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# NORTHEAST NATURAL ENERGY, LLC

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

Slot: Slot 9H  
Well: ERP 9H  
Wellbore: ERP 9H AWB



Plot reference wellpath is ERP 9H awp Proj: 22950'	Grid System: NAD83 / Lambert West Virginia SP, Northern Zone (4701), US feet
True vertical depths are referenced to Patterson 873 (KB)	North Reference: Grid north
Reference wellpath measured depths are referenced to Patterson 873 (KB)	Scale: True distance
Patterson 873 (KB) to Mean Sea Level: 1366.5 feet	Coordinates are in feet referenced to Slot
Mean Sea Level to Ground level (At Slot: Slot 9H): -1338 feet	Depths are in feet
Offset wellpath MDs are referenced to each path's default MD datum	Created by: tranlam on 2025-02-11; Database: WA_MPL_EASTERNUS_Defn

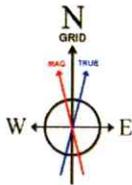
### Location Information

Facility Name			Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
ERP Pad			1750811.960	428438.070	39°40'25.3685"N	80°16'24.2106"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Slot 9H	-9.75	34.83	1750846.790	428428.320	39°40'25.2751"N	80°16'23.7641"W
Patterson 873 (KB) to Ground level (At Slot: Slot 9H)					28.5ft	
Mean Sea Level to Ground level (At Slot: Slot 9H)					-1338ft	
Patterson 873 (KB) to Mean Sea Level					1366.5ft	

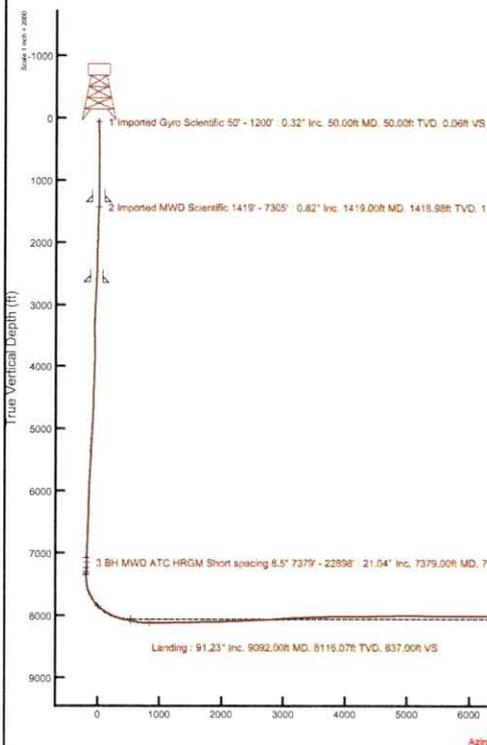
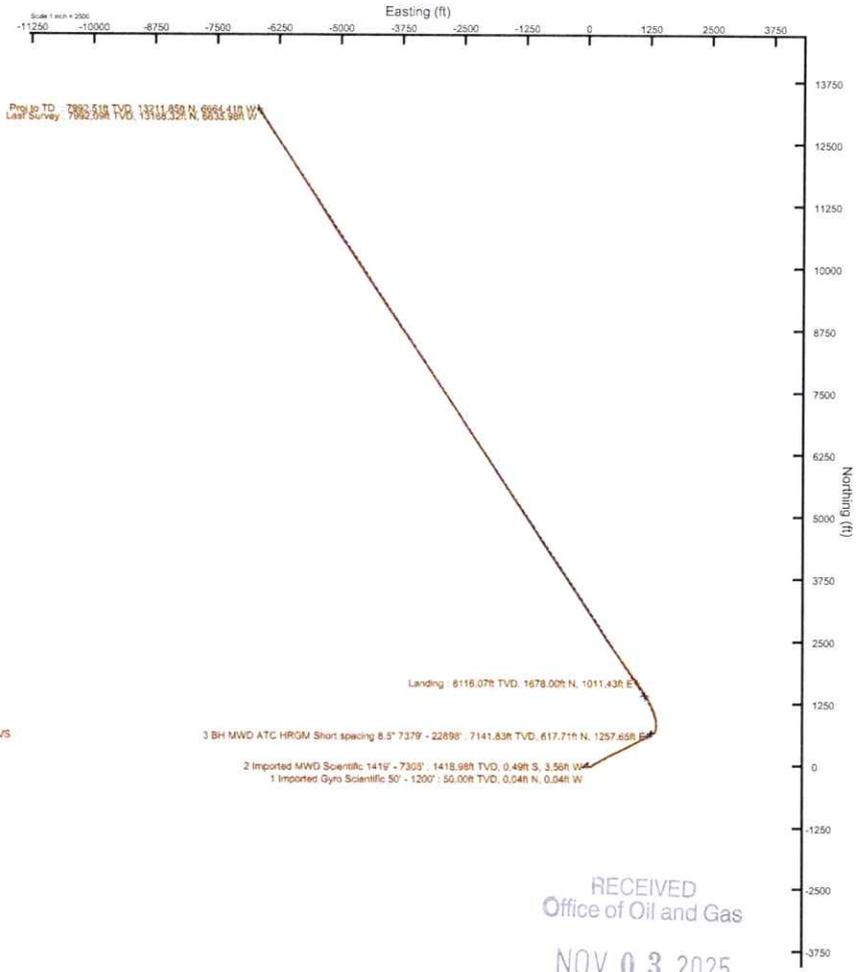
### Bottom Hole Location

MD (ft)	Inc. (°)	Az. (°)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
22950.00	89.540	326.850	7992.51	13211.85	-6664.41	1744182.79	441639.37	39°42'35.2650"N	80°17'50.4913"W

**API: 47061019610000.00**  
**BH JOB: 112536636**  
**DURATION: 2/3/2025 - 2/9/2025**  
**RIG: Patterson 873**



HDGM2024v1.0 (1900.0 to 2025.0) Dip: 66.19° Field: 51509.1 nT  
 Magnetic North is 9.01 degrees West of True North (at 12/31/2024)  
 Grid North is 0.49 degrees West of True North  
 To correct azimuth from True to Grid add 0.49 degrees  
 To correct azimuth from Magnetic to Grid subtract 8.52 degrees



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WV Department of  
Environmental Protection

03/13/2026



# Actual Wellpath Report

ERP 9H awp Proj: 22950'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	ERP 9H
Field	Monongalia	API	47-061-01961-00-00
Facility	ERP Pad	Wellbore	ERP 9H AWB
Slot	Slot 9H		

REPORT SETUP INFORMATION			
Projection System	NAD83 / Lambert West Virginia SP, Northern Zone (4701), US feet	Software System	WellArchitect® 6.0
North Reference	Grid	User	Tranlam
Scale	0.999941	Report Generated	2/11/2025 at 10:23:57 AM
Convergence at slot	0.49° 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	-9.75	34.83	1750846.79	428428.32	39°40'25.2751"N	80°16'23.7641"W
Facility Reference Pt			1750811.96	428438.07	39°40'25.3685"N	80°16'24.2106"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 873 (KB) to Facility Vertical Datum	1366.50ft
Horizontal Reference Pt	Slot	Patterson 873 (KB) to Mean Sea Level	1366.50ft
Vertical Reference Pt	Patterson 873 (KB)	Patterson 873 (KB) to Ground Level at Slot (Slot 9H)	28.50ft
MD Reference Pt	Patterson 873 (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	326.37°

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# Actual Wellpath Report

ERP 9H awp Proj: 22950'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	ERP 9H
Field	Monongalia	API	47-061-01961-00-00
Facility	ERP Pad	Wellbore	ERP 9H AWB
Slot	Slot 9H		

