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NORTHEAST NATURAL ENERGY, LLC



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

Slot: Slot 5H
 Well: ERP 5H
 Wellbore: ERP 5H AWB

Plot reference wellpath is ERP 5H awp Proj: 17244	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 5H): -1338 feet	Depths are in feet
Offset wellpath MDs are referenced to each path's default MD datum	Created by: tranlam on 2025-01-28; Database: WA_MPL_EASTERNUS_Defn

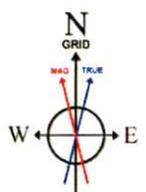
Location Information

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 5H	-22.74	19.90	1750831.860	428415.330	39°40'25.1454"N	80°16'23.9536"W
Patterson 873 (KB) to Ground level (At Slot: Slot 5H)					28.5ft	
Mean Sea Level to Ground level (At Slot: Slot 5H)					-1338ft	
Patterson 873 (KB) to Mean Sea Level					1366.5ft	

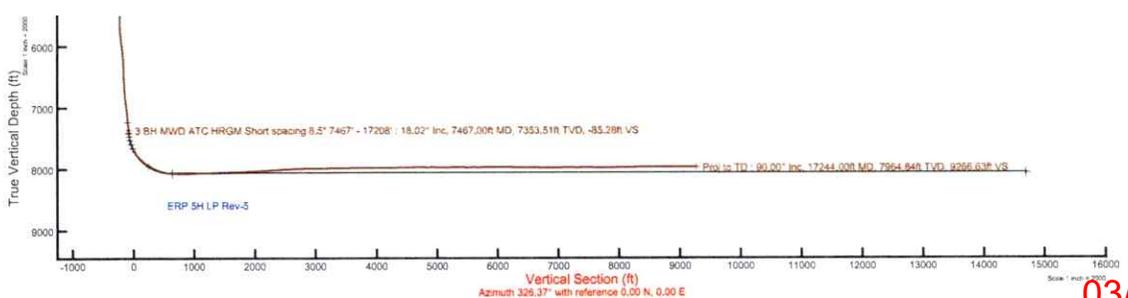
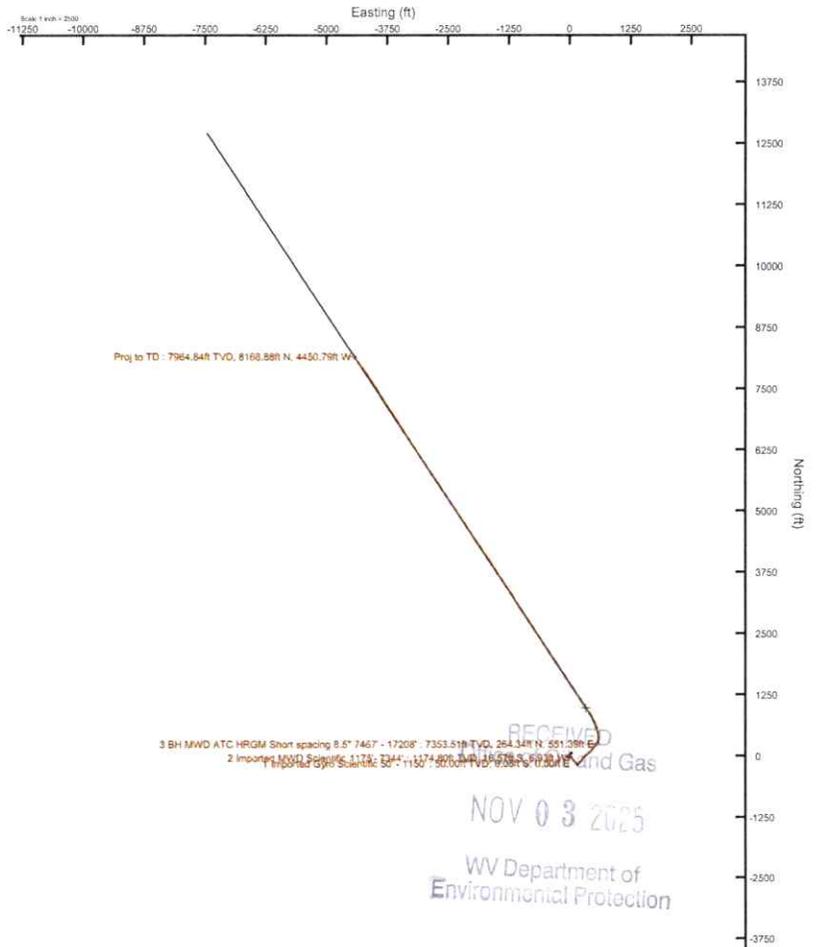
Bottom Hole Location

MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
17244.00	90.000	325.230	7964.84	8168.88	-4450.79	1746381.34	436583.71	39°41'45.4917"N	80°17'21.7903"W

API: 47-061-01960-00-00
BH JOB: 112536634
DURATION: 1/20/2025 - 1/23/2025
RIG: Patterson 873



HDGM2024v1.0 (1900.0 to 2025.0) Dip: 66.19° Field: 51509 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



03/13/2026



Actual Wellpath Report

ERP 5H ST01 awp Proj: 22658'

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REFERENCE WELLPATH IDENTIFICATION

Operator	NORTHEAST NATURAL ENERGY, LLC	Well	ERP 5H ST01
Field	Monongalia	API	47061019600001
Facility	ERP Pad	Wellbore	ERP 5H ST01 AWB
Slot	5H	Sidetrack from	ERP 5H awp Proj: 17244' at 7344.00 MD

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	3/26/2025 at 5:50:16 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	-22.74	19.90	1750831.86	428415.33	39°40'25.1454"N	80°16'23.9536"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 (5H)	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 5H ST01 awp Proj: 22658'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	ERP 5H ST01
Field	Monongalia	API	47061019600001
Facility	ERP Pad	Wellbore	ERP 5H ST01 AWB
Slot	5H	Sidetrack from	ERP 5H awp Proj: 17244' at 7344.00 MD

