

NORTHEAST NATURAL ENERGY, LLC

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

Slot: Slot 02
 Well: Yost 2H
 Wellbore: Yost 2H PWB

Scale 1 inch = 2500

Easting (ft)

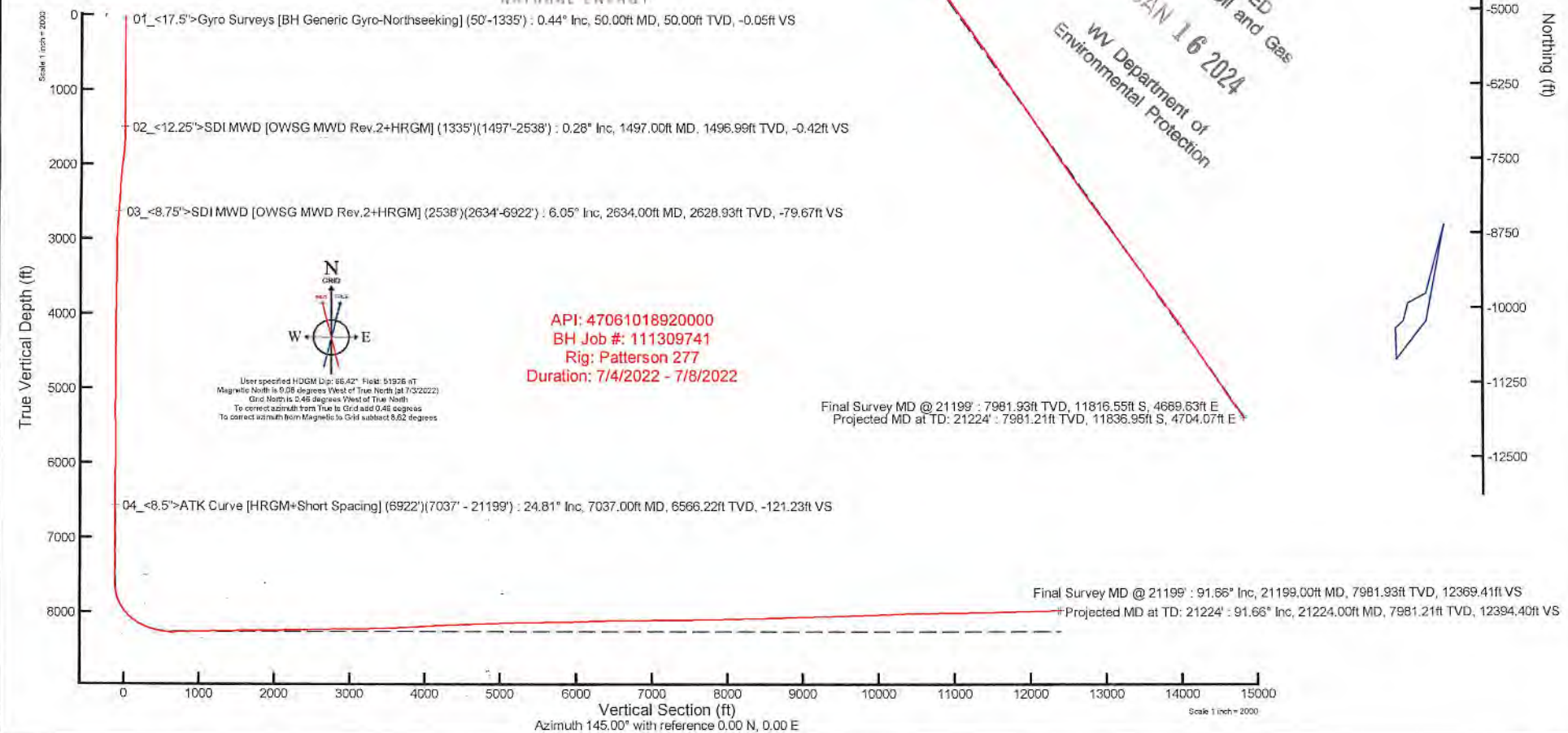


Well Name	Yost 2H PWB	Well Type	Production
Well Number	111309741	Well Status	Active
Well Depth	12394.40 ft	Well Completion	Open Hole
Wellbore	Yost 2H PWB	Well Completion	Open Hole
Wellbore	Yost 2H PWB	Well Completion	Open Hole

Location Information				
Facility Name	Grid East (US Ft)	Grid North (US Ft)	Latitude	Longitude
Yost Pad	1766204.700	419264.100	39°38'30.2737"N	80°13.51207"W
Site	Local E (ft)	Local N (ft)	Latitude	Longitude
Slot 02	64.98	-47.74	39°38'30.5062"N	80°13.51376"W

Well Profile Data								
Design Comment	M/D (ft)	In (ft)	Ac (ft)	TVD (ft)	Local E (ft)	Local N (ft)	DLS (ft/100ft)	VS (ft)
Tie On	6922.00	23.260	234.250	6491.93	-972.17	-1959.16	0.75	-120.98
Projection	7000.00	23.260	234.250	6532.59	-991.57	-1625.90	0.00	-130.34
Tangent	7306.18	31.178	234.808	6892.50	-1075.62	-1743.12	2.00	-118.72
Curve KOP	8296.07	31.178	234.808	7649.41	-1372.42	-2160.88	0.00	-115.21
Landing JS	9418.53	90.000	145.000	8280.00	-2171.00	-2252.73	8.00	800.88
BHL	21212.44	90.000	145.000	8292.00	-11832.00	4711.08	0.00	12394.89

Well Data			
Slot	Well	Wellbore	Wellbore
Slot 02	Yost 2H	Yost 2H AWPB	Yost 2H AWP Proj; 21224'
Slot 02	Yost 2H	Yost 2H PWB	Yost 2H Rev-A-D



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Actual Wellpath Report

Yost 2H AWP Proj: 21224'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Yost 2H
Field	Monongalia	API/Legal	
Facility	Yost Pad	Wellbore	Yost 2H AWB
Slot	Slot 02		

REPORT SETUP INFORMATION			
Projection System	NAD83 / Lambert West Virginia SP, Northern Zone (4701), US feet	Software System	WellArchitect® 6.0
North Reference	Grid	User	Manajohj
Scale	0.999941	Report Generated	7/8/2022 at 7:18:33 PM
Convergence at slot	0.46° West	Database	WA_MPL_EASTERNUS_Defn

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	64.38	-47.74	1766236.96	416728.48	39°38'30.9062"N	80°13'5.7376"W
Facility Reference Pt			1766284.70	416664.10	39°38'30.2737"N	80°13'5.1207"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	1520.00ft
Horizontal Reference Pt	Slot	Patterson 277 (RKB) to Mean Sea Level	1520.00ft
Vertical Reference Pt	Patterson 277 (RKB)	Patterson 277 (RKB) to Ground Level at Slot (Slot 02)	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	145.00°

