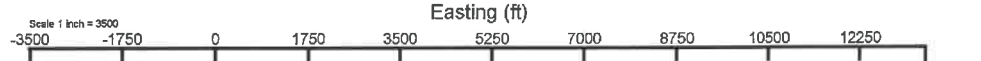


API: 47-061-01865-0000
 BH Job #: 110853547
 Rig: Patterson 277
 Duration: 5/14/21 - 5/20/21



Tally MWD <8-3/4">(5375')(5469'-8028') : 5468.68ft TVD, 22.26ft S, 6.87ft E
 Javins Inertial Gyro <8-3/4">(100'-5375') : 100.00ft TVD, 0.17ft N, 0.07ft W
 Slot 4H

BH AT Curve <8-1/2">(8028')(8049'-25054') : 7937.77ft TVD, 10.30ft S, 149.57ft E

Well reference wellbore is Bunner 4H PWB Rev-A,0	Old System: MAGD (Magnetic True North) SP, Northern Zone (NAD83, US Feet)
True vertical depth is referenced to Patterson 277 (RKB)	North Reference: GM/None
Reference wellbore measured depths are referenced to Patterson 277 (RKB)	Scale: True distance
Patterson 277 (RKB) to Mean Sea Level: 1305 feet	Coordinates are in feet referenced to Grid
Mean Sea Level to Ground level (At Slot: Slot 4H) : 410' -1277 feet	Depth is in feet
Other wellbore MDs are referenced to each job's detail KO station	Created by: M&D on 2021-05-21; Calabasas, WA, MFL_EASTERNUS_Csh

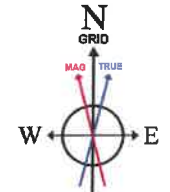


Javins Inertial Gyro <8-3/4">(100'-5375') : 0.29° Inc, 100.00ft MD, 100.00ft TVD, -0.18ft VS

Well Data			
Slot	Well	Wellbore	Wellbore
Slot 4H	Bunner 4H	Bunner 4H AWP	Bunner 4H AWP Proj: 25079
Slot 4H	Bunner 4H	Bunner 4H PWB	Bunner 4H PWP Rev-A,0

Location Information					
Facility Name		Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Bunner Pad		1768458.500	424248.370	39°39'45.2443"N	80°13'3.8736"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude
Slot 4H	-30.10	20.00	1768478.500	424218.270	39°39'44.8484"N
Patterson 277 (RKB) to Ground level (At Slot: Slot 4H)				28ft	
Mean Sea Level to Ground level (At Slot: Slot 4H)				-1277ft	
Patterson 277 (RKB) to Mean Sea Level				1305ft	

Well Profile Data							
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	VS (ft)
Tie On	8028.00	51.160	138.670	7924.77	2.19	138.80	7.09
Pro. to Bottom	8052.00	56.310	141.000	7962.62	-37.24	172.04	8.58
End of 3D Arc	8150.11	53.996	133.886	7995.85	-72.36	204.23	175.15
Landing Pt.	8498.19	80.000	145.568	8102.00	-322.58	411.61	498.78
BHL	29007.69	80.000	145.568	8102.00	-13989.27	9780.48	0.00



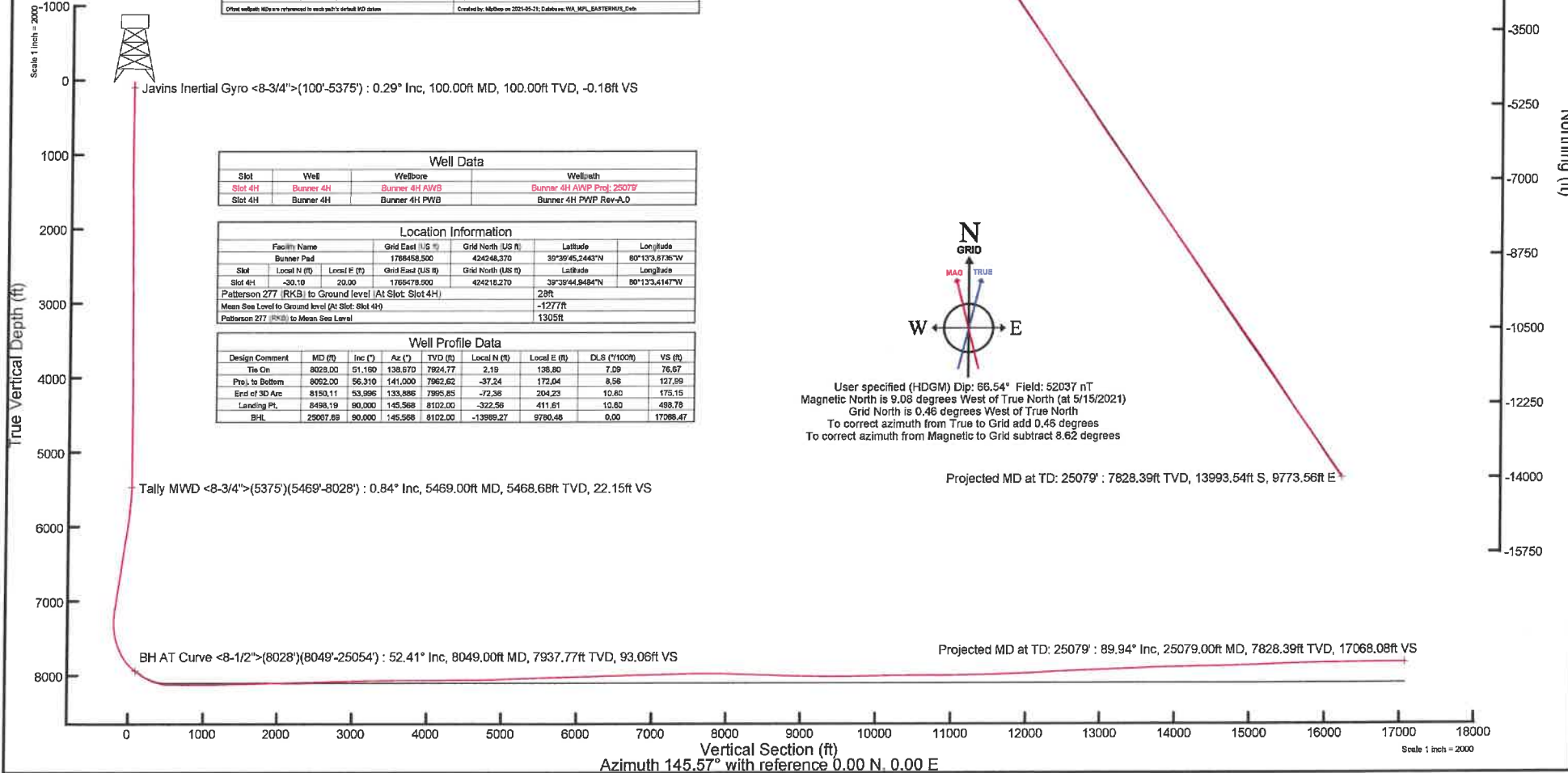
User specified (HDGM) Dip: 86.54° Field: 52037 nT
 Magnetic North is 9.08 degrees West of True North (at 5/15/2021)
 Grid North is 0.46 degrees West of True North
 To correct azimuth from True to Grid add 0.46 degrees
 To correct azimuth from Magnetic to Grid subtract 8.62 degrees

Projected MD at TD: 25079' : 7828.39ft TVD, 13993.54ft S, 9773.56ft E

Projected MD at TD: 25079' : 89.94° Inc, 25079.00ft MD, 7828.39ft TVD, 17068.08ft VS

Tally MWD <8-3/4">(5375')(5469'-8028') : 0.84° Inc, 5469.00ft MD, 5468.68ft TVD, 22.15ft VS

BH AT Curve <8-1/2">(8028')(8049'-25054') : 52.41° Inc, 8049.00ft MD, 7937.77ft TVD, 93.06ft VS



Vertical Section (ft)
 Azimuth 145.57° with reference 0.00 N. 0.00 E

Scale 1 inch = 2000

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	8/21/2021
Job End Date:	10/7/2021
State:	West Virginia
County:	Monongalia
API Number:	47-061-01865-00-00
Operator Name:	Northeast Natural Energy LLC
Well Name and Number:	Bunner 4H
Latitude:	39.66248600
Longitude:	-80.21761500
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	8,123
Total Base Water Volume (gal):	33,540,692
Total Base Non Water Volume:	0



Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
Water	Northeast Natural Energy LLC	Carrier/Base Fluid					
			Water	7732-18-5	100.00000	88.40386	
Sand	U.S. Well Services	Proppant					
			Crystalline Silica, quartz	14808-60-7	100.00000	11.27432	
HCL Acid (5% to 7.5%)	U.S. Well Services	Bulk Acid					
			Water	7732-18-5	95.00000	0.20887	
			Hydrogen Chloride	7647-01-0	7.50000	0.01915	
Clearal 268	U.S. Well Services	Anti-Bacterial Agent					
			Non-hazardous substances	Proprietary	90.00000	0.02650	
			Glutaraldehyde	111-30-8	20.00000	0.00624	
			Didecyl dimethyl ammonium chloride	7173-51-5	3.00000	0.00088	
			Alkyl dimethyl benzyl ammonium chloride	68391-01-5	3.00000	0.00088	
StimSTREAM SC-405	ChemSTREAM, INC.	Scale Inhibitor					
			Non-hazardous substances	Proprietary	70.00000	0.02242	
			Diethylenetriamine penta (methylene phosphonic acid) (DTPMP)	15827-60-8	10.00000	0.00320	

			2-Phosphono-1,2,4-butanetricarboxylic acid (PBTC)	37971-36-1	10.00000	0.00320
			Citric acid	77-92-9	10.00000	0.00320
Alphastim C1500+	U.S. Well Services	Friction Reducer				
			Alkanes, C16-20-iso-	90622-59-6	25.00000	0.01280
			Butene, homopolymer	9003-29-6	25.00000	0.01280
			Ethoxylated alcohols (C12-18)	68213-23-0	3.00000	0.00154
Alphainhibit	U.S. Well Services	Acid Corrosion Inhibitor				
			Ethylene glycol	107-21-1	40.00000	0.00006
			Cinnamaldehyde	104-55-2	20.00000	0.00002
			Formic acid	64-18-6	20.00000	0.00002
			Butyl cellosolve	111-76-2	20.00000	0.00002
			Polyether	60828-78-6	10.00000	0.00001
			Acetophenone,thiourea,formaldehyde polymer	68527-49-1	5.00000	0.00001

Ingredients shown above are subject to 29 CFR 1910.1200(i) and appear on Material Safety Data Sheets (MSDS). Ingredients shown below are Non-MSDS.

