

08/28/2026

17 of 39



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WV Department of
Environmental Protection

Actual Wellpath Report

ERP 1H AWP PROJ: 29562'

Page 1 of 12



REFERENCE WELLPATH IDENTIFICATION

Operator	NORTHEAST NATURAL ENERGY, LLC	Well	ERP 1H
Field	Monongalia	UWI	47061020100000
Facility	ERP Pad	Wellbore	ERP 1H AWB
Slot	1H		

REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert West Virginia SP, Northern Zone (4701), US feet [26853]	Software System	WellArchitect® 7.0.1
North Reference	Grid	Report Generated By	Tranlam on 2026-02-06 at 2:37:37 PM
Scale	0.999941	Last Updated	2026-02-06
Convergence at slot	0.49° 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	-48.89	-10.37	1750801.59	428389.18	39°40'24.8844"N	80°16'24.3378"W
Facility Reference Pt			1750811.96	428438.07	39°40'25.3685"N	80°16'24.2106"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 571 (KB) to Facility Vertical Datum	1363.00ft
Horizontal Reference Pt	Slot	Patterson 571 (KB) to Mean Sea Level	1363.00ft
Vertical Reference Pt	Patterson 571 (KB)	Patterson 571 (KB) to Ground Level at Slot (1H)	25.00ft
MD Reference Pt	Patterson 571 (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	326.370°

18 of 39



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Page 2 of 12

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WELLPATH DATA (327 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	114.470	0.00	0.00	0.00	0.00	1750801.59	428389.18	39°40'24.8844"N	80°16'24.3378"W	0.00	0.000	0.00	0.00	0.00
25.00	0.000	114.470	25.00	0.00	0.00	0.00	1750801.59	428389.18	39°40'24.8844"N	80°16'24.3378"W	0.00	0.000	0.00	0.00	0.00
50.00	0.500	114.470	50.00	-0.09	-0.05	0.10	1750801.69	428389.13	39°40'24.8839"N	80°16'24.3366"W	0.11	114.470	2.00	2.00	0.00
100.00	0.350	139.320	100.00	-0.43	-0.25	0.40	1750801.99	428388.93	39°40'24.8819"N	80°16'24.3327"W	0.47	122.314	0.47	-0.30	49.70
150.00	0.400	141.350	150.00	-0.75	-0.50	0.61	1750802.20	428388.68	39°40'24.8795"N	80°16'24.3300"W	0.79	129.723	0.10	0.10	4.06
200.00	0.360	90.180	200.00	-1.02	-0.64	0.87	1750802.46	428388.54	39°40'24.8781"N	80°16'24.3266"W	1.08	126.288	0.66	-0.08	-102.34
250.00	0.260	133.520	250.00	-1.21	-0.72	1.11	1750802.70	428388.46	39°40'24.8774"N	80°16'24.3235"W	1.32	122.897	0.49	-0.20	86.68
300.00	0.420	101.230	299.99	-1.45	-0.83	1.37	1750802.96	428388.35	39°40'24.8763"N	80°16'24.3202"W	1.61	121.229	0.49	0.32	-64.58
350.00	0.120	21.520	349.99	-1.55	-0.82	1.57	1750803.16	428388.36	39°40'24.8764"N	80°16'24.3176"W	1.77	117.534	0.83	-0.60	-159.42
400.00	0.140	151.660	399.99	-1.58	-0.82	1.62	1750803.21	428388.36	39°40'24.8764"N	80°16'24.3170"W	1.82	116.973	0.47	0.04	260.28
450.00	0.210	48.240	449.99	-1.63	-0.82	1.72	1750803.31	428388.36	39°40'24.8765"N	80°16'24.3158"W	1.90	115.448	0.56	0.14	-206.84
500.00	0.120	307.030	499.99	-1.57	-0.72	1.74	1750803.33	428388.46	39°40'24.8774"N	80°16'24.3155"W	1.89	112.566	0.52	-0.18	-202.42
550.00	0.320	34.930	549.99	-1.47	-0.58	1.78	1750803.37	428388.60	39°40'24.8788"N	80°16'24.3150"W	1.87	107.992	0.68	0.40	175.80
600.00	0.220	350.620	599.99	-1.33	-0.37	1.85	1750803.44	428388.81	39°40'24.8809"N	80°16'24.3142"W	1.88	101.320	0.45	-0.20	-88.62
650.00	0.110	99.510	649.99	-1.28	-0.28	1.88	1750803.47	428388.90	39°40'24.8817"N	80°16'24.3138"W	1.90	98.565	0.55	-0.22	217.78
700.00	0.200	29.330	699.99	-1.27	-0.21	1.97	1750803.56	428388.97	39°40'24.8824"N	80°16'24.3126"W	1.98	96.227	0.39	0.18	-140.36
750.00	0.120	164.090	749.99	-1.28	-0.19	2.03	1750803.62	428388.99	39°40'24.8827"N	80°16'24.3119"W	2.03	95.332	0.59	-0.16	269.52
800.00	0.320	96.350	799.99	-1.42	-0.25	2.18	1750803.77	428388.93	39°40'24.8820"N	80°16'24.3099"W	2.19	96.672	0.59	0.40	-135.48
850.00	0.050	184.450	849.99	-1.53	-0.29	2.32	1750803.91	428388.89	39°40'24.8817"N	80°16'24.3082"W	2.33	97.188	0.64	-0.54	176.20
900.00	0.230	105.770	899.99	-1.62	-0.34	2.41	1750804.00	428388.84	39°40'24.8812"N	80°16'24.3070"W	2.43	98.053	0.45	0.36	-157.36
950.00	0.090	184.050	949.99	-1.73	-0.41	2.50	1750804.09	428388.77	39°40'24.8806"N	80°16'24.3058"W	2.54	99.242	0.46	-0.28	156.56
1000.00	0.390	107.390	999.99	-1.89	-0.50	2.66	1750804.25	428388.68	39°40'24.8797"N	80°16'24.3037"W	2.71	100.578	0.76	0.60	-153.32
1050.00	0.140	169.870	1049.99	-2.08	-0.61	2.84	1750804.43	428388.57	39°40'24.8786"N	80°16'24.3015"W	2.90	102.105	0.70	-0.50	124.96
1100.00	0.310	98.450	1099.99	-2.22	-0.69	2.98	1750804.57	428388.49	39°40'24.8778"N	80°16'24.2996"W	3.06	103.002	0.59	0.34	-142.84
1150.00	0.380	145.930	1149.99	-2.48	-0.85	3.21	1750804.80	428388.33	39°40'24.8763"N	80°16'24.2967"W	3.32	104.767	0.57	0.14	94.96
1200.00	0.200	199.170	1199.99	-2.70	-1.07	3.27	1750804.86	428388.11	39°40'24.8741"N	80°16'24.2959"W	3.44	108.034	0.61	-0.36	106.48
1346.00	0.580	147.440	1345.99	-3.59	-1.93	3.59	1750805.18	428387.25	39°40'24.8656"N	80°16'24.2918"W	4.07	118.272	0.33	0.26	-35.43
1408.00	0.640	181.490	1407.98	-4.19	-2.54	3.75	1750805.34	428386.64	39°40'24.8596"N	80°16'24.2896"W	4.53	124.131	0.58	0.10	54.92
1502.00	1.160	189.150	1501.97	-5.32	-4.00	3.58	1750805.17	428385.18	39°40'24.8451"N	80°16'24.2916"W	5.37	138.185	0.57	0.55	8.15

19 of 39

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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]
1595.00	0.800	212.480	1594.96	-6.27	-5.48	3.08	1750804.67	428383.70	39°40'24.8305"N	80°16'24.2978"W	6.29	150.639	0.57	-0.39	25.09
1688.00	0.710	301.850	1687.95	-6.01	-5.72	2.25	1750803.84	428383.46	39°40'24.8280"N	80°16'24.3085"W	6.15	158.584	1.14	-0.10	96.10
1782.00	1.680	310.800	1781.93	-4.15	-4.52	0.71	1750802.30	428384.66	39°40'24.8398"N	80°16'24.3283"W	4.57	171.098	1.05	1.03	9.52
1876.00	1.280	343.060	1875.90	-1.82	-2.61	-0.64	1750800.95	428386.57	39°40'24.8585"N	80°16'24.3458"W	2.69	193.798	0.97	-0.43	34.32
1969.00	1.190	335.140	1968.88	0.13	-0.74	-1.35	1750800.24	428388.44	39°40'24.8769"N	80°16'24.3550"W	1.54	241.199	0.21	-0.10	-8.52
2062.00	1.510	6.330	2061.85	2.02	1.35	-1.62	1750799.97	428390.53	39°40'24.8976"N	80°16'24.3587"W	2.11	309.826	0.85	0.34	33.54
2156.00	1.360	6.910	2155.82	3.82	3.69	-1.35	1750800.24	428392.87	39°40'24.9207"N	80°16'24.3555"W	3.93	339.902	0.16	-0.16	0.62
2249.00	0.920	18.710	2248.81	5.12	5.49	-0.98	1750800.61	428394.67	39°40'24.9386"N	80°16'24.3510"W	5.58	349.905	0.53	-0.47	12.69
2343.00	0.380	27.240	2342.80	5.73	6.48	-0.59	1750801.00	428395.66	39°40'24.9484"N	80°16'24.3461"W	6.51	354.773	0.58	-0.57	9.07
2436.00	0.560	45.460	2435.80	5.96	7.08	-0.13	1750801.46	428396.26	39°40'24.9543"N	80°16'24.3403"W	7.08	358.963	0.25	0.19	19.59
2530.00	0.960	49.060	2529.79	6.15	7.92	0.79	1750802.38	428397.10	39°40'24.9627"N	80°16'24.3286"W	7.96	5.729	0.43	0.43	3.83
2613.00	1.420	51.070	2612.77	6.33	9.02	2.12	1750803.71	428398.20	39°40'24.9737"N	80°16'24.3117"W	9.26	13.226	0.56	0.55	2.42
2680.00	1.750	48.060	2679.74	6.56	10.22	3.53	1750805.12	428399.40	39°40'24.9857"N	80°16'24.2939"W	10.81	19.030	0.51	0.49	-4.49
2773.00	1.480	355.000	2772.71	7.82	12.37	4.48	1750806.07	428401.55	39°40'25.0070"N	80°16'24.2819"W	13.15	19.901	1.57	-0.29	-57.05
2867.00	2.910	296.200	2866.65	10.95	14.63	2.23	1750803.82	428403.81	39°40'25.0292"N	80°16'24.3109"W	14.80	8.668	2.65	1.52	-62.55
2960.00	5.130	273.520	2959.42	15.50	15.93	-4.04	1750797.55	428405.11	39°40'25.0415"N	80°16'24.3912"W	16.43	345.774	2.89	2.39	-24.39

