

Actual Wellpath Report

WEB-22D-HS (AWP) Proj: 15144'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY	Slot	Slot D
Area	Marshall County, WV	Well	WEB-22D-HS
Field	Marshall	Wellbore	WEB-22D-HS (AWB)
Facility	WEB-22 Pad		

REPORT SETUP INFORMATION	
Projection System	NAD27 / Lambert West Virginia SP, Northern Zone (4701), US feet
North Reference	Grid
Scale	0.999954
Convergence at slot	0.65° West
Software System	WellArchitect@ 4.0.1
User	Kroschr
Report Generated	06/Aug/2014 at 13:56
Database/Source file	WA_Pennsylvania/WEB-22D-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	-13.87	-14.39	1713911.42	519838.67	39°55'22.008"N	80°31'12.160"W
Facility Reference Pt			1713925.81	519852.54	39°55'22.147"N	80°31'11.977"W
Field Reference Pt			609601.22	0.00	38°23'48.753"N	84°21'09.765"W

WELLPATH DATUM	
Calculation method	Minimum curvature
Horizontal Reference Pt	Slot
Vertical Reference Pt	Precision 542 (RT)
MD Reference Pt	Precision 542 (RT)
Field Vertical Reference	Mean Sea Level
	Precision 542 (RT) to Facility Vertical Datum
	Precision 542 (RT) to Mean Sea Level
	Precision 542 (RT) to Mud Line at Slot (Slot D)
	Section Origin
	Section Azimuth
	18.60ft
	1343.60ft
	18.60ft
	N 0.00, E 0.00 ft
	325.00°

Received
 APR 20 2015
 WV Dept. of Environmental Protection
 Office of Oil and Gas

06/12/2015



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Area	Marshall County, WV	Well	WEB-22D-HS
Field	Marshall	Wellbore	WEB-22D-HS (AWB)
Facility	WEB-22 Pad		

