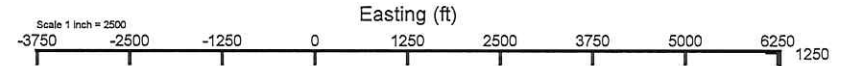


NORTHEAST NATURAL ENERGY, LLC

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

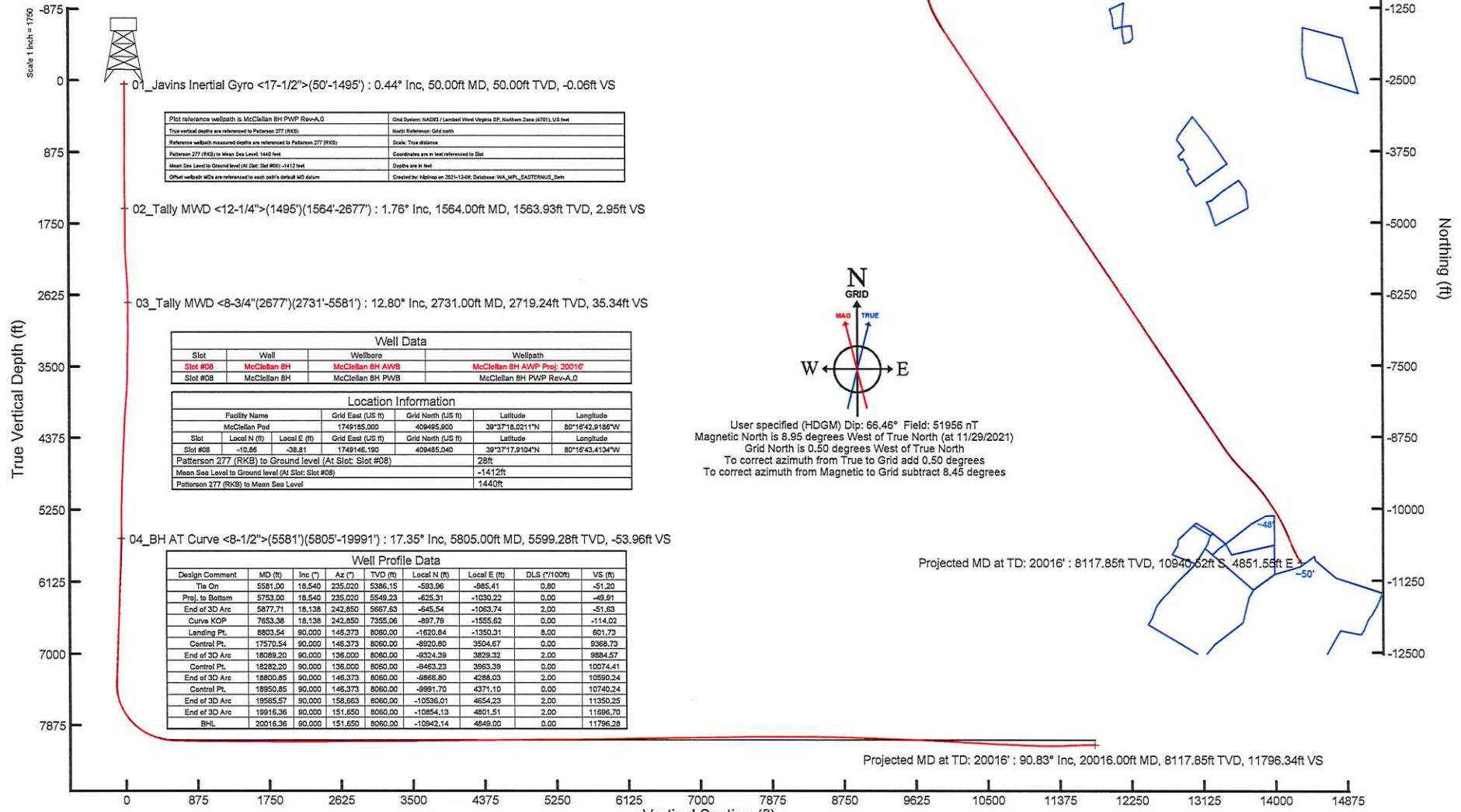
Slot: Slot #08
 Well: McClellan 8H
 Wellbore: McClellan 8H PWB

API: 47-061-01887-0000
 BH Job #: 111066131
 Rig: Patterson 277
 Duration: 11/30/21 - 12/6/21



01_Javins Inertial Gyro <17-1/2">(50'-1495') : 50.00ft TVD, 0.08ft N, 0.01ft E
 02_Tally MWD <12-1/4">(1495')(1564'-2677') : 1563.93ft TVD, 2.83ft S, 1.08ft E
 03_Tally MWD <8-3/4">(2677')(2731'-5581') : 2719.24ft TVD, 114.37ft S, 108.14ft W

04_BH AT Curve <8-1/2">(5581')(5805'-19991') : 5599.28ft TVD, 629.77ft S, 1044.24ft W



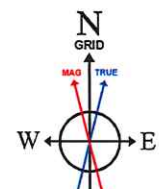
Plot reference wellpath is McClellan 8H PWP Rev-A.0	Grid System: NAD83 / Lambert West Virginia SP, Mathews Zone (4701), US feet
True vertical depths are referenced to Patterson 277 (RKB)	North Reference: Grid north
Reference wellbath measured depths are referenced to Patterson 277 (RKB)	Scale: True distance
Patterson 277 (RKB) to Mean Sea Level: 1442 feet	Coordinates are in feet referenced to Slot
Mean Sea Level to Ground level (At Slot: Slot #08): -1412 feet	Depth is in feet
Other wellbath MDs are referenced to each path's default MD datum	Created by: Nthrup on 20211308; Database: WA_MPL_EASTERNUS_Dat

02_Tally MWD <12-1/4">(1495')(1564'-2677') : 1.76° Inc, 1564.00ft MD, 1563.93ft TVD, 2.95ft VS

03_Tally MWD <8-3/4">(2677')(2731'-5581') : 12.80° Inc, 2731.00ft MD, 2719.24ft TVD, 35.34ft VS

Well Data			
Slot	Well	Wellbore	Wellpath
Slot #08	McClellan 8H	McClellan 8H AWP	McClellan 8H AWP Proj: 2001E
Slot #08	McClellan 8H	McClellan 8H PWB	McClellan 8H PWP Rev-A.0

Location Information					
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	
McClellan Pad	1749185.000	409495.800	39°37'18.02117"N	80°16'42.9186"W	
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Longitude
Slot #08	-10.86	-38.81	1749146.190	409485.040	39°37'17.9104"N 80°16'43.4134"W
Patterson 277 (RKB) to Ground level (At Slot: Slot #08)			28ft		
Mean Sea Level to Ground level (At Slot: Slot #08)			-1412ft		
Patterson 277 (RKB) to Mean Sea Level			1440ft		



User specified (HDGM) Dip: 66.46° Field: 51956 nT
 Magnetic North is 8.95 degrees West of True North (at 11/29/2021)
 Grid North is 0.50 degrees West of True North
 To correct azimuth from True to Grid add 0.50 degrees
 To correct azimuth from Magnetic to Grid subtract 8.45 degrees

04_BH AT Curve <8-1/2">(5581')(5805'-19991') : 17.35° Inc, 5805.00ft MD, 5599.28ft TVD, -53.96ft VS

Well Profile Data							
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	VS (ft)
Tie On	5581.00	18.540	235.020	5396.15	-593.96	-985.41	-51.20
Proj. to Bottom	5753.00	18.540	235.020	5549.23	-625.31	-1030.22	-49.91
End of 3D Arc	5877.71	18.138	242.850	5697.93	-645.54	-1063.74	-51.83
Curve KOP	7853.38	18.138	242.850	7355.06	-897.79	-1555.62	-114.02
Landing Pt.	8803.54	90.000	148.373	8060.00	-1620.84	-1350.31	601.73
Control Pt.	11750.54	90.000	148.373	8060.00	-8920.80	3504.67	0.00
End of 3D Arc	18089.20	90.000	136.000	8060.00	-6924.39	3829.32	2.00
Control Pt.	18282.20	90.000	136.000	8060.00	-9463.23	3863.39	0.00
End of 3D Arc	18800.85	90.000	146.373	8060.00	-9866.80	4288.03	2.00
Control Pt.	18950.85	90.000	146.373	8060.00	-9991.70	4371.10	0.00
End of 3D Arc	19565.57	90.000	158.663	8060.00	-10536.01	4654.23	2.00
End of 3D Arc	19916.36	90.000	151.650	8060.00	-10954.13	4801.51	2.00
BHL	20016.36	90.000	151.650	8060.00	-10942.14	4848.00	0.00