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Slot	Slot 02		

WELLPATH DATA (239 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	269.100	0.00	0.00	0.00	0.00	1766236.96	416728.48	39°38'30.9062"N	80°13'5.7376"W	0.00	0.000	0.00	0.00	0.00
28.00	0.000	269.100	28.00	0.00	0.00	0.00	1766236.96	416728.48	39°38'30.9062"N	80°13'5.7376"W	0.00	0.000	0.00	0.00	0.00
50.00	0.440	269.100	50.00	-0.05	0.00	-0.08	1766236.88	416728.48	39°38'30.9062"N	80°13'5.7387"W	0.08	269.100	2.00	2.00	0.00
100.00	0.470	301.800	100.00	-0.34	0.10	-0.45	1766236.51	416728.58	39°38'30.9072"N	80°13'5.7434"W	0.46	282.960	0.52	0.06	65.40
150.00	0.460	274.100	150.00	-0.66	0.23	-0.83	1766236.13	416728.71	39°38'30.9084"N	80°13'5.7482"W	0.86	285.325	0.45	-0.02	-55.40
200.00	0.250	321.700	200.00	-0.89	0.33	-1.09	1766235.87	416728.81	39°38'30.9094"N	80°13'5.7516"W	1.14	286.612	0.69	-0.42	95.20
250.00	0.160	62.800	250.00	-0.99	0.44	-1.10	1766235.86	416728.92	39°38'30.9105"N	80°13'5.7517"W	1.18	291.990	0.64	-0.18	202.20
300.00	0.210	296.500	300.00	-1.06	0.52	-1.12	1766235.84	416729.00	39°38'30.9112"N	80°13'5.7519"W	1.23	294.784	0.66	0.10	-252.60
350.00	0.210	355.500	350.00	-1.22	0.65	-1.21	1766235.75	416729.13	39°38'30.9125"N	80°13'5.7531"W	1.37	298.241	0.41	0.00	118.00
400.00	0.190	301.900	399.99	-1.38	0.78	-1.29	1766235.67	416729.26	39°38'30.9139"N	80°13'5.7541"W	1.51	301.378	0.36	-0.04	-107.20
450.00	0.210	294.700	449.99	-1.53	0.87	-1.44	1766235.52	416729.35	39°38'30.9147"N	80°13'5.7561"W	1.68	301.040	0.06	0.04	-14.40
500.00	0.250	200.700	499.99	-1.55	0.80	-1.56	1766235.40	416729.28	39°38'30.9140"N	80°13'5.7576"W	1.75	297.203	0.68	0.08	-188.00
550.00	0.180	50.600	549.99	-1.50	0.75	-1.54	1766235.42	416729.23	39°38'30.9135"N	80°13'5.7573"W	1.71	295.987	0.83	-0.14	-300.20
600.00	0.370	203.300	599.99	-1.42	0.65	-1.54	1766235.42	416729.13	39°38'30.9125"N	80°13'5.7574"W	1.67	292.910	1.07	0.38	305.40
650.00	0.180	292.400	649.99	-1.40	0.53	-1.68	1766235.28	416729.01	39°38'30.9114"N	80°13'5.7591"W	1.76	287.626	0.82	-0.38	178.20
700.00	0.240	336.200	699.99	-1.57	0.66	-1.79	1766235.17	416729.14	39°38'30.9126"N	80°13'5.7606"W	1.91	290.178	0.33	0.12	87.60
750.00	0.220	3.700	749.99	-1.75	0.85	-1.83	1766235.13	416729.33	39°38'30.9145"N	80°13'5.7611"W	2.02	294.939	0.22	-0.04	55.00
800.00	0.180	338.900	799.99	-1.90	1.02	-1.85	1766235.11	416729.50	39°38'30.9162"N	80°13'5.7614"W	2.11	298.846	0.19	-0.08	-49.60
850.00	0.090	285.300	849.99	-2.00	1.10	-1.92	1766235.04	416729.58	39°38'30.9170"N	80°13'5.7622"W	2.21	299.917	0.29	-0.18	-107.20
900.00	0.250	78.900	899.99	-1.99	1.13	-1.85	1766235.11	416729.61	39°38'30.9173"N	80°13'5.7613"W	2.17	301.546	0.67	0.32	307.20
950.00	0.180	35.300	949.99	-1.97	1.22	-1.70	1766235.26	416729.70	39°38'30.9181"N	80°13'5.7594"W	2.09	305.727	0.34	-0.14	-87.20
1000.00	0.300	104.300	999.99	-1.90	1.25	-1.52	1766235.44	416729.73	39°38'30.9185"N	80°13'5.7572"W	1.97	309.401	0.58	0.24	138.00
1050.00	0.180	253.800	1049.99	-1.83	1.20	-1.47	1766235.49	416729.68	39°38'30.9179"N	80°13'5.7565"W	1.90	309.121	0.93	-0.24	299.00
1100.00	0.120	295.700	1099.99	-1.90	1.20	-1.59	1766235.37	416729.68	39°38'30.9179"N	80°13'5.7581"W	1.99	306.916	0.24	-0.12	83.80
1150.00	0.320	176.500	1149.99	-1.82	1.08	-1.63	1766235.33	416729.56	39°38'30.9168"N	80°13'5.7586"W	1.96	303.507	0.79	0.40	-238.40
1200.00	0.330	139.600	1199.99	-1.56	0.83	-1.53	1766235.43	416729.31	39°38'30.9143"N	80°13'5.7573"W	1.74	298.524	0.41	0.02	-73.80
1250.00	0.340	155.500	1249.99	-1.27	0.59	-1.38	1766235.58	416729.07	39°38'30.9119"N	80°13'5.7553"W	1.50	293.118	0.19	0.02	31.80
1300.00	0.360	100.600	1299.99	-1.01	0.42	-1.16	1766235.80	416728.90	39°38'30.9103"N	80°13'5.7525"W	1.24	290.058	0.65	0.04	-109.80
1335.00	0.240	94.700	1334.99	-0.89	0.40	-0.98	1766235.98	416728.88	39°38'30.9101"N	80°13'5.7502"W	1.06	292.090	0.35	-0.34	-16.86
1497.00	0.280	196.440	1496.99	-0.42	-0.01	-0.75	1766236.21	416728.47	39°38'30.9061"N	80°13'5.7472"W	0.75	269.248	0.25	0.02	62.80

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Field	Monongalia	API/Legal	
Facility	Yost Pad	Wellbore	Yost 2H AWB
Slot	Slot 02		

