



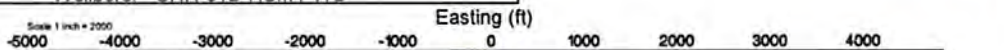
# CNX GAS COMPANY, LLC



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

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

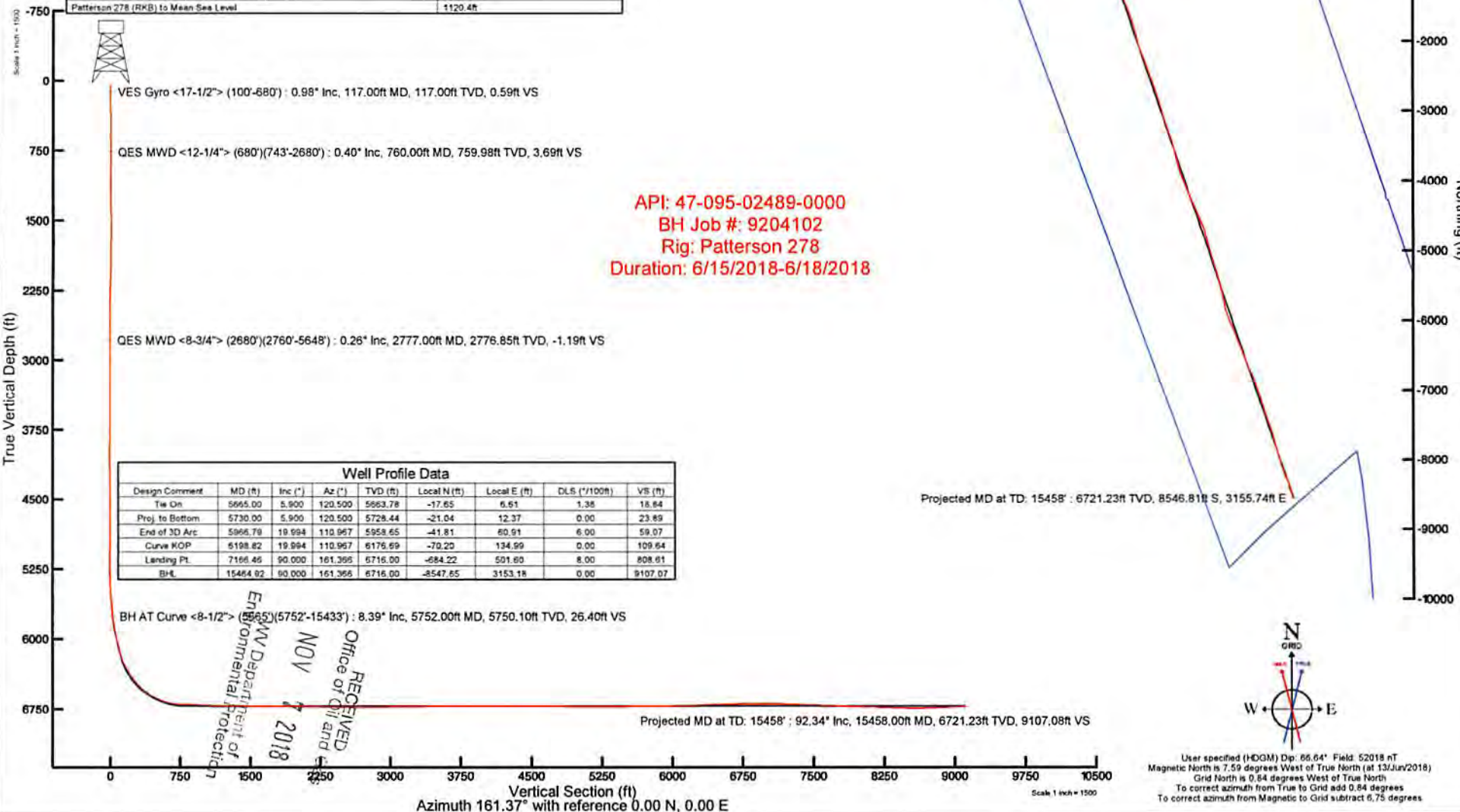
File reference wellpath is SHR-31B-HSM PWB Row-B.1	Grid System: NAD27 / Lambert West Virginia SP, Northern Zone (472), US feet
True vertical depths are referenced to Patterson 278 (RKB)	North Reference: Grid north
Measured depths are referenced to Patterson 278 (RKB)	Scale: True distance
Patterson 278 (RKB) to Mean Sea Level: 1120.4 feet	Depth are in feet
Mean Sea Level to Ground level (At Slot: Slot B): -1091.4 feet	Created by: mhwjw on 2018-06-20
Coordinates are in feet referenced to Slot B	Database: WIA_MPL_EASTERNUS.Dbt



Scale 1 inch = 2000

VES Gyro <17-1/2"> (100'-680') : 117.00ft TVD, 0.71ft S, 0.26ft W  
 QES MWD <12-1/4"> (680')(743'-2680') : 759.98ft TVD, 4.45ft S, 1.66ft W  
 QES MWD <8-3/4"> (2680')(2760'-5648') : 2776.85ft TVD, 1.02ft N, 0.70ft W  
 BH AT Curve <8-1/2"> (5665')(5752'-15433') : 5750.10ft TVD, 22.36ft S, 16.30ft E

Location Information				
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
SHR-31 Pad	162656.880	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)
Slot B	27.61	23.50	1626580.380	337877.960
Patterson 278 (RKB) to Ground level (At Slot: Slot B)			29ft	
Mean Sea Level to Ground level (At Slot: Slot B)			-1091.4ft	
Patterson 278 (RKB) to Mean Sea Level			1120.4ft	



API: 47-095-02489-0000  
 BH Job #: 9204102  
 Rig: Patterson 278  
 Duration: 6/15/2018-6/18/2018

Well Profile Data							
Design Comment	MD (ft)	Inc (")	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	VS (ft)
Tie On	5665.00	5.900	120.500	5863.78	-17.65	6.61	18.84
Proj. to Bottom	5730.00	5.900	120.500	5728.44	-21.04	12.37	23.49
End of 3D Arc	5966.79	10.994	110.967	5958.65	-41.81	60.91	59.07
Curve KOP	6198.82	19.994	110.967	6176.89	-70.20	134.99	109.64
Landing Pt.	7166.46	90.000	161.366	6716.00	-684.22	501.60	808.61
BH	15464.92	90.000	161.366	6716.00	-8547.65	3153.18	9107.07

