

NORTHEAST NATURAL ENERGY, LLC

Location: Monongalia County, WV
Field: Monongalia
Facility: Dolls Run Pad

Slot: Slot #5H
Well: Dolls Run 5H
Wellbore: Dolls Run 5H PWB

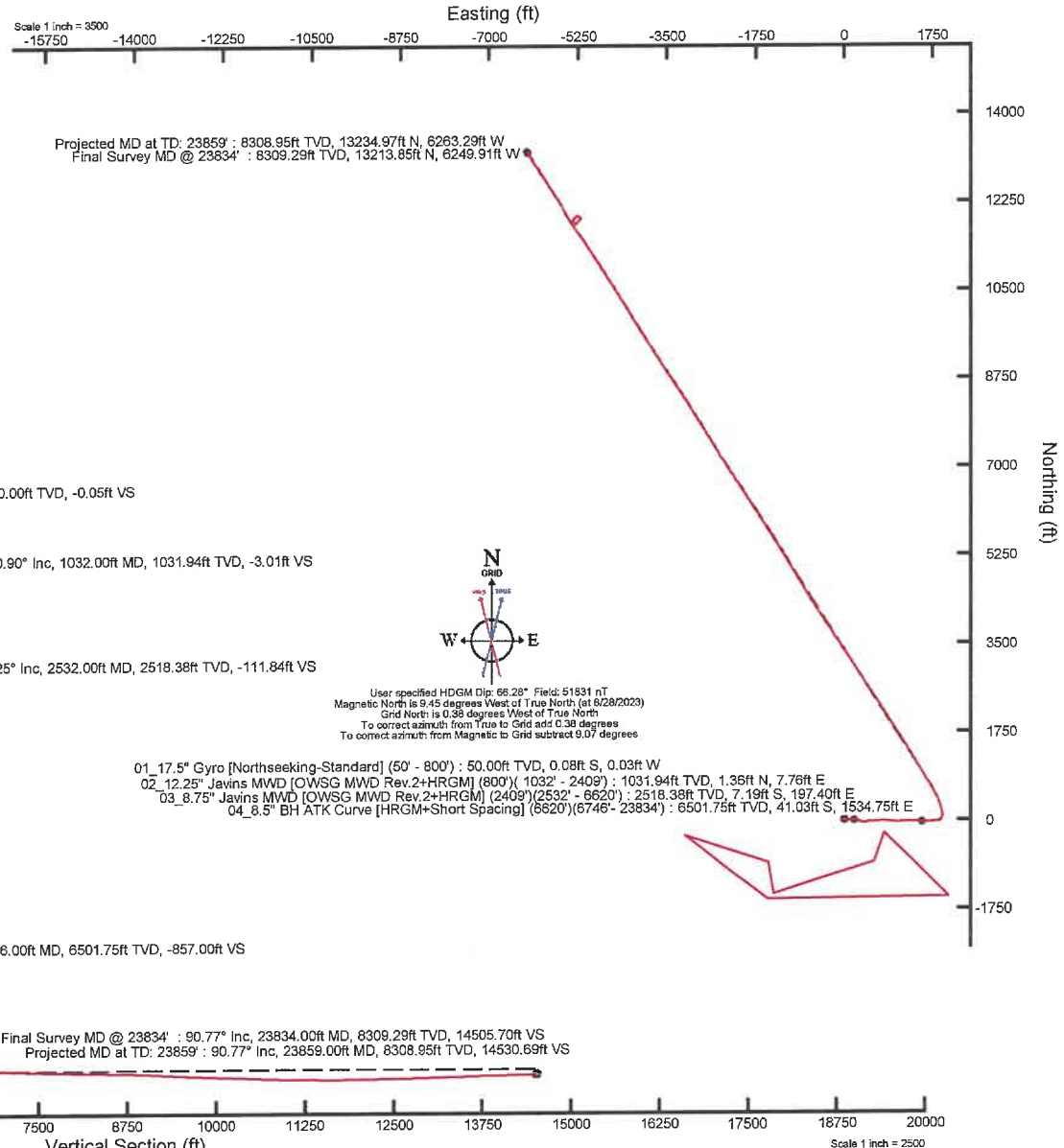
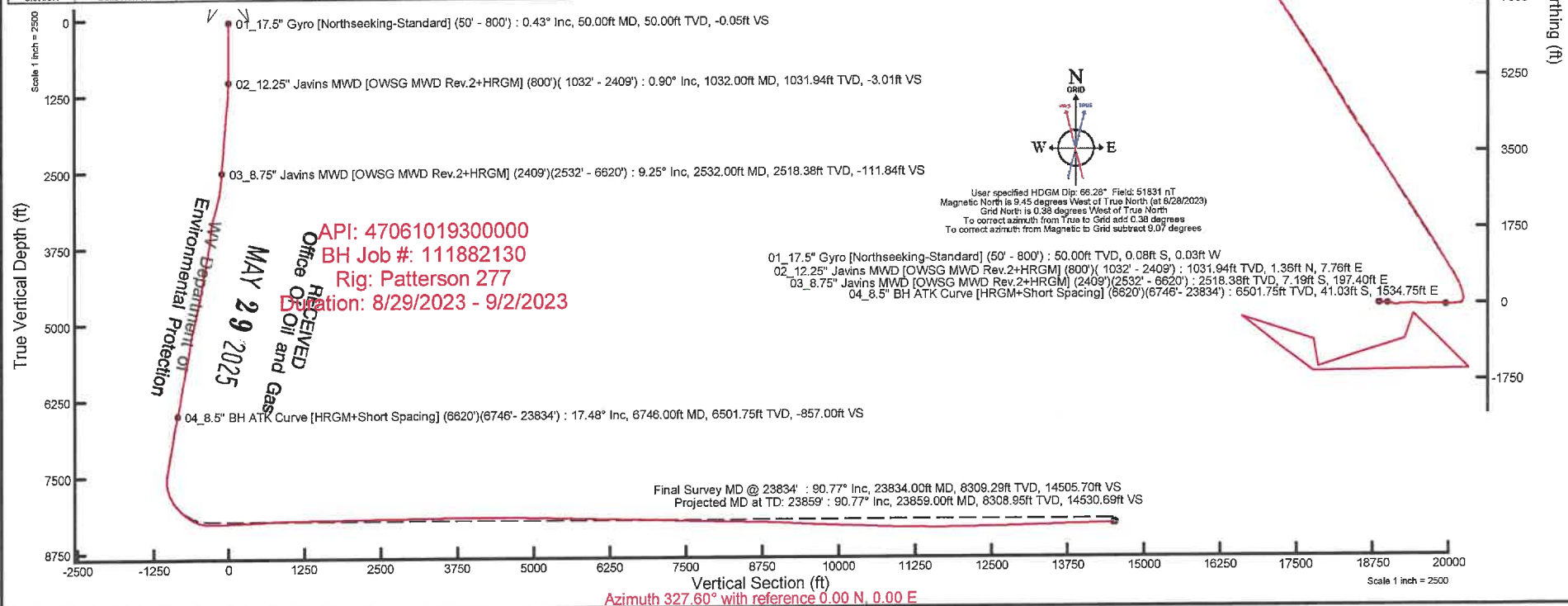


Plot reference wellbore is Dolls Run 5H Rev-A-0	Grid System: NAD83 (Lambert West Virginia SP, Northern Zone (4701), US feet)
True vertical depths are referenced to Patterson 277 (RKB)	North Reference: Old north
Reference wellbore measured depths are referenced to Patterson 277 (RKB)	Scale: True distance
Patterson 277 (RKB) to Mean Sea Level: 1500 feet	Coordinates are in feet referenced to Slot
Mean Sea Level to Ground level (At Slot: Slot #5H) -1522 feet	Depths are in feet
Other wellbore MDs are referenced to each plot's default MD datum	Created by manupj on 2023-09-05, Database: /VIA_MPS_EAST/US_Debs

Location Information					
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	
Dolls Run Pad	1801477.970	417816.940	39°38'44.2060"N	80°05'35.3217"W	
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude
Slot #5H	59.28	9.24	1801487.210	417876.220	39°38'44.7924"N
Patterson 277 (RKB) to Ground level (At Slot: Slot #5H)			28ft		
Mean Sea Level to Ground level (At Slot: Slot #5H)			-1522ft		
Patterson 277 (RKB) to Mean Sea Level			1550ft		

Well Profile Data							
Design Comment	MD (ft)	Inc (")	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	VS (ft)
Tie On	6620.00	18.230	100.790	8381.61	-34.98	1496.51	-631.49
Projection	6781.00	18.230	100.790	8634.73	-44.41	1546.09	-666.53
End Bold/Start Tangent	7041.01	19.713	86.406	8780.77	-48.51	1629.51	-674.25
Curve KOP	7746.43	19.713	86.406	7444.84	-29.45	1886.58	-1025.25
Landing Pt	8984.59	90.000	327.589	8235.00	701.80	1699.43	-317.57
Dolls Run 5H IP#1 Rev-1	21691.67	90.000	327.589	8235.00	11430.86	-5106.70	12389.31
Start Hold	21783.68	90.000	325.299	8235.00	11507.54	-5180.55	12481.30
Dolls Run 5H IP#2 Rev-1	22192.25	90.000	325.299	8235.00	11843.28	-5383.04	12689.34
Start Hold	22439.90	90.000	332.109	8235.00	12054.77	-5521.80	13136.80
Start Turn	22538.53	90.000	332.109	8235.00	12133.45	-5663.25	13225.55
Dolls Run 5H IP#3 Rev-1	22682.52	90.000	327.599	8235.00	12275.23	-5646.59	13369.37
BH	23636.14	90.000	327.599	8235.00	13298.62	-6257.63	14931.59

Well Data			
Slot	Well	Wellbore	Wellpath
Slot #5H	Dolls Run 5H	Dolls Run 5H A/WB	Dolls Run 5H AWP Proj: 23859'
Slot #5H	Dolls Run 5H	Dolls Run 5H PWB	Dolls Run 5H Rev-A-0