WELLPATH DATA (257 stations) † = interpolated, ‡ = extrapolated station													
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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]
0.00†	0.000	317.520	0.00	0.00	0.00	0.00	1750846.79	428428.32	39°40'25.2751"N	80°16'23.7641"W	0.00	0.000	0.00
28.50	0.000	317.520	28.50	0.00	0.00	0.00	1750846.79	428428.32	39°40'25.2751"N	80°16'23.7641"W	0.00	0.000	0.00
50.00	0.320	317.520	50.00	0.06	0.04	-0.04	1750846.75	428428.36	39°40'25.2755"N	80°16'23.7646"W	0.06	317.520	1.49
100.00	0.310	297.680	100.00	0.32	0.21	-0.25	1750846.54	428428.53	39°40'25.2771"N	80°16'23.7674"W	0.33	309.526	0.22
150.00	0.290	306.370	150.00	0.55	0.35	-0.48	1750846.31	428428.67	39°40'25.2785"N	80°16'23.7702"W	0.59	306.150	0.10
200.00	0.290	317.590	200.00	0.80	0.52	-0.66	1750846.13	428428.84	39°40'25.2801"N	80°16'23.7726"W	0.84	307.894	0.11
250.00	0.220	282.240	250.00	0.99	0.63	-0.84	1750845.95	428428.95	39°40'25.2812"N	80°16'23.7749"W	1.05	306.791	0.34
300.00	0.230	291.770	300.00	1.14	0.69	-1.03	1750845.76	428429.01	39°40'25.2818"N	80°16'23.7773"W	1.24	303.741	0.08
350.00	0.210	300.500	350.00	1.31	0.77	-1.20	1750845.59	428429.09	39°40'25.2826"N	80°16'23.7795"W	1.43	302.698	0.08
400.00	0.200	287.960	400.00	1.46	0.84	-1.36	1750845.43	428429.16	39°40'25.2833"N	80°16'23.7816"W	1.60	301.779	0.09
450.00	0.220	293.350	450.00	1.61	0.91	-1.53	1750845.26	428429.23	39°40'25.2839"N	80°16'23.7838"W	1.78	300.658	0.06
500.00	0.220	241.970	500.00	1.70	0.90	-1.71	1750845.08	428429.22	39°40'25.2838"N	80°16'23.7860"W	1.93	297.862	0.38
550.00	0.200	265.980	550.00	1.75	0.85	-1.88	1750844.91	428429.17	39°40'25.2833"N	80°16'23.7882"W	2.06	294.374	0.18
600.00	0.240	253.350	599.99	1.82	0.82	-2.07	1750844.72	428429.14	39°40'25.2829"N	80°16'23.7906"W	2.22	291.530	0.13
650.00	0.250	263.800	649.99	1.90	0.77	-2.28	1750844.51	428429.09	39°40'25.2825"N	80°16'23.7933"W	2.40	288.776	0.09
700.00	0.220	264.490	699.99	2.00	0.75	-2.48	1750844.31	428429.07	39°40'25.2823"N	80°16'23.7959"W	2.59	286.884	0.06
750.00	0.280	233.610	749.99	2.04	0.67	-2.67	1750844.12	428428.99	39°40'25.2815"N	80°16'23.7983"W	2.76	284.088	0.29
800.00	0.310	212.180	799.99	1.98	0.48	-2.84	1750843.95	428428.80	39°40'25.2796"N	80°16'23.8005"W	2.88	279.658	0.23
850.00	0.340	194.130	849.99	1.82	0.23	-2.95	1750843.84	428428.55	39°40'25.2770"N	80°16'23.8019"W	2.96	274.371	0.21
900.00	0.330	189.290	899.99	1.62	-0.06	-3.01	1750843.78	428428.26	39°40'25.2742"N	80°16'23.8026"W	3.01	268.853	0.06
950.00	0.300	169.280	949.99	1.39	-0.33	-3.01	1750843.78	428427.99	39°40'25.2715"N	80°16'23.8025"W	3.03	263.725	0.23
1000.00	0.250	72.050	999.99	1.24	-0.43	-2.88	1750843.91	428427.89	39°40'25.2706"N	80°16'23.8009"W	2.91	261.593	0.83
1050.00	0.480	349.240	1049.99	1.41	-0.19	-2.82	1750843.97	428428.13	39°40'25.2730"N	80°16'23.8001"W	2.82	266.210	1.03
1100.00	0.490	324.350	1099.99	1.81	0.19	-2.98	1750843.81	428428.51	39°40'25.2767"N	80°16'23.8022"W	2.99	273.701	0.42
1150.00	0.480	283.800	1149.99	2.18	0.42	-3.31	1750843.48	428428.74	39°40'25.2789"N	80°16'23.8064"W	3.34	277.173	0.67
1200.00	0.320	315.400	1199.98	2.47	0.57	-3.61	1750843.18	428428.89	39°40'25.2803"N	80°16'23.8103"W	3.66	278.907	0.53
1419.00	0.820	162.200	1418.98	1.56	-0.49	-3.56	1750843.23	428427.83	39°40'25.2699"N	80°16'23.8096"W	3.59	262.154	0.51
1510.00	1.810	136.140	1509.95	-0.48	-2.15	-2.37	1750844.42	428426.17	39°40'25.2536"N	80°16'23.7941"W	3.20	227.784	1.24
1601.00	2.790	131.180	1600.88	-4.03	-4.64	0.30	1750847.09	428423.68	39°40'25.2292"N	80°16'23.7598"W	4.65	176.347	1.10
1692.00	2.700	118.820	1691.78	-8.07	-7.13	3.84	1750850.63	428421.19	39°40'25.2049"N	80°16'23.7142"W	8.10	151.698	0.66

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# Actual Wellpath Report

ERP 9H awp Proj: 22950'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	ERP 9H
Field	Monongalia	API	47-061-01961-00-00
Facility	ERP Pad	Wellbore	ERP 9H AWB
Slot	Slot 9H		

