

NORTHEAST NATURAL ENERGY, LLC

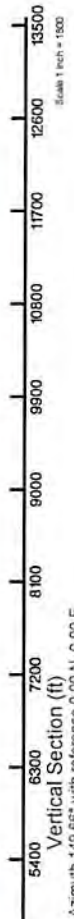
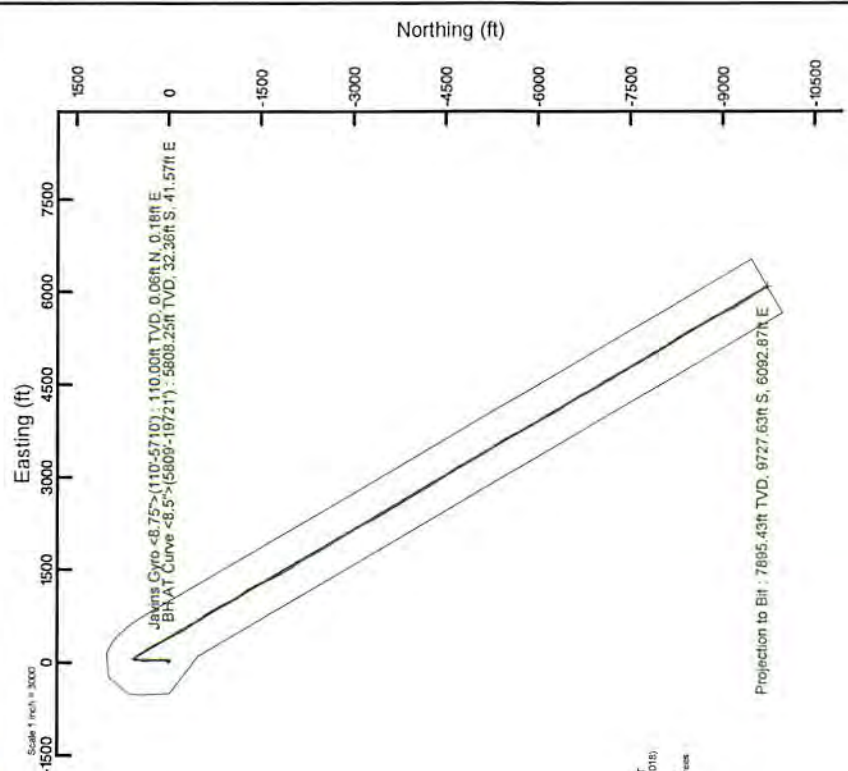
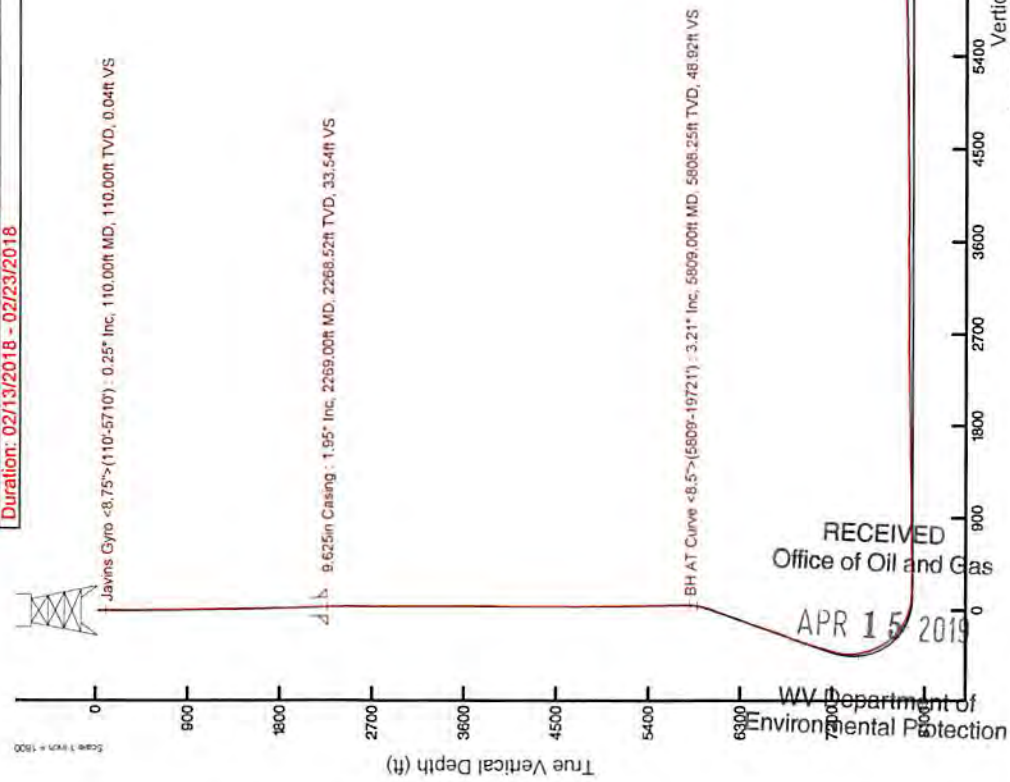
Location: Monongalia County, WV
 Field: Monongalia
 Facility: Jenkins Pad
 Slot: Slot #06
 Well: Jenkins 6H
 Wellbore: Jenkins 6H PWB

Plot reference wellbore is Jenkins 6H PWB Rev A-0	Grid System: NAD83 / Lambert West Virginia SP, Northern Zone (4701), US feet
True vertical depths are referenced to Patterson 334 (RKB)	* - Wellbore was transformed from a different geoidetic datum
Measured depths are referenced to Patterson 334 (RKB)	North Reference: Grid north
Patterson 334 (RKB) to Mean Sea Level: 1130 feet	Scale: True distance
Mean Sea Level to Ground level (At Slot: Slot #06) -1114 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: Promisc on 2018-03-05
	Database: WA_Pennsylvania



Location Information			
Facility Name	Grid East (US ft)	Grid North (US ft)	Longitude
Jenkins Pad	1788480.777	441086.166	80°03'23.600"W
Local N (ft)	Local E (ft)	Grid North (US ft)	Latitude
-20.58	75.79	30°42'33.102"N	Longitude
Slot #06	1788504.560	441065.610	80°00'22.625"W
Comment: Jenkins 6H			
Patterson 334 (RKB) to Ground level (At Slot: Slot #06)			25ft
Mean Sea Level to Ground level (At Slot: Slot #06)			-1114ft
Patterson 334 (RKB) to Mean Sea Level			1130ft

Comments
API: 47-061-01743-0000
Job #: 8981605
Rig: Patterson 334
Duration: 02/13/2018 - 02/23/2018



REFERENCE WELLPATH IDENTIFICATION

Operator	NORTHEAST NATURAL ENERGY, LLC	Slot	Slot #06
Area	Monongalia County, WV	Well	Jenkins 6H
Field	Monongalia	Wellbore	Jenkins 6H AWB
Facility	Jenkins Pad		

REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert West Virginia SP, Northern Zone (4701), US feet	Software System	WellArchitect® 5.0
North Reference	Grid	User	Thomsuzc
Scale	0.999942	Report Generated	3/5/2018 at 8:43:57 AM
Convergence at slot	0.41° West	Database/Source file	WA_Pennsylvania/Jenkins_6H_AWP_Proj_19748_MD.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-20.58	75.79	1788556.56	441065.61	39°42'33.102"N	80°08'22.628"W
Facility Reference Pt			1788480.78	441086.19	39°42'33.300"N	80°08'23.600"W
Field Reference Pt			1777685.71	440640.65	39°42'28.114"N	80°10'41.690"W

WELLPATH DATUM

Calculation method	Minimum curvature	Patterson 334 (RKB) to Facility Vertical Datum	25.00ft
Horizontal Reference Pt	Slot	Patterson 334 (RKB) to Mean Sea Level	1139.00ft
Vertical Reference Pt	Patterson 334 (RKB)	Patterson 334 (RKB) to Ground Level at Slot (Slot #06)	25.00ft
MD Reference Pt	Patterson 334 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	149.66°



Actual Wellpath Report

Jenkins 6H AWP Proj: 19748'MD
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REFERENCE WELLPATH IDENTIFICATION

Operator	NORTHEAST NATURAL ENERGY, LLC	Slot	Slot #06
Area	Monongalia County, WV	Well	Jenkins 6H
Field	Monongalia	Wellbore	Jenkins 6H AWB
Facility	Jenkins Pad		

WELLPATH DATA (208 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]
0.00H	0.000	70.810	0.00	0.00	0.00	0.00	1788556.56	441065.61	39°42'33.102"N	80°08'22.628"W	0.00	0.000	0.00	0.00	0.00
25.00	0.000	70.810	25.00	0.00	0.00	0.00	1788556.56	441065.61	39°42'33.102"N	80°08'22.628"W	0.00	0.000	0.00	0.00	0.00
110.00	0.250	70.810	110.00	0.04	0.06	0.18	1788556.74	441065.67	39°42'33.103"N	80°08'22.626"W	0.19	70.810	0.29	0.29	83.31
210.00	0.330	45.210	210.00	0.01	0.34	0.59	1788557.15	441065.95	39°42'33.105"N	80°08'22.621"W	0.67	60.185	0.15	0.08	-25.60
310.00	0.320	59.110	310.00	-0.07	0.68	1.03	1788557.59	441066.29	39°42'33.109"N	80°08'22.615"W	1.23	56.487	0.08	-0.01	13.90
410.00	0.450	98.810	409.99	0.18	0.77	1.66	1788558.22	441066.37	39°42'33.110"N	80°08'22.607"W	1.83	65.221	0.29	0.13	39.70
510.00	0.580	119.710	509.99	0.86	0.45	2.48	1788559.04	441066.06	39°42'33.107"N	80°08'22.597"W	2.53	79.646	0.23	0.13	20.90
610.00	0.660	129.510	609.98	1.84	-0.16	3.37	1788559.93	441065.45	39°42'33.101"N	80°08'22.585"W	3.37	92.774	0.13	0.08	9.80
710.00	0.640	119.010	709.98	2.86	-0.80	4.30	1788560.86	441064.81	39°42'33.094"N	80°08'22.573"W	4.38	100.542	0.12	-0.02	-10.50
810.00	0.670	100.310	809.97	3.73	-1.18	5.37	1788561.93	441064.43	39°42'33.091"N	80°08'22.560"W	5.49	102.363	0.21	0.03	-18.70
910.00	1.450	111.010	909.95	5.09	-1.73	7.12	1788563.68	441063.88	39°42'33.085"N	80°08'22.537"W	7.33	103.686	0.80	0.78	10.70
1010.00	1.200	118.210	1009.93	6.98	-2.68	9.23	1788565.79	441062.93	39°42'33.076"N	80°08'22.510"W	9.61	106.215	0.30	-0.25	7.20
1110.00	1.070	126.010	1109.91	8.72	-3.73	10.90	1788567.46	441061.88	39°42'33.066"N	80°08'22.489"W	11.52	108.870	0.20	-0.13	7.80
1210.00	0.960	131.210	1209.89	10.37	-4.83	12.29	1788568.85	441060.78	39°42'33.055"N	80°08'22.471"W	13.20	111.447	0.14	-0.11	5.20
1310.00	0.990	110.010	1309.88	11.83	-5.68	13.73	1788570.29	441059.94	39°42'33.047"N	80°08'22.452"W	14.86	112.456	0.36	0.03	-21.20
1410.00	1.010	126.910	1409.86	13.31	-6.50	15.25	1788571.81	441059.11	39°42'33.039"N	80°08'22.433"W	16.58	113.089	0.29	0.02	16.90
1510.00	1.330	107.610	1509.84	14.99	-7.38	17.06	1788573.62	441058.23	39°42'33.030"N	80°08'22.409"W	18.59	113.396	0.50	0.32	-19.30
1610.00	1.380	123.610	1609.81	16.93	-8.40	19.17	1788575.73	441057.21	39°42'33.020"N	80°08'22.382"W	20.93	113.661	0.38	0.05	16.00
1710.00	1.670	114.910	1709.78	19.21	-9.68	21.49	1788578.05	441055.93	39°42'33.008"N	80°08'22.363"W	23.57	114.244	0.37	0.29	-8.70
1810.00	1.410	121.310	1809.74	21.49	-10.93	23.86	1788580.42	441054.68	39°42'32.996"N	80°08'22.322"W	26.25	114.611	0.31	-0.26	6.40
1910.00	1.300	114.010	1909.72	23.49	-12.03	25.95	1788582.51	441053.58	39°42'32.985"N	80°08'22.295"W	28.61	114.875	0.20	-0.11	-7.30
2010.00	2.020	114.710	2009.67	25.86	-13.23	28.59	1788585.15	441052.38	39°42'32.973"N	80°08'22.261"W	31.50	114.834	0.72	0.72	0.70
2110.00	1.940	121.210	2109.61	28.79	-14.84	31.64	1788588.20	441050.77	39°42'32.958"N	80°08'22.222"W	34.95	115.136	0.24	-0.08	6.50
2210.00	1.920	122.310	2209.56	31.77	-16.62	34.50	1788591.06	441048.99	39°42'32.940"N	80°08'22.185"W	38.29	115.717	0.04	-0.02	1.10
2310.00	1.970	123.710	2309.50	34.80	-18.47	37.35	1788593.90	441047.14	39°42'32.922"N	80°08'22.149"W	41.66	116.310	0.07	0.05	1.40
2410.00	0.740	116.710	2409.47	36.89	-19.71	39.35	1788595.91	441045.90	39°42'32.910"N	80°08'22.123"W	44.01	116.604	1.24	-1.23	-7.00
2510.00	0.610	131.510	2509.46	37.94	-20.35	40.33	1788596.89	441045.26	39°42'32.904"N	80°08'22.111"W	45.17	116.780	0.22	-0.13	14.00
2610.00	0.590	131.110	2609.46	38.93	-21.05	41.12	1788597.67	441044.57	39°42'32.897"N	80°08'22.100"W	46.19	117.106	0.02	-0.02	-0.70
2710.00	0.260	114.410	2709.45	39.61	-21.48	41.71	1788598.27	441044.13	39°42'32.893"N	80°08'22.093"W	46.92	117.245	0.35	-0.33	-16.50
2810.00	0.380	157.610	2809.45	40.12	-21.88	42.04	1788598.60	441043.73	39°42'32.889"N	80°08'22.088"W	47.39	117.491	0.26	0.12	43.00

