





# Actual Wellpath Report

SHR1DHS AWP Proj: 15980'  
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### REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot D
Area	Tyler County, WV	Well	SHR1DHS
Field	Tyler	Wellbore	SHR1DHS AWB
Facility	SHR 1 Pad		

95.02112

### REPORT SETUP INFORMATION

Projection System	NAD27 / Lambert West Virginia SP, Northern Zone (4701), US feet	Software System	WellArchitect® 4.0.1
North Reference	True	User	Edsaryar
Scale	0.999948	Report Generated	1/14/2014 at 4:23:44 PM
Convergence at slot	n/a	Database/Source file	Well Architect Eastern US/SHR1DHS_AWB.xml

### WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	39.08	45.44	1619685.15	336047.15	39°24'53.369"N	80°50'46.117"W
Facility Reference Pt			1619639.13	336008.76	39°24'52.983"N	80°50'46.696"W
Field Reference Pt			0.00	0.00	38°17'12.460"N	86°28'23.077"W

### WELLPATH DATUM

Calculation method	Minimum curvature	Precision 542 (RT) to Facility Vertical Datum	18.60ft
Horizontal Reference Pt	Slot	Precision 542 (RT) to Mean Sea Level	1014.60ft
Vertical Reference Pt	Precision 542 (RT)	Precision 542 (RT) to Mud Line at Slot (Slot D)	18.60ft
MD Reference Pt	Precision 542 (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	159.14°





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**WELLPATH DATA (189 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	132.570	0.00	0.00	0.00	0.00	1619685.15	336047.15	39°24'53.369"N	80°50'46.117"W	0.00	0.000	0.00	0.00	0.00
18.60	0.000	132.570	18.60	0.00	0.00	0.00	1619685.15	336047.15	39°24'53.369"N	80°50'46.117"W	0.00	0.000	0.00	0.00	0.00
118.60	0.510	132.570	118.60	0.40	-0.30	0.33	1619685.47	336046.84	39°24'53.366"N	80°50'46.113"W	0.45	132.570	0.51	0.51	0.00
218.60	0.320	183.010	218.60	1.05	-0.88	0.64	1619685.78	336046.26	39°24'53.360"N	80°50'46.109"W	1.09	143.968	0.39	-0.19	50.44
318.60	0.330	170.710	318.59	1.59	-1.44	0.67	1619685.80	336045.70	39°24'53.355"N	80°50'46.109"W	1.59	155.023	0.07	0.01	-12.30
418.60	0.430	163.880	418.59	2.25	-2.09	0.82	1619685.94	336045.05	39°24'53.348"N	80°50'46.107"W	2.25	158.486	0.11	0.10	-6.83
518.60	0.170	134.910	518.59	2.75	-2.55	1.03	1619686.14	336044.58	39°24'53.344"N	80°50'46.104"W	2.75	157.986	0.29	-0.26	-28.97
618.60	0.380	132.260	618.59	3.19	-2.88	1.38	1619686.49	336044.25	39°24'53.340"N	80°50'46.100"W	3.20	154.361	0.21	0.21	-2.65
718.60	0.190	125.570	718.59	3.62	-3.20	1.76	1619686.87	336043.92	39°24'53.337"N	80°50'46.095"W	3.65	151.152	0.19	-0.19	-6.69
818.60	0.200	109.340	818.59	3.87	-3.36	2.06	1619687.16	336043.76	39°24'53.336"N	80°50'46.091"W	3.94	148.417	0.06	0.01	-16.23
