

### REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot C
Area	Marshall County, WV	Well	SHL-22C-HS
Field	Marshall	Wellbore	SHL-22C-HS AWB
Facility	SHL-22 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	0.999963	Report Generated	16/Jul/2015 at 06:46
Convergence at slot	0.69° West	Database/Source file	WellArchitectEasternDB/SHL-22C-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	28.15	28.46	1698341.30	552086.58	40°00'38.896"N	80°34'36.957"W
Facility Reference Pt			1698312.84	552058.43	40°00'38.614"N	80°34'37.318"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 584 (RKB) to Facility Vertical Datum	1342.00ft
Horizontal Reference Pt	Slot	Precision 584 (RKB) to Mean Sea Level	1342.00ft
Vertical Reference Pt	Precision 584 (RKB)	Precision 584 (RKB) to Mud Line at Slot (Slot C)	19.40ft
MD Reference Pt	Precision 584 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	145.00°



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## WELLPATH DATA (208 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	328.240	0.00	0.00	0.00	0.00	1698341.30	552086.58	40°00'38.896"N	80°34'36.957"W	0.00	0.000	0.00	0.00	0.00
19.40	0.000	328.240	19.40	0.00	0.00	0.00	1698341.30	552086.58	40°00'38.896"N	80°34'36.957"W	0.00	0.000	0.00	0.00	0.00
107.40	0.470	328.240	107.40	-0.36	0.31	-0.19	1698341.11	552086.89	40°00'38.899"N	80°34'36.959"W	0.36	328.240	0.53	0.53	0.00
207.40	0.580	342.870	207.39	-1.25	1.14	-0.55	1698340.75	552087.72	40°00'38.907"N	80°34'36.964"W	1.27	334.030	0.17	0.11	14.63
307.40	0.450	323.580	307.39	-2.13	1.94	-0.94	1698340.36	552088.52	40°00'38.915"N	80°34'36.969"W	2.15	334.204	0.21	-0.13	-19.29
407.40	0.370	350.870	407.39	-2.81	2.57	-1.22	1698340.08	552089.15	40°00'38.921"N	80°34'36.973"W	2.85	334.610	0.20	-0.08	27.29
507.40	0.470	15.330	507.39	-3.36	3.29	-1.16	1698340.14	552089.87	40°00'38.928"N	80°34'36.972"W	3.49	340.501	0.21	0.10	24.46
607.40	0.490	353.230	607.38	-4.00	4.11	-1.11	1698340.19	552090.69	40°00'38.936"N	80°34'36.972"W	4.25	344.928	0.19	0.02	-22.10
707.40	0.270	334.280	707.38	-4.61	4.75	-1.26	1698340.04	552091.33	40°00'38.943"N	80°34'36.974"W	4.91	345.141	0.25	-0.22	-18.95
807.40	0.450	81.110	807.38	-4.67	5.02	-0.97	1698340.33	552091.60	40°00'38.945"N	80°34'36.970"W	5.11	349.024	0.59	0.18	106.83
907.40	0.100	24.790	907.38	-4.54	5.16	-0.55	1698340.75	552091.74	40°00'38.947"N	80°34'36.965"W	5.19	353.928	0.40	-0.35	-56.32
1007.40	0.210	355.780	1007.38	-4.74	5.42	-0.53	1698340.77	552092.00	40°00'38.949"N	80°34'36.964"W	5.45	354.461	0.13	0.11	-29.01
1107.40	0.160	65.720	1107.38	-4.87	5.66	-0.41	1698340.89	552092.24	40°00'38.952"N	80°34'36.963"W	5.68	355.839	0.22	-0.05	69.94
1207.40	0.230	49.140	1207.38	-4.87	5.85	-0.13	1698341.17	552092.43	40°00'38.954"N	80°34'36.959"W	5.85	358.700	0.09	0.07	-16.58
1307.40	0.080	275.340	1307.38	-4.93	5.99	-0.05	1698341.25	552092.57	40°00'38.955"N	80°34'36.958"W	5.99	359.518	0.29	-0.15	-133.80
1407.40	0.060	106.980	1407.38	-4.94	5.98	-0.07	1698341.23	552092.56	40°00'38.955"N	80°34'36.959"W	5.98	359.331	0.14	-0.02	-168.36
1507.40	0.150	93.750	1507.38	-4.81	5.95	0.11	1698341.41	552092.53	40°00'38.955"N	80°34'36.956"W	5.96	1.067	0.09	0.05	-13.23
1607.40	0.200	31.290	1607.38	-4.80	6.09	0.33	1698341.63	552092.67	40°00'38.956"N	80°34'36.954"W	6.10	3.119	0.19	0.05	-62.46
1707.40	0.510	43.170	1707.37	-4.96	6.57	0.73	1698342.03	552093.15	40°00'38.961"N	80°34'36.949"W	6.61	6.318	0.32	0.31	11.88
1807.40	0.580	45.420	1807.37	-5.14	7.25	1.39	1698342.69	552093.83	40°00'38.968"N	80°34'36.940"W	7.38	10.873	0.07	0.07	2.25
1907.40	0.610	41.980	1907.36	-5.34	8.00	2.11	1698343.41	552094.58	40°00'38.975"N	80°34'36.931"W	8.27	14.769	0.05	0.03	-3.44
2007.40	0.540	19.390	2007.36	-5.74	8.84	2.62	1698343.92	552095.42	40°00'38.984"N	80°34'36.925"W	9.22	16.517	0.24	-0.07	-22.59
2107.40	0.510	32.480	2107.35	-6.18	9.66	3.02	1698344.32	552096.24	40°00'38.992"N	80°34'36.920"W	10.12	17.344	0.12	-0.03	13.09
2207.40	0.430	9.470	2207.35	-6.62	10.40	3.32	1698344.62	552096.98	40°00'38.999"N	80°34'36.916"W	10.92	17.684	0.20	-0.08	-23.01
2307.40	0.480	343.090	2307.35	-7.29	11.18	3.26	1698344.56	552097.76	40°00'39.007"N	80°34'36.917"W	11.64	16.250	0.21	0.05	-26.38
2407.40	0.470	323.300	2407.34	-8.09	11.91	2.89	1698344.19	552098.49	40°00'39.014"N	80°34'36.922"W	12.25	13.646	0.16	-0.01	-19.79
2507.40	0.300	279.170	2507.34	-8.69	12.28	2.39	1698343.69	552098.86	40°00'39.017"N	80°34'36.928"W	12.51	11.003	0.33	-0.17	-44.13
2607.40	0.250	255.850	2607.34	-8.95	12.26	1.92	1698343.22	552098.84	40°00'39.017"N	80°34'36.934"W	12.41	8.883	0.12	-0.05	-23.32
2707.40	0.290	243.860	2707.34	-9.06	12.10	1.48	1698342.78	552098.68	40°00'39.016"N	80°34'36.940"W	12.19	6.965	0.07	0.04	-11.99
2807.40	0.400	245.850	2807.34	-9.17	11.85	0.93	1698342.23	552098.42	40°00'39.013"N	80°34'36.947"W	11.88	4.501	0.11	0.11	1.99