WELLPATH DATA (250 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]
0.00†	0.000	177.840	0.00	0.00	0.00	0.00	1750831.86	428415.33	39°40'25.1454"N	80°16'23.9536"W	0.00	0.000	0.00
28.50	0.000	177.840	28.50	0.00	0.00	0.00	1750831.86	428415.33	39°40'25.1454"N	80°16'23.9536"W	0.00	0.000	0.00
50.00	0.270	177.840	50.00	-0.04	-0.05	0.00	1750831.86	428415.28	39°40'25.1449"N	80°16'23.9536"W	0.05	177.840	1.26
100.00	0.390	137.720	100.00	-0.31	-0.29	0.12	1750831.98	428415.04	39°40'25.1425"N	80°16'23.9520"W	0.32	157.675	0.51
150.00	0.740	141.430	150.00	-0.80	-0.67	0.44	1750832.30	428414.66	39°40'25.1388"N	80°16'23.9479"W	0.80	147.010	0.70
200.00	0.740	146.480	199.99	-1.45	-1.19	0.82	1750832.68	428414.14	39°40'25.1337"N	80°16'23.9430"W	1.45	145.648	0.13
250.00	0.890	176.260	249.99	-2.11	-1.85	1.02	1750832.88	428413.48	39°40'25.1272"N	80°16'23.9403"W	2.11	151.145	0.89
300.00	0.900	184.810	299.98	-2.75	-2.63	1.01	1750832.87	428412.70	39°40'25.1195"N	80°16'23.9404"W	2.82	158.947	0.27
350.00	0.550	208.080	349.98	-3.17	-3.23	0.87	1750832.73	428412.10	39°40'25.1135"N	80°16'23.9422"W	3.35	164.997	0.90
400.00	0.690	172.600	399.97	-3.56	-3.74	0.79	1750832.65	428411.59	39°40'25.1085"N	80°16'23.9430"W	3.83	168.050	0.80
450.00	0.870	167.400	449.97	-4.18	-4.41	0.91	1750832.77	428410.92	39°40'25.1019"N	80°16'23.9414"W	4.51	168.299	0.39
500.00	1.140	169.830	499.96	-4.99	-5.27	1.08	1750832.94	428410.06	39°40'25.0934"N	80°16'23.9391"W	5.38	168.377	0.55
550.00	1.300	182.720	549.95	-5.90	-6.33	1.15	1750833.01	428409.00	39°40'25.0830"N	80°16'23.9382"W	6.43	169.741	0.63
600.00	1.290	197.090	599.94	-6.72	-7.43	0.95	1750832.81	428407.90	39°40'25.0720"N	80°16'23.9406"W	7.49	172.694	0.65
650.00	0.830	188.400	649.93	-7.34	-8.33	0.73	1750832.59	428407.00	39°40'25.0632"N	80°16'23.9433"W	8.36	174.959	0.97
700.00	0.920	186.770	699.92	-7.92	-9.09	0.63	1750832.49	428406.24	39°40'25.0557"N	80°16'23.9445"W	9.11	176.005	0.19
750.00	1.410	199.250	749.91	-8.59	-10.07	0.38	1750832.24	428405.27	39°40'25.0460"N	80°16'23.9476"W	10.07	177.813	1.10
800.00	1.320	223.850	799.90	-9.09	-11.06	-0.22	1750831.64	428404.27	39°40'25.0361"N	80°16'23.9552"W	11.06	181.126	1.18
850.00	1.030	217.580	849.89	-9.36	-11.83	-0.89	1750830.97	428403.50	39°40'25.0284"N	80°16'23.9637"W	11.87	184.304	0.63
900.00	1.360	229.270	899.88	-9.58	-12.58	-1.61	1750830.25	428402.75	39°40'25.0210"N	80°16'23.9728"W	12.68	187.314	0.82
950.00	1.800	222.820	949.86	-9.83	-13.54	-2.60	1750829.26	428401.79	39°40'25.0114"N	80°16'23.9853"W	13.79	190.861	0.95
1000.00	1.210	228.200	999.84	-10.09	-14.47	-3.52	1750828.34	428400.86	39°40'25.0021"N	80°16'23.9971"W	14.89	193.693	1.21
1050.00	1.430	242.050	1049.83	-10.11	-15.11	-4.47	1750827.39	428400.22	39°40'24.9957"N	80°16'24.0091"W	15.76	196.477	0.77
1100.00	1.300	243.740	1099.81	-9.97	-15.65	-5.53	1750826.33	428399.68	39°40'24.9902"N	80°16'24.0226"W	16.60	199.454	0.27
1150.00	1.280	236.230	1149.80	-9.90	-16.22	-6.50	1750825.36	428399.11	39°40'24.9846"N	80°16'24.0350"W	17.47	201.850	0.34
1175.00	1.270	225.390	1174.80	-9.95	-16.57	-6.93	1750824.93	428398.77	39°40'24.9811"N	80°16'24.0404"W	17.96	202.706	0.96
1375.00	1.260	22.120	1374.78	-9.14	-16.09	-7.68	1750824.18	428399.25	39°40'24.9858"N	80°16'24.0501"W	17.83	205.527	1.24
1470.00	1.050	53.260	1469.76	-8.50	-14.60	-6.59	1750825.27	428400.73	39°40'25.0006"N	80°16'24.0363"W	16.02	204.300	0.69
1565.00	1.260	91.740	1564.74	-9.06	-14.11	-4.85	1750827.01	428401.22	39°40'25.0056"N	80°16'24.0140"W	14.92	198.969	0.83
1660.00	1.300	89.220	1659.72	-10.25	-14.13	-2.73	1750829.13	428401.21	39°40'25.0056"N	80°16'23.9869"W	14.39	190.929	0.07

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Actual Wellpath Report

ERP 5H ST01 awp Proj: 22658'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	ERP 5H ST01
Field	Monongalia	API	47061019600001
Facility	ERP Pad	Wellbore	ERP 5H ST01 AWB
Slot	5H	Sidetrack from	ERP 5H awp Proj: 17244' at 7344.00 MD

WELLPATH DATA (250 stations)													
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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]
1756.00	1.620	94.630	1755.69	-11.68	-14.22	-0.29	1750831.57	428401.11	39°40'25.0049"N	80°16'23.9557"W	14.22	181.153	0.36
1851.00	1.200	95.380	1850.66	-13.14	-14.42	2.04	1750833.90	428400.91	39°40'25.0031"N	80°16'23.9259"W	14.57	171.938	0.44
1946.00	1.010	99.210	1945.64	-14.33	-14.65	3.86	1750835.72	428400.68	39°40'25.0010"N	80°16'23.9026"W	15.15	165.239	0.21
2042.00	1.100	92.130	2041.62	-15.45	-14.82	5.62	1750837.48	428400.51	39°40'24.9994"N	80°16'23.8801"W	15.85	159.245	0.16
2137.00	1.560	96.860	2136.60	-16.82	-15.01	7.81	1750839.67	428400.32	39°40'24.9978"N	80°16'23.8520"W	16.92	152.504	0.50
2232.00	1.170	86.060	2231.57	-18.14	-15.09	10.06	1750841.92	428400.24	39°40'24.9971"N	80°16'23.8232"W	18.14	146.312	0.49
2327.00	0.870	72.160	2326.56	-18.82	-14.81	11.72	1750843.58	428400.52	39°40'25.0001"N	80°16'23.8021"W	18.88	141.646	0.41
2423.00	1.070	71.270	2422.54	-19.25	-14.30	13.26	1750845.12	428401.04	39°40'25.0053"N	80°16'23.7825"W	19.50	137.155	0.21
2518.00	0.930	103.590	2517.53	-20.04	-14.19	14.85	1750846.71	428401.14	39°40'25.0064"N	80°16'23.7621"W	20.54	133.705	0.60
2613.00	1.310	119.100	2612.51	-21.57	-14.90	16.55	1750848.41	428400.43	39°40'24.9995"N	80°16'23.7403"W	22.27	132.005	0.51
2756.00	1.640	120.580	2755.46	-24.87	-16.74	19.74	1750851.60	428398.59	39°40'24.9817"N	80°16'23.6993"W	25.88	130.299	0.23
2851.00	1.590	123.740	2850.43	-27.31	-18.16	22.00	1750853.86	428397.17	39°40'24.9678"N	80°16'23.6702"W	28.53	129.536	0.11
2950.00	2.910	128.550	2949.35	-30.97	-20.49	25.11	1750856.97	428394.84	39°40'24.9450"N	80°16'23.6302"W	32.41	129.214	1.35
3045.00	6.010	138.270	3044.05	-38.19	-25.71	30.31	1750862.17	428389.63	39°40'24.8939"N	80°16'23.5632"W	39.74	130.303	3.35
3140.00	9.390	137.330	3138.18	-50.77	-35.12	38.87	1750870.73	428380.21	39°40'24.8017"N	80°16'23.4526"W	52.39	132.094	3.56
3236.00	12.970	137.190	3232.34	-69.15	-48.78	51.51	1750883.36	428366.55	39°40'24.6677"N	80°16'23.2895"W	70.94	133.445	3.73
3331.00	15.400	140.970	3324.44	-92.23	-66.41	66.70	1750898.55	428348.93	39°40'24.4948"N	80°16'23.0933"W	94.12	134.875	2.74
3427.00	13.470	142.210	3417.41	-116.08	-85.15	81.58	1750913.43	428330.19	39°40'24.3109"N	80°16'22.9010"W	117.92	136.226	2.04
3523.00	12.880	136.660	3510.88	-137.77	-101.76	95.77	1750927.63	428313.57	39°40'24.1479"N	80°16'22.7176"W	139.74	136.737	1.45
3618.00	11.050	137.300	3603.81	-157.20	-116.16	109.22	1750941.07	428299.18	39°40'24.0068"N	80°16'22.5441"W	159.44	136.764	1.93
3716.00	10.290	139.420	3700.12	-175.17	-129.71	121.28	1750953.13	428285.63	39°40'23.8739"N	80°16'22.3884"W	177.57	136.924	0.87
3811.00	10.290	148.370	3793.60	-192.07	-143.38	131.25	1750963.10	428271.96	39°40'23.7396"N	80°16'22.2593"W	194.38	137.529	1.68
3907.00	8.870	152.910	3888.26	-207.99	-157.27	139.12	1750970.97	428258.07	39°40'23.6030"N	80°16'22.1572"W	209.97	138.505	1.67
4002.00	7.350	145.430	3982.31	-221.35	-168.79	145.90	1750977.75	428246.55	39°40'23.4897"N	80°16'22.0692"W	223.11	139.161	1.94
4097.00	5.560	149.060	4076.70	-232.02	-177.75	151.71	1750983.57	428237.60	39°40'23.4017"N	80°16'21.9938"W	233.69	139.518	1.93
4193.00	3.570	123.750	4172.40	-239.43	-183.40	156.59	1750988.44	428231.95	39°40'23.3463"N	80°16'21.9308"W	241.15	139.508	2.90
4288.00	2.050	132.270	4267.28	-243.80	-186.18	160.31	1750992.16	428229.16	39°40'23.3191"N	80°16'21.8830"W	245.69	139.271	1.65
4384.00	0.220	291.050	4363.27	-245.32	-187.27	161.41	1750993.26	428228.07	39°40'23.3084"N	80°16'21.8688"W	247.23	139.242	2.35
4479.00	0.880	292.950	4458.26	-244.56	-186.92	160.57	1750992.42	428228.42	39°40'23.3118"N	80°16'21.8796"W	246.42	139.337	0.69
4575.00	1.090	299.510	4554.25	-243.13	-186.18	159.09	1750990.94	428229.16	39°40'23.3190"N	80°16'21.8986"W	244.90	139.487	0.25