918.60	0.210	93.940	918.59	4.06	-3.43	2.41	1619687.51	336043.69	39°24'53.335"N	80°50'46.087"W	4.19	144.869	0.06	0.01	-15.40
1018.60	0.280	76.130	1018.59	4.17	-3.38	2.83	1619687.93	336043.73	39°24'53.336"N	80°50'46.081"W	4.41	140.055	0.10	0.07	-17.81
1118.60	0.460	45.950	1118.58	4.04	-3.04	3.36	1619688.46	336044.06	39°24'53.339"N	80°50'46.075"W	4.53	132.190	0.26	0.18	-30.18
1218.60	0.190	41.410	1218.58	3.80	-2.64	3.75	1619688.86	336044.46	39°24'53.343"N	80°50'46.070"W	4.59	125.101	0.27	-0.27	-4.54
1318.60	0.120	67.930	1318.58	3.72	-2.48	3.96	1619689.07	336044.62	39°24'53.344"N	80°50'46.067"W	4.67	121.998	0.10	-0.07	26.52
1418.60	0.080	34.290	1418.58	3.68	-2.38	4.10	1619689.21	336044.71	39°24'53.345"N	80°50'46.065"W	4.74	120.129	0.07	-0.04	-33.64
1518.60	0.370	39.610	1518.58	3.48	-2.07	4.34	1619689.46	336045.01	39°24'53.348"N	80°50'46.062"W	4.81	115.502	0.29	0.29	5.32
1618.60	0.380	52.910	1618.58	3.23	-1.62	4.81	1619689.94	336045.46	39°24'53.353"N	80°50'46.056"W	5.08	108.633	0.09	0.01	13.30
1718.60	0.520	174.730	1718.58	3.57	-1.87	5.12	1619690.24	336045.20	39°24'53.350"N	80°50'46.052"W	5.45	110.113	0.79	0.14	121.82
1818.60	1.160	177.120	1818.57	4.97	-3.34	5.21	1619690.31	336043.73	39°24'53.336"N	80°50'46.051"W	6.19	122.635	0.64	0.64	2.39
1918.60	1.110	177.610	1918.55	6.86	-5.32	5.30	1619690.37	336041.76	39°24'53.316"N	80°50'46.050"W	7.51	135.071	0.05	-0.05	0.49
2018.60	1.040	177.660	2018.53	8.64	-7.19	5.38	1619690.42	336039.88	39°24'53.298"N	80°50'46.049"W	8.98	143.194	0.07	-0.07	0.05
2118.60	0.960	169.510	2118.51	10.32	-8.92	5.57	1619690.59	336038.15	39°24'53.281"N	80°50'46.047"W	10.52	148.021	0.16	-0.08	-8.15
2218.60	0.790	161.930	2218.50	11.83	-10.40	5.94	1619690.93	336036.66	39°24'53.266"N	80°50'46.042"W	11.98	150.283	0.21	-0.17	-7.58
2318.60	0.640	151.250	2318.49	13.07	-11.55	6.42	1619691.39	336035.51	39°24'53.255"N	80°50'46.036"W	13.21	150.927	0.20	-0.15	-10.68
2353.60	0.590	145.340	2353.49	13.44	-11.86	6.62	1619691.59	336035.19	39°24'53.252"N	80°50'46.033"W	13.58	150.858	0.23	-0.14	-16.89
2606.00	0.060	315.690	2605.89	14.58	-12.84	7.26	1619692.22	336034.20	39°24'53.242"N	80°50'46.025"W	14.75	150.507	0.26	-0.21	67.49
2695.00	0.090	40.720	2694.89	14.51	-12.75	7.28	1619692.23	336034.29	39°24'53.243"N	80°50'46.025"W	14.68	150.297	0.12	0.03	95.54
2740.00	1.410	73.820	2739.88	14.54	-12.57	7.83	1619692.79	336034.46	39°24'53.245"N	80°50'46.018"W	14.81	148.085	2.97	2.93	73.56
2784.00	2.930	69.710	2783.85	14.59	-12.03	9.40	1619694.37	336034.98	39°24'53.250"N	80°50'45.998"W	15.27	141.985	3.47	3.45	-9.34

