

REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot D
Area	Tyler County, WV	Well	SHR-40D-HS
Field	Tyler	Wellbore	SHR-40D-HS AWB
Facility	SHR-40 Pad		

REPORT SETUP INFORMATION

Projection System	NAD27 / Lambert West Virginia SP, Northern Zone (4701), US feet	Software System	WellArchitect@ 4.0.1
North Reference	Grid	User	Edsaryar
Scale	0.999948	Report Generated	22/May/2015 at 10:46
Convergence at slot	0.85° West	Database/Source file	WellArchitectEasternDB/SHR-40D-HS_AWB.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North [ft]	East [ft]	Easting [US ft]	Northing [US ft]	Latitude	Longitude
Slot Location	-50.70	-31.31	1622891.28	335991.76	39°24'53.294"N	80°50'05.259"W
Facility Reference Pt			1622922.59	336042.46	39°24'53.800"N	80°50'04.870"W
Field Reference Pt			609601.22	0.00	38°23'48.753"N	84°21'09.765"W

WELLPATH DATUM

Calculation method	Minimum curvature	Precision 542 (RKB) to Facility Vertical Datum	788.96ft
Horizontal Reference Pt	Slot	Precision 542 (RKB) to Mean Sea Level	788.96ft
Vertical Reference Pt	Precision 542 (RKB)	Precision 542 (RKB) to Mud Line at Slot (Slot D)	19.40ft
MD Reference Pt	Precision 542 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	160.00°



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WELLPATH DATA (205 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	59.400	0.00	0.00	0.00	0.00	1622891.28	335991.76	39°24'53.294"N	80°50'05.259"W	0.00	0.000	0.00	0.00	0.00
19.40	0.000	59.400	19.40	0.00	0.00	0.00	1622891.28	335991.76	39°24'53.294"N	80°50'05.259"W	0.00	0.000	0.00	0.00	0.00
104.00	0.190	59.400	104.00	-0.03	0.07	0.12	1622891.40	335991.83	39°24'53.295"N	80°50'05.258"W	0.14	59.400	0.22	0.00	0.00
204.00	0.160	64.260	204.00	-0.07	0.22	0.39	1622891.67	335991.98	39°24'53.297"N	80°50'05.254"W	0.45	60.922	0.03	-0.03	4.86
304.00	0.140	89.950	304.00	-0.04	0.28	0.64	1622891.92	335992.04	39°24'53.297"N	80°50'05.251"W	0.69	66.489	0.07	-0.02	25.69
404.00	0.200	106.090	404.00	0.10	0.23	0.93	1622892.21	335991.99	39°24'53.297"N	80°50'05.248"W	0.95	76.129	0.08	0.06	16.14
504.00	0.200	110.830	504.00	0.32	0.12	1.26	1622892.54	335991.88	39°24'53.296"N	80°50'05.243"W	1.26	84.619	0.02	0.00	4.74
604.00	0.260	106.830	604.00	0.57	-0.01	1.64	1622892.92	335991.75	39°24'53.295"N	80°50'05.238"W	1.64	90.324	0.06	0.06	-4.00
704.00	0.150	102.020	704.00	0.77	-0.10	1.98	1622893.26	335991.66	39°24'53.294"N	80°50'05.234"W	1.99	92.950	0.11	-0.11	-4.81
804.00	0.360	103.980	804.00	1.02	-0.21	2.42	1622893.70	335991.55	39°24'53.293"N	80°50'05.228"W	2.42	94.858	0.21	0.21	1.96
904.00	0.310	88.560	903.99	1.28	-0.27	2.99	1622894.27	335991.49	39°24'53.292"N	80°50'05.221"W	3.00	95.242	0.10	-0.05	-15.42
1004.00	0.320	79.500	1003.99	1.41	-0.22	3.54	1622894.82	335991.54	39°24'53.293"N	80°50'05.214"W	3.54	93.508	0.05	0.01	-9.06
1104.00	0.340	44.290	1103.99	1.33	0.05	4.02	1622895.30	335991.81	39°24'53.295"N	80°50'05.208"W	4.02	89.337	0.20	0.02	-35.21
1204.00	0.350	23.110	1203.99	0.98	0.54	4.35	1622895.63	335992.30	39°24'53.300"N	80°50'05.204"W	4.38	82.919	0.13	0.01	-21.18
1304.00	0.450	6.450	1303.99	0.40	1.21	4.51	1622895.79	335992.97	39°24'53.307"N	80°50'05.202"W	4.67	74.969	0.15	0.10	-16.66
1404.00	0.350	11.270	1403.98	-0.21	1.90	4.61	1622895.89	335993.66	39°24'53.314"N	80°50'05.201"W	4.99	67.608	0.11	-0.10	4.82
1504.00	0.420	18.270	1503.98	-0.76	2.55	4.79	1622896.07	335994.31	39°24'53.320"N	80°50'05.199"W	5.42	61.976	0.08	0.07	7.00
1604.00	0.420	16.370	1603.98	-1.34	3.25	5.01	1622896.29	335995.01	39°24'53.327"N	80°50'05.196"W	5.97	57.024	0.01	0.00	-1.90
1704.00	0.320	19.180	1703.98	-1.85	3.86	5.20	1622896.48	335995.62	39°24'53.333"N	80°50'05.194"W	6.48	53.395	0.10	-0.10	2.81
1804.00	0.280	23.710	1803.98	-2.24	4.35	5.39	1622896.67	335996.11	39°24'53.338"N	80°50'05.191"W	6.93	51.095	0.05	-0.04	4.53
1904.00	0.310	15.580	1903.97	-2.64	4.84	5.56	1622896.84	335996.59	39°24'53.343"N	80°50'05.189"W	7.37	48.999	0.05	0.03	-8.13
2004.00	0.350	10.270	2003.97	-3.13	5.40	5.69	1622896.97	335997.16	39°24'53.349"N	80°50'05.188"W	7.84	46.513	0.05	0.04	-5.31
2104.00	0.200	12.570	2103.97	-3.54	5.87	5.78	1622897.06	335997.63	39°24'53.353"N	80°50'05.187"W	8.24	44.579	0.15	-0.15	2.30
2204.00	0.070	16.840	2203.97	-3.73	6.10	5.84	1622897.12	335997.86	39°24'53.355"N	80°50'05.186"W	8.44	43.758	0.13	-0.13	4.27
2304.00	0.000	35.080	2303.97	-3.78	6.15	5.85	1622897.13	335997.91	39°24'53.356"N	80°50'05.186"W	8.49	43.571	0.07	-0.07	0.00
2404.00	0.150	179.300	2403.97	-3.66	6.02	5.86	1622897.14	335997.78	39°24'53.355"N	80°50'05.186"W	8.40	44.194	0.15	0.15	0.00
2504.00	0.300	185.340	2503.97	-3.30	5.63	5.83	1622897.11	335997.39	39°24'53.351"N	80°50'05.186"W	8.11	46.008	0.15	0.15	6.04
2589.00	0.320	187.100	2588.97	-2.88	5.17	5.78	1622897.06	335996.93	39°24'53.346"N	80°50'05.187"W	7.76	48.180	0.03	0.02	2.07
2623.00	0.470	170.070	2622.97	-2.66	4.94	5.80	1622897.08	335996.70	39°24'53.344"N	80°50'05.186"W	7.62	49.539	0.56	0.44	-50.09
2667.00	1.220	120.900	2666.96	-2.12	4.52	6.23	1622897.51	335996.28	39°24'53.340"N	80°50'05.181"W	7.70	54.004	2.23	1.70	-111.75



