

Planned Wellpath Report

Yost 7H PWP Rev-A.0

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REFERENCE WELLPATH IDENTIFICATION

Operator	NORTHEAST NATURAL ENERGY, LLC	Slot	Slot 07
Area	Monongalia County, WV	Well	Yost 7H
Field	Monongalia	Wellbore	Yost 7H PWB
Facility	Yost Pad		

REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert West Virginia SP, Northern Zone (4701), US feet	Software System	WellArchitect® 5.1
North Reference	Grid	User	Atenjen
Scale	0.999941	Report Generated	3/28/2019 at 8:28:08 AM
Convergence at slot	0.46° West	Database/Source file	WA_MPL_EASTERNUS_Defm/Yost_7H_PWP_Rev-A.0.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-1.20	-36.00	1766248.70	416662.90	39°38'30.259"N	80°13'05.581"W
Facility Reference Pt			1766284.70	416664.10	39°38'30.274"N	80°13'05.121"W
Field Reference Pt			1777685.71	440640.65	39°42'28.114"N	80°10'41.690"W

WELLPATH DATUM

Calculation method	Minimum curvature	Precision 228 (RKB) to Facility Vertical Datum	1514.50ft
Horizontal Reference Pt	Slot	Precision 228 (RKB) to Mean Sea Level	1514.50ft
Vertical Reference Pt	Precision 228 (RKB)	Precision 228 (RKB) to Ground Level at Slot (Slot 07)	22.50ft
MD Reference Pt	Precision 228 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	324.99°



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NORTHEAST NATURAL ENERGY, LLC	Well	Yost 7H
Area	Wellbore	Yost 7H PWB
Field		
Facility		

WELLPATH DATA (225 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	144.500	0.00	0.00	0.00	0.00	1766248.70	416662.90	39°38'30.259"N	80°13'05.581"W	0.00	0.000	0.00	0.00	0.00
22.50	0.000	144.500	22.50	0.00	0.00	0.00	1766248.70	416662.90	39°38'30.259"N	80°13'05.581"W	0.00	0.000	0.00	0.00	0.00
107.50	0.120	144.500	107.50	-0.09	-0.07	0.05	1766248.75	416662.83	39°38'30.258"N	80°13'05.580"W	0.09	144.500	0.14	0.14	170.00
207.50	0.110	164.190	207.50	-0.28	-0.25	0.14	1766248.84	416662.65	39°38'30.257"N	80°13'05.579"W	0.29	150.995	0.04	-0.01	19.69
307.50	0.090	170.530	307.50	-0.45	-0.42	0.18	1766248.88	416662.48	39°38'30.255"N	80°13'05.578"W	0.46	157.059	0.02	-0.02	6.34
407.50	0.090	146.170	407.50	-0.60	-0.56	0.23	1766248.93	416662.34	39°38'30.253"N	80°13'05.578"W	0.61	157.384	0.04	0.00	-24.36
507.50	0.140	168.280	507.50	-0.79	-0.75	0.30	1766249.00	416662.15	39°38'30.252"N	80°13'05.577"W	0.81	157.937	0.07	0.05	22.09
607.50	0.140	162.050	607.50	-1.02	-0.98	0.37	1766249.07	416661.92	39°38'30.249"N	80°13'05.576"W	1.05	159.612	0.02	0.00	-6.21
707.50	0.150	162.970	707.50	-1.26	-1.22	0.44	1766249.14	416661.68	39°38'30.247"N	80°13'05.575"W	1.30	160.178	0.01	0.00	0.92
807.50	0.150	173.600	807.50	-1.50	-1.48	0.49	1766249.19	416661.42	39°38'30.244"N	80°13'05.574"W	1.56	161.528	0.03	0.00	10.63
907.50	0.150	184.170	907.50	-1.71	-1.74	0.50	1766249.20	416661.16	39°38'30.242"N	80°13'05.574"W	1.81	163.989	0.03	0.00	10.57
1007.50	0.130	165.500	1007.50	-1.92	-1.98	0.52	1766249.22	416660.92	39°38'30.239"N	80°13'05.574"W	2.05	165.337	0.05	-0.02	-18.67
1107.50	0.170	164.330	1107.50	-2.17	-2.23	0.59	1766249.29	416660.67	39°38'30.237"N	80°13'05.573"W	2.31	165.280	0.04	0.04	-1.17
1207.50	0.180	154.420	1207.50	-2.46	-2.52	0.69	1766249.39	416660.38	39°38'30.234"N	80°13'05.572"W	2.61	164.577	0.03	0.01	-9.91
1307.50	0.200	172.080	1307.50	-2.77	-2.83	0.79	1766249.49	416660.07	39°38'30.231"N	80°13'05.570"W	2.94	164.481	0.06	0.02	17.66
1407.50	0.350	174.570	1407.50	-3.19	-3.31	0.84	1766249.54	416659.59	39°38'30.226"N	80°13'05.570"W	3.41	165.766	0.15	0.15	2.49
1452.50	0.370	168.980	1452.49	-3.44	-3.59	0.88	1766249.58	416659.31	39°38'30.224"N	80°13'05.569"W	3.70	166.218	0.09	0.04	-12.47
1623.50	0.000	16.880	1623.49	-3.95	-4.13	0.99	1766249.69	416658.77	39°38'30.218"N	80°13'05.568"W	4.25	166.574	0.22	-0.22	-98.81
1717.50	0.200	266.180	1717.49	-3.86	-4.14	0.82	1766249.52	416658.76	39°38'30.218"N	80°13'05.570"W	4.22	168.770	0.21	0.21	-99.81
1811.50	0.400	221.680	1811.49	-3.85	-4.40	0.44	1766249.14	416658.50	39°38'30.216"N	80°13'05.575"W	4.42	174.280	0.31	0.21	-47.34
1905.50	0.400	202.680	1905.49	-4.11	-4.95	0.10	1766248.80	416657.95	39°38'30.210"N	80°13'05.579"W	4.95	178.890	0.14	0.00	-20.21
1999.50	0.400	208.880	1999.49	-4.43	-5.54	-0.19	1766248.51	416657.36	39°38'30.204"N	80°13'05.583"W	5.54	181.987	0.05	0.00	6.60
2093.50	0.100	151.380	2093.49	-4.65	-5.90	-0.31	1766248.39	416657.01	39°38'30.201"N	80°13'05.584"W	5.90	182.994	0.38	-0.32	-61.17
2187.50	0.200	91.380	2187.49	-4.83	-5.97	-0.11	1766248.59	416656.92	39°38'30.200"N	80°13'05.582"W	5.97	181.008	0.18	0.11	-63.83
2375.50	0.100	97.180	2375.49	-4.98	-5.99	0.14	1766248.84	416656.92	39°38'30.200"N	80°13'05.578"W	5.99	178.657	0.11	-0.11	6.17
2471.50	0.200	150.580	2471.49	-5.30	-6.30	0.25	1766248.89	416656.83	39°38'30.199"N	80°13'05.578"W	6.08	178.176	0.17	0.00	109.57
2565.50	0.300	101.080	2565.48	-5.64	-6.49	0.57	1766249.27	416656.41	39°38'30.197"N	80°13'05.577"W	6.30	177.755	0.16	0.10	-51.67
2597.50	0.300	91.280	2597.48	-5.75	-6.51	0.73	1766249.43	416656.40	39°38'30.195"N	80°13'05.573"W	6.51	174.988	0.24	0.11	-52.66
2853.50	0.200	148.380	2853.48	-5.93	-6.59	0.93	1766249.63	416656.31	39°38'30.194"N	80°13'05.571"W	6.55	173.555	0.16	0.00	-30.63
2715.50	0.300	105.380	2715.48	-6.17	-6.73	1.15	1766249.85	416656.17	39°38'30.193"N	80°13'05.565"W	6.82	170.332	0.33	0.16	-69.35
2747.50	0.100	43.580	2747.48	-6.23	-6.73	1.25	1766249.95	416656.17	39°38'30.193"N	80°13'05.564"W	6.84	169.510	0.84	-0.62	-193.12