Projected MD at TD: 20016' : 8117.85ft TVD, 10940.62ft S, 4851.55ft E

Projected MD at TD: 20016' : 90.83° Inc, 20016.00ft MD, 8117.85ft TVD, 11796.34ft VS

Vertical Section (ft)
 Azimuth 146.37° with reference 0.00 N, 0.00 E

Scale 1 inch = 1750



Actual Wellpath Report

McClellan 8H AWP Proj: 20016'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	McClellan 8H
Field	Monongalia	API/Legal	
Facility	McClellan Pad	Wellbore	McClellan 8H AWB
Slot	Slot #08		

REPORT SETUP INFORMATION			
Projection System	NAD83 / Lambert West Virginia SP, Northern Zone (4701), US feet	Software System	WellArchitect® 6.0
North Reference	Grid	User	Hilpthop
Scale	0.999941	Report Generated	12/6/2021 at 12:34:20 PM
Convergence at slot	0.50° 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	-10.86	-38.81	1749146.19	409485.04	39°37'17.9104"N	80°16'43.4134"W
Facility Reference Pt			1749185.00	409495.90	39°37'18.0211"N	80°16'42.9186"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	1440.00ft
Horizontal Reference Pt	Slot	Patterson 277 (RKB) to Mean Sea Level	1440.00ft
Vertical Reference Pt	Patterson 277 (RKB)	Patterson 277 (RKB) to Ground Level at Slot (Slot #08)	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	146.37°



Actual Wellpath Report

McClellan 8H AWP Proj: 20016'

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REFERENCE WELLPATH IDENTIFICATION

Operator	NORTHEAST NATURAL ENERGY, LLC	Well	McClellan 8H
Field	Monongalia	API/Legal	
Facility	McClellan Pad	Wellbore	McClellan 8H AWB
Slot	Slot #08		

WELLPATH DATA (229 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	10.000	0.00	0.00	0.00	0.00	1749146.19	409485.04	39°37'17.9104"N	80°16'43.4134"W	0.00	0.000	0.00	0.00	0.00
28.00	0.000	10.000	28.00	0.00	0.00	0.00	1749146.19	409485.04	39°37'17.9104"N	80°16'43.4134"W	0.00	0.000	0.00	0.00	0.00
50.00	0.440	10.000	50.00	-0.06	0.08	0.01	1749146.20	409485.12	39°37'17.9112"N	80°16'43.4132"W	0.08	10.000	2.00	2.00	0.00
100.00	0.510	24.400	100.00	-0.32	0.47	0.14	1749146.33	409485.51	39°37'17.9151"N	80°16'43.4117"W	0.50	16.418	0.28	0.14	28.80
150.00	0.510	57.000	150.00	-0.43	0.80	0.42	1749146.61	409485.84	39°37'17.9183"N	80°16'43.4081"W	0.90	27.651	0.57	0.00	65.20
200.00	0.530	90.200	199.99	-0.30	0.92	0.84	1749147.03	409485.96	39°37'17.9196"N	80°16'43.4028"W	1.24	42.300	0.60	0.04	66.40
250.00	0.570	139.800	249.99	0.07	0.73	1.23	1749147.42	409485.77	39°37'17.9177"N	80°16'43.3978"W	1.43	59.329	0.93	0.08	99.20
300.00	0.490	171.000	299.99	0.52	0.33	1.42	1749147.61	409485.37	39°37'17.9138"N	80°16'43.3953"W	1.46	77.041	0.59	-0.16	62.40
350.00	0.510	215.600	349.99	0.79	-0.06	1.33	1749147.52	409484.98	39°37'17.9099"N	80°16'43.3965"W	1.33	92.800	0.76	0.04	89.20
400.00	0.510	228.400	399.99	0.90	-0.39	1.03	1749147.22	409484.65	39°37'17.9066"N	80°16'43.4002"W	1.10	110.909	0.23	0.00	25.60
450.00	0.490	246.400	449.98	0.89	-0.63	0.67	1749146.86	409484.41	39°37'17.9043"N	80°16'43.4048"W	0.92	133.191	0.32	-0.04	36.00
500.00	0.460	279.300	499.98	0.72	-0.68	0.27	1749146.46	409484.36	39°37'17.9037"N	80°16'43.4098"W	0.73	158.071	0.54	-0.06	65.80
550.00	0.360	285.200	549.98	0.46	-0.61	-0.08	1749146.11	409484.43	39°37'17.9044"N	80°16'43.4143"W	0.61	187.133	0.22	-0.20	11.80
600.00	0.370	329.300	599.98	0.18	-0.43	-0.31	1749145.88	409484.61	39°37'17.9062"N	80°16'43.4173"W	0.53	216.008	0.55	0.02	88.20
650.00	0.330	342.200	649.98	-0.12	-0.15	-0.44	1749145.75	409484.89	39°37'17.9089"N	80°16'43.4190"W	0.46	250.970	0.18	-0.08	25.80
700.00	0.430	13.100	699.98	-0.38	0.17	-0.44	1749145.75	409485.21	39°37'17.9120"N	80°16'43.4190"W	0.47	291.145	0.45	0.20	61.80
750.00	0.420	15.200	749.98	-0.63	0.53	-0.35	1749145.84	409485.57	39°37'17.9156"N	80°16'43.4179"W	0.63	326.714	0.04	-0.02	4.20
800.00	0.410	336.500	799.98	-0.93	0.87	-0.37	1749145.82	409485.91	39°37'17.9190"N	80°16'43.4182"W	0.95	336.927	0.55	-0.02	-77.40
850.00	0.410	53.600	849.98	-1.11	1.14	-0.30	1749145.89	409486.18	39°37'17.9217"N	80°16'43.4173"W	1.18	345.357	1.02	0.00	154.20
900.00	0.480	12.300	899.97	-1.27	1.45	-0.11	1749146.08	409486.49	39°37'17.9247"N	80°16'43.4150"W	1.45	355.693	0.64	0.14	-82.60
950.00	0.390	342.800	949.97	-1.58	1.82	-0.11	1749146.08	409486.86	39°37'17.9284"N	80°16'43.4151"W	1.82	356.381	0.48	-0.18	-59.00
1000.00	0.420	311.700	999.97	-1.92	2.10	-0.30	1749145.89	409487.14	39°37'17.9312"N	80°16'43.4175"W	2.12	351.823	0.44	0.06	-62.20
1017.00	0.500	298.200	1016.97	-2.04	2.18	-0.41	1749145.78	409487.22	39°37'17.9319"N	80°16'43.4189"W	2.22	349.242	0.79	0.47	-79.41
1050.00	0.560	267.000	1049.97	-2.25	2.24	-0.70	1749145.49	409487.28	39°37'17.9325"N	80°16'43.4226"W	2.35	342.590	0.88	0.18	-94.55
1100.00	0.560	183.100	1099.97	-2.18	1.98	-0.96	1749145.23	409487.02	39°37'17.9299"N	80°16'43.4259"W	2.20	334.173	1.50	0.00	-167.80
1150.00	0.640	145.500	1149.97	-1.71	1.51	-0.81	1749145.38	409486.55	39°37'17.9252"N	80°16'43.4240"W	1.71	331.629	0.79	0.16	-75.20
1200.00	0.760	157.700	1199.96	-1.10	0.97	-0.53	1749145.66	409486.01	39°37'17.9200"N	80°16'43.4203"W	1.11	331.357	0.38	0.24	24.40
1250.00	0.730	160.400	1249.96	-0.47	0.36	-0.30	1749145.89	409485.40	39°37'17.9140"N	80°16'43.4172"W	0.47	320.728	0.09	-0.06	5.40
1300.00	0.630	136.000	1299.95	0.11	-0.13	0.00	1749146.19	409484.91	39°37'17.9091"N	80°16'43.4134"W	0.13	179.897	0.61	-0.20	-48.80
1350.00	0.570	127.000	1349.95	0.62	-0.48	0.39	1749146.58	409484.56	39°37'17.9057"N	80°16'43.4084"W	0.62	140.995	0.22	-0.12	-18.00



Actual Wellpath Report

McClellan 8H AWP Proj: 20016'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	McClellan 8H
Field	Monongalia	API/Legal	
Facility	McClellan Pad	Wellbore	McClellan 8H AWB
Slot	Slot #08		

