



Actual Wellpath Report

WDTN-5B-HSU ST02 AWP Proj: 19934'
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REFERENCE WELLPATH IDENTIFICATION

Operator	CNX GAS COMPANY, LLC	Slot	Slot B
Area	Monongalia County, WV	Well	WDTN-5B-HSU ST02
Field	Monongalia	Wellbore	WDTN-5B-HSU ST02 AWP
Facility	WTN-5 Pad	Sidetrack from	WDTN-5B-HSU Pilot ST01 AWP Proj: 14000' at 12415.00 MD

REPORT SETUP INFORMATION

Projection System	NAD27 / Lambert West Virginia SP, Northern Zone (4701), US feet	Software System	WellArchitect@ 5.1
North Reference	Grid	User	Edsaryar
Scale	0.999942	Report Generated	29/May/2019 at 16:41
Convergence at slot	0.53° West	Database/Source file	WA_MPL_EASTERIUS_Defn\WDTN-5B-HSU_ST02_AWP_Proj_19934_.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	0.00	0.00	1764427.45	440530.83	39°42'23.382"N	80°20'14.303"W
Facility Reference Pt			1764427.45	440530.83	39°42'23.382"N	80°20'14.303"W
Field Reference Pt			609601.22	0.00	38°23'48.753"N	84°21'09.765"W

WELLPATH DATUM

Calculation method	Minimum curvature	Patterson 801 (RKB) to Facility Vertical Datum	1416.94ft
Horizontal Reference Pt	Slot	Patterson 801 (RKB) to Mean Sea Level	1416.94ft
Vertical Reference Pt	Patterson 801 (RKB)	Patterson 801 (RKB) to Mud Line at Slot (Slot B)	29.00ft
MD Reference Pt	Patterson 801 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	315.00°

RECEIVED
Office of Oil & Gas
OCT 28 2019
WV Department of Environmental Protection



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		CNX GAS COMPANY, LLC	Well	WDTN-5B-HSU ST02
		Area	Wellbore	WDTN-5B-HSU ST02 AWP
		Field	Sidetrack from	WDTN-5B-HSU Pilot ST01 AWP Proj: 14000' at 12415.00 MD
		Facility		

WELLPATH DATA (212 stations) † = Interpolated/extrapolated station															
MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(US ft)	(US ft)			(ft)	(°)	(ft/100ft)	(ft/100ft)	(ft/100ft)
0.00†	0.000	52.710	0.00	0.00	0.00	0.00	1764427.45	440530.83	39°42'23.382"N	80°20'14.303"W	0.00	0.000	0.00	0.00	0.00
29.00	0.000	52.710	29.00	0.00	0.00	0.00	1764427.45	440530.83	39°42'23.382"N	80°20'14.303"W	0.00	0.000	0.00	0.00	0.00
100.00	0.640	52.710	100.00	-0.05	0.24	0.32	1764427.77	440531.07	39°42'23.384"N	80°20'14.299"W	0.40	52.710	0.90	0.90	74.24
200.00	0.600	74.110	199.99	-0.38	0.72	1.26	1764428.71	440531.55	39°42'23.389"N	80°20'14.287"W	1.46	60.254	0.23	-0.04	21.40
300.00	0.530	65.450	299.99	-0.80	1.06	2.19	1764430.64	440531.89	39°42'23.393"N	80°20'14.275"W	2.43	64.202	0.11	-0.07	-8.66
400.00	0.650	42.490	399.98	-0.94	1.67	2.99	1764430.44	440532.50	39°42'23.399"N	80°20'14.265"W	3.43	60.858	0.26	0.12	-22.96
500.00	0.740	66.150	499.98	-1.14	2.35	3.97	1764431.42	440533.18	39°42'23.406"N	80°20'14.253"W	4.61	59.376	0.30	0.09	23.66
600.00	0.940	72.100	599.96	-1.75	2.86	5.34	1764432.79	440533.69	39°42'23.411"N	80°20'14.235"W	6.05	61.807	0.22	0.20	5.95
700.00	1.010	88.200	699.95	-2.73	3.14	7.00	1764434.45	440533.97	39°42'23.414"N	80°20'14.214"W	7.67	65.832	0.28	0.07	16.10
800.00	1.020	101.530	799.93	-4.07	2.99	8.75	1764436.20	440533.82	39°42'23.412"N	80°20'14.191"W	9.25	71.135	0.24	0.01	13.33
900.00	1.110	110.810	899.92	-5.70	2.47	10.53	1764437.98	440533.30	39°42'23.407"N	80°20'14.169"W	10.81	76.807	0.19	0.09	9.28
1000.00	1.170	115.240	999.90	-7.54	1.69	12.36	1764439.81	440532.52	39°42'23.400"N	80°20'14.145"W	12.47	82.219	0.11	0.06	4.43
1100.00	1.070	118.460	1099.88	-9.40	0.81	14.10	1764441.55	440531.64	39°42'23.391"N	80°20'14.123"W	14.12	86.719	0.12	-0.10	3.22
1200.00	1.440	136.480	1199.86	-11.55	-0.55	15.79	1764443.24	440530.28	39°42'23.378"N	80°20'14.101"W	15.80	91.987	0.54	0.37	18.02
1300.00	2.160	133.830	1299.81	-14.69	-2.76	18.01	1764445.46	440528.07	39°42'23.356"N	80°20'14.072"W	18.22	98.724	0.72	0.72	-2.65
1400.00	2.310	135.820	1399.73	-18.59	-5.51	20.78	1764448.21	440525.32	39°42'23.329"N	80°20'14.037"W	21.50	104.864	0.17	0.15	1.99
1500.00	1.310	136.840	1499.68	-21.75	-7.79	22.96	1764450.41	440523.04	39°42'23.307"N	80°20'14.008"W	24.25	108.747	1.00	-1.00	1.02
1600.00	0.520	161.530	1599.66	-23.30	-9.06	23.89	1764451.34	440521.77	39°42'23.295"N	80°20'13.996"W	25.55	110.765	0.87	-0.79	24.69
1700.00	0.260	160.110	1699.66	-23.91	-9.70	24.11	1764451.56	440521.13	39°42'23.288"N	80°20'13.993"W	25.99	111.920	0.26	-0.26	-1.42
1800.00	0.270	207.340	1799.66	-24.19	-10.12	24.08	1764451.53	440520.71	39°42'23.284"N	80°20'13.994"W	26.12	112.805	0.21	0.01	47.23
1900.00	0.130	264.930	1899.66	-24.18	-10.34	23.86	1764451.31	440520.49	39°42'23.282"N	80°20'14.006"W	26.00	113.439	0.23	-0.14	57.59
2000.00	0.210	12.260	1999.66	-24.01	-10.17	23.78	1764451.23	440520.66	39°42'23.284"N	80°20'13.998"W	25.87	113.161	0.28	0.08	107.33
2100.00	0.150	332.650	2099.66	-23.79	-9.88	23.76	1764451.21	440520.95	39°42'23.282"N	80°20'13.998"W	25.73	112.575	0.13	-0.06	-39.61
2200.00	0.400	318.600	2199.66	-23.31	-9.50	23.47	1764450.92	440521.33	39°42'23.280"N	80°20'14.002"W	25.32	112.038	0.26	0.25	-14.05
2300.00	0.410	357.130	2299.66	-22.70	-8.88	23.22	1764450.67	440521.95	39°42'23.286"N	80°20'14.005"W	24.86	110.930	0.27	0.01	38.53
2400.00	0.150	341.770	2399.66	-22.32	-8.40	23.16	1764450.51	440522.43	39°42'23.301"N	80°20'14.006"W	24.64	109.933	0.27	-0.26	-15.36
2500.00	0.390	349.170	2499.65	-21.92	-7.94	23.06	1764450.50	440522.89	39°42'23.306"N	80°20'14.009"W	24.39	109.004	0.24	0.24	7.40
2600.00	0.310	349.430	2599.65	-21.42	-7.34	22.95	1764450.39	440523.49	39°42'23.312"N	80°20'14.007"W	24.09	107.742	0.08	-0.08	0.26
2700.00	0.350	15.040	2699.65	-21.04	-6.78	22.97	1764450.42	440524.05	39°42'23.317"N	80°20'14.008"W	23.95	106.443	0.15	0.04	25.61
2959.00	0.330	322.210	2958.65	-19.91	-5.43	22.72	1764450.17	440525.40	39°42'23.331"N	80°20'14.012"W	23.36	103.433	0.12	-0.01	-20.40



