



CNX GAS COMPANY, LLC
 Location: Marshall County, WV
 Field: Marshall
 Facility: MAJ-6 Pad

Well: MAJ-6E-HSU
 Wellbore: MAJ-6E-HSU PWB



Scale 1 inch = 2000
 Easting (ft)

Scale 1 inch = 2000
 True Vertical Depth (ft)



YES Gyro <12-1/4"> (100-10945) : 0.17" Inc. 100.00ft MD, 100.00ft TVD, 0.10ft VS

YES Gyro <12-1/4"> (100-10945) : 100.00ft TVD, 0.07ft S, 0.08ft E

BH AT Curve <8-1/2"> (10945)(11034-18582) : 10912.00ft TVD, 347.93ft S, 835.58ft W

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API: 47-051-01938-0000
 BH Job #: 109627396-A
 Rig: Patterson 563
 Duration: 3/29/2019-4/3/2019

For reference against MAJ-6E-HSU PWB Trace 0

True vertical depths are referenced to Patterson 563 (RKB)	Grid System: NAD83 Lambert West Virginia Spher. Norm. Zone (ft)(1) US In.
Measured depths are referenced to Patterson 563 (RKB)	North Reference: Grid north
Patterson 563 (RKB) to Mean Sea Level: 1373.2 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: Slot E) : -1344.2 feet	Depth are in feet
Created by: adalberto on 2019-04-04	Checked by: W.A.M. EASTRICK on 2019-04-04
Coordinates are in feet referenced to NAD83	Trademark: W.A.M. EASTRICK, US Pat.

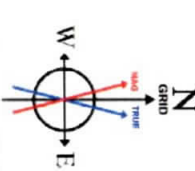
Location Information			
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude
MAJ-6 Pad	1705926.000	524252.820	39°46'04.722"N
Local N (ft)	Grid East (US ft)	Grid North (US ft)	Longitude
Slot E	-17.76	1705917.750	39°56'04.545"N
Patterson 563 (RKB) to Mud line (At Slot: Slot E)			29ft
Mean Sea Level to Mud line (At Slot: Slot E)			-1344.2ft
Patterson 563 (RKB) to Mean Sea Level			1373.2ft

Well Profile Data					
Design Comment	MD (ft)	Inc. (")	Az (°)	TVD (ft)	Local N (ft)
The Oh	10945.00	4.990	136.730	10923.82	-338.65
Proj. to Bottom	11034.00	4.990	136.730	10912.49	-344.28
Curve KOP	11137.50	4.990	136.730	11015.59	-350.84
End of 3D Arc	11580.45	32.196	209.020	11433.81	-471.01
Landing Pt.	12525.88	89.000	145.000	11914.00	-1185.26
BHL	18617.79	89.000	145.000	12020.32	-6174.72
					2794.22
					0.00
					6660.73

Projected MD at TD: 18607' : 12010.80ft TVD, 6185.14ft S, 2779.84ft E

Projected MD at TD: 18607' : 89.42" Inc. 18607.00ft MD, 12010.80ft TVD, 6661.02ft VS

Azimuth 145.00° with reference 0.00 N, 0.00 E



User specified (HDGM) Dip: 66.95° Field: 52671 nT
 Magnetic North is 8.52 degrees West of True North (at 25Mar/2019)
 Grid North is 0.67 degrees West of True North
 To correct azimuth from True to Grid add 0.67 degrees
 To correct azimuth from Magnetic to Grid subtract 7.85 degrees



Actual Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION			
Operator	CNX GAS COMPANY, LLC	Slot	Slot E
Area	Marshall County, WV	Well	MAJ-6E-HSU
Field	Marshall	Wellbore	MAJ-6E-HSU AWB
Facility	MAJ-6 Pad		

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	0.999955	Report Generated	04/Apr/2019 at 21:15
Convergence at slot	0.67° West	Database/Source file	WA_MPL_EASTERNNUS_Defn/MAJ-6E-HSU_AWP_Proj_18607_.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North(ft)	East(ft)	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-17.76	-9.21	1705917.75	524235.06	39°56'04.545"N	80°32'55.414"W
Facility Reference Pt			1705926.96	524252.82	39°56'04.722"N	80°32'55.298"W
Field Reference Pt			1704323.48	525162.98	39°56'13.531"N	80°33'16.019"W

WELLPATH DATUM			
Calculation method	Minimum curvature	Patterson 563 (RKB) to Facility Vertical Datum	1373.20ft
Horizontal Reference Pt	Slot	Patterson 563 (RKB) to Mean Sea Level	1373.20ft
Vertical Reference Pt	Patterson 563 (RKB)	Patterson 563 (RKB) to Mud Line at Slot (Slot E)	29.00ft
MD Reference Pt	Patterson 563 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	145.00°



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Operator	CNX GAS COMPANY, LLC	Well	MAJ-6E-HSU
Area	Marshall County, WV	Wellbore	MAJ-6E-HSU AWB
Field	Marshall		
Facility	MAJ-6 Pad		

