



NORTHEAST NATURAL ENERGY, LLC



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

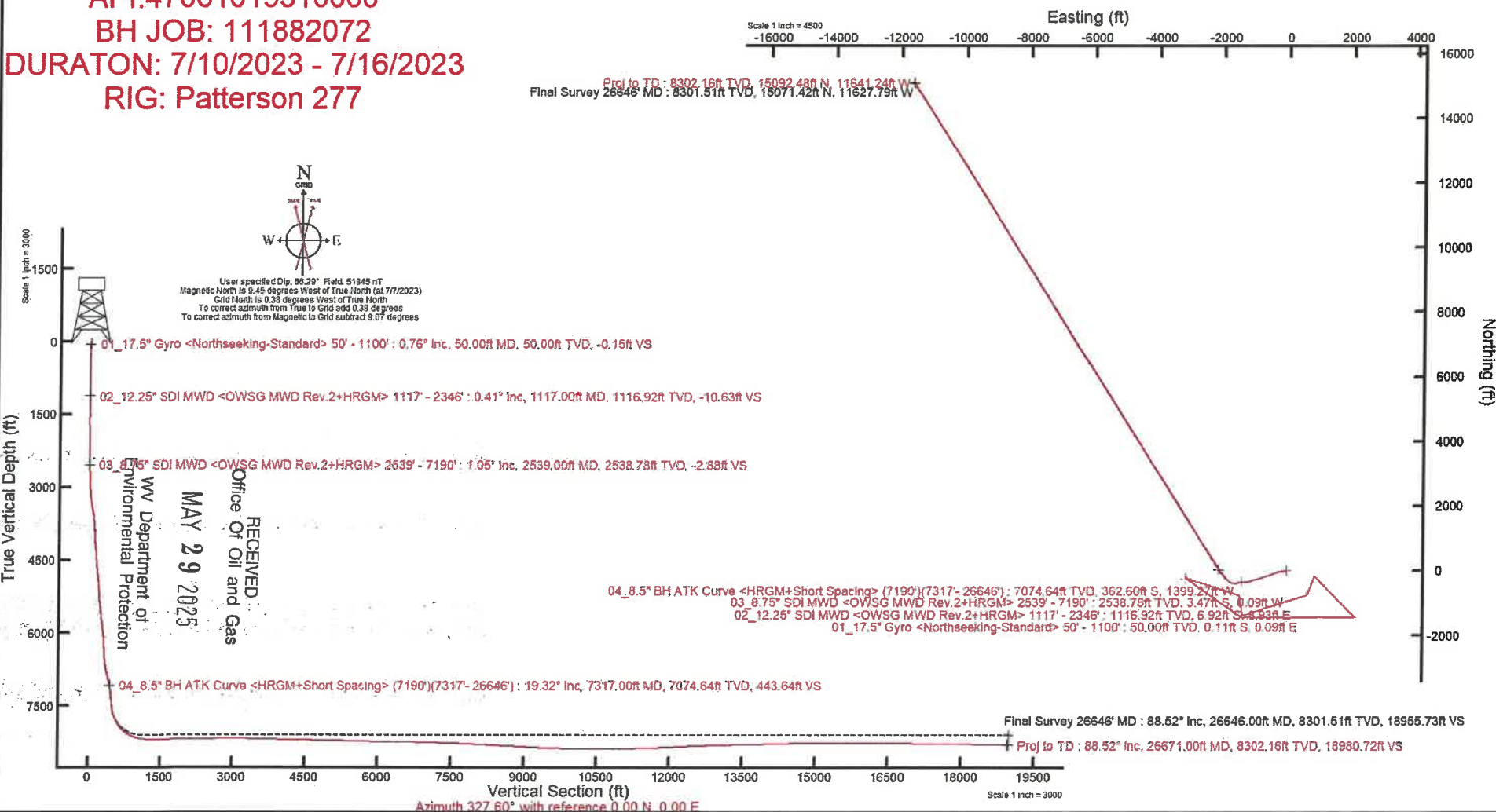
Slot: Slot #7H
Well: Dolls Run 7H
Wellbore: Dolls Run 7H AWB

Plot reference wellpath is Dolls Run 7H AWP Prep: 200711		Grid System, NAD83: Lambert West Virginia SP, Northern Zone (4701), US feet	
True vertical depths are referenced to Patterson 277 (RKB)		North Reference: Grid north	
Reference wellpath 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 #7H): -1522 feet		Depths are in feet	
Offset wellpath 1/2s are referenced to each path's default 150' datum		Created by: Isamam on 2023-07-19; Database: WA_NPL_EASTERNUS_Dept	

Bottom Hole Location

MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
26671.00	88.52	327.420	8302.16	15092.48	-11641.24	1789837.44	432908.49	39°41'12.57351N	80°05'35.5097W

API:47061019310000
BH JOB: 111882072
DURATON: 7/10/2023 - 7/16/2023
RIG: Patterson 277



119632



Actual Wellpath Report

Dolls Run 7H AWP Proj: 26671'

Page 1 of 13



REFERENCE WELLPATH IDENTIFICATION

Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Dolls Run 7H
Field	Monongalia	API	47061019310000
Facility	Dolls Run Pad	Wellbore	Dolls Run 7H AWP
Slot	Slot #7H		

REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert West Virginia SP, Northern Zone (4701), US feet	Software System	WellArchitect® 6.0
North Reference	Grid	User	Tranlam
Scale	0.999941	Report Generated	7/18/2023 at 3:57:15 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	0.00	0.00	1801477.97	417816.94	39°38'44.2060"N	80°05'35.3217"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 #7H)	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°

170632



Actual Wellpath Report

Dolls Run 7H AWP Proj: 26671'

Page 2 of 13



REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Dolls Run 7H
Field	Monongalia	API	47061019310000
Facility	Dolls Run Pad	Wellbore	Dolls Run 7H AWB
Slot	Slot #7H		

WELLPATH DATA (295 stations) † = interpolated, ‡ = extrapolated station													
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]
0.00†	0.000	141.940	0.00	0.00	0.00	0.00	1801477.97	417816.94	39°38'44.2060"N	80°05'35.3217"W	0.00	0.000	0.00
28.00	0.000	141.940	28.00	0.00	0.00	0.00	1801477.97	417816.94	39°38'44.2060"N	80°05'35.3217"W	0.00	0.000	0.00
50.00	0.760	141.940	50.00	-0.15	-0.11	0.09	1801478.06	417816.83	39°38'44.2048"N	80°05'35.3205"W	0.15	141.940	3.45
100.00	0.940	127.440	99.99	-0.86	-0.63	0.62	1801478.59	417816.31	39°38'44.1998"N	80°05'35.3137"W	0.88	135.243	0.56
150.00	0.890	121.120	149.99	-1.59	-1.08	1.28	1801479.25	417815.86	39°38'44.1954"N	80°05'35.3052"W	1.67	130.076	0.23
200.00	0.860	121.940	199.98	-2.28	-1.47	1.93	1801479.90	417815.47	39°38'44.1915"N	80°05'35.2969"W	2.43	127.395	0.07
250.00	0.900	121.320	249.98	-2.97	-1.88	2.58	1801480.55	417815.06	39°38'44.1876"N	80°05'35.2885"W	3.19	126.009	0.08
300.00	0.920	123.220	299.97	-3.69	-2.30	3.25	1801481.22	417814.64	39°38'44.1834"N	80°05'35.2799"W	3.99	125.267	0.07
350.00	0.920	125.180	349.96	-4.42	-2.75	3.92	1801481.89	417814.19	39°38'44.1790"N	80°05'35.2713"W	4.79	125.088	0.06
400.00	0.850	122.700	399.96	-5.13	-3.18	4.56	1801482.53	417813.76	39°38'44.1748"N	80°05'35.2631"W	5.56	124.935	0.16
450.00	0.930	135.930	449.95	-5.86	-3.68	5.15	1801483.12	417813.26	39°38'44.1700"N	80°05'35.2555"W	6.33	125.505	0.44
500.00	0.930	120.180	499.94	-6.62	-4.17	5.79	1801483.76	417812.77	39°38'44.1651"N	80°05'35.2474"W	7.13	125.792	0.51
550.00	0.940	129.150	549.94	-7.37	-4.63	6.45	1801484.42	417812.31	39°38'44.1606"N	80°05'35.2388"W	7.95	125.679	0.29
600.00	0.890	114.020	599.93	-8.08	-5.05	7.13	1801485.10	417811.89	39°38'44.1565"N	80°05'35.2301"W	8.74	125.328	0.49
650.00	0.690	126.660	649.93	-8.69	-5.39	7.72	1801485.69	417811.55	39°38'44.1532"N	80°05'35.2225"W	9.42	124.907	0.53
700.00	0.580	141.410	699.92	-9.22	-5.77	8.12	1801486.09	417811.17	39°38'44.1495"N	80°05'35.2173"W	9.96	125.373	0.39
750.00	0.620	166.340	749.92	-9.73	-6.23	8.34	1801486.31	417810.71	39°38'44.1450"N	80°05'35.2145"W	10.41	126.734	0.52
800.00	0.380	171.690	799.92	-10.14	-6.65	8.43	1801486.40	417810.29	39°38'44.1407"N	80°05'35.2133"W	10.74	128.279	0.49
850.00	0.120	356.750	849.92	-10.24	-6.77	8.45	1801486.42	417810.17	39°38'44.1396"N	80°05'35.2130"W	10.83	128.675	1.00
900.00	0.220	8.230	899.92	-10.12	-6.62	8.46	1801486.43	417810.32	39°38'44.1411"N	80°05'35.2129"W	10.74	128.026	0.21
950.00	0.060	67.160	949.92	-10.06	-6.51	8.50	1801486.47	417810.43	39°38'44.1421"N	80°05'35.2124"W	10.71	127.458	0.39
1000.00	0.150	121.050	999.92	-10.12	-6.54	8.58	1801486.55	417810.40	39°38'44.1419"N	80°05'35.2114"W	10.79	127.298	0.25
1050.00	0.220	137.550	1049.92	-10.27	-6.64	8.70	1801486.67	417810.30	39°38'44.1409"N	80°05'35.2099"W	10.95	127.350	0.17
1100.00	0.350	141.400	1099.92	-10.52	-6.83	8.86	1801486.83	417810.11	39°38'44.1390"N	80°05'35.2078"W	11.19	127.627	0.26
1117.00	0.410	148.830	1116.92	-10.63	-6.92	8.93	1801486.90	417810.02	39°38'44.1381"N	80°05'35.2070"W	11.30	127.801	0.46
1212.00	0.540	159.860	1211.91	-11.41	-7.64	9.26	1801487.23	417809.30	39°38'44.1311"N	80°05'35.2027"W	12.00	129.518	0.17
1306.00	0.690	152.170	1305.91	-12.40	-8.55	9.67	1801487.64	417808.39	39°38'44.1221"N	80°05'35.1973"W	12.91	131.479	0.18
1401.00	0.670	175.210	1400.90	-13.47	-9.61	9.99	1801487.96	417807.33	39°38'44.1116"N	80°05'35.1932"W	13.86	133.902	0.29
1495.00	0.760	165.890	1494.89	-14.55	-10.76	10.18	1801488.15	417806.18	39°38'44.1002"N	80°05'35.1906"W	14.82	136.583	0.16
1590.00	0.320	170.610	1589.89	-15.39	-11.64	10.38	1801488.35	417805.30	39°38'44.0916"N	80°05'35.1880"W	15.59	138.262	0.47