WELLPATH DATA (229 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]
1400.00	0.580	136.100	1399.95	1.10	-0.81	0.76	1749146.95	409484.23	39°37'17.9024"N	80°16'43.4036"W	1.12	136.794	0.18	0.02	18.20
1450.00	0.680	141.400	1449.95	1.64	-1.23	1.12	1749147.31	409483.81	39°37'17.8984"N	80°16'43.3989"W	1.66	137.509	0.23	0.20	10.60
1495.00	0.780	140.800	1494.94	2.22	-1.67	1.48	1749147.67	409483.37	39°37'17.8940"N	80°16'43.3942"W	2.24	138.423	0.22	0.22	-1.33
1564.00	1.760	221.550	1563.93	2.95	-2.83	1.08	1749147.27	409482.21	39°37'17.8825"N	80°16'43.3993"W	3.03	159.139	2.62	1.42	117.03
1658.00	4.310	237.670	1657.79	3.24	-5.80	-2.86	1749143.33	409479.24	39°37'17.8528"N	80°16'43.4494"W	6.47	206.279	2.83	2.71	17.15
1753.00	5.650	238.780	1752.43	2.97	-10.13	-9.88	1749136.31	409474.91	39°37'17.8094"N	80°16'43.5385"W	14.15	224.274	1.41	1.41	1.17
1848.00	6.870	238.070	1846.86	2.60	-15.56	-18.70	1749127.49	409469.48	39°37'17.7550"N	80°16'43.6507"W	24.33	230.234	1.29	1.28	-0.75
1942.00	8.290	233.910	1940.04	2.72	-22.53	-28.95	1749117.24	409462.51	39°37'17.6853"N	80°16'43.7809"W	36.68	232.110	1.62	1.51	-4.43
2036.00	8.720	228.890	2033.01	3.94	-31.21	-39.79	1749106.40	409453.84	39°37'17.5986"N	80°16'43.9185"W	50.57	231.898	0.91	0.46	-5.34
2130.00	8.300	218.780	2125.98	6.92	-41.18	-49.41	1749096.78	409443.86	39°37'17.4992"N	80°16'44.0403"W	64.32	230.193	1.65	-0.45	-10.76
2226.00	7.770	209.450	2221.04	11.95	-52.23	-56.94	1749089.25	409432.81	39°37'17.3893"N	80°16'44.1353"W	77.27	227.471	1.46	-0.55	-9.72
2319.00	7.950	205.810	2313.16	18.07	-63.50	-62.84	1749083.36	409421.55	39°37'17.2775"N	80°16'44.2093"W	89.33	224.700	0.57	0.19	-3.91
2413.00	8.800	210.340	2406.16	24.53	-75.56	-69.30	1749076.90	409409.49	39°37'17.1578"N	80°16'44.2906"W	102.52	222.527	1.14	0.90	4.82
2509.00	8.940	219.760	2501.02	29.89	-87.63	-77.78	1749068.42	409397.42	39°37'17.0378"N	80°16'44.3976"W	117.17	221.592	1.52	0.15	9.81
2603.00	10.100	227.610	2593.73	33.23	-98.80	-88.54	1749057.66	409386.25	39°37'16.9264"N	80°16'44.5339"W	132.67	221.865	1.85	1.23	8.35
2677.00	11.350	231.440	2666.43	34.84	-107.71	-99.02	1749047.17	409377.33	39°37'16.8374"N	80°16'44.6669"W	146.32	222.593	1.94	1.69	5.18
2731.00	12.800	236.000	2719.24	35.34	-114.37	-108.14	1749038.06	409370.68	39°37'16.7709"N	80°16'44.7826"W	157.40	223.396	3.21	2.69	8.44
2825.00	17.270	238.020	2810.00	35.00	-127.59	-128.62	1749017.58	409357.46	39°37'16.6385"N	80°16'45.0429"W	181.17	225.230	4.79	4.76	2.15
2920.00	18.800	236.490	2900.33	34.57	-143.51	-153.34	1748992.85	409341.54	39°37'16.4790"N	80°16'45.3571"W	210.02	226.897	1.69	1.61	-1.61
3014.00	19.440	234.260	2989.14	35.11	-161.01	-178.67	1748967.53	409324.04	39°37'16.3039"N	80°16'45.6788"W	240.52	227.976	1.03	0.68	-2.37
3108.00	21.030	238.210	3077.34	35.14	-179.04	-205.71	1748940.50	409306.02	39°37'16.1234"N	80°16'46.0223"W	272.71	228.966	2.23	1.69	4.20
3203.00	21.790	238.750	3165.79	33.86	-197.16	-235.27	1748910.93	409287.89	39°37'15.9418"N	80°16'46.3980"W	306.96	230.036	0.83	0.80	0.57
3298.00	21.520	241.780	3254.08	31.49	-214.55	-265.70	1748880.51	409270.50	39°37'15.7673"N	80°16'46.7849"W	341.51	231.079	1.21	-0.28	3.19
3393.00	20.940	240.570	3342.64	28.60	-231.13	-295.84	1748850.37	409253.92	39°37'15.6009"N	80°16'47.1682"W	375.42	232.000	0.77	-0.61	-1.27
3490.00	20.190	237.960	3433.46	26.87	-248.53	-325.12	1748821.09	409236.53	39°37'15.4264"N	80°16'47.5406"W	409.23	232.605	1.22	-0.77	-2.69
3585.00	18.690	238.820	3523.04	25.76	-265.11	-352.04	1748794.17	409219.95	39°37'15.2603"N	80°16'47.8827"W	440.70	233.019	1.61	-1.58	0.91
3679.00	19.480	239.230	3611.87	24.34	-280.92	-378.40	1748767.82	409204.13	39°37'15.1017"N	80°16'48.2177"W	471.28	233.410	0.85	0.84	0.44
3775.00	21.530	244.040	3701.79	21.19	-296.83	-407.99	1748738.22	409188.23	39°37'14.9420"N	80°16'48.5942"W	504.54	233.963	2.76	2.14	5.01
3870.00	22.510	243.460	3789.86	16.62	-312.58	-439.94	1748706.28	409172.48	39°37'14.7836"N	80°16'49.0006"W	539.68	234.606	1.06	1.03	-0.61
3964.00	22.610	247.150	3876.67	11.02	-327.64	-472.69	1748673.53	409157.42	39°37'14.6319"N	80°16'49.4175"W	575.14	235.273	1.51	0.11	3.93



Actual Wellpath Report

McClellan 8H AWP Proj: 20016'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	McClellan 8H
Field	Monongalia	API/Legal	
Facility	McClellan Pad	Wellbore	McClellan 8H AWB
Slot	Slot #08		