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WELLPATH DATA (205 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	2.740	109.630	2711.94	-1.06	3.92	7.65	1622898.93	335995.68	39°24'53.334"N	80°50'05.163"W	8.60	62.893	3.47	3.38	-25.04
2756.00	4.080	100.960	2755.86	0.41	3.27	10.18	1622901.46	335995.03	39°24'53.328"W	80°50'05.130"W	10.69	72.210	3.25	3.05	-19.70
2800.00	5.270	91.340	2799.71	1.95	2.92	13.74	1622905.02	335994.68	39°24'53.325"N	80°50'05.085"W	14.04	77.993	3.23	2.70	-21.86
2844.00	6.660	87.950	2843.47	3.47	2.97	18.31	1622909.59	335994.73	39°24'53.326"N	80°50'05.027"W	18.55	80.798	3.26	3.16	-7.70
2888.00	7.750	85.510	2887.12	5.05	3.29	23.82	1622915.09	335995.05	39°24'53.330"N	80°50'04.957"W	24.04	82.136	2.57	2.48	-5.55
2932.00	8.170	83.860	2930.70	6.60	3.86	29.88	1622921.16	335995.62	39°24'53.337"N	80°50'04.879"W	30.13	82.647	1.09	0.95	-3.75
2977.00	8.230	81.300	2975.24	7.99	4.69	36.24	1622927.52	335996.44	39°24'53.346"N	80°50'04.798"W	36.55	82.634	0.82	0.13	-5.69
3021.00	8.070	77.980	3018.80	9.04	5.80	42.38	1622933.66	335997.56	39°24'53.358"N	80°50'04.721"W	42.77	82.201	1.13	-0.36	-7.55
3065.00	7.880	73.290	3062.37	9.64	7.32	48.29	1622939.57	335999.07	39°24'53.374"N	80°50'04.645"W	48.84	81.386	1.54	-0.43	-10.66
3109.00	8.650	71.930	3105.91	9.93	9.21	54.32	1622945.60	336000.97	39°24'53.393"N	80°50'04.569"W	55.10	80.379	1.81	1.75	-3.09
3153.00	10.090	73.330	3149.32	10.26	11.34	61.16	1622952.44	336003.10	39°24'53.415"N	80°50'04.482"W	62.20	79.495	3.31	3.27	3.18
3198.00	11.870	76.760	3193.50	11.04	13.53	69.44	1622960.72	336005.29	39°24'53.438"N	80°50'04.377"W	70.75	78.973	4.21	3.96	7.62
3242.00	13.600	81.120	3236.42	12.57	15.37	78.96	1622970.24	336007.13	39°24'53.458"N	80°50'04.256"W	80.44	78.987	4.50	3.93	9.91
3286.00	15.260	83.100	3279.03	14.88	16.86	89.82	1622981.10	336008.62	39°24'53.474"N	80°50'04.118"W	91.39	79.368	3.94	3.77	4.50
3330.00	16.690	79.220	3321.33	17.20	18.74	101.78	1622993.05	336010.50	39°24'53.494"N	80°50'03.966"W	103.49	79.568	4.05	3.25	-8.82
3374.00	17.640	74.290	3363.37	18.71	21.73	114.40	1623005.68	336013.48	39°24'53.526"N	80°50'03.806"W	116.45	79.247	3.95	2.16	-11.20
3419.00	18.470	68.820	3406.16	19.08	26.15	127.61	1623018.89	336017.91	39°24'53.571"N	80°50'03.638"W	130.26	78.420	4.19	1.84	-12.16
3463.00	19.030	65.410	3447.82	18.36	31.65	140.64	1623031.91	336023.41	39°24'53.628"N	80°50'03.474"W	144.15	77.316	2.80	1.27	-7.75
3507.00	20.400	65.400	3489.24	17.17	37.83	154.13	1623045.40	336029.59	39°24'53.691"N	80°50'03.303"W	158.71	76.210	3.11	3.11	-0.02
3551.00	21.950	66.960	3530.27	16.12	44.24	168.67	1623059.94	336036.00	39°24'53.756"N	80°50'03.119"W	174.38	75.303	3.75	3.52	3.55
3595.00	23.820	69.110	3570.81	15.54	50.63	184.54	1623075.81	336042.38	39°24'53.822"N	80°50'02.918"W	191.36	74.659	4.65	4.25	4.89
3639.00	25.130	70.100	3610.85	15.42	56.98	201.63	1623092.90	336048.73	39°24'53.887"N	80°50'02.701"W	209.53	74.221	3.12	2.98	2.25
3684.00	26.930	72.140	3651.29	15.82	63.35	220.32	1623111.58	336055.11	39°24'53.953"N	80°50'02.465"W	229.24	73.957	4.47	4.00	4.53
3728.00	28.510	75.610	3690.24	17.22	69.02	239.97	1623131.24	336060.78	39°24'54.012"N	80°50'02.215"W	249.70	73.954	5.13	3.59	7.89
3772.00	30.290	77.200	3728.57	19.64	74.09	260.97	1623152.23	336065.84	39°24'54.065"N	80°50'01.949"W	271.28	74.151	4.42	4.05	3.61
3816.00	32.060	75.160	3766.22	22.08	79.54	283.08	1623174.54	336071.29	39°24'54.122"N	80°50'01.668"W	294.04	74.306	4.68	4.02	-4.64
3860.00	33.310	72.640	3803.25	23.68	86.14	305.90	1623197.16	336077.89	39°24'54.190"N	80°50'01.378"W	317.80	74.274	4.20	2.84	-5.73
3904.00	34.170	70.400	3839.84	24.33	93.89	329.07	1623220.33	336085.64	39°24'54.270"N	80°50'01.085"W	342.20	74.076	3.44	1.95	-5.09
3948.00	35.310	69.420	3876.00	24.28	102.50	352.62	1623243.88	336094.26	39°24'54.359"N	80°50'00.786"W	367.21	73.792	2.89	2.59	-2.23
3993.00	36.980	70.240	3912.33	24.21	111.65	377.53	1623268.79	336103.40	39°24'54.453"N	80°50'00.471"W	393.70	73.525	3.86	3.71	1.82