Page 1 of 33



Actual Wellpath Report

Dolls Run 5H AWP Proj: 23859'

Page 1 of 14



REFERENCE WELLPATH IDENTIFICATION

Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Dolls Run 5H
Field	Monongalia	API/Legal	
Facility	Dolls Run Pad	Wellbore	Dolls Run 5H AWB
Slot	Slot #5H		

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	9/5/2023 at 3:33:11 PM
Convergence at slot	0.38° 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	59.28	9.24	1801487.21	417876.22	39°38'44.7924"N	80°05'35.2085"W
Facility Reference Pt			1801477.97	417816.94	39°38'44.2060"N	80°05'35.3217"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	1550.00ft
Horizontal Reference Pt	Slot	Patterson 277 (RKB) to Mean Sea Level	1550.00ft
Vertical Reference Pt	Patterson 277 (RKB)	Patterson 277 (RKB) to Ground Level at Slot (Slot #5H)	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	327.60°

Page 17 of 33

Actual Wellpath Report

Dolls Run 5H AWP Proj: 23859'

Page 2 of 14

REFERENCE WELLPATH IDENTIFICATION

Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Dolls Run 5H
Field	Monongalia	API/Legal	
Facility	Dolls Run Pad	Wellbore	Dolls Run 5H AWP
Slot	Slot #5H		

WELLPATH DATA (261 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	203.930	0.00	-1550.00	0.00	0.00	0.00	1801487.21	417876.22	39°38'44.7924"N	80°05'35.2085"W	0.00	0.000	0.00	0.00	0.00
28.00	0.000	203.930	28.00	-1522.00	0.00	0.00	0.00	1801487.21	417876.22	39°38'44.7924"N	80°05'35.2085"W	0.00	0.000	0.00	0.00	0.00
50.00	0.430	203.930	50.00	-1500.00	-0.05	-0.08	-0.03	1801487.18	417876.14	39°38'44.7917"N	80°05'35.2090"W	0.08	203.930	1.95	1.95	0.00
100.00	0.270	86.750	100.00	-1450.00	-0.21	-0.24	0.01	1801487.22	417875.98	39°38'44.7901"N	80°05'35.2084"W	0.24	178.085	1.21	-0.32	-234.36
150.00	0.290	184.170	150.00	-1400.00	-0.37	-0.36	0.12	1801487.33	417875.86	39°38'44.7889"N	80°05'35.2070"W	0.38	162.065	0.84	0.04	194.84
200.00	0.240	38.400	200.00	-1350.00	-0.43	-0.40	0.17	1801487.38	417875.82	39°38'44.7885"N	80°05'35.2063"W	0.44	156.899	1.01	-0.10	-291.54
250.00	0.380	180.180	250.00	-1300.00	-0.54	-0.49	0.24	1801487.45	417875.73	39°38'44.7876"N	80°05'35.2055"W	0.54	154.098	1.18	0.28	283.56
300.00	0.250	349.730	300.00	-1250.00	-0.58	-0.55	0.22	1801487.43	417875.67	39°38'44.7871"N	80°05'35.2057"W	0.59	158.344	1.25	-0.26	339.10
350.00	0.300	112.150	350.00	-1200.00	-0.58	-0.49	0.32	1801487.53	417875.73	39°38'44.7876"N	80°05'35.2044"W	0.58	146.865	0.97	0.10	244.84
400.00	0.290	238.960	400.00	-1150.00	-0.69	-0.60	0.33	1801487.54	417875.62	39°38'44.7865"N	80°05'35.2043"W	0.69	151.193	1.06	-0.02	253.62
450.00	0.310	39.920	450.00	-1100.00	-0.64	-0.56	0.31	1801487.52	417875.66	39°38'44.7869"N	80°05'35.2045"W	0.64	151.228	1.18	0.04	321.92
500.00	0.500	101.970	500.00	-1050.00	-0.75	-0.51	0.61	1801487.82	417875.71	39°38'44.7875"N	80°05'35.2007"W	0.79	129.660	0.90	0.38	124.10
550.00	0.350	39.380	550.00	-1000.00	-0.86	-0.43	0.92	1801488.13	417875.79	39°38'44.7882"N	80°05'35.1967"W	1.02	115.194	0.92	-0.30	-125.18
600.00	0.890	70.850	599.99	-950.01	-0.90	-0.19	1.38	1801488.59	417876.03	39°38'44.7907"N	80°05'35.1908"W	1.40	97.716	1.24	1.08	62.94
650.00	0.870	59.300	649.99	-900.01	-1.00	0.13	2.08	1801489.29	417876.35	39°38'44.7939"N	80°05'35.1820"W	2.08	86.319	0.36	-0.04	-23.10
700.00	0.680	62.410	699.98	-850.02	-1.04	0.46	2.67	1801489.88	417876.68	39°38'44.7972"N	80°05'35.1745"W	2.71	80.112	0.39	-0.38	6.22
750.00	0.860	85.860	749.98	-800.02	-1.24	0.63	3.30	1801490.51	417876.85	39°38'44.7989"N	80°05'35.1664"W	3.36	79.215	0.72	0.36	46.90
800.00	0.990	68.720	799.97	-750.03	-1.50	0.81	4.08	1801491.29	417877.03	39°38'44.8007"N	80°05'35.1564"W	4.16	78.730	0.61	0.26	-34.28
1032.00	0.900	95.840	1031.94	-518.06	-3.01	1.36	7.76	1801494.97	417877.58	39°38'44.8063"N	80°05'35.1094"W	7.88	80.095	0.19	-0.04	11.69
1127.00	3.110	90.270	1126.88	-423.12	-4.87	1.27	11.08	1801498.29	417877.49	39°38'44.8057"N	80°05'35.0670"W	11.15	83.476	2.33	2.33	-5.86
1221.00	4.620	88.230	1220.66	-329.34	-8.17	1.37	17.41	1801504.62	417877.59	39°38'44.8071"N	80°05'34.9860"W	17.47	85.495	1.61	1.61	-2.17
1316.00	6.020	99.280	1315.25	-234.75	-13.44	0.69	26.16	1801513.36	417876.91	39°38'44.8009"N	80°05'34.8742"W	26.16	88.496	1.82	1.47	11.63
1411.00	7.140	100.300	1409.62	-140.38	-20.75	-1.17	36.88	1801524.09	417875.05	39°38'44.7833"N	80°05'34.7370"W	36.90	91.820	1.19	1.18	1.07
1506.00	8.650	100.240	1503.72	-46.28	-29.60	-3.50	49.72	1801536.93	417872.72	39°38'44.7611"N	80°05'34.5726"W	49.84	94.024	1.59	1.59	-0.06
1601.00	7.170	103.120	1597.81	47.81	-38.67	-6.11	62.53	1801549.73	417870.11	39°38'44.7361"N	80°05'34.4087"W	62.82	95.585	1.61	-1.56	3.03
1695.00	5.250	103.230	1691.26	141.26	-45.93	-8.43	72.43	1801559.63	417867.79	39°38'44.7139"N	80°05'34.2820"W	72.92	96.639	2.04	-2.04	0.12
1789.00	5.820	101.330	1784.82	234.82	-52.29	-10.35	81.29	1801568.49	417865.87	39°38'44.6955"N	80°05'34.1685"W	81.94	97.257	0.64	0.61	-2.02
1884.00	7.320	100.290	1879.19	329.19	-59.73	-12.38	91.96	1801579.17	417863.84	39°38'44.6761"N	80°05'34.0319"W	92.79	97.666	1.58	1.58	-1.09
1978.00	8.570	93.320	1972.29	422.29	-67.88	-13.85	104.85	1801592.05	417862.37	39°38'44.6624"N	80°05'33.8670"W	105.76	97.527	1.68	1.33	-7.41
2073.00	9.520	87.970	2066.11	516.11	-75.98	-13.98	119.77	1801606.97	417862.24	39°38'44.6620"N	80°05'33.6763"W	120.58	96.660	1.33	1.00	-5.63

Page 18 of 33

Actual Wellpath Report

Dolls Run 5H AWP Proj: 23859'
Page 3 of 14

REFERENCE WELLPATH IDENTIFICATION

Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Dolls Run 5H
Field	Monongalia	API/Legal	
Facility	Dolls Run Pad	Wellbore	Dolls Run 5H AWB
Slot	Slot #5H		

