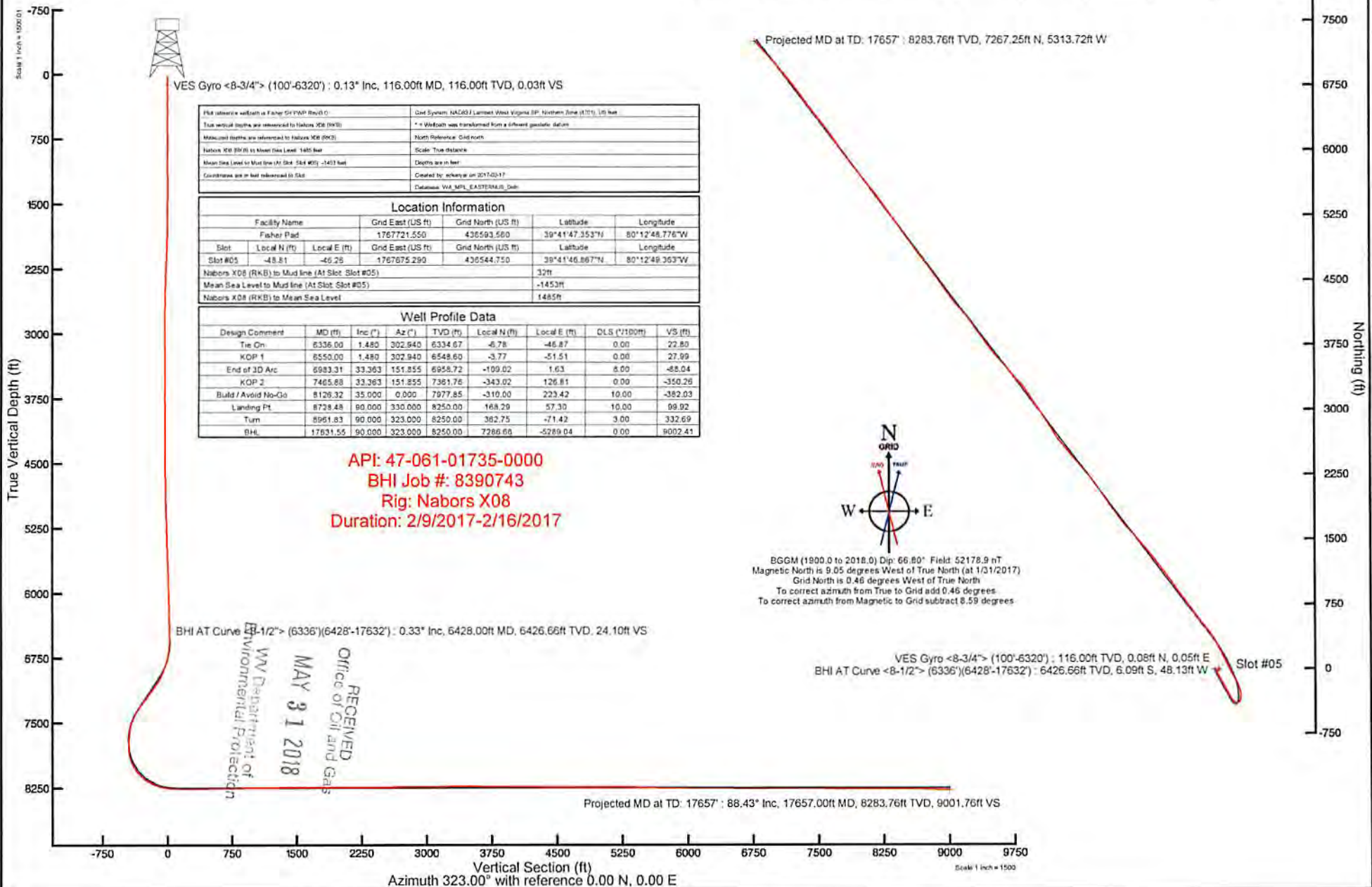
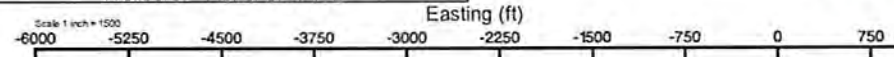


NORTHEAST NATURAL ENERGY, LLC

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

Slot: Slot #05
 Well: Fisher 5H
 Wellbore: Fisher 5H PWB



Plot reference wellbore is Fisher 5H PWB Rev 01	Grid System: NAD83 Lambert West Virginia IP Northern Zone (N11), US feet
True vertical depths are referenced to Nabors X08 (RKB)	* - Wellbore was transformed from a different geoidic datum
Manufactured depths are referenced to Nabors X08 (RKB)	North Reference: Grid north
Nabors X08 (RKB) to Mean Sea Level: 1485 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot Slot #05) : -1413 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: schary on 20170217
	Database: WA_MPL_EASTERNUS_Dat

Location Information					
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	
Fisher Pad	1767721.550	436593.560	39°41'47.353"N	80°12'48.776"W	
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude
Slot #05	-48.81	-46.26	1767675.290	436544.750	39°41'46.867"N
Nabors X08 (RKB) to Mud line (At Slot Slot #05)					32ft
Mean Sea Level to Mud line (At Slot Slot #05)					-1453ft
Nabors X08 (RKB) to Mean Sea Level					1485ft

Well Profile Data							
Design Comment	MD (ft)	Inc (")	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	VS (ft)
Tie On	8336.00	1.480	302.940	6334.67	-6.78	-46.87	22.80
KOP 1	8550.00	1.480	302.940	6548.60	-3.77	-51.51	27.99
End of 3D Arc	8983.31	33.363	151.855	6958.72	-109.02	1.63	-88.04
KOP 2	7465.88	33.363	151.855	7361.76	-343.02	126.81	-350.26
Build / Avoid No-Go	8126.32	35.000	0.000	7977.85	-310.00	223.42	-382.03
Landing Pt	8728.48	90.000	323.000	8250.00	168.29	57.30	99.92
Turn	8961.83	90.000	323.000	8250.00	362.75	-71.42	332.69
BHL	17631.55	90.000	323.000	8250.00	7266.66	-5289.04	9002.41

API: 47-061-01735-0000
BHI Job #: 8390743
Rig: Nabors X08
Duration: 2/9/2017-2/16/2017



BGGM (1900.0 to 2018.0) Dip: 66.80° Field: 52178.9 nT
 Magnetic North is 9.05 degrees West of True North (at 1/31/2017)
 Grid North is 0.46 degrees West of True North
 To correct azimuth from True to Grid add 0.46 degrees.
 To correct azimuth from Magnetic to Grid subtract 8.59 degrees.