08/20/2019

REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot #06
NORTHEAST NATURAL ENERGY, LLC	Well	Jenkins 6H
Area	Wellbore	Jenkins 6H AWB
Field		
Facility		

WELLPATH DATA (208 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]
2910.00	0.250	123.710	2909.45	40.64	-22.31	42.35	1788598.91	441043.31	39°42'32.885"N	80°08'22.084"W	47.87	117.775	0.22	-0.13	-33.90
3010.00	0.130	100.210	3009.45	40.91	-22.45	42.64	1788599.20	441043.16	39°42'32.883"N	80°08'22.081"W	48.19	117.761	0.14	-0.12	-23.50
3110.00	0.190	117.710	3109.45	41.13	-22.54	42.90	1788599.46	441043.07	39°42'32.882"N	80°08'22.077"W	48.47	117.720	0.08	0.06	17.50
3210.00	0.090	111.110	3209.45	41.33	-22.65	43.12	1788599.68	441042.96	39°42'32.881"N	80°08'22.075"W	48.71	117.710	0.10	-0.10	-6.60
3310.00	0.110	29.010	3309.45	41.34	-22.59	43.24	1788599.80	441043.02	39°42'32.882"N	80°08'22.073"W	48.79	117.586	0.13	0.02	-82.10
3410.00	0.170	303.210	3409.45	41.16	-22.43	43.16	1788599.72	441043.18	39°42'32.883"N	80°08'22.074"W	48.64	117.456	0.20	0.06	-85.80
3510.00	0.160	223.410	3509.45	41.07	-22.45	42.94	1788599.50	441043.16	39°42'32.883"N	80°08'22.077"W	48.46	117.597	0.21	-0.01	-79.80
3610.00	0.300	278.710	3609.45	40.94	-22.51	42.59	1788599.15	441043.10	39°42'32.883"N	80°08'22.081"W	48.17	117.858	0.25	0.14	55.30
3710.00	0.040	238.010	3709.45	40.78	-22.49	42.30	1788598.86	441043.12	39°42'32.883"N	80°08'22.085"W	47.91	117.997	0.27	-0.26	-40.70
3810.00	0.290	299.010	3809.45	40.56	-22.38	42.05	1788598.61	441043.23	39°42'32.884"N	80°08'22.088"W	47.64	118.028	0.27	0.25	61.00
3910.00	0.660	269.810	3909.44	40.05	-22.26	41.25	1788597.81	441043.35	39°42'32.885"N	80°08'22.099"W	46.88	118.355	0.43	0.37	-29.20
4010.00	0.550	279.210	4009.44	39.46	-22.19	40.20	1788596.76	441043.42	39°42'32.886"N	80°08'22.112"W	45.92	118.895	0.15	-0.11	9.40
4110.00	0.530	293.010	4109.43	38.78	-21.93	39.30	1788595.86	441043.68	39°42'32.888"N	80°08'22.124"W	45.01	119.161	0.13	-0.02	13.80
4210.00	0.270	310.410	4209.43	38.19	-21.60	38.70	1788595.26	441044.01	39°42'32.891"N	80°08'22.131"W	44.32	119.166	0.28	-0.26	17.40
4310.00	0.570	305.910	4309.43	37.51	-21.15	38.12	1788594.67	441044.46	39°42'32.896"N	80°08'22.139"W	43.59	119.029	0.30	0.30	-4.50
4410.00	0.450	215.510	4409.43	37.22	-21.18	37.49	1788594.04	441044.43	39°42'32.895"N	80°08'22.147"W	43.06	119.469	0.73	-0.12	-90.40
4510.00	0.110	29.110	4509.43	37.33	-21.42	37.30	1788593.86	441044.19	39°42'32.893"N	80°08'22.149"W	43.02	119.861	0.56	-0.34	173.60
4610.00	0.710	271.510	4609.42	36.95	-21.32	36.73	1788593.29	441044.29	39°42'32.894"N	80°08'22.156"W	42.47	120.128	0.77	0.60	-117.60
4710.00	0.650	221.310	4709.42	36.80	-21.73	35.74	1788592.30	441043.88	39°42'32.890"N	80°08'22.169"W	41.82	121.297	0.58	-0.06	-50.20
4810.00	0.930	190.310	4809.41	37.60	-22.95	35.22	1788591.78	441042.66	39°42'32.878"N	80°08'22.176"W	42.04	123.092	0.50	0.28	-31.00
4910.00	1.170	170.310	4909.39	39.17	-24.76	35.25	1788591.80	441040.86	39°42'32.860"N	80°08'22.175"W	43.07	125.084	0.43	0.24	-20.00
5010.00	0.880	190.810	5009.38	40.70	-26.52	35.27	1788591.83	441039.09	39°42'32.842"N	80°08'22.175"W	44.13	126.934	0.46	-0.29	20.50
5110.00	0.800	141.510	5109.37	41.97	-27.82	35.56	1788592.12	441037.79	39°42'32.830"N	80°08'22.171"W	45.15	128.032	0.70	-0.08	-49.30
5210.00	0.940	149.110	5209.35	43.48	-29.07	36.42	1788592.98	441036.54	39°42'32.817"N	80°08'22.160"W	46.60	128.595	0.18	0.14	7.60
5310.00	0.810	141.010	5309.34	45.00	-30.32	37.28	1788593.84	441035.29	39°42'32.805"N	80°08'22.149"W	48.06	129.119	0.18	-0.13	-8.10
5410.00	0.860	163.410	5409.33	46.43	-31.59	37.94	1788594.50	441034.02	39°42'32.792"N	80°08'22.140"W	49.37	129.779	0.33	0.05	22.40
5510.00	1.010	139.910	5509.32	48.03	-32.98	38.73	1788595.28	441032.63	39°42'32.779"N	80°08'22.130"W	50.87	130.422	0.41	0.15	-23.00
5610.00	0.540	132.610	5609.31	49.35	-33.98	39.64	1788596.20	441031.64	39°42'32.769"N	80°08'22.118"W	52.21	130.601	0.48	-0.47	-7.80
5710.00	0.660	130.310	5709.30	50.34	-34.67	40.43	1788596.98	441030.94	39°42'32.762"N	80°08'22.108"W	53.26	130.615	0.12	0.12	-2.50
5809.00	3.210	14.720	5808.25	48.92	-32.36	41.57	1788598.12	441033.26	39°42'32.785"N	80°08'22.094"W	52.67	127.898	3.58	2.58	-116.00

REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot #06
NORTHEAST NATURAL ENERGY, LLC	Well	Jenkins 6H
Monongalia County, WV	Wellbore	Jenkins 6H AWB
Monongalia		
Jenkins Pad		

