



Office of Oil & Gas
DEC 22 2014

Actual Wellpath Report

WEB-13B-HS (AWP) Proj:12725'
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REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot B
Area	Marshall County, WV	Well	WEB-13B-HS
Field	Marshall	Wellbore	WEB-13B-IIS AWB
Facility	WEB-13 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	Frisjesl
Scale	0.999957	Report Generated	4/23/2014 at 12:05:25 PM
Convergence at slot	0.67° West	Database/Source file	WA_EasternUS/WEB-13B-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	-28.07	69.95	1705722.78	531262.68	39°57'13.972"N	80°32'58.971"W
Facility Reference Pt			1705652.83	531290.75	39°57'14.242"N	80°32'59.873"W
Field Reference Pt			609601.22	0.00	38°23'48.753"N	84°21'09.765"W

WELLPATH DATUM

Calculation method	Minimum curvature	Nomac 79 (RT) to Facility Vertical Datum	1270.47ft
Horizontal Reference Pt	Slot	Nomac 79 (RT) to Mean Sea Level	1270.47ft
Vertical Reference Pt	Nomac 79 (RT)	Nomac 79 (RT) to Mud Line at Slot (Slot B)	1270.47ft
MD Reference Pt	Nomac 79 (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	143.00°

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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY	Slot	Slot B
Area	Marshall County, WV	Well	WEB-13B-IIS
Field	Marshall	Wellbore	WEB-13B-HS AWB
Facility	WEB-13 Pad		