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4037.00	38.330	71.220	3947.17	24.55	120.52	402.91	1623294.16	336112.27	39°24'54.544"N	80°50'00.149"W	420.54	73.347	3.36	3.07	2.23
4081.00	39.950	71.310	3981.29	25.17	129.44	429.21	1623320.46	336121.19	39°24'54.636"N	80°49'59.816"W	448.30	73.218	3.68	3.68	0.20
4125.00	41.470	72.930	4014.65	26.24	138.24	456.52	1623347.77	336129.99	39°24'54.727"N	80°49'59.469"W	476.99	73.153	4.21	3.45	3.68
4169.00	42.820	74.030	4047.27	28.03	146.63	484.82	1623376.08	336138.38	39°24'54.815"N	80°49'59.110"W	506.51	73.172	3.50	3.07	2.50
4213.00	43.380	75.270	4079.40	30.47	154.59	513.82	1623405.07	336146.34	39°24'54.897"N	80°49'58.743"W	536.57	73.255	2.31	1.27	2.82
4258.00	43.520	76.400	4112.07	33.62	162.16	543.82	1623435.07	336153.91	39°24'54.977"N	80°49'58.362"W	567.48	73.396	1.75	0.31	2.51
4302.00	43.080	76.710	4144.09	37.06	169.18	573.17	1623464.42	336160.93	39°24'55.050"N	80°49'57.989"W	597.62	73.556	1.11	-1.00	0.70
4346.00	42.710	77.220	4176.32	40.69	175.93	602.35	1623493.59	336167.68	39°24'55.121"N	80°49'57.619"W	627.51	73.718	1.15	-0.84	1.16
4390.00	42.830	75.410	4208.63	43.98	183.00	631.37	1623522.62	336174.75	39°24'55.195"N	80°49'57.250"W	657.36	73.836	2.81	0.27	-4.11
4434.00	43.500	75.150	4240.72	46.75	190.65	660.49	1623551.73	336182.40	39°24'55.275"N	80°49'56.881"W	687.45	73.899	1.58	1.52	-0.59
4478.00	43.470	73.500	4272.64	49.03	198.83	689.64	1623580.88	336190.58	39°24'55.360"N	80°49'56.511"W	717.73	73.917	2.58	-0.07	-3.75
4522.00	42.410	73.480	4304.85	50.86	207.35	718.38	1623609.62	336199.10	39°24'55.449"N	80°49'56.147"W	747.70	73.900	2.41	-2.41	-0.05
4567.00	41.700	72.140	4338.27	52.34	216.25	747.17	1623638.41	336208.00	39°24'55.541"N	80°49'55.781"W	777.84	73.858	2.54	-1.58	-2.98
4611.00	40.330	70.920	4371.47	53.11	225.40	774.56	1623665.80	336217.14	39°24'55.635"N	80°49'55.434"W	806.69	73.775	3.61	-3.11	-2.77
4655.00	37.840	69.530	4405.62	53.23	234.77	800.66	1623691.90	336226.52	39°24'55.732"N	80°49'55.103"W	834.37	73.658	6.00	-5.66	-3.16
4699.00	36.710	68.580	4440.63	52.79	244.30	825.55	1623716.79	336236.04	39°24'55.830"N	80°49'54.788"W	860.94	73.516	2.88	-2.57	-2.16
4788.00	35.940	65.350	4512.34	50.02	264.91	874.06	1623765.29	336256.65	39°24'56.040"N	80°49'54.174"W	913.32	73.139	2.32	-0.87	-3.63
4876.00	34.600	63.340	4584.19	45.02	286.89	919.86	1623811.09	336278.63	39°24'56.264"N	80°49'53.595"W	963.56	72.678	2.01	-1.52	-2.28
4964.00	32.630	65.830	4657.47	40.40	307.82	963.84	1623855.07	336299.56	39°24'56.478"N	80°49'53.038"W	1011.80	72.288	2.73	-2.24	2.83
5053.00	32.590	71.260	4732.46	39.18	325.35	1008.44	1623899.67	336317.09	39°24'56.657"N	80°49'52.473"W	1059.62	72.119	3.29	-0.04	6.10
5141.00	34.160	72.500	4805.94	40.78	340.39	1054.45	1623945.67	336332.13	39°24'56.813"N	80°49'51.890"W	1108.03	72.109	1.95	1.78	1.41
5230.00	36.740	70.660	4878.44	42.18	356.72	1103.41	1623994.63	336348.46	39°24'56.981"N	80°49'51.269"W	1159.64	72.084	3.14	2.90	-2.07
5318.00	36.890	70.490	4948.89	42.71	374.26	1153.14	1624044.36	336366.00	39°24'57.162"N	80°49'50.639"W	1212.35	72.019	0.21	0.17	-0.19
5406.00	36.090	72.710	5019.64	44.16	390.79	1202.79	1624094.00	336382.52	39°24'57.333"N	80°49'50.010"W	1264.68	72.001	1.75	-0.91	2.52
5495.00	36.400	74.950	5091.43	47.68	405.43	1253.32	1624144.53	336397.17	39°24'57.485"N	80°49'49.369"W	1317.26	72.074	1.53	0.35	2.52
5583.00	37.460	75.140	5161.77	52.33	419.08	1304.40	1624195.61	336410.81	39°24'57.627"N	80°49'48.721"W	1370.07	72.189	1.21	1.20	0.22
5671.00	38.430	72.750	5231.17	56.04	434.05	1356.39	1624247.59	336425.79	39°24'57.783"N	80°49'48.061"W	1424.15	72.255	2.00	1.10	-2.72
5760.00	37.410	67.660	5301.39	56.26	452.53	1407.82	1624299.03	336444.27	39°24'57.973"N	80°49'47.409"W	1478.77	72.180	3.70	-1.15	-5.72
5848.00	34.270	69.070	5372.72	54.77	471.55	1455.70	1624346.90	336463.29	39°24'58.168"N	80°49'46.803"W	1530.17	72.051	3.69	-3.57	1.60
5936.00	32.430	71.470	5446.23	54.97	487.90	1501.22	1624392.42	336479.64	39°24'58.336"N	80°49'46.226"W	1578.52	71.996	2.57	-2.09	2.73



Actual Wellpath Report

SHR-40D-HS AWP Proj: 16145'
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REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot D
Area	Tyler County, WV	Well	SHR-40D-HS
Field	Tyler	Wellbore	SHR-40D-HS AWB
Facility	SHR-40 Pad		