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20 of 39



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Page 3 of 12



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Field	Monongalia	UWI	47061020100000
Facility	ERP Pad	Wellbore	ERP 1H AWB
Slot	1H		

WELLPATH DATA (327 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]
3054.00	7.160	263.880	3052.88	20.74	15.56	-14.06	1750787.53	428404.74	39°40'25.0370"N	80°16'24.5193"W	20.97	317.907	2.42	2.16	-10.26
3147.00	8.820	255.000	3144.98	25.70	13.10	-26.71	1750774.88	428402.28	39°40'25.0116"N	80°16'24.6809"W	29.75	296.125	2.22	1.78	-9.55
3241.00	10.710	249.710	3237.61	30.02	8.21	-41.87	1750759.73	428397.38	39°40'24.9619"N	80°16'24.8741"W	42.66	281.089	2.22	2.01	-5.63
3335.00	12.450	249.370	3329.70	34.31	1.61	-59.54	1750742.05	428390.79	39°40'24.8952"N	80°16'25.0995"W	59.56	271.545	1.85	1.85	-0.36
3429.00	13.240	250.840	3421.34	39.28	-5.50	-79.19	1750722.40	428383.68	39°40'24.8233"N	80°16'25.3500"W	79.38	266.029	0.91	0.84	1.56
3523.00	13.270	246.310	3512.84	43.83	-13.37	-99.24	1750702.35	428375.82	39°40'24.7439"N	80°16'25.6055"W	100.14	262.330	1.11	0.03	-4.82
3616.00	13.160	239.150	3603.38	46.19	-23.08	-118.11	1750683.49	428366.10	39°40'24.6462"N	80°16'25.8457"W	120.34	258.941	1.76	-0.12	-7.70
3710.00	13.700	234.780	3694.82	46.40	-34.99	-136.39	1750665.21	428354.19	39°40'24.5270"N	80°16'26.0782"W	140.80	255.611	1.22	0.57	-4.65
3803.00	14.640	231.670	3784.99	45.13	-48.63	-154.60	1750647.00	428340.55	39°40'24.3906"N	80°16'26.3096"W	162.07	252.539	1.30	1.01	-3.34
3897.00	16.040	230.360	3875.64	42.80	-64.28	-173.92	1750627.68	428324.90	39°40'24.2343"N	80°16'26.5550"W	185.42	249.715	1.53	1.49	-1.39
3990.00	17.110	234.900	3964.77	41.10	-80.35	-195.01	1750606.59	428308.84	39°40'24.0737"N	80°16'26.8229"W	210.92	247.607	1.81	1.15	4.88
4084.00	17.640	238.600	4054.49	41.30	-95.72	-218.48	1750583.12	428293.47	39°40'23.9198"N	80°16'27.1214"W	238.53	246.341	1.30	0.56	3.94
4178.00	18.000	241.900	4143.98	43.26	-109.98	-243.45	1750558.15	428279.20	39°40'23.7768"N	80°16'27.4391"W	267.14	245.688	1.14	0.38	3.51
4270.00	18.820	246.320	4231.27	47.19	-122.64	-269.58	1750532.02	428266.55	39°40'23.6495"N	80°16'27.7719"W	296.17	245.538	1.76	0.89	4.80
4366.00	17.750	249.200	4322.43	53.12	-134.05	-297.45	1750504.16	428255.13	39°40'23.5343"N	80°16'28.1269"W	326.26	245.740	1.46	-1.11	3.00
4459.00	16.810	247.970	4411.23	58.97	-144.13	-323.16	1750478.45	428245.06	39°40'23.4325"N	80°16'28.4547"W	353.85	245.963	1.08	-1.01	-1.32
4553.00	16.290	243.890	4501.34	63.43	-155.03	-347.60	1750454.01	428234.16	39°40'23.3227"N	80°16'28.7661"W	380.61	245.963	1.35	-0.55	-4.34
4646.00	14.670	245.670	4590.96	67.04	-165.63	-370.05	1750431.57	428223.56	39°40'23.2161"N	80°16'29.0519"W	405.42	245.888	1.82	-1.74	1.91
4740.00	13.800	244.670	4682.07	70.58	-175.33	-391.03	1750410.59	428213.86	39°40'23.1184"N	80°16'29.3191"W	428.53	245.850	0.96	-0.93	-1.06
4833.00	14.690	240.950	4772.22	73.12	-185.80	-411.36	1750390.25	428203.39	39°40'23.0132"N	80°16'29.5780"W	451.37	245.693	1.37	0.96	-4.00
4926.00	15.270	239.920	4862.06	74.82	-197.66	-432.27	1750369.35	428191.53	39°40'22.8942"N	80°16'29.8441"W	475.32	245.427	0.69	0.62	-1.11
5019.00	15.270	242.930	4951.77	76.98	-209.37	-453.77	1750347.85	428179.82	39°40'22.7766"N	80°16'30.1178"W	499.74	245.231	0.85	0.00	3.24
5113.00	15.160	242.980	5042.48	79.81	-220.59	-475.74	1750325.88	428168.60	39°40'22.6639"N	80°16'30.3975"W	524.40	245.124	0.12	-0.12	0.05
5206.00	15.170	244.060	5132.24	82.84	-231.44	-497.52	1750304.10	428157.76	39°40'22.5548"N	80°16'30.6748"W	548.71	245.053	0.30	0.01	1.16
5301.00	14.270	244.240	5224.12	86.10	-241.96	-519.24	1750282.38	428147.23	39°40'22.4489"N	80°16'30.9514"W	572.85	245.015	0.95	-0.95	0.19
5394.00	13.980	243.780	5314.31	89.12	-251.91	-539.64	1750261.98	428137.29	39°40'22.3489"N	80°16'31.2112"W	595.54	244.976	0.33	-0.31	-0.49
5488.00	13.320	243.420	5405.65	91.91	-261.77	-559.51	1750242.11	428127.43	39°40'22.2498"N	80°16'31.4642"W	617.72	244.927	0.71	-0.70	-0.38
5581.00	12.510	235.960	5496.31	93.16	-272.20	-577.44	1750224.19	428116.99	39°40'22.1451"N	80°16'31.6924"W	638.38	244.761	1.99	-0.87	-8.02
5674.00	16.670	235.780	5586.29	92.95	-285.35	-596.82	1750204.80	428103.85	39°40'22.0136"N	80°16'31.9388"W	661.53	244.447	4.47	4.47	-0.19

WELLPATH DATA (327 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]
5768.00	17.220	240.270	5676.21	93.75	-299.83	-620.06	1750181.57	428089.37	39°40'21.8685"N	80°16'32.2343"W	688.74	244.194	1.51	0.59	4.78
5861.00	15.180	236.250	5765.52	94.67	-313.43	-642.14	1750159.49	428075.77	39°40'21.7322"N	80°16'32.5152"W	714.55	243.983	2.50	-2.19	-4.32
5955.00	15.060	239.670	5856.26	95.34	-326.43	-662.91	1750138.72	428062.77	39°40'21.6019"N	80°16'32.7794"W	738.92	243.784	0.96	-0.13	3.64
6049.00	14.630	239.020	5947.13	96.59	-338.71	-683.63	1750118.00	428050.49	39°40'21.4788"N	80°16'33.0430"W	762.94	243.644	0.49	-0.46	-0.69
6142.00	14.600	240.920	6037.12	98.07	-350.45	-703.94	1750097.69	428038.75	39°40'21.3611"N	80°16'33.3015"W	786.35	243.534	0.52	-0.03	2.04
6236.00	14.260	243.710	6128.15	100.49	-361.34	-724.68	1750076.96	428027.87	39°40'21.2517"N	80°16'33.5654"W	809.77	243.498	0.82	-0.36	2.97
6373.00	13.650	245.450	6261.11	105.19	-375.53	-754.51	1750047.13	428013.68	39°40'21.1089"N	80°16'33.9454"W	842.79	243.540	0.54	-0.45	1.27
6468.00	15.100	244.460	6353.13	108.70	-385.52	-775.87	1750025.77	428003.68	39°40'21.0084"N	80°16'34.2174"W	866.37	243.578	1.55	1.53	-1.04
6563.00	16.480	247.030	6444.55	112.94	-396.11	-799.44	1750002.19	427993.09	39°40'20.9017"N	80°16'34.5177"W	892.20	243.642	1.63	1.45	2.71
6657.00	18.280	246.590	6534.25	118.02	-407.17	-825.25	1749976.39	427982.03	39°40'20.7901"N	80°16'34.8465"W	920.23	243.739	1.92	1.91	-0.47
6752.00	18.810	248.960	6624.32	124.00	-418.59	-853.22	1749948.42	427970.61	39°40'20.6749"N	80°16'35.2029"W	950.37	243.867	0.97	0.56	2.49
6847.00	19.070	249.700	6714.18	130.92	-429.47	-882.07	1749919.58	427959.73	39°40'20.5649"N	80°16'35.5707"W	981.07	244.039	0.37	0.27	0.78
6943.00	19.010	249.320	6804.92	138.04	-440.44	-911.40	1749890.24	427948.77	39°40'20.4540"N	80°16'35.9446"W	1012.25	244.208	0.14	-0.06	-0.40
7038.00	19.100	249.410	6894.72	145.01	-451.37	-940.43	1749861.22	427937.84	39°40'20.3436"N	80°16'36.3146"W	1043.14	244.361	0.10	0.09	0.09
7132.00	19.120	249.370	6983.54	151.95	-462.20	-969.23	1749832.42	427927.01	39°40'20.2340"N	80°16'36.6817"W	1073.80	244.505	0.03	0.02	-0.04
7227.00	19.090	249.420	7073.31	158.95	-473.14	-998.34	1749803.31	427916.07	39°40'20.1234"N	80°16'37.0527"W	1104.78	244.642	0.04	-0.03	0.05