## WELLPATH DATA (257 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]
1783.00	2.140	96.520	1782.70	-11.06	-8.36	7.41	1750854.20	428419.96	39°40'25.1931"N	80°16'23.6684"W	11.17	138.456	1.19
1873.00	2.350	86.150	1872.63	-13.06	-8.43	10.92	1750857.71	428419.89	39°40'25.1927"N	80°16'23.6235"W	13.79	127.661	0.51
1964.00	2.340	111.330	1963.55	-15.51	-8.98	14.51	1750861.30	428419.34	39°40'25.1876"N	80°16'23.5775"W	17.06	121.743	1.12
2055.00	1.600	126.920	2054.50	-18.23	-10.42	17.26	1750864.04	428417.91	39°40'25.1736"N	80°16'23.5423"W	20.16	121.115	1.00
2148.00	0.900	123.770	2147.48	-20.13	-11.60	18.90	1750865.69	428416.72	39°40'25.1620"N	80°16'23.5211"W	22.18	121.541	0.76
2243.00	0.840	99.590	2242.47	-21.29	-12.13	20.21	1750867.00	428416.19	39°40'25.1569"N	80°16'23.5043"W	23.57	120.979	0.39
2338.00	1.670	94.040	2337.44	-22.62	-12.35	22.28	1750869.06	428415.98	39°40'25.1549"N	80°16'23.4778"W	25.47	118.997	0.88
2434.00	2.250	89.560	2433.39	-24.50	-12.43	25.56	1750872.34	428415.89	39°40'25.1544"N	80°16'23.4359"W	28.42	115.938	0.62
2529.00	3.180	99.190	2528.28	-27.31	-12.84	30.02	1750876.81	428415.48	39°40'25.1508"N	80°16'23.3787"W	32.65	113.150	1.09
2613.00	3.750	104.590	2612.13	-30.95	-13.90	34.98	1750881.77	428414.42	39°40'25.1407"N	80°16'23.3152"W	37.64	111.672	0.78
2696.00	3.330	104.100	2694.97	-34.75	-15.17	39.94	1750886.73	428413.15	39°40'25.1285"N	80°16'23.2516"W	42.73	110.797	0.51
2736.00	3.780	104.600	2734.89	-36.60	-15.79	42.35	1750889.13	428412.53	39°40'25.1226"N	80°16'23.2208"W	45.19	110.445	1.13
2828.00	4.340	100.030	2826.66	-41.26	-17.16	48.71	1750895.50	428411.16	39°40'25.1096"N	80°16'23.1393"W	51.64	109.404	0.70
2919.00	4.230	95.280	2917.41	-45.75	-18.07	55.44	1750902.23	428410.26	39°40'25.1012"N	80°16'23.0531"W	58.31	108.048	0.41
3010.00	4.280	95.560	3008.15	-50.00	-18.70	62.16	1750908.95	428409.62	39°40'25.0955"N	80°16'22.9670"W	64.92	106.745	0.06
3101.00	3.830	93.930	3098.93	-54.00	-19.24	68.58	1750915.36	428409.08	39°40'25.0907"N	80°16'22.8850"W	71.22	105.673	0.51
3192.00	5.140	79.700	3189.65	-57.47	-18.72	75.62	1750922.40	428409.60	39°40'25.0965"N	80°16'22.7950"W	77.90	103.905	1.88
3283.00	6.870	66.980	3280.15	-60.08	-15.86	84.64	1750931.42	428412.46	39°40'25.1255"N	80°16'22.6799"W	86.11	100.615	2.39
3374.00	7.640	54.000	3370.43	-60.84	-10.18	94.54	1750941.33	428418.14	39°40'25.1825"N	80°16'22.5539"W	95.09	96.145	1.98
3465.00	7.810	48.270	3460.60	-59.71	-2.51	104.05	1750950.84	428425.81	39°40'25.2591"N	80°16'22.4331"W	104.08	91.380	0.87
3560.00	9.020	50.060	3554.58	-57.99	6.57	114.58	1750961.36	428434.89	39°40'25.3497"N	80°16'22.2995"W	114.77	86.718	1.30
3651.00	10.730	51.480	3644.23	-56.48	16.43	126.68	1750973.46	428444.75	39°40'25.4482"N	80°16'22.1459"W	127.74	82.612	1.90
3742.00	12.810	56.500	3733.31	-55.78	27.27	141.72	1750988.50	428455.59	39°40'25.5566"N	80°16'21.9547"W	144.32	79.107	2.55
3833.00	15.440	59.040	3821.55	-56.37	39.07	160.52	1751007.30	428467.39	39°40'25.6748"N	80°16'21.7155"W	165.21	76.319	2.97
3924.00	17.340	61.180	3908.85	-58.07	51.84	182.79	1751029.57	428480.16	39°40'25.8029"N	80°16'21.4321"W	190.00	74.166	2.19
4015.00	20.020	63.150	3995.05	-61.05	65.42	208.58	1751055.35	428493.73	39°40'25.9393"N	80°16'21.1039"W	218.60	72.586	3.03
4106.00	21.870	61.510	4080.03	-64.40	80.54	237.37	1751084.15	428508.86	39°40'26.0912"N	80°16'20.7373"W	250.67	71.258	2.13
4198.00	21.390	59.940	4165.56	-66.98	97.12	266.96	1751113.73	428525.43	39°40'26.2575"N	80°16'20.3608"W	284.07	70.009	0.82
4293.00	20.660	61.770	4254.23	-69.64	113.72	296.72	1751143.49	428542.04	39°40'26.4241"N	80°16'19.9820"W	317.76	69.030	1.03
4389.00	20.560	64.520	4344.09	-73.62	128.99	326.85	1751173.62	428557.30	39°40'26.5775"N	80°16'19.5983"W	351.38	68.464	1.01

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# Actual Wellpath Report

ERP 9H awp Proj: 22950'  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	NORTHEAST NATURAL ENERGY, LLC	Well	ERP 9H
Field	Monongalia	API	47-061-01961-00-00
Facility	ERP Pad	Wellbore	ERP 9H AWB
Slot	Slot 9H		

## WELLPATH DATA (257 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]
4484.00	20.520	62.400	4433.05	-77.74	143.88	356.67	1751203.44	428572.19	39°40'26.7272"N	80°16'19.2186"W	384.60	68.031	0.78
4583.00	20.080	57.950	4525.91	-80.03	160.93	386.45	1751233.22	428589.25	39°40'26.8983"N	80°16'18.8396"W	418.62	67.391	1.62
4679.00	18.760	57.820	4616.45	-80.87	177.90	413.49	1751260.25	428606.21	39°40'27.0683"N	80°16'18.4957"W	450.13	66.720	1.38
4773.00	19.160	61.680	4705.35	-82.68	193.27	439.86	1751286.63	428621.58	39°40'27.2224"N	80°16'18.1601"W	480.45	66.280	1.40
4868.00	20.850	63.280	4794.61	-86.16	208.27	468.69	1751315.45	428636.58	39°40'27.3731"N	80°16'17.7931"W	512.88	66.041	1.87
4963.00	21.250	64.910	4883.28	-90.75	223.17	499.38	1751346.14	428651.48	39°40'27.5230"N	80°16'17.4022"W	546.98	65.920	0.75
5058.00	21.400	64.530	4971.77	-95.77	237.93	530.62	1751377.38	428666.23	39°40'27.6714"N	80°16'17.0044"W	581.52	65.849	0.21
5153.00	21.450	63.440	5060.21	-100.37	253.15	561.80	1751408.56	428681.45	39°40'27.8245"N	80°16'16.6072"W	616.20	65.744	0.42
5247.00	21.510	65.400	5147.68	-105.19	268.00	592.85	1751439.60	428696.31	39°40'27.9740"N	80°16'16.2119"W	650.61	65.674	0.77
5342.00	20.510	65.320	5236.36	-110.51	282.20	623.81	1751470.56	428710.51	39°40'28.1169"N	80°16'15.8175"W	684.67	65.658	1.05
5437.00	20.300	62.980	5325.40	-115.00	296.64	653.61	1751500.36	428724.94	39°40'28.2621"N	80°16'15.4379"W	717.78	65.589	0.89
5537.00	20.460	63.140	5419.14	-119.05	312.42	684.66	1751531.40	428740.72	39°40'28.4207"N	80°16'15.0426"W	752.57	65.472	0.17
5632.00	20.630	64.560	5508.10	-123.39	327.11	714.58	1751561.33	428755.41	39°40'28.5684"N	80°16'14.6615"W	785.89	65.403	0.55
5727.00	21.900	64.570	5596.63	-128.31	341.91	745.70	1751592.44	428770.21	39°40'28.7173"N	80°16'14.2652"W	820.34	65.368	1.34
5823.00	22.710	65.250	5685.45	-133.72	357.35	778.69	1751625.44	428785.65	39°40'28.8727"N	80°16'13.8449"W	856.78	65.349	0.89
5917.00	22.280	63.150	5772.30	-138.62	373.00	811.07	1751657.81	428801.29	39°40'29.0301"N	80°16'13.4326"W	892.73	65.303	0.97
6012.00	22.880	61.890	5860.01	-142.53	389.83	843.43	1751690.17	428818.13	39°40'29.1992"N	80°16'13.0206"W	929.16	65.194	0.81
6106.00	22.660	60.810	5946.69	-145.69	407.27	875.36	1751722.09	428835.57	39°40'29.3743"N	80°16'12.6142"W	965.46	65.049	0.50
6197.00	20.950	61.140	6031.17	-148.40	423.68	904.91	1751751.64	428851.97	39°40'29.5389"N	80°16'12.2381"W	999.18	64.911	1.88
6288.00	18.650	62.340	6116.79	-151.26	438.29	932.05	1751778.78	428866.58	39°40'29.6855"N	80°16'11.8926"W	1029.96	64.815	2.57
6378.00	17.700	62.990	6202.30	-154.34	451.18	956.98	1751803.72	428879.47	39°40'29.8151"N	80°16'11.5751"W	1058.01	64.758	1.08
6469.00	17.200	60.830	6289.11	-156.98	464.02	981.06	1751827.79	428892.31	39°40'29.9440"N	80°16'11.2687"W	1085.26	64.687	0.90
6563.00	17.230	58.670	6378.90	-158.62	478.03	1005.09	1751851.81	428906.32	39°40'30.0845"N	80°16'10.9629"W	1112.97	64.564	0.68
6654.00	18.470	62.430	6465.52	-160.68	491.71	1029.38	1751876.10	428920.00	39°40'30.2218"N	80°16'10.6538"W	1140.79	64.467	1.86
6745.00	19.990	62.800	6551.44	-163.94	505.50	1055.99	1751902.72	428933.79	39°40'30.3602"N	80°16'10.3149"W	1170.74	64.420	1.68
6835.00	20.520	62.930	6635.88	-167.47	519.71	1083.72	1751930.44	428948.00	39°40'30.5030"N	80°16'9.9619"W	1201.89	64.380	0.59
6926.00	21.910	62.430	6720.71	-171.08	534.82	1112.97	1751959.70	428963.11	39°40'30.6549"N	80°16'9.5894"W	1234.81	64.334	1.54
7018.00	22.950	60.800	6805.75	-174.28	551.52	1143.85	1751990.57	428979.81	39°40'30.8225"N	80°16'9.1964"W	1269.87	64.258	1.32
7114.00	22.160	60.910	6894.40	-177.16	569.45	1176.01	1752022.73	428997.74	39°40'31.0025"N	80°16'8.7870"W	1306.63	64.163	0.82
7209.00	21.220	60.080	6982.68	-179.69	586.74	1206.57	1752053.28	429015.02	39°40'31.1759"N	80°16'8.3981"W	1341.67	64.067	1.04