WELLPATH DATA (205 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]
6024.00	35.110	70.830	5519.38	55.94	503.71	1547.51	1624438.70	336495.45	39°24'58.499"N	80°49'45.639"W	1627.42	71.970	3.07	3.05	-0.73
6113.00	35.050	72.750	5592.21	57.54	519.70	1596.09	1624487.28	336511.43	39°24'58.664"N	80°49'45.023"W	1678.57	71.964	1.24	-0.07	2.16
6201.00	34.560	76.100	5664.48	61.40	533.19	1644.45	1624535.64	336524.92	39°24'58.804"N	80°49'44.410"W	1728.73	72.036	2.24	-0.56	3.81
6289.00	36.170	78.160	5736.24	67.74	544.51	1694.10	1624585.29	336536.24	39°24'58.924"N	80°49'43.779"W	1779.46	72.182	2.28	1.83	2.34
6350.00	34.810	76.010	5785.91	72.12	552.42	1728.62	1624619.80	336544.15	39°24'59.007"N	80°49'43.341"W	1814.74	72.278	3.03	-2.23	-3.52
6439.00	36.840	77.210	5858.07	78.13	564.47	1779.29	1624670.48	336556.20	39°24'59.133"N	80°49'42.698"W	1866.68	72.399	2.41	2.28	1.35
6574.00	41.690	99.050	5963.06	105.15	566.37	1863.55	1624754.73	336558.10	39°24'59.164"N	80°49'41.625"W	1947.72	73.095	10.80	3.59	16.18
6663.00	43.130	109.710	6028.86	139.01	551.44	1921.50	1624812.68	336543.17	39°24'59.025"N	80°49'40.884"W	1999.06	73.987	8.23	1.62	11.98
6753.00	48.680	120.810	6091.56	184.97	523.69	1979.63	1624870.80	336515.42	39°24'58.760"N	80°49'40.138"W	2047.72	75.183	10.78	6.17	12.33
6842.00	54.340	127.260	6146.97	241.37	484.62	2037.19	1624928.36	336476.35	39°24'58.382"N	80°49'39.397"W	2094.04	76.619	8.52	6.36	7.25
6932.00	57.470	129.280	6197.41	304.76	438.45	2095.68	1624986.84	336430.19	39°24'57.934"N	80°49'38.643"W	2141.05	78.183	3.94	3.48	2.24
7022.00	61.370	132.780	6243.20	372.54	387.57	2154.07	1625045.24	336379.31	39°24'57.440"N	80°49'37.890"W	2188.66	79.800	5.48	4.33	3.89
7111.00	66.690	137.270	6282.18	445.05	330.96	2210.54	1625101.69	336322.70	39°24'56.889"N	80°49'37.160"W	2235.17	81.485	7.50	5.98	5.04
7200.00	69.760	142.480	6315.21	522.62	267.77	2263.74	1625154.90	336259.52	39°24'56.272"N	80°49'36.470"W	2279.52	83.254	6.44	3.45	5.85
7290.00	73.980	147.040	6343.22	605.11	197.93	2313.03	1625204.18	336189.68	39°24'55.589"N	80°49'35.829"W	2321.48	85.109	6.72	4.69	5.07
7380.00	79.070	152.370	6364.20	691.17	122.39	2357.11	1625248.26	336114.14	39°24'54.849"N	80°49'35.253"W	2360.29	87.028	8.07	5.66	5.92
7469.00	84.950	158.350	6376.58	778.94	42.34	2393.79	1625284.94	336034.10	39°24'54.063"N	80°49'34.771"W	2394.17	88.987	9.37	6.61	6.72
7559.00	87.080	161.860	6382.83	868.70	-42.07	2424.34	1625315.48	335949.69	39°24'53.233"N	80°49'34.366"W	2424.70	90.994	4.55	2.37	3.90
7649.00	87.010	162.900	6387.47	958.50	-127.73	2451.54	1625342.69	335864.04	39°24'52.391"N	80°49'34.003"W	2454.87	92.983	1.16	-0.08	1.16
7738.00	88.680	161.070	6390.82	1047.38	-212.30	2479.05	1625370.19	335779.47	39°24'51.559"N	80°49'33.637"W	2488.12	94.895	2.78	1.88	-2.06
7828.00	90.030	162.250	6391.83	1137.33	-297.72	2507.36	1625398.51	335694.06	39°24'50.719"N	80°49'33.260"W	2524.98	96.771	1.99	1.50	1.31
7917.00	90.370	163.180	6391.52	1226.23	-382.70	2533.81	1625424.95	335609.08	39°24'49.883"N	80°49'32.907"W	2562.54	98.589	1.11	0.38	1.04
8007.00	90.310	161.310	6390.99	1316.16	-468.41	2561.25	1625452.39	335523.38	39°24'49.040"N	80°49'32.541"W	2603.73	100.364	2.08	-0.07	-2.08
8096.00	90.310	157.260	6390.51	1405.13	-551.63	2592.72	1625483.86	335440.16	39°24'48.222"N	80°49'32.125"W	2650.76	102.011	4.55	0.00	-4.55
8186.00	90.310	158.990	6390.02	1495.08	-635.15	2626.25	1625517.39	335356.64	39°24'47.402"N	80°49'31.682"W	2701.97	103.596	1.92	0.00	1.92
8275.00	90.280	158.750	6389.56	1584.06	-718.16	2658.34	1625549.47	335273.63	39°24'46.586"N	80°49'31.258"W	2753.64	105.118	0.27	-0.03	-0.27
8365.00	90.250	158.330	6389.15	1674.03	-801.92	2691.26	1625582.40	335189.88	39°24'45.763"N	80°49'30.822"W	2808.20	106.593	0.47	-0.03	-0.47
8454.00	90.090	157.920	6388.88	1762.98	-884.52	2724.42	1625615.55	335107.29	39°24'44.952"N	80°49'30.384"W	2864.41	107.987	0.49	-0.18	-0.46
8544.00	90.120	157.750	6388.72	1852.92	-967.86	2758.38	1625649.51	335023.95	39°24'44.133"N	80°49'29.936"W	2923.25	109.335	0.19	0.03	-0.19
8633.00	89.940	157.550	6388.67	1941.84	-1050.18	2792.22	1625683.35	334941.64	39°24'43.325"N	80°49'29.490"W	2983.18	110.612	0.30	-0.20	-0.22

REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot D
Area	Tyler County, WV	Well	SHR-40D-HS
Field	Tyler	Wellbore	SHR-40D-HS AWB
Facility	SHR-40 Pad		