WELLPATH DATA (225 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]
2778.50	0.200	290.080	2778.48	-6.18	-6.69	1.21	1766249.91	416656.21	39°38'30.193"N	80°13'05.565"W	6.80	169.718	0.83	0.32	-366.13
2810.50	0.900	317.080	2810.48	-5.88	-6.49	0.99	1766249.69	416656.41	39°38'30.195"N	80°13'05.567"W	6.56	171.322	2.27	2.19	84.38
2841.50	2.000	310.780	2841.47	-5.12	-5.96	0.41	1766249.11	416656.94	39°38'30.200"N	80°13'05.575"W	5.97	176.016	3.58	3.55	-20.32
2872.50	2.500	306.180	2872.45	-3.95	-5.20	-0.54	1766248.16	416657.70	39°38'30.208"N	80°13'05.587"W	5.23	185.931	1.71	1.61	-14.84
2904.50	2.900	307.280	2904.41	-2.52	-4.30	-1.75	1766246.95	416658.60	39°38'30.216"N	80°13'05.603"W	4.64	202.117	1.26	1.25	3.44
2966.50	4.200	299.980	2966.29	1.03	-2.22	-4.96	1766243.74	416660.68	39°38'30.237"N	80°13'05.644"W	5.44	245.932	2.22	2.10	-11.77
2998.50	5.100	301.280	2998.19	3.40	-0.89	-7.19	1766241.51	416662.01	39°38'30.250"N	80°13'05.673"W	7.25	262.927	2.83	2.81	4.06
3029.50	5.500	302.980	3029.05	6.03	0.63	-9.62	1766239.08	416663.53	39°38'30.264"N	80°13'05.704"W	9.64	273.757	1.39	1.29	5.48
3060.50	5.800	300.580	3059.90	8.84	2.24	-12.21	1766236.49	416665.14	39°38'30.280"N	80°13'05.737"W	12.42	280.381	1.23	0.97	-7.74
3092.50	6.300	296.880	3091.72	11.86	3.85	-15.17	1766233.53	416666.75	39°38'30.296"N	80°13'05.775"W	15.65	284.253	1.98	1.56	-11.56
3123.50	6.600	296.580	3122.53	14.93	5.42	-18.28	1766230.42	416668.32	39°38'30.311"N	80°13'05.815"W	19.07	286.514	0.97	0.97	-0.97
3154.50	6.300	293.680	3153.33	17.95	6.90	-21.43	1766227.27	416669.80	39°38'30.326"N	80°13'05.855"W	22.51	287.846	1.43	-0.97	-9.35
3186.50	6.300	283.780	3185.14	20.77	8.02	-24.74	1766223.96	416670.92	39°38'30.336"N	80°13'05.898"W	26.01	287.965	3.39	0.00	-30.94



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Area	Wellbore	Yost 7H PWB
Field		
Facility	Yost Pad	

