

SWN PRODUCTION COMPANY, LLC

Location: Brooke County, WV

Slot: Slot #206H

Field: Brooke

Well: State of WV DNR A BRK 206H

Facility: State of WV DNR A BRK Pad

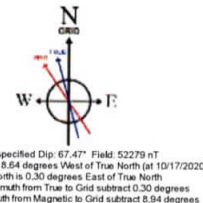
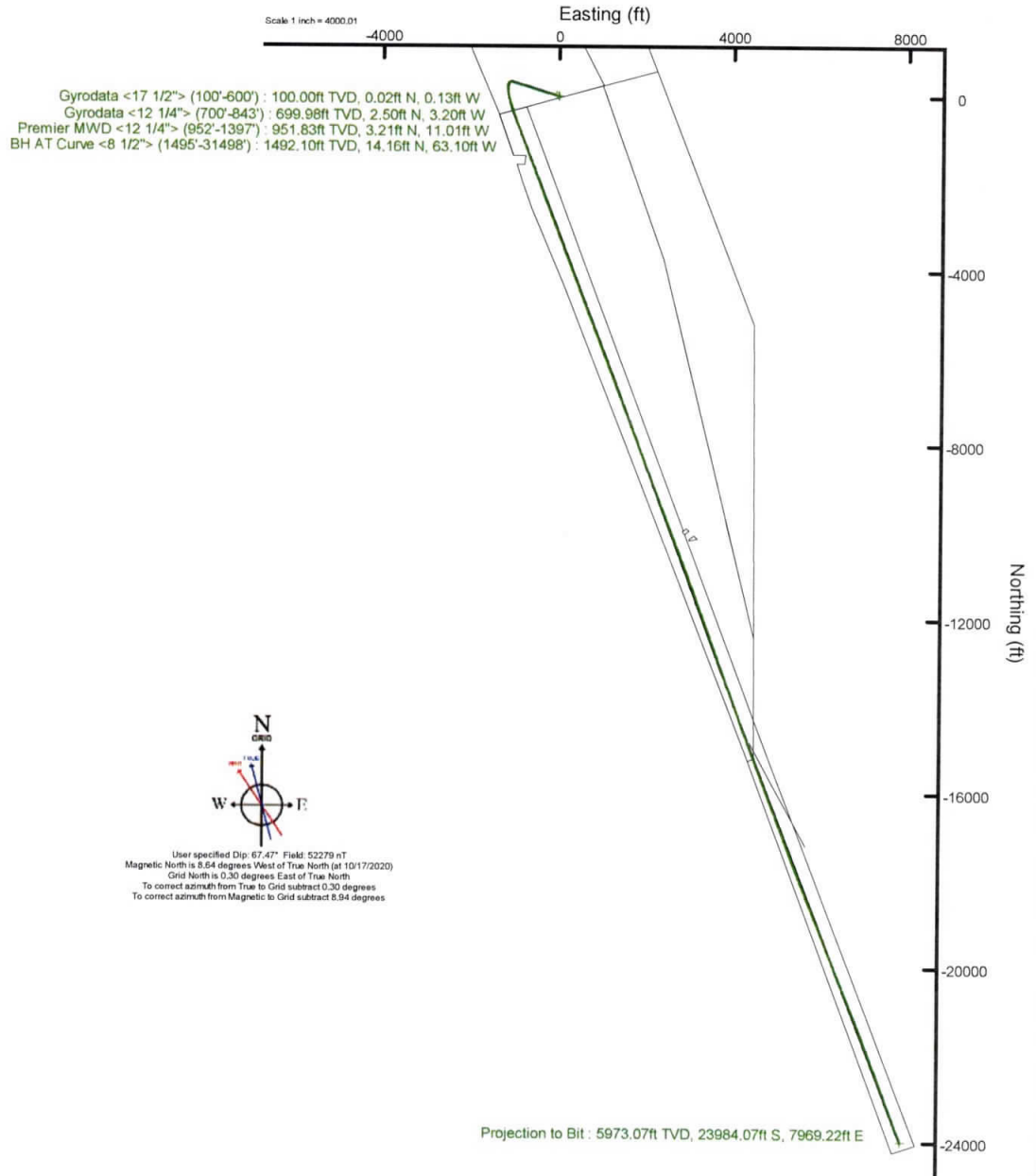
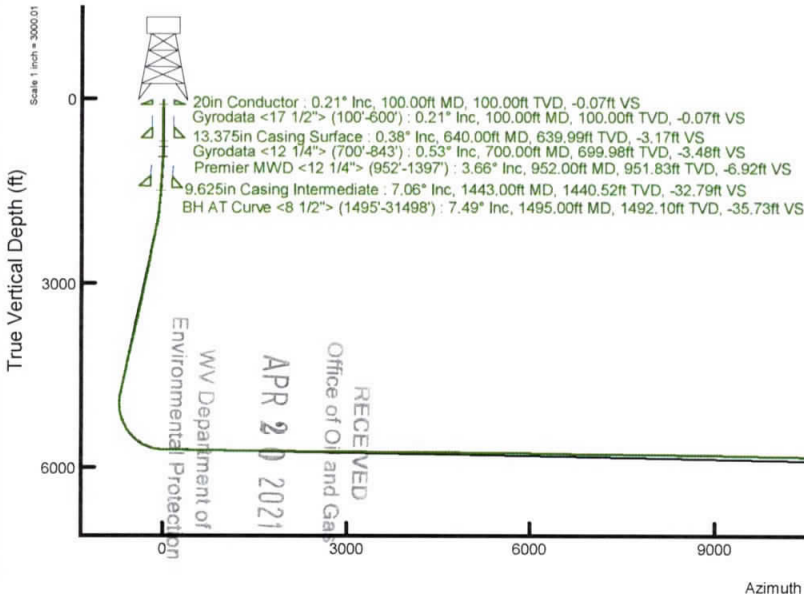
Wellbore: State of WV DNR A BRK 206H

Plot reference wellpath is State of WV DNR A BRK 206H PWP Rev-A.0	Grid System: NAD83 / UTM Zone 17 North, US feet
True vertical depths are referenced to SDC 40 (KB)	North Reference: Grid north
Reference wellpath measured depths are referenced to SDC 40 (KB)	Scale: True distance
SDC 40 (KB) to Mean Sea Level 1165.9 feet	Coordinates are in feet referenced to Slot
Mean Sea Level to Ground level (At Slot: Slot #206H): -1139.9 feet	Depths are in feet
Offset wellpath MDs are referenced to each path's default MD datum	Created by: atengen on 2020-11-03; Database: WA_MPL_EASTERNUS_Defn

Location Information

Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude		
State of WV DNR A BRK Pad	1769998.690	14644013.310	40°19'16.0680"N	80°32'6.3852"W		
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Slot #206H	-7.58	12.86	1770011.550	14644005.730	40°19'15.9924"N	80°32'6.2196"W
SDC 40 (KB) to Ground level (At Slot: Slot #206H)					26ft	
Mean Sea Level to Ground level (At Slot: Slot #206H)					-1139.9ft	
SDC 40 (KB) to Mean Sea Level					1165.9ft	

API: 47-009-00299-0000
 BH Job #: 110502444
 Rig: SDC 40
 Duration: 10/24/2020 - 11/02/2020





Actual Wellpath Report

State of WV DNR A BRK 206H AWP Proj: 31541'
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REFERENCE WELLPATH IDENTIFICATION

Operator	SWN PRODUCTION COMPANY, LLC	Well	State of WV DNR A BRK 206H
Field	Brooke	API	047-009-00299
Facility	State of WV DNR A BRK Pad	Wellbore	State of WV DNR A BRK 206H AWP
Slot	Slot #206H		

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	11/3/2020 at 4:06:55 PM
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	-7.58	12.86	1770011.55	14644005.73	40°19'15.9924"N	80°32'6.2196"W
Facility Reference Pt			1769998.69	14644013.31	40°19'16.0680"N	80°32'6.3852"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	1165.90ft
Horizontal Reference Pt	Slot	SDC 40 (KB) to Mean Sea Level	1165.90ft
Vertical Reference Pt	SDC 40 (KB)	SDC 40 (KB) to Ground Level at Slot (Slot #206H)	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	159.11°

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Field	Brooke	API	047-009-00299
Facility	State of WV DNR A BRK Pad	Wellbore	State of WV DNR A BRK 206H AWB
Slot	Slot #206H		