WELLPATH DATA (205 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]
8723.00	89.910	157.640	6388.79	2031.76	-1133.38	2826.53	1625717.65	334858.44	39°24'42.507"N	80°49'29.037"W	3045.29	111.850	0.11	-0.03	0.10
8812.00	89.850	159.710	6388.97	2120.73	-1216.29	2858.89	1625750.01	334775.54	39°24'41.693"N	80°49'28.609"W	3106.86	113.047	2.33	-0.07	2.33
8902.00	90.030	160.700	6389.07	2210.73	-1300.97	2889.37	1625780.49	334690.86	39°24'40.860"N	80°49'28.205"W	3168.75	114.240	1.12	0.20	1.10
8991.00	89.940	161.050	6389.09	2299.72	-1385.05	2918.53	1625809.65	334606.78	39°24'40.034"N	80°49'27.818"W	3230.51	115.388	0.41	-0.10	0.39
9080.00	89.850	160.940	6389.26	2388.71	-1469.20	2947.51	1625838.63	334522.64	39°24'39.206"N	80°49'27.433"W	3293.38	116.494	0.16	-0.10	-0.12
9170.00	89.910	159.800	6389.44	2478.70	-1553.97	2977.74	1625868.86	334437.87	39°24'38.373"N	80°49'27.032"W	3358.84	117.558	1.27	0.07	-1.27
9259.00	89.970	160.020	6389.54	2567.70	-1637.56	3008.31	1625899.43	334354.29	39°24'37.551"N	80°49'26.626"W	3425.13	118.561	0.26	0.07	0.25
9349.00	90.000	160.740	6389.56	2657.70	-1722.33	3038.53	1625929.65	334269.52	39°24'36.718"N	80°49'26.226"W	3492.72	119.546	0.80	0.03	0.80
9439.00	89.880	160.220	6389.65	2747.70	-1807.16	3068.61	1625959.72	334184.70	39°24'35.884"N	80°49'25.826"W	3561.20	120.495	0.59	-0.13	-0.58
9528.00	89.970	162.820	6389.77	2836.66	-1891.56	3096.82	1625987.93	334100.30	39°24'35.054"N	80°49'25.451"W	3628.81	121.417	2.92	0.10	2.92
9618.00	90.180	165.720	6389.65	2926.40	-1978.18	3121.21	1626012.32	334013.69	39°24'34.202"N	80°49'25.124"W	3695.29	122.366	3.23	0.23	3.22
9707.00	90.430	162.170	6389.18	3015.17	-2063.69	3145.82	1626036.93	333928.18	39°24'33.360"N	80°49'24.795"W	3762.32	123.265	4.00	0.28	-3.99
9797.00	90.180	158.870	6388.70	3105.15	-2148.53	3175.83	1626066.94	333843.35	39°24'32.526"N	80°49'24.397"W	3834.33	124.079	3.68	-0.28	-3.67
9886.00	90.250	159.730	6388.37	3194.15	-2231.78	3207.29	1626098.39	333760.10	39°24'31.708"N	80°49'23.980"W	3907.37	124.832	0.97	0.08	0.97
9976.00	90.090	160.450	6388.10	3284.15	-2316.40	3237.94	1626129.04	333675.48	39°24'30.876"N	80°49'23.574"W	3981.20	125.580	0.82	-0.18	0.80
10066.00	90.120	159.130	6387.93	3374.14	-2400.86	3269.03	1626160.13	333591.03	39°24'30.046"N	80°49'23.162"W	4055.94	126.295	1.47	0.03	-1.47
10155.00	90.280	158.240	6387.62	3463.12	-2483.77	3301.38	1626192.48	333508.13	39°24'29.231"N	80°49'22.734"W	4131.37	126.956	1.02	0.18	-1.00
10245.00	90.220	157.410	6387.23	3553.05	-2567.11	3335.35	1626226.45	333424.79	39°24'28.413"N	80°49'22.286"W	4208.87	127.584	0.92	-0.07	-0.92
10334.00	90.090	157.970	6386.99	3641.98	-2649.45	3369.13	1626260.23	333342.46	39°24'27.604"N	80°49'21.840"W	4286.10	128.181	0.65	-0.15	0.63
10424.00	90.220	159.080	6386.75	3731.95	-2733.20	3402.08	1626293.18	333258.71	39°24'26.781"N	80°49'21.405"W	4364.00	128.778	1.24	0.14	1.23
10513.00	89.880	157.520	6386.67	3820.90	-2815.89	3434.99	1626326.08	333176.02	39°24'25.969"N	80°49'20.970"W	4441.66	129.344	1.79	-0.38	-1.75
10603.00	89.690	155.840	6387.01	3910.75	-2898.53	3470.61	1626361.70	333093.39	39°24'25.157"N	80°49'20.501"W	4521.80	129.867	1.88	-0.21	-1.87
10692.00	89.750	159.670	6387.44	3999.66	-2980.89	3504.30	1626395.39	333011.03	39°24'24.348"N	80°49'20.056"W	4600.63	130.386	4.30	0.07	4.30
10782.00	89.970	161.090	6387.66	4089.66	-3065.66	3534.52	1626425.61	332926.26	39°24'23.515"N	80°49'19.655"W	4678.80	130.937	1.60	0.24	1.58
10872.00	89.940	158.840	6387.73	4179.65	-3150.21	3565.35	1626456.44	332841.72	39°24'22.684"N	80°49'19.247"W	4757.68	131.463	2.50	-0.03	-2.50
10962.00	89.880	157.550	6387.87	4269.61	-3233.77	3598.78	1626489.86	332758.16	39°24'21.863"N	80°49'18.809"W	4838.23	131.942	1.43	-0.07	-1.43
11051.00	89.600	163.260	6388.28	4358.57	-3317.58	3628.62	1626519.70	332674.36	39°24'21.039"N	80°49'18.409"W	4916.62	132.436	6.42	-0.31	6.42
11141.00	89.480	164.470	6389.00	4448.36	-3404.03	3653.63	1626544.71	332587.91	39°24'20.188"N	80°49'18.075"W	4993.64	132.975	1.35	-0.13	1.34
11230.00	89.510	162.650	6389.79	4537.18	-3489.39	3678.81	1626569.89	332502.56	39°24'19.348"N	80°49'17.738"W	5070.45	133.486	2.05	0.03	-2.04
11320.00	89.510	162.030	6390.55	4627.10	-3575.14	3706.11	1626597.19	332416.81	39°24'18.505"N	80°49'17.374"W	5149.46	133.970	0.69	0.00	-0.69



Actual Wellpath Report

SHR-40D-HS AWP Proj: 16145'
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REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot D
Area	Tyler County, WV	Well	SHR-40D-HS
Field	Tyler	Wellbore	SHR-40D-HS AWB
Facility	SHR-40 Pad		