21 of 39

22 of 39



Actual Wellpath Report

ERP 1H AWP PROJ: 29562'
Page 4 of 12



REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	ERP 1H
Field	Monongalia	UWI	47061020100000
Facility	ERP Pad	Wellbore	ERP 1H AWB
Slot	1H		

WELLPATH DATA (327 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]
7322.00	19.100	249.670	7163.08	166.04	-484.00	-1027.46	1749774.20	427905.21	39°40'20.0136"N	80°16'37.4239"W	1135.75	244.776	0.09	0.01	0.26
7417.00	19.080	249.650	7252.85	173.18	-494.80	-1056.59	1749745.06	427894.41	39°40'19.9044"N	80°16'37.7953"W	1166.71	244.906	0.02	-0.02	-0.02
7514.00	19.110	249.440	7344.52	180.41	-505.89	-1086.32	1749715.34	427883.32	39°40'19.7922"N	80°16'38.1742"W	1198.34	245.029	0.08	0.03	-0.22
7609.00	18.240	263.560	7434.56	190.73	-513.03	-1115.67	1749685.99	427876.19	39°40'19.7192"N	80°16'38.5488"W	1227.97	245.305	4.83	-0.92	14.86
7705.00	20.800	279.220	7525.10	209.20	-511.98	-1147.45	1749654.21	427877.23	39°40'19.7269"N	80°16'38.9553"W	1256.49	245.954	6.04	2.67	16.31
7799.00	25.810	286.250	7611.42	236.22	-503.57	-1183.60	1749618.06	427885.64	39°40'19.8069"N	80°16'39.4185"W	1286.27	246.952	6.09	5.33	7.48
7893.00	31.970	294.730	7693.72	273.11	-487.41	-1225.91	1749575.76	427901.80	39°40'19.9629"N	80°16'39.9614"W	1319.25	248.318	7.86	6.55	9.02
7987.00	38.810	302.700	7770.34	321.36	-461.04	-1273.38	1749528.29	427928.17	39°40'20.2195"N	80°16'40.5714"W	1354.28	250.097	8.77	7.28	8.48
8081.00	46.600	310.690	7839.42	381.35	-422.78	-1324.18	1749477.49	427966.43	39°40'20.5933"N	80°16'41.2252"W	1390.03	252.293	10.08	8.29	8.50
8176.00	52.430	320.950	7901.16	452.23	-370.91	-1374.19	1749427.49	428018.29	39°40'21.1015"N	80°16'41.8705"W	1423.36	254.895	10.24	6.14	10.80
8271.00	61.270	325.440	7953.08	531.54	-307.22	-1421.65	1749380.03	428081.97	39°40'21.7269"N	80°16'42.4845"W	1454.46	257.806	10.11	9.31	4.73
8366.00	70.160	327.560	7992.12	618.04	-235.06	-1469.34	1749332.34	428154.13	39°40'22.4359"N	80°16'43.1024"W	1488.02	260.911	9.58	9.36	2.23
8460.00	78.660	328.210	8017.36	708.47	-158.44	-1517.42	1749284.26	428230.75	39°40'23.1890"N	80°16'43.7258"W	1525.67	264.039	9.07	9.04	0.69
8555.00	85.840	328.410	8030.16	802.48	-78.39	-1566.84	1749234.85	428310.79	39°40'23.9759"N	80°16'44.3666"W	1568.80	267.136	7.56	7.56	0.21
8651.00	87.750	329.090	8035.53	898.25	3.55	-1616.56	1749185.13	428392.72	39°40'24.7814"N	80°16'45.0115"W	1616.56	270.126	2.11	1.99	0.71
8745.00	91.790	328.540	8035.90	992.14	83.94	-1665.22	1749136.47	428473.12	39°40'25.5717"N	80°16'45.6428"W	1667.34	272.886	4.34	4.30	-0.59
8840.00	92.280	326.760	8032.53	1087.05	164.15	-1716.02	1749085.67	428553.32	39°40'26.3600"N	80°16'46.3013"W	1723.85	275.464	1.94	0.52	-1.87
8935.00	92.000	326.360	8028.98	1181.99	243.36	-1768.34	1749033.36	428632.53	39°40'27.1384"N	80°16'46.9792"W	1785.00	277.836	0.51	-0.29	-0.42
9030.00	91.790	326.410	8025.84	1276.93	322.43	-1820.90	1748980.80	428711.60	39°40'27.9153"N	80°16'47.6602"W	1849.23	280.042	0.23	-0.22	0.05
9124.00	91.880	326.840	8022.83	1370.88	400.89	-1872.58	1748929.12	428790.05	39°40'28.6862"N	80°16'48.3298"W	1915.02	282.084	0.47	0.10	0.46
9219.00	91.690	325.630	8019.87	1465.84	479.83	-1925.36	1748876.35	428868.98	39°40'29.4618"N	80°16'49.0135"W	1984.25	283.994	1.29	-0.20	-1.27
9314.00	92.090	326.810	8016.74	1560.78	558.75	-1978.15	1748823.56	428947.89	39°40'30.2371"N	80°16'49.6974"W	2055.55	285.773	1.31	0.42	1.24
9409.00	91.290	326.670	8013.94	1655.74	638.15	-2030.23	1748771.49	429027.29	39°40'31.0174"N	80°16'50.3722"W	2128.16	287.449	0.85	-0.84	-0.15
9504.00	90.520	326.450	8012.44	1750.73	717.41	-2082.57	1748719.15	429106.55	39°40'31.7962"N	80°16'51.0505"W	2202.68	289.008	0.84	-0.81	-0.23
9598.00	90.590	326.750	8011.52	1844.72	795.88	-2134.31	1748667.41	429185.02	39°40'32.5672"N	80°16'51.7209"W	2277.88	290.450	0.33	0.07	0.32
9694.00	90.620	326.930	8010.51	1940.71	876.25	-2186.82	1748614.90	429265.37	39°40'33.3569"N	80°16'52.4014"W	2355.84	291.836	0.19	0.03	0.19
9788.00	90.550	326.960	8009.55	2034.70	955.03	-2238.09	1748563.64	429344.15	39°40'34.1310"N	80°16'53.0658"W	2433.34	293.109	0.08	-0.07	0.03
9882.00	90.650	326.700	8008.57	2128.69	1033.71	-2289.52	1748512.21	429422.82	39°40'34.9042"N	80°16'53.7323"W	2512.06	294.299	0.30	0.11	-0.28
9977.00	90.520	326.590	8007.60	2223.69	1113.05	-2341.75	1748459.99	429502.17	39°40'35.6838"N	80°16'54.4091"W	2592.81	295.422	0.18	-0.14	-0.12

23 of 39

WELLPATH DATA (327 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]
10072.00	90.490	326.580	8006.76	2318.68	1192.35	-2394.06	1748407.67	429581.45	39°40'36.4629"N	80°16'55.0869"W	2674.55	296.475	0.03	-0.03	-0.01
10167.00	90.490	325.340	8005.95	2413.68	1271.06	-2447.24	1748354.50	429660.17	39°40'37.2363"N	80°16'55.7758"W	2757.64	297.447	1.31	0.00	-1.31
10262.00	90.520	325.990	8005.11	2508.66	1349.51	-2500.82	1748300.93	429738.61	39°40'38.0069"N	80°16'56.4697"W	2841.70	298.352	0.68	0.03	0.68
10357.00	90.430	326.380	8004.32	2603.66	1428.43	-2553.68	1748248.06	429817.53	39°40'38.7823"N	80°16'57.1547"W	2926.04	299.221	0.42	-0.09	0.41
10451.00	89.820	325.670	8004.12	2697.66	1506.39	-2606.21	1748195.54	429895.47	39°40'39.5482"N	80°16'57.8352"W	3010.24	300.028	1.00	-0.65	-0.76
10546.00	90.220	326.840	8004.08	2792.65	1585.38	-2658.98	1748142.77	429974.46	39°40'40.3243"N	80°16'58.5189"W	3095.74	300.805	1.30	0.42	1.23
10641.00	90.180	326.780	8003.75	2887.65	1664.88	-2710.99	1748090.77	430053.96	39°40'41.1055"N	80°16'59.1928"W	3181.40	301.555	0.08	-0.04	-0.06
10736.00	90.120	326.870	8003.50	2982.65	1744.39	-2762.97	1748038.79	430133.47	39°40'41.8868"N	80°16'59.8665"W	3267.56	302.266	0.11	-0.06	0.09
10831.00	89.970	324.220	8003.43	3077.63	1822.72	-2816.72	1747985.05	430211.79	39°40'42.6562"N	80°17'0.5626"W	3355.03	302.907	2.79	-0.16	-2.79
10925.00	90.150	326.720	8003.33	3171.61	1900.16	-2869.99	1747931.77	430289.22	39°40'43.4169"N	80°17'1.2526"W	3442.01	303.508	2.67	0.19	2.66
11020.00	90.030	326.560	8003.18	3266.61	1979.50	-2922.23	1747879.53	430368.56	39°40'44.1965"N	80°17'1.9296"W	3529.57	304.113	0.21	-0.13	-0.17
11114.00	90.000	326.580	8003.16	3360.61	2057.95	-2974.02	1747827.75	430447.01	39°40'44.9673"N	80°17'2.6007"W	3616.62	304.682	0.04	-0.03	0.02
11209.00	90.120	326.500	8003.06	3455.61	2137.21	-3026.40	1747775.38	430526.26	39°40'45.7460"N	80°17'3.2794"W	3704.96	305.229	0.15	0.13	-0.08
11304.00	89.940	326.450	8003.01	3550.61	2216.40	-3078.87	1747722.91	430605.45	39°40'46.5242"N	80°17'3.9593"W	3793.66	305.749	0.20	-0.19	-0.05
11399.00	90.000	325.120	8003.06	3645.60	2294.96	-3132.28	1747669.50	430684.00	39°40'47.2959"N	80°17'4.6513"W	3883.05	306.229	1.40	0.06	-1.40
11494.00	90.000	326.470	8003.06	3740.59	2373.53	-3185.69	1747616.10	430762.56	39°40'48.0677"N	80°17'5.3431"W	3972.69	306.688	1.42	0.00	1.42



Actual Wellpath Report

ERP 1H AWP PROJ: 29562'