WELLPATH DATA (261 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]
2168.00	10.930	82.220	2159.60	609.60	-83.71	-12.49	136.54	1801623.74	417863.73	39°38'44.6779"N	80°05'33.4620"W	137.11	95.225	1.83	1.48	-6.05
2263.00	11.020	84.570	2252.86	702.86	-91.58	-10.41	154.51	1801641.71	417865.81	39°38'44.6997"N	80°05'33.2325"W	154.86	93.854	0.48	0.09	2.47
2357.00	8.980	87.360	2345.43	795.43	-99.29	-9.22	170.78	1801657.98	417867.00	39°38'44.7125"N	80°05'33.0246"W	171.03	93.091	2.23	-2.17	2.97
2409.00	8.390	86.990	2396.84	846.84	-103.17	-8.83	178.62	1801665.82	417867.39	39°38'44.7168"N	80°05'32.9244"W	178.84	92.832	1.14	-1.13	-0.71
2532.00	9.250	83.170	2518.38	968.38	-111.84	-7.19	197.40	1801684.60	417869.03	39°38'44.7343"N	80°05'32.6845"W	197.53	92.085	0.85	0.70	-3.11
2627.00	8.730	88.350	2612.22	1062.22	-118.82	-6.07	212.19	1801699.38	417870.15	39°38'44.7463"N	80°05'32.4955"W	212.27	91.639	1.01	-0.55	5.45
2725.00	8.110	98.430	2709.16	1159.16	-127.15	-6.87	226.46	1801713.66	417869.35	39°38'44.7393"N	80°05'32.3130"W	226.56	91.738	1.63	-0.63	10.29
2820.00	10.710	104.560	2802.88	1252.88	-137.98	-10.07	241.64	1801728.83	417866.15	39°38'44.7086"N	80°05'32.1187"W	241.85	92.387	2.93	2.74	6.45
2914.00	13.070	112.920	2894.86	1344.86	-153.11	-16.41	259.88	1801747.08	417859.81	39°38'44.6472"N	80°05'31.8849"W	260.40	93.613	3.10	2.51	8.89
3009.00	16.270	113.100	2986.75	1436.75	-172.91	-25.82	282.02	1801769.22	417850.40	39°38'44.5557"N	80°05'31.6011"W	283.20	95.230	3.37	3.37	0.19
3104.00	19.160	109.030	3077.24	1527.24	-196.08	-36.12	309.01	1801796.20	417840.10	39°38'44.4556"N	80°05'31.2553"W	311.11	96.668	3.31	3.04	-4.28
3198.00	22.260	103.190	3165.17	1615.17	-220.86	-45.22	340.94	1801828.13	417831.00	39°38'44.3678"N	80°05'30.8463"W	343.92	97.555	3.96	3.30	-6.21
3293.00	24.630	94.690	3252.34	1702.34	-245.67	-50.95	378.20	1801865.39	417825.28	39°38'44.3136"N	80°05'30.3695"W	381.62	97.672	4.34	2.49	-8.95
3387.00	23.690	85.460	3338.14	1788.14	-266.31	-51.05	416.56	1801903.75	417825.17	39°38'44.3150"N	80°05'29.8791"W	419.68	96.987	4.14	-1.00	-9.82
3482.00	19.090	76.590	3426.60	1876.60	-280.30	-45.94	450.73	1801937.91	417830.29	39°38'44.3678"N	80°05'29.4428"W	453.06	95.819	5.91	-4.84	-9.34
3577.00	15.440	77.700	3517.30	1967.30	-289.70	-39.64	478.20	1801965.38	417836.59	39°38'44.4319"N	80°05'29.0921"W	479.84	94.738	3.86	-3.84	1.17
3675.00	15.770	81.050	3611.69	2061.69	-299.48	-34.79	504.10	1801991.28	417841.44	39°38'44.4815"N	80°05'28.7614"W	505.30	93.947	0.98	0.34	3.42
3770.00	18.010	88.560	3702.60	2152.60	-312.18	-32.41	531.55	1802018.72	417843.81	39°38'44.5068"N	80°05'28.4108"W	532.53	93.489	3.29	2.36	7.91
3864.00	18.240	85.950	3791.93	2241.93	-326.64	-31.00	560.75	1802047.92	417845.22	39°38'44.5226"N	80°05'28.0376"W	561.60	93.165	0.90	0.24	-2.78
3958.00	19.370	88.340	3880.92	2330.92	-341.59	-29.51	591.00	1802078.18	417846.71	39°38'44.5393"N	80°05'27.6509"W	591.74	92.859	1.45	1.20	2.54
4053.00	19.940	90.400	3970.38	2420.38	-358.42	-29.17	622.95	1802110.12	417847.05	39°38'44.5447"N	80°05'27.2426"W	623.63	92.681	0.94	0.60	2.17
4148.00	19.520	84.710	4059.81	2509.81	-374.43	-27.82	654.96	1802142.13	417848.40	39°38'44.5602"N	80°05'26.8335"W	655.55	92.432	2.07	-0.44	-5.99
4243.00	21.070	89.570	4148.92	2598.92	-390.71	-26.23	687.84	1802175.01	417849.99	39°38'44.5780"N	80°05'26.4133"W	688.34	92.184	2.41	1.63	5.12
4337.00	21.090	87.120	4236.63	2686.63	-407.99	-25.25	721.63	1802208.80	417850.97	39°38'44.5899"N	80°05'25.9814"W	722.07	92.004	0.94	0.02	-2.61
4432.00	20.630	80.720	4325.42	2775.42	-422.98	-21.69	755.22	1802242.39	417854.53	39°38'44.6272"N	80°05'25.5523"W	755.53	91.645	2.45	-0.48	-6.74
4527.00	18.240	84.000	4415.00	2865.00	-436.17	-17.44	786.53	1802273.69	417858.78	39°38'44.6713"N	80°05'25.1524"W	786.72	91.270	2.76	-2.52	3.45
4625.00	17.340	93.730	4508.33	2958.33	-451.60	-16.79	816.36	1802303.52	417859.44	39°38'44.6797"N	80°05'24.7711"W	816.54	91.178	3.17	-0.92	9.93
4720.00	18.540	99.920	4598.72	3048.72	-470.12	-20.31	845.37	1802332.53	417855.91	39°38'44.6468"N	80°05'24.4000"W	845.61	91.376	2.37	1.26	6.52
4814.00	20.180	98.840	4687.40	3137.40	-490.87	-25.38	876.12	1802363.27	417850.85	39°38'44.5987"N	80°05'24.0065"W	876.48	91.659	1.79	1.74	-1.15
4909.00	19.220	92.160	4776.85	3226.85	-510.55	-28.48	907.94	1802395.09	417847.74	39°38'44.5700"N	80°05'23.5995"W	908.38	91.797	2.58	-1.01	-7.03

Actual Wellpath Report

Dolls Run 5H AWP Proj: 23859'
Page 4 of 14

REFERENCE WELLPATH IDENTIFICATION

Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Dolls Run 5H
Field	Monongalia	API/Legal	
Facility	Dolls Run Pad	Wellbore	Dolls Run 5H AWB
Slot	Slot #5H		

WELLPATH DATA (261 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]
5004.00	19.070	95.910	4866.60	3316.60	-529.04	-30.67	939.00	1802426.15	417845.55	39°38'44.5504"N	80°05'23.2022"W	939.50	91.871	1.30	-0.16	3.95
5099.00	20.530	97.510	4955.98	3405.98	-549.35	-34.45	970.96	1802458.11	417841.78	39°38'44.5152"N	80°05'22.7934"W	971.57	92.032	1.64	1.54	1.68
5193.00	20.990	97.120	5043.88	3493.88	-570.64	-38.69	1004.00	1802491.15	417837.53	39°38'44.4754"N	80°05'22.3706"W	1004.75	92.207	0.51	0.49	-0.41
5288.00	22.410	95.140	5132.15	3582.15	-592.50	-42.42	1038.92	1802526.07	417833.80	39°38'44.4408"N	80°05'21.9238"W	1039.79	92.338	1.68	1.49	-2.08
5382.00	21.690	89.480	5219.28	3669.28	-612.59	-43.87	1074.14	1802561.29	417832.36	39°38'44.4288"N	80°05'21.4735"W	1075.04	92.339	2.39	-0.77	-6.02
5477.00	20.980	84.590	5307.78	3757.78	-629.58	-42.10	1108.63	1802595.78	417834.12	39°38'44.4484"N	80°05'21.0327"W	1109.43	92.175	2.02	-0.75	-5.15
5575.00	20.930	80.020	5399.30	3849.30	-644.22	-37.42	1143.34	1802630.48	417838.81	39°38'44.4970"N	80°05'20.5895"W	1143.95	91.874	1.67	-0.05	-4.66
5670.00	18.600	83.700	5488.70	3938.70	-657.36	-32.81	1175.12	1802662.25	417843.41	39°38'44.5446"N	80°05'20.1836"W	1175.57	91.599	2.78	-2.45	3.87
5765.00	19.140	91.870	5578.61	4028.61	-672.80	-31.66	1205.75	1802692.88	417844.56	39°38'44.5580"N	80°05'19.7922"W	1206.16	91.504	2.84	0.57	8.60
5859.00	23.140	94.950	5666.27	4116.27	-692.69	-33.76	1239.57	1802726.70	417842.47	39°38'44.5394"N	80°05'19.3597"W	1240.02	91.560	4.41	4.26	3.28
5954.00	23.200	89.920	5753.62	4203.62	-714.02	-35.34	1276.88	1802764.01	417840.88	39°38'44.5262"N	80°05'18.8825"W	1277.37	91.585	2.08	0.06	-5.29
6049.00	22.110	83.370	5841.30	4291.30	-731.80	-33.25	1313.36	1802800.49	417842.97	39°38'44.5492"N	80°05'18.4164"W	1313.78	91.450	2.89	-1.15	-6.89
6143.00	19.260	88.340	5929.24	4379.24	-747.42	-30.76	1346.43	1802833.56	417845.47	39°38'44.5760"N	80°05'17.9938"W	1346.79	91.309	3.56	-3.03	5.29
6238.00	19.300	95.220	6018.92	4468.92	-765.02	-31.73	1377.73	1802864.86	417844.49	39°38'44.5684"N	80°05'17.5936"W	1378.10	91.319	2.39	0.04	7.24
6332.00	18.770	89.320	6107.79	4557.79	-782.45	-32.97	1408.33	1802895.45	417843.26	39°38'44.5582"N	80°05'17.2023"W	1408.71	91.341	2.12	-0.56	-6.28
6427.00	17.670	85.040	6198.03	4648.03	-797.14	-31.54	1437.98	1802925.10	417844.68	39°38'44.5742"N	80°05'16.8234"W	1438.32	91.256	1.82	-1.16	-4.51
6525.00	17.660	93.810	6291.42	4741.42	-812.77	-31.24	1467.63	1802954.75	417844.98	39°38'44.5791"N	80°05'16.4444"W	1467.97	91.219	2.71	-0.01	8.95
6620.00	18.230	100.790	6381.81	4831.81	-831.46	-34.98	1496.61	1802983.73	417841.24	39°38'44.5440"N	80°05'16.0736"W	1497.02	91.339	2.34	0.60	7.35
6746.00	17.480	97.160	6501.75	4951.75	-857.00	-41.03	1534.75	1803021.87	417835.20	39°38'44.4867"N	80°05'15.5856"W	1535.30	91.531	1.06	-0.60	-2.88
6840.00	18.650	96.620	6591.11	5041.11	-875.46	-44.52	1563.69	1803050.80	417831.70	39°38'44.4540"N	80°05'15.2153"W	1564.32	91.631	1.26	1.24	-0.57
6935.00	18.790	89.990	6681.10	5131.10	-893.22	-46.27	1594.08	1803081.19	417829.95	39°38'44.4387"N	80°05'14.8267"W	1594.75	91.663	2.24	0.15	-6.98
7029.00	19.540	87.040	6769.89	5219.89	-909.05	-45.45	1624.92	1803112.03	417830.77	39°38'44.4487"N	80°05'14.4325"W	1625.55	91.602	1.30	0.80	-3.14
7123.00	19.460	87.120	6858.50	5308.50	-924.49	-43.86	1656.26	1803143.36	417832.37	39°38'44.4666"N	80°05'14.0321"W	1656.84	91.517	0.09	-0.09	0.09
7218.00	19.130	85.410	6948.16	5398.16	-939.55	-41.81	1687.58	1803174.68	417834.41	39°38'44.4888"N	80°05'13.6318"W	1688.09	91.419	0.69	-0.35	-1.80
7313.00	20.040	85.380	7037.66	5487.66	-954.40	-39.26	1719.32	1803206.42	417836.96	39°38'44.5161"N	80°05'13.2263"W	1719.77	91.308	0.96	0.96	-0.03
7407.00	19.550	85.480	7126.11	5576.11	-969.26	-36.72	1751.05	1803238.15	417839.50	39°38'44.5432"N	80°05'12.8208"W	1751.44	91.201	0.52	-0.52	0.11
7502.00	20.110	85.170	7215.48	5665.48	-984.26	-34.09	1783.17	1803270.27	417842.13	39°38'44.5712"N	80°05'12.4105"W	1783.50	91.095	0.60	0.59	-0.33
7597.00	20.150	85.100	7304.67	5754.67	-999.37	-31.32	1815.75	1803302.85	417844.90	39°38'44.6007"N	80°05'11.9942"W	1816.02	90.988	0.05	0.04	-0.07
7692.00	20.580	84.410	7393.74	5843.74	-1014.46	-28.30	1848.67	1803335.76	417847.93	39°38'44.6328"N	80°05'11.5736"W	1848.88	90.877	0.52	0.45	-0.73
7786.00	19.880	76.340	7481.95	5931.95	-1027.05	-22.91	1880.65	1803367.74	417853.31	39°38'44.6880"N	80°05'11.1653"W	1880.79	90.698	3.06	-0.74	-8.59