18 of 32



Actual Wellpath Report

Dolls Run 7H AWP Proj: 26671'

Page 3 of 13



REFERENCE WELLPATH IDENTIFICATION

Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Dolls Run 7H
Field	Monongalia	API	47061019310000
Facility	Dolls Run Pad	Wellbore	Dolls Run 7H AWB
Slot	Slot #7H		

WELLPATH DATA (295 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]
1685.00	0.490	343.380	1684.89	-15.24	-11.51	10.31	1801488.28	417805.43	39°38'44.0929"N	80°05'35.1889"W	15.45	138.149	0.85
1779.00	0.660	325.970	1778.88	-14.31	-10.68	9.89	1801487.86	417806.27	39°38'44.1011"N	80°05'35.1943"W	14.55	137.184	0.26
1874.00	0.900	317.420	1873.88	-13.03	-9.67	9.08	1801487.05	417807.27	39°38'44.1110"N	80°05'35.2048"W	13.27	136.810	0.28
1968.00	0.900	308.350	1967.86	-11.61	-8.67	8.00	1801485.97	417808.27	39°38'44.1208"N	80°05'35.2186"W	11.80	137.299	0.15
2063.00	0.820	308.410	2062.85	-10.26	-7.79	6.88	1801484.85	417809.15	39°38'44.1295"N	80°05'35.2330"W	10.39	138.518	0.08
2157.00	0.860	313.450	2156.84	-8.94	-6.88	5.84	1801483.81	417810.06	39°38'44.1383"N	80°05'35.2464"W	9.03	139.663	0.09
2251.00	0.950	310.260	2250.83	-7.51	-5.89	4.74	1801482.71	417811.05	39°38'44.1480"N	80°05'35.2606"W	7.56	141.206	0.11
2346.00	1.240	307.970	2345.81	-5.79	-4.75	3.33	1801481.30	417812.19	39°38'44.1592"N	80°05'35.2787"W	5.80	145.010	0.31
2539.00	1.050	269.830	2538.78	-2.88	-3.47	-0.09	1801477.88	417813.47	39°38'44.1716"N	80°05'35.3225"W	3.47	181.456	0.40
2633.00	3.170	257.650	2632.71	-1.53	-4.03	-3.49	1801474.48	417812.91	39°38'44.1659"N	80°05'35.3659"W	5.33	220.874	2.29
2728.00	5.300	259.160	2727.44	0.98	-5.42	-10.36	1801467.61	417811.52	39°38'44.1517"N	80°05'35.4537"W	11.70	242.401	2.24
2822.00	9.320	239.970	2820.67	2.89	-10.05	-21.22	1801456.75	417806.89	39°38'44.1053"N	80°05'35.5921"W	23.48	244.669	4.95
2917.00	12.180	254.130	2914.01	6.06	-16.64	-37.53	1801440.44	417800.30	39°38'44.0391"N	80°05'35.8000"W	41.05	246.089	4.08
3012.00	11.720	249.190	3006.96	10.85	-22.81	-56.19	1801421.78	417794.13	39°38'43.9769"N	80°05'36.0380"W	60.64	247.907	1.18
3106.00	15.500	253.610	3098.30	16.24	-29.75	-77.17	1801400.80	417787.20	39°38'43.9069"N	80°05'36.3057"W	82.71	248.920	4.17
3201.00	14.370	262.450	3190.11	24.69	-34.88	-101.04	1801376.94	417782.06	39°38'43.8547"N	80°05'36.6104"W	106.89	250.956	2.67
3296.00	16.100	266.940	3281.77	36.10	-37.13	-125.88	1801352.09	417779.81	39°38'43.8308"N	80°05'36.9278"W	131.25	253.566	2.20
3391.00	17.650	270.610	3372.68	50.41	-37.68	-153.44	1801324.54	417779.26	39°38'43.8236"N	80°05'37.2800"W	158.00	256.203	1.98
3489.00	20.040	267.930	3465.42	66.98	-38.13	-185.08	1801292.90	417778.81	39°38'43.8171"N	80°05'37.6844"W	188.97	258.359	2.59
3583.00	21.660	261.190	3553.27	82.06	-41.37	-218.33	1801259.66	417775.57	39°38'43.7829"N	80°05'38.1092"W	222.21	259.271	3.08
3677.00	23.080	252.060	3640.22	93.61	-49.70	-253.01	1801224.97	417767.24	39°38'43.6982"N	80°05'38.5518"W	257.85	258.886	3.99
3772.00	22.300	248.620	3727.87	101.70	-62.01	-287.51	1801190.47	417754.93	39°38'43.5744"N	80°05'38.9919"W	294.12	257.829	1.62
3867.00	21.700	247.550	3815.96	108.19	-75.29	-320.53	1801157.46	417741.66	39°38'43.4410"N	80°05'39.4128"W	329.25	256.782	0.76
3961.00	21.070	246.490	3903.48	113.80	-88.67	-352.08	1801125.91	417728.28	39°38'43.3067"N	80°05'39.8151"W	363.08	255.865	0.79
4056.00	20.570	244.540	3992.28	118.46	-102.65	-382.81	1801095.18	417714.29	39°38'43.1665"N	80°05'40.2067"W	396.34	254.989	0.90
4150.00	18.700	248.090	4080.81	123.20	-115.38	-411.71	1801066.29	417701.57	39°38'43.0388"N	80°05'40.5750"W	427.57	254.345	2.36
4245.00	18.290	255.310	4170.92	130.51	-124.84	-440.26	1801037.74	417692.11	39°38'42.9434"N	80°05'40.9392"W	457.62	254.169	2.45
4340.00	20.070	252.890	4260.64	139.34	-133.42	-470.26	1801007.74	417683.53	39°38'42.8567"N	80°05'41.3220"W	488.82	254.161	2.05
4438.00	19.710	249.490	4352.80	147.18	-144.15	-501.81	1800976.19	417672.80	39°38'42.7485"N	80°05'41.7244"W	522.11	253.972	1.24
4533.00	18.910	247.220	4442.46	153.05	-155.73	-531.01	1800946.99	417661.22	39°38'42.6322"N	80°05'42.0967"W	553.37	253.655	1.15