WELLPATH DATA (155 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]
0.00†	0.000	58.430	0.00	0.00	0.00	0.00	1705722.78	531262.68	39°57'13.972"N	80°32'58.971"W	0.00	0.000	0.00
26.00	0.000	58.430	26.00	0.00	0.00	0.00	1705722.78	531262.68	39°57'13.972"N	80°32'58.971"W	0.00	0.000	0.00
126.00	0.530	58.430	126.00	0.04	0.24	0.39	1705723.17	531262.92	39°57'13.975"N	80°32'58.966"W	0.46	58.430	0.53
226.00	0.640	41.640	225.99	-0.02	0.90	1.16	1705723.94	531263.58	39°57'13.981"N	80°32'58.956"W	1.47	52.123	0.20
326.00	0.750	52.700	325.99	-0.14	1.72	2.05	1705724.83	531264.40	39°57'13.990"N	80°32'58.945"W	2.67	50.086	0.17
426.00	1.110	58.190	425.97	-0.05	2.62	3.39	1705726.17	531265.30	39°57'13.999"N	80°32'58.928"W	4.29	52.309	0.37
526.00	0.300	25.390	525.96	-0.09	3.37	4.33	1705727.11	531266.05	39°57'14.006"N	80°32'58.916"W	5.49	52.108	0.87
626.00	0.830	246.740	625.96	-0.38	3.32	3.78	1705726.56	531266.00	39°57'14.006"N	80°32'58.923"W	5.03	48.680	1.07
726.00	0.660	241.050	725.95	-0.63	2.76	2.61	1705725.39	531265.44	39°57'14.000"N	80°32'58.938"W	3.79	43.418	0.19
826.00	0.530	231.160	825.95	-0.70	2.19	1.74	1705724.52	531264.87	39°57'13.994"N	80°32'58.949"W	2.80	38.562	0.17
926.00	0.350	230.250	925.94	-0.67	1.70	1.15	1705723.93	531264.38	39°57'13.989"N	80°32'58.956"W	2.05	34.014	0.18
1026.00	0.450	242.250	1025.94	-0.72	1.32	0.57	1705723.35	531264.00	39°57'13.985"N	80°32'58.964"W	1.44	23.152	0.13
1126.00	0.380	217.850	1125.94	-0.69	0.88	0.01	1705722.79	531263.56	39°57'13.981"N	80°32'58.971"W	0.88	0.965	0.19
1226.00	0.410	199.080	1225.94	-0.41	0.28	-0.31	1705722.47	531262.96	39°57'13.975"N	80°32'58.975"W	0.41	312.345	0.13
1326.00	0.400	153.120	1325.94	0.14	-0.37	-0.26	1705722.52	531262.31	39°57'13.969"N	80°32'58.974"W	0.46	215.518	0.32
1426.00	0.370	129.410	1425.93	0.79	-0.89	0.14	1705722.92	531261.79	39°57'13.964"N	80°32'58.969"W	0.90	170.875	0.16
1526.00	0.220	115.560	1525.93	1.28	-1.18	0.57	1705723.35	531261.50	39°57'13.961"N	80°32'58.963"W	1.30	154.314	0.17
1626.00	0.150	67.010	1625.93	1.48	-1.21	0.86	1705723.64	531261.47	39°57'13.960"N	80°32'58.960"W	1.48	144.561	0.16
1726.00	0.150	222.000	1725.93	1.54	-1.25	0.89	1705723.67	531261.43	39°57'13.960"N	80°32'58.959"W	1.54	144.558	0.29
1826.00	0.310	209.520	1825.93	1.67	-1.59	0.67	1705723.45	531261.09	39°57'13.957"N	80°32'58.962"W	1.72	157.066	0.17
1926.00	0.380	205.130	1925.93	1.93	-2.12	0.40	1705723.18	531260.56	39°57'13.951"N	80°32'58.965"W	2.16	169.405	0.07
2026.00	0.340	215.090	2025.93	2.18	-2.66	0.09	1705722.87	531260.02	39°57'13.946"N	80°32'58.969"W	2.67	178.164	0.07
2126.00	0.430	233.220	2125.92	2.27	-3.13	-0.39	1705722.39	531259.55	39°57'13.941"N	80°32'58.975"W	3.16	187.021	0.15
2226.00	0.390	270.890	2225.92	2.06	-3.35	-1.03	1705721.75	531259.33	39°57'13.939"N	80°32'58.984"W	3.50	197.031	0.27
2326.00	0.280	290.410	2325.92	1.64	-3.26	-1.60	1705721.18	531259.42	39°57'13.940"N	80°32'58.991"W	3.63	206.079	0.16
2426.00	0.160	287.350	2425.92	1.32	-3.13	-1.96	1705720.82	531259.55	39°57'13.941"N	80°32'58.996"W	3.70	211.999	0.12
2526.00	0.220	291.810	2525.92	1.05	-3.02	-2.27	1705720.51	531259.66	39°57'13.942"N	80°32'59.000"W	3.78	216.919	0.06
2626.00	0.350	320.420	2625.92	0.58	-2.71	-2.64	1705720.14	531259.97	39°57'13.945"N	80°32'59.004"W	3.79	224.235	0.19
2726.00	0.250	323.310	2725.92	0.05	-2.30	-2.97	1705719.81	531260.38	39°57'13.949"N	80°32'59.009"W	3.76	232.177	0.10
2826.00	0.400	324.720	2825.91	-0.51	-1.84	-3.30	1705719.48	531260.84	39°57'13.954"N	80°32'59.013"W	3.78	240.802	0.15
2926.00	0.290	337.260	2925.91	-1.11	-1.33	-3.60	1705719.18	531261.35	39°57'13.959"N	80°32'59.017"W	3.84	249.781	0.13
3026.00	0.310	331.010	3025.91	-1.62	-0.86	-3.83	1705718.95	531261.82	39°57'13.963"N	80°32'59.020"W	3.92	257.403	0.04
3088.00	0.320	321.420	3087.91	-1.96	-0.57	-4.02	1705718.76	531262.11	39°57'13.966"N	80°32'59.022"W	4.06	261.877	0.09
3279.00	0.530	331.160	3278.91	-3.37	0.62	-4.78	1705718.00	531263.30	39°57'13.978"N	80°32'59.032"W	4.82	277.366	0.12
3374.00	0.560	334.180	3373.90	-4.26	1.42	-5.19	1705717.59	531264.10	39°57'13.986"N	80°32'59.038"W	5.38	285.304	0.04
3469.00	0.620	304.730	3468.90	-5.20	2.13	-5.81	1705716.97	531264.81	39°57'13.993"N	80°32'59.046"W	6.19	290.127	0.32
3563.00	0.790	316.240	3562.89	-6.33	2.89	-6.68	1705716.10	531265.57	39°57'14.000"N	80°32'59.057"W	7.28	293.383	0.23
3658.00	0.460	316.750	3657.88	-7.36	3.64	-7.39	1705715.39	531266.32	39°57'14.007"N	80°32'59.066"W	8.24	296.204	0.35
3753.00	0.740	312.520	3752.88	-8.34	4.33	-8.11	1705714.67	531267.01	39°57'14.014"N	80°32'59.076"W	9.19	298.113	0.30
3848.00	0.860	326.820	3847.87	-9.65	5.34	-8.95	1705713.83	531268.02	39°57'14.024"N	80°32'59.087"W	10.42	300.835	0.24
3943.00	0.740	332.740	3942.86	-10.97	6.49	-9.62	1705713.16	531269.16	39°57'14.035"N	80°32'59.095"W	11.60	303.980	0.15
4039.00	0.810	324.000	4038.85	-12.26	7.59	-10.30	1705712.48	531270.26	39°57'14.046"N	80°32'59.104"W	12.80	306.357	0.14
4134.00	0.800	330.890	4133.84	-13.59	8.71	-11.02	1705711.76	531271.39	39°57'14.057"N	80°32'59.114"W	14.05	308.310	0.10
4229.00	0.550	308.650	4228.83	-14.69	9.57	-11.70	1705711.08	531272.25	39°57'14.066"N	80°32'59.123"W	15.12	309.286	0.38
4324.00	0.640	308.290	4323.83	-15.64	10.19	-12.47	1705710.31	531272.87	39°57'14.072"N	80°32'59.133"W	16.10	309.235	0.09

