

47-001-03239

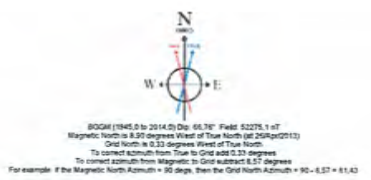
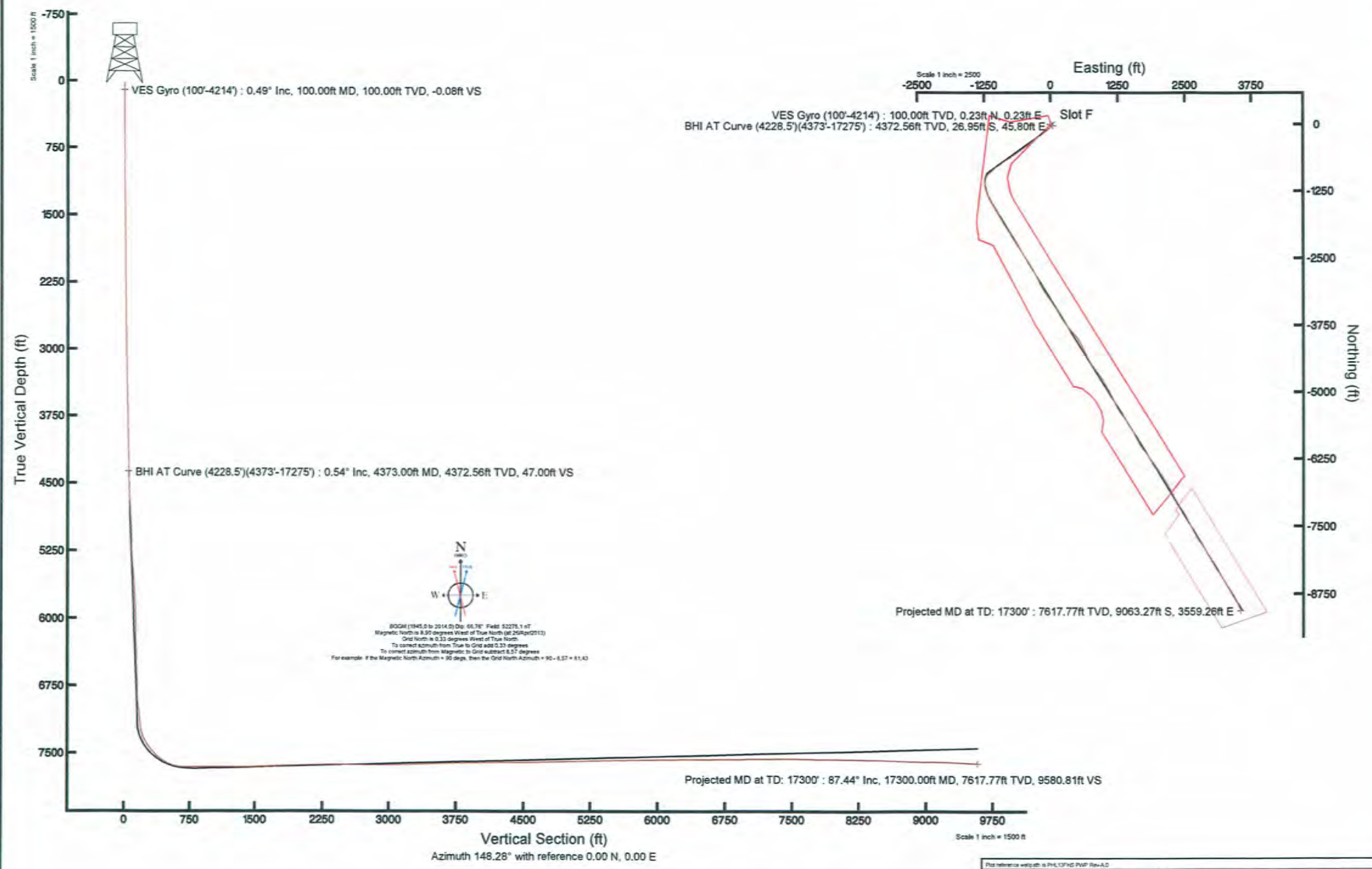
PHL13FHS



# CNX GAS COMPANY, LLC

Location: Barbour County, WV  
 Field: Barbour  
 Facility: PHL13 Pad

Slot: Slot F  
 Well: PHL13FHS  
 Wellbore: PHL13FHS PWB



This reference wellpath is PHL13FHS PWB Rev-0.0	Grid System: NAD2011 Lambert Vertical Virginia SP, Northern Zone (4751), US feet
True vertical depths are referenced to Patterson 334 (RT)	North Reference: Grid north
Measured depths are referenced to Patterson 334 (RT)	Scale: True distance
Patterson 334 (RT) to Mean Sea Level: 1051.6 feet	Depths are in feet
Mean Sea Level to Mud line (at Slot F): 0 feet	Created by: tomhuett on 30Apr2010
Coordinates are in feet referenced to Slot	

1-03239 W



# Actual Wellpath Report

PHL13FHS AWP Proj: 17300'MD  
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### REFERENCE WELLPATH IDENTIFICATION

Operator	CNX GAS COMPANY, LLC	Slot	Slot F
Area	Barbour County, WV	Well	PHL13FHS
Field	Barbour	Wellbore	PHL13FHS AWB
Facility	PHL13 Pad		

### REPORT SETUP INFORMATION

Projection System	NAD27 / Lambert West Virginia SP, Northern Zone (4701), US feet	Software System	WellArchitect® 3.0.3
North Reference	Grid	User	Thomsuzc
Scale	0.999966	Report Generated	30/Apr/2013 at 10:58
Convergence at slot	0.33° West	Database/Source file	WA_Eastern_US/PHL13FHS_AWB.xml

### WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-44.44	-89.63	1854721.40	261686.63	39°13'02.446"N	80°00'45.905"W
Facility Reference Pt			1854811.03	261731.07	39°13'02.890"N	80°00'44.770"W
Field Reference Pt			1853088.00	260038.65	39°12'46.064"N	80°01'06.538"W

### WELLPATH DATUM

Calculation method	Minimum curvature	Patterson 331 (RT) to Facility Vertical Datum	1551.60ft
Horizontal Reference Pt	Slot	Patterson 331 (RT) to Mean Sea Level	1551.60ft
Vertical Reference Pt	Patterson 331 (RT)	Patterson 331 (RT) to Mud Line at Slot (Slot F)	1551.60ft
MD Reference Pt	Patterson 331 (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	148.28°