19 of 32



Actual Wellpath Report

Dolls Run 7H AWP Proj: 26671'
Page 4 of 13



REFERENCE WELLPATH IDENTIFICATION

Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Dolls Run 7H
Field	Monongalia	API	47061019310000
Facility	Dolls Run Pad	Wellbore	Dolls Run 7H AWB
Slot	Slot #7H		

WELLPATH DATA (295 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]
4627.00	18.050	252.970	4531.62	159.46	-165.89	-558.98	1800919.02	417651.06	39°38'42.5300"N	80°05'42.4534"W	583.08	253.470	2.14
4722.00	17.490	252.530	4622.08	167.04	-174.49	-586.67	1800891.34	417642.46	39°38'42.4432"N	80°05'42.8066"W	612.07	253.436	0.61
4816.00	17.760	255.150	4711.67	175.00	-182.40	-614.00	1800864.01	417634.55	39°38'42.3632"N	80°05'43.1553"W	640.52	253.455	0.89
4911.00	18.550	258.640	4801.95	184.80	-189.09	-642.82	1800835.19	417627.86	39°38'42.2952"N	80°05'43.5232"W	670.06	253.608	1.41
5005.00	20.440	255.950	4890.55	195.33	-196.02	-673.41	1800804.60	417620.93	39°38'42.2247"N	80°05'43.9136"W	701.36	253.770	2.23
5100.00	19.400	249.780	4979.88	203.89	-205.50	-704.31	1800773.70	417611.45	39°38'42.1290"N	80°05'44.3078"W	733.68	253.734	2.47
5195.00	19.540	249.480	5069.45	210.49	-216.53	-734.00	1800744.02	417600.43	39°38'42.0181"N	80°05'44.6863"W	765.27	253.564	0.18
5289.00	18.000	243.800	5158.45	215.29	-228.45	-761.75	1800716.26	417588.50	39°38'41.8984"N	80°05'45.0402"W	795.27	253.306	2.54
5387.00	17.430	248.880	5251.81	219.80	-240.43	-789.03	1800688.99	417576.53	39°38'41.7783"N	80°05'45.3879"W	824.85	253.054	1.68
5482.00	18.620	256.510	5342.16	227.50	-249.09	-817.06	1800660.96	417567.86	39°38'41.6908"N	80°05'45.7454"W	854.18	253.045	2.78
5577.00	19.480	258.000	5431.96	237.94	-255.92	-847.30	1800630.72	417561.03	39°38'41.6213"N	80°05'46.1314"W	885.11	253.193	1.04
5672.00	18.730	252.950	5521.73	247.50	-263.69	-877.38	1800600.64	417553.27	39°38'41.5426"N	80°05'46.5153"W	916.15	253.272	1.91
5767.00	19.100	255.600	5611.60	256.34	-272.03	-907.02	1800571.01	417544.93	39°38'41.4582"N	80°05'46.8934"W	946.93	253.305	0.98
5861.00	20.200	257.870	5700.13	266.72	-279.26	-937.78	1800540.25	417537.69	39°38'41.3847"N	80°05'47.2861"W	978.48	253.417	1.42
5955.00	21.680	260.770	5787.92	279.17	-285.46	-970.79	1800507.24	417531.50	39°38'41.3213"N	80°05'47.7075"W	1011.89	253.614	1.92
6050.00	19.920	257.910	5876.73	291.69	-291.66	-1003.94	1800474.09	417525.29	39°38'41.2578"N	80°05'48.1307"W	1045.45	253.800	2.14
6145.00	20.820	255.610	5965.79	302.53	-299.25	-1036.12	1800441.92	417517.71	39°38'41.1808"N	80°05'48.5415"W	1078.47	253.890	1.27
6240.00	22.550	254.420	6054.06	313.03	-308.34	-1070.02	1800408.02	417508.62	39°38'41.0887"N	80°05'48.9741"W	1113.56	253.925	1.88
6338.00	20.930	249.440	6145.09	322.06	-319.53	-1104.51	1800373.52	417497.43	39°38'40.9758"N	80°05'49.4141"W	1149.81	253.865	2.50
6433.00	18.020	242.250	6234.66	326.73	-332.34	-1133.42	1800344.62	417484.62	39°38'40.8473"N	80°05'49.7825"W	1181.14	253.658	3.96
6527.00	16.290	241.720	6324.48	328.86	-345.36	-1157.89	1800320.15	417471.61	39°38'40.7171"N	80°05'50.0943"W	1208.30	253.392	1.85
6622.00	16.190	248.110	6415.69	332.23	-356.61	-1181.92	1800296.12	417460.35	39°38'40.6043"N	80°05'50.4004"W	1234.55	253.210	1.88
6716.00	15.970	256.940	6506.03	338.91	-364.42	-1206.68	1800271.36	417452.55	39°38'40.5255"N	80°05'50.7163"W	1260.51	253.196	2.61
6811.00	16.410	263.510	6597.27	349.10	-368.89	-1232.75	1800245.30	417448.08	39°38'40.4796"N	80°05'51.0491"W	1286.76	253.341	1.98
6906.00	17.100	266.360	6688.24	361.68	-371.29	-1260.02	1800218.03	417445.67	39°38'40.4541"N	80°05'51.3976"W	1313.58	253.581	1.13
7001.00	19.120	272.680	6778.53	377.35	-371.45	-1289.51	1800188.54	417445.51	39°38'40.4506"N	80°05'51.7745"W	1341.94	253.931	2.96
7096.00	20.220	278.320	6868.00	397.00	-368.35	-1321.30	1800156.76	417448.62	39°38'40.4791"N	80°05'52.1811"W	1371.68	254.423	2.31
7190.00	21.850	276.110	6955.73	418.49	-364.13	-1354.76	1800123.29	417452.83	39°38'40.5186"N	80°05'52.6093"W	1402.85	254.956	1.93
7317.00	19.320	267.320	7074.64	443.64	-362.60	-1399.27	1800078.79	417454.36	39°38'40.5308"N	80°05'53.1784"W	1445.48	255.472	3.14
7411.00	20.570	260.710	7163.01	457.83	-365.99	-1431.10	1800046.96	417450.97	39°38'40.4952"N	80°05'53.5850"W	1477.16	255.655	2.74

20832



Actual Wellpath Report

Dolls Run 7H AWP Proj: 26671'

Page 5 of 13



REFERENCE WELLPATH IDENTIFICATION

Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Dolls Run 7H
Field	Monongalia	API	47061019310000
Facility	Dolls Run Pad	Wellbore	Dolls Run 7H AWP
Slot	Slot #7H		

