



# NOBLE ENERGY



Location: Doddridge Co., WV  
Field: Doddridge  
Facility: Oxford Pad

Slot: Slot D  
Well: OXFD1DHS  
Wellbore: OXFD1DHS PWB

True vertical section is based on 1000 ft MD	Grid System: NAD83 / Lambert West Virg. S. B. North - Zone 18N UTM 18Q
True east and depth are referenced to Point on MD (PT)	North Reference: True north
Measured depth are referenced to Point on MD (PT)	Scale: True & slanting
Pressure MD (PT) is Mean Sea Level 1100 ft	Depth on a line
When this form is filled out for Slot D, Slot E, 1-100 ft	Checked by: 06/09/13
Comments are at end reference to the	

Scale 1 inch = 1500 ft  
Easting (ft)  
-1500 -750 0 750 1500 2250 3000 3750

Scale 1 inch = 1500 ft

True Vertical Depth (ft)  
-750  
0  
750  
1500  
2250  
3000  
3750  
4500  
5250  
6000  
6750  
7500

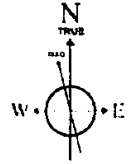
Northing (ft)  
750  
0  
-750  
-1500  
-2250  
-3000  
-3750  
-4500  
-5250  
-6000  
-6750  
-7500  
-8250

BHI MWD Surveys (2576)(2718-10242) : 2717.59ft TVD, 15.38ft S, 25.23ft E  
BHI MWD Surveys (642)(735-2576) : 734.95ft TVD, 4.35ft S, 3.69ft E  
VES Gyro (100-642) : 100.00ft TVD, 0.08ft S, 0.02ft W

VES Gyro (100-642) : 0.11° Inc, 100.00ft MD, 100.00ft TVD, 0.06ft VS  
BHI MWD Surveys (642)(735-2576) : 1.91° Inc, 735.00ft MD, 734.95ft TVD, 5.35ft VS  
BHI MWD Surveys (2576)(2718-10242) : 0.09° Inc, 2718.00ft MD, 2717.59ft TVD, 23.07ft VS

API: 47-017-06003-0000  
BHI Job #: 5591475  
Rig: Precision 542  
Duration: 7/17/2013-9/12/2013

Projected MD at TD: 15002' : 6561.76ft TVD, 3400.96ft S, 1814.47ft E



Use specified (MAG) Dip: 66.63° Field: 52429 nT  
Magnetic North is 7.52 degrees West of True North (at 9/3/2013)

To correct azimuth from Magnetic to True subtract 7.52 degrees

Projected MD at TD: 15002' : 91.42° Inc, 10287.00ft MD, 6561.76ft TVD, 3816.44ft VS

Vertical Section (ft)  
750 1500 2250 3000 3750 4500 5250 6000 6750 7500 8250 9000

Scale 1 inch = 1500 ft  
Azimuth 160.00° with reference 0.00 N, 0.00 E

Environmental Protection

WV Department of

Office of Oil and Gas

JUN 08 2014

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# Actual Wellpath Report

OXFD1DHS AWP (Curve&Lateral) Proj: 10267'  
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### REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot D
Area	Doddridge Co., WV	Well	OXFD1DHS
Field	Doddridge	Wellbore	OXFD1DHS AWB
Facility	Oxford Pad		

### REPORT SETUP INFORMATION

Projection System	NAD27 / Lambert West Virginia SP, Northern Zone (4701), US feet	Software System	WellArchitect@ 4.0.1
North Reference	True	User	Edsaryar
Scale	0.999963	Report Generated	10/2/2013 at 6:35:20 PM
Convergence at slot	n/a	Database/Source file	Well Architect Eastern US/OXFD1DHS_AWB.xml

### WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-57.56	-17.07	1624551.43	273175.75	39°14'32.724"N	80°49'32.298"W
Facility Reference Pt			1624569.34	273233.05	39°14'33.293"N	80°49'32.081"W
Field Reference Pt			0.00	0.00	38°17'12.460"N	86°28'23.077"W

### WELLPATH DATUM

Calculation method	Minimum curvature	Precision 542 (RT) to Facility Vertical Datum	18.60ft
Horizontal Reference Pt	Slot	Precision 542 (RT) to Mean Sea Level	1138.60ft
Vertical Reference Pt	Precision 542 (RT)	Precision 542 (RT) to Mud Line at Slot (Slot D)	18.60ft
MD Reference Pt	Precision 542 (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	160.00°