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Actual Wellpath Report

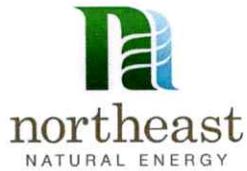
ERP 5H ST01 awp Proj: 22658'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	ERP 5H ST01
Field	Monongalia	API	47061019600001
Facility	ERP Pad	Wellbore	ERP 5H ST01 AWB
Slot	5H	Sidetrack from	ERP 5H awp Proj: 17244' at 7344.00 MD

WELLPATH DATA (250 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]
4670.00	0.940	281.120	4649.23	-241.78	-185.59	157.54	1750989.39	428229.75	39°40'23.3247"N	80°16'21.9185"W	243.44	139.673	0.38
4766.00	1.040	264.470	4745.22	-240.81	-185.52	155.90	1750987.75	428229.82	39°40'23.3252"N	80°16'21.9394"W	242.33	139.958	0.32
4861.00	0.710	270.770	4840.21	-240.07	-185.60	154.45	1750986.30	428229.75	39°40'23.3244"N	80°16'21.9579"W	241.46	140.233	0.36
4957.00	0.640	278.390	4936.20	-239.38	-185.51	153.33	1750985.18	428229.83	39°40'23.3251"N	80°16'21.9723"W	240.67	140.425	0.12
5052.00	0.690	274.980	5031.19	-238.67	-185.38	152.23	1750984.08	428229.96	39°40'23.3263"N	80°16'21.9864"W	239.88	140.608	0.07
5147.00	0.880	278.890	5126.18	-237.82	-185.22	150.94	1750982.79	428230.12	39°40'23.3278"N	80°16'22.0029"W	238.94	140.822	0.21
5245.00	0.670	22.250	5224.18	-236.99	-184.57	150.42	1750982.27	428230.77	39°40'23.3341"N	80°16'22.0097"W	238.10	140.822	1.25
5340.00	2.990	65.190	5319.13	-237.06	-183.02	152.88	1750984.73	428232.32	39°40'23.3497"N	80°16'21.9784"W	238.47	140.128	2.67
5436.00	5.680	53.440	5414.85	-237.20	-179.14	158.97	1750990.82	428236.20	39°40'23.3886"N	80°16'21.9009"W	239.50	138.414	2.94
5531.00	8.600	46.960	5509.10	-235.79	-171.49	167.94	1750999.79	428243.85	39°40'23.4649"N	80°16'21.7871"W	240.02	135.600	3.18
5627.00	10.890	44.330	5603.71	-232.73	-160.10	179.52	1751011.37	428255.24	39°40'23.5785"N	80°16'21.6402"W	240.54	131.727	2.43
5723.00	13.980	40.490	5697.45	-227.66	-144.79	193.39	1751025.24	428270.55	39°40'23.7309"N	80°16'21.4645"W	241.59	126.822	3.33
5818.00	16.630	38.940	5789.07	-220.45	-125.49	209.39	1751041.24	428289.85	39°40'23.9231"N	80°16'21.2620"W	244.11	120.934	2.82
5913.00	18.060	35.340	5879.75	-211.09	-102.90	226.45	1751058.30	428312.44	39°40'24.1477"N	80°16'21.0463"W	248.73	114.437	1.88
6008.00	19.120	35.540	5969.79	-200.28	-78.23	244.01	1751075.86	428337.11	39°40'24.3931"N	80°16'20.8244"W	256.25	107.775	1.12
6104.00	18.520	38.790	6060.66	-190.08	-53.55	262.70	1751094.55	428361.78	39°40'24.6385"N	80°16'20.5881"W	268.11	101.521	1.26
6199.00	17.830	42.140	6150.92	-181.95	-31.00	281.92	1751113.76	428384.33	39°40'24.8630"N	80°16'20.3449"W	283.61	96.276	1.32
6294.00	17.500	46.840	6241.45	-176.01	-10.45	302.09	1751133.94	428404.88	39°40'25.0678"N	80°16'20.0891"W	302.27	91.981	1.54
6389.00	17.000	49.330	6332.18	-171.94	8.37	323.05	1751154.89	428423.70	39°40'25.2556"N	80°16'19.8232"W	323.16	88.515	0.94
6484.00	17.330	49.290	6422.95	-168.49	26.65	344.31	1751176.14	428441.98	39°40'25.4381"N	80°16'19.5534"W	345.34	85.573	0.35
6582.00	18.540	50.080	6516.18	-164.99	46.17	367.32	1751199.16	428461.50	39°40'25.6329"N	80°16'19.2612"W	370.21	82.835	1.26
6678.00	18.310	43.550	6607.27	-159.97	66.90	389.42	1751221.25	428482.22	39°40'25.8396"N	80°16'18.9809"W	395.12	80.252	2.16
6773.00	18.500	46.710	6697.41	-154.13	88.05	410.67	1751242.50	428503.37	39°40'26.0505"N	80°16'18.7114"W	420.00	77.899	1.07
6868.00	18.190	43.190	6787.59	-148.22	109.20	431.79	1751263.62	428524.52	39°40'26.2612"N	80°16'18.4436"W	445.38	75.808	1.21
6963.00	19.380	34.670	6877.54	-139.01	132.98	450.91	1751282.74	428548.30	39°40'26.4978"N	80°16'18.2017"W	470.11	73.569	3.14
7058.00	21.310	34.040	6966.61	-126.62	160.25	469.54	1751301.37	428575.57	39°40'26.7689"N	80°16'17.9665"W	496.13	71.156	2.04
7154.00	19.040	38.670	7056.72	-115.23	186.93	489.09	1751320.92	428602.25	39°40'27.0343"N	80°16'17.7194"W	523.60	69.083	2.89
7249.00	18.460	40.990	7146.68	-106.53	210.38	508.64	1751340.47	428625.70	39°40'27.2677"N	80°16'17.4719"W	550.43	67.529	0.99
7344.00	18.640	39.350	7236.75	-98.09	233.48	528.13	1751359.96	428648.79	39°40'27.4976"N	80°16'17.2252"W	577.44	66.151	0.58
7474.00	17.630	25.000	7360.35	-81.76	267.40	549.64	1751381.46	428682.72	39°40'27.8347"N	80°16'16.9539"W	611.23	64.057	3.51