BHI AT Curve <8-1/2'> (6336')(6428'-17632') : 0.33° Inc, 6428.00ft MD, 6426.66ft TVD, 24.10ft VS

VES Gyro <8-3/4'> (100'-6320') : 116.00ft TVD, 0.08ft N, 0.05ft E
 BHI AT Curve <8-1/2'> (6336')(6428'-17632') : 6426.66ft TVD, 6.09ft S, 48.13ft W

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Projected MD at TD: 17657' : 88.43° Inc, 17657.00ft MD, 8283.76ft TVD, 9001.76ft VS

Vertical Section (ft)
 Azimuth 323.00° with reference 0.00 N, 0.00 E

Scale 1 inch = 1500'



Actual Wellpath Report

Fisher 5H AWP Proj: 17657'

Page 1 of 10



REFERENCE WELLPATH IDENTIFICATION

Operator	NORTHEAST NATURAL ENERGY, LLC	Slot	Slot #05
Area	Monongalia County, WV	Well	Fisher 5H
Field	Monongalia	Wellbore	Fisher 5H AWB
Facility	Fisher Pad		

REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert West Virginia SP, Northern Zone (4701), US feet	Software System	WellArchitect® 5.0
North Reference	Grid	User	Edsaryar
Scale	0.999941	Report Generated	2/17/2017 at 10:01:50 AM
Convergence at slot	0.46° West	Database/Source file	WA_MPL_EASTERNUS_Defn/Fisher_5H_AWP_Proj_17657_.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-48.81	-46.26	1767675.29	436544.75	39°41'46.867"N	80°12'49.363"W
Facility Reference Pt			1767721.55	436593.56	39°41'47.353"N	80°12'48.776"W
Field Reference Pt			1777685.71	440640.65	39°42'28.114"N	80°10'41.690"W

WELLPATH DATUM

Calculation method	Minimum curvature	Nabors X08 (RKB) to Facility Vertical Datum	1485.00ft
Horizontal Reference Pt	Slot	Nabors X08 (RKB) to Mean Sea Level	1485.00ft
Vertical Reference Pt	Nabors X08 (RKB)	Nabors X08 (RKB) to Mud Line at Slot (Slot #05)	32.00ft
MD Reference Pt	Nabors X08 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	323.00°



Actual Wellpath Report

Fisher 5H AWP Proj: 17657'

Page 2 of 10



REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Slot	Slot #05
Area	Monongalia County, WV	Well	Fisher 5H
Field	Monongalia	Wellbore	Fisher 5H AWB
Facility	Fisher Pad		

WELLPATH DATA (187 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	0.00	32.250	0.00	0.00	0.00	0.00	1767675.29	436544.75	39°41'46.867"N	80°12'49.363"W	0.00	0.000	0.00	0.00	0.00
32.00	0.00	32.250	32.00	0.00	0.00	0.00	1767675.29	436544.75	39°41'46.867"N	80°12'49.363"W	0.00	0.000	0.00	0.00	0.00
116.00	0.130	32.250	116.00	0.03	0.08	0.05	1767675.34	436544.83	39°41'46.868"N	80°12'49.363"W	0.10	32.250	0.15	0.15	38.39
216.00	0.220	261.170	216.00	0.16	0.15	-0.08	1767675.21	436544.90	39°41'46.869"N	80°12'49.364"W	0.17	331.962	0.32	0.09	-131.08
316.00	0.170	243.130	316.00	0.28	0.05	-0.40	1767674.89	436544.80	39°41'46.868"N	80°12'49.368"W	0.40	277.196	0.08	-0.05	-18.04
416.00	0.240	291.960	416.00	0.49	0.06	-0.73	1767674.56	436544.81	39°41'46.868"N	80°12'49.373"W	0.73	274.861	0.18	0.07	48.83
516.00	0.260	307.760	516.00	0.89	0.28	-1.10	1767674.19	436545.03	39°41'46.870"N	80°12'49.377"W	1.14	284.229	0.07	0.02	15.80
616.00	0.250	260.380	616.00	1.20	0.38	-1.50	1767673.80	436545.13	39°41'46.871"N	80°12'49.382"W	1.54	284.317	0.21	-0.01	-47.38
716.00	0.150	272.820	716.00	1.39	0.35	-1.84	1767673.45	436545.10	39°41'46.871"N	80°12'49.387"W	1.87	280.811	0.11	-0.10	12.44
816.00	0.320	310.220	816.00	1.74	0.54	-2.18	1767673.11	436545.29	39°41'46.872"N	80°12'49.391"W	2.25	283.841	0.22	0.17	37.40
916.00	0.200	265.320	915.99	2.11	0.70	-2.57	1767672.72	436545.45	39°41'46.874"N	80°12'49.396"W	2.67	285.316	0.23	-0.12	-44.90
1016.00	0.290	308.030	1015.99	2.45	0.85	-2.95	1767672.34	436545.60	39°41'46.875"N	80°12'49.401"W	3.06	286.027	0.20	0.09	42.71
1116.00	0.060	236.530	1115.99	2.70	0.97	-3.19	1767672.10	436545.72	39°41'46.877"N	80°12'49.404"W	3.33	286.972	0.28	-0.23	-71.50
1216.00	0.140	342.520	1215.99	2.81	1.06	-3.27	1767672.02	436545.81	39°41'46.877"N	80°12'49.405"W	3.44	287.979	0.17	0.08	105.99
1316.00	0.010	219.290	1315.99	2.93	1.17	-3.31	1767671.98	436545.92	39°41'46.879"N	80°12'49.406"W	3.51	289.470	0.15	-0.13	-123.23
1416.00	0.120	182.200	1415.99	2.84	1.06	-3.32	1767671.97	436545.81	39°41'46.877"N	80°12'49.406"W	3.49	287.691	0.11	0.11	-37.09
1516.00	0.310	145.650	1515.99	2.49	0.73	-3.17	1767672.12	436545.48	39°41'46.874"N	80°12'49.404"W	3.26	282.980	0.23	0.19	-36.55
1616.00	0.320	161.690	1615.99	1.96	0.24	-2.93	1767672.36	436544.99	39°41'46.869"N	80°12'49.401"W	2.94	274.732	0.09	0.01	16.04
1716.00	0.510	162.790	1715.99	1.27	-0.45	-2.71	1767672.58	436544.30	39°41'46.863"N	80°12'49.398"W	2.75	260.629	0.19	0.19	1.10
1816.00	1.250	159.140	1815.98	-0.19	-1.89	-2.19	1767673.10	436542.86	39°41'46.848"N	80°12'49.391"W	2.90	229.202	0.74	0.74	-3.65
1916.00	2.060	151.220	1915.93	-3.02	-4.49	-0.94	1767674.35	436540.26	39°41'46.823"N	80°12'49.375"W	4.58	191.812	0.84	0.81	-7.92
2016.00	2.120	151.670	2015.87	-6.63	-7.69	0.80	1767676.09	436537.06	39°41'46.791"N	80°12'49.352"W	7.73	174.026	0.06	0.06	0.45
2116.00	2.110	156.260	2115.80	-10.25	-11.00	2.42	1767677.71	436533.75	39°41'46.759"N	80°12'49.331"W	11.27	167.578	0.17	-0.01	4.59
2216.00	2.130	157.850	2215.73	-13.83	-14.41	3.87	1767679.16	436530.34	39°41'46.725"N	80°12'49.312"W	14.92	164.984	0.06	0.02	1.59
2316.00	2.120	161.190	2315.66	-17.39	-17.88	5.16	1767680.45	436526.87	39°41'46.691"N	80°12'49.295"W	18.61	163.896	0.12	-0.01	3.34
2416.00	1.980	161.130	2415.60	-20.79	-21.27	6.32	1767681.61	436523.48	39°41'46.658"N	80°12'49.280"W	22.19	163.456	0.14	-0.14	-0.06
2516.00	1.510	164.490	2515.55	-23.65	-24.17	7.23	1767682.52	436520.58	39°41'46.629"N	80°12'49.268"W	25.23	163.350	0.48	-0.47	3.36
2616.00	1.210	176.150	2615.62	-25.76	-26.49	7.65	1767682.94	436518.26	39°41'46.606"N	80°12'49.263"W	27.58	163.891	0.41	-0.30	11.66
2716.00	1.160	172.370	2715.50	-27.53	-28.55	7.86	1767683.15	436516.20	39°41'46.586"N	80°12'49.260"W	29.61	164.613	0.09	-0.05	-3.78
2816.00	0.870	184.630	2815.49	-28.98	-30.31	7.93	1767683.22	436514.44	39°41'46.568"N	80°12'49.259"W	31.33	165.338	0.36	-0.29	12.26