WELLPATH DATA (194 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)	(°/100ft)
0.00†	0.000	133.760	0.00	0.00	0.00	0.00	1705917.75	524235.06	39°56'04.545"N	80°32'55.414"W	0.00	0.000	0.00	0.00	0.00
29.00	0.000	133.760	29.00	0.00	0.00	0.00	1705917.75	524235.06	39°56'04.545"N	80°32'55.414"W	0.00	0.000	0.00	0.00	0.00
100.00	0.170	133.760	100.00	0.10	-0.07	0.08	1705917.83	524234.99	39°56'04.545"N	80°32'55.413"W	0.11	133.760	0.24	0.24	188.39
200.00	0.240	133.880	200.00	0.45	-0.32	0.33	1705918.08	524234.74	39°56'04.542"N	80°32'55.410"W	0.46	133.814	0.07	0.07	0.12
300.00	0.260	134.670	300.00	0.88	-0.63	0.65	1705918.73	524234.43	39°56'04.539"N	80°32'55.406"W	0.90	134.045	0.02	0.02	0.79
400.00	0.260	126.420	400.00	1.31	-0.91	0.98	1705918.40	524234.15	39°56'04.536"N	80°32'55.401"W	1.34	132.916	0.04	-0.01	-8.25
500.00	0.260	121.320	500.00	1.73	-1.16	1.35	1705919.10	524233.90	39°56'04.534"N	80°32'55.396"W	1.78	130.657	0.02	0.01	-5.10
600.00	0.270	123.060	600.00	2.15	-1.41	1.74	1705919.49	524233.65	39°56'04.532"N	80°32'55.391"W	2.24	128.919	0.01	0.01	-1.74
700.00	0.400	89.930	699.99	2.57	-1.54	2.29	1705920.04	524233.52	39°56'04.530"N	80°32'55.384"W	2.76	123.851	0.23	0.13	-33.13
800.00	0.510	89.180	799.99	3.02	-1.53	3.08	1705920.83	524233.53	39°56'04.530"N	80°32'55.374"W	3.44	116.375	0.11	0.11	-0.75
900.00	0.510	99.720	899.99	3.59	-1.60	3.97	1705921.72	524233.46	39°56'04.529"N	80°32'55.363"W	4.28	111.938	0.09	0.00	10.54
1000.00	0.330	96.570	999.98	4.09	-1.71	4.69	1705922.44	524233.35	39°56'04.529"N	80°32'55.353"W	4.99	109.982	0.18	-0.18	-3.15
1100.00	0.250	137.110	1099.98	4.50	-1.90	5.13	1705922.88	524233.16	39°56'04.527"N	80°32'55.348"W	5.47	110.324	0.21	-0.08	40.54
1200.00	0.330	99.930	1199.98	4.92	-2.11	5.56	1705923.31	524232.95	39°56'04.525"N	80°32'55.342"W	5.95	110.771	0.20	0.08	-37.18
1300.00	0.130	188.830	1299.98	5.20	-2.27	5.83	1705923.58	524232.79	39°56'04.523"N	80°32'55.339"W	6.25	111.292	0.35	-0.20	88.90
1400.00	0.260	141.160	1399.98	5.51	-2.56	5.95	1705923.70	524232.50	39°56'04.521"N	80°32'55.337"W	6.48	113.271	0.20	0.13	-47.67
1500.00	0.120	237.600	1499.98	5.73	-2.79	6.00	1705923.75	524232.27	39°56'04.518"N	80°32'55.336"W	6.62	114.938	0.30	-0.14	96.44
1600.00	0.060	75.140	1599.98	5.74	-2.83	5.97	1705923.72	524232.23	39°56'04.518"N	80°32'55.337"W	6.61	115.412	0.18	-0.06	-162.46
1700.00	0.260	234.520	1699.98	5.76	-2.95	5.83	1705923.58	524232.11	39°56'04.517"N	80°32'55.339"W	6.54	116.853	0.32	0.20	159.38
1800.00	0.080	43.710	1799.98	5.75	-3.03	5.70	1705923.45	524232.03	39°56'04.516"N	80°32'55.340"W	6.45	118.043	0.34	-0.18	169.19
1900.00	0.140	133.130	1899.98	5.86	-3.07	5.83	1705923.58	524231.99	39°56'04.516"N	80°32'55.339"W	6.59	117.796	0.16	0.06	89.42
2000.00	0.120	252.300	1999.98	5.95	-3.18	5.82	1705923.57	524231.88	39°56'04.514"N	80°32'55.339"W	6.64	118.660	0.22	-0.02	119.17
2100.00	0.040	195.030	2099.98	5.94	-3.25	5.71	1705923.46	524231.81	39°56'04.514"N	80°32'55.340"W	6.57	119.616	0.10	-0.08	-57.27
2200.00	0.030	255.720	2199.98	5.95	-3.29	5.68	1705923.43	524231.77	39°56'04.513"N	80°32'55.341"W	6.56	120.070	0.04	-0.01	60.69
2300.00	0.050	34.010	2299.98	5.93	-3.26	5.68	1705923.43	524231.80	39°56'04.514"N	80°32'55.338"W	6.55	118.849	0.08	0.02	138.29
2400.00	0.200	84.710	2399.98	6.00	-3.21	5.88	1705923.63	524231.85	39°56'04.514"N	80°32'55.338"W	6.69	119.617	0.17	0.15	50.70
2500.00	0.220	125.030	2499.98	6.26	-3.30	6.21	1705923.96	524231.76	39°56'04.513"N	80°32'55.334"W	7.03	117.998	0.15	0.02	40.32
2600.00	0.300	117.910	2599.98	6.68	-3.53	6.60	1705924.35	524231.53	39°56'04.511"N	80°32'55.329"W	7.48	118.175	0.09	0.08	-7.12
2700.00	0.210	130.910	2699.98	7.09	-3.78	6.97	1705924.72	524231.28	39°56'04.509"N	80°32'55.324"W	7.92	118.458	0.11	-0.09	13.00
2800.00	0.170	126.830	2799.98	7.41	-3.98	7.22	1705924.97	524231.08	39°56'04.507"N	80°32'55.321"W	8.25	118.883	0.04	-0.04	-4.08



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REFERENCE WELLPATH IDENTIFICATION		Slot	Slot E
Operator	CNX GAS COMPANY, LLC	Well	MAJ-6E-HSU
Area	Marshall County, WV	Wellbore	MAJ-6E-HSU AWB
Field	Marshall		
Facility	MAJ-6 Pad		

