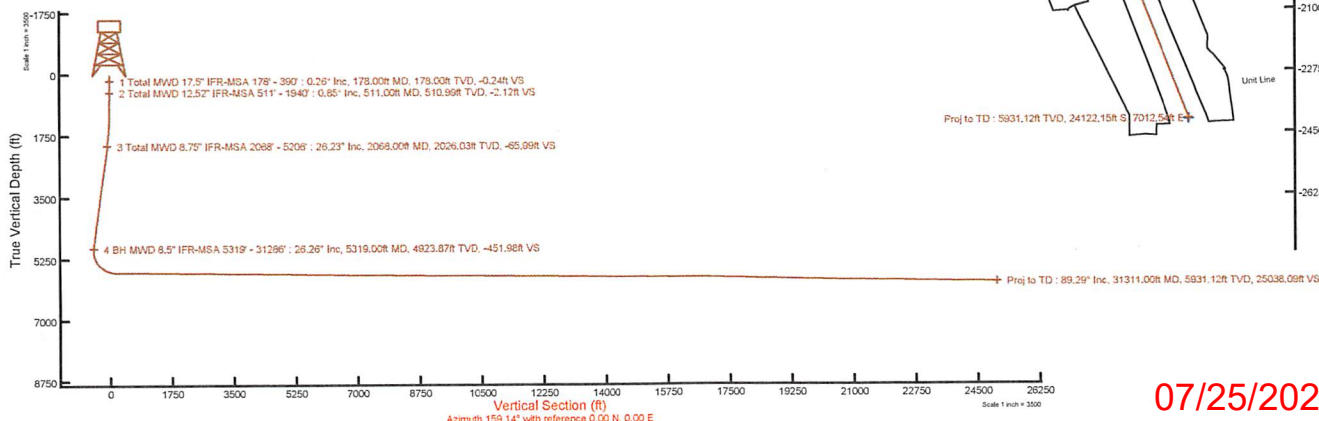
User specified Dip: 67.09° Field: 51816 nT
Magnetic North is 8.90 degrees West of True North (at 7/5/2024)
Grid North is 0.30 degrees East of True North
To correct azimuth from True to Grid subtract 0.30 degrees
To correct azimuth from Magnetic to Grid subtract 9.20 degrees



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07/25/2025

REFERENCE WELLPATH IDENTIFICATION

Operator	SWN PRODUCTION COMPANY, LLC	Well	State of WV DNR C BRK 406H
Field	Brooke	API/Legal	
Facility	State of WV DNR C BRK Pad	Wellbore	State of WV DNR C BRK 406H AWB
Slot	406H		

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	7/23/2024 at 11:27:11 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	-44.82	16.04	1769311.37	14637131.75	40°18'8.0763"N	80°32'15.7259"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 501 (KB) to Facility Vertical Datum	1015.00ft
Horizontal Reference Pt	Slot	SDC 501 (KB) to Mean Sea Level	1015.00ft
Vertical Reference Pt	SDC 501 (KB)	SDC 501 (KB) to Ground Level at Slot (406H)	26.00ft
MD Reference Pt	SDC 501 (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	159.14°

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Actual Wellpath Report

State of WV DNR C BRK 406H awp Proj: 31311'
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Facility	State of WV DNR C BRK Pad	Wellbore	State of WV DNR C BRK 406H AWB
Slot	406H		

WELLPATH DATA (331 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]
0.00†	0.000	24.540	0.00	0.00	0.00	0.00	1769311.37	14637131.75	40°18'8.0763"N	80°32'15.7259"W	0.00	0.000	0.00
26.00	0.000	24.540	26.00	0.00	0.00	0.00	1769311.37	14637131.75	40°18'8.0763"N	80°32'15.7259"W	0.00	0.000	0.00
178.00	0.260	24.540	178.00	-0.24	0.31	0.14	1769311.51	14637132.06	40°18'8.0794"N	80°32'15.7241"W	0.34	24.540	0.17
238.00	0.340	302.160	238.00	-0.48	0.53	0.05	1769311.42	14637132.28	40°18'8.0816"N	80°32'15.7253"W	0.53	5.267	0.67
328.00	0.190	341.150	328.00	-0.84	0.82	-0.23	1769311.14	14637132.57	40°18'8.0844"N	80°32'15.7288"W	0.85	344.565	0.25
390.00	0.340	353.230	390.00	-1.12	1.10	-0.28	1769311.09	14637132.85	40°18'8.0872"N	80°32'15.7295"W	1.13	345.659	0.26
511.00	0.850	295.090	510.99	-2.12	1.83	-1.14	1769310.24	14637133.58	40°18'8.0945"N	80°32'15.7405"W	2.16	328.225	0.60
602.00	1.090	304.160	601.98	-3.31	2.60	-2.46	1769308.91	14637134.35	40°18'8.1022"N	80°32'15.7576"W	3.58	316.607	0.31
692.00	1.660	288.340	691.95	-4.84	3.50	-4.41	1769306.96	14637135.24	40°18'8.1111"N	80°32'15.7826"W	5.63	308.414	0.76
783.00	1.060	271.150	782.93	-5.99	3.93	-6.50	1769304.87	14637135.68	40°18'8.1155"N	80°32'15.8096"W	7.60	301.137	0.79
874.00	1.340	234.300	873.91	-6.03	3.32	-8.21	1769303.17	14637135.07	40°18'8.1096"N	80°32'15.8316"W	8.85	292.046	0.88
965.00	2.640	243.770	964.85	-5.56	1.78	-10.95	1769300.42	14637133.53	40°18'8.0944"N	80°32'15.8672"W	11.09	279.213	1.47
1056.00	4.650	251.750	1055.66	-5.53	-0.31	-16.33	1769295.04	14637131.44	40°18'8.0741"N	80°32'15.9368"W	16.34	268.929	2.27
1147.00	6.370	253.020	1146.24	-6.04	-2.94	-24.67	1769286.71	14637128.82	40°18'8.0486"N	80°32'16.0445"W	24.84	263.214	1.89
1237.00	7.680	257.580	1235.56	-7.26	-5.69	-35.32	1769276.07	14637126.07	40°18'8.0219"N	80°32'16.1821"W	35.77	260.852	1.58
1328.00	9.210	262.080	1325.57	-9.78	-8.00	-48.47	1769262.92	14637123.75	40°18'7.9998"N	80°32'16.3520"W	49.12	260.629	1.83
1419.00	10.820	265.170	1415.18	-13.77	-9.72	-64.19	1769247.20	14637122.03	40°18'7.9836"N	80°32'16.5551"W	64.92	261.389	1.86
1509.00	12.950	266.970	1503.25	-19.20	-10.97	-82.68	1769228.72	14637120.79	40°18'7.9722"N	80°32'16.7938"W	83.41	262.446	2.40
1600.00	15.110	268.190	1591.53	-26.19	-11.88	-104.72	1769206.69	14637119.88	40°18'7.9643"N	80°32'17.0784"W	105.39	263.528	2.40
1690.00	17.500	267.330	1677.91	-34.24	-12.88	-129.97	1769181.45	14637118.87	40°18'7.9557"N	80°32'17.4042"W	130.60	264.340	2.67
1781.00	20.440	264.310	1763.96	-42.68	-15.09	-159.45	1769151.98	14637116.66	40°18'7.9354"N	80°32'17.7850"W	160.17	264.593	3.41
1872.00	23.260	262.670	1848.41	-51.04	-18.96	-193.09	1769118.35	14637112.80	40°18'7.8989"N	80°32'18.2194"W	194.02	264.391	3.17
1940.00	24.810	260.360	1910.51	-56.96	-23.06	-220.48	1769090.98	14637108.69	40°18'7.8598"N	80°32'18.5731"W	221.68	264.028	2.67
2068.00	26.230	256.870	2026.03	-65.99	-33.99	-274.51	1769036.97	14637097.77	40°18'7.7546"N	80°32'19.2712"W	276.60	262.942	1.62
2161.00	26.680	258.360	2109.29	-72.10	-42.87	-314.97	1768996.52	14637088.90	40°18'7.6689"N	80°32'19.7940"W	317.88	262.249	0.86
2251.00	27.600	262.530	2189.39	-80.16	-49.66	-355.44	1768956.07	14637082.11	40°18'7.6039"N	80°32'20.3168"W	358.89	262.047	2.35
2342.00	27.980	262.360	2269.89	-89.93	-55.24	-397.50	1768914.03	14637076.54	40°18'7.5510"N	80°32'20.8600"W	401.32	262.089	0.43
2432.00	28.340	263.470	2349.24	-100.04	-60.47	-439.64	1768871.89	14637071.30	40°18'7.5014"N	80°32'21.4043"W	443.78	262.168	0.71
2523.00	28.850	265.690	2429.14	-111.64	-64.58	-483.00	1768828.56	14637067.20	40°18'7.4630"N	80°32'21.9641"W	487.30	262.384	1.30
2613.00	28.520	265.990	2508.10	-124.06	-67.71	-526.08	1768785.49	14637064.06	40°18'7.4343"N	80°32'22.5204"W	530.42	262.666	0.40

Actual Wellpath Report

State of WV DNR C BRK 406H awp Proj: 31311'
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REFERENCE WELLPATH IDENTIFICATION

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Field	Brooke	API/Legal	
Facility	State of WV DNR C BRK Pad	Wellbore	State of WV DNR C BRK 406H AWB
Slot	406H		