Page 5 of 12



REFERENCE WELLPATH IDENTIFICATION

Operator	NORTHEAST NATURAL ENERGY, LLC	Well	ERP 1H
Field	Monongalia	UWI	47061020100000
Facility	ERP Pad	Wellbore	ERP 1H AWB
Slot	1H		

WELLPATH DATA (327 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]
11589.00	89.910	326.030	8003.13	3835.59	2452.52	-3238.47	1747563.32	430841.55	39°40'48.8438"N	80°17'6.0269"W	4062.33	307.137	0.47	-0.09	-0.46
11683.00	90.090	326.620	8003.13	3929.59	2530.74	-3290.59	1747511.20	430919.77	39°40'49.6123"N	80°17'6.7023"W	4151.22	307.563	0.66	0.19	0.63
11778.00	90.090	326.760	8002.98	4024.59	2610.13	-3342.76	1747459.03	430999.15	39°40'50.3924"N	80°17'7.3784"W	4241.09	307.984	0.15	0.00	0.15
11873.00	89.940	326.650	8002.96	4119.59	2689.54	-3394.91	1747406.89	431078.56	39°40'51.1727"N	80°17'8.0543"W	4331.17	308.387	0.20	-0.16	-0.12
11968.00	90.370	326.740	8002.70	4214.59	2768.94	-3447.07	1747354.73	431157.95	39°40'51.9528"N	80°17'8.7303"W	4421.46	308.774	0.46	0.45	0.09
12063.00	90.490	326.750	8001.99	4309.58	2848.38	-3499.17	1747302.64	431237.38	39°40'52.7333"N	80°17'9.4055"W	4511.92	309.146	0.13	0.13	0.01
12158.00	90.310	326.660	8001.32	4404.58	2927.78	-3551.32	1747250.49	431316.78	39°40'53.5135"N	80°17'10.0813"W	4602.58	309.503	0.21	-0.19	-0.09
12253.00	90.460	326.920	8000.69	4499.57	3007.26	-3603.35	1747198.46	431396.26	39°40'54.2945"N	80°17'10.7557"W	4693.37	309.848	0.32	0.16	0.27
12348.00	90.310	326.490	8000.05	4594.57	3086.67	-3655.50	1747146.32	431475.66	39°40'55.0747"N	80°17'11.4316"W	4784.37	310.177	0.48	-0.16	-0.45
12442.00	90.280	326.220	7999.56	4688.57	3164.92	-3707.57	1747094.24	431553.91	39°40'55.8435"N	80°17'12.1064"W	4874.71	310.485	0.29	-0.03	-0.29
12537.00	90.090	325.390	7999.26	4783.56	3243.50	-3760.97	1747040.85	431632.48	39°40'56.6155"N	80°17'12.7981"W	4966.40	310.775	0.90	-0.20	-0.87
12631.00	89.420	324.010	7999.66	4877.52	3320.21	-3815.28	1746986.54	431709.19	39°40'57.3689"N	80°17'13.5014"W	5057.68	311.031	1.63	-0.71	-1.47
12725.00	89.940	326.480	8000.18	4971.49	3397.43	-3868.86	1746932.96	431786.41	39°40'58.1274"N	80°17'14.1954"W	5148.85	311.288	2.69	0.55	2.63
12820.00	89.050	326.040	8001.02	5066.49	3476.43	-3921.63	1746880.20	431865.40	39°40'58.9035"N	80°17'14.8791"W	5240.68	311.556	1.05	-0.94	-0.46
12915.00	89.630	326.570	8002.12	5161.48	3555.46	-3974.32	1746827.51	431944.43	39°40'59.6800"N	80°17'15.5620"W	5332.59	311.816	0.83	0.61	0.56
13009.00	89.480	326.380	8002.85	5255.48	3633.82	-4026.24	1746775.60	432022.78	39°41'0.4499"N	80°17'16.2348"W	5423.58	312.067	0.26	-0.16	-0.20
13104.00	90.310	326.910	8003.02	5350.47	3713.17	-4078.47	1746723.37	432102.13	39°41'1.2295"N	80°17'16.9117"W	5515.58	312.316	1.04	0.87	0.56
13199.00	90.090	327.020	8002.69	5445.47	3792.81	-4130.26	1746671.58	432181.76	39°41'2.0121"N	80°17'17.5831"W	5607.54	312.561	0.26	-0.23	0.12
13294.00	90.280	328.080	8002.38	5540.45	3872.98	-4181.23	1746620.61	432261.92	39°41'2.7999"N	80°17'18.2440"W	5699.36	312.808	1.13	0.20	1.12
13389.00	90.250	327.560	8001.94	5635.41	3953.38	-4231.83	1746570.02	432342.32	39°41'3.5901"N	80°17'18.9002"W	5791.17	313.052	0.55	-0.03	-0.55
13483.00	90.370	326.940	8001.43	5729.40	4032.44	-4282.68	1746519.17	432421.37	39°41'4.3670"N	80°17'19.5595"W	5882.34	313.276	0.67	0.13	-0.66
13578.00	90.490	326.980	8000.72	5824.39	4112.08	-4334.47	1746467.38	432501.01	39°41'5.1495"N	80°17'20.2309"W	5974.68	313.492	0.13	0.13	0.04
13673.00	90.090	326.310	8000.24	5919.39	4191.43	-4386.71	1746415.15	432580.35	39°41'5.9291"N	80°17'20.9079"W	6067.23	313.696	0.82	-0.42	-0.71
13767.00	90.280	326.770	7999.94	6013.39	4269.85	-4438.53	1746363.33	432658.77	39°41'6.6996"N	80°17'21.5796"W	6158.91	313.890	0.53	0.20	0.49
13862.00	90.520	327.530	7999.27	6108.38	4349.65	-4490.06	1746311.80	432738.57	39°41'7.4838"N	80°17'22.2477"W	6251.41	314.090	0.84	0.25	0.80
13957.00	90.250	327.020	7998.63	6203.36	4429.57	-4541.42	1746260.45	432818.48	39°41'8.2691"N	80°17'22.9135"W	6343.94	314.286	0.61	-0.28	-0.54
14052.00	90.430	327.390	7998.07	6298.35	4509.43	-4592.87	1746209.00	432898.33	39°41'9.0539"N	80°17'23.5807"W	6436.57	314.475	0.43	0.19	0.39
14146.00	90.280	326.610	7997.49	6392.34	4588.26	-4644.07	1746157.80	432977.16	39°41'9.8285"N	80°17'24.2443"W	6528.36	314.654	0.84	-0.16	-0.83
14241.00	90.280	327.780	7997.02	6487.33	4668.11	-4695.54	1746106.34	433057.00	39°41'10.6131"N	80°17'24.9116"W	6621.12	314.832	1.23	0.00	1.23

25 of 39

WELLPATH DATA (327 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]
14335.00	90.340	326.550	7996.52	6581.32	4747.09	-4746.50	1746055.38	433135.98	39°41'11.3892"N	80°17'25.5724"W	6712.98	315.004	1.31	0.06	-1.31
14430.00	90.400	326.780	7995.90	6676.32	4826.46	-4798.71	1746003.17	433215.34	39°41'12.1690"N	80°17'26.2491"W	6806.05	315.165	0.25	0.06	0.24
14525.00	90.340	326.850	7995.29	6771.31	4905.96	-4850.70	1745951.18	433294.84	39°41'12.9502"N	80°17'26.9231"W	6899.11	315.324	0.10	-0.06	0.07
14620.00	90.370	326.890	7994.70	6866.30	4985.51	-4902.62	1745899.26	433374.39	39°41'13.7318"N	80°17'27.5962"W	6992.22	315.480	0.05	0.03	0.04
14714.00	90.280	327.080	7994.17	6960.30	5064.34	-4953.84	1745848.05	433453.21	39°41'14.5063"N	80°17'28.2602"W	7084.35	315.632	0.22	-0.10	0.20
14809.00	90.370	326.900	7993.63	7055.29	5144.00	-5005.59	1745796.30	433532.87	39°41'15.2891"N	80°17'28.9311"W	7177.51	315.781	0.21	0.09	-0.19
14903.00	90.490	325.750	7992.92	7149.29	5222.22	-5057.71	1745744.18	433611.08	39°41'16.0576"N	80°17'29.6066"W	7269.94	315.917	1.23	0.13	-1.22
14998.00	90.400	325.660	7992.18	7244.28	5300.70	-5111.24	1745690.66	433689.56	39°41'16.8285"N	80°17'30.3001"W	7363.57	316.042	0.13	-0.09	-0.09
15093.00	90.280	325.640	7991.62	7339.27	5379.13	-5164.84	1745637.06	433767.99	39°41'17.5989"N	80°17'30.9946"W	7457.26	316.164	0.13	-0.13	-0.02
15188.00	90.460	326.080	7991.01	7434.26	5457.76	-5218.16	1745583.75	433846.61	39°41'18.3713"N	80°17'31.6854"W	7550.91	316.286	0.50	0.19	0.46
15282.00	90.370	327.040	7990.33	7528.26	5536.20	-5269.95	1745531.96	433925.04	39°41'19.1419"N	80°17'32.3568"W	7643.42	316.411	1.03	-0.10	1.02
15377.00	90.650	325.640	7989.48	7623.25	5615.26	-5322.61	1745479.31	434004.10	39°41'19.9187"N	80°17'33.0392"W	7737.01	316.533	1.50	0.29	-1.47
15472.00	90.680	325.650	7988.38	7718.24	5693.69	-5376.21	1745425.70	434082.52	39°41'20.6891"N	80°17'33.7338"W	7830.82	316.643	0.03	0.03	0.01
15567.00	90.490	325.750	7987.41	7813.23	5772.16	-5429.74	1745372.18	434160.99	39°41'21.4599"N	80°17'34.4274"W	7924.64	316.751	0.23	-0.20	0.11
15661.00	90.340	325.300	7986.73	7907.21	5849.65	-5482.95	1745318.97	434238.48	39°41'22.2211"N	80°17'35.1167"W	8017.55	316.853	0.50	-0.16	-0.48
15756.00	90.150	325.450	7986.32	8002.20	5927.83	-5536.93	1745265.00	434316.64	39°41'22.9889"N	80°17'35.8160"W	8111.52	316.953	0.25	-0.20	0.16

26 of 39



Actual Wellpath Report

ERP 1H AWP PROJ: 29562'