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# Actual Wellpath Report

ERP 9H awp Proj: 22950'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	ERP 9H
Field	Monongalia	API	47-061-01961-00-00
Facility	ERP Pad	Wellbore	ERP 9H AWB
Slot	Slot 9H		

## WELLPATH DATA (257 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]
7305.00	20.010	58.050	7072.53	-181.30	604.10	1235.56	1752082.28	429032.38	39°40'31.3499"N	80°16'8.0292"W	1375.34	63.945	1.46
7379.00	21.040	58.650	7141.83	-182.20	617.71	1257.65	1752104.36	429045.99	39°40'31.4863"N	80°16'7.7482"W	1401.16	63.841	1.42
7475.00	20.240	60.900	7231.67	-184.19	634.75	1286.88	1752133.59	429063.03	39°40'31.6571"N	80°16'7.3763"W	1434.91	63.745	1.17
7547.00	19.480	64.170	7299.39	-186.81	646.04	1308.57	1752155.28	429074.32	39°40'31.7705"N	80°16'7.1002"W	1459.35	63.724	1.87
7570.00	19.060	64.030	7321.10	-187.83	649.36	1315.40	1752162.10	429077.64	39°40'31.8039"N	80°16'7.0132"W	1466.94	63.726	1.84
7666.00	20.740	52.700	7411.40	-188.83	666.53	1343.02	1752189.73	429094.81	39°40'31.9759"N	80°16'6.6618"W	1499.32	63.605	4.37
7761.00	23.980	39.190	7499.30	-182.04	691.71	1368.62	1752215.33	429119.98	39°40'32.2269"N	80°16'6.3371"W	1533.49	63.188	6.37
7856.00	28.630	16.650	7584.65	-161.74	728.59	1387.40	1752234.11	429156.86	39°40'32.5930"N	80°16'6.1010"W	1567.07	62.294	11.51
7952.00	33.290	0.540	7667.10	-125.16	777.08	1394.25	1752240.96	429205.35	39°40'33.0728"N	80°16'6.0186"W	1596.18	60.867	9.87
8047.00	38.090	358.130	7744.23	-78.64	832.47	1393.54	1752240.25	429260.74	39°40'33.6201"N	80°16'6.0338"W	1623.26	59.147	5.26
8142.00	47.170	355.510	7814.06	-23.18	896.62	1389.85	1752236.56	429324.89	39°40'34.2538"N	80°16'6.0880"W	1653.97	57.173	9.74
8237.00	52.720	349.290	7875.21	42.15	968.59	1380.09	1752226.79	429396.85	39°40'34.9642"N	80°16'6.2208"W	1686.06	54.938	7.69
8332.00	58.540	343.210	7928.85	115.85	1044.63	1361.33	1752208.04	429472.88	39°40'35.7141"N	80°16'6.4689"W	1715.95	52.499	8.09
8426.00	62.240	339.310	7975.30	194.80	1121.97	1335.04	1752181.75	429550.22	39°40'36.4761"N	80°16'6.8137"W	1743.89	49.956	5.34
8521.00	68.410	337.690	8014.94	279.16	1202.23	1303.39	1752150.10	429630.48	39°40'37.2667"N	80°16'7.2272"W	1773.19	47.312	6.68
8617.00	74.360	333.670	8045.58	368.89	1285.06	1265.90	1752112.61	429713.30	39°40'38.0820"N	80°16'7.7158"W	1803.85	44.570	7.36
8712.00	78.190	328.250	8068.14	460.83	1365.68	1221.10	1752067.81	429793.91	39°40'38.8750"N	80°16'8.2976"W	1831.98	41.801	6.85
8806.00	79.910	326.360	8085.99	553.10	1443.33	1171.25	1752017.96	429871.57	39°40'39.6382"N	80°16'8.9436"W	1858.77	39.059	2.69
8902.00	81.350	326.010	8101.62	647.81	1522.03	1118.53	1751965.26	429950.25	39°40'40.4114"N	80°16'9.6264"W	1888.83	36.312	1.54
8997.00	84.980	325.100	8112.93	742.11	1599.80	1065.19	1751911.91	430028.02	39°40'41.1755"N	80°16'10.3172"W	1921.97	33.657	3.94
9092.00	91.230	325.890	8116.07	837.00	1678.00	1011.43	1751858.16	430106.22	39°40'41.9438"N	80°16'11.0133"W	1959.26	31.080	6.63
9187.00	90.860	325.080	8114.33	931.97	1756.27	957.61	1751804.34	430184.48	39°40'42.7127"N	80°16'11.7101"W	2000.37	28.602	0.94
9282.00	90.220	324.100	8113.44	1026.92	1833.69	902.57	1751749.30	430261.90	39°40'43.4731"N	80°16'12.4226"W	2043.78	26.207	1.23
9377.00	90.710	324.900	8112.67	1121.87	1911.03	847.41	1751694.14	430339.23	39°40'44.2328"N	80°16'13.1366"W	2090.48	23.914	0.99
9473.00	90.620	325.470	8111.55	1217.84	1989.84	792.60	1751639.34	430418.04	39°40'45.0070"N	80°16'13.8462"W	2141.89	21.719	0.60
9568.00	91.140	325.770	8110.09	1312.82	2068.23	738.96	1751585.71	430496.43	39°40'45.7772"N	80°16'14.5408"W	2196.28	19.661	0.63
9664.00	91.970	325.480	8107.49	1408.77	2147.44	684.78	1751531.53	430575.63	39°40'46.5553"N	80°16'15.2424"W	2253.98	17.687	0.92
9759.00	91.290	324.530	8104.79	1503.71	2225.23	630.32	1751477.07	430653.41	39°40'47.3195"N	80°16'15.9475"W	2312.78	15.815	1.23
9855.00	91.420	323.020	8102.52	1599.58	2302.65	573.61	1751420.36	430730.83	39°40'48.0797"N	80°16'16.6813"W	2373.02	13.988	1.58
9950.00	91.170	325.190	8100.37	1694.48	2379.58	517.93	1751364.68	430807.76	39°40'48.8353"N	80°16'17.4019"W	2435.30	12.279	2.30

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# Actual Wellpath Report

ERP 9H awp Proj: 22950'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	ERP 9H
Field	Monongalia	API	47-061-01961-00-00
Facility	ERP Pad	Wellbore	ERP 9H AWB
Slot	Slot 9H		