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OXFD1DHS AWP (Curve&Lateral) Proj: 10267'  
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Field	Doddridge	Wellbore	OXFD1DHS AWB
Facility	Oxford Pad		

## WELLPATH DATA (131 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	195.690	0.00	0.00	0.00	0.00	1624551.43	273175.75	39°14'32.724"N	80°49'32.298"W	0.00	0.000	0.00	0.00	0.00
18.60	0.000	195.690	18.60	0.00	0.00	0.00	1624551.43	273175.75	39°14'32.724"N	80°49'32.298"W	0.00	0.000	0.00	0.00	0.00
100.00	0.110	195.690	100.00	0.06	-0.08	-0.02	1624551.41	273175.68	39°14'32.723"N	80°49'32.298"W	0.08	195.690	0.14	0.14	0.00
200.00	0.190	167.470	200.00	0.31	-0.33	-0.01	1624551.41	273175.42	39°14'32.721"N	80°49'32.298"W	0.33	181.933	0.11	0.08	-28.22
300.00	0.260	154.030	300.00	0.70	-0.70	0.12	1624551.54	273175.05	39°14'32.717"N	80°49'32.296"W	0.71	169.872	0.09	0.07	-13.44
400.00	0.200	142.700	400.00	1.09	-1.04	0.33	1624551.74	273174.71	39°14'32.714"N	80°49'32.294"W	1.09	162.400	0.08	-0.06	-11.33
500.00	0.490	133.750	500.00	1.64	-1.47	0.74	1624552.15	273174.27	39°14'32.710"N	80°49'32.288"W	1.65	153.198	0.29	0.29	-8.95
600.00	0.780	134.620	599.99	2.64	-2.25	1.54	1624552.93	273173.48	39°14'32.702"N	80°49'32.278"W	2.72	145.615	0.29	0.29	0.87
642.00	1.000	133.400	641.98	3.22	-2.70	2.01	1624553.40	273173.02	39°14'32.697"N	80°49'32.272"W	3.36	143.365	0.53	0.52	-2.90
735.00	1.910	135.000	734.95	5.35	-4.35	3.69	1624555.06	273171.34	39°14'32.681"N	80°49'32.251"W	5.71	139.689	0.98	0.98	1.72
798.00	1.810	130.000	797.92	7.17	-5.73	5.20	1624556.54	273169.94	39°14'32.667"N	80°49'32.232"W	7.74	137.814	0.30	-0.16	-7.94
893.00	1.920	120.300	892.87	9.69	-7.50	7.72	1624559.04	273168.14	39°14'32.650"N	80°49'32.200"W	10.76	134.177	0.35	0.12	-10.21
988.00	1.520	121.380	987.83	11.90	-8.96	10.17	1624561.47	273166.64	39°14'32.635"N	80°49'32.169"W	13.55	131.383	0.42	-0.42	1.14
1083.00	1.280	103.660	1082.80	13.47	-9.87	12.28	1624563.56	273165.70	39°14'32.627"N	80°49'32.142"W	15.75	128.790	0.52	-0.25	-18.65
1177.00	0.950	106.120	1176.78	14.51	-10.33	14.05	1624565.32	273165.21	39°14'32.622"N	80°49'32.119"W	17.44	126.337	0.35	-0.35	2.62
1272.00	0.800	113.060	1271.77	15.43	-10.81	15.41	1624566.68	273164.71	39°14'32.617"N	80°49'32.102"W	18.83	125.045	0.19	-0.16	7.31
1367.00	0.170	120.820	1366.77	15.99	-11.14	16.14	1624567.41	273164.37	39°14'32.614"N	80°49'32.093"W	19.62	124.613	0.67	-0.66	8.17
1462.00	0.200	168.640	1461.77	16.27	-11.38	16.30	1624567.56	273164.13	39°14'32.612"N	80°49'32.091"W	19.88	124.918	0.16	0.03	50.34
1557.00	0.740	144.280	1556.76	17.02	-12.04	16.69	1624567.94	273163.47	39°14'32.605"N	80°49'32.086"W	20.58	125.803	0.59	0.57	-25.64
1651.00	1.110	102.950	1650.75	18.10	-12.73	17.93	1624569.17	273162.75	39°14'32.598"N	80°49'32.070"W	21.99	125.383	0.79	0.39	-43.97
1745.00	1.620	92.830	1744.72	19.11	-13.00	20.14	1624571.38	273162.45	39°14'32.596"N	80°49'32.042"W	23.98	122.844	0.60	0.54	-10.77
1835.00	0.510	264.800	1834.72	19.50	-13.10	21.02	1624572.25	273162.34	39°14'32.595"N	80°49'32.031"W	24.77	121.943	2.36	-1.23	191.08
1925.00	1.840	259.420	1924.69	19.16	-13.40	19.20	1624570.43	273162.06	39°14'32.592"N	80°49'32.054"W	23.41	124.926	1.48	1.48	-5.98
2014.00	0.810	226.820	2013.67	19.18	-14.10	17.33	1624568.55	273161.40	39°14'32.585"N	80°49'32.078"W	22.34	129.122	1.39	-1.16	-36.63
2104.00	0.640	170.640	2103.66	19.92	-15.03	16.95	1624568.16	273160.47	39°14'32.576"N	80°49'32.082"W	22.65	131.560	0.78	-0.19	-62.42
2193.00	0.940	124.340	2192.66	21.00	-15.93	17.64	1624568.83	273159.56	39°14'32.567"N	80°49'32.074"W	23.77	132.094	0.76	0.34	-52.02
2283.00	1.110	111.880	2282.64	22.18	-16.67	19.05	1624570.23	273158.80	39°14'32.559"N	80°49'32.056"W	25.32	131.187	0.31	0.19	-13.84
2373.00	0.650	69.280	2372.63	22.76	-16.82	20.34	1624571.52	273158.64	39°14'32.558"N	80°49'32.039"W	26.39	129.583	0.86	-0.51	-47.33
2462.00	0.830	60.990	2461.62	22.65	-16.33	21.38	1624572.56	273159.11	39°14'32.563"N	80°49'32.026"W	26.90	127.370	0.23	0.20	-9.31
2552.00	1.260	78.420	2551.61	22.69	-15.81	22.92	1624574.11	273159.60	39°14'32.568"N	80°49'32.007"W	27.84	124.604	0.59	0.48	19.37