# Actual Wellpath Report

PHL13FHS AWP Proj: 17300' MD

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## REFERENCE WELLPATH IDENTIFICATION

Operator	CNX GAS COMPANY, LLC	Slot	Slot F
Area	Barbour County, WV	Well	PHL13FHS
Field	Barbour	Wellbore	PHL13FHS AWB
Facility	PHL13 Pad		

## WELLPATH DATA (193 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]
0.00†	0.000	44.180	0.00	0.00	0.00	0.00	1854721.40	261686.63	39°13'02.446"N	80°00'45.905"W	0.00	0.000	0.00	0.00	0.00
24.50	0.000	44.180	24.50	0.00	0.00	0.00	1854721.40	261686.63	39°13'02.446"N	80°00'45.905"W	0.00	0.000	0.00	0.00	0.00
114.50	0.590	44.180	114.50	-0.11	0.33	0.32	1854721.73	261686.96	39°13'02.449"N	80°00'45.901"W	0.46	44.180	0.66	0.66	0.00
214.50	0.300	64.260	214.50	-0.21	0.82	0.92	1854722.32	261687.45	39°13'02.454"N	80°00'45.894"W	1.23	48.380	0.32	-0.29	20.08
314.50	0.650	68.160	314.49	-0.09	1.14	1.68	1854723.08	261687.77	39°13'02.457"N	80°00'45.884"W	2.03	55.840	0.35	0.35	3.90
414.50	0.390	80.380	414.49	0.14	1.41	2.54	1854723.94	261688.04	39°13'02.460"N	80°00'45.873"W	2.91	61.020	0.28	-0.26	12.22
514.50	0.330	80.560	514.49	0.38	1.51	3.16	1854724.56	261688.14	39°13'02.461"N	80°00'45.865"W	3.50	64.442	0.06	-0.06	0.18
614.50	0.160	80.170	614.48	0.54	1.58	3.58	1854724.99	261688.21	39°13'02.462"N	80°00'45.860"W	3.92	66.165	0.17	-0.17	-0.39
714.50	0.530	83.500	714.48	0.79	1.66	4.18	1854725.58	261688.29	39°13'02.462"N	80°00'45.853"W	4.50	68.351	0.37	0.37	3.33
814.50	0.430	80.990	814.48	1.13	1.77	5.01	1854726.41	261688.40	39°13'02.464"N	80°00'45.842"W	5.31	70.540	0.10	-0.10	-2.51
914.50	0.750	80.150	914.47	1.52	1.94	6.03	1854727.43	261688.57	39°13'02.465"N	80°00'45.829"W	6.33	72.145	0.32	0.32	-0.84
1014.50	0.470	92.000	1014.47	1.99	2.04	7.08	1854728.48	261688.67	39°13'02.466"N	80°00'45.816"W	7.37	73.937	0.31	-0.28	11.85
1114.50	0.740	111.170	1114.46	2.73	1.79	8.09	1854729.50	261688.42	39°13'02.464"N	80°00'45.803"W	8.29	77.520	0.33	0.27	19.17
1214.50	0.860	110.170	1214.45	3.84	1.30	9.40	1854730.80	261687.93	39°13'02.459"N	80°00'45.786"W	9.49	82.130	0.12	0.12	-1.00
1314.50	0.830	110.040	1314.44	5.00	0.79	10.78	1854732.19	261687.42	39°13'02.454"N	80°00'45.769"W	10.81	85.798	0.03	-0.03	-0.13
1414.50	0.370	107.660	1414.44	5.81	0.45	11.77	1854733.17	261687.08	39°13'02.451"N	80°00'45.756"W	11.78	87.830	0.46	-0.46	-2.38
1514.50	0.550	106.040	1514.43	6.41	0.22	12.54	1854733.94	261686.85	39°13'02.449"N	80°00'45.746"W	12.54	89.015	0.18	0.18	-1.62
1614.50	0.540	105.330	1614.43	7.11	-0.04	13.46	1854734.86	261686.59	39°13'02.446"N	80°00'45.735"W	13.46	90.177	0.01	-0.01	-0.71
1714.50	0.390	105.600	1714.42	7.71	-0.26	14.24	1854735.64	261686.37	39°13'02.444"N	80°00'45.725"W	14.24	91.037	0.15	-0.15	0.27
1814.50	0.280	106.030	1814.42	8.14	-0.42	14.80	1854736.20	261686.22	39°13'02.442"N	80°00'45.717"W	14.81	91.613	0.11	-0.11	0.43
1914.50	0.280	133.260	1914.42	8.55	-0.65	15.21	1854736.62	261685.98	39°13'02.440"N	80°00'45.712"W	15.23	92.453	0.13	0.00	27.23
2014.50	0.600	133.800	2014.42	9.30	-1.18	15.77	1854737.17	261685.45	39°13'02.435"N	80°00'45.705"W	15.81	94.285	0.32	0.32	0.54
2114.50	0.370	142.420	2114.42	10.12	-1.80	16.35	1854737.75	261684.83	39°13'02.429"N	80°00'45.698"W	16.44	96.284	0.24	-0.23	8.62
2214.50	0.420	144.070	2214.41	10.81	-2.35	16.76	1854738.16	261684.28	39°13'02.423"N	80°00'45.692"W	16.92	97.991	0.05	0.05	1.65
2314.50	0.660	144.390	2314.41	11.75	-3.12	17.31	1854738.71	261683.51	39°13'02.416"N	80°00'45.685"W	17.59	100.211	0.24	0.24	0.32
2414.50	0.840	124.510	2414.40	13.00	-4.00	18.25	1854739.65	261682.63	39°13'02.407"N	80°00'45.673"W	18.68	102.367	0.31	0.18	-19.88
2514.50	1.050	124.640	2514.39	14.51	-4.94	19.61	1854741.01	261681.70	39°13'02.398"N	80°00'45.656"W	20.22	104.135	0.21	0.21	0.13
2614.50	0.820	128.410	2614.37	16.02	-5.90	20.92	1854742.32	261680.73	39°13'02.389"N	80°00'45.639"W	21.74	105.757	0.24	-0.23	3.77
2714.50	0.990	124.810	2714.36	17.49	-6.84	22.19	1854743.59	261679.79	39°13'02.379"N	80°00'45.623"W	23.22	107.133	0.18	0.17	-3.60
2814.50	0.850	129.040	2814.35	18.98	-7.80	23.48	1854744.88	261678.83	39°13'02.370"N	80°00'45.607"W	24.74	108.381	0.16	-0.14	4.23





