



# CNX GAS COMPANY, LLC

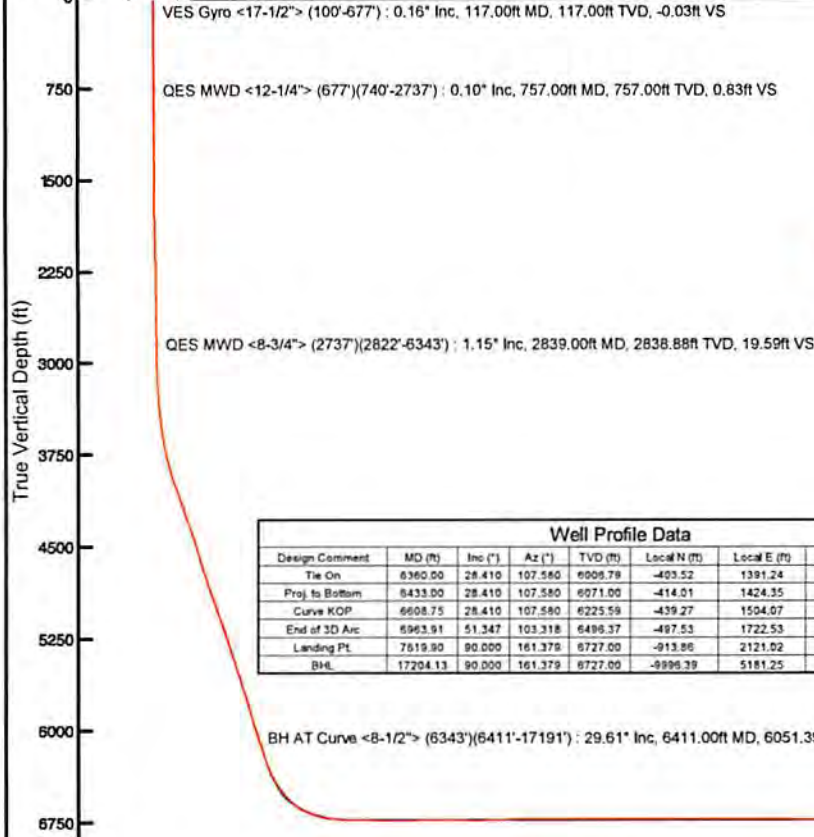
Location: Tyler County, WV  
Field: Tyler  
Facility: SHR-31 Pad

Slot: Slot D  
Well: SHR-31D-HSM  
Wellbore: SHR-31D-HSM PWB

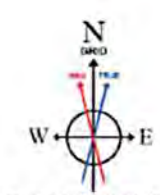


Plot reference wellbore is SHR-31D-HSM PWB Rev-B.0	Grid System: NAD83 / Lambert West Virginia SP, Northern Zone (4701), US feet
True vertical depths are referenced to Patterson 278 (RKB)	North Reference: Grid north
Measured depths are referenced to Patterson 278 (RKB)	Scale: True distance
Patterson 278 (RKB) to Mean Sea Level: 1120.4 feet	Depths are in feet
Mean Sea Level to Ground level (At Slot: Slot D): -1091.4 feet	Created by: adwayne on 2018-07-10
Coordinates are in feet referenced to S84	Database: WA_MPL_EASTERNRUS_Delta

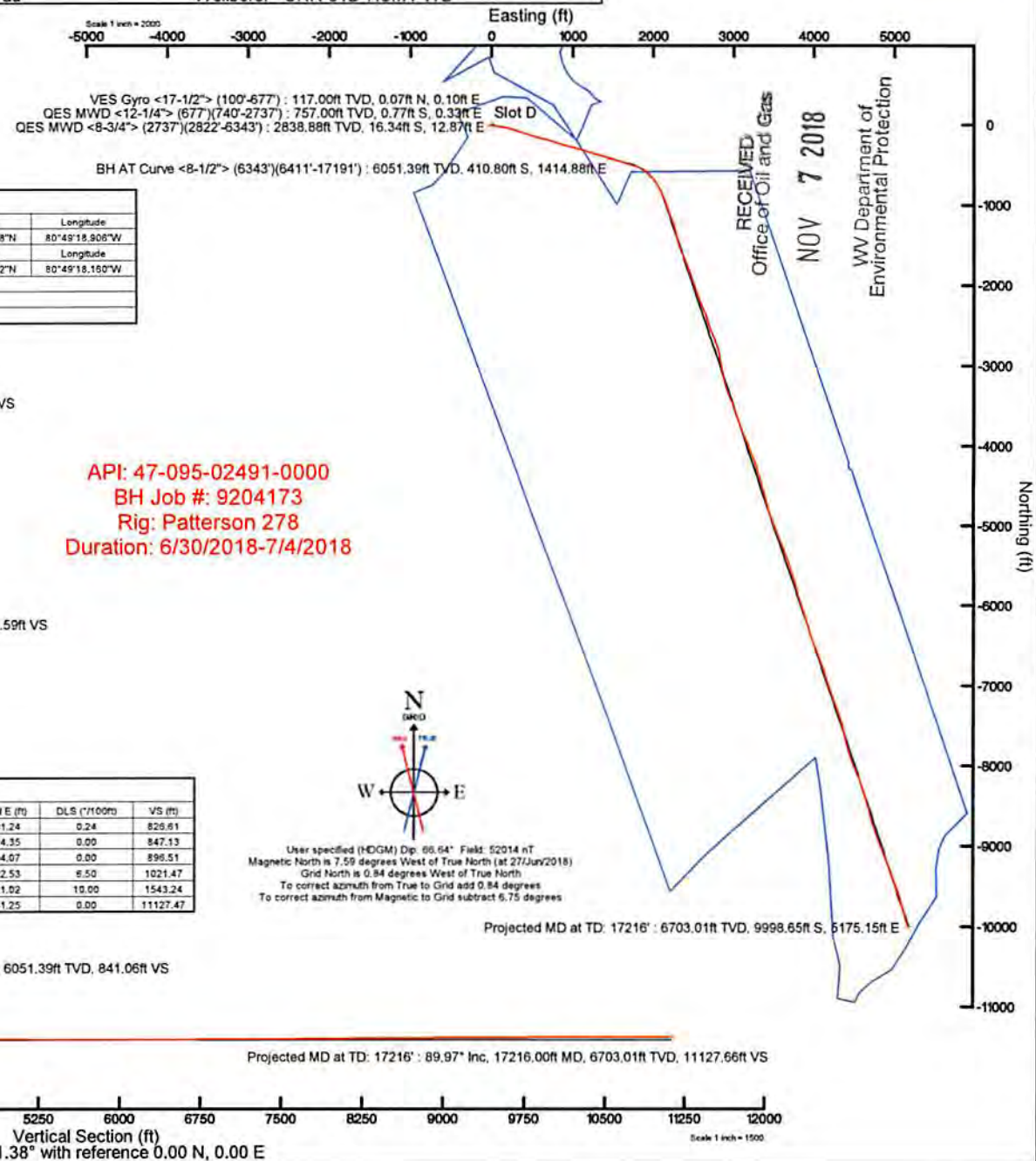
Location Information					
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	
SHR-31 Pad	1626556.880	337850.350	39°25'12.198"N	80°49'18.906"W	
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude
Slot D	44.06	59.21	1626616.090	337894.410	39°25'12.642"N
Patterson 278 (RKB) to Ground level (At Slot: Slot D)			29ft		
Mean Sea Level to Ground level (At Slot: Slot D)			-1091.4ft		
Patterson 278 (RKB) to Mean Sea Level			1120.4ft		



