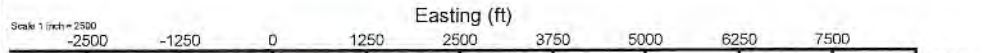


NORTHEAST NATURAL ENERGY, LLC

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

Slot: Slot 14
 Well: Yost 14H
 Wellbore: Yost 14H PWB

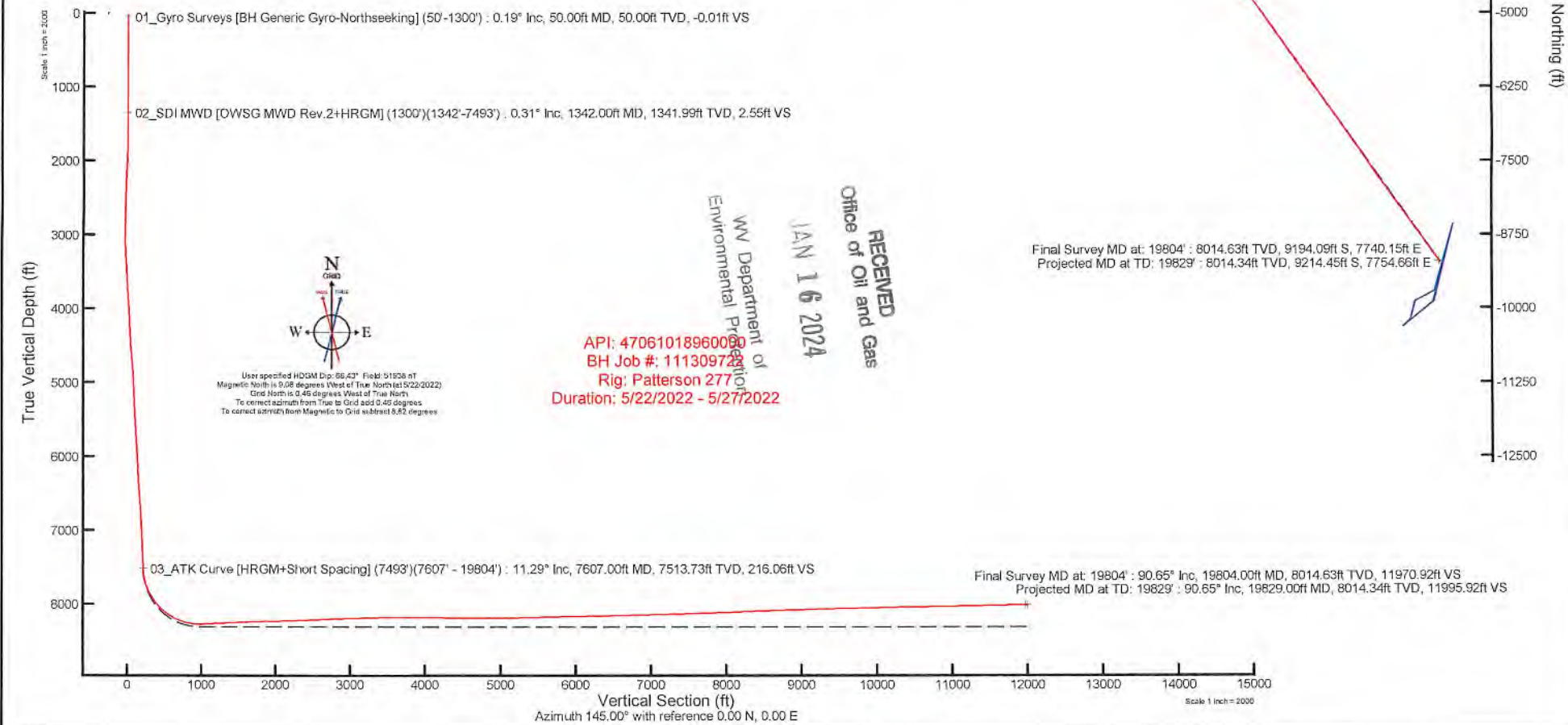


Wellbore Name	Yost 14H PWB	Well ID	Yost 14H
Wellbore Number	14	Well Name	Yost 14H
Wellbore Type	Production	Well Status	Active
Wellbore Depth	19829'	Wellbore Length	19829'
Wellbore Diameter	4.5"	Wellbore Completion	Open Hole

Location Information			
Facility Name	Grid East (USFT)	Grid North (USFT)	Longitude
Yost Pad	179284.100	419564.100	80° 13' 5.120" W
Slot	Local N (ft)	Local E (ft)	Longitude
Slot 14	21.11	-21.10	80° 13' 5.263" W

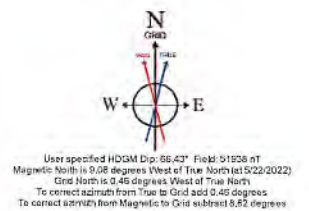
Well Profile Data						
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)
Top Cr.	7495.00	11.300	87.130	7491.94	387.10	891.83
Projection to Btm.	7539.00	11.300	87.130	7545.11	376.22	917.99
Build-Up	8320.88	49.335	140.888	8134.75	182.90	1156.42
Landing Pt.	8830.29	80.000	145.000	8308.00	-191.92	1436.66
BHIL	18853.56	80.000	145.000	8308.00	-8211.68	7759.35

Well Data			
Slot	Well	Wellbore	Wellpath
Slot 14	Yost 14H	Yost 14H AWB	Yost 14H AWB Proj: 19829'
Slot 14	Yost 14H	Yost 14H PWB	Yost 14H PWB Rev-A,0



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API: 47061018960090
 BH Job #: 111309728
 Rig: Patterson 277
 Duration: 5/22/2022 - 5/27/2022





Actual Wellpath Report

Yost 14H AWP Proj: 19829'

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REFERENCE WELLPATH IDENTIFICATION

Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Yost 14H
Field	Monongalia	API/Legal	
Facility	Yost Pad	Wellbore	Yost 14H AWB
Slot	Slot 14		

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	5/30/2022 at 4:51:47 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	28.11	-21.10	1766263.60	416692.21	39°38'30.5499"N	80°13'5.3933"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 14)	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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Actual Wellpath Report

Yost 14H AWP Proj: 19829'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Yost 14H
Field	Monongalia	API/Legal	
Facility	Yost Pad	Wellbore	Yost 14H AWB
Slot	Slot 14		