# Actual Wellpath Report

PHL13FHS AWP Proj: 17300'MD  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	CNX GAS COMPANY, LLC	Slot	Slot F
Area	Barbour County, WV	Well	PHL13FHS
Field	Barbour	Wellbore	PHL13FHS AWB
Facility	PHL13 Pad		

WELLPATH DATA (193 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]
2914.50	0.830	133.000	2914.34	20.38	-8.76	24.58	1854745.98	261677.87	39°13'02.361"N	80°00'45.593"W	26.10	109.618	0.06	-0.02	3.96
3014.50	0.810	133.800	3014.33	21.76	-9.74	25.62	1854747.02	261676.89	39°13'02.351"N	80°00'45.579"W	27.41	110.825	0.02	-0.02	0.80
3114.50	1.050	134.350	3114.31	23.33	-10.87	26.79	1854748.19	261675.76	39°13'02.340"N	80°00'45.564"W	28.91	112.096	0.24	0.24	0.55
3214.50	0.970	130.080	3214.30	25.03	-12.06	28.09	1854749.49	261674.57	39°13'02.328"N	80°00'45.548"W	30.57	113.237	0.11	-0.08	-4.27
3314.50	1.000	129.590	3314.28	26.66	-13.16	29.41	1854750.81	261673.47	39°13'02.317"N	80°00'45.531"W	32.22	114.110	0.03	0.03	-0.49
3414.50	1.310	129.150	3414.26	28.56	-14.44	30.97	1854752.37	261672.19	39°13'02.305"N	80°00'45.511"W	34.17	114.998	0.31	0.31	-0.44
3514.50	1.190	132.490	3514.24	30.64	-15.86	32.62	1854754.02	261670.77	39°13'02.291"N	80°00'45.490"W	36.27	115.932	0.14	-0.12	3.34
3614.50	1.270	132.810	3614.22	32.71	-17.32	34.20	1854755.60	261669.32	39°13'02.277"N	80°00'45.470"W	38.33	116.855	0.08	0.08	0.32
3714.50	1.170	132.320	3714.19	34.76	-18.76	35.77	1854757.17	261667.88	39°13'02.262"N	80°00'45.450"W	40.39	117.674	0.10	-0.10	-0.49
3814.50	0.970	131.100	3814.18	36.55	-20.00	37.16	1854758.56	261666.63	39°13'02.250"N	80°00'45.432"W	42.20	118.291	0.20	-0.20	-1.22
3914.50	1.260	130.270	3914.16	38.40	-21.27	38.64	1854760.04	261665.36	39°13'02.238"N	80°00'45.413"W	44.10	118.831	0.29	0.29	-0.83
4014.50	1.260	126.580	4014.13	40.47	-22.63	40.36	1854761.76	261664.00	39°13'02.224"N	80°00'45.391"W	46.27	119.285	0.08	0.00	-3.69
4114.50	1.270	126.920	4114.11	42.53	-23.95	42.13	1854763.53	261662.68	39°13'02.211"N	80°00'45.369"W	48.46	119.624	0.01	0.01	0.34
4228.50	1.240	129.100	4228.08	44.87	-25.49	44.09	1854765.50	261661.14	39°13'02.196"N	80°00'45.343"W	50.93	120.033	0.05	-0.03	1.91
4373.00	0.540	134.000	4372.56	47.00	-26.95	45.80	1854767.20	261659.68	39°13'02.182"N	80°00'45.322"W	53.14	120.476	0.49	-0.48	3.39
4414.00	0.930	137.080	4413.56	47.52	-27.33	46.16	1854767.56	261659.30	39°13'02.178"N	80°00'45.317"W	53.65	120.626	0.96	0.95	7.51
4466.00	5.660	222.550	4465.47	48.63	-29.53	44.72	1854766.12	261657.10	39°13'02.156"N	80°00'45.335"W	53.59	123.440	10.89	9.10	164.37
4516.00	11.290	232.390	4514.91	49.80	-34.34	39.17	1854760.57	261652.30	39°13'02.109"N	80°00'45.405"W	52.09	131.241	11.59	11.26	19.68
4560.00	16.240	233.230	4557.63	50.78	-40.65	30.82	1854752.22	261645.98	39°13'02.046"N	80°00'45.511"W	51.01	142.832	11.26	11.25	1.91
4655.00	25.200	228.150	4646.40	55.52	-62.14	5.06	1854726.46	261624.49	39°13'01.832"N	80°00'45.837"W	62.35	175.345	9.61	9.43	-5.35
4751.00	25.700	227.280	4733.09	63.09	-89.90	-25.46	1854695.95	261596.74	39°13'01.556"N	80°00'46.222"W	93.43	195.811	0.65	0.52	-0.91
4845.00	25.700	232.990	4817.80	68.86	-116.00	-56.71	1854664.69	261570.64	39°13'01.296"N	80°00'46.618"W	129.12	206.054	2.63	0.00	6.07
4939.00	25.700	233.850	4902.50	72.31	-140.29	-89.45	1854631.96	261546.34	39°13'01.054"N	80°00'47.032"W	166.38	212.520	0.40	0.00	0.91
5033.00	27.710	231.320	4986.47	76.53	-165.98	-122.97	1854598.44	261520.66	39°13'00.798"N	80°00'47.456"W	206.57	216.534	2.46	2.14	-2.69
5127.00	29.380	233.890	5069.05	80.95	-193.23	-158.66	1854562.75	261493.41	39°13'00.527"N	80°00'47.907"W	250.02	219.390	2.20	1.78	2.73
5221.00	30.620	239.420	5150.47	82.23	-219.00	-197.91	1854523.50	261467.64	39°13'00.270"N	80°00'48.404"W	295.18	222.104	3.22	1.32	5.88
5316.00	30.140	237.050	5232.43	82.27	-244.28	-238.75	1854482.66	261442.36	39°13'00.018"N	80°00'48.921"W	341.58	224.344	1.36	-0.51	-2.49
5411.00	29.650	230.990	5314.81	85.76	-272.05	-277.04	1854444.38	261414.59	39°12'59.741"N	80°00'49.406"W	388.28	225.520	3.22	-0.52	-6.38
5505.00	26.670	226.730	5397.68	92.94	-301.16	-310.47	1854410.94	261385.48	39°12'59.452"N	80°00'49.828"W	432.54	225.873	3.82	-3.17	-4.53
5601.00	26.950	228.060	5483.36	101.11	-330.47	-342.34	1854379.07	261356.18	39°12'59.160"N	80°00'50.231"W	475.82	226.011	0.69	0.29	1.39