BH AT Curve <8-1/2"> (5665')(5752'-15433') : 8.39" Inc, 5752.00ft MD, 5750.10ft TVD, 26.40ft VS

Projected MD at TD: 15458' : 92.34" Inc, 15458.00ft MD, 6721.23ft TVD, 9107.08ft VS

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User specified (HDGM) Dip: 66.64° Field: 52018 nT  
 Magnetic North is 7.59 degrees West of True North (at 13/Jun/2018)  
 Grid North is 0.64 degrees West of True North  
 To correct azimuth from True to Grid add 0.64 degrees  
 To correct azimuth from Magnetic to Grid subtract 6.75 degrees



# Actual Wellpath Report

SHR-31B-HSM AWP Proj: 15458'

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HUGHES**  
a GE company



## REFERENCE WELLPATH IDENTIFICATION

Operator	CNX GAS COMPANY, LLC	Slot	Slot B
Area	Tyler County, WV	Well	SHR-31B-HSM
Field	Tyler	Wellbore	SHR-31B-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	20/Jun/2018 at 09:00
Convergence at slot	0.84° West	Database/Source file	WA_MPL_EASTERNUS_Defn/SHR-31B-HSM_AWP_Proj_15458_.xml

## WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	27.61	23.50	1626580.38	337877.96	39°25'12.475"N	80°49'18.612"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 B)	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	161.37°





# Actual Wellpath Report

SHR-31B-HSM AWP Proj: 15458



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

WELLPATH DATA (183 stations) † = interpolated/extrapolated station												
MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	DLS
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(US ft)	(US ft)	(°N)	(°W)	(ft)	(ft)
0.00	0.00	200.180	0.00	0.00	0.00	0.00	1625580.38	337877.96	39°25'12.475"N	80°49'18.612"W	0.00	0.00
29.00	0.00	200.180	29.00	0.00	0.00	0.00	1625580.38	337877.96	39°25'12.475"N	80°49'18.612"W	0.00	0.00
117.00	0.980	200.180	117.00	0.59	-0.71	-0.26	1626580.12	337877.25	39°25'12.468"N	80°49'18.615"W	0.75	1.11
217.00	0.130	182.950	216.99	1.36	-1.62	-0.56	1626579.82	337876.34	39°25'12.459"N	80°49'18.619"W	1.72	0.86
317.00	0.300	163.060	316.99	1.73	-1.99	-0.49	1626579.89	337875.97	39°25'12.455"N	80°49'18.618"W	2.05	0.18
417.00	0.330	167.160	416.99	2.27	-2.52	-0.35	1626580.03	337875.44	39°25'12.450"N	80°49'18.616"W	2.54	0.04
517.00	0.590	227.770	516.99	2.77	-3.14	-0.67	1626579.71	337874.82	39°25'12.444"N	80°49'18.620"W	3.21	0.26
617.00	0.410	212.020	616.98	3.20	-3.79	-1.24	1626579.14	337874.17	39°25'12.437"N	80°49'18.627"W	3.99	0.22
697.00	0.220	214.030	696.98	3.47	-4.16	-1.48	1626578.90	337873.80	39°25'12.433"N	80°49'18.630"W	4.42	0.24
760.00	0.400	211.900	759.98	3.69	-4.45	-1.66	1626578.72	337873.51	39°25'12.430"N	80°49'18.632"W	4.75	0.29
804.00	0.390	198.660	803.98	3.90	-4.72	-1.79	1626578.59	337873.24	39°25'12.428"N	80°49'18.634"W	5.05	0.21
845.00	0.300	180.120	844.98	4.12	-4.96	-1.83	1626578.55	337873.00	39°25'12.425"N	80°49'18.634"W	5.29	0.35
888.00	0.350	199.340	887.98	4.33	-5.20	-1.88	1626578.50	337872.76	39°25'12.423"N	80°49'18.636"W	5.53	0.28
932.00	0.260	208.070	931.98	4.50	-5.41	-1.97	1626578.41	337872.55	39°25'12.421"N	80°49'18.636"W	5.76	0.23
976.00	0.320	187.640	975.98	4.68	-5.62	-2.03	1626578.35	337872.34	39°25'12.419"N	80°49'18.637"W	5.98	0.27
1017.00	0.100	205.600	1016.98	4.81	-5.77	-2.06	1626578.32	337872.19	39°25'12.417"N	80°49'18.637"W	6.13	0.55
1059.00	0.370	195.210	1058.97	4.95	-5.93	-2.11	1626578.27	337872.03	39°25'12.416"N	80°49'18.638"W	6.30	0.65
1102.00	0.260	226.850	1101.97	5.10	-6.13	-2.22	1626578.16	337871.83	39°25'12.414"N	80°49'18.639"W	6.52	0.47
1144.00	0.320	182.680	1143.97	5.25	-6.32	-2.30	1626578.08	337871.64	39°25'12.412"N	80°49'18.640"W	6.72	0.54
1186.00	0.330	189.910	1185.97	5.47	-6.55	-2.32	1626578.06	337871.41	39°25'12.410"N	80°49'18.640"W	6.95	0.10
1228.00	0.410	195.630	1227.97	5.70	-6.82	-2.38	1626578.00	337871.14	39°25'12.407"N	80°49'18.641"W	7.22	0.21
1271.00	0.280	160.250	1270.97	5.93	-7.06	-2.39	1626577.99	337870.90	39°25'12.405"N	80°49'18.641"W	7.46	0.57
1313.00	0.260	175.640	1312.97	6.12	-7.26	-2.35	1626578.03	337870.71	39°25'12.403"N	80°49'18.640"W	7.63	0.18
1343.00	0.390	137.900	1342.97	6.28	-7.40	-2.27	1626578.11	337870.56	39°25'12.401"N	80°49'18.639"W	7.74	0.81
1385.00	0.300	134.340	1384.97	6.51	-7.58	-2.10	1626578.28	337870.38	39°25'12.399"N	80°49'18.637"W	7.87	0.22
1427.00	0.480	139.220	1426.97	6.77	-7.79	-1.91	1626578.47	337870.17	39°25'12.397"N	80°49'18.635"W	8.02	0.44
1469.00	0.620	161.490	1468.97	7.16	-8.14	-1.72	1626578.66	337869.82	39°25'12.394"N	80°49'18.632"W	8.32	0.60
1512.00	0.810	144.460	1511.96	7.69	-8.61	-1.47	1626578.91	337869.35	39°25'12.389"N	80°49'18.629"W	8.73	0.66
1555.00	0.480	134.490	1554.96	8.14	-8.98	-1.16	1626579.22	337868.98	39°25'12.386"N	80°49'18.625"W	9.06	0.81
1597.00	0.600	39.750	1596.96	8.18	-8.94	-0.90	1626579.48	337869.02	39°25'12.386"N	80°49'18.622"W	8.98	1.90