WELLPATH DATA (189 stations) † = interpolated/extrapolated station

ID [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]
0.00†	0.000	340.960	0.00	0.00	0.00	0.00	1713911.42	519838.67	39°55'22.008"N	80°31'12.160"W	0.00	0.000	0.000
18.60	0.000	340.960	18.60	0.00	0.00	0.00	1713911.42	519838.67	39°55'22.008"N	80°31'12.160"W	0.00	0.000	0.000
57.00	0.760	340.960	57.00	0.24	0.24	-0.08	1713911.34	519838.91	39°55'22.012"N	80°31'12.161"W	0.25	340.960	1.98
147.00	0.860	337.880	146.99	0.48	1.43	-0.53	1713910.89	519840.10	39°55'22.022"N	80°31'12.167"W	1.53	339.598	0.12
242.00	0.740	359.680	241.98	2.68	2.70	-0.80	1713910.62	519841.37	39°55'22.034"N	80°31'12.170"W	2.82	343.444	0.34
315.00	0.760	15.950	314.97	3.37	3.64	-0.67	1713910.75	519842.31	39°55'22.044"N	80°31'12.169"W	3.70	349.520	0.29
389.00	0.610	19.730	388.97	3.91	4.48	-0.41	1713911.01	519843.15	39°55'22.052"N	80°31'12.166"W	4.50	354.830	0.21
429.00	0.580	27.550	428.97	4.12	4.86	-0.24	1713911.18	519843.53	39°55'22.056"N	80°31'12.163"W	4.87	357.172	0.22
460.00	0.610	137.620	459.97	4.03	4.88	-0.06	1713911.36	519843.55	39°55'22.056"N	80°31'12.161"W	4.88	359.338	3.15
491.00	1.290	162.320	490.96	3.53	4.43	0.16	1713911.58	519843.10	39°55'22.052"N	80°31'12.158"W	4.43	2.080	2.51
521.00	1.700	171.460	520.95	2.81	3.67	0.33	1713911.75	519842.33	39°55'22.044"N	80°31'12.156"W	3.68	5.136	1.58
551.00	2.280	172.080	550.93	1.88	2.63	0.48	1713911.90	519841.30	39°55'22.034"N	80°31'12.154"W	2.68	10.280	1.93
582.00	2.560	174.450	581.91	0.73	1.33	0.63	1713912.05	519840.00	39°55'22.021"N	80°31'12.152"W	1.48	25.264	0.96
612.00	2.460	179.290	611.88	-0.38	0.02	0.70	1713912.12	519838.69	39°55'22.008"N	80°31'12.151"W	0.70	88.080	0.78
645.00	2.000	179.290	644.85	-1.44	-1.26	0.72	1713912.14	519837.41	39°55'21.995"N	80°31'12.150"W	1.45	150.320	1.39
677.00	1.140	191.590	676.84	-2.12	-2.13	0.66	1713912.08	519836.54	39°55'21.987"N	80°31'12.151"W	2.23	162.757	2.87
708.00	0.330	232.650	707.84	-2.34	-2.49	0.53	1713911.95	519836.18	39°55'21.983"N	80°31'12.153"W	2.54	168.005	2.96
740.00	0.610	316.170	739.84	-2.18	-2.42	0.34	1713911.76	519836.25	39°55'21.984"N	80°31'12.155"W	2.44	172.068	2.06
771.00	1.090	324.520	770.83	-1.72	-2.06	0.05	1713911.47	519836.61	39°55'21.987"N	80°31'12.159"W	2.06	178.562	1.60
803.00	1.420	320.910	802.83	-1.02	-1.51	-0.37	1713911.05	519837.16	39°55'21.993"N	80°31'12.164"W	1.55	193.988	1.06
834.00	2.000	320.030	833.81	-0.10	-0.79	-0.96	1713910.46	519837.88	39°55'22.000"N	80°31'12.172"W	1.25	230.597	1.87
866.00	1.950	325.220	865.79	1.00	0.08	-1.63	1713909.79	519838.75	39°55'22.008"N	80°31'12.181"W	1.64	272.896	0.58
897.00	2.310	325.920	896.77	2.16	1.03	-2.28	1713909.14	519839.70	39°55'22.018"N	80°31'12.189"W	2.51	294.335	1.16
943.00	2.130	344.650	942.74	3.89	2.63	-3.03	1713908.39	519841.30	39°55'22.033"N	80°31'12.199"W	4.01	310.904	1.62
992.00	1.780	356.430	991.71	5.40	4.26	-3.32	1713908.10	519842.93	39°55'22.050"N	80°31'12.203"W	5.40	322.098	1.08
1037.00	0.510	7.770	1036.70	6.14	5.16	-3.34	1713908.08	519843.83	39°55'22.058"N	80°31'12.203"W	6.14	327.117	2.85
1086.00	0.740	125.050	1085.70	6.00	5.19	-3.05	1713908.37	519843.86	39°55'22.059"N	80°31'12.200"W	6.02	329.601	2.19
1133.00	1.320	140.780	1132.69	5.18	4.60	-2.46	1713908.96	519843.27	39°55'22.053"N	80°31'12.192"W	5.21	331.899	1.36
1180.00	1.700	142.100	1179.67	3.94	3.63	-1.69	1713909.73	519842.30	39°55'22.044"N	80°31'12.182"W	4.00	335.094	0.81
1207.00	2.060	142.980	1206.66	3.06	2.93	-1.15	1713910.27	519841.60	39°55'22.037"N	80°31'12.175"W	3.14	338.593	1.34
1334.00	2.400	150.870	1333.56	-1.87	-1.22	1.52	1713912.94	519837.45	39°55'21.996"N	80°31'12.140"W	1.95	128.691	0.36
1433.00	1.180	118.300	1432.51	-4.84	-3.51	3.43	1713914.85	519835.16	39°55'21.974"N	80°31'12.115"W	4.91	135.697	1.56
1527.00	1.310	30.210	1526.50	-5.26	-3.04	4.82	1713916.24	519835.63	39°55'21.978"N	80°31'12.097"W	5.70	122.258	1.84
1621.00	0.740	38.040	1620.48	-4.63	-1.64	5.74	1713917.16	519837.03	39°55'21.992"N	80°31'12.086"W	5.96	105.921	0.62
1716.00	0.930	251.420	1715.48	-4.23	-1.40	5.38	1713916.80	519837.27	39°55'21.995"N	80°31'12.090"W	5.56	104.564	1.68
1811.00	1.230	251.950	1810.46	-3.72	-1.96	3.68	1713915.10	519836.71	39°55'21.989"N	80°31'12.112"W	4.17	118.025	0.32
1900.00	0.940	245.230	1900.45	-3.31	-2.57	2.09	1713913.51	519836.10	39°55'21.983"N	80°31'12.132"W	3.31	140.815	0.35
1990.00	1.020	218.820	1989.43	-3.30	-3.30	0.77	1713911.07	519835.37	39°55'21.975"N	80°31'12.149"W	3.39	166.955	0.18
2079.00	0.920	218.820	2078.42	-3.32	-4.29	-0.35	1713911.07	519834.38	39°55'21.965"N	80°31'12.164"W	4.30	184.634	0.36
2169.00	0.790	217.990	2168.41	-3.70	-5.34	-1.18	1713910.24	519833.33	39°55'21.955"N	80°31'12.174"W	5.47	192.482	0.15
2255.00	0.590	197.000	2257.40	-4.16	-6.26	-1.69	1713909.73	519832.41	39°55'21.946"N	80°31'12.181"W	6.49	195.134	0.36
2348.00	0.450	243.200	2347.40	-4.38	-6.86	-2.15	1713909.27	519831.81	39°55'21.940"N	80°31'12.186"W	7.19	197.416	0.49
2437.00	0.450	243.540	2436.40	-4.27	-7.16	-2.78	1713908.64	519831.51	39°55'21.937"N	80°31'12.194"W	7.68	201.230	0.01
2527.00	0.480	261.110	2526.40	-4.05	-7.37	-3.47	1713907.95	519831.30	39°55'21.935"N	80°31'12.203"W	8.15	205.198	0.16
2616.00	0.530	269.250	2615.39	-3.65	-7.44	-4.25	1713907.17	519831.23	39°55'21.934"N	80°31'12.213"W	8.57	209.744	0.10

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Operator	NOBLE ENERGY	Slot	Slot D
Area	Marshall County, WV	Well	WEB-22D-HS
Field	Marshall	Wellbore	WEB-22D-HS (AWB)
Facility	WEB-22 Pad		

