

# NORTHEAST NATURAL ENERGY, LLC

Location: Monongalia County, WV  
 Field: Monongalia  
 Facility: Sullivan Pad

Slot: Slot #07  
 Well: Sullivan 7H  
 Wellbore: Sullivan 7H PWB

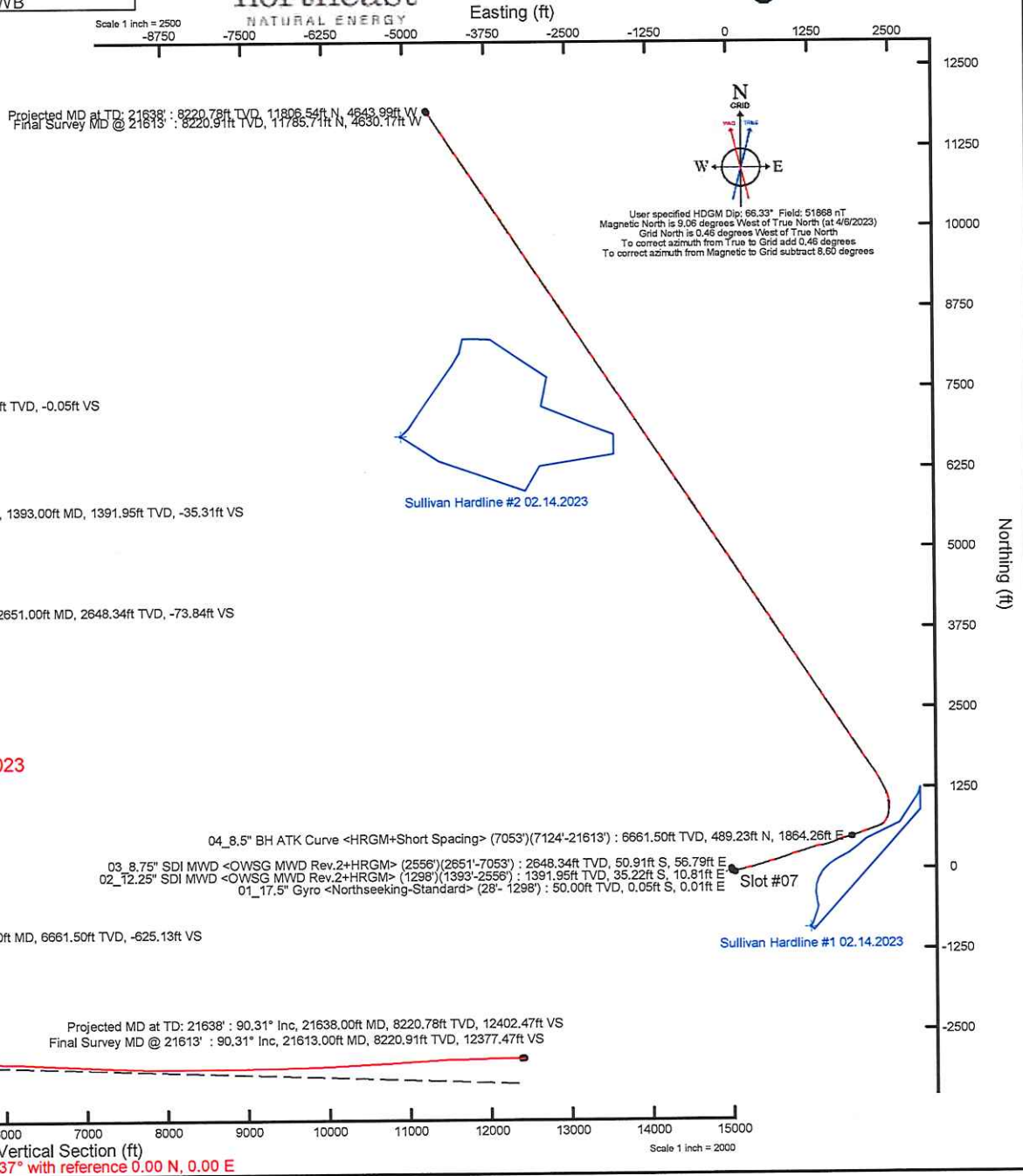


True vertical depths are referenced to Patterson 277 (RKB)	Grid System: NAD83 (Lambert Conformal Conic Projection, Zone 18N)
Horizontal depths are referenced to Patterson 277 (RKB)	North Reference: Grid North
Horizontal 277 (RKB) to Mean Sea Level: 1504ft	Scale: True Distance
Mean Sea Level to Ground level (At Slot: Slot #07)	Coordinates are in feet referenced to 1983
Depth in feet	Created by: humans on 2023/04/07 Database: sullivan_277REV_A0

Location Information				
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Sullivan Pad	1764815.000	406882.090	39°36'53.4792"N	80°13'22.9021"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)
Slot #07	11.40	16.44	1764831.440	406883.490
Patterson 277 (RKB) to Ground level (At Slot: Slot #07)	28ft			
Mean Sea Level to Ground level (At Slot: Slot #07)	-1476ft			
Patterson 277 (RKB) to Mean Sea Level	1504ft			

Well Profile Data								
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (1/100ft)	VS (ft)
Tie On	7053.00	32.660	74.690	6602.40	479.47	1826.15	3.88	-612.15
Projection	7153.00	32.660	74.690	6686.59	493.72	1878.20	0.00	-629.11
Start Tangent	7283.37	31.706	70.133	6786.95	514.65	1944.36	2.00	-648.32
Curve KOP	7994.70	31.706	70.133	7402.12	641.70	2295.96	0.00	-737.28
Landing Pt	9188.01	88.000	326.373	8100.00	1438.17	2249.34	8.00	-49.28
BHL	21647.04	88.000	326.373	8534.81	11806.02	-4649.01	0.00	12403.15

Well Data			
Slot	Well	Wellbore	Wellpath
Slot #07	Sullivan 7H	Sullivan 7H AWB	Sullivan 7H AWP Proj: 21638*
Slot #07	Sullivan 7H	Sullivan 7H PWB	Sullivan 7H Rev-A0





# Actual Wellpath Report

Sullivan 7H AWP Proj: 21638'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Sullivan 7H
Field	Monongalia	API/Legal	
Facility	Sullivan Pad	Wellbore	Sullivan 7H AWB
Slot	Slot #07		

REPORT SETUP INFORMATION			
Projection System	NAD83 / Lambert West Virginia SP, Northern Zone (4701), US feet	Software System	WellArchitect® 6.0
North Reference	Grid	User	Manajohj
Scale	0.999941	Report Generated	4/12/2023 at 11:18:21 AM
Convergence at slot	0.46° West	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	11.40	16.44	1764831.44	406893.49	39°36'53.5932"N	80°13'22.6932"W
Facility Reference Pt			1764815.00	406882.09	39°36'53.4792"N	80°13'22.9021"W
Field Reference Pt			1777685.71	440640.65	39°42'28.1140"N	80°10'41.6900"W

WELLPATH DATUM			
Calculation method	Minimum curvature	Patterson 277 (RKB) to Facility Vertical Datum	1504.00ft
Horizontal Reference Pt	Slot	Patterson 277 (RKB) to Mean Sea Level	1504.00ft
Vertical Reference Pt	Patterson 277 (RKB)	Patterson 277 (RKB) to Ground Level at Slot (Slot #07)	28.00ft
MD Reference Pt	Patterson 277 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	326.37°

02/23/2024



# Actual Wellpath Report

Sullivan 7H AWP Proj: 21638'  
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Field	Monongalia	API/Legal	
Facility	Sullivan Pad	Wellbore	Sullivan 7H AWB
Slot	Slot #07		