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# Actual Wellpath Report

OXFD1DHS AWP (Curve&Lateral) Proj: 10267'  
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### REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot D
Area	Doddridge Co., WV	Well	OXFD1DHS
Field	Doddridge	Wellbore	OXFD1DHS AWB
Facility	Oxford Pad		

### WELLPATH DATA (131 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]
2576.00	1.450	82.200	2575.60	22.80	-15.72	23.47	1624574.67	273159.69	39°14'32.569"N	80°49'32.000"W	28.25	123.803	0.87	0.79	15.75
2718.00	0.090	346.420	2717.59	23.07	-15.36	25.23	1624576.43	273160.02	39°14'32.572"N	80°49'31.977"W	29.54	121.341	1.03	-0.96	-67.45
2808.00	0.060	6.180	2807.59	22.95	-15.25	25.22	1624576.42	273160.13	39°14'32.573"N	80°49'31.977"W	29.47	121.161	0.04	-0.03	21.96
2897.00	0.120	62.890	2896.59	22.90	-15.16	25.31	1624576.51	273160.22	39°14'32.574"N	80°49'31.976"W	29.50	120.925	0.11	0.07	63.72
2986.00	0.160	126.540	2985.59	22.99	-15.19	25.49	1624576.69	273160.18	39°14'32.574"N	80°49'31.974"W	29.67	120.796	0.17	0.04	71.52
3076.00	0.190	92.780	3075.59	23.16	-15.27	25.74	1624576.94	273160.10	39°14'32.573"N	80°49'31.971"W	29.93	120.686	0.12	0.03	-37.51
3165.00	0.060	260.960	3164.59	23.20	-15.29	25.84	1624577.04	273160.08	39°14'32.573"N	80°49'31.970"W	30.02	120.611	0.28	-0.15	188.97
3254.00	2.490	51.650	3253.56	22.59	-14.10	27.31	1624578.53	273161.25	39°14'32.585"N	80°49'31.951"W	30.73	117.300	2.86	2.73	169.31
3344.00	6.990	40.560	3343.23	19.28	-8.72	32.41	1624583.70	273166.55	39°14'32.638"N	80°49'31.886"W	33.56	105.059	5.08	5.00	-12.32
3433.00	7.570	51.610	3431.52	14.77	-0.96	40.52	1624591.93	273174.19	39°14'32.715"N	80°49'31.783"W	40.53	91.363	1.70	0.65	12.42
3523.00	6.540	65.230	3520.84	12.47	4.87	49.82	1624601.32	273179.88	39°14'32.772"N	80°49'31.665"W	50.06	84.423	2.17	-1.14	15.13
3612.00	8.060	58.190	3609.12	10.77	10.28	59.73	1624611.30	273185.15	39°14'32.826"N	80°49'31.539"W	60.61	80.236	1.98	1.71	-7.91
3702.00	8.540	46.310	3698.18	6.79	18.22	69.92	1624621.61	273192.94	39°14'32.904"N	80°49'31.409"W	72.26	75.395	1.97	0.53	-13.20
3791.00	8.550	44.390	3786.19	1.28	27.51	79.33	1624631.16	273202.09	39°14'32.996"N	80°49'31.290"W	83.97	70.873	0.32	0.01	-2.16