* Total Water Volume sources may include fresh water, produced water, and/or recycled water

** Information is based on the maximum potential for concentration and thus the total may be over 100%

Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided.

Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)



Actual Wellpath Report

Bunner 4H AWP Proj: 25079'

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REFERENCE WELLPATH IDENTIFICATION

Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Bunner 4H
Field	Monongalia	API/Legal	
Facility	Bunner Pad	Wellbore	Bunner 4H AWB
Slot	Slot 4H		

REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert West Virginia SP, Northern Zone (4701), US feet	Software System	WellArchitect® 6.0
North Reference	Grid	User	Hilpthop
Scale	0.999941	Report Generated	5/21/2021 at 12:03:07 PM
Convergence at slot	0.46° West	Database	WA_MPL_EASTERNUS_Defn

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-30.10	20.00	1766478.50	424218.27	39°39'44.9484"N	80°13'3.4147"W
Facility Reference Pt			1766458.50	424248.37	39°39'45.2443"N	80°13'3.6735"W
Field Reference Pt			1777685.71	440640.65	39°42'28.1140"N	80°10'41.6900"W

WELLPATH DATUM

Calculation method	Minimum curvature	Patterson 277 (RKB) to Facility Vertical Datum	1305.00ft
Horizontal Reference Pt	Slot	Patterson 277 (RKB) to Mean Sea Level	1305.00ft
Vertical Reference Pt	Patterson 277 (RKB)	Patterson 277 (RKB) to Ground Level at Slot (Slot 4H)	28.00ft
MD Reference Pt	Patterson 277 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	145.57°



Actual Wellpath Report

Bunner 4H AWP Proj: 25079'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Bunner 4H
Field	Monongalia	API/Legal	
Facility	Bunner Pad	Wellbore	Bunner 4H AWB
Slot	Slot 4H		

WELLPATH DATA (270 stations) † = interpolated, ‡ = extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]
0.00†	0.000	336.500	0.00	0.00	0.00	0.00	1766478.50	424218.27	39°39'44.9484"N	80°13'3.4147"W	0.00	0.000	0.00	0.00	0.00
28.00	0.000	336.500	28.00	0.00	0.00	0.00	1766478.50	424218.27	39°39'44.9484"N	80°13'3.4147"W	0.00	0.000	0.00	0.00	0.00
100.00	0.290	336.500	100.00	-0.18	0.17	-0.07	1766478.43	424218.44	39°39'44.9501"N	80°13'3.4156"W	0.18	336.500	0.40	0.40	0.00
200.00	0.310	304.100	200.00	-0.68	0.55	-0.40	1766478.10	424218.82	39°39'44.9538"N	80°13'3.4198"W	0.68	324.180	0.17	0.02	-32.40
300.00	0.270	342.400	300.00	-1.16	0.93	-0.69	1766477.81	424219.20	39°39'44.9575"N	80°13'3.4237"W	1.16	323.229	0.19	-0.04	38.30
400.00	0.300	343.500	400.00	-1.63	1.40	-0.84	1766477.66	424219.67	39°39'44.9622"N	80°13'3.4256"W	1.63	329.132	0.03	0.03	1.10
500.00	0.290	339.000	499.99	-2.13	1.89	-1.00	1766477.50	424220.16	39°39'44.9670"N	80°13'3.4277"W	2.14	332.034	0.03	-0.01	-4.50
600.00	0.240	330.100	599.99	-2.58	2.31	-1.20	1766477.30	424220.58	39°39'44.9711"N	80°13'3.4303"W	2.60	332.555	0.06	-0.05	-8.90
700.00	0.340	280.300	699.99	-3.00	2.54	-1.59	1766476.91	424220.81	39°39'44.9734"N	80°13'3.4354"W	3.00	327.899	0.26	0.10	-49.80
800.00	0.400	261.000	799.99	-3.36	2.54	-2.23	1766476.27	424220.81	39°39'44.9734"N	80°13'3.4435"W	3.38	318.708	0.14	0.06	-19.30
900.00	0.390	266.000	899.99	-3.68	2.46	-2.92	1766475.58	424220.73	39°39'44.9725"N	80°13'3.4522"W	3.82	310.182	0.04	-0.01	5.00
1000.00	0.350	314.100	999.99	-4.15	2.65	-3.47	1766475.03	424220.92	39°39'44.9744"N	80°13'3.4594"W	4.37	307.345	0.30	-0.04	48.10
1100.00	0.550	87.600	1099.98	-4.20	2.88	-3.21	1766475.29	424221.15	39°39'44.9767"N	80°13'3.4561"W	4.32	311.898	0.83	0.20	133.50
1200.00	0.590	206.700	1199.98	-3.69	2.44	-2.97	1766475.53	424220.71	39°39'44.9724"N	80°13'3.4529"W	3.84	309.487	0.98	0.04	119.10
1300.00	0.320	259.200	1299.98	-3.56	1.93	-3.47	1766475.03	424220.20	39°39'44.9673"N	80°13'3.4593"W	3.97	299.092	0.47	-0.27	52.50
1400.00	0.450	103.400	1399.98	-3.38	1.79	-3.36	1766475.14	424220.06	39°39'44.9658"N	80°13'3.4579"W	3.81	297.996	0.75	0.13	-155.80
1500.00	0.770	130.300	1499.97	-2.44	1.26	-2.47	1766476.03	424219.53	39°39'44.9607"N	80°13'3.4464"W	2.77	297.082	0.42	0.32	26.90
1600.00	0.830	133.300	1599.96	-1.08	0.33	-1.43	1766477.07	424218.60	39°39'44.9516"N	80°13'3.4330"W	1.47	283.052	0.07	0.06	3.00
1700.00	0.780	132.700	1699.95	0.29	-0.63	-0.40	1766478.10	424217.64	39°39'44.9422"N	80°13'3.4198"W	0.75	212.731	0.05	-0.05	-0.60
1800.00	0.950	135.400	1799.94	1.77	-1.68	0.68	1766479.18	424216.59	39°39'44.9319"N	80°13'3.4058"W	1.81	157.964	0.17	0.17	2.70
1900.00	1.050	146.700	1899.93	3.50	-3.03	1.76	1766480.26	424215.24	39°39'44.9186"N	80°13'3.3918"W	3.51	149.824	0.22	0.10	11.30
2000.00	1.240	168.600	1999.91	5.41	-4.86	2.48	1766480.98	424213.41	39°39'44.9006"N	80°13'3.3825"W	5.46	152.957	0.47	0.19	21.90
2100.00	0.320	160.700	2099.90	6.68	-6.19	2.79	1766481.29	424212.08	39°39'44.8875"N	80°13'3.3784"W	6.78	155.740	0.92	-0.92	-7.90
2200.00	0.490	222.400	2199.89	7.04	-6.76	2.59	1766481.09	424211.51	39°39'44.8818"N	80°13'3.3809"W	7.24	159.038	0.44	0.17	61.70
2300.00	0.550	226.300	2299.89	7.22	-7.41	1.96	1766480.46	424210.86	39°39'44.8753"N	80°13'3.3889"W	7.67	165.215	0.07	0.06	3.90
2400.00	0.250	221.400	2399.89	7.35	-7.91	1.47	1766479.96	424210.36	39°39'44.8704"N	80°13'3.3952"W	8.04	169.504	0.30	-0.30	-4.90
2450.00	0.190	176.600	2449.89	7.45	-8.07	1.40	1766479.90	424210.20	39°39'44.8688"N	80°13'3.3960"W	8.19	170.176	0.35	-0.12	-89.60
2500.00	0.950	165.000	2499.88	7.91	-8.56	1.51	1766480.01	424209.72	39°39'44.8640"N	80°13'3.3945"W	8.69	169.990	1.53	1.52	-23.20
2600.00	0.810	135.200	2599.87	9.39	-9.86	2.22	1766480.72	424208.41	39°39'44.8512"N	80°13'3.3853"W	10.10	167.294	0.47	-0.14	-29.80
2700.00	0.900	140.600	2699.86	10.86	-10.97	3.22	1766481.72	424207.30	39°39'44.8403"N	80°13'3.3724"W	11.43	163.640	0.12	0.09	-5.40



Actual Wellpath Report

Bunner 4H AWP Proj: 25079'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Bunner 4H
Field	Monongalia	API/Legal	
Facility	Bunner Pad	Wellbore	Bunner 4H AWB
Slot	Slot 4H		