WELLPATH DATA (225 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]
3217.50	6.400	269.480	3215.95	23.03	8.41	-28.12	1766220.58	416671.31	39°38'30.340"N	80°13'05.941"W	29.36	286.654	5.10	0.32	-46.13
3248.50	6.800	261.480	3246.75	24.82	8.13	-31.67	1766217.03	416671.02	39°38'30.337"N	80°13'05.986"W	32.69	284.391	3.23	1.29	-25.81
3279.50	7.000	259.080	3277.52	26.41	7.50	-35.34	1766213.37	416670.40	39°38'30.330"N	80°13'06.033"W	36.12	281.976	1.13	0.65	-7.74
3311.50	6.600	256.280	3309.30	27.88	6.69	-39.04	1766209.66	416669.59	39°38'30.322"N	80°13'06.081"W	39.61	279.724	1.62	-1.25	-8.75
3342.50	5.600	254.080	3340.12	29.02	5.85	-42.22	1766206.48	416668.75	39°38'30.314"N	80°13'06.121"W	42.63	277.891	3.31	-3.23	-7.10
3373.50	4.800	252.480	3370.99	29.90	5.05	-44.91	1766203.79	416667.95	39°38'30.305"N	80°13'06.155"W	45.20	276.412	2.62	-2.58	-5.16
3404.50	3.900	248.380	3401.90	30.54	4.27	-47.13	1766201.57	416667.17	39°38'30.297"N	80°13'06.184"W	47.32	275.175	3.07	-2.90	-13.23
3436.50	3.400	248.380	3433.84	31.01	3.52	-49.03	1766199.68	416666.42	39°38'30.290"N	80°13'06.208"W	49.15	274.104	1.56	-1.56	0.00
3467.50	2.600	255.480	3464.80	31.47	3.00	-50.56	1766198.14	416665.90	39°38'30.285"N	80°13'06.227"W	50.65	273.399	2.84	-2.58	22.90
3510.50	2.100	276.680	3507.76	32.33	2.85	-52.29	1766196.42	416665.75	39°38'30.283"N	80°13'06.249"W	52.37	273.120	2.31	-1.16	49.30
3542.50	2.000	314.180	3539.74	33.27	3.31	-53.27	1766195.43	416666.21	39°38'30.287"N	80°13'06.262"W	53.37	273.553	4.13	-0.31	117.19
3573.50	2.400	334.980	3570.72	34.44	4.27	-53.93	1766194.77	416667.17	39°38'30.297"N	80°13'06.271"W	54.10	274.529	2.86	1.29	67.10
3667.50	1.400	325.780	3664.67	37.53	7.01	-55.41	1766193.29	416669.90	39°38'30.324"N	80°13'06.290"W	55.85	277.205	1.11	-1.06	-9.79
3761.50	0.800	339.680	3758.65	39.31	8.57	-56.28	1766192.42	416671.47	39°38'30.339"N	80°13'06.301"W	56.93	278.658	0.69	-0.64	14.79
3855.50	0.900	338.580	3852.64	40.66	9.87	-56.78	1766191.92	416672.77	39°38'30.352"N	80°13'06.308"W	57.63	279.864	0.11	0.11	-1.17
3949.50	0.500	309.980	3946.63	41.78	10.82	-57.37	1766191.34	416673.72	39°38'30.361"N	80°13'06.315"W	58.38	280.685	0.55	-0.43	-30.43
4043.50	0.200	11.280	4040.63	42.29	11.25	-57.65	1766191.06	416674.15	39°38'30.366"N	80°13'06.319"W	58.74	281.041	0.47	-0.32	65.21
4137.50	0.100	160.780	4134.63	42.32	11.33	-57.59	1766191.11	416674.23	39°38'30.366"N	80°13'06.318"W	58.69	281.132	0.31	-0.11	159.04
4231.50	0.100	86.780	4228.63	42.20	11.26	-57.48	1766191.22	416674.16	39°38'30.366"N	80°13'06.317"W	58.57	281.082	0.13	0.00	-78.72
4324.50	0.300	248.080	4321.63	42.21	11.17	-57.63	1766191.08	416674.07	39°38'30.365"N	80°13'06.319"W	58.70	280.972	0.43	0.22	173.44
4419.50	0.300	180.380	4416.63	42.07	10.83	-57.86	1766190.85	416673.73	39°38'30.361"N	80°13'06.321"W	58.86	280.603	0.35	0.00	-71.26
4512.50	0.300	190.080	4509.63	41.69	10.35	-57.90	1766190.80	416673.25	39°38'30.357"N	80°13'06.322"W	58.82	280.132	0.05	0.00	10.43
4606.50	0.000	172.380	4603.63	41.52	10.11	-57.94	1766190.76	416673.00	39°38'30.354"N	80°13'06.323"W	58.82	279.893	0.32	-0.32	180.77
4700.50	0.400	157.280	4697.63	41.20	9.80	-57.82	1766190.89	416672.70	39°38'30.351"N	80°13'06.321"W	58.64	279.623	0.43	0.43	167.32
4794.50	0.500	203.080	4791.62	40.66	9.12	-57.85	1766190.85	416672.02	39°38'30.345"N	80°13'06.321"W	58.57	278.961	0.39	0.11	48.72
4888.50	0.500	171.980	4885.62	40.08	8.34	-57.96	1766190.75	416671.24	39°38'30.337"N	80°13'06.322"W	58.55	278.188	0.29	0.00	-33.09
4982.50	0.700	216.280	4979.61	39.53	7.47	-58.24	1766190.47	416670.37	39°38'30.328"N	80°13'06.326"W	58.72	277.309	0.52	0.21	47.13
5076.50	0.600	205.080	5073.61	39.10	6.56	-58.79	1766189.92	416669.46	39°38'30.319"N	80°13'06.333"W	59.15	276.369	0.17	-0.11	-11.91
5170.50	0.900	228.280	5167.60	38.77	5.62	-59.55	1766189.16	416668.52	39°38'30.310"N	80°13'06.343"W	59.81	275.396	0.45	0.32	24.68
5264.50	0.300	212.480	5261.60	38.59	4.93	-60.23	1766188.47	416667.83	39°38'30.303"N	80°13'06.351"W	60.43	274.675	0.66	-0.64	-16.81
5358.50	0.200	238.980	5355.59	38.51	4.63	-60.50	1766188.20	416667.53	39°38'30.300"N	80°13'06.355"W	60.68	274.379	0.16	-0.11	28.19
5452.50	0.300	193.280	5449.59	38.35	4.31	-60.70	1766188.00	416667.21	39°38'30.297"N	80°13'06.357"W	60.85	274.061	0.23	0.11	-48.62

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5546.50	0.700	232.380	5543.59	38.16	3.72	-61.21	1766187.49	416666.62	39°38'30.291"N	80°13'06.364"W	61.32	273.477	0.54	0.43	41.60
5540.50	0.700	234.080	5637.58	38.13	3.03	-62.13	1766186.57	416665.93	39°38'30.284"N	80°13'06.375"W	62.20	272.794	0.02	0.00	1.81
5734.50	0.700	238.580	5731.58	38.16	2.40	-63.09	1766185.62	416665.30	39°38'30.278"N	80°13'06.387"W	63.13	272.175	0.06	0.00	4.79
5827.50	0.500	227.580	5824.57	38.14	1.83	-63.87	1766184.83	416664.73	39°38'30.272"N	80°13'06.397"W	63.90	271.638	0.25	-0.22	-11.83
5921.50	0.400	219.680	5918.57	38.00	1.30	-64.38	1766184.32	416664.20	39°38'30.267"N	80°13'06.404"W	64.40	271.154	0.12	-0.11	-8.40
6015.50	0.200	131.880	6012.57	37.75	0.93	-64.47	1766184.23	416663.83	39°38'30.263"N	80°13'06.405"W	64.48	270.831	0.47	-0.21	-93.40
6109.50	0.100	168.080	6106.57	37.52	0.75	-64.33	1766184.37	416663.64	39°38'30.261"N	80°13'06.403"W	64.33	270.664	0.14	-0.11	38.51
6203.50	0.500	173.380	6200.57	37.08	0.26	-64.27	1766184.44	416663.16	39°38'30.256"N	80°13'06.402"W	64.27	270.229	0.43	0.43	5.64
6297.50	0.300	198.380	6294.56	36.57	-0.38	-64.30	1766184.41	416662.52	39°38'30.250"N	80°13'06.403"W	64.30	269.658	0.28	-0.21	26.60
6328.50	0.300	202.980	6325.56	36.48	-0.54	-64.35	1766184.35	416662.36	39°38'30.249"N	80°13'06.403"W	64.36	269.523	0.08	0.00	14.84
6384.50	0.300	202.980	6381.56	36.33	-0.81	-64.47	1766184.24	416662.09	39°38'30.246"N	80°13'06.405"W	64.47	269.284	0.00	0.00	0.00
6428.50†	4.651	235.127	6425.51	36.27	-1.93	-65.98	1766182.73	416660.97	39°38'30.235"N	80°13'06.424"W	66.01	268.323	10.00	9.89	73.06
6528.50†	14.649	236.556	6523.97	36.63	-11.24	-79.89	1766168.81	416651.66	39°38'30.142"N	80°13'06.601"W	80.68	261.990	10.00	10.00	1.43