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 (1/100ft)
2706.00	0.250	283.500	2705.39	-3.27	-7.40	-4.86	1713906.56	519831.27	39°55'21.934"N	80°31'12.221"W	8.85	213.290	0.33
2795.00	0.380	304.980	2794.39	-2.85	-7.18	-5.29	1713906.13	519831.49	39°55'21.936"N	80°31'12.226"W	8.92	216.360	0.19
2885.00	0.430	293.690	2884.39	-2.28	-6.88	-5.84	1713905.58	519831.80	39°55'21.939"N	80°31'12.234"W	9.02	220.351	0.10
2974.00	0.090	240.010	2973.39	-1.99	-6.78	-6.21	1713905.21	519831.89	39°55'21.940"N	80°31'12.238"W	9.19	222.493	0.43
3064.00	0.500	313.970	3063.38	-1.60	-6.54	-6.55	1713904.87	519832.13	39°55'21.942"N	80°31'12.243"W	9.26	225.056	0.54
3154.00	0.070	338.840	3153.38	-1.16	-6.21	-6.85	1713904.57	519832.46	39°55'21.946"N	80°31'12.247"W	9.25	227.800	0.49
3243.00	0.290	15.250	3242.38	-0.96	-5.95	-6.81	1713904.61	519832.72	39°55'21.948"N	80°31'12.246"W	9.04	228.889	0.27
3333.00	0.100	36.680	3332.38	-0.79	-5.66	-6.71	1713904.71	519833.01	39°55'21.951"N	80°31'12.245"W	8.78	229.821	0.22
3372.00	0.250	23.160	3371.38	-0.74	-5.56	-6.65	1713904.77	519833.11	39°55'21.952"N	80°31'12.244"W	8.67	230.124	0.40
3445.00	0.440	331.320	3444.38	-0.37	-5.17	-6.73	1713904.69	519833.50	39°55'21.956"N	80°31'12.245"W	8.48	232.470	0.47
3488.00	0.880	286.600	3487.38	0.05	-4.93	-7.12	1713904.30	519833.74	39°55'21.958"N	80°31'12.250"W	8.66	235.322	1.50
3533.00	4.740	262.930	3532.32	1.19	-5.06	-9.30	1713902.12	519833.61	39°55'21.957"N	80°31'12.278"W	10.58	241.459	8.78
3578.00	5.300	357.810	3577.14	3.02	-5.56	-13.20	1713898.22	519833.11	39°55'21.951"N	80°31'12.328"W	14.33	247.175	1.25
3668.00	8.850	245.910	3666.45	6.25	-8.93	-23.65	1713887.74	519829.74	39°55'21.917"N	80°31'12.462"W	25.28	249.320	4.51
3757.00	11.860	234.720	3754.00	7.50	-17.01	-37.37	1713874.05	519821.66	39°55'21.836"N	80°31'12.637"W	41.06	245.531	4.05
3847.00	12.710	225.480	3841.95	5.82	-29.29	-51.98	1713859.44	519809.38	39°55'21.713"N	80°31'12.823"W	59.67	240.599	2.38
3936.00	11.940	222.790	3928.90	2.25	-42.91	-65.22	1713846.21	519795.76	39°55'21.576"N	80°31'12.990"W	78.07	236.655	1.08
4026.00	11.300	226.580	4017.05	-1.01	-55.81	-77.95	1713833.48	519782.87	39°55'21.448"N	80°31'13.152"W	95.86	234.399	1.11
4115.00	10.300	233.520	4104.48	-2.49	-66.53	-90.68	1713820.75	519772.14	39°55'21.340"N	80°31'13.314"W	112.47	233.732	1.84
4205.00	10.560	250.410	4193.01	-0.50	-74.08	-104.92	1713806.51	519764.59	39°55'21.264"N	80°31'13.495"W	128.44	234.775	3.40
4295.00	7.740	244.020	4281.86	2.64	-79.50	-118.14	1713793.29	519759.17	39°55'21.209"N	80°31'13.664"W	142.40	236.062	3.33
4331.00	9.790	229.750	4317.44	2.74	-82.54	-122.66	1713788.77	519756.13	39°55'21.178"N	80°31'13.722"W	147.84	236.061	8.26
4421.00	17.080	230.170	4404.92	0.92	-95.97	-138.67	1713772.76	519742.70	39°55'21.044"N	80°31'13.925"W	168.64	235.313	8.10
4510.00	22.260	231.580	4488.70	-1.18	-114.83	-161.93	1713749.50	519723.85	39°55'20.855"N	80°31'14.221"W	198.51	234.658	5.84
4600.00	24.400	231.430	4571.34	-3.36	-137.02	-189.82	1713721.61	519701.66	39°55'20.633"N	80°31'14.576"W	234.11	234.178	2.38
4690.00	24.370	231.380	4653.31	-5.69	-160.20	-218.86	1713692.57	519678.48	39°55'20.400"N	80°31'14.945"W	271.23	233.798	0.04
4779.00	24.290	230.380	4734.40	-8.32	-183.33	-247.31	1713664.12	519655.35	39°55'20.168"N	80°31'15.307"W	307.85	233.451	0.47
4869.00	23.900	230.620	4816.56	-11.21	-206.70	-275.66	1713635.77	519631.98	39°55'19.934"N	80°31'15.667"W	344.55	233.136	0.45
4959.00	21.080	230.380	4899.71	-13.90	-228.59	-302.23	1713609.21	519610.09	39°55'19.715"N	80°31'16.005"W	378.94	232.897	3.13
5049.00	22.460	231.170	4983.29	-16.36	-249.69	-328.09	1713583.35	519588.99	39°55'19.504"N	80°31'16.334"W	412.30	232.727	1.57
5138.00	23.970	232.570	5064.45	-18.32	-272.21	-356.81	1713554.62	519566.48	39°55'19.278"N	80°31'16.699"W	448.79	232.661	4.00
5228.00	25.600	232.200	5145.48	-20.10	-296.10	-387.83	1713523.61	519542.58	39°55'19.038"N	80°31'17.094"W	487.94	232.639	0.45
5317.00	25.800	232.840	5225.68	-21.77	-319.58	-418.45	1713492.99	519519.10	39°55'18.803"N	80°31'17.483"W	526.53	232.630	0.38
5407.00	25.250	232.670	5306.90	-23.29	-343.05	-449.33	1713462.12	519495.63	39°55'18.567"N	80°31'17.876"W	565.31	232.639	0.62
5496.00	24.440	232.570	5387.66	-24.84	-365.76	-479.04	1713432.40	519472.93	39°55'18.340"N	80°31'18.254"W	602.71	232.638	0.91
5586.00	24.540	233.610	5469.56	-26.09	-388.16	-508.87	1713402.57	519450.53	39°55'18.115"N	80°31'18.634"W	640.01	232.668	0.49
5675.00	26.400	235.270	5549.90	-26.44	-410.42	-540.04	1713371.41	519428.27	39°55'17.891"N	80°31'19.031"W	678.29	232.766	2.28
5765.00	20.850	234.970	5632.31	-26.35	-431.04	-569.64	1713341.80	519407.65	39°55'17.684"N	80°31'19.408"W	714.35	232.886	6.21
5855.00	19.560	231.770	5716.77	-27.21	-449.56	-594.59	1713316.85	519389.13	39°55'17.499"N	80°31'19.725"W	745.42	232.908	1.89
5944.00	22.490	232.940	5799.84	-28.66	-469.04	-619.89	1713291.56	519369.65	39°55'17.303"N	80°31'20.047"W	777.34	232.887	3.33
6034.00	21.170	233.730	5883.38	-29.64	-489.03	-646.73	1713264.72	519349.66	39°55'17.103"N	80°31'20.388"W	810.81	232.905	1.50
6123.00	22.420	234.080	5966.02	-30.27	-508.49	-673.43	1713238.02	519330.20	39°55'16.907"N	80°31'20.728"W	843.84	232.944	1.41
6213.00	22.420	235.200	6049.21	-30.49	-528.36	-701.42	1713210.03	519310.34	39°55'16.708"N	80°31'21.085"W	878.15	233.017	0.47
6302.00	22.460	233.310	6131.48	-30.93	-548.20	-728.99	1713182.46	519290.49	39°55'16.509"N	80°31'21.435"W	912.11	233.050	0.81
6392.00	22.440	232.900	6214.66	-32.07	-568.84	-756.48	1713154.98	519269.86	39°55'16.302"N	80°31'21.785"W	946.48	233.059	0.18