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## WELLPATH DATA (208 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]
2907.40	0.660	252.130	2907.33	-9.40	11.53	0.07	1698341.37	552098.11	40°00'39.010"N	80°34'36.958"W	11.53	0.327	0.27	0.26	6.28
3007.40	0.580	265.840	3007.33	-9.83	11.31	-0.99	1698340.31	552097.89	40°00'39.008"N	80°34'36.971"W	11.36	355.013	0.17	-0.08	13.71
3047.40	0.640	270.990	3047.33	-10.07	11.30	-1.41	1698339.89	552097.88	40°00'39.007"N	80°34'36.977"W	11.39	352.876	0.20	0.15	12.88
3195.40	0.230	283.750	3195.32	-10.78	11.39	-2.53	1698338.77	552097.97	40°00'39.008"N	80°34'36.991"W	11.66	347.485	0.28	-0.28	8.62
3225.40	0.200	41.930	3225.32	-10.83	11.44	-2.55	1698338.75	552098.02	40°00'39.009"N	80°34'36.991"W	11.72	347.429	1.23	-0.10	393.93
3256.40	0.200	38.760	3256.32	-10.86	11.52	-2.48	1698338.82	552098.10	40°00'39.009"N	80°34'36.991"W	11.79	347.848	0.04	0.00	-10.23
3286.40	1.280	9.960	3286.32	-11.11	11.89	-2.39	1698338.91	552098.47	40°00'39.013"N	80°34'36.989"W	12.13	348.636	3.70	3.60	-96.00
3316.40	1.800	14.270	3316.31	-11.66	12.68	-2.22	1698339.08	552099.26	40°00'39.021"N	80°34'36.987"W	12.87	350.086	1.77	1.73	14.37
3346.40	2.190	8.020	3346.29	-12.38	13.70	-2.02	1698339.28	552100.28	40°00'39.031"N	80°34'36.985"W	13.85	351.615	1.49	1.30	-20.83
3376.40	2.100	9.910	3376.27	-13.19	14.81	-1.85	1698339.45	552101.39	40°00'39.042"N	80°34'36.983"W	14.93	352.898	0.38	-0.30	6.30
3407.40	2.060	6.770	3407.25	-14.01	15.93	-1.68	1698339.62	552102.51	40°00'39.053"N	80°34'36.981"W	16.01	353.971	0.39	-0.13	-10.13
3437.40	2.570	342.980	3437.22	-15.05	17.10	-1.82	1698339.48	552103.68	40°00'39.065"N	80°34'36.983"W	17.20	353.942	3.59	1.70	-79.30
3467.40	3.540	324.920	3467.18	-16.62	18.51	-2.54	1698338.76	552105.08	40°00'39.078"N	80°34'36.992"W	18.68	352.171	4.52	3.23	-60.20
3497.40	3.980	319.590	3497.12	-18.58	20.06	-3.75	1698337.55	552106.64	40°00'39.094"N	80°34'37.008"W	20.40	349.405	1.87	1.47	-17.77
3527.40	4.970	310.950	3527.03	-20.88	21.70	-5.41	1698335.89	552108.28	40°00'39.110"N	80°34'37.030"W	22.36	346.006	3.98	3.30	-28.80
3558.40	5.810	306.850	3557.89	-23.67	23.52	-7.68	1698333.62	552110.10	40°00'39.127"N	80°34'37.059"W	24.74	341.922	2.98	2.71	-13.23
3588.40	5.940	302.440	3587.73	-26.55	25.27	-10.20	1698331.10	552111.84	40°00'39.144"N	80°34'37.092"W	27.25	338.009	1.57	0.43	-14.70
3618.40	6.510	295.360	3617.55	-29.46	26.83	-13.05	1698328.25	552113.41	40°00'39.159"N	80°34'37.129"W	29.83	334.058	3.18	1.90	-23.60
3648.40	6.990	287.780	3647.35	-32.39	28.11	-16.33	1698324.98	552114.69	40°00'39.172"N	80°34'37.171"W	32.51	329.855	3.37	1.60	-25.27
3679.40	6.980	283.750	3678.12	-35.31	29.14	-19.95	1698321.35	552115.71	40°00'39.181"N	80°34'37.218"W	35.31	325.598	1.58	-0.03	-13.00
3709.40	7.060	274.030	3707.89	-37.84	29.70	-23.56	1698317.74	552116.28	40°00'39.187"N	80°34'37.264"W	37.91	321.574	3.96	0.27	-32.40
3739.40	7.240	266.760	3737.66	-40.00	29.72	-27.29	1698314.01	552116.30	40°00'39.186"N	80°34'37.312"W	40.35	317.445	3.07	0.60	-24.23
3770.40	7.240	263.720	3768.41	-41.96	29.40	-31.18	1698310.12	552115.98	40°00'39.183"N	80°34'37.362"W	42.85	313.315	1.24	0.00	-9.81
3800.40	8.120	261.900	3798.14	-43.83	28.89	-35.16	1698306.15	552115.47	40°00'39.177"N	80°34'37.413"W	45.50	309.414	3.04	2.93	-6.07
3831.40	9.130	262.550	3828.79	-45.96	28.26	-39.76	1698301.54	552114.84	40°00'39.170"N	80°34'37.472"W	48.78	305.407	3.27	3.26	2.10
3861.40	9.450	263.230	3858.40	-48.23	27.67	-44.57	1698296.73	552114.24	40°00'39.164"N	80°34'37.534"W	52.46	301.830	1.13	1.07	2.27
3891.40	10.350	264.290	3887.95	-50.71	27.11	-49.70	1698291.61	552113.69	40°00'39.158"N	80°34'37.600"W	56.61	298.611	3.06	3.00	3.53
3922.40	11.700	264.890	3918.38	-53.64	26.55	-55.60	1698285.70	552113.13	40°00'39.152"N	80°34'37.675"W	61.61	295.526	4.37	4.35	1.94
3952.40	12.080	265.470	3947.74	-56.75	26.03	-61.76	1698279.55	552112.61	40°00'39.146"N	80°34'37.754"W	67.02	292.856	1.33	1.27	1.93
3982.40	12.810	265.920	3977.03	-60.05	25.55	-68.20	1698273.10	552112.13	40°00'39.140"N	80°34'37.837"W	72.83	290.534	2.45	2.43	1.50