3880.00	8.570	48.000	3874.20	-4.06	36.68	88.89	1624640.85	273211.11	39°14'33.087"N	80°49'31.168"W	96.16	67.577	0.60	0.02	4.06
3970.00	8.680	47.860	3963.19	-9.14	45.72	98.91	1624651.00	273220.01	39°14'33.176"N	80°49'31.041"W	108.96	65.190	0.12	0.12	-0.16
4060.00	8.040	53.500	4052.23	-13.48	54.02	109.00	1624661.21	273228.16	39°14'33.258"N	80°49'30.913"W	121.65	63.637	1.15	-0.71	6.27
4149.00	8.150	61.200	4140.35	-16.22	60.76	119.53	1624671.84	273234.74	39°14'33.325"N	80°49'30.779"W	134.09	63.054	1.22	0.12	8.65
4239.00	7.940	60.440	4229.46	-18.22	66.90	130.53	1624682.93	273240.72	39°14'33.385"N	80°49'30.639"W	146.68	62.863	0.26	-0.23	-0.84
4328.00	7.860	61.450	4317.62	-20.15	72.84	141.22	1624693.71	273246.50	39°14'33.444"N	80°49'30.503"W	158.90	62.715	0.18	-0.09	1.13
4418.00	8.020	59.820	4406.75	-22.17	78.94	152.06	1624704.63	273252.44	39°14'33.504"N	80°49'30.365"W	171.33	62.563	0.31	0.18	-1.81
4508.00	8.120	57.850	4495.86	-24.62	85.48	162.86	1624715.53	273258.81	39°14'33.569"N	80°49'30.228"W	183.93	62.307	0.33	0.11	-2.19
4597.00	7.990	54.160	4583.98	-27.63	92.45	173.20	1624725.97	273265.63	39°14'33.638"N	80°49'30.097"W	196.33	61.909	0.60	-0.15	-4.15
4687.00	8.250	53.970	4673.08	-31.12	99.91	183.49	1624736.37	273272.94	39°14'33.712"N	80°49'29.966"W	208.93	61.433	0.29	0.29	-0.21
4776.00	8.160	56.020	4761.17	-34.41	107.19	193.90	1624746.88	273280.07	39°14'33.784"N	80°49'29.834"W	221.55	61.064	0.34	-0.10	2.30
4866.00	7.880	57.440	4850.29	-37.30	114.08	204.39	1624757.47	273286.80	39°14'33.852"N	80°49'29.700"W	234.07	60.831	0.38	-0.31	1.58
4955.00	7.950	58.370	4938.44	-39.87	120.59	214.77	1624767.95	273293.16	39°14'33.916"N	80°49'29.568"W	246.31	60.686	0.16	0.08	1.04
5045.00	8.420	60.780	5027.53	-42.18	127.08	225.82	1624779.10	273299.47	39°14'33.980"N	80°49'29.428"W	259.12	60.633	0.65	0.52	2.68
5135.00	7.930	60.670	5116.61	-44.24	133.33	236.99	1624790.35	273305.57	39°14'34.042"N	80°49'29.286"W	271.92	60.637	0.54	-0.54	-0.12
5224.00	8.590	57.660	5204.69	-46.65	139.90	247.96	1624801.41	273311.97	39°14'34.107"N	80°49'29.146"W	284.70	60.568	0.89	0.74	-3.38

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Field	Doddridge	Wellbore	OXFD1DHS AWB
Facility	Oxford Pad		