WELLPATH DATA (295 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]
7506.00	20.940	260.500	7251.85	470.99	-371.49	-1464.32	1800013.74	417445.47	39°38'40.4387"N	80°05'54.0091"W	1510.70	255.765	0.40
7601.00	20.830	252.830	7340.62	482.03	-379.28	-1497.20	1799980.86	417437.68	39°38'40.3595"N	80°05'54.4289"W	1544.50	255.785	2.88
7695.00	20.840	252.620	7428.48	490.76	-389.21	-1529.13	1799948.94	417427.76	39°38'40.2593"N	80°05'54.8361"W	1577.88	255.720	0.08
7790.00	20.730	255.750	7517.30	500.37	-398.39	-1561.55	1799916.51	417418.57	39°38'40.1664"N	80°05'55.2499"W	1611.57	255.688	1.17
7885.00	21.890	264.400	7605.82	513.60	-404.26	-1595.48	1799882.58	417412.70	39°38'40.1062"N	80°05'55.6831"W	1645.90	255.782	3.52
7979.00	25.440	280.440	7691.99	535.26	-402.31	-1632.83	1799845.24	417414.65	39°38'40.1230"N	80°05'56.1607"W	1681.66	256.159	7.79
8074.00	31.600	289.160	7775.46	568.67	-390.43	-1676.47	1799801.61	417426.54	39°38'40.2375"N	80°05'56.7195"W	1721.33	256.890	7.81
8168.00	33.020	295.880	7854.93	609.77	-371.16	-1722.79	1799755.29	417445.80	39°38'40.4249"N	80°05'57.3133"W	1762.32	257.842	4.11
8263.00	39.060	310.050	7931.85	660.46	-340.52	-1769.11	1799708.96	417476.44	39°38'40.7247"N	80°05'57.9081"W	1801.59	259.105	10.80
8358.00	49.320	316.420	7999.91	724.54	-295.02	-1817.01	1799661.07	417521.94	39°38'41.1712"N	80°05'58.5243"W	1840.81	260.778	11.76
8452.00	56.000	316.720	8056.89	797.85	-240.77	-1868.35	1799609.73	417576.18	39°38'41.7039"N	80°05'59.1852"W	1883.80	262.657	7.11
8547.00	62.430	322.350	8105.52	878.59	-178.66	-1921.16	1799556.93	417638.29	39°38'42.3142"N	80°05'59.8655"W	1929.45	264.687	8.47
8642.00	70.050	324.660	8143.77	965.24	-108.79	-1972.79	1799505.31	417708.15	39°38'43.0013"N	80°06'0.5315"W	1975.78	266.844	8.32
8736.00	77.030	324.620	8170.39	1055.22	-35.32	-2024.92	1799453.17	417781.62	39°38'43.7240"N	80°06'1.2043"W	2025.23	269.001	7.43
8830.00	83.800	324.550	8186.03	1147.72	40.17	-2078.60	1799399.49	417857.11	39°38'44.4665"N	80°06'1.8970"W	2078.99	271.107	7.20
8924.00	86.550	326.290	8193.94	1241.31	117.28	-2131.76	1799346.34	417934.22	39°38'45.2251"N	80°06'2.5830"W	2134.98	273.149	3.46
9019.00	88.980	327.050	8197.64	1336.22	196.59	-2183.91	1799294.19	418013.52	39°38'46.0054"N	80°06'3.2565"W	2192.74	275.144	2.68
9113.00	91.290	329.050	8197.42	1430.20	276.34	-2233.65	1799244.46	418093.27	39°38'46.7903"N	80°06'3.8992"W	2250.68	277.053	3.25
9208.00	90.860	326.830	8195.64	1525.18	356.83	-2284.06	1799194.05	418173.75	39°38'47.5824"N	80°06'4.5505"W	2311.77	278.879	2.38
9303.00	91.820	326.060	8193.42	1620.13	435.98	-2336.56	1799141.56	418252.89	39°38'48.3611"N	80°06'5.2284"W	2376.88	280.569	1.30
9397.00	92.060	326.980	8190.23	1714.06	514.34	-2388.38	1799089.74	418331.25	39°38'49.1321"N	80°06'5.8976"W	2443.13	282.153	1.01
9492.00	90.460	326.770	8188.15	1809.03	593.88	-2440.28	1799037.84	418410.78	39°38'49.9147"N	80°06'6.5679"W	2511.51	283.678	1.70
9587.00	90.310	326.760	8187.51	1904.01	673.34	-2492.35	1798985.78	418490.23	39°38'50.6965"N	80°06'7.2403"W	2581.70	285.118	0.16
9681.00	90.460	327.230	8186.88	1998.01	752.16	-2543.55	1798934.58	418569.06	39°38'51.4721"N	80°06'7.9016"W	2652.43	286.474	0.52
9775.00	90.520	327.500	8186.07	2092.00	831.32	-2594.24	1798883.89	418648.21	39°38'52.2511"N	80°06'8.5564"W	2724.18	287.768	0.29
9870.00	90.920	327.390	8184.88	2186.99	911.39	-2645.36	1798832.78	418728.27	39°38'53.0390"N	80°06'9.2167"W	2797.95	289.010	0.44
9965.00	90.830	326.550	8183.43	2281.98	991.02	-2697.13	1798781.00	418807.90	39°38'53.8225"N	80°06'9.8855"W	2873.44	290.175	0.89
10060.00	90.370	325.020	8182.43	2376.92	1069.58	-2750.55	1798727.59	418886.45	39°38'54.5953"N	80°06'10.5750"W	2951.18	291.249	1.68
10154.00	91.600	326.490	8180.82	2470.85	1147.26	-2803.43	1798674.71	418964.13	39°38'55.3596"N	80°06'11.2578"W	3029.10	292.256	2.04
10249.00	91.390	326.360	8178.34	2565.80	1226.39	-2855.95	1798622.19	419043.25	39°38'56.1380"N	80°06'11.9360"W	3108.13	293.239	0.26

26671



Actual Wellpath Report

Dolls Run 7H AWP Proj: 26671'

Page 6 of 13



REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Dolls Run 7H
Field	Monongalia	API	47061019310000
Facility	Dolls Run Pad	Wellbore	Dolls Run 7H AWP
Slot	Slot #7H		

WELLPATH DATA (295 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]
10344.00	91.630	326.910	8175.83	2660.75	1305.70	-2908.18	1798569.97	419122.56	39°38'56.9184"N	80°06'12.6105"W	3187.85	294.179	0.63
10438.00	91.880	326.890	8172.96	2754.70	1384.41	-2959.49	1798518.66	419201.27	39°38'57.6929"N	80°06'13.2733"W	3267.29	295.070	0.27
10533.00	90.220	326.900	8171.21	2849.68	1463.97	-3011.37	1798466.79	419280.82	39°38'58.4757"N	80°06'13.9433"W	3348.36	295.927	1.75
10627.00	90.340	326.860	8170.76	2943.67	1542.70	-3062.73	1798415.43	419359.55	39°38'59.2503"N	80°06'14.6067"W	3429.32	296.734	0.13
10721.00	89.750	326.450	8170.68	3037.65	1621.23	-3114.40	1798363.76	419438.07	39°39'0.0229"N	80°06'15.2740"W	3511.10	297.500	0.76
10816.00	88.740	327.920	8171.93	3132.64	1701.06	-3165.87	1798312.29	419517.89	39°39'0.8084"N	80°06'15.9389"W	3593.93	298.250	1.88
10910.00	88.280	327.880	8174.38	3226.61	1780.66	-3215.81	1798262.36	419597.49	39°39'1.5918"N	80°06'16.5842"W	3675.89	298.974	0.49
11004.00	88.950	327.690	8176.65	3320.58	1860.16	-3265.90	1798212.27	419676.99	39°39'2.3742"N	80°06'17.2315"W	3758.50	299.665	0.74
11099.00	89.080	328.140	8178.28	3415.56	1940.64	-3316.36	1798161.82	419757.46	39°39'3.1662"N	80°06'17.8834"W	3842.44	300.335	0.49
11194.00	88.950	328.340	8179.92	3510.54	2021.40	-3366.35	1798111.82	419838.22	39°39'3.9610"N	80°06'18.5295"W	3926.63	300.984	0.25
11288.00	88.890	328.450	8181.69	3604.52	2101.45	-3415.61	1798062.57	419918.26	39°39'4.7488"N	80°06'19.1661"W	4010.29	301.602	0.13
11382.00	88.180	327.490	8184.09	3698.48	2181.11	-3465.44	1798012.74	419997.92	39°39'5.5327"N	80°06'19.8101"W	4094.70	302.186	1.27
11477.00	88.090	328.180	8187.18	3793.43	2261.49	-3515.99	1797962.19	420078.29	39°39'6.3237"N	80°06'20.4633"W	4180.49	302.749	0.73
11571.00	88.770	328.280	8189.76	3887.39	2341.37	-3565.46	1797912.72	420158.17	39°39'7.1099"N	80°06'21.1027"W	4265.51	303.292	0.73
11665.00	88.740	328.130	8191.80	3981.36	2421.25	-3614.98	1797863.21	420238.04	39°39'7.8960"N	80°06'21.7426"W	4350.92	303.813	0.16
11759.00	88.580	328.240	8194.00	4075.33	2501.10	-3664.52	1797813.67	420317.89	39°39'8.6819"N	80°06'22.3828"W	4436.69	304.314	0.21
11854.00	88.830	328.250	8196.15	4170.30	2581.86	-3714.51	1797763.69	420398.64	39°39'9.4766"N	80°06'23.0289"W	4523.67	304.802	0.26
11948.00	88.920	328.050	8197.99	4264.28	2661.69	-3764.10	1797714.10	420478.47	39°39'10.2623"N	80°06'23.6698"W	4610.10	305.265	0.23
12043.00	88.340	328.160	8200.26	4359.25	2742.33	-3814.28	1797663.92	420559.10	39°39'11.0558"N	80°06'24.3183"W	4697.77	305.715	0.62
12138.00	89.230	328.040	8202.28	4454.22	2822.96	-3864.47	1797613.74	420639.73	39°39'11.8493"N	80°06'24.9669"W	4785.73	306.148	0.95
12232.00	89.010	328.100	8203.72	4548.21	2902.73	-3914.18	1797564.03	420719.49	39°39'12.6343"N	80°06'25.6094"W	4873.05	306.560	0.24
12327.00	89.080	327.930	8205.30	4643.19	2983.29	-3964.49	1797513.72	420800.05	39°39'13.4272"N	80°06'26.2596"W	4961.58	306.962	0.19
12422.00	89.410	327.830	8206.56	4738.18	3063.74	-4015.00	1797463.22	420880.50	39°39'14.2189"N	80°06'26.9123"W	5050.42	307.346	0.36
12516.00	88.740	327.490	8208.07	4832.17	3143.15	-4065.28	1797412.94	420959.90	39°39'15.0003"N	80°06'27.5619"W	5138.67	307.710	0.80
12611.00	89.320	327.220	8209.68	4927.15	3223.13	-4116.52	1797361.71	421039.88	39°39'15.7873"N	80°06'28.2239"W	5228.22	308.060	0.67
12706.00	88.310	327.310	8211.65	5022.13	3303.03	-4167.88	1797310.35	421119.77	39°39'16.5734"N	80°06'28.8875"W	5318.01	308.397	1.07
12800.00	88.680	328.000	8214.12	5116.10	3382.42	-4218.15	1797260.08	421199.15	39°39'17.3546"N	80°06'29.5371"W	5406.80	308.725	0.83
12895.00	88.370	327.730	8216.56	5211.06	3462.83	-4268.66	1797209.57	421279.56	39°39'18.1460"N	80°06'30.1899"W	5496.61	309.050	0.43
12989.00	88.430	327.470	8219.19	5305.03	3542.17	-4319.01	1797159.22	421358.89	39°39'18.9267"N	80°06'30.8405"W	5585.77	309.356	0.28
13084.00	88.430	328.050	8221.79	5399.99	3622.49	-4369.67	1797108.57	421439.21	39°39'19.7171"N	80°06'31.4952"W	5675.96	309.659	0.61