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REFERENCE WELLPATH IDENTIFICATION

	Slot	Slot 07
Operator	NORTHEAST NATURAL ENERGY, LLC	
Area	Monongalia County, WV	Yost 7H
Field	Monongalia	Yost 7H PWB
Facility	Yost Pad	

WELLPATH DATA (225 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]
6628.50†	24.649	236.833	6618.03	37.65	-29.67	-107.97	1766140.74	416633.24	39°38'29.957"N	80°13'06.958"W	111.97	254.636	10.00	10.00	0.28
6728.50†	34.648	236.957	6704.83	39.30	-56.64	-149.36	1766099.35	416606.26	39°38'29.687"N	80°13'07.484"W	159.74	249.231	10.00	10.00	0.12
6782.02	40.000	237.000	6747.37	40.42	-74.32	-176.56	1766072.16	416588.59	39°38'29.511"N	80°13'07.830"W	191.56	247.172	10.00	10.00	0.08
6828.50†	43.484	232.375	6782.05	40.22	-92.23	-201.77	1766046.95	416570.68	39°38'29.332"N	80°13'08.150"W	221.85	245.434	10.00	7.50	-9.95
6863.83	46.244	229.246	6807.10	38.38	-107.99	-221.07	1766027.65	416554.92	39°38'29.174"N	80°13'08.396"W	246.03	243.965	10.00	7.81	-8.85
6928.50†	46.244	229.246	6851.82	33.71	-138.48	-256.45	1765992.27	416524.43	39°38'28.870"N	80°13'08.845"W	291.45	241.632	0.00	0.00	0.00
7028.50†	46.244	229.246	6920.98	26.48	-185.63	-311.17	1765937.55	416477.28	39°38'28.400"N	80°13'09.539"W	362.33	239.181	0.00	0.00	0.00
7128.50†	46.244	229.246	6990.14	19.25	-232.78	-365.88	1765882.84	416430.13	39°38'27.930"N	80°13'10.234"W	433.66	237.534	0.00	0.00	0.00
7228.50†	46.244	229.246	7059.30	12.02	-279.94	-420.60	1765828.13	416382.98	39°38'27.459"N	80°13'10.928"W	505.24	236.353	0.00	0.00	0.00
7328.50†	46.244	229.246	7128.45	4.79	-327.09	-475.31	1765773.42	416335.88	39°38'26.989"N	80°13'11.623"W	576.98	235.466	0.00	0.00	0.00
7428.50†	46.244	229.246	7197.61	-2.44	-374.24	-530.03	1765718.71	416288.68	39°38'26.519"N	80°13'12.318"W	648.83	234.775	0.00	0.00	0.00
7528.50†	46.244	229.246	7266.77	-9.66	-421.39	-584.74	1765663.99	416241.53	39°38'26.048"N	80°13'13.012"W	720.76	234.222	0.00	0.00	0.00
7628.50†	46.244	229.246	7335.93	-16.89	-488.55	-639.46	1765609.28	416194.38	39°38'25.578"N	80°13'13.707"W	792.74	233.769	0.00	0.00	0.00
7728.50†	46.244	229.246	7405.09	-24.12	-515.70	-694.17	1765554.57	416147.23	39°38'25.108"N	80°13'14.401"W	864.77	233.392	0.00	0.00	0.00
7828.50†	46.244	229.246	7474.25	-31.35	-562.85	-748.89	1765499.86	416100.08	39°38'24.637"N	80°13'15.096"W	936.82	233.072	0.00	0.00	0.00
7928.50†	46.244	229.246	7543.40	-38.58	-610.00	-803.60	1765445.15	416052.94	39°38'24.167"N	80°13'15.790"W	1008.90	232.798	0.00	0.00	0.00
8028.50†	46.244	229.246	7612.56	-45.81	-657.15	-858.32	1765390.43	416005.79	39°38'23.697"N	80°13'16.485"W	1081.00	232.561	0.00	0.00	0.00
8128.50†	46.244	229.246	7681.72	-53.04	-704.31	-913.03	1765335.72	415958.64	39°38'23.226"N	80°13'17.180"W	1153.12	232.354	0.00	0.00	0.00
8228.50†	46.244	229.246	7750.88	-60.27	-751.46	-967.75	1765281.01	415911.49	39°38'22.756"N	80°13'17.874"W	1225.25	232.171	0.00	0.00	0.00
8328.50†	46.244	229.246	7820.04	-67.50	-798.61	-1022.46	1765226.30	415864.34	39°38'22.286"N	80°13'18.569"W	1297.39	232.008	0.00	0.00	0.00
8377.61	46.244	229.246	7854.00	-71.05	-821.77	-1049.33	1765199.43	415841.18	39°38'22.055"N	80°13'18.910"W	1332.82	231.934	0.00	0.00	0.00
8428.50†	46.108	236.293	7889.26	-72.47	-843.95	-1078.53	1765170.23	415819.00	39°38'21.833"N	80°13'19.281"W	1369.49	231.957	10.00	-0.27	13.86
8528.50†	47.095	250.011	7958.14	-62.13	-876.55	-1143.09	1765105.68	415786.40	39°38'21.506"N	80°13'20.126"W	1440.48	232.518	10.00	0.99	13.71
8628.50†	49.641	262.968	8024.73	-34.69	-893.78	-1215.51	1765033.27	415769.18	39°38'21.330"N	80°13'21.026"W	1508.74	233.672	10.00	2.55	12.95
8728.50†	53.509	274.751	8087.00	9.00	-895.12	-1293.58	1764955.20	415767.84	39°38'21.310"N	80°13'22.024"W	1573.08	235.318	10.00	3.87	11.79
8828.50†	58.416	285.278	8143.07	67.63	-880.53	-1374.93	1764873.85	415782.43	39°38'21.448"N	80°13'23.066"W	1632.72	237.364	10.00	4.91	10.53
8928.50†	64.095	294.676	8191.22	139.40	-850.45	-1457.10	1764791.69	415812.50	39°38'21.739"N	80°13'24.119"W	1687.13	239.730	10.00	5.68	9.40
9028.50†	70.321	303.171	8230.00	222.14	-805.80	-1537.58	1764711.22	415857.15	39°38'22.174"N	80°13'25.152"W	1735.93	242.342	10.00	6.23	8.50
9128.50†	76.916	311.012	8258.23	313.34	-747.94	-1613.93	1764634.87	415915.01	39°38'22.739"N	80°13'26.134"W	1778.81	245.136	10.00	6.59	7.84
9228.50†	83.735	318.437	8275.05	410.22	-678.61	-1683.83	1764564.97	415984.33	39°38'23.419"N	80°13'27.095"W	1815.43	248.050	10.00	6.82	7.43
9319.05	90.000	324.988	8280.00†	500.40	-607.71	-1739.78	1764509.03	416055.23	39°38'24.115"N	80°13'27.757"W	1842.86	250.746	10.00	6.92	7.23
9328.50†	90.000	324.988	8280.00	509.85	-599.97	-1745.20	1764503.61	416062.97	39°38'24.191"N	80°13'27.827"W	1845.45	251.028	0.00	0.00	0.00