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4013.40	13.790	268.590	4007.20	-63.86	25.21	-75.32	1698265.98	552111.79	40°00'39.136"N	80°34'37.929"W	79.43	288.505	3.73	3.16	8.61
4043.40	13.820	269.680	4036.33	-67.87	25.10	-82.48	1698258.82	552111.68	40°00'39.134"N	80°34'38.021"W	86.22	286.927	0.87	0.10	3.63
4073.40	14.570	271.880	4065.42	-72.18	25.21	-89.84	1698251.47	552111.79	40°00'39.134"N	80°34'38.115"W	93.31	285.673	3.08	2.50	7.33
4104.40	15.540	273.410	4095.35	-77.10	25.58	-97.88	1698243.42	552112.16	40°00'39.137"N	80°34'38.219"W	101.17	284.647	3.38	3.13	4.94
4134.40	16.720	272.840	4124.17	-82.24	26.03	-106.20	1698235.10	552112.61	40°00'39.141"N	80°34'38.326"W	109.35	283.774	3.97	3.93	-1.90
4164.40	18.180	272.060	4152.79	-87.71	26.42	-115.19	1698226.12	552113.00	40°00'39.143"N	80°34'38.441"W	118.18	282.917	4.93	4.87	-2.60
4194.40	19.870	271.510	4181.15	-93.56	26.72	-124.96	1698216.34	552113.30	40°00'39.145"N	80°34'38.567"W	127.79	282.069	5.66	5.63	-1.83
4225.40	21.020	271.690	4210.20	-100.02	27.02	-135.79	1698205.52	552113.60	40°00'39.147"N	80°34'38.706"W	138.45	281.255	3.72	3.71	0.58
4255.40	21.940	272.090	4238.11	-106.61	27.39	-146.77	1698194.54	552113.96	40°00'39.149"N	80°34'38.847"W	149.30	280.569	3.11	3.07	1.33
4285.40	23.350	273.490	4265.80	-113.70	27.95	-158.30	1698183.00	552114.33	40°00'39.153"N	80°34'38.995"W	160.75	280.014	5.03	4.70	4.67
4315.40	23.570	273.770	4293.32	-121.15	28.71	-170.22	1698171.09	552115.29	40°00'39.159"N	80°34'39.149"W	172.63	279.573	0.82	0.73	0.93
4345.40	24.200	273.920	4320.75	-128.77	29.52	-182.34	1698158.97	552116.10	40°00'39.166"N	80°34'39.305"W	184.72	279.197	2.11	2.10	0.50
4376.40	24.700	273.940	4348.97	-136.83	30.40	-195.14	1698146.17	552116.98	40°00'39.173"N	80°34'39.469"W	197.50	278.855	1.61	1.61	0.06
4406.40	24.380	273.390	4376.26	-144.62	31.20	-207.58	1698133.73	552117.78	40°00'39.180"N	80°34'39.629"W	209.91	278.548	1.31	-1.07	-1.83
4436.40	24.860	274.480	4403.53	-152.47	32.06	-220.04	1698121.26	552118.64	40°00'39.187"N	80°34'39.789"W	222.37	278.289	2.20	1.60	3.63
4466.40	25.400	274.040	4430.69	-160.53	33.00	-232.75	1698108.56	552119.58	40°00'39.194"N	80°34'39.953"W	235.08	278.071	1.90	1.80	-1.47
4497.40	25.620	273.220	4458.67	-168.87	33.85	-246.07	1698095.24	552120.43	40°00'39.201"N	80°34'40.124"W	248.39	277.832	1.34	0.71	-2.65
4527.40	26.230	272.900	4485.65	-176.95	34.55	-259.17	1698082.14	552121.13	40°00'39.207"N	80°34'40.293"W	261.46	277.593	2.09	2.03	-1.07
4557.40	27.560	272.430	4512.41	-185.24	35.18	-272.73	1698068.59	552121.76	40°00'39.211"N	80°34'40.467"W	274.98	277.350	4.49	4.43	-1.57
4587.40	28.090	272.320	4538.94	-193.74	35.76	-286.72	1698054.59	552122.34	40°00'39.215"N	80°34'40.647"W	288.94	277.109	1.77	1.77	-0.37
4679.40	30.850	272.260	4619.03	-221.16	37.57	-331.94	1698009.38	552124.14	40°00'39.228"N	80°34'41.228"W	334.06	276.457	3.00	3.00	-0.07
4769.40	31.510	271.780	4696.03	-249.22	39.21	-378.50	1697962.81	552125.78	40°00'39.238"N	80°34'41.827"W	380.53	275.914	0.78	0.73	-0.53
4862.40	31.630	271.170	4775.26	-278.16	40.46	-427.18	1697914.14	552127.04	40°00'39.245"N	80°34'42.452"W	429.09	275.410	0.37	0.13	-0.66
4952.40	31.220	271.270	4850.06	-305.89	41.46	-474.09	1697867.23	552128.04	40°00'39.249"N	80°34'43.055"W	475.90	274.998	0.46	-0.46	0.11
5043.40	29.510	271.570	4930.57	-333.19	42.59	-520.07	1697821.25	552129.17	40°00'39.255"N	80°34'43.647"W	521.82	274.682	1.89	-1.88	0.33
5134.40	28.860	271.920	5010.02	-359.74	43.94	-564.43	1697776.89	552130.52	40°00'39.263"N	80°34'44.217"W	566.14	274.452	0.74	-0.71	0.38
5164.40	28.820	271.950	5036.30	-368.44	44.43	-578.89	1697762.43	552131.01	40°00'39.266"N	80°34'44.403"W	580.59	274.389	0.14	-0.13	0.10
5248.00	27.400	271.540	5110.04	-392.00	45.64	-618.26	1697723.06	552132.21	40°00'39.274"N	80°34'44.909"W	619.94	274.222	1.71	-1.70	-0.49
5315.00	29.260	271.190	5169.01	-410.85	46.39	-650.04	1697691.28	552132.97	40°00'39.277"N	80°34'45.317"W	651.70	274.082	2.79	2.78	-0.52
5404.00	34.590	269.960	5244.52	-438.19	46.82	-697.09	1697644.24	552133.40	40°00'39.276"N	80°34'45.922"W	698.66	273.843	6.03	5.99	-1.38