Actual Wellpath Report

WEB-22D-HS (AWP) Proj: 15144'

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REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot D
NOBLE ENERGY	WEB-22D-HS	WEB-22D-HS
Area	Marshall County, WV	
Field	Marshall	
Facility	WEB-22 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 [1/100ft]
6482.00	22.420	234.410	6297.85	-32.87	-589.19	-784.13	1713127.32	519249.51	39°55'16.097"N	80°31'22.137"W	980.82	233.079	0.64
6571.00	22.890	256.330	6380.13	-26.74	-603.18	-814.81	1713096.65	519235.52	39°55'15.956"N	80°31'22.529"W	1013.77	233.489	9.45
6661.00	25.750	275.960	6462.27	-7.52	-605.29	-851.33	1713060.13	519233.41	39°55'15.931"N	80°31'22.997"W	1044.57	234.587	9.48
6750.00	30.230	291.130	6540.94	23.81	-595.19	-891.53	1713019.94	519243.51	39°55'16.026"N	80°31'23.515"W	1071.95	236.273	9.42
6840.00	35.870	295.460	6616.35	65.60	-575.67	-936.51	1712974.96	519263.03	39°55'16.214"N	80°31'24.095"W	1099.29	238.421	6.79
6930.00	44.690	290.870	6684.96	114.85	-553.01	-990.00	1712921.46	519285.69	39°55'16.432"N	80°31'24.785"W	1133.99	240.813	10.33
7019.00	54.000	295.700	6742.90	172.29	-526.18	-1051.84	1712859.63	519312.52	39°55'16.690"N	80°31'25.582"W	1176.11	243.424	11.24
7109.00	63.020	305.240	6789.94	242.04	-487.11	-1117.65	1712793.83	519351.59	39°55'17.069"N	80°31'26.432"W	1219.18	246.541	13.48
7198.00	69.010	313.100	6826.15	320.19	-435.72	-1180.51	1712730.96	519402.97	39°55'17.569"N	80°31'27.247"W	1258.36	249.741	10.50
7288.00	75.540	319.040	6853.56	404.80	-373.99	-1239.87	1712671.61	519464.70	39°55'18.173"N	80°31'28.017"W	1295.04	253.215	9.60
7378.00	79.790	322.310	6872.79	492.44	-305.99	-1295.55	1712615.93	519532.69	39°55'18.838"N	80°31'28.742"W	1331.19	256.711	5.91
7467.00	85.410	325.600	6884.25	580.64	-234.66	-1347.44	1712564.04	519604.02	39°55'19.537"N	80°31'29.418"W	1367.72	260.121	7.30
7557.00	89.850	327.750	6887.97	670.50	-159.54	-1396.83	1712514.66	519679.14	39°55'20.274"N	80°31'30.063"W	1405.91	263.484	5.48
7646.00	90.340	327.820	6887.82	759.39	-84.24	-1444.27	1712467.22	519754.43	39°55'21.013"N	80°31'30.683"W	1446.73	266.662	0.56
7736.00	90.400	326.730	6887.24	849.32	-8.53	-1492.92	1712418.57	519830.14	39°55'21.756"N	80°31'31.319"W	1492.95	269.673	1.21
7826.00	90.620	327.300	6886.44	939.26	66.96	-1541.92	1712369.57	519905.62	39°55'22.496"N	80°31'31.959"W	1543.37	272.487	0.68
7915.00	90.620	325.190	6885.48	1028.23	140.95	-1591.37	1712320.31	519979.61	39°55'23.222"N	80°31'32.604"W	1597.60	275.061	2.37
8005.00	90.620	324.570	6884.46	1118.22	214.56	-1643.14	1712268.36	520053.22	39°55'23.943"N	80°31'33.279"W	1657.09	277.439	0.69
8095.00	90.920	326.090	6883.20	1208.21	288.57	-1694.33	1712217.17	520127.22	39°55'24.669"N	80°31'33.947"W	1718.73	279.665	1.71
8184.00	90.800	329.010	6881.86	1297.10	363.65	-1742.07	1712169.43	520202.31	39°55'25.405"N	80°31'34.571"W	1779.62	281.791	3.28
8274.00	90.890	330.390	6880.54	1386.78	441.35	-1787.47	1712124.03	520280.00	39°55'26.168"N	80°31'35.165"W	1841.15	283.870	1.54