WELLPATH DATA (229 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]
4059.00	23.040	247.560	3964.23	3.99	-341.83	-506.70	1748639.52	409143.23	39°37'14.4888"N	80°16'49.8505"W	611.22	235.996	0.48	0.45	0.43
4157.00	23.180	246.880	4054.37	-3.25	-356.72	-542.16	1748604.06	409128.34	39°37'14.3386"N	80°16'50.3020"W	648.99	236.657	0.31	0.14	-0.69
4252.00	22.080	242.570	4142.06	-8.59	-372.29	-575.21	1748571.02	409112.77	39°37'14.1819"N	80°16'50.7226"W	685.18	237.088	2.09	-1.16	-4.54
4346.00	21.710	245.150	4229.28	-13.15	-387.73	-606.67	1748539.56	409097.33	39°37'14.0265"N	80°16'51.1229"W	719.99	237.416	1.10	-0.39	2.74
4441.00	20.470	240.660	4317.92	-17.07	-403.26	-637.10	1748509.13	409081.80	39°37'13.8705"N	80°16'51.5100"W	754.00	237.668	2.14	-1.31	-4.73
4536.00	20.530	244.510	4406.91	-20.68	-418.57	-666.61	1748479.62	409066.50	39°37'13.7167"N	80°16'51.8855"W	787.13	237.875	1.42	0.06	4.05
4630.00	20.130	244.950	4495.05	-25.42	-432.51	-696.15	1748450.09	409052.56	39°37'13.5763"N	80°16'52.2613"W	819.56	238.148	0.46	-0.43	0.47
4724.00	20.120	242.830	4583.32	-29.65	-446.74	-725.18	1748421.05	409038.32	39°37'13.4332"N	80°16'52.6308"W	851.75	238.365	0.78	-0.01	-2.26
4819.00	19.140	241.150	4672.79	-32.79	-461.72	-753.36	1748392.87	409023.35	39°37'13.2828"N	80°16'52.9892"W	883.59	238.497	1.19	-1.03	-1.77
4913.00	19.310	241.930	4761.55	-35.58	-476.47	-780.57	1748365.66	409008.60	39°37'13.1347"N	80°16'53.3353"W	914.50	238.600	0.33	0.18	0.83
5009.00	20.950	244.400	4851.69	-39.52	-491.35	-810.06	1748336.18	408993.72	39°37'12.9850"N	80°16'53.7104"W	947.43	238.760	1.92	1.71	2.57
5108.00	22.350	240.610	4943.70	-43.38	-508.24	-842.42	1748303.82	408976.83	39°37'12.8154"N	80°16'54.1222"W	983.86	238.897	2.00	1.41	-3.83
5202.00	22.430	238.450	5030.62	-45.35	-526.40	-873.28	1748272.96	408958.68	39°37'12.6333"N	80°16'54.5144"W	1019.66	238.919	0.88	0.09	-2.30
5297.00	21.670	242.610	5118.68	-47.92	-543.95	-904.30	1748241.94	408941.12	39°37'12.4572"N	80°16'54.9089"W	1055.29	238.973	1.83	-0.80	4.38
5392.00	19.710	239.120	5207.55	-50.59	-560.24	-933.63	1748212.62	408924.83	39°37'12.2936"N	80°16'55.2818"W	1088.82	239.033	2.44	-2.06	-3.67
5487.00	19.050	236.720	5297.17	-51.46	-576.97	-960.34	1748185.91	408908.10	39°37'12.1260"N	80°16'55.6213"W	1120.33	239.003	1.09	-0.69	-2.53
5581.00	18.540	235.020	5386.15	-51.20	-593.96	-985.41	1748160.84	408891.12	39°37'11.9560"N	80°16'55.9397"W	1150.57	238.920	0.80	-0.54	-1.81
5805.00	17.350	242.560	5599.28	-53.96	-629.77	-1044.24	1748102.02	408855.31	39°37'11.5970"N	80°16'56.6875"W	1219.44	238.906	1.16	-0.53	3.37
5898.00	17.670	242.010	5687.97	-56.84	-642.79	-1069.01	1748077.25	408842.29	39°37'11.4662"N	80°16'57.0026"W	1247.38	238.982	0.39	0.34	-0.59
5992.00	17.740	242.180	5777.52	-59.70	-656.16	-1094.27	1748051.99	408828.92	39°37'11.3318"N	80°16'57.3239"W	1275.92	239.052	0.09	0.07	0.18
6087.00	17.670	241.720	5868.02	-62.50	-669.75	-1119.77	1748026.49	408815.33	39°37'11.1954"N	80°16'57.6482"W	1304.78	239.116	0.16	-0.07	-0.48
6181.00	17.790	242.000	5957.56	-65.24	-683.25	-1145.01	1748001.25	408801.83	39°37'11.0598"N	80°16'57.9693"W	1333.37	239.175	0.16	0.13	0.30
6275.00	17.570	241.990	6047.12	-68.04	-696.65	-1170.22	1747976.05	408788.43	39°37'10.9251"N	80°16'58.2899"W	1361.89	239.234	0.23	-0.23	-0.01
6370.00	17.600	242.090	6137.68	-70.88	-710.11	-1195.57	1747950.70	408774.97	39°37'10.7900"N	80°16'58.6123"W	1390.55	239.292	0.04	0.03	0.11
6465.00	18.570	241.900	6227.98	-73.77	-723.96	-1221.60	1747924.66	408761.12	39°37'10.6509"N	80°16'58.9435"W	1420.01	239.348	1.02	1.02	-0.20
6560.00	18.740	242.110	6317.99	-76.75	-738.22	-1248.44	1747897.83	408746.86	39°37'10.5076"N	80°16'59.2848"W	1450.37	239.403	0.19	0.18	0.22
6655.00	18.760	241.950	6407.95	-79.76	-752.54	-1275.41	1747870.86	408732.54	39°37'10.3637"N	80°16'59.6278"W	1480.87	239.458	0.06	0.02	-0.17
6750.00	18.770	241.860	6497.90	-82.71	-766.94	-1302.36	1747843.90	408718.15	39°37'10.2192"N	80°16'59.9707"W	1511.41	239.507	0.03	0.01	-0.09
6845.00	18.810	241.840	6587.84	-85.63	-781.37	-1329.34	1747816.93	408703.71	39°37'10.0742"N	80°17'0.3139"W	1541.98	239.553	0.04	0.04	-0.02
6940.00	18.580	242.290	6677.82	-88.65	-795.64	-1356.25	1747790.03	408689.45	39°37'9.9309"N	80°17'0.6561"W	1572.40	239.602	0.29	-0.24	0.47



Actual Wellpath Report

McClellan 8H AWP Proj: 20016'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	McClellan 8H
Field	Monongalia	API/Legal	
Facility	McClellan Pad	Wellbore	McClellan 8H AWB
Slot	Slot #08		

WELLPATH DATA (229 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]
7034.00	18.780	241.940	6766.87	-91.67	-809.72	-1382.86	1747763.42	408675.37	39°37'9.7894"N	80°17'0.9945"W	1602.48	239.649	0.24	0.21	-0.37
7128.00	18.740	241.820	6855.88	-94.57	-823.97	-1409.52	1747736.76	408661.12	39°37'9.6463"N	80°17'1.3337"W	1632.69	239.691	0.06	-0.04	-0.13
7222.00	18.640	240.960	6944.92	-97.21	-838.39	-1435.96	1747710.31	408646.70	39°37'9.5015"N	80°17'1.6700"W	1662.80	239.721	0.31	-0.11	-0.91
7317.00	18.590	242.300	7034.95	-99.98	-852.80	-1462.64	1747683.64	408632.29	39°37'9.3568"N	80°17'2.0093"W	1693.10	239.756	0.45	-0.05	1.41
7411.00	18.490	242.340	7124.07	-103.08	-866.68	-1489.11	1747657.17	408618.41	39°37'9.2173"N	80°17'2.3460"W	1722.96	239.800	0.11	-0.11	0.04
7506.00	18.700	241.580	7214.11	-106.03	-880.93	-1515.85	1747630.43	408604.17	39°37'9.0743"N	80°17'2.6860"W	1753.23	239.837	0.34	0.22	-0.80
7600.00	18.650	242.130	7303.17	-108.91	-895.12	-1542.39	1747603.90	408589.97	39°37'8.9317"N	80°17'3.0236"W	1783.31	239.871	0.19	-0.05	0.59
7695.00	18.970	234.180	7393.11	-109.84	-911.26	-1568.34	1747577.95	408573.83	39°37'8.7699"N	80°17'3.3534"W	1813.86	239.842	2.72	0.34	-8.37
7789.00	20.170	215.230	7481.77	-103.41	-933.47	-1590.10	1747556.19	408551.63	39°37'8.5486"N	80°17'3.6290"W	1843.85	239.585	6.84	1.28	-20.16
7883.00	21.790	191.700	7569.69	-85.27	-963.84	-1603.01	1747543.28	408521.26	39°37'8.2473"N	80°17'3.7906"W	1870.47	238.983	9.07	1.72	-25.03
7978.00	28.590	178.090	7655.67	-53.47	-1003.91	-1605.84	1747540.45	408481.19	39°37'7.8511"N	80°17'3.8222"W	1893.82	237.988	9.36	7.16	-14.33
8073.00	36.680	167.120	7735.68	-7.48	-1054.41	-1598.73	1747547.55	408430.69	39°37'7.3526"N	80°17'3.7258"W	1915.13	236.594	10.52	8.52	-11.55
8168.00	41.690	160.780	7809.32	49.71	-1111.97	-1581.99	1747564.29	408373.14	39°37'6.7853"N	80°17'3.5055"W	1933.69	234.897	6.75	5.27	-6.67
8263.00	48.770	160.340	7876.18	115.05	-1175.52	-1559.54	1747586.74	408309.59	39°37'6.1592"N	80°17'3.2115"W	1952.95	232.993	7.46	7.45	-0.46
8358.00	55.310	160.120	7934.59	187.74	-1245.97	-1534.22	1747612.07	408239.15	39°37'5.4651"N	80°17'2.8800"W	1976.42	230.919	6.89	6.88	-0.23
8453.00	63.700	155.480	7982.77	267.90	-1321.60	-1503.20	1747643.09	408163.52	39°37'4.7203"N	80°17'2.4752"W	2001.56	228.678	9.78	8.83	-4.88
8548.00	70.320	150.520	8019.88	354.69	-1399.41	-1463.45	1747682.83	408085.72	39°37'3.9548"N	80°17'1.9586"W	2024.85	226.281	8.46	6.97	-5.22
8642.00	76.930	150.940	8046.36	444.57	-1478.04	-1419.38	1747726.89	408007.09	39°37'3.1816"N	80°17'1.3868"W	2049.21	223.840	7.04	7.03	0.45
8736.00	83.340	150.960	8062.46	536.84	-1558.96	-1374.44	1747771.84	407926.18	39°37'2.3858"N	80°17'0.8034"W	2078.32	221.401	6.82	6.82	0.02
8831.00	89.750	151.210	8068.18	631.29	-1641.92	-1328.61	1747817.66	407843.22	39°37'1.5698"N	80°17'0.2086"W	2112.13	218.979	6.75	6.75	0.26
8926.00	88.920	146.790	8069.28	726.16	-1723.32	-1279.70	1747866.57	407761.82	39°37'0.7695"N	80°16'59.5745"W	2146.50	216.597	4.73	-0.87	-4.65
9021.00	88.740	146.690	8071.22	821.14	-1802.75	-1227.61	1747918.66	407682.40	39°36'59.9891"N	80°16'58.9001"W	2181.04	214.254	0.22	-0.19	-0.11
9116.00	89.290	146.360	8072.86	916.12	-1881.98	-1175.22	1747971.05	407603.18	39°36'59.2107"N	80°16'58.2218"W	2218.78	211.983	0.68	0.58	-0.35
9210.00	89.230	146.390	8074.07	1010.12	-1960.24	-1123.17	1748023.09	407524.92	39°36'58.4417"N	80°16'57.5480"W	2259.22	209.812	0.07	-0.06	0.03
9305.00	89.600	146.690	8075.04	1105.11	-2039.49	-1070.79	1748075.46	407445.67	39°36'57.6630"N	80°16'56.8699"W	2303.50	207.701	0.50	0.39	0.32
9400.00	89.820	146.540	8075.52	1200.11	-2118.82	-1018.52	1748127.73	407366.35	39°36'56.8835"N	80°16'56.1932"W	2350.91	205.674	0.28	0.23	-0.16
9495.00	89.570	146.890	8076.03	1295.11	-2198.23	-966.38	1748179.87	407286.94	39°36'56.1032"N	80°16'55.5182"W	2401.27	203.731	0.45	-0.26	0.37
9590.00	89.850	146.120	8076.51	1390.10	-2277.45	-913.96	1748232.29	407207.73	39°36'55.3248"N	80°16'54.8395"W	2454.00	201.866	0.86	0.29	-0.81
9684.00	89.850	146.270	8076.75	1484.10	-2355.56	-861.66	1748284.58	407129.62	39°36'54.5574"N	80°16'54.1625"W	2508.21	200.092	0.16	0.00	0.16
9779.00	89.510	146.710	8077.29	1579.10	-2434.77	-809.21	1748337.03	407050.42	39°36'53.7791"N	80°16'53.4836"W	2565.72	198.385	0.59	-0.36	0.46