WELLPATH DATA (208 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]
5905.00	14.160	352.880	5903.03	36.19	-18.06	40.79	1788597.35	441047.55	39°42'32.926"N	80°08'22.105"W	44.61	113.879	11.71	11.41	-22.75
5999.00	21.660	0.280	5992.42	10.65	10.74	39.45	1788596.01	441076.35	39°42'33.211"N	80°08'22.125"W	40.88	74.766	8.32	7.98	7.87
6095.00	22.490	8.020	6081.40	-19.00	46.65	42.10	1788598.65	441112.26	39°42'33.566"N	80°08'22.094"W	62.84	42.064	3.15	0.86	8.06
6189.00	22.710	8.000	6168.18	-47.33	82.42	47.13	1788603.69	441148.03	39°42'33.920"N	80°08'22.033"W	94.94	29.762	0.23	0.23	-0.02
6284.00	22.620	357.330	6255.88	-77.90	118.85	48.83	1788605.39	441184.45	39°42'34.280"N	80°08'22.014"W	128.49	22.337	4.32	-0.09	-11.23
6379.00	22.060	352.420	6343.76	-110.54	154.78	45.63	1788602.19	441220.38	39°42'34.635"N	80°08'22.059"W	161.37	16.425	2.05	-0.59	-5.17
6474.00	22.320	357.190	6431.73	-142.99	190.49	42.39	1788598.95	441256.09	39°42'34.987"N	80°08'22.103"W	195.15	12.546	1.92	0.27	5.02
6569.00	19.880	3.260	6520.36	-172.44	224.64	42.42	1788598.98	441290.24	39°42'35.325"N	80°08'22.106"W	228.61	10.695	3.44	-2.57	6.39
6664.00	22.680	359.440	6608.98	-201.80	259.09	43.16	1788599.72	441324.68	39°42'35.665"N	80°08'22.100"W	262.66	9.459	3.29	2.95	-4.02
6759.00	22.360	351.750	6696.66	-234.45	295.30	40.39	1788596.95	441360.89	39°42'36.023"N	80°08'22.138"W	298.04	7.789	3.12	-0.34	-8.09
6854.00	23.170	350.110	6784.26	-268.71	331.59	34.59	1788591.15	441397.18	39°42'36.381"N	80°08'22.216"W	333.39	5.955	1.08	0.85	-1.73
6948.00	22.930	359.760	6870.78	-301.89	368.13	31.33	1788587.89	441433.72	39°42'36.742"N	80°08'22.261"W	369.46	4.865	4.02	-0.26	10.27
7043.00	22.290	11.880	6958.53	-331.26	404.29	34.97	1788591.53	441469.88	39°42'37.100"N	80°08'22.218"W	405.80	4.943	4.94	-0.67	12.76
7138.00	23.600	17.380	7046.02	-357.40	440.08	44.36	1788600.92	441505.66	39°42'37.454"N	80°08'22.101"W	442.31	5.756	2.64	1.38	5.79
7233.00	22.190	10.920	7133.55	-383.68	475.85	53.44	1788610.00	441541.43	39°42'37.808"N	80°08'21.988"W	478.84	6.408	3.03	-1.48	-6.80
7328.00	18.100	3.160	7222.73	-409.49	508.22	57.65	1788614.21	441573.79	39°42'38.129"N	80°08'21.937"W	511.47	6.472	5.13	-4.31	-8.17
7423.00	10.520	14.770	7314.74	-427.95	531.37	60.68	1788617.24	441596.95	39°42'38.358"N	80°08'21.900"W	534.83	6.515	8.49	-7.98	12.22
7518.00	8.350	93.380	7408.78	-430.25	539.38	69.81	1788626.37	441604.96	39°42'38.437"N	80°08'21.784"W	543.88	7.375	12.67	-2.28	82.75
7613.00	15.440	124.200	7501.77	-414.97	531.85	87.20	1788643.75	441597.43	39°42'38.364"N	80°08'21.561"W	538.95	9.311	9.78	7.46	32.44
7708.00	20.600	143.640	7592.16	-386.88	511.25	107.60	1788664.15	441576.83	39°42'38.162"N	80°08'21.298"W	522.45	11.885	8.27	5.43	20.46
7804.00	29.750	149.930	7678.96	-346.18	476.96	129.59	1788686.15	441542.54	39°42'37.825"N	80°08'21.014"W	494.25	15.201	9.92	9.53	6.55
7899.00	39.090	148.890	7757.24	-292.54	430.82	156.94	1788713.49	441496.40	39°42'37.371"N	80°08'20.660"W	458.51	20.016	9.85	9.83	-1.09
7994.00	49.790	146.680	7824.98	-226.17	374.70	192.45	1788748.99	441440.28	39°42'36.818"N	80°08'20.200"W	421.23	27.185	11.38	11.26	-2.33
8089.00	57.240	147.670	7881.43	-149.91	310.54	233.79	1788790.34	441376.13	39°42'36.187"N	80°08'19.665"W	388.71	36.975	7.89	7.84	1.04
8184.00	65.870	151.720	7926.65	-66.48	238.45	275.79	1788832.33	441304.05	39°42'35.478"N	80°08'19.121"W	364.58	49.153	9.82	9.08	4.26
8279.00	76.270	154.100	7957.43	23.10	158.54	316.60	1788873.14	441224.14	39°42'34.691"N	80°08'18.592"W	354.07	63.400	11.20	10.95	2.51
8374.00	83.340	153.120	7974.23	116.32	74.84	358.14	1788914.68	441140.45	39°42'33.867"N	80°08'18.053"W	365.87	78.197	7.51	7.44	-1.32
8469.00	87.510	149.570	7981.81	210.94	-8.22	403.54	1788960.07	441057.39	39°42'33.049"N	80°08'17.464"W	403.62	91.167	5.76	4.39	-3.74
8564.00	91.080	151.240	7982.98	305.90	-90.81	450.44	1789006.98	440974.81	39°42'32.236"N	80°08'16.857"W	459.50	101.398	4.15	3.76	1.15
8658.00	91.450	155.040	7980.91	399.69	-174.63	492.89	1789049.43	440890.99	39°42'31.411"N	80°08'16.306"W	522.92	109.509	4.06	0.39	4.01



Actual Wellpath Report

Jenkins 6H AWP Proj: 19748'MD
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REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot #06
NORTHEAST NATURAL ENERGY, LLC	Well	Jenkins 6H
Area	Wellbore	Jenkins 6H AWB
Field		
Facility		