WELLPATH DATA (331 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]
2705.00	28.120	266.560	2589.09	-136.91	-70.55	-569.63	1768741.95	14637061.23	40°18'7.4085"N	80°32'23.0827"W	573.99	262.940	0.52
2795.00	27.740	265.900	2668.60	-149.30	-73.32	-611.70	1768699.91	14637058.46	40°18'7.3833"N	80°32'23.6258"W	616.08	263.165	0.54
2886.00	27.460	264.900	2749.25	-161.11	-76.70	-653.72	1768657.90	14637055.08	40°18'7.3520"N	80°32'24.1684"W	658.20	263.308	0.59
2976.00	26.980	265.290	2829.28	-172.42	-80.22	-694.74	1768616.90	14637051.56	40°18'7.3193"N	80°32'24.6980"W	699.35	263.413	0.57
3069.00	27.180	265.170	2912.08	-184.16	-83.74	-736.93	1768574.73	14637048.04	40°18'7.2867"N	80°32'25.2427"W	741.67	263.517	0.22
3160.00	27.100	265.410	2993.07	-195.70	-87.15	-778.30	1768533.37	14637044.63	40°18'7.2552"N	80°32'25.7769"W	783.16	263.611	0.15
3250.00	27.180	265.710	3073.16	-207.31	-90.33	-819.23	1768492.46	14637041.46	40°18'7.2258"N	80°32'26.3054"W	824.19	263.708	0.18
3340.00	27.140	265.150	3153.23	-218.83	-93.60	-860.18	1768451.52	14637038.18	40°18'7.1956"N	80°32'26.8342"W	865.26	263.790	0.29
3431.00	26.420	264.760	3234.47	-230.01	-97.21	-901.02	1768410.69	14637034.58	40°18'7.1621"N	80°32'27.3615"W	906.25	263.843	0.81
3522.00	26.800	266.200	3315.83	-241.48	-100.41	-941.65	1768370.08	14637031.37	40°18'7.1325"N	80°32'27.8862"W	946.99	263.913	0.82
3612.00	26.840	265.570	3396.15	-253.18	-103.33	-982.16	1768329.59	14637028.46	40°18'7.1057"N	80°32'28.4091"W	987.58	263.994	0.32
3704.00	26.600	265.140	3478.33	-264.73	-106.68	-1023.39	1768288.38	14637025.11	40°18'7.0747"N	80°32'28.9415"W	1028.93	264.049	0.33
3794.00	26.110	263.960	3558.97	-275.35	-110.47	-1063.16	1768248.62	14637021.32	40°18'7.0393"N	80°32'29.4550"W	1068.88	264.068	0.80
3885.00	26.130	264.000	3640.68	-285.61	-114.67	-1103.00	1768208.79	14637017.12	40°18'6.9998"N	80°32'29.9695"W	1108.94	264.065	0.03
3978.00	26.820	266.110	3723.93	-296.98	-118.23	-1144.30	1768167.51	14637013.56	40°18'6.9667"N	80°32'30.5028"W	1150.39	264.101	1.25
4068.00	26.770	265.380	3804.26	-308.58	-121.24	-1184.76	1768127.06	14637010.55	40°18'6.9391"N	80°32'31.0252"W	1190.95	264.157	0.37
4159.00	26.660	264.420	3885.55	-319.69	-124.88	-1225.51	1768086.33	14637006.92	40°18'6.9052"N	80°32'31.5513"W	1231.85	264.182	0.49
4250.00	26.370	263.710	3966.98	-330.16	-129.08	-1265.91	1768045.94	14637002.72	40°18'6.8658"N	80°32'32.0731"W	1272.48	264.178	0.47
4340.00	26.200	263.830	4047.67	-340.22	-133.40	-1305.53	1768006.34	14636998.40	40°18'6.8251"N	80°32'32.5848"W	1312.33	264.166	0.20
4431.00	26.260	264.450	4129.30	-350.63	-137.51	-1345.54	1767966.34	14636994.29	40°18'6.7865"N	80°32'33.1014"W	1352.55	264.165	0.31
4521.00	26.720	265.950	4209.86	-361.74	-140.86	-1385.54	1767926.36	14636990.94	40°18'6.7554"N	80°32'33.6179"W	1392.68	264.195	0.90
4612.00	27.660	266.290	4290.80	-373.89	-143.68	-1427.03	1767884.89	14636988.13	40°18'6.7297"N	80°32'34.1535"W	1434.24	264.251	1.05
4702.00	27.470	264.990	4370.58	-385.71	-146.84	-1468.55	1767843.38	14636984.97	40°18'6.7006"N	80°32'34.6897"W	1475.88	264.290	0.70
4793.00	27.260	264.480	4451.40	-396.96	-150.68	-1510.20	1767801.74	14636981.13	40°18'6.6648"N	80°32'35.2275"W	1517.70	264.302	0.35
4886.00	26.960	263.620	4534.18	-407.87	-155.07	-1552.36	1767759.61	14636976.74	40°18'6.6235"N	80°32'35.7718"W	1560.08	264.295	0.53
4977.00	26.040	261.620	4615.62	-417.34	-160.27	-1592.62	1767719.36	14636971.54	40°18'6.5742"N	80°32'36.2918"W	1600.66	264.253	1.41
5067.00	25.610	261.130	4696.63	-425.65	-166.15	-1631.38	1767680.61	14636965.66	40°18'6.5181"N	80°32'36.7925"W	1639.82	264.185	0.53
5158.00	25.450	263.100	4778.75	-434.45	-171.53	-1670.22	1767641.78	14636960.28	40°18'6.4669"N	80°32'37.2942"W	1679.01	264.136	0.95
5206.00	25.310	264.000	4822.12	-439.57	-173.84	-1690.67	1767621.35	14636957.97	40°18'6.4451"N	80°32'37.5582"W	1699.58	264.129	0.85
5319.00	26.260	263.530	4923.87	-451.98	-179.19	-1739.53	1767572.51	14636952.63	40°18'6.3948"N	80°32'38.1892"W	1748.73	264.119	0.86

Actual Wellpath Report

State of WV DNR C BRK 406H awp Proj: 31311'
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Facility	State of WV DNR C BRK Pad	Wellbore	State of WV DNR C BRK 406H AWB
Slot	406H		

WELLPATH DATA (331 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]
5414.00	27.950	249.470	5008.52	-457.34	-189.37	-1781.31	1767530.74	14636942.45	40°18'6.2962"N	80°32'38.7291"W	1791.35	263.932	6.96
5509.00	28.250	232.190	5092.46	-450.90	-211.00	-1819.98	1767492.08	14636920.83	40°18'6.0845"N	80°32'39.2297"W	1832.17	263.387	8.55
5604.00	30.210	215.480	5175.50	-431.06	-244.31	-1851.68	1767460.40	14636887.54	40°18'5.7570"N	80°32'39.6409"W	1867.72	262.484	8.81
5700.00	35.140	205.800	5256.34	-398.67	-288.90	-1877.75	1767434.34	14636842.96	40°18'5.3176"N	80°32'39.9804"W	1899.85	261.253	7.47
5795.00	41.080	199.120	5331.08	-355.93	-343.08	-1899.90	1767412.19	14636788.80	40°18'4.7834"N	80°32'40.2699"W	1930.63	259.764	7.60
5890.00	47.300	189.400	5399.25	-301.75	-407.15	-1915.86	1767396.24	14636724.76	40°18'4.1511"N	80°32'40.4802"W	1958.65	258.002	9.67
5985.00	52.960	182.460	5460.17	-236.68	-479.58	-1923.20	1767388.90	14636652.35	40°18'3.4357"N	80°32'40.5797"W	1982.10	255.998	8.18
6080.00	59.950	176.930	5512.66	-162.58	-558.66	-1922.63	1767389.48	14636573.31	40°18'2.6543"N	80°32'40.5775"W	2002.15	253.798	8.81
6175.00	65.460	171.070	5556.23	-81.04	-642.52	-1913.71	1767398.40	14636489.47	40°18'1.8251"N	80°32'40.4679"W	2018.69	251.441	7.98
6271.00	72.230	166.300	5590.88	7.19	-730.21	-1896.07	1767416.02	14636401.82	40°18'0.9577"N	80°32'40.2462"W	2031.82	248.937	8.44
6367.00	81.100	162.210	5613.01	100.12	-819.99	-1870.70	1767441.39	14636312.07	40°18'0.0692"N	80°32'39.9246"W	2042.52	246.330	10.12
6463.00	89.290	162.060	5621.04	195.57	-910.96	-1841.37	1767470.70	14636221.13	40°17'59.1687"N	80°32'39.5522"W	2054.39	243.677	8.53
6558.00	89.880	161.760	5621.73	290.45	-1001.27	-1811.88	1767500.19	14636130.87	40°17'58.2749"N	80°32'39.1775"W	2070.13	241.074	0.70
6653.00	89.970	162.020	5621.85	385.34	-1091.56	-1782.35	1767529.71	14636040.61	40°17'57.3812"N	80°32'38.8024"W	2090.04	238.516	0.29
6749.00	89.780	162.470	5622.06	481.20	-1182.99	-1753.07	1767558.97	14635949.22	40°17'56.4762"N	80°32'38.4307"W	2114.88	235.988	0.51
6845.00	89.380	161.780	5622.77	577.07	-1274.35	-1723.61	1767588.42	14635857.89	40°17'55.5719"N	80°32'38.0565"W	2143.55	233.523	0.83
6940.00	89.320	161.680	5623.84	671.96	-1364.55	-1693.83	1767618.19	14635767.72	40°17'54.6790"N	80°32'37.6781"W	2175.10	231.145	0.12
7035.00	89.140	161.810	5625.12	766.86	-1454.77	-1664.07	1767647.94	14635677.54	40°17'53.7861"N	80°32'37.3001"W	2210.31	228.839	0.23
7131.00	89.230	162.160	5626.49	862.73	-1546.05	-1634.38	1767677.61	14635586.29	40°17'52.8825"N	80°32'36.9230"W	2249.77	226.591	0.38
7321.00	89.350	161.580	5628.84	1052.50	-1726.60	-1575.27	1767736.71	14635405.81	40°17'51.0953"N	80°32'36.1721"W	2337.22	222.376	0.31
7416.00	89.230	161.680	5630.02	1147.40	-1816.75	-1545.33	1767766.63	14635315.69	40°17'50.2030"N	80°32'35.7917"W	2385.09	220.384	0.16
7511.00	89.010	161.860	5631.48	1242.29	-1906.97	-1515.61	1767796.34	14635225.51	40°17'49.3099"N	80°32'35.4142"W	2435.91	218.477	0.30
7607.00	88.860	161.800	5633.26	1338.17	-1998.17	-1485.68	1767826.26	14635134.34	40°17'48.4072"N	80°32'35.0340"W	2489.97	216.632	0.17
7702.00	89.570	162.680	5634.56	1433.02	-2088.63	-1456.71	1767855.22	14635043.92	40°17'47.5118"N	80°32'34.6661"W	2546.45	214.894	1.19
7797.00	90.310	162.120	5634.66	1527.86	-2179.19	-1427.98	1767883.93	14634953.40	40°17'46.6155"N	80°32'34.3014"W	2605.38	213.236	0.98
7892.00	90.250	162.550	5634.20	1622.71	-2269.71	-1399.16	1767912.75	14634862.91	40°17'45.7196"N	80°32'33.9354"W	2666.31	211.652	0.46
7987.00	90.060	162.430	5633.94	1717.55	-2360.30	-1370.57	1767941.32	14634772.35	40°17'44.8229"N	80°32'33.5726"W	2729.38	210.143	0.24
8082.00	89.660	161.830	5634.17	1812.42	-2450.72	-1341.42	1767970.46	14634681.97	40°17'43.9279"N	80°32'33.2024"W	2793.82	208.694	0.76
8177.00	89.660	161.840	5634.74	1907.32	-2540.98	-1311.81	1768000.07	14634591.74	40°17'43.0344"N	80°32'32.8262"W	2859.62	207.305	0.01
8273.00	89.320	159.630	5635.59	2003.27	-2631.60	-1280.13	1768031.73	14634501.16	40°17'42.1374"N	80°32'32.4235"W	2926.44	205.940	2.33