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Actual Wellpath Report

ERP 5H ST01 awp Proj: 22658'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	ERP 5H ST01
Field	Monongalia	API	47061019600001
Facility	ERP Pad	Wellbore	ERP 5H ST01 AWB
Slot	5H	Sidetrack from	ERP 5H awp Proj: 17244' at 7344.00 MD

WELLPATH DATA (250 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]
7569.00	15.450	346.690	7451.68	-62.34	292.83	552.81	1751384.64	428708.14	39°40'28.0863"N	80°16'16.9161"W	625.58	62.089	11.49
7665.00	16.850	338.190	7543.90	-36.73	318.20	544.70	1751376.53	428733.51	39°40'28.3363"N	80°16'17.0227"W	630.83	59.708	2.86
7761.00	24.130	342.420	7633.77	-4.21	349.87	533.59	1751365.41	428765.17	39°40'28.6483"N	80°16'17.1682"W	638.06	56.748	7.73
7856.00	32.190	343.810	7717.46	38.67	392.75	520.64	1751352.47	428808.06	39°40'29.0710"N	80°16'17.3385"W	652.17	52.971	8.51
7952.00	41.820	340.120	7794.04	94.29	447.54	502.59	1751334.42	428862.84	39°40'29.6109"N	80°16'17.5754"W	672.97	48.316	10.29
8048.00	46.690	335.090	7862.80	159.96	509.37	476.97	1751308.80	428924.67	39°40'30.2198"N	80°16'17.9098"W	697.83	43.118	6.25
8143.00	48.930	332.180	7926.61	229.77	572.41	445.69	1751277.52	428987.70	39°40'30.8401"N	80°16'18.3168"W	725.46	37.905	3.27
8239.00	58.950	331.270	7983.04	306.94	640.65	408.94	1751240.78	429055.94	39°40'31.5114"N	80°16'18.7943"W	760.04	32.551	10.47
8334.00	66.860	332.330	8026.28	391.07	715.14	369.03	1751200.87	429130.42	39°40'32.2441"N	80°16'19.3128"W	804.74	27.295	8.39
8428.00	74.340	332.200	8057.48	479.20	793.56	327.80	1751159.64	429208.84	39°40'33.0156"N	80°16'19.8488"W	858.59	22.444	7.96
8524.00	81.540	330.660	8077.53	572.65	875.94	282.92	1751114.76	429291.22	39°40'33.8260"N	80°16'20.4318"W	920.50	17.900	7.66
8620.00	82.970	329.410	8090.46	667.57	958.35	235.40	1751067.25	429373.62	39°40'34.6363"N	80°16'21.0485"W	986.83	13.801	1.97
8715.00	82.900	327.740	8102.15	761.78	1038.79	186.25	1751018.10	429454.06	39°40'35.4271"N	80°16'21.6860"W	1055.36	10.165	1.75
8811.00	89.940	326.320	8108.14	857.52	1119.12	134.14	1750965.99	429534.38	39°40'36.2165"N	80°16'22.3613"W	1127.13	6.835	7.48
8906.00	89.970	326.560	8108.22	952.52	1198.28	81.62	1750913.48	429613.54	39°40'36.9944"N	80°16'23.0416"W	1201.06	3.897	0.25
9002.00	89.970	326.070	8108.27	1048.52	1278.17	28.38	1750860.24	429693.42	39°40'37.7793"N	80°16'23.7314"W	1278.48	1.272	0.51
9098.00	91.080	326.750	8107.39	1144.52	1358.13	-24.73	1750807.13	429773.38	39°40'38.5650"N	80°16'24.4194"W	1358.36	358.957	1.36
9194.00	91.970	327.070	8104.83	1240.48	1438.53	-77.12	1750754.74	429853.77	39°40'39.3551"N	80°16'25.0983"W	1440.60	356.931	0.99
9289.00	92.060	326.910	8101.49	1335.41	1518.15	-128.84	1750703.02	429933.38	39°40'40.1375"N	80°16'25.7685"W	1523.60	355.149	0.19
9385.00	92.280	326.590	8097.86	1431.34	1598.37	-181.44	1750650.43	430013.60	39°40'40.9259"N	80°16'26.4501"W	1608.64	353.524	0.40
9481.00	92.160	327.060	8094.14	1527.27	1678.66	-233.93	1750597.94	430093.89	39°40'41.7149"N	80°16'27.1303"W	1694.89	352.067	0.50
9576.00	92.710	326.840	8090.10	1622.18	1758.22	-285.70	1750546.18	430173.44	39°40'42.4967"N	80°16'27.8010"W	1781.28	350.771	0.62
9672.00	92.490	325.500	8085.75	1718.07	1837.88	-339.09	1750492.79	430253.10	39°40'43.2794"N	80°16'28.4927"W	1868.90	349.547	1.41
9768.00	92.120	327.230	8081.88	1813.99	1917.74	-392.22	1750439.67	430332.96	39°40'44.0641"N	80°16'29.1810"W	1957.44	348.441	1.84
9863.00	92.060	326.690	8078.42	1908.92	1997.33	-443.98	1750387.91	430412.54	39°40'44.8462"N	80°16'29.8517"W	2046.08	347.468	0.57
9959.00	92.000	326.700	8075.02	2004.86	2077.51	-496.66	1750335.23	430492.71	39°40'45.6341"N	80°16'30.5343"W	2136.05	346.555	0.06
10055.00	92.030	326.400	8071.64	2100.80	2157.56	-549.54	1750282.35	430572.76	39°40'46.4207"N	80°16'31.2195"W	2226.44	345.710	0.31
10151.00	92.090	326.740	8068.19	2196.74	2237.62	-602.39	1750229.50	430652.82	39°40'47.2074"N	80°16'31.9043"W	2317.29	344.933	0.36
10246.00	92.830	326.760	8064.12	2291.65	2317.00	-654.43	1750177.47	430732.19	39°40'47.9874"N	80°16'32.5787"W	2407.65	344.228	0.78
10342.00	92.830	329.500	8059.37	2387.48	2398.42	-705.06	1750126.85	430813.60	39°40'48.7877"N	80°16'33.2351"W	2499.90	343.618	2.85

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Actual Wellpath Report

ERP 5H ST01 awp Proj: 22658'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	ERP 5H ST01
Field	Monongalia	API	47061019600001
Facility	ERP Pad	Wellbore	ERP 5H ST01 AWB
Slot	5H	Sidetrack from	ERP 5H awp Proj: 17244' at 7344.00 MD