WELLPATH DATA (240 stations) † = interpolated, ‡ = extrapolated station																
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	TVDSS [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	167.110	0.00	-1504.00	0.00	0.00	0.00	1764831.44	406893.49	39°36'53.5932"N	80°13'22.6932"W	0.00	0.000	0.00	0.00	0.00
28.00	0.000	167.110	28.00	-1476.00	0.00	0.00	0.00	1764831.44	406893.49	39°36'53.5932"N	80°13'22.6932"W	0.00	0.000	0.00	0.00	0.00
50.00	0.270	167.110	50.00	-1454.00	-0.05	-0.05	0.01	1764831.45	406893.44	39°36'53.5927"N	80°13'22.6931"W	0.05	167.110	1.23	1.23	0.00
100.00	0.260	153.350	100.00	-1404.00	-0.27	-0.27	0.09	1764831.53	406893.22	39°36'53.5906"N	80°13'22.6921"W	0.28	161.602	0.13	-0.02	-27.52
150.00	0.240	158.380	150.00	-1354.00	-0.49	-0.47	0.18	1764831.62	406893.02	39°36'53.5886"N	80°13'22.6909"W	0.50	159.053	0.06	-0.04	10.06
200.00	0.430	132.450	200.00	-1304.00	-0.77	-0.69	0.36	1764831.80	406892.80	39°36'53.5864"N	80°13'22.6886"W	0.78	152.743	0.48	0.38	-51.86
250.00	0.330	168.670	250.00	-1254.00	-1.09	-0.96	0.52	1764831.96	406892.53	39°36'53.5838"N	80°13'22.6865"W	1.09	151.400	0.51	-0.20	72.44
300.00	0.350	163.180	300.00	-1204.00	-1.37	-1.24	0.59	1764832.03	406892.25	39°36'53.5809"N	80°13'22.6855"W	1.38	154.472	0.08	0.04	-10.98
350.00	0.340	160.480	350.00	-1154.00	-1.66	-1.53	0.69	1764832.13	406891.96	39°36'53.5781"N	80°13'22.6843"W	1.68	155.792	0.04	-0.02	-5.40
400.00	0.310	130.730	399.99	-1104.01	-1.93	-1.76	0.84	1764832.28	406891.73	39°36'53.5759"N	80°13'22.6823"W	1.95	154.464	0.34	-0.06	-59.50
450.00	0.510	122.170	449.99	-1054.01	-2.26	-1.97	1.13	1764832.57	406891.52	39°36'53.5739"N	80°13'22.6786"W	2.27	150.080	0.42	0.40	-17.12
500.00	0.540	145.240	499.99	-1004.01	-2.70	-2.28	1.45	1764832.89	406891.21	39°36'53.5708"N	80°13'22.6744"W	2.70	147.449	0.42	0.06	46.14
550.00	0.470	157.660	549.99	-954.01	-3.14	-2.66	1.67	1764833.11	406890.83	39°36'53.5670"N	80°13'22.6717"W	3.14	147.947	0.26	-0.14	24.84
600.00	0.360	140.790	599.99	-904.01	-3.50	-2.97	1.84	1764833.28	406890.52	39°36'53.5640"N	80°13'22.6694"W	3.50	148.193	0.33	-0.22	-33.74
650.00	0.480	152.340	649.99	-854.01	-3.86	-3.28	2.04	1764833.48	406890.21	39°36'53.5609"N	80°13'22.6668"W	3.86	148.117	0.29	0.24	23.10
700.00	0.560	152.960	699.98	-804.02	-4.31	-3.68	2.25	1764833.69	406889.81	39°36'53.5570"N	80°13'22.6641"W	4.31	148.596	0.16	0.16	1.24
750.00	0.680	137.800	749.98	-754.02	-4.85	-4.12	2.56	1764834.00	406889.37	39°36'53.5527"N	80°13'22.6601"W	4.85	148.159	0.40	0.24	-30.32
800.00	0.670	142.220	799.98	-704.02	-5.43	-4.57	2.94	1764834.38	406888.92	39°36'53.5483"N	80°13'22.6552"W	5.43	147.277	0.11	-0.02	8.84
850.00	0.800	145.170	849.97	-654.03	-6.07	-5.09	3.32	1764834.76	406888.40	39°36'53.5432"N	80°13'22.6503"W	6.07	146.913	0.27	0.26	5.90
1109.00	3.510	170.050	1108.77	-395.23	-15.14	-14.38	5.72	1764837.16	406879.11	39°36'53.4515"N	80°13'22.6187"W	15.48	158.319	1.08	1.05	9.61
1204.00	4.470	168.060	1203.54	-300.46	-21.25	-20.87	6.99	1764838.43	406872.62	39°36'53.3875"N	80°13'22.6018"W	22.01	161.490	1.02	1.01	-2.09
1298.00	4.830	166.100	1297.23	-206.77	-28.38	-28.30	8.70	1764840.13	406865.20	39°36'53.3142"N	80°13'22.5792"W	29.60	162.917	0.42	0.38	-2.09
1393.00	3.930	159.290	1391.95	-112.05	-35.31	-35.22	10.81	1764842.25	406858.27	39°36'53.2460"N	80°13'22.5515"W	36.84	162.942	1.09	-0.95	-7.17
1488.00	4.380	151.090	1486.70	-17.30	-42.10	-41.44	13.71	1764845.15	406852.05	39°36'53.1847"N	80°13'22.5138"W	43.65	161.692	0.78	0.47	-8.63
1583.00	4.240	139.190	1581.44	77.44	-49.20	-47.28	17.76	1764849.20	406846.22	39°36'53.1274"N	80°13'22.4614"W	50.50	159.409	0.95	-0.15	-12.53
1679.00	3.200	121.750	1677.24	173.24	-55.16	-51.37	22.36	1764853.80	406842.12	39°36'53.0873"N	80°13'22.4022"W	56.03	156.480	1.59	-1.08	-18.17
1774.00	3.030	112.310	1772.10	268.10	-59.65	-53.72	26.94	1764858.38	406839.77	39°36'53.0644"N	80°13'22.3435"W	60.10	153.370	0.57	-0.18	-9.94
1869.00	3.840	106.220	1866.92	362.92	-64.16	-55.56	32.31	1764863.75	406837.93	39°36'53.0466"N	80°13'22.2746"W	64.28	149.819	0.93	0.85	-6.41
1964.00	3.540	101.770	1961.73	457.73	-68.68	-57.05	38.24	1764869.68	406836.44	39°36'53.0324"N	80°13'22.1987"W	68.68	146.167	0.44	-0.32	-4.68
2059.00	1.950	111.600	2056.62	552.62	-72.10	-58.24	42.61	1764874.05	406835.25	39°36'53.0210"N	80°13'22.1427"W	72.17	143.809	1.74	-1.67	10.35



# Actual Wellpath Report

Sullivan 7H AWP Proj: 21638'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Sullivan 7H
Field	Monongalia	API/Legal	
Facility	Sullivan Pad	Wellbore	Sullivan 7H AWB
Slot	Slot #07		