Actual Wellpath Report

McClellan 8H AWP Proj: 20016'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	McClellan 8H
Field	Monongalia	API/Legal	
Facility	McClellan Pad	Wellbore	McClellan 8H AWB
Slot	Slot #08		

WELLPATH DATA (229 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]
9873.00	89.690	146.490	8077.94	1673.10	-2513.24	-757.47	1748388.77	406971.95	39°36'53.0080"N	80°16'52.8137"W	2624.91	196.772	0.30	0.19	-0.23
9968.00	89.410	146.430	8078.69	1768.09	-2592.42	-704.98	1748441.25	406892.78	39°36'52.2301"N	80°16'52.1342"W	2686.57	195.213	0.30	-0.29	-0.06
10063.00	89.570	146.490	8079.53	1863.09	-2671.60	-652.49	1748493.74	406813.60	39°36'51.4521"N	80°16'51.4548"W	2750.13	193.725	0.18	0.17	0.06
10156.00	89.720	146.130	8080.11	1956.09	-2748.98	-600.91	1748545.32	406736.23	39°36'50.6918"N	80°16'50.7870"W	2813.89	192.330	0.42	0.16	-0.39
10251.00	90.460	146.310	8079.96	2051.09	-2827.94	-548.09	1748598.14	406657.27	39°36'49.9160"N	80°16'50.1033"W	2880.56	190.969	0.80	0.78	0.19
10346.00	89.910	146.680	8079.65	2146.09	-2907.16	-495.65	1748650.57	406578.06	39°36'49.1376"N	80°16'49.4245"W	2949.10	189.675	0.70	-0.58	0.39
10441.00	89.880	146.860	8079.83	2241.08	-2986.62	-443.59	1748702.63	406498.60	39°36'48.3568"N	80°16'48.7505"W	3019.38	188.448	0.19	-0.03	0.19
10535.00	89.880	146.550	8080.02	2335.08	-3065.19	-391.99	1748754.23	406420.04	39°36'47.5847"N	80°16'48.0824"W	3090.15	187.288	0.33	0.00	-0.33
10629.00	90.980	146.700	8079.32	2429.08	-3143.69	-340.28	1748805.93	406341.55	39°36'46.8134"N	80°16'47.4130"W	3162.05	186.178	1.18	1.17	0.16
10724.00	90.860	146.470	8077.79	2524.06	-3222.97	-287.97	1748858.24	406262.27	39°36'46.0344"N	80°16'46.7359"W	3235.81	185.106	0.27	-0.13	-0.24
10819.00	90.740	146.640	8076.47	2619.05	-3302.23	-235.61	1748910.59	406183.01	39°36'45.2555"N	80°16'46.0582"W	3310.63	184.081	0.22	-0.13	0.18
10914.00	90.920	146.870	8075.09	2714.04	-3381.68	-183.54	1748962.66	406103.57	39°36'44.4749"N	80°16'45.3840"W	3386.65	183.107	0.31	0.19	0.24
11008.00	90.490	146.600	8073.93	2808.03	-3460.27	-131.98	1749014.22	406024.98	39°36'43.7026"N	80°16'44.7165"W	3462.78	182.184	0.54	-0.46	-0.29
11103.00	90.280	146.090	8073.30	2903.03	-3539.34	-79.34	1749066.86	405945.91	39°36'42.9257"N	80°16'44.0351"W	3540.23	181.284	0.58	-0.22	-0.54
11197.00	89.910	145.900	8073.14	2997.03	-3617.27	-26.77	1749119.43	405867.99	39°36'42.1601"N	80°16'43.3547"W	3617.37	180.424	0.44	-0.39	-0.20
11292.00	89.970	146.310	8073.24	3092.03	-3696.12	26.21	1749172.40	405789.14	39°36'41.3853"N	80°16'42.6691"W	3696.22	179.594	0.44	0.06	0.43
11386.00	90.090	146.150	8073.19	3186.03	-3774.26	78.46	1749224.65	405711.01	39°36'40.6176"N	80°16'41.9928"W	3775.08	178.809	0.21	0.13	-0.17
11481.00	89.750	146.770	8073.32	3281.02	-3853.45	130.95	1749277.14	405631.83	39°36'39.8395"N	80°16'41.3134"W	3855.67	178.054	0.74	-0.36	0.65
11577.00	90.150	146.230	8073.41	3377.02	-3933.50	183.94	1749330.12	405551.78	39°36'39.0530"N	80°16'40.6276"W	3937.80	177.323	0.70	0.42	-0.56
11671.00	90.580	146.240	8072.81	3471.02	-4011.64	236.18	1749382.36	405473.65	39°36'38.2852"N	80°16'39.9514"W	4018.59	176.631	0.46	0.46	0.01
11766.00	90.520	146.230	8071.90	3566.02	-4090.61	288.98	1749435.15	405394.68	39°36'37.5092"N	80°16'39.2681"W	4100.81	175.959	0.06	-0.06	-0.01
11861.00	90.770	146.240	8070.83	3661.01	-4169.58	341.78	1749487.94	405315.71	39°36'36.7333"N	80°16'38.5848"W	4183.57	175.314	0.26	0.26	0.01
11954.00	90.710	146.490	8069.63	3754.00	-4247.01	393.28	1749539.45	405238.29	39°36'35.9726"N	80°16'37.9181"W	4265.18	174.709	0.28	-0.06	0.27
12048.00	90.580	146.380	8068.57	3848.00	-4325.33	445.25	1749591.41	405159.98	39°36'35.2030"N	80°16'37.2455"W	4348.19	174.123	0.18	-0.14	-0.12
12142.00	90.370	146.360	8067.79	3941.99	-4403.59	497.31	1749643.47	405081.72	39°36'34.4340"N	80°16'36.5717"W	4431.59	173.557	0.22	-0.22	-0.02
12237.00	90.830	146.320	8066.79	4036.99	-4482.66	549.96	1749696.12	405002.65	39°36'33.6571"N	80°16'35.8903"W	4516.27	173.006	0.49	0.48	-0.04
12332.00	91.050	147.190	8065.23	4131.97	-4562.10	602.04	1749748.19	404923.22	39°36'32.8765"N	80°16'35.2162"W	4601.65	172.482	0.94	0.23	0.92
12426.00	90.950	146.350	8063.59	4225.95	-4640.72	653.54	1749799.69	404844.61	39°36'32.1039"N	80°16'34.5494"W	4686.51	171.984	0.90	-0.11	-0.89
12520.00	90.920	146.420	8062.06	4319.94	-4718.99	705.57	1749851.72	404766.34	39°36'31.3348"N	80°16'33.8760"W	4771.44	171.496	0.08	-0.03	0.07
12614.00	90.310	146.470	8061.05	4413.94	-4797.32	757.53	1749903.67	404688.02	39°36'30.5652"N	80°16'33.2036"W	4856.76	171.027	0.65	-0.65	0.05