Page 6 of 12



REFERENCE WELLPATH IDENTIFICATION

Operator	NORTHEAST NATURAL ENERGY, LLC	Well	ERP 1H
Field	Monongalia	UWI	47061020100000
Facility	ERP Pad	Wellbore	ERP 1H AWB
Slot	1H		

WELLPATH DATA (327 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]
15850.00	90.310	325.080	7985.94	8096.18	6005.07	-5590.49	1745211.44	434393.89	39°41'23.7476"N	80°17'36.5098"W	8204.54	317.048	0.43	0.17	-0.39
15945.00	90.370	325.590	7985.38	8191.16	6083.21	-5644.52	1745157.41	434472.02	39°41'24.5151"N	80°17'37.2098"W	8298.56	317.142	0.54	0.06	0.54
16040.00	90.460	326.020	7984.69	8286.15	6161.78	-5697.91	1745104.03	434550.59	39°41'25.2869"N	80°17'37.9016"W	8392.48	317.240	0.46	0.09	0.45
16134.00	90.280	325.550	7984.09	8380.15	6239.51	-5750.77	1745051.17	434628.31	39°41'26.0505"N	80°17'38.5865"W	8485.45	317.334	0.54	-0.19	-0.50
16229.00	90.310	325.430	7983.60	8475.14	6317.79	-5804.59	1744997.36	434706.59	39°41'26.8194"N	80°17'39.2838"W	8579.50	317.424	0.13	0.03	-0.13
16323.00	90.310	325.680	7983.09	8569.12	6395.31	-5857.76	1744944.19	434784.10	39°41'27.5808"N	80°17'39.9727"W	8672.56	317.512	0.27	0.00	0.27
16418.00	90.400	325.850	7982.50	8664.12	6473.85	-5911.20	1744890.75	434862.64	39°41'28.3523"N	80°17'40.6652"W	8766.59	317.601	0.20	0.09	0.18
16512.00	90.400	325.740	7981.84	8758.11	6551.59	-5964.04	1744837.91	434940.37	39°41'29.1159"N	80°17'41.3500"W	8859.63	317.688	0.12	0.00	-0.12
16607.00	90.250	325.590	7981.30	8853.10	6630.04	-6017.62	1744784.33	435018.81	39°41'29.8865"N	80°17'42.0443"W	8953.72	317.772	0.22	-0.16	-0.16
16702.00	90.620	325.720	7980.58	8948.09	6708.47	-6071.22	1744730.74	435097.24	39°41'30.6569"N	80°17'42.7387"W	9047.83	317.855	0.41	0.39	0.14
16796.00	90.680	325.970	7979.52	9042.08	6786.25	-6123.99	1744677.97	435175.02	39°41'31.4210"N	80°17'43.4226"W	9140.92	317.937	0.27	0.06	0.27
16891.00	90.310	325.660	7978.70	9137.07	6864.84	-6177.36	1744624.60	435253.60	39°41'32.1929"N	80°17'44.1142"W	9235.03	318.017	0.51	-0.39	-0.33
16985.00	90.490	325.760	7978.04	9231.06	6942.50	-6230.32	1744571.65	435331.25	39°41'32.9557"N	80°17'44.8004"W	9328.19	318.095	0.22	0.19	0.11
17080.00	90.520	325.650	7977.20	9326.05	7020.98	-6283.85	1744518.13	435409.73	39°41'33.7266"N	80°17'45.4940"W	9422.36	318.171	0.12	0.03	-0.12
17175.00	90.120	325.890	7976.67	9421.05	7099.52	-6337.29	1744464.69	435488.27	39°41'34.4982"N	80°17'46.1865"W	9516.53	318.247	0.49	-0.42	0.25
17270.00	90.310	326.660	7976.31	9516.05	7178.53	-6390.03	1744411.95	435567.27	39°41'35.2744"N	80°17'46.8702"W	9610.61	318.326	0.83	0.20	0.81
17364.00	90.060	326.790	7976.01	9610.04	7257.12	-6441.60	1744360.38	435645.86	39°41'36.0465"N	80°17'47.5388"W	9703.61	318.407	0.30	-0.27	0.14
17459.00	90.000	326.710	7975.96	9705.04	7336.57	-6493.69	1744308.29	435725.30	39°41'36.8271"N	80°17'48.2142"W	9797.61	318.488	0.11	-0.06	-0.08
17553.00	90.000	326.490	7975.96	9799.04	7415.04	-6545.44	1744256.55	435803.77	39°41'37.5981"N	80°17'48.8850"W	9890.68	318.564	0.23	0.00	-0.23
17648.00	89.850	325.790	7976.09	9894.04	7493.93	-6598.37	1744203.63	435882.65	39°41'38.3730"N	80°17'49.5710"W	9984.86	318.636	0.75	-0.16	-0.74
17742.00	89.660	326.580	7976.49	9988.04	7572.03	-6650.68	1744151.32	435960.75	39°41'39.1402"N	80°17'50.2491"W	10078.05	318.706	0.86	-0.20	0.84
17837.00	89.690	326.770	7977.03	10083.03	7651.41	-6702.87	1744099.13	436040.12	39°41'39.9201"N	80°17'50.9257"W	10172.14	318.781	0.20	0.03	0.20
17933.00	89.690	326.400	7977.55	10179.03	7731.54	-6755.73	1744046.27	436120.24	39°41'40.7073"N	80°17'51.6111"W	10267.26	318.853	0.39	0.00	-0.39
18028.00	90.120	326.790	7977.70	10274.03	7810.84	-6808.04	1743993.97	436199.55	39°41'41.4865"N	80°17'52.2892"W	10361.40	318.924	0.61	0.45	0.41
18123.00	89.970	326.700	7977.63	10369.03	7890.28	-6860.13	1743941.88	436278.98	39°41'42.2670"N	80°17'52.9646"W	10455.52	318.995	0.18	-0.16	-0.09
18218.00	89.910	326.240	7977.73	10464.03	7969.47	-6912.61	1743889.40	436358.17	39°41'43.0450"N	80°17'53.6449"W	10549.72	319.062	0.49	-0.06	-0.48
18312.00	89.910	325.170	7977.88	10558.02	8047.13	-6965.57	1743836.44	436435.82	39°41'43.8078"N	80°17'54.3313"W	10643.10	319.121	1.14	0.00	-1.14
18406.00	89.660	326.430	7978.23	10652.01	8124.87	-7018.41	1743783.61	436513.56	39°41'44.5714"N	80°17'55.0160"W	10736.46	319.179	1.37	-0.27	1.34
18500.00	89.200	325.250	7979.16	10746.00	8202.65	-7071.18	1743730.84	436591.33	39°41'45.3354"N	80°17'55.7000"W	10829.83	319.237	1.35	-0.49	-1.26

27 of 39

WELLPATH DATA (327 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]
18594.00	88.830	326.420	7980.78	10839.98	8280.42	-7123.96	1743678.06	436669.09	39°41'46.0993"N	80°17'56.3841"W	10923.19	319.293	1.31	-0.39	1.24
18688.00	89.850	326.730	7981.86	10933.97	8358.86	-7175.74	1743626.29	436747.53	39°41'46.8700"N	80°17'57.0553"W	11016.43	319.355	1.13	1.09	0.33
18783.00	89.450	326.310	7982.44	11028.97	8438.10	-7228.14	1743573.89	436826.77	39°41'47.6484"N	80°17'57.7347"W	11110.70	319.416	0.61	-0.42	-0.44
18878.00	89.850	326.750	7983.02	11123.97	8517.34	-7280.53	1743521.50	436906.01	39°41'48.4270"N	80°17'58.4140"W	11204.97	319.477	0.63	0.42	0.46
18973.00	90.370	326.940	7982.84	11218.96	8596.88	-7332.49	1743469.55	436985.53	39°41'49.2084"N	80°17'59.0877"W	11299.19	319.538	0.58	0.55	0.20
19068.00	90.250	327.010	7982.33	11313.96	8676.53	-7384.26	1743417.77	437065.18	39°41'49.9909"N	80°17'59.7591"W	11393.40	319.600	0.15	-0.13	0.07
19163.00	90.250	326.910	7981.91	11408.95	8756.16	-7436.06	1743365.98	437144.81	39°41'50.7734"N	80°18'0.4308"W	11487.62	319.661	0.11	0.00	-0.11
19257.00	90.120	326.420	7981.61	11502.95	8834.70	-7487.72	1743314.33	437223.34	39°41'51.5449"N	80°18'1.1006"W	11580.92	319.718	0.54	-0.14	-0.52
19352.00	89.750	325.290	7981.72	11597.94	8913.32	-7541.04	1743261.01	437301.96	39°41'52.3172"N	80°18'1.7917"W	11675.38	319.767	1.25	-0.39	-1.19
19447.00	89.420	326.260	7982.41	11692.94	8991.87	-7594.47	1743207.58	437380.50	39°41'53.0888"N	80°18'2.4842"W	11769.86	319.816	1.08	-0.35	1.02
19542.00	90.090	326.800	7982.81	11787.93	9071.11	-7646.86	1743155.20	437459.74	39°41'53.8673"N	80°18'3.1634"W	11864.21	319.869	0.91	0.71	0.57
19636.00	90.220	327.140	7982.56	11881.93	9149.92	-7698.10	1743103.96	437538.54	39°41'54.6416"N	80°18'3.8279"W	11957.50	319.925	0.39	0.14	0.36
19731.00	90.650	328.300	7981.84	11976.90	9230.23	-7748.83	1743053.23	437618.85	39°41'55.4308"N	80°18'4.4861"W	12051.62	319.986	1.30	0.45	1.22
19826.00	89.290	326.490	7981.89	12071.88	9310.26	-7800.02	1743002.05	437698.87	39°41'56.2171"N	80°18'5.1501"W	12145.83	320.044	2.38	-1.43	-1.91
19921.00	89.630	326.940	7982.78	12166.87	9389.67	-7852.15	1742949.92	437778.28	39°41'56.9973"N	80°18'5.8261"W	12240.18	320.096	0.59	0.36	0.47
20016.00	89.970	327.420	7983.11	12261.86	9469.50	-7903.64	1742898.43	437858.11	39°41'57.7817"N	80°18'6.4939"W	12334.46	320.150	0.62	0.36	0.51