WELLPATH DATA (194 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)	Build Rate (ft/100ft)	Turn Rate (ft/100ft)
2900.00	0.200	221.700	2899.98	7.59	-4.20	7.23	1705924.98	524230.86	39°56'04.505"N	80°32'55.321"W	8.36	120.190	0.27	0.03	94.87
3000.00	0.140	177.570	2999.97	7.73	-4.46	7.12	1705924.87	524230.60	39°56'04.502"N	80°32'55.322"W	8.40	122.059	0.14	-0.06	-44.13
3100.00	0.120	329.290	3099.97	7.73	-4.49	7.07	1705924.82	524230.57	39°56'04.502"N	80°32'55.323"W	8.37	122.420	0.25	-0.02	151.72
3200.00	0.120	38.070	3199.97	7.60	-4.32	7.08	1705924.83	524230.74	39°56'04.503"N	80°32'55.322"W	8.29	121.373	0.14	0.00	68.78
3300.00	0.230	171.520	3299.97	7.74	-4.43	7.17	1705924.92	524230.63	39°56'04.502"N	80°32'55.321"W	8.43	121.713	0.32	0.11	133.45
3400.00	1.460	288.560	3399.96	6.90	-4.23	5.99	1705923.74	524230.84	39°56'04.504"N	80°32'55.336"W	7.33	125.178	1.58	1.23	117.04
3500.00	2.810	300.540	3499.89	3.64	-2.57	2.68	1705920.43	524232.49	39°56'04.520"N	80°32'55.379"W	3.71	133.895	1.41	1.35	11.98
3600.00	4.320	298.250	3599.70	-1.95	0.45	-2.75	1705915.00	524235.51	39°56'04.549"N	80°32'55.449"W	2.79	279.370	1.52	1.51	-2.29
3700.00	5.890	288.290	3699.30	-9.43	3.85	-10.94	1705906.81	524238.91	39°56'04.582"N	80°32'55.556"W	11.60	289.370	1.80	1.80	-9.96
3800.00	7.260	278.840	3798.64	-17.92	6.43	-22.06	1705895.69	524241.49	39°56'04.606"N	80°32'55.698"W	22.98	286.248	1.74	1.37	-9.45
3900.00	8.850	273.600	3897.65	-27.10	7.88	-35.98	1705881.77	524242.94	39°56'04.619"N	80°32'55.877"W	36.84	282.357	1.75	1.59	-5.24
4000.00	9.720	267.160	3996.34	-36.39	7.95	-52.09	1705865.66	524243.01	39°56'04.618"N	80°32'56.084"W	52.69	278.675	1.35	0.87	-6.44
4100.00	10.600	265.750	4094.78	-45.59	6.85	-69.70	1705848.06	524241.91	39°56'04.605"N	80°32'56.310"W	70.03	275.612	0.91	0.88	-1.41
4200.00	11.030	268.160	4193.00	-55.52	5.86	-88.43	1705829.33	524240.92	39°56'04.593"N	80°32'56.550"W	88.62	273.791	0.62	0.43	2.41
4300.00	11.280	260.470	4291.12	-64.96	3.93	-107.64	1705810.12	524238.99	39°56'04.572"N	80°32'56.796"W	107.71	272.092	1.51	0.25	-7.69
4400.00	11.320	254.530	4389.18	-72.45	-0.30	-126.74	1705791.01	524234.76	39°56'04.528"N	80°32'57.041"W	126.74	269.862	1.16	0.04	-5.94
4500.00	11.450	249.870	4487.21	-78.27	-6.34	-145.52	1705772.24	524228.72	39°56'04.466"N	80°32'57.281"W	145.66	267.506	0.93	0.13	-4.66
4600.00	12.710	242.350	4585.00	-82.23	-14.86	-164.59	1705753.17	524220.20	39°56'04.379"N	80°32'57.524"W	165.26	264.841	2.01	1.26	-7.52
4700.00	13.800	243.000	4682.34	-85.30	-25.38	-184.96	1705732.80	524209.68	39°56'04.273"N	80°32'57.784"W	186.69	262.187	1.10	1.09	0.65
4800.00	13.840	245.810	4779.45	-89.20	-35.70	-206.49	1705711.26	524199.37	39°56'04.169"N	80°32'58.059"W	209.56	260.192	0.67	0.04	2.81
4900.00	13.890	243.850	4876.53	-93.29	-45.89	-228.18	1705689.58	524189.18	39°56'04.065"N	80°32'58.336"W	232.75	258.629	0.47	0.05	-1.96
5000.00	14.550	238.960	4973.47	-96.00	-57.65	-249.72	1705668.04	524177.41	39°56'03.947"N	80°32'58.611"W	256.29	256.999	1.37	0.66	-4.89
5100.00	15.270	235.110	5070.11	-96.90	-71.66	-271.28	1705646.48	524163.40	39°56'03.806"N	80°32'58.886"W	280.59	255.202	1.22	0.72	-3.85
5200.00	15.370	238.510	5166.55	-97.73	-86.12	-293.39	1705624.38	524148.94	39°56'03.660"N	80°32'59.167"W	305.76	253.641	0.90	0.10	3.40
5300.00	14.870	244.290	5263.10	-100.62	-98.61	-316.25	1705601.52	524136.46	39°56'03.534"N	80°32'59.445"W	331.27	252.882	1.59	-0.50	5.78
5400.00	16.080	249.490	5359.48	-106.15	-109.03	-340.78	1705576.98	524126.04	39°56'03.428"N	80°32'59.727"W	357.80	252.259	1.84	1.21	5.20
5500.00	16.300	252.280	5455.50	-113.73	-118.16	-367.15	1705550.62	524116.91	39°56'03.335"N	80°33'00.109"W	385.69	252.160	0.82	0.25	2.79
5600.00	14.810	252.090	5551.83	-121.79	-126.37	-392.70	1705525.07	524108.70	39°56'03.251"N	80°33'00.436"W	412.53	252.162	1.52	-1.52	-0.19
5700.00	14.870	253.130	5648.50	-129.48	-134.02	-417.14	1705500.63	524101.04	39°56'03.173"N	80°33'00.748"W	438.14	252.188	0.27	0.06	1.04
5800.00	16.660	250.170	5744.73	-137.22	-142.61	-442.91	1705474.86	524092.46	39°56'03.085"N	80°33'01.078"W	465.30	252.152	1.96	1.79	-2.96



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Field	Marshall		
Facility	MAJ-6 Pad		