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CNX GAS COMPANY, LLC		Monongalia County, WV	Well	WDTN-5B-HSU ST02
Monongalia		Wellbore	WDTN-5B-HSU ST02 AWP	
WTN-5 Pad		Sidetrack from	WDTN-5B-HSU Pilot ST01 AWP Proj: 14000' at 12415.00 MD	

WELLPATH DATA (212 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 (ft/100ft)	Built Rate (ft/100ft)	Turn Rate (ft/100ft)
3053.00	0.270	317.980	3052.65	-19.42	-5.05	22.41	1764449.86	440525.78	39°42'23.334"N	80°20'14.016"W	22.97	102.697	0.07	-0.06	-4.50
3146.00	1.010	333.340	3145.64	-18.42	-4.15	21.89	1764449.34	440526.68	39°42'23.343"N	80°20'14.022"W	22.28	100.741	0.81	0.80	16.52
3240.00	1.410	337.340	3239.62	-16.56	-2.35	21.08	1764448.53	440528.48	39°42'23.361"N	80°20'14.033"W	21.21	96.350	0.43	0.43	4.26
3333.00	1.490	358.280	3332.59	-14.62	-0.08	20.60	1764448.05	440530.75	39°42'23.383"N	80°20'14.039"W	20.60	90.226	0.57	0.09	22.52
3427.00	2.140	349.820	3426.54	-12.29	2.87	20.25	1764447.70	440533.80	39°42'23.412"N	80°20'14.044"W	20.46	81.940	0.75	0.69	-9.00
3520.00	1.760	11.770	3519.49	-10.09	5.98	20.24	1764447.92	440536.80	39°42'23.443"N	80°20'14.045"W	21.10	73.551	0.89	-0.41	23.60
3614.00	0.620	353.240	3613.47	-8.89	7.89	20.47	1764447.99	440538.72	39°42'23.462"N	80°20'14.042"W	21.94	68.915	1.26	-1.21	-19.71
3711.00	0.590	308.860	3710.46	-7.99	8.73	20.02	1764447.47	440539.56	39°42'23.470"N	80°20'14.048"W	21.84	66.446	0.47	-0.03	-45.75
3805.00	0.670	289.300	3804.46	-7.01	9.21	19.13	1764446.57	440540.04	39°42'23.475"N	80°20'14.059"W	21.23	64.279	0.24	0.09	-20.81
3899.00	0.220	253.630	3898.45	-6.43	9.34	18.43	1764445.88	440540.17	39°42'23.476"N	80°20'14.068"W	20.67	63.120	0.54	-0.48	-37.95
3992.00	0.670	277.020	3991.45	-5.91	9.36	17.72	1764445.17	440540.29	39°42'23.478"N	80°20'14.077"W	20.04	62.160	0.51	0.48	25.15
4086.00	0.220	275.070	4085.45	-5.34	9.44	17.00	1764444.45	440540.19	39°42'23.477"N	80°20'14.087"W	19.44	60.945	0.48	-0.48	-2.07
4179.00	0.770	291.520	4178.44	-4.63	9.69	16.24	1764443.69	440540.52	39°42'23.479"N	80°20'14.096"W	18.91	59.179	0.60	0.59	17.69
4273.00	0.570	258.020	4272.44	-3.80	9.82	15.19	1764442.64	440540.65	39°42'23.481"N	80°20'14.110"W	18.09	57.117	0.46	-0.21	-35.64
4367.00	0.980	250.870	4366.43	-3.19	9.46	13.98	1764441.43	440540.29	39°42'23.477"N	80°20'14.125"W	16.88	55.902	0.45	0.44	-7.61
4460.00	1.130	265.040	4459.41	-2.26	9.12	12.31	1764439.76	440539.95	39°42'23.473"N	80°20'14.147"W	15.32	53.463	0.32	0.16	15.24
4554.00	0.940	265.090	4553.40	-1.16	8.98	10.62	1764438.07	440539.81	39°42'23.472"N	80°20'14.168"W	13.91	49.795	0.20	-0.20	0.05
4648.00	1.070	251.740	4647.38	-0.27	8.64	9.02	1764436.47	440539.46	39°42'23.468"N	80°20'14.189"W	12.49	46.243	0.28	0.14	-14.20
4741.00	1.140	247.360	4740.37	0.47	8.01	7.34	1764434.79	440538.84	39°42'23.462"N	80°20'14.210"W	10.86	42.511	0.12	0.08	-4.71
4835.00	2.110	264.230	4834.33	1.92	7.47	4.76	1764432.20	440538.30	39°42'23.456"N	80°20'14.243"W	8.86	32.468	1.14	1.03	17.95
4928.00	1.380	256.150	4927.28	3.58	7.03	1.96	1764429.41	440537.86	39°42'23.452"N	80°20'14.279"W	7.30	15.606	0.83	-0.78	-8.69
5022.00	1.810	267.880	5021.25	5.18	6.71	-0.62	1764426.83	440537.54	39°42'23.448"N	80°20'14.312"W	6.74	35.4735	0.57	0.46	12.48
5116.00	1.670	280.720	5115.20	7.32	6.91	-3.45	1764424.00	440537.74	39°42'23.450"N	80°20'14.348"W	7.72	33.3475	0.44	-0.15	13.66
5209.00	1.670	293.050	5208.17	9.70	7.69	-6.03	1764421.42	440538.52	39°42'23.455"N	80°20'14.381"W	9.77	32.1916	0.39	0.00	13.26
5303.00	2.340	296.890	5302.11	12.79	9.09	-9.00	1764418.45	440539.92	39°42'23.471"N	80°20'14.419"W	12.79	31.5304	0.73	0.71	4.09
5397.00	2.690	313.210	5396.02	16.82	11.47	-12.32	1764415.13	440542.30	39°42'23.494"N	80°20'14.462"W	16.83	31.2966	0.84	0.37	17.36
5428.00	2.080	317.440	5426.99	18.11	12.38	-13.23	1764412.22	440543.21	39°42'23.503"N	80°20'14.474"W	18.12	31.3114	2.05	-1.97	13.65
5513.00	2.500	359.010	5511.93	20.99	15.37	-14.30	1764413.15	440546.20	39°42'23.533"N	80°20'14.488"W	21.00	31.7067	1.97	0.49	48.91
5617.00	4.090	56.110	5615.78	21.90	19.71	-11.26	1764416.19	440550.54	39°42'23.576"N	80°20'14.450"W	22.70	330.258	3.31	1.53	54.90
5711.00	3.980	80.530	5709.55	19.36	22.12	-5.26	1764422.19	440552.95	39°42'23.600"N	80°20'14.373"W	22.74	346.618	1.82	-0.12	25.98