28 & 39



Actual Wellpath Report

ERP 1H AWP PROJ: 29562'
Page 7 of 12



REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	ERP 1H
Field	Monongalia	UWI	47061020100000
Facility	ERP Pad	Wellbore	ERP 1H AWB
Slot	1H		

WELLPATH DATA (327 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]
20111.00	89.630	327.130	7983.44	12356.85	9549.42	-7955.00	1742847.08	437938.02	39°41'58.5670"N	80°18'7.1601"W	12428.74	320.205	0.47	-0.36	-0.31
20205.00	89.540	327.060	7984.12	12450.84	9628.34	-8006.06	1742796.02	438016.93	39°41'59.3424"N	80°18'7.8224"W	12522.06	320.256	0.12	-0.10	-0.07
20299.00	89.970	326.710	7984.53	12544.83	9707.07	-8057.41	1742744.67	438095.66	39°42'0.1159"N	80°18'8.4883"W	12615.43	320.305	0.59	0.46	-0.37
20394.00	90.030	327.070	7984.53	12639.83	9786.65	-8109.31	1742692.78	438175.23	39°42'0.8977"N	80°18'9.1613"W	12709.81	320.355	0.38	0.06	0.38
20489.00	90.180	327.010	7984.35	12734.82	9866.36	-8160.99	1742641.09	438254.93	39°42'1.6809"N	80°18'9.8317"W	12804.17	320.404	0.17	0.16	-0.06
20583.00	89.630	326.210	7984.51	12828.82	9944.84	-8212.72	1742589.37	438333.41	39°42'2.4519"N	80°18'10.5024"W	12897.62	320.449	1.03	-0.59	-0.85
20678.00	90.000	326.780	7984.82	12923.82	10024.05	-8265.16	1742536.93	438412.62	39°42'3.2301"N	80°18'11.1824"W	12992.10	320.493	0.72	0.39	0.60
20774.00	89.970	327.160	7984.84	13019.81	10104.54	-8317.49	1742484.60	438493.10	39°42'4.0209"N	80°18'11.8610"W	13087.49	320.541	0.40	-0.03	0.40
20869.00	89.450	326.530	7985.32	13114.81	10184.07	-8369.45	1742432.65	438572.63	39°42'4.8022"N	80°18'12.5348"W	13181.92	320.586	0.86	-0.55	-0.66
20963.00	88.310	326.240	7987.16	13208.79	10262.33	-8421.47	1742380.63	438650.89	39°42'5.5711"N	80°18'13.2094"W	13275.42	320.627	1.25	-1.21	-0.31
21058.00	89.480	326.700	7988.99	13303.77	10341.51	-8473.94	1742328.17	438730.06	39°42'6.3489"N	80°18'13.8897"W	13369.91	320.668	1.32	1.23	0.48
21153.00	89.350	326.850	7989.96	13398.76	10420.98	-8525.99	1742276.12	438809.52	39°42'7.1296"N	80°18'14.5647"W	13464.37	320.711	0.21	-0.14	0.16
21248.00	88.980	326.550	7991.34	13493.75	10500.37	-8578.14	1742223.97	438888.91	39°42'7.9096"N	80°18'15.2410"W	13558.84	320.753	0.50	-0.39	-0.32
21343.00	89.170	326.710	7992.88	13588.73	10579.70	-8630.39	1742171.73	438968.23	39°42'8.6889"N	80°18'15.9185"W	13653.34	320.794	0.26	0.20	0.17
21437.00	89.170	326.660	7994.24	13682.72	10658.24	-8682.01	1742120.11	439046.77	39°42'9.4606"N	80°18'16.5880"W	13746.83	320.834	0.05	0.00	-0.05
21532.00	89.110	326.770	7995.67	13777.71	10737.65	-8734.14	1742067.98	439126.17	39°42'10.2407"N	80°18'17.2640"W	13841.33	320.875	0.13	-0.06	0.12
21626.00	88.980	326.440	7997.23	13871.70	10816.12	-8785.87	1742016.25	439204.64	39°42'11.0116"N	80°18'17.9349"W	13934.85	320.913	0.38	-0.14	-0.35
21721.00	88.770	326.490	7999.10	13966.68	10895.29	-8838.35	1741963.78	439283.80	39°42'11.7893"N	80°18'18.6153"W	14029.39	320.951	0.23	-0.22	0.05
21816.00	88.340	326.230	8001.49	14061.65	10974.35	-8890.96	1741911.18	439362.86	39°42'12.5660"N	80°18'19.2974"W	14123.93	320.987	0.53	-0.45	-0.27
21910.00	88.430	326.830	8004.14	14155.61	11052.73	-8942.78	1741859.36	439441.24	39°42'13.3360"N	80°18'19.9694"W	14217.46	321.024	0.65	0.10	0.64
22005.00	89.170	326.550	8006.13	14250.59	11132.11	-8994.94	1741807.20	439520.61	39°42'14.1158"N	80°18'20.6458"W	14311.98	321.061	0.83	0.78	-0.29
22099.00	89.170	327.030	8007.49	14344.57	11210.75	-9046.41	1741755.73	439599.24	39°42'14.8884"N	80°18'21.3135"W	14405.50	321.099	0.51	0.00	0.51
22195.00	88.680	326.760	8009.30	14440.55	11291.15	-9098.84	1741703.31	439679.64	39°42'15.6783"N	80°18'21.9934"W	14501.00	321.137	0.58	-0.51	-0.28
22289.00	91.260	327.790	8009.34	14534.53	11370.22	-9149.65	1741652.50	439758.71	39°42'16.4552"N	80°18'22.6526"W	14594.45	321.176	2.96	2.74	1.10
22384.00	88.830	327.440	8009.27	14629.50	11450.44	-9200.53	1741601.62	439838.92	39°42'17.2435"N	80°18'23.3128"W	14688.85	321.218	2.58	-2.56	-0.37
22479.00	88.310	325.570	8011.64	14724.47	11529.63	-9252.94	1741549.22	439918.11	39°42'18.0215"N	80°18'23.9924"W	14783.41	321.252	2.04	-0.55	-1.97
22573.00	87.630	325.890	8014.97	14818.40	11607.27	-9305.83	1741496.32	439995.74	39°42'18.7839"N	80°18'24.6781"W	14877.07	321.280	0.80	-0.72	0.34
22667.00	88.400	325.620	8018.23	14912.34	11684.92	-9358.70	1741443.46	440073.39	39°42'19.5467"N	80°18'25.3634"W	14970.73	321.308	0.87	0.82	-0.29

29-4-39

WELLPATH DATA (327 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]
22761.00	88.460	325.840	8020.80	15006.30	11762.57	-9411.61	1741390.55	440151.04	39°42'20.3094"N	80°18'26.0493"W	15064.41	321.336	0.24	0.06	0.23
22856.00	88.460	325.760	8023.36	15101.26	11841.12	-9464.99	1741337.18	440229.58	39°42'21.0808"N	80°18'26.7412"W	15159.09	321.364	0.08	0.00	-0.08
22950.00	88.180	325.730	8026.11	15195.21	11918.78	-9517.88	1741284.29	440307.23	39°42'21.8436"N	80°18'27.4268"W	15252.78	321.390	0.30	-0.30	-0.03
23045.00	88.150	325.660	8029.15	15290.16	11997.21	-9571.39	1741230.78	440385.66	39°42'22.6140"N	80°18'28.1206"W	15347.46	321.417	0.08	-0.03	-0.07
23140.00	88.220	325.790	8032.16	15385.10	12075.68	-9624.86	1741177.31	440464.12	39°42'23.3846"N	80°18'28.8137"W	15442.15	321.444	0.16	0.07	0.14
23235.00	88.280	325.890	8035.06	15480.06	12154.25	-9678.18	1741124.00	440542.69	39°42'24.1564"N	80°18'29.5050"W	15536.83	321.470	0.12	0.06	0.11
23330.00	88.550	325.630	8037.69	15575.01	12232.76	-9731.61	1741070.57	440621.19	39°42'24.9275"N	80°18'30.1977"W	15631.53	321.496	0.39	0.28	-0.27
23424.00	88.580	325.800	8040.04	15668.98	12310.40	-9784.55	1741017.64	440698.83	39°42'25.6901"N	80°18'30.8839"W	15725.24	321.522	0.18	0.03	0.18
23519.00	88.520	325.760	8042.45	15763.94	12388.93	-9837.96	1740964.23	440777.35	39°42'26.4614"N	80°18'31.5763"W	15819.95	321.547	0.08	-0.06	-0.04
23614.00	88.550	325.660	8044.88	15858.90	12467.39	-9891.46	1740910.73	440855.81	39°42'27.2320"N	80°18'32.2699"W	15914.67	321.572	0.11	0.03	-0.11
23709.00	87.510	325.070	8048.14	15953.83	12545.51	-9945.42	1740856.77	440933.92	39°42'27.9992"N	80°18'32.9693"W	16009.41	321.594	1.26	-1.09	-0.62
23803.00	88.250	326.000	8051.62	16047.76	12622.95	-9998.58	1740803.62	441011.37	39°42'28.7598"N	80°18'33.6583"W	16103.12	321.617	1.26	0.79	0.99
23898.00	88.000	325.890	8054.73	16142.70	12701.62	-10051.75	1740750.45	441090.03	39°42'29.5325"N	80°18'34.3477"W	16197.80	321.643	0.29	-0.26	-0.12
23993.00	88.060	325.770	8057.99	16237.64	12780.17	-10105.07	1740697.13	441168.58	39°42'30.3040"N	80°18'35.0390"W	16292.49	321.667	0.14	0.06	-0.13
24087.00	88.180	325.960	8061.08	16331.59	12857.94	-10157.79	1740644.42	441246.33	39°42'31.0678"N	80°18'35.7225"W	16386.19	321.691	0.24	0.13	0.20
24184.00	88.740	325.790	8063.69	16428.55	12938.21	-10212.19	1740590.02	441326.60	39°42'31.8562"N	80°18'36.4278"W	16482.90	321.716	0.60	0.58	-0.18
24276.00	88.650	325.720	8065.78	16520.52	13014.24	-10263.95	1740538.27	441402.62	39°42'32.6030"N	80°18'37.0988"W	16574.65	321.738	0.12	-0.10	-0.08

30 of 39



Actual Wellpath Report

ERP 1H AWP PROJ: 29562'