Actual Wellpath Report

State of WV DNR C BRK 406H awp Proj: 31311'
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REFERENCE WELLPATH IDENTIFICATION

Operator	SWN PRODUCTION COMPANY, LLC	Well	State of WV DNR C BRK 406H
Field	Brooke	API/Legal	
Facility	State of WV DNR C BRK Pad	Wellbore	State of WV DNR C BRK 406H AWB
Slot	406H		

WELLPATH DATA (331 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]
8368.00	89.450	159.750	5636.61	2098.26	-2720.69	-1247.16	1768064.69	14634412.11	40°17'41.2554"N	80°32'32.0040"W	2992.92	204.627	0.19
8463.00	89.260	159.690	5637.68	2193.25	-2809.79	-1214.24	1768097.60	14634323.03	40°17'40.3732"N	80°32'31.5850"W	3060.93	203.371	0.21
8559.00	89.290	159.960	5638.90	2289.23	-2899.89	-1181.13	1768130.69	14634232.97	40°17'39.4811"N	80°32'31.1638"W	3131.21	202.161	0.28
8655.00	89.230	159.820	5640.14	2385.22	-2990.03	-1148.13	1768163.68	14634142.86	40°17'38.5887"N	80°32'30.7439"W	3202.89	201.006	0.16
8750.00	89.540	159.950	5641.16	2480.20	-3079.23	-1115.46	1768196.34	14634053.69	40°17'37.7056"N	80°32'30.3282"W	3275.05	199.913	0.35
8846.00	89.230	158.680	5642.19	2576.19	-3169.04	-1081.55	1768230.23	14633963.92	40°17'36.8164"N	80°32'29.8966"W	3348.52	198.844	1.36
8941.00	89.200	158.380	5643.49	2671.18	-3257.44	-1046.78	1768264.99	14633875.56	40°17'35.9411"N	80°32'29.4539"W	3421.50	197.815	0.32
9036.00	89.140	158.650	5644.86	2766.16	-3345.83	-1011.99	1768299.77	14633787.20	40°17'35.0659"N	80°32'29.0108"W	3495.52	196.829	0.29
9132.00	89.260	158.870	5646.20	2862.15	-3435.30	-977.22	1768334.53	14633697.77	40°17'34.1800"N	80°32'28.5680"W	3571.59	195.879	0.26
9227.00	89.350	158.700	5647.36	2957.14	-3523.85	-942.84	1768368.89	14633609.25	40°17'33.3032"N	80°32'28.1303"W	3647.81	194.979	0.20
9323.00	89.290	158.630	5648.50	3053.13	-3613.27	-907.92	1768403.80	14633519.87	40°17'32.4178"N	80°32'27.6856"W	3725.59	194.105	0.10
9418.00	88.920	158.560	5649.98	3148.12	-3701.70	-873.25	1768438.45	14633431.46	40°17'31.5421"N	80°32'27.2442"W	3803.31	193.274	0.40
9513.00	88.860	158.530	5651.82	3243.10	-3790.10	-838.51	1768473.18	14633343.10	40°17'30.6668"N	80°32'26.8018"W	3881.75	192.475	0.07
9610.00	89.050	158.730	5653.59	3340.07	-3880.42	-803.17	1768508.51	14633252.82	40°17'29.7725"N	80°32'26.3518"W	3962.67	191.694	0.28
9707.00	89.660	158.970	5654.68	3437.07	-3970.88	-768.17	1768543.49	14633162.39	40°17'28.8768"N	80°32'25.9062"W	4044.50	190.949	0.68
9804.00	90.220	159.630	5654.78	3534.07	-4061.62	-733.89	1768577.77	14633071.69	40°17'27.9784"N	80°32'25.4698"W	4127.39	190.242	0.89
9900.00	88.980	158.680	5655.45	3630.06	-4151.33	-699.73	1768611.91	14632982.01	40°17'27.0902"N	80°32'25.0350"W	4209.89	189.568	1.63
9995.00	89.320	158.770	5656.86	3725.05	-4239.84	-665.26	1768646.36	14632893.53	40°17'26.2137"N	80°32'24.5962"W	4291.72	188.917	0.37
10091.00	89.260	158.710	5658.05	3821.04	-4329.30	-630.45	1768681.16	14632804.10	40°17'25.3279"N	80°32'24.1530"W	4374.97	188.285	0.09
10187.00	89.260	158.690	5659.29	3917.03	-4418.74	-595.58	1768716.01	14632714.70	40°17'24.4424"N	80°32'23.7091"W	4458.70	187.676	0.02
10283.00	89.140	158.860	5660.63	4013.02	-4508.22	-560.83	1768750.75	14632625.26	40°17'23.5564"N	80°32'23.2666"W	4542.97	187.091	0.22
10379.00	89.320	158.760	5661.92	4109.01	-4597.72	-526.13	1768785.44	14632535.79	40°17'22.6702"N	80°32'22.8249"W	4627.73	186.528	0.21
10475.00	89.200	159.070	5663.16	4205.00	-4687.28	-491.60	1768819.96	14632446.26	40°17'21.7834"N	80°32'22.3853"W	4712.99	185.987	0.35
10571.00	89.230	158.890	5664.48	4300.99	-4776.89	-457.17	1768854.37	14632356.69	40°17'20.8962"N	80°32'21.9470"W	4798.71	185.467	0.19
10666.00	89.140	159.020	5665.83	4395.98	-4865.54	-423.06	1768888.47	14632268.07	40°17'20.0184"N	80°32'21.5127"W	4883.90	184.969	0.17
10761.00	89.170	158.730	5667.23	4490.97	-4954.15	-388.82	1768922.69	14632179.50	40°17'19.1410"N	80°32'21.0769"W	4969.38	184.488	0.31
10856.00	89.320	158.680	5668.48	4585.95	-5042.65	-354.33	1768957.18	14632091.03	40°17'18.2647"N	80°32'20.6377"W	5055.09	184.019	0.17
10952.00	89.050	158.940	5669.85	4681.94	-5132.15	-319.63	1768991.86	14632001.56	40°17'17.3785"N	80°32'20.1960"W	5142.10	183.564	0.39
11047.00	89.170	158.720	5671.32	4776.93	-5220.73	-285.33	1769026.15	14631913.02	40°17'16.5014"N	80°32'19.7593"W	5228.52	183.128	0.26
11143.00	89.170	159.000	5672.71	4872.92	-5310.26	-250.71	1769060.76	14631823.52	40°17'15.6149"N	80°32'19.3186"W	5316.18	182.703	0.29

Actual Wellpath Report

State of WV DNR C BRK 406H awp Proj: 31311'
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Field	Brooke	API/Legal	
Facility	State of WV DNR C BRK Pad	Wellbore	State of WV DNR C BRK 406H AWB
Slot	406H		