WELLPATH DATA (223 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	33.600	0.00	0.00	0.00	0.00	1766263.60	416692.21	39°38'30.5499"N	80°13'5.3933"W	0.00	0.000	0.00	0.00	0.00
28.00	0.000	33.600	28.00	0.00	0.00	0.00	1766263.60	416692.21	39°38'30.5499"N	80°13'5.3933"W	0.00	0.000	0.00	0.00	0.00
50.00	0.190	33.600	50.00	-0.01	0.03	0.02	1766263.62	416692.24	39°38'30.5502"N	80°13'5.3931"W	0.04	33.600	0.86	0.86	0.00
100.00	0.260	139.500	100.00	0.07	0.01	0.14	1766263.74	416692.22	39°38'30.5500"N	80°13'5.3916"W	0.14	84.616	0.72	0.14	211.80
150.00	0.160	66.400	150.00	0.20	-0.05	0.28	1766263.88	416692.16	39°38'30.5494"N	80°13'5.3898"W	0.28	99.244	0.53	-0.20	-146.20
200.00	0.160	13.700	200.00	0.16	0.05	0.36	1766263.96	416692.26	39°38'30.5504"N	80°13'5.3888"W	0.36	81.948	0.28	0.00	-105.40
250.00	0.430	188.600	250.00	0.25	-0.07	0.35	1766263.95	416692.14	39°38'30.5492"N	80°13'5.3889"W	0.35	100.956	1.18	0.54	349.80
300.00	0.330	218.900	300.00	0.43	-0.36	0.23	1766263.83	416691.85	39°38'30.5463"N	80°13'5.3904"W	0.43	147.993	0.44	-0.20	60.60
350.00	0.410	177.900	350.00	0.62	-0.66	0.14	1766263.74	416691.55	39°38'30.5434"N	80°13'5.3914"W	0.67	167.606	0.54	0.16	-82.00
400.00	0.310	198.200	400.00	0.85	-0.95	0.11	1766263.71	416691.25	39°38'30.5404"N	80°13'5.3919"W	0.97	173.579	0.32	-0.20	40.80
450.00	0.260	94.900	450.00	1.00	-1.10	0.18	1766263.78	416691.11	39°38'30.5390"N	80°13'5.3909"W	1.12	170.758	0.90	-0.10	-206.60
500.00	0.290	175.700	500.00	1.19	-1.24	0.30	1766263.90	416690.97	39°38'30.5377"N	80°13'5.3894"W	1.27	166.293	0.71	0.06	161.60
550.00	0.200	239.800	549.99	1.29	-1.41	0.24	1766263.84	416690.80	39°38'30.5360"N	80°13'5.3902"W	1.43	170.489	0.54	-0.18	128.20
600.00	0.260	244.300	599.99	1.26	-1.50	0.06	1766263.66	416690.71	39°38'30.5350"N	80°13'5.3924"W	1.50	177.783	0.13	0.12	9.00
650.00	0.200	57.400	649.99	1.25	-1.50	0.03	1766263.63	416690.71	39°38'30.5350"N	80°13'5.3928"W	1.50	178.880	0.92	-0.12	346.20
700.00	0.220	325.900	699.99	1.15	-1.38	0.05	1766263.65	416690.83	39°38'30.5363"N	80°13'5.3926"W	1.38	177.957	0.60	0.04	-183.00
750.00	0.310	143.400	749.99	1.19	-1.40	0.08	1766263.68	416690.81	39°38'30.5360"N	80°13'5.3922"W	1.41	176.907	1.06	0.18	355.00
800.00	0.200	46.900	799.99	1.32	-1.45	0.22	1766263.82	416690.76	39°38'30.5355"N	80°13'5.3904"W	1.47	171.384	0.77	-0.22	-193.00
850.00	0.180	337.300	849.99	1.23	-1.32	0.25	1766263.85	416690.89	39°38'30.5368"N	80°13'5.3900"W	1.35	169.135	0.43	-0.04	-139.20
900.00	0.230	208.100	899.99	1.20	-1.34	0.18	1766263.78	416690.87	39°38'30.5367"N	80°13'5.3909"W	1.35	172.501	0.74	0.10	-258.40
950.00	0.230	252.200	949.99	1.21	-1.46	0.03	1766263.63	416690.75	39°38'30.5355"N	80°13'5.3928"W	1.46	178.692	0.35	0.00	88.20
1000.00	0.360	126.500	999.99	1.33	-1.58	0.06	1766263.66	416690.63	39°38'30.5342"N	80°13'5.3924"W	1.58	177.682	1.06	0.26	-251.40
1050.00	0.220	353.400	1049.99	1.40	-1.58	0.18	1766263.78	416690.63	39°38'30.5343"N	80°13'5.3909"W	1.59	173.525	1.07	-0.28	-266.20
1100.00	0.140	63.400	1099.99	1.32	-1.46	0.22	1766263.82	416690.75	39°38'30.5355"N	80°13'5.3903"W	1.47	171.302	0.43	-0.16	140.00
1150.00	0.310	186.800	1149.99	1.43	-1.56	0.26	1766263.86	416690.65	39°38'30.5344"N	80°13'5.3898"W	1.59	170.507	0.81	0.34	246.80
1200.00	0.420	149.800	1199.99	1.71	-1.86	0.34	1766263.94	416690.35	39°38'30.5315"N	80°13'5.3888"W	1.89	169.691	0.51	0.22	-74.00
1250.00	0.420	147.700	1249.99	2.08	-2.17	0.53	1766264.13	416690.04	39°38'30.5285"N	80°13'5.3864"W	2.23	166.328	0.03	0.00	-4.20
1300.00	0.340	123.100	1299.99	2.40	-2.41	0.75	1766264.35	416689.80	39°38'30.5262"N	80°13'5.3835"W	2.52	162.684	0.36	-0.16	-49.20
1342.00	0.310	216.800	1341.99	2.65	-2.56	0.79	1766264.39	416689.65	39°38'30.5246"N	80°13'5.3830"W	2.68	162.954	1.13	-0.07	223.10
1497.00	0.230	204.660	1496.99	3.84	-3.18	0.41	1766264.01	416689.03	39°38'30.5184"N	80°13'5.3878"W	3.21	172.744	0.06	-0.05	-7.83

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Yost 14H
Field	Monongalia	API/Legal	
Facility	Yost Pad	Wellbore	Yost 14H AWB
Slot	Slot 14		