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Field	Marshall	Wellbore	WEB-13B-HS AWB
Facility	WEB-13 Pad		

WELLPATH DATA (155 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]
4418.00	0.590	300.880	4417.82	-16.60	10.76	-13.30	1705709.48	531273.44	39°57'14.077"N	80°32'59.143"W	17.11	308.970	0.10
4512.00	0.590	283.850	4511.82	-17.42	11.12	-14.19	1705708.59	531273.80	39°57'14.081"N	80°32'59.155"W	18.03	308.101	0.19
4607.00	0.970	295.540	4606.81	-18.51	11.59	-15.39	1705707.39	531274.27	39°57'14.085"N	80°32'59.170"W	19.26	306.983	0.43
4702.00	0.800	303.890	4701.80	-19.85	12.30	-16.66	1705706.12	531274.98	39°57'14.092"N	80°32'59.187"W	20.71	306.443	0.22
4798.00	0.860	317.790	4797.79	-21.20	13.21	-17.70	1705705.08	531275.89	39°57'14.101"N	80°32'59.200"W	22.09	306.733	0.22
4857.00	1.830	20.760	4856.77	-22.15	14.42	-17.67	1705705.11	531277.10	39°57'14.113"N	80°32'59.200"W	22.80	309.223	2.76
4908.00	5.390	27.680	4907.67	-23.61	17.30	-16.26	1705706.52	531279.98	39°57'14.141"N	80°32'59.182"W	23.75	316.773	7.02
4944.00	8.060	29.090	4943.41	-25.35	21.01	-14.25	1705708.53	531283.69	39°57'14.178"N	80°32'59.157"W	25.39	325.846	7.43
4952.00	8.480	29.460	4951.33	-25.82	22.01	-13.69	1705709.09	531284.69	39°57'14.188"N	80°32'59.150"W	25.92	328.122	5.29
5006.00	13.040	35.580	5004.37	-29.23	30.44	-8.18	1705714.60	531293.12	39°57'14.272"N	80°32'59.080"W	31.52	344.952	8.69
5047.00	16.750	28.450	5043.99	-33.07	39.40	-2.67	1705720.11	531302.08	39°57'14.361"N	80°32'59.011"W	39.49	356.116	10.08
5097.00	18.330	37.870	5091.67	-38.12	51.94	5.59	1705728.37	531314.62	39°57'14.486"N	80°32'58.907"W	52.24	6.138	6.49
5141.00	19.080	47.560	5133.36	-40.61	62.26	15.14	1705737.92	531324.94	39°57'14.589"N	80°32'58.786"W	64.07	13.670	7.26
5192.00	20.320	52.020	5181.37	-41.55	73.33	28.28	1705751.05	531336.01	39°57'14.700"N	80°32'58.619"W	78.60	21.085	3.82
5236.00	22.120	50.710	5222.39	-42.01	83.28	40.71	1705763.49	531345.96	39°57'14.800"N	80°32'58.461"W	92.70	26.050	4.23
5286.00	24.260	48.350	5268.35	-43.22	96.07	55.67	1705778.45	531358.75	39°57'14.928"N	80°32'58.270"W	111.04	30.092	4.67
5331.00	26.350	46.130	5309.03	-45.17	109.14	69.78	1705792.56	531371.81	39°57'15.059"N	80°32'58.091"W	129.54	32.595	5.10
5380.00	28.330	42.800	5352.56	-48.53	125.21	85.52	1705808.30	531387.88	39°57'15.219"N	80°32'57.892"W	151.63	34.335	5.10
5425.00	30.080	42.120	5391.83	-52.55	141.41	100.34	1705823.12	531404.08	39°57'15.381"N	80°32'57.704"W	173.39	35.359	3.96
5476.00	31.900	43.940	5435.55	-57.08	160.59	118.27	1705841.04	531423.27	39°57'15.573"N	80°32'57.476"W	199.44	36.369	4.01
5520.00	32.510	44.450	5472.78	-60.67	177.41	134.62	1705857.39	531440.08	39°57'15.741"N	80°32'57.269"W	222.70	37.191	1.52
5571.00	33.170	43.220	5515.63	-65.08	197.36	153.77	1705876.54	531460.03	39°57'15.940"N	80°32'57.026"W	250.19	37.923	1.84