1597.00 0.600 39.750 1596.96 8.18 -8.94 -0.90 1626579.48 337869.02 39°25'12.386"N 80°49'18.622"W 8.98 185.737 1.90 0.29 -225.57





# Actual Wellpath Report

SHR-31B-HSM AWP Proj: 15458



## REFERENCE WELLPATH IDENTIFICATION

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

## WELLPATH DATA (183 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)	(ft)	(%/100ft)	(%/100ft)
1682.00	1.340	23.980	1681.95	7.22	-7.69	-0.21	1626580.17	337870.27	39°25'12.399"N	80°49'18.613"W	7.69	181.560	0.92	0.87	-18.55
1767.00	1.160	26.300	1766.93	5.88	-6.01	0.58	1626580.96	337871.95	39°25'12.415"N	80°49'18.603"W	6.03	174.524	0.22	-0.21	2.73
1853.00	1.190	37.850	1852.91	4.77	-4.52	1.51	1626581.89	337873.44	39°25'12.430"N	80°49'18.592"W	4.77	161.536	0.28	0.03	13.43
1938.00	0.390	351.160	1937.90	3.99	-3.54	2.01	1626582.39	337874.42	39°25'12.440"N	80°49'18.586"W	4.07	150.439	1.14	-0.94	-54.93
2022.00	0.410	271.610	2021.90	3.61	-3.25	1.66	1626582.04	337874.71	39°25'12.443"N	80°49'18.590"W	3.65	152.890	0.61	0.02	-94.70
2106.00	0.550	316.250	2105.90	3.14	-2.95	1.08	1626581.46	337875.01	39°25'12.446"N	80°49'18.597"W	3.14	159.823	0.46	0.17	53.14
2190.00	1.110	344.600	2189.89	1.96	-1.87	0.59	1626580.97	337876.09	39°25'12.456"N	80°49'18.604"W	1.96	162.554	0.81	0.67	33.75
2275.00	1.080	342.330	2274.87	0.34	-0.31	0.13	1626580.51	337877.65	39°25'12.472"N	80°49'18.610"W	0.34	158.114	0.06	-0.04	-2.67
2359.00	0.920	351.090	2358.86	-1.12	1.11	-0.22	1626580.16	337879.07	39°25'12.486"N	80°49'18.615"W	1.13	348.832	0.26	-0.19	10.43
2444.00	0.430	331.930	2443.85	-2.10	2.06	-0.47	1626579.91	337880.02	39°25'12.495"N	80°49'18.618"W	2.12	347.048	0.63	-0.58	-22.54
2529.00	0.120	100.870	2528.85	-2.38	2.33	-0.54	1626579.84	337880.29	39°25'12.498"N	80°49'18.619"W	2.39	347.006	0.60	-0.36	151.69
2613.00	0.430	194.070	2612.85	-2.07	2.00	-0.53	1626579.85	337879.96	39°25'12.494"N	80°49'18.619"W	2.07	345.264	0.54	0.37	110.95
2697.00	0.390	176.340	2696.85	-1.53	1.41	-0.59	1626579.79	337879.37	39°25'12.489"N	80°49'18.620"W	1.53	337.492	0.16	-0.05	-21.11
2777.00	0.260	227.460	2776.85	-1.19	1.02	-0.70	1626579.68	337878.98	39°25'12.485"N	80°49'18.621"W	1.24	325.427	0.38	-0.16	63.90
2862.00	0.240	259.330	2861.85	-1.14	0.85	-1.02	1626579.36	337878.81	39°25'12.483"N	80°49'18.625"W	1.33	310.002	0.16	-0.02	37.49
2947.00	0.340	302.030	2946.85	-1.36	0.96	-1.41	1626578.97	337878.92	39°25'12.484"N	80°49'18.630"W	1.70	304.177	0.27	0.12	50.24
3032.00	0.180	321.100	3031.85	-1.68	1.19	-1.71	1626578.67	337879.15	39°25'12.486"N	80°49'18.634"W	2.08	304.987	0.21	-0.19	22.44
3118.00	0.220	324.390	3117.85	-1.96	1.43	-1.89	1626578.49	337879.39	39°25'12.489"N	80°49'18.636"W	2.37	307.221	0.05	0.05	3.83
3203.00	0.100	351.530	3202.84	-2.19	1.64	-1.99	1626578.39	337879.60	39°25'12.491"N	80°49'18.638"W	2.58	309.442	0.16	-0.14	31.93
3287.00	0.040	236.170	3286.84	-2.25	1.69	-2.03	1626578.35	337879.65	39°25'12.491"N	80°49'18.638"W	2.64	309.899	0.15	-0.07	-137.33
3372.00	0.260	239.170	3371.84	-2.22	1.58	-2.22	1626578.16	337879.54	39°25'12.490"N	80°49'18.640"W	2.72	305.464	0.26	0.12	3.53
3456.00	0.360	231.680	3455.84	-2.08	1.32	-2.59	1626577.79	337879.28	39°25'12.487"N	80°49'18.645"W	2.90	296.992	0.13	0.12	-8.92
3539.00	0.310	252.140	3538.84	-1.98	0.94	-3.43	1626576.95	337878.90	39°25'12.483"N	80°49'18.656"W	3.56	285.239	0.01	0.00	2.02
3623.00	0.420	269.010	3708.84	-2.08	0.86	-3.97	1626576.41	337878.82	39°25'12.483"N	80°49'18.663"W	4.06	282.204	0.18	0.13	19.62
3709.00	0.480	299.090	3794.84	-2.44	1.03	-4.60	1626575.78	337878.99	39°25'12.484"N	80°49'18.671"W	4.71	282.601	0.28	0.07	34.98
3795.00	0.590	302.570	3878.83	-3.04	1.43	-5.27	1626575.11	337879.39	39°25'12.488"N	80°49'18.679"W	5.46	285.198	0.14	0.13	4.14
3879.00	0.550	301.070	3962.83	-3.69	1.87	-5.98	1626574.40	337879.83	39°25'12.492"N	80°49'18.688"W	6.27	287.386	0.05	-0.05	-1.79
3963.00	0.200	277.150	4046.83	-4.06	2.10	-6.47	1626573.91	337880.06	39°25'12.495"N	80°49'18.695"W	6.81	287.970	0.45	-0.42	-28.48
4133.00	0.670	136.070	4132.82	-3.67	1.76	-6.27	1626574.11	337879.72	39°25'12.491"N	80°49'18.692"W	6.52	285.638	0.97	0.55	-164.05