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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]
5314.00	8.290	53.010	5293.71	-49.99	147.40	258.82	1624812.38	273319.31	39°14'34.181"N	80°49'29.008"W	297.85	60.339	0.83	-0.33	-5.17
5404.00	8.170	55.080	5382.79	-53.53	154.96	269.24	1624822.92	273326.71	39°14'34.256"N	80°49'28.876"W	310.65	60.078	0.36	-0.13	2.30
5493.00	8.590	54.020	5470.84	-56.99	162.49	279.81	1624833.59	273334.08	39°14'34.330"N	80°49'28.742"W	323.56	59.856	0.50	0.47	-1.19
5583.00	8.480	53.420	5559.84	-60.73	170.39	290.57	1624844.48	273341.83	39°14'34.408"N	80°49'28.605"W	336.85	59.613	0.16	-0.12	-0.67
5672.00	8.740	52.430	5647.84	-64.64	178.42	301.20	1624855.22	273349.70	39°14'34.488"N	80°49'28.470"W	350.08	59.359	0.34	0.29	-1.11
5762.00	8.720	52.380	5736.79	-68.77	186.76	312.03	1624866.17	273357.87	39°14'34.570"N	80°49'28.332"W	363.65	59.098	0.02	-0.02	-0.06
5851.00	8.720	52.400	5824.77	-72.86	194.99	322.72	1624876.98	273365.95	39°14'34.651"N	80°49'28.196"W	377.05	58.859	0.00	0.00	0.02
5941.00	8.590	56.160	5913.74	-76.53	202.90	333.70	1624888.08	273373.69	39°14'34.729"N	80°49'28.057"W	390.55	58.700	0.64	-0.14	4.18
5986.00	9.070	66.000	5958.21	-77.58	206.21	339.74	1624894.16	273376.92	39°14'34.762"N	80°49'27.980"W	397.42	58.743	3.52	1.07	21.87
6031.00	10.630	86.130	6002.56	-76.67	207.93	347.12	1624901.57	273378.53	39°14'34.779"N	80°49'27.886"W	404.63	59.077	8.34	3.47	44.73
6076.00	12.720	104.040	6046.64	-72.74	207.01	356.07	1624910.50	273377.48	39°14'34.770"N	80°49'27.772"W	411.87	59.827	9.24	4.64	39.80
6121.00	14.450	119.430	6090.39	-65.70	203.05	365.77	1624920.14	273373.37	39°14'34.731"N	80°49'27.649"W	418.35	60.964	8.87	3.84	34.20
6165.00	16.240	129.460	6132.83	-56.23	196.44	375.31	1624929.58	273366.62	39°14'34.666"N	80°49'27.528"W	423.61	62.372	7.26	4.07	22.80
6210.00	18.230	135.020	6175.81	-44.43	187.46	385.14	1624939.28	273357.50	39°14'34.577"N	80°49'27.403"W	428.34	64.046	5.74	4.42	12.36
6255.00	22.040	138.700	6218.06	-30.18	176.13	395.69	1624949.66	273346.02	39°14'34.465"N	80°49'27.269"W	433.12	66.005	8.92	8.47	8.18
6300.00	27.310	141.860	6258.93	-12.49	161.66	407.65	1624961.41	273331.37	39°14'34.322"N	80°49'27.117"W	438.53	68.368	12.07	11.71	7.02
6345.00	31.940	144.410	6298.04	8.80	143.85	420.96	1624974.45	273313.37	39°14'34.146"N	80°49'26.947"W	444.86	71.134	10.66	10.29	5.67
6389.00	35.720	146.720	6334.59	32.52	123.64	434.79	1624987.98	273292.96	39°14'33.946"N	80°49'26.772"W	452.03	74.126	9.07	8.59	5.25
6434.00	40.370	148.260	6370.02	59.59	100.25	449.67	1625002.51	273269.35	39°14'33.715"N	80°49'26.583"W	460.71	77.432	10.55	10.33	3.42
6479.00	45.780	150.330	6402.88	89.78	73.83	465.33	1625017.78	273242.70	39°14'33.454"N	80°49'26.384"W	471.15	80.985	12.42	12.02	4.60
6523.00	50.810	152.190	6432.14	122.24	45.02	481.10	1625033.13	273213.67	39°14'33.169"N	80°49'26.183"W	483.21	84.653	11.86	11.43	4.23
6568.00	55.020	152.550	6459.27	157.81	13.23	497.74	1625049.30	273181.63	39°14'32.855"N	80°49'25.972"W	497.92	88.478	9.38	9.36	0.80
6613.00	59.510	153.130	6483.60	195.36	-20.45	515.01	1625066.07	273147.71	39°14'32.522"N	80°49'25.752"W	515.42	92.273	10.04	9.98	1.29
6658.00	63.290	153.680	6505.14	234.60	-55.77	532.70	1625083.22	273112.13	39°14'32.173"N	80°49'25.527"W	535.61	95.977	8.47	8.40	1.22
6703.00	66.620	153.350	6524.18	275.10	-92.25	550.88	1625100.86	273075.38	39°14'31.812"N	80°49'25.296"W	558.55	99.507	7.43	7.40	-0.73
6748.00	70.060	154.300	6540.79	316.68	-129.78	569.32	1625118.75	273037.58	39°14'31.441"N	80°49'25.062"W	583.92	102.842	7.89	7.64	2.11
6792.00	72.850	154.820	6554.78	358.20	-167.45	587.23	1625136.11	272999.66	39°14'31.069"N	80°49'24.834"W	610.64	105.916	6.44	6.34	1.18
6837.00	75.540	155.740	6567.04	401.35	-206.78	605.34	1625153.63	272960.07	39°14'30.680"N	80°49'24.604"W	639.68	108.860	6.29	5.98	2.04
6882.00	77.850	157.120	6577.40	445.05	-246.91	622.84	1625170.54	272919.68	39°14'30.284"N	80°49'24.382"W	670.00	111.625	5.94	5.13	3.07
6927.00	80.820	159.120	6585.72	489.24	-287.95	639.32	1625186.40	272878.41	39°14'29.878"N	80°49'24.172"W	701.17	114.247	7.91	6.60	4.44