# Actual Wellpath Report

PHL13FHS AWP Proj: 17300'MD

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## REFERENCE WELLPATH IDENTIFICATION

Operator	CNX GAS COMPANY, LLC	Slot	Slot F
Area	Barbour County, WV	Well	PHL13FHS
Field	Barbour	Wellbore	PHL13FHS AWB
Facility	PHL13 Pad		

## WELLPATH DATA (193 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]
5694.00	31.380	231.860	5564.56	107.56	-359.52	-377.08	1854344.33	261327.12	39°12'58.871"N	80°00'50.670"W	521.01	226.366	5.16	4.76	4.09
5786.00	32.290	232.800	5642.72	112.59	-389.17	-415.50	1854305.92	261297.47	39°12'58.576"N	80°00'51.156"W	569.29	226.874	1.13	0.99	1.02
5882.00	31.290	232.390	5724.31	117.59	-419.89	-455.67	1854265.75	261266.76	39°12'58.270"N	80°00'51.664"W	619.63	227.340	1.07	-1.04	-0.43
5978.00	30.210	234.650	5806.82	121.68	-449.08	-495.12	1854226.30	261237.57	39°12'57.979"N	80°00'52.163"W	668.45	227.792	1.65	-1.13	2.35
6072.00	29.690	235.990	5888.27	124.11	-475.79	-533.71	1854187.71	261210.86	39°12'57.713"N	80°00'52.652"W	715.00	228.284	0.90	-0.55	1.43
6166.00	29.630	232.740	5969.95	127.28	-502.88	-571.50	1854149.92	261183.77	39°12'57.443"N	80°00'53.130"W	761.25	228.655	1.71	-0.06	-3.46
6260.00	29.880	231.730	6051.56	132.20	-531.45	-608.38	1854113.04	261155.20	39°12'57.159"N	80°00'53.596"W	807.81	228.861	0.60	0.27	-1.07
6354.00	30.630	239.360	6132.79	134.42	-558.16	-647.38	1854074.04	261128.49	39°12'56.892"N	80°00'54.090"W	854.78	229.233	4.16	0.80	8.12
6449.00	32.650	238.920	6213.66	133.67	-583.73	-690.16	1854031.27	261102.92	39°12'56.637"N	80°00'54.632"W	903.91	229.776	2.14	2.13	-0.46
6543.00	32.560	231.190	6292.88	136.51	-612.69	-731.60	1853989.83	261073.97	39°12'56.349"N	80°00'55.156"W	954.27	230.055	4.43	-0.10	-8.22
6636.00	32.750	235.760	6371.20	140.71	-642.53	-771.90	1853949.53	261044.13	39°12'56.052"N	80°00'55.666"W	1004.33	230.226	2.66	0.20	4.91
6731.00	30.610	241.420	6452.05	140.51	-668.57	-814.40	1853907.03	261018.09	39°12'55.792"N	80°00'56.204"W	1053.67	230.616	3.85	-2.25	5.96
6825.00	29.320	235.180	6533.51	140.45	-693.16	-854.32	1853867.11	260993.49	39°12'55.546"N	80°00'56.709"W	1100.16	230.945	3.59	-1.37	-6.64
6919.00	27.010	230.070	6616.38	144.74	-720.01	-889.59	1853831.84	260966.64	39°12'55.279"N	80°00'57.155"W	1144.46	231.014	3.55	-2.46	-5.44
7014.00	28.420	232.770	6700.49	149.99	-747.54	-924.14	1853797.30	260939.12	39°12'55.005"N	80°00'57.592"W	1188.63	231.030	1.99	1.48	2.84
7111.00	33.550	240.460	6783.65	151.19	-774.75	-965.88	1853755.56	260911.91	39°12'54.734"N	80°00'58.121"W	1238.21	231.266	6.67	5.29	7.93
7204.00	30.480	238.320	6862.50	150.20	-799.81	-1008.32	1853713.11	260886.85	39°12'54.484"N	80°00'58.658"W	1287.02	231.578	3.52	-3.30	-2.30
7298.00	30.740	225.690	6943.48	155.42	-829.15	-1045.84	1853675.60	260857.52	39°12'54.192"N	80°00'59.133"W	1334.64	231.593	6.84	0.28	-13.44
7393.00	32.210	224.340	7024.51	166.82	-864.22	-1080.91	1853640.53	260822.45	39°12'53.843"N	80°00'59.576"W	1383.92	231.357	1.72	1.55	-1.42
7487.00	32.180	229.340	7104.07	176.74	-898.45	-1117.42	1853604.02	260788.22	39°12'53.502"N	80°01'00.037"W	1433.82	231.199	2.83	-0.03	5.32
7581.00	32.190	231.530	7183.62	183.58	-930.34	-1156.01	1853565.43	260756.33	39°12'53.185"N	80°01'00.525"W	1483.88	231.174	1.24	0.01	2.33
7629.00	31.520	224.110	7224.41	188.15	-947.31	-1174.76	1853546.68	260739.36	39°12'53.016"N	80°01'00.762"W	1509.12	231.118	8.27	-1.40	-15.46
7673.00	33.230	213.780	7261.60	195.97	-965.60	-1189.48	1853531.96	260721.07	39°12'52.835"N	80°01'00.948"W	1532.08	230.931	13.14	3.89	-23.48
7724.00	34.280	204.520	7304.03	209.76	-990.30	-1203.22	1853518.22	260696.37	39°12'52.590"N	80°01'01.120"W	1558.35	230.544	10.29	2.06	-18.16
7768.00	35.730	196.780	7340.09	225.17	-1013.89	-1212.08	1853509.37	260672.78	39°12'52.356"N	80°01'01.231"W	1580.22	230.088	10.61	3.30	-17.59
7809.00	38.880	191.290	7372.70	242.52	-1037.98	-1218.06	1853503.39	260648.69	39°12'52.118"N	80°01'01.305"W	1600.33	229.564	11.17	7.68	-13.39
7863.00	43.660	190.220	7413.28	268.79	-1072.96	-1224.69	1853496.76	260613.71	39°12'51.772"N	80°01'01.387"W	1628.22	228.778	8.95	8.85	-1.98
7911.00	44.810	186.650	7447.68	294.38	-1106.08	-1229.59	1853491.86	260580.59	39°12'51.444"N	80°01'01.447"W	1653.87	228.027	5.71	2.40	-7.44
7958.00	45.430	178.410	7480.87	321.87	-1139.29	-1231.04	1853490.41	260547.38	39°12'51.116"N	80°01'01.463"W	1677.33	227.217	12.49	1.32	-17.53
8004.00	46.370	170.190	7512.91	351.51	-1172.10	-1227.75	1853493.70	260514.57	39°12'50.791"N	80°01'01.419"W	1697.41	226.328	12.99	2.04	-17.87