WELLPATH DATA (239 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]
1591.00	1.190	314.320	1590.98	-1.24	0.45	-1.52	1766235.44	416728.93	39°38'30.9106"N	80°13'5.7570"W	1.58	286.586	1.43	0.97	125.40
1686.00	3.710	315.570	1685.89	-5.24	3.34	-4.37	1766232.59	416731.82	39°38'30.9389"N	80°13'5.7939"W	5.50	307.331	2.65	2.65	1.32
1781.00	5.350	315.180	1780.59	-12.64	8.67	-9.65	1766227.31	416737.15	39°38'30.9912"N	80°13'5.8618"W	12.97	311.952	1.73	1.73	-0.41
1876.00	6.310	311.170	1875.09	-22.07	15.25	-16.70	1766220.26	416743.73	39°38'31.0556"N	80°13'5.9526"W	22.62	312.404	1.10	1.01	-4.22
1970.00	7.430	307.790	1968.42	-32.89	22.38	-25.39	1766211.57	416750.86	39°38'31.1254"N	80°13'6.0645"W	33.84	311.388	1.27	1.19	-3.60
2065.00	7.670	297.000	2062.60	-44.36	29.02	-35.90	1766201.07	416757.50	39°38'31.1902"N	80°13'6.1994"W	46.16	308.953	1.51	0.25	-11.36
2159.00	6.730	278.420	2155.87	-53.75	32.77	-46.92	1766190.04	416761.25	39°38'31.2264"N	80°13'6.3407"W	57.23	304.930	2.54	-1.00	-18.70
2254.00	4.910	266.710	2250.38	-59.79	33.45	-56.47	1766180.49	416761.92	39°38'31.2323"N	80°13'6.4629"W	65.63	300.637	2.34	-1.92	-13.38
2349.00	4.250	260.820	2345.08	-63.46	32.65	-64.01	1766172.96	416761.13	39°38'31.2239"N	80°13'6.5591"W	71.85	297.028	0.85	-0.69	-6.20
2444.00	4.860	273.230	2439.78	-67.48	32.32	-71.50	1766165.47	416760.79	39°38'31.2200"N	80°13'6.6548"W	78.46	294.323	1.22	0.64	13.06
2538.00	5.380	280.410	2533.40	-73.09	33.34	-79.81	1766157.16	416761.82	39°38'31.2294"N	80°13'6.7612"W	86.49	292.671	0.88	0.55	7.64
2634.00	6.050	276.970	2628.93	-79.67	34.76	-89.26	1766147.71	416763.24	39°38'31.2427"N	80°13'6.8821"W	95.79	291.280	0.78	0.70	-3.58
2742.00	6.820	269.850	2736.25	-87.14	35.44	-101.32	1766135.65	416763.92	39°38'31.2484"N	80°13'7.0364"W	107.34	289.278	1.03	0.71	-6.59
2836.00	7.470	259.300	2829.52	-92.85	34.29	-112.91	1766124.06	416762.77	39°38'31.2362"N	80°13'7.1843"W	118.00	286.894	1.55	0.69	-11.22
2931.00	9.190	252.000	2923.52	-97.61	30.80	-126.19	1766110.78	416759.28	39°38'31.2006"N	80°13'7.3538"W	129.89	283.716	2.12	1.81	-7.68
3026.00	10.390	246.790	3017.13	-101.58	25.08	-141.28	1766095.69	416753.56	39°38'31.1429"N	80°13'7.5461"W	143.49	280.065	1.57	1.26	-5.48
3120.00	11.350	240.950	3109.45	-104.27	17.25	-157.16	1766079.81	416745.72	39°38'31.0642"N	80°13'7.7482"W	158.10	276.262	1.55	1.02	-6.21
3214.00	12.670	236.480	3201.39	-105.49	7.06	-173.84	1766063.13	416735.54	39°38'30.9623"N	80°13'7.9604"W	173.98	272.326	1.72	1.40	-4.76
3308.00	13.870	234.720	3292.88	-105.70	-5.14	-191.63	1766045.34	416723.34	39°38'30.8403"N	80°13'8.1866"W	191.70	268.463	1.35	1.28	-1.87
3404.00	16.010	234.750	3385.63	-105.59	-19.43	-211.84	1766025.14	416709.05	39°38'30.6975"N	80°13'8.4435"W	212.73	264.760	2.23	2.23	0.03
3502.00	17.080	234.640	3479.57	-105.44	-35.56	-234.61	1766002.36	416692.92	39°38'30.5363"N	80°13'8.7329"W	237.29	261.382	1.09	1.09	-0.11
3597.00	18.640	237.590	3569.99	-106.04	-51.77	-258.81	1765978.17	416676.71	39°38'30.3741"N	80°13'9.0406"W	263.93	258.688	1.90	1.64	3.11
3692.00	19.850	237.660	3659.68	-107.47	-68.54	-285.25	1765951.72	416659.95	39°38'30.2064"N	80°13'9.3769"W	293.37	256.490	1.27	1.27	0.07
3786.00	21.760	239.150	3747.55	-109.48	-86.01	-313.70	1765923.28	416642.48	39°38'30.0314"N	80°13'9.7387"W	325.28	254.668	2.11	2.03	1.59
3881.00	23.500	237.020	3835.23	-111.42	-105.35	-344.71	1765892.27	416623.14	39°38'29.8978"N	80°13'10.1331"W	360.45	253.006	2.02	1.83	-2.24
3976.00	25.540	236.230	3921.66	-112.52	-127.05	-377.62	1765859.36	416601.44	39°38'29.6208"N	80°13'10.5516"W	398.42	251.405	2.17	2.15	-0.83
4071.00	27.340	237.010	4006.72	-113.73	-150.31	-412.95	1765824.04	416578.18	39°38'29.3881"N	80°13'11.0008"W	439.45	249.999	1.93	1.89	0.82
4166.00	28.970	236.570	4090.48	-115.12	-174.87	-450.45	1765786.54	416553.62	39°38'29.1425"N	80°13'11.4776"W	483.20	248.784	1.73	1.72	-0.46
4260.00	30.910	237.000	4171.93	-116.59	-200.56	-489.70	1765747.29	416527.93	39°38'28.8854"N	80°13'11.9767"W	529.18	247.728	2.08	2.06	0.46
4355.00	31.780	236.080	4253.06	-117.91	-227.81	-530.92	1765706.07	416500.68	39°38'28.6129"N	80°13'12.5009"W	577.73	246.777	1.05	0.92	-0.97

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Field	Monongalia	API/Legal	
Facility	Yost Pad	Wellbore	Yost 2H AWB
Slot	Slot 02		

WELLPATH DATA (239 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]	
4453.00	31.640	234.620	4336.43	-118.23	-257.09	-573.30	1765663.70	416471.40	39°38'28.3201"N	80°13'13.0395"W	628.30	245.846	0.80	-0.14	-1.49	
4548.00	31.300	235.500	4417.46	-118.28	-285.50	-613.95	1765623.05	416443.00	39°38'28.0362"N	80°13'13.5563"W	677.08	245.061	0.60	-0.36	0.93	
4642.00	32.040	236.030	4497.46	-118.94	-313.26	-654.75	1765582.25	416415.24	39°38'27.7586"N	80°13'14.0750"W	725.83	244.432	0.84	0.79	0.58	
4736.00	31.800	232.650	4577.26	-118.37	-342.22	-695.12	1765541.88	416386.28	39°38'27.4692"N	80°13'14.5880"W	774.80	243.788	1.92	-0.26	-3.60	
4831.00	30.780	232.020	4658.44	-116.08	-372.37	-734.18	1765502.82	416356.14	39°38'27.1882"N	80°13'15.0842"W	823.21	243.107	1.13	-1.07	-0.66	
4926.00	30.760	234.360	4740.07	-114.55	-401.48	-773.09	1765463.92	416327.02	39°38'26.8773"N	80°13'15.5785"W	871.12	242.556	1.26	-0.02	2.46	
5021.00	31.090	235.300	4821.56	-114.41	-429.60	-812.99	1765424.02	416298.91	39°38'26.5963"N	80°13'16.0858"W	919.52	242.147	0.62	0.35	0.99	
5116.00	31.550	236.920	4902.72	-115.37	-457.13	-853.99	1765383.03	416271.38	39°38'26.3210"N	80°13'16.6069"W	968.64	241.840	1.01	0.48	1.71	
5211.00	31.650	236.170	4983.63	-116.71	-484.57	-895.52	1765341.50	416243.94	39°38'26.0465"N	80°13'17.1350"W	1018.21	241.582	0.43	0.11	-0.79	
5305.00	30.490	236.190	5064.15	-117.71	-511.57	-935.82	1765301.20	416216.94	39°38'25.7764"N	80°13'17.6474"W	1066.62	241.336	1.23	-1.23	0.02	
5403.00	29.950	237.050	5148.83	-119.10	-538.71	-977.01	1765260.01	416189.80	39°38'25.5049"N	80°13'18.1710"W	1115.68	241.128	0.71	-0.55	0.88	
5498.00	29.460	236.250	5231.34	-120.46	-564.59	-1016.33	1765220.69	416163.92	39°38'25.2461"N	80°13'18.6710"W	1162.62	240.947	0.66	-0.52	-0.84	
5594.00	29.410	235.490	5314.95	-121.17	-591.06	-1055.38	1765181.64	416137.46	39°38'24.9814"N	80°13'19.1675"W	1209.62	240.749	0.39	-0.05	-0.79	
5688.00	29.360	232.720	5396.86	-120.45	-618.09	-1092.74	1765144.29	416110.42	39°38'24.7113"N	80°13'19.6422"W	1255.43	240.506	1.45	-0.05	-2.95	
5784.00	28.840	230.360	5480.75	-117.65	-647.12	-1129.29	1765107.73	416081.40	39°38'24.4215"N	80°13'20.1065"W	1301.67	240.186	1.31	-0.54	-2.46	
5877.00	29.680	233.150	5561.88	-115.09	-675.24	-1164.99	1765072.04	416053.28	39°38'24.1408"N	80°13'20.5600"W	1346.54	239.903	1.72	0.90	3.00	
5973.00	32.060	235.120	5644.28	-114.37	-704.07	-1204.92	1765032.11	416024.45	39°38'23.8527"N	80°13'21.0674"W	1395.55	239.701	2.69	2.48	2.05	
6067.00	35.050	238.090	5722.61	-115.88	-732.61	-1248.31	1764988.72	415995.91	39°38'23.5671"N	80°13'21.6191"W	1447.41	239.592	3.63	3.18	3.16	
6161.00	35.700	237.370	5799.26	-118.47	-761.67	-1294.32	1764942.72	415966.86	39°38'23.2763"N	80°13'22.2042"W	1501.80	239.524	0.82	0.69	-0.77	
6259.00	34.500	233.870	5879.44	-119.11	-793.46	-1340.83	1764896.22	415935.07	39°38'22.9585"N	80°13'22.7954"W	1558.01	239.384	2.39	-1.22	-3.57	
6354.00	33.040	233.420	5958.41	-117.86	-824.76	-1383.36	1764853.69	415903.78	39°38'22.6458"N	80°13'23.3358"W	1610.56	239.197	1.56	-1.54	-0.47	
6449.00	31.000	237.650	6038.97	-118.28	-853.29	-1424.83	1764812.22	415875.25	39°38'22.3605"N	80°13'23.8630"W	1660.79	239.084	3.19	-2.15	4.45	
6544.00	28.630	238.480	6121.39	-120.79	-878.28	-1464.91	1764772.14	415850.25	39°38'22.1104"N	80°13'24.3726"W	1708.02	239.055	2.53	-2.49	0.87	
6638.00	26.070	236.680	6204.87	-122.76	-901.40	-1501.37	1764735.68	415827.13	39°38'21.8789"N	80°13'24.8363"W	1751.18	239.020	2.86	-2.72	-1.91	
6733.00	24.830	233.170	6290.66	-122.74	-924.83	-1534.78	1764702.27	415803.71	39°38'21.6448"N	80°13'25.2610"W	1791.89	238.928	2.06	-1.31	-3.69	
6828.00	25.080	233.730	6376.79	-121.66	-948.70	-1566.98	1764670.08	415779.84	39°38'21.4063"N	80°13'25.6701"W	1831.79	238.808	0.36	0.26	0.59	
6922.00	25.060	234.050	6461.93	-120.88	-972.17	-1599.16	1764637.90	415756.37	39°38'21.1718"N	80°13'26.0790"W	1871.48	238.703	0.15	-0.02	0.34	
7037.00	24.810	236.780	6566.22	-121.23	-999.69	-1639.06	1764598.00	415728.85	39°38'20.8967"N	80°13'26.5862"W	1919.87	238.620	1.02	-0.22	2.37	
7132.00	27.720	234.700	6651.40	-121.73	-1023.38	-1673.77	1764563.29	415705.16	39°38'20.6597"N	80°13'27.0275"W	1961.84	238.558	3.21	3.06	-2.19	
7226.00	29.430	235.020	6733.95	-121.63	-1049.26	-1710.54	1764526.52	415679.29	39°38'20.4011"N	80°13'27.4948"W	2006.71	238.475	1.83	-1.82	0.34	