WELLPATH DATA (225 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]
9428.50†	90.000	324.988	8280.00	609.85	-518.07	-1802.58	1764446.24	416144.86	39°38'24.996"N	80°13'28.569"W	1875.55	253.965	0.00	0.00	0.00
9528.50†	90.000	324.988	8280.00	709.85	-436.16	-1859.95	1764388.86	416226.76	39°38'25.801"N	80°13'29.311"W	1910.41	256.802	0.00	0.00	0.00
9628.50†	90.000	324.988	8280.00	809.85	-354.26	-1917.32	1764331.49	416308.66	39°38'26.606"N	80°13'30.053"W	1949.78	259.532	0.00	0.00	0.00
9728.50†	90.000	324.988	8280.00	909.85	-272.36	-1974.70	1764274.12	416390.56	39°38'27.411"N	80°13'30.795"W	1993.39	262.147	0.00	0.00	0.00
9828.50†	90.000	324.988	8280.00	1009.85	-190.45	-2032.07	1764216.75	416472.46	39°38'28.215"N	80°13'31.536"W	2040.98	264.646	0.00	0.00	0.00
9928.50†	90.000	324.988	8280.00	1109.85	-108.55	-2089.45	1764159.38	416554.36	39°38'29.020"N	80°13'32.278"W	2092.27	267.026	0.00	0.00	0.00
10028.50†	90.000	324.988	8280.00	1209.85	-26.65	-2146.82	1764102.01	416636.25	39°38'29.825"N	80°13'33.020"W	2146.99	269.289	0.00	0.00	0.00
10128.50†	90.000	324.988	8280.00	1309.85	55.26	-2204.20	1764044.64	416718.15	39°38'30.630"N	80°13'33.762"W	2204.89	271.436	0.00	0.00	0.00
10228.50†	90.000	324.988	8280.00	1409.85	137.16	-2261.57	1763987.27	416800.05	39°38'31.435"N	80°13'34.504"W	2265.73	273.471	0.00	0.00	0.00
10328.50†	90.000	324.988	8280.00	1509.85	219.06	-2318.95	1763929.90	416881.95	39°38'32.240"N	80°13'35.246"W	2329.27	275.397	0.00	0.00	0.00
10428.50†	90.000	324.988	8280.00	1609.85	300.97	-2376.32	1763872.53	416963.85	39°38'33.044"N	80°13'35.988"W	2395.30	277.218	0.00	0.00	0.00
10528.50†	90.000	324.988	8280.00	1709.85	382.87	-2433.69	1763815.15	417045.75	39°38'33.849"N	80°13'36.730"W	2463.63	278.941	0.00	0.00	0.00
10628.50†	90.000	324.988	8280.00	1809.85	464.77	-2491.07	1763757.78	417127.65	39°38'34.654"N	80°13'37.471"W	2534.06	280.569	0.00	0.00	0.00



Planned Wellpath Report

Yost 7H PWP Rev-A.0

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REFERENCE WELLPATH IDENTIFICATION

Operator	NORTHEAST NATURAL ENERGY, LLC	Slot	Slot 07
Area	Monongalia County, WV	Well	Yost 7H
Field	Monongalia	Wellbore	Yost 7H PWB
Facility	Yost Pad		