8363.00	91.140	328.760	6878.96	1475.48	518.08	-1832.53	1712078.97	520356.72	39°55'26.921"N	80°31'35.754"W	1904.36	285.786	1.85
8453.00	90.890	324.440	6877.36	1565.41	593.18	-1882.06	1712029.45	520431.83	39°55'27.658"N	80°31'36.401"W	1973.33	287.494	4.81
8542.00	90.300	320.360	6876.36	1654.30	663.68	-1936.35	1711975.17	520502.32	39°55'28.348"N	80°31'37.108"W	2046.93	288.919	4.62
8632.00	90.250	318.920	6875.85	1743.90	732.25	-1994.63	1711916.89	520570.89	39°55'29.019"N	80°31'37.866"W	2124.79	290.159	1.61
8722.00	90.310	319.590	6875.41	1833.45	800.44	-2053.37	1711858.15	520639.07	39°55'29.687"N	80°31'38.630"W	2203.87	291.297	0.75
8811.00	90.340	320.620	6874.91	1922.12	868.72	-2110.45	1711801.07	520707.35	39°55'30.355"N	80°31'39.373"W	2282.25	292.373	1.16
8901.00	90.520	323.060	6874.23	2011.97	939.48	-2166.05	1711745.47	520778.10	39°55'31.048"N	80°31'40.097"W	2361.02	293.448	2.72
8990.00	91.510	325.510	6872.65	2100.94	1011.72	-2217.99	1711693.53	520850.34	39°55'31.756"N	80°31'40.774"W	2437.84	294.520	2.97
9080.00	91.230	327.850	6870.50	2190.87	1086.90	-2267.41	1711644.11	520925.52	39°55'32.493"N	80°31'41.419"W	2514.46	295.611	2.62
9169.00	91.200	328.160	6868.62	2279.73	1162.36	-2314.56	1711596.97	521000.98	39°55'33.234"N	80°31'42.036"W	2590.03	296.666	0.35
9259.00	90.580	328.770	6867.22	2369.55	1239.06	-2361.62	1711549.91	521077.67	39°55'33.986"N	80°31'42.651"W	2666.94	297.684	0.97
9348.00	90.430	329.150	6866.43	2458.34	1315.32	-2407.51	1711504.02	521153.92	39°55'34.734"N	80°31'43.251"W	2743.39	298.649	0.46
9438.00	90.520	328.660	6865.69	2548.13	1392.38	-2453.99	1711457.54	521230.32	39°55'35.491"N	80°31'43.859"W	2821.49	299.570	0.55
9527.00	90.520	327.010	6864.88	2637.01	1467.72	-2501.37	1711410.17	521306.32	39°55'36.230"N	80°31'44.478"W	2900.18	300.403	1.85
9617.00	90.520	326.240	6864.06	2726.97	1542.87	-2550.88	1711360.66	521381.47	39°55'36.967"N	80°31'45.125"W	2981.18	301.167	0.86
9707.00	90.520	327.470	6863.25	2816.92	1618.22	-2600.08	1711311.46	521456.81	39°55'37.706"N	80°31'45.767"W	3062.53	302.609	1.37
9796.00	90.550	328.400	6862.41	2905.80	1693.64	-2647.33	1711264.22	521532.23	39°55'38.446"N	80°31'46.385"W	3142.73	302.609	1.05
9886.00	90.490	326.340	6861.60	2995.71	1769.43	-2695.85	1711215.69	521608.01	39°55'39.189"N	80°31'47.019"W	3224.67	303.279	2.29
9976.00	90.460	327.040	6860.85	3085.67	1844.64	-2745.28	1711166.27	521683.22	39°55'39.927"N	80°31'47.664"W	3307.45	303.898	0.78
10065.00	90.580	326.480	6860.04	3174.62	1919.07	-2794.06	1711117.49	521758.52	39°55'40.657"N	80°31'48.301"W	3389.63	304.483	0.64
10155.00	90.460	324.620	6859.23	3264.61	1993.28	-2844.97	1711066.59	521831.86	39°55'41.385"N	80°31'48.965"W	3473.76	305.016	2.07
10245.00	90.520	321.480	6858.46	3354.54	2065.20	-2899.06	1711012.50	521903.77	39°55'42.089"N	80°31'49.670"W	3559.44	305.465	3.49
10334.00	90.620	319.430	6857.57	3443.25	2133.82	-2955.72	1710955.84	521972.32	39°55'42.761"N	80°31'50.408"W	3645.47	305.827	2.31
10424.00	90.430	319.110	6856.75	3532.80	2202.02	-3014.44	1710897.12	522040.58	39°55'43.428"N	80°31'51.171"W	3733.06	306.148	0.41