WELLPATH DATA (208 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]
8753.00	91.630	144.790	7978.35	494.53	-256.69	540.44	1789096.96	440808.93	39°42'30.603"N	80°08'15.690"W	598.30	115.406	10.79	0.19	-10.79
8848.00	91.510	146.700	7975.74	589.27	-335.18	593.89	1789150.41	440730.45	39°42'29.831"N	80°08'14.999"W	681.94	119.440	2.01	-0.13	2.01
8943.00	91.940	148.440	7972.88	684.15	-415.33	644.81	1789201.33	440650.31	39°42'29.043"N	80°08'14.340"W	766.99	122.786	1.89	0.45	1.83
9038.00	91.690	146.490	7969.87	779.03	-495.37	695.87	1789252.39	440570.27	39°42'28.255"N	80°08'13.680"W	854.18	125.446	2.07	-0.26	-2.05
9133.00	90.000	140.620	7968.47	873.44	-571.75	752.27	1789308.79	440493.90	39°42'27.504"N	80°08'12.951"W	944.89	127.236	6.43	-1.78	-6.18
9228.00	89.600	148.460	7968.80	967.99	-649.07	807.34	1789363.85	440416.58	39°42'26.744"N	80°08'12.239"W	1035.90	128.798	8.26	-0.42	8.25
9322.00	91.200	151.150	7968.15	1061.97	-730.30	854.61	1789411.12	440335.35	39°42'25.945"N	80°08'11.627"W	1124.14	130.515	3.33	1.70	2.86
9418.00	90.000	149.750	7967.14	1157.95	-813.80	901.95	1789458.46	440251.85	39°42'25.123"N	80°08'11.014"W	1214.82	132.059	1.92	-1.25	-1.46
9513.00	91.260	153.610	7966.10	1252.87	-897.41	947.01	1789503.51	440168.25	39°42'24.300"N	80°08'10.430"W	1304.67	133.460	4.27	1.33	4.06
9609.00	91.510	156.630	7963.78	1348.39	-984.47	987.38	1789543.88	440081.20	39°42'23.442"N	80°08'09.905"W	1394.31	134.915	3.16	0.26	3.15
9703.00	91.170	153.470	7961.58	1441.94	-1069.66	1027.02	1789583.52	439996.02	39°42'22.603"N	80°08'09.391"W	1482.88	136.165	3.38	-0.36	-3.36
9799.00	90.830	144.350	7959.90	1537.82	-1151.77	1076.53	1789633.03	439913.91	39°42'21.795"N	80°08'08.750"W	1576.55	136.934	9.51	-0.35	-9.50
9894.00	90.250	140.490	7959.00	1632.04	-1227.04	1134.46	1789690.95	439838.64	39°42'21.055"N	80°08'08.002"W	1671.11	137.245	4.11	-0.61	-4.06
9989.00	90.220	148.910	7958.61	1726.59	-1304.50	1189.30	1789745.79	439761.19	39°42'20.294"N	80°08'07.293"W	1765.27	137.645	8.86	-0.03	8.86
10084.00	91.080	152.500	7957.53	1821.56	-1387.33	1235.78	1789792.26	439678.36	39°42'19.478"N	80°08'06.691"W	1857.91	138.307	3.89	0.91	3.78
10179.00	91.720	156.110	7955.21	1916.20	-1472.90	1276.95	1789833.43	439592.80	39°42'18.635"N	80°08'06.156"W	1949.36	139.076	3.86	0.67	3.80
10272.00	90.860	159.200	7953.12	2008.26	-1558.88	1312.29	1789868.77	439506.82	39°42'17.788"N	80°08'05.696"W	2037.70	139.909	3.45	-0.92	3.32
10367.00	90.800	153.970	7951.74	2102.52	-1646.02	1350.02	1789906.50	439419.69	39°42'16.930"N	80°08'05.206"W	2128.84	140.642	5.51	-0.06	-5.51
10462.00	90.710	151.280	7950.49	2197.38	-1730.37	1393.70	1789950.18	439335.35	39°42'16.099"N	80°08'04.639"W	2221.84	141.151	2.83	-0.09	-2.83
10557.00	90.490	152.520	7949.49	2292.30	-1814.16	1438.44	1789994.92	439251.56	39°42'15.274"N	80°08'04.059"W	2315.23	141.589	1.33	-0.23	1.31
10652.00	91.350	149.560	7947.97	2387.25	-1897.26	1484.43	1790040.90	439168.46	39°42'14.456"N	80°08'03.463"W	2408.97	141.960	3.24	0.91	-3.12
10748.00	91.510	149.370	7945.57	2483.22	-1979.92	1533.19	1790089.66	439085.81	39°42'13.643"N	80°08'02.832"W	2504.15	142.247	0.26	0.17	-0.20
10843.00	90.340	140.210	7944.04	2577.76	-2057.45	1587.90	1790144.36	439008.29	39°42'12.880"N	80°08'02.125"W	2598.94	142.340	9.72	-1.23	-9.64
10939.00	89.750	147.660	7943.96	2673.21	-2134.99	1644.37	1790200.83	438930.74	39°42'12.118"N	80°08'01.396"W	2694.84	142.397	7.78	-0.61	7.76
11034.00	89.600	153.840	7944.50	2768.15	-2217.84	1690.77	1790247.23	438847.90	39°42'11.302"N	80°08'00.795"W	2788.82	142.680	6.51	-0.16	6.51
11129.00	90.090	150.450	7944.76	2863.05	-2301.82	1735.15	1790291.60	438763.93	39°42'10.476"N	80°08'00.219"W	2882.55	142.990	3.61	0.52	-3.57
11224.00	90.060	150.080	7944.63	2958.04	-2384.31	1782.27	1790338.72	438681.44	39°42'09.664"N	80°07'59.609"W	2976.81	143.222	0.39	-0.03	-0.99
11319.00	90.400	150.940	7944.25	3053.03	-2467.00	1829.03	1790385.48	438598.76	39°42'08.850"N	80°07'59.003"W	3071.07	143.447	0.97	0.36	0.97
11414.00	89.600	148.680	7944.25	3148.02	-2549.11	1876.80	1790433.25	438516.65	39°42'08.042"N	80°07'58.385"W	3165.49	143.637	2.52	-0.84	-2.83
11510.00	90.430	145.750	7944.23	3243.92	-2629.81	1928.78	1790485.22	438435.96	39°42'07.248"N	80°07'57.712"W	3261.30	143.743	3.17	0.86	-3.95

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Jenkins 6H AWP Proj: 19748'MD
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REFERENCE WELLPATH IDENTIFICATION

Operator	Slot #06
NORTHEAST NATURAL ENERGY, LLC	Slot #06
Area	Jenkins 6H
Field	Jenkins 6H AWB
Facility	Jenkins Pad