WELLPATH DATA (331 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]
11238.00	89.290	158.700	5673.99	4967.91	-5398.85	-216.43	1769095.02	14631734.96	40°17'14.7377"N	80°32'18.8823"W	5403.19	182.296	0.34
11334.00	89.260	158.960	5675.20	5063.90	-5488.37	-181.77	1769129.67	14631645.48	40°17'13.8514"N	80°32'18.4410"W	5491.38	181.897	0.27
11430.00	89.200	158.380	5676.49	5159.89	-5577.78	-146.85	1769164.57	14631556.10	40°17'12.9660"N	80°32'17.9964"W	5579.72	181.508	0.61
11525.00	89.170	158.930	5677.85	5254.87	-5666.26	-112.28	1769199.14	14631467.66	40°17'12.0899"N	80°32'17.5562"W	5667.37	181.135	0.58
11620.00	89.170	158.890	5679.22	5349.86	-5754.89	-78.10	1769233.30	14631379.07	40°17'11.2124"N	80°32'17.1212"W	5755.42	180.777	0.04
11716.00	89.140	158.840	5680.64	5445.85	-5844.42	-43.49	1769267.90	14631289.57	40°17'10.3259"N	80°32'16.6806"W	5844.58	180.426	0.06
11811.00	89.200	158.710	5682.01	5540.84	-5932.96	-9.10	1769302.28	14631201.06	40°17'9.4491"N	80°32'16.2428"W	5932.97	180.088	0.15
11906.00	89.020	158.720	5683.49	5635.83	-6021.47	25.39	1769336.75	14631112.58	40°17'8.5727"N	80°32'15.8038"W	6021.53	179.758	0.19
12001.00	89.010	158.570	5685.12	5730.81	-6109.94	59.97	1769371.32	14631024.15	40°17'7.6967"N	80°32'15.3635"W	6110.23	179.438	0.16
12097.00	89.050	158.570	5686.75	5826.79	-6199.29	95.04	1769406.38	14630934.84	40°17'6.8120"N	80°32'14.9170"W	6200.02	179.122	0.04
12192.00	89.140	158.570	5688.25	5921.77	-6287.71	129.75	1769441.07	14630846.45	40°17'5.9365"N	80°32'14.4751"W	6289.05	178.818	0.09
12287.00	89.320	158.310	5689.52	6016.76	-6376.05	164.66	1769475.96	14630758.14	40°17'5.0617"N	80°32'14.0307"W	6378.18	178.521	0.33
12382.00	89.110	158.510	5690.83	6111.74	-6464.38	199.61	1769510.90	14630669.84	40°17'4.1870"N	80°32'13.5856"W	6467.46	178.231	0.31
12478.00	89.170	158.760	5692.27	6207.73	-6553.77	234.58	1769545.86	14630580.49	40°17'3.3019"N	80°32'13.1404"W	6557.97	177.950	0.27
12573.00	89.200	158.780	5693.62	6302.71	-6642.32	268.98	1769580.24	14630491.98	40°17'2.4251"N	80°32'12.7025"W	6647.76	177.681	0.04
12669.00	89.260	158.360	5694.91	6398.70	-6731.67	304.05	1769615.30	14630402.66	40°17'1.5404"N	80°32'12.2560"W	6738.53	177.414	0.44
12764.00	89.140	158.460	5696.23	6493.68	-6820.00	339.00	1769650.24	14630314.36	40°17'0.6657"N	80°32'11.8110"W	6828.42	177.154	0.16
12859.00	89.200	158.760	5697.61	6588.67	-6908.45	373.65	1769684.87	14630225.95	40°16'59.7899"N	80°32'11.3700"W	6918.54	176.904	0.32
12955.00	89.260	158.590	5698.90	6684.66	-6997.86	408.55	1769719.77	14630136.57	40°16'58.9045"N	80°32'10.9256"W	7009.78	176.659	0.19
13050.00	89.350	158.890	5700.05	6779.65	-7086.39	443.00	1769754.20	14630048.07	40°16'58.0279"N	80°32'10.4871"W	7100.23	176.423	0.33
13145.00	90.310	158.420	5700.34	6874.64	-7174.87	477.58	1769788.76	14629959.62	40°16'57.1518"N	80°32'10.0470"W	7190.75	176.192	1.13
13240.00	89.480	158.530	5700.51	6969.64	-7263.25	512.43	1769823.60	14629871.28	40°16'56.2767"N	80°32'9.6032"W	7281.30	175.964	0.88
13336.00	89.450	158.320	5701.41	7065.62	-7352.52	547.73	1769858.89	14629782.05	40°16'55.3927"N	80°32'9.1538"W	7372.89	175.740	0.22
13431.00	89.380	158.470	5702.38	7160.61	-7440.84	582.71	1769893.86	14629693.76	40°16'54.5182"N	80°32'8.7084"W	7463.62	175.522	0.17
13527.00	89.320	158.250	5703.46	7256.60	-7530.07	618.11	1769929.24	14629604.57	40°16'53.6346"N	80°32'8.2577"W	7555.39	175.307	0.24
13622.00	89.480	158.360	5704.46	7351.58	-7618.33	653.22	1769964.34	14629516.34	40°16'52.7606"N	80°32'7.8106"W	7646.29	175.099	0.20
13717.00	89.420	158.610	5705.37	7446.57	-7706.71	688.06	1769999.17	14629427.99	40°16'51.8855"N	80°32'7.3670"W	7737.36	174.898	0.27
13813.00	89.350	157.860	5706.40	7542.55	-7795.86	723.66	1770034.75	14629338.88	40°16'51.0027"N	80°32'6.9138"W	7829.37	174.697	0.78
13908.00	89.410	158.670	5707.43	7637.53	-7884.10	758.84	1770069.92	14629250.67	40°16'50.1289"N	80°32'6.4659"W	7920.53	174.502	0.85
14004.00	89.480	158.560	5708.36	7733.53	-7973.49	793.84	1770104.90	14629161.32	40°16'49.2438"N	80°32'6.0203"W	8012.91	174.314	0.14

Actual Wellpath Report

State of WV DNR C BRK 406H awp Proj: 31311'
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REFERENCE WELLPATH IDENTIFICATION

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14099.00	89.380	158.510	5709.30	7828.52	-8061.89	828.60	1770139.65	14629072.94	40°16'48.3684"N	80°32'5.5778"W	8104.36	174.132	0.12
14194.00	89.450	158.400	5710.27	7923.50	-8150.25	863.49	1770174.53	14628984.62	40°16'47.4934"N	80°32'5.1337"W	8195.86	173.952	0.14
14290.00	89.380	158.510	5711.25	8019.49	-8239.54	898.74	1770209.76	14628895.37	40°16'46.6093"N	80°32'4.6849"W	8288.41	173.775	0.14
14385.00	89.910	158.520	5711.84	8114.48	-8327.93	933.53	1770244.54	14628807.00	40°16'45.7340"N	80°32'4.2420"W	8380.09	173.604	0.56
14480.00	89.540	158.440	5712.30	8209.48	-8416.31	968.38	1770279.38	14628718.66	40°16'44.8589"N	80°32'3.7984"W	8471.84	173.436	0.40
14576.00	89.480	158.290	5713.12	8305.46	-8505.54	1003.77	1770314.76	14628629.46	40°16'43.9752"N	80°32'3.3478"W	8564.57	173.269	0.17
14671.00	89.320	158.370	5714.12	8400.45	-8593.83	1038.85	1770349.82	14628541.22	40°16'43.1010"N	80°32'2.9012"W	8656.39	173.107	0.19
14766.00	89.480	158.870	5715.11	8495.44	-8682.28	1073.48	1770384.44	14628452.79	40°16'42.2251"N	80°32'2.4604"W	8748.39	172.952	0.55
14862.00	89.750	158.530	5715.76	8591.43	-8771.72	1108.35	1770419.30	14628363.39	40°16'41.3395"N	80°32'2.0165"W	8841.47	172.799	0.45
14957.00	89.970	158.770	5715.99	8686.43	-8860.20	1142.94	1770453.87	14628274.94	40°16'40.4634"N	80°32'1.5763"W	8933.62	172.650	0.34
15052.00	89.660	158.560	5716.29	8781.43	-8948.69	1177.50	1770488.42	14628186.48	40°16'39.5872"N	80°32'1.1364"W	9025.83	172.504	0.39
15148.00	89.510	158.370	5716.99	8877.42	-9037.99	1212.74	1770523.64	14628097.22	40°16'38.7029"N	80°32'0.6878"W	9118.99	172.358	0.25
15243.00	89.910	158.650	5717.47	8972.41	-9126.38	1247.54	1770558.43	14628008.86	40°16'37.8276"N	80°32'0.2448"W	9211.26	172.216	0.51
15339.00	89.660	158.700	5717.83	9068.41	-9215.81	1282.45	1770593.33	14627919.47	40°16'36.9421"N	80°31'59.8005"W	9304.61	172.078	0.27
15434.00	89.630	158.840	5718.42	9163.40	-9304.36	1316.85	1770627.72	14627830.95	40°16'36.0653"N	80°31'59.3627"W	9397.09	171.944	0.15
15529.00	89.510	158.410	5719.13	9258.40	-9392.82	1351.48	1770662.33	14627742.52	40°16'35.1893"N	80°31'58.9220"W	9489.55	171.812	0.47
15625.00	89.630	158.550	5719.85	9354.39	-9482.13	1386.69	1770697.53	14627653.25	40°16'34.3050"N	80°31'58.4737"W	9582.99	171.680	0.19
15721.00	89.600	158.710	5720.50	9450.38	-9571.53	1421.67	1770732.50	14627563.89	40°16'33.4198"N	80°31'58.0285"W	9676.53	171.552	0.17
15816.00	89.600	158.390	5721.16	9545.37	-9659.94	1456.41	1770767.22	14627475.51	40°16'32.5443"N	80°31'57.5863"W	9769.12	171.426	0.34
15911.00	89.600	158.810	5721.82	9640.37	-9748.39	1491.07	1770801.87	14627387.09	40°16'31.6684"N	80°31'57.1452"W	9861.77	171.304	0.44
16006.00	89.540	158.540	5722.54	9735.36	-9836.88	1525.62	1770836.40	14627298.63	40°16'30.7922"N	80°31'56.7055"W	9954.49	171.184	0.29
16102.00	89.540	158.470	5723.31	9831.35	-9926.21	1560.79	1770871.57	14627209.35	40°16'29.9077"N	80°31'56.2578"W	10048.17	171.064	0.07
16197.00	89.540	158.650	5724.07	9926.34	-10014.63	1595.52	1770906.28	14627120.96	40°16'29.0321"N	80°31'55.8158"W	10140.93	170.948	0.19
16292.00	89.630	158.770	5724.76	10021.34	-10103.14	1630.01	1770940.76	14627032.48	40°16'28.1556"N	80°31'55.3768"W	10233.79	170.835	0.16
16388.00	89.600	158.690	5725.40	10117.33	-10192.60	1664.83	1770975.57	14626943.05	40°16'27.2698"N	80°31'54.9336"W	10327.67	170.723	0.09
16483.00	89.510	158.790	5726.14	10212.33	-10281.13	1699.28	1771010.00	14626854.55	40°16'26.3932"N	80°31'54.4953"W	10420.62	170.615	0.14
16579.00	89.600	158.750	5726.89	10308.32	-10370.62	1734.04	1771044.75	14626765.11	40°16'25.5071"N	80°31'54.0529"W	10514.59	170.508	0.10
16674.00	89.660	158.700	5727.50	10403.32	-10459.14	1768.51	1771079.20	14626676.62	40°16'24.6306"N	80°31'53.6143"W	10607.60	170.403	0.08
16769.00	89.600	158.800	5728.11	10498.31	-10547.68	1802.94	1771113.62	14626588.11	40°16'23.7538"N	80°31'53.1761"W	10700.66	170.300	0.12
16865.00	89.510	158.690	5728.86	10594.31	-10637.15	1837.74	1771148.41	14626498.68	40°16'22.8679"N	80°31'52.7332"W	10794.73	170.198	0.15