WELLPATH DATA (194 stations)															
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(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(US ft)	(US ft)			(ft)	(°)	(ft/100ft)	(ft/100ft)	(ft/100ft)
5900.00	16.480	243.710	5840.59	-143.12	-153.76	-469.11	1705448.66	524081.31	39°56'02.972"N	80°33'01.412"W	493.67	251.853	1.85	-0.18	-6.46
6000.00	16.260	242.140	5936.53	-147.01	-166.58	-494.20	1705423.57	524068.49	39°56'02.842"N	80°33'01.733"W	521.62	251.373	0.49	-0.22	-1.57
6100.00	16.020	247.880	6032.60	-151.82	-178.32	-519.37	1705398.41	524056.75	39°56'02.723"N	80°33'02.054"W	549.13	251.050	1.61	-0.24	5.74
6200.00	16.810	249.600	6128.52	-158.55	-188.56	-545.50	1705372.07	524046.51	39°56'02.619"N	80°33'02.390"W	577.36	250.938	0.93	0.79	1.72
6300.00	18.160	247.200	6223.90	-165.48	-199.64	-573.62	1705344.15	524035.43	39°56'02.506"N	80°33'02.747"W	607.37	250.811	1.53	1.35	-2.40
6400.00	17.700	252.900	6319.05	-173.45	-210.15	-602.52	1705315.26	524024.92	39°56'02.399"N	80°33'03.116"W	638.12	250.772	1.81	-0.46	5.70
6500.00	17.940	252.370	6414.25	-182.72	-219.28	-631.73	1705286.05	524015.79	39°56'02.305"N	80°33'03.490"W	668.70	250.857	0.29	0.24	-0.53
6600.00	18.550	249.910	6509.23	-191.41	-229.41	-661.35	1705256.43	524005.66	39°56'02.202"N	80°33'03.869"W	700.01	250.869	0.98	0.61	-2.46
6700.00	18.740	248.160	6603.98	-199.16	-240.85	-691.20	1705226.59	523994.22	39°56'02.085"N	80°33'04.250"W	731.96	250.789	0.59	0.19	-1.75
6800.00	17.410	248.850	6699.04	-206.40	-252.22	-720.06	1705197.72	523982.85	39°56'01.970"N	80°33'04.619"W	762.96	250.696	1.35	-1.33	0.69
6900.00	16.720	249.930	6794.64	-213.50	-262.56	-747.53	1705170.26	523972.51	39°56'01.864"N	80°33'04.970"W	792.29	250.647	0.76	-0.69	1.08
7000.00	15.030	249.040	6890.82	-220.54	-272.13	-773.15	1705144.64	523962.94	39°56'01.767"N	80°33'05.297"W	819.64	250.609	1.71	-1.69	-0.89
7100.00	14.230	248.990	6987.58	-226.66	-281.18	-796.73	1705121.06	523953.89	39°56'01.675"N	80°33'05.599"W	844.89	250.561	0.80	-0.80	-0.05
7200.00	12.880	247.210	7084.79	-231.99	-289.90	-818.48	1705099.31	523945.17	39°56'01.586"N	80°33'05.876"W	868.30	250.496	1.41	-1.35	-1.78
7300.00	10.100	244.870	7182.78	-235.85	-297.95	-836.70	1705081.09	523937.13	39°56'01.504"N	80°33'06.109"W	888.16	250.399	2.82	-2.78	-2.34
7400.00	7.730	244.740	7281.56	-238.49	-304.54	-850.72	1705067.07	523930.53	39°56'01.438"N	80°33'06.288"W	903.59	250.304	2.37	-2.37	-0.13
7500.00	5.450	250.720	7380.90	-240.91	-308.98	-861.29	1705056.51	523926.10	39°56'01.392"N	80°33'06.423"W	915.03	250.265	2.38	-2.28	5.98
7600.00	3.600	261.320	7480.58	-243.59	-311.02	-868.87	1705048.92	523924.05	39°56'01.371"N	80°33'06.520"W	922.86	250.305	2.02	-1.85	10.60
7700.00	0.900	254.930	7580.50	-245.25	-311.70	-872.73	1705045.06	523923.38	39°56'01.364"N	80°33'06.570"W	926.73	250.346	2.71	-2.70	-6.39
7800.00	0.520	192.840	7680.49	-245.21	-312.35	-873.59	1705044.20	523922.73	39°56'01.358"N	80°33'06.581"W	927.75	250.326	0.80	-0.38	-62.09
7900.00	0.590	220.100	7780.49	-244.78	-313.18	-874.03	1705043.76	523921.89	39°56'01.349"N	80°33'06.587"W	928.44	250.286	0.27	0.07	27.26
8000.00	0.700	242.840	7880.48	-244.73	-313.85	-874.90	1705042.89	523921.22	39°56'01.343"N	80°33'06.597"W	929.49	250.266	0.28	0.11	22.74
8100.00	0.460	234.160	7980.48	-244.81	-314.37	-875.77	1705042.02	523920.71	39°56'01.338"N	80°33'06.608"W	930.48	250.254	0.25	-0.24	-8.68
8200.00	0.270	211.950	8080.47	-244.71	-314.80	-876.22	1705041.57	523920.27	39°56'01.333"N	80°33'06.614"W	931.06	250.238	0.23	-0.19	-22.21
8300.00	0.310	269.270	8180.47	-244.77	-315.01	-876.62	1705041.18	523920.07	39°56'01.331"N	80°33'06.619"W	931.50	250.234	0.28	0.04	57.32
8400.00	0.330	300.220	8280.47	-245.18	-314.88	-877.14	1705040.78	523920.21	39°56'01.332"N	80°33'06.628"W	931.94	250.253	0.17	0.02	30.95
8500.00	0.740	282.570	8380.47	-245.89	-314.57	-878.01	1705039.66	523920.49	39°56'01.335"N	80°33'06.637"W	932.67	250.288	0.44	0.41	-17.65
8600.00	0.740	285.000	8480.46	-246.89	-314.27	-879.27	1705038.52	523920.80	39°56'01.338"N	80°33'06.653"W	933.74	250.332	0.03	0.00	2.43
8700.00	0.580	252.360	8580.45	-247.54	-314.26	-880.37	1705037.42	523920.82	39°56'01.338"N	80°33'06.667"W	934.78	250.355	0.40	-0.16	-32.64
8800.00	0.620	246.960	8680.45	-247.80	-314.62	-881.35	1705036.44	523920.45	39°56'01.334"N	80°33'06.680"W	935.83	250.355	0.07	0.04	-5.40



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REFERENCE WELLPATH IDENTIFICATION		Slot	Slot E
Operator	CNX GAS COMPANY, LLC	Well	MAJ-6E-HSU
Area	Marshall County, WV	Wellbore	MAJ-6E-HSU AWB
Field	Marshall		
Facility	MAJ-6 Pad		