Actual Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION				
Operator	NORTHEAST NATURAL ENERGY, LLC		Well	McClellan 8H
Field	Monongalia		API/Legal	
Facility	McClellan Pad		Wellbore	McClellan 8H AWB
Slot	Slot #08			

WELLPATH DATA (229 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]	
12709.00	90.430	146.270	8060.44	4508.93	-4876.42	810.14	1749956.28	404608.92	39°36'29.7880"N	80°16'32.5226"W	4943.25	170.567	0.25	0.13	-0.21	
12804.00	90.620	146.380	8059.57	4603.93	-4955.47	862.81	1750008.95	404529.87	39°36'29.0112"N	80°16'31.8410"W	5030.02	170.123	0.23	0.20	0.12	
12898.00	90.370	146.230	8058.76	4697.93	-5033.68	914.96	1750061.09	404451.67	39°36'28.2428"N	80°16'31.1661"W	5116.16	169.698	0.31	-0.27	-0.16	
12993.00	90.800	146.330	8057.79	4792.92	-5112.69	967.69	1750113.82	404372.66	39°36'27.4664"N	80°16'30.4836"W	5203.46	169.282	0.46	0.45	0.11	
13088.00	90.580	146.950	8056.64	4887.91	-5192.03	1019.93	1750166.06	404293.33	39°36'26.6868"N	80°16'29.8075"W	5291.26	168.886	0.69	-0.23	0.65	
13182.00	90.650	146.240	8055.63	4981.91	-5270.50	1071.68	1750217.80	404214.87	39°36'25.9157"N	80°16'29.1377"W	5378.35	168.506	0.76	0.07	-0.76	
13278.00	90.340	146.660	8054.80	5077.90	-5350.50	1124.73	1750270.85	404134.87	39°36'25.1296"N	80°16'28.4510"W	5467.44	168.129	0.54	-0.32	0.44	
13372.00	89.850	145.940	8054.65	5171.90	-5428.70	1176.89	1750323.00	404056.67	39°36'24.3612"N	80°16'27.7761"W	5554.81	167.768	0.93	-0.52	-0.77	
13467.00	90.120	146.400	8054.67	5266.90	-5507.62	1229.78	1750375.89	403977.76	39°36'23.5858"N	80°16'27.0917"W	5643.24	167.413	0.56	0.28	0.48	
13561.00	90.060	146.680	8054.52	5360.90	-5586.04	1281.60	1750427.71	403899.34	39°36'22.8152"N	80°16'26.4209"W	5731.17	167.078	0.30	-0.06	0.30	
13656.00	90.310	146.360	8054.22	5455.90	-5665.28	1334.01	1750480.12	403820.11	39°36'22.0366"N	80°16'25.7426"W	5820.22	166.750	0.43	0.26	-0.34	
13751.00	90.830	146.730	8053.27	5550.89	-5744.53	1386.38	1750532.48	403740.86	39°36'21.2578"N	80°16'25.0648"W	5909.46	166.432	0.67	0.55	0.39	
13844.00	90.490	146.270	8052.20	5643.89	-5822.08	1437.70	1750583.81	403663.32	39°36'20.4958"N	80°16'24.4006"W	5996.97	166.129	0.62	-0.37	-0.49	
13938.00	90.430	145.860	8051.45	5737.88	-5900.07	1490.18	1750636.28	403585.34	39°36'19.7296"N	80°16'23.7216"W	6085.34	165.825	0.44	-0.06	-0.44	
14034.00	91.140	145.820	8050.13	5833.87	-5979.49	1544.08	1750690.17	403505.91	39°36'18.9492"N	80°16'23.0242"W	6175.64	165.521	0.74	0.74	-0.04	
14128.00	91.260	145.960	8048.16	5927.84	-6057.31	1596.78	1750742.87	403428.10	39°36'18.1847"N	80°16'22.3424"W	6264.24	165.232	0.20	0.13	0.15	
14222.00	91.290	146.530	8046.07	6021.82	-6135.44	1649.00	1750795.09	403349.98	39°36'17.4169"N	80°16'21.6667"W	6353.17	164.956	0.61	0.03	0.61	
14317.00	91.420	146.400	8043.82	6116.79	-6214.60	1701.46	1750847.55	403270.82	39°36'16.6390"N	80°16'20.9876"W	6443.31	164.689	0.19	0.14	-0.14	
14412.00	91.350	146.370	8041.53	6211.77	-6293.70	1754.04	1750900.12	403191.73	39°36'15.8619"N	80°16'20.3072"W	6533.55	164.427	0.08	-0.07	-0.03	
14507.00	90.710	146.580	8039.82	6306.75	-6372.88	1806.50	1750952.58	403112.55	39°36'15.0838"N	80°16'19.6283"W	6623.97	164.174	0.71	-0.67	0.22	
14602.00	90.740	146.370	8038.62	6401.74	-6452.07	1858.97	1751005.04	403033.37	39°36'14.3057"N	80°16'18.9494"W	6714.53	163.927	0.22	0.03	-0.22	
14697.00	90.830	146.410	8037.32	6496.73	-6531.18	1911.55	1751057.62	402954.26	39°36'13.5283"N	80°16'18.2689"W	6805.17	163.686	0.10	0.09	0.04	
14791.00	90.950	146.480	8035.86	6590.72	-6609.51	1963.50	1751109.57	402875.94	39°36'12.7586"N	80°16'17.5966"W	6894.99	163.455	0.15	0.13	0.07	
14885.00	90.620	146.250	8034.57	6684.71	-6687.76	2015.56	1751161.63	402797.69	39°36'11.9897"N	80°16'16.9229"W	6984.89	163.228	0.43	-0.35	-0.24	
14980.00	90.550	146.420	8033.60	6779.71	-6766.82	2068.22	1751214.28	402718.63	39°36'11.2128"N	80°16'16.2415"W	7075.83	163.005	0.19	-0.07	0.18	
15075.00	90.430	146.660	8032.79	6874.70	-6846.08	2120.60	1751266.66	402639.38	39°36'10.4340"N	80°16'15.5637"W	7166.99	162.789	0.28	-0.13	0.25	
15170.00	90.710	146.950	8031.84	6969.70	-6925.57	2172.60	1751318.66	402559.89	39°36'9.6528"N	80°16'14.8905"W	7258.36	162.583	0.42	0.29	0.31	
15264.00	90.770	146.530	8030.63	7063.69	-7004.17	2224.15	1751370.21	402481.30	39°36'8.8805"N	80°16'14.2233"W	7348.82	162.383	0.45	0.06	-0.45	
15359.00	90.680	146.760	8029.43	7158.68	-7083.51	2276.38	1751422.43	402401.96	39°36'8.1008"N	80°16'13.5474"W	7440.30	162.184	0.26	-0.09	0.24	
15454.00	90.800	146.580	8028.20	7253.67	-7162.88	2328.58	1751474.62	402322.60	39°36'7.3208"N	80°16'12.8719"W	7531.87	161.991	0.23	0.13	-0.19	



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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	McClellan 8H
Field	Monongalia	API/Legal	
Facility	McClellan Pad	Wellbore	McClellan 8H AWB
Slot	Slot #08		