Well Profile Data							
Design Comment	MD (ft)	Inc (")	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (*/100ft)
Tie On	6360.00	28.410	107.580	6008.78	-403.52	1391.24	0.24
Proj. to Bottom	8433.00	28.410	107.580	6971.00	-414.01	1424.35	0.00
Curve KOP	6608.75	28.410	107.580	6225.59	-439.27	1504.07	0.00
End of 3D Arc	6963.91	51.347	103.318	6496.37	-497.53	1722.53	6.50
Landing Pt	7619.90	90.000	161.379	6727.00	-913.96	2121.02	10.00
BHL	17204.13	90.000	161.379	8727.00	-999.39	5181.25	0.00



User specified (HDGM) Dip: 66.64° Field: 52014 nT  
Magnetic North is 7.59 degrees West of True North (at 27/June 2018)  
Grid North is 0.84 degrees West of True North  
To correct azimuth from True to Grid add 0.84 degrees  
To correct azimuth from Magnetic to Grid subtract 6.75 degrees



Vertical Section (ft)  
Azimuth 161.38° with reference 0.00 N, 0.00 E



# Actual Wellpath Report

SHR-31D-HSM AWP Proj: 17216'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	CNX GAS COMPANY, LLC	Slot	Slot D
Area	Tyler County, WV	Well	SHR-31D-HSM
Field	Tyler	Wellbore	SHR-31D-HSM AWB
Facility	SHR-31 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	0.999947	Report Generated	10/Jul/2018 at 17:38
Convergence at slot	0.84° West	Database/Source file	WA_MPL_EASTERNUS_Defn/SHR-31D-HSM_AWP_Proj_17216_.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	44.06	59.21	1626616.09	337894.41	39°25'12.642"N	80°49'18.160"W
Facility Reference Pt			1626556.88	337850.35	39°25'12.198"N	80°49'18.906"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 278 (RKB) to Facility Vertical Datum	1120.40ft
Horizontal Reference Pt	Slot	Patterson 278 (RKB) to Mean Sea Level	1120.40ft
Vertical Reference Pt	Patterson 278 (RKB)	Patterson 278 (RKB) to Ground Level at Slot (Slot D)	29.00ft
MD Reference Pt	Patterson 278 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	161.38°

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# Actual Wellpath Report

SHR-31D-HSM AWP Proj: 17216'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	CNX GAS COMPANY, LLC	Slot	Slot D
Area	Tyler County, WV	Well	SHR-31D-HSM
Field	Tyler	Wellbore	SHR-31D-HSM AWB
Facility	SHR-31 Pad		

WELLPATH DATA (192 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	0.00	56.980	0.00	0.00	0.00	0.00	1626616.09	337894.41	39°25'12.642"N	80°49'18.160"W	0.00	0.000	0.00	0.00	0.00
29.00	0.000	56.980	29.00	0.00	0.00	0.00	1626616.09	337894.41	39°25'12.642"N	80°49'18.160"W	0.00	0.000	0.00	0.00	0.00
117.00	0.160	56.980	117.00	-0.03	0.07	0.10	1626616.19	337894.48	39°25'12.643"N	80°49'18.159"W	0.12	56.980	0.18	0.18	64.75
217.00	0.080	264.530	217.00	-0.08	0.14	0.15	1626616.24	337894.55	39°25'12.644"N	80°49'18.158"W	0.20	47.836	0.23	-0.08	-152.45
317.00	0.510	127.310	317.00	0.27	-0.14	0.44	1626616.53	337894.27	39°25'12.641"N	80°49'18.154"W	0.46	107.840	0.57	0.43	-137.22
417.00	0.080	128.450	417.00	0.70	-0.45	0.84	1626616.93	337893.96	39°25'12.638"N	80°49'18.149"W	0.96	118.241	0.43	-0.43	1.14
517.00	0.250	288.210	517.00	0.63	-0.43	0.69	1626616.78	337893.98	39°25'12.638"N	80°49'18.151"W	0.81	121.793	0.33	0.17	159.76
617.00	0.180	206.080	617.00	0.61	-0.50	0.41	1626616.50	337893.91	39°25'12.638"N	80°49'18.155"W	0.65	140.391	0.29	-0.07	-82.13
694.00	0.130	210.190	694.00	0.75	-0.69	0.32	1626616.41	337893.72	39°25'12.636"N	80°49'18.156"W	0.76	155.128	0.07	-0.06	5.34
757.00	0.100	111.810	757.00	0.83	-0.77	0.33	1626616.42	337893.64	39°25'12.635"N	80°49'18.156"W	0.84	156.557	0.28	-0.05	-156.16
841.00	0.260	112.230	841.00	1.01	-0.87	0.58	1626616.67	337893.54	39°25'12.634"N	80°49'18.152"W	1.04	146.340	0.19	0.19	0.50
928.00	0.420	130.820	927.99	1.41	-1.15	1.00	1626617.09	337893.26	39°25'12.631"N	80°49'18.147"W	1.53	138.955	0.22	0.18	21.37
1014.00	0.430	130.590	1013.99	1.96	-1.57	1.48	1626617.57	337892.84	39°25'12.627"N	80°49'18.141"W	2.16	136.524	0.01	0.01	-0.27
1099.00	0.240	117.470	1098.99	2.36	-1.86	1.89	1626617.98	337892.55	39°25'12.624"N	80°49'18.136"W	2.65	134.550	0.24	-0.22	-15.44
1186.00	0.370	143.100	1185.99	2.76	-2.16	2.22	1626618.31	337892.25	39°25'12.621"N	80°49'18.131"W	3.10	134.333	0.21	0.15	29.46
1313.00	0.530	133.210	1312.98	3.67	-2.89	2.89	1626618.98	337891.52	39°25'12.614"N	80°49'18.123"W	4.09	135.047	0.14	0.13	-7.79
1442.00	0.640	141.830	1441.98	4.87	-3.87	3.77	1626619.86	337890.54	39°25'12.605"N	80°49'18.111"W	5.40	135.747	0.11	0.09	6.68
1569.00	0.630	157.080	1568.97	6.24	-5.07	4.48	1626620.57	337889.34	39°25'12.593"N	80°49'18.102"W	6.77	138.535	0.13	-0.01	12.01
1697.00	0.730	135.440	1696.96	7.67	-6.30	5.33	1626621.42	337888.11	39°25'12.581"N	80°49'18.091"W	8.25	139.784	0.21	0.08	-16.91
1781.00	0.810	139.130	1780.95	8.70	-7.13	6.09	1626622.18	337887.28	39°25'12.573"N	80°49'18.081"W	9.38	139.495	0.11	0.10	4.39
1866.00	1.030	145.060	1865.94	9.99	-8.21	6.92	1626623.01	337886.20	39°25'12.562"N	80°49'18.070"W	10.74	139.870	0.28	0.26	6.98
1950.00	0.990	144.610	1949.93	11.41	-9.42	7.77	1626623.86	337884.99	39°25'12.551"N	80°49'18.059"W	12.21	140.472	0.05	-0.05	-0.54
2035.00	0.770	150.020	2034.92	12.67	-10.51	8.48	1626624.57	337883.90	39°25'12.540"N	80°49'18.050"W	13.51	141.098	0.28	-0.26	6.36
2119.00	0.690	147.140	2118.91	13.72	-11.43	9.04	1626625.13	337882.98	39°25'12.531"N	80°49'18.043"W	14.57	141.652	0.10	-0.10	-3.43
2202.00	0.570	146.100	2201.91	14.60	-12.19	9.54	1626625.63	337882.22	39°25'12.523"N	80°49'18.036"W	15.48	141.947	0.15	-0.14	-1.25
2288.00	0.640	139.870	2287.90	15.46	-12.91	10.09	1626626.18	337881.50	39°25'12.516"N	80°49'18.029"W	16.39	141.995	0.11	0.08	-7.24
2373.00	0.550	146.270	2372.90	16.29	-13.61	10.62	1626626.71	337880.80	39°25'12.509"N	80°49'18.022"W	17.27	142.037	0.13	-0.11	7.53
2457.00	0.560	149.560	2456.89	17.08	-14.30	11.05	1626627.14	337880.11	39°25'12.503"N	80°49'18.016"W	18.08	142.302	0.04	0.01	3.92
2543.00	0.470	150.350	2542.89	17.84	-14.97	11.44	1626627.53	337879.44	39°25'12.496"N	80°49'18.011"W	18.84	142.613	0.10	-0.10	0.92
2628.00	0.320	151.450	2627.89	18.42	-15.48	11.73	1626627.82	337878.93	39°25'12.491"N	80°49'18.008"W	19.42	142.859	0.18	-0.18	1.29