Actual Wellpath Report

Dolls Run 5H AWP Proj: 23859'
Page 5 of 14

REFERENCE WELLPATH IDENTIFICATION

Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Dolls Run 5H
Field	Monongalia	API/Legal	
Facility	Dolls Run Pad	Wellbore	Dolls Run 5H AWB
Slot	Slot #5H		

WELLPATH DATA (261 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]
7880.00	20.090	55.150	7570.41	6020.41	-1031.50	-9.89	1909.46	1803396.56	417866.33	39°38'44.8185"N	80°05'10.7980"W	1909.49	90.297	7.67	0.22	-22.54
7975.00	20.160	30.510	7659.77	6109.77	-1023.33	13.57	1931.20	1803418.30	417889.79	39°38'45.0519"N	80°05'10.5220"W	1931.25	89.597	8.86	0.07	-25.94
8070.00	24.040	15.690	7747.84	6197.84	-1002.93	46.35	1944.76	1803431.85	417922.56	39°38'45.3766"N	80°05'10.3514"W	1945.32	88.635	7.12	4.08	-15.60
8165.00	30.290	1.610	7832.41	6282.41	-970.07	89.01	1950.68	1803437.77	417965.22	39°38'45.7986"N	80°05'10.2793"W	1952.71	87.387	9.40	6.58	-14.82
8259.00	36.210	348.450	7911.09	6361.09	-924.38	140.02	1945.78	1803432.87	418016.23	39°38'46.3025"N	80°05'10.3463"W	1950.81	85.884	9.90	6.30	-14.00
8354.00	40.830	343.380	7985.41	6435.41	-868.22	197.32	1931.27	1803418.36	418073.53	39°38'46.8678"N	80°05'10.5366"W	1941.32	84.166	5.89	4.86	-5.34
8448.00	46.360	343.270	8053.46	6503.46	-805.85	259.39	1912.67	1803399.76	418135.59	39°38'47.4800"N	80°05'10.7795"W	1930.18	82.277	5.88	5.88	-0.12
8543.00	52.150	340.070	8115.45	6565.45	-736.06	327.63	1889.97	1803377.06	418203.83	39°38'48.1530"N	80°05'11.0754"W	1918.16	80.165	6.61	6.09	-3.37
8637.00	57.020	334.130	8169.94	6619.94	-660.57	398.08	1860.08	1803347.17	418274.28	39°38'48.8473"N	80°05'11.4634"W	1902.20	77.920	7.30	5.18	-6.32
8732.00	64.140	333.740	8216.58	6666.58	-578.37	472.36	1823.73	1803310.83	418348.56	39°38'49.5790"N	80°05'11.9342"W	1883.91	75.479	7.50	7.49	-0.41
8826.00	72.040	330.900	8251.63	6701.63	-491.54	549.50	1783.21	1803270.31	418425.68	39°38'50.3387"N	80°05'12.4587"W	1865.95	72.873	8.86	8.40	-3.02
8920.00	81.630	331.150	8273.02	6723.02	-400.28	629.48	1738.92	1803226.02	418505.66	39°38'51.1263"N	80°05'13.0315"W	1849.35	70.100	10.21	10.20	0.27
9014.00	89.420	328.330	8280.35	6730.35	-306.71	710.34	1691.73	1803178.83	418586.52	39°38'51.9224"N	80°05'13.6416"W	1834.81	67.223	8.81	8.29	-3.00
9109.00	89.230	328.280	8281.46	6731.46	-211.72	791.17	1641.82	1803128.93	418667.34	39°38'52.7180"N	80°05'14.2864"W	1822.50	64.271	0.21	-0.20	-0.05
9204.00	92.560	328.600	8279.98	6729.98	-116.76	872.10	1592.11	1803079.22	418748.26	39°38'53.5145"N	80°05'14.9286"W	1815.31	61.288	3.52	3.51	0.34
9298.00	92.310	328.800	8275.99	6725.99	-22.86	952.34	1543.32	1803030.43	418828.51	39°38'54.3044"N	80°05'15.5591"W	1813.50	58.322	0.34	-0.27	0.21
9392.00	92.430	329.020	8272.10	6722.10	71.03	1032.77	1494.82	1802981.94	418908.93	39°38'55.0961"N	80°05'16.1858"W	1816.89	55.359	0.27	0.13	0.23
9487.00	92.710	329.040	8267.84	6717.84	165.91	1114.15	1445.98	1802933.10	418990.30	39°38'55.8972"N	80°05'16.8170"W	1825.43	52.385	0.30	0.29	0.02
9581.00	92.430	329.020	8263.63	6713.63	259.79	1194.67	1397.66	1802884.78	419070.81	39°38'56.6898"N	80°05'17.4415"W	1838.66	49.477	0.30	-0.30	-0.02
9675.00	92.530	329.160	8259.56	6709.56	353.67	1275.24	1349.42	1802836.55	419151.38	39°38'57.4830"N	80°05'18.0649"W	1856.65	46.619	0.18	0.11	0.15
9769.00	92.250	328.580	8255.64	6705.64	447.56	1355.63	1300.86	1802788.00	419231.77	39°38'58.2743"N	80°05'18.6924"W	1878.83	43.819	0.68	-0.30	-0.62
9864.00	92.250	328.760	8251.91	6701.91	542.47	1436.72	1251.51	1802738.64	419312.85	39°38'59.0725"N	80°05'19.3302"W	1905.37	41.059	0.19	0.00	0.19
9958.00	93.450	327.880	8247.23	6697.23	636.34	1516.61	1202.20	1802689.34	419392.74	39°38'59.8588"N	80°05'19.9672"W	1935.30	38.404	1.58	1.28	-0.94
10053.00	93.510	328.800	8241.47	6691.47	731.16	1597.32	1152.43	1802639.57	419473.44	39°39'0.6533"N	80°05'20.6103"W	1969.65	35.810	0.97	0.06	0.97
10148.00	93.330	328.230	8235.80	6685.80	825.98	1678.19	1102.90	1802590.05	419554.31	39°39'1.4492"N	80°05'21.2502"W	2008.16	33.313	0.63	-0.19	-0.60
10243.00	91.200	327.510	8232.05	6682.05	920.90	1758.57	1052.42	1802539.57	419634.69	39°39'2.2404"N	80°05'21.9024"W	2049.43	30.898	2.37	-2.24	-0.76
10337.00	91.540	327.180	8229.80	6679.80	1014.87	1837.69	1001.72	1802488.86	419713.80	39°39'3.0190"N	80°05'22.5572"W	2092.98	28.595	0.50	0.36	-0.35
10432.00	90.920	328.010	8227.76	6677.76	1109.85	1917.88	950.82	1802437.97	419793.98	39°39'3.8082"N	80°05'23.2147"W	2140.63	26.371	1.09	-0.65	0.87
10526.00	90.950	328.160	8226.23	6676.23	1203.83	1997.66	901.13	1802388.28	419873.76	39°39'4.5934"N	80°05'23.8566"W	2191.50	24.280	0.16	0.03	0.16
10621.00	90.980	327.850	8224.63	6674.63	1298.81	2078.22	850.80	1802337.96	419954.31	39°39'5.3862"N	80°05'24.5068"W	2245.63	22.264	0.33	0.03	-0.33

Actual Wellpath Report

Dolls Run 5H AWP Proj: 23859'
Page 6 of 14

REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Dolls Run 5H
Field	Monongalia	API/Legal	
Facility	Dolls Run Pad	Wellbore	Dolls Run 5H AWB
Slot	Slot #5H		