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# Actual Wellpath Report

SHL-22C-HS AWP Proj: 15849'  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot C
Area	Marshall County, WV	Well	SHL-22C-HS
Field	Marshall	Wellbore	SHL-22C-HS AWB
Facility	SHL-22 Pad		

## WELLPATH DATA (208 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]
5494.00	35.430	270.940	5318.24	-468.14	47.23	-748.72	1697592.61	552133.81	40°00'39.274"N	80°34'46.585"W	750.21	273.610	1.12	0.93	1.09
5583.00	35.370	270.310	5390.78	-498.17	47.80	-800.27	1697541.06	552134.38	40°00'39.273"N	80°34'47.248"W	801.70	273.418	0.42	-0.07	-0.71
5673.00	35.370	269.580	5464.17	-528.01	47.75	-852.37	1697488.97	552134.33	40°00'39.267"N	80°34'47.917"W	853.70	273.206	0.47	0.00	-0.81
5763.00	35.450	269.550	5537.53	-557.60	47.35	-904.51	1697436.82	552133.93	40°00'39.256"N	80°34'48.588"W	905.75	272.997	0.09	0.09	-0.03
5852.00	35.350	269.450	5610.07	-586.80	46.90	-956.07	1697385.27	552133.48	40°00'39.246"N	80°34'49.250"W	957.22	272.808	0.13	-0.11	-0.11
5942.00	35.310	269.360	5683.50	-616.21	46.36	-1008.11	1697333.23	552132.94	40°00'39.234"N	80°34'49.919"W	1009.18	272.633	0.07	-0.04	-0.10
6031.00	35.350	269.220	5756.11	-645.20	45.72	-1059.57	1697281.77	552132.30	40°00'39.222"N	80°34'50.580"W	1060.56	272.471	0.10	0.04	-0.16
6121.00	35.360	268.910	5829.51	-674.37	44.87	-1111.64	1697229.70	552131.45	40°00'39.207"N	80°34'51.249"W	1112.55	272.312	0.20	0.01	-0.34
6210.00	35.400	268.650	5902.07	-703.02	43.78	-1163.16	1697178.18	552130.35	40°00'39.190"N	80°34'51.911"W	1163.99	272.155	0.18	0.04	-0.29
6300.00	35.380	269.130	5975.44	-732.09	42.77	-1215.28	1697126.07	552129.34	40°00'39.174"N	80°34'52.580"W	1216.03	272.015	0.31	-0.02	0.53
6390.00	35.500	259.570	6048.83	-757.59	37.64	-1267.07	1697074.28	552124.21	40°00'39.117"N	80°34'53.245"W	1267.63	271.701	6.16	0.13	-10.62
6479.00	37.060	246.720	6120.68	-773.81	22.34	-1317.19	1697024.16	552108.91	40°00'38.960"N	80°34'53.887"W	1317.38	270.971	8.71	1.75	-14.44
6569.00	39.690	237.840	6191.28	-780.75	-3.70	-1366.48	1696974.87	552082.88	40°00'38.697"N	80°34'54.516"W	1366.49	269.845	6.78	2.92	-9.87
6659.00	44.420	228.170	6258.16	-778.42	-40.07	-1414.36	1696927.00	552046.52	40°00'38.332"N	80°34'55.126"W	1414.92	268.377	8.90	5.26	-10.74
6748.00	48.680	220.230	6319.40	-766.18	-86.41	-1459.21	1696882.15	552000.17	40°00'37.869"N	80°34'55.695"W	1461.76	266.611	8.05	4.79	-8.92
6838.00	55.370	212.690	6374.80	-743.46	-143.50	-1501.12	1696840.24	551943.09	40°00'37.300"N	80°34'56.225"W	1507.96	264.540	9.93	7.43	-8.38
6927.00	61.850	206.070	6421.17	-710.52	-209.68	-1538.21	1696803.15	551876.91	40°00'36.641"N	80°34'56.691"W	1552.43	262.238	9.66	7.28	-7.44
7017.00	66.310	200.820	6460.52	-668.13	-283.92	-1570.33	1696771.04	551802.67	40°00'35.904"N	80°34'57.092"W	1595.79	259.752	7.21	4.96	-5.83
7106.00	70.790	192.890	6493.10	-616.96	-363.12	-1594.23	1696747.13	551723.47	40°00'35.118"N	80°34'57.387"W	1635.06	257.169	9.70	5.03	-8.91
7196.00	72.110	182.790	6521.80	-554.48	-447.52	-1605.82	1696735.54	551639.08	40°00'34.283"N	80°34'57.523"W	1667.01	254.428	10.74	1.47	-11.22
7286.00	74.880	176.890	6547.39	-483.68	-533.75	-1605.55	1696735.81	551552.85	40°00'33.431"N	80°34'57.506"W	1691.94	251.611	7.00	3.08	-6.56
7375.00	78.030	167.130	6568.28	-406.68	-619.31	-1593.49	1696747.87	551467.30	40°00'32.587"N	80°34'57.338"W	1709.61	248.761	11.23	3.54	-10.97
7465.00	81.890	159.550	6583.99	-322.63	-704.12	-1568.07	1696773.29	551382.49	40°00'31.752"N	80°34'56.998"W	1718.91	245.818	9.33	4.29	-8.42
7554.00	84.790	152.240	6594.32	-235.89	-784.74	-1531.98	1696809.37	551301.87	40°00'30.959"N	80°34'56.522"W	1721.27	242.877	8.78	3.26	-8.21
7644.00	87.780	146.710	6600.16	-146.40	-862.06	-1486.38	1696854.97	551224.56	40°00'30.201"N	80°34'55.924"W	1718.28	239.888	6.97	3.32	-6.14
7734.00	88.060	144.990	6603.43	-56.47	-936.49	-1435.90	1696905.46	551150.13	40°00'29.471"N	80°34'55.264"W	1714.30	236.888	1.94	0.31	-1.91
7823.00	89.450	143.570	6605.36	32.50	-1008.72	-1383.95	1696957.40	551077.90	40°00'28.764"N	80°34'54.585"W	1712.55	233.913	2.23	1.56	-1.60
7913.00	89.290	144.290	6606.35	122.47	-1081.46	-1330.97	1697010.39	551005.16	40°00'28.051"N	80°34'53.893"W	1714.94	230.905	0.82	-0.18	0.80
8002.00	89.850	141.860	6607.02	211.41	-1152.61	-1277.50	1697063.85	550934.02	40°00'27.354"N	80°34'53.195"W	1720.61	227.942	2.80	0.63	-2.73
8092.00	89.820	142.000	6607.28	301.28	-1223.46	-1222.01	1697119.34	550863.17	40°00'26.661"N	80°34'52.471"W	1729.21	224.966	0.16	-0.03	0.16