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Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Yost 2H
Field	Monongalia	API/Legal	
Facility	Yost Pad	Wellbore	Yost 2H AWB
Slot	Slot 02		

WELLPATH DATA (239 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]
7321.00	31.270	234.820	6815.92	-121.56	-1076.84	-1749.82	1764487.25	415651.70	39°38'20.1253"N	80°13'27.9940"W	2054.62	238.392	1.94	1.94	-0.21
7416.00	31.340	235.090	6897.09	-121.52	-1105.19	-1790.23	1764446.84	415623.36	39°38'19.8420"N	80°13'28.5077"W	2103.90	238.311	0.17	0.07	0.28
7511.00	31.280	234.850	6978.26	-121.49	-1133.53	-1830.66	1764406.41	415595.02	39°38'19.5587"N	80°13'29.0215"W	2153.18	238.235	0.15	-0.06	-0.25
7605.00	31.390	235.030	7058.55	-121.44	-1161.61	-1870.67	1764366.40	415566.94	39°38'19.2780"N	80°13'29.5300"W	2201.99	238.162	0.15	0.12	0.19
7701.00	31.310	234.800	7140.53	-121.37	-1190.31	-1911.54	1764325.53	415538.24	39°38'18.9911"N	80°13'30.0495"W	2251.85	238.090	0.15	-0.08	-0.24
7795.00	31.280	235.080	7220.86	-121.32	-1218.36	-1951.51	1764285.57	415510.19	39°38'18.7107"N	80°13'30.5575"W	2300.61	238.023	0.16	-0.03	0.30
7890.00	30.430	235.000	7302.41	-121.35	-1246.28	-1991.44	1764245.64	415482.28	39°38'18.4316"N	80°13'31.0650"W	2349.27	237.961	0.90	-0.89	-0.08
7985.00	31.240	234.620	7383.98	-121.19	-1274.34	-2031.23	1764205.85	415454.21	39°38'18.1511"N	80°13'31.5707"W	2397.89	237.897	0.88	0.85	-0.40
8080.00	30.910	235.240	7465.35	-121.13	-1302.52	-2071.37	1764165.72	415426.04	39°38'17.8694"N	80°13'32.0808"W	2446.86	237.837	0.48	-0.35	0.65
8174.00	31.330	234.940	7545.82	-121.20	-1330.32	-2111.21	1764125.88	415398.24	39°38'17.5915"N	80°13'32.5871"W	2495.38	237.784	0.48	0.45	-0.32
8269.00	31.250	235.090	7627.00	-121.21	-1358.61	-2151.63	1764085.46	415369.95	39°38'17.3087"N	80°13'33.1009"W	2544.67	237.730	0.12	-0.08	0.16
8363.00	31.800	222.600	7707.22	-115.93	-1390.83	-2188.43	1764048.67	415337.73	39°38'16.9873"N	80°13'33.5679"W	2593.00	237.562	6.96	0.59	-13.29
8457.00	33.650	210.800	7786.37	-99.92	-1431.48	-2218.56	1764018.53	415297.09	39°38'16.5832"N	80°13'33.9489"W	2640.29	237.169	7.06	1.97	-12.55
8552.00	37.270	197.090	7863.86	-71.40	-1481.68	-2240.53	1763996.56	415246.89	39°38'16.0854"N	80°13'34.2246"W	2686.14	236.523	9.18	3.81	-14.43
8647.00	41.180	188.800	7937.49	-31.11	-1540.14	-2253.79	1763983.31	415188.43	39°38'15.5065"N	80°13'34.3879"W	2729.76	235.653	6.88	4.12	-8.73
8742.00	46.180	181.660	8006.22	19.02	-1605.39	-2259.57	1763977.53	415123.19	39°38'14.8612"N	80°13'34.4551"W	2771.81	234.607	7.39	5.26	-7.52
8836.00	51.610	174.370	8068.04	78.42	-1676.05	-2256.94	1763980.16	415052.53	39°38'14.1631"N	80°13'34.4141"W	2811.21	233.402	8.21	5.78	-7.76
8930.00	57.370	168.700	8122.65	146.86	-1751.63	-2245.55	1763991.55	414976.95	39°38'13.4171"N	80°13'34.2608"W	2847.93	232.044	7.85	6.13	-6.03
9025.00	63.580	163.420	8169.47	223.97	-1831.75	-2225.54	1764011.55	414896.84	39°38'12.6269"N	80°13'33.9968"W	2882.42	230.544	8.13	6.54	-5.56
9121.00	68.520	159.780	8208.44	308.01	-1914.94	-2197.81	1764039.28	414813.66	39°38'11.8070"N	80°13'33.6338"W	2915.03	228.935	6.20	5.15	-3.79
9215.00	74.900	154.700	8237.94	395.17	-1997.14	-2163.25	1764073.84	414731.46	39°38'10.9974"N	80°13'33.1835"W	2944.18	227.286	8.51	6.79	-5.40
9310.00	80.350	150.240	8258.30	487.12	-2079.35	-2120.35	1764116.74	414649.25	39°38'10.1883"N	80°13'32.6267"W	2969.78	225.559	7.34	5.74	-4.69
9404.00	85.410	146.100	8269.95	580.20	-2158.55	-2071.17	1764165.92	414570.06	39°38'9.4096"N	80°13'31.9899"W	2991.50	223.817	6.93	5.38	-4.40
9498.00	91.910	144.300	8272.15	674.12	-2235.67	-2017.57	1764219.51	414492.95	39°38'8.6517"N	80°13'31.2968"W	3011.45	222.065	7.17	6.91	-1.91
9592.00	92.000	144.620	8268.94	768.07	-2312.11	-1962.96	1764274.12	414416.51	39°38'7.9006"N	80°13'30.5910"W	3033.00	220.331	0.35	0.10	0.34
9687.00	92.150	144.330	8265.50	863.00	-2389.38	-1907.80	1764329.28	414339.25	39°38'7.1414"N	80°13'29.8779"W	3057.59	218.606	0.34	0.16	-0.31
9781.00	91.940	144.710	8262.15	956.94	-2465.88	-1853.27	1764383.80	414262.75	39°38'6.3898"N	80°13'29.1731"W	3084.67	216.927	0.46	-0.22	0.40
9876.00	90.860	144.130	8259.83	1051.90	-2543.12	-1798.02	1764439.05	414185.52	39°38'5.6309"N	80°13'28.4589"W	3114.53	215.261	1.29	-1.14	-0.61
9971.00	91.200	144.210	8258.12	1146.87	-2620.13	-1742.41	1764494.65	414108.51	39°38'4.8742"N	80°13'27.7403"W	3146.60	213.624	0.37	0.36	0.08
10064.00	91.080	144.470	8256.27	1239.85	-2696.67	-1688.21	1764548.86	414032.97	39°38'4.1320"N	80°13'27.0397"W	3180.68	212.057	0.31	-0.13	0.28