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Facility	WTN-5 Pad	Sidetrack from	WDTN-5B-HSU Pilot ST01 AWP Proj: 14000' at 12415.00 MD		

WELLPATH DATA (212 stations)															
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(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(US ft)	(US ft)			(ft)	(°)	(ft/100ft)	(ft/100ft)	(ft/100ft)
5805.00	1.810	143.020	5803.44	15.99	21.47	-1.15	1764426.30	440552.30	39°42'23.594"N	80°20'14.320"W	21.50	356.934	3.75	-2.31	66.48
5900.00	3.990	208.810	5898.34	13.59	17.37	-1.84	1764425.61	440548.20	39°42'23.554"N	80°20'14.329"W	17.47	353.953	3.83	2.29	69.25
5994.00	3.270	256.560	5992.17	14.08	13.88	-6.02	1764421.43	440544.71	39°42'23.519"N	80°20'14.382"W	15.13	336.540	3.20	-0.77	50.80
6088.00	4.770	308.760	6085.96	19.37	15.71	-11.68	1764415.77	440546.54	39°42'23.536"N	80°20'14.454"W	19.58	323.361	4.02	1.60	55.53
6182.00	8.040	324.040	6179.37	29.75	23.48	-18.59	1764408.86	440554.31	39°42'23.612"N	80°20'14.544"W	29.95	321.624	3.89	3.48	16.26
6276.00	9.320	326.500	6272.29	43.70	35.15	-26.65	1764392.61	440555.97	39°42'23.727"N	80°20'14.648"W	44.11	322.824	1.42	1.36	2.62
6369.00	8.650	324.820	6364.15	57.97	47.14	-34.84	1764392.61	440577.97	39°42'23.845"N	80°20'14.754"W	58.62	323.534	0.77	-0.72	-1.81
6463.00	7.440	321.500	6457.22	70.98	57.68	-42.70	1764384.75	440588.51	39°42'23.948"N	80°20'14.856"W	71.77	323.489	1.38	-1.29	-3.53
6557.00	7.780	321.000	6550.40	83.36	67.39	-50.49	1764376.96	440598.22	39°42'24.043"N	80°20'14.957"W	84.21	323.157	0.37	0.36	-0.53
6651.00	9.360	322.200	6643.34	97.27	78.38	-59.18	1764368.27	440609.20	39°42'24.151"N	80°20'15.070"W	98.21	322.943	1.69	1.68	1.28
6745.00	8.730	317.400	6736.18	111.98	89.67	-68.70	1764358.76	440620.49	39°42'24.262"N	80°20'15.193"W	112.96	322.543	1.05	-0.67	-5.11
6838.00	7.950	310.190	6828.19	125.44	99.01	-78.39	1764349.07	440629.84	39°42'24.353"N	80°20'15.318"W	126.29	321.632	1.40	-0.84	-7.75
6932.00	5.170	300.980	6921.57	136.03	105.39	-86.99	1764340.47	440636.21	39°42'24.416"N	80°20'15.429"W	136.65	320.464	3.15	-2.96	-9.80
7026.00	4.360	290.520	7015.25	143.39	108.82	-93.96	1764333.49	440639.65	39°42'24.449"N	80°20'15.518"W	143.78	319.190	1.26	-0.86	-11.13
7120.00	3.520	299.760	7109.03	149.43	111.51	-99.82	1764327.64	440642.33	39°42'24.475"N	80°20'15.593"W	149.66	318.167	1.12	-0.89	9.83
7213.00	3.560	311.740	7201.85	155.06	114.85	-104.45	1764323.01	440645.67	39°42'24.507"N	80°20'15.653"W	151.80	317.715	0.99	0.97	2.76
7307.00	4.470	314.330	7295.62	161.64	119.35	-109.25	1764318.21	440650.17	39°42'24.551"N	80°20'15.715"W	161.80	317.530	0.99	0.97	2.76
7401.00	3.250	308.570	7389.40	167.95	123.57	-113.95	1764313.51	440654.39	39°42'24.593"N	80°20'15.776"W	168.09	317.319	1.36	-1.30	-6.13
7494.00	2.820	349.030	7482.28	172.47	127.46	-116.45	1764311.01	440658.28	39°42'24.631"N	80°20'15.808"W	172.64	317.585	2.30	-0.46	43.51
7589.00	5.660	21.290	7577.03	176.29	134.12	-115.19	1764312.27	440664.94	39°42'24.697"N	80°20'15.793"W	176.80	319.342	3.79	2.99	33.96
7683.00	4.340	29.570	7670.67	179.10	141.53	-111.75	1764315.70	440672.36	39°42'24.770"N	80°20'15.750"W	180.33	321.706	1.60	-1.40	8.81
7777.00	1.540	40.540	7764.52	180.15	145.59	-109.18	1764318.28	440676.41	39°42'24.811"N	80°20'15.717"W	181.98	323.134	3.02	-2.98	11.67
7875.00	0.640	95.890	7862.53	179.82	146.53	-107.77	1764319.68	440677.35	39°42'24.820"N	80°20'15.699"W	181.90	323.666	1.31	-0.92	56.48
7969.00	0.930	110.850	7956.51	178.72	146.21	-106.54	1764320.92	440677.03	39°42'24.817"N	80°20'15.684"W	180.91	323.920	0.38	0.31	15.91
8063.00	1.570	111.940	8050.49	176.84	145.46	-104.63	1764322.82	440676.28	39°42'24.810"N	80°20'15.659"W	179.18	324.271	0.68	0.68	1.16
8157.00	0.970	47.250	8144.47	175.62	145.51	-102.85	1764324.60	440676.34	39°42'24.811"N	80°20'15.636"W	179.19	324.746	1.54	-0.64	-68.82
8251.00	1.410	12.560	8238.45	176.21	147.18	-102.02	1764325.44	440678.00	39°42'24.827"N	80°20'15.626"W	178.08	325.273	0.88	0.47	-36.90
8344.00	6.170	83.310	8321.40	177.89	149.99	-101.59	1764325.87	440680.81	39°42'24.855"N	80°20'15.621"W	181.15	325.890	0.76	0.73	-6.87
8438.00	2.710	9.690	8425.32	180.25	153.88	-101.03	1764326.43	440684.70	39°42'24.893"N	80°20'15.614"W	184.08	326.714	0.68	0.66	3.74
8532.00	2.040	33.890	8519.24	181.85	157.46	-99.72	1764327.73	440688.28	39°42'24.929"N	80°20'15.598"W	186.38	327.653	1.27	-0.71	25.74