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# Actual Wellpath Report

SHL-22C-HS AWP Proj: 15849'  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot C
Area	Marshall County, WV	Well	SHL-22C-HS
Field	Marshall	Wellbore	SHL-22C-HS AWB
Facility	SHL-22 Pad		

## WELLPATH DATA (208 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]
8182.00	89.750	142.490	6607.61	391.18	-1294.62	-11166.90	1697174.44	550792.01	40°00'25.964"N	80°34'51.752"W	1742.90	222.030	0.55	-0.08	0.54
8271.00	89.910	144.080	6607.88	480.14	-1365.96	-1113.70	1697227.65	550720.68	40°00'25.266"N	80°34'51.057"W	1762.43	219.191	1.80	0.18	1.79
8361.00	89.750	143.520	6608.14	570.12	-1438.58	-1060.54	1697280.80	550648.05	40°00'24.554"N	80°34'50.363"W	1787.25	216.398	0.65	-0.18	-0.62
8451.00	89.850	144.250	6608.46	660.10	-1511.29	-1007.50	1697333.84	550575.35	40°00'23.842"N	80°34'49.670"W	1816.33	213.689	0.82	0.11	0.81
8540.00	89.720	145.710	6608.79	749.09	-1584.17	-956.42	1697384.91	550502.47	40°00'23.128"N	80°34'49.002"W	1850.50	211.121	1.65	-0.15	1.64
8630.00	89.600	146.340	6609.33	839.08	-1658.80	-906.13	1697435.20	550427.84	40°00'22.396"N	80°34'48.345"W	1890.16	208.646	0.71	-0.13	0.70
8719.00	89.850	148.560	6609.75	927.99	-1733.82	-858.25	1697483.08	550352.83	40°00'21.661"N	80°34'47.718"W	1934.61	206.336	2.51	0.28	2.49
8809.00	89.940	148.300	6609.92	1017.83	-1810.50	-811.13	1697530.20	550276.15	40°00'20.909"N	80°34'47.101"W	1983.90	204.133	0.31	0.10	-0.29
8899.00	89.880	146.610	6610.06	1107.74	-1886.36	-762.72	1697578.61	550200.29	40°00'20.165"N	80°34'46.467"W	2034.72	202.015	1.88	-0.07	-1.88
8988.00	89.690	144.870	6610.39	1196.73	-1959.92	-712.62	1697628.71	550126.74	40°00'19.444"N	80°34'45.812"W	2085.45	199.981	1.97	-0.21	-1.96
9078.00	89.540	144.550	6611.00	1286.73	-2033.38	-660.62	1697680.70	550053.28	40°00'18.724"N	80°34'45.132"W	2138.00	197.998	0.39	-0.17	-0.36
9168.00	89.450	144.650	6611.79	1376.72	-2106.74	-608.49	1697732.83	549979.93	40°00'18.005"N	80°34'44.451"W	2192.85	196.110	0.15	-0.10	0.11
9257.00	89.510	144.390	6612.60	1465.72	-2179.21	-556.83	1697784.49	549907.46	40°00'17.295"N	80°34'43.776"W	2249.22	194.334	0.30	0.07	-0.29
9347.00	89.480	143.710	6613.39	1555.70	-2252.06	-504.00	1697837.32	549834.61	40°00'16.582"N	80°34'43.086"W	2307.77	192.615	0.76	-0.03	-0.76
9437.00	89.380	144.090	6614.29	1645.68	-2324.78	-450.97	1697890.34	549761.89	40°00'15.869"N	80°34'42.393"W	2368.11	190.978	0.44	-0.11	0.42
9526.00	89.880	144.380	6614.86	1734.67	-2396.99	-398.96	1697942.36	549689.68	40°00'15.162"N	80°34'41.714"W	2429.97	189.450	0.65	0.56	0.33
9616.00	89.820	144.140	6615.10	1824.66	-2470.04	-346.39	1697994.92	549616.63	40°00'14.446"N	80°34'41.027"W	2494.21	187.983	0.27	-0.07	-0.27
9705.00	89.480	145.060	6615.64	1913.65	-2542.59	-294.83	1698046.48	549544.09	40°00'13.736"N	80°34'40.354"W	2559.62	186.614	1.10	-0.38	1.03
9795.00	89.510	143.790	6616.44	2003.64	-2615.78	-242.48	1698098.83	549470.90	40°00'13.019"N	80°34'39.670"W	2627.00	185.296	1.41	0.03	-1.41
9884.00	89.510	142.500	6617.20	2092.59	-2686.99	-189.10	1698152.21	549399.69	40°00'12.321"N	80°34'38.973"W	2693.64	184.026	1.45	0.00	-1.45
9974.00	89.510	142.070	6617.97	2182.49	-2758.19	-134.05	1698207.26	549328.50	40°00'11.624"N	80°34'38.254"W	2761.44	182.782	0.48	0.00	-0.48
10063.00	89.690	144.540	6618.59	2271.44	-2829.54	-80.87	1698260.43	549257.15	40°00'10.925"N	80°34'37.560"W	2830.70	181.637	2.78	0.20	2.78
10153.00	89.880	146.100	6618.93	2361.44	-2903.55	-29.66	1698311.64	549183.14	40°00'10.200"N	80°34'36.891"W	2903.70	180.585	1.75	0.21	1.73
10243.00	89.910	145.760	6619.09	2451.42	-2978.10	20.76	1698362.06	549108.59	40°00'09.469"N	80°34'36.231"W	2978.17	179.601	0.38	0.03	-0.38
10332.00	89.850	144.150	6619.28	2540.42	-3050.96	71.86	1698413.16	549035.73	40°00'08.755"N	80°34'35.564"W	3051.81	178.651	1.81	-0.07	-1.81
10422.00	89.720	144.090	6619.62	2630.41	-3123.89	124.61	1698465.90	548962.82	40°00'08.041"N	80°34'34.875"W	3126.37	177.716	0.16	-0.14	-0.07
10511.00	89.910	144.740	6619.90	2719.40	-3196.26	176.40	1698517.69	548890.44	40°00'07.332"N	80°34'34.198"W	3201.13	176.841	0.76	0.21	0.73
10601.00	89.820	144.370	6620.11	2809.40	-3269.58	228.59	1698569.88	548817.12	40°00'06.614"N	80°34'33.516"W	3277.57	176.001	0.42	-0.10	-0.41
10690.00	89.880	145.200	6620.35	2898.40	-3342.30	279.91	1698621.20	548744.41	40°00'05.901"N	80°34'32.846"W	3354.00	175.213	0.94	0.07	0.93
10780.00	89.850	146.000	6620.56	2988.39	-3416.56	330.76	1698672.04	548670.16	40°00'05.173"N	80°34'32.181"W	3432.53	174.470	0.89	-0.03	0.89