WELLPATH DATA (223 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	0.380	96.750	1590.99	3.14	-3.39	0.64	1766264.24	416688.82	39°38'30.5164"N	80°13'5.3849"W	3.45	169.376	0.53	0.16	-114.80
1686.00	0.370	85.370	1685.98	3.41	-3.30	1.23	1766264.83	416688.91	39°38'30.5173"N	80°13'5.3773"W	3.52	159.593	0.21	-0.01	-33.03
1781.00	3.980	40.890	1780.90	2.66	-0.68	3.67	1766267.27	416691.53	39°38'30.5434"N	80°13'5.3464"W	3.73	100.494	3.84	3.80	-25.77
1876.00	5.920	37.890	1875.54	0.41	5.68	8.83	1766272.43	416697.89	39°38'30.6067"N	80°13'5.2810"W	10.50	57.256	2.06	2.04	-3.16
1970.00	7.720	32.970	1968.87	-3.38	14.80	15.25	1766278.85	416707.01	39°38'30.6974"N	80°13'5.2000"W	21.25	45.845	2.01	1.91	-5.23
2065.00	8.320	30.250	2062.94	-8.65	26.09	22.18	1766285.78	416718.30	39°38'30.8095"N	80°13'5.1125"W	34.25	40.366	0.75	0.63	-2.86
2159.00	7.700	29.090	2156.03	-14.25	37.47	28.67	1766292.27	416729.68	39°38'30.9225"N	80°13'5.0307"W	47.18	37.419	0.68	-0.66	-1.23
2254.00	6.700	28.790	2250.28	-19.48	47.89	34.43	1766298.03	416740.10	39°38'31.0259"N	80°13'4.9581"W	58.98	35.716	1.05	-1.05	-0.32
2349.00	5.090	29.090	2344.77	-23.77	56.43	39.15	1766302.75	416748.64	39°38'31.1106"N	80°13'4.8986"W	68.68	34.752	1.70	-1.69	0.32
2444.00	4.390	33.600	2439.45	-26.94	63.14	43.21	1766306.81	416755.35	39°38'31.1773"N	80°13'4.8474"W	76.51	34.386	0.83	-0.74	4.75
2538.00	2.880	45.260	2533.25	-28.65	67.80	46.88	1766310.48	416760.01	39°38'31.2236"N	80°13'4.8010"W	82.43	34.662	1.78	-1.61	12.40
2741.00	3.810	42.160	2735.91	-31.01	76.39	55.03	1766318.63	416768.60	39°38'31.3092"N	80°13'4.6977"W	94.15	35.768	0.47	0.46	-1.53
2835.00	5.390	45.220	2829.60	-32.46	81.82	60.26	1766323.86	416774.02	39°38'31.3632"N	80°13'4.6314"W	101.61	36.373	1.70	1.68	3.26
2930.00	7.070	52.950	2924.04	-33.42	88.48	68.09	1766331.69	416780.69	39°38'31.4297"N	80°13'4.5319"W	111.65	37.581	1.97	1.77	8.14
3025.00	8.720	62.520	3018.14	-32.69	95.33	79.15	1766342.75	416787.53	39°38'31.4982"N	80°13'4.3913"W	123.90	39.703	2.21	1.74	10.07
3119.00	10.080	68.800	3110.88	-29.79	101.59	93.14	1766356.74	416793.80	39°38'31.5612"N	80°13'4.2131"W	137.83	42.516	1.81	1.45	6.68
3213.00	11.710	68.780	3203.18	-25.56	108.02	109.71	1766373.30	416800.22	39°38'31.6260"N	80°13'4.0020"W	153.96	45.444	1.73	1.73	-0.02
3307.00	12.780	70.470	3295.04	-20.51	114.95	128.40	1766391.99	416807.15	39°38'31.6960"N	80°13'3.7638"W	172.33	48.163	1.20	1.14	1.80
3402.00	13.270	71.510	3387.60	-14.61	121.92	148.64	1766412.23	416814.12	39°38'31.7665"N	80°13'3.5058"W	192.24	50.641	0.57	0.52	1.09
3497.00	13.180	67.060	3480.08	-9.25	129.60	168.95	1766432.54	416821.80	39°38'31.8440"N	80°13'3.2469"W	212.93	52.510	1.08	-0.09	-4.68
3592.00	11.840	69.470	3572.82	-4.55	137.24	188.06	1766451.65	416829.44	39°38'31.9210"N	80°13'3.0035"W	232.81	53.879	1.51	-1.41	2.54
3687.00	11.130	70.790	3665.92	0.38	143.67	205.84	1766469.43	416835.87	39°38'31.9860"N	80°13'2.7768"W	251.02	55.086	0.80	-0.75	1.39
3782.00	11.220	73.660	3759.12	5.83	149.29	223.37	1766486.96	416841.49	39°38'32.0429"N	80°13'2.5533"W	268.67	56.243	0.59	0.09	3.02
3880.00	10.670	74.600	3855.34	11.92	154.38	241.27	1766504.85	416846.58	39°38'32.0946"N	80°13'2.3251"W	286.43	57.386	0.59	-0.56	0.96
3975.00	10.340	75.820	3948.74	17.90	158.81	258.01	1766521.60	416851.01	39°38'32.1396"N	80°13'2.1115"W	302.97	58.388	0.42	-0.35	1.28
4070.00	9.870	74.080	4042.27	23.60	163.13	274.11	1766537.69	416855.33	39°38'32.1836"N	80°13'1.9062"W	318.98	59.242	0.59	-0.49	-1.83
4165.00	9.810	70.330	4135.87	28.40	166.06	289.56	1766553.14	416860.28	39°38'32.2338"N	80°13'1.7092"W	334.81	59.865	0.68	-0.06	-3.95
4259.00	9.330	68.940	4228.56	32.35	173.52	304.21	1766567.79	416865.72	39°38'32.2887"N	80°13'1.5224"W	350.22	60.300	0.57	-0.51	-1.48
4354.00	8.740	72.950	4322.39	36.43	178.40	318.30	1766581.88	416870.60	39°38'32.3381"N	80°13'1.3428"W	364.88	60.730	0.91	-0.62	4.22
4449.00	8.960	73.570	4416.26	41.01	182.61	332.29	1766595.87	416874.81	39°38'32.3808"N	80°13'1.1644"W	379.16	61.209	0.25	0.23	0.65

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Actual Wellpath Report

Yost 14H AWP Proj: 19829'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Yost 14H
Field	Monongalia	API/Legal	
Facility	Yost Pad	Wellbore	Yost 14H AWB
Slot	Slot 14		