5614.00	33.120	42.130	5551.64	-69.29	214.64	169.70	1705892.48	531477.31	39°57'16.113"N	80°32'56.824"W	273.62	38.331	1.39
5666.00	33.160	41.550	5595.18	-74.79	235.82	188.67	1705911.44	531498.49	39°57'16.324"N	80°32'56.584"W	302.00	38.661	0.61
5709.00	33.200	42.070	5631.17	-79.36	253.36	204.35	1705927.12	531516.03	39°57'16.500"N	80°32'56.385"W	325.50	38.889	0.67
5804.00	33.750	41.900	5710.41	-89.37	292.31	239.40	1705962.17	531554.98	39°57'16.889"N	80°32'55.941"W	377.84	39.318	0.59
5898.00	33.730	42.310	5788.58	-99.24	331.05	274.41	1705997.18	531593.71	39°57'17.275"N	80°32'55.497"W	429.99	39.656	0.24
5993.00	33.610	41.800	5867.64	-109.24	370.15	309.69	1706032.46	531632.81	39°57'17.666"N	80°32'55.050"W	482.62	39.918	0.32
6087.00	33.450	43.130	5946.00	-118.73	408.45	344.74	1706067.51	531671.12	39°57'18.048"N	80°32'54.606"W	534.49	40.165	0.80
6182.00	33.280	40.720	6025.35	-128.77	447.32	379.65	1706102.41	531709.98	39°57'18.436"N	80°32'54.163"W	586.71	40.322	1.41
6277.00	33.340	40.820	6104.74	-139.82	486.83	413.72	1706136.48	531749.49	39°57'18.831"N	80°32'53.732"W	638.88	40.359	0.09
6302.00	33.620	41.710	6125.59	-142.62	497.19	422.81	1706145.57	531759.85	39°57'18.934"N	80°32'53.616"W	652.67	40.378	2.26
6372.00	34.020	53.260	6183.81	-146.33	523.40	451.43	1706174.19	531786.06	39°57'19.197"N	80°32'53.253"W	691.19	40.777	9.19
6421.00	33.200	63.370	6224.65	-143.85	537.63	474.42	1706197.18	531800.28	39°57'19.340"N	80°32'52.960"W	717.02	41.427	11.53
6467.00	33.610	73.280	6263.08	-137.17	546.94	497.89	1706220.65	531809.60	39°57'19.435"N	80°32'52.660"W	739.62	42.312	11.88
6517.00	36.260	78.060	6304.07	-126.10	553.98	525.62	1706248.38	531816.64	39°57'19.507"N	80°32'52.305"W	763.66	43.495	7.62
6562.00	39.050	82.210	6339.70	-113.54	558.66	552.70	1706275.45	531821.32	39°57'19.557"N	80°32'51.958"W	785.86	44.693	8.37
6612.00	41.140	88.450	6377.96	-96.31	561.24	584.76	1706307.51	531823.90	39°57'19.586"N	80°32'51.547"W	810.52	46.176	9.06
6657.00	42.610	96.470	6411.49	-77.23	559.92	614.72	1706337.47	531822.58	39°57'19.576"N	80°32'51.162"W	831.50	47.671	12.33
6706.00	45.420	104.310	6446.75	-52.17	553.74	648.14	1706370.89	531816.39	39°57'19.519"N	80°32'50.732"W	852.47	49.491	12.50
6752.00	48.510	109.820	6478.16	-24.95	543.84	680.24	1706402.99	531806.49	39°57'19.425"N	80°32'50.318"W	870.91	51.358	11.03
6803.00	52.470	113.880	6510.60	8.73	529.17	716.73	1706439.47	531791.82	39°57'19.284"N	80°32'49.847"W	890.91	53.561	9.90
6847.00	55.430	116.920	6536.50	40.25	513.90	748.84	1706471.59	531776.55	39°57'19.137"N	80°32'49.433"W	908.22	55.540	8.74
6899.00	59.410	119.690	6564.50	80.06	493.11	787.40	1706510.14	531755.76	39°57'18.936"N	80°32'48.935"W	929.06	57.943	8.87
6941.00	62.120	122.770	6585.01	114.09	474.10	818.72	1706541.46	531736.76	39°57'18.752"N	80°32'48.530"W	946.08	59.926	9.09

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Actual Wellpath Report

WEB-13B-HS (AWP) Proj:12725'