WELLPATH DATA (194 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)
8900.00	0.240	303.090	8780.44	-248.11	-314.72	-882.03	1705035.76	523920.35	39°56'01.333"N	80°33'06.688"W	936.49	250.363	0.53	-0.38	56.13
9000.00	0.490	351.880	8880.44	-248.68	-314.18	-882.26	1705035.53	523920.89	39°56'01.339"N	80°33'06.692"W	936.54	250.399	0.38	0.25	48.79
9100.00	0.840	357.720	8980.43	-249.68	-313.03	-882.35	1705035.44	523922.05	39°56'01.350"N	80°33'06.693"W	936.23	250.467	0.36	0.35	5.84
9200.00	1.020	0.040	9080.42	-251.03	-311.40	-882.38	1705035.41	523923.64	39°56'01.366"N	80°33'06.694"W	935.72	250.561	0.18	0.18	2.32
9300.00	0.550	321.740	9180.41	-252.23	-310.14	-882.68	1705035.11	523925.97	39°56'01.379"N	80°33'06.698"W	935.58	250.641	0.68	-0.47	-38.30
9400.00	0.280	299.750	9280.41	-252.93	-309.64	-883.19	1705034.60	523925.43	39°56'01.383"N	80°33'06.704"W	935.89	250.660	0.31	-0.27	-21.99
9500.00	0.080	210.980	9380.41	-253.13	-309.58	-883.44	1705034.36	523925.50	39°56'01.384"N	80°33'06.707"W	936.11	250.688	0.29	-0.20	-88.77
9600.00	0.400	135.390	9480.41	-252.75	-309.89	-883.23	1705034.56	523925.19	39°56'01.381"N	80°33'06.705"W	936.01	250.666	0.39	0.32	-75.59
9700.00	0.900	102.190	9580.40	-251.83	-310.30	-882.21	1705035.58	523924.77	39°56'01.377"N	80°33'06.692"W	935.19	250.622	0.61	0.50	-33.20
9800.00	0.380	155.730	9680.40	-250.93	-310.77	-881.31	1705036.48	523924.31	39°56'01.372"N	80°33'06.680"W	934.50	250.576	0.74	-0.52	53.54
9900.00	0.970	82.590	9780.39	-250.21	-310.96	-880.33	1705037.46	523924.11	39°56'01.371"N	80°33'06.667"W	933.64	250.545	0.93	0.59	-73.14
10000.00	0.610	80.930	9880.38	-249.59	-310.77	-878.97	1705038.82	523924.31	39°56'01.373"N	80°33'06.650"W	932.29	250.528	0.36	-0.36	-1.66
10100.00	0.630	121.350	9980.37	-248.85	-310.97	-877.97	1705039.82	523924.10	39°56'01.371"N	80°33'06.637"W	931.42	250.496	0.43	0.02	40.42
10200.00	1.510	119.700	10080.36	-247.16	-311.91	-876.36	1705041.43	523923.16	39°56'01.362"N	80°33'06.616"W	930.21	250.409	0.88	0.88	1.65
10300.00	2.090	117.360	10180.31	-244.35	-313.40	-873.60	1705044.19	523921.67	39°56'01.347"N	80°33'06.580"W	928.11	250.265	0.58	0.58	-2.34
10400.00	2.480	112.530	10280.23	-240.91	-315.07	-869.98	1705047.81	523920.01	39°56'01.331"N	80°33'06.534"W	925.27	250.092	0.43	0.39	-4.83
10500.00	2.780	113.580	10380.12	-237.02	-316.87	-866.76	1705052.03	523918.21	39°56'01.314"N	80°33'06.479"W	921.92	249.897	0.30	0.30	1.05
10600.00	3.310	122.310	10479.98	-232.28	-319.38	-861.09	1705056.70	523915.69	39°56'01.290"N	80°33'06.419"W	918.42	249.650	0.70	0.53	8.73
10700.00	4.670	130.180	10579.74	-225.68	-323.55	-855.54	1705062.25	523911.52	39°56'01.248"N	80°33'06.347"W	914.68	249.284	1.46	1.36	7.87
10800.00	4.900	131.870	10679.39	-217.59	-328.03	-849.25	1705068.54	523906.05	39°56'01.196"N	80°33'06.266"W	910.76	248.822	0.27	0.23	1.69
10900.00	5.220	144.120	10779.00	-208.88	-335.56	-843.41	1705074.38	523899.51	39°56'01.132"N	80°33'06.190"W	907.71	248.304	1.12	0.32	12.25
10945.00	4.990	136.730	10823.82	-204.90	-338.55	-840.87	1705076.92	523896.43	39°56'01.102"N	80°33'06.157"W	906.50	248.064	1.55	-0.51	-16.42
11034.00	10.280	144.360	10912.00	-193.12	-347.93	-833.58	1705084.21	523887.15	39°56'01.011"N	80°33'06.062"W	903.28	247.345	6.04	5.94	8.57
11129.00	5.160	173.750	11006.14	-180.88	-359.07	-828.17	1705089.62	523876.00	39°56'00.901"N	80°33'06.990"W	902.66	246.560	6.64	-5.39	30.94
11224.00	12.650	208.920	11099.99	-172.55	-372.45	-832.74	1705085.04	523862.63	39°56'00.768"N	80°33'06.047"W	912.24	245.903	9.40	7.88	37.02
11319.00	14.010	207.230	11192.43	-162.62	-391.78	-843.04	1705075.75	523843.79	39°56'00.576"N	80°33'06.176"W	929.63	245.074	1.49	1.43	-1.78
11413.00	20.050	196.800	11282.29	-147.33	-417.36	-852.91	1705064.88	523817.22	39°56'00.322"N	80°33'06.299"W	949.55	243.926	7.18	6.43	-11.10
11508.00	25.460	199.310	11369.86	-125.33	-452.24	-864.38	1705053.41	523782.84	39°55'59.976"N	80°33'06.441"W	975.54	242.361	5.78	5.69	2.64
11603.00	32.030	204.500	11453.12	-100.60	-494.49	-881.60	1705036.19	523740.59	39°55'59.557"N	80°33'06.656"W	1010.81	240.712	7.39	6.92	5.46
11697.00	36.450	197.210	11530.84	-70.81	-543.89	-900.22	1705017.58	523691.19	39°55'59.067"N	80°33'06.888"W	1051.76	238.861	6.41	4.70	-7.76



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REFERENCE WELLPATH IDENTIFICATION		Operator	CNX GAS COMPANY, LLC	Area	Marshall County, WV	Field	Marshall	Facility	MAJ-6 Pad
Operator	CNX GAS COMPANY, LLC	Slot	Slot E	Area	Marshall County, WV	Well	MAJ-6E-HSU	Field	Marshall
Facility	MAJ-6 Pad	Wellbore	MAJ-6E-HSU AWP						