Actual Wellpath Report

WDTN-5B-HSU ST02 AWP Proj: 19934'

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REFERENCE WELLPATH IDENTIFICATION		Operator	Slot	Slot B
Area	CNX GAS COMPANY, LLC	Well	WDTN-5B-HSU ST02	
Field	Monongalia County, WV	Wellbore	WDTN-5B-HSU ST02 AWB	
Facility	WTN-5 Pad	Sidetrack from	WDTN-5B-HSU Pilot ST01 AWP Proj: 14000' at 12415.00 MD	

WELLPATH DATA (212 stations)															
MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Built Rate	Turn Rate
ft/l	°	°	ft/l	ft/l	ft/l	ft/l	US ft	US ft			ft	°	ft/100ft	ft/100ft	ft/100ft
8626.00	1.470	103.480	8613.21	181.15	158.57	-97.62	1764329.84	440689.39	39°42'24.940"N	80°20'15.571"W	186.21	328.383	2.19	-0.61	74.03
8720.00	2.360	172.980	8707.16	178.60	156.37	-96.21	1764331.25	440687.19	39°42'24.918"N	80°20'15.553"W	183.59	328.397	2.45	0.95	73.94
8814.00	1.370	199.510	8801.11	176.59	153.39	-96.35	1764331.11	440684.21	39°42'24.889"N	80°20'15.554"W	181.13	327.866	1.37	-1.05	28.22
8916.00	1.040	314.620	8903.10	176.99	152.89	-97.41	1764330.04	440683.71	39°42'24.884"N	80°20'15.568"W	181.28	327.497	2.00	-0.32	112.85
9010.00	1.330	337.420	8997.08	178.85	154.49	-98.44	1764329.82	440685.31	39°42'24.900"N	80°20'15.581"W	183.19	327.496	0.58	0.31	24.26
9198.00	1.920	353.340	9185.01	183.34	159.64	-99.64	1764327.92	440690.46	39°42'24.950"N	80°20'15.597"W	188.18	328.029	0.39	0.31	8.47
9292.00	2.050	0.950	9278.95	185.74	162.88	-99.80	1764327.66	440693.70	39°42'24.983"N	80°20'15.599"W	191.02	328.505	0.31	0.14	8.10
9387.00	1.870	356.460	9373.90	188.08	166.13	-99.86	1764327.59	440696.95	39°42'25.015"N	80°20'15.601"W	193.83	328.989	0.25	-0.19	-4.73
9481.00	1.380	5.960	9467.86	189.95	168.78	-99.84	1764327.62	440699.60	39°42'25.041"N	80°20'15.601"W	196.10	329.394	0.59	-0.52	10.11
9575.00	1.260	10.720	9561.83	191.24	170.92	-99.53	1764327.93	440701.75	39°42'25.062"N	80°20'15.597"W	197.79	329.787	0.17	-0.13	5.06
9670.00	1.210	13.060	9656.81	192.36	172.93	-99.11	1764328.35	440703.75	39°42'25.082"N	80°20'15.592"W	199.32	330.182	0.07	-0.05	2.46
9764.00	1.180	11.070	9750.79	193.42	174.84	-98.70	1764328.76	440705.66	39°42'25.101"N	80°20'15.587"W	200.78	330.555	0.05	-0.03	-2.12
9859.00	1.210	10.170	9845.77	194.54	176.79	-98.33	1764329.12	440707.61	39°42'25.120"N	80°20'15.582"W	202.30	330.916	0.04	0.03	-0.95
9953.00	1.050	9.840	9939.75	195.61	178.62	-98.01	1764329.44	440709.44	39°42'25.138"N	80°20'15.578"W	203.74	331.245	0.17	-0.17	-0.35
10047.00	1.290	6.820	10033.73	196.76	180.52	-97.74	1764329.72	440711.34	39°42'25.157"N	80°20'15.575"W	205.28	331.567	0.26	0.26	-3.21
10142.00	1.720	9.820	10128.70	198.24	182.98	-97.37	1764330.09	440713.80	39°42'25.181"N	80°20'15.571"W	207.28	331.982	0.46	0.45	3.16
10236.00	1.780	19.460	10222.65	199.68	185.75	-96.64	1764330.81	440716.57	39°42'25.209"N	80°20'15.562"W	209.39	332.513	0.32	0.06	10.26
10324.00	1.490	27.640	10310.62	200.61	188.05	-95.66	1764331.80	440718.87	39°42'25.232"N	80°20'15.549"W	210.98	333.039	0.42	-0.33	9.30
10418.00	1.240	28.310	10404.59	201.27	190.03	-94.61	1764332.85	440720.85	39°42'25.251"N	80°20'15.536"W	212.28	333.534	0.27	-0.27	0.71
10513.00	1.000	30.160	10499.57	201.78	191.65	-93.70	1764333.75	440722.47	39°42'25.267"N	80°20'15.525"W	213.33	333.945	0.26	-0.25	1.95
10607.00	0.770	43.640	10593.56	202.00	192.82	-92.85	1764334.60	440723.64	39°42'25.279"N	80°20'15.514"W	214.01	334.286	0.33	-0.24	14.34
10701.00	0.670	57.830	10687.56	201.89	193.57	-91.95	1764335.50	440724.39	39°42'25.287"N	80°20'15.503"W	214.30	334.590	0.22	-0.11	15.10
10796.00	0.470	51.470	10782.55	201.73	194.11	-91.18	1764336.28	440724.92	39°42'25.292"N	80°20'15.493"W	214.45	334.839	0.22	-0.21	-6.69
10859.00	0.510	67.100	10845.55	201.59	194.38	-90.72	1764336.74	440725.19	39°42'25.295"N	80°20'15.487"W	214.50	334.981	0.22	0.06	24.81
10983.00	0.500	61.540	10969.54	201.23	194.85	-89.73	1764337.72	440725.67	39°42'25.299"N	80°20'15.474"W	214.52	335.272	0.04	-0.01	-4.48
11081.00	0.510	83.730	11067.54	200.84	195.10	-88.92	1764338.53	440725.92	39°42'25.302"N	80°20'15.464"W	214.41	335.497	0.20	0.01	22.64
11176.00	0.190	32.510	11162.54	200.61	195.28	-88.42	1764339.37	440726.10	39°42'25.304"N	80°20'15.458"W	214.36	335.640	0.44	-0.34	-53.92
11270.00	0.400	50.210	11256.54	200.61	195.62	-88.08	1764339.04	440726.44	39°42'25.307"N	80°20'15.453"W	214.54	335.759	0.24	0.22	18.83
11364.00	0.170	90.690	11350.54	200.48	195.83	-87.69	1764339.76	440726.65	39°42'25.309"N	80°20'15.448"W	214.57	335.877	0.31	-0.24	43.06
11459.00	0.540	126.190	11445.53	199.94	195.56	-87.19	1764340.27	440726.38	39°42'25.307"N	80°20'15.442"W	214.12	335.971	0.44	0.39	37.37