WELLPATH DATA (240 stations)																
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	TVDSS [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]
2154.00	0.940	90.280	2151.58	647.58	-73.86	-58.84	44.90	1764876.33	406834.65	39°36'53.0152"N	80°13'22.1135"W	74.02	142.657	1.19	-1.06	-22.44
2249.00	1.020	66.450	2246.57	742.57	-74.44	-58.51	46.45	1764877.89	406834.98	39°36'53.0187"N	80°13'22.0937"W	74.71	141.553	0.43	0.08	-25.08
2344.00	1.360	58.350	2341.55	837.55	-74.63	-57.58	48.19	1764879.62	406835.91	39°36'53.0280"N	80°13'22.0716"W	75.08	140.075	0.40	0.36	-8.53
2439.00	1.610	51.260	2436.52	932.52	-74.55	-56.15	50.19	1764881.62	406837.34	39°36'53.0422"N	80°13'22.0462"W	75.31	138.211	0.33	0.26	-7.46
2475.00	1.620	49.710	2472.50	968.50	-74.45	-55.51	50.97	1764882.41	406837.99	39°36'53.0487"N	80°13'22.0363"W	75.36	137.440	0.12	0.03	-4.31
2556.00	2.210	46.000	2553.46	1049.46	-74.03	-53.68	52.97	1764884.40	406839.81	39°36'53.0669"N	80°13'22.0109"W	75.41	135.384	0.74	0.73	-4.58
2651.00	3.530	59.110	2648.34	1144.34	-73.84	-50.91	56.79	1764888.23	406842.59	39°36'53.0946"N	80°13'21.9623"W	76.27	131.872	1.54	1.39	13.80
2746.00	6.660	64.640	2742.95	1238.95	-74.77	-47.05	64.28	1764895.72	406846.45	39°36'53.1334"N	80°13'21.8670"W	79.66	126.199	3.33	3.29	5.82
2841.00	8.340	68.010	2837.14	1333.14	-76.96	-42.11	75.65	1764907.09	406851.39	39°36'53.1831"N	80°13'21.7223"W	86.58	119.100	1.83	1.77	3.55
2936.00	10.320	72.840	2930.88	1426.88	-80.76	-37.02	90.17	1764921.61	406856.48	39°36'53.2345"N	80°13'21.5372"W	97.47	112.318	2.24	2.08	5.08
3031.00	11.870	77.040	3024.10	1520.10	-86.62	-32.31	107.83	1764939.26	406861.18	39°36'53.2824"N	80°13'21.3121"W	112.56	106.682	1.84	1.63	4.42
3126.00	13.300	77.050	3116.81	1612.81	-93.93	-27.67	128.00	1764959.43	406865.82	39°36'53.3299"N	80°13'21.0549"W	130.95	102.199	1.51	1.51	0.01
3221.00	13.780	77.360	3209.17	1705.17	-101.84	-22.75	149.69	1764981.12	406870.74	39°36'53.3803"N	80°13'20.7782"W	151.41	98.641	0.51	0.51	0.33
3315.00	14.640	74.870	3300.30	1796.30	-109.62	-17.20	172.08	1765003.51	406876.29	39°36'53.4369"N	80°13'20.4927"W	172.94	95.707	1.12	0.91	-2.65
3410.00	15.920	77.290	3391.94	1887.94	-118.08	-11.20	196.38	1765027.81	406882.29	39°36'53.4981"N	80°13'20.1828"W	196.70	93.263	1.51	1.35	2.55
3509.00	16.900	76.640	3486.90	1982.90	-127.92	-4.88	223.62	1765055.05	406888.61	39°36'53.5627"N	80°13'19.8353"W	223.68	91.251	1.01	0.99	-0.66
3603.00	17.940	77.330	3576.59	2072.59	-137.83	1.45	251.04	1765082.47	406894.94	39°36'53.6275"N	80°13'19.4856"W	251.05	89.670	1.13	1.11	0.73
3698.00	20.190	75.910	3666.38	2162.38	-148.55	8.65	281.22	1765112.65	406902.14	39°36'53.7010"N	80°13'19.1007"W	281.36	88.238	2.42	2.37	-1.49
3794.00	21.780	77.430	3756.01	2252.01	-160.49	16.56	314.68	1765146.10	406910.05	39°36'53.7818"N	80°13'18.6741"W	315.11	86.988	1.75	1.66	1.58
3889.00	24.400	74.410	3843.39	2339.39	-172.90	25.67	350.79	1765182.21	406919.16	39°36'53.8747"N	80°13'18.2136"W	351.72	85.815	3.03	2.76	-3.18
3984.00	26.860	72.430	3929.04	2425.04	-184.92	37.42	390.15	1765221.57	406930.91	39°36'53.9940"N	80°13'17.7118"W	391.94	84.521	2.74	2.59	-2.08
4078.00	28.920	71.970	4012.12	2508.12	-196.91	50.87	432.02	1765263.43	406944.36	39°36'54.1302"N	80°13'17.1783"W	435.00	83.284	2.20	2.19	-0.49
4173.00	31.180	71.840	4094.34	2590.34	-209.64	65.65	477.23	1765308.64	406959.13	39°36'54.2799"N	80°13'16.6020"W	481.72	82.168	2.38	2.38	-0.14
4268.00	32.380	75.280	4175.10	2671.10	-224.45	79.78	525.21	1765356.61	406973.26	39°36'54.4233"N	80°13'15.9905"W	531.23	81.363	2.29	1.26	3.62
4363.00	32.550	74.600	4255.26	2751.26	-240.69	93.03	574.45	1765405.85	406986.51	39°36'54.5582"N	80°13'15.3626"W	581.93	80.801	0.42	0.18	-0.72
4461.00	32.310	74.260	4337.98	2833.98	-256.98	107.13	625.07	1765456.48	407000.62	39°36'54.7016"N	80°13'14.7172"W	634.19	80.274	0.31	-0.24	-0.35
4556.00	30.270	71.730	4419.16	2915.16	-271.12	121.53	672.25	1765503.65	407015.01	39°36'54.8476"N	80°13'14.1158"W	683.15	79.753	2.55	-2.15	-2.66
4650.00	29.810	71.640	4500.53	2996.53	-283.55	136.32	716.93	1765548.32	407029.80	39°36'54.9973"N	80°13'13.5465"W	729.77	79.234	0.49	-0.49	-0.10
4744.00	29.720	71.000	4582.13	3078.13	-295.59	151.26	761.13	1765592.53	407044.74	39°36'55.1485"N	80°13'12.9832"W	776.02	78.760	0.35	-0.10	-0.68
4838.00	29.200	72.500	4663.98	3159.98	-307.85	165.74	805.04	1765636.43	407059.22	39°36'55.2951"N	80°13'12.4237"W	821.92	78.366	0.96	-0.55	1.60