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REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot B
Area	Marshall County, WV	Well	WEB-13B-HS
Field	Marshall	Wellbore	WEB-13B-HS AWB
Facility	WEB-13 Pad		

WELLPATH DATA (155 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]
6990.00	65.210	128.440	6606.76	155.97	448.53	854.38	1706577.13	531711.19	39°57'18.503"N	80°32'48.068"W	964.96	62.302	12.13
7036.00	69.010	134.000	6624.66	197.44	420.60	886.22	1706608.96	531683.26	39°57'18.231"N	80°32'47.655"W	980.96	64.611	13.86
7088.00	74.910	138.280	6640.77	246.49	384.95	920.43	1706643.17	531647.61	39°57'17.882"N	80°32'47.210"W	997.69	67.304	13.78
7131.00	79.300	140.590	6650.36	288.32	353.12	947.68	1706670.41	531615.78	39°57'17.571"N	80°32'46.856"W	1011.33	69.564	11.47
7226.00	82.940	142.760	6665.02	382.13	279.49	1005.86	1706728.60	531542.16	39°57'16.850"N	80°32'46.098"W	1043.97	74.471	4.45
7296.00	88.650	142.570	6670.16	451.91	224.01	1048.18	1706770.92	531486.68	39°57'16.307"N	80°32'45.546"W	1071.85	77.937	8.16
7320.00	88.580	142.620	6670.74	475.90	204.95	1062.76	1706785.49	531467.62	39°57'16.120"N	80°32'45.356"W	1082.34	79.085	0.36
7415.00	88.710	141.510	6672.98	570.86	130.04	1121.14	1706843.87	531392.72	39°57'15.387"N	80°32'44.595"W	1128.66	83.384	1.18
7510.00	88.710	140.840	6675.12	665.79	56.05	1180.69	1706903.41	531318.73	39°57'14.662"N	80°32'43.819"W	1182.02	87.282	0.71
7605.00	88.680	142.070	6677.28	760.73	-18.23	1239.87	1706962.59	531244.45	39°57'13.935"N	80°32'43.048"W	1240.00	90.842	1.29
7699.00	89.050	142.880	6679.15	854.71	-92.76	1297.11	1707019.83	531169.92	39°57'13.205"N	80°32'42.302"W	1300.42	94.091	0.95
7794.00	89.230	141.770	6680.57	949.69	-167.95	1355.17	1707077.89	531094.74	39°57'12.469"N	80°32'41.546"W	1365.53	97.065	1.18
7889.00	89.230	140.480	6681.85	1044.63	-241.90	1414.78	1707137.50	531020.79	39°57'11.745"N	80°32'40.769"W	1435.31	99.702	1.36
7984.00	89.450	141.170	6682.94	1139.55	-315.54	1474.79	1707197.50	530947.16	39°57'11.024"N	80°32'39.988"W	1508.17	102.077	0.76
8079.00	89.350	141.470	6683.94	1234.50	-389.69	1534.16	1707256.87	530873.00	39°57'10.298"N	80°32'39.214"W	1582.88	104.252	0.33
8173.00	89.380	142.410	6684.98	1328.48	-463.70	1592.10	1707314.81	530799.00	39°57'09.573"N	80°32'38.459"W	1658.26	106.238	1.00
8268.00	89.350	142.390	6686.03	1423.47	-538.96	1650.07	1707372.77	530723.74	39°57'08.836"N	80°32'37.704"W	1735.86	108.089	0.04
8363.00	89.380	143.480	6687.09	1518.46	-614.76	1707.32	1707430.02	530647.94	39°57'08.094"N	80°32'36.958"W	1814.63	109.803	1.15
8458.00	89.480	144.810	6688.03	1613.44	-691.76	1762.96	1707485.66	530570.95	39°57'07.339"N	80°32'36.232"W	1893.82	111.424	1.40
8553.00	89.350	147.890	6689.00	1708.26	-770.82	1815.59	1707538.29	530491.89	39°57'06.564"N	80°32'35.544"W	1972.45	113.004	3.24
8648.00	89.290	147.130	6690.13	1802.96	-850.95	1866.62	1707589.31	530411.77	39°57'05.778"N	80°32'34.877"W	2051.43	114.507	0.80
8742.00	89.420	144.490	6691.19	1896.83	-928.69	1919.43	1707642.13	530334.03	39°57'05.016"N	80°32'34.187"W	2132.30	115.819	2.81