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**WELLPATH DATA (189 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]
2874.00	4.510	65.370	2873.66	14.38	-9.76	14.78	1619699.78	336037.17	39°24'53.273"N	80°50'45.929"W	17.71	123.437	1.78	1.76	-4.82
2964.00	6.720	69.200	2963.22	14.15	-6.41	22.92	1619707.97	336040.39	39°24'53.306"N	80°50'45.825"W	23.80	105.633	2.49	2.46	4.26
3053.00	9.650	77.750	3051.31	15.28	-2.98	35.08	1619720.18	336043.64	39°24'53.339"N	80°50'45.671"W	35.21	94.857	3.56	3.29	9.61
3143.00	11.870	81.900	3139.72	18.45	-0.08	51.62	1619736.76	336046.30	39°24'53.368"N	80°50'45.460"W	51.62	90.084	2.61	2.47	4.61
3232.00	12.580	84.530	3226.70	23.04	2.14	70.33	1619755.50	336048.23	39°24'53.390"N	80°50'45.221"W	70.36	88.259	1.01	0.80	2.96
3322.00	13.300	83.260	3314.42	28.17	4.29	90.37	1619775.56	336050.08	39°24'53.411"N	80°50'44.966"W	90.47	87.284	0.86	0.80	-1.41
3411.00	16.650	84.590	3400.38	34.07	6.69	113.23	1619798.46	336052.14	39°24'53.435"N	80°50'44.675"W	113.43	86.618	3.78	3.76	1.49
3501.00	19.950	86.930	3485.82	42.20	8.73	141.41	1619826.67	336053.76	39°24'53.455"N	80°50'44.316"W	141.68	86.467	3.76	3.67	2.60
3590.00	20.350	84.610	3569.37	50.96	11.00	171.98	1619857.26	336055.57	39°24'53.478"N	80°50'43.926"W	172.33	86.341	1.00	0.45	-2.61
3680.00	20.900	83.560	3653.61	59.13	14.27	203.51	1619888.84	336058.37	39°24'53.510"N	80°50'43.525"W	204.01	85.990	0.74	0.61	-1.17
3770.00	21.010	89.470	3737.66	68.74	16.22	235.60	1619920.95	336059.83	39°24'53.529"N	80°50'43.116"W	236.16	86.062	2.35	0.12	6.57
3859.00	21.020	92.130	3820.75	80.52	15.77	267.50	1619952.85	336058.91	39°24'53.525"N	80°50'42.709"W	267.97	86.626	1.07	0.01	2.99
3949.00	20.920	86.740	3904.79	91.68	16.09	299.68	1619985.02	336058.74	39°24'53.528"N	80°50'42.299"W	300.11	86.928	2.15	-0.11	-5.99
4039.00	20.920	80.920	3988.87	99.82	19.54	331.59	1620016.98	336061.71	39°24'53.562"N	80°50'41.893"W	332.17	86.628	2.31	0.00	-6.47
4128.00	20.940	78.950	4072.00	105.77	25.09	362.89	1620048.36	336066.80	39°24'53.617"N	80°50'41.494"W	363.76	86.045	0.79	0.02	-2.21
4218.00	21.010	85.450	4156.05	113.05	29.45	394.76	1620080.29	336070.68	39°24'53.660"N	80°50'41.088"W	395.86	85.733	2.59	0.08	7.22
4308.00	20.700	88.730	4240.15	122.91	31.09	426.75	1620112.29	336071.84	39°24'53.676"N	80°50'40.680"W	427.88	85.834	1.34	-0.34	3.64
4398.00	19.960	87.420	4324.55	133.06	32.13	458.00	1620143.55	336072.41	39°24'53.686"N	80°50'40.282"W	459.12	85.987	0.97	-0.82	-1.46
4487.00	19.710	84.570	4408.27	141.82	34.23	488.11	1620173.70	336074.07	39°24'53.707"N	80°50'39.898"W	489.31	85.988	1.12	-0.28	-3.20
4577.00	20.730	80.340	4492.72	148.95	38.34	518.93	1620204.57	336077.71	39°24'53.748"N	80°50'39.506"W	520.34	85.774	1.98	1.13	-4.70
4667.00	21.080	87.560	4576.81	157.16	41.71	550.81	1620236.49	336080.60	39°24'53.781"N	80°50'39.100"W	552.38	85.670	2.89	0.39	8.02
4756.00	20.990	91.850	4659.89	168.37	41.87	582.73	1620268.41	336080.29	39°24'53.783"N	80°50'38.693"W	584.23	85.890	1.73	-0.10	4.82
4846.00	20.940	85.420	4743.94	179.11	42.64	614.88	1620300.56	336080.57	39°24'53.790"N	80°50'38.283"W	616.35	86.033	2.56	-0.06	-7.14
4935.00	20.930	81.590	4827.07	186.99	46.23	646.46	1620332.19	336083.69	39°24'53.826"N	80°50'37.881"W	648.11	85.909	1.54	-0.01	-4.30
5025.00	20.840	84.650	4911.16	194.74	50.08	678.30	1620364.09	336087.06	39°24'53.864"N	80°50'37.475"W	680.15	85.778	1.22	-0.10	3.40
5115.00	20.880	90.080	4995.27	204.75	51.55	710.28	1620396.09	336088.05	39°24'53.878"N	80°50'37.068"W	712.15	85.849	2.15	0.04	6.03
5204.00	20.890	89.810	5078.42	216.02	51.58	742.01	1620427.81	336087.60	39°24'53.879"N	80°50'36.663"W	743.80	86.024	0.11	0.01	-0.30
5294.00	20.850	84.970	5162.52	226.06	53.03	774.01	1620459.83	336088.58	39°24'53.893"N	80°50'36.256"W	775.83	86.080	1.92	-0.04	-5.38
5383.00	20.950	83.050	5245.67	234.20	56.35	805.58	1620491.44	336091.42	39°24'53.926"N	80°50'35.853"W	807.55	85.999	0.78	0.11	-2.16
5473.00	20.330	84.670	5329.89	242.26	59.75	837.12	1620523.03	336094.35	39°24'53.959"N	80°50'35.451"W	839.25	85.918	0.94	-0.69	1.80