222232



Actual Wellpath Report

Dolls Run 7H AWP Proj: 26671'

Page 7 of 13



REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Dolls Run 7H
Field	Monongalia	API	47061019310000
Facility	Dolls Run Pad	Wellbore	Dolls Run 7H AWB
Slot	Slot #7H		

WELLPATH DATA (295 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]
13178.00	88.650	328.210	8224.18	5493.96	3702.30	-4419.29	1797058.95	421519.01	39°39'20.5024"N	80°06'32.1364"W	5765.16	309.955	0.29
13273.00	88.770	328.280	8226.32	5588.92	3783.05	-4469.27	1797008.97	421599.76	39°39'21.2972"N	80°06'32.7825"W	5855.42	310.247	0.15
13368.00	88.520	327.930	8228.57	5683.89	3863.69	-4519.45	1796958.79	421680.39	39°39'22.0907"N	80°06'33.4311"W	5945.88	310.527	0.45
13462.00	88.030	326.610	8231.40	5777.85	3942.73	-4570.25	1796908.00	421759.42	39°39'22.8684"N	80°06'34.0874"W	6035.92	310.784	1.50
13557.00	89.010	328.210	8233.85	5872.81	4022.74	-4621.40	1796856.85	421839.43	39°39'23.6557"N	80°06'34.7483"W	6126.97	311.038	1.97
13651.00	89.570	327.030	8235.02	5966.80	4102.11	-4671.74	1796806.52	421918.80	39°39'24.4368"N	80°06'35.3988"W	6217.11	311.285	1.39
13746.00	90.220	328.310	8235.19	6061.80	4182.39	-4722.54	1796755.72	421999.07	39°39'25.2267"N	80°06'36.0553"W	6308.31	311.529	1.51
13841.00	89.140	328.560	8235.72	6156.79	4263.33	-4772.27	1796705.99	422080.01	39°39'26.0233"N	80°06'36.6982"W	6399.26	311.776	1.17
13935.00	88.710	328.090	8237.48	6250.76	4343.31	-4821.62	1796656.65	422159.99	39°39'26.8104"N	80°06'37.3361"W	6489.40	312.013	0.68
14029.00	88.950	328.310	8239.40	6344.74	4423.18	-4871.14	1796607.13	422239.85	39°39'27.5964"N	80°06'37.9762"W	6579.71	312.241	0.35
14124.00	89.260	328.390	8240.89	6439.72	4504.04	-4920.99	1796557.29	422320.71	39°39'28.3922"N	80°06'38.6205"W	6671.02	312.467	0.34
14218.00	88.890	327.810	8242.41	6533.70	4583.84	-4970.65	1796507.62	422400.50	39°39'29.1774"N	80°06'39.2625"W	6761.58	312.682	0.73
14313.00	88.950	327.190	8244.20	6628.68	4663.94	-5021.69	1796456.59	422480.60	39°39'29.9657"N	80°06'39.9220"W	6853.45	312.885	0.66
14408.00	88.830	328.160	8246.04	6723.66	4744.21	-5072.47	1796405.81	422560.86	39°39'30.7555"N	80°06'40.5783"W	6945.32	313.085	1.03
14502.00	88.180	326.540	8248.49	6817.63	4823.32	-5123.17	1796355.11	422639.97	39°39'31.5339"N	80°06'41.2334"W	7036.43	313.273	1.86
14597.00	88.150	327.710	8251.53	6912.57	4903.07	-5174.71	1796303.58	422719.71	39°39'32.3185"N	80°06'41.8993"W	7128.65	313.456	1.23
14692.00	87.910	327.420	8254.80	7007.52	4983.20	-5225.63	1796252.66	422799.83	39°39'33.1070"N	80°06'42.5574"W	7220.77	313.640	0.40
14786.00	88.680	327.690	8257.59	7101.48	5062.49	-5276.04	1796202.25	422879.12	39°39'33.8873"N	80°06'43.2088"W	7312.00	313.817	0.87
14881.00	88.120	327.300	8260.25	7196.44	5142.58	-5327.07	1796151.23	422959.20	39°39'34.6753"N	80°06'43.8682"W	7404.31	313.990	0.72
14975.00	88.580	327.360	8262.95	7290.40	5221.67	-5377.79	1796100.51	423038.29	39°39'35.4536"N	80°06'44.5236"W	7495.76	314.156	0.49
15070.00	87.810	327.420	8265.95	7385.35	5301.66	-5428.96	1796049.34	423118.27	39°39'36.2406"N	80°06'45.1849"W	7588.23	314.320	0.81
15165.00	88.150	327.490	8269.29	7480.29	5381.69	-5480.03	1795998.27	423198.30	39°39'37.0280"N	80°06'45.8449"W	7680.71	314.481	0.37
15260.00	88.150	327.420	8272.36	7575.24	5461.73	-5531.11	1795947.19	423278.33	39°39'37.8156"N	80°06'46.5050"W	7773.27	314.638	0.07
15354.00	87.750	326.880	8275.72	7669.18	5540.65	-5582.07	1795896.24	423357.25	39°39'38.5921"N	80°06'47.1634"W	7865.00	314.787	0.71
15449.00	86.830	327.230	8280.22	7764.06	5620.28	-5633.68	1795844.64	423436.88	39°39'39.3756"N	80°06'47.8302"W	7957.75	314.932	1.04
15543.00	87.230	327.130	8285.09	7857.94	5699.17	-5684.56	1795793.76	423515.76	39°39'40.1518"N	80°06'48.4877"W	8049.52	315.074	0.44
15638.00	86.980	326.800	8289.88	7952.81	5778.71	-5736.28	1795742.04	423595.30	39°39'40.9344"N	80°06'49.1560"W	8142.38	315.211	0.44
15732.00	87.100	327.290	8294.74	8046.68	5857.48	-5787.34	1795690.98	423674.06	39°39'41.7094"N	80°06'49.8158"W	8234.28	315.345	0.54
15827.00	86.800	327.180	8299.79	8141.54	5937.25	-5838.69	1795639.64	423753.83	39°39'42.4943"N	80°06'50.4792"W	8327.14	315.480	0.34
15922.00	87.230	327.760	8304.74	8236.41	6017.24	-5889.70	1795588.63	423833.81	39°39'43.2813"N	80°06'51.1385"W	8419.96	315.614	0.76

23 of 32



Actual Wellpath Report

Dolls Run 7H AWP Proj: 26671'

Page 8 of 13



REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Dolls Run 7H
Field	Monongalia	API	47061019310000
Facility	Dolls Run Pad	Wellbore	Dolls Run 7H AWB
Slot	Slot #7H		