# Actual Wellpath Report

SHR-31D-HSM AWP Proj: 17216'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	CNX GAS COMPANY, LLC	Slot	Slot D
Area	Tyler County, WV	Well	SHR-31D-HSM
Field	Tyler	Wellbore	SHR-31D-HSM AWB
Facility	SHR-31 Pad		

WELLPATH DATA (192 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]
2712.00	0.280	139.710	2711.89	18.84	-15.85	11.97	1626628.06	337878.56	39°25'12.488"N	80°49'18.004"W	19.86	142.928	0.09	-0.05	-13.98
2754.00	0.180	178.440	2753.89	19.00	-15.99	12.04	1626628.13	337878.42	39°25'12.486"N	80°49'18.004"W	20.02	143.021	0.43	-0.24	92.21
2839.00	1.150	104.390	2838.88	19.59	-16.34	12.87	1626628.96	337878.07	39°25'12.483"N	80°49'17.993"W	20.80	141.767	1.31	1.14	-87.12
2922.00	2.560	97.390	2921.84	20.86	-16.78	15.52	1626631.61	337877.63	39°25'12.479"N	80°49'17.959"W	22.86	137.245	1.72	1.70	-8.43
3008.00	3.880	97.030	3007.70	22.96	-17.39	20.31	1626636.40	337877.03	39°25'12.474"N	80°49'17.898"W	26.73	130.565	1.54	1.53	-0.42
3093.00	5.200	94.690	3092.43	25.73	-18.05	27.00	1626643.09	337876.36	39°25'12.468"N	80°49'17.813"W	32.48	123.765	1.57	1.55	-2.75
3177.00	6.830	94.020	3175.96	29.16	-18.71	35.78	1626651.87	337875.70	39°25'12.463"N	80°49'17.701"W	40.38	117.611	1.94	1.94	-0.80
3262.00	8.770	97.860	3260.17	33.99	-19.95	47.24	1626663.33	337874.46	39°25'12.452"N	80°49'17.554"W	51.28	112.899	2.36	2.28	4.52
3346.00	10.400	100.160	3343.00	40.50	-22.17	61.05	1626677.14	337872.24	39°25'12.432"N	80°49'17.378"W	64.95	109.957	1.99	1.94	2.74
3431.00	11.900	101.620	3426.39	48.61	-25.29	77.19	1626693.27	337869.13	39°25'12.404"N	80°49'17.172"W	81.22	108.139	1.80	1.76	1.72
3516.00	13.510	100.040	3509.31	57.78	-28.78	95.55	1626711.63	337865.63	39°25'12.372"N	80°49'16.937"W	99.79	106.764	1.94	1.89	-1.86
3601.00	18.060	97.030	3591.08	68.25	-32.13	118.41	1626734.50	337862.28	39°25'12.342"N	80°49'16.645"W	122.69	105.180	5.44	5.35	-3.54
3687.00	21.290	100.560	3672.06	81.64	-36.62	147.00	1626763.08	337857.79	39°25'12.302"N	80°49'16.280"W	151.49	103.989	4.00	3.76	4.10
3770.00	23.130	102.920	3748.90	97.52	-43.03	177.71	1626793.79	337851.38	39°25'12.243"N	80°49'15.888"W	182.84	103.611	2.46	2.22	2.84
3854.00	25.270	104.300	3825.51	115.89	-51.15	211.16	1626827.24	337843.27	39°25'12.168"N	80°49'15.460"W	217.27	103.616	2.63	2.55	1.64
3939.00	27.080	106.420	3901.79	136.86	-61.10	247.31	1626863.38	337833.31	39°25'12.075"N	80°49'14.998"W	254.74	103.877	2.40	2.13	2.49
4023.00	29.180	110.360	3975.87	160.73	-73.63	284.85	1626900.93	337820.78	39°25'11.956"N	80°49'14.517"W	294.21	104.493	3.34	2.50	4.69
4109.00	31.090	109.320	4050.25	187.57	-88.27	325.47	1626941.54	337806.14	39°25'11.817"N	80°49'13.997"W	337.22	105.175	2.30	2.22	-1.21
4194.00	30.520	107.400	4123.25	213.76	-101.99	366.77	1626982.84	337792.43	39°25'11.688"N	80°49'13.468"W	380.69	105.540	1.34	-0.67	-2.26
4277.00	30.180	104.730	4194.88	237.62	-113.60	407.06	1627023.13	337780.82	39°25'11.579"N	80°49'12.952"W	422.62	105.592	1.68	-0.41	-3.22
4364.00	31.170	108.190	4269.71	263.14	-126.19	449.61	1627065.67	337768.23	39°25'11.461"N	80°49'12.408"W	466.98	105.677	2.33	1.14	3.98
4450.00	30.780	108.430	4343.45	289.73	-140.09	491.63	1627107.69	337754.33	39°25'11.329"N	80°49'11.870"W	511.20	105.905	0.48	-0.45	0.28
4535.00	29.820	106.780	4416.84	315.08	-153.07	532.50	1627148.56	337741.35	39°25'11.207"N	80°49'11.347"W	554.06	106.037	1.49	-1.13	-1.94
4619.00	29.330	104.990	4489.90	338.56	-164.42	572.37	1627188.43	337730.00	39°25'11.101"N	80°49'10.837"W	595.51	106.027	1.20	-0.58	-2.13
4706.00	28.690	104.050	4565.98	361.63	-175.00	613.21	1627229.26	337719.42	39°25'11.002"N	80°49'10.314"W	637.69	105.928	0.90	-0.74	-1.08
4792.00	28.140	103.390	4641.62	383.52	-184.71	652.96	1627269.02	337709.71	39°25'10.912"N	80°49'09.806"W	678.59	105.795	0.74	-0.64	-0.77
4879.00	29.250	104.390	4717.93	405.98	-194.74	693.51	1627309.56	337699.68	39°25'10.819"N	80°49'09.288"W	720.33	105.685	1.39	1.28	1.15
4964.00	30.010	107.150	4791.82	429.72	-206.17	733.94	1627349.99	337688.25	39°25'10.712"N	80°49'08.770"W	762.35	105.691	1.84	0.89	3.25
5050.00	30.110	109.560	4866.26	455.63	-219.74	774.82	1627390.87	337674.69	39°25'10.584"N	80°49'08.247"W	805.37	105.833	1.41	0.12	2.80
5135.00	30.160	109.320	4939.77	481.93	-233.94	815.06	1627431.10	337660.48	39°25'10.449"N	80°49'07.732"W	847.97	106.015	0.15	0.06	-0.28