WELLPATH DATA (336 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	277.960	0.00	0.00	0.00	0.00	1770011.55	14644005.73	40°19'15.9924"N	80°32'6.2196"W	0.00	0.000	0.00	0.00	0.00
26.00	0.000	277.960	26.00	0.00	0.00	0.00	1770011.55	14644005.73	40°19'15.9924"N	80°32'6.2196"W	0.00	0.000	0.00	0.00	0.00
100.00	0.210	277.960	100.00	-0.07	0.02	-0.13	1770011.42	14644005.75	40°19'15.9926"N	80°32'6.2214"W	0.14	277.960	0.28	0.28	0.00
200.00	0.360	288.350	200.00	-0.35	0.14	-0.61	1770010.94	14644005.87	40°19'15.9938"N	80°32'6.2276"W	0.63	283.116	0.16	0.15	10.39
300.00	0.370	293.240	300.00	-0.78	0.37	-1.21	1770010.34	14644006.10	40°19'15.9961"N	80°32'6.2352"W	1.26	286.991	0.03	0.01	4.89
400.00	0.380	325.730	399.99	-1.32	0.77	-1.69	1770009.86	14644006.50	40°19'16.0001"N	80°32'6.2414"W	1.86	294.489	0.21	0.01	32.49
500.00	0.650	335.810	499.99	-2.21	1.56	-2.11	1770009.44	14644007.29	40°19'16.0079"N	80°32'6.2468"W	2.63	306.498	0.28	0.27	10.08
600.00	0.290	305.790	599.99	-2.99	2.23	-2.55	1770009.00	14644007.96	40°19'16.0145"N	80°32'6.2524"W	3.39	311.150	0.42	-0.36	-30.02
700.00	0.530	285.810	699.98	-3.48	2.50	-3.20	1770008.35	14644008.23	40°19'16.0173"N	80°32'6.2608"W	4.06	308.023	0.28	0.24	-19.98
800.00	1.170	277.940	799.97	-4.25	2.77	-4.66	1770006.90	14644008.50	40°19'16.0200"N	80°32'6.2796"W	5.42	300.740	0.65	0.64	-7.87
843.00	1.850	272.490	842.96	-4.73	2.86	-5.78	1770005.77	14644008.59	40°19'16.0209"N	80°32'6.2941"W	6.45	296.308	1.61	1.58	-12.67
952.00	3.660	274.510	951.83	-6.92	3.21	-11.01	1770000.54	14644008.94	40°19'16.0247"N	80°32'6.3616"W	11.47	286.252	1.66	1.66	1.85
1043.00	4.630	280.550	1042.59	-10.09	4.11	-17.52	1769994.04	14644009.84	40°19'16.0339"N	80°32'6.4455"W	17.99	283.206	1.17	1.07	6.64
1134.00	4.710	287.770	1133.29	-14.34	5.92	-24.69	1769986.87	14644011.65	40°19'16.0522"N	80°32'6.5379"W	25.39	283.493	0.65	0.09	7.93
1225.00	5.690	286.650	1223.91	-19.42	8.36	-32.57	1769979.00	14644014.08	40°19'16.0767"N	80°32'6.6395"W	33.62	284.391	1.08	1.08	-1.23
1317.00	6.570	283.640	1315.38	-25.18	10.90	-42.05	1769969.52	14644016.63	40°19'16.1023"N	80°32'6.7618"W	43.44	284.537	1.02	0.96	-3.27
1397.00	6.690	279.360	1394.85	-30.12	12.74	-51.10	1769960.47	14644018.47	40°19'16.1209"N	80°32'6.8784"W	52.66	284.002	0.64	0.15	-5.35
1495.00	7.490	274.410	1492.10	-35.73	14.16	-63.10	1769948.48	14644019.89	40°19'16.1356"N	80°32'7.0333"W	64.67	282.649	1.03	0.82	-5.05
1517.00	7.860	272.290	1513.90	-36.93	14.33	-66.03	1769945.55	14644020.06	40°19'16.1374"N	80°32'7.0711"W	67.57	282.246	2.12	1.68	-9.64
1612.00	7.520	284.990	1608.06	-43.13	16.20	-78.53	1769933.05	14644021.92	40°19'16.1565"N	80°32'7.2323"W	80.18	281.656	1.82	-0.36	13.37
1708.00	9.710	286.810	1702.97	-51.77	20.17	-92.35	1769919.24	14644025.89	40°19'16.1964"N	80°32'7.4105"W	94.52	282.318	2.30	2.28	1.90
1803.00	12.020	286.470	1796.26	-62.67	25.29	-109.50	1769902.09	14644031.01	40°19'16.2480"N	80°32'7.6316"W	112.38	283.003	2.43	2.43	-0.36
1898.00	13.360	286.710	1888.94	-75.37	31.25	-129.50	1769882.10	14644036.97	40°19'16.3079"N	80°32'7.8894"W	133.22	283.566	1.41	1.41	0.25
1993.00	15.110	286.180	1981.02	-89.53	37.85	-151.91	1769859.70	14644043.57	40°19'16.3743"N	80°32'8.1782"W	156.55	283.993	1.85	1.84	-0.56
2088.00	15.240	286.220	2072.70	-104.53	44.79	-175.79	1769835.83	14644050.51	40°19'16.4441"N	80°32'8.4861"W	181.41	284.295	0.14	0.14	0.04
2183.00	16.740	286.090	2164.02	-120.29	52.07	-200.92	1769810.70	14644057.78	40°19'16.5174"N	80°32'8.8101"W	207.56	284.529	1.58	1.58	-0.14
2278.00	18.640	284.790	2254.53	-137.38	59.74	-228.75	1769782.89	14644065.45	40°19'16.5946"N	80°32'9.1688"W	236.42	284.636	2.04	2.00	-1.37
2373.00	18.520	285.660	2344.58	-155.22	67.69	-257.96	1769753.69	14644073.39	40°19'16.6746"N	80°32'9.5453"W	266.69	284.703	0.32	-0.13	0.92
2468.00	18.560	285.440	2434.65	-173.16	75.79	-287.06	1769724.60	14644081.49	40°19'16.7562"N	80°32'9.9205"W	296.89	284.789	0.08	0.04	-0.23
2563.00	18.610	285.430	2524.69	-191.10	83.84	-316.24	1769695.43	14644089.54	40°19'16.8373"N	80°32'10.2967"W	327.17	284.849	0.05	0.05	-0.01

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Operator	SWN PRODUCTION COMPANY, LLC	Well	State of WV DNR A BRK 206H
Field	Brooke	API	047-009-00299
Facility	State of WV DNR A BRK Pad	Wellbore	State of WV DNR A BRK 206H AWB
Slot	Slot #206H		

WELLPATH DATA (336 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]
2658.00	18.610	285.560	2614.73	-209.08	91.94	-345.46	1769666.22	14644097.64	40°19'16.9188"N	80°32'10.6734"W	357.49	284.904	0.04	0.00	0.14
2753.00	18.650	285.490	2704.75	-227.10	100.07	-374.70	1769636.99	14644105.76	40°19'17.0006"N	80°32'11.0503"W	387.83	284.952	0.05	0.04	-0.07
2848.00	18.580	287.390	2794.78	-245.48	108.65	-403.78	1769607.92	14644114.34	40°19'17.0869"N	80°32'11.4252"W	418.14	285.060	0.64	-0.07	2.00
2944.00	18.530	287.380	2885.79	-264.41	117.77	-432.94	1769578.78	14644123.46	40°19'17.1786"N	80°32'11.8009"W	448.67	285.218	0.05	-0.05	-0.01
3039.00	18.440	287.540	2975.89	-283.10	126.81	-461.67	1769550.06	14644132.49	40°19'17.2694"N	80°32'12.1713"W	478.77	285.359	0.11	-0.09	0.17
3134.00	18.150	287.670	3066.09	-301.66	135.83	-490.09	1769521.65	14644141.51	40°19'17.3600"N	80°32'12.5376"W	508.57	285.491	0.31	-0.31	0.14
3229.00	17.860	287.390	3156.43	-319.91	144.68	-518.09	1769493.66	14644150.35	40°19'17.4489"N	80°32'12.8985"W	537.91	285.602	0.32	-0.31	-0.29
3324.00	19.070	287.230	3246.54	-338.51	153.63	-546.82	1769464.94	14644159.30	40°19'17.5388"N	80°32'13.2688"W	567.99	285.693	1.27	1.27	-0.17
3419.00	17.920	287.630	3336.63	-357.19	162.65	-575.57	1769436.20	14644168.32	40°19'17.6295"N	80°32'13.6394"W	598.11	285.780	1.22	-1.21	0.42
3514.00	18.730	287.390	3426.81	-375.75	171.64	-604.06	1769407.72	14644177.30	40°19'17.7197"N	80°32'14.0065"W	627.97	285.862	0.86	0.85	-0.25
3609.00	18.660	287.860	3516.80	-394.71	180.86	-633.08	1769378.72	14644186.52	40°19'17.8123"N	80°32'14.3805"W	658.40	285.944	0.17	-0.07	0.49
3703.00	20.340	287.620	3605.41	-414.29	190.41	-662.96	1769348.84	14644196.07	40°19'17.9083"N	80°32'14.7657"W	689.77	286.025	1.79	1.79	-0.26
3798.00	20.720	287.600	3694.37	-435.03	200.49	-694.72	1769317.10	14644206.15	40°19'18.0095"N	80°32'15.1750"W	723.07	286.098	0.40	0.40	-0.02
3893.00	20.760	287.290	3783.22	-455.90	210.58	-726.81	1769285.02	14644216.23	40°19'18.1109"N	80°32'15.5887"W	756.70	286.158	0.12	0.04	-0.33
3988.00	20.740	287.070	3872.05	-476.65	220.52	-758.97	1769252.87	14644226.17	40°19'18.2108"N	80°32'16.0032"W	790.36	286.201	0.08	-0.02	-0.23
4083.00	20.800	286.850	3960.88	-497.33	230.35	-791.19	1769220.66	14644235.99	40°19'18.3095"N	80°32'16.4185"W	824.04	286.232	0.10	0.06	-0.23
4178.00	20.770	287.040	4049.70	-518.00	240.17	-823.44	1769188.43	14644245.81	40°19'18.4083"N	80°32'16.8342"W	857.75	286.260	0.08	-0.03	0.20
4274.00	20.710	287.230	4139.48	-538.95	250.19	-855.93	1769155.95	14644255.82	40°19'18.5089"N	80°32'17.2529"W	891.74	286.294	0.09	-0.06	0.20
4369.00	20.680	286.760	4228.35	-559.56	260.00	-888.03	1769123.86	14644265.63	40°19'18.6076"N	80°32'17.6668"W	925.31	286.319	0.18	-0.03	-0.49
4464.00	19.310	286.240	4317.62	-579.29	269.23	-919.18	1769092.72	14644274.86	40°19'18.7004"N	80°32'18.0682"W	957.80	286.326	1.45	-1.44	-0.55
4559.00	19.300	288.330	4407.28	-598.70	278.56	-949.16	1769062.75	14644284.19	40°19'18.7941"N	80°32'18.4547"W	989.19	286.356	0.73	-0.01	2.20
4654.00	19.480	286.670	4496.89	-618.28	288.04	-979.24	1769032.69	14644293.66	40°19'18.8894"N	80°32'18.8424"W	1020.72	286.391	0.61	0.19	-1.75
4749.00	19.490	286.630	4586.45	-637.59	297.12	-1009.60	1769002.34	14644302.74	40°19'18.9806"N	80°32'19.2337"W	1052.41	286.399	0.02	0.01	-0.04
4844.00	19.370	286.940	4676.04	-656.90	306.25	-1039.85	1768972.09	14644311.86	40°19'19.0724"N	80°32'19.6237"W	1084.01	286.410	0.17	-0.13	0.33
4939.00	19.470	287.190	4765.63	-676.33	315.52	-1070.05	1768941.91	14644321.13	40°19'19.1655"N	80°32'20.0129"W	1115.60	286.429	0.14	0.11	0.26
5034.00	15.820	278.120	4856.17	-692.38	322.03	-1098.01	1768913.96	14644327.64	40°19'19.2313"N	80°32'20.3734"W	1144.26	286.346	4.80	-3.84	-9.55
5129.00	16.380	252.180	4947.56	-699.39	319.76	-1123.61	1768888.37	14644325.36	40°19'19.2102"N	80°32'20.7042"W	1168.23	285.885	7.53	0.59	-27.31
5224.00	16.540	228.960	5038.76	-695.45	306.76	-1146.59	1768865.40	14644312.38	40°19'19.0830"N	80°32'21.0017"W	1186.92	284.978	6.88	0.17	-24.44
5319.00	19.000	207.840	5129.32	-680.57	284.18	-1164.03	1768847.96	14644289.81	40°19'18.8607"N	80°32'21.2284"W	1198.22	283.720	7.22	2.59	-22.23
5414.00	24.130	190.070	5217.73	-653.67	251.33	-1174.67	1768837.33	14644256.97	40°19'18.5367"N	80°32'21.3679"W	1201.26	282.077	8.69	5.40	-18.71

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Field	Brooke	API	047-009-00299
Facility	State of WV DNR A BRK Pad	Wellbore	State of WV DNR A BRK 206H AWB
Slot	Slot #206H		