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# Actual Wellpath Report

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## REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot C
Area	Marshall County, WV	Well	SHL-22C-HS
Field	Marshall	Wellbore	SHL-22C-HS AWB
Facility	SHL-22 Pad		

## WELLPATH DATA (208 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]
10869.00	89.880	145.090	6620.77	3077.39	-3489.94	381.11	1698722.39	548596.77	40°00'04.454"N	80°34'31.523"W	3510.69	173.768	1.02	0.03	-1.02
10959.00	89.910	144.290	6620.93	3167.39	-3563.38	433.13	1698774.41	548523.33	40°00'03.735"N	80°34'30.843"W	3589.61	173.070	0.89	0.03	-0.89
11049.00	89.540	143.330	6621.37	3257.36	-3636.02	486.27	1698827.55	548450.70	40°00'03.023"N	80°34'30.149"W	3668.39	172.383	1.14	-0.41	-1.07
11138.00	89.420	145.220	6622.17	3346.35	-3708.26	538.23	1698879.51	548378.46	40°00'02.315"N	80°34'29.470"W	3747.12	171.742	2.13	-0.13	2.12
11228.00	89.450	144.790	6623.06	3436.34	-3781.99	589.84	1698931.12	548304.74	40°00'01.593"N	80°34'28.796"W	3827.71	171.135	0.48	0.03	-0.48
11317.00	89.420	145.560	6623.94	3525.34	-3855.04	640.67	1698981.94	548231.68	40°00'00.877"N	80°34'28.132"W	3907.92	170.564	0.87	-0.03	0.87
11407.00	89.820	146.200	6624.54	3615.33	-3929.55	691.15	1699032.42	548157.18	40°00'00.147"N	80°34'27.471"W	3989.87	170.025	0.84	0.44	0.71
11497.00	89.910	146.110	6624.75	3705.31	-4004.30	741.27	1699082.54	548082.44	39°59'59.414"N	80°34'26.816"W	4072.33	169.512	0.14	0.10	-0.10
11586.00	90.310	146.000	6624.58	3794.29	-4078.13	790.97	1699132.24	548008.61	39°59'58.690"N	80°34'26.166"W	4154.13	169.024	0.47	0.45	-0.12
11676.00	90.430	146.450	6624.00	3884.27	-4152.94	841.00	1699182.27	547933.80	39°59'57.957"N	80°34'25.512"W	4237.24	168.552	0.52	0.13	0.50
11765.00	89.540	146.030	6624.02	3973.25	-4226.93	890.46	1699231.73	547859.81	39°59'57.232"N	80°34'24.865"W	4319.71	168.104	1.11	-1.00	-0.47
11855.00	89.570	146.360	6624.72	4063.22	-4301.71	940.53	1699281.80	547785.03	39°59'56.498"N	80°34'24.210"W	4403.33	167.667	0.37	0.03	0.37
11944.00	89.600	145.300	6625.36	4152.21	-4375.35	990.52	1699331.78	547711.40	39°59'55.777"N	80°34'23.557"W	4486.06	167.244	1.19	0.03	-1.19
12034.00	89.540	144.020	6626.04	4242.21	-4448.76	1042.57	1699383.83	547637.99	39°59'55.057"N	80°34'22.877"W	4569.29	166.811	1.42	-0.07	-1.42
12124.00	89.600	144.910	6626.71	4332.20	-4521.99	1094.88	1699436.14	547564.76	39°59'54.340"N	80°34'22.193"W	4652.65	166.389	0.99	0.07	0.99
12213.00	89.570	145.250	6627.36	4421.20	-4594.97	1145.82	1699487.08	547491.79	39°59'53.625"N	80°34'21.527"W	4735.68	165.998	0.38	-0.03	0.38
12303.00	89.630	144.580	6627.99	4511.19	-4668.61	1197.55	1699538.81	547418.15	39°59'52.903"N	80°34'20.852"W	4819.76	165.613	0.75	0.07	-0.74
12392.00	89.570	141.570	6628.61	4600.13	-4739.75	1251.02	1699592.27	547347.01	39°59'52.207"N	80°34'20.154"W	4902.07	165.214	3.38	-0.07	-3.38
12482.00	89.660	139.160	6629.21	4689.83	-4809.06	1308.42	1699649.67	547277.71	39°59'51.528"N	80°34'19.406"W	4983.87	164.780	2.68	0.10	-2.68
12572.00	89.320	140.870	6630.01	4779.48	-4878.01	1366.25	1699707.50	547208.76	39°59'50.854"N	80°34'18.652"W	5065.73	164.353	1.94	-0.38	1.90
12661.00	89.170	142.990	6631.19	4868.34	-4948.07	1421.12	1699762.37	547138.71	39°59'50.168"N	80°34'17.936"W	5148.10	163.976	2.39	-0.17	2.38
12751.00	88.800	144.850	6632.78	4958.30	-5020.79	1474.11	1699815.36	547065.99	39°59'49.456"N	80°34'17.244"W	5232.72	163.638	2.11	-0.41	2.07
12840.00	88.830	148.510	6634.62	5047.23	-5095.13	1522.98	1699864.22	546991.65	39°59'48.727"N	80°34'16.605"W	5317.88	163.358	4.11	0.03	4.11
12930.00	89.320	147.810	6636.08	5137.08	-5171.58	1570.46	1699911.69	546915.20	39°59'47.977"N	80°34'15.983"W	5404.77	163.108	0.95	0.54	-0.78
13019.00	89.380	146.230	6637.09	5226.02	-5246.23	1618.90	1699960.13	546840.56	39°59'47.245"N	80°34'15.350"W	5490.33	162.851	1.78	0.07	-1.78
13109.00	89.380	146.340	6638.06	5315.99	-5321.09	1668.85	1700010.09	546765.70	39°59'46.511"N	80°34'14.696"W	5576.65	162.587	0.12	0.00	0.12
13199.00	89.290	146.680	6639.10	5405.95	-5396.14	1718.51	1700059.74	546690.65	39°59'45.775"N	80°34'14.047"W	5663.18	162.335	0.39	-0.10	0.38
13288.00	89.350	146.650	6640.16	5494.91	-5470.49	1767.41	1700108.64	546616.30	39°59'45.046"N	80°34'13.407"W	5748.91	162.095	0.08	0.07	-0.03
13378.00	89.600	145.990	6640.98	5584.88	-5545.38	1817.32	1700158.55	546541.41	39°59'44.312"N	80°34'12.755"W	5835.57	161.855	0.78	0.28	-0.73
13467.00	89.350	147.440	6641.80	5673.84	-5619.77	1866.16	1700207.39	546467.02	39°59'43.583"N	80°34'12.116"W	5921.52	161.630	1.65	-0.28	1.63