WELLPATH DATA (229 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]	
15548.00	91.050	146.410	8026.68	7347.65	-7241.25	2380.46	1751526.50	402244.23	39°36'6.5507"N	80°16'12.2005"W	7622.48	161.802	0.32	0.27	-0.18	
15643.00	91.230	146.850	8024.79	7442.63	-7320.57	2432.70	1751578.74	402164.92	39°36'5.7712"N	80°16'11.5244"W	7714.19	161.618	0.50	0.19	0.46	
15737.00	91.050	146.520	8022.92	7536.61	-7399.11	2484.32	1751630.36	402086.39	39°36'4.9994"N	80°16'10.8564"W	7805.04	161.440	0.40	-0.19	-0.35	
15832.00	89.820	146.370	8022.20	7631.61	-7478.27	2536.83	1751682.86	402007.23	39°36'4.2215"N	80°16'10.1769"W	7896.84	161.262	1.30	-1.29	-0.16	
15926.00	90.150	146.180	8022.22	7725.61	-7556.45	2589.02	1751735.05	401929.05	39°36'3.4533"N	80°16'9.5016"W	7987.68	161.087	0.41	0.35	-0.20	
16020.00	90.220	146.380	8021.92	7819.61	-7634.64	2641.20	1751787.23	401850.87	39°36'2.6851"N	80°16'8.8265"W	8078.59	160.917	0.23	0.07	0.21	
16114.00	90.520	146.830	8021.31	7913.61	-7713.12	2692.94	1751838.96	401772.40	39°36'1.9139"N	80°16'8.1569"W	8169.70	160.754	0.58	0.32	0.48	
16209.00	89.540	146.230	8021.26	8008.60	-7792.36	2745.33	1751891.35	401693.16	39°36'1.1351"N	80°16'7.4790"W	8261.82	160.592	1.21	-1.03	-0.63	
16303.00	89.780	146.370	8021.82	8102.60	-7870.56	2797.48	1751943.50	401614.96	39°36'0.3667"N	80°16'6.8041"W	8352.94	160.433	0.30	0.26	0.15	
16398.00	89.880	146.380	8022.10	8197.60	-7949.67	2850.09	1751996.11	401535.86	39°35'59.5894"N	80°16'6.1235"W	8445.13	160.276	0.11	0.11	0.01	
16493.00	89.600	146.360	8022.53	8292.60	-8028.77	2902.70	1752048.71	401456.76	39°35'58.8121"N	80°16'5.4427"W	8537.38	160.123	0.30	-0.29	-0.02	
16587.00	89.780	146.580	8023.04	8386.60	-8107.12	2954.63	1752100.63	401378.41	39°35'58.0421"N	80°16'4.7708"W	8628.75	159.976	0.30	0.19	0.23	
16682.00	89.380	146.360	8023.74	8481.60	-8186.31	3007.10	1752153.10	401299.23	39°35'57.2640"N	80°16'4.0918"W	8721.15	159.830	0.48	-0.42	-0.23	
16777.00	89.020	145.680	8025.07	8576.58	-8265.08	3060.19	1752206.19	401220.46	39°35'56.4900"N	80°16'3.4050"W	8813.42	159.683	0.81	-0.38	-0.72	
16871.00	89.260	146.840	8026.48	8670.57	-8343.24	3112.39	1752258.39	401142.31	39°35'55.7220"N	80°16'2.7296"W	8904.87	159.542	1.26	0.26	1.23	
16965.00	88.280	145.940	8028.49	8764.55	-8421.51	3164.41	1752310.41	401064.05	39°35'54.9529"N	80°16'2.0565"W	8996.40	159.406	1.42	-1.04	-0.96	
17061.00	88.280	145.930	8031.38	8860.50	-8501.00	3218.16	1752364.15	400984.56	39°35'54.1719"N	80°16'1.3612"W	9089.75	159.265	0.01	0.00	-0.01	
17156.00	88.150	146.220	8034.34	8955.45	-8579.79	3271.15	1752417.14	400905.78	39°35'53.3977"N	80°16'0.6757"W	9182.22	159.130	0.33	-0.14	0.31	
17250.00	88.120	146.280	8037.39	9049.40	-8657.90	3323.35	1752469.34	400827.67	39°35'52.6301"N	80°16'0.0004"W	9273.83	159.001	0.07	-0.03	0.06	
17345.00	87.780	146.680	8040.79	9144.34	-8737.05	3375.78	1752521.76	400748.52	39°35'51.8523"N	80°15'59.3220"W	9366.53	158.875	0.55	-0.36	0.42	
17439.00	87.970	146.710	8044.28	9238.28	-8815.56	3427.36	1752573.34	400670.02	39°35'51.0808"N	80°15'58.6545"W	9458.38	158.755	0.20	0.20	0.03	
17534.00	87.970	146.360	8047.64	9333.22	-8894.76	3479.71	1752625.69	400590.82	39°35'50.3025"N	80°15'57.9771"W	9551.19	158.634	0.37	0.00	-0.37	
17629.00	88.150	145.230	8050.86	9428.16	-8973.28	3533.08	1752679.06	400512.31	39°35'49.5310"N	80°15'57.2868"W	9643.78	158.509	1.20	0.19	-1.19	
17724.00	87.450	143.140	8054.51	9523.01	-9050.26	3588.63	1752734.60	400435.34	39°35'48.7750"N	80°15'56.5688"W	9735.78	158.371	2.32	-0.74	-2.20	
17819.00	87.350	142.070	8058.82	9617.71	-9125.65	3646.26	1752792.23	400359.95	39°35'48.0347"N	80°15'55.8244"W	9827.15	158.220	1.13	-0.11	-1.13	
17913.00	87.480	138.630	8063.06	9711.08	-9197.94	3706.18	1752852.14	400287.66	39°35'47.3253"N	80°15'55.0512"W	9916.55	158.054	3.66	0.14	-3.66	
18007.00	87.510	138.680	8067.17	9804.14	-9268.45	3768.21	1752914.17	400217.16	39°35'46.6338"N	80°15'54.2510"W	10005.18	157.875	0.06	0.03	0.05	
18101.00	87.230	136.230	8071.48	9896.90	-9337.62	3831.70	1752977.65	400147.99	39°35'45.9555"N	80°15'53.4325"W	10093.22	157.689	2.62	-0.30	-2.61	
18195.00	87.010	136.580	8076.20	9989.36	-9405.61	3896.44	1753042.39	400080.00	39°35'45.2890"N	80°15'52.5982"W	10180.76	157.497	0.44	-0.23	0.37	
18289.00	87.320	135.950	8080.85	10081.79	-9473.45	3961.34	1753107.29	400012.17	39°35'44.6241"N	80°15'51.7617"W	10268.32	157.308	0.75	0.33	-0.67	



Actual Wellpath Report

McClellan 8H AWP Proj: 20016'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	McClellan 8H
Field	Monongalia	API/Legal	
Facility	McClellan Pad	Wellbore	McClellan 8H AWB
Slot	Slot #08		

WELLPATH DATA (229 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]
18383.00	87.170	138.480	8085.37	10174.48	-9542.35	4025.11	1753171.05	399943.27	39°35'43.9485"N	80°15'50.9396"W	10356.54	157.129	2.69	-0.16	2.69
18478.00	86.890	138.860	8090.29	10268.50	-9613.59	4087.76	1753233.70	399872.04	39°35'43.2497"N	80°15'50.1315"W	10446.58	156.964	0.50	-0.29	0.40
18573.00	86.950	141.420	8095.40	10362.79	-9686.41	4148.56	1753294.49	399799.23	39°35'42.5353"N	80°15'49.3470"W	10537.41	156.815	2.69	0.06	2.69
18668.00	86.770	143.470	8100.60	10457.42	-9761.60	4206.37	1753352.30	399724.04	39°35'41.7970"N	80°15'48.6003"W	10629.32	156.688	2.16	-0.19	2.16
18763.00	86.240	145.360	8106.39	10552.18	-9838.71	4261.55	1753407.48	399646.93	39°35'41.0395"N	80°15'47.8871"W	10721.99	156.581	2.06	-0.56	1.99
18857.00	87.970	145.640	8111.14	10646.05	-9916.08	4314.72	1753460.65	399569.57	39°35'40.2794"N	80°15'47.1995"W	10814.13	156.485	1.86	1.84	0.30
18952.00	88.210	145.640	8114.31	10740.99	-9994.46	4368.31	1753514.23	399491.19	39°35'39.5093"N	80°15'46.5065"W	10907.40	156.391	0.25	0.25	0.00
19047.00	87.570	148.440	8117.81	10835.91	-10074.11	4419.95	1753565.87	399411.55	39°35'38.7265"N	80°15'45.8381"W	11001.07	156.311	3.02	-0.67	2.95
19141.00	87.780	150.190	8121.62	10929.70	-10154.87	4467.88	1753613.80	399330.79	39°35'37.9323"N	80°15'45.2172"W	11094.30	156.252	1.87	0.22	1.86
19236.00	88.150	154.720	8125.00	11024.08	-10239.03	4511.77	1753657.69	399246.64	39°35'37.1043"N	80°15'44.6474"W	11189.01	156.220	4.78	0.39	4.77
19331.00	87.720	154.720	8128.42	11118.01	-10324.88	4552.32	1753698.23	399160.80	39°35'36.2593"N	80°15'44.1202"W	11283.91	156.207	0.45	-0.45	0.00
19426.00	88.620	154.740	8131.45	11211.96	-10410.74	4592.85	1753738.76	399074.94	39°35'35.4142"N	80°15'43.5931"W	11378.83	156.195	0.95	0.95	0.02
19521.00	90.950	154.820	8131.81	11305.93	-10496.68	4633.33	1753779.23	398989.00	39°35'34.5683"N	80°15'43.0668"W	11473.80	156.183	2.45	2.45	0.08
19615.00	92.770	154.810	8128.76	11398.86	-10581.69	4673.30	1753819.21	398903.99	39°35'33.7314"N	80°15'42.5469"W	11567.72	156.172	1.94	1.94	-0.01
19711.00	93.110	154.910	8123.83	11493.68	-10668.49	4714.03	1753859.93	398817.21	39°35'32.8771"N	80°15'42.0172"W	11663.56	156.161	0.37	0.35	0.10
19806.00	90.520	155.050	8120.83	11587.55	-10754.52	4754.19	1753900.09	398731.18	39°35'32.0302"N	80°15'41.4950"W	11758.49	156.151	2.73	-2.73	0.15
19901.00	90.950	151.650	8119.61	11681.83	-10839.41	4796.79	1753942.69	398646.29	39°35'31.1949"N	80°15'40.9416"W	11853.35	156.129	3.61	0.45	-3.58
19991.00	90.830	151.500	8118.21	11771.44	-10918.55	4839.63	1753985.52	398567.16	39°35'30.4164"N	80°15'40.3859"W	11943.06	156.095	0.21	-0.13	-0.17
20016.00‡	90.830	151.500	8117.85	11796.34	-10940.52	4851.55	1753997.45	398545.19	39°35'30.2003"N	80°15'40.2312"W	11967.98	156.085	0.00	0.00	0.00