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Actual Wellpath Report

Fisher 5H AWP Proj: 17657'

Page 3 of 10



REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Slot	Slot #05
Area	Monongalia County, WV	Well	Fisher 5H
Field	Monongalia	Wellbore	Fisher 5H AWB
Facility	Fisher Pad		

WELLPATH DATA (187 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]
2916.00	0.650	208.570	2915.48	-29.78	-31.57	7.60	1767682.89	436513.19	39°41'46.556"N	80°12'49.263"W	32.47	166.467	0.38	-0.22	23.94
3016.00	0.560	232.770	3015.47	-30.02	-32.36	6.94	1767682.23	436512.39	39°41'46.548"N	80°12'49.271"W	33.10	167.900	0.27	-0.09	24.20
3116.00	0.540	245.640	3115.47	-29.92	-32.85	6.12	1767681.41	436511.90	39°41'46.543"N	80°12'49.282"W	33.41	169.448	0.12	-0.02	12.87
3216.00	0.480	240.430	3215.46	-29.76	-33.25	5.33	1767680.62	436511.50	39°41'46.539"N	80°12'49.292"W	33.67	170.901	0.08	-0.06	-5.21
3316.00	0.420	247.130	3315.46	-29.62	-33.60	4.62	1767679.91	436511.15	39°41'46.536"N	80°12'49.301"W	33.92	172.165	0.08	-0.06	6.70
3416.00	0.510	250.900	3415.46	-29.39	-33.89	3.87	1767679.15	436510.86	39°41'46.533"N	80°12'49.310"W	34.11	173.493	0.10	0.09	3.77
3516.00	0.560	255.730	3515.45	-29.06	-34.15	2.97	1767678.26	436510.60	39°41'46.530"N	80°12'49.322"W	34.28	175.029	0.07	0.05	4.83
3616.00	0.410	281.660	3615.45	-28.61	-34.20	2.15	1767677.44	436510.55	39°41'46.529"N	80°12'49.332"W	34.27	176.408	0.26	-0.15	25.93
3716.00	0.500	309.170	3715.45	-27.91	-33.85	1.46	1767676.75	436510.90	39°41'46.533"N	80°12'49.341"W	33.89	177.534	0.23	0.09	27.51
3816.00	0.490	303.960	3815.44	-27.09	-33.34	0.77	1767676.06	436511.41	39°41'46.538"N	80°12'49.350"W	33.35	178.685	0.05	-0.01	-5.21
3916.00	0.430	307.700	3915.44	-26.32	-32.87	0.11	1767675.40	436511.88	39°41'46.542"N	80°12'49.358"W	32.87	179.802	0.07	-0.06	3.74
4016.00	0.430	307.290	4015.44	-25.60	-32.41	-0.48	1767674.81	436512.34	39°41'46.547"N	80°12'49.366"W	32.42	180.851	0.00	0.00	-0.41
4116.00	0.330	283.830	4115.43	-25.01	-32.12	-1.06	1767674.23	436512.63	39°41'46.550"N	80°12'49.374"W	32.14	181.890	0.18	-0.10	-23.46
4216.00	0.230	287.080	4215.43	-24.63	-31.99	-1.53	1767673.76	436512.76	39°41'46.551"N	80°12'49.380"W	32.03	182.741	0.10	-0.10	3.25
4316.00	0.340	284.260	4315.43	-24.23	-31.86	-2.01	1767673.28	436512.89	39°41'46.552"N	80°12'49.386"W	31.92	183.611	0.11	0.11	-2.82
4416.00	0.390	278.340	4415.43	-23.76	-31.74	-2.64	1767672.66	436513.02	39°41'46.553"N	80°12'49.394"W	31.85	184.746	0.06	0.05	-5.92
4516.00	0.470	273.090	4515.43	-23.25	-31.66	-3.38	1767671.91	436513.09	39°41'46.554"N	80°12'49.403"W	31.84	186.095	0.09	0.08	-5.25
4616.00	0.570	280.960	4615.42	-22.62	-31.55	-4.28	1767671.01	436513.20	39°41'46.555"N	80°12'49.415"W	31.84	187.725	0.12	0.10	7.87
4716.00	0.950	281.350	4715.41	-21.63	-31.29	-5.58	1767669.71	436513.46	39°41'46.558"N	80°12'49.431"W	31.78	190.112	0.38	0.38	0.39
4816.00	1.150	289.930	4815.40	-20.17	-30.79	-7.34	1767667.95	436513.97	39°41'46.562"N	80°12'49.454"W	31.65	193.404	0.25	0.20	8.58
4916.00	1.270	293.630	4915.37	-18.36	-30.00	-9.30	1767666.00	436514.75	39°41'46.570"N	80°12'49.479"W	31.41	197.216	0.14	0.12	3.70
5016.00	1.600	297.730	5015.34	-16.14	-28.91	-11.55	1767663.74	436515.85	39°41'46.581"N	80°12'49.508"W	31.13	201.774	0.35	0.33	4.10
5116.00	1.640	297.330	5115.30	-13.58	-27.60	-14.05	1767661.24	436517.15	39°41'46.593"N	80°12'49.540"W	30.97	206.985	0.04	0.04	-0.40
5216.00	1.930	297.010	5215.25	-10.78	-26.18	-16.82	1767658.47	436518.57	39°41'46.607"N	80°12'49.576"W	31.12	212.730	0.29	0.29	-0.32
5316.00	2.020	298.470	5315.19	-7.66	-24.57	-19.87	1767655.42	436520.18	39°41'46.623"N	80°12'49.615"W	31.60	218.966	0.10	0.09	1.46
5416.00	2.100	298.000	5415.13	-4.40	-22.87	-23.04	1767652.25	436521.88	39°41'46.639"N	80°12'49.656"W	32.47	225.212	0.08	0.08	-0.47
5516.00	2.130	301.890	5515.06	-1.01	-21.03	-26.24	1767649.05	436523.72	39°41'46.657"N	80°12'49.697"W	33.62	231.286	0.15	0.03	3.89
5616.00	2.060	308.480	5615.00	3.47	-18.93	-29.22	1767646.07	436525.82	39°41'46.678"N	80°12'49.735"W	34.82	237.065	0.25	-0.07	6.59
5716.00	1.990	308.530	5714.93	6.89	-16.73	-31.99	1767643.31	436528.02	39°41'46.699"N	80°12'49.771"W	36.10	242.389	0.07	-0.07	0.05
5816.00	1.890	306.290	5814.88	9.15	-14.67	-34.67	1767640.62	436530.08	39°41'46.719"N	80°12'49.805"W	37.65	247.065	0.13	-0.10	-2.24