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# Actual Wellpath Report

SHL-22C-HS AWP Proj: 15849'  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot C
Area	Marshall County, WV	Well	SHL-22C-HS
Field	Marshall	Wellbore	SHL-22C-HS AWB
Facility	SHL-22 Pad		

## WELLPATH DATA (208 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]
13557.00	89.690	146.970	6642.55	5763.77	-5695.43	1914.91	1700256.13	546391.37	39°59'42.841"N	80°34'11.478"W	6008.72	161.416	0.64	0.38	-0.52
13646.00	89.540	144.750	6643.15	5852.75	-5769.08	1964.85	1700306.07	546317.72	39°59'42.119"N	80°34'10.825"W	6094.50	161.192	2.50	-0.17	-2.49
13736.00	89.570	143.280	6643.85	5942.73	-5841.90	2017.73	1700358.95	546244.90	39°59'41.406"N	80°34'10.134"W	6180.54	160.946	1.63	0.03	-1.63
13825.00	89.880	143.500	6644.28	6031.69	-5913.35	2070.80	1700412.02	546173.46	39°59'40.706"N	80°34'09.442"W	6265.45	160.700	0.43	0.35	0.25
13915.00	89.880	145.590	6644.47	6121.69	-5986.65	2123.01	1700464.22	546100.16	39°59'39.988"N	80°34'08.760"W	6351.94	160.474	2.32	0.00	2.32
14005.00	89.850	144.810	6644.68	6211.68	-6060.55	2174.37	1700515.59	546026.26	39°59'39.263"N	80°34'08.089"W	6438.81	160.263	0.87	-0.03	-0.87
14094.00	89.780	144.740	6644.97	6300.68	-6133.26	2225.70	1700566.92	545953.56	39°59'38.551"N	80°34'07.418"W	6524.62	160.055	0.11	-0.08	-0.08
14184.00	89.940	144.100	6645.19	6390.68	-6206.45	2278.07	1700619.28	545880.37	39°59'37.834"N	80°34'06.734"W	6611.33	159.844	0.73	0.18	-0.71
14274.00	89.850	145.460	6645.35	6480.67	-6279.98	2329.97	1700671.18	545806.85	39°59'37.113"N	80°34'06.056"W	6698.28	159.644	1.51	-0.10	1.51
14363.00	89.380	146.610	6645.95	6569.66	-6353.79	2379.69	1700720.90	545733.04	39°59'36.390"N	80°34'05.406"W	6784.81	159.467	1.40	-0.53	1.29
14453.00	89.350	146.760	6646.95	6659.61	-6428.99	2429.12	1700770.33	545657.83	39°59'35.652"N	80°34'04.759"W	6872.60	159.301	0.17	-0.03	0.17
14542.00	89.350	145.820	6647.96	6748.58	-6503.02	2478.51	1700819.72	545583.81	39°59'34.927"N	80°34'04.114"W	6959.34	159.137	1.06	0.00	-1.06
14632.00	89.320	145.600	6649.00	6838.57	-6577.38	2529.21	1700870.42	545509.46	39°59'34.198"N	80°34'03.451"W	7046.90	158.967	0.25	-0.03	-0.24
14722.00	89.910	145.640	6649.61	6928.56	-6651.65	2580.03	1700921.23	545435.18	39°59'33.470"N	80°34'02.787"W	7134.50	158.800	0.66	0.66	0.04
14811.00	89.820	144.640	6649.82	7017.56	-6724.68	2630.90	1700972.10	545362.16	39°59'32.754"N	80°34'02.122"W	7221.01	158.633	1.13	-0.10	-1.12
14901.00	89.850	143.430	6650.07	7107.54	-6797.52	2683.76	1701024.95	545289.32	39°59'32.041"N	80°34'01.432"W	7308.14	158.455	1.34	0.03	-1.34
14990.00	89.880	143.280	6650.28	7196.51	-6868.93	2736.88	1701078.07	545217.91	39°59'31.341"N	80°34'00.739"W	7394.10	158.276	0.17	0.00	-0.17
15080.00	89.880	144.140	6650.47	7286.48	-6941.47	2790.15	1701131.34	545145.38	39°59'30.631"N	80°34'00.043"W	7481.24	158.102	0.96	0.00	0.96
15169.00	89.570	143.580	6650.90	7375.47	-7013.35	2842.63	1701183.82	545073.50	39°59'29.926"N	80°33'59.358"W	7567.54	157.936	0.72	-0.35	-0.63
15259.00	89.600	142.300	6651.55	7465.40	-7085.16	2896.87	1701238.06	545001.69	39°59'29.223"N	80°33'58.650"W	7654.50	157.762	1.42	0.03	-1.42
15349.46	89.200	143.440	6652.50	7555.79	-7157.28	2951.47	1701292.65	544929.58	39°59'28.517"N	80°33'57.938"W	7741.95	157.590	1.34	-0.44	1.26
15438.00	88.800	141.180	6654.04	7644.22	-7227.33	3005.59	1701346.77	544859.53	39°59'27.831"N	80°33'57.232"W	7827.38	157.419	2.59	-0.45	-2.55
15528.00	88.860	144.570	6655.88	7734.12	-7299.06	3059.89	1701401.07	544787.80	39°59'27.129"N	80°33'56.523"W	7914.50	157.256	3.77	0.07	3.77
15617.00	88.860	145.050	6657.65	7823.10	-7371.78	3111.17	1701452.35	544715.08	39°59'26.416"N	80°33'55.853"W	8001.41	157.118	0.54	0.00	0.54
15707.00	88.770	147.030	6659.52	7913.07	-7446.41	3161.43	1701502.61	544640.46	39°59'25.684"N	80°33'55.196"W	8089.73	156.996	2.20	-0.10	2.20
15797.00	89.350	147.540	6660.99	8002.98	-7522.12	3210.07	1701551.24	544564.75	39°59'24.942"N	80°33'54.560"W	8178.44	156.890	0.86	0.64	0.57
15824.00	89.350	147.560	6661.30	8029.95	-7544.91	3224.55	1701565.73	544541.97	39°59'24.718"N	80°33'54.370"W	8205.08	156.859	0.07	0.00	0.07
15849.00	89.350	147.560	6661.58	8054.93	-7566.00	3237.96	1701579.14	544520.87	39°59'24.512"N	80°33'54.195"W	8229.75	156.831	0.00	0.00	0.00