Actual Wellpath Report

State of WV DNR C BRK 406H awp Proj: 31311'
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REFERENCE WELLPATH IDENTIFICATION

Operator	SWN PRODUCTION COMPANY, LLC	Well	State of WV DNR C BRK 406H
Field	Brooke	API/Legal	
Facility	State of WV DNR C BRK Pad	Wellbore	State of WV DNR C BRK 406H AWB
Slot	406H		

WELLPATH DATA (331 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]
16960.00	89.600	158.930	5729.60	10689.31	-10725.72	1872.08	1771182.73	14626410.14	40°16'21.9909"N	80°31'52.2963"W	10887.87	170.099	0.27
17055.00	89.480	159.720	5730.36	10784.30	-10814.60	1905.62	1771216.26	14626321.29	40°16'21.1109"N	80°31'51.8697"W	10981.21	170.007	0.84
17150.00	89.540	159.580	5731.17	10879.29	-10903.66	1938.66	1771249.28	14626232.26	40°16'20.2290"N	80°31'51.4496"W	11074.67	169.918	0.16
17246.00	89.660	159.800	5731.84	10975.29	-10993.69	1971.98	1771282.59	14626142.27	40°16'19.3376"N	80°31'51.0258"W	11169.15	169.831	0.26
17341.00	89.510	159.560	5732.53	11070.28	-11082.78	2004.97	1771315.57	14626053.22	40°16'18.4556"N	80°31'50.6063"W	11262.68	169.746	0.30
17436.00	89.570	159.550	5733.29	11165.27	-11171.79	2038.15	1771348.74	14625964.24	40°16'17.5742"N	80°31'50.1843"W	11356.19	169.661	0.06
17532.00	89.940	159.580	5733.70	11261.27	-11261.75	2071.67	1771382.24	14625874.31	40°16'16.6835"N	80°31'49.7581"W	11450.71	169.577	0.39
17627.00	89.540	159.870	5734.14	11356.26	-11350.86	2104.59	1771415.15	14625785.23	40°16'15.8012"N	80°31'49.3395"W	11544.32	169.496	0.52
17723.00	89.600	159.450	5734.86	11452.26	-11440.87	2137.95	1771448.51	14625695.26	40°16'14.9100"N	80°31'48.9152"W	11638.92	169.415	0.44
17818.00	89.570	159.620	5735.54	11547.25	-11529.88	2171.17	1771481.71	14625606.29	40°16'14.0288"N	80°31'48.4928"W	11732.52	169.336	0.18
17914.00	89.480	159.470	5736.34	11643.25	-11619.82	2204.72	1771515.24	14625516.38	40°16'13.1382"N	80°31'48.0661"W	11827.13	169.257	0.18
18009.00	89.570	159.780	5737.13	11738.24	-11708.87	2237.79	1771548.30	14625427.36	40°16'12.2565"N	80°31'47.6456"W	11920.80	169.180	0.34
18105.00	89.510	159.720	5737.90	11834.23	-11798.94	2271.02	1771581.52	14625337.33	40°16'11.3648"N	80°31'47.2231"W	12015.51	169.105	0.09
18200.00	89.690	159.140	5738.56	11929.23	-11887.88	2304.39	1771614.88	14625248.43	40°16'10.4841"N	80°31'46.7986"W	12109.16	169.030	0.64
18296.00	89.350	158.990	5739.37	12025.22	-11977.54	2338.70	1771649.17	14625158.80	40°16'9.5964"N	80°31'46.3623"W	12203.72	168.952	0.39
18391.00	89.910	160.000	5739.98	12120.22	-12066.51	2371.97	1771682.43	14625069.86	40°16'8.7154"N	80°31'45.9391"W	12297.44	168.879	1.22
18487.00	89.450	159.580	5740.51	12216.21	-12156.60	2405.14	1771715.58	14624979.80	40°16'7.8234"N	80°31'45.5174"W	12392.24	168.809	0.65
18582.00	89.570	159.440	5741.33	12311.20	-12245.59	2438.39	1771748.82	14624890.85	40°16'6.9423"N	80°31'45.0946"W	12486.00	168.738	0.19
18677.00	89.140	159.550	5742.40	12406.20	-12334.56	2471.66	1771782.09	14624801.91	40°16'6.0613"N	80°31'44.6714"W	12579.77	168.669	0.47
18772.00	89.170	159.710	5743.80	12501.18	-12423.61	2504.73	1771815.14	14624712.90	40°16'5.1796"N	80°31'44.2510"W	12673.59	168.601	0.17
18868.00	89.110	159.600	5745.24	12597.17	-12513.61	2538.10	1771848.50	14624622.93	40°16'4.2885"N	80°31'43.8266"W	12768.42	168.534	0.13
18963.00	89.110	159.750	5746.71	12692.15	-12602.69	2571.09	1771881.48	14624533.89	40°16'3.4066"N	80°31'43.4071"W	12862.28	168.469	0.16
19058.00	89.230	159.550	5748.09	12787.14	-12691.75	2604.13	1771914.50	14624444.86	40°16'2.5248"N	80°31'42.9871"W	12956.16	168.405	0.25
19154.00	89.290	159.560	5749.33	12883.13	-12781.69	2637.66	1771948.02	14624354.95	40°16'1.6342"N	80°31'42.5607"W	13051.01	168.340	0.06
19249.00	89.170	159.660	5750.61	12978.12	-12870.73	2670.75	1771981.10	14624265.95	40°16'0.7526"N	80°31'42.1399"W	13144.91	168.277	0.16
19344.00	89.080	159.660	5752.06	13073.10	-12959.80	2703.77	1772014.11	14624176.91	40°15'59.8707"N	80°31'41.7201"W	13238.84	168.216	0.09
19440.00	89.140	159.450	5753.55	13169.09	-13049.74	2737.30	1772047.62	14624087.01	40°15'58.9802"N	80°31'41.2938"W	13333.74	168.153	0.23
19537.00	89.230	159.620	5754.93	13266.08	-13140.61	2771.21	1772081.52	14623996.17	40°15'58.0805"N	80°31'40.8626"W	13429.64	168.091	0.20
19633.00	89.200	159.660	5756.24	13362.06	-13230.60	2804.61	1772114.90	14623906.21	40°15'57.1894"N	80°31'40.4379"W	13524.60	168.032	0.05
19729.00	89.230	159.490	5757.56	13458.05	-13320.56	2838.11	1772148.39	14623816.29	40°15'56.2987"N	80°31'40.0120"W	13619.55	167.972	0.18

Actual Wellpath Report

State of WV DNR C BRK 406H awp Proj: 31311'
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REFERENCE WELLPATH IDENTIFICATION

Operator	SWN PRODUCTION COMPANY, LLC	Well	State of WV DNR C BRK 406H
Field	Brooke	API/Legal	
Facility	State of WV DNR C BRK Pad	Wellbore	State of WV DNR C BRK 406H AWB
Slot	406H		