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Slot	Slot #07		

WELLPATH DATA (240 stations)																
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	TVDSS [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]
4933.00	27.780	71.870	4747.47	3243.47	-320.20	179.60	848.18	1765679.57	407073.08	39°36'55.4354"N	80°13'11.8738"W	866.98	78.044	1.53	-1.49	-0.66
5028.00	26.960	71.450	4831.83	3327.83	-331.72	193.34	889.63	1765721.02	407086.82	39°36'55.5745"N	80°13'11.3455"W	910.40	77.739	0.89	-0.86	-0.44
5124.00	26.780	71.040	4917.47	3413.47	-342.86	207.29	930.72	1765762.10	407100.77	39°36'55.7156"N	80°13'10.8220"W	953.52	77.444	0.27	-0.19	-0.43
5218.00	26.830	70.500	5001.37	3497.37	-353.40	221.25	970.74	1765802.12	407114.73	39°36'55.8568"N	80°13'10.3120"W	995.64	77.160	0.26	0.05	-0.57
5312.00	28.110	72.390	5084.77	3580.77	-364.69	235.03	1011.85	1765843.23	407128.51	39°36'55.9962"N	80°13'9.7881"W	1038.79	76.923	1.65	1.36	2.01
5410.00	27.320	73.640	5171.53	3667.53	-377.74	248.35	1055.43	1765886.81	407141.83	39°36'56.1313"N	80°13'9.2326"W	1084.26	76.759	1.00	-0.81	1.28
5506.00	27.740	71.960	5256.66	3752.66	-390.29	261.48	1097.82	1765929.19	407154.95	39°36'56.2644"N	80°13'8.6924"W	1128.53	76.603	0.92	0.44	-1.75
5601.00	30.720	71.830	5339.55	3835.55	-402.70	275.89	1141.90	1765973.27	407169.37	39°36'56.4103"N	80°13'8.1305"W	1174.76	76.417	3.14	3.14	-0.14
5696.00	31.320	72.380	5420.97	3916.97	-415.98	290.94	1188.49	1766019.86	407184.41	39°36'56.5627"N	80°13'7.5367"W	1223.58	76.245	0.70	0.63	0.58
5791.00	31.750	72.260	5501.94	3997.94	-429.63	306.03	1235.83	1766067.20	407199.50	39°36'56.7155"N	80°13'6.9334"W	1273.16	76.092	0.46	0.45	-0.13
5886.00	32.590	75.260	5582.35	4078.35	-444.76	320.15	1284.39	1766115.75	407213.62	39°36'56.8590"N	80°13'6.3144"W	1323.69	76.003	1.90	0.88	3.16
5980.00	31.020	78.860	5662.25	4158.25	-462.22	331.27	1332.64	1766164.00	407224.74	39°36'56.9727"N	80°13'5.6990"W	1373.20	76.040	2.62	-1.67	3.83
6074.00	29.390	79.410	5743.48	4239.48	-480.52	340.19	1379.08	1766210.44	407233.66	39°36'57.0645"N	80°13'5.1065"W	1420.42	76.143	1.76	-1.73	0.59
6169.00	28.190	78.440	5826.74	4322.74	-498.07	348.98	1423.98	1766255.33	407242.44	39°36'57.1549"N	80°13'4.5336"W	1466.12	76.230	1.36	-1.26	-1.02
6264.00	28.180	76.180	5910.47	4406.47	-514.11	358.83	1467.75	1766299.10	407252.30	39°36'57.2557"N	80°13'3.9754"W	1510.97	76.262	1.12	-0.01	-2.38
6362.00	28.070	72.670	5996.91	4492.91	-528.42	371.23	1512.23	1766343.58	407264.69	39°36'57.3817"N	80°13'3.4082"W	1557.13	76.208	1.69	-0.11	-3.58
6457.00	26.390	69.830	6081.38	4577.38	-539.61	385.17	1553.39	1766384.73	407278.63	39°36'57.5227"N	80°13'2.8837"W	1600.43	76.074	2.24	-1.77	-2.99
6551.00	25.760	67.980	6165.81	4661.81	-548.58	400.03	1591.94	1766423.28	407293.49	39°36'57.6726"N	80°13'2.3927"W	1641.43	75.895	1.09	-0.67	-1.97
6646.00	31.260	68.900	6249.26	4745.26	-558.09	416.65	1634.10	1766465.44	407310.12	39°36'57.8403"N	80°13'1.8556"W	1686.38	75.696	5.81	5.79	0.97
6741.00	30.750	71.400	6330.69	4826.69	-569.74	433.28	1680.12	1766511.46	407326.74	39°36'58.0082"N	80°13'1.2693"W	1735.09	75.539	1.46	-0.54	2.63
6836.00	28.180	72.110	6413.40	4909.40	-582.12	447.91	1724.49	1766555.83	407341.38	39°36'58.1564"N	80°13'0.7038"W	1781.71	75.440	2.73	-2.71	0.75
6931.00	27.980	72.180	6497.22	4993.22	-594.28	461.63	1767.05	1766598.39	407355.09	39°36'58.2952"N	80°13'0.1613"W	1826.36	75.359	0.21	-0.21	0.07
7026.00	31.800	73.570	6579.57	5075.57	-607.76	475.53	1812.30	1766643.63	407368.99	39°36'58.4362"N	80°12'59.5847"W	1873.65	75.298	4.09	4.02	1.46
7053.00	32.660	74.690	6602.40	5098.40	-612.15	479.47	1826.15	1766657.47	407372.93	39°36'58.4762"N	80°12'59.4081"W	1888.04	75.289	3.88	3.19	4.15
7124.00	34.650	76.520	6661.50	5157.50	-625.13	489.23	1864.26	1766695.58	407382.69	39°36'58.5757"N	80°12'58.9221"W	1927.38	75.296	3.15	2.80	2.58
7145.00	34.190	75.530	6678.83	5174.83	-629.12	492.10	1875.78	1766707.10	407385.56	39°36'58.6049"N	80°12'58.7752"W	1939.25	75.300	3.45	-2.19	-4.71
7240.00	31.060	71.840	6758.83	5254.83	-644.42	506.41	1924.92	1766756.25	407399.87	39°36'58.7502"N	80°12'58.1486"W	1990.42	75.261	3.90	-3.29	-3.88
7335.00	31.820	71.260	6839.89	5335.89	-657.40	522.09	1971.93	1766803.25	407415.55	39°36'58.9089"N	80°12'57.5496"W	2039.87	75.170	0.86	0.80	-0.61
7430.00	31.770	71.420	6920.63	5416.63	-670.33	538.11	2019.35	1766850.67	407431.57	39°36'59.0709"N	80°12'56.9453"W	2089.82	75.079	0.10	-0.05	0.17
7525.00	31.330	71.210	7001.59	5497.59	-683.15	554.03	2066.44	1766897.75	407447.49	39°36'59.2320"N	80°12'56.3452"W	2139.42	74.991	0.48	-0.46	-0.22



# Actual Wellpath Report

Sullivan 7H AWP Proj: 21638'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Sullivan 7H
Field	Monongalia	API/Legal	
Facility	Sullivan Pad	Wellbore	Sullivan 7H AWB
Slot	Slot #07		