WELLPATH DATA (208 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]
11605.00	91.050	147.430	7943.00	3338.77	-2709.10	1981.08	1790537.52	438356.67	39°42'06.468"N	80°07'57.036"W	3356.17	143.823	1.88	0.65	1.77
11700.00	90.920	149.930	7941.37	3433.74	-2790.24	2030.45	1790586.89	438275.54	39°42'05.669"N	80°07'56.397"W	3450.82	143.957	2.63	-0.14	2.63
11795.00	90.460	148.610	7940.22	3528.73	-2871.89	2078.99	1790635.43	438193.89	39°42'04.866"N	80°07'55.769"W	3545.41	144.099	1.47	-0.48	-1.39
11888.00	88.210	145.800	7941.30	3621.62	-2950.05	2129.35	1790685.78	438115.74	39°42'04.097"N	80°07'55.117"W	3638.26	144.178	3.87	-2.42	-3.02
11983.00	89.350	147.690	7943.32	3716.47	-3029.47	2181.43	1790737.86	438036.32	39°42'03.316"N	80°07'54.444"W	3733.14	144.243	2.32	1.20	1.99
12078.00	90.220	153.500	7943.68	3811.41	-3112.19	2228.05	1790784.48	437953.60	39°42'02.501"N	80°07'53.840"W	3827.53	144.401	6.18	0.92	6.12
12173.00	90.550	155.180	7943.04	3906.09	-3197.82	2269.19	1790825.61	437867.98	39°42'01.658"N	80°07'53.306"W	3921.13	144.640	1.80	0.35	1.77
12267.00	90.620	153.130	7942.08	3999.79	-3282.41	2310.16	1790866.58	437783.40	39°42'00.825"N	80°07'52.774"W	4013.86	144.862	2.18	0.07	-2.18
12363.00	90.830	152.530	7940.87	4095.64	-3367.81	2354.00	1790910.41	437698.00	39°41'59.984"N	80°07'52.206"W	4108.95	145.048	0.66	0.22	-0.63
12458.00	90.580	148.470	7939.70	4190.60	-3450.47	2409.76	1790957.18	437615.35	39°41'59.170"N	80°07'51.600"W	4203.50	145.171	4.28	-0.26	-4.27
12553.00	90.550	146.430	7938.76	4285.52	-3530.54	2451.87	1791008.28	437535.28	39°41'58.382"N	80°07'50.939"W	4298.41	145.221	2.15	-0.03	-2.15
12648.00	90.890	151.370	7937.57	4380.48	-3611.85	2500.92	1791057.33	437453.98	39°41'57.582"N	80°07'50.304"W	4393.19	145.300	5.21	0.36	5.20
12743.00	90.220	150.630	7936.65	4475.44	-3694.94	2546.98	1791103.38	437370.90	39°41'56.764"N	80°07'49.708"W	4487.72	145.421	1.05	-0.71	-0.78
12838.00	90.220	148.500	7936.28	4570.44	-3776.84	2595.10	1791151.50	437289.00	39°41'55.958"N	80°07'49.085"W	4582.47	145.507	2.24	0.00	-2.24
12933.00	90.310	148.010	7935.84	4665.41	-3857.63	2645.08	1791201.48	437208.22	39°41'55.163"N	80°07'48.438"W	4677.36	145.568	0.52	0.09	-0.52
13028.00	90.680	149.870	7935.02	4760.39	-3939.00	2694.09	1791250.49	437126.85	39°41'54.363"N	80°07'47.804"W	4772.19	145.630	2.00	0.39	1.96
13123.00	90.920	149.830	7933.69	4855.38	-4021.14	2741.80	1791298.20	437044.71	39°41'53.554"N	80°07'47.186"W	4866.93	145.712	0.26	0.25	-0.04
13218.00	90.770	149.840	7932.29	4950.37	-4103.26	2789.53	1791345.92	436962.59	39°41'52.746"N	80°07'46.568"W	4961.68	145.791	0.16	-0.16	0.01
13313.00	90.990	149.760	7930.83	5045.36	-4185.36	2837.31	1791393.70	436880.50	39°41'51.938"N	80°07'45.949"W	5056.44	145.866	0.25	0.23	-0.08
13409.00	91.110	149.280	7929.08	5141.34	-4268.08	2886.00	1791442.39	436797.79	39°41'51.124"N	80°07'45.319"W	5152.23	145.934	0.52	0.13	-0.50
13503.00	90.710	147.890	7927.58	5235.31	-4348.29	2934.99	1791491.37	436717.58	39°41'50.334"N	80°07'44.685"W	5246.12	145.982	1.54	-0.43	-1.48
13599.00	91.170	146.620	7926.01	5331.21	-4429.02	2986.91	1791543.29	436636.86	39°41'49.540"N	80°07'44.014"W	5342.08	146.004	1.41	0.48	-1.32
13693.00	91.200	145.870	7924.06	5425.03	-4507.16	3039.13	1791595.50	436558.72	39°41'48.772"N	80°07'43.339"W	5436.06	146.009	0.80	0.03	-0.80
13788.00	90.620	145.240	7922.55	5519.77	-4585.49	3092.85	1791649.23	436480.40	39°41'48.001"N	80°07'42.644"W	5531.04	146.001	0.90	-0.61	-0.66
13882.00	90.460	148.890	7921.67	5613.65	-4664.37	3143.95	1791700.32	436401.52	39°41'47.225"N	80°07'41.984"W	5625.01	146.019	3.89	-0.17	3.88
13977.00	90.890	153.050	7920.55	5708.60	-4747.41	3190.03	1791746.40	436318.49	39°41'46.408"N	80°07'41.387"W	5719.63	146.101	4.40	0.45	4.38
14072.00	91.660	153.250	7918.44	5803.40	-4832.14	3232.93	1791789.30	436233.76	39°41'45.573"N	80°07'40.830"W	5813.90	146.216	0.84	0.81	0.81
14168.00	91.170	152.140	7916.06	5899.23	-4917.42	3276.95	1791833.32	436148.49	39°41'44.734"N	80°07'40.259"W	5909.27	146.321	1.26	-0.51	-1.38
14263.00	90.860	152.330	7914.38	5994.12	-5001.47	3321.20	1791877.56	436064.44	39°41'43.906"N	80°07'39.686"W	6003.75	146.414	0.38	-0.33	0.33
14358.00	90.550	148.250	7913.21	6089.09	-5083.96	3368.27	1791924.63	435981.96	39°41'43.094"N	80°07'39.076"W	6098.51	146.474	4.31	-0.33	-4.31

Actual Wellpath Report

Jenkins 6H AWP Proj: 19748'MD
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REFERENCE WELLPATH IDENTIFICATION

Operator	Slot #06
NORTHEAST NATURAL ENERGY, LLC	Jenkins 6H
Area	Monongalia County, WV
Field	Monongalia
Facility	Jenkins Pad