## WELLPATH DATA (257 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]
10046.00	91.230	323.340	8098.36	1790.39	2457.49	461.87	1751308.63	430885.66	39°40'49.6005"N	80°16'18.1274"W	2500.52	10.644	1.93
10141.00	91.050	325.480	8096.47	1885.31	2534.72	406.60	1751253.36	430962.89	39°40'50.3590"N	80°16'18.8428"W	2567.13	9.113	2.26
10236.00	91.570	326.840	8094.30	1980.28	2613.61	353.71	1751200.48	431041.77	39°40'51.1341"N	80°16'19.5279"W	2637.43	7.707	1.53
10332.00	91.510	326.820	8091.72	2076.24	2693.94	301.21	1751147.98	431122.09	39°40'51.9235"N	80°16'20.2083"W	2710.72	6.380	0.07
10427.00	92.250	326.590	8088.60	2171.19	2773.30	249.08	1751095.86	431201.45	39°40'52.7034"N	80°16'20.8836"W	2784.46	5.132	0.82
10522.00	92.990	326.580	8084.26	2266.09	2852.51	196.82	1751043.60	431280.66	39°40'53.4818"N	80°16'21.5608"W	2859.29	3.947	0.78
10617.00	92.650	325.660	8079.58	2360.97	2931.28	143.93	1750990.71	431359.43	39°40'54.2557"N	80°16'22.2459"W	2934.82	2.811	1.03
10713.00	92.590	326.020	8075.19	2456.86	3010.64	90.08	1750936.86	431438.78	39°40'55.0354"N	80°16'22.9434"W	3011.99	1.714	0.38
10808.00	92.490	327.350	8070.98	2551.77	3089.95	37.96	1750884.74	431518.08	39°40'55.8147"N	80°16'23.6188"W	3090.18	0.704	1.40
10903.00	92.460	326.910	8066.88	2646.67	3169.66	-13.56	1750833.23	431597.79	39°40'56.5981"N	80°16'24.2864"W	3169.69	359.755	0.46
10999.00	92.960	326.300	8062.34	2742.56	3249.72	-66.34	1750780.46	431677.85	39°40'57.3848"N	80°16'24.9703"W	3250.40	358.831	0.82
11093.00	94.280	326.650	8056.41	2836.37	3327.93	-118.15	1750728.65	431756.05	39°40'58.1533"N	80°16'25.6416"W	3330.02	357.967	1.45
11188.00	94.440	326.660	8049.19	2931.09	3407.06	-170.22	1750676.58	431835.17	39°40'58.9308"N	80°16'26.3163"W	3411.31	357.140	0.17
11284.00	93.790	326.040	8042.30	3026.85	3486.77	-223.27	1750623.53	431914.87	39°40'59.7140"N	80°16'27.0037"W	3493.91	356.336	0.93
11378.00	93.300	326.320	8036.48	3120.67	3564.71	-275.49	1750571.31	431992.81	39°41'0.4799"N	80°16'27.6802"W	3575.34	355.581	0.60
11473.00	92.220	326.320	8031.91	3215.55	3643.67	-328.11	1750518.70	432071.77	39°41'1.2557"N	80°16'28.3619"W	3658.42	354.854	1.14
11568.00	91.820	326.150	8028.56	3310.49	3722.60	-380.88	1750465.93	432150.69	39°41'2.0312"N	80°16'29.0455"W	3742.03	354.158	0.46
11663.00	91.750	326.570	8025.60	3405.45	3801.65	-433.48	1750413.33	432229.74	39°41'2.8080"N	80°16'29.7270"W	3826.28	353.495	0.45
11758.00	91.570	326.090	8022.85	3500.41	3880.68	-486.13	1750360.69	432308.76	39°41'3.5845"N	80°16'30.4091"W	3911.01	352.860	0.54
11854.00	91.750	325.570	8020.07	3596.36	3960.07	-540.02	1750306.80	432388.15	39°41'4.3645"N	80°16'31.1072"W	3996.73	352.235	0.57
11949.00	92.250	326.340	8016.75	3691.30	4038.74	-593.18	1750253.65	432466.82	39°41'5.1374"N	80°16'31.7958"W	4082.07	351.645	0.97
12044.00	91.230	326.850	8013.87	3786.26	4118.01	-645.45	1750201.38	432546.08	39°41'5.9163"N	80°16'32.4732"W	4168.29	351.092	1.20
12139.00	90.250	326.030	8012.64	3881.25	4197.17	-697.97	1750148.87	432625.23	39°41'6.6941"N	80°16'33.1536"W	4254.80	350.558	1.35
12235.00	89.540	324.850	8012.82	3977.23	4276.22	-752.42	1750094.41	432704.28	39°41'7.4707"N	80°16'33.8588"W	4341.92	350.021	1.43
12330.00	90.280	326.990	8012.97	4072.22	4354.90	-805.65	1750041.19	432782.96	39°41'8.2437"N	80°16'34.5484"W	4428.80	349.519	2.38
12425.00	90.860	326.960	8012.02	4167.21	4434.55	-857.42	1749989.42	432862.60	39°41'9.0264"N	80°16'35.2194"W	4516.68	349.057	0.61
12521.00	90.770	326.910	8010.66	4263.20	4514.99	-909.80	1749937.05	432943.04	39°41'9.8169"N	80°16'35.8982"W	4605.75	348.607	0.11
12616.00	90.490	327.040	8009.61	4358.18	4594.64	-961.57	1749885.28	433022.68	39°41'10.5996"N	80°16'36.5692"W	4694.18	348.180	0.32
12712.00	90.770	326.990	8008.56	4454.17	4675.16	-1013.83	1749833.02	433103.20	39°41'11.3909"N	80°16'37.2465"W	4783.83	347.765	0.30
12807.00	90.520	326.390	8007.49	4549.16	4754.55	-1066.00	1749780.86	433182.58	39°41'12.1710"N	80°16'37.9226"W	4872.58	347.363	0.68

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# Actual Wellpath Report

ERP 9H awp Proj: 22950'

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REFERENCE WELLPATH IDENTIFICATION				
Operator	NORTHEAST NATURAL ENERGY, LLC		Well	ERP 9H
Field	Monongalia		API	47-061-01961-00-00
Facility	ERP Pad		Wellbore	ERP 9H AWB
Slot	Slot 9H			