WELLPATH DATA (223 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]
4543.00	9.260	78.770	4509.07	46.39	186.15	346.73	1766610.31	416878.35	39°38'32.4169"N	80°13'0.9801"W	393.54	61.770	0.93	0.32	5.53
4637.00	10.310	83.480	4601.70	53.45	188.58	362.51	1766626.09	416880.78	39°38'32.4422"N	80°13'0.7787"W	408.63	62.516	1.40	1.12	5.01
4735.00	11.170	80.130	4697.99	61.66	191.21	380.57	1766644.15	416883.40	39°38'32.4695"N	80°13'0.5481"W	425.91	63.325	1.08	0.88	-3.42
4830.00	11.940	76.440	4791.06	69.16	195.09	399.19	1766662.77	416887.28	39°38'32.5093"N	80°13'0.3105"W	444.31	63.955	1.12	0.81	-3.88
4925.00	13.030	73.500	4883.82	76.15	200.43	419.02	1766682.59	416892.63	39°38'32.5637"N	80°13'0.0578"W	464.49	64.436	1.33	1.15	-3.09
5020.00	11.870	69.680	4976.58	82.03	206.87	438.45	1766702.02	416899.06	39°38'32.6289"N	80°12'59.8099"W	484.80	64.741	1.50	-1.22	-4.02
5115.00	11.860	67.730	5069.55	86.65	213.96	456.64	1766720.22	416906.16	39°38'32.7004"N	80°12'59.5780"W	504.28	64.895	0.42	-0.01	-2.05
5210.00	10.950	69.940	5162.68	91.13	220.75	474.15	1766737.73	416912.95	39°38'32.7689"N	80°12'59.3549"W	523.02	65.034	1.06	-0.96	2.33
5304.00	10.280	67.970	5255.07	95.32	226.96	490.32	1766753.89	416919.16	39°38'32.8315"N	80°12'59.1489"W	540.30	65.161	0.81	-0.71	-2.10
5399.00	9.670	70.820	5348.63	99.39	232.76	505.71	1766769.28	416924.96	39°38'32.8901"N	80°12'58.9527"W	556.71	65.285	0.83	-0.64	3.00
5494.00	9.870	71.730	5442.25	103.91	237.94	520.98	1766784.55	416930.13	39°38'32.9424"N	80°12'58.7581"W	572.74	65.453	0.27	0.21	0.96
5590.00	9.680	73.310	5536.86	108.82	242.84	536.52	1766800.09	416935.03	39°38'32.9920"N	80°12'58.5599"W	588.92	65.648	0.34	-0.20	1.65
5687.00	10.200	73.450	5632.40	114.10	247.62	552.57	1766816.13	416939.82	39°38'33.0406"N	80°12'58.3553"W	605.51	65.861	0.54	0.54	0.14
5783.00	10.900	71.930	5726.78	119.43	252.86	569.34	1766832.91	416945.05	39°38'33.0937"N	80°12'58.1414"W	622.97	66.053	0.78	0.73	-1.58
5877.00	10.980	73.030	5819.07	124.79	258.23	586.35	1766849.92	416950.42	39°38'33.1481"N	80°12'57.9245"W	640.70	66.231	0.24	0.09	1.17
5972.00	11.810	71.190	5912.20	130.30	264.01	604.21	1766867.77	416956.20	39°38'33.2066"N	80°12'57.6968"W	659.37	66.397	0.95	0.87	-1.94
6066.00	11.430	68.890	6004.27	135.22	270.46	622.00	1766885.57	416962.65	39°38'33.2718"N	80°12'57.4700"W	678.26	66.500	0.64	-0.40	-2.45
6161.00	10.830	68.880	6097.49	139.62	277.07	639.11	1766902.67	416969.26	39°38'33.3384"N	80°12'57.2520"W	696.58	66.562	0.63	-0.63	-0.01
6255.00	11.150	65.680	6189.76	143.42	283.99	655.63	1766919.19	416976.19	39°38'33.4082"N	80°12'57.0415"W	714.50	66.580	0.73	0.34	-3.40
6350.00	9.820	72.550	6283.18	147.57	290.21	671.73	1766935.29	416982.40	39°38'33.4708"N	80°12'56.8363"W	731.74	66.634	1.92	-1.40	7.23
6445.00	10.210	75.150	6376.73	152.91	294.79	687.60	1766951.16	416986.98	39°38'33.5174"N	80°12'56.6340"W	748.13	66.794	0.63	0.41	2.74
6544.00	10.940	78.040	6474.05	159.61	298.99	705.27	1766968.83	416991.18	39°38'33.5603"N	80°12'56.4085"W	766.03	67.026	0.91	0.74	2.92
6638.00	11.610	76.370	6566.23	166.55	303.07	723.19	1766986.75	416995.26	39°38'33.6020"N	80°12'56.1799"W	784.13	67.263	0.79	0.71	-1.78
6733.00	12.170	76.210	6659.20	173.65	307.71	742.21	1767005.76	416999.90	39°38'33.6493"N	80°12'55.9373"W	803.46	67.482	0.59	0.59	-0.17
6827.00	12.080	71.750	6751.10	180.07	313.15	761.17	1767024.72	417005.34	39°38'33.7046"N	80°12'55.6954"W	823.07	67.638	1.00	-0.10	-4.74
6922.00	12.220	70.180	6843.97	185.57	319.67	780.07	1767043.62	417011.86	39°38'33.7705"N	80°12'55.4545"W	843.03	67.716	0.38	0.15	-1.65
7016.00	12.280	68.910	6935.83	190.58	326.64	798.75	1767062.31	417018.83	39°38'33.8409"N	80°12'55.2164"W	862.96	67.759	0.29	0.06	-1.35
7111.00	12.490	66.630	7028.62	195.08	334.35	817.61	1767081.16	417026.54	39°38'33.9186"N	80°12'54.9761"W	883.33	67.759	0.56	0.22	-2.40
7209.00	12.450	67.150	7124.31	199.44	342.66	837.07	1767100.62	417034.84	39°38'34.0022"N	80°12'54.7282"W	904.49	67.738	0.12	-0.04	0.53
7304.00	12.790	65.710	7217.02	203.55	350.96	856.09	1767119.64	417043.15	39°38'34.0857"N	80°12'54.4859"W	925.24	67.709	0.49	0.36	-1.52

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Field	Monongalia	API/Legal	
Facility	Yost Pad	Wellbore	Yost 14H AWB
Slot	Slot 14		

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7399.00	11.790	64.750	7309.84	207.15	359.42	874.46	1767138.00	417051.61	39°38'34.1709"N	80°12'54.2520"W	945.44	67.656	1.07	-1.05	-1.01
7493.00	11.300	67.130	7401.94	210.71	367.10	891.63	1767155.17	417059.29	39°38'34.2481"N	80°12'54.0333"W	964.24	67.622	0.73	-0.52	-2.53
7607.00	11.290	70.610	7513.73	216.06	375.15	912.45	1767175.99	417067.33	39°38'34.3292"N	80°12'53.7680"W	986.56	67.650	0.60	-0.01	3.05
7702.00	13.440	89.310	7606.56	224.79	378.37	932.27	1767195.81	417070.55	39°38'34.3626"N	80°12'53.5149"W	1006.12	67.910	4.75	2.26	19.68
7797.00	16.490	109.720	7698.39	242.03	373.95	956.02	1767219.56	417066.13	39°38'34.3208"N	80°12'53.2108"W	1026.55	68.637	6.36	3.21	21.48
7891.00	22.990	124.060	7786.87	270.11	359.14	983.83	1767247.37	417051.33	39°38'34.1766"N	80°12'52.8538"W	1047.34	69.946	8.58	6.91	15.26
7987.00	29.990	127.850	7872.74	310.60	333.88	1018.36	1767281.89	417026.07	39°38'33.9298"N	80°12'52.4100"W	1071.69	71.847	7.50	7.29	-3.95
8082.00	36.430	133.760	7952.20	361.02	299.76	1057.53	1767321.06	416991.95	39°38'33.5956"N	80°12'51.9058"W	1099.19	74.174	7.58	6.78	6.22
8176.00	43.310	136.180	8024.31	420.33	257.14	1100.06	1767363.59	416949.34	39°38'33.1778"N	80°12'51.3577"W	1129.72	76.843	7.50	7.32	2.57
8271.00	48.780	141.330	8090.25	488.26	205.68	1145.00	1767408.53	416897.88	39°38'32.6727"N	80°12'50.7781"W	1163.32	79.816	6.95	5.76	5.42
8365.00	56.400	142.680	8147.31	562.77	146.86	1190.89	1767454.42	416839.06	39°38'32.0950"N	80°12'50.1855"W	1199.91	82.970	8.19	8.11	1.44
8459.00	63.200	141.690	8194.57	643.86	82.73	1240.69	1767504.21	416774.94	39°38'31.4652"N	80°12'49.5424"W	1243.44	86.185	7.29	7.23	-1.05
8554.00	70.680	142.630	8231.76	731.10	13.74	1294.26	1767557.78	416705.95	39°38'30.7876"N	80°12'48.8507"W	1294.33	89.392	7.93	7.87	0.99
8649.00	78.090	144.190	8257.31	822.49	-59.68	1348.74	1767612.25	416632.53	39°38'30.0663"N	80°12'48.1468"W	1350.06	92.534	7.96	7.80	1.64
8744.00	84.520	144.820	8271.66	916.35	-136.10	1403.23	1767666.74	416556.12	39°38'29.3153"N	80°12'47.4425"W	1409.81	95.540	6.80	6.77	0.66
8837.00	93.290	143.690	8273.44	1009.23	-211.49	1457.49	1767721.01	416480.73	39°38'28.5745"N	80°12'46.7412"W	1472.76	98.256	9.51	9.43	-1.22
8932.00	92.900	144.280	8268.31	1104.07	-288.22	1513.27	1767776.78	416404.01	39°38'27.8206"N	80°12'46.0204"W	1540.48	100.784	0.74	-0.41	0.62
9027.00	93.020	144.100	8263.41	1198.94	-365.16	1568.78	1767832.29	416327.07	39°38'27.0646"N	80°12'45.3030"W	1610.72	103.103	0.23	0.13	-0.19
9123.00	92.060	144.340	8259.15	1294.83	-442.96	1624.86	1767888.36	416249.27	39°38'26.3001"N	80°12'44.5784"W	1684.15	105.249	1.03	-1.00	0.25
9217.00	92.340	143.920	8255.54	1388.75	-519.08	1679.89	1767943.39	416173.16	39°38'25.5522"N	80°12'43.8672"W	1758.26	107.171	0.54	0.30	-0.45
9312.00	92.890	144.160	8251.21	1483.64	-595.90	1735.62	1767999.12	416096.35	39°38'24.7974"N	80°12'43.1470"W	1835.07	108.949	0.63	0.58	0.25
9406.00	92.400	142.280	8246.87	1577.49	-671.10	1791.84	1768055.33	416021.15	39°38'24.0586"N	80°12'42.4208"W	1913.39	110.532	2.06	-0.52	-2.00
9500.00	92.340	143.700	8242.98	1671.35	-746.10	1848.38	1768111.86	415946.16	39°38'23.3218"N	80°12'41.6906"W	1993.28	111.981	1.51	-0.06	-1.51
9594.00	91.690	143.160	8239.68	1765.26	-821.54	1904.35	1768167.83	415870.72	39°38'22.5806"N	80°12'40.9675"W	2074.00	113.336	0.90	-0.69	-0.57
9689.00	91.600	143.780	8236.95	1860.18	-897.85	1960.87	1768224.35	415794.42	39°38'21.8309"N	80°12'40.2373"W	2156.65	114.602	0.66	-0.09	0.65
9783.00	91.290	144.810	8234.58	1954.14	-974.15	2015.71	1768279.19	415718.12	39°38'21.0811"N	80°12'39.5288"W	2238.76	115.794	1.14	-0.33	1.10
9878.00	91.630	145.520	8232.16	2049.11	-1052.10	2069.96	1768333.43	415640.17	39°38'20.3150"N	80°12'38.8273"W	2321.99	116.943	0.83	0.36	0.75
9972.00	91.850	145.550	8229.30	2143.06	-1129.57	2123.13	1768386.60	415562.71	39°38'19.5536"N	80°12'38.1398"W	2404.91	118.014	0.24	0.23	0.03
10066.00	91.880	145.690	8226.25	2237.01	-1207.11	2176.18	1768439.65	415485.18	39°38'18.7915"N	80°12'37.4539"W	2488.55	119.017	0.15	0.03	0.15
10160.00	92.280	146.170	8222.83	2330.93	-1284.92	2228.81	1768492.27	415407.37	39°38'18.0266"N	80°12'36.7733"W	2572.66	119.964	0.66	0.43	0.51