WELLPATH DATA (205 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]
11409.00	89.780	162.390	6391.11	4716.03	-3659.88	3733.30	1626624.38	332332.08	39°24'17.671"N	80°49'17.012"W	5228.03	134.431	0.51	0.30	0.40
11499.00	89.820	161.470	6391.42	4805.98	-3745.44	3761.22	1626652.30	332246.52	39°24'16.830"N	80°49'16.640"W	5308.02	134.880	1.02	0.04	-1.02
11589.00	89.940	160.310	6391.61	4895.97	-3830.48	3790.68	1626681.76	332161.49	39°24'15.994"N	80°49'16.249"W	5389.05	135.299	1.30	0.13	-1.29
11678.00	89.850	158.980	6391.77	4984.96	-3913.92	3821.64	1626712.71	332078.05	39°24'15.174"N	80°49'15.839"W	5470.26	135.683	1.50	-0.10	-1.49
11768.00	89.820	157.860	6392.03	5074.93	-3997.61	3854.74	1626745.81	331994.37	39°24'14.351"N	80°49'15.402"W	5553.37	136.042	1.24	-0.03	-1.24
11857.00	89.880	158.690	6392.26	5163.88	-4080.29	3887.69	1626778.75	331911.69	39°24'13.539"N	80°49'14.967"W	5635.85	136.385	0.94	0.07	0.93
11947.00	89.940	159.390	6392.41	5253.87	-4164.33	3919.88	1626810.95	331827.65	39°24'12.713"N	80°49'14.541"W	5719.01	136.732	0.78	0.07	0.78
12037.00	89.910	158.990	6392.52	5343.86	-4248.46	3951.85	1626842.92	331743.53	39°24'11.886"N	80°49'14.118"W	5802.29	137.072	0.45	-0.03	-0.44
12126.00	89.910	159.520	6392.66	5432.85	-4331.69	3983.38	1626874.44	331660.30	39°24'11.068"N	80°49'13.701"W	5884.80	137.399	0.60	0.00	0.60
12216.00	89.940	161.170	6392.78	5522.85	-4416.45	4013.65	1626904.71	331575.56	39°24'10.235"N	80°49'13.299"W	5967.78	137.736	1.83	0.03	1.83
12306.00	89.970	161.730	6392.85	5612.82	-4501.77	4042.28	1626933.34	331490.24	39°24'09.396"N	80°49'12.918"W	6050.29	138.078	0.62	0.03	0.62
12395.00	89.910	160.270	6392.94	5701.80	-4585.92	4071.26	1626962.31	331406.09	39°24'08.569"N	80°49'12.534"W	6132.35	138.402	1.64	-0.07	-1.64
12485.00	89.820	158.990	6393.16	5791.80	-4670.29	4102.58	1626993.64	331321.73	39°24'07.740"N	80°49'12.119"W	6216.33	138.703	1.43	-0.10	-1.42
12574.00	89.940	159.320	6393.34	5880.79	-4753.46	4134.25	1627025.31	331238.56	39°24'06.922"N	80°49'11.700"W	6299.80	138.985	0.39	0.13	0.37
12664.00	90.000	160.120	6393.39	5970.79	-4837.88	4165.45	1627056.50	331154.14	39°24'06.093"N	80°49'11.287"W	6384.05	139.271	0.89	0.07	0.89
12753.00	89.880	159.810	6393.48	6059.79	-4921.50	4195.94	1627086.99	331070.53	39°24'05.271"N	80°49'10.883"W	6467.38	139.550	0.37	-0.13	-0.35
12843.00	89.880	159.260	6393.67	6149.78	-5005.82	4227.40	1627118.45	330986.22	39°24'04.442"N	80°49'10.466"W	6552.03	139.819	0.61	0.00	-0.61
12932.00	89.850	158.550	6393.88	6238.77	-5088.85	4259.44	1627150.48	330903.19	39°24'03.626"N	80°49'10.043"W	6636.20	140.070	0.80	-0.03	-0.80
13022.00	90.000	158.540	6394.00	6328.74	-5172.61	4292.36	1627183.40	330819.43	39°24'02.803"N	80°49'09.608"W	6721.63	140.313	0.17	0.17	-0.01
13111.00	89.940	158.820	6394.05	6417.71	-5255.52	4324.71	1627215.76	330736.52	39°24'01.988"N	80°49'09.180"W	6806.15	140.549	0.32	-0.07	0.31
13201.00	90.060	161.810	6394.05	6507.70	-5340.25	4355.03	1627246.07	330651.80	39°24'01.155"N	80°49'08.778"W	6890.90	140.802	3.32	0.13	3.32
13291.00	90.250	168.120	6393.80	6597.32	-5427.13	4378.36	1627269.40	330564.93	39°24'00.300"N	80°49'08.464"W	6973.07	141.105	7.01	0.21	7.01
13380.00	90.920	165.400	6392.89	6685.69	-5513.75	4398.74	1627289.78	330478.31	39°23'59.447"N	80°49'08.189"W	7053.39	141.418	3.15	0.75	-3.06
13470.00	90.250	159.770	6391.97	6775.55	-5599.58	4425.67	1627316.71	330392.48	39°23'58.603"N	80°49'07.830"W	7137.36	141.679	6.30	-0.74	-6.26
13559.00	90.280	160.150	6391.56	6864.55	-5683.19	4456.16	1627347.20	330308.88	39°23'57.781"N	80°49'07.426"W	7221.92	141.900	0.43	0.03	0.43
13649.00	90.280	158.790	6391.12	6954.55	-5767.48	4487.73	1627378.76	330224.60	39°23'56.953"N	80°49'07.008"W	7307.77	142.113	1.51	0.00	-1.51
13739.00	90.340	157.910	6390.64	7044.51	-5851.12	4520.93	1627411.96	330140.95	39°23'56.131"N	80°49'06.569"W	7394.22	142.308	0.98	0.07	-0.98
13828.00	90.340	157.140	6390.11	7133.42	-5933.36	4554.95	1627445.98	330058.72	39°23'55.323"N	80°49'06.121"W	7480.13	142.487	0.87	0.00	-0.87
13918.00	90.460	158.710	6389.48	7223.36	-6016.76	4588.77	1627479.80	329975.33	39°23'54.504"N	80°49'05.674"W	7566.92	142.668	1.75	0.13	1.74
14007.00	90.830	162.110	6388.48	7312.34	-6100.59	4618.61	1627509.64	329891.50	39°23'53.680"N	80°49'05.279"W	7651.71	142.872	3.84	0.42	3.82



Actual Wellpath Report

SHR-40D-HS AWP Proj: 16145'
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REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot D
Area	Tyler County, WV	Well	SHR-40D-HS
Field	Tyler	Wellbore	SHR-40D-HS AWB
Facility	SHR-40 Pad		