## WELLPATH DATA (257 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]
12903.00	90.890	326.630	8006.31	4645.16	4834.60	-1118.96	1749727.89	433262.63	39°41'12.9576"N	80°16'38.6090"W	4962.41	346.968	0.46
12998.00	90.340	326.150	8005.29	4740.15	4913.72	-1171.55	1749675.31	433341.74	39°41'13.7349"N	80°16'39.2903"W	5051.45	346.590	0.77
13093.00	90.800	326.600	8004.34	4835.15	4992.82	-1224.15	1749622.71	433420.83	39°41'14.5121"N	80°16'39.9719"W	5140.70	346.224	0.68
13189.00	89.630	326.230	8003.98	4931.14	5072.79	-1277.25	1749569.61	433500.80	39°41'15.2979"N	80°16'40.6600"W	5231.12	345.868	1.28
13284.00	89.940	326.680	8004.34	5026.14	5151.97	-1329.75	1749517.12	433579.97	39°41'16.0759"N	80°16'41.3403"W	5320.81	345.528	0.58
13380.00	89.880	326.780	8004.49	5122.14	5232.23	-1382.41	1749464.46	433660.23	39°41'16.8646"N	80°16'42.0228"W	5411.78	345.200	0.12
13475.00	89.850	326.620	8004.71	5217.14	5311.63	-1434.57	1749412.31	433739.63	39°41'17.6448"N	80°16'42.6987"W	5501.95	344.886	0.17
13571.00	89.780	327.010	8005.02	5313.13	5391.98	-1487.12	1749359.77	433819.97	39°41'18.4343"N	80°16'43.3798"W	5593.29	344.581	0.41
13666.00	89.350	326.370	8005.74	5408.13	5471.37	-1539.28	1749307.60	433899.35	39°41'19.2144"N	80°16'44.0559"W	5683.77	344.287	0.81
13762.00	89.690	326.790	8006.55	5504.13	5551.49	-1592.16	1749254.73	433979.47	39°41'20.0017"N	80°16'44.7411"W	5775.29	343.997	0.56
13857.00	89.480	326.180	8007.24	5599.12	5630.69	-1644.61	1749202.28	434058.67	39°41'20.7799"N	80°16'45.4208"W	5865.96	343.718	0.68
13953.00	89.970	326.830	8007.70	5695.12	5710.75	-1697.59	1749149.31	434138.72	39°41'21.5665"N	80°16'46.1073"W	5957.72	343.445	0.85
14048.00	89.940	326.680	8007.77	5790.12	5790.20	-1749.67	1749097.23	434218.17	39°41'22.3472"N	80°16'46.7823"W	6048.78	343.186	0.16
14143.00	90.620	326.570	8007.31	5885.12	5869.53	-1801.93	1749044.97	434297.50	39°41'23.1268"N	80°16'47.4596"W	6139.90	342.934	0.73
14239.00	90.620	326.230	8006.27	5981.11	5949.49	-1855.05	1748991.85	434377.45	39°41'23.9124"N	80°16'48.1480"W	6231.98	342.683	0.35
14334.00	90.120	326.620	8005.65	6076.11	6028.64	-1907.59	1748939.32	434456.59	39°41'24.6900"N	80°16'48.8288"W	6323.24	342.442	0.67
14429.00	90.180	327.260	8005.41	6171.10	6108.26	-1959.41	1748887.50	434536.20	39°41'25.4724"N	80°16'49.5006"W	6414.83	342.215	0.68
14525.00	89.820	326.440	8005.41	6267.10	6188.63	-2011.91	1748835.01	434616.57	39°41'26.2622"N	80°16'50.1810"W	6507.45	341.991	0.93
14620.00	90.030	326.930	8005.53	6362.10	6268.02	-2064.08	1748782.83	434695.96	39°41'27.0423"N	80°16'50.8573"W	6599.13	341.773	0.56
14716.00	90.650	326.390	8004.96	6458.09	6348.22	-2116.84	1748730.07	434776.15	39°41'27.8303"N	80°16'51.5411"W	6691.85	341.559	0.86
14811.00	90.770	325.990	8003.78	6553.08	6427.14	-2169.70	1748677.22	434855.07	39°41'28.6058"N	80°16'52.2260"W	6783.49	341.346	0.44
14907.00	89.820	326.540	8003.29	6649.08	6506.98	-2223.01	1748623.91	434934.90	39°41'29.3901"N	80°16'52.9168"W	6876.23	341.138	1.14
15002.00	88.740	325.790	8004.48	6744.07	6585.88	-2275.91	1748571.02	435013.80	39°41'30.1653"N	80°16'53.6022"W	6968.04	340.936	1.38
15097.00	89.970	325.720	8005.55	6839.06	6664.40	-2329.36	1748517.57	435092.32	39°41'30.9368"N	80°16'54.2947"W	7059.76	340.734	1.30
15193.00	89.780	326.780	8005.76	6935.06	6744.22	-2382.69	1748464.24	435172.13	39°41'31.7210"N	80°16'54.9859"W	7152.75	340.542	1.12
15288.00	89.630	326.930	8006.25	7030.05	6823.77	-2434.64	1748412.30	435251.67	39°41'32.5026"N	80°16'55.6591"W	7245.08	340.364	0.22
15384.00	89.320	327.190	8007.13	7126.04	6904.33	-2486.84	1748360.11	435332.23	39°41'33.2943"N	80°16'56.3358"W	7338.54	340.192	0.42
15478.00	91.380	327.020	8006.56	7220.02	6983.25	-2537.88	1748309.06	435411.15	39°41'34.0698"N	80°16'56.9976"W	7430.12	340.028	2.20
15573.00	89.450	326.420	8005.87	7315.02	7062.67	-2590.01	1748256.94	435490.56	39°41'34.8501"N	80°16'57.6733"W	7522.59	339.861	2.13
15668.00	90.310	324.930	8006.07	7410.00	7141.12	-2643.58	1748203.38	435569.00	39°41'35.6208"N	80°16'58.3673"W	7614.73	339.686	1.81

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# Actual Wellpath Report

ERP 9H awp Proj: 22950'

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## REFERENCE WELLPATH IDENTIFICATION

Operator	NORTHEAST NATURAL ENERGY, LLC	Well	ERP 9H
Field	Monongalia	API	47-061-01961-00-00
Facility	ERP Pad	Wellbore	ERP 9H AWB
Slot	Slot 9H		

## WELLPATH DATA (257 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]
15763.00	88.890	326.730	8006.73	7504.99	7219.71	-2696.93	1748150.03	435647.59	39°41'36.3929"N	80°16'59.0585"W	7706.99	339.517	2.41
15858.00	90.280	326.250	8007.42	7599.99	7298.92	-2749.37	1748097.59	435726.79	39°41'37.1712"N	80°16'59.7382"W	7799.57	339.360	1.55
15952.00	90.180	326.590	8007.04	7693.99	7377.23	-2801.36	1748045.60	435805.10	39°41'37.9406"N	80°17'0.4120"W	7891.21	339.207	0.38
16047.00	89.970	325.920	8006.92	7788.98	7456.22	-2854.14	1747992.83	435884.09	39°41'38.7167"N	80°17'1.0959"W	7983.82	339.054	0.74
16142.00	90.060	325.990	8006.89	7883.98	7534.94	-2907.32	1747939.65	435962.80	39°41'39.4900"N	80°17'1.7851"W	8076.38	338.901	0.12
16237.00	90.060	326.260	8006.79	7978.98	7613.81	-2960.27	1747886.70	436041.67	39°41'40.2649"N	80°17'2.4712"W	8169.05	338.754	0.28
16332.00	89.850	326.880	8006.87	8073.98	7693.10	-3012.61	1747834.36	436120.95	39°41'41.0439"N	80°17'3.1496"W	8261.93	338.615	0.69
16428.00	89.750	326.840	8007.20	8169.98	7773.48	-3065.09	1747781.89	436201.33	39°41'41.8338"N	80°17'3.8299"W	8355.94	338.481	0.11
16522.00	90.090	326.610	8007.33	8263.97	7852.07	-3116.66	1747730.32	436279.91	39°41'42.6060"N	80°17'4.4985"W	8447.99	338.351	0.44
16617.00	90.580	326.360	8006.78	8358.97	7931.27	-3169.12	1747677.87	436359.11	39°41'43.3842"N	80°17'5.1783"W	8540.98	338.220	0.58
16713.00	90.000	325.990	8006.29	8454.97	8011.02	-3222.56	1747624.43	436438.85	39°41'44.1677"N	80°17'5.8708"W	8634.89	338.087	0.72
16808.00	90.220	325.720	8006.11	8549.97	8089.65	-3275.88	1747571.11	436517.47	39°41'44.9401"N	80°17'6.5618"W	8727.76	337.955	0.37
16903.00	90.310	326.610	8005.67	8644.96	8168.56	-3328.77	1747518.22	436596.38	39°41'45.7153"N	80°17'7.2473"W	8820.77	337.829	0.94
16998.00	90.090	326.230	8005.34	8739.96	8247.70	-3381.32	1747465.68	436675.52	39°41'46.4929"N	80°17'7.9283"W	8913.92	337.708	0.46
17094.00	90.550	326.380	8004.80	8835.96	8327.57	-3434.57	1747412.42	436755.38	39°41'47.2777"N	80°17'8.6185"W	9008.04	337.587	0.50
17189.00	90.770	326.340	8003.71	8930.95	8406.66	-3487.20	1747359.80	436834.47	39°41'48.0547"N	80°17'9.3006"W	9101.23	337.471	0.24
17284.00	90.550	326.260	8002.61	9025.95	8485.69	-3539.91	1747307.10	436913.49	39°41'48.8311"N	80°17'9.9837"W	9194.45	337.356	0.25
17380.00	90.830	326.110	8001.46	9121.94	8565.44	-3593.33	1747253.68	436993.24	39°41'49.6147"N	80°17'10.6760"W	9288.64	337.241	0.33
17475.00	90.680	325.880	8000.21	9216.93	8644.19	-3646.45	1747200.56	437071.98	39°41'50.3883"N	80°17'11.3645"W	9381.82	337.128	0.29
17570.00	90.770	326.170	7999.00	9311.92	8722.96	-3699.54	1747147.48	437150.75	39°41'51.1622"N	80°17'12.0524"W	9475.06	337.017	0.32
17666.00	90.150	326.260	7998.23	9407.92	8802.75	-3752.92	1747094.10	437230.53	39°41'51.9460"N	80°17'12.7442"W	9569.37	336.910	0.65
17761.00	90.490	326.060	7997.70	9502.91	8881.66	-3805.82	1747041.20	437309.43	39°41'52.7212"N	80°17'13.4298"W	9662.72	336.805	0.42
17856.00	90.150	326.000	7997.17	9597.91	8960.44	-3858.90	1746988.12	437388.21	39°41'53.4952"N	80°17'14.1177"W	9756.06	336.700	0.36
17952.00	90.000	326.270	7997.05	9693.91	9040.15	-3912.40	1746934.63	437467.92	39°41'54.2784"N	80°17'14.8110"W	9850.44	336.598	0.32
18047.00	90.030	325.050	7997.02	9788.90	9118.59	-3965.98	1746881.05	437546.36	39°41'55.0489"N	80°17'15.5054"W	9943.73	336.494	1.28
18143.00	90.340	326.190	7996.71	9884.89	9197.82	-4020.19	1746826.84	437625.58	39°41'55.8272"N	80°17'16.2078"W	10038.02	336.391	1.23
18238.00	89.910	326.380	7996.50	9979.89	9276.84	-4072.92	1746774.11	437704.60	39°41'56.6035"N	80°17'16.8912"W	10131.56	336.297	0.49
18333.00	89.600	326.020	7996.91	10074.89	9355.79	-4125.77	1746721.27	437783.54	39°41'57.3791"N	80°17'17.5762"W	10225.10	336.203	0.50
18429.00	89.750	326.190	7997.46	10170.88	9435.47	-4179.31	1746667.74	437863.22	39°41'58.1619"N	80°17'18.2700"W	10319.63	336.110	0.24
18525.00	89.170	326.320	7998.36	10266.88	9515.29	-4232.63	1746614.42	437943.03	39°41'58.9461"N	80°17'18.9612"W	10414.22	336.019	0.62