WELLPATH DATA (194 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	°	ft/100ft	ft/100ft	ft/100ft
11792.00	41.000	180.280	11605.15	-27.94	-602.21	-908.75	1705009.04	523632.88	39°55'58.489"N	80°33'06.988"W	1090.17	236.468	12.10	4.79	-17.82
11887.00	46.830	171.350	11673.62	28.65	-667.74	-903.68	1705014.11	523567.35	39°55'57.942"N	80°33'06.913"W	1123.62	233.539	8.94	6.14	-9.40
11982.00	53.570	168.070	11734.41	94.94	-739.47	-890.55	1705027.24	523495.62	39°55'57.135"N	80°33'06.734"W	1157.54	230.295	7.57	7.09	-3.45
12076.00	57.570	161.710	11787.58	167.81	-814.22	-870.26	1705047.53	523420.88	39°55'56.399"N	80°33'06.462"W	1191.77	226.905	7.02	4.26	-6.77
12171.00	64.560	156.880	11833.54	248.32	-891.87	-840.79	1705077.76	523343.23	39°55'55.635"N	80°33'06.072"W	1225.17	223.311	6.60	7.36	-5.08
12266.00	70.920	156.530	11869.50	334.37	-972.58	-806.03	1705111.70	523262.53	39°55'54.841"N	80°33'05.614"W	1263.17	219.651	6.70	6.69	-0.37
12360.00	74.770	158.160	11897.23	422.09	-1055.45	-771.46	1705146.33	523179.66	39°55'54.026"N	80°33'05.158"W	1307.33	216.164	4.42	4.10	1.73
12455.00	83.740	155.900	11914.92	513.28	-1141.28	-735.05	1705182.74	523093.83	39°55'53.182"N	80°33'04.678"W	1357.50	212.784	9.73	9.44	-2.38
12550.00	88.920	150.580	11921.01	607.04	-1225.87	-692.38	1705225.40	523009.25	39°55'52.351"N	80°33'04.117"W	1407.89	209.458	7.81	6.84	-5.60
12645.00	88.710	144.080	11922.97	701.89	-1305.78	-641.14	1705276.64	522929.34	39°55'51.568"N	80°33'03.448"W	1454.69	206.151	6.84	6.84	-0.22
12739.00	88.740	142.550	11922.06	795.82	-1381.14	-585.00	1705332.78	522853.99	39°55'50.829"N	80°33'02.716"W	1499.92	202.956	1.63	0.03	-1.63
12834.00	88.890	143.030	11927.03	890.73	-1456.78	-527.56	1705390.22	522778.35	39°55'50.088"N	80°33'01.967"W	1549.37	199.907	0.53	0.16	0.51
12940.00	89.050	143.490	11928.93	996.67	-1541.71	-464.16	1705453.61	522693.42	39°55'49.257"N	80°33'01.141"W	1610.07	196.755	0.46	0.15	0.43
13035.00	89.020	143.270	11930.53	1091.61	-1617.95	-407.50	1705510.27	522617.19	39°55'48.510"N	80°33'00.402"W	1668.48	194.137	0.23	-0.03	-0.23
13130.00	89.080	142.710	11932.11	1186.54	-1693.80	-350.32	1705567.44	522541.34	39°55'47.767"N	80°32'59.657"W	1729.65	191.686	0.59	0.06	-0.59
13225.00	89.050	142.670	11933.66	1281.45	-1769.35	-292.75	1705625.02	522465.79	39°55'47.027"N	80°32'58.906"W	1793.40	189.395	0.05	-0.03	-0.04
13320.00	89.110	143.480	11935.18	1376.39	-1845.28	-235.68	1705682.08	522389.86	39°55'46.283"N	80°32'58.162"W	1860.27	187.279	0.85	0.06	0.85
13415.00	89.080	144.850	11936.69	1471.36	-1922.29	-180.07	1705737.68	522312.86	39°55'45.529"N	80°32'57.437"W	1930.71	185.352	1.44	-0.03	1.44
13509.00	89.050	144.720	11938.22	1566.35	-1999.08	-125.88	1705791.88	522236.08	39°55'44.776"N	80°32'56.730"W	2003.04	183.603	0.14	-0.03	-0.14
13604.00	89.170	143.620	11939.69	1660.33	-2076.09	-70.27	1705847.48	522159.07	39°55'44.021"N	80°32'56.005"W	2077.28	181.939	1.16	0.13	-1.16
13699.00	89.080	144.830	11941.15	1755.30	-2153.15	-14.74	1705903.01	522082.01	39°55'43.266"N	80°32'55.281"W	2153.20	180.392	1.28	-0.09	1.27
13793.00	89.110	144.460	11942.63	1849.29	-2229.81	39.64	1705957.39	522005.36	39°55'42.515"N	80°32'54.571"W	2230.16	178.981	0.39	0.03	-0.39
13888.00	89.110	144.790	11944.11	1944.28	-2307.26	94.63	1706012.38	521927.91	39°55'41.756"N	80°32'53.854"W	2309.20	177.651	0.35	0.00	0.35
13983.00	89.110	143.680	11945.58	2039.26	-2384.33	150.15	1706067.89	521850.84	39°55'41.001"N	80°32'53.129"W	2389.06	176.397	1.17	0.00	-1.17
14078.00	89.140	144.900	11947.03	2134.24	-2461.46	205.59	1706123.33	521773.71	39°55'40.245"N	80°32'52.406"W	2470.03	175.225	1.28	0.03	1.28
14177.00	89.080	145.560	11948.49	2228.22	-2538.67	259.19	1706176.83	521696.51	39°55'39.488"N	80°32'51.707"W	2551.87	174.170	0.70	-0.06	0.70
14267.00	89.020	146.160	11950.02	2323.21	-2616.87	313.12	1706230.85	521618.32	39°55'38.722"N	80°32'51.003"W	2635.53	173.177	0.32	0.00	-0.32
14362.00	89.020	144.510	11951.59	2418.19	-2694.56	367.76	1706285.49	521540.62	39°55'37.960"N	80°32'50.290"W	2719.54	172.228	0.79	-0.06	-0.79
14457.00	89.050	144.560	11953.19	2513.18	-2771.93	422.87	1706340.60	521463.26	39°55'37.202"N	80°32'49.571"W	2804.00	171.326	0.06	0.03	0.05
14551.00	89.080	145.160	11954.73	2607.16	-2848.79	476.96	1706394.69	521386.41	39°55'36.449"N	80°32'48.865"W	2888.44	170.495	0.64	0.03	0.64



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REFERENCE WELLPATH IDENTIFICATION		Slot	Slot E
Operator	CNX GAS COMPANY, LLC	Well	MAJ-6E-HSU
Area	Marshall County, WV	Wellbore	MAJ-6E-HSU AWP
Field	Marshall		
Facility	MAJ-6 Pad		