8837.00	89.570	141.400	6692.02	1991.81	-1004.50	1976.67	1707699.36	530258.23	39°57'04.273"N	80°32'33.441"W	2217.26	116.939	3.26
8932.00	89.350	139.220	6692.92	2086.70	-1077.59	2037.33	1707760.02	530185.14	39°57'03.558"N	80°32'32.651"W	2304.76	117.875	2.31
9027.00	89.350	138.530	6694.00	2181.45	-1149.15	2099.81	1707822.49	530113.58	39°57'02.858"N	80°32'31.839"W	2393.69	118.690	0.73
9122.00	89.450	139.800	6694.99	2276.23	-1221.02	2161.92	1707884.61	530041.72	39°57'02.155"N	80°32'31.030"W	2482.90	119.457	1.34
9216.00	89.350	140.710	6695.98	2370.11	-1293.29	2222.02	1707944.70	529969.45	39°57'01.448"N	80°32'30.248"W	2570.99	120.201	0.97
9311.00	89.290	141.070	6697.10	2465.04	-1367.00	2281.94	1708004.62	529895.74	39°57'00.726"N	80°32'29.468"W	2660.07	120.924	0.38
9406.00	89.320	144.170	6698.26	2560.02	-1442.47	2339.61	1708062.28	529820.27	39°56'59.987"N	80°32'28.716"W	2748.54	121.656	3.26
9500.00	89.570	145.260	6699.17	2653.97	-1519.20	2393.90	1708116.57	529743.55	39°56'59.235"N	80°32'28.008"W	2835.27	122.400	1.19
9594.00	89.350	143.980	6700.05	2747.93	-1595.84	2448.32	1708170.99	529666.92	39°56'58.484"N	80°32'27.297"W	2922.50	123.097	1.38
9689.00	89.380	143.530	6701.11	2842.91	-1672.45	2504.49	1708227.16	529590.31	39°56'57.733"N	80°32'26.565"W	3011.57	123.734	0.47
9783.00	89.450	143.140	6702.07	2936.91	-1747.85	2560.62	1708283.28	529514.91	39°56'56.995"N	80°32'25.833"W	3100.28	124.317	0.42
9878.00	89.420	143.320	6703.00	3031.90	-1823.94	2617.48	1708340.14	529438.82	39°56'56.249"N	80°32'25.092"W	3190.29	124.870	0.19
9972.00	89.320	143.210	6704.04	3125.90	-1899.27	2673.70	1708396.36	529363.50	39°56'55.511"N	80°32'24.359"W	3279.62	125.388	0.16
10067.00	89.450	143.240	6705.06	3220.89	-1975.36	2730.57	1708453.23	529287.41	39°56'54.766"N	80°32'23.617"W	3370.17	125.883	0.14
10162.00	89.320	146.930	6706.08	3315.81	-2052.24	2784.93	1708507.59	529209.53	39°56'54.002"N	80°32'22.908"W	3460.01	126.400	3.89
10257.00	89.510	145.690	6707.05	3410.64	-2132.28	2837.62	1708560.28	529130.50	39°56'53.227"N	80°32'22.219"W	3549.47	126.922	1.32
10352.00	89.450	142.990	6707.91	3505.60	-2209.46	2893.00	1708615.65	529053.32	39°56'52.471"N	80°32'21.497"W	3640.21	127.370	2.84
10446.00	89.320	143.440	6708.92	3599.59	-2284.74	2949.28	1708671.93	528978.05	39°56'51.734"N	80°32'20.763"W	3730.72	127.764	0.50
10541.00	89.420	147.450	6709.96	3694.48	-2362.96	3003.15	1708725.80	528899.83	39°56'50.967"N	80°32'20.060"W	3821.32	128.197	4.22
10635.00	89.690	146.580	6710.69	3788.25	-2441.80	3054.33	1708776.97	528820.99	39°56'50.193"N	80°32'19.391"W	3910.41	128.641	0.97
10730.00	89.690	142.810	6711.21	3883.19	-2519.31	3109.22	1708831.86	528743.48	39°56'49.434"N	80°32'18.675"W	4001.77	129.017	3.97
10825.00	89.720	142.750	6711.70	3978.19	-2594.96	3166.68	1708889.32	528667.83	39°56'48.693"N	80°32'17.926"W	4094.11	129.333	0.07
10920.00	89.420	144.210	6712.41	4073.18	-2671.31	3223.21	1708945.85	528591.49	39°56'47.945"N	80°32'17.189"W	4186.28	129.651	1.57