# Actual Wellpath Report

SHR-31B-HSM AWP Proj: 15458'

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WV Department of Environmental Protection



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

WELLPATH DATA (183 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]	
4217.00	0.710	121.770	4216.82	-2.82	1.13	-5.49	1626574.89	337879.09	39°25'12.485"N	80°49'18.682"W	5.61	281.614	0.21	0.05	-17.02	
4303.00	0.650	112.590	4302.81	-2.09	0.66	-4.59	1626575.79	337878.62	39°25'12.481"N	80°49'18.670"W	4.63	278.194	0.14	-0.07	-10.67	
4387.00	0.640	104.790	4386.81	-1.52	0.36	-3.69	1626576.69	337878.32	39°25'12.478"N	80°49'18.659"W	3.71	275.533	0.11	-0.01	-9.29	
4471.00	0.360	105.260	4470.80	-1.11	0.17	-2.99	1626577.39	337878.13	39°25'12.476"N	80°49'18.650"W	2.99	273.232	0.33	-0.33	0.56	
4558.00	0.110	79.960	4557.80	-0.95	0.11	-2.64	1626577.74	337878.07	39°25'12.475"N	80°49'18.645"W	2.64	272.412	0.30	-0.29	-29.08	
4644.00	0.220	268.670	4643.80	-0.99	0.12	-2.72	1626577.66	337878.08	39°25'12.476"N	80°49'18.647"W	2.73	272.560	0.38	0.13	-199.17	
4731.00	0.380	272.530	4730.80	-1.14	0.13	-3.18	1626577.20	337878.09	39°25'12.476"N	80°49'18.652"W	3.18	272.353	0.19	0.18	4.44	
4816.00	0.520	282.630	4815.80	-1.44	0.23	-3.84	1626576.54	337878.19	39°25'12.476"N	80°49'18.661"W	3.84	273.392	0.19	0.16	11.88	
4900.00	0.630	292.980	4899.80	-1.95	0.49	-4.63	1626575.75	337878.45	39°25'12.479"N	80°49'18.671"W	4.66	276.049	0.18	0.13	12.32	
4985.00	0.730	288.710	4984.79	-2.58	0.85	-5.58	1626574.80	337878.81	39°25'12.482"N	80°49'18.683"W	5.64	278.638	0.13	0.12	-5.02	
5071.00	1.100	290.050	5070.78	-3.43	1.31	-6.87	1626573.51	337879.27	39°25'12.487"N	80°49'18.700"W	6.99	280.761	0.43	0.43	1.56	
5156.00	1.010	280.950	5155.76	-4.31	1.73	-8.37	1626572.01	337879.69	39°25'12.491"N	80°49'18.719"W	8.55	281.660	0.22	-0.11	-10.71	
5242.00	0.860	225.230	5241.75	-4.40	1.42	-9.58	1626570.80	337879.38	39°25'12.487"N	80°49'18.734"W	9.68	278.420	1.03	-0.17	-64.79	
5328.00	1.730	166.240	5327.73	-2.82	-0.30	-9.73	1626570.66	337877.66	39°25'12.470"N	80°49'18.736"W	9.73	268.244	1.72	1.01	-68.59	
5413.00	3.170	147.630	5412.66	0.74	-3.53	-8.16	1626572.22	337874.43	39°25'12.439"N	80°49'18.715"W	8.89	246.613	1.91	1.69	-21.89	
5498.00	4.250	141.040	5497.48	5.97	-7.96	-4.92	1626575.46	337870.00	39°25'12.395"N	80°49'18.673"W	9.36	211.722	1.36	1.27	-7.75	
5582.00	5.360	130.810	5581.18	12.27	-12.95	0.00	1626580.38	337865.01	39°25'12.347"N	80°49'18.609"W	12.95	179.982	1.66	1.32	-12.18	
5665.00	5.900	120.500	5663.78	18.84	-17.65	6.61	1626586.99	337860.31	39°25'12.301"N	80°49'18.524"W	18.85	159.454	1.38	0.65	-12.42	
5752.00	8.390	112.610	5750.10	26.40	-22.36	16.33	1626596.71	337855.60	39°25'12.256"N	80°49'18.400"W	27.69	143.859	3.07	2.86	-9.07	
5846.00	14.020	110.960	5842.27	38.19	-29.07	33.31	1626613.68	337848.89	39°25'12.192"N	80°49'18.182"W	44.21	131.118	6.00	5.99	-1.76	
5941.00	17.460	114.230	5933.70	55.22	-39.04	57.06	1626637.43	337838.92	39°25'12.097"N	80°49'17.878"W	69.13	124.383	3.74	3.62	3.44	
6035.00	19.180	113.900	6022.93	75.25	-51.09	84.03	1626664.41	337826.88	39°25'11.982"N	80°49'17.532"W	98.34	121.296	1.83	1.83	-0.35	
6129.00	19.590	113.920	6111.60	96.35	-63.73	112.56	1626692.93	337814.23	39°25'11.861"N	80°49'17.166"W	129.35	119.519	0.44	0.44	0.02	
6223.00	21.900	124.530	6199.53	121.05	-80.07	141.42	1626721.79	337797.90	39°25'11.704"N	80°49'16.795"W	162.51	119.517	4.68	2.46	11.29	
6317.00	29.060	139.930	6284.43	156.41	-107.54	170.63	1626751.00	337770.43	39°25'11.437"N	80°49'16.418"W	201.69	122.222	10.32	7.62	16.38	
6411.00	36.070	147.170	6363.63	204.56	-148.33	200.37	1626780.74	337729.64	39°25'11.038"N	80°49'16.031"W	249.30	126.511	8.52	7.46	7.70	
6505.00	37.280	145.620	6439.02	258.79	-195.08	231.45	1626811.82	337682.89	39°25'10.581"N	80°49'15.626"W	302.70	130.126	1.62	1.29	-1.65	
6599.00	46.070	147.540	6509.17	319.18	-247.24	265.76	1626846.13	337630.74	39°25'10.070"N	80°49'15.179"W	362.98	132.932	9.45	9.35	2.04	
6693.00	54.780	149.020	6569.00	389.70	-308.84	303.77	1626884.13	337569.14	39°25'09.467"N	80°49'14.684"W	433.19	135.474	9.34	9.27	1.57	
6787.00	64.080	149.380	6616.75	468.73	-378.29	345.15	1626925.52	337499.69	39°25'08.786"N	80°49'14.143"W	512.09	137.622	9.90	9.89	0.38	