WELLPATH DATA (240 stations)																
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	TVDSS [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]
7621.00	31.700	70.870	7083.43	5579.43	-695.85	570.34	2113.90	1766945.21	407463.79	39°36'59.3969"N	80°12'55.7404"W	2189.49	74.901	0.43	0.39	-0.35
7715.00	31.590	70.680	7163.45	5659.45	-708.12	586.58	2160.46	1766991.77	407480.03	39°36'59.5610"N	80°12'55.1471"W	2238.68	74.810	0.16	-0.12	-0.20
7809.00	31.760	69.510	7243.45	5739.45	-719.83	603.38	2206.87	1767038.18	407496.84	39°36'59.7308"N	80°12'54.5558"W	2287.87	74.708	0.68	0.18	-1.24
7904.00	31.780	69.150	7324.22	5820.22	-731.05	621.04	2253.67	1767084.97	407514.49	39°36'59.9090"N	80°12'53.9596"W	2337.67	74.594	0.20	0.02	-0.38
7999.00	31.690	69.040	7405.01	5901.01	-742.06	638.87	2300.35	1767131.65	407532.32	39°37'0.0888"N	80°12'53.3649"W	2387.42	74.479	0.11	-0.09	-0.12
8095.00	31.600	51.750	7486.91	5982.91	-745.57	663.51	2343.74	1767175.04	407556.96	39°37'0.3358"N	80°12'52.8130"W	2435.85	74.193	9.42	-0.09	-18.01
8189.00	32.950	38.960	7566.48	6062.48	-735.92	698.68	2379.20	1767210.49	407592.13	39°37'0.6861"N	80°12'52.3635"W	2479.66	73.635	7.39	1.44	-13.61
8284.00	35.250	22.550	7645.31	6141.31	-712.88	744.19	2406.02	1767237.31	407637.63	39°37'1.1380"N	80°12'52.0254"W	2518.48	72.813	9.96	2.42	-17.27
8378.00	39.380	12.560	7720.12	6216.12	-677.09	798.42	2422.93	1767254.22	407691.86	39°37'1.6753"N	80°12'51.8148"W	2551.09	71.762	7.79	4.39	-10.63
8473.00	44.040	8.080	7791.04	6287.04	-631.55	860.58	2434.13	1767265.42	407754.01	39°37'2.2904"N	80°12'51.6780"W	2581.78	70.529	5.82	4.91	-4.72
8568.00	48.950	4.740	7856.43	6352.43	-578.77	929.02	2441.74	1767273.03	407822.45	39°37'2.9674"N	80°12'51.5877"W	2612.50	69.169	5.76	5.17	-3.52
8662.00	54.700	352.640	7914.63	6410.63	-516.39	1002.62	2439.75	1767271.04	407896.05	39°37'3.6946"N	80°12'51.6207"W	2637.73	67.660	11.81	6.12	-12.87
8757.00	59.590	344.940	7966.21	6462.21	-442.67	1080.75	2424.11	1767255.40	407974.18	39°37'4.4655"N	80°12'51.8284"W	2654.12	65.971	8.53	5.15	-8.11
8852.00	64.890	337.250	8010.50	6506.50	-361.45	1160.12	2396.78	1767228.07	408053.54	39°37'5.2478"N	80°12'52.1857"W	2662.79	64.171	9.07	5.58	-8.09
8946.00	70.930	332.280	8045.85	6541.85	-275.34	1238.81	2359.61	1767190.90	408132.22	39°37'6.0225"N	80°12'52.6687"W	2665.03	62.300	8.08	6.43	-5.29
9040.00	76.830	331.190	8071.94	6567.94	-185.48	1318.30	2316.85	1767148.15	408211.71	39°37'6.8048"N	80°12'53.2231"W	2665.66	60.360	6.37	6.28	-1.16
9135.00	83.840	330.040	8087.88	6583.88	-92.14	1399.85	2270.92	1767102.22	408293.25	39°37'7.6070"N	80°12'53.8184"W	2667.71	58.349	7.47	7.38	-1.21
9231.00	87.720	325.050	8094.94	6590.94	3.53	1480.59	2219.56	1767050.86	408373.99	39°37'8.4009"N	80°12'54.4829"W	2668.07	56.294	6.57	4.04	-5.20
9325.00	87.050	326.240	8099.23	6595.23	97.42	1558.11	2166.57	1766997.88	408451.50	39°37'9.1629"N	80°12'55.1679"W	2668.66	54.278	1.45	-0.71	1.27
9420.00	88.550	326.090	8102.88	6598.88	192.35	1636.96	2113.71	1766945.03	408530.35	39°37'9.9379"N	80°12'55.8513"W	2673.47	52.244	1.59	1.58	-0.16
9516.00	89.570	326.280	8104.45	6600.45	288.34	1716.71	2060.30	1766891.61	408610.09	39°37'10.7219"N	80°12'56.5421"W	2681.77	50.198	1.08	1.06	0.20
9610.00	89.050	326.310	8105.59	6601.59	382.33	1794.90	2008.14	1766839.46	408688.28	39°37'11.4905"N	80°12'57.2165"W	2693.38	48.209	0.55	-0.55	0.03
9703.00	87.540	326.030	8108.35	6604.35	475.28	1872.12	1956.39	1766787.71	408765.49	39°37'12.2496"N	80°12'57.8857"W	2707.82	46.261	1.65	-1.62	-0.30
9798.00	88.150	326.500	8111.93	6607.93	570.22	1951.07	1903.67	1766734.99	408844.44	39°37'13.0256"N	80°12'58.5674"W	2725.91	44.296	0.81	0.64	0.49
9893.00	87.690	326.470	8115.37	6611.37	665.15	2030.22	1851.25	1766682.57	408923.59	39°37'13.8037"N	80°12'59.2454"W	2747.53	42.360	0.49	-0.48	-0.03
9987.00	87.970	326.160	8118.93	6614.93	759.09	2108.38	1799.15	1766630.48	409001.74	39°37'14.5721"N	80°12'59.9191"W	2771.68	40.475	0.44	0.30	-0.33
10081.00	88.340	326.530	8121.96	6617.96	853.04	2186.58	1747.08	1766578.42	409079.94	39°37'15.3408"N	80°13'0.5924"W	2798.83	38.625	0.56	0.39	0.39
10177.00	88.310	326.680	8124.77	6620.77	948.99	2266.70	1694.27	1766525.60	409160.05	39°37'16.1284"N	80°13'1.2755"W	2829.92	36.777	0.16	-0.03	0.16
10272.00	88.430	326.740	8127.47	6623.47	1043.95	2346.08	1642.14	1766473.48	409239.43	39°37'16.9088"N	80°13'1.9497"W	2863.69	34.990	0.14	0.13	0.06
10367.00	88.280	326.540	8130.19	6626.19	1138.91	2425.39	1589.93	1766421.27	409318.73	39°37'17.6885"N	80°13'2.6251"W	2900.07	33.246	0.26	-0.16	-0.21



# Actual Wellpath Report

Sullivan 7H AWP Proj: 21638'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Sullivan 7H
Field	Monongalia	API/Legal	
Facility	Sullivan Pad	Wellbore	Sullivan 7H AWB
Slot	Slot #07		