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Actual Wellpath Report

Fisher 5H AWP Proj: 17657'

Page 4 of 10



REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Slot	Slot #05
Area	Monongalia County, WV	Well	Fisher 5H
Field	Monongalia	Wellbore	Fisher 5H AWB
Facility	Fisher Pad		

WELLPATH DATA (187 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]
5916.00	1.680	303.540	5914.83	12.11	-12.89	-37.23	1767638.07	436531.86	39°41'46.737"N	80°12'49.838"W	39.39	250.906	0.23	-0.21	-2.75
6016.00	1.700	304.190	6014.78	14.90	-11.24	-39.67	1767635.62	436533.51	39°41'46.753"N	80°12'49.870"W	41.24	254.178	0.03	0.02	0.65
6116.00	1.530	300.310	6114.74	17.53	-9.74	-42.05	1767633.24	436535.02	39°41'46.768"N	80°12'49.900"W	43.17	256.965	0.20	-0.17	-3.88
6216.00	1.380	302.770	6214.71	19.89	-8.41	-44.22	1767631.07	436536.34	39°41'46.781"N	80°12'49.928"W	45.01	259.231	0.16	-0.15	2.46
6316.00	1.580	300.620	6314.68	22.30	-7.06	-46.42	1767628.88	436537.69	39°41'46.794"N	80°12'49.956"W	46.95	261.356	0.21	0.20	-2.15
6336.00	1.480	302.940	6334.67	22.80	-6.78	-46.87	1767628.42	436537.98	39°41'46.797"N	80°12'49.962"W	47.36	261.775	0.59	-0.50	11.60
6428.00	0.330	278.730	6426.66	24.10	-6.09	-48.13	1767627.16	436538.66	39°41'46.803"N	80°12'49.978"W	48.51	262.790	1.29	-1.25	-26.32
6523.00	0.110	326.120	6521.66	24.39	-5.97	-48.45	1767626.84	436538.78	39°41'46.804"N	80°12'49.982"W	48.82	262.974	0.28	-0.23	49.88
6618.00	5.520	136.800	6616.51	19.93	-9.23	-45.37	1767629.92	436535.52	39°41'46.772"N	80°12'49.943"W	46.30	258.502	5.92	5.69	179.66
6712.00	10.440	138.230	6709.57	6.95	-18.88	-36.60	1767638.69	436525.87	39°41'46.678"N	80°12'49.830"W	41.18	242.709	5.24	5.23	1.52
6807.00	16.160	147.650	6802.00	-14.83	-36.49	-23.78	1767651.51	436508.26	39°41'46.505"N	80°12'49.664"W	43.55	213.092	6.42	6.02	9.92
6901.00	20.630	153.780	6891.18	-44.15	-62.41	-9.45	1767665.84	436482.34	39°41'46.250"N	80°12'49.478"W	63.12	188.614	5.18	4.76	6.52
6995.00	27.500	152.180	6976.96	-81.89	-96.50	8.01	1767683.30	436448.26	39°41'45.914"N	80°12'49.251"W	96.83	175.254	7.34	7.31	-1.70
7089.00	35.980	151.210	7056.83	-130.73	-139.97	31.48	1767706.77	436404.79	39°41'45.486"N	80°12'48.946"W	143.47	167.325	9.04	9.02	-1.03
7184.00	36.080	151.110	7133.66	-186.05	-188.92	58.44	1767733.72	436355.84	39°41'45.005"N	80°12'48.597"W	197.75	162.813	0.12	0.11	-0.11
7278.00	36.050	152.910	7209.64	-240.70	-237.78	84.40	1767759.69	436306.98	39°41'44.524"N	80°12'48.259"W	252.32	160.457	1.13	-0.03	1.91
7372.00	36.030	151.870	7285.65	-295.26	-286.79	110.03	1767785.32	436257.98	39°41'44.042"N	80°12'47.926"W	307.17	159.009	0.65	-0.02	-1.11
7466.00	33.830	149.500	7362.72	-348.58	-333.72	136.35	1767811.64	436211.05	39°41'43.580"N	80°12'47.585"W	360.50	157.776	2.75	-2.34	-2.52
7560.00	23.410	141.240	7445.15	-393.39	-370.95	161.40	1767836.68	436173.83	39°41'43.214"N	80°12'47.261"W	404.54	156.485	11.83	-11.09	-8.79
7655.00	15.180	122.160	7534.82	-423.95	-392.34	183.81	1767859.09	436152.43	39°41'43.004"N	80°12'46.972"W	433.26	154.897	10.81	-8.66	-20.08
7749.00	9.910	92.130	7626.64	-440.59	-399.20	202.34	1767877.62	436145.57	39°41'42.938"N	80°12'46.734"W	447.55	153.121	8.75	-5.61	-31.95
7843.00	11.540	74.540	7719.02	-449.15	-397.00	219.49	1767894.77	436147.78	39°41'42.961"N	80°12'46.515"W	453.63	151.062	3.87	1.73	-18.71
7938.00	14.950	36.660	7811.65	-449.19	-384.61	236.00	1767911.28	436160.17	39°41'43.085"N	80°12'46.305"W	451.24	148.466	9.60	3.59	-39.87
8032.00	21.800	9.220	7900.96	-433.66	-357.57	246.07	1767921.34	436187.20	39°41'43.353"N	80°12'46.179"W	434.06	145.465	11.56	7.29	-29.19
8127.00	32.420	1.420	7985.43	-401.40	-314.56	249.54	1767924.81	436230.20	39°41'43.778"N	80°12'46.139"W	401.52	141.576	11.77	11.18	-8.21
8222.00	41.240	348.930	8061.50	-353.12	-258.19	244.14	1767919.41	436286.58	39°41'44.335"N	80°12'46.214"W	355.34	136.602	12.14	9.28	-13.15
8316.00	50.060	336.390	8127.28	-289.95	-194.51	223.67	1767898.95	436350.26	39°41'44.963"N	80°12'46.482"W	296.42	131.010	13.35	9.38	-13.34
8411.00	59.500	330.840	8182.04	-213.76	-125.20	189.05	1767864.33	436419.56	39°41'45.645"N	80°12'46.932"W	226.75	123.515	11.02	9.94	-5.84
8506.00	70.850	331.800	8221.86	-128.60	-49.67	147.77	1767823.05	436495.09	39°41'46.388"N	80°12'47.468"W	155.89	108.578	11.98	11.95	1.01
8601.00	79.800	334.240	8245.90	-38.20	32.16	106.16	1767781.44	436576.91	39°41'47.193"N	80°12'48.008"W	110.92	73.146	9.74	9.42	2.57