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5509.00	28.210	183.330	5303.00	-616.52	209.77	-1179.37	1768832.63	14644215.42	40°19'18.1262"N	80°32'21.4314"W	1197.88	280.086	5.31	4.29	-7.09
5604.00	35.320	177.170	5383.74	-569.86	159.85	-1179.32	1768832.68	14644165.52	40°19'17.6329"N	80°32'21.4341"W	1190.10	277.719	8.22	7.48	-6.48
5699.00	41.710	170.330	5458.06	-512.66	101.18	-1172.65	1768839.35	14644106.87	40°19'17.0528"N	80°32'21.3519"W	1177.00	274.931	8.08	6.73	-7.20
5794.00	48.850	170.600	5524.87	-446.53	34.65	-1161.48	1768850.51	14644040.37	40°19'16.3948"N	80°32'21.2122"W	1162.00	271.709	7.52	7.52	0.28
5889.00	54.670	165.160	5583.67	-372.84	-38.19	-1145.69	1768866.30	14643967.55	40°19'15.6742"N	80°32'21.0133"W	1146.33	268.091	7.60	6.13	-5.73
5984.00	62.860	163.000	5632.89	-291.99	-116.21	-1123.37	1768888.61	14643889.56	40°19'14.9020"N	80°32'20.7303"W	1129.36	264.094	8.84	8.62	-2.27
6079.00	70.060	161.960	5670.81	-205.10	-199.20	-1097.15	1768914.82	14643806.60	40°19'14.0806"N	80°32'20.3974"W	1115.09	259.709	7.64	7.58	-1.09
6174.00	79.610	161.560	5695.63	-113.62	-286.19	-1068.47	1768943.48	14643719.65	40°19'13.2196"N	80°32'20.0330"W	1106.14	255.006	10.06	10.05	-0.42
6269.00	86.890	161.570	5706.79	-19.43	-375.63	-1038.66	1768973.29	14643630.25	40°19'12.3343"N	80°32'19.6542"W	1104.50	250.118	7.66	7.66	0.01
6364.00	89.380	160.210	5709.89	75.47	-465.33	-1007.58	1769004.36	14643540.57	40°19'11.4462"N	80°32'19.2589"W	1109.84	245.211	2.99	2.62	-1.43
6465.00	89.140	159.670	5711.19	176.45	-560.20	-972.94	1769038.98	14643445.75	40°19'10.5070"N	80°32'18.8181"W	1122.69	240.068	0.59	-0.24	-0.53
6560.00	89.230	159.740	5712.54	271.43	-649.29	-939.99	1769071.92	14643356.69	40°19'9.6249"N	80°32'18.3987"W	1142.44	235.366	0.12	0.09	0.07
6655.00	89.290	159.920	5713.77	366.42	-738.46	-907.24	1769104.66	14643267.55	40°19'8.7421"N	80°32'17.9819"W	1169.79	230.856	0.20	0.06	0.19
6750.00	89.350	159.960	5714.90	461.40	-827.69	-874.65	1769137.23	14643178.36	40°19'7.8587"N	80°32'17.5673"W	1204.20	226.580	0.08	0.06	0.04
6845.00	88.920	159.630	5716.33	556.38	-916.83	-841.85	1769170.03	14643089.25	40°19'6.9761"N	80°32'17.1497"W	1244.70	222.559	0.57	-0.45	-0.35
6940.00	89.110	159.590	5717.96	651.37	-1005.87	-808.75	1769203.11	14643000.25	40°19'6.0946"N	80°32'16.7285"W	1290.68	218.801	0.20	0.20	-0.04
7035.00	89.050	159.530	5719.49	746.35	-1094.87	-775.58	1769236.27	14642911.28	40°19'5.2134"N	80°32'16.3063"W	1341.74	215.313	0.09	-0.06	-0.06
7130.00	89.050	158.980	5721.06	841.34	-1183.70	-741.94	1769269.90	14642822.48	40°19'4.3339"N	80°32'15.8779"W	1397.00	212.079	0.58	0.00	-0.58
7226.00	89.020	159.470	5722.68	937.32	-1273.45	-707.89	1769303.93	14642732.77	40°19'3.4453"N	80°32'15.4444"W	1456.97	209.069	0.51	-0.03	0.51
7321.00	89.690	159.190	5723.75	1032.32	-1362.33	-674.36	1769337.45	14642643.93	40°19'2.5653"N	80°32'15.0176"W	1520.10	206.336	0.76	0.71	-0.29
7416.00	89.320	159.430	5724.57	1127.31	-1451.20	-640.79	1769371.00	14642555.09	40°19'1.6854"N	80°32'14.5903"W	1586.37	203.824	0.46	-0.39	0.25
7511.00	89.600	158.900	5725.47	1222.31	-1539.98	-607.01	1769404.78	14642466.34	40°19'0.8063"N	80°32'14.1601"W	1655.29	201.513	0.63	0.29	-0.56
7606.00	89.450	159.310	5726.25	1317.30	-1628.73	-573.13	1769438.64	14642377.63	40°18'59.9276"N	80°32'13.7287"W	1726.62	199.386	0.46	-0.16	0.43
7701.00	89.600	159.430	5727.04	1412.30	-1717.63	-539.66	1769472.10	14642288.75	40°18'59.0473"N	80°32'13.3026"W	1800.41	197.442	0.20	0.16	0.13
7796.00	89.780	159.530	5727.55	1507.30	-1806.60	-506.35	1769505.39	14642199.82	40°18'58.1664"N	80°32'12.8787"W	1876.22	195.657	0.22	0.19	0.11
7891.00	89.420	159.110	5728.22	1602.29	-1895.48	-472.81	1769538.92	14642110.98	40°18'57.2864"N	80°32'12.4516"W	1953.56	194.006	0.58	-0.38	-0.44
7986.00	90.370	159.480	5728.39	1697.29	-1984.34	-439.22	1769572.50	14642022.15	40°18'56.4066"N	80°32'12.0241"W	2032.37	192.481	1.07	1.00	0.39
8081.00	89.690	159.500	5728.34	1792.29	-2073.32	-405.93	1769605.77	14641933.20	40°18'55.5256"N	80°32'11.6004"W	2112.69	191.078	0.72	-0.72	0.02
8176.00	89.260	159.200	5729.21	1887.28	-2162.21	-372.43	1769639.26	14641844.34	40°18'54.6455"N	80°32'11.1739"W	2194.05	189.773	0.55	-0.45	-0.32
8271.00	89.420	160.420	5730.31	1982.27	-2251.37	-339.65	1769672.03	14641755.22	40°18'53.7628"N	80°32'10.7567"W	2276.84	188.579	1.30	0.17	1.28

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Actual Wellpath Report

State of WV DNR A BRK 206H AWP Proj: 31541'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	State of WV DNR A BRK 206H
Field	Brooke	API	047-009-00299
Facility	State of WV DNR A BRK Pad	Wellbore	State of WV DNR A BRK 206H AWB
Slot	Slot #206H		

WELLPATH DATA (336 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]	
8366.00	88.280	158.910	5732.21	2077.24	-2340.43	-306.64	1769705.02	14641666.20	40°18'52.8810"N	80°32'10.3367"W	2360.43	187.464	1.99	-1.20	-1.59	
8461.00	89.140	159.330	5734.35	2172.21	-2429.16	-272.79	1769738.86	14641577.50	40°18'52.0024"N	80°32'9.9057"W	2444.43	186.407	1.01	0.91	0.44	
8556.00	89.420	159.840	5735.55	2267.20	-2518.19	-239.66	1769771.98	14641488.51	40°18'51.1210"N	80°32'9.4840"W	2529.57	185.437	0.61	0.29	0.54	
8651.00	88.980	159.050	5736.87	2362.19	-2607.13	-206.31	1769805.32	14641399.60	40°18'50.2403"N	80°32'9.0595"W	2615.28	184.524	0.95	-0.46	-0.83	
8746.00	88.950	159.130	5738.59	2457.18	-2695.86	-172.41	1769839.21	14641310.90	40°18'49.3618"N	80°32'8.6279"W	2701.37	183.659	0.09	-0.03	0.08	
8842.00	89.880	159.170	5739.57	2553.17	-2785.57	-138.24	1769873.36	14641221.23	40°18'48.4736"N	80°32'8.1929"W	2789.00	182.841	0.97	0.97	0.04	
8937.00	89.720	159.150	5739.90	2648.17	-2874.35	-104.44	1769907.15	14641132.48	40°18'47.5945"N	80°32'7.7627"W	2876.25	182.081	0.17	-0.17	-0.02	
9032.00	89.690	159.120	5740.39	2743.17	-2963.12	-70.61	1769940.97	14641043.74	40°18'46.7155"N	80°32'7.3319"W	2963.96	181.365	0.04	-0.03	-0.03	
9127.00	89.820	159.310	5740.80	2838.17	-3051.94	-36.90	1769974.67	14640954.96	40°18'45.8361"N	80°32'6.9028"W	3052.16	180.693	0.24	0.14	0.20	
9222.00	89.660	159.100	5741.23	2933.17	-3140.75	-3.17	1770008.38	14640866.18	40°18'44.9568"N	80°32'6.4734"W	3140.75	180.058	0.28	-0.17	-0.22	
9317.00	89.510	159.240	5741.91	3028.16	-3229.54	30.61	1770042.15	14640777.43	40°18'44.0777"N	80°32'6.0434"W	3229.68	179.457	0.22	-0.16	0.15	
9412.00	89.820	158.930	5742.47	3123.16	-3318.28	64.52	1770076.05	14640688.73	40°18'43.1990"N	80°32'5.6116"W	3318.90	178.886	0.46	0.33	-0.33	
9507.00	89.480	158.760	5743.05	3218.16	-3406.87	98.81	1770110.32	14640600.16	40°18'42.3218"N	80°32'5.1751"W	3408.30	178.339	0.40	-0.36	-0.18	
9602.00	89.510	158.810	5743.89	3313.15	-3495.43	133.18	1770144.68	14640511.64	40°18'41.4449"N	80°32'4.7374"W	3497.97	177.818	0.06	0.03	0.05	
9697.00	89.630	158.810	5744.60	3408.15	-3584.00	167.52	1770179.01	14640423.10	40°18'40.5678"N	80°32'4.3001"W	3587.92	177.324	0.13	0.13	0.00	
9792.00	89.750	159.210	5745.11	3503.15	-3672.70	201.55	1770213.02	14640334.44	40°18'39.6896"N	80°32'3.8669"W	3678.22	176.859	0.44	0.13	0.42	
9887.00	89.910	159.150	5745.40	3598.15	-3761.49	235.32	1770246.78	14640245.68	40°18'38.8104"N	80°32'3.4371"W	3768.85	176.420	0.18	0.17	-0.06	
9982.00	89.540	158.570	5745.85	3693.14	-3850.10	269.58	1770281.02	14640157.10	40°18'37.9331"N	80°32'3.0008"W	3859.53	175.995	0.72	-0.39	-0.61	
10077.00	89.820	159.440	5746.38	3788.14	-3938.79	303.61	1770315.05	14640068.45	40°18'37.0549"N	80°32'2.5675"W	3950.47	175.592	0.96	0.29	0.92	
10172.00	89.570	158.800	5746.89	3883.14	-4027.55	337.47	1770348.89	14639979.72	40°18'36.1760"N	80°32'2.1365"W	4041.66	175.210	0.72	-0.26	-0.67	
10267.00	89.940	159.350	5747.30	3978.14	-4116.28	371.40	1770382.81	14639891.02	40°18'35.2974"N	80°32'1.7046"W	4133.00	174.844	0.70	0.39	0.58	
10362.00	89.350	158.650	5747.88	4073.14	-4204.97	405.44	1770416.84	14639802.37	40°18'34.4193"N	80°32'1.2712"W	4224.47	174.493	0.96	-0.62	-0.74	
10457.00	89.480	158.510	5748.85	4168.13	-4293.40	440.14	1770451.52	14639713.97	40°18'33.5436"N	80°32'0.8294"W	4315.91	174.147	0.20	0.14	-0.15	
10552.00	89.820	159.160	5749.43	4263.12	-4381.99	474.44	1770485.80	14639625.41	40°18'32.6664"N	80°32'0.3927"W	4407.60	173.821	0.77	0.36	0.68	
10648.00	89.510	158.980	5750.00	4359.12	-4471.66	508.73	1770520.08	14639535.78	40°18'31.7786"N	80°31'59.9561"W	4500.50	173.510	0.37	-0.32	-0.19	
10743.00	89.480	159.130	5750.83	4454.12	-4560.38	542.69	1770554.03	14639447.10	40°18'30.9002"N	80°31'59.5238"W	4592.55	173.214	0.16	-0.03	0.16	
10838.00	89.720	159.330	5751.50	4549.11	-4649.20	576.38	1770587.71	14639358.31	40°18'30.0207"N	80°31'59.0950"W	4684.79	172.933	0.33	0.25	0.21	
10933.00	89.780	159.210	5751.91	4644.11	-4738.05	610.00	1770621.32	14639269.49	40°18'29.1409"N	80°31'58.6670"W	4777.16	172.664	0.14	0.06	-0.13	
11028.00	89.450	158.800	5752.55	4739.11	-4826.74	644.04	1770655.34	14639180.84	40°18'28.2628"N	80°31'58.2337"W	4869.52	172.400	0.55	-0.35	-0.43	
11123.00	89.420	158.890	5753.49	4834.11	-4915.33	678.32	1770689.61	14639092.28	40°18'27.3855"N	80°31'57.7973"W	4961.92	172.143	0.10	-0.03	0.09	