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5562.00	20.220	81.830	5413.38	249.77	63.37	867.74	1620553.70	336097.51	39°24'53.995"N	80°50'35.061"W	870.05	85.823	1.11	-0.12	-3.19
5652.00	18.320	85.410	5498.34	257.15	66.71	897.24	1620583.24	336100.41	39°24'54.028"N	80°50'34.686"W	899.72	85.748	2.49	-2.11	3.98
5741.00	18.920	91.870	5582.69	266.65	67.36	925.61	1620611.61	336100.63	39°24'54.035"N	80°50'34.324"W	928.06	85.838	2.41	0.67	7.26
5854.00	20.820	98.270	5688.97	283.51	63.87	963.80	1620649.75	336096.57	39°24'54.000"N	80°50'33.837"W	965.91	86.208	2.55	1.68	5.66
5944.00	20.820	96.810	5773.09	298.72	59.68	995.51	1620681.39	336091.90	39°24'53.959"N	80°50'33.433"W	997.30	86.569	0.58	0.00	-1.62
6033.00	20.930	83.480	5856.30	310.01	59.61	1027.03	1620712.90	336091.36	39°24'53.958"N	80°50'33.032"W	1028.75	86.678	5.33	0.12	-14.98
6123.00	20.710	77.040	5940.43	316.18	65.00	1058.51	1620744.46	336096.28	39°24'54.011"N	80°50'32.631"W	1060.50	86.486	2.55	-0.24	-7.16
6212.00	20.580	80.240	6023.72	321.35	71.18	1089.26	1620775.30	336102.00	39°24'54.072"N	80°50'32.239"W	1091.59	86.261	1.28	-0.15	3.60
6257.00	20.450	91.900	6065.88	325.92	72.26	1104.92	1620790.97	336102.85	39°24'54.083"N	80°50'32.039"W	1107.28	86.258	9.07	-0.29	25.91
6301.00	22.350	102.430	6106.86	333.49	70.21	1120.78	1620806.80	336100.55	39°24'54.063"N	80°50'31.837"W	1122.98	86.416	9.72	4.32	23.93
6346.00	25.450	111.140	6148.01	344.66	64.88	1138.16	1620824.10	336094.96	39°24'54.010"N	80°50'31.616"W	1140.01	86.738	10.42	6.89	19.36
6391.00	28.100	119.410	6188.20	359.29	56.18	1156.42	1620842.22	336085.99	39°24'53.924"N	80°50'31.383"W	1157.79	87.219	10.15	5.89	18.38
6436.00	31.340	126.020	6227.28	377.25	44.09	1175.13	1620860.75	336073.62	39°24'53.804"N	80°50'31.145"W	1175.96	87.851	10.23	7.20	14.69
6481.00	35.160	131.000	6264.91	398.49	28.70	1194.39	1620879.77	336057.95	39°24'53.652"N	80°50'30.900"W	1194.73	88.624	10.43	8.49	11.07
6525.00	38.570	135.040	6300.12	422.19	10.67	1213.65	1620898.75	336039.64	39°24'53.474"N	80°50'30.654"W	1213.69	89.496	9.50	7.75	9.18
6570.00	42.500	136.530	6334.31	449.04	-10.30	1234.03	1620918.82	336018.37	39°24'53.267"N	80°50'30.395"W	1234.07	90.478	8.99	8.73	3.31
6615.00	46.940	138.490	6366.28	478.47	-33.65	1255.39	1620939.83	335994.70	39°24'53.036"N	80°50'30.122"W	1255.84	91.535	10.33	9.87	4.36
6660.00	51.470	140.330	6395.67	510.53	-59.52	1277.53	1620961.58	335968.49	39°24'52.780"N	80°50'29.840"W	1278.92	92.668	10.53	10.07	4.09
6705.00	56.030	143.010	6422.28	545.14	-88.00	1300.01	1620983.63	335939.69	39°24'52.499"N	80°50'29.554"W	1302.99	93.872	11.21	10.13	5.96
6750.00	60.010	145.120	6446.11	581.99	-118.90	1322.39	1621005.54	335908.45	39°24'52.193"N	80°50'29.269"W	1327.73	95.138	9.70	8.84	4.69
6795.00	63.560	145.780	6467.38	620.51	-151.56	1344.88	1621027.53	335875.47	39°24'51.871"N	80°50'28.982"W	1353.39	96.430	7.99	7.89	1.47
6839.00	66.490	147.990	6485.96	659.49	-184.96	1366.65	1621048.81	335841.74	39°24'51.540"N	80°50'28.705"W	1379.11	97.708	8.07	6.66	5.02
6884.00	69.460	148.500	6502.83	700.45	-220.43	1388.60	1621070.22	335805.95	39°24'51.190"N	80°50'28.425"W	1405.99	99.020	6.68	6.60	1.13
6929.00	72.060	149.310	6517.66	742.25	-256.81	1410.54	1621091.61	335769.25	39°24'50.830"N	80°50'28.146"W	1433.73	100.319	6.02	5.78	1.80
6974.00	73.870	150.260	6530.84	784.70	-293.99	1432.19	1621112.70	335731.75	39°24'50.463"N	80°50'27.870"W	1462.06	101.600	4.50	4.02	2.11
7018.00	75.300	151.400	6542.54	826.67	-331.03	1452.86	1621132.81	335694.41	39°24'50.097"N	80°50'27.606"W	1490.10	102.835	4.10	3.25	2.59
7063.00	77.600	152.630	6553.08	870.08	-369.66	1473.39	1621152.76	335655.48	39°24'49.715"N	80°50'27.345"W	1519.05	104.084	5.76	5.11	2.73
7108.00	82.220	154.300	6560.96	914.15	-409.28	1493.17	1621171.94	335615.56	39°24'49.323"N	80°50'27.093"W	1548.25	105.329	10.90	10.27	3.71
7153.00	88.340	156.780	6564.67	958.89	-450.09	1511.73	1621189.88	335574.49	39°24'48.920"N	80°50'26.857"W	1577.31	106.580	14.67	13.60	5.51
7197.00	90.030	157.910	6565.29	1002.86	-490.68	1528.67	1621206.22	335533.64	39°24'48.519"N	80°50'26.641"W	1605.49	107.796	4.62	3.84	2.57