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Actual Wellpath Report

Fisher 5H AWP Proj: 17657'

Page 5 of 10



REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Slot	Slot #05
Area	Monongalia County, WV	Well	Fisher 5H
Field	Monongalia	Wellbore	Fisher 5H AWB
Facility	Fisher Pad		

WELLPATH DATA (187 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)
8696.00	86.920	334.380	8256.88	54.27	117.14	65.28	1767740.56	436661.88	39°41'48.030"N	80°12'48.540"W	134.10	29.129	7.50	7.49	0.15
8790.00	88.920	334.570	8260.29	146.32	201.91	24.80	1767700.09	436746.64	39°41'48.864"N	80°12'49.067"W	203.42	7.003	2.14	2.13	0.20
8884.00	89.910	331.530	8261.25	238.86	285.68	-17.79	1767657.50	436830.41	39°41'49.689"N	80°12'49.620"W	286.24	356.436	3.40	1.05	-3.23
8979.00	90.220	327.480	8261.15	333.23	367.52	-65.99	1767609.30	436912.25	39°41'50.494"N	80°12'50.245"W	373.40	349.820	4.28	0.33	-4.26
9074.00	90.830	322.500	8260.27	428.14	445.31	-120.48	1767554.82	436990.03	39°41'51.258"N	80°12'50.950"W	461.32	344.861	5.28	0.64	-5.24
9169.00	91.020	320.000	8258.74	523.08	519.38	-179.93	1767495.37	437064.10	39°41'51.986"N	80°12'51.718"W	549.66	340.893	2.64	0.20	-2.63
9263.00	90.580	324.200	8257.43	617.03	593.53	-237.65	1767437.65	437138.24	39°41'52.714"N	80°12'52.464"W	639.34	338.179	4.49	-0.47	4.47
9357.00	90.580	324.140	8256.48	711.01	669.74	-292.67	1767382.63	437214.45	39°41'53.463"N	80°12'53.176"W	730.89	336.395	0.06	0.00	-0.06
9452.00	90.800	325.020	8255.33	805.97	747.15	-347.73	1767327.58	437291.85	39°41'54.224"N	80°12'53.888"W	824.10	335.042	0.95	0.23	0.93
9547.00	90.710	324.200	8254.08	900.92	824.59	-402.74	1767272.57	437369.29	39°41'54.985"N	80°12'54.599"W	917.68	333.968	0.87	-0.09	-0.86
9641.00	90.860	323.250	8252.79	994.90	900.36	-458.35	1767216.97	437445.06	39°41'55.729"N	80°12'55.319"W	1010.31	333.021	1.02	0.16	-1.01
9736.00	90.770	325.360	8251.44	1089.86	977.50	-513.77	1767161.55	437522.19	39°41'56.487"N	80°12'56.035"W	1104.30	332.274	2.22	-0.09	2.22
9830.00	90.460	323.180	8250.43	1183.83	1053.80	-568.66	1767106.67	437598.49	39°41'57.237"N	80°12'56.745"W	1197.44	331.648	2.34	-0.33	-2.32
9925.00	90.740	322.460	8249.44	1278.82	1129.49	-626.06	1767049.26	437674.17	39°41'57.980"N	80°12'57.488"W	1291.39	331.001	0.81	0.29	-0.76
10020.00	90.550	323.260	8248.37	1373.82	1205.21	-683.42	1766991.91	437749.89	39°41'58.724"N	80°12'58.229"W	1385.49	330.444	0.87	-0.20	0.84
10114.00	90.090	322.260	8247.84	1467.81	1280.04	-740.30	1766935.03	437824.71	39°41'59.459"N	80°12'58.964"W	1478.70	329.957	1.17	-0.49	-1.06
10208.00	89.910	319.500	8247.84	1561.74	1352.96	-799.60	1766875.73	437897.63	39°42'00.175"N	80°12'59.730"W	1571.58	329.417	2.94	-0.19	-2.94
10303.00	90.430	318.910	8247.56	1656.53	1424.88	-861.67	1766813.67	437969.55	39°42'00.881"N	80°13'00.532"W	1665.16	328.837	0.83	0.55	-0.62
10398.00	90.280	320.080	8246.97	1751.35	1497.11	-923.37	1766751.97	438041.77	39°42'01.590"N	80°13'01.329"W	1758.97	328.335	1.24	-0.16	1.23
10492.00	90.370	316.660	8246.44	1845.03	1567.36	-985.81	1766689.54	438112.02	39°42'02.279"N	80°13'02.135"W	1851.60	327.832	3.64	0.10	-3.64
10587.00	90.340	318.320	8245.85	1939.58	1637.39	-1050.00	1766625.35	438182.04	39°42'02.966"N	80°13'02.963"W	1945.13	327.329	1.75	-0.03	1.75
10682.00	90.460	324.730	8245.19	2034.50	1711.72	-1109.07	1766566.28	438256.37	39°42'03.696"N	80°13'03.726"W	2039.62	327.060	6.75	0.13	6.75
10776.00	90.220	324.940	8244.63	2128.45	1788.56	-1163.21	1766512.15	438333.21	39°42'04.451"N	80°13'04.427"W	2133.55	326.962	0.34	-0.26	0.22
10871.00	89.820	324.630	8244.59	2223.40	1866.18	-1217.99	1766457.37	438410.81	39°42'05.214"N	80°13'05.136"W	2228.48	326.869	0.53	-0.42	-0.33
10966.00	89.970	325.330	8244.77	2318.34	1943.98	-1272.51	1766402.86	438488.61	39°42'05.978"N	80°13'05.841"W	2323.43	326.792	0.75	0.16	0.74
11060.00	89.780	325.350	8244.97	2412.27	2021.30	-1325.97	1766349.40	438565.92	39°42'06.738"N	80°13'06.533"W	2417.40	326.735	0.20	-0.20	0.02
11155.00	90.000	323.630	8245.16	2507.23	2098.62	-1381.14	1766294.23	438643.25	39°42'07.498"N	80°13'07.247"W	2512.33	326.650	1.83	0.23	-1.81
11250.00	90.490	323.120	8244.75	2602.23	2174.87	-1437.82	1766237.56	438719.48	39°42'08.247"N	80°13'07.980"W	2607.18	326.531	0.74	0.52	-0.54
11344.00	90.620	321.060	8243.84	2696.20	2249.02	-1495.57	1766179.81	438793.64	39°42'08.975"N	80°13'08.726"W	2700.89	326.377	2.20	0.14	-2.19
11438.00	90.620	318.900	8242.82	2790.06	2321.00	-1556.01	1766119.38	438865.61	39°42'09.682"N	80°13'09.507"W	2794.32	326.162	2.30	0.00	-2.30