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REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	State of WV DNR A BRK 206H
Field	Brooke	API	047-009-00299
Facility	State of WV DNR A BRK Pad	Wellbore	State of WV DNR A BRK 206H AWB
Slot	Slot #206H		

WELLPATH DATA (336 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]
11218.00	89.660	159.230	5754.25	4929.10	-5004.06	712.27	1770723.55	14639003.59	40°18'26.5070"N	80°31'57.3651"W	5054.49	171.899	0.44	0.25	0.36
11313.00	89.480	158.660	5754.96	5024.10	-5092.71	746.40	1770757.67	14638914.97	40°18'25.6292"N	80°31'56.9306"W	5147.12	171.662	0.63	-0.19	-0.60
11408.00	89.720	159.170	5755.62	5119.10	-5181.35	780.58	1770791.83	14638826.37	40°18'24.7515"N	80°31'56.4955"W	5239.82	171.433	0.59	0.25	0.54
11503.00	89.660	159.070	5756.14	5214.09	-5270.11	814.44	1770825.67	14638737.64	40°18'23.8727"N	80°31'56.0645"W	5332.67	171.215	0.12	-0.06	-0.11
11598.00	89.320	158.880	5756.98	5309.09	-5358.78	848.52	1770859.74	14638649.00	40°18'22.9947"N	80°31'55.6307"W	5425.54	171.002	0.41	-0.36	-0.20
11693.00	89.570	158.850	5757.90	5404.08	-5447.38	882.77	1770893.98	14638560.43	40°18'22.1173"N	80°31'55.1946"W	5518.45	170.795	0.27	0.26	-0.03
11788.00	89.350	159.390	5758.80	5499.08	-5536.14	916.63	1770927.83	14638471.71	40°18'21.2385"N	80°31'54.7637"W	5611.51	170.599	0.61	-0.23	0.57
11883.00	89.320	158.700	5759.90	5594.07	-5624.85	950.60	1770961.79	14638383.03	40°18'20.3601"N	80°31'54.3312"W	5704.61	170.408	0.73	-0.03	-0.73
11978.00	89.600	158.910	5760.80	5689.07	-5713.42	984.95	1770996.12	14638294.50	40°18'19.4831"N	80°31'53.8940"W	5797.70	170.219	0.37	0.29	0.22
12073.00	89.600	159.210	5761.46	5784.06	-5802.15	1018.90	1771030.06	14638205.81	40°18'18.6046"N	80°31'53.4618"W	5890.93	170.040	0.32	0.00	0.32
12168.00	89.820	159.420	5761.94	5879.06	-5891.02	1052.45	1771063.60	14638116.96	40°18'17.7246"N	80°31'53.0348"W	5984.29	169.871	0.32	0.23	0.22
12263.00	88.680	159.010	5763.19	5974.05	-5979.83	1086.16	1771097.30	14638028.19	40°18'16.8453"N	80°31'52.6058"W	6077.67	169.705	1.28	-1.20	-0.43
12358.00	89.080	158.800	5765.04	6069.03	-6068.44	1120.35	1771131.47	14637939.61	40°18'15.9678"N	80°31'52.1706"W	6171.00	169.540	0.48	0.42	-0.22
12453.00	89.600	159.460	5766.14	6164.03	-6157.20	1154.19	1771165.30	14637850.88	40°18'15.0889"N	80°31'51.7399"W	6264.45	169.383	0.88	0.55	0.69
12548.00	88.800	158.520	5767.46	6259.01	-6245.88	1188.24	1771199.34	14637762.24	40°18'14.2109"N	80°31'51.3064"W	6357.90	169.229	1.30	-0.84	-0.99
12643.00	89.290	158.880	5769.05	6354.00	-6334.38	1222.75	1771233.83	14637673.78	40°18'13.3346"N	80°31'50.8671"W	6451.31	169.074	0.64	0.52	0.38
12738.00	89.110	159.140	5770.37	6448.99	-6423.06	1256.77	1771267.84	14637585.12	40°18'12.4564"N	80°31'50.4340"W	6544.86	168.929	0.33	-0.19	0.27
12833.00	89.110	159.180	5771.85	6543.98	-6511.84	1290.57	1771301.62	14637496.38	40°18'11.5774"N	80°31'50.0039"W	6638.49	168.790	0.04	0.00	0.04
12928.00	89.020	159.010	5773.40	6638.96	-6600.57	1324.46	1771335.50	14637407.68	40°18'10.6988"N	80°31'49.5725"W	6732.14	168.654	0.20	-0.09	-0.18
13023.00	89.320	158.880	5774.77	6733.95	-6689.22	1358.59	1771369.62	14637319.07	40°18'9.8210"N	80°31'49.1381"W	6825.79	168.519	0.34	0.32	-0.14
13118.00	89.290	159.230	5775.93	6828.95	-6777.94	1392.54	1771403.56	14637230.39	40°18'8.9426"N	80°31'48.7059"W	6919.51	168.390	0.37	-0.03	0.37
13213.00	89.020	158.900	5777.33	6923.94	-6866.66	1426.48	1771437.49	14637141.70	40°18'8.0641"N	80°31'48.2739"W	7013.26	168.264	0.45	-0.28	-0.35
13308.00	89.230	159.190	5778.78	7018.93	-6955.36	1460.46	1771471.45	14637053.03	40°18'7.1858"N	80°31'47.8415"W	7107.04	168.142	0.38	0.22	0.31
13402.00	89.420	159.090	5779.89	7112.92	-7043.19	1493.93	1771504.90	14636965.23	40°18'6.3161"N	80°31'47.4156"W	7199.89	168.025	0.23	0.20	-0.11
13497.00	89.350	159.490	5780.91	7207.91	-7132.05	1527.52	1771538.48	14636876.41	40°18'5.4363"N	80°31'46.9881"W	7293.80	167.911	0.43	-0.07	0.42
13592.00	89.570	159.260	5781.80	7302.91	-7220.96	1560.98	1771571.93	14636787.54	40°18'4.5560"N	80°31'46.5623"W	7387.75	167.802	0.34	0.23	-0.24
13687.00	89.350	159.540	5782.70	7397.90	-7309.88	1594.40	1771605.34	14636698.65	40°18'3.6755"N	80°31'46.1370"W	7481.74	167.696	0.37	-0.23	0.29
13782.00	89.420	159.280	5783.72	7492.89	-7398.81	1627.81	1771638.74	14636609.76	40°18'2.7950"N	80°31'45.7120"W	7575.76	167.592	0.28	0.07	-0.27
13877.00	89.480	159.760	5784.63	7587.89	-7487.80	1661.05	1771671.96	14636520.80	40°18'1.9139"N	80°31'45.2891"W	7669.82	167.492	0.51	0.06	0.51
13972.00	89.420	159.390	5785.54	7682.88	-7576.82	1694.20	1771705.10	14636431.81	40°18'1.0325"N	80°31'44.8674"W	7763.92	167.396	0.39	-0.06	-0.39

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Actual Wellpath Report

State of WV DNR A BRK 206H AWP Proj: 31541'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	State of WV DNR A BRK 206H
Field	Brooke	API	047-009-00299
Facility	State of WV DNR A BRK Pad	Wellbore	State of WV DNR A BRK 206H AWB
Slot	Slot #206H		