WELLPATH DATA (261 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]
10716.00	91.230	327.400	8222.79	6672.79	1393.80	2158.43	799.94	1802287.10	420034.52	39°39'6.1757"N	80°05'25.1637"W	2301.90	20.335	0.54	0.26	-0.47
10810.00	91.080	327.850	8220.90	6670.90	1487.78	2237.81	749.62	1802236.78	420113.89	39°39'6.9568"N	80°05'25.8138"W	2360.02	18.520	0.50	-0.16	0.48
10905.00	90.740	326.640	8219.39	6669.39	1582.76	2317.69	698.23	1802185.40	420193.77	39°39'7.7430"N	80°05'26.4775"W	2420.58	16.765	1.32	-0.36	-1.27
10999.00	90.620	326.480	8218.27	6668.27	1676.74	2396.12	646.43	1802133.60	420272.20	39°39'8.5147"N	80°05'27.1463"W	2481.79	15.098	0.21	-0.13	-0.17
11094.00	90.580	326.340	8217.28	6667.28	1771.71	2475.26	593.88	1802081.05	420351.32	39°39'9.2934"N	80°05'27.8249"W	2545.50	13.492	0.15	-0.04	-0.15
11188.00	90.770	326.330	8216.17	6666.17	1865.68	2553.49	541.77	1802028.95	420429.55	39°39'10.0631"N	80°05'28.4976"W	2610.33	11.979	0.20	0.20	-0.01
11283.00	91.390	327.270	8214.38	6664.38	1960.66	2632.96	489.76	1801976.94	420509.02	39°39'10.8452"N	80°05'29.1692"W	2678.13	10.537	1.19	0.65	0.99
11378.00	90.860	326.600	8212.52	6662.52	2055.63	2712.56	437.94	1801925.13	420588.62	39°39'11.6284"N	80°05'29.8384"W	2747.69	9.171	0.90	-0.56	-0.71
11472.00	90.990	326.210	8211.00	6661.00	2149.60	2790.85	385.94	1801873.12	420666.90	39°39'12.3988"N	80°05'30.5099"W	2817.41	7.873	0.44	0.14	-0.41
11567.00	90.520	326.630	8209.75	6659.75	2244.57	2869.99	333.40	1801820.59	420746.03	39°39'13.1774"N	80°05'31.1883"W	2889.29	6.626	0.66	-0.49	0.44
11662.00	91.110	326.520	8208.40	6658.40	2339.54	2949.27	281.07	1801768.27	420825.31	39°39'13.9575"N	80°05'31.8639"W	2962.63	5.444	0.63	0.62	-0.12
11756.00	90.830	326.530	8206.80	6656.80	2433.51	3027.67	229.23	1801716.43	420903.70	39°39'14.7289"N	80°05'32.5333"W	3036.33	4.330	0.30	-0.30	0.01
11851.00	90.740	326.110	8205.50	6655.50	2528.48	3106.71	176.56	1801663.76	420982.74	39°39'15.5067"N	80°05'33.2135"W	3111.72	3.253	0.45	-0.09	-0.44
11945.00	90.740	325.810	8204.29	6654.29	2622.43	3184.60	123.94	1801611.14	421060.62	39°39'16.2730"N	80°05'33.8927"W	3187.01	2.229	0.32	0.00	-0.32
12040.00	90.980	326.770	8202.86	6652.86	2717.40	3263.61	71.22	1801558.43	421139.63	39°39'17.0504"N	80°05'34.5734"W	3264.39	1.250	1.04	0.25	1.01
12134.00	90.950	326.780	8201.28	6651.28	2811.37	3342.24	19.73	1801506.94	421218.25	39°39'17.8241"N	80°05'35.2385"W	3342.29	0.338	0.03	-0.03	0.01
12229.00	90.980	326.710	8199.68	6649.68	2906.35	3421.67	-32.36	1801454.85	421297.68	39°39'18.6057"N	80°05'35.9111"W	3421.82	359.458	0.08	0.03	-0.07
12323.00	90.950	326.920	8198.10	6648.10	3000.33	3500.33	-83.80	1801403.41	421376.33	39°39'19.3797"N	80°05'36.5755"W	3501.33	358.628	0.23	-0.03	0.22
12418.00	91.020	327.140	8196.46	6646.46	3095.31	3580.02	-135.50	1801351.72	421456.02	39°39'20.1638"N	80°05'37.2431"W	3582.58	357.833	0.24	0.07	0.23
12512.00	91.140	326.940	8194.69	6644.69	3189.29	3658.87	-186.63	1801300.59	421534.87	39°39'20.9398"N	80°05'37.9035"W	3663.63	357.080	0.25	0.13	-0.21
12607.00	90.340	326.970	8193.47	6643.47	3284.27	3738.50	-238.43	1801248.80	421614.49	39°39'21.7233"N	80°05'38.5725"W	3746.09	356.351	0.84	-0.84	0.03
12702.00	90.580	326.870	8192.70	6642.70	3379.26	3818.10	-290.28	1801196.95	421694.08	39°39'22.5066"N	80°05'39.2422"W	3829.11	355.652	0.27	0.25	-0.11
12796.00	91.140	326.460	8191.29	6641.29	3473.24	3896.62	-341.93	1801145.31	421772.60	39°39'23.2793"N	80°05'39.9092"W	3911.59	354.985	0.74	0.60	-0.44
12891.00	90.890	326.740	8189.61	6639.61	3568.21	3975.92	-394.21	1801093.02	421851.90	39°39'24.0595"N	80°05'40.5844"W	3995.41	354.338	0.40	-0.26	0.29
12986.00	90.400	324.620	8188.54	6638.54	3663.14	4054.37	-447.77	1801039.47	421930.34	39°39'24.8313"N	80°05'41.2758"W	4079.02	353.698	2.29	-0.52	-2.23
13080.00	90.490	327.620	8187.81	6637.81	3757.10	4132.40	-500.16	1800987.08	422008.37	39°39'25.5990"N	80°05'41.9523"W	4162.56	353.099	3.19	0.10	3.19
13175.00	90.310	328.730	8187.15	6637.15	3852.09	4213.11	-550.26	1800936.99	422089.08	39°39'26.3934"N	80°05'42.5996"W	4248.89	352.559	1.18	-0.19	1.17
13270.00	90.370	328.020	8186.58	6636.58	3947.08	4294.00	-600.07	1800887.18	422169.96	39°39'27.1896"N	80°05'43.2433"W	4335.73	352.045	0.75	0.06	-0.75
13364.00	90.060	327.720	8186.23	6636.23	4041.08	4373.61	-650.06	1800837.19	422249.56	39°39'27.9730"N	80°05'43.8893"W	4421.65	351.546	0.46	-0.33	-0.32
13459.00	89.600	327.750	8186.51	6636.51	4136.08	4453.94	-700.78	1800786.48	422329.88	39°39'28.7635"N	80°05'44.5445"W	4508.73	351.058	0.49	-0.48	0.03

Actual Wellpath Report

Dolls Run 5H AWP Proj: 23859'
Page 7 of 14

REFERENCE WELLPATH IDENTIFICATION

Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Dolls Run 5H
Field	Monongalia	API/Legal	
Facility	Dolls Run Pad	Wellbore	Dolls Run 5H AWB
Slot	Slot #5H		