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# Actual Wellpath Report

OXFD1DHS AWP (Curve&Lateral) Proj: 10267'  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot D
Area	Doddridge Co., WV	Well	OXFD1DHS
Field	Doddridge	Wellbore	OXFD1DHS AWB
Facility	Oxford Pad		

### WELLPATH DATA (131 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]
6972.00	84.950	161.400	6591.30	533.88	-329.97	654.39	1625200.86	272836.18	39°14'29.463"N	80°49'23.981"W	732.88	116.759	10.46	9.18	5.07
7017.00	87.720	163.100	6594.17	578.75	-372.73	668.08	1625213.91	272793.22	39°14'29.040"N	80°49'23.807"W	765.02	119.158	7.22	6.16	3.78
7061.00	87.010	163.100	6596.20	622.64	-414.79	680.86	1625226.07	272750.98	39°14'28.624"N	80°49'23.644"W	797.25	121.350	1.61	-1.61	0.00
7106.00	88.430	162.590	6597.99	667.55	-457.75	694.12	1625238.69	272707.83	39°14'28.200"N	80°49'23.476"W	831.47	123.403	3.35	3.16	-1.13
7151.00	90.280	163.360	6598.49	712.48	-500.77	707.29	1625251.23	272664.62	39°14'27.774"N	80°49'23.308"W	866.62	125.299	4.45	4.11	1.71
7196.00	90.180	162.990	6598.31	757.41	-543.84	720.32	1625263.62	272621.36	39°14'27.349"N	80°49'23.143"W	902.57	127.053	0.85	-0.22	-0.82
7286.00	90.580	161.310	6597.71	847.34	-629.51	747.90	1625289.94	272535.30	39°14'26.502"N	80°49'22.792"W	977.57	130.087	1.92	0.44	-1.87
7375.00	90.920	161.360	6596.55	936.31	-713.82	776.38	1625317.17	272450.58	39°14'25.669"N	80°49'22.430"W	1054.66	132.596	0.39	0.38	0.06
7465.00	90.650	161.950	6595.32	1026.26	-799.24	804.71	1625344.23	272364.76	39°14'24.824"N	80°49'22.070"W	1134.17	134.805	0.72	-0.30	0.66
7555.00	92.060	162.760	6593.19	1116.16	-884.97	831.98	1625370.23	272278.63	39°14'23.977"N	80°49'21.724"W	1214.65	136.768	1.81	1.57	0.90
7644.00	91.020	154.000	6590.79	1205.00	-967.60	864.73	1625401.76	272195.53	39°14'23.160"N	80°49'21.308"W	1297.69	138.213	9.91	-1.17	-9.84
7734.00	90.680	148.600	6589.46	1293.92	-1046.51	907.93	1625443.78	272116.00	39°14'22.380"N	80°49'20.759"W	1385.46	139.056	6.01	-0.38	-6.00
7823.00	90.710	150.060	6588.38	1381.38	-1123.05	953.32	1625488.04	272038.80	39°14'21.624"N	80°49'20.182"W	1473.11	139.673	1.64	0.03	1.64
7913.00	90.800	153.260	6587.19	1470.41	-1202.25	996.04	1625529.58	271958.99	39°14'20.841"N	80°49'19.639"W	1561.24	140.359	3.56	0.10	3.56
8003.00	91.020	157.220	6585.76	1560.07	-1283.94	1033.72	1625566.05	271876.74	39°14'20.034"N	80°49'19.160"W	1648.36	141.162	4.41	0.24	4.40