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# Actual Wellpath Report

ERP 9H awp Proj: 22950'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	ERP 9H
Field	Monongalia	API	47-061-01961-00-00
Facility	ERP Pad	Wellbore	ERP 9H AWB
Slot	Slot 9H		

## WELLPATH DATA (257 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]
18620.00	89.200	326.110	7999.71	10361.87	9594.24	-4285.45	1746561.60	438021.98	39°41'59.7218"N	80°17'19.6458"W	10507.84	335.931	0.22
18716.00	89.630	325.990	8000.69	10457.86	9673.87	-4339.06	1746507.99	438101.60	39°42'0.5041"N	80°17'20.3406"W	10602.42	335.842	0.47
18811.00	89.820	326.440	8001.15	10552.86	9752.83	-4391.89	1746455.17	438180.55	39°42'1.2798"N	80°17'21.0253"W	10696.09	335.757	0.51
18906.00	89.850	326.250	8001.42	10647.86	9831.91	-4444.54	1746402.52	438259.63	39°42'2.0567"N	80°17'21.7078"W	10789.82	335.675	0.20
19001.00	90.150	326.360	8001.42	10742.86	9910.95	-4497.24	1746349.82	438338.66	39°42'2.8332"N	80°17'22.3909"W	10883.57	335.593	0.34
19097.00	90.060	326.320	8001.25	10838.86	9990.85	-4550.45	1746296.62	438418.56	39°42'3.6182"N	80°17'23.0806"W	10978.33	335.513	0.10
19192.00	89.780	325.290	8001.38	10933.85	10069.43	-4603.84	1746243.23	438497.13	39°42'4.3901"N	80°17'23.7725"W	11071.98	335.430	1.12
19287.00	90.150	326.360	8001.44	11028.85	10148.02	-4657.20	1746189.87	438575.72	39°42'5.1622"N	80°17'24.4640"W	11165.66	335.348	1.19
19383.00	90.150	326.130	8001.18	11124.85	10227.84	-4710.55	1746136.53	438655.53	39°42'5.9463"N	80°17'25.1555"W	11260.46	335.271	0.24
19478.00	90.460	326.430	8000.68	11219.85	10306.85	-4763.28	1746083.80	438734.55	39°42'6.7226"N	80°17'25.8391"W	11354.30	335.196	0.45
19573.00	90.280	326.240	8000.07	11314.84	10385.92	-4815.94	1746031.14	438813.61	39°42'7.4994"N	80°17'26.5217"W	11448.17	335.123	0.28
19668.00	90.620	326.170	7999.32	11409.84	10464.86	-4868.78	1745978.30	438892.55	39°42'8.2750"N	80°17'27.2066"W	11542.03	335.050	0.37
19762.00	90.400	325.910	7998.48	11503.84	10542.83	-4921.29	1745925.80	438970.51	39°42'9.0409"N	80°17'27.8871"W	11634.87	334.977	0.36
19857.00	90.030	324.160	7998.13	11598.81	10620.68	-4975.73	1745871.36	439048.35	39°42'9.8055"N	80°17'28.5924"W	11728.46	334.897	1.88
19953.00	90.030	327.170	7998.08	11694.79	10699.94	-5029.87	1745817.23	439127.61	39°42'10.5841"N	80°17'29.2940"W	11823.21	334.823	3.14
20048.00	90.000	327.160	7998.05	11789.78	10779.76	-5081.38	1745765.72	439207.43	39°42'11.3684"N	80°17'29.9620"W	11917.37	334.762	0.03
20143.00	90.180	327.280	7997.90	11884.77	10859.63	-5132.82	1745714.29	439287.29	39°42'12.1533"N	80°17'30.6291"W	12011.55	334.702	0.23
20238.00	90.680	327.250	7997.19	11979.75	10939.54	-5184.19	1745662.92	439367.20	39°42'12.9385"N	80°17'31.2953"W	12105.76	334.644	0.53
20333.00	90.280	326.570	7996.39	12074.74	11019.13	-5236.05	1745611.06	439446.78	39°42'13.7205"N	80°17'31.9678"W	12199.90	334.584	0.83
20429.00	90.650	327.480	7995.61	12170.73	11099.66	-5288.30	1745558.81	439527.31	39°42'14.5118"N	80°17'32.6454"W	12295.07	334.525	1.02
20524.00	90.620	327.360	7994.56	12265.71	11179.71	-5339.45	1745507.67	439607.35	39°42'15.2984"N	80°17'33.3089"W	12389.34	334.471	0.13
20619.00	90.430	326.670	7993.69	12360.70	11259.39	-5391.17	1745455.95	439687.03	39°42'16.0813"N	80°17'33.9795"W	12483.53	334.414	0.75
20715.00	90.400	327.010	7993.00	12456.70	11339.76	-5443.68	1745403.45	439767.39	39°42'16.8710"N	80°17'34.6604"W	12578.70	334.357	0.36
20810.00	90.400	326.660	7992.33	12551.69	11419.28	-5495.64	1745351.48	439846.90	39°42'17.6523"N	80°17'35.3343"W	12672.89	334.300	0.37
20905.00	90.580	326.530	7991.52	12646.69	11498.58	-5547.94	1745299.18	439926.20	39°42'18.4314"N	80°17'36.0124"W	12767.03	334.243	0.23
21001.00	90.400	326.900	7990.70	12742.68	11578.83	-5600.63	1745246.50	440006.45	39°42'19.2199"N	80°17'36.6955"W	12862.21	334.187	0.43
21096.00	90.310	326.570	7990.11	12837.68	11658.26	-5652.74	1745194.40	440085.87	39°42'20.0003"N	80°17'37.3712"W	12956.41	334.133	0.36
21189.00	90.000	327.050	7989.86	12930.67	11736.09	-5703.64	1745143.49	440163.70	39°42'20.7650"N	80°17'38.0313"W	13048.65	334.081	0.61
21284.00	90.150	327.020	7989.73	13025.67	11815.80	-5755.34	1745091.80	440243.40	39°42'21.5482"N	80°17'38.7017"W	13142.94	334.030	0.16
21379.00	89.380	326.650	7990.12	13120.66	11895.32	-5807.31	1745039.84	440322.91	39°42'22.3295"N	80°17'39.3756"W	13237.20	333.978	0.90