WELLPATH DATA (205 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]
14097.00	90.770	163.950	6387.22	7402.20	-6186.66	4644.87	1627535.90	329805.44	39°23'52.833"N	80°49'04.928"W	7736.25	143.101	2.05	-0.07	2.04
14187.00	90.460	159.790	6386.25	7492.13	-6272.17	4672.87	1627563.90	329719.93	39°23'51.992"N	80°49'04.555"W	7821.50	143.313	4.63	-0.34	-4.62
14276.00	90.400	159.400	6385.59	7581.12	-6355.58	4703.90	1627594.92	329636.53	39°23'51.172"N	80°49'04.145"W	7906.96	143.494	0.44	-0.07	-0.44
14366.00	90.460	158.880	6384.91	7671.11	-6439.68	4735.95	1627626.97	329552.43	39°23'50.346"N	80°49'03.721"W	7993.66	143.668	0.58	0.07	-0.58
14456.00	90.430	158.900	6384.21	7761.09	-6523.64	4768.36	1627659.38	329468.48	39°23'49.521"N	80°49'03.292"W	8080.54	143.836	0.04	-0.03	0.02
14545.00	89.880	158.970	6383.97	7850.07	-6606.69	4800.35	1627691.37	329385.43	39°23'48.704"N	80°49'02.869"W	8166.50	143.998	0.62	-0.62	0.08
14635.00	89.910	158.580	6384.14	7940.05	-6690.58	4832.93	1627723.95	329301.54	39°23'47.880"N	80°49'02.439"W	8253.55	144.158	0.43	0.03	-0.43
14724.00	89.940	158.720	6384.25	8029.03	-6773.47	4865.33	1627756.35	329218.65	39°23'47.066"N	80°49'02.010"W	8339.75	144.311	0.16	0.03	0.16
14814.00	90.000	159.570	6384.30	8119.02	-6857.58	4897.37	1627788.39	329134.56	39°23'46.239"N	80°49'01.587"W	8426.78	144.467	0.95	0.07	0.94
14904.00	90.250	159.640	6384.10	8209.01	-6941.94	4928.74	1627819.75	329050.20	39°23'45.410"N	80°49'01.171"W	8513.69	144.625	0.29	0.28	0.08
14993.00	90.250	158.970	6383.71	8298.00	-7025.19	4960.19	1627851.20	328966.95	39°23'44.592"N	80°49'00.755"W	8599.81	144.776	0.75	0.00	-0.75
15083.00	90.220	157.860	6383.35	8387.97	-7108.88	4993.30	1627884.30	328883.27	39°23'43.770"N	80°49'00.318"W	8687.30	144.916	1.23	-0.03	-1.23
15172.00	89.910	157.880	6383.24	8476.91	-7191.32	5026.82	1627917.83	328800.83	39°23'42.960"N	80°48'59.876"W	8774.06	145.046	0.35	-0.35	0.02
15262.00	89.910	159.250	6383.39	8566.88	-7275.09	5059.71	1627950.72	328717.06	39°23'42.137"N	80°48'59.441"W	8861.59	145.182	1.52	0.00	1.52
15351.00	90.400	160.020	6383.15	8655.87	-7358.53	5090.68	1627981.69	328633.63	39°23'41.316"N	80°48'59.031"W	8947.79	145.324	1.03	0.55	0.87
15441.00	90.740	160.760	6382.25	8745.87	-7443.31	5120.89	1628011.89	328548.86	39°23'40.483"N	80°48'58.631"W	9034.73	145.473	0.90	0.38	0.82
15531.00	90.620	160.990	6381.18	8835.85	-7528.33	5150.37	1628041.37	328463.84	39°23'39.647"N	80°48'58.239"W	9121.52	145.623	0.29	-0.13	0.26
15620.00	90.250	160.380	6380.51	8924.84	-7612.32	5179.81	1628070.81	328379.86	39°23'38.821"N	80°48'57.849"W	9207.49	145.767	0.80	-0.42	-0.69
15710.00	90.120	157.870	6380.22	9014.82	-7696.40	5211.88	1628102.87	328295.78	39°23'37.995"N	80°48'57.424"W	9295.07	145.895	2.79	-0.14	-2.79
15800.00	89.910	158.470	6380.19	9104.77	-7779.95	5245.34	1628136.34	328212.23	39°23'37.174"N	80°48'56.983"W	9383.03	146.012	0.71	-0.23	0.67
15889.00	89.820	159.330	6380.40	9193.76	-7862.98	5277.38	1628168.37	328129.21	39°23'36.358"N	80°48'56.559"W	9469.81	146.132	0.97	-0.10	0.97
15979.00	89.910	160.100	6380.61	9283.76	-7947.40	5308.58	1628199.58	328044.79	39°23'35.529"N	80°48'56.146"W	9557.31	146.258	0.86	0.10	0.86
16069.00	89.880	160.550	6380.78	9373.75	-8032.14	5338.89	1628229.87	327960.05	39°23'34.695"N	80°48'55.744"W	9644.64	146.388	0.50	-0.03	0.50
16120.00	89.970	160.120	6380.85	9424.75	-8080.17	5356.05	1628247.04	327912.03	39°23'34.223"N	80°48'55.517"W	9694.14	146.461	0.86	0.18	-0.84
16145.00	89.970	160.120	6380.86	9449.75	-8103.68	5364.55	1628255.54	327888.52	39°23'33.992"N	80°48'55.404"W	9718.44	146.496	0.00	0.00	0.00

REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot D
Area	Tyler County, WV	Well	SHR-40D-HS
Field	Tyler	Wellbore	SHR-40D-HS AWB
Facility	SHR-40 Pad		

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SHR-40D-HS BHL Rev-2		6376.00	-8106.39	5355.76	1628246.75	327885.81	39°23'33.964"N	80°48'55.515"W	point
SHR-40D-HS LP Rev-2		6376.00	21.95	2397.28	1625288.43	336013.71	39°24'53.862"N	80°49'34.723"W	point
SHR-40 Pad LL		6599.46	50.70	31.31	1622922.59	336042.46	39°24'53.800"N	80°50'04.870"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: SHR-40D-HS AWB Ref Wellpath: SHR-40D-HS AWP Proj: 16145'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
19.40	2623.00	Generic gyro - northseeking (Standard)	01_VES Gyro <8-3/4"> (100'-2619')	SHR-40D-HS AWB
2623.00	6289.00	Generic gyro - continuous (Standard)	02_SDI Gyro <8-3/4"> (2619')(2663'-6285')	SHR-40D-HS AWB
6289.00	16120.00	NaviTrak (AT Curve Short Spaced)	03_BHI AT Curve <8-3/4"> (6289')(6350'-16120')	SHR-40D-HS AWB
16120.00	16145.00	Blind Drilling (std)	Projection to bit	SHR-40D-HS AWB



Actual Wellpath Report

SHR-40D-HS AWP Proj: 16145'
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REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot D
Area	Tyler County, WV	Well	SHR-40D-HS
Field	Tyler	Wellbore	SHR-40D-HS AWB
Facility	SHR-40 Pad		

COMMENTS

Wellpath general comments
 API: 47-095-02212-0000
 BHI Job #: 7250516
 Rig: Precision 542
 Duration: 5/16/2015-5/23/2015
 VES Gyro <8-3/4"> (100'-2619)
 SDI Gyro <8-3/4"> (2619')(2663'-6285')
 BHI AT Curve <8-3/4"> (6289')(6350'-16120')
 Projected MD at TD: 16145'