Actual Wellpath Report

WDTN-5B-HSU ST02 AWP Proj: 19934'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	CNX GAS COMPANY, LLC	Slot	Slot B
Area	Monongalia County, WV	Well	WDTN-5B-HSU ST02
Field	Monongalia	Wellbore	WDTN-5B-HSU ST02 AWB
Facility	WTN-5 Pad	Sidetrack from	WDTN-5B-HSU Pilot ST01 AWP Proj: 14000' at 12415.00 MD

WELLPATH DATA (212 stations)															
MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate
[ft]	[°]	[°]	[ft]	[ft]	[ft]	[ft]	[US ft]	[US ft]			[ft]	[°]	[°/100ft]	[°/100ft]	[°/100ft]
11554.00	0.810	102.840	11540.53	198.93	195.15	-86.17	1764341.28	440725.97	39°42'25.303"N	80°20'15.429"W	213.33	336.175	0.40	0.28	-24.58
11648.00	0.350	99.310	11634.52	198.13	194.96	-85.24	1764342.21	440725.77	39°42'25.301"N	80°20'15.417"W	212.78	336.383	0.49	-0.49	-3.76
11750.00	0.650	126.930	11736.52	197.30	194.56	-84.47	1764342.98	440725.38	39°42'25.297"N	80°20'15.407"W	212.10	336.530	0.37	0.29	27.08
11844.00	0.310	93.530	11830.52	196.59	194.22	-83.79	1764343.66	440725.04	39°42'25.294"N	80°20'15.398"W	211.53	336.663	0.45	-0.36	-35.53
11939.00	0.400	88.170	11925.51	196.17	194.22	-83.20	1764344.87	440725.09	39°42'25.294"N	80°20'15.391"W	211.29	336.809	0.10	0.09	-5.64
12034.00	0.350	81.040	12020.51	195.77	194.27	-82.59	1764344.25	440725.03	39°42'25.294"N	80°20'15.383"W	211.10	336.969	0.07	-0.05	-7.51
12129.00	0.520	113.860	12115.51	195.20	194.14	-81.91	1764345.55	440724.96	39°42'25.293"N	80°20'15.374"W	210.71	337.126	0.31	0.18	34.55
12224.00	0.100	70.850	12210.51	194.76	194.00	-81.43	1764346.02	440724.81	39°42'25.292"N	80°20'15.368"W	210.39	337.229	0.48	-0.44	-45.27
12320.00	0.190	285.010	12306.51	194.86	194.06	-81.51	1764345.95	440724.88	39°42'25.292"N	80°20'15.369"W	210.49	337.217	0.29	0.09	-151.92
12415.00	0.410	309.540	12401.51	195.33	194.32	-81.92	1764345.53	440725.14	39°42'25.295"N	80°20'15.374"W	210.88	337.141	0.26	0.23	25.82
12549.00	0.960	333.030	12428.50	195.65	194.58	-82.10	1764346.35	440725.40	39°42'25.297"N	80°20'15.377"W	211.20	337.124	2.25	2.04	87.00
12640.00	4.430	28.840	12495.43	196.90	197.35	-81.11	1764346.35	440728.17	39°42'25.325"N	80°20'15.364"W	213.37	337.659	5.93	5.18	83.30
12603.00	4.760	59.300	12589.14	196.95	202.52	-76.00	1764351.45	440733.34	39°42'25.377"N	80°20'15.300"W	216.31	339.431	2.59	0.35	32.40
12897.00	4.350	50.400	12682.84	195.65	206.79	-69.90	1764357.55	440737.61	39°42'25.419"N	80°20'15.222"W	218.28	341.323	0.87	-0.44	-9.47
12792.00	4.870	16.340	12777.55	197.24	212.96	-65.99	1764361.47	440743.77	39°42'25.481"N	80°20'15.173"W	222.94	342.783	2.89	0.55	-35.85
12887.00	4.900	28.000	12872.21	200.36	220.41	-62.95	1764364.50	440751.22	39°42'25.554"N	80°20'15.135"W	229.22	344.061	1.04	0.03	12.27
12981.00	4.470	51.650	12965.90	201.11	226.23	-58.19	1764369.26	440757.04	39°42'25.612"N	80°20'15.075"W	233.59	345.575	2.09	-0.46	25.16
13075.00	6.180	34.410	13059.50	201.62	232.67	-52.46	1764374.99	440763.49	39°42'25.677"N	80°20'15.002"W	238.51	347.295	2.47	1.82	-18.34
13170.00	13.620	19.740	13153.03	207.34	247.44	-45.78	1764381.67	440778.26	39°42'25.823"N	80°20'14.918"W	251.64	349.518	8.21	7.83	-15.44
13265.00	22.850	13.730	13243.17	221.72	275.95	-37.61	1764389.85	440806.77	39°42'26.106"N	80°20'14.817"W	278.50	352.240	9.90	9.72	-6.33
13359.00	28.750	356.960	13327.88	248.06	316.35	-34.47	1764392.99	440847.16	39°42'26.505"N	80°20'14.782"W	318.22	353.782	9.93	6.28	-17.84
13454.00	35.890	338.570	13408.30	290.73	365.26	-45.89	1764381.56	440896.07	39°42'26.988"N	80°20'14.934"W	368.14	352.838	12.72	7.52	-19.36
13548.00	42.770	335.100	13480.98	346.03	419.93	-69.43	1764358.02	440950.74	39°42'27.526"N	80°20'15.241"W	425.63	350.612	7.68	7.32	-3.69
13643.00	50.000	327.640	13546.51	411.96	480.05	-102.55	1764324.90	441010.85	39°42'28.117"N	80°20'15.672"W	490.88	347.941	9.49	7.61	-7.85
13737.00	54.920	323.770	13603.78	485.17	541.54	-144.59	1764282.87	441072.34	39°42'28.721"N	80°20'16.218"W	560.51	345.051	6.17	5.23	-4.12
13832.00	62.460	322.470	13663.12	565.47	606.39	-193.30	1764284.16	441137.19	39°42'29.357"N	80°20'16.848"W	636.46	342.320	8.02	7.94	-0.37
13926.00	70.780	322.760	13690.39	650.91	674.90	-245.33	1764181.83	441205.68	39°42'30.079"N	80°20'17.526"W	718.21	340.001	8.86	8.85	1.31
14021.00	79.920	326.140	13714.40	741.46	749.62	-288.96	1764128.51	441280.40	39°42'30.763"N	80°20'18.218"W	807.03	338.257	10.22	9.62	3.56
14115.00	88.520	324.030	13723.86	833.44	826.22	-352.45	1764075.03	441357.00	39°42'31.515"N	80°20'18.911"W	888.25	336.898	9.42	9.15	-2.24
14210.00	90.030	321.440	13725.06	927.56	901.81	-409.96	1764017.52	441432.59	39°42'32.256"N	80°20'19.656"W	990.62	335.554	3.16	1.59	-2.73