WELLPATH DATA (194 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	°	ft/100ft	ft/100ft	ft/100ft
14645.00	89.020	145.800	11956.29	2701.15	-2926.22	530.23	1706447.95	521308.97	39°55'35.690"N	80°32'48.170"W	2973.87	169.730	0.68	-0.06	0.58
14740.00	88.980	146.180	11957.94	2796.12	-3004.96	583.35	1706501.08	521230.24	39°55'34.918"N	80°32'47.477"W	3061.06	169.014	0.40	-0.04	0.40
14834.00	88.950	146.810	11959.64	2890.07	-3083.33	635.23	1706552.95	521151.88	39°55'34.149"N	80°32'46.799"W	3148.09	168.359	0.67	-0.03	0.67
14929.00	88.890	147.510	11961.43	2984.99	-3163.13	686.74	1706604.46	521072.08	39°55'33.366"N	80°32'46.126"W	3236.82	167.751	0.74	-0.06	0.74
15023.00	88.800	147.120	11963.33	3078.89	-3242.23	737.49	1706655.21	520992.98	39°55'32.591"N	80°32'45.463"W	3325.05	167.185	0.43	-0.10	-0.41
15117.00	88.800	146.170	11965.30	3172.83	-3320.73	789.17	1706706.88	520914.49	39°55'31.821"N	80°32'44.788"W	3413.21	166.632	1.01	0.00	-1.01
15212.00	88.830	145.350	11967.26	3267.80	-3399.25	842.61	1706760.32	520835.97	39°55'31.051"N	80°32'44.090"W	3502.12	166.078	0.86	0.03	-0.86
15307.00	88.860	145.340	11969.18	3362.78	-3477.38	896.62	1706814.32	520757.85	39°55'30.285"N	80°32'43.385"W	3591.11	165.542	0.03	0.03	-0.01
15400.00	88.740	144.950	11971.12	3455.76	-3553.68	949.75	1706867.46	520681.55	39°55'29.537"N	80°32'42.692"W	3678.40	165.037	0.44	-0.13	-0.42
15495.00	88.800	144.450	11973.16	3550.73	-3631.19	1004.64	1706922.34	520604.04	39°55'28.778"N	80°32'41.976"W	3767.61	164.535	0.53	0.06	-0.53
15589.00	88.860	144.010	11975.08	3644.71	-3707.44	1059.57	1706977.27	520527.79	39°55'28.030"N	80°32'41.260"W	3855.88	164.050	0.47	0.06	-0.47
15683.00	88.770	143.580	11977.03	3738.66	-3783.28	1115.08	1707032.78	520451.96	39°55'27.287"N	80°32'40.536"W	3944.19	163.578	0.47	-0.10	-0.46
15778.00	88.830	143.340	11979.01	3833.61	-3859.59	1171.63	1707089.33	520375.65	39°55'26.540"N	80°32'39.799"W	4033.50	163.114	0.26	0.06	-0.25
15872.00	88.800	143.510	11980.96	3927.55	-3935.06	1227.63	1707145.33	520300.18	39°55'25.800"N	80°32'39.069"W	4122.11	162.673	0.18	-0.03	0.18
15966.00	89.080	143.980	11982.70	4021.52	-4010.85	1283.21	1707200.90	520224.40	39°55'25.058"N	80°32'38.344"W	4211.12	162.259	0.58	0.30	0.50
16061.00	89.110	145.260	11984.20	4116.50	-4088.29	1338.21	1707255.90	520146.96	39°55'24.299"N	80°32'37.627"W	4301.74	161.875	1.35	0.03	1.35
16155.00	89.140	146.460	11985.63	4210.48	-4166.08	1390.96	1707308.64	520069.17	39°55'23.536"N	80°32'36.938"W	4392.15	161.537	1.28	0.03	1.28
16249.00	89.020	148.270	11987.14	4304.38	-4245.23	1441.64	1707359.32	519990.03	39°55'22.760"N	80°32'36.216"W	4483.34	161.243	1.93	-0.13	1.93
16343.00	89.050	148.390	11988.73	4398.21	-4325.22	1490.99	1707408.67	519910.04	39°55'21.975"N	80°32'35.631"W	4574.99	160.980	0.13	0.03	0.13
16438.00	89.420	147.240	11989.99	4493.08	-4405.61	1541.58	1707459.26	519829.65	39°55'21.187"N	80°32'34.969"W	4667.54	160.714	1.27	0.39	-1.21
16533.00	89.510	146.780	11990.88	4588.02	-4485.29	1593.31	1707510.98	519749.98	39°55'20.405"N	80°32'34.294"W	4759.88	160.443	0.49	0.09	-0.48
16627.00	89.450	146.300	11991.74	4681.98	-4563.71	1645.13	1707562.81	519671.56	39°55'19.636"N	80°32'33.617"W	4851.18	160.177	0.51	-0.06	-0.51
16721.00	89.420	145.640	11992.66	4775.96	-4641.61	1697.73	1707615.41	519593.67	39°55'18.872"N	80°32'32.930"W	4942.35	159.909	0.70	-0.03	-0.70
16816.00	89.420	144.150	11993.62	4870.96	-4719.32	1752.36	1707670.03	519515.96	39°55'18.111"N	80°32'32.217"W	5034.16	159.629	1.57	0.00	-1.57
16910.00	89.480	142.060	11994.53	4964.89	-4794.49	1808.79	1707726.46	519440.80	39°55'17.374"N	80°32'31.482"W	5124.34	159.330	2.22	0.06	-2.22
17005.00	89.480	141.770	11995.39	5059.75	-4869.26	1867.39	1707785.05	519366.03	39°55'16.642"N	80°32'30.719"W	5215.06	159.018	0.31	0.00	-0.31
17099.00	89.450	143.390	11996.27	5153.66	-4943.91	1924.91	1707842.16	519291.38	39°55'15.911"N	80°32'29.975"W	5305.28	158.731	1.72	-0.03	-1.72
17194.00	89.450	144.430	11997.18	5248.64	-5020.67	1980.46	1707898.12	519214.62	39°55'15.159"N	80°32'29.245"W	5397.16	158.473	1.09	0.00	1.09
17288.00	89.380	145.120	11998.14	5342.63	-5097.46	2034.67	1707952.33	519137.84	39°55'14.406"N	80°32'28.538"W	5488.53	158.240	0.74	-0.07	0.73
17383.00	89.420	144.660	11999.13	5437.63	-5175.17	2089.31	1708006.96	519060.13	39°55'13.645"N	80°32'27.825"W	5581.00	158.015	0.49	0.04	-0.48



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REFERENCE WELLPATH IDENTIFICATION		Slot	Slot E
Operator	CNX GAS COMPANY, LLC	Well	MAJ-6E-HSU
Area	Marshall County, WV	Wellbore	MAJ-6E-HSU AWB
Field	Marshall		
Facility	MAJ-6 Pad		