NOBLE ENERGY

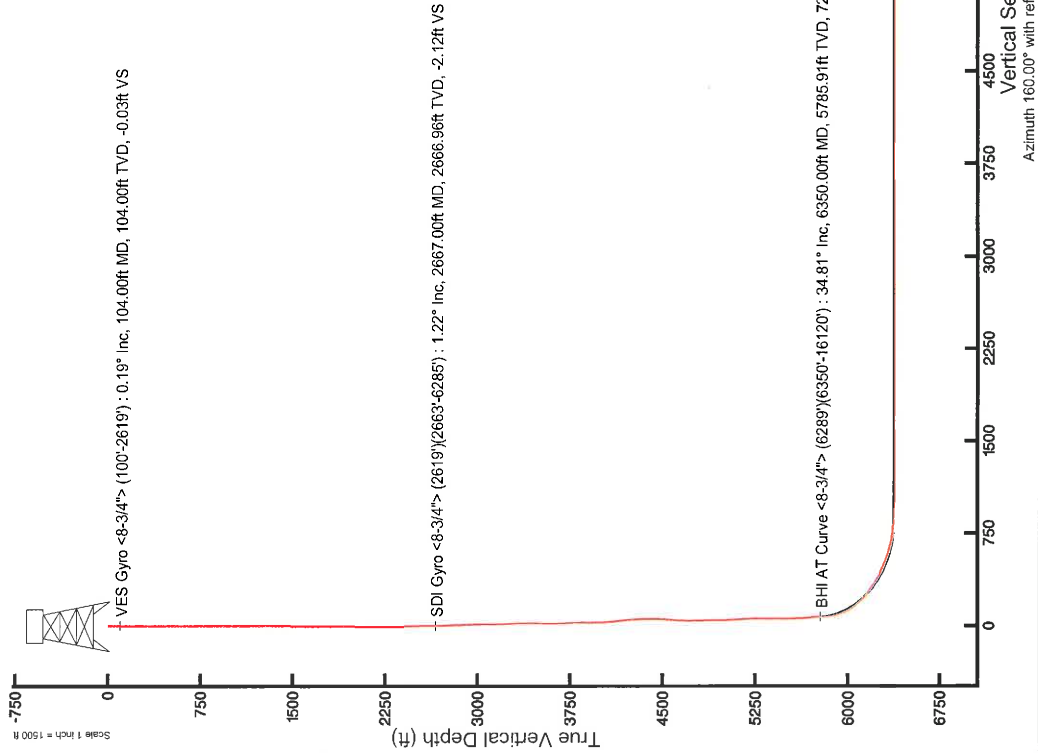


Location: Tyler County, WV
 Field: Tyler
 Facility: SHR-40 Pad

Slot: Slot D
 Well: SHR-40D-HS
 Wellbore: SHR-40D-HS PWB

For reference wellbore is SHR-40D-HS PWB Rev B.0
 True vertical depths are referenced to Precision 542 (RKB)
 Measured depths are referenced to Precision 542 (RKB)
 Precision 542 (RKB) to Mean Sea Level: 788.96 feet
 Mean Sea Level to Mud line (At Slot, Slot D): -708.56 feet
 Coordinates are in feet referenced to Slot
 Created by: edeyar on 27/May/2015

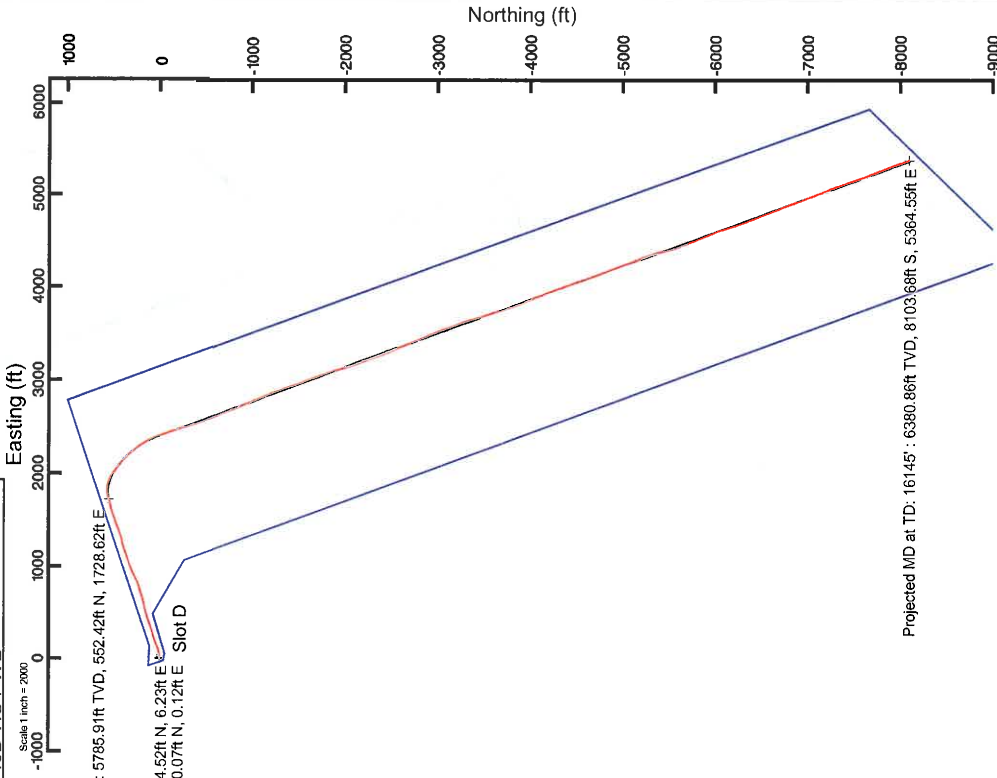
Location Information			
Facility Name	Grid East (US ft)	Grid North (US ft)	Longitude
SHR-40 Pad	1622922.599	336042.458	80°50'04.870"W
Local E (ft)	Local N (ft)	Grid East (US ft)	Longitude
-50.70	-31.31	1622891.280	80°50'05.258"W
Slot D		335994.780	19.4ft
Precision 542 (RKB) to Mud line (At Slot, Slot D)			-789.56ft
Mean Sea Level to Mud line (At Slot, Slot D)			788.96ft



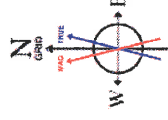
VES Gyro <8-3/4"> (2619)(2663-6285) : 0.19" Inc, 104.00ft MD, 104.00ft TVD, -0.03ft VS

SDI Gyro <8-3/4"> (2619)(2663-6285) : 1.22" Inc, 2667.00ft MD, 2666.96ft TVD, -2.12ft VS

BHI AT Curve <8-3/4"> (6289)(6350-16120) : 34.81" Inc, 6350.00ft MD, 5785.91ft TVD, 72.12ft VS



API: 47-095-02212-0000
 BHI Job #: 7250516
 Rig: Precision 542
 Duration: 5/16/2015-5/23/2015



User specified (HDGM) Dip: 66.03° Field: 55421 NT
 Magnetic North is 7.39 degrees West of True North (at 08/May/2015)
 To correct azimuth from True to GHD add 0.85 degrees
 To correct azimuth from Magnetic to GHD subtract 6.53 degrees