Actual Wellpath Report

WEB-22D-HS (AWP) Proj: 15144'

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REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot D
Area	Marshall County, WV	Well	WEB-22D-HS
Field	Marshall	Wellbore	WEB-22D-HS (AWB)
Facility	WEB-22 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]
10514.00	90.430	320.300	6856.07	3622.41	2270.66	-3072.64	1710838.92	522109.22	39°55'44.100"N	80°31'51.928"W	3820.61	306.464	1.32
10603.00	90.490	321.850	6855.36	3711.20	2339.89	-3128.56	1710783.01	522178.45	39°55'44.778"N	80°31'52.656"W	3906.79	306.793	1.74
10693.00	90.400	329.760	6854.66	3801.11	2414.28	-3179.10	1710732.47	522252.83	39°55'45.507"N	80°31'53.316"W	3991.92	307.214	8.79
10783.00	90.490	328.000	6853.96	3890.90	2491.32	-3225.61	1710685.91	522329.87	39°55'46.263"N	80°31'53.924"W	4075.69	307.681	1.96
10872.00	90.370	326.860	6853.29	3979.82	2566.32	-3273.52	1710638.06	522404.86	39°55'46.999"N	80°31'54.550"W	4159.56	308.095	1.29
10962.00	90.370	326.050	6852.71	4069.79	2641.33	-3323.25	1710588.33	522479.87	39°55'47.734"N	80°31'55.200"W	4245.07	308.478	0.90
11052.00	90.340	329.920	6852.15	4159.64	2717.62	-3370.95	1710540.63	522556.16	39°55'48.483"N	80°31'55.823"W	4329.99	308.875	4.30
11141.00	90.620	335.880	6851.40	4247.79	2796.71	-3411.69	1710499.90	522635.25	39°55'49.260"N	80°31'56.358"W	4411.48	309.343	6.37
11231.00	90.490	333.600	6850.53	4336.53	2878.00	-3450.30	1710461.28	522716.53	39°55'50.059"N	80°31'56.865"W	4493.04	309.832	2.20
11320.00	90.550	328.480	6849.72	4425.00	2955.84	-3493.38	1710418.21	522794.37	39°55'50.823"N	80°31'57.430"W	4576.10	310.235	5.75
11410.00	90.460	325.770	6848.93	4514.93	3031.41	-3542.22	1710369.94	522869.94	39°55'51.564"N	80°31'58.068"W	4662.28	310.557	3.01
11500.00	90.520	323.480	6848.16	4604.91	3104.79	-3594.32	1710317.27	522943.31	39°55'52.283"N	80°31'58.747"W	4749.62	310.821	2.55
11589.00	90.460	322.970	6847.40	4693.87	3176.08	-3647.60	1710263.99	523014.59	39°55'52.982"N	80°31'59.442"W	4836.58	311.047	0.58
11679.00	90.520	322.530	6846.63	4783.80	3247.71	-3702.08	1710209.52	523086.23	39°55'53.684"N	80°32'00.152"W	4924.74	311.259	0.49
11768.00	90.550	322.690	6845.80	4872.71	3318.42	-3756.12	1710155.48	523156.93	39°55'54.376"N	80°32'00.856"W	5012.02	311.460	0.18
11858.00	90.490	322.170	6844.98	4962.62	3389.75	-3810.99	1710100.61	523228.26	39°55'55.075"N	80°32'01.571"W	5100.40	311.652	0.58
11948.00	90.520	324.800	6844.21	5052.55	3461.41	-3865.44	1710046.17	523299.91	39°55'55.777"N	80°32'02.280"W	5188.74	311.844	1.33
12037.00	90.520	324.850	6843.43	5141.53	3533.51	-3917.61	1709994.00	523372.01	39°55'56.483"N	80°32'02.960"W	5275.73	312.049	1.66
12126.00	90.650	325.140	6842.52	5230.52	3606.40	-3968.66	1709942.95	523444.90	39°55'57.198"N	80°32'03.626"W	5362.50	312.262	0.36
12216.00	90.520	322.140	6841.60	5320.48	3678.87	-4022.01	1709889.60	523517.36	39°55'57.908"N	80°32'04.322"W	5450.75	312.449	3.34
12306.00	90.550	322.350	6840.76	5410.38	3750.02	-4077.11	1709834.50	523588.51	39°55'58.605"N	80°32'05.040"W	5539.45	312.607	0.24