# Actual Wellpath Report

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## REFERENCE WELLPATH IDENTIFICATION

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

## WELLPATH DATA (183 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)	(ft/100ft)	(%/100ft)	(%/100ft)
6881.00	66.990	147.950	6655.68	552.18	-451.35	389.65	1626970.01	337426.63	39°25'08.07"N	80°49'13.563"W	596.28	139.196	3.39	3.10	-1.52
6975.00	77.630	151.310	6684.21	639.74	-528.53	434.79	1627015.15	337349.46	39°25'07.315"N	80°49'12.973"W	684.39	140.568	11.82	11.32	3.57
7069.00	87.410	156.380	6696.44	732.00	-612.08	475.77	1627056.12	337265.91	39°25'06.495"N	80°49'12.436"W	775.24	142.142	11.70	10.40	5.39
7162.00	90.370	160.490	6698.24	824.83	-698.53	509.93	1627090.28	337179.47	39°25'05.646"N	80°49'11.984"W	864.85	143.870	5.45	3.18	4.42
7256.00	85.930	161.250	6701.28	918.75	-787.27	540.71	1627121.06	337090.74	39°25'04.773"N	80°49'11.575"W	956.07	145.518	4.79	-4.72	0.81
7350.00	87.970	162.610	6706.28	1012.60	-876.50	569.83	1627150.17	337001.51	39°25'03.896"N	80°49'11.188"W	1045.44	146.971	2.61	2.17	1.45
7444.00	88.180	159.930	6709.44	1106.54	-965.46	599.99	1627180.34	336912.55	39°25'03.021"N	80°49'10.787"W	1136.71	148.141	2.86	0.22	-2.85
7538.00	88.400	158.350	6712.24	1200.43	-1053.26	633.45	1627213.79	336824.76	39°25'02.158"N	80°49'10.344"W	1229.07	148.977	1.70	0.23	-1.68
7632.00	90.060	161.360	6713.50	1294.37	-1141.49	665.81	1627246.16	336736.54	39°25'01.291"N	80°49'09.915"W	1321.47	149.746	3.66	1.77	3.20
7726.00	89.940	162.850	6713.50	1388.36	-1230.94	694.69	1627275.04	336647.09	39°25'00.411"N	80°49'09.531"W	1413.44	150.561	1.59	-0.13	1.59
7820.00	89.880	160.140	6713.65	1482.35	-1320.07	724.53	1627304.87	336557.97	39°24'59.534"N	80°49'09.134"W	1505.83	151.240	2.88	-0.06	-2.88
7914.00	89.420	156.920	6714.23	1576.22	-1407.53	758.93	1627339.26	336470.51	39°24'58.675"N	80°49'08.679"W	1599.10	151.667	3.46	-0.49	-3.43
8007.00	89.320	158.910	6715.25	1669.04	-1493.70	793.89	1627374.23	336384.34	39°24'57.829"N	80°49'08.218"W	1691.57	152.010	2.14	-0.11	2.14
8102.00	89.480	160.790	6716.24	1764.00	-1582.87	826.61	1627406.95	336295.17	39°24'56.952"N	80°49'07.784"W	1785.71	152.425	1.99	0.17	1.98
8196.00	89.200	159.270	6717.33	1857.96	-1671.21	858.71	1627439.04	336206.84	39°24'56.084"N	80°49'07.359"W	1878.92	152.805	1.64	-0.30	-1.62
8289.00	89.140	163.240	6718.67	1950.94	-1759.25	888.59	1627468.92	336118.80	39°24'55.218"N	80°49'06.961"W	1970.93	153.202	4.27	-0.06	4.27
8384.00	89.290	166.190	6719.98	2045.75	-1850.87	913.63	1627493.96	336027.19	39°24'54.316"N	80°49'06.625"W	2064.09	153.728	3.11	0.16	3.11
8478.00	88.890	165.850	6721.47	2139.43	-1942.08	936.33	1627516.66	335935.99	39°24'53.418"N	80°49'06.319"W	2156.01	154.260	0.56	-0.43	-0.36
8572.00	88.980	163.820	6723.22	2233.24	-2032.78	960.92	1627541.25	335845.29	39°24'52.525"N	80°49'05.989"W	2248.46	154.699	2.16	0.10	-2.16
8666.00	89.110	159.650	6724.78	2327.20	-2122.02	990.37	1627570.69	335756.06	39°24'51.648"N	80°49'05.597"W	2341.75	154.981	4.44	0.14	-4.44
8760.00	88.770	157.910	6726.52	2421.09	-2209.62	1024.38	1627604.71	335668.46	39°24'50.787"N	80°49'05.147"W	2435.53	155.128	1.89	-0.36	-1.85
8854.00	90.060	159.770	6727.48	2514.99	-2297.28	1058.31	1627638.63	335580.81	39°24'49.926"N	80°49'04.699"W	2529.33	155.265	2.41	1.37	1.98
8948.00	90.740	161.630	6728.83	2608.97	-2385.99	1089.38	1627669.70	335492.10	39°24'49.054"N	80°49'04.286"W	2622.91	155.460	2.11	0.72	1.98
9042.00	90.430	159.990	6729.87	2702.96	-2474.76	1120.27	1627700.59	335403.34	39°24'48.181"N	80°49'03.876"W	2716.51	155.645	1.78	-0.33	-1.74
9136.00	90.310	158.720	6729.26	2796.90	-2562.72	1153.41	1627733.73	335315.38	39°24'47.316"N	80°49'03.437"W	2810.32	155.769	1.36	-0.13	-1.35
9230.00	90.280	159.670	6724.78	2890.83	-2650.58	1186.80	1627767.12	335227.52	39°24'46.453"N	80°49'02.996"W	2904.15	155.880	1.01	-0.03	1.01
9324.00	91.380	162.240	6723.41	2984.81	-2739.42	1217.47	1627797.78	335138.69	39°24'45.579"N	80°49'02.588"W	2997.78	156.038	2.97	1.17	2.73
9418.00	90.740	163.590	6721.67	3078.75	-2829.26	1245.08	1627825.39	335048.86	39°24'44.696"N	80°49'02.220"W	3091.10	156.247	1.59	-0.68	1.44
9512.00	90.860	163.000	6720.36	3172.69	-2919.28	1272.10	1627852.41	334958.84	39°24'43.810"N	80°49'01.859"W	3184.40	156.455	0.64	0.13	-0.63
9607.00	90.490	164.840	6719.24	3267.59	-3010.55	1298.41	1627878.71	334867.57	39°24'42.912"N	80°49'01.507"W	3278.61	156.670	1.98	-0.39	1.94