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Yost 2H
Field	Monongalia	API/Legal	
Facility	Yost Pad	Wellbore	Yost 2H AWB
Slot	Slot 02		

WELLPATH DATA (239 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]	
10159.00	91.020	144.610	8254.53	1334.83	-2773.04	-1633.10	1764603.96	413955.61	39°38'3.3718"N	80°13'26.3274"W	3218.19	210.495	0.16	-0.06	0.15	
10263.00	90.920	144.520	8252.94	1428.81	-2849.62	-1578.61	1764658.44	413879.04	39°38'2.6193"N	80°13'25.6230"W	3257.66	208.985	0.14	-0.11	-0.10	
10347.00	91.080	144.760	8251.30	1522.80	-2926.27	-1524.22	1764712.83	413802.39	39°38'1.8662"N	80°13'24.9200"W	3299.44	207.514	0.31	0.17	0.26	
10442.00	90.550	144.050	8249.96	1617.78	-3003.51	-1468.93	1764768.12	413725.16	39°38'1.1072"N	80°13'24.2054"W	3343.47	206.062	0.93	-0.56	-0.75	
10537.00	90.220	144.400	8249.31	1712.77	-3080.58	-1413.40	1764823.65	413648.09	39°38'0.3500"N	80°13'23.4876"W	3389.35	204.646	0.51	-0.35	-0.37	
10631.00	90.680	144.510	8248.57	1806.76	-3157.06	-1358.75	1764878.29	413571.61	39°37'59.5985"N	80°13'22.7813"W	3437.04	203.286	0.50	0.49	0.12	
10724.00	90.220	144.400	8247.84	1899.76	-3232.73	-1304.69	1764932.35	413495.95	39°37'58.8550"N	80°13'22.0826"W	3486.08	201.978	0.51	-0.49	-0.12	
10819.00	90.890	144.100	8246.92	1994.74	-3309.82	-1249.19	1764987.85	413418.86	39°37'58.0975"N	80°13'21.3653"W	3537.71	200.677	0.77	0.71	-0.32	
10914.00	91.200	144.480	8245.19	2089.72	-3386.95	-1193.75	1765043.28	413341.74	39°37'57.3397"N	80°13'20.6488"W	3591.16	199.415	0.52	0.33	0.40	
11009.00	90.370	143.870	8243.88	2184.70	-3464.02	-1138.22	1765098.81	413264.68	39°37'56.5825"N	80°13'19.9311"W	3646.22	198.190	1.03	-0.87	-0.54	
11103.00	91.320	143.920	8242.50	2278.67	-3540.00	-1082.90	1765154.13	413188.69	39°37'55.8359"N	80°13'19.2163"W	3701.93	197.009	1.01	1.01	-0.05	
11198.00	91.260	145.950	8240.36	2373.65	-3617.74	-1028.34	1765208.69	413110.97	39°37'55.0720"N	80°13'18.5110"W	3761.05	195.868	2.14	-0.06	2.14	
11292.00	92.060	144.690	8237.64	2467.60	-3695.00	-974.88	1765262.14	413033.70	39°37'54.3127"N	80°13'17.8197"W	3821.44	194.780	1.59	0.85	-1.34	
11388.00	91.600	144.300	8234.57	2563.55	-3773.11	-919.15	1765317.87	412955.60	39°37'53.5452"N	80°13'17.0995"W	3883.45	193.691	0.63	-0.48	-0.41	
11483.00	90.890	144.890	8232.51	2658.52	-3850.52	-864.13	1765372.89	412878.19	39°37'52.7845"N	80°13'16.3883"W	3946.30	192.649	0.97	-0.75	0.62	
11578.00	90.550	144.100	8231.31	2753.51	-3927.85	-808.96	1765428.05	412800.87	39°37'52.0247"N	80°13'15.6753"W	4010.29	191.638	0.91	-0.36	-0.83	
11673.00	90.680	144.430	8230.29	2848.50	-4004.96	-753.48	1765483.53	412723.76	39°37'51.2670"N	80°13'14.9583"W	4075.22	190.655	0.37	0.14	0.35	
11769.00	90.920	144.480	8228.95	2944.48	-4083.07	-697.67	1765539.33	412645.66	39°37'50.4996"N	80°13'14.2371"W	4142.24	189.696	0.26	0.25	0.05	
11864.00	90.740	144.210	8227.58	3039.47	-4160.25	-642.30	1765594.70	412568.48	39°37'49.7412"N	80°13'13.5215"W	4209.54	188.777	0.34	-0.19	-0.28	
11959.00	90.490	144.260	8226.56	3134.45	-4237.33	-586.78	1765650.21	412491.41	39°37'48.9838"N	80°13'12.8040"W	4277.77	187.884	0.27	-0.26	0.05	
12055.00	90.740	144.210	8225.53	3230.44	-4315.22	-530.68	1765706.31	412413.52	39°37'48.2185"N	80°13'12.0790"W	4347.73	187.011	0.27	0.26	-0.05	
12150.00	92.000	145.060	8223.25	3325.41	-4392.67	-475.71	1765761.28	412336.08	39°37'47.4575"N	80°13'11.3685"W	4418.35	186.181	1.60	1.33	0.89	
12245.00	91.420	143.990	8220.42	3420.36	-4470.00	-420.60	1765816.38	412258.76	39°37'46.6976"N	80°13'10.6563"W	4489.74	185.375	1.28	-0.61	-1.13	
12340.00	92.340	144.070	8217.30	3515.29	-4546.84	-364.83	1765872.15	412181.92	39°37'45.9426"N	80°13'9.9357"W	4561.45	184.588	0.97	0.97	0.08	
12435.00	92.590	144.760	8213.22	3610.20	-4624.03	-309.60	1765927.37	412104.73	39°37'45.1842"N	80°13'9.2220"W	4634.38	183.831	0.77	0.26	0.73	
12529.00	92.800	145.180	8208.80	3704.10	-4700.92	-255.71	1765981.27	412027.85	39°37'44.4286"N	80°13'8.5253"W	4707.86	183.114	0.50	0.22	0.45	
12624.00	93.020	145.330	8203.97	3798.97	-4778.88	-201.63	1766035.34	411949.90	39°37'43.6624"N	80°13'7.8262"W	4783.13	182.416	0.28	0.23	0.16	
12719.00	93.480	145.270	8198.59	3893.82	-4856.85	-147.64	1766089.33	411871.92	39°37'42.8961"N	80°13'7.1282"W	4859.10	181.741	0.49	0.48	-0.06	
12814.00	93.480	145.140	8192.82	3988.64	-4934.72	-93.53	1766143.44	411794.06	39°37'42.1308"N	80°13'6.4287"W	4935.61	181.086	0.14	0.00	-0.14	
12909.00	93.260	144.700	8187.24	4083.48	-5012.33	-39.03	1766197.94	411716.45	39°37'41.3681"N	80°13'5.7242"W	5012.48	180.446	0.52	-0.23	-0.46	