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Actual Wellpath Report

Fisher 5H AWP Proj: 17657'

Page 6 of 10



REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Slot	Slot #05
Area	Monongalia County, WV	Well	Fisher 5H
Field	Monongalia	Wellbore	Fisher 5H AWP
Facility	Fisher Pad		

WELLPATH DATA (187 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]
11533.00	90.460	319.880	8241.93	2884.87	2393.12	-1617.84	1766057.55	438937.72	39°42'10.390"N	80°13'10.305"W	2888.67	325.940	1.05	-0.17	1.03
11627.00	90.460	321.000	8241.17	2978.77	2465.58	-1677.70	1765997.69	439010.18	39°42'11.101"N	80°13'11.078"W	2982.25	325.767	1.19	0.00	1.19
11722.00	90.250	319.820	8240.58	3073.67	2538.79	-1738.25	1765937.15	439083.39	39°42'11.820"N	80°13'11.860"W	3076.84	325.602	1.26	-0.22	-1.24
11817.00	90.400	320.080	8240.04	3168.53	2611.51	-1799.37	1765876.03	439156.10	39°42'12.534"N	80°13'12.650"W	3171.39	325.433	0.32	0.16	0.27
11911.00	90.520	326.200	8239.29	3262.49	2686.88	-1855.73	1765819.67	439231.27	39°42'13.272"N	80°13'13.379"W	3265.27	325.367	6.51	0.13	6.51
12005.00	90.090	329.010	8238.79	3356.17	2766.04	-1906.09	1765769.32	439310.63	39°42'14.052"N	80°13'14.031"W	3359.19	325.429	3.02	-0.46	2.99
12100.00	90.000	327.590	8238.71	3450.76	2846.87	-1956.00	1765719.40	439391.45	39°42'14.847"N	80°13'14.678"W	3454.07	325.508	1.50	-0.09	-1.49
12195.00	89.690	326.210	8238.97	3545.54	2926.45	-2007.88	1765667.53	439471.02	39°42'15.629"N	80°13'15.350"W	3549.04	325.545	1.49	-0.33	-1.45
12289.00	89.510	325.970	8239.63	3639.40	3004.46	-2060.32	1765615.09	439549.03	39°42'16.396"N	80°13'16.029"W	3643.04	325.559	0.32	-0.19	-0.26
12384.00	89.720	325.930	8240.27	3734.27	3083.17	-2113.51	1765561.90	439627.73	39°42'17.170"N	80°13'16.718"W	3738.03	325.569	0.23	0.22	-0.04
12478.00	89.380	327.130	8241.00	3828.09	3161.58	-2165.35	1765510.07	439706.14	39°42'17.941"N	80°13'17.389"W	3832.01	325.593	1.33	-0.36	1.28
12573.00	89.540	325.050	8241.90	3922.94	3240.41	-2218.35	1765457.08	439784.97	39°42'18.715"N	80°13'18.075"W	3927.00	325.605	2.20	0.17	-2.19
12667.00	89.570	316.130	8242.63	4016.76	3312.96	-2277.96	1765397.47	439857.51	39°42'19.428"N	80°13'18.845"W	4020.55	325.488	9.49	0.03	-9.49
12761.00	89.570	318.700	8243.34	4110.30	3382.17	-2341.56	1765333.87	439926.71	39°42'20.107"N	80°13'19.666"W	4113.63	325.304	2.73	0.00	2.73
12856.00	89.850	320.540	8243.82	4205.13	3454.53	-2403.11	1765272.33	439999.07	39°42'20.817"N	80°13'20.461"W	4208.17	325.176	1.96	0.29	1.94
12951.00	89.630	319.150	8244.25	4299.99	3527.13	-2464.36	1765211.07	440071.67	39°42'21.529"N	80°13'21.252"W	4302.76	325.058	1.48	-0.23	-1.46
13045.00	89.880	319.050	8244.65	4393.77	3598.18	-2525.91	1765149.53	440142.72	39°42'22.227"N	80°13'22.047"W	4396.27	324.931	0.29	0.27	-0.11
13140.00	89.720	320.400	8244.98	4488.61	3670.66	-2587.32	1765088.13	440215.19	39°42'22.938"N	80°13'22.840"W	4490.88	324.821	1.43	-0.17	1.42
13235.00	89.880	323.900	8245.31	4583.58	3745.66	-2645.60	1765029.85	440290.19	39°42'23.675"N	80°13'23.594"W	4585.76	324.766	3.69	0.17	3.68
13330.00	89.510	324.710	8245.82	4678.56	3822.82	-2701.03	1764974.42	440367.33	39°42'24.433"N	80°13'24.311"W	4680.76	324.757	0.94	-0.39	0.85
13424.00	89.880	324.710	8246.32	4772.51	3899.54	-2755.34	1764920.12	440444.05	39°42'25.187"N	80°13'25.013"W	4774.76	324.756	0.39	0.39	0.00
13518.00	90.370	326.740	8246.11	4866.40	3977.21	-2808.27	1764867.19	440521.72	39°42'25.950"N	80°13'25.699"W	4868.74	324.774	2.22	0.52	2.16
13612.00	89.750	324.600	8246.02	4960.29	4054.83	-2861.28	1764814.18	440599.34	39°42'26.713"N	80°13'26.385"W	4962.72	324.791	2.37	-0.66	-2.28
13707.00	89.780	319.530	8246.41	5055.25	4129.73	-2919.66	1764755.80	440674.24	39°42'27.448"N	80°13'27.140"W	5057.58	324.740	5.34	0.03	-5.34
13802.00	89.630	317.930	8246.90	5149.98	4201.13	-2982.32	1764693.15	440745.63	39°42'28.149"N	80°13'27.949"W	5152.07	324.630	1.69	-0.16	-1.68
13896.00	89.570	322.000	8247.55	5243.83	4273.09	-3042.77	1764632.70	440817.58	39°42'28.855"N	80°13'28.730"W	5245.74	324.546	4.33	-0.06	4.33
13991.00	89.260	324.770	8248.52	5338.81	4349.33	-3099.43	1764576.05	440893.82	39°42'29.604"N	80°13'29.462"W	5340.70	324.526	2.93	-0.33	2.92
14085.00	89.110	324.250	8249.86	5432.77	4425.86	-3153.99	1764521.49	440970.34	39°42'30.356"N	80°13'30.168"W	5434.69	324.525	0.58	-0.16	-0.55
14180.00	89.080	325.180	8251.36	5527.71	4503.40	-3208.86	1764466.62	441047.87	39°42'31.118"N	80°13'30.878"W	5529.68	324.528	0.98	-0.03	0.98
14275.00	88.220	324.040	8253.60	5622.65	4580.82	-3263.86	1764411.62	441125.29	39°42'31.879"N	80°13'31.590"W	5624.65	324.530	1.50	-0.91	-1.20