WELLPATH DATA (261 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]
13554.00	90.060	328.330	8186.79	6636.79	4231.07	4534.54	-751.06	1800736.19	422410.48	39°39'29.5568"N	80°05'45.1943"W	4596.31	350.595	0.78	0.48	0.61
13648.00	89.880	327.850	8186.84	6636.84	4325.07	4614.33	-800.75	1800686.51	422490.27	39°39'30.3421"N	80°05'45.8363"W	4683.29	350.155	0.55	-0.19	-0.51
13743.00	90.220	328.630	8186.76	6636.76	4420.06	4695.10	-850.75	1800636.51	422571.04	39°39'31.1371"N	80°05'46.4825"W	4771.56	349.729	0.90	0.36	0.82
13837.00	89.940	327.880	8186.63	6636.63	4514.06	4775.04	-900.21	1800587.06	422650.97	39°39'31.9238"N	80°05'47.1217"W	4859.15	349.324	0.85	-0.30	-0.80
13932.00	89.820	327.970	8186.83	6636.83	4609.05	4855.54	-950.66	1800536.61	422731.46	39°39'32.7161"N	80°05'47.7735"W	4947.73	348.922	0.16	-0.13	0.09
14026.00	89.020	328.270	8187.78	6637.78	4703.04	4935.35	-1000.30	1800486.97	422811.27	39°39'33.5016"N	80°05'48.4150"W	5035.70	348.542	0.91	-0.85	0.32
14121.00	89.320	327.850	8189.15	6639.15	4798.03	5015.96	-1050.55	1800436.72	422891.88	39°39'34.2949"N	80°05'49.0644"W	5124.80	348.171	0.54	0.32	-0.44
14215.00	88.770	327.860	8190.72	6640.72	4892.02	5095.54	-1100.56	1800386.72	422971.45	39°39'35.0781"N	80°05'49.7106"W	5213.04	347.812	0.59	-0.59	0.01
14309.00	88.860	327.660	8192.67	6642.67	4986.00	5175.03	-1150.69	1800336.59	423050.94	39°39'35.8604"N	80°05'50.3583"W	5301.42	347.464	0.23	0.10	-0.21
14404.00	88.610	327.210	8194.76	6644.76	5080.97	5255.08	-1201.82	1800285.47	423130.97	39°39'36.6481"N	80°05'51.0188"W	5390.75	347.118	0.54	-0.26	-0.47
14499.00	88.920	328.030	8196.81	6646.81	5175.95	5335.29	-1252.68	1800234.61	423211.18	39°39'37.4374"N	80°05'51.6760"W	5480.37	346.787	0.92	0.33	0.86
14593.00	88.860	327.410	8198.63	6648.63	5269.93	5414.74	-1302.87	1800184.42	423290.63	39°39'38.2194"N	80°05'52.3245"W	5569.28	346.471	0.66	-0.06	-0.66
14688.00	88.740	327.500	8200.62	6650.62	5364.91	5494.81	-1353.97	1800133.33	423370.69	39°39'39.0072"N	80°05'52.9846"W	5659.16	346.158	0.16	-0.13	0.09
14783.00	88.550	327.510	8202.87	6652.87	5459.88	5574.91	-1404.99	1800082.31	423450.79	39°39'39.7955"N	80°05'53.6438"W	5749.23	345.855	0.20	-0.20	0.01
14878.00	88.920	328.320	8204.96	6654.96	5554.86	5655.38	-1455.44	1800031.86	423531.25	39°39'40.5875"N	80°05'54.2958"W	5839.66	345.568	0.94	0.39	0.85
14972.00	88.430	327.190	8207.14	6657.14	5648.83	5734.86	-1505.57	1799981.73	423610.73	39°39'41.3696"N	80°05'54.9436"W	5929.20	345.290	1.31	-0.52	-1.20
15067.00	88.830	328.070	8209.41	6659.41	5743.80	5815.07	-1556.42	1799930.88	423690.94	39°39'42.1590"N	80°05'55.6006"W	6019.76	345.016	1.02	0.42	0.93
15161.00	88.650	328.000	8211.48	6661.48	5837.78	5894.80	-1606.17	1799881.14	423770.66	39°39'42.9437"N	80°05'56.2435"W	6109.70	344.758	0.21	-0.19	-0.07
15256.00	88.830	327.850	8213.57	6663.57	5932.75	5975.28	-1656.61	1799830.70	423851.14	39°39'43.7357"N	80°05'56.8953"W	6200.67	344.504	0.25	0.19	-0.16
15350.00	88.800	327.680	8215.51	6665.51	6026.73	6054.78	-1706.74	1799780.58	423930.63	39°39'44.5180"N	80°05'57.5430"W	6290.73	344.258	0.18	-0.03	-0.18
15445.00	88.710	327.560	8217.57	6667.57	6121.71	6134.99	-1757.60	1799729.72	424010.83	39°39'45.3073"N	80°05'58.2003"W	6381.79	344.014	0.16	-0.09	-0.13
15540.00	88.580	327.460	8219.82	6669.82	6216.68	6215.09	-1808.62	1799678.71	424090.93	39°39'46.0957"N	80°05'58.8594"W	6472.90	343.775	0.17	-0.14	-0.11
15635.00	88.890	328.180	8221.92	6671.92	6311.66	6295.48	-1859.20	1799628.13	424171.32	39°39'46.8868"N	80°05'59.5131"W	6564.27	343.547	0.82	0.33	0.76
15729.00	88.770	327.740	8223.84	6673.84	6405.64	6375.15	-1909.05	1799578.27	424250.98	39°39'47.6708"N	80°06'0.1574"W	6654.85	343.330	0.49	-0.13	-0.47
15824.00	88.830	327.940	8225.83	6675.83	6500.61	6455.55	-1959.61	1799527.72	424331.38	39°39'48.4621"N	80°06'0.8107"W	6746.42	343.114	0.22	0.06	0.21
15919.00	88.680	327.500	8227.89	6677.89	6595.59	6535.85	-2010.33	1799477.00	424411.67	39°39'49.2523"N	80°06'1.4661"W	6838.04	342.903	0.49	-0.16	-0.46
16013.00	88.580	327.840	8230.14	6680.14	6689.56	6615.26	-2060.59	1799426.75	424491.07	39°39'50.0337"N	80°06'2.1155"W	6928.75	342.699	0.38	-0.11	0.36
16108.00	88.650	328.130	8232.43	6682.43	6784.53	6695.78	-2110.94	1799376.40	424571.59	39°39'50.8262"N	80°06'2.7662"W	7020.65	342.502	0.31	0.07	0.31
16203.00	88.830	328.050	8234.52	6684.52	6879.51	6776.41	-2161.14	1799326.20	424652.21	39°39'51.6197"N	80°06'3.4151"W	7112.68	342.311	0.21	0.19	-0.08
16297.00	88.060	327.160	8237.07	6687.07	6973.47	6855.75	-2211.48	1799275.86	424731.55	39°39'52.4004"N	80°06'4.0656"W	7203.61	342.122	1.25	-0.82	-0.95

Actual Wellpath Report

Dolls Run 5H AWP Proj: 23859'

Page 8 of 14

REFERENCE WELLPATH IDENTIFICATION

Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Dolls Run 5H
Field	Monongalia	API/Legal	
Facility	Dolls Run Pad	Wellbore	Dolls Run 5H AWB
Slot	Slot #5H		

WELLPATH DATA (261 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]
16392.00	88.090	327.350	8240.27	6690.27	7068.42	6935.61	-2262.84	1799224.51	424811.40	39°39'53.1862"N	80°06'4.7291"W	7295.41	341.930	0.20	0.03	0.20
16486.00	87.780	327.730	8243.65	6693.65	7162.35	7014.87	-2313.26	1799174.09	424890.66	39°39'53.9662"N	80°06'5.3806"W	7386.44	341.749	0.52	-0.33	0.40
16580.00	88.090	327.980	8247.04	6697.04	7256.29	7094.41	-2363.24	1799124.11	424970.19	39°39'54.7490"N	80°06'6.0265"W	7477.67	341.576	0.42	0.33	0.27
16674.00	87.660	327.000	8250.53	6700.53	7350.23	7173.62	-2413.72	1799073.63	425049.40	39°39'55.5285"N	80°06'6.6789"W	7568.81	341.403	1.14	-0.46	-1.04
16768.00	87.780	326.480	8254.26	6704.26	7444.14	7252.16	-2465.24	1799022.12	425127.94	39°39'56.3012"N	80°06'7.3443"W	7659.71	341.225	0.57	0.13	-0.55
16863.00	88.800	328.150	8257.10	6707.10	7539.09	7332.08	-2516.51	1798970.85	425207.85	39°39'57.0876"N	80°06'8.0068"W	7751.92	341.057	2.06	1.07	1.76
16957.00	89.170	327.820	8258.76	6708.76	7633.08	7411.77	-2566.34	1798921.03	425287.53	39°39'57.8719"N	80°06'8.6508"W	7843.49	340.901	0.53	0.39	-0.35
17051.00	88.550	328.530	8260.64	6710.64	7727.05	7491.62	-2615.90	1798871.47	425367.38	39°39'58.6578"N	80°06'9.2913"W	7935.19	340.752	1.00	-0.66	0.76
17146.00	88.830	327.150	8262.81	6712.81	7822.02	7572.02	-2666.45	1798820.92	425447.78	39°39'59.4490"N	80°06'9.9447"W	8027.79	340.601	1.48	0.29	-1.45
17240.00	88.830	327.110	8264.73	6714.73	7916.00	7650.96	-2717.46	1798769.92	425526.71	39°40'0.2257"N	80°06'10.6037"W	8119.22	340.446	0.04	0.00	-0.04
17335.00	88.920	327.490	8266.59	6716.59	8010.98	7730.88	-2768.77	1798718.61	425606.63	39°40'1.0122"N	80°06'11.2667"W	8211.74	340.295	0.41	0.09	0.40
17430.00	89.200	327.320	8268.15	6718.15	8105.97	7810.91	-2819.94	1798667.44	425686.65	39°40'1.7997"N	80°06'11.9279"W	8304.36	340.149	0.34	0.29	-0.18
17524.00	88.980	327.560	8269.64	6719.64	8199.96	7890.13	-2870.52	1798616.87	425765.86	39°40'2.5792"N	80°06'12.5815"W	8396.07	340.008	0.35	-0.23	0.26
17619.00	88.800	328.070	8271.48	6721.48	8294.94	7970.51	-2921.11	1798566.28	425846.24	39°40'3.3702"N	80°06'13.2354"W	8488.93	339.873	0.57	-0.19	0.54
17714.00	89.260	327.970	8273.09	6723.09	8389.92	8051.08	-2971.42	1798515.97	425926.81	39°40'4.1631"N	80°06'13.8856"W	8581.91	339.742	0.50	0.48	-0.11
17808.00	89.050	328.030	8274.48	6724.48	8483.91	8130.79	-3021.23	1798466.17	426006.51	39°40'4.9476"N	80°06'14.5294"W	8673.96	339.616	0.23	-0.22	0.06
17903.00	88.830	327.760	8276.24	6726.24	8578.89	8211.25	-3071.71	1798415.69	426086.97	39°40'5.7394"N	80°06'15.1818"W	8766.98	339.490	0.37	-0.23	-0.28
17998.00	88.620	327.160	8278.35	6728.35	8673.87	8291.31	-3122.79	1798364.61	426167.03	39°40'6.5272"N	80°06'15.8420"W	8859.89	339.362	0.67	-0.22	-0.63
18093.00	89.050	327.420	8280.28	6730.28	8768.84	8371.23	-3174.12	1798313.28	426246.94	39°40'7.3136"N	80°06'16.5052"W	8952.80	339.235	0.53	0.45	0.27
18187.00	88.310	327.820	8282.45	6732.45	8862.82	8450.59	-3224.45	1798262.96	426326.30	39°40'8.0946"N	80°06'17.1556"W	9044.87	339.115	0.89	-0.79	0.43
18282.00	87.810	327.500	8285.66	6735.66	8957.76	8530.81	-3275.24	1798212.17	426406.51	39°40'8.8840"N	80°06'17.8120"W	9137.94	338.997	0.62	-0.53	-0.34
18376.00	87.010	327.310	8289.91	6739.91	9051.67	8609.93	-3325.82	1798161.59	426485.62	39°40'9.6624"N	80°06'18.4657"W	9229.95	338.880	0.87	-0.85	-0.20
18471.00	87.070	327.300	8294.82	6744.82	9146.54	8689.77	-3377.07	1798110.35	426565.46	39°40'10.4481"N	80°06'19.1279"W	9322.91	338.763	0.06	0.06	-0.01
18566.00	87.230	327.590	8299.54	6749.54	9241.42	8769.74	-3428.13	1798059.29	426645.42	39°40'11.2350"N	80°06'19.7877"W	9415.97	338.649	0.35	0.17	0.31
18660.00	87.110	327.630	8304.18	6754.18	9335.31	8849.02	-3478.42	1798009.00	426724.70	39°40'12.0152"N	80°06'20.4377"W	9508.13	338.541	0.13	-0.13	0.04
18755.00	87.540	327.940	8308.61	6758.61	9430.20	8929.31	-3529.01	1797958.42	426804.98	39°40'12.8053"N	80°06'21.0916"W	9601.38	338.435	0.56	0.45	0.33
18849.00	87.070	327.900	8313.03	6763.03	9524.10	9008.87	-3578.88	1797908.55	426884.53	39°40'13.5882"N	80°06'21.7361"W	9693.71	338.334	0.50	-0.50	-0.04
18944.00	87.480	327.490	8317.55	6767.55	9618.99	9089.07	-3629.59	1797857.84	426964.73	39°40'14.3774"N	80°06'22.3916"W	9786.99	338.231	0.61	0.43	-0.43
19038.00	88.180	327.760	8321.11	6771.11	9712.92	9168.40	-3679.89	1797807.55	427044.06	39°40'15.1581"N	80°06'23.0416"W	9879.33	338.131	0.80	0.74	0.29
19133.00	87.720	327.520	8324.51	6774.51	9807.86	9248.60	-3730.70	1797756.74	427124.25	39°40'15.9472"N	80°06'23.6984"W	9972.70	338.032	0.55	-0.48	-0.25