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Slot	Slot 02		

WELLPATH DATA (239 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]
13003.00	92.710	144.400	8182.34	4177.35	-5088.80	15.42	1766252.38	411639.99	39°37'40.6167"N	80°13'5.0205"W	5088.83	179.826	0.67	-0.59	-0.32
13098.00	92.250	145.490	8178.23	4272.26	-5166.50	69.93	1766306.89	411562.30	39°37'39.8532"N	80°13'4.3159"W	5166.97	179.225	1.24	-0.48	1.15
13193.00	92.280	144.960	8174.48	4367.18	-5244.47	124.07	1766361.03	411484.33	39°37'39.0869"N	80°13'3.6161"W	5245.93	178.645	0.56	0.03	-0.56
13288.00	91.880	144.850	8171.03	4462.12	-5322.14	178.66	1766415.60	411406.66	39°37'38.3235"N	80°13'2.9106"W	5325.14	178.077	0.44	-0.42	-0.12
13382.00	92.120	145.110	8167.75	4556.06	-5399.08	232.57	1766469.51	411329.73	39°37'37.5675"N	80°13'2.2137"W	5404.09	177.534	0.38	0.26	0.28
13477.00	92.370	145.380	8164.03	4650.99	-5477.07	286.68	1766523.62	411251.74	39°37'36.8010"N	80°13'1.5142"W	5484.57	177.004	0.39	0.26	0.28
13572.00	92.150	145.130	8160.28	4745.91	-5555.07	340.78	1766577.72	411173.75	39°37'36.0344"N	80°13'0.8148"W	5565.51	176.490	0.35	-0.23	-0.26
13667.00	92.090	144.680	8156.77	4840.85	-5632.75	395.36	1766632.30	411096.08	39°37'35.2711"N	80°13'0.1094"W	5646.60	175.985	0.48	-0.06	-0.47
13762.00	92.190	145.330	8153.22	4935.78	-5710.52	449.81	1766686.74	411018.31	39°37'34.5068"N	80°12'59.4056"W	5728.20	175.496	0.69	0.11	0.68
13857.00	91.600	144.540	8150.08	5030.73	-5788.23	504.35	1766741.28	410940.60	39°37'33.7431"N	80°12'58.7006"W	5810.16	175.020	1.04	-0.62	-0.83
13951.00	91.940	144.700	8147.17	5124.68	-5864.83	558.75	1766795.68	410864.00	39°37'32.9903"N	80°12'57.9976"W	5891.39	174.558	0.40	0.36	0.17
14045.00	92.650	146.610	8143.41	5218.59	-5942.38	611.74	1766848.66	410786.46	39°37'32.2281"N	80°12'57.3125"W	5973.78	174.122	2.17	0.76	2.03
14140.00	91.140	146.420	8140.27	5313.50	-6021.57	664.13	1766901.04	410707.28	39°37'31.4497"N	80°12'56.6350"W	6058.08	173.706	1.60	-1.59	-0.20
14234.00	90.770	145.830	8138.70	5407.47	-6099.60	716.51	1766953.43	410629.25	39°37'30.6826"N	80°12'55.9576"W	6141.54	173.300	0.74	-0.39	-0.63
14329.00	89.970	145.210	8138.09	5502.47	-6177.91	770.29	1767007.20	410550.95	39°37'29.9130"N	80°12'55.2624"W	6225.74	172.893	1.07	-0.84	-0.65
14424.00	90.220	146.160	8137.93	5597.46	-6256.37	823.85	1767060.76	410472.49	39°37'29.1417"N	80°12'54.5700"W	6310.38	172.498	1.03	0.26	1.00
14518.00	91.140	146.040	8136.82	5691.43	-6334.39	876.27	1767113.18	410394.48	39°37'28.3749"N	80°12'53.8921"W	6394.71	172.124	0.99	0.98	-0.13
14612.00	90.980	146.510	8135.08	5785.39	-6412.55	928.45	1767165.35	410316.32	39°37'27.6065"N	80°12'53.2173"W	6479.42	171.762	0.53	-0.17	0.50
14706.00	91.140	146.370	8133.34	5879.35	-6490.87	980.41	1767217.31	410238.01	39°37'26.8366"N	80°12'52.5454"W	6564.50	171.411	0.23	0.17	-0.15
14800.00	91.320	146.000	8131.32	5973.31	-6568.95	1032.71	1767269.60	410159.93	39°37'26.0691"N	80°12'51.8691"W	6649.63	171.066	0.44	0.19	-0.39
14894.00	91.850	146.050	8128.72	6067.25	-6646.87	1085.22	1767322.11	410082.01	39°37'25.3031"N	80°12'51.1901"W	6734.88	170.727	0.57	0.56	0.05
14989.00	92.250	145.710	8125.32	6162.18	-6725.47	1138.47	1767375.36	410003.42	39°37'24.5305"N	80°12'50.5016"W	6821.15	170.392	0.55	0.42	-0.36
15084.00	91.880	146.150	8121.90	6257.11	-6804.11	1191.65	1767428.54	409924.78	39°37'23.7575"N	80°12'49.8139"W	6907.68	170.066	0.60	-0.39	0.46
15179.00	91.660	146.540	8118.96	6352.04	-6883.15	1244.28	1767481.16	409845.75	39°37'22.9805"N	80°12'49.1334"W	6994.71	169.753	0.47	-0.23	0.41
15273.00	90.950	145.870	8116.82	6445.99	-6961.25	1296.55	1767533.43	409767.66	39°37'22.2128"N	80°12'48.4575"W	7080.96	169.449	1.04	-0.76	-0.71
15368.00	90.680	146.110	8115.47	6540.97	-7039.99	1349.68	1767586.56	409688.92	39°37'21.4388"N	80°12'47.7705"W	7168.20	169.147	0.38	-0.28	0.25
15463.00	90.460	146.230	8114.53	6635.94	-7118.90	1402.57	1767639.44	409610.01	39°37'20.6631"N	80°12'47.0867"W	7255.75	168.854	0.26	-0.23	0.13
15558.00	90.460	146.390	8113.76	6730.91	-7197.94	1455.26	1767692.13	409530.98	39°37'19.8861"N	80°12'46.4053"W	7343.58	168.570	0.17	0.00	0.17
15653.00	90.520	146.330	8112.95	6825.88	-7277.03	1507.89	1767744.75	409451.89	39°37'19.1086"N	80°12'45.7248"W	7431.61	168.293	0.09	0.06	-0.06
15747.00	90.580	146.390	8112.05	6919.85	-7355.29	1559.96	1767796.82	409373.64	39°37'18.3394"N	80°12'45.0514"W	7519.89	168.026	0.09	0.06	0.06

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Actual Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Yost 2H
Field	Monongalia	API/Legal	
Facility	Yost Pad	Wellbore	Yost 2H AWB
Slot	Slot 02		