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# Actual Wellpath Report

SHR1DHS AWP Proj: 15980'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY	Slot	Slot D
Area	Tyler County, WV	Well	SHR1DHS
Field	Tyler	Wellbore	SHR1DHS AWB
Facility	SHR 1 Pad		

## WELLPATH DATA (189 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]
7287.00	88.980	162.840	6566.07	1092.81	-575.43	1558.89	1621235.16	335448.46	39°24'47.681"N	80°50'26.256"W	1661.70	110.260	5.60	-1.17	5.48
7376.00	89.660	165.110	6567.13	1181.48	-660.96	1583.45	1621258.44	335362.58	39°24'46.836"N	80°50'25.943"W	1715.86	112.656	2.66	0.76	2.55
7466.00	89.380	165.240	6567.88	1270.98	-747.96	1606.48	1621280.16	335275.25	39°24'45.976"N	80°50'25.650"W	1772.07	114.966	0.34	-0.31	0.14
7555.00	89.290	163.490	6568.91	1359.60	-833.65	1630.47	1621302.85	335189.21	39°24'45.129"N	80°50'25.344"W	1831.23	117.081	1.97	-0.10	-1.97
7645.00	89.510	162.080	6569.86	1449.41	-919.62	1657.10	1621328.19	335102.86	39°24'44.279"N	80°50'25.005"W	1895.17	119.028	1.59	0.24	-1.57
7734.00	89.450	161.640	6570.66	1538.30	-1004.19	1684.81	1621354.63	335017.89	39°24'43.443"N	80°50'24.652"W	1961.37	120.796	0.50	-0.07	-0.49
7824.00	89.630	159.300	6571.39	1628.27	-1089.00	1714.89	1621383.44	334932.64	39°24'42.605"N	80°50'24.269"W	2031.45	122.417	2.61	0.20	-2.60
7913.00	90.740	156.480	6571.10	1717.24	-1171.45	1748.39	1621415.69	334849.70	39°24'41.790"N	80°50'23.842"W	2104.55	123.823	3.41	1.25	-3.17
8003.00	90.460	157.070	6570.16	1807.16	-1254.15	1783.87	1621449.94	334766.48	39°24'40.973"N	80°50'23.390"W	2180.62	125.109	0.73	-0.31	0.66
8092.00	90.800	157.360	6569.18	1896.10	-1336.20	1818.34	1621483.17	334683.93	39°24'40.162"N	80°50'22.951"W	2256.50	126.310	0.50	0.38	0.33
8182.00	90.580	155.900	6568.09	1986.00	-1418.81	1854.04	1621517.62	334600.80	39°24'39.345"N	80°50'22.496"W	2334.62	127.425	1.64	-0.24	-1.62
8271.00	90.490	155.940	6567.26	2074.86	-1500.06	1890.35	1621552.71	334519.02	39°24'38.542"N	80°50'22.034"W	2413.21	128.433	0.11	-0.10	0.04
8361.00	90.460	155.460	6566.52	2164.69	-1582.08	1927.38	1621588.51	334436.46	39°24'37.732"N	80°50'21.562"W	2493.55	129.381	0.53	-0.03	-0.53
8451.00	90.920	158.110	6565.43	2254.60	-1664.78	1962.85	1621622.73	334353.24	39°24'36.914"N	80°50'21.110"W	2573.77	130.303	2.99	0.51	2.94
8540.00	89.880	159.560	6564.81	2343.60	-1747.77	1994.99	1621653.62	334269.78	39°24'36.094"N	80°50'20.701"W	2652.30	131.221	2.00	-1.17	1.63
8630.00	90.000	160.870	6564.91	2433.58	-1832.46	2025.45	1621682.81	334184.65	39°24'35.257"N	80°50'20.313"W	2731.36	132.136	1.46	0.13	1.46
8720.00	89.570	162.160	6565.24	2523.50	-1917.81	2053.98	1621710.06	334098.88	39°24'34.413"N	80°50'19.949"W	2810.13	133.036	1.51	-0.48	1.43
8809.00	89.540	162.060	6565.93	2612.38	-2002.50	2081.32	1621736.12	334013.80	39°24'33.576"N	80°50'19.601"W	2888.24	133.894	0.12	-0.03	-0.11
8899.00	89.630	160.220	6566.59	2702.31	-2087.67	2110.41	1621763.93	333928.21	39°24'32.735"N	80°50'19.230"W	2968.53	134.690	2.05	0.10	-2.04
8988.00	89.880	159.970	6566.97	2791.30	-2171.35	2140.71	1621792.97	333844.09	39°24'31.908"N	80°50'18.845"W	3049.17	135.407	0.40	0.28	-0.28
9078.00	90.000	160.010	6567.06	2881.29	-2255.92	2171.51	1621822.50	333759.08	39°24'31.072"N	80°50'18.452"W	3131.23	136.092	0.14	0.13	0.04
9168.00	89.780	161.730	6567.23	2971.25	-2340.94	2201.00	1621850.71	333673.62	39°24'30.231"N	80°50'18.077"W	3213.16	136.765	1.93	-0.24	1.91
9257.00	89.850	161.240	6567.52	3060.17	-2425.33	2229.27	1621877.71	333588.82	39°24'29.397"N	80°50'17.717"W	3294.22	137.412	0.56	0.08	-0.55
9347.00	89.910	160.810	6567.71	3150.12	-2510.44	2258.53	1621905.69	333503.29	39°24'28.556"N	80°50'17.344"W	3376.87	138.024	0.48	0.07	-0.48
9437.00	90.220	160.040	6567.61	3240.10	-2595.24	2288.68	1621934.57	333418.05	39°24'27.718"N	80°50'16.960"W	3460.25	138.592	0.92	0.34	-0.86
9526.00	90.180	160.890	6567.30	3329.07	-2679.12	2318.44	1621963.06	333333.74	39°24'26.889"N	80°50'16.581"W	3543.00	139.128	0.96	-0.04	0.96
9616.00	90.370	159.420	6566.87	3419.06	-2763.77	2348.99	1621992.34	333248.65	39°24'26.052"N	80°50'16.192"W	3627.15	139.638	1.65	0.21	-1.63
9706.00	90.340	157.690	6566.31	3509.05	-2847.53	2381.90	1622023.99	333164.40	39°24'25.224"N	80°50'15.773"W	3712.40	140.088	1.92	-0.03	-1.92
9795.00	90.370	156.500	6565.76	3597.99	-2929.51	2416.53	1622057.39	333081.92	39°24'24.414"N	80°50'15.331"W	3797.59	140.481	1.34	0.03	-1.34
9885.00	90.250	156.340	6565.27	3687.88	-3012.00	2452.54	1622092.15	332998.91	39°24'23.599"N	80°50'14.873"W	3884.21	140.846	0.22	-0.13	-0.18

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# Actual Wellpath Report

SHR1DHS AWP Proj: 15980'  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot D
Area	Tyler County, WV	Well	SHRIDHS
Field	Tyler	Wellbore	SHRIDHS AWB
Facility	SHR 1 Pad		