Actual Wellpath Report

WDTN-5B-HSU ST02 AWP Proj: 19934'

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REFERENCE WELLPATH IDENTIFICATION

Operator	CNX GAS COMPANY, LLC	Slot	Slot B
Area	Monongalia County, WV	Well	WDTN-5B-HSU ST02
Field	Monongalia	Wellbore	WDTN-5B-HSU ST02 AWB
Facility	WTN-5 Pad	Sidetrack from	WDTN-5B-HSU Pilot ST01 AWP Proj: 14000' at 12415.00 MD

WELLPATH DATA (212 stations)

MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate
ft	°	°	ft	ft	ft	ft	US ft	US ft			ft	°	"/100ft	"/100ft	"/100ft
14304.00	90.090	321.310	13724.961	1020.98	975.25	-468.63	1763958.84	441506.02	39°42'32.97"N	80°20'20.415"W	1082.00	334.334	0.15	0.06	-0.14
14399.00	90.120	322.290	13724.78	1115.31	1049.90	-527.38	1763900.10	441580.67	39°42'33.709"N	80°20'21.176"W	1174.92	333.329	1.03	0.03	1.03
14493.00	90.150	319.130	13724.56	1208.83	1122.65	-586.90	1763840.59	441653.41	39°42'34.423"N	80°20'21.946"W	1266.80	332.400	3.36	0.03	-3.36
14588.00	90.030	314.020	13724.41	1303.76	1191.62	-652.18	1763775.31	441722.38	39°42'35.088"N	80°20'22.790"W	1358.42	331.308	5.38	-0.13	-5.38
14694.00	90.620	314.430	13723.81	1409.75	1265.55	-728.14	1763699.35	441796.30	39°42'35.822"N	80°20'23.770"W	1460.07	330.086	0.68	0.56	0.39
14788.00	91.660	315.270	13721.94	1503.73	1331.83	-794.77	1763622.73	441862.52	39°42'36.471"N	80°20'24.631"W	1550.94	329.173	1.42	1.11	0.89
14883.00	91.850	315.370	13719.03	1598.68	1399.35	-861.53	1763565.97	441930.09	39°42'37.132"N	80°20'25.493"W	1643.29	328.381	0.23	0.20	0.11
14977.00	91.660	316.110	13716.15	1692.63	1466.64	-927.11	1763500.40	441997.38	39°42'37.791"N	80°20'26.340"W	1735.09	327.702	0.81	-0.20	0.79
15071.00	92.590	315.730	13712.67	1786.55	1534.11	-992.45	1763435.06	442064.85	39°42'38.451"N	80°20'27.184"W	1827.15	327.100	1.07	0.99	-0.40
15165.00	93.600	315.340	13707.59	1880.41	1601.10	-1058.20	1763369.31	442131.84	39°42'39.107"N	80°20'28.034"W	1919.20	326.538	1.15	1.07	-0.41
15259.00	94.590	315.690	13700.88	1974.17	1667.99	-1123.90	1763303.62	442198.72	39°42'40.415"N	80°20'28.882"W	2011.31	326.028	1.12	1.05	0.37
15353.00	94.620	315.040	13693.33	2067.86	1734.67	-1189.73	1763237.79	442265.39	39°42'40.415"N	80°20'29.733"W	2103.46	325.556	0.69	0.03	-0.69
15446.00	94.680	313.610	13685.79	2160.55	1799.43	-1256.04	1763171.49	442330.15	39°42'41.049"N	80°20'30.589"W	2194.45	325.084	1.53	0.06	-1.54
15540.00	93.730	312.590	13678.90	2254.24	1863.49	-1324.49	1763103.04	442394.20	39°42'41.676"N	80°20'31.472"W	2286.23	324.596	1.48	-1.01	-1.09
15634.00	92.430	312.870	13673.85	2348.03	1927.17	-1393.44	1763034.10	442457.89	39°42'42.299"N	80°20'32.362"W	2378.16	324.131	1.41	-1.38	0.30
15727.00	90.220	312.400	13671.70	2440.92	1990.15	-1461.83	1762965.71	442520.86	39°42'42.915"N	80°20'33.245"W	2469.34	323.701	2.43	-2.38	-0.51
15821.00	90.120	312.260	13671.42	2534.81	2053.44	-1531.32	1762896.22	442584.15	39°42'43.534"N	80°20'34.141"W	2561.56	323.287	0.18	-0.11	-0.15
15915.00	90.090	312.690	13671.25	2628.72	2116.92	-1600.66	1762826.89	442647.62	39°42'44.155"N	80°20'35.036"W	2653.95	322.906	0.46	-0.03	0.46
16009.00	89.510	312.490	13671.58	2722.64	2180.53	-1669.86	1762757.69	442711.23	39°42'44.777"N	80°20'35.929"W	2746.48	322.555	0.65	-0.62	-0.21
16102.00	89.450	311.980	13672.42	2815.53	2243.04	-1738.71	1762688.84	442773.74	39°42'45.388"N	80°20'36.818"W	2838.02	322.219	0.55	-0.55	-0.55
16196.00	89.140	312.470	13673.58	2909.41	2306.21	-1808.32	1762619.24	442836.90	39°42'46.006"N	80°20'37.716"W	2930.63	321.900	0.62	-0.33	0.52
16290.00	89.080	312.680	13675.04	3003.31	2369.80	-1877.53	1762550.04	442900.48	39°42'46.628"N	80°20'38.609"W	3023.42	321.611	0.23	-0.06	0.22
16383.00	89.050	312.930	13676.56	3096.23	2432.98	-1945.75	1762481.82	442963.67	39°42'47.246"N	80°20'39.490"W	3115.34	321.349	0.27	-0.03	0.27
16477.00	89.110	313.820	13678.07	3190.18	2497.53	-2014.07	1762413.50	443028.21	39°42'47.878"N	80°20'40.372"W	3208.45	321.116	0.95	0.06	0.95
16572.00	89.080	315.510	13679.57	3285.16	2564.30	-2081.62	1762345.95	443094.98	39°42'48.531"N	80°20'41.244"W	3302.85	320.931	1.78	-0.03	1.78
16666.00	89.050	315.250	13681.10	3379.15	2631.20	-2147.64	1762279.94	443161.87	39°42'49.186"N	80°20'42.097"W	3399.40	320.778	0.28	-0.03	-0.28
16760.00	89.110	314.390	13682.61	3473.14	2697.45	-2214.31	1762213.28	443228.12	39°42'49.835"N	80°20'42.958"W	3489.90	320.618	0.92	0.06	-0.91
16855.00	89.140	314.120	13684.06	3568.10	2763.74	-2282.34	1762145.25	443294.40	39°42'50.484"N	80°20'43.836"W	3584.32	320.450	0.29	0.03	-0.28
16949.00	89.080	315.230	13685.52	3662.12	2829.82	-2349.18	1762078.41	443360.48	39°42'51.130"N	80°20'44.700"W	3677.84	320.302	1.18	-0.06	1.18
17044.00	90.370	316.880	13685.98	3757.08	2898.21	-2415.10	1762012.50	443428.87	39°42'51.800"N	80°20'45.551"W	3772.58	320.195	2.20	1.36	1.74