WELLPATH DATA (336 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]
14067.00	89.540	159.060	5786.40	7777.88	-7665.64	1727.90	1771738.78	14636343.03	40°18'0.1530"N	80°31'44.4386"W	7857.97	167.297	0.37	0.13	-0.35
14161.00	89.290	159.090	5787.36	7871.87	-7753.43	1761.47	1771772.34	14636255.26	40°17'59.2837"N	80°31'44.0114"W	7951.01	167.201	0.27	-0.27	0.03
14256.00	89.450	159.430	5788.41	7966.86	-7842.27	1795.11	1771805.97	14636166.46	40°17'58.4040"N	80°31'43.5833"W	8045.10	167.107	0.40	0.17	0.36
14351.00	89.230	159.300	5789.50	8061.86	-7931.17	1828.58	1771839.43	14636077.59	40°17'57.5238"N	80°31'43.1573"W	8139.24	167.017	0.27	-0.23	-0.14
14446.00	88.980	158.910	5790.98	8156.85	-8019.91	1862.46	1771873.30	14635988.89	40°17'56.6451"N	80°31'42.7262"W	8233.33	166.926	0.49	-0.26	-0.41
14541.00	89.290	159.570	5792.42	8251.83	-8108.73	1896.13	1771906.95	14635900.10	40°17'55.7656"N	80°31'42.2978"W	8327.48	166.839	0.77	0.33	0.69
14636.00	89.320	159.240	5793.57	8346.83	-8197.66	1929.54	1771940.36	14635811.21	40°17'54.8852"N	80°31'41.8726"W	8421.68	166.755	0.35	0.03	-0.35
14731.00	89.080	159.130	5794.90	8441.82	-8286.45	1963.30	1771974.10	14635722.45	40°17'54.0060"N	80°31'41.4431"W	8515.85	166.671	0.28	-0.25	-0.12
14826.00	89.050	158.130	5796.45	8536.80	-8374.90	1997.91	1772008.70	14635634.03	40°17'53.1301"N	80°31'41.0025"W	8609.92	166.582	1.05	-0.03	-1.05
14921.00	89.420	159.650	5797.72	8631.79	-8463.52	2032.12	1772042.89	14635545.45	40°17'52.2526"N	80°31'40.5671"W	8704.06	166.499	1.65	0.39	1.60
15016.00	89.510	158.890	5798.60	8726.78	-8552.36	2065.75	1772076.51	14635456.64	40°17'51.3729"N	80°31'40.1392"W	8798.31	166.421	0.81	0.09	-0.80
15111.00	89.110	159.090	5799.75	8821.77	-8641.04	2099.81	1772110.55	14635368.00	40°17'50.4949"N	80°31'39.7058"W	8892.51	166.342	0.47	-0.42	0.21
15206.00	89.450	159.270	5800.94	8916.77	-8729.83	2133.57	1772144.30	14635279.24	40°17'49.6157"N	80°31'39.2762"W	8986.77	166.266	0.40	0.36	0.19
15300.00	89.050	159.090	5802.17	9010.76	-8817.68	2166.98	1772177.70	14635191.42	40°17'48.7458"N	80°31'38.8511"W	9080.05	166.193	0.47	-0.43	-0.19
15395.00	89.260	159.110	5803.57	9105.75	-8906.42	2200.86	1772211.57	14635102.72	40°17'47.8671"N	80°31'38.4199"W	9174.32	166.120	0.22	0.22	0.02
15490.00	89.080	159.190	5804.95	9200.74	-8995.19	2234.67	1772245.37	14635013.98	40°17'46.9881"N	80°31'37.9896"W	9268.62	166.048	0.21	-0.19	0.08
15585.00	88.980	158.860	5806.56	9295.72	-9083.89	2268.67	1772279.36	14634925.32	40°17'46.1099"N	80°31'37.5570"W	9362.90	165.977	0.36	-0.11	-0.35
15680.00	89.080	158.860	5808.17	9390.71	-9172.48	2302.93	1772313.60	14634836.76	40°17'45.2326"N	80°31'37.1210"W	9457.16	165.906	0.11	0.11	0.00
15775.00	88.890	159.100	5809.85	9485.69	-9261.14	2337.00	1772347.66	14634748.13	40°17'44.3547"N	80°31'36.6874"W	9551.46	165.837	0.32	-0.20	0.25
15870.00	89.080	158.860	5811.53	9580.68	-9349.81	2371.07	1772381.71	14634659.50	40°17'43.4767"N	80°31'36.2538"W	9645.77	165.770	0.32	0.20	-0.25
15964.00	88.890	158.940	5813.20	9674.66	-9437.49	2404.91	1772415.54	14634571.85	40°17'42.6085"N	80°31'35.8232"W	9739.09	165.704	0.22	-0.20	0.09
16064.00	89.110	158.990	5814.94	9774.65	-9530.81	2440.79	1772451.41	14634478.57	40°17'41.6844"N	80°31'35.3665"W	9838.39	165.636	0.23	0.22	0.05
16158.00	89.140	159.170	5816.38	9868.64	-9618.61	2474.35	1772484.96	14634390.81	40°17'40.8151"N	80°31'34.9395"W	9931.77	165.574	0.19	0.03	0.19
16253.00	89.140	158.950	5817.80	9963.63	-9707.32	2508.30	1772518.89	14634302.12	40°17'39.9367"N	80°31'34.5075"W	10026.15	165.512	0.23	0.00	-0.23
16348.00	89.050	158.440	5819.30	10058.61	-9795.82	2542.81	1772553.39	14634213.66	40°17'39.0603"N	80°31'34.0682"W	10120.47	165.448	0.55	-0.09	-0.54
16443.00	89.170	159.090	5820.78	10153.60	-9884.36	2577.22	1772587.78	14634125.16	40°17'38.1836"N	80°31'33.6303"W	10214.82	165.386	0.70	0.13	0.68
16537.00	89.170	158.900	5822.14	10247.59	-9972.10	2610.91	1772621.46	14634037.45	40°17'37.3148"N	80°31'33.2016"W	10308.23	165.328	0.20	0.00	-0.20
16632.00	89.200	158.950	5823.49	10342.58	-10060.74	2645.07	1772655.60	14633948.84	40°17'36.4371"N	80°31'32.7669"W	10402.64	165.270	0.06	0.03	0.05
16727.00	89.110	159.080	5824.89	10437.57	-10149.43	2679.08	1772689.61	14633860.19	40°17'35.5589"N	80°31'32.3341"W	10497.06	165.213	0.17	-0.09	0.14
16822.00	89.200	159.080	5826.29	10532.56	-10238.16	2713.00	1772723.51	14633771.49	40°17'34.6803"N	80°31'31.9025"W	10591.52	165.158	0.09	0.09	0.00

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Operator	SWN PRODUCTION COMPANY, LLC	Well	State of WV DNR A BRK 206H
Field	Brooke	API	047-009-00299
Facility	State of WV DNR A BRK Pad	Wellbore	State of WV DNR A BRK 206H AWB
Slot	Slot #206H		

WELLPATH DATA (336 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]
16916.00	88.860	158.880	5827.88	10626.54	-10325.89	2746.71	1772757.21	14633683.80	40°17'33.8116"N	80°31'31.4735"W	10684.96	165.104	0.42	-0.36	-0.21
17010.00	89.050	158.770	5829.60	10720.53	-10413.53	2780.66	1772791.15	14633596.19	40°17'32.9438"N	80°31'31.0415"W	10778.39	165.049	0.23	0.20	-0.12
17105.00	89.260	159.240	5831.00	10815.51	-10502.21	2814.70	1772825.17	14633507.54	40°17'32.0656"N	80°31'30.6084"W	10872.85	164.997	0.54	0.22	0.49
17200.00	89.080	159.120	5832.38	10910.50	-10591.00	2848.46	1772858.92	14633418.79	40°17'31.1865"N	80°31'30.1789"W	10967.36	164.946	0.23	-0.19	-0.13
17294.00	88.920	159.000	5834.02	11004.49	-10678.77	2882.05	1772892.50	14633331.04	40°17'30.3173"N	80°31'29.7515"W	11060.85	164.897	0.21	-0.17	-0.13
17389.00	89.020	159.030	5835.72	11099.47	-10767.46	2916.07	1772926.50	14633242.39	40°17'29.4391"N	80°31'29.3187"W	11155.34	164.847	0.11	0.11	0.03
17484.00	89.290	159.190	5837.13	11194.46	-10856.20	2949.94	1772960.36	14633153.68	40°17'28.5604"N	80°31'28.8877"W	11249.86	164.798	0.33	0.28	0.17
17578.00	89.170	159.390	5838.39	11288.46	-10944.12	2983.18	1772993.58	14633065.80	40°17'27.6899"N	80°31'28.4649"W	11343.42	164.753	0.25	-0.13	0.21
17673.00	89.050	158.690	5839.86	11383.44	-11032.83	3017.15	1773027.55	14632977.13	40°17'26.8115"N	80°31'28.0326"W	11437.94	164.705	0.75	-0.13	-0.74
17768.00	89.290	160.070	5841.24	11478.43	-11121.73	3050.61	1773060.99	14632888.26	40°17'25.9312"N	80°31'27.6070"W	11532.52	164.661	1.47	0.25	1.45
17862.00	88.860	159.860	5842.76	11572.41	-11210.03	3082.80	1773093.17	14632799.99	40°17'25.0570"N	80°31'27.1976"W	11626.19	164.624	0.51	-0.46	-0.22
17957.00	89.480	160.030	5844.13	11667.39	-11299.26	3115.38	1773125.74	14632710.80	40°17'24.1735"N	80°31'26.7835"W	11720.87	164.586	0.68	0.65	0.18
18051.00	89.290	159.610	5845.14	11761.37	-11387.48	3147.80	1773158.15	14632622.61	40°17'23.3000"N	80°31'26.3712"W	11814.54	164.548	0.49	-0.20	-0.45
18146.00	89.510	160.030	5846.14	11856.36	-11476.64	3180.57	1773190.91	14632533.48	40°17'22.4172"N	80°31'25.9545"W	11909.22	164.510	0.50	0.23	0.44
18241.00	89.480	159.950	5846.98	11951.35	-11565.91	3213.08	1773223.40	14632444.25	40°17'21.5334"N	80°31'25.5412"W	12003.92	164.474	0.09	-0.03	-0.08
18336.00	89.420	160.230	5847.89	12046.33	-11655.22	3245.43	1773255.74	14632354.97	40°17'20.6491"N	80°31'25.1300"W	12098.64	164.440	0.30	-0.06	0.29
18430.00	89.260	159.930	5848.97	12140.31	-11743.59	3277.46	1773287.75	14632266.63	40°17'19.7741"N	80°31'24.7229"W	12192.36	164.406	0.36	-0.17	-0.32
18524.00	89.140	159.910	5850.28	12234.29	-11831.87	3309.73	1773320.01	14632178.39	40°17'18.9001"N	80°31'24.3126"W	12286.07	164.372	0.13	-0.13	-0.02
18619.00	89.260	159.710	5851.61	12329.27	-11921.03	3342.51	1773352.78	14632089.27	40°17'18.0174"N	80°31'23.8957"W	12380.76	164.337	0.25	0.13	-0.21
18714.00	89.720	160.410	5852.45	12424.25	-12010.33	3374.91	1773385.16	14632000.00	40°17'17.1332"N	80°31'23.4839"W	12475.49	164.305	0.88	0.48	0.74
18808.00	89.380	160.000	5853.19	12518.23	-12098.77	3406.74	1773416.99	14631911.59	40°17'16.2575"N	80°31'23.0793"W	12569.25	164.274	0.57	-0.36	-0.44
18902.00	89.510	160.100	5854.10	12612.22	-12187.12	3438.81	1773449.04	14631823.27	40°17'15.3827"N	80°31'22.6716"W	12662.99	164.243	0.17	0.14	0.11
18997.00	89.510	160.580	5854.92	12707.19	-12276.58	3470.77	1773480.99	14631733.85	40°17'14.4970"N	80°31'22.2654"W	12757.77	164.214	0.51	0.00	0.51
19092.00	89.080	159.430	5856.08	12802.17	-12365.85	3503.25	1773513.46	14631644.62	40°17'13.6132"N	80°31'21.8524"W	12852.51	164.183	1.29	-0.45	-1.21
19186.00	89.200	160.100	5857.50	12896.15	-12454.03	3535.76	1773545.96	14631556.46	40°17'12.7400"N	80°31'21.4391"W	12946.22	164.151	0.72	0.13	0.71
19281.00	89.380	159.950	5858.67	12991.13	-12543.31	3568.21	1773578.39	14631467.22	40°17'11.8561"N	80°31'21.0266"W	13040.97	164.120	0.25	0.19	-0.16
19376.00	89.720	160.520	5859.42	13086.11	-12632.71	3600.33	1773610.51	14631377.85	40°17'10.9710"N	80°31'20.6183"W	13135.75	164.092	0.70	0.36	0.60
19470.00	89.880	160.710	5859.75	13180.08	-12721.38	3631.53	1773641.69	14631289.22	40°17'10.0931"N	80°31'20.2219"W	13229.57	164.068	0.26	0.17	0.20
19565.00	90.120	160.470	5859.75	13275.05	-12810.98	3663.11	1773673.25	14631199.65	40°17'9.2060"N	80°31'19.8207"W	13324.40	164.043	0.36	0.25	-0.25
19660.00	89.850	160.190	5859.77	13370.03	-12900.44	3695.08	1773705.22	14631110.23	40°17'8.3203"N	80°31'19.4143"W	13419.20	164.017	0.41	-0.28	-0.29