WELLPATH DATA (250 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]
10438.00	93.200	322.390	8054.32	2483.28	2477.79	-758.70	1750073.20	430892.97	39°40'49.5676"N	80°16'33.9300"W	2591.35	342.975	7.41
10534.00	93.510	323.160	8048.70	2578.93	2554.10	-816.68	1750015.23	430969.28	39°40'50.3167"N	80°16'34.6799"W	2681.49	342.268	0.86
10630.00	93.350	324.850	8042.96	2674.67	2631.63	-873.00	1749958.92	431046.80	39°40'51.0781"N	80°16'35.4088"W	2772.65	341.648	1.77
10725.00	91.290	324.570	8039.11	2769.55	2709.11	-927.83	1749904.09	431124.27	39°40'51.8391"N	80°16'36.1187"W	2863.59	341.094	2.19
10820.00	91.420	325.800	8036.86	2864.50	2787.08	-982.05	1749849.87	431202.24	39°40'52.6050"N	80°16'36.8208"W	2955.04	340.590	1.30
10916.00	90.370	325.490	8035.37	2960.48	2866.32	-1036.22	1749795.70	431281.48	39°40'53.3835"N	80°16'37.5224"W	3047.88	340.124	1.14
11011.00	90.400	325.750	8034.73	3055.47	2944.72	-1089.86	1749742.06	431359.87	39°40'54.1537"N	80°16'38.2171"W	3139.94	339.690	0.28
11107.00	90.460	326.210	8034.01	3151.46	3024.29	-1143.57	1749688.36	431439.44	39°40'54.9354"N	80°16'38.9129"W	3233.28	339.287	0.48
11203.00	90.950	325.590	8032.83	3247.45	3103.78	-1197.39	1749634.54	431518.92	39°40'55.7163"N	80°16'39.6100"W	3326.74	338.904	0.82
11298.00	90.400	325.140	8031.71	3342.43	3181.94	-1251.38	1749580.56	431597.07	39°40'56.4841"N	80°16'40.3092"W	3419.16	338.531	0.75
11394.00	90.370	325.940	8031.06	3438.42	3261.09	-1305.70	1749526.24	431676.22	39°40'57.2617"N	80°16'41.0127"W	3512.77	338.179	0.83
11490.00	90.370	325.580	8030.44	3534.41	3340.45	-1359.71	1749472.23	431755.58	39°40'58.0414"N	80°16'41.7123"W	3606.58	337.851	0.37
11585.00	90.370	325.780	8029.83	3629.40	3418.91	-1413.27	1749418.67	431834.03	39°40'58.8121"N	80°16'42.4061"W	3699.50	337.541	0.21
11680.00	90.580	325.420	8029.04	3724.39	3497.29	-1466.94	1749365.01	431912.41	39°40'59.5822"N	80°16'43.1012"W	3792.49	337.244	0.44
11776.00	90.460	326.170	8028.17	3820.38	3576.68	-1520.91	1749311.05	431991.79	39°41'0.3621"N	80°16'43.8002"W	3886.62	336.963	0.79
11871.00	90.310	326.320	8027.53	3915.37	3655.66	-1573.69	1749258.27	432070.77	39°41'1.1381"N	80°16'44.4841"W	3980.00	336.709	0.22
11967.00	90.430	327.070	8026.91	4011.37	3735.90	-1626.40	1749205.56	432151.00	39°41'1.9265"N	80°16'45.1672"W	4074.57	336.474	0.79
12063.00	90.370	326.550	8026.24	4107.36	3816.23	-1678.95	1749153.01	432231.33	39°41'2.7159"N	80°16'45.8483"W	4169.23	336.253	0.55
12158.00	90.430	326.470	8025.58	4202.36	3895.46	-1731.37	1749100.59	432310.55	39°41'3.4944"N	80°16'46.5275"W	4262.89	336.037	0.11
12254.00	90.430	327.000	8024.86	4298.36	3975.73	-1784.03	1749047.94	432390.81	39°41'4.2831"N	80°16'47.2099"W	4357.65	335.833	0.55
12349.00	90.460	326.850	8024.12	4393.35	4055.33	-1835.87	1748996.10	432470.41	39°41'5.0653"N	80°16'47.8819"W	4451.53	335.643	0.16
12445.00	90.430	326.620	8023.37	4489.35	4135.60	-1888.53	1748943.45	432550.67	39°41'5.8541"N	80°16'48.5643"W	4546.39	335.456	0.24
12540.00	90.460	326.970	8022.64	4584.34	4215.08	-1940.55	1748891.43	432630.15	39°41'6.6351"N	80°16'49.2385"W	4640.33	335.279	0.37
12636.00	90.430	326.360	8021.89	4680.33	4295.28	-1993.30	1748838.68	432710.35	39°41'7.4232"N	80°16'49.9222"W	4735.26	335.105	0.64
12731.00	90.430	326.690	8021.18	4775.33	4374.52	-2045.70	1748786.28	432789.59	39°41'8.2018"N	80°16'50.6012"W	4829.22	334.937	0.35
12827.00	89.880	326.790	8020.92	4871.33	4454.80	-2098.35	1748733.64	432869.86	39°41'8.9905"N	80°16'51.2835"W	4924.26	334.778	0.58
12922.00	89.910	326.110	8021.09	4966.33	4533.97	-2150.85	1748681.14	432949.02	39°41'9.7685"N	80°16'51.9639"W	5018.27	334.621	0.72
13018.00	89.910	326.270	8021.24	5062.33	4613.74	-2204.27	1748627.72	433028.78	39°41'10.5521"N	80°16'52.6560"W	5113.25	334.463	0.17
13113.00	89.940	326.460	8021.37	5157.33	4692.83	-2256.89	1748575.10	433107.87	39°41'11.3293"N	80°16'53.3379"W	5207.32	334.316	0.20
13209.00	90.000	326.670	8021.42	5253.33	4772.94	-2309.79	1748522.21	433187.98	39°41'12.1164"N	80°16'54.0234"W	5302.46	334.176	0.23

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Actual Wellpath Report

ERP 5H ST01 awp Proj: 22658'

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REFERENCE WELLPATH IDENTIFICATION

Operator	NORTHEAST NATURAL ENERGY, LLC	Well	ERP 5H ST01
Field	Monongalia	API	47061019600001
Facility	ERP Pad	Wellbore	ERP 5H ST01 AWB
Slot	5H	Sidetrack from	ERP 5H awp Proj: 17244' at 7344.00 MD