Actual Wellpath Report

WDTN-5B-HSU ST02 AWP Proj: 19934'

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REFERENCE WELLPATH IDENTIFICATION		Slot	Slot B
Operator	CNX GAS COMPANY, LLC	Well	WDTN-5B-HSU ST02
Area	Monongalia County, WV	Wellbore	WDTN-5B-HSU ST02 AWP
Field	Monongalia	Sidetrack from	WDTN-5B-HSU Pilot ST01 AWP Proj: 14000' at 12415.00 MD
Facility	WTN-5 Pad		

WELLPATH DATA (212 stations)															
MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(US ft)	(US ft)			(ft)	(°)	(F/100ft)	(F/100ft)	(F/100ft)
17138.00	90.250	316.480	13685.47	3851.04	2966.60	-2479.59	1761948.01	443497.25	39°42'52.470"N	80°20'46.385"W	3866.40	320.110	0.44	-0.13	-0.43
17233.00	91.170	316.360	13684.29	3946.00	3035.41	-2545.07	1761882.53	443566.06	39°42'53.144"N	80°20'47.231"W	3961.20	320.022	0.98	0.97	-0.13
17327.00	91.260	315.590	13682.30	4039.97	3102.99	-2610.39	1761817.22	443633.63	39°42'53.806"N	80°20'48.075"W	4054.95	319.928	0.82	0.10	-0.82
17421.00	91.200	316.330	13680.28	4133.93	3170.54	-2675.10	1761751.90	443701.18	39°42'54.467"N	80°20'48.919"W	4148.71	319.838	0.79	-0.06	0.79
17516.00	91.140	314.990	13678.34	4228.90	3238.47	-2742.72	1761685.52	443769.11	39°42'55.132"N	80°20'49.776"W	4243.44	319.745	1.41	-0.06	-1.41
17610.00	92.060	314.880	13675.71	4322.86	3304.84	-2808.61	1761619.01	443835.47	39°42'55.782"N	80°20'50.636"W	4337.08	319.641	0.99	0.98	-0.12
17705.00	90.180	314.530	13673.86	4417.84	3371.65	-2876.12	1761551.51	443902.28	39°42'56.436"N	80°20'51.507"W	4431.71	319.535	2.01	-1.98	-0.37
17802.00	90.120	314.930	13673.60	4514.84	3439.92	-2945.03	1761482.60	443970.54	39°42'57.104"N	80°20'52.397"W	4528.38	319.432	0.42	-0.06	0.41
17893.00	90.090	313.910	13673.44	4605.83	3503.61	-3010.02	1761417.61	444034.23	39°42'57.728"N	80°20'53.237"W	4619.04	319.333	1.12	-0.03	-1.12
17988.00	90.220	314.810	13673.18	4700.82	3570.03	-3077.94	1761349.69	444100.64	39°42'58.378"N	80°20'54.144"W	4713.69	319.233	0.96	0.14	0.95
18082.00	90.090	314.750	13672.93	4794.82	3636.24	-3144.67	1761282.97	444166.85	39°42'59.026"N	80°20'54.976"W	4807.41	319.146	0.15	-0.14	-0.06
18177.00	90.580	315.420	13672.37	4889.82	3703.51	-3211.74	1761215.90	444234.12	39°42'59.684"N	80°20'55.842"W	4902.17	319.068	0.87	0.52	0.71
18271.00	90.520	315.490	13671.47	4983.81	3770.50	-3277.67	1761149.97	444301.11	39°43'00.340"N	80°20'56.694"W	4995.98	319.000	0.10	-0.06	0.07
18366.00	90.520	315.900	13670.61	5078.80	3838.49	-3344.03	1761083.63	444369.08	39°43'01.006"N	80°20'57.551"W	5090.82	318.938	0.43	0.00	-0.09
18460.00	90.710	315.820	13669.60	5172.79	3905.94	-3409.49	1761018.17	444436.53	39°43'01.666"N	80°20'58.397"W	5184.68	318.882	0.22	0.20	-0.03
18555.00	90.650	315.680	13668.47	5267.77	3973.98	-3475.77	1760951.89	444504.57	39°43'02.333"N	80°20'59.253"W	5279.54	318.826	0.16	-0.06	-0.15
18650.00	90.580	315.190	13667.45	5362.76	4041.66	-3542.43	1760885.23	444572.25	39°43'02.995"N	80°21'00.115"W	5374.37	318.766	0.52	-0.07	-0.52
18745.00	90.650	314.560	13666.43	5457.76	4108.69	-3609.75	1760817.92	444639.27	39°43'03.651"N	80°21'00.984"W	5469.15	318.699	0.67	0.07	-0.66
18841.00	90.520	314.670	13665.45	5553.75	4176.11	-3678.08	1760749.59	444706.69	39°43'04.311"N	80°21'01.867"W	5564.90	318.628	0.18	-0.14	0.11
18936.00	90.610	315.200	13664.51	5648.75	4243.20	-3745.33	1760682.35	444773.78	39°43'04.968"N	80°21'02.735"W	5659.70	318.566	0.57	0.09	0.56
19031.00	90.680	315.060	13663.44	5743.74	4310.53	-3812.35	1760615.33	444841.10	39°43'05.627"N	80°21'03.601"W	5754.53	318.510	0.16	0.07	-0.15
19125.00	91.350	315.100	13661.78	5837.72	4377.08	-3878.71	1760548.97	444907.64	39°43'06.279"N	80°21'04.458"W	5848.35	318.455	0.71	0.71	0.04
19219.00	91.540	314.820	13659.41	5931.69	4443.48	-3945.20	1760482.48	444974.04	39°43'06.929"N	80°21'05.317"W	5942.15	318.399	0.36	0.20	-0.30
19314.00	92.740	315.540	13655.86	6026.62	4510.81	-4012.12	1760415.57	445041.37	39°43'07.588"N	80°21'06.182"W	6036.93	318.349	1.47	1.26	0.76
19409.00	93.320	315.550	13650.84	6121.49	4578.53	-4078.56	1760349.14	445109.08	39°43'08.251"N	80°21'07.040"W	6131.69	318.305	0.61	0.61	0.05
19503.00	93.850	315.600	13644.96	6215.30	4645.53	-4144.32	1760283.47	445176.08	39°43'08.907"N	80°21'07.899"W	6225.40	318.264	0.57	0.56	0.05
19598.00	94.490	315.940	13638.05	6310.04	4713.42	-4210.22	1760217.38	445243.97	39°43'09.571"N	80°21'08.743"W	6320.06	318.227	0.76	0.67	0.36
19692.00	95.200	316.300	13630.11	6403.68	4780.93	-4275.24	1760152.47	445311.47	39°43'10.232"N	80°21'09.582"W	6413.66	318.196	0.85	0.76	0.38
19787.00	95.850	316.400	13620.97	6498.21	4849.35	-4340.51	1760087.20	445379.89	39°43'10.903"N	80°21'10.425"W	6508.17	318.169	0.69	0.68	0.11
19881.00	96.440	316.750	13610.91	6591.64	4917.23	-4404.76	1760022.96	445447.76	39°43'11.567"N	80°21'11.255"W	6601.59	318.147	0.73	0.63	0.37