WELLPATH DATA (295 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]
16016.00	87.100	327.010	8309.39	8330.30	6096.32	-5940.30	1795538.03	423912.88	39°39'44.0594"N	80°06'51.7925"W	8511.89	315.743	0.81
16111.00	87.200	327.550	8314.11	8425.18	6176.14	-5991.59	1795486.75	423992.71	39°39'44.8448"N	80°06'52.4553"W	8604.88	315.869	0.58
16205.00	87.260	327.520	8318.66	8519.07	6255.36	-6041.99	1795436.35	424071.92	39°39'45.6243"N	80°06'53.1066"W	8696.85	315.994	0.07
16299.00	87.170	326.540	8323.22	8612.95	6334.13	-6093.08	1795385.26	424150.68	39°39'46.3993"N	80°06'53.7668"W	8789.02	316.111	1.05
16394.00	86.860	326.510	8328.17	8707.80	6413.26	-6145.41	1795332.93	424229.81	39°39'47.1778"N	80°06'54.4429"W	8882.34	316.222	0.33
16488.00	86.950	326.310	8333.24	8801.65	6491.45	-6197.34	1795281.01	424307.99	39°39'47.9470"N	80°06'55.1137"W	8974.74	316.328	0.23
16583.00	86.090	326.730	8339.01	8896.45	6570.54	-6249.65	1795228.70	424387.08	39°39'48.7251"N	80°06'55.7895"W	9068.08	316.434	1.01
16678.00	87.070	327.900	8344.68	8991.28	6650.35	-6300.86	1795177.50	424466.89	39°39'49.5104"N	80°06'56.4513"W	9161.22	316.546	1.60
16773.00	86.730	327.790	8349.82	9086.14	6730.66	-6351.34	1795127.01	424547.19	39°39'50.3007"N	80°06'57.1039"W	9254.27	316.661	0.38
16868.00	86.640	327.140	8355.31	9180.98	6810.62	-6402.35	1795076.01	424627.14	39°39'51.0874"N	80°06'57.7631"W	9347.44	316.770	0.69
16962.00	87.010	326.110	8360.52	9274.82	6889.00	-6453.98	1795024.38	424705.52	39°39'51.8584"N	80°06'58.4302"W	9439.92	316.867	1.16
17057.00	87.500	326.960	8365.07	9369.69	6968.16	-6506.31	1794972.06	424784.67	39°39'52.6372"N	80°06'59.1062"W	9533.48	316.963	1.03
17151.00	88.310	327.300	8368.50	9463.63	7047.05	-6557.29	1794921.08	424863.56	39°39'53.4135"N	80°06'59.7651"W	9625.96	317.062	0.93
17246.00	88.710	326.970	8370.97	9558.59	7126.82	-6608.82	1794869.55	424943.33	39°39'54.1983"N	80°07'0.4310"W	9719.47	317.160	0.55
17340.00	88.430	326.790	8373.32	9652.55	7205.53	-6660.17	1794818.21	425022.02	39°39'54.9726"N	80°07'1.0945"W	9812.11	317.252	0.35
17435.00	88.120	327.620	8376.18	9747.51	7285.35	-6711.60	1794766.78	425101.84	39°39'55.7580"N	80°07'1.7592"W	9905.65	317.347	0.93
17530.00	88.610	327.560	8378.89	9842.47	7365.52	-6762.50	1794715.89	425182.01	39°39'56.5468"N	80°07'2.4170"W	9999.11	317.444	0.52
17624.00	88.740	328.230	8381.06	9936.44	7445.12	-6812.44	1794665.94	425261.60	39°39'57.3301"N	80°07'3.0627"W	10091.54	317.541	0.73
17719.00	88.770	328.150	8383.13	10031.42	7525.83	-6862.51	1794615.88	425342.31	39°39'58.1243"N	80°07'3.7100"W	10184.90	317.640	0.09
17814.00	89.290	328.290	8384.73	10126.40	7606.58	-6912.53	1794565.86	425423.05	39°39'58.9189"N	80°07'4.3567"W	10278.28	317.737	0.57
17908.00	89.690	327.520	8385.57	10220.39	7686.21	-6962.47	1794515.92	425502.68	39°39'59.7025"N	80°07'5.0024"W	10370.82	317.828	0.92
18003.00	89.720	328.290	8386.06	10315.39	7766.69	-7012.95	1794465.45	425583.15	39°40'0.4944"N	80°07'5.6549"W	10464.36	317.919	0.81
18098.00	89.260	327.940	8386.91	10410.38	7847.35	-7063.13	1794415.28	425663.81	39°40'1.2881"N	80°07'6.3037"W	10557.87	318.011	0.61
18192.00	89.820	328.400	8387.66	10504.37	7927.21	-7112.70	1794365.71	425743.66	39°40'2.0740"N	80°07'6.9446"W	10650.41	318.100	0.77
18287.00	89.380	327.690	8388.32	10599.36	8007.81	-7162.98	1794315.43	425824.26	39°40'2.8671"N	80°07'7.5946"W	10743.99	318.187	0.88
18381.00	90.180	328.020	8388.68	10693.36	8087.40	-7212.99	1794265.42	425903.84	39°40'3.6503"N	80°07'8.2412"W	10836.66	318.271	0.92
18475.00	91.420	328.680	8387.37	10787.34	8167.41	-7262.31	1794216.11	425983.85	39°40'4.4376"N	80°07'8.8789"W	10929.21	318.357	1.49
18571.00	91.140	327.770	8385.23	10883.31	8249.00	-7312.85	1794165.57	426065.43	39°40'5.2405"N	80°07'9.5324"W	11023.78	318.443	0.99
18664.00	91.110	327.830	8383.40	10976.29	8327.68	-7362.40	1794116.02	426144.11	39°40'6.0147"N	80°07'10.1729"W	11115.54	318.521	0.07
18758.00	90.860	327.970	8381.79	11070.28	8407.30	-7412.34	1794066.08	426223.72	39°40'6.7981"N	80°07'10.8186"W	11208.28	318.599	0.30

246632



Actual Wellpath Report

Dolls Run 7H AWP Proj: 26671'

Page 9 of 13



REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Dolls Run 7H
Field	Monongalia	API	47061019310000
Facility	Dolls Run Pad	Wellbore	Dolls Run 7H AWB
Slot	Slot #7H		

WELLPATH DATA (295 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]
18852.00	90.890	328.260	8380.35	11164.26	8487.10	-7461.99	1794016.44	426303.53	39°40'7.5835"N	80°07'11.4605"W	11300.98	318.678	0.31
18947.00	92.100	327.650	8377.87	11259.23	8567.60	-7512.37	1793966.06	426384.02	39°40'8.3755"N	80°07'12.1119"W	11394.72	318.755	1.43
19042.00	91.820	327.650	8374.62	11354.17	8647.81	-7563.18	1793915.26	426464.22	39°40'9.1647"N	80°07'12.7687"W	11488.53	318.828	0.29
19136.00	91.350	327.170	8372.02	11448.13	8726.98	-7613.79	1793864.65	426543.38	39°40'9.9437"N	80°07'13.4229"W	11581.45	318.897	0.71
19231.00	91.940	327.710	8369.30	11543.09	8807.01	-7664.89	1793813.55	426623.41	39°40'10.7311"N	80°07'14.0835"W	11675.36	318.966	0.84
19325.00	91.790	327.490	8366.24	11637.04	8886.34	-7715.23	1793763.21	426702.73	39°40'11.5117"N	80°07'14.7343"W	11768.26	319.035	0.28
19419.00	91.360	326.580	8363.65	11731.00	8965.17	-7766.36	1793712.08	426781.56	39°40'12.2873"N	80°07'15.3950"W	11861.31	319.098	1.07
19515.00	91.910	327.670	8360.91	11826.96	9045.76	-7818.45	1793660.00	426862.15	39°40'13.0802"N	80°07'16.0683"W	11956.34	319.162	1.27
19609.00	92.710	327.340	8357.12	11920.88	9124.98	-7868.91	1793609.54	426941.36	39°40'13.8596"N	80°07'16.7205"W	12049.27	319.227	0.92
19703.00	93.270	327.740	8352.22	12014.75	9204.19	-7919.29	1793559.16	427020.57	39°40'14.6389"N	80°07'17.3718"W	12142.17	319.291	0.73
19798.00	92.960	328.130	8347.06	12109.61	9284.58	-7969.65	1793508.81	427100.95	39°40'15.4299"N	80°07'18.0229"W	12235.96	319.358	0.52
19893.00	93.080	327.960	8342.05	12204.47	9365.07	-8019.86	1793458.60	427181.44	39°40'16.2220"N	80°07'18.6721"W	12329.75	319.425	0.22
19988.00	93.050	328.040	8336.97	12299.34	9445.52	-8070.13	1793408.34	427261.88	39°40'17.0136"N	80°07'19.3221"W	12423.56	319.490	0.09
20082.00	91.850	328.080	8332.96	12393.25	9525.21	-8119.81	1793358.66	427341.57	39°40'17.7978"N	80°07'19.9645"W	12516.43	319.554	1.28
20177.00	91.880	328.100	8329.86	12488.19	9605.81	-8170.00	1793308.47	427422.17	39°40'18.5909"N	80°07'20.6135"W	12610.33	319.618	0.04
20272.00	92.190	327.790	8326.49	12583.13	9686.28	-8220.39	1793258.09	427502.63	39°40'19.3826"N	80°07'21.2650"W	12704.28	319.680	0.46
20366.00	92.090	327.980	8322.98	12677.06	9765.84	-8270.33	1793208.15	427582.18	39°40'20.1655"N	80°07'21.9107"W	12797.26	319.740	0.23
20461.00	92.370	327.630	8319.28	12771.99	9846.17	-8320.90	1793157.58	427662.51	39°40'20.9559"N	80°07'22.5646"W	12891.26	319.799	0.47
20556.00	92.220	328.250	8315.48	12866.91	9926.62	-8371.29	1793107.19	427742.95	39°40'21.7475"N	80°07'23.2161"W	12985.23	319.858	0.67
20650.00	92.590	327.910	8311.54	12960.83	10006.33	-8420.95	1793057.54	427822.66	39°40'22.5319"N	80°07'23.8582"W	13078.19	319.917	0.53
20744.00	90.580	327.960	8308.94	13054.78	10085.96	-8470.83	1793007.66	427902.28	39°40'23.3154"N	80°07'24.5032"W	13171.24	319.974	2.14
20839.00	91.020	328.080	8307.61	13149.77	10166.53	-8521.14	1792957.36	427982.85	39°40'24.1082"N	80°07'25.1537"W	13265.30	320.032	0.48
20934.00	91.230	327.380	8305.74	13244.75	10246.84	-8571.85	1792906.65	428063.16	39°40'24.8984"N	80°07'25.8094"W	13359.43	320.086	0.77
21028.00	90.960	328.120	8303.95	13338.73	10326.33	-8622.00	1792856.50	428142.63	39°40'25.6805"N	80°07'26.4578"W	13452.58	320.140	0.84
21123.00	90.340	327.450	8302.87	13433.73	10406.70	-8672.64	1792805.86	428223.00	39°40'26.4712"N	80°07'27.1126"W	13546.73	320.193	0.96
21217.00	91.110	327.570	8301.68	13527.72	10485.98	-8723.13	1792755.38	428302.27	39°40'27.2513"N	80°07'27.7653"W	13639.96	320.243	0.83
21312.00	91.170	328.160	8299.79	13622.70	10566.41	-8773.65	1792704.86	428382.70	39°40'28.0427"N	80°07'28.4186"W	13734.11	320.296	0.62
21406.00	92.000	327.820	8297.19	13716.66	10646.08	-8823.45	1792655.06	428462.37	39°40'28.8267"N	80°07'29.0626"W	13827.23	320.348	0.95
21501.00	91.450	326.960	8294.33	13811.61	10726.07	-8874.63	1792603.89	428542.35	39°40'29.6136"N	80°07'29.7242"W	13921.48	320.396	1.07
21596.00	91.660	327.910	8291.75	13906.58	10806.10	-8925.74	1792552.77	428622.38	39°40'30.4010"N	80°07'30.3850"W	14015.73	320.444	1.02