WELLPATH DATA (250 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]
13304.00	89.910	326.850	8021.49	5348.32	4852.40	-2361.86	1748470.14	433267.43	39°41'12.8972"N	80°16'54.6983"W	5396.68	334.046	0.21
13400.00	89.850	326.500	8021.69	5444.32	4932.61	-2414.60	1748417.40	433347.64	39°41'13.6854"N	80°16'55.3818"W	5491.90	333.917	0.37
13495.00	89.820	326.610	8021.97	5539.32	5011.88	-2466.96	1748365.05	433426.91	39°41'14.4642"N	80°16'56.0604"W	5586.13	333.793	0.12
13591.00	90.370	325.610	8021.81	5635.32	5091.57	-2520.49	1748311.52	433506.59	39°41'15.2472"N	80°16'56.7539"W	5681.28	333.663	1.19
13686.00	90.400	326.890	8021.17	5730.31	5170.56	-2573.27	1748258.75	433585.57	39°41'16.0232"N	80°16'57.4378"W	5775.50	333.542	1.35
13782.00	90.400	324.840	8020.50	5826.30	5250.01	-2627.13	1748204.89	433665.02	39°41'16.8038"N	80°16'58.1356"W	5870.64	333.416	2.14
13878.00	90.370	325.950	8019.85	5922.29	5329.03	-2681.65	1748150.37	433744.03	39°41'17.5799"N	80°16'58.8418"W	5965.72	333.288	1.16
13972.00	90.370	326.130	8019.25	6016.28	5406.99	-2734.16	1748097.87	433821.99	39°41'18.3459"N	80°16'59.5221"W	6058.97	333.176	0.19
14068.00	90.430	326.680	8018.58	6112.28	5486.95	-2787.28	1748044.75	433901.95	39°41'19.1315"N	80°17'0.2105"W	6154.31	333.070	0.58
14164.00	89.780	325.760	8018.40	6208.28	5566.75	-2840.65	1747991.38	433981.74	39°41'19.9155"N	80°17'0.9021"W	6249.64	332.965	1.17
14259.00	89.420	326.800	8019.06	6303.27	5645.76	-2893.39	1747938.65	434060.75	39°41'20.6918"N	80°17'1.5855"W	6344.00	332.865	1.16
14355.00	89.260	326.570	8020.17	6399.27	5725.98	-2946.11	1747885.93	434140.96	39°41'21.4800"N	80°17'2.2689"W	6439.44	332.773	0.29
14451.00	89.140	326.210	8021.51	6495.26	5805.92	-2999.24	1747832.80	434220.90	39°41'22.2654"N	80°17'2.9575"W	6534.84	332.680	0.40
14546.00	89.910	325.540	8022.30	6590.25	5884.56	-3052.54	1747779.51	434299.53	39°41'23.0380"N	80°17'3.6479"W	6629.18	332.583	1.07
14642.00	90.060	327.430	8022.32	6686.24	5964.60	-3105.54	1747726.51	434379.56	39°41'23.8244"N	80°17'4.3349"W	6724.64	332.496	1.97
14737.00	89.780	326.510	8022.45	6781.24	6044.24	-3157.32	1747674.73	434459.20	39°41'24.6070"N	80°17'5.0061"W	6819.20	332.419	1.01
14833.00	89.780	326.180	8022.82	6877.24	6124.15	-3210.52	1747621.53	434539.11	39°41'25.3921"N	80°17'5.6956"W	6914.67	332.335	0.34
14929.00	89.350	326.410	8023.55	6973.23	6204.01	-3263.80	1747568.26	434618.96	39°41'26.1767"N	80°17'6.3859"W	7010.14	332.252	0.51
15024.00	89.450	325.530	8024.55	7068.22	6282.74	-3316.96	1747515.11	434697.68	39°41'26.9501"N	80°17'7.0748"W	7104.57	332.168	0.93
15120.00	89.880	326.730	8025.11	7164.22	6362.44	-3370.46	1747461.61	434777.38	39°41'27.7332"N	80°17'7.7680"W	7200.04	332.088	1.33
15215.00	89.940	327.930	8025.26	7259.21	6442.41	-3421.74	1747410.33	434857.35	39°41'28.5191"N	80°17'8.4329"W	7294.72	332.026	1.26
15311.00	90.150	327.690	8025.18	7355.17	6523.65	-3472.88	1747359.19	434938.59	39°41'29.3175"N	80°17'9.0962"W	7390.46	331.971	0.33
15407.00	89.940	326.290	8025.11	7451.17	6604.16	-3525.18	1747306.90	435019.08	39°41'30.1085"N	80°17'9.7742"W	7486.10	331.908	1.47
15503.00	89.780	325.670	8025.34	7547.16	6683.72	-3578.89	1747253.19	435098.65	39°41'30.8902"N	80°17'10.4702"W	7581.60	331.833	0.67
15598.00	89.690	325.340	8025.78	7642.15	6762.02	-3632.69	1747199.39	435176.94	39°41'31.6593"N	80°17'11.1671"W	7676.02	331.754	0.36
15694.00	90.000	327.220	8026.04	7738.15	6841.86	-3685.98	1747146.11	435256.78	39°41'32.4438"N	80°17'11.8578"W	7771.59	331.687	1.98
15789.00	90.340	326.930	8025.76	7833.14	6921.61	-3737.61	1747094.47	435336.51	39°41'33.2274"N	80°17'12.5272"W	7866.28	331.631	0.47
15884.00	90.400	326.880	8025.14	7928.13	7001.19	-3789.48	1747042.61	435416.09	39°41'34.0094"N	80°17'13.1997"W	7960.96	331.575	0.08
15980.00	90.180	325.330	8024.66	8024.13	7080.87	-3843.02	1746989.07	435495.77	39°41'34.7922"N	80°17'13.8934"W	8056.52	331.510	1.63
16074.00	90.340	320.640	8024.23	8117.94	7155.91	-3899.59	1746932.50	435570.80	39°41'35.5288"N	80°17'14.6255"W	8149.47	331.412	4.99

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Actual Wellpath Report

ERP 5H ST01 awp Proj: 22658'
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REFERENCE WELLPATH IDENTIFICATION

Operator	NORTHEAST NATURAL ENERGY, LLC	Well	ERP 5H ST01
Field	Monongalia	API	47061019600001
Facility	ERP Pad	Wellbore	ERP 5H ST01 AWB
Slot	5H	Sidetrack from	ERP 5H awp Proj: 17244' at 7344.00 MD