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Field	Brooke	API	047-009-00299
Facility	State of WV DNR A BRK Pad	Wellbore	State of WV DNR A BRK 206H AWB
Slot	Slot #206H		

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19755.00	89.690	160.230	5860.15	13465.01	-12989.83	3727.25	1773737.37	14631020.87	40°17'7.4353"N	80°31'19.0055"W	13513.99	163.990	0.17	-0.17	0.04
19849.00	89.820	160.060	5860.56	13558.99	-13078.24	3759.17	1773769.28	14630932.50	40°17'6.5599"N	80°31'18.5997"W	13607.78	163.963	0.23	0.14	-0.18
19944.00	89.690	160.300	5860.96	13653.97	-13167.61	3791.38	1773801.48	14630843.16	40°17'5.6751"N	80°31'18.1903"W	13702.58	163.937	0.29	-0.14	0.25
20039.00	89.780	160.070	5861.40	13748.96	-13256.99	3823.59	1773833.67	14630753.82	40°17'4.7902"N	80°31'17.7810"W	13797.37	163.911	0.26	0.09	-0.24
20134.00	89.540	159.370	5861.96	13843.95	-13346.09	3856.51	1773866.59	14630664.74	40°17'3.9079"N	80°31'17.3624"W	13892.12	163.883	0.78	-0.25	-0.74
20228.00	89.600	160.450	5862.67	13937.94	-13434.37	3888.80	1773898.86	14630576.50	40°17'3.0339"N	80°31'16.9519"W	13985.89	163.856	1.15	0.06	1.15
20323.00	89.630	160.120	5863.31	14032.91	-13523.80	3920.85	1773930.90	14630487.11	40°17'2.1484"N	80°31'16.5447"W	14080.70	163.832	0.35	0.03	-0.35
20418.00	89.660	159.860	5863.90	14127.90	-13613.06	3953.35	1773963.39	14630397.88	40°17'1.2646"N	80°31'16.1314"W	14175.49	163.806	0.28	0.03	-0.27
20513.00	89.630	159.750	5864.49	14222.89	-13702.22	3986.15	1773996.17	14630308.75	40°17'0.3818"N	80°31'15.7145"W	14270.26	163.780	0.12	-0.03	-0.12
20608.00	89.780	159.850	5864.97	14317.88	-13791.38	4018.95	1774028.96	14630219.63	40°16'59.4991"N	80°31'15.2975"W	14365.03	163.753	0.19	0.16	0.11
20702.00	89.660	160.220	5865.43	14411.87	-13879.73	4051.05	1774061.05	14630131.32	40°16'58.6243"N	80°31'14.8895"W	14458.83	163.729	0.41	-0.13	0.39
20797.00	89.480	159.990	5866.15	14506.85	-13969.05	4083.37	1774093.36	14630042.02	40°16'57.7399"N	80°31'14.4786"W	14553.64	163.706	0.31	-0.19	-0.24
20892.00	89.720	160.230	5866.81	14601.84	-14058.39	4115.69	1774125.67	14629952.73	40°16'56.8554"N	80°31'14.0679"W	14648.45	163.682	0.36	0.25	0.25
20986.00	89.750	160.220	5867.25	14695.82	-14146.84	4147.50	1774157.46	14629864.30	40°16'55.9796"N	80°31'13.6637"W	14742.28	163.660	0.03	0.03	-0.01
21081.00	89.630	159.840	5867.76	14790.80	-14236.13	4179.94	1774189.89	14629775.05	40°16'55.0956"N	80°31'13.2513"W	14837.09	163.637	0.42	-0.13	-0.40
21176.00	89.880	160.210	5868.17	14885.79	-14325.41	4212.39	1774222.33	14629685.80	40°16'54.2116"N	80°31'12.8388"W	14931.90	163.614	0.47	0.26	0.39
21271.00	89.820	161.610	5868.41	14980.74	-14415.18	4243.46	1774253.39	14629596.06	40°16'53.3228"N	80°31'12.4442"W	15026.79	163.597	1.48	-0.06	1.47
21365.00	89.850	160.820	5868.68	15074.68	-14504.18	4273.73	1774283.65	14629507.11	40°16'52.4418"N	80°31'12.0599"W	15120.71	163.582	0.84	0.03	-0.84
21460.00	89.510	158.630	5869.22	15169.66	-14593.28	4306.65	1774316.55	14629418.03	40°16'51.5595"N	80°31'11.6414"W	15215.49	163.558	2.33	-0.36	-2.31
21555.00	89.690	159.180	5869.88	15264.66	-14681.91	4340.84	1774350.73	14629329.44	40°16'50.6819"N	80°31'11.2065"W	15310.18	163.529	0.61	0.19	0.58
21649.00	89.630	158.930	5870.44	15358.66	-14769.70	4374.44	1774384.32	14629241.68	40°16'49.8126"N	80°31'10.7790"W	15403.89	163.502	0.27	-0.06	-0.27
21744.00	89.600	158.960	5871.07	15453.65	-14858.36	4408.57	1774418.43	14629153.06	40°16'48.9347"N	80°31'10.3449"W	15498.59	163.474	0.04	-0.03	0.03
21838.00	89.690	159.130	5871.66	15547.65	-14946.14	4442.19	1774452.04	14629065.31	40°16'48.0655"N	80°31'9.9173"W	15592.31	163.447	0.20	0.10	0.18
21933.00	89.720	159.480	5872.15	15642.65	-15035.01	4475.76	1774485.60	14628976.48	40°16'47.1855"N	80°31'9.4904"W	15687.06	163.422	0.37	0.03	0.37
22028.00	89.720	159.190	5872.61	15737.65	-15123.89	4509.29	1774519.11	14628887.63	40°16'46.3053"N	80°31'9.0640"W	15781.82	163.398	0.31	0.00	-0.31
22122.00	89.850	159.120	5872.96	15831.65	-15211.74	4542.74	1774552.55	14628799.81	40°16'45.4355"N	80°31'8.6386"W	15875.56	163.373	0.16	0.14	-0.07
22217.00	89.660	158.950	5873.37	15926.65	-15300.45	4576.73	1774586.52	14628711.14	40°16'44.5570"N	80°31'8.2063"W	15970.29	163.347	0.27	-0.20	-0.18
22312.00	89.820	159.060	5873.80	16021.65	-15389.14	4610.76	1774620.55	14628622.48	40°16'43.6788"N	80°31'7.7734"W	16065.02	163.321	0.20	0.17	0.12
22406.00	89.660	159.590	5874.23	16115.64	-15477.09	4643.95	1774653.72	14628534.57	40°16'42.8080"N	80°31'7.3513"W	16158.79	163.298	0.59	-0.17	0.56
22501.00	89.820	159.080	5874.66	16210.64	-15565.97	4677.48	1774687.24	14628445.71	40°16'41.9278"N	80°31'6.9250"W	16253.56	163.275	0.56	0.17	-0.54

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Actual Wellpath Report

State of WV DNR A BRK 206H AWP Proj: 31541'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	State of WV DNR A BRK 206H
Field	Brooke	API	047-009-00299
Facility	State of WV DNR A BRK Pad	Wellbore	State of WV DNR A BRK 206H AWB
Slot	Slot #206H		