47-001-03239



**Actual Wellpath Report**  
 PHL13FHS AWP Proj: 17300.MD  
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PHL13FHS

**REFERENCE WELLPATH IDENTIFICATION**

Operator	CNX GAS COMPANY, LLC	Slot	Slot F
Area	Barbour County, WV	Well	PHL13FHS
Field	Barbour	Wellbore	PHL13FHS AWB
Facility	PHL13 Pad		

**WELLPATH DATA (193 stations)**

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [ft]	Grid North [ft]	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]	
8053.00	50.670	164.840	7545.37	386.16	-1207.90	-1219.76	1853501.68	260478.77	39°12'50.438"N	80°01'01.315"W	1716.64	225.280	11.99	8.78	-10.92
8097.00	56.160	162.160	7571.59	420.24	-1241.75	-1209.71	1853511.74	260444.93	39°12'50.104"N	80°01'01.184"W	1733.59	224.251	13.40	12.48	-6.09
8147.00	61.140	159.970	7597.59	461.87	-1282.12	-1195.83	1853525.61	260404.56	39°12'49.706"N	80°01'01.005"W	1753.24	223.006	10.64	9.96	-4.38
8194.00	65.680	158.750	7618.63	503.11	-1321.43	-1181.02	1853540.43	260365.25	39°12'49.318"N	80°01'00.814"W	1772.28	221.788	9.93	9.66	-2.60
8240.00	71.270	156.640	7635.50	545.31	-1361.00	-1164.77	1853556.68	260325.68	39°12'48.928"N	80°01'00.605"W	1791.37	220.558	12.88	12.15	-4.59
8289.00	78.000	154.200	7648.48	592.16	-1403.93	-1145.11	1853576.33	260282.75	39°12'48.505"N	80°01'00.352"W	1811.71	219.202	14.55	13.73	-4.98
8350.00	85.900	149.770	7657.02	652.37	-1457.19	-1116.75	1853604.69	260229.50	39°12'47.980"N	80°00'59.988"W	1835.90	217.466	14.81	12.95	-7.26
8429.00	90.490	146.940	7659.51	731.30	-1524.38	-1075.34	1853646.10	260162.31	39°12'47.318"N	80°00'59.457"W	1865.50	215.200	6.82	5.81	-3.58
8523.00	91.170	149.250	7658.14	825.28	-1604.17	-1025.67	1853695.77	260082.52	39°12'46.533"N	80°00'58.820"W	1904.03	212.594	2.56	0.72	2.46
8618.00	90.030	149.680	7657.15	920.26	-1685.98	-977.41	1853744.03	260000.71	39°12'45.727"N	80°00'58.201"W	1948.81	210.102	1.28	-1.20	0.45
8712.00	89.820	149.000	7657.27	1014.24	-1766.84	-929.47	1853791.97	259919.85	39°12'44.930"N	80°00'57.586"W	1996.41	207.747	0.76	-0.22	-0.72
8808.00	89.880	148.420	7657.52	1110.24	-1848.88	-879.61	1853841.82	259837.82	39°12'44.122"N	80°00'56.946"W	2047.46	205.443	0.61	0.06	-0.60
8902.00	89.820	147.050	7657.77	1204.23	-1928.36	-829.43	1853892.00	259758.34	39°12'43.339"N	80°00'56.303"W	2099.18	203.274	1.46	-0.06	-1.46
8996.00	90.370	148.410	7657.61	1298.22	-2007.84	-779.25	1853942.18	259678.86	39°12'42.557"N	80°00'55.660"W	2153.75	201.211	1.56	0.59	1.45
9091.00	90.280	148.960	7657.07	1393.22	-2089.00	-729.87	1853991.56	259597.71	39°12'41.757"N	80°00'55.026"W	2212.83	199.259	0.59	-0.09	0.58
9185.00	91.420	147.950	7655.68	1487.20	-2169.10	-680.70	1854040.73	259517.61	39°12'40.969"N	80°00'54.396"W	2273.40	197.423	1.62	1.21	-1.07
9279.00	91.690	146.170	7653.13	1581.16	-2248.22	-630.02	1854091.40	259438.49	39°12'40.189"N	80°00'53.746"W	2334.83	195.654	1.29	0.29	-1.26
9374.00	91.540	146.060	7650.45	1676.07	-2327.33	-577.49	1854143.93	259359.38	39°12'39.410"N	80°00'53.073"W	2397.91	193.936	0.76	-0.16	-0.75
9467.00	92.530	144.550	7647.15	1768.88	-2403.75	-524.59	1854196.83	259282.97	39°12'38.658"N	80°00'51.731"W	2460.32	192.311	1.94	1.06	-1.62
9561.00	92.620	148.400	7642.92	1862.72	-2482.01	-472.74	1854248.68	259204.71	39°12'37.888"N	80°00'51.076"W	2526.63	190.784	4.09	0.10	4.10
9656.00	91.510	146.450	7639.50	1957.64	-2562.01	-421.62	1854299.79	259124.71	39°12'37.100"N	80°00'51.076"W	2596.47	189.345	2.36	-1.17	-2.05
9750.00	91.600	148.160	7636.95	2051.59	-2641.09	-370.87	1854350.55	259045.64	39°12'36.321"N	80°00'50.425"W	2667.00	187.993	1.82	0.10	1.82
9845.00	90.710	151.050	7635.03	2146.53	-2723.00	-322.82	1854398.60	258963.73	39°12'35.514"N	80°00'49.809"W	2742.07	186.761	3.18	-0.94	3.04
9940.00	90.920	151.920	7633.68	2241.38	-2806.47	-277.47	1854443.94	258880.26	39°12'34.692"N	80°00'49.227"W	2820.15	185.646	0.94	0.22	0.92
10034.00	90.220	156.610	7632.75	2334.83	-2891.12	-236.67	1854484.74	258795.62	39°12'33.857"N	80°00'48.702"W	2900.79	184.680	5.04	-0.74	4.99
10129.00	90.430	152.330	7632.21	2429.25	-2976.82	-195.74	1854525.67	258709.92	39°12'33.013"N	80°00'48.176"W	2983.25	183.762	4.51	0.22	-4.51
10223.00	90.030	149.270	7631.83	2523.15	-3058.87	-149.88	1854571.52	258627.88	39°12'32.204"N	80°00'47.588"W	3062.54	182.805	3.28	-0.43	-3.26
10316.00	89.940	148.050	7631.86	2616.15	-3138.29	-101.51	1854619.89	258548.45	39°12'31.422"N	80°00'46.968"W	3139.94	181.853	1.32	-0.10	-1.31
10410.00	88.830	143.650	7632.87	2710.03	-3216.06	-48.76	1854672.64	258470.69	39°12'30.656"N	80°00'46.292"W	3216.43	180.869	4.83	-1.18	-4.68
10505.00	88.980	145.330	7634.68	2804.80	-3293.38	6.41	1854727.81	258393.37	39°12'29.895"N	80°00'45.585"W	3293.38	179.889	1.78	0.16	1.77