### WELLPATH DATA (189 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]
9974.00	90.490	156.920	6564.69	3776.80	-3093.69	2487.84	1622126.22	332916.70	39°24'22.791"N	80°50'14.423"W	3969.92	141.195	0.71	0.27	0.65
10064.00	90.490	158.070	6563.92	3866.75	-3176.84	2522.29	1622159.42	332833.05	39°24'21.969"N	80°50'13.985"W	4056.38	141.552	1.28	0.00	1.28
10153.00	90.000	157.440	6563.54	3955.73	-3259.21	2555.98	1622191.87	332750.19	39°24'21.155"N	80°50'13.555"W	4141.92	141.895	0.90	-0.55	-0.71
10243.00	90.220	156.410	6563.37	4045.66	-3342.01	2591.25	1622225.90	332666.88	39°24'20.337"N	80°50'13.106"W	4228.90	142.212	1.17	0.24	-1.14
10333.00	90.370	156.770	6562.91	4135.57	-3424.60	2627.01	1622260.41	332583.76	39°24'19.521"N	80°50'12.651"W	4316.14	142.508	0.43	0.17	0.40
10422.00	90.000	157.060	6562.62	4224.50	-3506.47	2661.91	1622294.07	332501.38	39°24'18.711"N	80°50'12.206"W	4402.39	142.796	0.53	-0.42	0.33
10511.00	90.030	157.200	6562.60	4313.44	-3588.47	2696.49	1622327.43	332418.87	39°24'17.901"N	80°50'11.766"W	4488.68	143.078	0.16	0.03	0.16
10601.00	90.550	158.390	6562.14	4403.42	-3671.80	2730.51	1622360.19	332335.05	39°24'17.077"N	80°50'11.333"W	4575.78	143.364	1.44	0.58	1.32
10690.00	90.180	161.160	6561.57	4492.40	-3755.30	2761.27	1622389.69	332251.10	39°24'16.252"N	80°50'10.941"W	4661.21	143.673	3.14	-0.42	3.11
10779.00	89.970	162.210	6561.46	4581.31	-3839.79	2789.24	1622416.39	332166.21	39°24'15.417"N	80°50'10.585"W	4745.93	144.005	1.20	-0.24	1.18
10869.00	90.250	161.830	6561.29	4671.20	-3925.39	2817.02	1622442.89	332080.20	39°24'14.571"N	80°50'10.231"W	4831.60	144.335	0.52	0.31	-0.42
10958.00	90.520	160.770	6560.69	4760.13	-4009.69	2845.55	1622470.15	331995.49	39°24'13.738"N	80°50'09.867"W	4916.79	144.638	1.23	0.30	-1.19
11048.00	90.000	160.040	6560.28	4850.11	-4094.48	2875.73	1622499.06	331910.27	39°24'12.900"N	80°50'09.483"W	5003.46	144.918	1.00	-0.58	-0.81
11137.00	90.580	158.510	6559.83	4939.10	-4177.72	2907.23	1622529.30	331826.57	39°24'12.077"N	80°50'09.082"W	5089.72	145.166	1.84	0.65	-1.72
11227.00	90.830	158.250	6558.72	5029.09	-4261.38	2940.39	1622561.20	331742.43	39°24'11.250"N	80°50'08.660"W	5177.38	145.394	0.40	0.28	-0.29
11316.00	91.260	162.580	6557.10	5118.03	-4345.19	2970.21	1622589.76	331658.18	39°24'10.421"N	80°50'08.280"W	5263.35	145.645	4.89	0.48	4.87
11406.00	91.050	160.830	6555.28	5207.92	-4430.62	2998.45	1622616.72	331572.34	39°24'09.577"N	80°50'07.920"W	5349.87	145.912	1.96	-0.23	-1.94
11495.00	91.420	159.590	6553.36	5296.88	-4514.35	3028.58	1622645.59	331488.18	39°24'08.750"N	80°50'07.537"W	5436.14	146.143	1.45	0.42	-1.39
11585.00	91.320	159.480	6551.21	5386.85	-4598.64	3060.04	1622675.78	331403.43	39°24'07.916"N	80°50'07.136"W	5523.71	146.359	0.17	-0.11	-0.12
11674.00	90.490	158.510	6549.81	5475.84	-4681.72	3091.93	1622706.42	331319.89	39°24'07.095"N	80°50'06.730"W	5610.57	146.558	1.43	-0.93	-1.09
11763.00	90.280	157.650	6549.21	5564.82	-4764.28	3125.16	1622738.40	331236.84	39°24'06.279"N	80°50'06.307"W	5697.80	146.737	0.99	-0.24	-0.97
11853.00	89.480	156.920	6549.40	5654.77	-4847.30	3159.91	1622771.91	331153.32	39°24'05.459"N	80°50'05.864"W	5786.30	146.900	1.20	-0.89	-0.81
11942.00	89.850	153.430	6549.92	5743.54	-4928.06	3197.27	1622808.05	331072.01	39°24'04.660"N	80°50'05.388"W	5874.38	147.025	3.94	0.42	-3.92
12032.00	89.380	154.610	6550.52	5833.18	-5008.96	3236.69	1622846.26	330990.53	39°24'03.861"N	80°50'04.886"W	5963.71	147.130	1.41	-0.52	1.31
12122.00	88.770	153.520	6551.98	5922.81	-5089.88	3276.05	1622884.39	330909.03	39°24'03.061"N	80°50'04.385"W	6053.05	147.233	1.39	-0.68	-1.21
12211.00	88.830	156.650	6553.84	6011.56	-5170.57	3313.53	1622920.66	330827.79	39°24'02.263"N	80°50'03.908"W	6141.20	147.346	3.52	0.07	3.52
12301.00	88.650	161.490	6555.82	6101.51	-5254.59	3345.66	1622951.53	330743.31	39°24'01.433"N	80°50'03.498"W	6229.30	147.515	5.38	-0.20	5.38
12391.00	88.710	163.820	6557.89	6191.31	-5340.47	3372.49	1622977.06	330657.04	39°24'00.584"N	80°50'03.157"W	6316.19	147.728	2.59	0.07	2.59
12480.00	89.170	162.670	6559.54	6280.07	-5425.67	3398.14	1623001.43	330571.47	39°23'59.742"N	80°50'02.830"W	6401.97	147.941	1.39	0.52	-1.29
12570.00	89.320	163.080	6560.73	6369.87	-5511.68	3424.64	1623026.63	330485.08	39°23'58.892"N	80°50'02.493"W	6488.97	148.146	0.49	0.17	0.46