WELLPATH DATA (270 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]
2800.00	0.720	202.400	2799.85	11.99	-12.15	3.48	1766481.98	424206.12	39°39'44.8286"N	80°13'3.3690"W	12.64	164.029	0.85	-0.18	61.80
2900.00	0.260	208.200	2899.85	12.44	-12.93	3.13	1766481.63	424205.34	39°39'44.8209"N	80°13'3.3733"W	13.31	166.390	0.46	-0.46	5.80
3000.00	0.750	101.300	2999.85	13.01	-13.26	3.67	1766482.17	424205.01	39°39'44.8177"N	80°13'3.3665"W	13.76	164.548	0.86	0.49	-106.90
3100.00	0.800	100.900	3099.84	13.98	-13.52	4.99	1766483.49	424204.75	39°39'44.8152"N	80°13'3.3495"W	14.42	159.733	0.05	0.05	-0.40
3200.00	0.920	110.200	3199.83	15.13	-13.98	6.43	1766484.93	424204.34	39°39'44.8113"N	80°13'3.3310"W	15.35	155.217	0.18	0.12	9.30
3300.00	0.920	118.900	3299.81	16.50	-14.60	7.89	1766486.39	424203.67	39°39'44.8048"N	80°13'3.3123"W	16.59	151.612	0.14	0.00	8.70
3400.00	0.570	84.000	3399.81	17.45	-14.93	9.09	1766487.59	424203.34	39°39'44.8016"N	80°13'3.2970"W	17.48	148.681	0.56	-0.35	-34.90
3500.00	0.340	65.600	3499.80	17.74	-14.76	9.85	1766488.35	424203.51	39°39'44.8034"N	80°13'3.2872"W	17.74	146.278	0.27	-0.23	-18.40
3600.00	0.260	325.600	3599.80	17.57	-14.45	9.99	1766488.49	424203.82	39°39'44.8064"N	80°13'3.2854"W	17.57	145.332	0.46	-0.08	-100.00
3700.00	0.690	116.600	3699.80	17.87	-14.53	10.40	1766488.90	424203.74	39°39'44.8056"N	80°13'3.2802"W	17.87	144.400	0.93	0.43	151.00
3800.00	0.840	155.200	3799.79	19.12	-15.47	11.25	1766489.75	424202.80	39°39'44.7965"N	80°13'3.2693"W	19.12	143.970	0.53	0.15	38.60
3900.00	0.890	142.000	3899.78	20.62	-16.74	12.03	1766490.53	424201.53	39°39'44.7839"N	80°13'3.2591"W	20.62	144.293	0.20	0.05	-13.20
4000.00	0.820	128.000	3999.77	22.07	-17.80	13.08	1766491.58	424200.47	39°39'44.7736"N	80°13'3.2457"W	22.08	143.691	0.22	-0.07	-14.00
4100.00	0.690	122.200	4099.76	23.31	-18.56	14.15	1766492.65	424199.71	39°39'44.7662"N	80°13'3.2319"W	23.34	142.675	0.15	-0.13	-5.80
4200.00	0.620	119.100	4199.76	24.20	-19.40	14.50	1766493.00	424198.88	39°39'44.7579"N	80°13'3.2273"W	24.22	143.217	0.80	-0.07	74.90
4300.00	0.550	215.100	4299.75	24.70	-20.31	14.07	1766492.56	424197.97	39°39'44.7489"N	80°13'3.2328"W	24.70	145.290	0.20	-0.07	18.00
4400.00	0.560	177.900	4399.75	25.28	-21.19	13.81	1766492.31	424197.08	39°39'44.7401"N	80°13'3.2360"W	25.29	146.907	0.35	0.01	-37.20
4500.00	0.460	298.600	4499.74	25.34	-21.48	13.47	1766491.97	424196.79	39°39'44.7372"N	80°13'3.2402"W	25.36	147.906	0.89	-0.10	120.70
4600.00	0.460	312.300	4599.74	24.59	-21.02	12.82	1766491.32	424197.25	39°39'44.7417"N	80°13'3.2486"W	24.62	148.615	0.11	0.00	13.70
4700.00	0.430	138.600	4699.74	24.57	-21.03	12.77	1766491.27	424197.24	39°39'44.7416"N	80°13'3.2492"W	24.61	148.725	0.89	-0.03	-173.70
4800.00	0.770	203.800	4799.74	25.30	-21.93	12.75	1766491.25	424196.34	39°39'44.7327"N	80°13'3.2494"W	25.37	149.821	0.71	0.34	65.20
4900.00	0.470	325.200	4899.73	25.24	-22.21	12.25	1766490.75	424196.07	39°39'44.7299"N	80°13'3.2558"W	25.36	151.123	1.09	-0.30	121.40
5000.00	0.970	284.800	4999.72	24.19	-21.65	11.19	1766489.69	424196.62	39°39'44.7353"N	80°13'3.2694"W	24.38	152.662	0.68	0.50	-40.40
5100.00	1.180	280.100	5099.71	22.83	-21.26	9.36	1766487.86	424197.02	39°39'44.7391"N	80°13'3.2928"W	23.23	156.229	0.23	0.21	-4.70
5200.00	1.000	227.500	5199.69	22.23	-21.67	7.71	1766486.20	424196.61	39°39'44.7349"N	80°13'3.3140"W	22.99	160.423	0.98	-0.18	-52.60
5300.00	0.170	46.900	5299.69	22.33	-22.15	7.17	1766485.67	424196.12	39°39'44.7301"N	80°13'3.3208"W	23.28	162.066	1.17	-0.83	179.40
5375.00	0.080	124.200	5374.69	22.36	-22.11	7.29	1766485.79	424196.16	39°39'44.7305"N	80°13'3.3192"W	23.28	161.739	0.23	-0.12	103.07
5469.00	0.840	258.300	5468.68	22.15	-22.28	6.67	1766485.17	424195.99	39°39'44.7287"N	80°13'3.3271"W	23.26	163.327	0.95	0.81	142.66
5564.00	2.910	316.940	5563.63	19.50	-20.66	4.35	1766482.85	424197.61	39°39'44.7446"N	80°13'3.3570"W	21.11	168.124	2.71	2.18	61.73
5658.00	4.910	325.600	5657.41	13.12	-15.60	0.44	1766478.94	424202.67	39°39'44.7943"N	80°13'3.4074"W	15.61	178.373	2.21	2.13	9.21



Actual Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION

Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Bunner 4H
Field	Monongalia	API/Legal	
Facility	Bunner Pad	Wellbore	Bunner 4H AWB
Slot	Slot 4H		