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Field	Monongalia	API/Legal	
Facility	Yost Pad	Wellbore	Yost 14H AWB
Slot	Slot 14		

WELLPATH DATA (223 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]
10255.00	92.490	145.350	8218.88	2425.84	-1363.39	2282.21	1768545.67	415328.91	39°38'17.2553"N	80°12'36.0828"W	2658.44	120.854	0.89	0.22	-0.86
10349.00	92.490	145.430	8214.80	2519.75	-1440.68	2335.55	1768599.01	415251.62	39°38'16.4956"N	80°12'35.3932"W	2744.15	121.668	0.09	0.00	0.09
10444.00	92.460	145.640	8210.89	2614.66	-1518.93	2389.26	1768652.72	415173.37	39°38'15.7265"N	80°12'34.6987"W	2831.21	122.445	0.22	-0.03	0.22
10539.00	92.340	145.610	8206.72	2709.57	-1597.27	2442.85	1768706.30	415095.04	39°38'14.9565"N	80°12'34.0058"W	2918.70	123.179	0.13	-0.13	-0.03
10633.00	92.650	146.160	8202.62	2803.47	-1675.02	2495.52	1768758.97	415017.29	39°38'14.1922"N	80°12'33.3248"W	3005.55	123.870	0.67	0.33	0.59
10726.00	92.590	145.850	8198.37	2896.36	-1752.04	2547.47	1768810.91	414940.27	39°38'13.4350"N	80°12'32.6531"W	3091.80	124.519	0.34	-0.06	-0.33
10821.00	91.200	145.630	8195.23	2991.30	-1830.52	2600.92	1768864.36	414861.81	39°38'12.6637"N	80°12'31.9620"W	3180.50	125.138	1.48	-1.46	-0.23
10916.00	91.540	145.440	8192.96	3086.26	-1908.82	2654.66	1768918.10	414783.51	39°38'11.8941"N	80°12'31.2671"W	3269.68	125.718	0.41	0.36	-0.20
11011.00	91.820	146.560	8190.17	3181.21	-1987.54	2707.76	1768971.20	414704.79	39°38'11.1202"N	80°12'30.5805"W	3358.91	126.279	1.21	0.29	1.18
11104.00	91.260	145.720	8187.68	3274.15	-2064.74	2759.56	1769022.99	414627.60	39°38'10.3613"N	80°12'29.9106"W	3446.49	126.804	1.09	-0.60	-0.90
11199.00	91.570	145.270	8185.33	3369.12	-2143.00	2813.36	1769076.79	414549.34	39°38'9.5921"N	80°12'29.2151"W	3536.59	127.297	0.58	0.33	-0.47
11294.00	90.800	145.260	8183.37	3464.10	-2221.06	2867.47	1769130.90	414471.29	39°38'8.8249"N	80°12'28.5155"W	3627.05	127.760	0.81	-0.81	-0.01
11389.00	90.950	145.580	8181.91	3559.09	-2299.26	2921.39	1769184.81	414393.09	39°38'8.0562"N	80°12'27.8186"W	3717.68	128.204	0.37	0.16	0.34
11485.00	90.950	145.580	8180.32	3655.07	-2378.45	2975.64	1769239.06	414313.91	39°38'7.2779"N	80°12'27.1171"W	3809.39	128.636	0.00	0.00	0.00
11580.00	90.400	145.660	8179.20	3750.05	-2456.84	3029.28	1769292.70	414235.52	39°38'6.5073"N	80°12'26.4236"W	3900.34	129.043	0.59	-0.58	0.08
11675.00	89.850	145.470	8179.00	3845.05	-2535.20	3083.00	1769346.41	414157.17	39°38'5.7372"N	80°12'25.7291"W	3991.51	129.431	0.61	-0.58	-0.20
11771.00	89.540	145.870	8179.51	3941.04	-2614.47	3137.14	1769400.55	414077.90	39°38'4.9579"N	80°12'25.0292"W	4083.76	129.808	0.53	-0.32	0.42
11866.00	88.800	146.130	8180.88	4036.02	-2693.22	3190.26	1769453.66	413999.15	39°38'4.1838"N	80°12'24.3424"W	4175.07	130.171	0.83	-0.78	0.27
11961.00	89.540	148.980	8182.26	4130.90	-2773.38	3241.21	1769504.62	413919.00	39°38'3.3956"N	80°12'23.6830"W	4265.80	130.552	3.10	0.78	3.00
12057.00	88.280	145.440	8184.09	4226.80	-2854.05	3293.19	1769556.58	413838.33	39°38'2.6024"N	80°12'23.0107"W	4357.83	130.914	3.91	-1.31	-3.69
12152.00	89.450	145.080	8185.97	4321.77	-2932.10	3347.31	1769610.71	413760.29	39°38'1.8353"N	80°12'22.3110"W	4449.91	131.217	1.29	1.23	-0.38
12247.00	89.680	145.690	8186.71	4416.77	-3010.28	3401.27	1769664.67	413682.11	39°38'1.0668"N	80°12'21.6135"W	4542.08	131.510	0.68	0.22	0.64
12342.00	90.220	145.280	8186.81	4511.76	-3088.56	3455.10	1769718.49	413603.84	39°38'0.2974"N	80°12'20.9176"W	4634.32	131.794	0.73	0.59	-0.43
12437.00	90.460	145.560	8186.24	4606.76	-3166.77	3509.02	1769772.40	413525.63	39°37'59.5286"N	80°12'20.2206"W	4726.70	132.065	0.39	0.25	0.29
12531.00	90.430	145.860	8185.51	4700.75	-3244.43	3561.98	1769825.36	413447.97	39°37'58.7652"N	80°12'19.5360"W	4818.09	132.329	0.32	-0.03	0.32
12626.00	89.970	145.630	8185.18	4795.74	-3322.95	3615.45	1769878.83	413369.46	39°37'57.9934"N	80°12'18.8447"W	4910.55	132.586	0.54	-0.48	-0.24
12721.00	89.850	145.260	8185.33	4890.74	-3401.19	3669.33	1769932.71	413291.22	39°37'57.2244"N	80°12'18.1481"W	5003.21	132.828	0.41	-0.13	-0.39
12816.00	89.630	145.330	8185.76	4985.74	-3479.29	3723.42	1769986.79	413213.13	39°37'56.4567"N	80°12'17.4490"W	5096.01	133.059	0.24	-0.23	0.07
12911.00	90.460	145.930	8185.69	5080.73	-3557.71	3777.05	1770040.42	413134.72	39°37'55.6860"N	80°12'16.7557"W	5188.77	133.287	1.08	0.87	0.63
13005.00	89.970	145.440	8185.33	5174.72	-3635.87	3830.01	1770093.87	413057.07	39°37'54.9226"N	80°12'16.0711"W	5280.61	133.507	0.70	-0.52	-0.47