8092.00	91.200	156.760	6584.04	1648.93	-1365.85	1068.50	1625599.62	271794.34	39°14'19.224"N	80°49'18.718"W	1734.14	141.964	0.55	0.20	-0.52
8182.00	91.260	155.330	6582.10	1738.69	-1448.07	1105.03	1625634.93	271711.58	39°14'18.411"N	80°49'18.254"W	1821.54	142.653	1.59	0.07	-1.59
8272.00	91.050	161.510	6580.29	1828.59	-1531.71	1138.11	1625666.77	271627.48	39°14'17.585"N	80°49'17.833"W	1908.25	143.386	6.87	-0.23	6.87
8361.00	91.050	164.390	6578.66	1917.45	-1616.77	1164.20	1625691.60	271542.04	39°14'16.744"N	80°49'17.502"W	1992.32	144.243	3.24	0.00	3.24
8451.00	90.740	164.740	6577.25	2007.15	-1703.52	1188.15	1625714.27	271454.95	39°14'15.887"N	80°49'17.198"W	2076.94	145.105	0.52	-0.34	0.39
8540.00	90.680	160.780	6576.15	2096.03	-1788.49	1214.52	1625739.38	271369.60	39°14'15.047"N	80°49'16.862"W	2161.89	145.821	4.45	-0.07	-4.45
8630.00	90.800	153.360	6574.98	2185.84	-1871.32	1249.56	1625773.19	271286.27	39°14'14.228"N	80°49'16.417"W	2250.16	146.267	8.24	0.13	-8.24
8719.00	91.360	156.290	6573.31	2274.45	-1951.84	1287.41	1625809.85	271205.20	39°14'13.432"N	80°49'15.936"W	2338.18	146.592	3.35	0.63	3.29
8809.00	89.750	155.010	6572.43	2364.18	-2033.83	1324.51	1625845.74	271122.68	39°14'12.622"N	80°49'15.465"W	2427.09	146.926	2.29	-1.79	-1.42
8899.00	90.090	149.440	6572.56	2453.32	-2113.43	1366.43	1625886.48	271042.48	39°14'11.835"N	80°49'14.932"W	2516.69	147.115	6.20	0.38	-6.19
8988.00	89.540	153.730	6572.85	2541.34	-2191.68	1408.77	1625927.66	270963.60	39°14'11.061"N	80°49'14.394"W	2605.40	147.268	4.86	-0.62	4.82
9077.00	90.770	160.430	6572.61	2630.17	-2273.61	1443.42	1625961.08	270881.18	39°14'10.252"N	80°49'13.954"W	2693.09	147.590	7.65	1.38	7.53
9167.00	90.460	155.370	6571.64	2720.08	-2356.96	1477.26	1625993.70	270797.34	39°14'09.428"N	80°49'13.524"W	2781.65	147.922	5.63	-0.34	-5.62
9256.00	90.180	161.390	6571.14	2809.00	-2439.66	1510.04	1626025.25	270714.17	39°14'08.610"N	80°49'13.107"W	2869.18	148.244	6.77	-0.31	6.76
9346.00	89.540	166.820	6571.36	2898.73	-2526.19	1534.68	1626048.61	270627.29	39°14'07.755"N	80°49'12.794"W	2955.82	148.721	6.08	-0.71	6.03

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# Actual Wellpath Report

OXFD1DHS AWP (Curve&Lateral) Proj: 10267'  
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### REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot D
Area	Doddridge Co., WV	Well	OXFD1DHS
Field	Doddridge	Wellbore	OXFD1DHS AWB
Facility	Oxford Pad		