# Actual Wellpath Report

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

## WELLPATH DATA (183 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]
9701.00	90.220	163.500	6718.66	3361.47	-3100.98	1324.05	1627904.35	334777.15	39°24'42.022"N	80°49'01.163"W	3371.82	156.879	1.45	-0.29	-1.43
9794.00	90.030	159.840	6718.46	3454.45	-3189.25	1353.29	1627933.59	334688.89	39°24'41.154"N	80°49'00.774"W	3464.49	157.007	3.94	-0.20	-3.94
9888.00	90.400	159.820	6718.10	3548.42	-3277.48	1385.70	1627966.00	334600.66	39°24'40.286"N	80°49'00.345"W	3558.38	157.082	0.39	0.39	-0.02
9982.00	90.280	161.690	6717.55	3642.41	-3366.23	1416.68	1627996.98	334511.92	39°24'39.414"N	80°48'59.934"W	3652.19	157.176	1.99	-0.13	1.99
10076.00	90.280	164.310	6717.09	3736.36	-3456.11	1444.16	1628024.46	334422.04	39°24'38.530"N	80°48'59.567"W	3745.70	157.322	2.79	0.00	2.79
10170.00	90.150	164.890	6716.73	3830.21	-3546.73	1469.12	1628049.42	334331.42	39°24'37.638"N	80°48'59.232"W	3838.96	157.500	0.63	-0.14	0.62
10264.00	89.780	165.860	6716.79	3923.98	-3637.69	1492.86	1628073.16	334240.47	39°24'36.742"N	80°48'58.912"W	3932.10	157.687	1.10	-0.39	1.03
10358.00	90.280	165.810	6716.74	4017.69	-3728.83	1515.86	1628096.16	334149.34	39°24'35.845"N	80°48'58.602"W	4025.17	157.877	0.53	0.53	-0.05
10451.00	90.250	163.790	6716.31	4110.52	-3818.57	1540.24	1628120.54	334059.60	39°24'34.961"N	80°48'58.275"W	4117.50	158.033	2.17	-0.03	-2.17
10546.00	90.120	159.180	6716.01	4205.49	-3908.63	1570.40	1628150.70	333969.55	39°24'34.076"N	80°48'57.874"W	4212.31	158.111	4.85	-0.14	-4.85
10640.00	90.340	157.680	6715.63	4299.37	-3996.04	1604.96	1628185.25	333882.14	39°24'33.217"N	80°48'57.418"W	4306.30	158.118	1.61	0.23	-1.60
10734.00	89.940	159.010	6715.40	4393.23	-4083.40	1639.65	1628219.94	333794.78	39°24'32.359"N	80°48'56.959"W	4400.30	158.123	1.48	-0.43	1.41
10828.00	89.660	160.170	6715.73	4487.18	-4171.50	1672.43	1628252.71	333706.69	39°24'31.493"N	80°48'56.525"W	4494.27	158.153	1.27	-0.30	1.23
10922.00	89.510	157.070	6716.41	4581.06	-4259.02	1706.69	1628286.98	333619.17	39°24'30.633"N	80°48'56.073"W	4588.25	158.163	3.30	-0.16	-3.30
11016.00	89.570	154.100	6717.16	4674.57	-4344.60	1745.54	1628325.82	333533.60	39°24'29.793"N	80°48'55.562"W	4682.14	158.111	3.16	0.06	-3.16
11110.00	89.510	157.210	6717.92	4768.09	-4430.23	1784.28	1628364.56	333447.97	39°24'28.952"N	80°48'55.052"W	4776.04	158.063	3.31	-0.06	3.31
11204.00	89.540	159.050	6718.70	4861.93	-4517.46	1819.29	1628399.57	333360.75	39°24'28.095"N	80°48'54.590"W	4870.04	158.064	1.96	0.03	1.96
11298.00	89.600	157.540	6719.40	4955.79	-4604.79	1854.06	1628434.33	333273.43	39°24'27.237"N	80°48'54.131"W	4964.03	158.068	1.61	0.06	-1.61
11391.00	89.540	159.910	6720.10	5048.68	-4691.44	1887.80	1628468.07	333186.78	39°24'26.386"N	80°48'53.685"W	5057.01	158.081	2.55	-0.06	2.55
11485.00	90.030	164.680	6720.45	5142.64	-4780.96	1916.37	1628496.65	333097.26	39°24'25.505"N	80°48'53.304"W	5150.74	158.157	5.10	0.52	5.07
11579.00	90.310	166.120	6720.17	5236.41	-4871.92	1940.07	1628520.34	333006.30	39°24'24.610"N	80°48'52.985"W	5244.00	158.287	1.56	0.30	1.53
11673.00	90.180	164.920	6719.77	5330.16	-4962.93	1963.57	1628543.84	332915.30	39°24'23.714"N	80°48'52.669"W	5337.26	158.414	1.28	-0.14	-1.28
11767.00	90.310	163.650	6719.37	5424.03	-5053.42	1989.03	1628569.30	332824.82	39°24'22.823"N	80°48'52.328"W	5430.77	158.515	1.36	0.14	-1.35
11861.00	90.520	161.920	6718.69	5518.00	-5143.20	2016.85	1628597.12	332735.04	39°24'21.940"N	80°48'51.957"W	5524.51	158.588	1.85	0.22	-1.84
11956.00	90.400	162.010	6717.93	5612.99	-5233.53	2046.26	1628626.53	332644.72	39°24'21.051"N	80°48'51.565"W	5619.34	158.645	0.16	-0.13	0.09
12050.00	90.400	163.010	6717.27	5706.97	-5323.18	2074.51	1628654.78	332555.07	39°24'20.169"N	80°48'51.189"W	5713.13	158.709	1.06	0.00	1.06
12144.00	89.850	163.820	6717.07	5800.91	-5413.27	2101.34	1628681.61	332464.99	39°24'19.283"N	80°48'50.830"W	5806.82	158.785	1.04	-0.59	0.86
12238.00	91.230	166.150	6716.18	5894.71	-5504.05	2125.69	1628705.95	332374.21	39°24'18.389"N	80°48'50.503"W	5900.26	158.883	2.88	1.47	2.48
12332.00	91.170	166.480	6714.21	5988.34	-5595.36	2147.92	1628728.19	332282.91	39°24'17.490"N	80°48'50.203"W	5993.47	158.999	0.36	-0.06	0.35
12426.00	90.890	167.560	6712.52	6081.86	-5686.94	2169.03	1628749.29	332191.33	39°24'16.588"N	80°48'49.917"W	6086.54	159.123	1.19	-0.30	1.15