WELLPATH DATA (239 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]
15842.00	90.800	146.430	8110.90	7014.82	-7434.42	1612.51	1767849.37	409294.52	39°37'17.5615"N	80°12'44.3718"W	7607.28	167.762	0.24	0.23	0.04
15937.00	90.650	146.230	8109.70	7109.78	-7513.47	1665.18	1767902.03	409215.47	39°37'16.7843"N	80°12'43.6908"W	7695.78	167.504	0.26	-0.16	-0.21
16031.00	90.460	144.900	8108.79	7203.77	-7591.00	1718.33	1767955.18	409137.95	39°37'16.0223"N	80°12'43.0037"W	7783.05	167.245	1.43	-0.20	-1.41
16126.00	90.770	145.360	8107.77	7298.77	-7668.93	1772.64	1768009.49	409060.02	39°37'15.2563"N	80°12'42.3018"W	7871.14	166.985	0.58	0.33	0.48
16221.00	90.680	145.430	8106.57	7393.76	-7747.12	1826.58	1768063.43	408981.83	39°37'14.4879"N	80°12'41.6045"W	7959.54	166.733	0.12	-0.09	0.07
16315.00	90.650	145.370	8105.48	7487.75	-7824.49	1879.96	1768116.80	408904.47	39°37'13.7274"N	80°12'40.9146"W	8047.17	166.490	0.07	-0.03	-0.06
16410.00	90.650	144.260	8104.40	7582.74	-7902.13	1934.69	1768171.54	408826.84	39°37'12.9645"N	80°12'40.2073"W	8135.52	166.243	1.17	0.00	-1.17
16504.00	91.200	144.430	8102.88	7676.72	-7978.50	1989.48	1768226.32	408750.47	39°37'12.2140"N	80°12'39.4995"W	8222.80	165.999	0.61	0.59	0.18
16598.00	90.710	144.060	8101.32	7770.70	-8054.77	2044.40	1768281.23	408674.20	39°37'11.4645"N	80°12'38.7900"W	8310.17	165.758	0.65	-0.52	-0.39
16693.00	91.110	144.280	8099.81	7865.68	-8131.78	2100.00	1768336.83	408597.20	39°37'10.7078"N	80°12'38.0717"W	8398.56	165.520	0.48	0.42	0.23
16787.00	91.510	144.210	8097.66	7959.64	-8208.04	2154.91	1768391.74	408520.94	39°37'9.9584"N	80°12'37.3623"W	8486.20	165.290	0.43	0.43	-0.07
16881.00	91.510	144.340	8095.18	8053.60	-8284.33	2209.78	1768446.61	408444.66	39°37'9.2088"N	80°12'36.6534"W	8573.99	165.065	0.14	0.00	0.14
16977.00	91.480	144.410	8092.68	8149.56	-8362.34	2265.68	1768502.50	408366.66	39°37'8.4422"N	80°12'35.9313"W	8663.83	164.840	0.08	-0.03	0.07
17070.00	90.920	143.930	8090.73	8242.53	-8437.72	2320.11	1768556.93	408291.28	39°37'7.7015"N	80°12'35.2281"W	8750.89	164.625	0.79	-0.60	-0.52
17165.00	91.140	144.110	8089.02	8337.50	-8514.58	2375.91	1768612.73	408214.42	39°37'6.9463"N	80°12'34.5073"W	8839.86	164.409	0.30	0.23	0.19
17260.00	91.290	144.030	8087.01	8432.47	-8591.49	2431.64	1768668.46	408137.52	39°37'6.1905"N	80°12'33.7874"W	8928.98	164.197	0.18	0.16	-0.08
17355.00	91.600	144.330	8084.61	8527.43	-8668.50	2487.22	1768724.03	408060.51	39°37'5.4339"N	80°12'33.0694"W	9018.27	163.990	0.45	0.33	0.32
17450.00	91.480	144.490	8082.06	8622.39	-8745.72	2542.49	1768779.30	407983.29	39°37'4.6750"N	80°12'32.3553"W	9107.80	163.790	0.21	-0.13	0.17
17545.00	92.250	144.250	8078.97	8717.33	-8822.90	2597.81	1768834.61	407906.12	39°37'3.9166"N	80°12'31.6408"W	9197.40	163.594	0.85	0.81	-0.25
17641.00	92.180	144.310	8075.26	8813.26	-8900.78	2653.81	1768890.61	407828.25	39°37'3.1513"N	80°12'30.9173"W	9287.98	163.398	0.10	-0.07	0.06
17736.00	91.660	144.450	8072.07	8908.20	-8977.96	2709.11	1768945.90	407751.07	39°37'2.3928"N	80°12'30.2029"W	9377.80	163.209	0.57	-0.55	0.15
17830.00	91.750	144.320	8069.28	9002.15	-9054.34	2763.82	1769000.61	407674.69	39°37'1.6422"N	80°12'29.4960"W	9466.78	163.025	0.17	0.10	-0.14
17925.00	91.720	144.330	8066.40	9097.10	-9131.48	2819.20	1769055.99	407597.56	39°37'0.8842"N	80°12'28.7806"W	9556.77	162.843	0.03	-0.03	0.01
18019.00	91.750	144.070	8063.56	9191.05	-9207.69	2874.16	1769110.95	407521.36	39°37'0.1354"N	80°12'28.0707"W	9645.84	162.664	0.28	0.03	-0.28
18114.00	91.450	143.800	8060.90	9285.99	-9284.45	2930.07	1769166.85	407444.60	39°36'59.3811"N	80°12'27.3486"W	9735.83	162.485	0.42	-0.32	-0.28
18208.00	91.850	144.900	8058.20	9379.95	-9360.80	2984.83	1769221.61	407368.25	39°36'58.6308"N	80°12'26.6411"W	9825.16	162.314	1.24	0.43	1.17
18301.00	91.820	144.660	8055.22	9472.90	-9436.74	3038.44	1769275.21	407292.32	39°36'57.8845"N	80°12'25.9485"W	9913.83	162.153	0.26	-0.03	-0.26
18396.00	91.660	144.280	8052.33	9567.85	-9514.01	3093.62	1769330.39	407215.05	39°36'57.1251"N	80°12'25.2356"W	10004.34	161.987	0.43	-0.17	-0.40
18491.00	91.850	144.330	8049.42	9662.80	-9591.13	3149.02	1769385.79	407137.94	39°36'56.3673"N	80°12'24.5199"W	10094.86	161.824	0.21	0.20	0.05
18586.00	91.660	144.130	8046.51	9757.75	-9668.20	3204.49	1769441.26	407060.87	39°36'55.6100"N	80°12'23.8034"W	10185.42	161.682	0.25	-0.20	-0.16

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Actual Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Yost 2H
Field	Monongalia	API/Legal	
Facility	Yost Pad	Wellbore	Yost 2H AWB
Slot	Slot 02		