WELLPATH DATA (336 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]
22595.00	89.720	159.450	5875.04	16304.64	-15653.88	4710.76	1774720.50	14628357.84	40°16'41.0573"N	80°31'6.5018"W	16347.33	163.252	0.41	-0.11	0.39
22690.00	89.850	159.930	5875.39	16399.63	-15742.98	4743.73	1774753.46	14628268.78	40°16'40.1752"N	80°31'6.0826"W	16442.15	163.231	0.52	0.14	0.51
22784.00	89.750	159.310	5875.72	16493.63	-15831.09	4776.46	1774786.19	14628180.70	40°16'39.3027"N	80°31'5.6665"W	16535.96	163.211	0.67	-0.11	-0.66
22879.00	89.750	158.290	5876.13	16588.63	-15919.66	4810.82	1774820.53	14628092.16	40°16'38.4256"N	80°31'5.2294"W	16630.68	163.186	1.07	0.00	-1.07
22974.00	89.600	158.790	5876.67	16683.62	-16008.07	4845.57	1774855.27	14628003.78	40°16'37.5501"N	80°31'4.7872"W	16725.37	163.159	0.55	-0.16	0.53
23069.00	89.660	158.510	5877.29	16778.61	-16096.55	4880.16	1774889.84	14627915.34	40°16'36.6739"N	80°31'4.3472"W	16820.07	163.134	0.30	0.06	-0.29
23163.00	89.880	159.360	5877.66	16872.61	-16184.27	4913.94	1774923.61	14627827.66	40°16'35.8053"N	80°31'3.9175"W	16913.82	163.110	0.93	0.23	0.90
23258.00	89.780	159.220	5877.95	16967.61	-16273.13	4947.54	1774957.20	14627738.83	40°16'34.9254"N	80°31'3.4903"W	17008.61	163.089	0.18	-0.11	-0.15
23353.00	89.600	159.060	5878.46	17062.61	-16361.90	4981.37	1774991.01	14627650.09	40°16'34.0464"N	80°31'3.0601"W	17103.39	163.067	0.25	-0.19	-0.17
23448.00	89.380	159.210	5879.31	17157.61	-16450.67	5015.20	1775024.83	14627561.36	40°16'33.1674"N	80°31'2.6298"W	17198.16	163.045	0.28	-0.23	0.16
23542.00	89.480	159.100	5880.24	17251.60	-16538.51	5048.65	1775058.27	14627473.55	40°16'32.2976"N	80°31'2.2045"W	17291.94	163.024	0.16	0.11	-0.12
23637.00	89.420	159.330	5881.15	17346.60	-16627.32	5082.36	1775091.96	14627384.77	40°16'31.4181"N	80°31'1.7758"W	17386.73	163.004	0.25	-0.06	0.24
23732.00	89.480	159.430	5882.06	17441.59	-16716.23	5115.81	1775125.41	14627295.90	40°16'30.5377"N	80°31'1.3505"W	17481.53	162.984	0.12	0.06	0.11
23827.00	89.570	159.280	5882.85	17536.59	-16805.13	5149.31	1775158.89	14627207.03	40°16'29.6575"N	80°31'0.9246"W	17576.34	162.964	0.18	0.09	-0.16
23922.00	89.380	159.420	5883.72	17631.58	-16894.02	5182.81	1775192.37	14627118.17	40°16'28.7773"N	80°31'0.4986"W	17671.15	162.945	0.25	-0.20	0.15
24016.00	89.480	159.360	5884.66	17725.58	-16982.00	5215.90	1775225.45	14627030.23	40°16'27.9061"N	80°31'0.0780"W	17764.96	162.926	0.12	0.11	-0.06
24111.00	89.540	159.760	5885.47	17820.57	-17071.02	5249.07	1775258.61	14626941.25	40°16'27.0247"N	80°30'59.6562"W	17859.80	162.908	0.43	0.06	0.42
24206.00	89.260	159.550	5886.47	17915.56	-17160.09	5282.10	1775291.63	14626852.21	40°16'26.1428"N	80°30'59.2364"W	17954.64	162.891	0.37	-0.29	-0.22
24300.00	89.140	159.370	5887.78	18009.55	-17248.10	5315.08	1775324.59	14626764.23	40°16'25.2713"N	80°30'58.8172"W	18048.46	162.873	0.23	-0.13	-0.19
24395.00	89.140	159.300	5889.20	18104.54	-17336.98	5348.60	1775358.10	14626675.39	40°16'24.3912"N	80°30'58.3910"W	18143.27	162.855	0.07	0.00	-0.07
24490.00	88.830	159.010	5890.89	18199.52	-17425.75	5382.40	1775391.89	14626586.65	40°16'23.5122"N	80°30'57.9612"W	18238.06	162.835	0.45	-0.33	-0.31
24585.00	89.200	159.620	5892.52	18294.51	-17514.61	5415.95	1775425.43	14626497.83	40°16'22.6323"N	80°30'57.5346"W	18332.87	162.817	0.75	0.39	0.64
24680.00	89.170	158.380	5893.87	18389.50	-17603.29	5449.99	1775459.45	14626409.18	40°16'21.7541"N	80°30'57.1017"W	18427.65	162.797	1.31	-0.03	-1.31
24775.00	89.420	158.190	5895.04	18484.48	-17691.54	5485.14	1775494.59	14626320.96	40°16'20.8802"N	80°30'56.6545"W	18522.35	162.774	0.33	0.26	-0.20
24869.00	89.290	158.160	5896.10	18578.46	-17778.80	5520.08	1775529.52	14626233.74	40°16'20.0160"N	80°30'56.2098"W	18616.04	162.751	0.14	-0.14	-0.03
24964.00	89.320	158.080	5897.25	18673.44	-17866.95	5555.48	1775564.90	14626145.62	40°16'19.1430"N	80°30'55.7593"W	18710.72	162.728	0.09	0.03	-0.08
25059.00	89.290	158.290	5898.40	18768.42	-17955.14	5590.78	1775600.19	14626057.47	40°16'18.2697"N	80°30'55.3101"W	18805.42	162.705	0.22	-0.03	0.22
25154.00	89.320	158.050	5899.56	18863.40	-18043.32	5626.10	1775635.50	14625969.32	40°16'17.3964"N	80°30'54.8607"W	18900.12	162.682	0.25	0.03	-0.25
25248.00	89.380	158.210	5900.62	18957.38	-18130.55	5661.12	1775670.50	14625882.12	40°16'16.5325"N	80°30'54.4151"W	18993.82	162.659	0.18	0.06	0.17
25342.00	89.290	157.840	5901.71	19051.36	-18217.71	5696.29	1775705.66	14625794.99	40°16'15.6693"N	80°30'53.9675"W	19087.50	162.637	0.41	-0.10	-0.39

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REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	State of WV DNR A BRK 206H
Field	Brooke	API	047-009-00299
Facility	State of WV DNR A BRK Pad	Wellbore	State of WV DNR A BRK 206H AWB
Slot	Slot #206H		

WELLPATH DATA (336 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]
25437.00	89.450	158.250	5902.76	19146.33	-18305.82	5731.81	1775741.16	14625706.92	40°16'14.7967"N	80°30'53.5156"W	19182.19	162.614	0.46	0.17	0.43
25532.00	89.350	158.040	5903.75	19241.32	-18393.98	5767.17	1775776.51	14625618.79	40°16'13.9236"N	80°30'53.0656"W	19276.90	162.592	0.24	-0.11	-0.22
25627.00	89.260	158.130	5904.90	19336.29	-18482.11	5802.62	1775811.95	14625530.69	40°16'13.0508"N	80°30'52.6145"W	19371.60	162.570	0.13	-0.09	0.09
25721.00	89.290	158.220	5906.09	19430.27	-18569.37	5837.57	1775846.88	14625443.47	40°16'12.1867"N	80°30'52.1698"W	19465.32	162.549	0.10	0.03	0.10
25816.00	89.350	158.320	5907.22	19525.26	-18657.61	5872.74	1775882.04	14625355.26	40°16'11.3128"N	80°30'51.7224"W	19560.05	162.528	0.12	0.06	0.11
25910.00	89.420	157.980	5908.23	19619.24	-18744.85	5907.72	1775917.01	14625268.05	40°16'10.4488"N	80°30'51.2772"W	19653.77	162.507	0.37	0.07	-0.36
26005.00	89.420	158.010	5909.19	19714.21	-18832.93	5943.31	1775952.59	14625180.01	40°16'9.5765"N	80°30'50.8243"W	19748.47	162.485	0.03	0.00	0.03
26100.00	89.350	157.990	5910.21	19809.19	-18921.01	5978.90	1775988.16	14625091.97	40°16'8.7042"N	80°30'50.3715"W	19843.18	162.464	0.08	-0.07	-0.02
26194.00	89.110	157.520	5911.47	19903.16	-19008.00	6014.48	1776023.73	14625005.00	40°16'7.8426"N	80°30'49.9186"W	19936.85	162.442	0.56	-0.26	-0.50
26288.00	89.290	157.900	5912.79	19997.12	-19094.97	6050.13	1776059.36	14624918.07	40°16'6.9813"N	80°30'49.4649"W	20030.52	162.419	0.45	0.19	0.40
26383.00	89.290	157.830	5913.96	20092.09	-19182.96	6085.92	1776095.14	14624830.11	40°16'6.1099"N	80°30'49.0094"W	20125.22	162.398	0.07	0.00	-0.07
26478.00	89.450	158.160	5915.01	20187.07	-19271.03	6121.52	1776130.72	14624742.07	40°16'5.2376"N	80°30'48.5565"W	20219.93	162.377	0.39	0.17	0.35
26573.00	89.260	158.300	5916.08	20282.05	-19359.25	6156.75	1776165.94	14624653.89	40°16'4.3640"N	80°30'48.1082"W	20314.68	162.358	0.25	-0.20	0.15
26667.00	89.170	157.750	5917.37	20376.02	-19446.42	6191.92	1776201.10	14624566.76	40°16'3.5008"N	80°30'47.6607"W	20408.40	162.338	0.59	-0.10	-0.59
26762.00	88.950	157.790	5918.92	20470.98	-19534.34	6227.85	1776237.02	14624478.86	40°16'2.6299"N	80°30'47.2033"W	20503.09	162.317	0.24	-0.23	0.04
26856.00	89.420	158.190	5920.26	20564.96	-19621.48	6263.08	1776272.23	14624391.76	40°16'1.7669"N	80°30'46.7551"W	20596.81	162.297	0.66	0.50	0.43
26951.00	89.050	157.960	5921.53	20659.93	-19709.60	6298.55	1776307.69	14624303.67	40°16'0.8942"N	80°30'46.3038"W	20691.55	162.278	0.46	-0.39	-0.24
27046.00	89.200	158.200	5922.98	20754.90	-19797.73	6334.01	1776343.13	14624215.58	40°16'0.0215"N	80°30'45.8527"W	20786.28	162.259	0.30	0.16	0.25
27141.00	88.980	158.020	5924.49	20849.88	-19885.86	6369.42	1776378.53	14624127.48	40°15'59.1486"N	80°30'45.4021"W	20881.02	162.240	0.30	-0.23	-0.19
27235.00	89.080	157.680	5926.08	20943.84	-19972.91	6404.86	1776413.96	14624040.46	40°15'58.2865"N	80°30'44.9511"W	20974.74	162.220	0.38	0.11	-0.36
27330.00	89.450	157.750	5927.30	21038.81	-20060.81	6440.88	1776449.97	14623952.60	40°15'57.4160"N	80°30'44.4927"W	21069.44	162.200	0.40	0.39	0.07
27425.00	89.420	157.870	5928.24	21133.78	-20148.77	6476.76	1776485.83	14623864.67	40°15'56.5448"N	80°30'44.0361"W	21164.15	162.180	0.13	-0.03	0.13
27519.00	89.540	158.250	5929.09	21227.76	-20235.96	6511.88	1776520.94	14623777.52	40°15'55.6813"N	80°30'43.5893"W	21257.91	162.162	0.42	0.13	0.40
27614.00	88.980	158.320	5930.32	21322.74	-20324.21	6547.03	1776556.07	14623689.30	40°15'54.8074"N	80°30'43.1422"W	21352.68	162.145	0.59	-0.59	0.07
27708.00	89.080	157.520	5931.91	21416.70	-20411.30	6582.35	1776591.38	14623602.24	40°15'53.9448"N	80°30'42.6926"W	21446.41	162.126	0.86	0.11	-0.85
27803.00	89.230	158.180	5933.31	21511.67	-20499.28	6618.17	1776627.19	14623514.29	40°15'53.0735"N	80°30'42.2369"W	21541.14	162.107	0.71	0.16	0.69
27898.00	89.140	158.110	5934.66	21606.65	-20587.45	6653.53	1776662.53	14623426.17	40°15'52.2004"N	80°30'41.7870"W	21635.90	162.090	0.12	-0.09	-0.07
27993.00	88.250	158.110	5936.82	21701.61	-20675.57	6688.94	1776697.93	14623338.07	40°15'51.3276"N	80°30'41.3366"W	21730.65	162.073	0.94	-0.94	0.00
28087.00	89.510	158.090	5938.66	21795.57	-20762.77	6723.99	1776732.97	14623250.91	40°15'50.4640"N	80°30'40.8906"W	21824.41	162.056	1.34	1.34	-0.02
28182.00	88.920	157.810	5939.96	21890.54	-20850.81	6759.65	1776768.62	14623162.90	40°15'49.5921"N	80°30'40.4369"W	21919.15	162.038	0.69	-0.62	-0.29

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REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	State of WV DNR A BRK 206H
Field	Brooke	API	047-009-00299
Facility	State of WV DNR A BRK Pad	Wellbore	State of WV DNR A BRK 206H AWB
Slot	Slot #206H		