WELLPATH DATA (270 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]
5753.00	4.910	323.420	5752.06	4.99	-8.98	-4.28	1766474.22	424209.29	39°39'44.8593"N	80°13'3.4685"W	9.95	205.466	0.20	0.00	-2.29
5848.00	5.380	327.480	5846.68	-3.53	-1.96	-9.09	1766469.41	424216.31	39°39'44.9283"N	80°13'3.5308"W	9.30	257.838	0.63	0.49	4.27
5943.00	7.470	334.480	5941.08	-14.08	7.37	-14.15	1766464.35	424225.64	39°39'45.0201"N	80°13'3.5964"W	15.95	297.512	2.35	2.20	7.37
6038.00	7.470	329.660	6035.27	-26.34	18.27	-19.93	1766458.57	424236.54	39°39'45.1274"N	80°13'3.6714"W	27.04	312.516	0.66	0.00	-5.07
6136.00	9.700	335.620	6132.17	-40.82	31.29	-26.56	1766451.95	424249.56	39°39'45.2556"N	80°13'3.7575"W	41.04	319.680	2.45	2.28	6.08
6230.00	9.450	344.890	6224.87	-55.91	45.96	-31.84	1766446.67	424264.22	39°39'45.4001"N	80°13'3.8265"W	55.91	325.287	1.66	-0.27	9.86
6325.00	8.950	342.550	6318.64	-70.33	60.53	-36.09	1766442.42	424278.80	39°39'45.5438"N	80°13'3.8823"W	70.47	329.200	0.66	-0.53	-2.46
6419.00	8.550	339.980	6411.55	-84.09	74.08	-40.67	1766437.83	424292.34	39°39'45.6773"N	80°13'3.9423"W	84.51	331.231	0.59	-0.43	-2.73
6514.00	7.690	336.430	6505.60	-97.18	86.54	-45.63	1766432.87	424304.80	39°39'45.8000"N	80°13'4.0070"W	97.83	332.198	1.05	-0.91	-3.74
6609.00	8.120	341.420	6599.70	-109.87	98.72	-50.31	1766428.19	424316.99	39°39'45.9201"N	80°13'4.0681"W	110.80	332.996	0.85	0.45	5.25
6699.00	10.020	341.990	6688.57	-123.50	112.19	-54.76	1766423.75	424330.46	39°39'46.0529"N	80°13'4.1263"W	124.84	333.986	2.11	2.11	0.63
6799.00	9.370	341.720	6787.14	-139.66	128.20	-60.00	1766418.50	424346.46	39°39'46.2106"N	80°13'4.1950"W	141.54	334.919	0.65	-0.65	-0.27
6893.00	8.690	340.580	6879.97	-153.87	142.16	-64.76	1766413.74	424360.42	39°39'46.3482"N	80°13'4.2573"W	156.22	335.509	0.75	-0.72	-1.21
6988.00	7.980	337.680	6973.97	-167.25	155.03	-69.65	1766408.85	424373.29	39°39'46.4750"N	80°13'4.3211"W	169.96	335.807	0.87	-0.75	-3.05
7083.00	8.650	337.520	7067.97	-180.69	167.73	-74.89	1766403.62	424385.99	39°39'46.6001"N	80°13'4.3894"W	183.69	335.941	0.71	0.71	-0.17
7177.00	8.460	336.650	7160.92	-194.39	180.61	-80.33	1766398.17	424398.87	39°39'46.7270"N	80°13'4.4603"W	197.67	336.022	0.24	-0.20	-0.93
7224.00	6.140	341.030	7207.54	-200.21	186.16	-82.52	1766395.99	424404.42	39°39'46.7817"N	80°13'4.4888"W	203.63	336.094	5.07	-4.94	9.32
7271.00	2.700	356.200	7254.39	-203.58	189.65	-83.41	1766395.10	424407.90	39°39'46.8160"N	80°13'4.5006"W	207.18	336.259	7.67	-7.32	32.28
7318.00	2.420	74.190	7301.36	-204.22	191.02	-82.53	1766395.98	424409.28	39°39'46.8297"N	80°13'4.4894"W	208.09	336.634	6.87	-0.60	165.94
7366.00	5.580	97.720	7349.24	-202.33	190.98	-79.24	1766399.27	424409.24	39°39'46.8296"N	80°13'4.4474"W	206.77	337.467	7.29	6.58	49.02
7459.00	11.770	110.270	7441.14	-191.54	187.09	-65.85	1766412.66	424405.34	39°39'46.7921"N	80°13'4.2758"W	198.33	340.610	6.92	6.66	13.49
7554.00	17.400	117.170	7533.05	-171.12	177.23	-44.10	1766434.40	424395.49	39°39'46.6965"N	80°13'3.9967"W	182.64	346.027	6.19	5.93	7.26
7649.00	22.840	130.720	7622.26	-140.76	158.70	-17.46	1766461.05	424376.96	39°39'46.5154"N	80°13'3.6541"W	159.65	353.723	7.51	5.73	14.26
7744.00	28.250	134.140	7707.95	-100.87	130.99	12.68	1766491.18	424349.25	39°39'46.2439"N	80°13'3.2660"W	131.60	5.528	5.90	5.69	3.60
7838.00	35.730	132.680	7787.62	-52.24	96.84	48.87	1766527.37	424315.11	39°39'45.9093"N	80°13'2.7997"W	108.47	26.778	8.00	7.96	-1.55
7933.00	43.640	136.270	7860.68	7.25	54.28	92.00	1766570.49	424272.54	39°39'45.4921"N	80°13'2.2439"W	106.81	59.460	8.67	8.33	3.78
7996.00	48.900	138.930	7904.22	52.31	20.65	122.64	1766601.14	424238.91	39°39'45.1621"N	80°13'1.8486"W	124.37	80.445	8.89	8.35	4.22
8028.00	51.160	138.670	7924.77	76.67	2.19	138.80	1766617.29	424220.46	39°39'44.9811"N	80°13'1.6402"W	138.81	89.094	7.09	7.06	-0.81
8049.00	52.410	139.750	7937.77	93.06	-10.30	149.57	1766628.07	424207.97	39°39'44.8585"N	80°13'1.5011"W	149.93	93.938	7.19	5.95	5.14
8144.00	54.050	135.810	7994.64	168.43	-66.61	200.71	1766679.20	424151.66	39°39'44.3059"N	80°13'0.8415"W	211.48	108.360	3.74	1.73	-4.15



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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Bunner 4H
Field	Monongalia	API/Legal	
Facility	Bunner Pad	Wellbore	Bunner 4H AWB
Slot	Slot 4H		

WELLPATH DATA (270 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]
8238.00	62.950	136.990	8043.71	247.48	-124.62	255.90	1766734.38	424093.65	39°39'43.7370"N	80°13'0.1299"W	284.63	115.966	9.53	9.47	1.26
8334.00	69.970	140.070	8082.04	334.76	-190.56	314.09	1766792.57	424027.72	39°39'43.0900"N	80°12'59.3792"W	367.38	121.245	7.88	7.31	3.21
8429.00	77.150	145.460	8108.92	425.68	-263.07	369.10	1766847.58	423955.21	39°39'42.3777"N	80°12'58.6684"W	453.26	125.479	9.31	7.56	5.67
8524.00	88.580	144.160	8120.70	519.77	-339.97	423.34	1766901.82	423878.32	39°39'41.6220"N	80°12'57.9670"W	542.96	128.767	12.11	12.03	-1.37
8618.00	89.780	142.790	8122.05	613.70	-415.50	479.28	1766957.75	423802.80	39°39'40.8800"N	80°12'57.2440"W	634.31	130.923	1.94	1.28	-1.46
8714.00	89.510	143.660	8122.64	709.61	-492.39	536.75	1767015.22	423725.91	39°39'40.1246"N	80°12'56.5013"W	728.39	132.532	0.95	-0.28	0.91
8722.00	89.690	143.190	8122.70	717.61	-498.82	541.52	1767019.99	423719.48	39°39'40.0615"N	80°12'56.4397"W	736.25	132.650	6.29	2.25	-5.88
8817.00	90.000	142.700	8122.96	812.51	-574.63	598.76	1767077.23	423643.67	39°39'39.3168"N	80°12'55.7001"W	829.89	133.822	0.61	0.33	-0.52
8912.00	89.850	145.620	8123.08	907.47	-651.64	654.38	1767132.84	423566.67	39°39'38.5602"N	80°12'54.9811"W	923.50	134.879	3.08	-0.16	3.07
9007.00	89.940	146.330	8123.26	1002.47	-730.37	707.54	1767186.00	423487.94	39°39'37.7862"N	80°12'54.2934"W	1016.88	135.910	0.75	0.09	0.75
9102.00	90.090	146.930	8123.23	1097.45	-809.71	759.79	1767238.25	423408.61	39°39'37.0063"N	80°12'53.6172"W	1110.37	136.822	0.65	0.16	0.63
9197.00	90.950	146.200	8122.37	1192.43	-888.98	812.14	1767290.59	423329.34	39°39'36.2270"N	80°12'52.9399"W	1204.10	137.587	1.19	0.91	-0.77
9291.00	91.910	145.570	8120.02	1286.40	-966.78	864.84	1767343.29	423251.55	39°39'35.4623"N	80°12'52.2581"W	1297.15	138.186	1.22	1.02	-0.67
9386.00	91.660	145.680	8117.06	1381.35	-1045.15	918.45	1767396.89	423173.18	39°39'34.6920"N	80°12'51.5647"W	1391.36	138.692	0.29	-0.26	0.12
9480.00	91.050	145.630	8114.84	1475.32	-1122.74	971.47	1767449.91	423095.60	39°39'33.9293"N	80°12'50.8789"W	1484.69	139.132	0.65	-0.65	-0.05
9575.00	91.230	145.120	8112.95	1570.30	-1200.90	1025.44	1767503.87	423017.44	39°39'33.1612"N	80°12'50.1809"W	1579.14	139.506	0.57	0.19	-0.54
9670.00	91.420	146.140	8110.75	1665.28	-1279.29	1079.05	1767557.49	422939.06	39°39'32.3907"N	80°12'49.4874"W	1673.60	139.853	1.09	0.20	1.07
9764.00	91.320	144.730	8108.51	1759.25	-1356.67	1132.37	1767610.80	422861.68	39°39'31.6301"N	80°12'48.7979"W	1767.15	140.150	1.50	-0.11	-1.50
9860.00	91.690	146.520	8105.98	1855.21	-1435.88	1186.55	1767664.97	422782.48	39°39'30.8516"N	80°12'48.0971"W	1862.70	140.431	1.90	0.39	1.86
9955.00	90.920	145.010	8103.82	1950.18	-1514.40	1239.98	1767718.40	422703.97	39°39'30.0799"N	80°12'47.4060"W	1957.28	140.690	1.78	-0.81	-1.59
10050.00	91.380	145.460	8101.91	2045.16	-1592.42	1294.14	1767772.56	422625.95	39°39'29.3130"N	80°12'46.7056"W	2051.97	140.900	0.68	0.48	0.47
10145.00	91.600	145.960	8099.44	2140.13	-1670.88	1347.64	1767826.06	422547.49	39°39'28.5418"N	80°12'46.0136"W	2146.62	141.112	0.57	0.23	0.53
10239.00	90.890	145.010	8097.40	2234.10	-1748.32	1400.89	1767879.30	422470.06	39°39'27.7807"N	80°12'45.3249"W	2240.33	141.296	1.26	-0.76	-1.01
10333.00	91.910	145.930	8095.11	2328.07	-1825.73	1454.15	1767932.56	422392.65	39°39'27.0198"N	80°12'44.6360"W	2334.07	141.463	1.46	1.09	0.98
10429.00	91.230	145.050	8092.47	2424.04	-1904.81	1508.52	1767986.93	422313.58	39°39'26.2426"N	80°12'43.9329"W	2429.80	141.622	1.16	-0.71	-0.92
10523.00	91.600	145.610	8090.15	2518.01	-1982.09	1561.98	1768040.38	422236.30	39°39'25.4830"N	80°12'43.2416"W	2523.58	141.760	0.71	0.39	0.60
10619.00	91.230	145.550	8087.78	2613.98	-2061.26	1616.22	1768094.63	422157.13	39°39'24.7049"N	80°12'42.5400"W	2619.35	141.900	0.39	-0.39	-0.06
10713.00	91.780	145.030	8085.31	2707.94	-2138.51	1669.73	1768148.13	422079.89	39°39'23.9457"N	80°12'41.8481"W	2713.16	142.018	0.81	0.59	-0.55
10808.00	91.510	144.650	8082.59	2802.89	-2216.14	1724.42	1768202.81	422002.26	39°39'23.1828"N	80°12'41.1411"W	2808.00	142.113	0.49	-0.28	-0.40
10903.00	92.280	145.660	8079.45	2897.84	-2294.06	1778.66	1768257.05	421924.35	39°39'22.4169"N	80°12'40.4396"W	2902.82	142.212	1.34	0.81	1.06