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Actual Wellpath Report
WEB-13B-HS (AWP) Proj:12725'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY	Slot	Slot B
Area	Marshall County, WV	Well	WEB-13B-IHS
Field	Marshall	Wellbore	WEB-13B-IHS AWB
Facility	WEB-13 Pad		

WELLPATH DATA (155 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]
11014.00	89.480	142.120	6713.31	4167.17	-2746.53	3279.56	1709002.20	528516.27	39°56'47.208"N	80°32'16.454"W	4277.73	129.945	2.22
11109.00	89.450	140.760	6714.20	4262.13	-2820.81	3338.78	1709061.41	528441.99	39°56'46.481"N	80°32'15.683"W	4370.86	130.193	1.43
11204.00	89.420	145.440	6715.14	4357.10	-2896.76	3395.80	1709118.42	528366.05	39°56'45.737"N	80°32'14.940"W	4463.48	130.466	4.93
11298.00	89.660	143.390	6715.89	4451.06	-2973.20	3450.49	1709173.12	528289.62	39°56'44.987"N	80°32'14.226"W	4554.75	130.751	2.20
11393.00	89.380	138.680	6716.69	4545.97	-3047.04	3510.21	1709232.84	528215.78	39°56'44.265"N	80°32'13.449"W	4648.23	130.960	4.97
11488.00	89.420	135.700	6717.68	4640.47	-3116.72	3574.76	1709297.38	528146.10	39°56'43.583"N	80°32'12.610"W	4742.66	131.084	3.14
11583.00	89.380	135.390	6718.68	4734.66	-3184.53	3641.29	1709363.91	528078.30	39°56'42.921"N	80°32'11.746"W	4837.38	131.172	0.33
11677.00	89.320	139.000	6719.74	4828.16	-3253.48	3705.15	1709427.76	528009.35	39°56'42.247"N	80°32'10.915"W	4930.85	131.286	3.84
11772.00	89.260	142.990	6720.92	4923.07	-3327.28	3764.92	1709487.54	527935.55	39°56'41.524"N	80°32'10.137"W	5024.48	131.469	4.20
11867.00	89.450	147.450	6721.99	5017.97	-3405.28	3819.10	1709541.71	527857.55	39°56'40.760"N	80°32'09.430"W	5116.78	131.722	4.70
11962.00	89.450	148.810	6722.90	5112.58	-3485.96	3869.25	1709591.86	527776.88	39°56'39.968"N	80°32'08.774"W	5207.98	132.017	1.43
12057.00	89.630	148.930	6723.67	5207.08	-3567.27	3918.37	1709640.97	527695.57	39°56'39.170"N	80°32'08.132"W	5298.96	132.315	0.23
12151.00	89.570	145.900	6724.32	5300.79	-3646.47	3968.98	1709691.58	527616.38	39°56'38.393"N	80°32'07.470"W	5389.76	132.575	3.22
12246.00	89.480	143.170	6725.11	5395.74	-3723.83	4024.09	1709746.69	527539.02	39°56'37.635"N	80°32'06.751"W	5482.72	132.781	2.88
12340.00	89.570	142.720	6725.89	5489.74	-3798.85	4080.74	1709803.33	527464.01	39°56'36.900"N	80°32'06.013"W	5575.27	132.951	0.49
12435.00	89.570	140.350	6726.60	5584.70	-3873.22	4139.82	1709862.42	527389.63	39°56'36.172"N	80°32'05.243"W	5669.21	133.094	2.49
12529.00	89.510	139.000	6727.36	5678.54	-3944.88	4200.65	1709923.24	527317.98	39°56'35.471"N	80°32'04.452"W	5762.60	133.202	1.44
12624.00	89.570	139.720	6728.12	5773.34	-4016.97	4262.52	1709985.11	527245.89	39°56'34.766"N	80°32'03.647"W	5857.06	133.301	0.76
12700.00	89.540	140.120	6728.71	5849.23	-4075.12	4311.45	1710034.04	527187.75	39°56'34.196"N	80°32'03.010"W	5932.55	133.386	0.53
12725.00	89.540	140.120	6728.91	5874.20	-4094.30	4327.48	1710050.07	527168.56	39°56'34.009"N	80°32'02.802"W	5957.38	133.414	0.00

HOLE & CASING SECTIONS - Ref Wellbore: WEB-13B-HS AWB Ref Wellpath: WEB-13B-IHS (AWP) Proj:12725'									
String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
30in Conductor	26.00	66.00	40.00	26.00	66.00	0.00	0.00	0.04	0.06
20in Casing Surface	26.00	437.50	411.50	26.00	437.47	0.00	0.00	2.74	3.57
13.375in Casing Intermediate	26.00	1210.10	1184.10	26.00	1210.04	0.00	0.00	0.38	-0.27

510163

REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot B
Area	Marshall County, WV	Well	WEB-13B-IIS
Field	Marshall	Wellbore	WEB-13B-HS AWB
Facility	WEB-13 Pad		