WELLPATH DATA (208 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]
14454.00	90.890	148.440	7912.01	6185.06	-5165.67	3418.65	1791975.00	435900.25	39°41'42.290"N	80°07'38.425"W	6194.46	146.503	0.41	0.35	0.20
14549.00	90.740	145.710	7910.65	6279.94	-5245.39	3470.28	1792026.63	435820.53	39°41'41.506"N	80°07'37.757"W	6289.43	146.512	2.88	-0.16	-2.87
14644.00	90.580	144.300	7909.56	6374.62	-5323.21	3524.75	1792081.10	435742.72	39°41'40.740"N	80°07'37.053"W	6384.39	146.490	1.49	-0.17	-1.48
14739.00	90.710	147.230	7908.49	6469.38	-5401.74	3578.19	1792134.53	435664.20	39°41'39.968"N	80°07'36.362"W	6479.37	146.479	3.09	0.14	3.08
14834.00	90.920	150.500	7907.14	6564.35	-5483.03	3627.30	1792183.64	435582.91	39°41'39.168"N	80°07'35.727"W	6574.26	146.513	3.45	0.22	3.44
14929.00	91.140	153.460	7905.43	6659.25	-5566.87	3671.92	1792228.26	435499.07	39°41'38.343"N	80°07'35.149"W	6668.81	146.591	3.12	0.23	3.12
15023.00	90.920	153.320	7903.74	6753.03	-5650.90	3714.01	1792270.35	435415.05	39°41'37.515"N	80°07'34.603"W	6762.14	146.685	0.28	-0.23	-0.15
15119.00	90.770	150.810	7902.32	6848.93	-5735.70	3758.98	1792315.31	435330.25	39°41'36.680"N	80°07'34.020"W	6857.71	146.761	2.62	-0.16	-2.61
15213.00	90.620	150.730	7901.18	6942.91	-5817.73	3804.88	1792361.21	435248.23	39°41'35.873"N	80°07'33.426"W	6951.48	146.815	0.18	-0.16	-0.09
15307.00	90.680	149.450	7900.12	7036.90	-5899.20	3851.74	1792408.07	435166.77	39°41'35.071"N	80°07'32.819"W	7045.32	146.888	1.36	0.06	-1.36
15401.00	90.710	150.310	7898.98	7130.89	-5980.50	3898.91	1792455.24	435085.47	39°41'34.270"N	80°07'32.208"W	7139.18	146.898	0.92	0.03	0.91
15496.00	91.050	151.500	7897.52	7225.85	-6063.50	3945.10	1792501.42	435002.47	39°41'33.453"N	80°07'31.610"W	7233.94	146.951	1.30	0.36	1.25
15591.00	90.950	151.260	7895.86	7320.79	-6146.88	3990.60	1792546.92	434919.10	39°41'32.633"N	80°07'31.020"W	7328.64	147.008	0.27	-0.11	-0.25
15687.00	89.660	153.400	7895.35	7416.68	-6231.89	4035.17	1792591.49	434834.09	39°41'31.795"N	80°07'30.443"W	7424.23	147.077	2.60	-1.34	2.23
15781.00	89.050	148.890	7896.41	7510.62	-6314.20	4080.52	1792636.84	434751.79	39°41'30.985"N	80°07'29.855"W	7517.96	147.128	4.84	-0.65	-4.80
15877.00	89.260	142.930	7897.83	7606.36	-6393.65	4134.30	1792690.61	434672.34	39°41'30.204"N	80°07'29.160"W	7613.89	147.112	6.21	0.22	-6.21
15972.00	89.750	143.480	7898.65	7700.75	-6469.73	4191.20	1792747.51	434596.27	39°41'29.456"N	80°07'28.426"W	7708.66	147.064	0.78	0.52	0.58
16067.00	89.660	149.030	7899.14	7795.55	-6548.69	4243.95	1792800.25	434517.32	39°41'28.679"N	80°07'27.744"W	7803.62	147.054	5.84	-0.09	5.84
16162.00	89.480	151.000	7899.85	7890.54	-6630.97	4291.42	1792847.72	434435.04	39°41'27.869"N	80°07'27.129"W	7898.48	147.090	2.08	-0.19	2.07
16258.00	89.600	150.690	7900.62	7986.51	-6714.80	4338.19	1792894.49	434351.21	39°41'27.044"N	80°07'26.524"W	7994.28	147.135	0.35	0.12	-0.32
16353.00	89.690	151.670	7901.21	8081.48	-6798.03	4383.98	1792940.28	434267.99	39°41'26.224"N	80°07'25.930"W	8089.04	147.182	1.04	0.09	1.03
16448.00	89.690	152.380	7901.72	8176.39	-6881.93	4428.55	1792984.84	434184.10	39°41'25.398"N	80°07'25.353"W	8183.70	147.239	0.75	0.00	0.75
16543.00	89.600	151.590	7902.31	8271.31	-6965.80	4473.17	1793029.46	434100.23	39°41'24.573"N	80°07'24.775"W	8278.38	147.293	0.84	-0.09	-0.83
16637.00	89.690	151.260	7902.89	8365.27	-7048.34	4518.13	1793074.42	434017.69	39°41'23.760"N	80°07'24.192"W	8372.13	147.339	0.36	0.10	-0.35
16732.00	89.540	149.670	7903.53	8460.25	-7130.99	4564.96	1793121.24	433935.05	39°41'22.946"N	80°07'23.586"W	8466.99	147.374	1.68	-0.16	-1.67
16828.00	89.750	148.880	7904.13	8556.25	-7213.52	4614.00	1793170.28	433852.53	39°41'22.134"N	80°07'22.951"W	8562.93	147.396	0.85	0.22	-0.82
16923.00	89.080	147.620	7905.10	8651.21	-7294.29	4663.99	1793220.27	433771.76	39°41'21.339"N	80°07'22.305"W	8657.92	147.405	1.50	-0.71	-1.53
17018.00	89.420	148.500	7906.34	8746.17	-7374.90	4714.24	1793270.52	433691.15	39°41'20.546"N	80°07'21.655"W	8752.90	147.412	0.99	0.36	0.38
17113.00	89.420	151.030	7907.30	8841.15	-7456.97	4762.07	1793318.35	433609.09	39°41'19.738"N	80°07'21.036"W	8847.81	147.437	2.66	0.00	2.66
17208.00	89.820	151.560	7907.93	8936.11	-7540.29	4807.70	1793363.97	433525.77	39°41'18.918"N	80°07'20.444"W	8942.59	147.478	0.70	0.42	0.51



Actual Wellpath Report

Jenkins 6H AWP Proj: 19748'MD
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REFERENCE WELLPATH IDENTIFICATION

Operator	NORTHEAST NATURAL ENERGY, LLC	Slot	Slot #06
Area	Monongalia County, WV	Well	Jenkins 6H
Field	Monongalia	Wellbore	Jenkins 6H AWB
Facility	Jenkins Pad		