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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Bunner 4H
Field	Monongalia	API/Legal	
Facility	Bunner Pad	Wellbore	Bunner 4H AWB
Slot	Slot 4H		

WELLPATH DATA (270 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]
10996.00	91.350	144.980	8076.50	2990.79	-2370.50	1831.55	1768309.94	421847.91	39°39'21.6657"N	80°12'39.7556"W	2995.64	142.309	1.24	-1.00	-0.73
11091.00	91.510	145.220	8074.13	3085.76	-2448.39	1885.89	1768364.27	421770.03	39°39'20.9002"N	80°12'39.0530"W	3090.50	142.395	0.30	0.17	0.25
11186.00	91.630	145.120	8071.53	3180.72	-2526.34	1940.13	1768418.51	421692.08	39°39'20.1340"N	80°12'38.3517"W	3185.36	142.477	0.16	0.13	-0.11
11281.00	90.030	145.080	8070.15	3275.70	-2604.25	1994.47	1768472.85	421614.18	39°39'19.3684"N	80°12'37.6490"W	3280.25	142.553	1.68	-1.68	-0.04
11376.00	90.740	146.150	8069.51	3370.70	-2682.64	2048.12	1768526.50	421535.79	39°39'18.5978"N	80°12'36.9552"W	3375.11	142.639	1.35	0.75	-1.13
11471.00	90.740	146.750	8068.29	3465.68	-2761.81	2100.62	1768578.99	421456.63	39°39'17.8196"N	80°12'36.2760"W	3469.90	142.744	0.63	0.00	0.63
11565.00	90.430	146.440	8067.33	3559.66	-2840.28	2152.37	1768630.74	421378.17	39°39'17.0481"N	80°12'35.6064"W	3563.69	142.845	0.47	-0.33	-0.33
11660.00	89.970	145.640	8066.99	3654.65	-2919.07	2205.44	1768683.80	421299.38	39°39'16.2736"N	80°12'34.9200"W	3658.54	142.928	0.97	-0.48	-0.84
11754.00	90.280	145.890	8066.79	3748.65	-2996.78	2258.32	1768736.68	421221.67	39°39'15.5097"N	80°12'34.2360"W	3752.43	142.999	0.42	0.33	0.27
11848.00	90.370	146.100	8066.26	3842.65	-3074.71	2310.89	1768789.25	421143.75	39°39'14.7437"N	80°12'33.5561"W	3846.30	143.072	0.24	0.10	0.22
11943.00	89.850	146.280	8066.07	3937.64	-3153.64	2363.75	1768842.11	421064.82	39°39'13.9678"N	80°12'32.8723"W	3941.16	143.147	0.58	-0.55	0.19
12037.00	90.220	146.440	8066.02	4031.63	-3231.90	2415.83	1768894.18	420986.57	39°39'13.1984"N	80°12'32.1986"W	4035.02	143.222	0.43	0.39	0.17
12132.00	90.800	146.700	8065.17	4126.61	-3311.18	2468.16	1768946.51	420907.29	39°39'12.4190"N	80°12'31.5215"W	4129.86	143.299	0.67	0.61	0.27
12226.00	90.550	146.220	8064.06	4220.60	-3389.52	2520.09	1768998.44	420828.95	39°39'11.6488"N	80°12'30.8497"W	4223.71	143.369	0.58	-0.27	-0.51
12321.00	90.370	145.530	8063.30	4315.59	-3468.16	2573.39	1769051.73	420750.32	39°39'10.8758"N	80°12'30.1604"W	4318.62	143.424	0.75	-0.19	-0.73
12416.00	90.060	146.010	8062.94	4410.59	-3546.71	2626.83	1769105.17	420671.78	39°39'10.1038"N	80°12'29.4693"W	4413.54	143.475	0.60	-0.33	0.51
12511.00	90.090	146.080	8062.82	4505.59	-3625.51	2679.89	1769158.22	420592.99	39°39'9.3292"N	80°12'28.7830"W	4508.45	143.529	0.08	0.03	0.07
12605.00	91.110	146.650	8061.83	4599.57	-3703.76	2731.95	1769210.28	420514.73	39°39'8.5598"N	80°12'28.1095"W	4602.33	143.587	1.24	1.09	0.61
12701.00	90.430	145.630	8060.54	4695.55	-3783.47	2785.43	1769263.76	420435.03	39°39'7.7763"N	80°12'27.4177"W	4698.22	143.639	1.28	-0.71	-1.06
12795.00	91.420	146.310	8059.03	4789.54	-3861.36	2838.03	1769316.36	420357.14	39°39'7.0106"N	80°12'26.7374"W	4792.13	143.685	1.28	1.05	0.72
12890.00	91.480	146.280	8056.62	4884.50	-3940.37	2890.73	1769369.05	420278.14	39°39'6.2339"N	80°12'26.0557"W	4887.01	143.736	0.07	0.06	-0.03
12986.00	92.120	146.380	8053.61	4980.44	-4020.22	2943.93	1769422.25	420198.29	39°39'5.4489"N	80°12'25.3676"W	4982.86	143.785	0.67	0.67	0.10
13080.00	92.490	145.890	8049.83	5074.36	-4098.21	2996.26	1769474.58	420120.31	39°39'4.6822"N	80°12'24.6906"W	5076.71	143.829	0.65	0.39	-0.52
13175.00	92.030	145.580	8046.08	5169.29	-4176.66	3049.71	1769528.02	420041.86	39°39'3.9111"N	80°12'23.9995"W	5171.58	143.864	0.58	-0.48	-0.33
13270.00	91.850	146.220	8042.86	5264.23	-4255.28	3102.94	1769581.25	419963.25	39°39'3.1382"N	80°12'23.3111"W	5266.47	143.901	0.70	-0.19	0.67
13365.00	92.190	146.230	8039.52	5359.17	-4334.20	3155.72	1769634.03	419884.33	39°39'2.3624"N	80°12'22.6284"W	5361.33	143.942	0.36	0.36	0.01
13460.00	91.600	145.830	8036.37	5454.11	-4412.94	3208.77	1769687.08	419805.59	39°39'1.5883"N	80°12'21.9422"W	5456.22	143.978	0.75	-0.62	-0.42
13554.00	91.720	146.120	8033.65	5548.07	-4490.82	3261.35	1769739.65	419727.73	39°39'0.8228"N	80°12'21.2622"W	5550.12	144.012	0.33	0.13	0.31
13649.00	91.630	145.640	8030.87	5643.03	-4569.43	3314.61	1769792.91	419649.12	39°39'0.0501"N	80°12'20.5734"W	5645.03	144.043	0.51	-0.09	-0.51
13744.00	91.540	145.460	8028.25	5737.99	-4647.74	3368.33	1769846.63	419570.81	39°38'59.2803"N	80°12'19.8788"W	5739.96	144.068	0.21	-0.09	-0.19



Actual Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Bunner 4H
Field	Monongalia	API/Legal	
Facility	Bunner Pad	Wellbore	Bunner 4H AWB
Slot	Slot 4H		