# Actual Wellpath Report

PHL13FHS AWP Proj: 17300'MD

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## REFERENCE WELLPATH IDENTIFICATION

Operator	CNX GAS COMPANY, LLC	Slot	Slot F
Area	Barbour County, WV	Well	PHL13FHS
Field	Barbour	Wellbore	PHL13FHS AWB
Facility	PHL13 Pad		

## WELLPATH DATA (193 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]
10601.00	88.800	145.510	7636.54	2900.67	-3372.40	60.88	1854782.28	258314.35	39°12'29.117"N	80°00'44.888"W	3372.95	178.966	0.27	-0.19	0.19
10696.00	89.940	147.940	7637.59	2995.62	-3451.81	112.99	1854834.39	258234.94	39°12'28.335"N	80°00'44.220"W	3453.66	178.125	2.83	1.20	2.56
10790.00	91.020	151.440	7636.80	3089.57	-3532.95	160.43	1854881.82	258153.81	39°12'27.536"N	80°00'43.611"W	3536.59	177.400	3.90	1.15	3.72
10884.00	91.170	148.470	7635.00	3183.50	-3614.29	207.48	1854928.87	258072.47	39°12'26.735"N	80°00'43.008"W	3620.24	176.715	3.16	0.16	-3.16
10977.00	91.820	143.870	7632.57	3276.38	-3691.50	259.22	1854980.61	257995.26	39°12'25.975"N	80°00'42.345"W	3700.59	175.983	4.99	0.70	-4.95
11071.00	91.720	142.550	7629.67	3369.97	-3766.74	315.49	1855036.88	257920.03	39°12'25.234"N	80°00'41.625"W	3779.93	175.212	1.41	-0.11	-1.40
11167.00	94.190	136.770	7624.72	3464.71	-3839.78	377.51	1855098.90	257846.99	39°12'24.516"N	80°00'40.831"W	3858.30	174.385	6.54	2.57	-6.02
11263.00	92.890	137.990	7618.79	3558.79	-3910.29	442.39	1855163.78	257776.48	39°12'23.823"N	80°00'40.002"W	3935.23	173.545	1.86	-1.35	1.27
11358.00	89.910	144.920	7616.47	3653.02	-3984.52	501.52	1855222.91	257702.26	39°12'23.092"N	80°00'39.246"W	4015.96	172.826	7.94	-3.14	7.29
11452.00	91.230	152.610	7615.53	3746.94	-4064.82	550.23	1855271.61	257621.95	39°12'22.301"N	80°00'38.621"W	4101.90	172.291	8.30	1.40	8.18
11547.00	90.920	152.040	7613.75	3841.69	-4148.94	594.34	1855315.72	257537.84	39°12'21.472"N	80°00'38.055"W	4191.30	171.848	0.68	-0.33	-0.60
11641.00	90.920	154.760	7612.24	3935.29	-4232.97	636.42	1855357.80	257453.81	39°12'20.644"N	80°00'37.514"W	4280.55	171.450	2.89	0.00	2.89
11735.00	90.890	153.370	7610.75	4028.80	-4317.49	677.53	1855398.91	257369.29	39°12'19.811"N	80°00'36.986"W	4370.33	171.082	1.48	-0.03	-1.48
11830.00	90.800	151.890	7609.35	4123.52	-4401.85	721.20	1855442.57	257284.94	39°12'18.980"N	80°00'36.425"W	4460.54	170.695	1.56	-0.09	-1.56
11924.00	90.770	145.540	7608.06	4217.46	-4482.13	769.98	1855491.35	257204.66	39°12'18.189"N	80°00'35.799"W	4547.79	170.252	6.75	-0.03	-6.76
12019.00	89.850	144.180	7607.55	4312.28	-4559.81	824.66	1855546.03	257126.98	39°12'17.424"N	80°00'35.099"W	4633.78	169.749	1.73	-0.97	-1.43
12112.00	90.090	142.590	7607.60	4404.94	-4634.46	880.12	1855601.49	257052.34	39°12'16.690"N	80°00'34.389"W	4717.29	169.247	1.73	0.26	-1.71
12207.00	90.710	147.690	7606.93	4499.76	-4712.38	934.40	1855655.77	256974.42	39°12'15.923"N	80°00'33.694"W	4804.13	168.784	5.41	0.65	5.37
12302.00	91.170	149.440	7605.37	4594.74	-4793.43	983.94	1855705.31	256893.38	39°12'15.124"N	80°00'33.059"W	4893.37	168.400	1.90	0.48	1.84
12396.00	91.510	148.990	7603.18	4688.71	-4874.16	1032.04	1855753.40	256812.65	39°12'14.329"N	80°00'32.442"W	4982.22	168.045	0.60	0.36	-0.48
12487.00	91.110	150.530	7601.10	4779.65	-4952.75	1077.85	1855799.22	256734.06	39°12'13.555"N	80°00'31.855"W	5068.68	167.722	1.75	-0.44	1.69
12585.00	91.420	153.050	7598.93	4877.43	-5039.08	1124.16	1855845.53	256647.73	39°12'12.704"N	80°00'31.260"W	5162.95	167.424	2.59	0.32	2.57
12679.00	91.450	155.170	7596.58	4970.91	-5123.62	1165.19	1855886.55	256563.20	39°12'11.871"N	80°00'30.733"W	5254.44	167.188	2.25	0.03	2.26
12774.00	91.020	155.560	7594.53	5065.16	-5209.95	1204.78	1855926.14	256476.87	39°12'11.020"N	80°00'30.224"W	5347.44	166.979	0.61	-0.45	0.41
12870.00	91.630	152.390	7592.31	5160.65	-5296.18	1246.89	1855968.25	256390.64	39°12'10.170"N	80°00'29.683"W	5440.98	166.752	3.36	0.64	-3.30
12964.00	90.950	146.120	7590.19	5254.57	-5376.91	1294.91	1856016.26	256309.92	39°12'09.375"N	80°00'29.067"W	5530.64	166.459	6.71	-0.72	-6.67
13058.00	91.020	142.070	7588.57	5348.28	-5453.02	1350.01	1856071.37	256233.81	39°12'08.626"N	80°00'28.362"W	5617.65	166.095	4.31	0.07	-4.31
13152.00	90.890	144.300	7587.01	5441.89	-5528.26	1406.33	1856127.68	256158.57	39°12'07.885"N	80°00'27.641"W	5704.33	165.727	2.38	-0.14	2.37
13247.00	90.920	146.220	7585.51	5536.75	-5606.31	1460.46	1856181.81	256080.52	39°12'07.117"N	80°00'26.948"W	5793.42	165.399	2.02	0.03	2.02
13342.00	90.890	150.930	7584.01	5631.71	-5687.34	1509.97	1856231.32	255999.49	39°12'06.318"N	80°00'26.313"W	5884.38	165.131	4.96	-0.03	4.96