Actual Wellpath Report

Dolls Run 5H AWP Proj: 23859'
Page 9 of 14

REFERENCE WELLPATH IDENTIFICATION

Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Dolls Run 5H
Field	Monongalia	API/Legal	
Facility	Dolls Run Pad	Wellbore	Dolls Run 5H AWB
Slot	Slot #5H		

WELLPATH DATA (261 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]
19227.00	87.720	327.480	8328.25	6778.25	9901.78	9327.81	-3781.17	1797706.27	427203.46	39°40'16.7267"N	80°06'24.3506"W	10065.05	337.934	0.04	0.00	-0.04
19322.00	87.880	327.440	8331.89	6781.89	9996.71	9407.84	-3832.23	1797655.22	427283.48	39°40'17.5142"N	80°06'25.0105"W	10158.42	337.837	0.17	0.17	-0.04
19417.00	87.940	327.540	8335.36	6785.36	10091.65	9487.90	-3883.25	1797604.20	427363.54	39°40'18.3020"N	80°06'25.6699"W	10251.82	337.741	0.12	0.06	0.11
19511.00	87.660	327.410	8338.97	6788.97	10185.58	9567.10	-3933.76	1797553.70	427442.73	39°40'19.0813"N	80°06'26.3226"W	10344.26	337.649	0.33	-0.30	-0.14
19606.00	87.570	327.530	8342.92	6792.92	10280.50	9647.12	-3984.80	1797502.66	427522.75	39°40'19.8688"N	80°06'26.9823"W	10437.70	337.557	0.16	-0.09	0.13
19700.00	87.570	327.510	8346.91	6796.91	10374.41	9726.35	-4035.23	1797452.23	427601.97	39°40'20.6484"N	80°06'27.6341"W	10530.19	337.468	0.02	0.00	-0.02
19795.00	87.660	327.480	8350.86	6800.86	10469.33	9806.40	-4086.24	1797401.22	427682.02	39°40'21.4360"N	80°06'28.2933"W	10623.69	337.379	0.10	0.09	-0.03
19890.00	87.690	327.430	8354.71	6804.71	10564.25	9886.41	-4137.30	1797350.16	427762.03	39°40'22.2234"N	80°06'28.9533"W	10717.20	337.292	0.06	0.03	-0.05
19984.00	87.810	327.790	8358.40	6808.40	10658.18	9965.73	-4187.61	1797299.85	427841.34	39°40'23.0039"N	80°06'29.6036"W	10809.80	337.208	0.40	0.13	0.38
20079.00	88.120	327.830	8361.78	6811.78	10753.12	10046.07	-4238.19	1797249.28	427921.68	39°40'23.7945"N	80°06'30.2574"W	10903.48	337.126	0.33	0.33	0.04
20174.00	88.340	327.890	8364.71	6814.71	10848.07	10126.48	-4288.71	1797198.77	428002.08	39°40'24.5857"N	80°06'30.9103"W	10997.21	337.047	0.24	0.23	0.06
20268.00	88.370	327.610	8367.41	6817.41	10942.03	10205.94	-4338.85	1797148.63	428081.54	39°40'25.3677"N	80°06'31.5584"W	11089.94	336.968	0.30	0.03	-0.30
20363.00	88.210	327.980	8370.24	6820.24	11036.99	10286.29	-4389.45	1797098.02	428161.88	39°40'26.1584"N	80°06'32.2126"W	11183.70	336.891	0.42	-0.17	0.39
20457.00	88.860	327.920	8372.65	6822.65	11130.96	10365.94	-4439.32	1797048.16	428241.52	39°40'26.9421"N	80°06'32.8572"W	11276.53	336.816	0.69	0.69	-0.06
20552.00	89.820	327.640	8373.74	6823.74	11225.95	10446.30	-4489.97	1796997.52	428321.88	39°40'27.7330"N	80°06'33.5119"W	11370.36	336.741	1.05	1.01	-0.29
20647.00	90.120	328.380	8373.79	6823.79	11320.95	10526.87	-4540.29	1796947.19	428402.45	39°40'28.5259"N	80°06'34.1625"W	11464.26	336.669	0.84	0.32	0.78
20742.00	89.660	327.520	8373.97	6823.97	11415.94	10607.39	-4590.71	1796896.78	428482.97	39°40'29.3182"N	80°06'34.8142"W	11558.17	336.598	1.03	-0.48	-0.91
20836.00	89.780	327.590	8374.43	6824.43	11509.94	10686.72	-4641.14	1796846.36	428562.29	39°40'30.0988"N	80°06'35.4661"W	11651.01	336.525	0.15	0.13	0.07
20931.00	89.880	327.480	8374.72	6824.72	11604.94	10766.87	-4692.13	1796795.37	428642.43	39°40'30.8875"N	80°06'36.1252"W	11744.86	336.453	0.16	0.11	-0.12
21026.00	89.750	327.550	8375.02	6825.02	11699.94	10847.01	-4743.15	1796744.35	428722.56	39°40'31.6760"N	80°06'36.7847"W	11838.71	336.381	0.16	-0.14	0.07
21121.00	91.290	328.380	8374.16	6824.16	11794.93	10927.54	-4793.54	1796693.96	428803.09	39°40'32.4685"N	80°06'37.4361"W	11932.69	336.315	1.84	1.62	0.87
21215.00	91.570	327.770	8371.81	6821.81	11888.90	11007.29	-4843.23	1796644.27	428882.84	39°40'33.2533"N	80°06'38.0785"W	12025.70	336.250	0.71	0.30	-0.65
21309.00	90.920	327.670	8369.77	6819.77	11982.87	11086.75	-4893.42	1796594.09	428962.29	39°40'34.0352"N	80°06'38.7273"W	12118.64	336.184	0.70	-0.69	-0.11
21404.00	90.920	327.580	8368.25	6818.25	12077.86	11166.97	-4944.28	1796543.23	429042.50	39°40'34.8245"N	80°06'39.3847"W	12212.58	336.118	0.09	0.00	-0.09
21499.00	90.550	327.800	8367.03	6817.03	12172.85	11247.25	-4995.06	1796492.46	429122.78	39°40'35.6146"N	80°06'40.0411"W	12306.55	336.053	0.45	-0.39	0.23
21593.00	90.710	327.550	8365.99	6815.99	12266.85	11326.68	-5045.32	1796442.20	429202.21	39°40'36.3961"N	80°06'40.6908"W	12399.55	335.990	0.32	0.17	-0.27
21688.00	90.580	327.530	8364.92	6814.92	12361.84	11406.83	-5096.30	1796391.22	429282.35	39°40'37.1848"N	80°06'41.3498"W	12493.52	335.926	0.14	-0.14	-0.02
21782.00	91.350	325.700	8363.34	6813.34	12455.81	11485.31	-5148.02	1796339.51	429360.82	39°40'37.9569"N	80°06'42.0180"W	12586.28	335.857	2.11	0.82	-1.95
21877.00	90.950	325.580	8361.44	6811.44	12550.74	11563.71	-5201.62	1796285.91	429439.23	39°40'38.7281"N	80°06'42.7105"W	12679.76	335.781	0.44	-0.42	-0.13
21972.00	91.170	325.400	8359.68	6809.68	12645.65	11641.98	-5255.44	1796232.10	429517.49	39°40'39.4980"N	80°06'43.4055"W	12773.23	335.705	0.30	0.23	-0.19

page 25 of 33

Actual Wellpath Report

Dolls Run 5H AWP Proj: 23859'
Page 10 of 14

REFERENCE WELLPATH IDENTIFICATION

Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Dolls Run 5H
Field	Monongalia	API/Legal	
Facility	Dolls Run Pad	Wellbore	Dolls Run 5H AWB
Slot	Slot #5H		