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Operator	CNX GAS COMPANY, LLC	Area	Tyler County, WV	Field	Tyler	Facility	SHR-31 Pad
Slot	Slot D	Well	SHR-31D-HSM	Wellbore	SHR-31D-HSM AWB		

WELLPATH DATA (192 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)	(ft)	(°)	(ft/100ft)	(ft/100ft)	(ft/100ft)
5220.00	107.910	5013.10	507.94	-247.65	855.79	1627471.83	337646.77	39.2510.319	80°49'07.210	890.90	106.140	0.98	0.51	-1.66	0.27
5305.00	106.960	5086.21	533.45	-260.64	897.15	1627513.19	337633.78	39.2510.197	80°49'06.681	934.25	106.200	0.60	0.19	-1.12	0.27
5388.00	105.860	5157.30	558.04	-272.74	938.26	1627554.29	337621.68	39.2510.083	80°49'06.155	977.09	106.209	1.05	0.80	-1.33	0.27
5472.00	104.660	5228.82	582.60	-284.34	980.76	1627596.80	337610.09	39.2509.975	80°49'05.611	1021.14	106.168	0.92	0.54	-1.43	0.27
5557.00	104.440	5301.45	606.76	-295.43	1023.50	1627639.54	337598.99	39.2509.872	80°49'05.064	1065.29	106.101	1.32	-1.32	-0.26	0.27
5640.00	104.180	5372.88	629.74	-305.88	1064.46	1627680.49	337588.55	39.2509.774	80°49'04.541	1107.54	106.032	0.34	-0.30	-0.31	0.27
5725.00	105.830	5446.32	653.43	-316.95	1105.79	1627721.82	337577.48	39.2509.671	80°49'04.012	1150.31	105.994	1.16	-0.62	-1.94	0.27
5810.00	107.140	5520.42	677.37	-328.76	1145.72	1627761.74	337565.67	39.2509.560	80°49'03.501	1191.95	106.011	1.65	-1.47	-1.54	0.27
5896.00	108.110	5596.16	701.45	-341.09	1184.55	1627800.57	337553.34	39.2509.444	80°49'03.004	1232.68	106.064	1.13	-1.00	-1.13	0.27
5982.00	108.520	5672.01	725.81	-353.83	1223.02	1627839.05	337540.60	39.2509.323	80°49'02.512	1273.18	106.135	0.66	0.62	-0.48	0.27
6066.00	106.840	5745.87	749.49	-365.98	1261.15	1627877.17	337528.45	39.2509.209	80°49'02.024	1313.18	106.182	0.97	-0.17	-2.00	0.27
6151.00	105.100	5821.10	771.96	-376.88	1299.17	1627915.19	337517.55	39.2509.107	80°49'01.537	1352.73	106.177	2.07	-1.84	-2.05	0.27
6235.00	105.320	5896.16	792.95	-386.77	1335.56	1627951.57	337507.66	39.2509.014	80°49'01.072	1390.43	106.151	0.70	-0.69	-0.26	0.27
6321.00	107.400	5972.50	815.67	-397.94	1373.54	1627989.55	337496.49	39.2508.909	80°49'00.586	1430.02	106.157	2.65	2.41	-2.42	0.27
6360.00	107.580	6006.79	826.61	-403.52	1391.24	1628007.26	337490.91	39.2508.857	80°49'00.359	1448.68	106.175	0.24	-0.10	-0.46	0.27
6411.00	106.660	6301.39	841.06	-410.80	1414.88	1628030.89	337483.63	39.2508.788	80°49'00.056	1473.31	106.190	2.51	-1.80	-1.80	0.27
6505.00	106.470	6133.67	867.25	-423.76	1458.46	1628074.47	337470.67	39.2508.666	80°48'59.499	1518.77	106.202	1.46	-1.46	-0.20	0.27
6599.00	108.240	6216.36	893.51	-437.10	1501.11	1628117.12	337457.34	39.2508.541	80°48'58.953	1563.46	106.235	0.95	0.32	1.88	0.27
6693.00	107.310	6296.55	922.54	-452.02	1547.76	1628163.76	337442.42	39.2508.400	80°48'58.356	1612.41	106.280	6.14	6.12	-0.99	0.27
6787.00	106.400	6371.08	955.71	-468.57	1602.52	1628218.52	337425.86	39.2508.244	80°48'57.655	1669.62	106.299	6.88	6.85	-0.97	0.27
6881.00	105.050	6439.11	992.73	-486.67	1664.74	1628260.74	337407.77	39.2508.075	80°48'56.859	1734.42	106.296	6.12	6.12	-0.37	0.27
6975.00	105.960	6500.07	1033.35	-506.38	1733.47	1628349.46	337388.06	39.2507.890	80°48'55.980	1805.91	106.284	6.53	6.53	-0.10	0.27
7068.00	112.630	6554.72	1079.62	-531.30	1804.41	1628420.40	337363.14	39.2507.654	80°48'55.071	1881.00	106.407	6.55	3.04	7.17	0.27
7162.00	121.740	6605.36	1136.42	-567.56	1874.70	1628490.69	337326.88	39.2507.306	80°48'54.169	1958.73	106.843	9.21	4.27	9.69	0.27
7256.00	134.050	6649.48	1205.61	-618.59	1939.91	1628555.90	337275.85	39.2506.811	80°48'53.328	2036.15	107.686	12.84	5.60	13.10	0.27
7350.00	143.130	6685.14	1285.72	-683.81	1997.24	1628613.22	337210.63	39.2506.174	80°48'52.586	2111.06	108.900	11.00	6.41	9.66	0.27
7444.00	148.510	6710.17	1372.92	-758.73	2048.02	1628663.99	337135.72	39.2505.441	80°48'51.925	2184.04	110.328	9.79	8.10	5.72	0.27
7537.00	155.220	6723.63	1463.58	-839.80	2091.32	1628707.29	337054.65	39.2504.646	80°48'51.358	2253.64	111.879	10.10	7.15	7.22	0.27
7632.00	159.480	6728.61	1558.18	-927.32	2127.83	1628743.80	336967.14	39.2503.787	80°48'50.877	2321.12	113.548	6.12	4.18	4.48	0.27
7726.00	160.050	6730.08	1652.13	-1015.51	2160.34	1628776.31	336878.96	39.2502.920	80°48'50.446	2387.12	115.177	0.66	0.27	0.61	0.27