WELLPATH DATA (270 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]
13838.00	91.750	146.620	8025.55	5831.95	-4725.67	3420.82	1769899.11	419492.89	39°38'58.5142"N	80°12'19.1999"W	5833.87	144.100	1.25	0.22	1.23
13933.00	91.540	146.090	8022.82	5926.90	-4804.73	3473.43	1769951.72	419413.84	39°38'57.7371"N	80°12'18.5194"W	5928.75	144.136	0.60	-0.22	-0.56
14027.00	91.850	145.620	8020.04	6020.86	-4882.49	3526.17	1770004.46	419336.08	39°38'56.9727"N	80°12'17.8374"W	6022.67	144.163	0.60	0.33	-0.50
14121.00	91.720	146.120	8017.11	6114.81	-4960.26	3578.89	1770057.17	419258.31	39°38'56.2082"N	80°12'17.1557"W	6116.58	144.189	0.55	-0.14	0.53
14216.00	91.910	145.980	8014.10	6209.76	-5039.03	3631.91	1770110.19	419179.55	39°38'55.4389"N	80°12'16.4699"W	6211.49	144.218	0.25	0.20	-0.15
14311.00	91.850	146.180	8010.99	6304.70	-5117.82	3684.90	1770163.17	419100.77	39°38'54.6593"N	80°12'15.7846"W	6306.39	144.246	0.22	-0.06	0.21
14406.00	91.480	145.870	8008.23	6399.66	-5196.56	3737.96	1770216.24	419022.02	39°38'53.8852"N	80°12'15.0983"W	6401.30	144.272	0.51	-0.39	-0.33
14501.00	91.660	145.680	8005.62	6494.62	-5275.08	3791.38	1770269.65	418943.51	39°38'53.1133"N	80°12'14.4076"W	6496.23	144.294	0.28	0.19	-0.20
14595.00	91.660	145.750	8002.90	6588.58	-5352.72	3844.31	1770322.57	418865.88	39°38'52.3502"N	80°12'13.7232"W	6590.17	144.314	0.07	0.00	0.07
14689.00	91.820	145.820	8000.05	6682.54	-5430.41	3897.14	1770375.40	418788.19	39°38'51.5865"N	80°12'13.0401"W	6684.09	144.335	0.19	0.17	0.07
14785.00	91.110	146.700	7997.59	6778.50	-5510.22	3950.44	1770428.70	418708.39	39°38'50.8019"N	80°12'12.3507"W	6780.01	144.362	1.18	-0.74	0.92
14879.00	90.920	146.000	7995.93	6872.47	-5588.45	4002.52	1770480.77	418630.16	39°38'50.0328"N	80°12'11.6771"W	6873.93	144.389	0.77	-0.20	-0.74
14973.00	91.290	146.650	7994.11	6966.45	-5666.67	4054.63	1770532.88	418551.95	39°38'49.2639"N	80°12'11.0031"W	6967.86	144.415	0.80	0.39	0.69
15068.00	91.630	146.170	7991.69	7061.41	-5745.78	4107.17	1770585.42	418472.84	39°38'48.4861"N	80°12'10.3235"W	7062.78	144.442	0.62	0.36	-0.51
15164.00	91.510	146.040	7989.06	7157.37	-5825.43	4160.69	1770638.93	418393.19	39°38'47.7030"N	80°12'9.6314"W	7158.70	144.465	0.18	-0.12	-0.14
15258.00	91.750	146.320	7986.39	7251.32	-5903.49	4212.99	1770691.23	418315.14	39°38'46.9356"N	80°12'8.9550"W	7252.62	144.487	0.39	0.26	0.30
15352.00	91.260	145.770	7983.92	7345.29	-5981.44	4265.47	1770743.71	418237.20	39°38'46.1694"N	80°12'8.2763"W	7346.55	144.507	0.78	-0.52	-0.59
15450.00	91.450	144.930	7981.60	7443.26	-6062.03	4321.17	1770799.41	418156.61	39°38'45.3772"N	80°12'7.5562"W	7444.51	144.518	0.88	0.19	-0.86
15545.00	91.260	144.940	7979.36	7538.23	-6139.77	4375.74	1770853.97	418078.88	39°38'44.6132"N	80°12'6.8509"W	7539.48	144.523	0.20	-0.20	0.01
15640.00	89.910	144.880	7978.39	7633.21	-6217.50	4430.34	1770908.57	418001.15	39°38'43.8492"N	80°12'6.1451"W	7634.48	144.528	1.42	-1.42	-0.06
15735.00	90.220	144.980	7978.28	7728.21	-6295.25	4484.93	1770963.15	417923.40	39°38'43.0850"N	80°12'5.4395"W	7729.47	144.533	0.34	0.33	0.11
15831.00	89.570	144.910	7978.46	7824.20	-6373.83	4540.07	1771018.29	417844.82	39°38'42.3127"N	80°12'4.7268"W	7825.47	144.538	0.68	-0.68	-0.07
15925.00	89.600	145.060	7979.14	7918.19	-6450.82	4594.00	1771072.22	417767.84	39°38'41.5560"N	80°12'4.0297"W	7919.46	144.543	0.16	0.03	0.16
16020.00	88.310	144.920	7980.87	8013.17	-6528.61	4648.49	1771126.71	417690.05	39°38'40.7914"N	80°12'3.3253"W	8014.44	144.548	1.37	-1.36	-0.15
16115.00	88.000	145.400	7983.93	8108.12	-6606.54	4702.74	1771180.95	417612.13	39°38'40.0254"N	80°12'2.6242"W	8109.39	144.556	0.60	-0.33	0.51
16211.00	87.750	144.310	7987.49	8204.04	-6684.99	4757.96	1771236.17	417533.69	39°38'39.2545"N	80°12'1.9104"W	8205.32	144.559	1.16	-0.26	-1.14
16306.00	88.620	145.340	7990.50	8298.98	-6762.60	4812.66	1771290.87	417456.08	39°38'38.4917"N	80°12'1.2035"W	8300.27	144.562	1.42	0.92	1.08
16401.00	88.370	144.850	7992.99	8393.95	-6840.48	4867.00	1771345.20	417378.20	39°38'37.7262"N	80°12'0.5010"W	8395.23	144.568	0.58	-0.26	-0.52
16497.00	88.370	145.100	7995.72	8489.90	-6919.07	4922.08	1771400.28	417299.63	39°38'36.9538"N	80°11'59.7892"W	8491.19	144.573	0.26	0.00	0.26
16592.00	87.910	145.150	7998.81	8584.85	-6996.96	4976.37	1771454.56	417221.73	39°38'36.1882"N	80°11'59.0874"W	8586.14	144.579	0.49	-0.48	0.05



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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Bunner 4H
Field	Monongalia	API/Legal	
Facility	Bunner Pad	Wellbore	Bunner 4H AWB
Slot	Slot 4H		

WELLPATH DATA (270 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]
16687.00	87.940	145.200	8002.25	8679.79	-7074.90	5030.58	1771508.78	417143.80	39°38'35.4221"N	80°11'58.3866"W	8681.07	144.585	0.06	0.03	0.05
16783.00	88.060	145.320	8005.60	8775.73	-7153.74	5085.26	1771563.45	417064.97	39°38'34.6472"N	80°11'57.6799"W	8777.00	144.593	0.18	0.13	0.13
16878.00	88.430	145.160	8008.51	8870.68	-7231.75	5139.39	1771617.58	416986.96	39°38'33.8804"N	80°11'56.9801"W	8871.95	144.600	0.42	0.39	-0.17
16973.00	89.200	145.360	8010.47	8965.66	-7309.80	5193.52	1771671.70	416908.92	39°38'33.1132"N	80°11'56.2805"W	8966.92	144.607	0.84	0.81	0.21
17068.00	88.920	145.230	8012.03	9060.64	-7387.88	5247.60	1771725.78	416830.84	39°38'32.3457"N	80°11'55.5814"W	9061.91	144.614	0.32	-0.29	-0.14
17163.00	88.990	145.270	8013.76	9155.63	-7465.93	5301.74	1771779.92	416752.80	39°38'31.5786"N	80°11'54.8816"W	9156.88	144.620	0.08	0.07	0.04
17258.00	89.230	145.300	8015.24	9250.61	-7544.01	5355.84	1771834.01	416674.72	39°38'30.8111"N	80°11'54.1823"W	9251.87	144.627	0.25	0.25	0.03
17354.00	89.540	145.140	8016.27	9346.61	-7622.85	5410.59	1771888.76	416595.88	39°38'30.0361"N	80°11'53.4745"W	9347.86	144.633	0.36	0.32	-0.17
17448.00	90.000	144.930	8016.64	9440.60	-7699.88	5464.46	1771942.63	416518.86	39°38'29.2790"N	80°11'52.7783"W	9441.85	144.637	0.54	0.49	-0.22
17543.00	90.520	145.080	8016.21	9535.60	-7777.71	5518.94	1771997.11	416441.04	39°38'28.5140"N	80°11'52.0741"W	9536.85	144.641	0.57	0.55	-0.16
17639.00	90.460	145.020	8015.39	9631.59	-7856.39	5573.94	1772052.10	416362.36	39°38'27.7407"N	80°11'51.3634"W	9632.84	144.645	0.09	-0.06	-0.06
17733.00	90.520	145.160	8014.59	9725.58	-7933.47	5627.73	1772105.89	416285.28	39°38'26.9830"N	80°11'50.6681"W	9726.84	144.649	0.16	0.06	0.15
17829.00	91.290	145.100	8013.07	9821.57	-8012.23	5682.61	1772160.76	416206.53	39°38'26.2089"N	80°11'49.9588"W	9822.82	144.654	0.80	0.80	-0.06
17922.00	91.050	145.270	8011.17	9914.54	-8088.56	5735.69	1772213.84	416130.20	39°38'25.4586"N	80°11'49.2727"W	9915.80	144.659	0.32	-0.26	0.18
18018.00	91.320	145.290	8009.19	10010.52	-8167.45	5790.36	1772268.51	416051.32	39°38'24.6831"N	80°11'48.5661"W	10011.77	144.665	0.28	0.28	0.02
18113.00	91.320	144.840	8007.00	10105.49	-8245.31	5844.75	1772322.89	415973.46	39°38'23.9179"N	80°11'47.8632"W	10106.74	144.669	0.47	0.00	-0.47
18207.00	91.020	145.500	8005.08	10199.47	-8322.46	5898.42	1772376.56	415896.32	39°38'23.1596"N	80°11'47.1694"W	10200.72	144.673	0.77	-0.32	0.70
18302.00	89.940	145.510	8004.28	10294.47	-8400.75	5952.22	1772430.36	415818.03	39°38'22.3900"N	80°11'46.4740"W	10295.70	144.681	1.14	-1.14	0.01
18396.00	90.150	145.080	8004.21	10388.46	-8478.03	6005.74	1772483.87	415740.76	39°38'21.6304"N	80°11'45.7823"W	10389.70	144.687	0.51	0.22	-0.46
18491.00	90.580	146.020	8003.61	10483.46	-8556.36	6059.48	1772537.61	415662.43	39°38'20.8603"N	80°11'45.0876"W	10484.68	144.694	1.09	0.45	0.99
18586.00	90.340	145.730	8002.84	10578.46	-8635.00	6112.77	1772590.90	415583.80	39°38'20.0872"N	80°11'44.3986"W	10579.66	144.705	0.40	-0.25	-0.31
18681.00	89.820	145.200	8002.71	10673.46	-8713.26	6166.63	1772644.75	415505.54	39°38'19.3179"N	80°11'43.7025"W	10674.65	144.712	0.78	-0.55	-0.56
18777.00	90.180	144.740	8002.71	10769.45	-8791.87	6221.73	1772699.85	415426.94	39°38'18.5453"N	80°11'42.9903"W	10770.65	144.714	0.61	0.37	-0.48
18872.00	90.150	144.940	8002.44	10864.44	-8869.54	6276.44	1772754.56	415349.27	39°38'17.7819"N	80°11'42.2834"W	10865.65	144.715	0.21	-0.03	0.21
18967.00	90.180	145.110	8002.16	10959.44	-8947.38	6330.89	1772809.01	415271.44	39°38'17.0168"N	80°11'41.5796"W	10960.65	144.718	0.18	0.03	0.18
19062.00	90.920	145.190	8001.25	11054.43	-9025.34	6385.18	1772863.29	415193.48	39°38'16.2505"N	80°11'40.8781"W	11055.64	144.722	0.78	0.78	0.08
19156.00	90.920	145.110	7999.74	11148.41	-9102.47	6438.88	1772916.99	415116.36	39°38'15.4924"N	80°11'40.1840"W	11149.63	144.725	0.09	0.00	-0.09
19250.00	90.890	145.230	7998.26	11242.40	-9179.62	6492.57	1772970.67	415039.21	39°38'14.7340"N	80°11'39.4902"W	11243.61	144.729	0.13	-0.03	0.13
19345.00	91.260	145.340	7996.47	11337.38	-9257.69	6546.66	1773024.76	414961.14	39°38'13.9665"N	80°11'38.7911"W	11338.59	144.734	0.41	0.39	0.12
19440.00	91.480	145.220	7994.20	11432.35	-9335.76	6600.75	1773078.85	414883.08	39°38'13.1992"N	80°11'38.0920"W	11433.56	144.738	0.26	0.23	-0.13