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# Actual Wellpath Report

SHR1DHS AWP Proj: 15980'

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## REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot D
Area	Tyler County, WV	Well	SHR1DHS
Field	Tyler	Wellbore	SHR1DHS AWB
Facility	SHR 1 Pad		

## WELLPATH DATA (189 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]
12659.00	89.780	162.210	6561.43	6458.70	-5596.62	3451.18	1623051.90	330399.75	39°23'58.052"N	80°50'02.155"W	6575.17	148.340	1.11	0.52	-0.98
12749.00	89.850	160.120	6561.72	6548.64	-5681.80	3480.24	1623079.68	330314.16	39°23'57.210"N	80°50'01.785"W	6662.95	148.512	2.32	0.08	-2.32
12838.00	90.180	159.970	6561.69	6637.63	-5765.45	3510.61	1623108.79	330230.06	39°23'56.384"N	80°50'01.398"W	6750.17	148.663	0.41	0.37	-0.17
12928.00	89.880	160.780	6561.65	6727.60	-5850.22	3540.84	1623137.75	330144.85	39°23'55.546"N	80°50'01.013"W	6838.32	148.816	0.96	-0.33	0.90
13017.00	90.150	161.020	6561.62	6816.56	-5934.32	3569.96	1623165.60	330060.33	39°23'54.714"N	80°50'00.642"W	6925.38	148.970	0.41	0.30	0.27
13107.00	89.940	159.260	6561.55	6906.54	-6018.97	3600.54	1623194.90	329975.24	39°23'53.878"N	80°50'00.253"W	7013.69	149.112	1.97	-0.23	-1.96
13197.00	90.150	156.560	6561.48	6996.51	-6102.35	3634.38	1623227.49	329891.36	39°23'53.054"N	80°49'59.822"W	7102.64	149.223	3.01	0.23	-3.00
13286.00	90.090	157.800	6561.29	7085.46	-6184.39	3668.89	1623260.77	329808.82	39°23'52.243"N	80°49'59.383"W	7190.79	149.321	1.39	-0.07	1.39
13376.00	89.910	157.670	6561.29	7175.43	-6267.68	3702.99	1623293.62	329725.04	39°23'51.420"N	80°49'58.948"W	7279.83	149.425	0.25	-0.20	-0.14
13465.00	89.880	157.990	6561.46	7264.41	-6350.10	3736.58	1623325.96	329642.13	39°23'50.605"N	80°49'58.521"W	7367.89	149.526	0.36	-0.03	0.36
13555.00	90.310	157.760	6561.31	7354.39	-6433.47	3770.48	1623358.60	329558.26	39°23'49.781"N	80°49'58.089"W	7456.94	149.627	0.54	0.48	-0.26
13645.00	90.120	159.450	6560.97	7444.38	-6517.26	3803.31	1623390.17	329473.99	39°23'48.953"N	80°49'57.671"W	7545.85	149.733	1.89	-0.21	1.88
13734.00	89.880	160.150	6560.97	7533.37	-6600.79	3834.04	1623419.65	329390.02	39°23'48.127"N	80°49'57.280"W	7633.49	149.850	0.83	-0.27	0.79
13823.00	90.120	161.360	6560.97	7622.34	-6684.81	3863.37	1623447.72	329305.57	39°23'47.297"N	80°49'56.906"W	7720.90	149.975	1.39	0.27	1.36
13913.00	90.680	160.660	6560.34	7712.29	-6769.91	3892.66	1623475.72	329220.04	39°23'46.455"N	80°49'56.534"W	7809.26	150.101	1.00	0.62	-0.78
14003.00	90.950	159.820	6559.06	7802.26	-6854.60	3923.08	1623504.87	329134.91	39°23'45.618"N	80°49'56.146"W	7897.86	150.216	0.98	0.30	-0.93
14093.00	91.080	158.980	6557.47	7892.24	-6938.83	3954.74	1623535.27	329050.22	39°23'44.786"N	80°49'55.743"W	7986.70	150.319	0.94	0.14	-0.93
14182.00	90.830	159.110	6555.98	7981.23	-7021.94	3986.57	1623565.84	328966.65	39°23'43.964"N	80°49'55.338"W	8074.67	150.415	0.32	-0.28	0.15
14272.00	90.920	159.580	6554.61	8071.22	-7106.14	4018.31	1623596.32	328881.99	39°23'43.132"N	80°49'54.934"W	8163.58	150.513	0.53	0.10	0.52
14362.00	90.710	159.610	6553.33	8161.21	-7190.48	4049.68	1623626.43	328797.19	39°23'42.298"N	80°49'54.534"W	8252.46	150.612	0.24	-0.23	0.03
14451.00	90.770	157.840	6552.18	8250.19	-7273.41	4081.97	1623657.47	328713.79	39°23'41.479"N	80°49'54.123"W	8340.56	150.698	1.99	0.07	-1.99
14540.00	91.320	159.640	6550.56	8339.17	-7356.33	4114.24	1623688.48	328630.40	39°23'40.659"N	80°49'53.712"W	8428.68	150.783	2.11	0.62	2.02
14630.00	90.280	158.710	6549.30	8429.16	-7440.44	4146.23	1623719.21	328545.82	39°23'39.828"N	80°49'53.305"W	8517.71	150.871	1.55	-1.16	-1.03
14720.00	90.800	158.860	6548.45	8519.16	-7524.34	4178.80	1623750.51	328461.45	39°23'38.999"N	80°49'52.890"W	8606.86	150.953	0.60	0.58	0.17
14809.00	90.680	158.790	6547.30	8608.15	-7607.33	4210.94	1623781.41	328378.00	39°23'38.178"N	80°49'52.481"W	8695.02	151.034	0.16	-0.13	-0.08
14899.00	90.400	157.750	6546.45	8698.13	-7690.92	4244.26	1623813.47	328293.92	39°23'37.352"N	80°49'52.057"W	8784.31	151.108	1.20	-0.31	-1.16
14989.00	90.490	157.460	6545.76	8788.10	-7774.13	4278.55	1623846.51	328210.21	39°23'36.530"N	80°49'51.620"W	8873.73	151.173	0.34	0.10	-0.32
15078.00	90.650	156.390	6544.87	8877.02	-7856.01	4313.43	1623880.16	328127.82	39°23'35.720"N	80°49'51.176"W	8962.28	151.231	1.22	0.18	-1.20
15168.00	90.310	157.640	6544.12	8966.96	-7938.86	4348.57	1623914.05	328044.46	39°23'34.901"N	80°49'50.729"W	9051.83	151.288	1.44	-0.38	1.39
15257.00	89.720	158.580	6544.09	9055.94	-8021.44	4381.75	1623945.99	327961.40	39°23'34.085"N	80°49'50.306"W	9140.20	151.354	1.25	-0.66	1.06