WELLPATH DATA (250 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]
16169.00	90.370	322.610	8023.64	8212.60	7230.38	-3958.57	1746873.54	435645.27	39°41'36.2597"N	80°17'15.3883"W	8243.10	331.300	2.07
16265.00	90.310	324.810	8023.07	8308.49	7307.75	-4015.38	1746816.72	435722.64	39°41'37.0194"N	80°17'16.1237"W	8338.26	331.213	2.29
16360.00	90.370	326.450	8022.51	8403.48	7386.16	-4069.01	1746763.10	435801.04	39°41'37.7896"N	80°17'16.8185"W	8432.81	331.150	1.73
16456.00	90.220	328.840	8022.02	8499.45	7467.25	-4120.38	1746711.73	435882.13	39°41'38.5865"N	80°17'17.4848"W	8528.62	331.110	2.49
16552.00	90.250	328.450	8021.62	8595.37	7549.23	-4170.33	1746661.78	435964.10	39°41'39.3924"N	80°17'18.1330"W	8624.53	331.083	0.41
16647.00	90.370	328.770	8021.11	8690.30	7630.33	-4219.81	1746612.30	436045.19	39°41'40.1895"N	80°17'18.7751"W	8719.44	331.056	0.36
16743.00	89.970	328.740	8020.82	8786.21	7712.40	-4269.61	1746562.51	436127.26	39°41'40.9963"N	80°17'19.4213"W	8815.37	331.031	0.42
16838.00	89.880	327.960	8020.95	8881.16	7793.27	-4319.46	1746512.67	436208.13	39°41'41.7911"N	80°17'20.0681"W	8910.26	331.002	0.83
16934.00	89.880	328.850	8021.15	8977.09	7875.04	-4369.75	1746462.37	436289.89	39°41'42.5948"N	80°17'20.7206"W	9006.16	330.975	0.93
17029.00	89.880	328.560	8021.35	9072.02	7956.22	-4419.10	1746413.03	436371.06	39°41'43.3928"N	80°17'21.3610"W	9101.09	330.951	0.31
17125.00	90.280	328.280	8021.21	9167.95	8038.00	-4469.37	1746362.76	436452.84	39°41'44.1967"N	80°17'22.0133"W	9197.00	330.925	0.51
17221.00	90.180	328.430	8020.83	9263.90	8119.73	-4519.74	1746312.40	436534.56	39°41'44.9999"N	80°17'22.6668"W	9292.90	330.898	0.19
17316.00	90.340	330.860	8020.40	9358.73	8201.70	-4567.74	1746264.39	436616.53	39°41'45.8058"N	80°17'23.2902"W	9387.87	330.885	2.56
17412.00	90.280	332.320	8019.88	9454.33	8286.13	-4613.42	1746218.72	436700.96	39°41'46.6363"N	80°17'23.8839"W	9483.86	330.893	1.52
17507.00	90.150	334.570	8019.52	9548.60	8371.10	-4655.88	1746176.26	436785.92	39°41'47.4723"N	80°17'24.4368"W	9578.76	330.918	2.37
17602.00	90.310	334.480	8019.14	9642.64	8456.87	-4696.74	1746135.40	436871.68	39°41'48.3163"N	80°17'24.9691"W	9673.57	330.953	0.19
17696.00	90.250	334.520	8018.68	9735.69	8541.71	-4737.21	1746094.94	436956.52	39°41'49.1512"N	80°17'25.4964"W	9767.39	330.987	0.08
17791.00	90.220	334.110	8018.29	9829.78	8627.32	-4778.39	1746053.76	437042.12	39°41'49.9937"N	80°17'26.0328"W	9862.23	331.019	0.43
17887.00	90.250	332.080	8017.90	9925.11	8712.92	-4821.83	1746010.33	437127.72	39°41'50.8359"N	80°17'26.5981"W	9958.16	331.039	2.11
17982.00	90.310	331.580	8017.43	10019.68	8796.67	-4866.67	1745965.48	437211.46	39°41'51.6596"N	80°17'27.1813"W	10053.15	331.047	0.53
18078.00	90.280	330.550	8016.94	10115.36	8880.68	-4913.12	1745919.04	437295.47	39°41'52.4858"N	80°17'27.7849"W	10149.15	331.047	1.07
18173.00	90.400	329.040	8016.37	10210.18	8962.78	-4960.91	1745871.25	437377.57	39°41'53.2930"N	80°17'28.4055"W	10244.12	331.035	1.59
18268.00	90.250	326.660	8015.84	10305.14	9043.21	-5011.46	1745820.71	437457.99	39°41'54.0834"N	80°17'29.0613"W	10338.97	331.006	2.51
18364.00	90.250	326.350	8015.42	10401.14	9123.26	-5064.44	1745767.73	437538.04	39°41'54.8700"N	80°17'29.7481"W	10434.68	330.965	0.32
18459.00	90.180	326.210	8015.06	10496.14	9202.28	-5117.17	1745715.00	437617.05	39°41'55.6462"N	80°17'30.4316"W	10529.36	330.923	0.16
18554.00	90.250	325.580	8014.70	10591.14	9280.94	-5170.44	1745661.73	437695.70	39°41'56.4190"N	80°17'31.1220"W	10624.00	330.878	0.67
18650.00	90.370	326.650	8014.18	10687.13	9360.63	-5223.96	1745608.22	437775.39	39°41'57.2019"N	80°17'31.8156"W	10719.67	330.835	1.12
18746.00	89.970	326.440	8013.90	10783.13	9440.73	-5276.89	1745555.30	437855.48	39°41'57.9888"N	80°17'32.5017"W	10815.40	330.797	0.47
18842.00	89.940	326.470	8013.97	10879.13	9520.74	-5329.93	1745502.25	437935.49	39°41'58.7749"N	80°17'33.1894"W	10911.13	330.759	0.04
18937.00	90.060	327.190	8013.97	10974.13	9600.26	-5381.91	1745450.28	438015.00	39°41'59.5562"N	80°17'33.8634"W	11005.90	330.725	0.77

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Actual Wellpath Report

ERP 5H ST01 awp Proj: 22658'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	ERP 5H ST01
Field	Monongalia	API	47061019600001
Facility	ERP Pad	Wellbore	ERP 5H ST01 AWB
Slot	5H	Sidetrack from	ERP 5H awp Proj: 17244' at 7344.00 MD

WELLPATH DATA (250 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]
19033.00	89.940	326.900	8013.97	11070.12	9680.81	-5434.13	1745398.06	438095.55	39°42'0.3477"N	80°17'34.5405"W	11101.71	330.693	0.33
19128.00	90.030	326.900	8014.00	11165.12	9760.39	-5486.01	1745346.18	438175.13	39°42'1.1296"N	80°17'35.2132"W	11196.50	330.661	0.09
19224.00	90.060	326.730	8013.92	11261.11	9840.74	-5538.56	1745293.64	438255.47	39°42'1.9190"N	80°17'35.8946"W	11292.29	330.628	0.18
19319.00	89.660	326.190	8014.16	11356.11	9919.92	-5591.05	1745241.15	438334.65	39°42'2.6970"N	80°17'36.5750"W	11387.04	330.594	0.71
19415.00	89.690	326.700	8014.70	11452.11	9999.92	-5644.11	1745188.10	438414.64	39°42'3.4829"N	80°17'37.2629"W	11482.79	330.559	0.53
19510.00	90.150	326.490	8014.83	11547.11	10079.23	-5696.41	1745135.80	438493.94	39°42'4.2621"N	80°17'37.9410"W	11577.56	330.526	0.53
19605.00	90.150	326.570	8014.58	11642.11	10158.47	-5748.80	1745083.41	438573.18	39°42'5.0407"N	80°17'38.6202"W	11672.33	330.494	0.08
19701.00	90.620	327.160	8013.94	11738.10	10238.86	-5801.28	1745030.94	438653.56	39°42'5.8305"N	80°17'39.3007"W	11768.14	330.464	0.79
19795.00	90.650	325.910	8012.90	11832.09	10317.27	-5853.11	1744979.11	438731.97	39°42'6.6009"N	80°17'39.9726"W	11861.91	330.433	1.33
19890.00	90.520	325.470	8011.93	11927.08	10395.73	-5906.65	1744925.57	438810.43	39°42'7.3716"N	80°17'40.6665"W	11956.58	330.396	0.48
19986.00	90.650	325.850	8010.95	12023.07	10475.00	-5960.80	1744871.42	438889.69	39°42'8.1502"N	80°17'41.3683"W	12052.25	330.358	0.42
20082.00	90.650	325.570	8009.86	12119.06	10554.31	-6014.88	1744817.34	438968.99	39°42'8.9292"N	80°17'42.0692"W	12147.93	330.321	0.29
20177.00	90.550	325.320	8008.86	12214.04	10632.54	-6068.76	1744763.47	439047.23	39°42'9.6977"N	80°17'42.7674"W	12242.59	330.283	0.28
20272.00	90.550	325.650	8007.95	12309.02	10710.82	-6122.59	1744709.64	439125.50	39°42'10.4665"N	80°17'43.4649"W	12337.25	330.247	0.35
20368.00	89.480	325.030	8007.93	12405.01	10789.78	-6177.19	1744655.05	439204.45	39°42'11.2421"N	80°17'44.1723"W	12432.90	330.209	1.29
20463.00	89.690	324.480	8008.61	12499.96	10867.36	-6232.01	1744600.23	439282.03	39°42'12.0040"N	80°17'44.8825"W	12527.47	330.167	0.62
20557.00	89.380	325.610	8009.38	12593.93	10944.40	-6285.86	1744546.38	439359.07	39°42'12.7606"N	80°17'45.5802"W	12621.09	330.129	1.25
20652.00	89.420	326.580	8010.37	12688.93	11023.24	-6338.85	1744493.40	439437.90	39°42'13.5351"N	80°17'46.2671"W	12715.85	330.099	1.02
20747.00	89.940	327.530	8010.90	12783.92	11102.96	-6390.51	1744441.74	439517.62	39°42'14.3184"N	80°17'46.9371"W	12810.72	330.077	1.14
20842.00	89.970	326.480	8010.98	12878.91	11182.64	-6442.24	1744390.01	439597.29	39°42'15.1013"N	80°17'47.6080"W	12905.58	330.054	1.11
20938.00	90.220	326.550	8010.82	12974.91	11262.71	-6495.21	1744337.05	439677.35	39°42'15.8879"N	80°17'48.2947"W	13001.40	330.028	0.27
21033.00	90.340	326.650	8010.35	13069.91	11342.02	-6547.50	1744284.75	439756.66	39°42'16.6671"N	80°17'48.9728"W	13096.23	330.003	0.16
21129.00	90.490	326.590	8009.66	13165.90	11422.18	-6600.32	1744231.94	439836.81	39°42'17.4546"N	80°17'49.6577"W	13192.06	329.978	0.17
21224.00	91.260	326.940	8008.21	13260.89	11501.63	-6652.38	1744179.88	439916.26	39°42'18.2352"N	80°17'50.3327"W	13286.90	329.956	0.89
21320.00	90.430	326.690	8006.79	13356.88	11581.96	-6704.92	1744127.35	439996.59	39°42'19.0245"N	80°17'51.0141"W	13382.74	329.933	0.90
21415.00	89.260	326.450	8007.05	13451.87	11661.25	-6757.26	1744075.02	440075.87	39°42'19.8034"N	80°17'51.6927"W	13477.58	329.909	1.26
21511.00	89.450	326.360	8008.13	13547.87	11741.41	-6810.37	1744021.90	440155.82	39°42'20.5890"N	80°17'52.3813"W	13573.40	329.885	0.22
21606.00	89.110	328.710	8009.32	13642.83	11821.35	-6861.36	1743970.92	440235.96	39°42'21.3765"N	80°17'53.0428"W	13668.30	329.868	2.50
21702.00	87.720	326.590	8011.98	13738.77	11902.41	-6912.70	1743919.58	440317.01	39°42'22.1731"N	80°17'53.7089"W	13764.19	329.853	2.64
21797.00	89.110	326.400	8014.61	13833.73	11981.59	-6965.12	1743867.16	440396.19	39°42'22.9510"N	80°17'54.3886"W	13858.99	329.830	1.48