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# Actual Wellpath Report

ERP 9H awp Proj: 22950'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	ERP 9H
Field	Monongalia	API	47-061-01961-00-00
Facility	ERP Pad	Wellbore	ERP 9H AWB
Slot	Slot 9H		

**WELLPATH DATA (257 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]
21474.00	89.570	327.200	7990.99	13215.65	11974.92	-5859.15	1744988.00	440402.51	39°42'23.1116"N	80°17'40.0479"W	13331.48	333.928	0.61
21569.00	89.690	327.060	7991.61	13310.64	12054.71	-5910.71	1744936.44	440482.30	39°42'23.8956"N	80°17'40.7166"W	13425.81	333.880	0.19
21664.00	89.880	326.970	7991.96	13405.64	12134.40	-5962.43	1744884.73	440561.98	39°42'24.6786"N	80°17'41.3874"W	13520.14	333.832	0.22
21759.00	89.450	326.540	7992.52	13500.63	12213.85	-6014.51	1744832.65	440641.42	39°42'25.4592"N	80°17'42.0627"W	13614.42	333.783	0.64
21854.00	89.660	326.830	7993.26	13595.63	12293.23	-6066.68	1744780.48	440720.80	39°42'26.2392"N	80°17'42.7393"W	13708.69	333.734	0.38
21948.00	90.220	326.780	7993.36	13689.62	12371.89	-6118.15	1744729.02	440799.46	39°42'27.0120"N	80°17'43.4066"W	13802.01	333.687	0.60
22043.00	90.400	326.810	7992.84	13784.62	12451.38	-6170.17	1744676.99	440878.94	39°42'27.7930"N	80°17'44.0813"W	13896.32	333.640	0.19
22138.00	90.550	326.960	7992.05	13879.61	12530.95	-6222.07	1744625.10	440958.50	39°42'28.5748"N	80°17'44.7543"W	13990.67	333.594	0.22
22233.00	90.520	327.240	7991.17	13974.60	12610.71	-6273.67	1744573.50	441038.26	39°42'29.3585"N	80°17'45.4236"W	14085.06	333.550	0.30
22329.00	90.250	327.000	7990.52	14070.59	12691.33	-6325.78	1744521.39	441118.87	39°42'30.1506"N	80°17'46.0995"W	14180.45	333.507	0.38
22423.00	89.850	326.450	7990.44	14164.59	12769.91	-6377.36	1744469.82	441197.46	39°42'30.9228"N	80°17'46.7683"W	14273.80	333.462	0.72
22519.00	90.710	327.120	7989.97	14260.58	12850.23	-6429.94	1744417.24	441277.76	39°42'31.7118"N	80°17'47.4503"W	14369.15	333.418	1.14
22614.00	89.540	326.950	7989.76	14355.57	12929.93	-6481.63	1744365.55	441357.46	39°42'32.4950"N	80°17'48.1207"W	14463.56	333.376	1.24
22709.00	89.600	327.220	7990.48	14450.56	13009.68	-6533.26	1744313.93	441437.21	39°42'33.2786"N	80°17'48.7902"W	14557.99	333.335	0.29
22803.00	89.450	327.120	7991.26	14544.55	13088.66	-6584.22	1744262.98	441516.19	39°42'34.0546"N	80°17'49.4512"W	14651.45	333.295	0.19
22898.00	89.540	326.850	7992.09	14639.54	13168.32	-6635.98	1744211.22	441595.84	39°42'34.8373"N	80°17'50.1225"W	14745.87	333.255	0.30
22950.00‡	89.540	326.850	7992.51	14691.54	13211.85	-6664.41	1744182.79	441639.37	39°42'35.2650"N	80°17'50.4913"W	14797.55	333.232	0.00

**HOLE & CASING SECTIONS - Ref Wellbore: ERP 9H AWB Ref Wellpath: ERP 9H awp Proj: 22950'**

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
13.375in Casing	28.50	1200.00	1171.50	28.50	1199.98	0.00	0.00	0.57	-3.61
9.625in Casing	28.50	7305.00	7276.50	28.50	7072.53	0.00	0.00	604.10	1235.56
5.5in Casing	28.50	22950.00	22921.50	28.50	7992.51	0.00	0.00	13211.85	-6664.41

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# Actual Wellpath Report

ERP 9H awp Proj: 22950'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	ERP 9H
Field	Monongalia	API	47-061-01961-00-00
Facility	ERP Pad	Wellbore	ERP 9H AWB
Slot	Slot 9H		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
ERP 9H BHL Rev-1	8062.00	13205.72	-6674.57	1744172.63	441633.24	39°42'35.2035"N	80°17'50.6206"W	point
ERP 9H LP Rev-1	8062.00	1412.11	1169.00	1752015.72	429840.35	39°40'39.3295"N	80°16'8.9689"W	point
ERP Hardline #1 (11.26.2024)	9528.50	11494.04	-7506.62	1743340.62	439921.66	39°42'18.2149"N	80°18'1.0717"W	polygon
2D Polygon: dimensions not calculated								
ERP Hardline #2 (11.26.2024)	9528.50	11898.70	-6490.04	1744357.14	440326.29	39°42'22.3032"N	80°17'48.1113"W	polygon
2D Polygon: dimensions not calculated								
ERP Hardline #3 (11.26.2024)	9528.50	11729.31	-6387.83	1744459.35	440156.92	39°42'20.6382"N	80°17'46.7842"W	polygon
2D Polygon: dimensions not calculated								
ERP Hardline #4 (11.26.2024)	9528.50	11549.11	-6475.82	1744371.36	439976.72	39°42'18.8496"N	80°17'47.8896"W	polygon
2D Polygon: dimensions not calculated								
ERP Hardline #5 (11.26.2024)	9528.50	10985.51	-7145.23	1743701.99	439413.16	39°42'13.2212"N	80°17'56.3901"W	polygon
2D Polygon: dimensions not calculated								
ERP Unit Lines NE (11.26.2024)	9528.50	12280.83	-8229.86	1742617.43	440708.40	39°42'25.9265"N	80°18'10.4150"W	polygon
2D Polygon: dimensions not calculated								

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# Actual Wellpath Report

ERP 9H awp Proj: 22950'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	ERP 9H
Field	Monongalia	API	47-061-01961-00-00
Facility	ERP Pad	Wellbore	ERP 9H AWB
Slot	Slot 9H		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
ERP Unit Lines NW (11.26.2024)	9528.50	12280.83	-8229.86	1742617.43	440708.40	39°42'25.9265"N	80°18'10.4150"W	polygon
2D Polygon: dimensions not calculated								

WELLPATH COMPOSITION - Ref Wellbore: ERP 9H AWB Ref Wellpath: ERP 9H awp Proj: 22950'					
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
28.50	1200.00	BH Generic gyro - northseeking (Standard)	1 Imported Gyro Scientific 50' - 1200'	ERP 9H AWB	2/3/2025
1200.00	7305.00	OWSG MWD rev2 + HRGM	2 Imported MWD Scientific 1419' - 7305'	ERP 9H AWB	2/3/2025
7305.00	22950.00	BH AutoTrak Curve/eXpress (2019) (HRGM, Short spacing)	3 BH MWD ATC HRGM Short spacing 8.5" 7379' - 22898'	ERP 9H AWB	2/3/2025

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