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# Actual Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION			
Operator	CNX GAS COMPANY, LLC	Area	Tyler County, WV
Field	Tyler	Facility	SHR-31 Pad
Slot	Slot D	Well	SHR-31D-HSM
		Wellbore	SHR-31D-HSM AWB

WELLPATH DATA (192 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)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft/100ft)	(ft/100ft)	(ft/100ft)
7819.00	88.950	157.800	6731.55	1745.03	-1102.27	2193.77	1628809.74	336792.20	39°25'02.06"N	80°48'50.00"W	2455.13	116.677	2.44	-0.30	-2.42
7913.00	89.910	159.540	6732.49	1838.91	-1189.82	2227.96	1628843.93	336704.65	39°25'01.20"N	80°48'49.55"W	2525.77	118.104	2.11	1.02	1.85
8007.00	89.510	164.410	6732.97	1932.88	-1279.18	2257.04	1628873.01	336615.30	39°25'00.32"N	80°48'49.16"W	2594.33	119.543	5.20	-0.43	5.18
8101.00	90.580	168.090	6732.89	2026.52	-1370.47	2279.38	1628895.34	336524.01	39°24'59.42"N	80°48'48.86"W	2659.65	121.016	4.08	1.14	3.91
8195.00	90.890	164.440	6731.69	2120.15	-1461.76	2301.69	1628917.65	336432.73	39°24'58.53"N	80°48'48.56"W	2726.63	122.419	3.90	0.33	-3.88
8289.00	91.750	160.170	6729.52	2214.09	-1551.27	2330.25	1628946.21	336343.23	39°24'57.65"N	80°48'48.18"W	2799.37	123.652	4.63	0.91	-4.54
8383.00	89.720	155.280	6728.31	2307.86	-1638.22	2365.86	1628981.82	336256.28	39°24'56.79"N	80°48'47.71"W	2877.68	124.700	5.63	-2.16	-5.20
8478.00	88.620	155.620	6729.69	2402.34	-1724.62	2405.33	1629021.29	336169.89	39°24'55.94"N	80°48'47.19"W	2959.71	125.640	1.21	-1.16	0.36
8572.00	89.230	160.850	6731.45	2496.15	-1811.87	2440.17	1629056.12	336082.64	39°24'55.09"N	80°48'46.73"W	3039.29	126.595	5.60	0.65	5.56
8666.00	89.880	162.120	6732.18	2590.15	-1901.00	2470.01	1629085.97	335993.52	39°24'54.214"N	80°48'46.336"W	3116.85	127.583	1.52	0.69	1.35
8760.00	90.740	162.010	6731.67	2684.14	-1990.43	2498.96	1629114.91	335904.09	39°24'53.334"N	80°48'45.951"W	3194.78	128.537	0.92	0.91	-0.12
8854.00	91.790	161.360	6729.60	2778.11	-2079.64	2528.49	1629144.44	335814.88	39°24'52.457"N	80°48'45.558"W	3273.86	129.437	1.31	1.12	-0.69
8948.00	91.290	158.030	6727.07	2872.02	-2167.76	2561.09	1629177.04	335726.77	39°24'51.591"N	80°48'45.126"W	3355.35	130.245	3.58	-0.53	-3.54
9042.00	90.740	155.800	6725.41	2965.72	-2254.21	2597.94	1629213.89	335640.32	39°24'50.742"N	80°48'44.640"W	3439.59	130.948	2.44	-0.59	-2.37
9136.00	90.830	157.830	6724.12	3059.40	-2340.61	2634.94	1629250.89	335553.93	39°24'49.893"N	80°48'44.153"W	3524.40	131.615	2.16	0.10	2.16
9230.00	90.060	163.570	6723.39	3153.36	-2429.28	2666.00	1629281.94	335465.26	39°24'49.021"N	80°48'43.741"W	3606.80	132.340	6.16	-0.82	6.11
9324.00	90.060	162.240	6723.29	3247.32	-2519.13	2693.63	1629309.57	335375.42	39°24'48.138"N	80°48'43.372"W	3688.04	133.083	1.41	0.00	-1.41
9418.00	89.940	156.430	6723.29	3341.22	-2607.04	2726.79	1629342.73	335287.51	39°24'47.274"N	80°48'42.933"W	3772.54	133.714	6.18	-0.13	-6.18
9512.00	89.750	158.620	6723.54	3435.00	-2693.90	2762.72	1629378.66	335200.66	39°24'46.420"N	80°48'42.459"W	3858.72	134.277	2.34	-0.20	2.33
9606.00	90.000	163.650	6723.75	3528.97	-2782.82	2793.10	1629409.04	335111.74	39°24'45.546"N	80°48'42.056"W	3942.78	134.894	5.36	0.27	5.35
9700.00	88.980	169.300	6724.59	3622.56	-2874.17	2815.08	1629431.01	335020.40	39°24'44.646"N	80°48'41.759"W	4023.12	135.595	6.11	-1.09	6.01
9794.00	89.880	170.600	6725.52	3715.50	-2966.72	2831.48	1629447.42	334927.85	39°24'43.734"N	80°48'41.533"W	4101.06	136.336	1.68	0.96	1.38
9888.00	90.090	166.650	6725.55	3808.73	-3058.86	2850.02	1629465.95	334835.72	39°24'42.826"N	80°48'41.279"W	4180.81	137.024	4.21	0.22	-4.20
9982.00	90.090	167.810	6725.40	3902.24	-3150.53	2870.79	1629486.73	334744.05	39°24'41.923"N	80°48'40.998"W	4262.31	137.660	1.23	0.00	1.23
10076.00	89.780	165.600	6725.51	3995.83	-3242.00	2892.41	1629508.34	334652.58	39°24'41.022"N	80°48'40.705"W	4344.72	138.262	2.37	-0.33	-2.35
10170.00	89.970	158.680	6725.71	4089.76	-3331.42	2921.22	1629537.15	334563.17	39°24'40.143"N	80°48'40.322"W	4430.79	138.753	7.36	-0.20	-7.36
10264.00	90.150	156.780	6725.61	4183.57	-3418.40	2956.84	1629572.77	334476.19	39°24'39.289"N	80°48'39.852"W	4519.78	139.141	2.03	0.19	-2.02
10358.00	90.220	158.980	6725.31	4277.38	-3505.48	2992.24	1629608.16	334389.12	39°24'38.433"N	80°48'39.385"W	4608.89	139.516	2.34	0.07	2.34
10451.00	90.150	159.260	6725.01	4370.31	-3592.37	3025.38	1629641.31	334302.23	39°24'37.579"N	80°48'38.946"W	4696.60	139.897	0.31	-0.08	0.30
10545.00	90.430	161.648	6724.53	4464.29	-3680.95	3056.83	1629672.76	334213.67	39°24'36.708"N	80°48'38.529"W	4784.73	140.292	2.55	0.30	2.53