# Actual Wellpath Report

PHL13FHS AWP Proj: 17300'MD  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	CNX GAS COMPANY, LLC	Slot	Slot F
Area	Barbour County, WV	Well	PHL13FHS
Field	Barbour	Wellbore	PHL13FHS AWB
Facility	PHL13 Pad		

## WELLPATH DATA (193 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]
13436.00	90.920	153.830	7582.52	5725.44	-5770.61	1553.54	1856274.88	255916.23	39°12'05.498"N	80°00'25.754"W	5976.07	164.932	3.08	0.03	3.09
13531.00	90.920	153.450	7581.00	5820.02	-5855.72	1595.71	1856317.06	255831.12	39°12'04.659"N	80°00'25.212"W	6069.25	164.757	0.40	0.00	-0.40
13625.00	90.920	151.610	7579.49	5913.74	-5939.11	1639.06	1856360.41	255747.73	39°12'03.837"N	80°00'24.655"W	6161.13	164.572	1.96	0.00	-1.96
13720.00	90.950	147.680	7577.94	6008.68	-6021.06	1687.06	1856408.40	255665.79	39°12'03.030"N	80°00'24.040"W	6252.95	164.348	4.14	0.03	-4.14
13812.00	90.430	141.800	7576.83	6100.46	-6096.14	1740.14	1856461.48	255590.71	39°12'02.291"N	80°00'23.360"W	6339.64	164.069	6.42	-0.57	-6.39
13907.00	90.370	142.670	7576.16	6194.93	-6171.24	1798.32	1856519.66	255515.61	39°12'01.552"N	80°00'22.616"W	6427.92	163.754	0.92	-0.06	0.92
14002.00	90.400	144.600	7575.52	6289.61	-6247.74	1854.64	1856575.98	255439.12	39°12'00.799"N	80°00'21.895"W	6517.20	163.466	2.03	0.03	2.03
14095.00	90.340	144.400	7574.92	6382.41	-6323.45	1908.65	1856629.98	255363.41	39°12'00.054"N	80°00'21.203"W	6605.22	163.204	0.22	-0.06	-0.22
14189.00	90.370	144.270	7574.34	6476.18	-6399.81	1963.45	1856684.78	255287.05	39°11'59.302"N	80°00'20.502"W	6694.23	162.944	0.14	0.03	-0.14
14283.00	90.400	146.280	7573.71	6570.04	-6477.07	2016.99	1856738.32	255209.80	39°11'58.541"N	80°00'19.816"W	6783.85	162.703	2.14	0.03	2.14
14376.00	90.310	144.650	7573.13	6662.93	-6553.67	2069.71	1856791.04	255133.19	39°11'57.787"N	80°00'19.141"W	6872.73	162.473	1.76	-0.10	-1.75
14470.00	90.460	149.650	7572.50	6756.88	-6632.62	2120.69	1856842.01	255054.25	39°11'57.010"N	80°00'18.488"W	6963.40	162.269	5.32	0.16	5.32
14564.00	90.430	149.030	7571.77	6850.86	-6713.47	2168.62	1856889.94	254973.40	39°11'56.213"N	80°00'17.873"W	7055.04	162.098	0.66	-0.03	-0.66
14658.00	90.400	149.350	7571.09	6944.84	-6794.20	2216.76	1856938.09	254892.67	39°11'55.418"N	80°00'17.256"W	7146.70	161.930	0.34	-0.03	0.34
14752.00	90.490	152.280	7570.36	7038.74	-6876.26	2262.60	1856983.92	254810.62	39°11'54.610"N	80°00'16.668"W	7238.94	161.786	3.12	0.10	3.12
14846.00	90.460	152.550	7569.58	7132.49	-6959.57	2306.12	1857027.44	254727.31	39°11'53.788"N	80°00'16.109"W	7331.70	161.667	0.29	-0.03	0.29
14940.00	90.400	148.080	7568.88	7226.40	-7041.21	2352.66	1857073.98	254645.67	39°11'52.984"N	80°00'15.512"W	7423.86	161.524	4.76	-0.06	-4.76
15033.00	90.460	147.180	7568.18	7319.40	-7119.76	2402.45	1857123.77	254567.13	39°11'52.211"N	80°00'14.874"W	7514.17	161.354	0.97	0.06	-0.97
15126.00	89.750	144.560	7568.01	7412.30	-7196.73	2454.62	1857175.94	254490.16	39°11'51.453"N	80°00'14.206"W	7603.82	161.167	2.92	-0.76	-2.82
15220.00	90.150	147.950	7568.09	7506.23	-7274.88	2506.83	1857228.15	254412.01	39°11'50.683"N	80°00'13.537"W	7694.68	160.987	3.63	0.43	3.61
15315.00	89.380	155.110	7568.48	7601.02	-7358.34	2552.09	1857273.40	254328.56	39°11'49.861"N	80°00'12.956"W	7788.35	160.872	7.58	-0.81	7.54
15407.00	88.800	151.190	7569.94	7692.65	-7440.39	2593.63	1857314.94	254246.51	39°11'49.052"N	80°00'12.423"W	7879.49	160.782	4.31	-0.63	-4.26
15501.00	88.890	152.910	7571.84	7786.43	-7523.41	2637.68	1857358.98	254163.49	39°11'48.234"N	80°00'11.858"W	7972.39	160.680	1.83	0.10	1.83
15595.00	89.940	152.990	7572.80	7880.11	-7607.12	2680.42	1857401.73	254079.78	39°11'47.409"N	80°00'11.309"W	8065.54	160.590	1.12	1.12	0.09
15687.00	89.910	149.450	7572.92	7971.97	-7687.74	2724.71	1857446.01	253999.16	39°11'46.615"N	80°00'10.741"W	8156.31	160.485	3.85	-0.03	-3.85
15781.00	89.510	143.930	7573.39	8065.90	-7766.27	2776.31	1857497.61	253920.64	39°11'45.841"N	80°00'10.080"W	8247.60	160.329	5.89	-0.43	-5.87
15875.00	88.860	144.960	7574.73	8159.68	-7842.74	2830.96	1857552.26	253844.18	39°11'45.089"N	80°00'09.380"W	8338.04	160.152	1.30	-0.69	1.10
15970.00	88.860	146.680	7576.62	8254.57	-7921.31	2884.32	1857605.62	253765.61	39°11'44.315"N	80°00'08.697"W	8430.09	159.992	1.81	0.00	1.81
16063.00	88.860	149.280	7578.47	8347.54	-8000.14	2933.61	1857654.91	253686.78	39°11'43.539"N	80°00'08.065"W	8521.05	159.862	2.80	0.00	2.80
16157.00	88.650	150.590	7580.51	8441.48	-8081.47	2980.69	1857701.99	253605.45	39°11'42.737"N	80°00'07.461"W	8613.63	159.754	1.41	-0.22	1.39