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13100.00	90.860	144.080	8184.65	5269.71	-3712.98	3884.78	1770148.15	412979.46	39°37'54.1598"N	80°12'15.3632"W	5373.80	133.705	1.76	0.94	-1.48
13195.00	91.420	144.150	8182.75	5364.68	-3789.93	3940.46	1770203.82	412902.51	39°37'53.4036"N	80°12'14.6439"W	5467.25	133.884	0.59	0.59	0.07
13290.00	91.570	144.730	8180.28	5459.65	-3867.19	3995.69	1770259.04	412825.26	39°37'52.6444"N	80°12'13.9303"W	5560.63	134.064	0.63	0.16	0.61
13384.00	91.600	144.430	8177.68	5553.61	-3943.76	4050.15	1770313.50	412748.69	39°37'51.8919"N	80°12'13.2266"W	5653.05	134.238	0.32	0.03	-0.32
13479.00	91.540	144.130	8175.07	5648.56	-4020.85	4105.59	1770368.94	412671.60	39°37'51.1342"N	80°12'12.5103"W	5746.58	134.403	0.32	-0.06	-0.32
13574.00	91.420	143.750	8172.62	5743.52	-4097.63	4161.49	1770424.83	412594.83	39°37'50.3798"N	80°12'11.7882"W	5840.26	134.557	0.42	-0.13	-0.40
13669.00	90.950	144.030	8170.66	5838.48	-4174.36	4217.46	1770480.81	412518.10	39°37'49.6258"N	80°12'11.0651"W	5934.00	134.706	0.58	-0.49	0.29
13764.00	91.320	144.790	8168.77	5933.45	-4251.60	4272.74	1770536.08	412440.87	39°37'48.8668"N	80°12'10.3509"W	6027.64	134.858	0.89	0.39	0.80
13859.00	90.710	144.550	8167.09	6028.44	-4329.09	4327.67	1770591.00	412363.38	39°37'48.1052"N	80°12'9.6412"W	6121.26	135.009	0.69	-0.64	-0.25
13953.00	91.290	144.520	8165.45	6122.42	-4405.64	4382.20	1770645.58	412286.84	39°37'47.3529"N	80°12'8.9386"W	6213.97	135.153	0.62	0.62	-0.03
14047.00	91.380	143.900	8163.26	6216.38	-4481.87	4437.16	1770700.49	412210.61	39°37'46.6038"N	80°12'8.2266"W	6306.78	135.287	0.67	0.10	-0.66
14142.00	91.170	144.160	8161.15	6311.35	-4558.74	4492.94	1770756.27	412133.75	39°37'45.8485"N	80°12'7.5059"W	6400.67	135.416	0.35	-0.22	0.27
14236.00	91.170	144.040	8159.23	6405.31	-4634.87	4548.05	1770811.37	412057.63	39°37'45.1004"N	80°12'6.7940"W	6493.59	135.542	0.13	0.00	-0.13
14331.00	91.260	144.270	8157.21	6500.28	-4711.86	4603.67	1770866.99	411980.64	39°37'44.3438"N	80°12'6.0755"W	6587.52	135.665	0.26	0.09	0.24
14426.00	91.570	144.680	8154.87	6595.25	-4789.14	4658.87	1770922.18	411903.36	39°37'43.5843"N	80°12'5.3624"W	6681.38	135.790	0.52	0.33	0.41
14520.00	91.630	144.800	8152.24	6689.21	-4865.85	4713.12	1770976.44	411826.65	39°37'42.8304"N	80°12'4.6613"W	6774.22	135.913	0.16	0.06	0.15
14614.00	91.540	144.600	8149.64	6783.17	-4942.54	4767.42	1771030.73	411749.97	39°37'42.0767"N	80°12'3.9597"W	6867.10	136.033	0.23	-0.10	-0.21
14708.00	91.290	144.430	8147.32	6877.14	-5019.05	4821.97	1771085.28	411673.46	39°37'41.3247"N	80°12'3.2549"W	6960.06	136.147	0.32	-0.27	-0.18
14801.00	91.480	144.730	8145.07	6970.11	-5094.83	4875.85	1771139.16	411597.70	39°37'40.5801"N	80°12'2.5587"W	7052.04	136.258	0.38	0.20	0.32
14896.00	91.420	144.620	8142.67	7065.08	-5172.31	4930.77	1771194.07	411520.22	39°37'39.8186"N	80°12'1.8492"W	7146.00	136.370	0.13	-0.06	-0.12
14991.00	91.570	144.690	8140.19	7160.05	-5249.77	4985.71	1771249.00	411442.76	39°37'39.0572"N	80°12'1.1394"W	7239.99	136.478	0.17	0.16	0.07
15086.00	91.820	144.730	8137.38	7255.00	-5327.28	5040.57	1771303.86	411365.25	39°37'38.2955"N	80°12'0.4306"W	7333.98	136.584	0.27	0.26	0.04
15181.00	91.720	145.350	8134.45	7349.96	-5405.10	5094.97	1771358.26	411287.44	39°37'37.5306"N	80°11'59.7275"W	7427.91	136.692	0.66	-0.11	0.65
15275.00	91.850	144.860	8131.52	7443.91	-5482.16	5148.72	1771412.01	411210.38	39°37'36.7732"N	80°11'59.0329"W	7520.87	136.797	0.54	0.14	-0.52
15370.00	92.060	144.710	8128.28	7538.86	-5559.73	5203.47	1771466.75	411132.82	39°37'36.0108"N	80°11'58.3255"W	7614.90	136.896	0.27	0.22	-0.16
15465.00	92.090	143.670	8124.84	7633.78	-5636.72	5259.02	1771522.30	411055.83	39°37'35.2542"N	80°11'57.6079"W	7709.08	136.985	1.09	0.03	-1.09
15560.00	91.600	144.510	8121.78	7728.72	-5713.63	5314.71	1771577.98	410978.93	39°37'34.4985"N	80°11'56.8886"W	7803.31	137.072	1.02	-0.52	0.88
15654.00	91.540	144.300	8119.20	7822.68	-5790.03	5369.40	1771632.67	410902.53	39°37'33.7476"N	80°11'56.1820"W	7896.52	137.159	0.23	-0.06	-0.22
15749.00	91.420	144.080	8116.75	7917.64	-5867.05	5424.97	1771688.23	410825.52	39°37'32.9907"N	80°11'55.4642"W	7990.78	137.242	0.26	-0.13	-0.23
15844.00	91.940	143.850	8113.96	8012.59	-5944.70	5479.61	1771742.88	410747.87	39°37'32.2275"N	80°11'54.7581"W	8084.90	137.331	1.74	0.55	1.65