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# Actual Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION			
Operator	CNX GAS COMPANY, LLC	Area	Tyler County, WV
Field	Tyler	Facility	SHR-31 Pad
Slot	Slot D	Well	SHR-31D-HSM
		Wellbore	SHR-31D-HSM AWB

WELLPATH DATA (192 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)	(ft)	(°)	(ft/100ft)	(%/100ft)	(%/100ft)
10640.00	90.800	161.510	6723.51	4559.28	-3771.07	3086.86	1629702.78	334123.55	39°24'35.822"N	80°48'38.130"W	4873.36	140.698	0.41	0.39	-0.14
10733.00	89.880	156.170	6722.96	4652.16	-3857.77	3120.42	1629736.34	334036.86	39°24'34.970"N	80°48'37.686"W	4961.79	141.032	5.83	-0.99	-5.74
10827.00	89.690	157.860	6723.31	4745.88	-3944.30	3157.12	1629773.04	333950.33	39°24'34.120"N	80°48'37.203"W	5052.22	141.325	1.81	-0.20	1.80
10921.00	89.540	158.280	6723.95	4839.72	-4031.50	3192.23	1629808.14	333863.14	39°24'33.264"N	80°48'36.739"W	5142.30	141.627	0.47	-0.16	0.45
11015.00	89.540	157.110	6724.70	4933.62	-4118.46	3227.90	1629843.81	333776.18	39°24'32.409"N	80°48'36.269"W	5232.69	141.912	1.24	0.00	-1.24
11109.00	89.380	160.690	6725.59	5027.41	-4206.14	3261.73	1629877.65	333688.50	39°24'31.548"N	80°48'35.821"W	5322.64	142.207	3.81	-0.17	3.81
11203.00	89.570	162.780	6726.45	5121.40	-4295.39	3291.19	1629907.10	333599.25	39°24'30.670"N	80°48'35.429"W	5411.32	142.540	2.23	0.20	2.22
11297.00	89.630	163.190	6727.10	5215.36	-4385.28	3318.70	1629934.61	333509.38	39°24'29.786"N	80°48'35.062"W	5499.49	142.882	0.44	0.06	0.44
11391.00	90.370	164.560	6727.10	5309.27	-4475.57	3344.80	1629960.71	333419.08	39°24'28.897"N	80°48'34.713"W	5587.35	143.228	1.66	0.79	1.46
11485.00	89.510	163.510	6727.20	5403.17	-4565.95	3370.66	1629986.56	333328.71	39°24'28.008"N	80°48'34.367"W	5675.32	143.565	1.44	-0.91	-1.12
11579.00	90.000	164.610	6727.60	5497.06	-4656.33	3396.47	1630012.38	333238.34	39°24'27.118"N	80°48'34.021"W	5763.46	143.892	1.28	0.52	1.17
11673.00	89.940	164.410	6727.65	5590.92	-4746.92	3421.58	1630037.48	333147.76	39°24'26.227"N	80°48'33.685"W	5851.53	144.216	0.22	-0.06	-0.21
11767.00	90.060	161.880	6727.65	5684.87	-4836.87	3448.83	1630064.73	333057.81	39°24'25.341"N	80°48'33.321"W	5940.52	144.510	2.69	0.13	-2.69
11861.00	89.940	160.020	6727.65	5778.86	-4925.72	3479.51	1630095.41	332968.96	39°24'24.468"N	80°48'32.913"W	6030.73	144.763	1.98	-0.13	-1.98
11955.00	90.000	159.440	6727.70	5872.82	-5013.90	3512.08	1630127.97	332880.79	39°24'23.601"N	80°48'32.482"W	6121.59	144.990	0.62	0.06	-0.62
12049.00	90.030	158.380	6727.63	5966.74	-5101.60	3545.90	1630161.79	332793.09	39°24'22.739"N	80°48'32.035"W	6212.87	145.199	1.13	0.10	-1.13
12144.00	90.030	158.210	6727.53	6061.60	-5189.86	3581.03	1630196.93	332704.83	39°24'21.872"N	80°48'31.571"W	6305.43	145.394	0.19	-0.06	-0.18
12238.00	89.940	158.700	6727.55	6155.48	-5277.29	3615.55	1630231.44	332617.40	39°24'21.013"N	80°48'31.115"W	6397.04	145.584	0.53	-0.10	0.52
12331.00	89.910	159.490	6727.68	6248.40	-5364.17	3648.74	1630264.63	332530.53	39°24'20.159"N	80°48'30.676"W	6487.50	145.776	0.85	-0.03	0.85
12425.00	89.970	161.370	6727.77	6342.38	-5452.74	3680.22	1630296.11	332441.97	39°24'19.289"N	80°48'30.259"W	6578.48	145.983	2.00	0.06	2.00
12519.00	90.060	162.220	6727.75	6436.38	-5542.03	3709.59	1630325.47	332352.68	39°24'18.410"N	80°48'29.868"W	6668.97	146.203	0.91	0.10	0.90
12613.00	90.220	163.210	6727.52	6530.35	-5631.79	3737.52	1630353.40	332262.93	39°24'17.527"N	80°48'29.496"W	6759.15	146.430	1.07	0.17	1.05
12707.00	90.250	165.550	6727.13	6624.22	-5722.31	3762.83	1630378.71	332172.42	39°24'16.636"N	80°48'29.157"W	6848.62	146.672	2.49	0.03	2.49
12801.00	90.180	165.960	6726.78	6717.94	-5813.42	3785.96	1630401.84	332081.31	39°24'15.739"N	80°48'28.845"W	6937.53	146.926	0.44	-0.07	0.44
12895.00	90.180	162.510	6726.49	6811.81	-5903.87	3811.49	1630427.37	331990.87	39°24'14.849"N	80°48'28.503"W	7027.31	147.154	3.67	0.00	-3.67
12989.00	90.220	160.570	6726.16	6905.81	-5993.02	3841.25	1630457.13	331901.71	39°24'13.972"N	80°48'28.108"W	7118.40	147.342	2.06	0.04	-2.06
13082.00	90.340	162.040	6725.70	6998.80	-6081.11	3871.06	1630486.94	331813.63	39°24'13.106"N	80°48'27.711"W	7208.68	147.520	1.59	0.13	1.58
13177.00	90.430	162.700	6725.07	7093.78	-6171.65	3899.83	1630515.71	331723.10	39°24'12.216"N	80°48'27.328"W	7300.54	147.711	0.70	0.09	0.69
13270.00	90.340	163.820	6724.44	7186.73	-6260.70	3926.62	1630542.49	331634.05	39°24'11.339"N	80°48'26.971"W	7390.18	147.905	1.21	-0.10	1.20
13364.00	90.250	162.550	6723.96	7280.68	-6350.68	3953.81	1630569.68	331544.08	39°24'10.454"N	80°48'26.607"W	7480.89	148.094	1.35	-0.10	-1.35