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Actual Wellpath Report

ERP 5H ST01 awp Proj: 22658'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	ERP 5H ST01
Field	Monongalia	API	47061019600001
Facility	ERP Pad	Wellbore	ERP 5H ST01 AWB
Slot	5H	Sidetrack from	ERP 5H awp Proj: 17244' at 7344.00 MD

WELLPATH DATA (250 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]
21893.00	89.480	326.310	8015.79	13929.72	12061.50	-7018.31	1743813.98	440476.10	39°42'23.7360"N	80°17'55.0782"W	13954.80	329.806	0.40
21988.00	90.000	325.840	8016.22	14024.72	12140.33	-7071.33	1743760.97	440554.92	39°42'24.5104"N	80°17'55.7655"W	14049.60	329.781	0.74
22083.00	90.090	325.480	8016.15	14119.71	12218.77	-7124.92	1743707.38	440633.36	39°42'25.2809"N	80°17'56.4601"W	14144.36	329.753	0.39
22179.00	90.550	325.620	8015.61	14215.70	12297.94	-7179.22	1743653.08	440712.52	39°42'26.0584"N	80°17'57.1639"W	14240.10	329.725	0.50
22274.00	90.620	325.900	8014.64	14310.69	12376.47	-7232.67	1743599.63	440791.04	39°42'26.8298"N	80°17'57.8567"W	14334.87	329.698	0.30
22370.00	90.220	325.630	8013.94	14406.68	12455.83	-7286.68	1743545.63	440870.40	39°42'27.6093"N	80°17'58.5567"W	14430.64	329.672	0.50
22466.00	90.490	325.550	8013.34	14502.67	12535.03	-7340.93	1743491.38	440949.60	39°42'28.3873"N	80°17'59.2599"W	14526.40	329.645	0.29
22561.00	90.550	325.690	8012.48	14597.66	12613.43	-7394.57	1743437.74	441027.99	39°42'29.1573"N	80°17'59.9551"W	14621.16	329.619	0.16
22633.00	90.550	325.640	8011.79	14669.65	12672.88	-7435.18	1743397.14	441087.44	39°42'29.7413"N	80°18'0.4815"W	14692.99	329.600	0.07
22658.00‡	90.550	325.640	8011.55	14694.64	12693.52	-7449.29	1743383.03	441108.08	39°42'29.9440"N	80°18'0.6644"W	14717.92	329.593	0.00

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Actual Wellpath Report

ERP 5H ST01 awp Proj: 22658'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	ERP 5H ST01
Field	Monongalia	API	47061019600001
Facility	ERP Pad	Wellbore	ERP 5H ST01 AWB
Slot	5H	Sidetrack from	ERP 5H awp Proj: 17244' at 7344.00 MD

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
ERP 5H BHL Rev-1	8062.00	12692.01	-7450.32	1743381.99	441106.56	39°42'29.9289"N	80°18'0.6775"W	point
ERP 5H ST01 LP Rev 1	8062.00	1154.75	350.05	1751181.89	429570.01	39°40'36.5870"N	80°16'19.6039"W	point
ERP 5H point E	8062.00	7982.57	-4190.98	1746641.13	436397.41	39°41'43.6730"N	80°17'18.4458"W	point
ERP 5H point W	8062.00	7845.15	-4342.12	1746490.00	436260.00	39°41'42.3018"N	80°17'20.3639"W	point
ERP Hardline #1 (11.26.2024)	9528.50	11507.03	-7491.69	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	11911.69	-6475.11	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	11742.31	-6372.89	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	11562.10	-6460.89	1744371.36	439976.72	39°42'18.8496"N	80°17'47.8896"W	polygon
2D Polygon: dimensions not calculated								

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Actual Wellpath Report

ERP 5H ST01 awp Proj: 22658'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	ERP 5H ST01
Field	Monongalia	API	4706101960001
Facility	ERP Pad	Wellbore	ERP 5H ST01 AWB
Slot	5H	Sidetrack from	ERP 5H awp Proj: 17244' at 7344.00 MD

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
ERP Hardline #5 (11.26.2024)	9528.50	10998.50	-7130.30	1743701.99	439413.16	39°42'13.2212"N	80°17'56.3901"W	polygon
	2D Polygon: dimensions not calculated							
ERP Hardline #6 (12.18.2024)	9528.50	8465.92	-2165.77	1748666.22	436880.73	39°41'48.6246"N	80°16'52.5921"W	polygon
	2D Polygon: dimensions not calculated							
ERP Unit Lines NE (11.26.2024)	10028.50	12293.82	-8214.93	1742617.43	440708.40	39°42'25.9265"N	80°18'10.4150"W	polygon
	2D Polygon: dimensions not calculated							
ERP Unit Lines NW (2.27.2025)	10028.50	12293.82	-8214.93	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 5H ST01 AWB Ref Wellpath: ERP 5H ST01 awp Proj: 22658'					
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
28.50	1150.00	BH Generic gyro - northseeking (Standard)	1 Imported Gyro Scientific 50' - 1150'	ERP 5H AWB	1/19/2025
1150.00	7344.00	OWSG MWD rev2 + HRGM	2 Imported MWD Scientific 1175'- 7344'	ERP 5H AWB	1/19/2025
7344.00	22658.00	BH AutoTrak Curve/eXpress (2019) (HRGM, Short spacing)	1 BH ATC MWD HRGM 8.5" 7474' - 22633'	ERP 5H ST01 AWB	3/11/2025

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