Page 8 of 12



REFERENCE WELLPATH IDENTIFICATION

Operator	NORTHEAST NATURAL ENERGY, LLC	Well	ERP 1H
Field	Monongalia	UWI	47061020100000
Facility	ERP Pad	Wellbore	ERP 1H AWB
Slot	1H		

WELLPATH DATA (327 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]
24372.00	89.170	326.090	8067.61	16616.50	13093.72	-10317.75	1740484.47	441482.10	39°42'33.3837"N	80°18'37.7964"W	16670.38	321.762	0.66	0.54	0.39
24466.00	89.200	326.030	8068.94	16710.49	13171.70	-10370.23	1740431.99	441560.08	39°42'34.1496"N	80°18'38.4769"W	16764.11	321.786	0.07	0.03	-0.06
24561.00	89.170	325.830	8070.29	16805.48	13250.38	-10423.44	1740378.78	441638.76	39°42'34.9225"N	80°18'39.1668"W	16858.85	321.810	0.21	-0.03	-0.21
24655.00	89.080	325.660	8071.73	16899.46	13328.07	-10476.35	1740325.88	441716.44	39°42'35.6855"N	80°18'39.8527"W	16952.62	321.831	0.20	-0.10	-0.18
24750.00	89.080	325.920	8073.26	16994.44	13406.62	-10529.75	1740272.48	441794.99	39°42'36.4570"N	80°18'40.5451"W	17047.38	321.853	0.27	0.00	0.27
24845.00	89.050	326.160	8074.81	17089.43	13485.41	-10582.81	1740219.42	441873.77	39°42'37.2308"N	80°18'41.2332"W	17142.12	321.877	0.25	-0.03	0.25
24940.00	89.230	325.930	8076.23	17184.42	13564.20	-10635.87	1740166.37	441952.55	39°42'38.0048"N	80°18'41.9211"W	17236.86	321.900	0.31	0.19	-0.24
25035.00	89.050	325.950	8077.66	17279.40	13642.89	-10689.07	1740113.17	442031.24	39°42'38.7777"N	80°18'42.6109"W	17331.61	321.922	0.19	-0.19	0.02
25130.00	89.820	325.980	8078.59	17374.39	13721.61	-10742.24	1740060.01	442109.96	39°42'39.5509"N	80°18'43.3003"W	17426.37	321.944	0.81	0.81	0.03
25224.00	90.280	326.170	8078.51	17468.39	13799.61	-10794.70	1740007.55	442187.95	39°42'40.3170"N	80°18'43.9806"W	17520.13	321.966	0.53	0.49	0.20
25318.00	90.310	325.900	8078.03	17562.39	13877.57	-10847.22	1739955.04	442265.91	39°42'41.0828"N	80°18'44.6616"W	17613.89	321.988	0.29	0.03	-0.29
25413.00	90.250	326.000	8077.56	17657.39	13956.28	-10900.41	1739901.85	442344.61	39°42'41.8559"N	80°18'45.3513"W	17708.66	322.009	0.12	-0.06	0.11
25508.00	90.000	325.960	8077.36	17752.38	14035.02	-10953.56	1739848.70	442423.35	39°42'42.6293"N	80°18'46.0405"W	17803.44	322.030	0.27	-0.26	-0.04
25603.00	90.060	326.040	8077.31	17847.38	14113.78	-11006.68	1739795.58	442502.10	39°42'43.4028"N	80°18'46.7294"W	17898.21	322.051	0.11	0.06	0.08
25698.00	89.940	326.800	8077.31	17942.38	14192.93	-11059.23	1739743.04	442581.24	39°42'44.1803"N	80°18'47.4109"W	17992.93	322.074	0.81	-0.13	0.80
25793.00	90.520	327.280	8076.93	18037.37	14272.64	-11110.91	1739691.36	442660.95	39°42'44.9634"N	80°18'48.0814"W	18087.58	322.100	0.79	0.61	0.51
25888.00	91.290	327.180	8075.43	18132.35	14352.51	-11162.32	1739639.95	442740.81	39°42'45.7481"N	80°18'48.7486"W	18182.19	322.127	0.82	0.81	-0.11
25983.00	91.230	327.070	8073.34	18227.32	14432.27	-11213.88	1739588.40	442820.57	39°42'46.5317"N	80°18'49.4175"W	18276.80	322.153	0.13	-0.06	-0.12
26077.00	91.850	327.620	8070.81	18321.27	14511.39	-11264.58	1739537.70	442899.68	39°42'47.3090"N	80°18'50.0754"W	18370.39	322.179	0.88	0.66	0.59
26172.00	92.460	327.340	8067.24	18416.18	14591.43	-11315.61	1739486.67	442979.72	39°42'48.0955"N	80°18'50.7377"W	18464.91	322.207	0.71	0.64	-0.29
26267.00	91.720	327.090	8063.77	18511.11	14671.25	-11367.02	1739435.26	443059.53	39°42'48.8797"N	80°18'51.4048"W	18559.49	322.232	0.82	-0.78	-0.26
26362.00	91.750	327.100	8060.90	18606.06	14750.97	-11418.61	1739383.68	443139.25	39°42'49.6629"N	80°18'52.0741"W	18654.11	322.257	0.03	0.03	0.01
26456.00	91.630	327.020	8058.12	18700.01	14829.82	-11469.70	1739332.59	443218.10	39°42'50.4376"N	80°18'52.7370"W	18747.74	322.281	0.15	-0.13	-0.09
26551.00	91.720	327.110	8055.35	18794.96	14909.52	-11521.33	1739280.97	443297.79	39°42'51.2206"N	80°18'53.4069"W	18842.37	322.305	0.13	0.09	0.09
26646.00	91.820	327.280	8052.41	18889.91	14989.33	-11572.77	1739229.53	443377.60	39°42'52.0047"N	80°18'54.0744"W	18936.98	322.329	0.21	0.11	0.18
26741.00	91.720	327.300	8049.48	18984.85	15069.23	-11624.08	1739178.22	443457.49	39°42'52.7896"N	80°18'54.7403"W	19031.58	322.354	0.11	-0.11	0.02
26836.00	92.120	327.160	8046.30	19079.79	15149.07	-11675.47	1739126.83	443537.32	39°42'53.5740"N	80°18'55.4072"W	19126.18	322.378	0.45	0.42	-0.15
26931.00	92.180	327.010	8042.73	19174.71	15228.76	-11727.06	1739075.24	443617.01	39°42'54.3570"N	80°18'56.0765"W	19220.80	322.402	0.17	0.06	-0.16

31 of 39

WELLPATH DATA (327 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]
27025.00	92.310	327.230	8039.05	19268.63	15307.64	-11778.05	1739024.26	443695.89	39°42'55.1319"N	80°18'56.7382"W	19314.41	322.424	0.27	0.14	0.23
27120.00	92.250	327.370	8035.27	19363.54	15387.52	-11829.33	1738972.98	443775.76	39°42'55.9167"N	80°18'57.4037"W	19408.99	322.448	0.16	-0.06	0.15
27214.00	92.280	327.270	8031.56	19457.46	15466.58	-11880.05	1738922.26	443854.82	39°42'56.6934"N	80°18'58.0618"W	19502.58	322.472	0.11	0.03	-0.11
27308.00	92.150	327.180	8027.92	19551.38	15545.56	-11930.90	1738871.42	443933.79	39°42'57.4694"N	80°18'58.7217"W	19596.19	322.494	0.17	-0.14	-0.10
27403.00	92.800	327.390	8023.82	19646.28	15625.41	-11982.19	1738820.13	444013.64	39°42'58.2539"N	80°18'59.3873"W	19690.77	322.518	0.72	0.68	0.22
27498.00	92.770	327.120	8019.20	19741.15	15705.22	-12033.52	1738768.81	444093.44	39°42'59.0380"N	80°19'0.0534"W	19785.33	322.540	0.29	-0.03	-0.28
27593.00	92.770	327.300	8014.61	19836.03	15784.99	-12084.91	1738717.42	444173.21	39°42'59.8217"N	80°19'0.7203"W	19879.91	322.563	0.19	0.00	0.19
27688.00	92.860	327.370	8009.95	19930.90	15864.87	-12136.12	1738666.21	444253.08	39°43'0.6065"N	80°19'1.3849"W	19974.47	322.585	0.12	0.09	0.07
27783.00	92.060	326.720	8005.87	20025.81	15944.51	-12187.75	1738614.58	444332.72	39°43'1.3889"N	80°19'2.0548"W	20069.09	322.606	1.08	-0.84	-0.68
27878.00	92.190	325.920	8002.35	20120.74	16023.51	-12240.39	1738561.94	444411.71	39°43'2.1648"N	80°19'2.7377"W	20163.83	322.624	0.85	0.14	-0.84
27973.00	92.400	326.110	7998.54	20215.66	16102.21	-12293.45	1738508.89	444490.41	39°43'2.9379"N	80°19'3.4259"W	20258.59	322.640	0.30	0.22	0.20
28066.00	91.780	327.030	7995.15	20308.60	16179.78	-12344.65	1738457.69	444567.97	39°43'3.6998"N	80°19'4.0901"W	20351.31	322.658	1.19	-0.67	0.99
28161.00	91.690	325.880	7992.28	20403.55	16258.92	-12397.13	1738405.22	444647.11	39°43'4.4772"N	80°19'4.7707"W	20446.05	322.675	1.21	-0.09	-1.21
28256.00	91.690	326.020	7989.47	20498.51	16337.59	-12450.29	1738352.05	444725.78	39°43'5.2499"N	80°19'5.4603"W	20540.86	322.690	0.15	0.00	0.15
28351.00	91.690	325.760	7986.67	20593.47	16416.22	-12503.55	1738298.81	444804.40	39°43'6.0221"N	80°19'6.1509"W	20635.67	322.705	0.27	0.00	-0.27
28445.00	91.690	325.890	7983.90	20687.42	16493.95	-12556.32	1738246.03	444882.13	39°43'6.7855"N	80°19'6.8354"W	20729.49	322.719	0.14	0.00	0.14
28539.00	91.750	326.130	7981.08	20781.38	16571.85	-12608.85	1738193.51	444960.03	39°43'7.5507"N	80°19'7.5166"W	20823.29	322.734	0.26	0.06	0.26

32-2-39



Actual Wellpath Report

ERP 1H AWP PROJ: 29562'