WELLPATH DATA (225 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]
10728.50†	90.000	324.988	8280.00	1909.85	546.68	-2548.44	1763700.41	417209.54	39°38'35.459"N	80°13'38.213"W	2606.42	282.107	0.00	0.00	0.00
10828.50†	90.000	324.988	8280.00	2009.85	628.58	-2605.82	1763843.04	417291.44	39°38'36.264"N	80°13'38.955"W	2680.56	283.562	0.00	0.00	0.00
10928.50†	90.000	324.988	8280.00	2109.85	710.48	-2663.19	1763985.67	417373.34	39°38'37.069"N	80°13'39.697"W	2756.33	284.937	0.00	0.00	0.00
11028.50†	90.000	324.988	8280.00	2209.85	792.39	-2720.57	1763528.30	417455.24	39°38'37.873"N	80°13'40.439"W	2833.61	286.239	0.00	0.00	0.00
11128.50†	90.000	324.988	8280.00	2309.85	874.29	-2777.94	1763470.93	417537.14	39°38'38.678"N	80°13'41.181"W	2912.27	287.470	0.00	0.00	0.00
11228.50†	90.000	324.988	8280.00	2409.85	956.19	-2835.32	1763413.56	417619.04	39°38'39.483"N	80°13'41.923"W	2992.21	288.636	0.00	0.00	0.00
11328.50†	90.000	324.988	8280.00	2509.85	1038.10	-2892.69	1763356.19	417700.93	39°38'40.288"N	80°13'42.665"W	3073.32	289.742	0.00	0.00	0.00
11428.50†	90.000	324.988	8280.00	2609.85	1120.00	-2950.06	1763298.82	417782.83	39°38'41.093"N	80°13'43.407"W	3155.52	290.789	0.00	0.00	0.00
11528.50†	90.000	324.988	8280.00	2709.85	1201.90	-3007.44	1763241.45	417864.73	39°38'41.898"N	80°13'44.149"W	3238.71	291.784	0.00	0.00	0.00
11628.50†	90.000	324.988	8280.00	2809.85	1283.81	-3064.81	1763184.07	417946.63	39°38'42.702"N	80°13'44.890"W	3322.84	292.728	0.00	0.00	0.00
11728.50†	90.000	324.988	8280.00	2909.85	1365.71	-3122.19	1763126.70	418028.53	39°38'43.507"N	80°13'45.632"W	3407.82	293.626	0.00	0.00	0.00
11828.50†	90.000	324.988	8280.00	3009.85	1447.62	-3179.56	1763069.33	418110.43	39°38'44.312"N	80°13'46.374"W	3493.59	294.479	0.00	0.00	0.00
11928.50†	90.000	324.988	8280.00	3109.85	1529.52	-3236.94	1763011.96	418192.32	39°38'45.117"N	80°13'47.116"W	3580.11	295.292	0.00	0.00	0.00
12028.50†	90.000	324.988	8280.00	3209.85	1611.42	-3294.31	1762954.59	418274.22	39°38'45.922"N	80°13'47.858"W	3667.31	296.066	0.00	0.00	0.00
12128.50†	90.000	324.988	8280.00	3309.85	1693.33	-3351.69	1762897.22	418356.12	39°38'46.726"N	80°13'48.600"W	3755.15	296.804	0.00	0.00	0.00
12228.50†	90.000	324.988	8280.00	3409.85	1775.23	-3409.06	1762839.85	418438.02	39°38'47.531"N	80°13'49.342"W	3843.58	297.508	0.00	0.00	0.00
12328.50†	90.000	324.988	8280.00	3509.85	1857.13	-3466.43	1762782.48	418519.92	39°38'48.336"N	80°13'50.084"W	3932.57	298.180	0.00	0.00	0.00
12428.50†	90.000	324.988	8280.00	3609.85	1939.04	-3523.81	1762725.11	418601.82	39°38'49.141"N	80°13'50.826"W	4022.07	298.823	0.00	0.00	0.00
12528.50†	90.000	324.988	8280.00	3709.85	2020.94	-3581.18	1762667.74	418683.72	39°38'49.946"N	80°13'51.568"W	4112.06	299.437	0.00	0.00	0.00
12628.50†	90.000	324.988	8280.00	3809.85	2102.84	-3638.56	1762610.37	418765.61	39°38'50.750"N	80°13'52.310"W	4202.50	300.025	0.00	0.00	0.00
12728.50†	90.000	324.988	8280.00	3909.85	2184.75	-3695.93	1762552.99	418847.51	39°38'51.555"N	80°13'53.052"W	4293.37	300.588	0.00	0.00	0.00
12828.50†	90.000	324.988	8280.00	4009.85	2266.65	-3753.31	1762495.62	418929.41	39°38'52.360"N	80°13'53.794"W	4384.63	301.128	0.00	0.00	0.00
12928.50†	90.000	324.988	8280.00	4109.85	2348.55	-3810.68	1762438.25	419011.31	39°38'53.165"N	80°13'54.536"W	4476.27	301.646	0.00	0.00	0.00
13028.50†	90.000	324.988	8280.00	4209.85	2430.46	-3868.06	1762380.88	419093.21	39°38'53.970"N	80°13'55.278"W	4568.26	302.143	0.00	0.00	0.00
13128.50†	90.000	324.988	8280.00	4309.85	2512.36	-3925.43	1762323.51	419175.11	39°38'54.775"N	80°13'56.020"W	4660.57	302.620	0.00	0.00	0.00
13228.50†	90.000	324.988	8280.00	4409.85	2594.26	-3982.80	1762266.14	419257.00	39°38'55.579"N	80°13'56.762"W	4753.20	303.079	0.00	0.00	0.00
13328.50†	90.000	324.988	8280.00	4509.85	2676.17	-4040.18	1762208.77	419338.90	39°38'56.384"N	80°13'57.504"W	4846.12	303.520	0.00	0.00	0.00
13428.50†	90.000	324.988	8280.00	4609.85	2758.07	-4097.55	1762151.40	419420.80	39°38'57.189"N	80°13'58.246"W	4939.32	303.945	0.00	0.00	0.00
13528.50†	90.000	324.988	8280.00	4709.85	2839.97	-4154.93	1762094.03	419502.70	39°38'57.994"N	80°13'58.988"W	5032.78	304.353	0.00	0.00	0.00
13628.50†	90.000	324.988	8280.00	4809.85	2921.88	-4212.30	1762036.66	419584.60	39°38'58.798"N	80°13'59.730"W	5126.49	304.747	0.00	0.00	0.00
13728.50†	90.000	324.988	8280.00	4909.85	3003.78	-4269.68	1761979.29	419666.50	39°38'59.603"N	80°14'00.472"W	5220.42	305.127	0.00	0.00	0.00
13828.50†	90.000	324.988	8280.00	5009.85	3085.68	-4327.05	1761921.91	419748.39	39°39'00.408"N	80°14'01.214"W	5314.58	305.493	0.00	0.00	0.00

WELLPATH DATA (225 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]
13928.50†	90.000	324.988	8280.00	5109.85	3167.99	-4384.43	1761864.54	419830.29	39°39'01.213"N	80°14'01.956"W	5408.95	305.847	0.00	0.00	0.00
14028.50†	90.000	324.988	8280.00	5209.85	3249.49	-4441.80	1761807.17	419912.19	39°39'02.018"N	80°14'02.698"W	5503.52	306.188	0.00	0.00	0.00
14128.50†	90.000	324.988	8280.00	5309.85	3331.39	-4499.17	1761749.80	419994.09	39°39'02.822"N	80°14'03.440"W	5598.28	306.518	0.00	0.00	0.00
14228.50†	90.000	324.988	8280.00	5409.85	3413.30	-4556.55	1761692.43	420075.99	39°39'03.627"N	80°14'04.182"W	5693.22	306.837	0.00	0.00	0.00
14328.50†	90.000	324.988	8280.00	5509.85	3495.20	-4613.92	1761635.06	420157.89	39°39'04.432"N	80°14'04.924"W	5788.33	307.145	0.00	0.00	0.00
14428.50†	90.000	324.988	8280.00	5609.85	3577.10	-4671.30	1761577.69	420239.79	39°39'05.237"N	80°14'05.666"W	5883.60	307.444	0.00	0.00	0.00
14528.50†	90.000	324.988	8280.00	5709.85	3659.01	-4728.67	1761520.32	420321.68	39°39'06.042"N	80°14'06.409"W	5979.02	307.732	0.00	0.00	0.00
14628.50†	90.000	324.988	8280.00	5809.85	3740.91	-4786.05	1761462.95	420403.58	39°39'06.846"N	80°14'07.151"W	6074.59	308.012	0.00	0.00	0.00
14728.50†	90.000	324.988	8280.00	5909.85	3822.81	-4843.42	1761405.58	420485.48	39°39'07.651"N	80°14'07.893"W	6170.30	308.283	0.00	0.00	0.00
14828.50†	90.000	324.988	8280.00	6009.85	3904.72	-4900.80	1761348.20	420567.38	39°39'08.456"N	80°14'08.635"W	6266.15	308.546	0.00	0.00	0.00
14928.50†	90.000	324.988	8280.00	6109.85	3986.62	-4958.17	1761290.83	420649.28	39°39'09.261"N	80°14'09.377"W	6362.12	308.801	0.00	0.00	0.00
15028.50†	90.000	324.988	8280.00	6209.85	4068.53	-5015.54	1761233.46	420731.18	39°39'10.065"N	80°14'10.119"W	6458.22	309.048	0.00	0.00	0.00
15128.50†	90.000	324.988	8280.00	6309.85	4150.43	-5072.92	1761176.09	420813.07	39°39'10.870"N	80°14'10.861"W	6554.43	309.288	0.00	0.00	0.00