WELLPATH DATA (331 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]
19824.00	89.140	159.560	5758.91	13553.04	-13409.55	2871.34	1772181.61	14623727.34	40°15'55.4176"N	80°31'39.5895"W	13713.52	167.914	0.12
19920.00	89.140	159.470	5760.35	13649.03	-13499.47	2904.93	1772215.19	14623637.45	40°15'54.5273"N	80°31'39.1624"W	13808.48	167.856	0.09
20015.00	89.540	160.050	5761.45	13744.01	-13588.60	2937.79	1772248.04	14623548.36	40°15'53.6448"N	80°31'38.7446"W	13902.54	167.801	0.74
20111.00	89.480	159.920	5762.27	13840.00	-13678.79	2970.65	1772280.88	14623458.19	40°15'52.7518"N	80°31'38.3269"W	13997.65	167.747	0.15
20206.00	89.450	159.860	5763.15	13934.99	-13768.00	3003.31	1772313.53	14623369.02	40°15'51.8686"N	80°31'37.9118"W	14091.76	167.694	0.07
20302.00	89.540	159.600	5764.00	14030.98	-13858.05	3036.57	1772346.77	14623279.01	40°15'50.9769"N	80°31'37.4890"W	14186.83	167.641	0.29
20398.00	89.350	159.540	5764.93	14126.97	-13948.01	3070.07	1772380.27	14623189.08	40°15'50.0863"N	80°31'37.0629"W	14281.89	167.587	0.21
20493.00	89.450	159.600	5765.92	14221.96	-14037.03	3103.23	1772413.42	14623100.10	40°15'49.2048"N	80°31'36.6413"W	14375.96	167.534	0.12
20588.00	89.540	159.640	5766.76	14316.96	-14126.08	3136.32	1772446.48	14623011.08	40°15'48.3231"N	80°31'36.2207"W	14470.06	167.482	0.10
20684.00	89.380	159.590	5767.67	14412.95	-14216.06	3169.75	1772479.91	14622921.13	40°15'47.4322"N	80°31'35.7956"W	14565.15	167.430	0.17
20780.00	89.420	159.620	5768.67	14508.94	-14306.04	3203.21	1772513.35	14622831.19	40°15'46.5413"N	80°31'35.3703"W	14660.26	167.379	0.05
20876.00	89.420	159.230	5769.64	14604.93	-14395.91	3236.94	1772547.07	14622741.35	40°15'45.6514"N	80°31'34.9413"W	14755.34	167.328	0.41
20971.00	89.450	159.730	5770.58	14699.93	-14484.88	3270.24	1772580.36	14622652.42	40°15'44.7705"N	80°31'34.5179"W	14849.45	167.278	0.53
21066.00	89.290	159.570	5771.62	14794.92	-14573.94	3303.28	1772613.38	14622563.39	40°15'43.8886"N	80°31'34.0980"W	14943.61	167.229	0.24
21161.00	89.290	159.670	5772.80	14889.91	-14662.99	3336.36	1772646.45	14622474.38	40°15'43.0069"N	80°31'33.6774"W	15037.77	167.181	0.11
21256.00	89.380	159.660	5773.90	14984.90	-14752.06	3369.37	1772679.45	14622385.34	40°15'42.1250"N	80°31'33.2577"W	15131.95	167.134	0.10
21352.00	89.780	159.520	5774.61	15080.89	-14842.03	3402.85	1772712.91	14622295.40	40°15'41.2342"N	80°31'32.8321"W	15227.12	167.087	0.44
21447.00	89.260	159.450	5775.40	15175.89	-14931.00	3436.14	1772746.19	14622206.46	40°15'40.3532"N	80°31'32.4088"W	15321.29	167.040	0.55
21542.00	89.450	159.350	5776.47	15270.88	-15019.92	3469.56	1772779.60	14622117.58	40°15'39.4728"N	80°31'31.9839"W	15415.45	166.993	0.23
21637.00	89.480	159.490	5777.36	15365.87	-15108.86	3502.95	1772812.98	14622028.68	40°15'38.5922"N	80°31'31.5593"W	15509.62	166.947	0.15
21732.00	89.480	159.550	5778.22	15460.87	-15197.85	3536.19	1772846.21	14621939.72	40°15'37.7110"N	80°31'31.1367"W	15603.82	166.902	0.06
21827.00	89.290	159.550	5779.24	15555.86	-15286.86	3569.38	1772879.38	14621850.75	40°15'36.8297"N	80°31'30.7148"W	15698.04	166.857	0.20
21922.00	89.380	159.640	5780.35	15650.85	-15375.89	3602.50	1772912.49	14621761.75	40°15'35.9482"N	80°31'30.2937"W	15792.28	166.814	0.13
22018.00	89.510	160.030	5781.28	15746.84	-15466.00	3635.59	1772945.57	14621671.67	40°15'35.0560"N	80°31'29.8731"W	15887.56	166.772	0.43
22114.00	89.420	159.780	5782.17	15842.83	-15556.15	3668.57	1772978.54	14621581.55	40°15'34.1634"N	80°31'29.4539"W	15982.88	166.731	0.28
22210.00	89.420	159.610	5783.14	15938.82	-15646.18	3701.89	1773011.84	14621491.56	40°15'33.2720"N	80°31'29.0305"W	16078.15	166.689	0.18
22305.00	89.480	159.600	5784.06	16033.81	-15735.22	3734.99	1773044.93	14621402.55	40°15'32.3903"N	80°31'28.6096"W	16172.43	166.647	0.06
22400.00	89.420	159.640	5784.97	16128.80	-15824.27	3768.07	1773078.00	14621313.54	40°15'31.5086"N	80°31'28.1891"W	16266.71	166.606	0.08
22496.00	89.480	159.600	5785.89	16224.79	-15914.26	3801.50	1773111.42	14621223.59	40°15'30.6176"N	80°31'27.7641"W	16362.00	166.565	0.08
22591.00	89.380	158.310	5786.83	16319.79	-16002.92	3835.61	1773145.52	14621134.96	40°15'29.7397"N	80°31'27.3303"W	16456.16	166.521	1.36

Actual Wellpath Report

State of WV DNR C BRK 406H awp Proj: 31311'
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REFERENCE WELLPATH IDENTIFICATION

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WELLPATH DATA (331 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]
22686.00	89.420	158.370	5787.83	16414.77	-16091.20	3870.68	1773180.56	14621046.71	40°15'28.8654"N	80°31'26.8841"W	16550.20	166.475	0.08
22781.00	89.630	158.340	5788.62	16509.76	-16179.50	3905.72	1773215.59	14620958.44	40°15'27.9910"N	80°31'26.4383"W	16644.25	166.428	0.22
22876.00	89.570	158.650	5789.28	16604.75	-16267.89	3940.54	1773250.40	14620870.09	40°15'27.1158"N	80°31'25.9953"W	16738.34	166.384	0.33
22972.00	89.480	158.780	5790.08	16700.74	-16357.33	3975.39	1773285.24	14620780.68	40°15'26.2300"N	80°31'25.5520"W	16833.48	166.340	0.16
23067.00	89.320	158.170	5791.07	16795.73	-16445.70	4010.24	1773320.08	14620692.34	40°15'25.3550"N	80°31'25.1086"W	16927.59	166.296	0.66
23162.00	89.320	157.720	5792.20	16890.70	-16533.75	4045.91	1773355.73	14620604.34	40°15'24.4831"N	80°31'24.6546"W	17021.58	166.250	0.47
23257.00	89.170	158.210	5793.45	16985.68	-16621.80	4081.55	1773391.36	14620516.32	40°15'23.6111"N	80°31'24.2011"W	17115.58	166.204	0.54
23353.00	89.380	158.760	5794.66	17081.66	-16711.10	4116.76	1773426.55	14620427.05	40°15'22.7267"N	80°31'23.7532"W	17210.71	166.161	0.61
23448.00	89.200	158.620	5795.84	17176.65	-16799.60	4151.28	1773461.06	14620338.58	40°15'21.8504"N	80°31'23.3141"W	17304.90	166.120	0.24
23543.00	88.920	158.730	5797.40	17271.64	-16888.08	4185.82	1773495.59	14620250.14	40°15'20.9742"N	80°31'22.8747"W	17399.09	166.079	0.32
23638.00	88.800	158.640	5799.29	17366.61	-16976.57	4220.35	1773530.10	14620161.68	40°15'20.0979"N	80°31'22.4355"W	17493.29	166.039	0.16
23734.00	88.890	158.440	5801.22	17462.59	-17065.89	4255.46	1773565.20	14620072.39	40°15'19.2134"N	80°31'21.9888"W	17588.45	165.999	0.23
23829.00	88.920	159.100	5803.04	17557.57	-17154.43	4289.85	1773599.58	14619983.89	40°15'18.3367"N	80°31'21.5514"W	17682.68	165.960	0.70
23924.00	88.920	158.600	5804.83	17652.55	-17243.01	4324.12	1773633.84	14619895.34	40°15'17.4595"N	80°31'21.1155"W	17776.94	165.922	0.53
24020.00	88.860	158.570	5806.69	17748.53	-17332.37	4359.17	1773668.87	14619806.02	40°15'16.5746"N	80°31'20.6697"W	17872.14	165.883	0.07
24115.00	89.010	158.620	5808.46	17843.51	-17420.80	4393.83	1773703.52	14619717.62	40°15'15.6989"N	80°31'20.2288"W	17966.36	165.844	0.17
24210.00	89.080	158.660	5810.04	17938.49	-17509.26	4428.43	1773738.11	14619629.19	40°15'14.8229"N	80°31'19.7887"W	18060.60	165.806	0.08
24305.00	88.980	158.460	5811.65	18033.47	-17597.68	4463.15	1773772.81	14619540.81	40°15'13.9474"N	80°31'19.3471"W	18154.83	165.769	0.24
24401.00	88.860	158.660	5813.46	18129.45	-17687.02	4498.24	1773807.88	14619451.51	40°15'13.0627"N	80°31'18.9008"W	18250.06	165.731	0.24
24496.00	88.800	158.490	5815.40	18224.43	-17775.43	4532.93	1773842.56	14619363.12	40°15'12.1871"N	80°31'18.4595"W	18344.31	165.694	0.19
24591.00	88.920	158.920	5817.29	18319.40	-17863.93	4567.42	1773877.05	14619274.66	40°15'11.3108"N	80°31'18.0208"W	18438.58	165.658	0.47
24686.00	88.710	158.440	5819.25	18414.38	-17952.41	4601.96	1773911.56	14619186.22	40°15'10.4346"N	80°31'17.5816"W	18532.86	165.622	0.55
24782.00	88.860	158.730	5821.29	18510.35	-18041.76	4637.00	1773946.59	14619096.90	40°15'9.5498"N	80°31'17.1358"W	18628.12	165.586	0.34
24878.00	88.830	158.710	5823.22	18606.33	-18131.20	4671.83	1773981.42	14619007.50	40°15'8.6641"N	80°31'16.6928"W	18723.42	165.551	0.04
24973.00	88.800	158.390	5825.19	18701.31	-18219.60	4706.57	1774016.13	14618919.13	40°15'7.7887"N	80°31'16.2510"W	18817.69	165.516	0.34
25069.00	88.860	158.680	5827.15	18797.28	-18308.92	4741.69	1774051.24	14618829.84	40°15'6.9042"N	80°31'15.8042"W	18912.97	165.480	0.31
25164.00	88.740	158.520	5829.14	18892.26	-18397.35	4776.35	1774085.89	14618741.44	40°15'6.0285"N	80°31'15.3635"W	19007.26	165.446	0.21
25259.00	88.620	158.490	5831.33	18987.22	-18485.72	4811.15	1774120.67	14618653.11	40°15'5.1534"N	80°31'14.9208"W	19101.55	165.412	0.13
25354.00	88.490	158.530	5833.72	19082.19	-18574.09	4845.94	1774155.45	14618564.77	40°15'4.2783"N	80°31'14.4783"W	19195.83	165.378	0.14
25450.00	88.650	158.480	5836.12	19178.15	-18663.39	4881.10	1774190.60	14618475.51	40°15'3.3940"N	80°31'14.0310"W	19291.11	165.344	0.17