WELLPATH DATA (240 stations)																
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	TVDSS [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]
10462.00	88.400	326.540	8132.95	6628.95	1233.87	2504.62	1537.57	1766368.91	409397.95	39°37'18.4673"N	80°13'3.3022"W	2938.91	31.546	0.13	0.13	0.00
10556.00	88.400	326.570	8135.57	6631.57	1327.84	2583.02	1485.78	1766317.13	409476.35	39°37'19.2380"N	80°13'3.9720"W	2979.86	29.908	0.03	0.00	0.03
10651.00	87.870	326.380	8138.66	6634.66	1422.79	2662.17	1433.34	1766264.69	409555.50	39°37'20.0161"N	80°13'4.6502"W	3023.51	28.298	0.59	-0.56	-0.20
10745.00	88.120	326.570	8141.95	6637.95	1516.73	2740.49	1381.46	1766212.81	409633.81	39°37'20.7860"N	80°13'5.3213"W	3068.99	26.752	0.33	0.27	0.20
10840.00	88.250	326.390	8144.96	6640.96	1611.68	2819.65	1329.02	1766160.38	409712.97	39°37'21.5642"N	80°13'5.9994"W	3117.17	25.237	0.23	0.14	-0.19
10934.00	88.340	326.680	8147.76	6643.76	1705.64	2898.03	1277.21	1766108.57	409791.34	39°37'22.3347"N	80°13'6.6696"W	3166.99	23.784	0.32	0.10	0.31
11029.00	88.460	326.620	8150.41	6646.41	1800.60	2977.36	1225.00	1766056.37	409870.66	39°37'23.1145"N	80°13'7.3448"W	3219.52	22.364	0.14	0.13	-0.06
11124.00	88.060	326.550	8153.29	6649.29	1895.55	3056.62	1172.71	1766004.08	409949.92	39°37'23.8937"N	80°13'8.0212"W	3273.86	20.990	0.43	-0.42	-0.07
11219.00	88.610	326.780	8156.05	6652.05	1990.51	3135.95	1120.53	1765951.90	410029.25	39°37'24.6736"N	80°13'8.6962"W	3330.13	19.663	0.63	0.58	0.24
11314.00	88.460	326.740	8158.48	6654.48	2085.48	3215.38	1068.47	1765899.85	410108.68	39°37'25.4545"N	80°13'9.3695"W	3388.26	18.382	0.16	-0.16	-0.04
11408.00	88.490	326.770	8160.99	6656.99	2179.44	3293.97	1016.96	1765848.34	410187.26	39°37'26.2270"N	80°13'10.0359"W	3447.38	17.157	0.05	0.03	0.03
11503.00	88.310	326.410	8163.64	6659.64	2274.41	3373.24	964.67	1765796.05	410266.52	39°37'27.0063"N	80°13'10.7122"W	3508.47	15.959	0.42	-0.19	-0.38
11598.00	87.050	326.190	8167.48	6663.48	2369.33	3452.21	912.00	1765743.39	410345.49	39°37'27.7826"N	80°13'11.3934"W	3570.65	14.798	1.35	-1.33	-0.23
11692.00	87.200	326.860	8172.20	6668.20	2463.21	3530.52	860.22	1765691.61	410423.79	39°37'28.5524"N	80°13'12.0631"W	3633.81	13.693	0.73	0.16	0.71
11787.00	87.140	326.850	8176.89	6672.89	2558.09	3609.96	808.34	1765639.73	410503.23	39°37'29.3334"N	80°13'12.7343"W	3699.36	12.621	0.06	-0.06	-0.01
11882.00	87.200	326.570	8181.58	6677.58	2652.97	3689.28	756.26	1765587.66	410582.54	39°37'30.1131"N	80°13'13.4079"W	3765.99	11.585	0.30	0.06	-0.29
11976.00	86.330	326.650	8186.88	6682.88	2746.82	3767.64	704.61	1765536.01	410660.90	39°37'30.8834"N	80°13'14.0760"W	3832.96	10.593	0.93	-0.93	0.09
12072.00	86.340	327.160	8193.02	6689.02	2842.62	3847.90	652.30	1765483.70	410741.15	39°37'31.6724"N	80°13'14.7528"W	3902.80	9.621	0.53	0.01	0.53
12167.00	86.360	326.710	8199.07	6695.07	2937.42	3927.35	600.58	1765431.98	410820.60	39°37'32.4535"N	80°13'15.4220"W	3973.01	8.694	0.47	0.02	-0.47
12262.00	86.460	325.850	8205.02	6701.02	3032.23	4006.21	547.94	1765379.35	410899.46	39°37'33.2287"N	80°13'16.1027"W	4043.51	7.788	0.91	0.11	-0.91
12356.00	87.350	326.480	8210.09	6706.09	3126.09	4084.18	495.68	1765327.09	410977.42	39°37'33.9951"N	80°13'16.7786"W	4114.15	6.920	1.16	0.95	0.67
12452.00	87.630	326.730	8214.30	6710.30	3222.00	4164.25	442.89	1765274.30	411057.49	39°37'34.7822"N	80°13'17.4614"W	4187.74	6.071	0.39	0.29	0.26
12546.00	87.970	325.310	8217.90	6713.90	3315.93	4242.14	390.39	1765221.81	411135.37	39°37'35.5478"N	80°13'18.1403"W	4260.07	5.258	1.55	0.36	-1.51
12641.00	88.920	326.420	8220.48	6716.48	3410.89	4320.74	337.11	1765168.53	411213.97	39°37'36.3204"N	80°13'18.8294"W	4333.87	4.461	1.54	1.00	1.17
12735.00	88.740	326.520	8222.40	6718.40	3504.87	4399.08	285.20	1765116.62	411292.30	39°37'37.0905"N	80°13'19.5009"W	4408.32	3.709	0.22	-0.19	0.11
12830.00	88.370	326.260	8224.80	6720.80	3599.84	4478.18	232.63	1765064.05	411371.39	39°37'37.8679"N	80°13'20.1809"W	4484.21	2.974	0.48	-0.39	-0.27
12925.00	89.350	326.780	8226.69	6722.69	3694.82	4557.40	180.23	1765011.66	411450.61	39°37'38.6467"N	80°13'20.8586"W	4560.96	2.265	1.17	1.03	0.55
13020.00	89.410	326.700	8227.72	6723.72	3789.81	4636.83	128.13	1764959.56	411530.04	39°37'39.4275"N	80°13'21.5326"W	4638.60	1.583	0.11	0.06	-0.08
13115.00	89.420	326.450	8228.69	6724.69	3884.80	4716.11	75.80	1764907.24	411609.32	39°37'40.2069"N	80°13'22.2095"W	4716.72	0.921	0.26	0.01	-0.26
13210.00	89.200	326.350	8229.83	6725.83	3979.79	4795.24	23.24	1764854.68	411688.43	39°37'40.9847"N	80°13'22.8895"W	4795.29	0.278	0.25	-0.23	-0.11



# Actual Wellpath Report

Sullivan 7H AWP Proj: 21638'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Sullivan 7H
Field	Monongalia	API/Legal	
Facility	Sullivan Pad	Wellbore	Sullivan 7H AWB
Slot	Slot #07		