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Operator	Area	Field	Facility
CNX GAS COMPANY, LLC	Tyler County, WV	Tyler	SHR-31 Pad
			Wellbore
			Well
			Slot
			Slot D

## REFERENCE WELLPATH IDENTIFICATION

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)	(ft)	(°)	(ft/100ft)	(ft/100ft)	(ft/100ft)
13458.00	159.550	6723.52	7374.67	-6439.58	3984.33	1630600.20	331455.19	39°24'09.580"N	80°48'26.202"W	7572.52	148.254	3.19	-3.19	0.03	-3.19
13552.00	158.030	6722.89	7468.57	-6527.20	4018.34	1630634.21	331367.56	39°24'08.719"N	80°48'25.753"W	7664.95	148.382	1.63	-1.62	0.22	-1.62
13646.00	158.830	6722.21	7562.44	-6614.62	4052.90	1630668.76	331280.15	39°24'07.860"N	80°48'25.296"W	7757.52	148.503	0.87	-0.85	0.16	0.85
13740.00	159.400	6721.60	7656.37	-6702.50	4086.26	1630702.13	331192.28	39°24'06.996"N	80°48'24.855"W	7849.90	148.631	0.81	0.81	0.06	0.81
13834.00	162.890	6720.82	7750.35	-6791.49	4116.49	1630732.35	331103.30	39°24'05.121"N	80°48'24.454"W	7941.65	148.779	3.51	3.51	0.16	3.51
13929.00	163.940	6719.73	7845.29	-6882.53	4143.60	1630759.46	331012.26	39°24'05.225"N	80°48'24.091"W	8033.59	148.950	1.13	0.23	0.16	1.11
14023.00	161.490	6718.72	7939.25	-6972.27	4171.53	1630787.39	330922.52	39°24'04.342"N	80°48'23.719"W	8124.91	149.108	2.63	-2.61	-0.33	-2.61
14117.00	159.390	6717.94	8033.23	-7060.84	4202.99	1630818.85	330833.96	39°24'03.472"N	80°48'23.302"W	8217.09	149.237	2.23	-2.23	0.03	-2.23
14210.00	159.340	6717.12	8126.16	-7147.87	4235.77	1630851.62	330746.93	39°24'02.616"N	80°48'22.868"W	8308.65	149.349	0.06	-0.05	0.03	-0.05
14304.00	160.470	6716.29	8220.13	-7236.14	4268.06	1630883.92	330658.67	39°24'01.749"N	80°48'22.441"W	8401.08	149.467	1.20	1.20	-0.03	1.20
14398.00	160.050	6715.82	8314.11	-7324.61	4299.81	1630915.66	330570.20	39°24'00.879"N	80°48'22.020"W	8493.43	149.586	0.62	-0.45	-0.43	-0.45
14492.00	163.780	6715.79	8408.09	-7413.95	4328.98	1630944.84	330480.86	39°24'00.000"N	80°48'21.632"W	8585.27	149.719	3.97	3.97	-0.16	3.97
14586.00	166.320	6715.82	8501.89	-7504.77	4353.23	1630969.08	330390.06	39°23'59.106"N	80°48'21.306"W	8675.95	149.884	2.70	2.70	0.10	2.70
14681.00	167.970	6715.72	8596.40	-7597.38	4374.37	1630990.22	330297.45	39°23'58.194"N	80°48'21.020"W	8766.71	150.068	1.74	1.74	0.06	1.74
14775.00	168.040	6715.08	8689.77	-7689.33	4393.90	1631009.75	330205.51	39°23'57.288"N	80°48'20.754"W	8856.19	150.255	0.63	0.63	0.07	0.63
14869.00	164.470	6713.72	8783.41	-7780.61	4416.23	1631032.08	330114.23	39°23'56.389"N	80°48'20.453"W	8946.56	150.421	3.81	-3.80	0.32	-3.80
14964.00	161.360	6712.17	8878.35	-7871.39	4444.13	1631059.98	330023.45	39°23'55.496"N	80°48'20.080"W	9039.31	150.551	3.27	-3.27	-0.09	-3.27
15057.00	159.370	6710.85	8971.32	-7958.97	4475.38	1631091.22	329935.87	39°23'54.635"N	80°48'19.666"W	9130.95	150.651	2.15	-2.14	-0.16	-2.14
15151.00	156.120	6709.77	9065.11	-8045.95	4510.97	1631126.82	329848.90	39°23'53.781"N	80°48'19.197"W	9224.22	150.723	3.46	-3.46	-0.17	-3.46
15245.00	155.570	6709.27	9158.75	-8132.05	4548.69	1631164.53	329762.80	39°23'52.935"N	80°48'18.700"W	9317.77	150.779	0.76	-0.59	0.48	-0.59
15339.00	158.960	6709.87	9252.55	-8219.06	4584.25	1631200.09	329675.81	39°23'52.080"N	80°48'18.231"W	9411.07	150.849	2.68	2.54	-0.85	2.54
15433.00	164.160	6710.71	9346.52	-8308.19	4613.98	1631229.81	329586.67	39°23'51.204"N	80°48'17.836"W	9503.41	150.954	5.56	5.53	0.55	5.53
15528.00	165.000	6710.38	9441.36	-8399.77	4639.24	1631255.07	329495.10	39°23'50.302"N	80°48'17.498"W	9595.76	151.088	1.30	0.95	0.88	0.95
15621.00	162.490	6709.25	9534.27	-8489.04	4665.26	1631281.10	329405.83	39°23'49.424"N	80°48'17.150"W	9686.51	151.208	2.70	-2.70	0.10	-2.70
15715.00	163.990	6708.50	9628.22	-8579.04	4692.37	1631308.20	329315.84	39°23'48.538"N	80°48'16.788"W	9778.46	151.323	1.70	-1.60	-0.60	1.60
15809.00	165.040	6707.77	9722.07	-8669.63	4717.46	1631333.29	329225.26	39°23'47.647"N	80°48'16.451"W	9870.00	151.448	1.25	0.56	1.12	0.56
15903.00	163.340	6706.17	9815.94	-8760.05	4743.07	1631358.90	329134.84	39°23'46.757"N	80°48'16.108"W	9961.69	151.567	1.89	-1.81	0.55	-1.81
15997.00	160.060	6704.30	9909.91	-8849.27	4772.57	1631388.40	329045.63	39°23'45.879"N	80°48'15.716"W	10054.20	151.661	3.49	-3.49	-0.19	-3.49
16091.00	157.940	6703.49	10003.82	-8937.02	4806.26	1631422.08	328957.88	39°23'45.017"N	80°48'15.271"W	10147.43	151.729	2.55	-2.26	-1.18	-2.26
16185.00	157.710	6703.54	10097.64	-9024.06	4841.74	1631457.56	328870.84	39°23'44.162"N	80°48'14.803"W	10240.90	151.785	0.25	0.06	-0.24	0.06