Actual Wellpath Report

McClellan 8H AWP Proj: 20016'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	McClellan 8H
Field	Monongalia	API/Legal	
Facility	McClellan Pad	Wellbore	McClellan 8H AWB
Slot	Slot #08		

HOLE & CASING SECTIONS - Ref Wellbore: McClellan 8H AWB Ref Wellpath: McClellan 8H AWP Proj: 20016'									
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]
24in Conductor	28.00	128.00	100.00	28.00	128.00	0.00	0.00	0.68	0.27
17.5in Open Hole	128.00	1468.00	1340.00	128.00	1467.94	0.68	0.27	-1.40	1.26
13.375in Casing Surface	28.00	1438.00	1410.00	28.00	1437.95	0.00	0.00	-1.12	1.04
12.25in Open Hole	1468.00	2721.00	1253.00	1467.94	2709.48	-1.40	1.26	-113.13	-106.33
9.625in Casing Intermediate	28.00	2691.00	2663.00	28.00	2680.15	0.00	0.00	-109.43	-101.23
8.75in Open Hole	2721.00	5753.00	3032.00	2709.48	5549.68	-113.13	-106.33	-622.35	-1030.50
8.5in Open Hole	5753.00	20016.00	14263.00	5549.68	8117.85	-622.35	-1030.50	-10940.52	4851.55
5.5in Casing Production	28.00	20016.00	19988.00	28.00	8117.85	0.00	0.00	-10940.52	4851.55



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McClellan 8H AWP Proj: 20016'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	McClellan 8H
Field	Monongalia	API/Legal	
Facility	McClellan Pad	Wellbore	McClellan 8H AWB
Slot	Slot #08		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
McClellan 8H BHL Rev-10	8060.00	-10942.14	4849.00	1753994.89	398543.57	39°35'30.1840"N	80°15'40.2636"W	point
McClellan 8H LP Rev-6	8060.00	-1620.84	-1350.31	1747795.97	407864.30	39°37'1.7763"N	80°17'0.4882"W	point
McClellan Hardline #1 (8.31.21)	8529.00	-1282.79	1569.51	1750715.60	408202.33	39°37'5.3671"N	80°16'23.2158"W	polygon
	2D Polygon: dimensions not calculated							
McClellan Hardline #10 (8.31.21)	8529.00	-12590.77	3164.54	1752310.54	396895.04	39°35'13.7495"N	80°16'1.6000"W	polygon
	2D Polygon: dimensions not calculated							
McClellan Hardline #11 (8.31.21)	8529.00	-10602.58	6981.21	1756126.98	398883.11	39°35'33.7174"N	80°15'13.0643"W	polygon
	2D Polygon: dimensions not calculated							
McClellan Hardline #12 (8.31.21)	8529.00	-10041.72	8250.83	1757396.51	399443.93	39°35'39.3651"N	80°14'56.9065"W	polygon
	2D Polygon: dimensions not calculated							
McClellan Hardline #13 (8.31.21)	8529.00	-10128.71	4248.54	1753394.47	399356.95	39°35'38.1725"N	80°15'48.0219"W	polygon
	2D Polygon: dimensions not calculated							
McClellan Hardline #2 (8.31.21)	8529.00	-1590.66	1780.29	1750926.37	407894.48	39°37'2.3424"N	80°16'20.4885"W	polygon
	2D Polygon: dimensions not calculated							



Actual Wellpath Report

McClellan 8H AWP Proj: 20016'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	McClellan 8H
Field	Monongalia	API/Legal	
Facility	McClellan Pad	Wellbore	McClellan 8H AWB
Slot	Slot #08		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
McClellan Hardline #3 (8.31.21)	8529.00	-1779.27	5608.79	1754754.63	407705.88	39°37'0.8009"N	80°15'31.5471"W	polygon
2D Polygon: dimensions not calculated								
McClellan Hardline #4 (8.31.21)	8529.00	-3155.27	2997.35	1752143.36	406329.97	39°36'46.9831"N	80°16'4.7658"W	polygon
2D Polygon: dimensions not calculated								
McClellan Hardline #5 (8.31.21)	8529.00	-4644.77	3241.73	1752387.72	404840.56	39°36'32.2836"N	80°16'1.4808"W	polygon
2D Polygon: dimensions not calculated								
McClellan Hardline #6 (8.31.21)	8529.00	-7608.68	7081.43	1756227.19	401876.83	39°36'3.3135"N	80°15'12.1048"W	polygon
2D Polygon: dimensions not calculated								
McClellan Hardline #7 (8.31.21)	8529.00	-10251.75	3039.09	1752185.09	399233.92	39°35'36.8547"N	80°16'3.4577"W	polygon
2D Polygon: dimensions not calculated								
McClellan Hardline #8 (8.31.21)	8529.00	-10294.47	2992.78	1752138.79	399191.20	39°35'36.4286"N	80°16'4.0446"W	polygon
2D Polygon: dimensions not calculated								
McClellan Hardline #9 (8.31.21)	8529.00	-10956.69	3021.03	1752167.03	398529.02	39°35'29.8865"N	80°16'3.6114"W	polygon
2D Polygon: dimensions not calculated								



Actual Wellpath Report

McClellan 8H AWP Proj: 20016'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	McClellan 8H
Field	Monongalia	API/Legal	
Facility	McClellan Pad	Wellbore	McClellan 8H AWB
Slot	Slot #08		

WELLPATH COMPOSITION - Ref Wellbore: McClellan 8H AWB Ref Wellpath: McClellan 8H AWP Proj: 20016'					
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
28.00	1495.00	BH Generic gyro - northseeking (Standard)	01_Javins Inertial Gyro <17-1/2">(50'-1495')	McClellan 8H AWB	11/29/2021
1495.00	2677.00	OWSG MWD rev2 + HRGM	02_Tally MWD <12-1/4">(1495')(1564'-2677')	McClellan 8H AWB	11/29/2021
2677.00	5581.00	OWSG MWD rev2 + HRGM	03_Tally MWD <8-3/4">(2677')(2731'-5581')	McClellan 8H AWB	11/29/2021
5581.00	20016.00	BH AutoTrak Curve/eXpress (2019) (HRGM, Short spacing)	04_BH AT Curve <8-1/2">(5581')(5805'-19991')	McClellan 8H AWB	11/29/2021



Actual Wellpath Report

McClellan 8H AWP Proj: 20016'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	McClellan 8H
Field	Monongalia	API/Legal	
Facility	McClellan Pad	Wellbore	McClellan 8H AWB
Slot	Slot #08		

COMMENTS
<p>Wellpath general comments API: 47-061-01887-0000 BH Job #: 111066131 Rig: Patterson 277 Duration: 11/30/21 - 12/6/21</p> <p>01_Javins Inertial Gyro <17-1/2">(50'-1495') 02_Tally MWD <12-1/4">(1495')(1564'-2677') 03_Tally MWD <8-3/4"(2677')(2731'-5581') 04_BH AT Curve <8-1/2">(5581')(5805'-19991') Projected MD at TD: 20016'</p>