WELLPATH DATA (240 stations)																
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	TVDS [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]
13304.00	89.480	326.070	8230.91	8726.91	4073.79	4873.35	-29.04	1764802.40	411766.54	39°37'41.7525"N	80°13'23.5656"W	4873.44	359.659	0.42	0.30	-0.30
13399.00	89.600	326.620	8231.68	8727.68	4168.78	4952.43	-81.68	1764749.76	411845.61	39°37'42.5298"N	80°13'24.2465"W	4953.10	359.055	0.59	0.13	0.58
13493.00	90.280	326.360	8231.77	8727.77	4262.78	5030.80	-133.58	1764697.87	411923.98	39°37'43.3002"N	80°13'24.9178"W	5032.58	358.479	0.77	0.72	-0.28
13588.00	90.580	326.480	8231.06	8727.06	4357.78	5109.95	-186.12	1764645.33	412003.12	39°37'44.0782"N	80°13'25.5975"W	5113.33	357.914	0.34	0.32	0.13
13683.00	89.290	326.430	8231.17	8727.17	4452.78	5189.12	-238.62	1764592.84	412082.29	39°37'44.8565"N	80°13'26.2766"W	5194.61	357.367	1.36	-1.36	-0.05
13778.00	89.910	327.030	8231.83	8727.83	4547.77	5268.55	-290.73	1764540.73	412161.72	39°37'45.6373"N	80°13'26.9508"W	5276.56	356.841	0.91	0.65	0.63
13873.00	89.320	326.270	8232.47	8728.47	4642.77	5347.90	-342.96	1764488.50	412241.06	39°37'46.4173"N	80°13'27.6264"W	5358.89	356.331	1.01	-0.62	-0.80
13967.00	89.170	326.210	8233.71	8729.71	4736.76	5426.04	-395.19	1764436.28	412319.20	39°37'47.1854"N	80°13'28.3020"W	5440.42	355.834	0.17	-0.16	-0.06
14062.00	89.230	326.460	8235.04	8731.04	4831.75	5505.10	-447.85	1764383.62	412398.26	39°37'47.9625"N	80°13'28.9831"W	5523.29	355.349	0.27	0.06	0.26
14157.00	89.450	326.390	8236.13	8732.13	4926.75	5584.25	-500.38	1764331.09	412477.40	39°37'48.7405"N	80°13'29.6627"W	5606.62	354.880	0.24	0.23	-0.07
14253.00	88.680	326.650	8237.70	8733.70	5022.73	5664.31	-553.33	1764278.14	412557.45	39°37'49.5275"N	80°13'30.3477"W	5691.27	354.421	0.85	-0.80	0.27
14348.00	89.050	326.730	8239.58	8735.58	5117.71	5743.69	-605.49	1764225.99	412636.82	39°37'50.3078"N	80°13'31.0226"W	5775.51	353.982	0.40	0.39	0.08
14443.00	88.800	326.430	8241.36	8737.36	5212.69	5822.96	-657.81	1764173.68	412716.10	39°37'51.0871"N	80°13'31.6993"W	5860.00	353.555	0.41	-0.26	-0.32
14538.00	88.120	326.440	8243.91	8739.91	5307.66	5902.09	-710.31	1764121.17	412795.22	39°37'51.8649"N	80°13'32.3786"W	5944.68	353.138	0.72	-0.72	0.01
14632.00	88.830	326.290	8246.41	8742.41	5401.62	5980.33	-762.36	1764069.13	412873.45	39°37'52.6339"N	80°13'33.0518"W	6028.73	352.735	0.77	0.76	-0.16
14728.00	87.050	325.780	8249.87	8745.87	5497.56	6059.89	-815.95	1764015.54	412953.01	39°37'53.4159"N	80°13'33.7451"W	6114.58	352.331	1.93	-1.85	-0.53
14823.00	86.400	326.110	8255.29	8751.29	5592.40	6138.47	-869.07	1763962.43	413031.59	39°37'54.1883"N	80°13'34.4320"W	6199.69	351.942	0.77	-0.68	0.35
14918.00	87.290	326.760	8260.52	8756.52	5687.25	6217.51	-921.51	1763909.99	413110.62	39°37'54.9652"N	80°13'35.1104"W	6285.43	351.569	1.16	0.94	0.68
15013.00	88.650	326.270	8263.89	8759.89	5782.19	6296.69	-973.89	1763857.61	413189.80	39°37'55.7435"N	80°13'35.7881"W	6371.56	351.208	1.52	1.43	-0.52
15108.00	88.620	325.780	8266.15	8762.15	5877.16	6375.45	-1026.96	1763804.54	413268.55	39°37'56.5176"N	80°13'36.4745"W	6457.63	350.849	0.52	-0.03	-0.52
15203.00	89.230	325.730	8267.93	8763.93	5972.14	6453.97	-1080.41	1763751.09	413347.06	39°37'57.2893"N	80°13'37.1658"W	6543.78	350.497	0.64	0.64	-0.05
15298.00	89.260	326.460	8269.18	8765.18	6067.13	6532.81	-1133.40	1763698.11	413425.90	39°37'58.0642"N	80°13'37.8512"W	6630.40	350.158	0.77	0.03	0.77
15394.00	87.750	326.250	8271.69	8767.69	6163.09	6612.70	-1186.57	1763644.94	413505.78	39°37'58.8495"N	80°13'38.5390"W	6718.31	349.827	1.59	-1.57	-0.22
15488.00	87.010	326.280	8275.98	8771.98	6256.99	6690.79	-1238.72	1763592.80	413583.87	39°37'59.6170"N	80°13'39.2136"W	6804.49	349.511	0.79	-0.79	0.03
15584.00	86.060	325.980	8281.79	8777.79	6352.82	6770.35	-1292.12	1763539.40	413663.42	39°38'0.3990"N	80°13'39.9044"W	6892.55	349.195	1.04	-0.99	-0.31
15680.00	87.660	325.770	8287.05	8783.05	6448.67	6849.70	-1345.89	1763485.63	413742.77	39°38'1.1789"N	80°13'40.5999"W	6980.67	348.884	1.68	1.67	-0.22
15774.00	87.010	326.120	8291.42	8787.42	6542.56	6927.49	-1398.47	1763433.05	413820.56	39°38'1.9435"N	80°13'41.2800"W	7067.24	348.587	0.79	-0.69	0.37
15869.00	88.250	326.490	8295.34	8791.34	6637.48	7006.46	-1451.13	1763380.40	413899.52	39°38'2.7197"N	80°13'41.9612"W	7155.16	348.299	1.36	1.31	0.39
15964.00	87.200	326.270	8299.12	8795.12	6732.40	7085.51	-1503.69	1763327.84	413978.56	39°38'3.4967"N	80°13'42.6412"W	7243.31	348.018	1.13	-1.11	-0.23
16059.00	87.570	326.450	8303.45	8799.45	6827.30	7164.52	-1556.26	1763275.27	414057.57	39°38'4.2733"N	80°13'43.3213"W	7331.59	347.745	0.43	0.39	0.19





# Actual Wellpath Report

Sullivan 7H AWP Proj: 21638'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Sullivan 7H
Field	Monongalia	API/Legal	
Facility	Sullivan Pad	Wellbore	Sullivan 7H AWB
Slot	Slot #07		