## WELLPATH DATA (192 stations)

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# Actual Wellpath Report

SHR-31D-HSM AWP Proj: 17216'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	CNX GAS COMPANY, LLC	Slot	Slot D
Area	Tyler County, WV	Well	SHR-31D-HSM
Field	Tyler	Wellbore	SHR-31D-HSM AWB
Facility	SHR-31 Pad		

WELLPATH DATA (192 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]	
16279.00	89.940	160.410	6703.59	10191.55	-9111.85	4875.33	1631491.15	328783.06	39°23'43.299"N	80°48'14.359"W	10334.15	151.851	2.87	-0.06	2.87	
16373.00	89.910	160.710	6703.71	10285.54	-9200.49	4906.61	1631522.43	328694.43	39°23'42.428"N	80°48'13.944"W	10427.07	151.929	0.32	-0.03	0.32	
16467.00	90.580	157.660	6703.31	10379.46	-9288.34	4940.01	1631555.83	328606.58	39°23'41.564"N	80°48'13.502"W	10520.31	151.994	3.32	0.71	-3.24	
16561.00	89.510	158.240	6703.24	10473.29	-9375.46	4975.30	1631591.12	328519.46	39°23'40.708"N	80°48'13.037"W	10613.81	152.046	1.29	-1.14	0.62	
16654.00	88.920	158.620	6704.51	10566.16	-9461.94	5009.49	1631625.30	328432.99	39°23'39.859"N	80°48'12.586"W	10706.23	152.102	0.75	-0.63	0.41	
16748.00	89.200	161.610	6706.05	10660.11	-9550.32	5041.45	1631657.26	328344.62	39°23'38.990"N	80°48'12.162"W	10799.29	152.171	3.19	0.30	3.18	
16842.00	90.740	164.630	6706.10	10754.05	-9640.25	5068.74	1631684.55	328254.69	39°23'38.105"N	80°48'11.798"W	10891.58	152.265	3.61	1.64	3.21	
16936.00	90.770	165.220	6704.86	10847.86	-9731.01	5093.19	1631709.00	328163.93	39°23'37.212"N	80°48'11.470"W	10983.31	152.373	0.63	0.03	0.63	
17029.00	90.770	163.910	6703.61	10940.71	-9820.65	5117.94	1631733.74	328074.30	39°23'36.329"N	80°48'11.138"W	11074.22	152.474	1.41	0.00	-1.41	
17124.00	90.000	162.110	6702.98	11035.66	-9911.49	5145.69	1631761.50	327983.46	39°23'35.435"N	80°48'10.768"W	11167.62	152.563	2.06	-0.81	-1.89	
17191.00	89.970	160.880	6702.99	11102.66	-9975.03	5166.96	1631782.76	327919.93	39°23'34.811"N	80°48'10.485"W	11233.82	152.616	1.84	-0.04	-1.84	
17216.00	89.970	160.880	6703.01	11127.66	-9998.65	5175.15	1631790.95	327896.31	39°23'34.578"N	80°48'10.377"W	11258.56	152.635	0.00	0.00	0.00	

HOLE & CASING SECTIONS - Ref Wellbore: SHR-31D-HSM AWB Ref Wellpath: SHR-31D-HSM AWP Proj: 17216'										
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]	
24in Open Hole	29.00	129.00	100.00	29.00	129.00	0.00	0.00	0.08	0.13	
20in Conductor	29.00	129.00	100.00	29.00	129.00	0.00	0.00	0.08	0.13	
17.5in Open Hole	129.00	684.00	555.00	129.00	684.00	0.08	0.13	-0.67	0.33	
13.375in Casing Surface	29.00	684.00	655.00	29.00	684.00	0.00	0.00	-0.67	0.33	
12.25in Open Hole	684.00	2712.00	2028.00	684.00	2711.89	-0.67	0.33	-15.85	11.97	
9.625in Casing Intermediate	29.00	2712.00	2683.00	29.00	2711.89	0.00	0.00	-15.85	11.97	
8.75in Open Hole	2712.00	6433.00	3721.00	2711.89	6070.55	-15.85	11.97	-413.90	1425.25	
8.5in Open Hole	6433.00	17216.00	10783.00	6070.55	6703.01	-413.90	1425.25	-9998.65	5175.15	
5.5in Casing Production	29.00	17216.00	17187.00	29.00	6703.01	0.00	0.00	-9998.65	5175.15	

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# Actual Wellpath Report

SHR-31D-HSM AWP Proj: 17216'

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## REFERENCE WELLPATH IDENTIFICATION

Operator	CNX GAS COMPANY, LLC	Slot	Slot D
Area	Tyler County, WV	Well	SHR-31D-HSM
Field	Tyler	Wellbore	SHR-31D-HSM AWB
Facility	SHR-31 Pad		

## TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SHR-31D-HSM BHL Rev-4	6727.00	-9996.39	5181.25	1631797.06	327898.57	39°23'34.602"N	80°48'10.299"W	point
SHR-31D-HSM LP Rev-4	6727.00	-913.86	2121.02	1628736.99	336980.60	39°25'03.919"N	80°48'50.966"W	point
SHR-31 Unleased Tract	6950.40	-25.30	-53.77	1626562.32	337869.11	39°25'12.385"N	80°49'18.840"W	polygon
SHR-31 Lease Line Rev-2	7000.40	-25.30	-53.77	1626562.32	337869.11	39°25'12.385"N	80°49'18.840"W	polygon

## WELLPATH COMPOSITION - Ref Wellbore: SHR-31D-HSM AWB Ref Wellpath: SHR-31D-HSM AWP Proj: 17216'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
29.00	694.00	VESSI GyroFlex v4	01_VES Gyro <17-1/2"> (100'-677')	SHR-31D-HSM AWB
694.00	2754.00	OWSG MWD rev2 - Standard	02_QES MWD <12-1/4"> (677')(740'-2737')	SHR-31D-HSM AWB
2754.00	6360.00	OWSG MWD rev2 - Standard	03_QES MWD <8-3/4"> (2737')(2822'-6343')	SHR-31D-HSM AWB
6360.00	17191.00	BHI AutoTrak Curve (Short)	04_BH AT Curve <8-1/2"> (6360')(6411'-17191')	SHR-31D-HSM AWB
17191.00	17216.00	Blind Drilling (std)	Projection to bit	SHR-31D-HSM AWB

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# Actual Wellpath Report

SHR-31D-HSM AWP Proj: 17216'

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## REFERENCE WELLPATH IDENTIFICATION

Operator	CNX GAS COMPANY, LLC	Slot	Slot D
Area	Tyler County, WV	Well	SHR-31D-HSM
Field	Tyler	Wellbore	SHR-31D-HSM AWB
Facility	SHR-31 Pad		

## COMMENTS

### Wellpath general comments

API: 47-095-02491-0000  
 BH Job #: 9204173  
 Rig: Patterson 278  
 Duration: 6/30/2018-7/4/2018  
 VES Gyro <17'-1/2"> (100'-677')  
 QES MWD <12'-1/4"> (677')(740'-2737')  
 QES MWD <8'-3/4"> (2737')(2822'-6343')  
 BH AT Curve <8'-1/2"> (6343')(6411'-17191')  
 Projected MD at TD: 17216'

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