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Actual Wellpath Report

Fisher 5H AWP Proj: 17657'
Page 7 of 10



REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Slot	Slot #05
Area	Monongalia County, WV	Well	Fisher 5H
Field	Monongalia	Wellbore	Fisher 5H AWB
Facility	Fisher Pad		

WELLPATH DATA (187 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]
14370.00	88.890	322.480	8255.99	5717.61	4656.92	-3320.67	1764354.82	441201.39	39°42'32.626"N	80°13'32.325"W	5719.60	324.509	1.79	0.71	-1.64
14464.00	89.050	322.440	8257.68	5811.59	4731.44	-3377.94	1764297.56	441275.91	39°42'33.358"N	80°13'33.065"W	5813.52	324.476	0.18	0.17	-0.04
14559.00	89.570	322.940	8258.83	5906.58	4807.00	-3435.52	1764239.98	441351.46	39°42'34.100"N	80°13'33.810"W	5908.47	324.447	0.76	0.55	0.53
14654.00	89.600	324.490	8259.52	6001.57	4883.57	-3491.73	1764183.77	441428.03	39°42'34.853"N	80°13'34.537"W	6003.46	324.435	1.63	0.03	1.63
14748.00	89.720	323.350	8260.07	6095.56	4959.54	-3547.09	1764128.41	441503.99	39°42'35.599"N	80°13'35.253"W	6097.45	324.427	1.22	0.13	-1.21
14841.00	90.180	325.260	8260.15	6188.53	5035.06	-3601.35	1764074.16	441579.51	39°42'36.341"N	80°13'35.955"W	6190.44	324.426	2.11	0.49	2.05
14936.00	89.510	325.350	8260.41	6283.45	5113.17	-3655.42	1764020.09	441657.61	39°42'37.109"N	80°13'36.655"W	6285.43	324.439	0.71	-0.71	0.09
15031.00	88.800	324.390	8261.81	6378.39	5190.86	-3710.08	1763965.43	441735.29	39°42'37.872"N	80°13'37.363"W	6380.42	324.445	1.26	-0.75	-1.01
15125.00	89.020	325.100	8263.60	6472.33	5267.60	-3764.33	1763911.19	441812.03	39°42'38.626"N	80°13'38.065"W	6474.40	324.450	0.79	0.23	0.76
15220.00	89.350	323.820	8264.95	6567.28	5344.90	-3819.55	1763855.98	441889.32	39°42'39.385"N	80°13'38.779"W	6569.39	324.450	1.39	0.35	-1.35
15314.00	89.820	323.730	8265.63	6661.27	5420.72	-3875.09	1763800.43	441965.15	39°42'40.130"N	80°13'39.498"W	6663.38	324.440	0.51	0.50	-0.10
15409.00	90.180	322.820	8265.63	6756.27	5496.87	-3931.90	1763743.63	442041.28	39°42'40.878"N	80°13'40.233"W	6758.36	324.424	1.03	0.38	-0.96
15504.00	89.660	320.130	8265.77	6851.23	5571.18	-3991.07	1763684.47	442115.59	39°42'41.608"N	80°13'40.997"W	6853.22	324.383	2.88	-0.55	-2.83
15599.00	89.720	320.780	8266.28	6946.13	5644.44	-4051.55	1763623.99	442188.85	39°42'42.327"N	80°13'41.779"W	6948.00	324.329	0.69	0.06	0.68
15693.00	90.220	323.310	8266.33	7040.11	5718.55	-4109.36	1763566.18	442262.95	39°42'43.055"N	80°13'42.526"W	7041.92	324.299	2.74	0.53	2.69
15788.00	90.550	322.700	8265.69	7135.11	5794.42	-4166.52	1763509.02	442338.82	39°42'43.800"N	80°13'43.266"W	7136.89	324.282	0.73	0.35	-0.64
15883.00	89.970	321.560	8265.26	7230.09	5869.41	-4224.84	1763450.71	442413.81	39°42'44.536"N	80°13'44.020"W	7231.82	324.253	1.35	-0.61	-1.20
15978.00	90.280	323.450	8265.05	7325.09	5944.78	-4282.66	1763392.89	442489.17	39°42'45.277"N	80°13'44.767"W	7326.78	324.231	2.02	0.33	1.99
16072.00	88.280	325.990	8266.23	7419.02	6021.50	-4336.94	1763338.61	442565.89	39°42'46.031"N	80°13'45.470"W	7420.75	324.237	3.44	-2.13	2.70
16166.00	89.170	326.290	8268.32	7512.86	6099.54	-4389.30	1763286.25	442643.92	39°42'46.798"N	80°13'46.148"W	7514.68	324.261	1.00	0.95	0.32
16261.00	89.380	324.480	8269.53	7607.76	6177.71	-4443.26	1763232.30	442722.09	39°42'47.566"N	80°13'46.847"W	7609.65	324.275	1.92	0.22	-1.91
16356.00	89.420	322.380	8270.52	7702.75	6254.00	-4499.86	1763175.71	442798.37	39°42'48.315"N	80°13'47.579"W	7704.63	324.264	2.21	0.04	-2.21
16451.00	89.480	322.140	8271.43	7797.74	6329.13	-4558.00	1763117.56	442873.49	39°42'49.053"N	80°13'48.331"W	7799.56	324.240	0.26	0.06	-0.25
16545.00	89.600	322.910	8272.19	7891.73	6403.72	-4615.19	1763060.38	442948.09	39°42'49.785"N	80°13'49.070"W	7893.52	324.220	0.83	0.13	0.82
16640.00	89.600	323.450	8272.85	7986.73	6479.77	-4672.12	1763003.45	443024.13	39°42'50.532"N	80°13'49.807"W	7988.50	324.207	0.57	0.00	0.57
16734.00	90.890	323.910	8272.45	8080.72	6555.51	-4727.80	1762947.78	443099.86	39°42'51.276"N	80°13'50.527"W	8082.49	324.201	1.46	1.37	0.49
16829.00	90.920	324.070	8270.95	8175.69	6632.34	-4783.64	1762891.94	443176.69	39°42'52.031"N	80°13'51.249"W	8177.48	324.199	0.17	0.03	0.17
16924.00	89.850	323.510	8270.31	8270.68	6708.99	-4839.76	1762835.82	443253.33	39°42'52.784"N	80°13'51.975"W	8272.48	324.194	1.27	-1.13	-0.59
17019.00	89.940	322.180	8270.49	8365.68	6784.70	-4897.14	1762778.45	443329.04	39°42'53.528"N	80°13'52.718"W	8367.45	324.179	1.40	0.09	-1.40
17113.00	89.720	320.520	8270.76	8459.63	6858.11	-4955.84	1762719.75	443402.45	39°42'54.249"N	80°13'53.476"W	8461.33	324.147	1.78	-0.23	-1.77