25 of 32

Actual Wellpath Report

Dolls Run 7H AWP Proj: 26671'

Page 10 of 13

REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Dolls Run 7H
Field	Monongalia	API	47061019310000
Facility	Dolls Run Pad	Wellbore	Dolls Run 7H AWB
Slot	Slot #7H		

WELLPATH DATA (295 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]
21690.00	91.350	327.450	8289.28	14000.54	10885.51	-8975.98	1792502.54	428701.79	39°40'31.1824"N	80°07'31.0346"W	14108.96	320.492	0.59
21785.00	91.480	327.790	8286.94	14095.51	10965.72	-9026.84	1792451.68	428781.99	39°40'31.9715"N	80°07'31.6922"W	14203.20	320.539	0.38
21880.00	91.570	327.580	8284.41	14190.48	11045.97	-9077.61	1792400.92	428862.24	39°40'32.7612"N	80°07'32.3486"W	14297.43	320.587	0.24
21974.00	91.850	327.690	8281.60	14284.44	11125.34	-9127.91	1792350.62	428941.60	39°40'33.5420"N	80°07'32.9989"W	14390.68	320.632	0.32
22069.00	91.690	328.170	8278.67	14379.39	11205.80	-9178.32	1792300.21	429022.05	39°40'34.3337"N	80°07'33.6508"W	14484.87	320.680	0.53
22164.00	91.170	327.520	8276.30	14474.36	11286.20	-9228.87	1792249.67	429102.45	39°40'35.1248"N	80°07'34.3044"W	14579.11	320.727	0.88
22259.00	91.880	327.760	8273.77	14569.33	11366.42	-9279.70	1792198.84	429182.67	39°40'35.9141"N	80°07'34.9616"W	14673.39	320.771	0.79
22353.00	91.790	327.880	8270.76	14663.28	11445.94	-9329.73	1792148.81	429262.18	39°40'36.6965"N	80°07'35.6087"W	14766.63	320.816	0.16
22447.00	91.450	327.050	8268.10	14757.24	11525.15	-9380.27	1792098.28	429341.39	39°40'37.4759"N	80°07'36.2620"W	14859.97	320.858	0.95
22542.00	89.940	327.550	8266.95	14852.23	11605.09	-9431.58	1792046.96	429421.32	39°40'38.2623"N	80°07'36.9255"W	14954.36	320.899	1.67
22637.00	88.890	326.470	8267.92	14947.21	11684.77	-9483.31	1791995.24	429500.99	39°40'39.0462"N	80°07'37.5941"W	15048.82	320.937	1.59
22731.00	89.110	327.840	8269.56	15041.19	11763.73	-9534.28	1791944.27	429579.95	39°40'39.8230"N	80°07'38.2530"W	15142.25	320.976	1.48
22826.00	89.140	327.840	8271.01	15136.18	11844.14	-9584.84	1791893.72	429660.36	39°40'40.6142"N	80°07'38.9069"W	15236.56	321.019	0.03
22921.00	88.800	327.350	8272.72	15231.17	11924.33	-9635.74	1791842.82	429740.54	39°40'41.4032"N	80°07'39.5650"W	15330.93	321.059	0.63
23015.00	89.940	328.730	8273.75	15325.15	12004.08	-9685.49	1791793.07	429820.28	39°40'42.1878"N	80°07'40.2085"W	15424.22	321.102	1.90
23110.00	91.690	327.010	8272.40	15420.14	12084.51	-9736.01	1791742.56	429900.71	39°40'42.9793"N	80°07'40.8617"W	15518.55	321.143	2.58
23205.00	91.080	327.060	8270.11	15515.10	12164.19	-9787.69	1791690.88	429980.39	39°40'43.7631"N	80°07'41.5298"W	15613.02	321.179	0.64
23300.00	90.890	327.700	8268.47	15610.09	12244.20	-9838.89	1791639.68	430060.39	39°40'44.5502"N	80°07'42.1918"W	15707.45	321.216	0.70
23395.00	90.490	327.310	8267.33	15705.08	12324.32	-9889.92	1791588.65	430140.50	39°40'45.3385"N	80°07'42.8517"W	15801.88	321.254	0.59
23489.00	90.280	327.670	8266.70	15799.08	12403.59	-9940.44	1791538.14	430219.77	39°40'46.1184"N	80°07'43.5049"W	15895.32	321.291	0.44
23583.00	90.310	327.480	8266.21	15893.08	12482.93	-9990.84	1791487.74	430299.11	39°40'46.8990"N	80°07'44.1566"W	15988.76	321.328	0.20
23678.00	90.060	327.860	8265.91	15988.08	12563.20	-10041.65	1791436.94	430379.37	39°40'47.6888"N	80°07'44.8136"W	16083.18	321.365	0.48
23773.00	90.000	326.630	8265.86	16083.07	12643.09	-10093.05	1791385.54	430459.26	39°40'48.4748"N	80°07'45.4781"W	16177.68	321.399	1.30
23868.00	89.350	327.620	8266.40	16178.07	12722.88	-10144.61	1791333.98	430539.04	39°40'49.2597"N	80°07'46.1448"W	16272.21	321.433	1.25
23962.00	89.690	327.600	8267.18	16272.06	12802.25	-10194.96	1791283.63	430618.41	39°40'50.0406"N	80°07'46.7959"W	16365.66	321.468	0.36
24057.00	89.510	327.480	8267.85	16367.06	12882.41	-10245.95	1791232.65	430698.56	39°40'50.8293"N	80°07'47.4552"W	16460.13	321.503	0.23
24152.00	89.380	327.550	8268.77	16462.06	12962.54	-10296.97	1791181.63	430778.69	39°40'51.6176"N	80°07'48.1149"W	16554.61	321.538	0.16
24247.00	89.660	327.470	8269.56	16557.05	13042.67	-10348.00	1791130.61	430858.81	39°40'52.4060"N	80°07'48.7747"W	16649.09	321.572	0.31
24342.00	89.290	327.370	8270.43	16652.05	13122.71	-10399.15	1791079.46	430938.85	39°40'53.1935"N	80°07'49.4362"W	16743.59	321.605	0.40
24436.00	89.200	327.690	8271.67	16746.04	13202.01	-10449.61	1791029.00	431018.14	39°40'53.9737"N	80°07'50.0887"W	16837.09	321.638	0.35