WELLPATH DATA (240 stations)																
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	TVDSS [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]
16154.00	87.020	326.540	8307.93	6803.93	6922.20	7243.64	-1608.64	1763222.89	414136.69	39°38'5.0510"N	80°13'43.9990"W	7420.11	347.479	0.59	-0.58	0.09
16249.00	87.110	326.340	8312.80	6808.80	7017.07	7322.70	-1661.09	1763170.45	414215.74	39°38'5.8282"N	80°13'44.6776"W	7508.74	347.219	0.23	0.09	-0.21
16344.00	86.620	326.120	8317.99	6813.99	7111.93	7401.56	-1713.82	1763117.73	414294.59	39°38'6.6032"N	80°13'45.3597"W	7597.38	346.963	0.57	-0.52	-0.23
16439.00	86.800	326.110	8323.44	6819.44	7206.77	7480.29	-1766.70	1763064.85	414373.32	39°38'7.3771"N	80°13'46.0437"W	7686.09	346.711	0.19	0.19	-0.01
16534.00	88.340	326.900	8327.47	6823.47	7301.68	7559.44	-1819.08	1763012.48	414452.47	39°38'8.1551"N	80°13'46.7214"W	7775.23	346.470	1.82	1.62	0.83
16629.00	87.720	326.460	8330.74	6826.74	7396.62	7638.78	-1871.23	1762960.33	414531.80	39°38'8.9349"N	80°13'47.3962"W	7864.63	346.236	0.80	-0.65	-0.46
16724.00	88.060	326.370	8334.24	6830.24	7491.56	7717.86	-1923.74	1762907.81	414610.88	39°38'9.7123"N	80°13'48.0757"W	7954.01	346.004	0.37	0.36	-0.09
16820.00	87.870	326.340	8337.65	6833.65	7587.50	7797.73	-1976.90	1762854.66	414690.74	39°38'10.4973"N	80°13'48.7634"W	8044.42	345.774	0.20	-0.20	-0.03
16914.00	88.370	326.550	8340.73	6836.73	7681.45	7876.02	-2028.83	1762960.33	414531.80	39°38'11.2669"N	80°13'49.4353"W	8133.14	345.555	0.58	0.53	0.22
17009.00	88.370	326.460	8343.43	6839.43	7776.41	7955.22	-2081.23	1762750.33	414848.22	39°38'12.0453"N	80°13'50.1133"W	8222.96	345.339	0.09	0.00	-0.09
17103.00	88.520	326.040	8345.98	6841.98	7870.37	8033.35	-2133.44	1762698.13	414926.34	39°38'12.8132"N	80°13'50.7887"W	8311.81	345.127	0.47	0.16	-0.45
17198.00	89.880	326.510	8347.31	6843.31	7965.36	8112.35	-2186.18	1762645.40	415005.34	39°38'13.5898"N	80°13'51.4710"W	8401.76	344.918	1.51	1.43	0.49
17293.00	91.260	326.280	8346.36	6842.36	8060.35	8191.47	-2238.75	1762592.83	415084.45	39°38'14.3674"N	80°13'52.1513"W	8491.89	344.714	1.47	1.45	-0.24
17388.00	92.710	326.250	8343.07	6839.07	8155.29	8270.42	-2291.48	1762540.10	415163.40	39°38'15.1434"N	80°13'52.8334"W	8582.00	344.514	1.53	1.53	-0.03
17483.00	89.690	326.770	8341.08	6837.08	8250.26	8349.62	-2343.88	1762487.70	415242.60	39°38'15.9219"N	80°13'53.5114"W	8672.37	344.320	3.23	-3.18	0.55
17578.00	89.750	326.890	8341.55	6837.55	8345.26	8429.14	-2395.86	1762435.73	415322.11	39°38'16.7036"N	80°13'54.1841"W	8763.02	344.133	0.14	0.06	0.13
17673.00	89.050	326.590	8342.54	6838.54	8440.25	8508.57	-2447.95	1762383.64	415401.54	39°38'17.4844"N	80°13'54.8583"W	8853.72	343.949	0.80	-0.74	-0.32
17768.00	90.220	326.650	8343.15	6839.15	8535.25	8587.90	-2500.22	1762331.37	415480.86	39°38'18.2642"N	80°13'55.5346"W	8944.45	343.768	1.23	1.23	0.06
17864.00	90.740	327.170	8342.34	6838.34	8631.24	8668.33	-2552.63	1762278.97	415561.29	39°38'19.0548"N	80°13'56.2129"W	9036.36	343.591	0.77	0.54	0.54
17959.00	89.880	326.720	8341.83	6837.83	8726.23	8747.95	-2604.45	1762227.15	415640.90	39°38'19.8375"N	80°13'56.8835"W	9127.42	343.421	1.02	-0.91	-0.47
18054.00	90.250	325.250	8341.72	6837.72	8821.22	8826.69	-2657.59	1762174.01	415719.64	39°38'20.6114"N	80°13'57.5710"W	9218.09	343.244	1.60	0.39	-1.55
18150.00	90.430	326.070	8341.15	6837.15	8917.21	8905.96	-2711.74	1762119.87	415798.90	39°38'21.3904"N	80°13'58.2714"W	9309.65	343.065	0.87	0.19	0.85
18245.00	89.850	325.960	8340.92	6836.92	9012.21	8984.73	-2764.84	1762066.77	415877.67	39°38'22.1645"N	80°13'58.9584"W	9400.52	342.895	0.62	-0.61	-0.12
18341.00	90.740	326.580	8340.43	6836.43	9108.21	9064.56	-2818.15	1762013.46	415957.50	39°38'22.9492"N	80°13'59.6481"W	9492.54	342.730	1.13	0.93	0.65
18436.00	90.310	326.970	8339.56	6835.56	9203.20	9144.03	-2870.20	1761961.42	416036.96	39°38'23.7304"N	80°14'0.3217"W	9583.91	342.574	0.61	-0.45	0.41
18532.00	91.200	326.640	8338.29	6834.29	9299.19	9224.36	-2922.75	1761908.87	416117.28	39°38'24.5200"N	80°14'1.0019"W	9676.32	342.419	0.99	0.93	-0.34
18626.00	91.170	326.320	8336.35	6832.35	9393.17	9302.71	-2974.65	1761856.97	416195.63	39°38'25.2901"N	80°14'1.6734"W	9766.72	342.268	0.34	-0.03	-0.34
18722.00	91.540	326.340	8334.08	6830.08	9489.14	9382.58	-3027.86	1761803.77	416275.50	39°38'26.0751"N	80°14'2.3619"W	9859.04	342.115	0.39	0.39	0.02
18818.00	91.170	326.060	8331.81	6827.81	9585.12	9462.33	-3081.25	1761750.38	416355.24	39°38'26.8590"N	80°14'3.0527"W	9951.37	341.963	0.48	-0.39	-0.29
18913.00	91.480	326.590	8329.61	6825.61	9680.09	9541.37	-3133.91	1761697.72	416434.28	39°38'27.6358"N	80°14'3.7341"W	10042.86	341.817	0.65	0.33	0.56







# Actual Wellpath Report

Sullivan 7H AWP Proj: 21638'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Sullivan 7H
Field	Monongalia	API/Legal	
Facility	Sullivan Pad	Wellbore	Sullivan 7H AWB
Slot	Slot #07		

WELLPATH COMPOSITION - Ref Wellbore: Sullivan 7H AWB Ref Wellpath: Sullivan 7H AWP Proj: 21638'					
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
28.00	1298.00	BH Generic gyro - northseeking (Standard)	01 17.5" Gyro <Northseeking-Standard> (28'- 1298')	Sullivan 7H AWB	4/6/2023
1298.00	2556.00	OWSG MWD rev2 + HRGM	02 12.25" SDI MWD <OWSG MWD Rev.2+HRGM> (1298')(1393'-2556')	Sullivan 7H AWB	4/6/2023
2556.00	7053.00	OWSG MWD rev2 + HRGM	03 8.75" SDI MWD <OWSG MWD Rev.2+HRGM> (2556')(2651'-7053')	Sullivan 7H AWB	4/6/2023
7053.00	21638.00	BH AutoTrak Curve/eXpress (2019) (HRGM, Short spacing)	04 8.5" BH ATK Curve <HRGM+Short Spacing> (7053')(7124'-21613')	Sullivan 7H AWB	4/6/2023

02/23/2024

REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Sullivan 7H
Field	Monongalia	API/Legal	
Facility	Sullivan Pad	Wellbore	Sullivan 7H AWB
Slot	Slot #07		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
50.00	0.270	167.110	50.00	01_17.5" Gyro <Northseeking-Standard> (28'- 1298')
1393.00	3.930	159.290	1391.95	02_12.25" SDI MWD <OWSG MWD Rev.2+HRGM> (1298')(1393'-2556')
2651.00	3.530	59.110	2648.34	03_8.75" SDI MWD <OWSG MWD Rev.2+HRGM> (2556')(2651'-7053')
7124.00	34.650	76.520	6661.50	04_8.5" BH ATK Curve <HRGM+Short Spacing> (7053')(7124'-21613')
21613.00	90.310	326.450	8220.91	Final Survey MD @ 21613'
21638.00	90.310	326.450	8220.78	Projected MD at TD: 21638'

COMMENTS
<p><b>Wellpath general comments</b>            API: 47061019190000            BH Job #: 111699088            Rig: Patterson 277            Duration: 04/07/2023 - 04/11/2023</p> <p>01_17.5" Gyro &lt;Northseeking-Standard&gt; (28'- 1298')            02_12.25" SDI MWD &lt;OWSG MWD Rev.2+HRGM&gt; (1298')(1393'-2556')            03_8.75" SDI MWD &lt;OWSG MWD Rev.2+HRGM&gt; (2556')(2651'-7053')            04_8.5" BH ATK Curve &lt;HRGM+Short Spacing&gt; (7053')(7124'-21613')</p> <p>Final Survey MD @ 21613'            Projected MD at TD: 21638'</p>