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28276.00	89.140	157.960	5941.55	21984.51	-20937.88	6795.04	1776803.98	14623075.86	40°15'48.7297"N	80°30'39.9866"W	22012.89	162.020	0.28	0.23	0.16
28371.00	89.290	158.130	5942.86	22079.48	-21025.99	6830.55	1776839.49	14622987.79	40°15'47.8572"N	80°30'39.5348"W	22107.66	162.003	0.24	0.16	0.18
28466.00	89.290	158.100	5944.03	22174.46	-21114.13	6865.96	1776874.88	14622899.68	40°15'46.9842"N	80°30'39.0843"W	22202.43	161.986	0.03	0.00	-0.03
28561.00	89.170	156.390	5945.31	22269.40	-21201.73	6902.70	1776911.61	14622812.12	40°15'46.1166"N	80°30'38.6167"W	22297.10	161.966	1.80	-0.13	-1.80
28655.00	89.140	158.340	5946.70	22363.34	-21288.47	6938.87	1776947.76	14622725.40	40°15'45.2574"N	80°30'38.1563"W	22390.78	161.947	2.07	-0.03	2.07
28751.00	89.140	157.970	5948.14	22459.32	-21377.57	6974.59	1776983.47	14622636.34	40°15'44.3751"N	80°30'37.7019"W	22486.56	161.931	0.39	0.00	-0.39
28845.00	89.200	159.140	5949.50	22553.30	-21465.05	7008.95	1777017.82	14622548.89	40°15'43.5087"N	80°30'37.2649"W	22580.39	161.917	1.25	0.06	1.24
28940.00	89.230	159.150	5950.80	22648.29	-21553.82	7042.77	1777051.62	14622460.16	40°15'42.6297"N	80°30'36.8350"W	22675.27	161.905	0.03	0.03	0.01
29035.00	89.200	159.320	5952.10	22743.28	-21642.64	7076.45	1777085.29	14622371.37	40°15'41.7502"N	80°30'36.4069"W	22770.16	161.894	0.18	-0.03	0.18
29130.00	89.230	159.260	5953.40	22838.27	-21731.49	7110.04	1777118.87	14622282.55	40°15'40.8703"N	80°30'35.9800"W	22865.05	161.883	0.07	0.03	-0.06
29225.00	89.170	159.200	5954.73	22933.26	-21820.31	7143.72	1777152.54	14622193.77	40°15'39.9908"N	80°30'35.5518"W	22959.94	161.872	0.09	-0.06	-0.06
29319.00	89.350	159.180	5955.94	23027.26	-21908.17	7177.12	1777185.92	14622105.94	40°15'39.1208"N	80°30'35.1274"W	23053.83	161.861	0.19	0.19	-0.02
29414.00	89.260	159.200	5957.10	23122.25	-21996.97	7210.86	1777219.65	14622017.18	40°15'38.2415"N	80°30'34.6984"W	23148.72	161.850	0.10	-0.09	0.02
29509.00	89.200	159.130	5958.37	23217.24	-22085.75	7244.65	1777253.43	14621928.44	40°15'37.3623"N	80°30'34.2689"W	23243.61	161.839	0.10	-0.06	-0.07
29603.00	89.230	158.900	5959.66	23311.23	-22173.50	7278.31	1777287.07	14621840.71	40°15'36.4933"N	80°30'33.8410"W	23337.48	161.828	0.25	0.03	-0.24
29698.00	88.740	158.970	5961.34	23406.22	-22262.14	7312.45	1777321.20	14621752.11	40°15'35.6155"N	80°30'33.4070"W	23432.35	161.816	0.52	-0.52	0.07
29792.00	89.080	159.030	5963.13	23500.20	-22349.88	7346.13	1777354.87	14621664.40	40°15'34.7467"N	80°30'32.9788"W	23526.22	161.805	0.37	0.36	0.06
29887.00	89.290	159.320	5964.48	23595.19	-22438.67	7379.90	1777388.63	14621575.65	40°15'33.8675"N	80°30'32.5496"W	23621.11	161.794	0.38	0.22	0.31
29982.00	89.200	159.050	5965.73	23690.18	-22527.46	7413.66	1777422.37	14621486.89	40°15'32.9882"N	80°30'32.1205"W	23716.00	161.784	0.30	-0.09	-0.28
30077.00	89.260	159.050	5967.01	23785.17	-22616.17	7447.62	1777456.32	14621398.22	40°15'32.1097"N	80°30'31.6888"W	23810.89	161.773	0.06	0.06	0.00
30172.00	89.480	159.100	5968.06	23880.17	-22704.90	7481.55	1777490.23	14621309.52	40°15'31.2311"N	80°30'31.2575"W	23905.77	161.762	0.24	0.23	0.05
30266.00	89.420	159.170	5968.96	23974.16	-22792.73	7515.03	1777523.70	14621221.72	40°15'30.3613"N	80°30'30.8320"W	23999.67	161.752	0.10	-0.06	0.07
30361.00	89.350	159.000	5969.98	24069.16	-22881.47	7548.94	1777557.60	14621133.02	40°15'29.4826"N	80°30'30.4010"W	24094.56	161.742	0.19	-0.07	-0.18
30456.00	89.660	159.190	5970.80	24164.15	-22970.21	7582.83	1777591.48	14621044.31	40°15'28.6038"N	80°30'29.9701"W	24189.46	161.731	0.38	0.33	0.20
30550.00	89.480	159.370	5971.50	24258.15	-23058.13	7616.09	1777624.73	14620956.43	40°15'27.7332"N	80°30'29.5475"W	24283.37	161.722	0.27	-0.19	0.19
30645.00	90.030	159.410	5971.91	24353.15	-23147.05	7649.53	1777658.15	14620867.54	40°15'26.8527"N	80°30'29.1225"W	24378.29	161.713	0.58	0.58	0.04
30740.00	89.820	159.150	5972.03	24448.15	-23235.90	7683.14	1777691.75	14620778.72	40°15'25.9728"N	80°30'28.6954"W	24473.21	161.703	0.35	-0.22	-0.27
30834.00	90.000	159.290	5972.18	24542.15	-23323.79	7716.49	1777725.09	14620690.87	40°15'25.1026"N	80°30'28.2715"W	24567.12	161.694	0.24	0.19	0.15
30929.00	89.970	159.230	5972.21	24637.14	-23412.63	7750.13	1777758.72	14620602.06	40°15'24.2228"N	80°30'27.8440"W	24662.03	161.684	0.07	-0.03	-0.06
31024.00	89.910	158.980	5972.31	24732.14	-23501.38	7784.02	1777792.59	14620513.34	40°15'23.3439"N	80°30'27.4133"W	24756.94	161.674	0.27	-0.06	-0.26

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REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	State of WV DNR A BRK 206H
Field	Brooke	API	047-009-00299
Facility	State of WV DNR A BRK Pad	Wellbore	State of WV DNR A BRK 206H AWB
Slot	Slot #206H		

WELLPATH DATA (336 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]
31119.00	89.940	159.310	5972.43	24827.14	-23590.16	7817.84	1777826.39	14620424.60	40°15'22.4648"N	80°30'26.9835"W	24851.84	161.665	0.35	0.03	0.35
31213.00	89.820	158.850	5972.63	24921.14	-23677.96	7851.40	1777859.94	14620336.83	40°15'21.5953"N	80°30'26.5569"W	24945.75	161.655	0.51	-0.13	-0.49
31308.00	89.970	158.940	5972.80	25016.14	-23766.59	7885.61	1777894.14	14620248.24	40°15'20.7176"N	80°30'26.1220"W	25040.64	161.644	0.18	0.16	0.09
31403.00	89.940	158.880	5972.88	25111.14	-23855.23	7919.79	1777928.31	14620159.64	40°15'19.8399"N	80°30'25.6875"W	25135.53	161.634	0.07	-0.03	-0.06
31498.00	89.910	159.080	5973.00	25206.14	-23943.90	7953.87	1777962.37	14620070.99	40°15'18.9617"N	80°30'25.2543"W	25230.43	161.624	0.21	-0.03	0.21
31541.00†	89.910	159.080	5973.07	25249.14	-23984.07	7969.22	1777977.72	14620030.84	40°15'18.5640"N	80°30'25.0592"W	25273.39	161.620	0.00	0.00	0.00

HOLE & CASING SECTIONS - Ref Wellbore: State of WV DNR A BRK 206H AWB Ref Wellpath: State of WV DNR A BRK 206H AWP Proj: 31541'									
String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
20in Conductor	26.00	100.00	74.00	26.00	100.00	0.00	0.00	0.02	-0.13
17.5in Open Hole	100.00	640.00	540.00	100.00	639.99	0.02	-0.13	2.34	-2.75
13.375in Casing Surface	26.00	640.00	614.00	26.00	639.99	0.00	0.00	2.34	-2.75
12.25in Open Hole	640.00	1485.00	845.00	639.99	1482.19	2.34	-2.75	14.06	-61.80
9.625in Casing Intermediate	26.00	1443.00	1417.00	26.00	1440.52	0.00	0.00	13.52	-56.55
8.5in Open Hole	1485.00	31541.00	30056.00	1482.19	5973.07	14.06	-61.80	-23984.07	7969.22
5.5in Casing Production	26.00	31541.00	31515.00	26.00	5973.07	0.00	0.00	-23984.07	7969.22

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Field	Brooke	API	047-009-00299
Facility	State of WV DNR A BRK Pad	Wellbore	State of WV DNR A BRK 206H AWB
Slot	Slot #206H		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
State of WV DNR A BRK 206H LP Rev-4	5706.00	-385.85	-1044.68	1768967.27	14643620.02	40°19'12.2335"N	80°32'19.7325"W	point
State of WV A BRK 206H Hardline Pt 1.1	6000.00	-14342.83	4542.74	1774552.55	14629668.39	40°16'54.0217"N	80°31'8.5777"W	point
State of WV A BRK 206H Hardline Pt 1.2	6000.00	-14532.34	4621.09	1774630.87	14629478.95	40°16'52.1448"N	80°31'7.5801"W	point
State of WV DNR A BRK 206H BHL Rev-5	6146.97	-23986.71	7963.28	1777971.78	14620028.21	40°15'18.5382"N	80°30'25.1360"W	point

WELLPATH COMPOSITION - Ref Wellbore: State of WV DNR A BRK 206H AWB Ref Wellpath: State of WV DNR A BRK 206H AWP Proj: 31541'					
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
26.00	600.00	Gyrodata 2015 - GC+WIR+DPIPE	01_Gyrodata <17 1/2"> (100'-600')	State of WV DNR A BRK 206H AWB	10/23/2020
600.00	843.00	Gyrodata 2015 - GC+WIR+DPIPE	02_Gyrodata <12 1/4"> (700'-843')	State of WV DNR A BRK 206H AWB	10/23/2020
843.00	1397.00	OWSG MWD rev2 + HRGM	03_Premier MWD <12 1/4"> (952'-1397')	State of WV DNR A BRK 206H AWB	10/23/2020
1397.00	31541.00	BH AutoTrak Curve (2019) (Short spacing)	04_BH AT Curve <8 1/2"> (1495'-31498')	State of WV DNR A BRK 206H AWB	10/23/2020

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Actual Wellpath Report
State of WV DNR A BRK 206H AWP Proj: 31541'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	State of WV DNR A BRK 206H
Field	Brooke	API	047-009-00299
Facility	State of WV DNR A BRK Pad	Wellbore	State of WV DNR A BRK 206H AWB
Slot	Slot #206H		

COMMENTS
Wellpath general comments API: 47-009-00299-0000 BH Job #: 110502444 Rig: SDC 40 Duration: 10/24/2020 - 11/02/2020

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