47-001-03239

PHL13FHS



# Actual Wellpath Report

PHL13FHS AWP Proj: 17300'MD  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	CNX GAS COMPANY, LLC	Slot	Slot F
Area	Barbour County, WV	Well	PHL13FHS
Field	Barbour	Wellbore	PHL13FHS AWB
Facility	PHL13 Pad		

## WELLPATH DATA (193 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]
16250.00	87.850	150.980	7583.35	8534.34	-8162.60	3026.07	1857747.36	253524.33	39°11'41.938"N	80°00'06.879"W	8705.46	159.659	0.96	-0.86	0.42
16344.00	87.880	148.630	7586.85	8628.24	-8243.78	3073.31	1857794.60	253443.14	39°11'41.138"N	80°00'06.273"W	8798.02	159.554	2.50	0.03	-2.50
16437.00	87.880	145.520	7590.30	8721.14	-8321.78	3123.81	1857845.11	253365.15	39°11'40.370"N	80°00'05.626"W	8888.77	159.425	3.34	0.00	-3.34
16531.00	87.880	145.340	7593.77	8814.96	-8399.13	3177.11	1857898.40	253287.80	39°11'39.608"N	80°00'04.944"W	8979.95	159.280	0.19	0.00	-0.19
16624.00	87.910	149.110	7597.19	8907.87	-8477.26	3227.42	1857948.70	253209.68	39°11'38.839"N	80°00'04.299"W	9070.84	159.157	4.05	0.03	4.05
16719.00	89.320	145.700	7599.49	9002.81	-8557.26	3278.57	1857999.85	253129.68	39°11'38.051"N	80°00'03.644"W	9163.83	159.037	3.88	1.48	-3.59
16813.00	89.380	146.880	7600.55	9096.75	-8635.45	3330.73	1858052.02	253051.49	39°11'37.281"N	80°00'02.976"W	9255.53	158.908	1.26	0.06	1.26
16907.00	89.350	146.470	7601.60	9190.70	-8713.99	3382.37	1858103.65	252972.96	39°11'36.508"N	80°00'02.315"W	9347.41	158.786	0.44	-0.03	-0.44
17001.00	87.290	147.450	7604.35	9284.63	-8792.75	3433.60	1858154.88	252894.20	39°11'35.732"N	80°00'01.658"W	9439.39	158.669	2.43	-2.19	1.04
17095.00	87.600	154.750	7608.55	9378.36	-8874.90	3478.95	1858200.23	252812.05	39°11'34.923"N	80°00'00.603"W	9532.42	158.595	7.77	0.33	7.77
17186.00	87.320	157.430	7612.58	9468.42	-8958.00	3515.79	1858237.07	252728.95	39°11'34.103"N	80°00'00.166"W	9623.24	158.571	2.96	-0.31	2.95
17275.00	87.440	157.650	7616.65	9556.17	-9040.17	3549.76	1858271.04	252646.79	39°11'33.293"N	80°00'00.043"W	9712.13	158.562	0.28	0.13	0.25
17300.00	87.440	157.650	7617.77	9580.81	-9063.27	3559.26	1858280.53	252623.69	39°11'33.065"N	80°00'00.043"W	9737.10	158.559	0.00	0.00	0.00

## HOLE & CASING SECTIONS - Ref Wellbore: PHL13FHS AWB Ref Wellpath: PHL13FHS AWP Proj: 17300'MD

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
9.625in Casing	24.50	2016.50	1992.00	24.50	2016.42	0.00	0.00	-1.20	15.79





# Actual Wellpath Report

PHL13FHS AWP Proj: 17300'MD

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## REFERENCE WELLPATH IDENTIFICATION

Operator	CNX GAS COMPANY, LLC	Slot	Slot F
Area	Barbour County, WV	Well	PHL13FHS
Field	Barbour	Wellbore	PHL13FHS AWB
Facility	PHL13 Pad		

## TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
PHL13FHS PBHL Rev-1		7447.21	-9048.90	3582.60	1858303.87	252638.06	39°11'33.209"N	79°59'59.748"W	point
PHL13FHS LP1 Plat		7672.10	-667.10	-925.42	1853796.02	261019.56	39°12'55.800"N	80°00'57.614"W	point
PHL13FHS LP2 Plat		7672.10	-1616.54	-1010.78	1853710.66	260070.15	39°12'46.411"N	80°00'58.630"W	point
PHL13FHS LP Rev-1		7676.00	-1617.17	-1011.08	1853710.36	260069.52	39°12'46.405"N	80°00'58.633"W	point

## WELLPATH COMPOSITION - Ref Wellbore: PHL13FHS AWB Ref Wellpath: PHL13FHS AWP Proj: 17300'MD

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
24.50	4228.50	Generic gyro - northseeking (Standard)	VES Gyro (100'-4214')	PHL13FHS AWB
4228.50	17275.00	NaviTrak (MagCorr)	BHI AT Curve (4228.5')(4373'-17275')	PHL13FHS AWB
17275.00	17300.00	Blind Drilling (std)	Projection to bit	PHL13FHS AWB