Planned Wellpath Report

Yost 7H PWP Rev-A.0

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REFERENCE WELLPATH IDENTIFICATION

Operator	NORTHEAST NATURAL ENERGY, LLC	Slot	Slot 07
Area	Monongalia County, WV	Well	Yost 7H
Field	Monongalia	Wellbore	Yost 7H PWB
Facility	Yost Pad		

WELLPATH DATA (225 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]
15228.50†	90.000	324.988	8280.00	6409.85	4232.33	-5130.29	1761118.72	420894.97	39°39'11.675"N	80°14'11.603"W	6650.75	309.522	0.00	0.00	0.00
15328.50†	90.000	324.988	8280.00	6509.85	4314.24	-5187.67	1761061.35	420976.87	39°39'12.480"N	80°14'12.345"W	6747.19	309.748	0.00	0.00	0.00
15428.50†	90.000	324.988	8280.00	6609.85	4396.14	-5245.04	1761003.98	421058.77	39°39'13.284"N	80°14'13.087"W	6843.72	309.988	0.00	0.00	0.00
15528.50†	90.000	324.988	8280.00	6709.85	4478.04	-5302.42	1760946.61	421140.67	39°39'14.089"N	80°14'13.829"W	6940.35	310.182	0.00	0.00	0.00
15628.50†	90.000	324.988	8280.00	6809.85	4559.79	-5359.79	1760889.24	421222.57	39°39'14.894"N	80°14'14.572"W	7037.08	310.390	0.00	0.00	0.00
15728.50†	90.000	324.988	8280.00	6909.85	4641.85	-5417.17	1760831.87	421304.46	39°39'15.699"N	80°14'15.314"W	7133.89	310.593	0.00	0.00	0.00
15828.50†	90.000	324.988	8280.00	7009.85	4723.75	-5474.54	1760774.50	421386.36	39°39'16.504"N	80°14'16.056"W	7230.80	310.790	0.00	0.00	0.00
15928.50†	90.000	324.988	8280.00	7109.85	4805.66	-5531.91	1760717.12	421468.26	39°39'17.308"N	80°14'16.798"W	7327.78	310.981	0.00	0.00	0.00
16028.50†	90.000	324.988	8280.00	7209.85	4887.56	-5589.29	1760659.75	421550.16	39°39'18.113"N	80°14'17.540"W	7424.85	311.168	0.00	0.00	0.00
16128.50†	90.000	324.988	8280.00	7309.85	4969.46	-5646.66	1760602.38	421632.06	39°39'18.918"N	80°14'18.282"W	7521.99	311.350	0.00	0.00	0.00
16228.50†	90.000	324.988	8280.00	7409.85	5051.37	-5704.04	1760545.01	421713.96	39°39'19.723"N	80°14'19.024"W	7619.21	311.527	0.00	0.00	0.00
16328.50†	90.000	324.988	8280.00	7509.85	5133.27	-5761.41	1760487.64	421795.86	39°39'20.527"N	80°14'19.767"W	7716.50	311.700	0.00	0.00	0.00
16428.50†	90.000	324.988	8280.00	7609.85	5215.17	-5818.79	1760430.27	421877.75	39°39'21.332"N	80°14'20.509"W	7813.85	311.889	0.00	0.00	0.00
16528.50†	90.000	324.988	8280.00	7709.85	5297.08	-5876.16	1760372.90	421959.65	39°39'22.137"N	80°14'21.251"W	7911.28	312.033	0.00	0.00	0.00
16628.50†	90.000	324.988	8280.00	7809.85	5378.98	-5933.54	1760315.53	422041.55	39°39'22.942"N	80°14'21.993"W	8008.76	312.194	0.00	0.00	0.00
16728.50†	90.000	324.988	8280.00	7909.85	5460.88	-5990.91	1760258.16	422123.45	39°39'23.746"N	80°14'22.735"W	8106.31	312.350	0.00	0.00	0.00
16828.50†	90.000	324.988	8280.00	8009.85	5542.79	-6048.28	1760200.79	422205.35	39°39'24.551"N	80°14'23.477"W	8203.92	312.503	0.00	0.00	0.00
16928.50†	90.000	324.988	8280.00	8109.85	5624.69	-6105.66	1760143.42	422287.25	39°39'25.356"N	80°14'24.220"W	8301.58	312.652	0.00	0.00	0.00
17028.50†	90.000	324.988	8280.00	8209.85	5706.59	-6163.03	1760086.04	422369.14	39°39'26.161"N	80°14'24.962"W	8399.30	312.798	0.00	0.00	0.00
17128.50†	90.000	324.988	8280.00	8309.85	5788.50	-6220.41	1760028.67	422451.04	39°39'26.965"N	80°14'25.704"W	8497.07	312.940	0.00	0.00	0.00
17228.50†	90.000	324.988	8280.00	8409.85	5870.40	-6277.78	1759971.30	422532.94	39°39'27.770"N	80°14'26.446"W	8594.89	313.079	0.00	0.00	0.00
17328.50†	90.000	324.988	8280.00	8509.85	5952.30	-6335.16	1759913.93	422614.84	39°39'28.575"N	80°14'27.188"W	8692.76	313.215	0.00	0.00	0.00
17428.50†	90.000	324.988	8280.00	8609.85	6034.21	-6392.53	1759856.56	422696.74	39°39'29.380"N	80°14'27.931"W	8790.68	313.348	0.00	0.00	0.00
17528.50†	90.000	324.988	8280.00	8709.85	6116.11	-6449.91	1759799.19	422778.64	39°39'30.184"N	80°14'28.673"W	8888.65	313.478	0.00	0.00	0.00
17628.50†	90.000	324.988	8280.00	8809.85	6198.01	-6507.28	1759741.82	422860.53	39°39'30.989"N	80°14'29.415"W	8986.66	313.606	0.00	0.00	0.00
17728.50†	90.000	324.988	8280.00	8909.85	6279.92	-6564.65	1759684.45	422942.43	39°39'31.794"N	80°14'30.157"W	9084.72	313.730	0.00	0.00	0.00
17828.50†	90.000	324.988	8280.00	9009.85	6361.82	-6622.03	1759627.08	423024.33	39°39'32.598"N	80°14'30.899"W	9182.81	313.852	0.00	0.00	0.00
17928.50†	90.000	324.988	8280.00	9109.85	6443.72	-6679.40	1759569.71	423106.23	39°39'33.403"N	80°14'31.642"W	9280.95	313.971	0.00	0.00	0.00
18028.50†	90.000	324.988	8280.00	9209.85	6525.63	-6736.78	1759512.33	423188.13	39°39'34.208"N	80°14'32.384"W	9379.13	314.088	0.00	0.00	0.00
18128.50†	90.000	324.988	8280.00	9309.85	6607.53	-6794.15	1759454.96	423270.03	39°39'35.013"N	80°14'33.126"W	9477.34	314.202	0.00	0.00	0.00
18228.50†	90.000	324.988	8280.00	9409.85	6689.44	-6851.53	1759397.59	423351.93	39°39'35.817"N	80°14'33.868"W	9575.59	314.314	0.00	0.00	0.00
18328.50†	90.000	324.988	8280.00	9509.85	6771.34	-6908.90	1759340.22	423433.82	39°39'36.622"N	80°14'34.611"W	9673.88	314.424	0.00	0.00	0.00