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Yost 14H
Field	Monongalia	API/Legal	
Facility	Yost Pad	Wellbore	Yost 14H AWB
Slot	Slot 14		

WELLPATH DATA (223 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]
15938.00	92.890	146.200	8110.00	8106.50	-6022.49	5532.23	1771795.49	410670.08	39°37'31.4628"N	80°11'54.0779"W	8177.78	137.430	1.17	1.01	0.59
16033.00	92.740	145.420	8105.34	8201.37	-6100.98	5585.55	1771848.81	410591.60	39°37'30.6912"N	80°11'53.3887"W	8271.66	137.525	0.84	-0.16	-0.82
16128.00	92.530	145.050	8100.97	8296.27	-6178.94	5639.67	1771902.92	410513.65	39°37'29.9249"N	80°11'52.6895"W	8365.71	137.613	0.45	-0.22	-0.39
16222.00	91.820	144.910	8097.40	8390.20	-6255.87	5693.57	1771956.82	410436.73	39°37'29.1688"N	80°11'51.9930"W	8458.88	137.694	0.77	-0.76	-0.15
16317.00	91.720	145.000	8094.47	8485.16	-6333.60	5748.09	1772011.34	410358.99	39°37'28.4047"N	80°11'51.2884"W	8553.08	137.775	0.14	-0.11	0.09
16412.00	92.090	145.640	8091.31	8580.10	-6411.68	5802.12	1772065.36	410280.92	39°37'27.6372"N	80°11'50.5903"W	8647.21	137.857	0.78	0.39	0.67
16506.00	91.820	145.620	8088.10	8674.04	-6489.23	5855.15	1772118.40	410203.38	39°37'26.8750"N	80°11'49.9048"W	8740.30	137.940	0.29	-0.29	-0.02
16600.00	92.150	146.030	8084.85	8767.98	-6566.95	5907.92	1772171.16	410125.66	39°37'26.1109"N	80°11'49.2228"W	8833.37	138.024	0.56	0.35	0.44
16695.00	91.050	145.390	8082.20	8862.93	-6645.40	5961.42	1772224.66	410047.21	39°37'25.3397"N	80°11'48.5313"W	8927.48	138.106	1.34	-1.16	-0.67
16789.00	90.770	145.140	8080.70	8956.92	-6722.64	6014.98	1772278.21	409969.98	39°37'24.5805"N	80°11'47.8393"W	9020.75	138.180	0.40	-0.30	-0.27
16883.00	93.420	147.300	8077.27	9050.82	-6800.71	6067.20	1772330.43	409891.92	39°37'23.8130"N	80°11'47.1642"W	9113.76	138.263	3.64	2.82	2.30
16979.00	91.660	145.590	8073.01	9146.69	-6880.63	6120.21	1772383.43	409812.00	39°37'23.0272"N	80°11'46.4788"W	9208.69	138.347	2.55	-1.83	-1.78
17072.00	91.660	145.320	8070.32	9239.64	-6957.20	6172.92	1772436.14	409735.44	39°37'22.2745"N	80°11'45.7976"W	9300.94	138.418	0.29	0.00	-0.29
17167.00	91.600	144.940	8067.61	9334.60	-7035.11	6227.21	1772490.43	409657.53	39°37'21.5087"N	80°11'45.0961"W	9395.26	138.486	0.40	-0.06	-0.40
17262.00	91.630	145.270	8064.94	9429.57	-7113.00	6281.54	1772544.75	409579.65	39°37'20.7431"N	80°11'44.3942"W	9489.60	138.552	0.35	0.03	0.35
17357.00	91.290	145.070	8062.52	9524.54	-7190.95	6335.78	1772598.99	409501.70	39°37'19.9769"N	80°11'43.6933"W	9583.94	138.617	0.42	-0.36	-0.21
17452.00	91.140	144.730	8060.50	9619.51	-7268.66	6390.39	1772653.60	409424.00	39°37'19.2131"N	80°11'42.9877"W	9678.35	138.679	0.39	-0.16	-0.36
17547.00	91.140	145.520	8058.61	9714.49	-7346.58	6444.70	1772707.90	409346.08	39°37'18.4472"N	80°11'42.2860"W	9772.74	138.742	0.83	0.00	0.83
17642.00	91.480	145.770	8056.44	9809.46	-7424.99	6498.30	1772761.50	409267.68	39°37'17.6764"N	80°11'41.5933"W	9867.03	138.808	0.44	0.36	0.26
17738.00	91.380	145.580	8054.04	9905.43	-7504.24	6552.43	1772815.62	409188.43	39°37'16.8974"N	80°11'40.8938"W	9962.32	138.874	0.24	-0.10	-0.22
17832.00	91.350	145.270	8051.81	9999.40	-7581.60	6605.77	1772868.96	409111.07	39°37'16.1369"N	80°11'40.2045"W	10055.69	138.935	0.31	-0.03	-0.31
17927.00	91.480	145.240	8049.46	10094.37	-7659.64	6659.89	1772923.09	409033.04	39°37'15.3698"N	80°11'39.5051"W	10150.09	138.994	0.14	0.14	-0.03
18021.00	92.090	145.620	8046.53	10188.32	-7737.00	6713.20	1772976.39	408955.68	39°37'14.6093"N	80°11'38.8162"W	10243.45	139.053	0.76	0.65	0.40
18116.00	90.220	144.620	8044.62	10283.29	-7814.92	6767.52	1773030.70	408877.77	39°37'13.8434"N	80°11'38.1145"W	10337.90	139.108	2.23	-1.97	-1.05
18210.00	91.690	145.430	8043.05	10377.28	-7891.93	6821.39	1773084.57	408800.77	39°37'13.0865"N	80°11'37.4184"W	10431.39	139.161	1.79	1.56	0.86
18303.00	90.830	145.460	8041.01	10470.25	-7968.50	6874.13	1773137.31	408724.20	39°37'12.3337"N	80°11'36.7370"W	10523.81	139.217	0.93	-0.92	0.03
18398.00	90.800	145.480	8039.65	10565.24	-8046.76	6927.97	1773191.15	408645.95	39°37'11.5545"N	80°11'36.0412"W	10618.24	139.273	0.04	-0.03	0.02
18493.00	90.680	144.900	8038.43	10660.23	-8124.75	6982.20	1773245.37	408567.96	39°37'10.7978"N	80°11'35.3406"W	10712.73	139.325	0.62	-0.13	-0.61
18588.00	90.620	143.460	8037.35	10755.21	-8201.77	7037.79	1773300.96	408490.94	39°37'10.0409"N	80°11'34.6226"W	10807.39	139.368	1.52	-0.06	-1.52
18682.00	90.650	144.910	8036.31	10849.19	-8277.99	7092.79	1773355.96	408414.72	39°37'9.2918"N	80°11'33.9122"W	10901.05	139.409	1.54	0.03	1.54