WELLPATH DATA (194 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)	(°)	(ft/100ft)	(ft/100ft)	(ft/100ft)
17478.00	89.450	144.360	12000.07	5532.62	-5252.51	2144.46	1708062.11	518982.79	39°55'12.887"N	80°32'27.106"W	5673.41	157.791	0.32	0.03	-0.32
17572.00	89.420	144.220	12001.00	5626.61	-5328.84	2199.32	1708116.97	518906.47	39°55'12.139"N	80°32'26.391"W	5764.85	157.573	0.15	-0.03	-0.15
17667.00	89.450	143.510	12001.93	5721.58	-5405.56	2255.34	1708172.99	518829.76	39°55'11.387"N	80°32'25.660"W	5857.18	157.353	0.75	0.03	-0.75
17762.00	89.450	143.810	12002.85	5816.55	-5482.08	2311.63	1708229.27	518753.24	39°55'10.637"N	80°32'24.926"W	5949.52	157.136	0.32	0.00	0.32
17856.00	89.380	144.370	12003.80	5910.54	-5558.21	2366.76	1708284.40	518677.11	39°55'09.891"N	80°32'24.208"W	6041.13	156.935	0.60	-0.07	0.60
17951.00	89.450	145.030	12004.77	6005.53	-5635.74	2421.66	1708339.29	518599.59	39°55'09.131"N	80°32'23.492"W	6134.00	156.747	0.70	0.07	0.69
18046.00	89.480	145.300	12005.66	6100.52	-5713.71	2475.92	1708393.55	518521.62	39°55'08.367"N	80°32'22.784"W	6227.09	156.571	0.29	0.03	0.28
18141.00	89.480	145.840	12006.52	6195.52	-5792.06	2529.63	1708447.26	518443.27	39°55'07.599"N	80°32'22.083"W	6320.36	156.407	0.57	0.00	0.57
18235.00	89.450	147.210	12007.40	6289.48	-5870.47	2581.47	1708499.10	518364.87	39°55'06.830"N	80°32'21.406"W	6412.98	156.263	1.46	-0.03	1.46
18330.00	89.540	147.900	12008.24	6384.38	-5950.63	2632.44	1708550.06	518284.71	39°55'06.044"N	80°32'20.740"W	6506.90	156.136	0.73	0.09	0.73
18424.00	89.480	147.750	12009.04	6478.26	-6030.19	2682.49	1708600.12	518205.15	39°55'05.263"N	80°32'20.086"W	6599.92	156.018	0.17	-0.06	-0.16
18519.00	89.450	148.150	12009.93	6573.13	-6110.71	2732.90	1708650.52	518124.63	39°55'04.473"N	80°32'19.427"W	6693.99	155.904	0.42	-0.03	0.42
18582.00	89.420	147.550	12010.55	6636.05	-6164.05	2766.42	1708684.04	518071.30	39°55'03.950"N	80°32'18.989"W	6756.37	155.829	0.95	-0.05	-0.95
18607.00	89.420	147.550	12010.80	6661.02	-6185.14	2779.84	1708697.46	518050.21	39°55'03.743"N	80°32'18.813"W	6781.11	155.799	0.00	0.00	0.00



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REFERENCE WELLPATH IDENTIFICATION			
Operator	CNX GAS COMPANY, LLC	Slot	Slot E
Area	Marshall County, WV	Well	MAJ-6E-HSU
Field	Marshall	Wellbore	MAJ-6E-HSU AWB
Facility	MAJ-6 Pad		

HOLE & CASING SECTIONS - Ref Wellbore: MAJ-6E-HSU AWB Ref Wellpath: MAJ-6E-HSU AWP Proj: 18607'											
String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start EW [ft]	End N/S [ft]	End EW [ft]		
36in Open Hole	29.00	94.00	65.00	29.00	94.00	0.00	0.00	-0.06	0.06		
30in Conductor	29.00	94.00	65.00	29.00	94.00	0.00	0.00	-0.06	0.06		
24in Open Hole	94.00	889.00	795.00	94.00	888.99	-0.06	0.06	-1.58	3.87		
18.625in Casing Surface	29.00	889.00	860.00	29.00	888.99	0.00	0.00	-1.58	3.87		
17.5in Open Hole	889.00	3281.00	2392.00	888.99	3280.97	-1.58	3.87	-4.37	7.16		
13.375in Casing Intermediate	29.00	3215.00	3186.00	29.00	3214.97	0.00	0.00	-4.30	7.10		
12.25in Open Hole	3281.00	11034.00	7753.00	3280.97	10912.00	-4.37	7.16	-347.93	-833.58		
9.625in Casing Intermediate	29.00	10944.00	10915.00	29.00	10822.83	0.00	0.00	-338.58	-840.93		
8.5in Open Hole	11034.00	18607.00	7573.00	10912.00	12010.80	-347.93	-833.58	-6185.14	2779.84		
5.5in Casing Production	29.00	18607.00	18578.00	29.00	12010.80	0.00	0.00	-6185.14	2779.84		

TARGETS											
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape			
MAJ-6E-HSU LP Rev-4	11914.00	-1185.26	-699.43	1705218.35	523049.85	39°55'52.752"N	80°33'04.214"W	point			
MAJ-6E-HSU BHL Rev-4	12020.32	-6174.72	2794.22	1708711.84	518060.63	39°55'03.848"N	80°32'18.630"W	point			
MAJ-6 Lease Lines	12028.20	27.63	-53.26	1705864.49	524262.69	39°56'04.812"N	80°32'56.102"W	polygon			



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REFERENCE WELLPATH IDENTIFICATION			
Operator	CNX GAS COMPANY, LLC	Slot	Slot E
Area	Marshall County, WV	Well	MAJ-6E-HSU
Field	Marshall	Wellbore	MAJ-6E-HSU AWB
Facility	MAJ-6 Pad		

WELLPATH COMPOSITION - Ref Wellbore: MAJ-6E-HSU AWB				Ref Wellpath: MAJ-6E-HSU AWP Proj: 18607'		Wellbore	
Start MD	End MD	Positional Uncertainty Model	Log Name/Comment				
(ft)	(ft)						
29.00	10945.00	VESST GyroFlex v4	04 VES Gyro <12-1/4"> (100-10945)			MAJ-6E-HSU AWB	
10945.00	18582.00	BH AutoTrak Curve (Short)	05 BH AT Curve <8-1/2"> (10945)(1034-18582)			MAJ-6E-HSU AWB	
18582.00	18607.00	Blind Drilling (std)	Projection to bit			MAJ-6E-HSU AWB	



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REFERENCE WELLPATH IDENTIFICATION			
Operator	CNX GAS COMPANY, LLC	Slot	Slot E
Area	Marshall County, WV	Well	MAJ-6E-HSU
Field	Marshall	Wellbore	MAJ-6E-HSU AWP
Facility	MAJ-6 Pad		

COMMENTS

Wellpath general comments
API: 47-051-01938-0000
BH Job #: 109627396-A
Rig: Patterson 563
Duration: 3/29/2019-4/3/2019
VES Gyro <12-1/4"> (100-10945)
BH AT Curve <8-1/2"> (10945)(11034-18582)
Projected MD at TD: 18607'