Page 9 of 12



REFERENCE WELLPATH IDENTIFICATION

Operator	NORTHEAST NATURAL ENERGY, LLC	Well	ERP 1H
Field	Monongalia	UWI	47061020100000
Facility	ERP Pad	Wellbore	ERP 1H AWB
Slot	1H		

WELLPATH DATA (327 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]
28633.00	91.290	326.180	7978.58	20875.34	16649.90	-12661.19	1738141.18	445038.06	39°43'8.3172"N	80°19'8.1954"W	20917.09	322.749	0.49	-0.49	0.05
28727.00	90.740	325.140	7976.92	20969.32	16727.50	-12714.20	1738088.16	445115.66	39°43'9.0793"N	80°19'8.8829"W	21010.95	322.762	1.25	-0.59	-1.11
28822.00	90.860	326.370	7975.59	21064.30	16806.02	-12767.66	1738034.71	445194.18	39°43'9.8505"N	80°19'9.5761"W	21105.81	322.776	1.30	0.13	1.29
28917.00	90.770	326.100	7974.24	21159.29	16884.99	-12820.45	1737981.92	445273.14	39°43'10.6261"N	80°19'10.2609"W	21200.63	322.791	0.30	-0.09	-0.28
29011.00	90.120	325.760	7973.51	21253.29	16962.85	-12873.11	1737929.27	445351.00	39°43'11.3908"N	80°19'10.9439"W	21294.49	322.805	0.78	-0.69	-0.36
29107.00	90.310	325.900	7973.15	21349.28	17042.28	-12927.03	1737875.35	445430.42	39°43'12.1709"N	80°19'11.6431"W	21390.36	322.819	0.25	0.20	0.15
29201.00	91.290	326.080	7971.84	21443.27	17120.19	-12979.60	1737822.78	445508.33	39°43'12.9361"N	80°19'12.3250"W	21484.20	322.833	1.06	1.04	0.19
29296.00	91.540	325.940	7969.49	21538.24	17198.94	-13032.69	1737769.69	445587.07	39°43'13.7095"N	80°19'13.0137"W	21579.03	322.847	0.30	0.26	-0.15
29392.00	91.450	325.850	7966.99	21634.20	17278.40	-13086.50	1737715.89	445666.53	39°43'14.4899"N	80°19'13.7115"W	21674.86	322.860	0.13	-0.09	-0.09
29490.00	91.480	325.960	7964.48	21732.17	17359.53	-13141.42	1737660.97	445747.65	39°43'15.2867"N	80°19'14.4238"W	21772.69	322.874	0.12	0.03	0.11
29537.00	91.540	326.060	7963.24	21779.15	17398.48	-13167.68	1737634.71	445786.60	39°43'15.6693"N	80°19'14.7645"W	21819.60	322.880	0.25	0.13	0.21
29562.00‡	91.540	326.060	7962.57	21804.14	17419.21	-13181.64	1737620.76	445807.33	39°43'15.8730"N	80°19'14.9455"W	21844.56	322.884	0.00	0.00	0.00

HOLE & CASING SECTIONS - Ref Wellbore: ERP 1H AWB Ref Wellpath: ERP 1H AWP PROJ: 29562'

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]
5 1/2in Casing	25.00	29562.00	29537.00	25.00	7962.57	0.00	0.00	17419.21	-13181.64

Actual Wellpath Report

ERP 1H AWP PROJ: 29562'

Page 10 of 12

REFERENCE WELLPATH IDENTIFICATION

Operator	NORTHEAST NATURAL ENERGY, LLC	Well	ERP 1H
Field	Monongalia	UWI	47061020100000
Facility	ERP Pad	Wellbore	ERP 1H AWB
Slot	1H		

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
ERP 1H BHL Rev3	7950.00	17416.70	-13187.20	1737615.20	445804.82	39°43'15.8476"N	80°19'15.0163"W	point
ERP 1H LP Rev 4	7950.00	13.18	-1612.65	1749189.04	428402.36	39°40'24.8769"N	80°16'44.9626"W	point
ERP 1H BHL Rev-0	7975.00	15595.78	-12311.65	1738490.69	443984.01	39°42'57.9315"N	80°19'3.5997"W	point
ERP 1H BHL Rev-1	7975.00	19753.53	-14741.35	1736061.14	448141.50	39°43'38.8002"N	80°19'35.1802"W	point
ERP 1H BHL Rev-2	7975.00	17416.70	-13187.20	1737615.20	445804.82	39°43'15.8476"N	80°19'15.0163"W	point
ERP 1H LP Rev-0	7975.00	-720.65	-1460.09	1749341.59	427668.57	39°40'17.6379"N	80°16'42.9302"W	point
ERP 1H LP Rev-2	7975.00	96.45	-1668.02	1749133.67	428485.62	39°40'25.6951"N	80°16'45.6800"W	point
ERP 1H LP Rev-3	7975.00	13.18	-1612.65	1749189.04	428402.36	39°40'24.8769"N	80°16'44.9626"W	point
ERP 1H BHL Rev4	8060.00	17416.70	-13187.20	1737615.20	445804.82	39°43'15.8476"N	80°19'15.0163"W	point
ERP 1H LP Rev 5	8060.00	13.18	-1612.65	1749189.04	428402.36	39°40'24.8769"N	80°16'44.9626"W	point
ERP Pad Hardline #1 (9.9.21)	8525.00	1015.96	90.47	1750892.05	429405.08	39°40'34.9323"N	80°16'23.2927"W	polygon
	2D Polygon:: dimensions not calculated							
ERP Pad Hardline #2 (9.9.21)	8525.00	1368.28	1190.17	1751991.69	429757.38	39°40'38.5074"N	80°16'9.2672"W	polygon
	2D Polygon:: dimensions not calculated							

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
ERP Pad Hardline #3 (9.9.21)	8525.00	1393.21	1461.05	1752262.55	429782.30	39°40'38.7767"N	80°16'5.8056"W	polygon
2D Polygon:: dimensions not calculated								

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
ERP Pad Hardline #3 (9.9.21)	8525.00	1393.21	1461.05	1752262.55	429782.30	39°40'38.7767"N	80°16'5.8056"W	polygon
2D Polygon:: dimensions not calculated								



Actual Wellpath Report

ERP 1H AWP PROJ: 29562'

Page 11 of 12



REFERENCE WELLPATH IDENTIFICATION

Operator	NORTHEAST NATURAL ENERGY, LLC	Well	ERP 1H
Field	Monongalia	UWI	47061020100000
Facility	ERP Pad	Wellbore	ERP 1H AWB
Slot	1H		

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
ERP Pad Hardline #4 (9.9.21)	8525.00	-4814.85	97.36	1750898.94	423574.63	39°39'37.3098"N	80°16'22.5630"W	polygon
	2D Polygon:: dimensions not calculated							
ERP Pad Hardline #5 (9.9.21)	8525.00	-10391.88	6438.44	1757239.64	417997.93	39°38'42.7257"N	80°15'0.8900"W	polygon
	2D Polygon:: dimensions not calculated							
ERP Pad Hardline #6 (9.9.21)	8525.00	-11095.55	6760.61	1757561.79	417294.31	39°38'35.7982"N	80°14'56.6966"W	polygon
	2D Polygon:: dimensions not calculated							
ERP Pad Hardline #7 (9.9.21)	8525.00	-12582.58	6320.86	1757122.07	415807.37	39°38'21.0662"N	80°15'2.1590"W	polygon
	2D Polygon:: dimensions not calculated							
ERP Pad Hardline #8 (9.9.21)	8525.00	-10842.93	5810.56	1756611.80	417546.91	39°38'38.2162"N	80°15'8.8680"W	polygon
	2D Polygon:: dimensions not calculated							
ERP Pad Hardline #9 (02.28.2024)	8525.00	1015.96	90.47	1750892.05	429405.08	39°40'34.9323"N	80°16'23.2927"W	polygon
	2D Polygon:: dimensions not calculated							
ERP Hardline #1 (11.26.2024)	9525.00	11533.18	-7461.42	1743340.62	439921.66	39°42'18.2149"N	80°18'1.0717"W	polygon
	2D Polygon:: dimensions not calculated							
ERP Hardline #2 (11.26.2024)	9525.00	11937.84	-6444.84	1744357.14	440326.29	39°42'22.3032"N	80°17'48.1113"W	polygon
	2D Polygon:: dimensions not calculated							
ERP Hardline #3 (11.26.2024)	9525.00	11768.46	-6342.62	1744459.35	440156.92	39°42'20.6382"N	80°17'46.7842"W	polygon
	2D Polygon:: dimensions not calculated							
ERP Hardline #4 (11.26.2024)	9525.00	11588.25	-6430.62	1744371.36	439976.72	39°42'18.8496"N	80°17'47.8896"W	polygon
	2D Polygon:: dimensions not calculated							
ERP Hardline #5 (11.26.2024)	9525.00	11024.66	-7100.03	1743701.99	439413.16	39°42'13.2212"N	80°17'56.3901"W	polygon
	2D Polygon:: dimensions not calculated							
ERP Unit Lines NW (2.27.2025)	10025.00	12319.97	-8184.66	1742617.43	440708.40	39°42'25.9265"N	80°18'10.4150"W	polygon
	2D Polygon:: dimensions not calculated							

360 of 39



Actual Wellpath Report

ERP 1H AWP PROJ: 29562'

Page 12 of 12



REFERENCE WELLPATH IDENTIFICATION

Operator	NORTHEAST NATURAL ENERGY, LLC	Well	ERP 1H
Field	Monongalia	UWI	47061020100000
Facility	ERP Pad	Wellbore	ERP 1H AWB
Slot	1H		

WELLPATH COMPOSITION - Ref Wellbore: ERP 1H AWB Ref Wellpath: ERP 1H AWP PROJ: 29562'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
25.00	1200.00	OWSG XYZ Accel with XY Static and Continuous Gyro rev1.1	1 Imported Gyro 50' - 1200'	ERP 1H AWB	2026-01-15
1200.00	6236.00	OWSG MWD rev2 + HRGM	2 Imported AEP MWD HRGM 1346' - 6236'	ERP 1H AWB	2026-01-15
6236.00	29562.00	BH AutoTrak Curve/eXpress (2019) (HRGM, Short spacing)	3 BH ATC Short spacing HRGM 8.5" 6373' - 29537'	ERP 1H AWB	2026-01-15