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Yost 14H
Field	Monongalia	API/Legal	
Facility	Yost Pad	Wellbore	Yost 14H AWB
Slot	Slot 14		

WELLPATH DATA (223 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]
18777.00	90.950	144.770	8034.98	10944.18	-8355.65	7147.49	1773410.65	408337.07	39°37'8.5285"N	80°11'33.2056"W	10995.62	139.456	0.35	0.32	-0.15
18871.00	91.970	145.320	8032.59	11038.15	-8432.67	7201.33	1773464.49	408260.06	39°37'7.7715"N	80°11'32.5100"W	11089.14	139.503	1.23	1.09	0.59
18966.00	91.480	144.220	8029.73	11133.11	-8510.23	7256.11	1773519.26	408182.50	39°37'7.0091"N	80°11'31.8024"W	11183.70	139.548	1.27	-0.52	-1.16
19060.00	90.400	144.300	8028.18	11227.08	-8586.52	7311.00	1773574.16	408106.22	39°37'6.2594"N	80°11'31.0934"W	11277.37	139.587	1.15	-1.15	0.09
19155.00	90.710	144.550	8027.26	11322.07	-8663.78	7366.27	1773629.42	408028.96	39°37'5.5000"N	80°11'30.3796"W	11372.03	139.628	0.42	0.33	0.26
19250.00	92.000	145.850	8025.02	11417.04	-8741.77	7420.47	1773683.62	407950.98	39°37'4.7334"N	80°11'29.6793"W	11466.55	139.674	1.93	1.36	1.37
19345.00	91.140	144.580	8022.41	11512.00	-8819.76	7474.64	1773737.79	407872.99	39°37'3.9668"N	80°11'28.9794"W	11561.08	139.719	1.61	-0.91	-1.34
19440.00	91.260	145.000	8020.42	11606.98	-8897.36	7529.41	1773792.55	407795.39	39°37'3.2040"N	80°11'28.2720"W	11655.69	139.760	0.46	0.13	0.44
19534.00	90.980	144.720	8018.59	11700.96	-8974.21	7583.50	1773846.64	407718.55	39°37'2.4486"N	80°11'27.5732"W	11749.30	139.801	0.42	-0.30	-0.30
19629.00	90.860	144.570	8017.06	11795.95	-9051.68	7638.46	1773901.60	407641.08	39°37'1.6872"N	80°11'26.8633"W	11843.95	139.840	0.20	-0.13	-0.16
19724.00	90.830	144.390	8015.66	11890.94	-9129.00	7693.65	1773956.78	407563.77	39°37'0.9273"N	80°11'26.1505"W	11938.63	139.877	0.19	-0.03	-0.19
19804.00	90.650	144.530	8014.63	11970.92	-9194.09	7740.15	1774003.28	407498.68	39°37'0.2876"N	80°11'25.5499"W	12018.37	139.907	0.29	-0.22	0.18
19829.00‡	90.650	144.530	8014.34	11995.92	-9214.45	7754.66	1774017.78	407478.33	39°37'0.0875"N	80°11'25.3626"W	12043.29	139.917	0.00	0.00	0.00

HOLE & CASING SECTIONS - Ref Wellbore: Yost 14H AWB Ref Wellpath: Yost 14H AWP Proj: 19829'									
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	1491.00	1463.00	28.00	1490.99	0.00	0.00	-3.16	0.42
13.375in Casing Surface	28.00	1471.00	1443.00	28.00	1470.99	0.00	0.00	-3.09	0.45
12.25in Open Hole	1491.00	2691.00	1200.00	1490.99	2686.01	-3.16	0.42	74.01	52.86
9.625in Casing Intermediate	28.00	2661.00	2633.00	28.00	2656.07	0.00	0.00	72.67	51.60
8.75in Open Hole	2691.00	7639.00	4948.00	2686.01	7545.08	74.01	52.86	376.89	918.62
8.5in Open Hole	7639.00	19829.00	12190.00	7545.08	8014.34	376.89	918.62	-9214.45	7754.66
5.5in Casing Production	28.00	19799.00	19771.00	28.00	8014.69	0.00	0.00	-9190.02	7737.25

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Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Yost 14H
Field	Monongalia	API/Legal	
Facility	Yost Pad	Wellbore	Yost 14H AWB
Slot	Slot 14		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Yost 14H BHL Rev-4	8308.00	-9211.66	7759.35	1774022.48	407481.12	39°37'0.1154"N	80°11'25.3029"W	point
Yost 14H LP Rev-1	8308.00	-181.92	1436.66	1767700.17	416510.30	39°38'28.8651"N	80°12'47.0105"W	point
Yost Hardline #3 (2.10.22)	9028.00	-10312.07	7155.82	1773418.98	406380.77	39°36'49.1944"N	80°11'32.9065"W	polygon
2D Polygon: dimensions not calculated								
Yost Hardline #4 (2.24.22)	9028.00	-10312.07	7155.82	1773418.98	406380.77	39°36'49.1944"N	80°11'32.9065"W	polygon
2D Polygon: dimensions not calculated								
Yost Hardline #5 (2.24.22)	9028.00	-1567.19	1554.83	1767818.33	415125.12	39°38'15.1843"N	80°12'45.3596"W	polygon
2D Polygon: dimensions not calculated								

WELLPATH COMPOSITION - Ref Wellbore: Yost 14H AWB Ref Wellpath: Yost 14H AWP Proj: 19829'					
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
28.00	1300.00	BH Generic gyro - northseeking (Standard)	01 Gyro Surveys [BH Generic Gyro-Northseeking] (50'-1300')	Yost 14H AWB	5/22/2022
1300.00	7493.00	OWSG MWD rev2 + HRGM	02 SDI MWD [OWSG MWD Rev.2+HRGM] (1300')(1342'-7493')	Yost 14H AWB	5/22/2022
7493.00	19829.00	BH AutoTrak Curve/eXpress (2019) (HRGM, Short spacing)	03 ATK Curve [HRGM+Short Spacing] (7493')(7607' - 19804')	Yost 14H AWB	5/22/2022

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Actual Wellpath Report

Yost 14H AWP Proj: 19829'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Yost 14H
Field	Monongalia	API/Legal	
Facility	Yost Pad	Wellbore	Yost 14H AWB
Slot	Slot 14		

COMMENTS
<p>Wellpath general comments API: 47061018960000 BH Job #: 111309722 Rig: Patterson 277 Duration: 5/22/2022 - 5/27/2022</p> <p>01_Gyro Surveys [BH Generic Gyro-Northseeking] (50'-1300') 02_SDI MWD [OWSG MWD Rev.2+HRGM] (1300')(1342'-7493') 03_ATK Curve [HRGM+Short Spacing] (7493')(7607' - 19804')</p> <p>Final Survey MD at: 19804' Projected MD at TD: 19829'</p>

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