# Actual Wellpath Report

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

WELLPATH DATA (183 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]	
12519.00	91.380	169.290	6710.68	6174.14	-5778.03	2187.69	1628767.95	332100.25	39°24'15.691"N	80°48'49.662"W	6178.32	159.262	1.93	0.53	1.86	
12613.00	92.430	165.200	6707.55	6267.57	-5869.64	2208.43	1628788.69	332008.64	39°24'14.789"N	80°48'49.381"W	6271.35	159.381	4.49	1.12	-4.35	
12709.00	92.860	156.330	6703.11	6363.37	-5960.09	2239.99	1628820.24	331918.20	39°24'13.899"N	80°48'48.962"W	6367.12	159.402	9.24	0.45	-9.24	
12802.00	91.110	157.860	6699.89	6456.05	-6045.70	2276.16	1628856.41	331832.59	39°24'13.058"N	80°48'48.485"W	6459.98	159.369	2.50	-1.88	1.65	
12895.00	91.570	158.940	6697.72	6548.89	-6132.15	2310.38	1628890.64	331746.15	39°24'12.209"N	80°48'48.033"W	6552.94	159.355	1.26	0.49	1.16	
12989.00	91.750	157.240	6694.99	6642.70	-6219.32	2345.44	1628925.69	331658.98	39°24'11.353"N	80°48'47.571"W	6646.88	159.337	1.82	0.19	-1.81	
13083.00	91.260	158.570	6692.53	6736.49	-6306.38	2380.79	1628961.04	331571.93	39°24'10.497"N	80°48'47.104"W	6740.81	159.317	1.51	-0.52	1.41	
13177.00	90.430	158.840	6691.14	6830.38	-6393.95	2414.92	1628995.17	331484.36	39°24'09.637"N	80°48'46.653"W	6834.80	159.309	0.93	-0.88	0.29	
13271.00	90.180	157.870	6690.64	6924.24	-6481.32	2449.59	1629029.84	331396.99	39°24'08.778"N	80°48'46.195"W	6928.78	159.296	1.07	-0.27	-1.03	
13364.00	89.780	161.710	6690.67	7017.19	-6568.58	2481.71	1629061.96	331309.74	39°24'07.921"N	80°48'45.770"W	7021.76	159.303	4.15	-0.43	4.13	
13459.00	88.370	156.760	6692.21	7112.08	-6657.37	2515.38	1629095.62	331220.96	39°24'07.048"N	80°48'45.324"W	7116.72	159.302	5.42	-1.48	-5.21	
13552.00	88.770	151.200	6694.53	7204.24	-6740.88	2556.15	1629136.39	331137.45	39°24'06.229"N	80°48'44.790"W	7209.26	159.233	5.99	0.43	-5.98	
13646.00	87.940	159.710	6697.23	7297.62	-6826.27	2595.15	1629175.38	331052.06	39°24'05.390"N	80°48'44.277"W	7302.93	159.185	9.09	-0.88	9.05	
13740.00	87.380	159.790	6701.07	7391.50	-6914.39	2627.65	1629207.89	330963.95	39°24'04.524"N	80°48'43.847"W	7396.85	159.192	0.60	-0.60	0.09	
13835.00	87.420	161.620	6705.38	7486.39	-7003.96	2659.01	1629239.25	330874.39	39°24'03.644"N	80°48'43.430"W	7491.71	159.211	1.92	0.04	1.93	
13929.00	88.370	163.570	6708.83	7580.30	-7093.59	2687.11	1629267.34	330784.76	39°24'02.762"N	80°48'43.056"W	7585.48	159.253	2.31	1.01	2.07	
14023.00	87.910	163.500	6711.88	7674.19	-7183.68	2713.74	1629293.97	330694.67	39°24'01.875"N	80°48'42.700"W	7679.17	159.305	0.49	-0.49	-0.07	
14117.00	87.850	162.910	6715.36	7768.07	-7273.61	2740.88	1629321.11	330604.75	39°24'00.991"N	80°48'42.338"W	7772.89	159.352	0.63	-0.06	-0.63	
14211.00	87.630	161.790	6719.07	7861.98	-7363.12	2769.36	1629349.58	330515.25	39°24'00.110"N	80°48'41.958"W	7866.69	159.388	1.21	-0.23	-1.19	
14305.00	88.400	160.790	6722.32	7955.93	-7452.09	2799.49	1629379.72	330426.28	39°23'59.235"N	80°48'41.558"W	7960.58	159.411	1.34	0.82	-1.06	
14399.00	88.400	159.220	6724.95	8049.86	-7540.39	2831.62	1629411.84	330337.98	39°23'58.367"N	80°48'41.132"W	8054.54	159.417	1.67	0.00	-1.67	
14493.00	88.120	165.040	6727.81	8143.77	-7629.78	2860.44	1629440.66	330248.60	39°23'57.488"N	80°48'40.748"W	8148.35	159.449	6.20	-0.30	6.19	
14587.00	88.460	165.370	6730.61	8237.52	-7720.62	2884.43	1629464.65	330157.77	39°23'56.594"N	80°48'40.426"W	8241.84	159.514	0.50	0.36	0.35	
14681.00	88.060	164.420	6733.46	8331.29	-7811.33	2908.92	1629489.14	330067.06	39°23'55.701"N	80°48'40.097"W	8335.38	159.575	1.10	-0.43	-1.01	
14775.00	88.090	164.390	6736.62	8425.11	-7901.82	2934.17	1629514.39	329976.58	39°23'54.810"N	80°48'39.759"W	8429.00	159.629	0.05	0.03	-0.03	
14870.00	88.520	164.220	6739.43	8519.94	-7993.23	2959.86	1629540.08	329885.17	39°23'53.911"N	80°48'39.415"W	8523.65	159.681	0.49	0.45	-0.18	
14964.00	90.860	162.940	6739.94	8613.86	-8083.39	2986.43	1629566.64	329795.01	39°23'53.024"N	80°48'39.059"W	8617.42	159.723	2.84	2.49	-1.36	
15058.00	92.220	158.790	6737.41	8707.80	-8172.14	3017.22	1629597.44	329706.26	39°23'52.151"N	80°48'38.651"W	8711.35	159.735	4.64	1.45	-4.41	
15152.00	91.940	158.480	6734.00	8801.63	-8259.63	3051.44	1629631.66	329618.79	39°23'51.291"N	80°48'38.199"W	8805.27	159.724	0.44	-0.30	-0.33	
15246.00	92.650	157.710	6730.24	8895.40	-8346.77	3086.48	1629666.69	329531.65	39°23'50.435"N	80°48'37.736"W	8899.15	159.707	1.11	0.76	-0.82	