Actual Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Bunner 4H
Field	Monongalia	API/Legal	
Facility	Bunner Pad	Wellbore	Bunner 4H AWB
Slot	Slot 4H		

WELLPATH DATA (270 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]
19536.00	91.450	145.130	7991.75	11528.32	-9414.54	6655.56	1773133.65	414804.31	39°38'12.4248"N	80°11'37.3837"W	11529.52	144.742	0.10	-0.03	-0.09
19631.00	92.030	145.190	7988.86	11623.27	-9492.47	6709.80	1773187.89	414726.38	39°38'11.6588"N	80°11'36.6826"W	11624.48	144.745	0.61	0.61	0.06
19726.00	92.090	145.460	7985.45	11718.21	-9570.55	6763.82	1773241.90	414648.31	39°38'10.8913"N	80°11'35.9846"W	11719.41	144.750	0.29	0.06	0.28
19821.00	91.970	144.950	7982.08	11813.15	-9648.51	6817.99	1773296.08	414570.35	39°38'10.1249"N	80°11'35.2844"W	11814.35	144.754	0.55	-0.13	-0.54
19916.00	91.970	145.080	7978.82	11908.09	-9726.30	6872.43	1773350.51	414492.56	39°38'9.3603"N	80°11'34.5809"W	11909.29	144.756	0.14	0.00	0.14
20011.00	91.880	145.160	7975.63	12003.03	-9804.19	6926.73	1773404.80	414414.68	39°38'8.5947"N	80°11'33.8793"W	12004.24	144.759	0.13	-0.09	0.08
20107.00	92.800	145.480	7971.71	12098.95	-9883.07	6981.30	1773459.38	414335.80	39°38'7.8193"N	80°11'33.1739"W	12100.15	144.763	1.01	0.96	0.33
20202.00	93.660	145.330	7966.35	12193.80	-9961.15	7035.15	1773513.23	414257.73	39°38'7.0518"N	80°11'32.4779"W	12194.99	144.768	0.92	0.91	-0.16
20298.00	93.660	145.230	7960.23	12289.60	-10039.89	7089.72	1773567.79	414178.99	39°38'6.2778"N	80°11'31.7727"W	12290.79	144.772	0.10	0.00	-0.10
20393.00	93.540	145.110	7954.26	12384.41	-10117.72	7143.87	1773621.94	414101.17	39°38'5.5127"N	80°11'31.0729"W	12385.60	144.775	0.18	-0.13	-0.13
20488.00	92.620	145.080	7949.16	12479.27	-10195.52	7198.15	1773676.22	414023.38	39°38'4.7480"N	80°11'30.3715"W	12480.46	144.777	0.97	-0.97	-0.03
20583.00	92.120	145.020	7945.23	12574.18	-10273.32	7252.53	1773730.59	413945.58	39°38'3.9833"N	80°11'29.6688"W	12575.38	144.780	0.53	-0.53	-0.06
20679.00	91.940	144.940	7941.83	12670.12	-10351.89	7307.59	1773785.64	413867.02	39°38'3.2110"N	80°11'28.9574"W	12671.32	144.781	0.21	-0.19	-0.08
20773.00	92.340	145.370	7938.32	12764.05	-10428.98	7361.26	1773839.31	413789.93	39°38'2.4532"N	80°11'28.2638"W	12765.25	144.784	0.62	0.43	0.46
20868.00	91.780	145.030	7934.90	12858.99	-10506.94	7415.44	1773893.49	413711.98	39°38'1.6869"N	80°11'27.5636"W	12860.19	144.787	0.69	-0.59	-0.36
20964.00	92.340	145.150	7931.45	12954.92	-10585.61	7470.34	1773948.39	413633.31	39°38'0.9136"N	80°11'26.8542"W	12956.12	144.789	0.60	0.58	0.13
21059.00	92.280	145.510	7927.62	13049.84	-10663.68	7524.34	1774002.38	413555.24	39°38'0.1462"N	80°11'26.1564"W	13051.04	144.793	0.38	-0.06	0.38
21154.00	92.220	145.170	7923.89	13144.77	-10741.76	7578.32	1774056.36	413477.17	39°37'59.3786"N	80°11'25.4587"W	13145.96	144.797	0.36	-0.06	-0.36
21249.00	92.150	144.990	7920.27	13239.70	-10819.60	7632.67	1774110.70	413399.33	39°37'58.6135"N	80°11'24.7565"W	13240.89	144.799	0.20	-0.07	-0.19
21344.00	92.220	145.240	7916.65	13334.62	-10897.47	7686.96	1774164.99	413321.47	39°37'57.8480"N	80°11'24.0549"W	13335.82	144.801	0.27	0.07	0.26
21438.00	92.220	145.400	7913.01	13428.55	-10974.71	7740.40	1774218.43	413244.23	39°37'57.0887"N	80°11'23.3643"W	13429.75	144.805	0.17	0.00	0.17
21534.00	92.490	146.360	7909.06	13524.47	-11054.12	7794.21	1774272.23	413164.83	39°37'56.3081"N	80°11'22.6688"W	13525.65	144.813	1.04	0.28	1.00
21629.00	92.090	145.950	7905.27	13619.39	-11132.96	7847.08	1774326.10	413085.99	39°37'55.5329"N	80°11'21.9854"W	13620.55	144.822	0.60	-0.42	-0.43
21724.00	92.460	146.370	7901.50	13714.31	-11211.80	7899.94	1774377.95	413007.15	39°37'54.7577"N	80°11'21.3020"W	13715.45	144.831	0.59	0.39	0.44
21819.00	92.090	146.140	7897.73	13809.22	-11290.73	7952.67	1774430.68	412928.23	39°37'53.9817"N	80°11'20.6203"W	13810.34	144.841	0.46	-0.39	-0.24
21914.00	91.200	146.040	7895.00	13904.18	-11369.54	8005.64	1774483.66	412849.42	39°37'53.2069"N	80°11'19.9355"W	13905.28	144.849	0.94	-0.94	-0.11
22010.00	91.320	146.060	7892.89	14000.15	-11449.16	8059.24	1774537.25	412769.81	39°37'52.4241"N	80°11'19.2427"W	14001.24	144.858	0.13	0.12	0.02
22105.00	91.260	146.030	7890.75	14095.13	-11527.94	8112.29	1774590.30	412691.04	39°37'51.6496"N	80°11'18.5570"W	14096.19	144.866	0.07	-0.06	-0.03
22201.00	91.540	146.070	7888.40	14191.09	-11607.55	8165.89	1774643.89	412611.43	39°37'50.8669"N	80°11'17.8642"W	14192.14	144.874	0.29	0.29	0.04
22295.00	91.420	146.180	7885.98	14285.06	-11685.57	8218.27	1774696.26	412533.42	39°37'50.0998"N	80°11'17.1871"W	14286.09	144.882	0.17	-0.13	0.12



Actual Wellpath Report

Bunner 4H AWP Proj: 25079'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Bunner 4H
Field	Monongalia	API/Legal	
Facility	Bunner Pad	Wellbore	Bunner 4H AWB
Slot	Slot 4H		