26671

Actual Wellpath Report

Dolls Run 7H AWP Proj: 26671'

Page 11 of 13

REFERENCE WELLPATH IDENTIFICATION

Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Dolls Run 7H
Field	Monongalia	API	47061019310000
Facility	Dolls Run Pad	Wellbore	Dolls Run 7H AWB
Slot	Slot #7H		

WELLPATH DATA (295 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]
24530.00	88.830	327.940	8273.29	16840.02	13281.56	-10499.67	1790978.94	431097.68	39°40'54.7563"N	80°07'50.7361"W	16930.53	321.672	0.48
24624.00	88.890	328.600	8275.16	16934.00	13361.49	-10549.10	1790929.52	431177.61	39°40'55.5428"N	80°07'51.3755"W	17023.89	321.708	0.70
24719.00	89.140	326.950	8276.79	17028.98	13441.84	-10599.75	1790878.87	431257.96	39°40'56.3334"N	80°07'52.0305"W	17118.35	321.742	1.76
24814.00	89.290	327.480	8278.09	17123.97	13521.70	-10651.18	1790827.44	431337.81	39°40'57.1190"N	80°07'52.6956"W	17212.91	321.772	0.58
24908.00	90.340	327.750	8278.40	17217.97	13601.08	-10701.53	1790777.09	431417.19	39°40'57.9000"N	80°07'53.3467"W	17306.42	321.804	1.15
25003.00	89.540	327.680	8278.50	17312.97	13681.39	-10752.27	1790726.36	431497.49	39°40'58.6902"N	80°07'54.0029"W	17400.91	321.836	0.85
25097.00	89.630	328.000	8279.18	17406.96	13760.97	-10802.31	1790676.33	431577.06	39°40'59.4731"N	80°07'54.6500"W	17494.40	321.868	0.35
25192.00	89.780	328.260	8279.67	17501.96	13841.64	-10852.46	1790626.17	431657.74	39°41'0.2669"N	80°07'55.2988"W	17588.83	321.902	0.32
25286.00	89.600	327.940	8280.17	17595.95	13921.45	-10902.14	1790576.50	431737.53	39°41'1.0521"N	80°07'55.9413"W	17682.29	321.935	0.39
25381.00	89.570	327.880	8280.86	17690.95	14001.93	-10952.60	1790526.04	431818.01	39°41'1.8440"N	80°07'56.5941"W	17776.77	321.967	0.07
25476.00	89.570	327.690	8281.58	17785.95	14082.30	-11003.25	1790475.40	431898.38	39°41'2.6348"N	80°07'57.2490"W	17871.28	321.998	0.20
25570.00	89.140	327.290	8282.63	17879.94	14161.57	-11053.76	1790424.88	431977.64	39°41'3.4146"N	80°07'57.9023"W	17964.85	322.026	0.62
25665.00	88.980	327.430	8284.19	17974.93	14241.55	-11105.00	1790373.65	432057.62	39°41'4.2015"N	80°07'58.5648"W	18059.42	322.054	0.22
25760.00	88.000	327.400	8286.70	18069.89	14321.57	-11156.14	1790322.51	432137.63	39°41'4.9887"N	80°07'59.2262"W	18153.98	322.082	1.03
25855.00	88.980	327.940	8289.20	18164.86	14401.81	-11206.93	1790271.73	432217.87	39°41'5.7782"N	80°07'59.8830"W	18248.49	322.111	1.18
25949.00	88.710	327.880	8291.09	18258.84	14481.44	-11256.85	1790221.80	432297.49	39°41'6.5616"N	80°08'0.5288"W	18342.00	322.141	0.29
26044.00	88.950	327.830	8293.03	18353.82	14561.86	-11307.39	1790171.27	432377.91	39°41'7.3528"N	80°08'1.1825"W	18436.51	322.170	0.26
26139.00	88.770	327.610	8294.92	18448.80	14642.16	-11358.12	1790120.55	432458.20	39°41'8.1429"N	80°08'1.8385"W	18531.04	322.199	0.30
26233.00	89.420	328.060	8296.41	18542.78	14721.72	-11408.15	1790070.52	432537.76	39°41'8.9257"N	80°08'2.4857"W	18624.58	322.227	0.84
26327.00	89.230	327.890	8297.52	18636.77	14801.41	-11457.99	1790020.68	432617.44	39°41'9.7098"N	80°08'3.1304"W	18718.10	322.256	0.27
26422.00	89.820	328.400	8298.30	18731.77	14882.10	-11508.13	1789970.54	432698.13	39°41'10.5037"N	80°08'3.7790"W	18812.60	322.286	0.82
26517.00	89.510	327.830	8298.86	18826.76	14962.76	-11558.31	1789920.37	432778.79	39°41'11.2973"N	80°08'4.4281"W	18907.11	322.315	0.68
26611.00	88.400	327.090	8300.57	18920.74	15041.99	-11608.86	1789869.82	432858.01	39°41'12.0768"N	80°08'5.0819"W	19000.71	322.340	1.42
26646.00	88.520	327.420	8301.51	18955.73	15071.42	-11627.79	1789850.90	432887.44	39°41'12.3663"N	80°08'5.3266"W	19035.57	322.349	1.00
26671.00‡	88.520	327.420	8302.16	18980.72	15092.48	-11641.24	1789837.44	432908.49	39°41'12.5735"N	80°08'5.5007"W	19060.47	322.356	0.00

27 of 32



Actual Wellpath Report

Dolls Run 7H AWP Proj: 26671'

Page 12 of 13



REFERENCE WELLPATH IDENTIFICATION

Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Dolls Run 7H
Field	Monongalia	API	47061019310000
Facility	Dolls Run Pad	Wellbore	Dolls Run 7H AWB
Slot	Slot #7H		

HOLE & CASING SECTIONS - Ref Wellbore: Dolls Run 7H AWB Ref Wellpath: Dolls Run 7H AWP Proj: 26671'

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	1014.00	986.00	28.00	1013.92	0.00	0.00	-6.56	8.61
13.375in Casing Surface	28.00	984.00	956.00	28.00	983.92	0.00	0.00	-6.52	8.55
12.25in Open Hole	1014.00	2419.00	1405.00	1013.92	2418.80	-6.56	8.61	-3.97	2.06
9.625in Casing Intermediate	28.00	2389.00	2361.00	28.00	2388.80	0.00	0.00	-4.24	2.59
8.75in Open Hole	2419.00	7240.00	4821.00	2418.80	7002.31	-3.97	2.06	-362.69	-1372.88
8.5in Open Hole	7240.00	26327.00	19087.00	7002.31	8297.52	-362.69	-1372.88	14801.41	-11457.99
5.5in Casing	28.00	26671.00	26643.00	28.00	8302.16	0.00	0.00	15092.48	-11641.24

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Dolls Run 7H EXT-BHL Rev-1	8102.00	15088.68	-11648.39	1789830.29	432904.69	39°41'12.5354"N	80°08'5.5918"W	point
Dolls Run 7H LP Rev-0	8102.00	25.99	-2088.80	1799389.29	417842.93	39°38'44.3257"N	80°06'2.0261"W	point
Dolls Run Hardline#1_3.8.2023	9028.00	-249.76	-3123.08	1798355.09	417567.20	39°38'41.5320"N	80°06'15.2240"W	polygon
2D Polygon: dimensions not calculated								

26671



Actual Wellpath Report

Dolls Run 7H AWP Proj: 26671'

Page 13 of 13



REFERENCE WELLPATH IDENTIFICATION

Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Dolls Run 7H
Field	Monongalia	API	47061019310000
Facility	Dolls Run Pad	Wellbore	Dolls Run 7H AWB
Slot	Slot #7H		

WELLPATH COMPOSITION - Ref Wellbore: Dolls Run 7H AWB Ref Wellpath: Dolls Run 7H AWP Proj: 26671'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
28.00	1100.00	BH Generic gyro - northseeking (Standard)	01_ 17.5" Gyro <Northseeking-Standard> 50' - 1100'	Dolls Run 7H AWB	7/7/2023
1100.00	2346.00	OWSG MWD rev2 + HRGM	02_ 12.25" SDI MWD <OWSG MWD Rev.2+HRGM> 1117' - 2346'	Dolls Run 7H AWB	7/7/2023
2346.00	7190.00	OWSG MWD rev2 + HRGM	03_ 8.75" SDI MWD <OWSG MWD Rev.2+HRGM> 2539' - 7190'	Dolls Run 7H AWB	7/7/2023
7190.00	26671.00	BH AutoTrak Curve/eXpress (2019) (HRGM, Short spacing)	04_ 8.5" BH ATK Curve <HRGM+Short Spacing> (7190')(7317'- 26646')	Dolls Run 7H AWB	7/7/2023

290932