# Actual Wellpath Report

SHR-31B-HSM AWP Proj: 15458'

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

WELLPATH DATA (183 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]
15340.00	92.400	160.380	6726.10	8989.23	-8434.46	3120.07	1629700.27	329443.96	39°23'49.573"N	80°48'37.292"W	8993.05	159.700	2.85	-0.27	2.84
15433.00	92.340	163.690	6722.25	9082.13	-8522.84	3148.72	1629728.93	329355.59	39°23'48.704"N	80°48'36.911"W	9085.88	159.723	3.56	-0.06	3.56
15458.00	92.340	163.690	6721.23	9107.08	-8546.81	3155.74	1629735.94	329331.62	39°23'48.468"N	80°48'36.817"W	9110.80	159.734	0.00	0.00	0.00

HOLE & CASING SECTIONS - Ref Wellbore: SHR-31B-HSM AWB Ref Wellpath: SHR-31B-HSM AWP Proj: 15458'									
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	128.99	0.00	0.00	-0.89	-0.33
20in Conductor	29.00	129.00	100.00	29.00	128.99	0.00	0.00	-0.89	-0.33
17.5in Open Hole	129.00	704.00	575.00	128.99	703.98	-0.89	-0.33	-4.19	-1.49
13.375in Casing Surface	29.00	704.00	675.00	29.00	703.98	0.00	0.00	-4.19	-1.49
12.25in Open Hole	704.00	2732.00	2028.00	703.98	2731.85	-4.19	-1.49	1.20	-0.60
9.625in Casing Intermediate	29.00	2732.00	2703.00	29.00	2731.85	0.00	0.00	1.20	-0.60
8.75in Open Hole	2732.00	5730.00	2998.00	2731.85	5728.32	1.20	-0.60	-21.13	13.49
8.5in Open Hole	5730.00	15458.00	9728.00	5728.32	6721.23	-21.13	13.49	-8546.81	3155.74
5.5in Casing Production	29.00	15458.00	15429.00	29.00	6721.23	0.00	0.00	-8546.81	3155.74





# Actual Wellpath Report

SHR-31B-HSM AWP Proj: 15458'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	CNX GAS COMPANY, LLC	Slot	Slot B
Area	Tyler County, WV	Well	SHR-31B-HSM
Field	Tyler	Wellbore	SHR-31B-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-31B-HSM BHL Rev-4	6716.40	-8547.96	3153.21	1629733.42	329330.47	39°23'48.456"N	80°48'36.849"W	point
SHR-31B-HSM LP Rev-4	6716.40	-684.53	501.63	1627081.98	337193.47	39°25'05.783"N	80°49'12.093"W	point
SHR-31 Unleased Tract	6950.40	-8.85	-18.06	1626562.32	337869.11	39°25'12.385"N	80°49'18.840"W	polygon
SHR-31 Lease Line Rev-2	7000.40	-8.85	-18.06	1626562.32	337869.11	39°25'12.385"N	80°49'18.840"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: SHR-31B-HSM AWB Ref Wellpath: SHR-31B-HSM AWP Proj: 15458'				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
29.00	697.00	VESSI GyroFlex v4	01 VES Gyro <17-1/2"> (100'-680')	SHR-31B-HSM AWB
697.00	2697.00	OWSG MWD rev2 - Standard	02 QES MWD <12-1/4"> (680')(743'-2680')	SHR-31B-HSM AWB
2697.00	5665.00	OWSG MWD rev2 - Standard	03 QES MWD <8-3/4"> (2680')(2760'-5648')	SHR-31B-HSM AWB
5665.00	15433.00	BHI AutoTrak Curve (Short)	04 BH AT Curve <8-1/2"> (5665')(5752'-15433')	SHR-31B-HSM AWB
15433.00	15458.00	Blind Drilling (std)	Projection to bit	SHR-31B-HSM AWB





# Actual Wellpath Report

SHR-31B-HSM AWP Proj: 15458'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	CNX GAS COMPANY, LLC	Slot	Slot B
Area	Tyler County, WV	Well	SHR-31B-HSM
Field	Tyler	Wellbore	SHR-31B-HSM AWB
Facility	SHR-31 Pad		

### COMMENTS

Wellpath general comments  
 API: 47-095-02489-0000  
 BH Job #: 9204102  
 Rig: Patterson 278  
 Duration: 6/15/2018-6/18/2018  
 VES Gyro <17-1/2"> (100'-680')  
 QES MWD <12-1/4"> (680')(743'-2680')  
 QES MWD <8-3/4"> (2680')(2760'-5648')  
 BH AT Curve <8-1/2"> (5665')(5752'-15433')  
 Projected MD at TD: 15458'