WELLPATH DATA (270 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]
22391.00	90.800	146.210	7884.12	14381.03	-11765.32	8271.67	1774749.66	412453.67	39°37'49.3157"N	80°11'16.4968"W	14382.05	144.891	0.65	-0.65	0.03
22486.00	91.020	146.130	7882.61	14476.02	-11844.23	8324.55	1774802.54	412374.77	39°37'48.5399"N	80°11'15.8132"W	14477.01	144.899	0.25	0.23	-0.08
22582.00	91.080	146.370	7880.85	14571.99	-11924.03	8377.88	1774855.86	412294.96	39°37'47.7552"N	80°11'15.1239"W	14572.97	144.908	0.26	0.06	0.25
22677.00	91.020	146.260	7879.11	14666.97	-12003.07	8430.56	1774908.54	412215.93	39°37'46.9781"N	80°11'14.4429"W	14667.92	144.917	0.13	-0.06	-0.12
22772.00	91.630	146.420	7876.91	14761.94	-12082.12	8483.20	1774961.18	412136.89	39°37'46.2008"N	80°11'13.7624"W	14762.87	144.926	0.66	0.64	0.17
22868.00	92.000	146.150	7873.87	14857.88	-12161.93	8536.46	1775014.43	412057.08	39°37'45.4161"N	80°11'13.0739"W	14858.79	144.935	0.48	0.39	-0.28
22963.00	91.910	146.030	7870.63	14952.82	-12240.73	8589.42	1775067.40	411978.29	39°37'44.6414"N	80°11'12.3892"W	14953.72	144.942	0.16	-0.09	-0.13
23057.00	91.380	146.390	7867.93	15046.78	-12318.82	8641.68	1775119.65	411900.20	39°37'43.8736"N	80°11'11.7137"W	15047.66	144.950	0.68	-0.56	0.38
23153.00	92.740	146.450	7864.48	15142.70	-12398.74	8694.74	1775172.71	411820.28	39°37'43.0877"N	80°11'11.0278"W	15143.56	144.960	1.42	1.42	0.06
23248.00	92.680	146.430	7859.99	15237.58	-12477.82	8747.20	1775225.17	411741.21	39°37'42.3102"N	80°11'10.3496"W	15238.42	144.969	0.07	-0.06	-0.02
23344.00	91.970	146.220	7856.09	15333.50	-12557.64	8800.39	1775278.35	411661.39	39°37'41.5253"N	80°11'9.6621"W	15334.32	144.977	0.77	-0.74	-0.22
23439.00	91.910	146.140	7852.88	15428.44	-12636.52	8853.23	1775331.19	411582.52	39°37'40.7498"N	80°11'8.9790"W	15429.24	144.985	0.11	-0.06	-0.08
23534.00	92.220	146.460	7849.45	15523.37	-12715.51	8905.91	1775383.86	411503.54	39°37'39.9732"N	80°11'8.2981"W	15524.15	144.993	0.47	0.33	0.34
23629.00	91.660	146.030	7846.24	15618.30	-12794.45	8958.66	1775436.62	411424.60	39°37'39.1970"N	80°11'7.6162"W	15619.08	145.000	0.74	-0.59	-0.45
23724.00	91.260	146.240	7843.82	15713.27	-12873.31	9011.58	1775489.53	411345.75	39°37'38.4217"N	80°11'6.9322"W	15714.03	145.007	0.48	-0.42	0.22
23819.00	91.750	146.520	7841.32	15808.23	-12952.39	9064.17	1775542.11	411266.67	39°37'37.6441"N	80°11'6.2525"W	15808.97	145.015	0.59	0.52	0.29
23915.00	91.260	146.030	7838.80	15904.19	-13032.20	9117.45	1775595.39	411186.86	39°37'36.8593"N	80°11'5.5638"W	15904.91	145.023	0.72	-0.51	-0.51
24009.00	90.860	146.200	7837.06	15998.16	-13110.22	9169.85	1775647.79	411108.85	39°37'36.0922"N	80°11'4.8865"W	15998.88	145.029	0.46	-0.43	0.18
24104.00	90.770	146.080	7835.71	16093.15	-13189.10	9222.77	1775700.71	411029.97	39°37'35.3167"N	80°11'4.2025"W	16093.85	145.036	0.16	-0.09	-0.13
24199.00	90.150	145.740	7834.95	16188.15	-13267.78	9276.02	1775753.95	410951.30	39°37'34.5432"N	80°11'3.5143"W	16188.83	145.041	0.74	-0.65	-0.36
24295.00	91.260	146.400	7833.77	16284.13	-13347.42	9329.60	1775807.53	410871.66	39°37'33.7601"N	80°11'2.8218"W	16284.81	145.047	1.35	1.16	0.69
24390.00	90.890	146.250	7831.98	16379.11	-13426.47	9382.26	1775860.19	410792.62	39°37'32.9829"N	80°11'2.1411"W	16379.77	145.055	0.42	-0.39	-0.16
24485.00	90.520	144.980	7830.82	16474.10	-13504.86	9435.91	1775913.83	410714.24	39°37'32.2122"N	80°11'1.4479"W	16474.76	145.058	1.39	-0.39	-1.34
24581.00	90.680	145.080	7829.81	16570.09	-13583.52	9490.93	1775968.85	410635.58	39°37'31.4389"N	80°11'0.7371"W	16570.75	145.058	0.20	0.17	0.10
24676.00	89.850	146.040	7829.37	16665.09	-13661.87	9544.65	1776022.57	410557.24	39°37'30.6687"N	80°11'0.0429"W	16665.74	145.061	1.34	-0.87	1.01
24771.00	90.030	145.260	7829.47	16760.08	-13740.30	9598.26	1776076.17	410478.81	39°37'29.8976"N	80°10'59.3502"W	16760.74	145.064	0.84	0.19	-0.82
24866.00	90.680	145.600	7828.88	16855.08	-13818.52	9652.16	1776130.07	410400.59	39°37'29.1286"N	80°10'58.6538"W	16855.73	145.066	0.77	0.68	0.36
24962.00	90.000	145.100	7828.31	16951.08	-13897.50	9706.74	1776184.65	410321.62	39°37'28.3523"N	80°10'57.9486"W	16951.73	145.068	0.88	-0.71	-0.52
25054.00	89.940	145.220	7828.36	17043.08	-13973.00	9759.30	1776237.20	410246.12	39°37'27.6100"N	80°10'57.2696"W	17043.73	145.068	0.15	-0.07	0.13
25079.00	89.940	145.220	7828.39	17068.08	-13993.54	9773.56	1776251.46	410225.59	39°37'27.4081"N	80°10'57.0853"W	17068.73	145.068	0.00	0.00	0.00

HOLE & CASING SECTIONS - Ref Wellbore: Bunner 4H AWB Ref Wellpath: Bunner 4H AWP Proj: 25079'

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
17.5in Open Hole	28.00	1250.00	1222.00	28.00	1249.98	0.00	0.00	2.09	-3.21
13.375in Casing Surface	28.00	1250.00	1222.00	28.00	1249.98	0.00	0.00	2.09	-3.21
12.25in Open Hole	1250.00	2525.00	1275.00	1249.98	2524.88	2.09	-3.21	-8.94	1.63
9.625in Casing Intermediate	28.00	2525.00	2497.00	28.00	2524.88	0.00	0.00	-8.94	1.63
8.75in Open Hole	2525.00	8092.00	5567.00	2524.88	7963.78	-8.94	1.63	-36.07	172.11
8.5in Open Hole	8092.00	25079.00	16987.00	7963.78	7828.39	-36.07	172.11	-13993.54	9773.56
5.5in Casing Production	28.00	25079.00	25051.00	28.00	7828.39	0.00	0.00	-13993.54	9773.56

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Bunner 4H BHL Rev-5	8102.00	-13989.27	9780.48	1776258.39	410229.85	39°37'27.4508"N	80°10'56.9972"W	point
Bunner 4H LP Rev-3	8102.00	-322.56	411.61	1766890.08	423895.73	39°39'41.7932"N	80°12'58.1188"W	point
Bunner South Hardline #1 (4.1.21)	8600.00	-818.80	2903.24	1769381.56	423399.52	39°39'37.0841"N	80°12'26.2100"W	polygon
2D Polygon: dimensions not calculated								
Bunner South Hardline #2 (4.1.21)	8600.00	1373.52	-2105.08	1764373.55	425591.71	39°39'58.3553"N	80°13'30.4730"W	polygon
2D Polygon: dimensions not calculated								



Actual Wellpath Report

Bunner 4H AWP Proj: 25079'

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REFERENCE WELLPATH IDENTIFICATION

Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Bunner 4H
Field	Monongalia	API/Legal	
Facility	Bunner Pad	Wellbore	Bunner 4H AWB
Slot	Slot 4H		

WELLPATH COMPOSITION - Ref Wellbore: Bunner 4H AWB Ref Wellpath: Bunner 4H AWP Proj: 25079'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
28.00	5375.00	BH Generic gyro - northseeking (Standard)	01_Javins Inertial Gyro <8-3/4">(100'-5375')	Bunner 4H AWB	5/14/2021
5375.00	8028.00	OWSG MWD rev2 + HRGM	02_Tally MWD <8-3/4">(5375')(5469'-8028')	Bunner 4H AWB	5/14/2021
8028.00	25079.00	BH AutoTrak Curve/eXpress (2019) (HRGM, Short spacing)	03_BH AT Curve <8-1/2">(8028')(8049'-25054')	Bunner 4H AWB	5/14/2021



Actual Wellpath Report

Bunner 4H AWP Proj: 25079'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NORTHEAST NATURAL ENERGY, LLC	Well	Bunner 4H
Field	Monongalia	API/Legal	
Facility	Bunner Pad	Wellbore	Bunner 4H AWB
Slot	Slot 4H		

COMMENTS
<p>Wellpath general comments API: 47-061-01865-0000 BH Job #: 110853547 Rig: Patterson 277 Duration: 5/14/21 - 5/20/21 01_Javins Inertial Gyro <8-3/4">(100'-5375') 02_Tally MWD <8-3/4">(5375')(5469'-8028') 03_BH AT Curve <8-1/2">(8028')(8049'-25054') Projected MD at TD: 25079'</p>