95-02-113





# Actual Wellpath Report

SHR1DHS AWP Proj: 15980'  
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### REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot D
Area	Tyler County, WV	Well	SHR1DHS
Field	Tyler	Wellbore	SHR1DHS AWB
Facility	SHR 1 Pad		

### WELLPATH DATA (189 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]
15347.00	89.750	159.210	6544.51	9145.94	-8105.40	4414.16	1623977.13	327876.96	39°23'33.255"N	80°49'49.894"W	9229.43	151.428	0.70	0.03	0.70
15437.00	90.180	159.700	6544.56	9235.94	-8189.68	4445.74	1624007.45	327792.23	39°23'32.422"N	80°49'49.492"W	9318.55	151.505	0.72	0.48	0.54
15526.00	90.060	161.260	6544.38	9324.91	-8273.56	4475.48	1624035.92	327707.92	39°23'31.593"N	80°49'49.113"W	9406.47	151.589	1.76	-0.13	1.75
15616.00	90.150	161.530	6544.21	9414.84	-8358.86	4504.20	1624063.35	327622.20	39°23'30.750"N	80°49'48.747"W	9495.17	151.682	0.32	0.10	0.30
15706.00	89.690	159.700	6544.34	9504.81	-8443.75	4534.07	1624091.95	327536.88	39°23'29.911"N	80°49'48.367"W	9584.08	151.765	2.10	-0.51	-2.03
15795.00	89.570	158.740	6544.91	9593.80	-8526.96	4565.64	1624122.27	327453.21	39°23'29.089"N	80°49'47.965"W	9672.34	151.834	1.09	-0.13	-1.08
15884.00	89.320	158.230	6545.78	9682.79	-8609.75	4598.28	1624153.66	327369.94	39°23'28.270"N	80°49'47.550"W	9760.74	151.894	0.64	-0.28	-0.57
15955.00	89.780	157.920	6546.33	9753.78	-8675.61	4624.79	1624179.18	327303.69	39°23'27.619"N	80°49'47.212"W	9831.33	151.939	0.78	0.65	-0.44
15980.00	89.780	157.920	6546.43	9778.77	-8698.78	4634.19	1624188.23	327280.39	39°23'27.390"N	80°49'47.093"W	9856.19	151.954	0.00	0.00	0.00

95-02112

### TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SHR1DHS BHL Rev-1		6563.00	-8698.44	4634.04	1624188.09	327280.73	39°23'27.394"N	80°49'47.094"W	point
SHR1DHS LP Rev-1		6563.00	-446.22	1489.59	1621167.81	335578.69	39°24'48.958"N	80°50'27.139"W	point
SHR1DHS LP Plat2		6621.30	-305.63	1436.10	1621116.43	335720.05	39°24'50.348"N	80°50'27.820"W	point

### WELLPATH COMPOSITION - Ref Wellbore: SHR1DHS AWB Ref Wellpath: SHR1DHS AWP Proj: 15980'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
18.60	2353.60	Generic gyro - northseeking (Standard)	01_VES Gyro (100'-2335')	SHR1DHS AWB
2353.60	15955.00	NaviTrak (MagCorr)	02_BHI AT Curve <8-3/4"> (2353.6')(2606'-15955')	SHR1DHS AWB
15955.00	15980.00	Blind Drilling (std)	Projection to bit	SHR1DHS AWB





# Actual Wellpath Report

SHR1DHS AWP Proj: 15980'

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## REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot D
Area	Tyler County, WV	Well	SHR1DHS
Field	Tyler	Wellbore	SHR1DHS AWB
Facility	SHR 1 Pad		

## COMMENTS

Wellpath general comments  
API: 47-095-02112-0000  
BHI Job #: 5774023  
Rig: Precision 542  
Duration: 12/31/2013-1/10/2014  
VES Gyro <9-5/8"> (100'-2335')  
BHI AT Curve <8-3/4"> (2353.6')(2606'-15955')  
Projected MD at TD: 15980'

95-02112