WELLPATH DATA (239 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]
18680.00	92.180	144.570	8043.37	9851.69	-9744.56	3259.21	1769495.97	406984.51	39°36'54.8596"N	80°12'23.0965"W	10275.16	161.507	0.69	0.55	0.41
18775.00	91.850	144.930	8040.03	9946.63	-9822.09	3314.01	1769550.77	406906.99	39°36'54.0976"N	80°12'22.3885"W	10366.11	161.355	0.51	-0.35	0.38
18869.00	92.370	144.250	8036.56	10040.56	-9898.65	3368.44	1769605.19	406830.43	39°36'53.3452"N	80°12'21.6854"W	10456.09	161.207	0.91	0.55	-0.72
18964.00	91.940	143.080	8032.99	10135.46	-9975.13	3424.68	1769661.43	406753.96	39°36'52.5938"N	80°12'20.9590"W	10546.64	161.052	1.31	-0.45	-1.23
19058.00	92.050	144.320	8029.71	10229.38	-10050.84	3480.30	1769717.05	406678.26	39°36'51.8499"N	80°12'20.2408"W	10636.34	160.901	1.32	0.13	1.32
19153.00	92.590	144.110	8025.86	10324.29	-10127.84	3535.80	1769772.55	406601.26	39°36'51.0932"N	80°12'19.5238"W	10727.30	160.755	0.60	0.56	-0.22
19248.00	91.020	145.430	8022.86	10419.24	-10205.40	3590.57	1769827.31	406523.71	39°36'50.3310"N	80°12'18.8162"W	10818.61	160.617	2.16	-1.65	1.39
19343.00	91.200	146.280	8021.02	10514.21	-10284.01	3643.89	1769880.62	406445.10	39°36'49.5583"N	80°12'18.1271"W	10910.48	160.489	0.91	0.19	0.89
19438.00	89.880	146.150	8020.13	10609.18	-10362.96	3696.71	1769933.44	406366.16	39°36'48.7821"N	80°12'17.4442"W	11002.57	160.367	1.40	-1.39	-0.14
19532.00	90.950	146.320	8019.45	10703.16	-10441.10	3748.95	1769985.68	406288.02	39°36'48.0139"N	80°12'16.7689"W	11093.75	160.249	1.15	1.14	0.18
19628.00	90.980	146.230	8017.83	10799.12	-10520.93	3802.24	1770038.97	406208.19	39°36'47.2291"N	80°12'16.0799"W	11186.92	160.130	0.10	0.03	-0.09
19722.00	90.920	146.120	8016.27	10893.09	-10599.01	3854.56	1770091.29	406130.12	39°36'46.4615"N	80°12'15.4036"W	11278.15	160.015	0.13	-0.06	-0.12
19817.00	90.980	146.260	8014.70	10988.05	-10677.93	3907.42	1770144.14	406051.20	39°36'45.6856"N	80°12'14.7204"W	11370.41	159.901	0.16	0.06	0.15
19911.00	90.980	146.140	8013.09	11082.02	-10756.04	3959.70	1770196.42	405973.10	39°36'44.9178"N	80°12'14.0445"W	11461.74	159.789	0.13	0.00	-0.13
20006.00	90.980	146.370	8011.47	11178.98	-10835.02	4012.47	1770249.18	405894.13	39°36'44.1414"N	80°12'13.3624"W	11554.11	159.679	0.24	0.00	0.24
20101.00	91.080	146.090	8009.76	11271.95	-10913.98	4065.26	1770301.98	405815.17	39°36'43.3651"N	80°12'12.6799"W	11646.51	159.571	0.31	0.11	-0.29
20197.00	91.110	146.230	8007.92	11367.91	-10993.70	4118.72	1770355.42	405735.45	39°36'42.5814"N	80°12'11.9890"W	11739.90	159.462	0.15	0.03	0.15
20292.00	90.980	146.120	8006.19	11462.87	-11072.61	4171.59	1770408.29	405656.55	39°36'41.8057"N	80°12'11.3055"W	11832.36	159.356	0.18	-0.14	-0.12
20387.00	91.020	146.290	8004.53	11557.84	-11151.54	4224.42	1770461.12	405577.62	39°36'41.0297"N	80°12'10.6226"W	11924.87	159.252	0.18	0.04	0.18
20482.00	91.140	146.270	8002.74	11652.80	-11230.55	4277.15	1770513.85	405498.62	39°36'40.2580"N	80°12'9.9409"W	12017.45	159.151	0.13	0.13	-0.02
20576.00	91.880	146.250	8000.26	11746.74	-11308.68	4329.34	1770566.04	405420.49	39°36'39.4848"N	80°12'9.2663"W	12109.07	159.051	0.79	0.79	-0.02
20671.00	91.820	145.880	7997.20	11841.67	-11387.46	4382.35	1770619.04	405341.71	39°36'38.7103"N	80°12'8.5812"W	12201.61	158.951	0.39	-0.06	-0.39
20765.00	91.750	144.120	7994.27	11935.63	-11464.42	4436.24	1770672.92	405264.76	39°36'37.9539"N	80°12'7.8849"W	12292.81	158.846	1.87	-0.07	-1.87
20859.00	91.420	144.250	7991.67	12029.58	-11540.62	4491.22	1770727.91	405188.57	39°36'37.2052"N	80°12'7.1748"W	12383.74	158.736	0.38	-0.35	0.14
20953.00	91.600	144.220	7989.19	12123.54	-11616.87	4546.14	1770782.82	405112.33	39°36'36.4559"N	80°12'6.4655"W	12474.73	158.628	0.19	0.19	-0.03
21048.00	91.820	144.130	7986.36	12218.49	-11693.86	4601.72	1770838.40	405035.34	39°36'35.6993"N	80°12'5.7477"W	12566.71	158.520	0.25	0.23	-0.09
21143.00	91.600	144.410	7983.52	12313.44	-11770.94	4657.17	1770893.85	404958.26	39°36'34.9417"N	80°12'5.0315"W	12658.77	158.414	0.37	-0.23	0.29
21199.00	91.660	144.710	7981.93	12369.41	-11816.55	4689.63	1770926.30	404912.65	39°36'34.4935"N	80°12'4.6122"W	12713.12	158.353	0.55	0.11	0.54
21224.00	91.660	144.710	7981.21	12394.40	-11836.95	4704.07	1770940.74	404892.26	39°36'34.2931"N	80°12'4.4257"W	12737.41	158.327	0.00	0.00	0.00

HOLE & CASING SECTIONS - Ref Wellbore: Yost 2H AWB Ref Wellpath: Yost 2H AWP Proj: 21224'									
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	1490.00	1462.00	28.00	1489.99	0.00	0.00	0.02	-0.74

HOLE & CASING SECTIONS - Ref Wellbore: Yost 2H AWB Ref Wellpath: Yost 2H AWP Proj: 21224'									
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]
13.375in Casing Surface	28.00	1460.00	1432.00	28.00	1459.99	0.00	0.00	0.15	-0.73
12.25in Open Hole	1490.00	2660.00	1170.00	1489.99	2654.78	0.02	-0.74	35.06	-92.02
9.625in Casing Intermediate	28.00	2630.00	2602.00	28.00	2624.95	0.00	0.00	34.71	-88.84
8.75in Open Hole	2660.00	7000.00	4340.00	2654.78	6532.64	35.06	-92.02	-991.07	-1626.12
8.5in Open Hole	7000.00	21224.00	14224.00	6532.64	7981.21	-991.07	-1626.12	-11836.95	4704.07
5.5in Casing Production	28.00	21194.00	21166.00	28.00	7982.07	0.00	0.00	-11812.47	4686.74

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Yost 2H BHL Rev-3	8260.00	-11832.00	4711.98	1770948.65	404897.20	39°36'34.3425"N	80°12'4.3251"W	point
Yost 2H LP Rev-1	8260.00	-2171.00	-2052.73	1764184.36	414557.61	39°38'9.2880"N	80°13'31.7529"W	point
Yost Hardline #3 (1.31.21)	9028.00	-8613.53	8009.07	1774245.54	408115.48	39°37'6.4019"N	80°11'22.5146"W	polygon
2D Polygon: dimensions not calculated								

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Actual Wellpath Report

Yost 2H AWP Proj: 21224'

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REFERENCE WELLPATH IDENTIFICATION

Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Yost 2H
Field	Monongalia	API/Legal	
Facility	Yost Pad	Wellbore	Yost 2H AWB
Slot	Slot 02		

WELLPATH COMPOSITION - Ref Wellbore: Yost 2H AWB Ref Wellpath: Yost 2H AWP Proj: 21224'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
28.00	1335.00	BH Generic gyro - northseeking (Standard)	01_<17.5">Gyro Surveys [BH Generic Gyro-Northseeking] (50'-1335')	Yost 2H AWB	7/3/2022
1335.00	2538.00	OWSG MWD rev2 + HRGM	02_<12.25">SDI MWD [OWSG MWD Rev.2+HRGM] (1335')(1497'-2538')	Yost 2H AWB	7/3/2022
2538.00	6922.00	OWSG MWD rev2 + HRGM	03_<8.75">SDI MWD [OWSG MWD Rev.2+HRGM] (2538')(2634'-6922')	Yost 2H AWB	7/3/2022
6922.00	21224.00	BH AutoTrak Curve/eXpress (2019) (HRGM, Short spacing)	04_<8.5">ATK Curve [HRGM+Short Spacing] (6922')(7037' - 21199')	Yost 2H AWB	7/3/2022

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Actual Wellpath Report

Yost 2H AWP Proj: 21224'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Yost 2H
Field	Monongalia	API/Legal	
Facility	Yost Pad	Wellbore	Yost 2H AWB
Slot	Slot 02		

COMMENTS
<p>Wellpath general comments API: 47061018920000 BH Job #: 111309741 Rig: Patterson 277 Duration: 7/4/2022 - 7/8/2022</p> <p>01_<17.5">Gyro Surveys [BH Generic Gyro-Northseeking] (50'-1335') 02_<12.25">SDI MWD [OWSG MWD Rev.2+HRGM] (1335')(1497'-2538') 03_<8.75">SDI MWD [OWSG MWD Rev.2+HRGM] (2538')(2634'-6922') 04_<8.5">ATK Curve [HRGM+Short Spacing] (6922')(7037' - 21199')</p> <p>Final Survey MD @ 21199' Projected MD at TD: 21224'</p>

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