WELLPATH DATA (261 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]
22066.00	90.920	325.590	8357.96	6807.96	12739.58	11719.43	-5308.68	1796178.86	429594.94	39°40'40.2599"N	80°06'44.0932"W	12865.74	335.630	0.33	-0.27	0.20
22161.00	91.880	325.540	8355.64	6805.64	12834.49	11797.76	-5362.38	1796125.16	429673.26	39°40'41.0303"N	80°06'44.7868"W	12959.26	335.557	1.01	1.01	-0.05
22255.00	91.880	328.780	8352.56	6802.56	12928.42	11876.69	-5413.32	1796074.22	429752.18	39°40'41.8069"N	80°06'45.4452"W	13052.19	335.497	3.44	0.00	3.45
22350.00	91.910	331.510	8349.42	6799.42	13023.27	11959.03	-5460.58	1796026.96	429834.51	39°40'42.6174"N	80°06'46.0569"W	13146.72	335.458	2.87	0.03	2.87
22445.00	92.250	332.350	8345.97	6795.97	13117.93	12042.80	-5505.25	1795982.29	429918.28	39°40'43.4423"N	80°06'46.6355"W	13241.48	335.433	0.95	0.36	0.88
22539.00	91.940	332.470	8342.53	6792.53	13211.54	12126.05	-5548.76	1795938.79	430001.53	39°40'44.2621"N	80°06'47.1992"W	13335.29	335.412	0.35	-0.33	0.13
22634.00	91.820	329.560	8339.41	6789.41	13306.31	12209.10	-5594.76	1795892.79	430084.57	39°40'45.0797"N	80°06'47.7948"W	13429.95	335.381	3.06	-0.13	-3.06
22729.00	91.690	325.680	8336.50	6786.50	13401.24	12289.27	-5645.61	1795841.95	430164.74	39°40'45.8687"N	80°06'48.4521"W	13524.02	335.326	4.08	-0.14	-4.08
22823.00	92.370	326.630	8333.17	6783.17	13495.15	12367.30	-5697.93	1795789.63	430242.76	39°40'46.6362"N	80°06'49.1281"W	13616.77	335.263	1.24	0.72	1.01
22917.00	92.190	326.500	8329.43	6779.43	13589.06	12445.68	-5749.68	1795737.88	430321.14	39°40'47.4073"N	80°06'49.7968"W	13709.62	335.204	0.24	-0.19	-0.14
23012.00	92.060	326.580	8325.91	6775.91	13683.98	12524.88	-5802.02	1795685.54	430400.33	39°40'48.1865"N	80°06'50.4732"W	13803.48	335.145	0.16	-0.14	0.08
23107.00	92.180	326.660	8322.40	6772.40	13778.90	12604.15	-5854.25	1795633.31	430479.60	39°40'48.9664"N	80°06'51.1482"W	13897.37	335.087	0.15	0.13	0.08
23201.00	91.940	326.380	8319.02	6769.02	13872.83	12682.51	-5906.07	1795581.50	430557.95	39°40'49.7372"N	80°06'51.8178"W	13990.27	335.029	0.39	-0.26	-0.30
23296.00	90.150	326.460	8317.29	6767.29	13967.79	12761.63	-5958.61	1795528.97	430637.07	39°40'50.5157"N	80°06'52.4966"W	14084.19	334.971	1.89	-1.88	0.08
23390.00	90.680	326.630	8316.60	6766.60	14061.77	12840.06	-6010.43	1795477.15	430715.49	39°40'51.2872"N	80°06'53.1663"W	14177.18	334.916	0.59	0.56	0.18
23485.00	91.570	327.500	8314.74	6764.74	14156.74	12919.77	-6062.07	1795425.51	430795.20	39°40'52.0715"N	80°06'53.8337"W	14271.27	334.864	1.31	0.94	0.92
23579.00	90.650	327.310	8312.92	6762.92	14250.72	12998.95	-6112.69	1795374.89	430874.38	39°40'52.8506"N	80°06'54.4882"W	14364.46	334.815	1.00	-0.98	-0.20
23674.00	90.800	327.330	8311.72	6761.72	14345.72	13078.91	-6163.98	1795323.60	430954.33	39°40'53.6373"N	80°06'55.1512"W	14458.65	334.766	0.16	0.16	0.02
23769.00	90.950	327.560	8310.27	6760.27	14440.70	13158.97	-6215.10	1795272.49	431034.39	39°40'54.4251"N	80°06'55.8120"W	14552.87	334.718	0.29	0.16	0.24
23834.00	90.770	327.660	8309.29	6759.29	14505.70	13213.85	-6249.91	1795237.68	431089.26	39°40'54.9651"N	80°06'56.2621"W	14617.36	334.687	0.32	-0.28	0.15
23859.00†	90.770	327.660	8308.95	6758.95	14530.69	13234.97	-6263.29	1795224.31	431110.38	39°40'55.1729"N	80°06'56.4349"W	14642.17	334.675	0.00	0.00	0.00

Actual Wellpath Report

Dolls Run 5H AWP Proj: 23859'

Page 11 of 14

REFERENCE WELLPATH IDENTIFICATION

Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Dolls Run 5H
Field	Monongalia	API/Legal	
Facility	Dolls Run Pad	Wellbore	Dolls Run 5H AWB
Slot	Slot #5H		

HOLE & CASING SECTIONS - Ref Wellbore: Dolls Run 5H AWB Ref Wellpath: Dolls Run 5H AWP Proj: 23859'

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]
17.5in Open Hole	28.00	967.00	939.00	28.00	966.95	0.00	0.00	1.39	6.74
13.375in Casing Surface	28.00	937.00	909.00	28.00	936.95	0.00	0.00	1.35	6.27
12.25in Open Hole	967.00	2454.00	1487.00	966.95	2441.34	1.39	6.74	-8.40	185.29
9.625in Casing Intermediate	28.00	2424.00	2396.00	28.00	2411.67	0.00	0.00	-8.71	180.82
8.75in Open Hole	2454.00	6781.00	4327.00	2441.34	6535.09	-8.40	185.29	-42.33	1545.31
8.5in Open Hole	6781.00	23859.00	17078.00	6535.09	8308.95	-42.33	1545.31	13234.97	-6263.29
5.5in Casing Production	28.00	23829.00	23801.00	28.00	8309.36	0.00	0.00	13209.63	-6247.24

Actual Wellpath Report

Dolls Run 5H AWP Proj: 23859'

Page 12 of 14

REFERENCE WELLPATH IDENTIFICATION

Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Dolls Run 5H
Field	Monongalia	API/Legal	
Facility	Dolls Run Pad	Wellbore	Dolls Run 5H AWB
Slot	Slot #5H		

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Dolls Run 5H EXT-BHL Rev-1	8235.00	13239.62	-6257.63	1795229.96	431115.03	39°40'55.2192"N	80°06'56.3630"W	point
Dolls Run 5H IP#1 Rev-2	8235.00	11430.86	-5109.70	1796377.82	429306.39	39°40'37.4214"N	80°06'41.5232"W	point
Dolls Run 5H IP#2 Rev-2	8235.00	11843.28	-5393.04	1796094.50	429718.77	39°40'41.4781"N	80°06'45.1829"W	point
Dolls Run 5H IP#3 Rev-2	8235.00	12275.23	-5645.59	1795841.97	430150.70	39°40'45.7298"N	80°06'48.4506"W	point
Dolls Run 5H LP Rev-1	8235.00	701.90	1699.43	1803186.54	418578.08	39°38'51.8394"N	80°05'13.5424"W	point
Dolls Run Hardline#1_5.17.2023	9028.00	-309.03	-3132.30	1798355.10	417567.21	39°38'41.5321"N	80°06'15.2239"W	polygon
2D Polygon: dimensions not calculated								
Dolls Run Hardline#2_6.6.2023	9028.00	11872.75	-5346.60	1796140.94	429748.24	39°40'41.7725"N	80°06'44.5915"W	polygon
2D Polygon: dimensions not calculated								

Page 28 of 33

Actual Wellpath Report

Dolls Run 5H AWP Proj: 23859'

Page 13 of 14

REFERENCE WELLPATH IDENTIFICATION

Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Dolls Run 5H
Field	Monongalia	API/Legal	
Facility	Dolls Run Pad	Wellbore	Dolls Run 5H AWB
Slot	Slot #5H		

WELLPATH COMPOSITION - Ref Wellbore: Dolls Run 5H AWB Ref Wellpath: Dolls Run 5H AWP Proj: 23859'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
28.00	800.00	BH Generic gyro - northseeking (Standard)	01 17.5" Gyro [Northseeking-Standard] (50' - 800')	Dolls Run 5H AWB	8/28/2023
800.00	2409.00	OWSG MWD rev2 + HRGM	02 12.25" Javins MWD [OWSG MWD Rev.2+HRGM] (800')(1032' - 2409')	Dolls Run 5H AWB	8/28/2023
2409.00	6620.00	OWSG MWD rev2 + HRGM	03 8.75" Javins MWD [OWSG MWD Rev.2+HRGM] (2409')(2532' - 6620')	Dolls Run 5H AWB	8/28/2023
6620.00	23859.00	BH AutoTrak Curve/eXpress (2019) (HRGM, Short spacing)	04 8.5" BH ATK Curve [HRGM+Short Spacing] (6620')(6746'- 23834')	Dolls Run 5H AWB	8/28/2023

Page 29 of 33



Actual Wellpath Report

Dolls Run 5H AWP Proj: 23859'
Page 14 of 14



REFERENCE WELLPATH IDENTIFICATION

Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Dolls Run 5H
Field	Monongalia	API/Legal	
Facility	Dolls Run Pad	Wellbore	Dolls Run 5H AWB
Slot	Slot #5H		

COMMENTS

Wellpath general comments

API: 47061019300000

BH Job #: 111882130

Rig: Patterson 277

Duration: 8/29/2023 - 9/2/2023

01_17.5" Gyro [Northseeking-Standard] (50' - 800')

02_12.25" Javins MWD [OWSG MWD Rev.2+HRGM] (800')(1032' - 2409')

03_8.75" Javins MWD [OWSG MWD Rev.2+HRGM] (2409')(2532' - 6620')

04_8.5" BH ATK Curve [HRGM+Short Spacing] (6620')(6746' - 23834')

Final Survey MD @ 23834'

Projected MD at TD: 23859'

Page 30 of 33