Actual Wellpath Report

State of WV DNR C BRK 406H awp Proj: 31311'

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REFERENCE WELLPATH IDENTIFICATION

Operator	SWN PRODUCTION COMPANY, LLC	Well	State of WV DNR C BRK 406H
Field	Brooke	API/Legal	
Facility	State of WV DNR C BRK Pad	Wellbore	State of WV DNR C BRK 406H AWB
Slot	406H		

WELLPATH DATA (331 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]
25545.00	88.890	159.730	5838.16	19273.13	-18752.12	4914.98	1774224.46	14618386.82	40°15'2.5154"N	80°31'13.6003"W	19385.53	165.313	1.34
25640.00	88.520	158.430	5840.30	19368.10	-18840.83	4948.89	1774258.36	14618298.14	40°15'1.6370"N	80°31'13.1691"W	19479.95	165.283	1.42
25735.00	88.770	158.640	5842.55	19463.07	-18929.21	4983.64	1774293.10	14618209.79	40°15'0.7617"N	80°31'12.7271"W	19574.26	165.250	0.34
25830.00	88.430	158.570	5844.87	19558.04	-19017.64	5018.29	1774327.73	14618121.39	40°14'59.8860"N	80°31'12.2865"W	19668.60	165.218	0.37
25925.00	88.610	158.660	5847.32	19653.00	-19106.07	5052.92	1774362.35	14618033.00	40°14'59.0104"N	80°31'11.8460"W	19762.94	165.186	0.21
26116.00	88.580	158.850	5852.01	19843.94	-19284.04	5122.10	1774431.51	14617855.10	40°14'57.2480"N	80°31'10.9662"W	19952.70	165.125	0.10
26211.00	89.110	158.340	5853.92	19938.92	-19372.47	5156.77	1774466.16	14617766.70	40°14'56.3724"N	80°31'10.5253"W	20047.06	165.094	0.77
26306.00	89.200	158.780	5855.32	20033.90	-19460.88	5191.49	1774500.87	14617678.32	40°14'55.4968"N	80°31'10.0837"W	20141.44	165.063	0.47
26406.00	88.950	158.560	5856.94	20133.88	-19554.02	5227.86	1774537.23	14617585.22	40°14'54.5745"N	80°31'9.6212"W	20240.81	165.032	0.33
26501.00	89.320	158.760	5858.37	20228.87	-19642.50	5262.43	1774571.78	14617496.78	40°14'53.6983"N	80°31'9.1816"W	20335.21	165.002	0.44
26690.00	89.230	158.250	5860.76	20417.84	-19818.34	5331.67	1774641.00	14617321.00	40°14'51.9570"N	80°31'8.3009"W	20522.99	164.942	0.27
26785.00	88.950	158.330	5862.27	20512.82	-19906.59	5366.81	1774676.12	14617232.79	40°14'51.0831"N	80°31'7.8539"W	20617.34	164.912	0.31
26880.00	88.490	159.090	5864.39	20607.79	-19995.08	5401.29	1774710.60	14617144.33	40°14'50.2067"N	80°31'7.4154"W	20711.77	164.883	0.93
26975.00	89.290	158.570	5866.24	20702.77	-20083.65	5435.60	1774744.88	14617055.79	40°14'49.3297"N	80°31'6.9792"W	20806.22	164.856	1.00
27069.00	89.290	158.890	5867.40	20796.76	-20171.24	5469.69	1774778.97	14616968.23	40°14'48.4623"N	80°31'6.5457"W	20899.68	164.828	0.34
27164.00	89.230	158.510	5868.63	20891.75	-20259.74	5504.20	1774813.46	14616879.76	40°14'47.5859"N	80°31'6.1069"W	20994.13	164.801	0.40
27259.00	89.200	158.200	5869.93	20986.73	-20348.04	5539.24	1774848.48	14616791.51	40°14'46.7115"N	80°31'5.6612"W	21088.52	164.772	0.33
27353.00	89.230	158.740	5871.22	21080.72	-20435.47	5573.73	1774882.97	14616704.11	40°14'45.8457"N	80°31'5.2225"W	21181.95	164.744	0.58
27447.00	89.290	158.420	5872.43	21174.71	-20522.97	5608.06	1774917.28	14616616.64	40°14'44.9792"N	80°31'4.7860"W	21275.40	164.717	0.35
27542.00	89.050	159.400	5873.81	21269.69	-20611.60	5642.24	1774951.45	14616528.05	40°14'44.1016"N	80°31'4.3514"W	21369.90	164.691	1.06
27636.00	89.110	158.390	5875.32	21363.68	-20699.28	5676.08	1774985.27	14616440.40	40°14'43.2333"N	80°31'3.9211"W	21463.41	164.666	1.08
27731.00	89.260	158.590	5876.67	21458.66	-20787.65	5710.91	1775020.09	14616352.06	40°14'42.3581"N	80°31'3.4782"W	21557.85	164.638	0.26
27825.00	88.950	158.140	5878.14	21552.64	-20875.02	5745.56	1775054.73	14616264.73	40°14'41.4929"N	80°31'3.0374"W	21651.28	164.611	0.58
27919.00	89.110	158.530	5879.73	21646.62	-20962.37	5780.26	1775089.41	14616177.41	40°14'40.6279"N	80°31'2.5961"W	21744.71	164.584	0.45
28013.00	89.320	158.530	5881.01	21740.61	-21049.84	5814.66	1775123.80	14616089.98	40°14'39.7617"N	80°31'2.1586"W	21838.17	164.558	0.22
28108.00	88.920	157.960	5882.47	21835.58	-21138.06	5849.87	1775159.00	14616001.79	40°14'38.8880"N	80°31'1.7108"W	21932.59	164.531	0.73
28202.00	89.110	159.210	5884.09	21929.56	-21225.55	5884.18	1775193.30	14615914.33	40°14'38.0216"N	80°31'1.2745"W	22026.07	164.505	1.34
28297.00	89.260	158.780	5885.44	22024.55	-21314.23	5918.23	1775227.34	14615825.68	40°14'37.1435"N	80°31'0.8416"W	22120.62	164.482	0.48
28391.00	89.080	158.660	5886.80	22118.54	-21401.81	5952.34	1775261.43	14615738.13	40°14'36.2762"N	80°31'0.4079"W	22214.14	164.458	0.23
28485.00	88.980	158.800	5888.39	22212.52	-21489.40	5986.44	1775295.52	14615650.58	40°14'35.4088"N	80°30'59.9744"W	22307.66	164.433	0.18

Actual Wellpath Report

State of WV DNR C BRK 406H awp Proj: 31311'
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REFERENCE WELLPATH IDENTIFICATION