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
WEB-13B-HS LP Rev-2		6660.00	249.90	1037.79	1706760.52	531512.57	39°57'16.561"N	80°32'45.683"W	point
WEB-13B-HS LP Rev-3		6670.00	249.90	1037.79	1706760.52	531512.57	39°57'16.561"N	80°32'45.683"W	point
WEB-13B-IIS BHL Rev-3		6712.77	-4098.66	4314.66	1710037.25	527164.20	39°56'33.964"N	80°32'02.966"W	point
WEB-13B-HS BHL Rev-4		6722.27	-4098.66	4314.66	1710037.25	527164.20	39°56'33.964"N	80°32'02.966"W	point
WEB-13 LL		7225.95	28.07	-69.95	1705652.83	531290.75	39°57'14.242"N	80°32'59.873"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: WEB-13B-HS AWB Ref Wellpath: WEB-13B-HS (AWP) Proj:12725'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
26.00	3088.00	Generic gyro - northseeking (Standard)	01 VES Gyro <12-1/4"> (100'-3062')	WEB-13B-HS AWB
3088.00	4798.00	NaviTrak (MagCorr)	02 BHI AT Curve MagCorr <8-3/4"> (3088')(3279'-4798')	WEB-13B-HS AWB
4798.00	12700.00	NaviTrak (AT Curve Short Spaced)	03 BHI AT Curve SS <8-3/4"> (4798')(4857'-12700')	WEB-13B-HS AWB
12700.00	12725.00	Blind Drilling (std)	Projection to bit	WEB-13B-HS AWB

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 WEB-13B-HS (AWP) Proj:12725'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY	Slot	Slot B
Area	Marshall County, WV	Well	WEB-13B-HS
Field	Marshall	Wellbore	WEB-13B-HS AWB
Facility	WEB-13 Pad		

51-01663

COMMENTS
<p>Wellpath general comments API#: 47-051-01663-0000 Rig: Nomac 79 BHI Job#: 6069149 Duration: 04/11/14-04/16/14 VES Gyro Surveys: (126-3088') BHI ATCurve surveys: (3088')(3279'-12700') TD Projected to MD: 12725'</p>

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Location Information						
Facility Name		Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	
WEB-13 Pad		1705652.830	531290.750	39°57'14.242"N	80°32'59.873"W	
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Slot B	-28.07	69.95	1705722.780	531262.680	39°57'13.972"N	80°32'58.971"W
Nomac 79 (RT) to Mud line (At Slot: Slot B)				1270.47ft		
Mean Sea Level to Mud line (At Slot: Slot B)				0ft		
Nomac 79 (RT) to Mean Sea Level				1270.47ft		

Well Profile Data								
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (*/100ft)	VS (ft)
Tie On	3088.00	0.320	321.420	3087.91	-0.57	-4.02	0.00	-1.96
KOP	4800.00	0.320	321.420	4799.88	6.90	-9.98	0.00	-11.52
End of 3D Arc	5466.47	33.376	41.835	5429.24	148.97	114.67	5.00	-49.97
End of Tangent	6312.53	33.376	41.835	6135.76	495.75	425.11	0.00	-140.09
Landing Pt.	7269.06	89.450	143.000	6670.00	249.90	1037.79	10.00	424.98
BHL	12714.30	89.450	143.000	6722.27	-4098.66	4314.66	0.00	5859.97

Targets								
Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
WEB-13B-HS LP Rev-2	6650.00	249.00	1037.79	1706760.52	531512.57	39°57'16.561"N	80°32'45.683"W	
WEB-13B-HS LP Rev-3	7269.06	6670.00	249.90	1706760.52	531512.57	39°57'16.561"N	80°32'45.683"W	
WEB-13B-HS BHL Rev-3	6712.77	-4098.66	4314.66	1710037.25	527164.20	39°56'33.964"N	80°32'02.966"W	
WEB-13B-HS BHL Rev-4	12714.30	6722.27	-4098.66	4314.66	1710037.25	527164.20	39°56'33.964"N	80°32'02.966"W
WEB-13 LL	7225.55	28.07	-69.95	1705652.83	531290.75	39°57'14.242"N	80°32'59.873"W	

Plot reference wellpath is WEB-13B-HS PWP Rev-E 0

True vertical depths are referenced to Nomac 79 (RT)	Grid System: NAD27 / Lambert West Virginia SP, Northern Zone (4701), US feet
Measured depths are referenced to Nomac 79 (RT)	North Reference: Grid north
Nomac 79 (RT) to Mean Sea Level: 1270.47 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: Slot B): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: hjsjesl on 4/23/2014