Actual Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION

Operator	CNX GAS COMPANY, LLC	Slot	Slot B
Area	Monongalia County, WV	Well	WDTN-5B-HSU ST02
Field	Monongalia	Wellbore	WDTN-5B-HSU ST02 AWB
Facility	WTN-5 Pad	Sidetrack from	WDTN-5B-HSU Pilot ST01 AWP Proj: 14000' at 12415.00 MD

WELLPATH DATA (212 stations)

MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate
[ft]	[°]	[°]	[ft]	[ft]	[ft]	[ft]	[US ft]	[US ft]	[°]	[°]	[ft]	[°]	[°/100ft]	[°/100ft]	[°/100ft]
19909.00	96.660	316.790	13607.71	6619.44	4937.50	-4423.81	1760003.91	445468.03	39°43'11.766"N	80°21'11.502"W	6629.40	318.141	0.80	0.79	0.14
19934.00	96.660	316.790	13604.81	6644.26	4955.60	-4440.81	1759986.91	445486.13	39°43'11.943"N	80°21'11.721"W	6654.23	318.136	0.00	0.00	0.00

HOLE & CASING SECTIONS - Ref Wellbore: WDTN-5B-HSU ST02 AWB Ref Wellpath: WDTN-5B-HSU ST02 AWP Proj: 19934'

String/Diameter	Start MD	End MD	Interval	Start TVD	End TVD	Start N/S	Start EW	End N/S	End EW
	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]
26in Conductor	29.00	100.00	71.00	29.00	100.00	0.00	0.00	0.24	0.32
24in Open Hole	100.00	1377.00	1277.00	100.00	1376.75	0.24	0.32	-4.86	20.13
18.625in Casing Surface	29.00	1337.60	1308.60	29.00	1337.38	0.00	0.00	-3.77	19.04
17.5in Open Hole	1337.60	2990.00	1652.40	1337.38	2989.65	-3.77	19.04	-5.29	22.62
13.375in Casing Intermediate	29.00	2939.70	2910.70	29.00	2939.35	0.00	0.00	-5.52	22.79
12.25in Open Hole	2990.00	5959.00	2969.00	2989.65	5957.22	-5.29	22.62	14.66	-4.23
12.25in Open Hole	5959.00	12415.00	6456.00	5957.22	12401.51	-4.23	22.62	194.32	-81.92
9.625in Casing Intermediate	29.00	12415.00	12386.00	29.00	12401.51	0.00	0.00	194.32	-81.92
12.25in Open Hole	12415.00	12510.00	95.00	12401.51	12496.42	194.32	-81.92	197.42	-81.07
9.625in Casing Intermediate	12415.00	12417.20	2.20	12401.51	12403.71	194.32	-81.92	194.33	-81.93
8.5in Open Hole	12510.00	19934.00	7424.00	12496.42	13604.81	197.42	-81.07	4955.60	-4440.81
5.5in Casing Production	29.00	19934.00	19905.00	29.00	13604.81	0.00	0.00	4955.60	-4440.81

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REFERENCE WELLPATH IDENTIFICATION			
Operator	CNX GAS COMPANY, LLC	Slot	Slot B
Area	Monongalia County, WV	Well	WDTN-5B-HSU ST02
Field	Monongalia	Wellbore	WDTN-5B-HSU ST02 AWB
Facility	WTN-5 Pad	Sidetrack from	WDTN-5B-HSU Pilot ST01 AWP Proj: 14000' at 12415.00 MD

TARGETS	Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
	WDTN-5B-HSU LP Rev-3	13335.00	661.73	-156.01	1764271.45	441192.52	39°42'29.907"N	80°20'16.378"W	point
	WDTN-5B-HSU BHL Rev-5	13592.64	4951.14	-4445.41	1759982.31	445481.67	39°43'11.899"N	80°21'11.780"W	point
	WDTN-5B-HSU BHL Rev-4	13714.88	4951.14	-4445.41	1759982.31	445481.67	39°43'11.899"N	80°21'11.780"W	point
	WDTN-5B-HSU LP Rev-5	13725.00	850.11	-344.38	1764083.09	441380.89	39°42'31.752"N	80°20'18.811"W	point

WELLPATH COMPOSITION - Ref Wellbore: WDTN-5B-HSU ST02 AWB Ref Wellpath: WDTN-5B-HSU ST02 AWP Proj: 19934'										
Start MD	End MD	Positional Uncertainty Model			Log Name/Comment					Wellbore
[ft]	[ft]									
29.00	2700.00	VESI GyroFlex v4	01	VES Gyro <17-1/2"> (100'-2700')						WDTN-5B-HSU Pilot AWB
2700.00	5397.00	BHI NavITrak (Axial)	02	APS EM <12-1/4"> (2700')(2959'-10589')						WDTN-5B-HSU Pilot AWB
5397.00	12415.00	BHI NavITrak (Axial)	03	APS EM <12-1/4"> (5397')(5428'-12435')						WDTN-5B-HSU Pilot ST01 AWB
12415.00	19909.00	BHI AutoTrak Curve (Short)	05	BH AT Curve <8-1/2"> (12415')(12442'-19909')						WDTN-5B-HSU ST02 AWB
19909.00	19934.00	Blind Drilling (std)		Projection to bit						WDTN-5B-HSU ST02 AWB

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 WDTN-5B-HSU ST02 AWP Proj: 19934'
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REFERENCE WELLPATH IDENTIFICATION

Operator	Area	Field	Facility	Slot	Slot B
CNX GAS COMPANY, LLC	Monongalia County, WV	Monongalia	WTN-5 Pad	Well	WDTN-5B-HSU ST02
				Wellbore	WDTN-5B-HSU ST02 AWB
				Sidetrack from	WDTN-5B-HSU Pilot ST01 AWP Proj: 14000' at 12415.00 MD

COMMENTS

Wellpath general comments

API: 47-061-01806-0000
 BH Job #: 109707008
 Rig: Patterson 801
 Duration: 5/20/2019-5/26/2019
 VES Gyro <17'-1/2"> (100'-2700')
 APS EM <12'-1/4"> (2700')(2959-5397')
 APS EM <12'-1/4"> (5397')(5428-12415')
 BH AT Curve <8'-1/2"> (12415')(12442-19909')
 Projected MD at TD: 19934'

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