12395.00	90.550	322.210	6839.91	5499.27	3820.42	-4131.56	1709780.06	523658.91	39°55'59.294"N	80°32'05.749"W	5627.20	312.759	0.16
12485.00	90.430	320.800	6839.14	5589.10	3890.86	-4187.58	1709724.04	523729.34	39°55'59.984"N	80°32'06.478"W	5716.17	312.896	1.57
12574.00	90.460	320.760	6838.45	5677.86	3959.80	-4243.85	1709667.77	523798.28	39°56'00.659"N	80°32'07.211"W	5804.34	313.017	0.06
12664.00	90.490	321.550	6837.70	5767.65	4029.90	-4300.30	1709611.33	523868.37	39°56'01.345"N	80°32'07.946"W	5893.44	313.141	0.88
12753.00	90.490	322.340	6836.94	5856.52	4099.97	-4355.16	1709556.47	523938.45	39°56'02.031"N	80°32'08.660"W	5981.40	313.271	0.89
12843.00	90.490	322.880	6836.17	5946.44	4171.48	-4409.81	1709501.82	524009.95	39°56'02.732"N	80°32'09.373"W	6070.22	313.409	0.60
12933.00	90.430	323.970	6835.45	6036.40	4243.75	-4463.43	1709448.20	524082.22	39°56'03.440"N	80°32'10.072"W	6158.87	313.555	1.21
13022.00	90.430	325.720	6834.78	6125.39	4316.51	-4514.68	1709396.96	524154.98	39°56'04.153"N	80°32'10.740"W	6246.17	313.715	1.97
13112.00	90.460	327.180	6834.08	6215.36	4391.52	-4564.41	1709347.23	524229.98	39°56'04.888"N	80°32'11.390"W	6333.98	313.894	1.62
13202.00	90.400	327.810	6833.40	6305.27	4467.41	-4612.77	1709298.87	524305.87	39°56'05.633"N	80°32'12.022"W	6421.49	314.083	0.70
13291.00	90.430	326.510	6832.76	6394.20	4542.19	-4661.04	1709250.61	524380.64	39°56'06.366"N	80°32'12.652"W	6508.20	314.260	1.46
13381.00	90.550	324.990	6831.99	6484.19	4616.58	-4711.69	1709199.96	524455.02	39°56'07.096"N	80°32'13.313"W	6596.42	314.416	1.69
13470.00	90.550	324.050	6831.13	6573.18	4689.05	-4763.34	1709148.31	524527.49	39°56'07.806"N	80°32'13.987"W	6684.05	314.550	1.06
13560.00	90.520	323.940	6830.29	6663.16	4761.85	-4816.24	1709095.41	524600.29	39°56'08.519"N	80°32'14.677"W	6772.84	314.675	0.13
13650.00	90.460	325.180	6829.52	6753.15	4835.17	-4868.43	1709043.23	524673.61	39°56'09.238"N	80°32'15.358"W	6861.52	314.804	1.38
13739.00	90.460	326.740	6828.81	6842.14	4908.91	-4918.24	1708993.41	524747.35	39°56'09.961"N	80°32'16.008"W	6948.85	314.946	1.75
13829.00	90.460	328.520	6828.09	6932.04	4984.92	-4966.43	1708945.23	524823.36	39°56'10.707"N	80°32'16.638"W	7036.68	315.107	1.98
13919.00	90.520	330.400	6827.32	7021.76	5062.43	-5012.15	1708899.51	524900.86	39°56'11.467"N	80°32'17.236"W	7123.90	315.286	2.09
14008.00	90.400	330.060	6826.43	7110.38	5139.68	-5056.34	1708855.32	524978.11	39°56'12.226"N	80°32'17.815"W	7209.92	315.468	0.40
14098.00	90.460	328.470	6825.58	7200.12	5217.04	-5102.33	1708809.09	525055.46	39°56'12.985"N	80°32'18.417"W	7297.35	315.637	1.78
14187.00	90.520	325.900	6824.82	7289.05	5291.82	-5150.56	1708761.11	525130.24	39°56'13.718"N	80°32'19.047"W	7384.56	315.775	2.89
14277.00	90.520	325.000	6823.96	7379.04	5365.96	-5201.58	1708710.09	525204.37	39°56'14.445"N	80°32'19.713"W	7473.28	315.891	0.97
14367.00	90.520	324.770	6823.09	7469.04	5439.59	-5253.33	1708658.34	525278.00	39°56'15.167"N	80°32'20.388"W	7562.18	315.998	0.30
14456.00	90.580	323.970	6822.24	7558.03	5511.93	-5305.17	1708606.50	525350.33	39°56'15.876"N	80°32'21.065"W	7650.24	316.095	0.90

Actual Wellpath Report

WEB-22D-HS (AWP) Proj: 15144'