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# Actual Wellpath Report

SHL-22C-HS AWP Proj: 15849'  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot C
Area	Marshall County, WV	Well	SHL-22C-HS
Field	Marshall	Wellbore	SHL-22C-HS AWB
Facility	SHL-22 Pad		

## TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SHL-22C-HS LP Rev-3		6595.00	-859.91	-1471.17	1696870.19	551226.70	40°00'30.224"N	80°34'55.729"W	point
SHL-22C-HS LP Rev-4		6600.00	-859.91	-1471.17	1696870.19	551226.70	40°00'30.224"N	80°34'55.729"W	point
SHL-22C-HS BHL Rev-3		6652.21	-7572.41	3228.64	1701569.81	544514.46	39°59'24.447"N	80°33'54.314"W	point
SHL-22C-HS BHL Rev-4		6657.21	-7572.41	3228.64	1701569.81	544514.46	39°59'24.447"N	80°33'54.314"W	point
SHL-22 Pad LL		7002.00	-28.15	-28.46	1698312.84	552058.43	40°00'38.614"N	80°34'37.318"W	polygon

## WELLPATH COMPOSITION - Ref Wellbore: SHL-22C-HS AWB Ref Wellpath: SHL-22C-HS AWP Proj: 15849'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
19.40	3047.40	Generic gyro - northseeking (Standard)	01_MS Gyro <12-1/4"> (100'-3040')	SHL-22C-HS AWB
3047.40	5164.40	ISCVSA MWD, Rev. 2 (Standard)	02 SDI MWD <-8-3/4"> (3040')(3188'-5157')	SHL-22C-HS AWB
5164.40	15824.00	NaviTrak (AT Curve Short Spaced)	03_BHI AT Curve <-8-1/2"> (5164.4')(5248'-15824')	SHL-22C-HS AWB
15824.00	15849.00	Blind Drilling (std)	Projection to bit	SHL-22C-HS AWB



# Actual Wellpath Report

SHL-22C-HS AWP Proj: 15849'  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot C
Area	Marshall County, WV	Well	SHL-22C-HS
Field	Marshall	Wellbore	SHL-22C-HS AWB
Facility	SHL-22 Pad		

## COMMENTS

Wellpath general comments  
 API: 47-051-01808-0000  
 BHI Job #: 7366814  
 Rig: Precision 584  
 Duration: 7/8/2015-7/16/2015  
 MS Gyro <12-1/4"> (100'-3040')  
 SDI MWD <8-3/4"> (3040')(3188'-5157')  
 BHI AT Curve <8-1/2"> (5164.4')(5248'-15824')  
 Projected MD at TD: 15849'

05/26/2017

Location: Marshall County, WV  
 Field: Marshall  
 Facility: SHL-22 Pad

Slot: Slot C  
 Well: SHL-22C-HS  
 Wellbore: SHL-22C-HS-PWB

True vertical depths are referenced to Precision S84 (RK8)	Grid System: NAD2011 Lambert West Virginia S.P. Northern Zone (4203), US feet
Measured depths are referenced to Precision S84 (RK8)	North Reference: Grid North
Precision S84 (RK8) to Mean Sea Level: 1342 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot, Slot C): -1322.6 feet	Depth is in feet
Coordinates are in feet referenced to Slot	Created by software on 08/JUL/2015

Location Information			
Facility Name	Grid East (US ft)	Grid North (US ft)	Longitude
SHL-22 Pad	1698312.840	522058.430	80°34'37.316"W
Slot	Grid East (US ft)	Grid North (US ft)	Longitude
28.15	1698341.300	522086.960	80°34'36.957"W
Precision S84 (RK8) to Mud line (At Slot, Slot C)	19.4ft		
Mean Sea Level to Mud line (At Slot, Slot C)	-1322.6ft		
Precision S84 (RK8) to Mean Sea Level	1342ft		