Actual Wellpath Report

Fisher 5H AWP Proj: 17657'

Page 8 of 10



REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Slot	Slot #05
Area	Monongalia County, WV	Well	Fisher 5H
Field	Monongalia	Wellbore	Fisher 5H AWB
Facility	Fisher Pad		

WELLPATH DATA (187 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]
17208.00	89.600	321.490	8271.33	8554.57	6931.95	-5015.62	1762659.97	443476.28	39°42'54.973"N	80°13'54.249"W	8556.19	324.112	1.03	-0.13	1.02
17302.00	88.650	319.700	8272.76	8648.47	7004.56	-5075.28	1762600.32	443548.89	39°42'55.686"N	80°13'55.020"W	8649.99	324.074	2.16	-1.01	-1.90
17397.00	87.750	318.650	8275.75	8743.21	7076.42	-5137.36	1762538.24	443620.74	39°42'56.391"N	80°13'55.822"W	8744.60	324.021	1.46	-0.95	-1.11
17492.00	88.280	316.040	8279.04	8837.69	7146.23	-5201.68	1762473.92	443690.55	39°42'57.076"N	80°13'56.652"W	8838.90	323.949	2.80	0.56	-2.75
17586.00	88.370	317.060	8281.79	8931.05	7214.45	-5266.30	1762409.31	443758.76	39°42'57.745"N	80°13'57.486"W	8932.08	323.872	1.09	0.10	1.09
17632.00	88.430	318.560	8283.07	8976.84	7248.51	-5297.18	1762378.43	443792.83	39°42'58.079"N	80°13'57.885"W	8977.81	323.841	3.26	0.13	3.26
17657.00	88.430	318.560	8283.76	9001.76	7267.25	-5313.72	1762361.89	443811.56	39°42'58.263"N	80°13'58.099"W	9002.69	323.826	0.00	0.00	0.00

HOLE & CASING SECTIONS - Ref Wellbore: Fisher 5H AWB Ref Wellpath: Fisher 5H AWP Proj: 17657'									
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	32.00	72.00	40.00	32.00	72.00	0.00	0.00	0.02	0.01
17.5in Open Hole	72.00	1490.00	1418.00	72.00	1489.99	0.02	0.01	0.84	-3.24
13.375in Casing Surface	32.00	1460.00	1428.00	32.00	1459.99	0.00	0.00	0.94	-3.29
12.25in Open Hole	1490.00	2712.00	1222.00	1489.99	2711.50	0.84	-3.24	-28.47	7.85
9.625in Casing Intermediate	32.00	2682.00	2650.00	32.00	2681.51	0.00	0.00	-27.86	7.77
8.75in Open Hole	2712.00	6358.00	3646.00	2711.50	6356.66	-28.47	7.85	-6.50	-47.31
8.5in Open Hole	6358.00	17657.00	11299.00	6356.66	8283.76	-6.50	-47.31	7267.25	-5313.72
5.5in Casing Production	32.00	17657.00	17625.00	32.00	8283.76	0.00	0.00	7267.25	-5313.72

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Actual Wellpath Report

Fisher 5H AWP Proj: 17657'

Page 9 of 10



REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Slot	Slot #05
Area	Monongalia County, WV	Well	Fisher 5H
Field	Monongalia	Wellbore	Fisher 5H AWB
Facility	Fisher Pad		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Fisher 5H BHL Rev-3	8250.00	7286.66	-5289.04	1762386.57	443830.97	39°42'58.457"N	80°13'57.785"W	point
Fisher 5H LP Rev-3	8250.00	168.29	57.30	1767732.58	436713.03	39°41'48.535"N	80°12'48.647"W	point
Fisher 5H LP Plat2	8266.00	176.86	68.66	1767743.95	436721.60	39°41'48.620"N	80°12'48.503"W	point

WELLPATH COMPOSITION - Ref Wellbore: Fisher 5H AWB					Ref Wellpath: Fisher 5H AWP Proj: 17657'	
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment		Wellbore	
32.00	6336.00	VESSI GyroFlex v4	01_VES Gyro <8-3/4"> (100'-6320')		Fisher 5H AWB	
6336.00	17632.00	BHI AutoTrak Curve (Short)	02_BHI AT Curve <8-1/2"> (6336')(6428'-17632')		Fisher 5H AWB	
17632.00	17657.00	Blind Drilling (std)	Projection to bit		Fisher 5H AWB	

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Page 10 of 10



REFERENCE WELLPATH IDENTIFICATION

Operator	NORTHEAST NATURAL ENERGY, LLC	Slot	Slot #05
Area	Monongalia County, WV	Well	Fisher 5H
Field	Monongalia	Wellbore	Fisher 5H AWB
Facility	Fisher Pad		

COMMENTS

Wellpath general comments

API: 47-061-01735-0000

BHI Job #: 8390743

Rig: Nabors X08

Duration: 2/9/2017-2/16/2017

VES Gyro <8-3/4"> (100'-6320')

BHI AT Curve <8-1/2"> (6336')(6428'-17632')

Projected MD at TD: 17657'

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