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REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot D
Area	Marshall County, WV	Well	WEB-22D-HS
Field	Marshall	Wellbore	WEB-22D-HS (AWB)
Facility	WEB-22 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]
14546.00	90.430	323.750	6821.45	7648.01	5584.60	-5358.25	1708553.43	525423.01	39°56'16.588"N	80°32'21.757"W	7739.42	316.185	0.30
14635.00	90.580	323.390	6820.66	7736.97	5656.21	-5411.10	1708500.58	525494.61	39°56'17.289"N	80°32'22.446"W	7827.69	316.269	0.44
14725.00	90.580	323.600	6819.75	7826.94	5728.55	-5464.64	1708447.05	525566.94	39°56'17.998"N	80°32'23.144"W	7916.98	316.351	0.23
14815.00	90.460	322.430	6818.93	7916.88	5800.44	-5518.78	1708392.91	525638.83	39°56'18.702"N	80°32'23.849"W	8006.37	316.425	1.31
14904.00	90.460	324.220	6818.22	8005.83	5871.81	-5571.93	1708339.76	525710.20	39°56'19.401"N	80°32'24.542"W	8094.73	316.501	2.01
14994.00	91.110	324.160	6816.99	8095.82	5944.79	-5624.58	1708287.11	525783.18	39°56'20.117"N	80°32'25.229"W	8183.92	316.585	0.73
15084.00	90.220	321.820	6815.94	8185.75	6016.65	-5678.75	1708232.94	525855.03	39°56'20.820"N	80°32'25.935"W	8273.35	316.655	2.78
15120.00	90.150	321.130	6815.83	8221.68	6044.81	-5701.17	1708210.52	525883.19	39°56'21.096"N	80°32'26.227"W	8309.22	316.676	1.93
15144.00	90.150	321.130	6815.76	8245.62	6063.50	-5716.24	1708195.46	525901.88	39°56'21.279"N	80°32'26.423"W	8333.15	316.689	0.00

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
WEB-22D-HS BHL Rev-1		6883.00	6062.37	-5718.93	1708192.76	525900.75	39°56'21.268"N	80°32'26.458"W	point
WEB-22D-HS LP Rev-1		6883.00	-249.20	-1299.53	1712611.96	519589.48	39°55'19.399"N	80°31'28.801"W	point
WEB-22D-HS BHL Plat		6913.00	6062.37	-5718.93	1708192.76	525900.75	39°56'21.268"N	80°32'26.458"W	point
WEB-22D-HS LP Plat		6913.00	-331.12	-1242.17	1712669.31	519507.57	39°55'18.596"N	80°31'28.053"W	point

WELLPATH COMPOSITION - Ref Wellbore: WEB-22D-HS (AWB) Ref Wellpath: WEB-22D-HS (AWP) Proj: 15144'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment
18.60	389.00	Generic gyro - northseeking (Standard)	01_17 1/2" Gyro Surveys (57-389)
389.00	1207.00	Generic gyro - northseeking (Standard)	02_17 1/2" BHI Motor / Gyro Surveys (389)(429-1207) Proj:1262'
1207.00	3372.00	Navitrak (MagCorr)	03_BHI LCP / Motor Surveys 12 1/4" (1207)(1334-3372) Proj:3425'
3372.00	4295.00	Navitrak (MagCorr)	04_BHI MWD <8-3/4"> (3372)(3445-4295)
4295.00	15120.00	Navitrak (AT Curve Short Spaced)	05_BHI AT Curve <8-3/4"> (4295)(4331-15120)
15120.00	15144.00	Blind Drilling (std)	Projection to bit

Actual Wellpath Report
 WEB-22D-HS (AWP) Proj: 15144'
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REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot D
NOBLE ENERGY	Well	WEB-22D-HS
Area Marshall County, WV	Wellbore	WEB-22D-HS (AWB)
Field Marshall		
Facility WEB-22 Pad		

COMMENTS

Wellpath general comments
 API: 47-051-01733-0000
 BHI Job #: 6234518
 Rig: Precision 542
 Duration: 07/27/2014-08/03/2014
 Gyro <17-1/2"> (57'-389')
 BHI Motor / Gyro Surveys (389')(429'-1207')
 BHI MWD LCP (1207')(1334'-3372')
 BHI MWD(3372')(3445'-4295')
 BHI AT Curve (4295')(4331'-15120')
 MD Projected to TD: 15144'



NOBLE ENERGY



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

Slot: Slot D
 Well: WEB-22D-HS
 Wellbore: WEB-22D-HS-PWB

Location Information

Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
WEB-22 Pad	1713925.810	519852.540	39°55'22.147"N	80°31'11.977"W
Slot	Local E (ft)	Grid East (US ft)	Latitude	Longitude
Slot D	-13.87	1713911.420	39°55'22.008"N	80°31'12.160"W
Precision 542 (RT) to Mud line (At Slot: Slot D)			18.6ft	
Mean Sea Level to Mud line (At Slot: Slot D)			-1325ft	
Precision 542 (RT) to Mean Sea Level			1343.6ft	

True vertical depths are referenced to Precision 542 (RT)
 Measured depths are referenced to Precision 542 (RT)
 Precision 542 (RT) to Mean Sea Level: 1343.6 feet
 Mean Sea Level to Mud line (At Slot: Slot D): -1325 feet
 Coordinates are in feet referenced to Slot
 Created by: kscsch on 06/Aug/2014

Well	Wellbore	Wellpath
Slot D	WEB-22D-HS	WEB-22D-HS (AWB)
Slot D	WEB-22D-HS	WEB-22D-HS (PWP) Proj: 15144'
Slot D	WEB-22D-HS	WEB-22D-HS (PWP) Rev: C.0