WELLPATH DATA (208 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]
17304.00	89.910	149.820	7908.16	9032.09	-7624.00	4854.69	1793410.96	433442.07	39°41'18.094"N	80°07'19.836"W	9038.44	147.512	1.81	0.09	-1.81
17398.00	89.880	148.710	7908.33	9126.09	-7704.79	4902.73	1793459.00	433361.28	39°41'17.299"N	80°07'19.214"W	9132.39	147.530	1.18	-0.03	-1.18
17493.00	90.280	150.200	7908.20	9221.08	-7786.61	4951.01	1793507.27	433279.47	39°41'16.494"N	80°07'18.590"W	9227.34	147.550	1.62	0.42	1.57
17588.00	89.350	149.490	7908.50	9316.08	-7868.75	4998.73	1793554.99	433197.33	39°41'15.685"N	80°07'17.972"W	9322.26	147.574	1.23	-0.98	-0.75
17683.00	89.510	148.570	7909.45	9411.07	-7950.20	5047.62	1793603.87	433115.89	39°41'14.883"N	80°07'17.339"W	9417.23	147.588	0.98	0.17	-0.97
17778.00	91.140	147.400	7908.91	9506.02	-8030.75	5097.98	1793654.23	433035.35	39°41'14.091"N	80°07'16.688"W	9512.22	147.592	2.11	1.72	-1.23
17873.00	91.850	143.720	7906.43	9600.73	-8109.06	5151.67	1793707.92	432957.04	39°41'13.321"N	80°07'15.994"W	9607.11	147.572	3.94	0.75	-3.87
17967.00	90.620	146.300	7904.41	9694.39	-8186.04	5205.56	1793761.81	432880.06	39°41'12.564"N	80°07'15.298"W	9700.98	147.547	3.04	-1.31	2.74
18063.00	92.030	148.220	7902.19	9790.27	-8266.76	5257.46	1793813.70	432799.35	39°41'11.769"N	80°07'14.627"W	9796.95	147.545	2.48	1.47	2.00
18158.00	92.000	149.590	7898.84	9885.20	-8348.06	5306.49	1793862.73	432718.05	39°41'10.969"N	80°07'13.993"W	9891.86	147.558	1.44	-0.03	1.44
18253.00	90.860	150.520	7896.47	9980.17	-8430.35	5353.90	1793910.14	432635.77	39°41'10.159"N	80°07'13.379"W	9986.74	147.581	1.55	-1.20	0.98
18348.00	91.480	152.640	7894.53	10075.09	-8513.88	5399.10	1793955.33	432552.25	39°41'09.337"N	80°07'12.794"W	10081.49	147.619	2.32	0.65	2.23
18442.00	90.180	150.590	7893.17	10169.02	-8596.56	5443.78	1794000.01	432469.57	39°41'08.523"N	80°07'12.215"W	10175.24	147.656	2.58	-1.38	-2.18
18536.00	89.110	151.180	7893.75	10262.99	-8678.68	5489.51	1794045.74	432387.45	39°41'07.714"N	80°07'11.623"W	10269.09	147.685	1.30	-1.14	0.63
18630.00	88.620	149.030	7895.62	10356.97	-8760.15	5536.35	1794092.58	432305.99	39°41'06.912"N	80°07'11.016"W	10362.98	147.707	2.35	-0.52	-2.29
18724.00	88.490	150.600	7897.99	10450.93	-8841.38	5583.60	1794139.82	432224.77	39°41'06.113"N	80°07'10.405"W	10456.89	147.726	1.68	-0.14	1.67
18819.00	89.290	152.010	7899.83	10545.87	-8924.69	5629.20	1794185.42	432141.46	39°41'05.293"N	80°07'09.814"W	10551.68	147.759	1.71	0.84	1.48
18915.00	90.250	154.900	7900.21	10641.65	-9010.56	5672.10	1794228.32	432055.59	39°41'04.447"N	80°07'09.258"W	10647.20	147.810	3.17	1.00	3.01
19009.00	91.050	157.430	7899.15	10735.03	-9096.53	5710.08	1794266.30	431969.63	39°41'03.600"N	80°07'08.765"W	10740.20	147.883	2.82	0.85	2.69
19104.00	90.460	151.210	7897.89	10829.66	-9182.10	5751.22	1794307.44	431884.07	39°41'02.757"N	80°07'08.231"W	10834.55	147.939	6.58	-0.62	-6.55
19199.00	90.800	147.720	7896.85	10924.64	-9263.90	5799.48	1794355.69	431802.26	39°41'01.952"N	80°07'07.606"W	10929.50	147.952	3.69	0.36	-3.67
19294.00	90.800	146.020	7895.52	11019.52	-9343.45	5851.39	1794407.60	431722.72	39°41'01.169"N	80°07'06.935"W	11024.47	147.943	1.79	0.00	-1.79
19389.00	90.060	145.590	7894.81	11114.30	-9422.02	5904.78	1794460.99	431644.15	39°41'00.396"N	80°07'06.246"W	11119.40	147.925	0.90	-0.78	-0.45
19484.00	90.250	147.350	7894.55	11209.15	-9501.21	5957.26	1794513.46	431564.97	39°40'59.617"N	80°07'05.567"W	11214.36	147.912	1.86	0.20	1.85
19579.00	89.660	148.100	7894.63	11304.09	-9581.53	6007.98	1794564.18	431484.65	39°40'58.827"N	80°07'04.912"W	11309.36	147.911	1.00	-0.62	0.79
19674.00	89.780	149.970	7895.09	11399.08	-9662.99	6056.86	1794613.05	431403.20	39°40'58.025"N	80°07'04.279"W	11404.34	147.920	1.97	0.13	1.97
19721.00	89.720	151.300	7895.30	11446.07	-9703.95	6079.91	1794636.10	431362.24	39°40'57.622"N	80°07'03.981"W	11451.28	147.931	2.83	-0.13	2.83
19748.00	89.720	151.300	7895.43	11473.06	-9727.63	6092.87	1794649.06	431338.56	39°40'57.389"N	80°07'03.813"W	11478.24	147.939	0.00	0.00	0.00

05/31/2019

REFERENCE WELLPATH IDENTIFICATION

Operator	NORTHEAST NATURAL ENERGY, LLC		Slot	Slot #06
Area	Monongalia County, WV		Well	Jenkins 6H
Field	Monongalia		Wellbore	Jenkins 6H AWB
Facility	Jenkins Pad			

HOLE & CASING SECTIONS - Ref Wellbore: Jenkins 6H AWB Ref Wellpath: Jenkins 6H AWP Proj: 19748'MD

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	End N/S [ft]	Start E/W [ft]	End E/W [ft]
9.625in Casing	25.00	2269.00	2244.00	25.00	2268.52	0.00	-17.69	0.00	36.18
8.75in Open Hole	2269.00	5770.00	3501.00	2268.52	5769.29	-17.69	-33.99	36.18	41.05
8.5in Open Hole	5770.00	19748.00	13978.00	5769.29	7895.43	-33.99	-9727.63	41.05	6092.87

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Jenkins 6H BHL Rev-3	7980.00	-9727.64	6093.65	1794649.84	431338.56	39°40'57.389"N	80°07'03.803"W	point
Jenkins 6H LP Rev-3	7980.00	69.18	360.66	1788917.20	441134.79	39°42'33.811"N	80°08'18.020"W	point

WELLPATH COMPOSITION - Ref Wellbore: Jenkins 6H AWB Ref Wellpath: Jenkins 6H AWP Proj: 19748'MD

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment
25.00	5710.00	BHI Generic gyro - northseeking (Standard)	01_Javins Gyro <8-3/4"> (110'-5710')
5710.00	19721.00	BHI AutoTrak Curve (Short)	02_BH AT Curve <8-1/2"> (5710')(5809'-19721')
19721.00	19748.00	Blind Drilling (std)	Projection to bit
			Wellbore



Actual Wellpath Report

Jenkins 6H AWP Proj: 19748'MD
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REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot #06
NORTHEAST NATURAL ENERGY, LLC	Well	Jenkins 6H
Monongalia County, WV	Wellbore	Jenkins 6H AWB
Monongalia		
Jenkins Pad		

COMMENTS

Wellpath general comments
 API: 47-061-01743-0000
 Job #: 8981605
 Rig: Patterson 334
 Duration: 02/13/2018 - 02/23/2018

05/31/2019