WELLPATH DATA (225 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]
18428.50†	90.000	324.988	8280.00	9609.85	6853.24	-6966.28	1759282.85	423515.72	39°39'37.427"N	80°14'35.353"W	9772.20	314.531	0.00	0.00	0.00
18528.50†	90.000	324.988	8280.00	9709.85	6935.15	-7023.65	1759225.48	423597.62	39°39'38.232"N	80°14'36.095"W	9870.56	314.637	0.00	0.00	0.00
18628.50†	90.000	324.988	8280.00	9809.85	7017.05	-7081.02	1759168.11	423679.52	39°39'39.036"N	80°14'36.837"W	9968.95	314.740	0.00	0.00	0.00
18728.50†	90.000	324.988	8280.00	9909.85	7098.95	-7138.40	1759110.74	423761.42	39°39'39.841"N	80°14'37.580"W	10067.37	314.841	0.00	0.00	0.00
18828.50†	90.000	324.988	8280.00	10009.85	7180.86	-7195.77	1759053.37	423843.32	39°39'40.646"N	80°14'38.322"W	10165.82	314.941	0.00	0.00	0.00
18928.50†	90.000	324.988	8280.00	10109.85	7262.76	-7253.15	1758996.00	423925.21	39°39'41.450"N	80°14'39.064"W	10264.30	315.038	0.00	0.00	0.00
19028.50†	90.000	324.988	8280.00	10209.85	7344.66	-7310.52	1758938.63	424007.11	39°39'42.255"N	80°14'39.807"W	10362.81	315.133	0.00	0.00	0.00
19128.50†	90.000	324.988	8280.00	10309.85	7426.57	-7367.90	1758881.25	424089.01	39°39'43.060"N	80°14'40.549"W	10461.35	315.227	0.00	0.00	0.00
19228.50†	90.000	324.988	8280.00	10409.85	7508.47	-7425.27	1758823.88	424170.91	39°39'43.865"N	80°14'41.291"W	10559.91	315.319	0.00	0.00	0.00
19328.50†	90.000	324.988	8280.00	10509.85	7590.37	-7482.65	1758766.51	424252.81	39°39'44.669"N	80°14'42.033"W	10658.51	315.409	0.00	0.00	0.00
19428.50†	90.000	324.988	8280.00	10609.85	7672.28	-7540.02	1758709.14	424334.71	39°39'45.474"N	80°14'42.776"W	10757.12	315.498	0.00	0.00	0.00
19528.50†	90.000	324.988	8280.00	10709.85	7754.18	-7597.39	1758651.77	424416.61	39°39'46.279"N	80°14'43.518"W	10855.77	315.585	0.00	0.00	0.00
19548.54	90.000	324.988	8280.00 ²	10729.89	7770.59	-7608.89	1758640.27	424433.02	39°39'46.440"N	80°14'43.667"W	10875.54	315.602	0.00	0.00	0.00



REFERENCE WELLPATH IDENTIFICATION

	Slot	Slot 07
Operator	NORTHEAST NATURAL ENERGY, LLC	Yost 7H
Area	Monongalia County, WV	Yost 7H PWB
Field	Monongalia	
Facility	Yost Pad	

HOLE & CASING SECTIONS - Ref Wellbore: Yost 7H PWB Ref Wellpath: Yost 7H PWP Rev-A.0

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]
28in Open Hole	22.50	62.50	40.00	22.50	62.50	0.00	0.00	-0.02	0.01
24in Conductor	22.50	62.50	40.00	22.50	62.50	0.00	0.00	-0.02	0.01
17.5in Open Hole	62.50	1481.50	1419.00	62.50	1481.49	-0.02	0.01	-3.76	0.91
13.375in Casing Surface	22.50	1481.50	1459.00	22.50	1481.49	0.00	0.00	-3.76	0.91
12.25in Open Hole	1481.50	2602.50	1121.00	1481.49	2602.48	-3.76	0.91	-6.51	0.76
9.625in Casing Intermediate	22.50	2602.50	2580.00	22.50	2602.48	0.00	0.00	-6.51	0.76
8.75in Open Hole	2602.50	6328.50	3726.00	2602.48	6325.56	-6.51	0.76	-0.54	-64.35
8.5in Open Hole	6328.50	19548.54	13220.04	6325.56	8280.00	-0.54	-64.35	7770.59	-7608.89
5.5in Casing Production	22.50	19548.54	19526.04	22.50	8280.00	0.00	0.00	7770.59	-7608.89

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
2) Yost 7H BHL Rev-5	19548.54	8280.00	7770.59	-7608.89	1758640.27	424433.02	39°39'46.440"N	80°14'43.667"W	point
1) Yost 7H LP Rev-2	9319.05	8280.00	-607.71	-1739.78	1764509.03	416055.23	39°38'24.115"N	80°13'27.757"W	point

SURVEY PROGRAM - Ref Wellbore: Yost 7H PWB Ref Wellpath: Yost 7H PWP Rev-A.0

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
22.50	1452.50	BHI Generic gyro - northseeking (Standard)	01_Phoenix Gyro <17 1/2"> (100'-1445')	Yost 7H AWB
1452.50	2597.50	OWSG MWD rev2 + HRGM	02_Phoenix MWD <12 1/4"> (1616'-2590')	Yost 7H AWB
2597.50	3467.50	OWSG MWD rev2 + HRGM	03_Phoenix MWD <8 3/4"> (2646'-3460')	Yost 7H AWB
3467.50	6328.50	OWSG MWD rev2 + HRGM	04_Phoenix MWD <8 3/4"> (3503'-6321')	Yost 7H AWB
6328.50	19600.00	BHI AutoTrak Curve (Short)		Yost 7H PWB