### WELLPATH DATA (131 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]
9436.00	89.420	169.480	6572.18	2987.81	-2614.26	1553.16	1626065.78	270538.96	39°14'06.885"N	80°49'12.559"W	3040.83	149.285	2.96	-0.13	2.96
9525.00	89.510	166.470	6573.01	3075.94	-2701.29	1571.70	1626083.04	270451.67	39°14'06.025"N	80°49'12.324"W	3125.25	149.808	3.38	0.10	-3.38
9615.00	90.120	166.490	6573.30	3165.36	-2788.80	1592.74	1626102.78	270363.86	39°14'05.160"N	80°49'12.057"W	3211.57	150.268	0.68	0.68	0.02
9704.00	90.150	163.850	6573.09	3253.99	-2874.83	1615.51	1626124.29	270277.51	39°14'04.309"N	80°49'11.767"W	3297.65	150.666	2.97	0.03	-2.97
9794.00	90.430	162.770	6572.64	3343.84	-2961.03	1641.36	1626148.86	270190.94	39°14'03.457"N	80°49'11.439"W	3385.52	150.999	1.24	0.31	-1.20
9883.00	90.460	157.510	6571.94	3432.80	-3044.71	1671.58	1626177.84	270106.83	39°14'02.630"N	80°49'11.055"W	3473.39	151.233	5.91	0.03	-5.91
9973.00	91.820	158.740	6570.15	3522.73	-3128.21	1705.11	1626210.13	270022.85	39°14'01.805"N	80°49'10.629"W	3562.73	151.406	2.04	1.51	1.37
10063.00	91.630	159.060	6567.44	3612.68	-3212.13	1737.49	1626241.27	269938.45	39°14'00.975"N	80°49'10.217"W	3651.94	151.590	0.41	-0.21	0.36
10152.00	91.720	157.600	6564.84	3701.60	-3294.81	1770.34	1626272.90	269855.31	39°14'00.158"N	80°49'09.800"W	3740.30	151.750	1.64	0.10	-1.64
10242.00	91.420	157.320	6562.38	3791.48	-3377.90	1804.83	1626306.15	269771.72	39°13'59.337"N	80°49'09.362"W	3829.83	151.884	0.46	-0.33	-0.31
10267.00	91.420	157.320	6561.76	3816.44	-3400.96	1814.47	1626315.45	269748.52	39°13'59.109"N	80°49'09.239"W	3854.71	151.919	0.00	0.00	0.00

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# Actual Wellpath Report

OXFD1DHS AWP (Curve&Lateral) Proj: 10267'  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot D
Area	Doddridge Co., WV	Well	OXFD1DHS
Field	Doddridge	Wellbore	OXFD1DHS AWB
Facility	Oxford Pad		

### TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
3700' VS Target		6555.00	-3291.35	1775.18	1626277.78	269858.70	39°14'00.192"N	80°49'09.738"W	point
4400' VS Target		6555.00	-3945.60	2024.29	1626517.20	269200.87	39°13'53.726"N	80°49'06.573"W	point
1800' VS Target		6580.00	-1515.51	1099.00	1625627.91	271644.25	39°14'17.745"N	80°49'18.330"W	point
OXFD1DHS BHL Rev-1		6586.50	-7363.05	3325.53	1627767.83	265764.72	39°13'19.947"N	80°48'50.043"W	point
OXFD1DHS LP Plat		6595.00	-237.05	612.15	1625159.99	272929.70	39°14'30.381"N	80°49'24.518"W	point
OXFD1DHS LP Rev-1		6595.00	-358.62	658.50	1625204.54	272807.47	39°14'29.179"N	80°49'23.929"W	point

### WELLPATH COMPOSITION - Ref Wellbore: OXFD1DHS AWB Ref Wellpath: OXFD1DHS AWP (Curve&Lateral) Proj: 10267'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
18.60	642.00	Generic gyro - northseeking (Standard)	VES Gyro (100'-642')	OXFD1DHS AWB
642.00	2576.00	NaviTrak (MagCorr)	BHI MWD Surveys (642')(735'-2576')	OXFD1DHS AWB
2576.00	10242.00	NaviTrak (MagCorr)	BHI MWD Surveys (2576')(2718'-10242')	OXFD1DHS AWB
10242.00	10267.00	Blind Drilling (std)	Projection to bit	OXFD1DHS AWB

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**Actual Wellpath Report**  
OXFD1DHS AWP (Curve&Lateral) Proj: 10267'  
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**REFERENCE WELLPATH IDENTIFICATION**

Operator	NOBLE ENERGY	Slot	Slot D
Area	Doddridge Co., WV	Well	OXFD1DHS
Field	Doddridge	Wellbore	OXFD1DHS AWB
Facility	Oxford Pad		

**COMMENTS**

**Wellpath general comments**

API: 47-017-06003-0000  
BHI Job #: 5591475  
Rig: Precision 542  
Duration: 7/17/2013-9/12/2013  
VES Gyro (100'-642')  
BHI MWD Surveys (642')(735'-2576')  
BHI MWD Surveys (2576')(2718'-10242')  
Projected MD at TD: 15002'

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