Operator	SWN PRODUCTION COMPANY, LLC	Well	State of WV DNR C BRK 406H
Field	Brooke	API/Legal	
Facility	State of WV DNR C BRK Pad	Wellbore	State of WV DNR C BRK 406H AWB
Slot	406H		

WELLPATH DATA (331 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]
28580.00	89.140	158.890	5889.95	22307.51	-21577.98	6020.72	1775329.78	14615562.03	40°14'34.5316"N	80°30'59.5385"W	22402.20	164.410	0.19
28673.00	88.920	158.620	5891.53	22400.49	-21664.65	6054.41	1775363.46	14615475.40	40°14'33.6734"N	80°30'59.1101"W	22494.73	164.386	0.37
28768.00	89.010	159.130	5893.24	22495.48	-21753.25	6088.65	1775397.68	14615386.83	40°14'32.7960"N	80°30'58.6749"W	22589.28	164.363	0.55
28862.00	88.950	159.060	5894.92	22589.46	-21841.05	6122.18	1775431.21	14615299.06	40°14'31.9266"N	80°30'58.2487"W	22682.87	164.341	0.10
28956.00	89.020	159.320	5896.58	22683.45	-21928.90	6155.57	1775464.58	14615211.24	40°14'31.0566"N	80°30'57.8243"W	22776.48	164.320	0.29
29051.00	88.980	158.050	5898.24	22778.43	-22017.39	6190.10	1775499.10	14615122.79	40°14'30.1804"N	80°30'57.3853"W	22871.00	164.297	1.34
29145.00	88.800	158.770	5900.06	22872.40	-22104.78	6224.68	1775533.66	14615035.44	40°14'29.3150"N	80°30'56.9455"W	22964.49	164.273	0.79
29240.00	88.830	158.470	5902.02	22967.38	-22193.22	6259.30	1775568.28	14614947.03	40°14'28.4391"N	80°30'56.5053"W	23059.01	164.250	0.32
29333.00	89.320	158.720	5903.53	23060.36	-22279.80	6293.24	1775602.20	14614860.49	40°14'27.5818"N	80°30'56.0737"W	23151.55	164.227	0.59
29428.00	88.920	158.650	5904.99	23155.35	-22368.29	6327.77	1775636.71	14614772.03	40°14'26.7055"N	80°30'55.6347"W	23246.09	164.204	0.43
29522.00	88.800	158.500	5906.86	23249.32	-22455.77	6362.10	1775671.03	14614684.58	40°14'25.8391"N	80°30'55.1982"W	23339.62	164.182	0.20
29616.00	88.920	158.600	5908.73	23343.30	-22543.25	6396.47	1775705.39	14614597.14	40°14'24.9729"N	80°30'54.7612"W	23433.15	164.159	0.17
29710.00	88.860	158.590	5910.55	23437.28	-22630.74	6430.77	1775739.67	14614509.67	40°14'24.1064"N	80°30'54.3251"W	23526.69	164.137	0.06
29805.00	89.290	159.480	5912.08	23532.26	-22719.44	6464.75	1775773.65	14614421.01	40°14'23.2280"N	80°30'53.8931"W	23621.31	164.116	1.04
29899.00	89.260	158.790	5913.27	23626.26	-22807.27	6498.23	1775807.11	14614333.21	40°14'22.3583"N	80°30'53.4677"W	23714.94	164.097	0.73
29992.00	89.170	158.860	5914.54	23719.25	-22893.98	6531.82	1775840.69	14614246.53	40°14'21.4996"N	80°30'53.0406"W	23807.54	164.076	0.12
30087.00	89.200	158.670	5915.90	23814.23	-22982.52	6566.22	1775875.08	14614158.03	40°14'20.6229"N	80°30'52.6033"W	23902.13	164.055	0.20
30182.00	89.230	158.590	5917.20	23909.22	-23070.98	6600.84	1775909.68	14614069.60	40°14'19.7468"N	80°30'52.1632"W	23996.70	164.034	0.09
30276.00	89.230	158.470	5918.46	24003.21	-23158.45	6635.24	1775944.07	14613982.17	40°14'18.8806"N	80°30'51.7257"W	24090.26	164.012	0.13
30370.00	89.380	158.770	5919.60	24097.20	-23245.98	6669.50	1775978.32	14613894.67	40°14'18.0139"N	80°30'51.2901"W	24183.83	163.991	0.36
30464.00	89.230	158.620	5920.74	24191.19	-23333.55	6703.66	1776012.46	14613807.14	40°14'17.1467"N	80°30'50.8559"W	24277.43	163.971	0.23
30559.00	89.200	158.550	5922.04	24286.17	-23421.98	6738.34	1776047.13	14613718.74	40°14'16.2709"N	80°30'50.4150"W	24372.00	163.950	0.08
30654.00	89.290	158.540	5923.29	24381.16	-23510.39	6773.08	1776081.86	14613630.36	40°14'15.3954"N	80°30'49.9732"W	24466.57	163.929	0.10
30748.00	89.350	158.750	5924.41	24475.15	-23597.93	6807.31	1776116.07	14613542.86	40°14'14.5285"N	80°30'49.5381"W	24560.17	163.909	0.23
30842.00	89.320	158.750	5925.50	24569.14	-23685.53	6841.38	1776150.13	14613455.29	40°14'13.6610"N	80°30'49.1050"W	24653.78	163.889	0.03
30936.00	89.170	158.530	5926.74	24663.13	-23773.07	6875.61	1776184.35	14613367.79	40°14'12.7941"N	80°30'48.6698"W	24747.38	163.869	0.28
31031.00	89.420	158.640	5927.91	24758.12	-23861.50	6910.30	1776219.02	14613279.39	40°14'11.9184"N	80°30'48.2288"W	24841.97	163.849	0.29
31125.00	89.380	158.720	5928.89	24852.11	-23949.07	6944.47	1776253.18	14613191.86	40°14'11.0513"N	80°30'47.7943"W	24935.59	163.830	0.10
31218.00	89.290	158.520	5929.97	24945.10	-24035.66	6978.37	1776287.07	14613105.30	40°14'10.1937"N	80°30'47.3634"W	25028.20	163.810	0.24
31286.00	89.290	158.400	5930.81	25013.09	-24098.91	7003.34	1776312.02	14613042.07	40°14'9.5674"N	80°30'47.0459"W	25095.90	163.796	0.18

Actual Wellpath Report

State of WV DNR C BRK 406H awp Proj: 31311'
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REFERENCE WELLPATH IDENTIFICATION

Operator	SWN PRODUCTION COMPANY, LLC	Well	State of WV DNR C BRK 406H
Field	Brooke	API/Legal	
Facility	State of WV DNR C BRK Pad	Wellbore	State of WV DNR C BRK 406H AWB
Slot	406H		

WELLPATH DATA (331 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]
31311.00†	89.290	158.400	5931.12	25038.09	-24122.15	7012.54	1776321.22	14613018.84	40°14'9.3372"N	80°30'46.9289"W	25120.78	163.790	0.00

HOLE & CASING SECTIONS - Ref Wellbore: State of WV DNR C BRK 406H AWB Ref Wellpath: State of WV DNR C BRK 406H awp Proj: 31311'

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]
13.375in Casing	26.00	390.00	364.00	26.00	390.00	0.00	0.00	1.10	-0.28
9.625in Casing	26.00	1940.00	1914.00	26.00	1910.51	0.00	0.00	-23.06	-220.48
5.5in Casing	26.00	31311.00	31285.00	26.00	5931.12	0.00	0.00	-24122.15	7012.54

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 406H wp1	5608.00	-2769.91	-1224.23	1768087.60	14634362.90	40°17'40.7678"N	80°32'31.7114"W	point
State of WV DNR C BRK 406H wp2	5608.00	-6106.70	63.59	1769374.93	14631027.39	40°17'7.7286"N	80°32'15.3167"W	point
State of WV DNR C BRK 406H LP rev 2	5620.00	-875.42	-1863.26	1767448.82	14636256.67	40°17'59.5211"N	80°32'39.8323"W	point
State of WV DNR C BRK 406H BHL rev 4	5930.00	-24129.31	6996.35	1776305.04	14613011.68	40°14'9.2673"N	80°30'47.1382"W	point

REFERENCE WELLPATH IDENTIFICATION

Operator	SWN PRODUCTION COMPANY, LLC	Well	State of WV DNR C BRK 406H
Field	Brooke	API/Legal	
Facility	State of WV DNR C BRK Pad	Wellbore	State of WV DNR C BRK 406H AWB
Slot	406H		

WELLPATH COMPOSITION - Ref Wellbore: State of WV DNR C BRK 406H AWB Ref Wellpath: State of WV DNR C BRK 406H awp Proj: 31311'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
26.00	390.00	OWSG MWD rev2 + IFR1 + Multi-Station Correction	1 Total MWD 17.5" IFR-MSA 178' - 390'	State of WV DNR C BRK 406H AWB	7/11/2024
390.00	1940.00	OWSG MWD rev2 + IFR1 + Multi-Station Correction	2 Total MWD 12.52" IFR-MSA 511' - 1940'	State of WV DNR C BRK 406H AWB	7/11/2024
1940.00	5206.00	OWSG MWD rev2 + IFR1 + Multi-Station Correction	3 Total MWD 8.75" IFR-MSA 2068' - 5206'	State of WV DNR C BRK 406H AWB	7/11/2024
5206.00	31311.00	OWSG MWD rev2 + IFR1 + Multi-Station Correction	4 BH MWD 8.5" IFR-MSA 5319' - 31286'	State of WV DNR C BRK 406H AWB	7/11/2024

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