

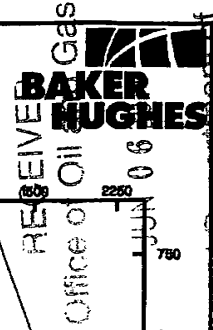
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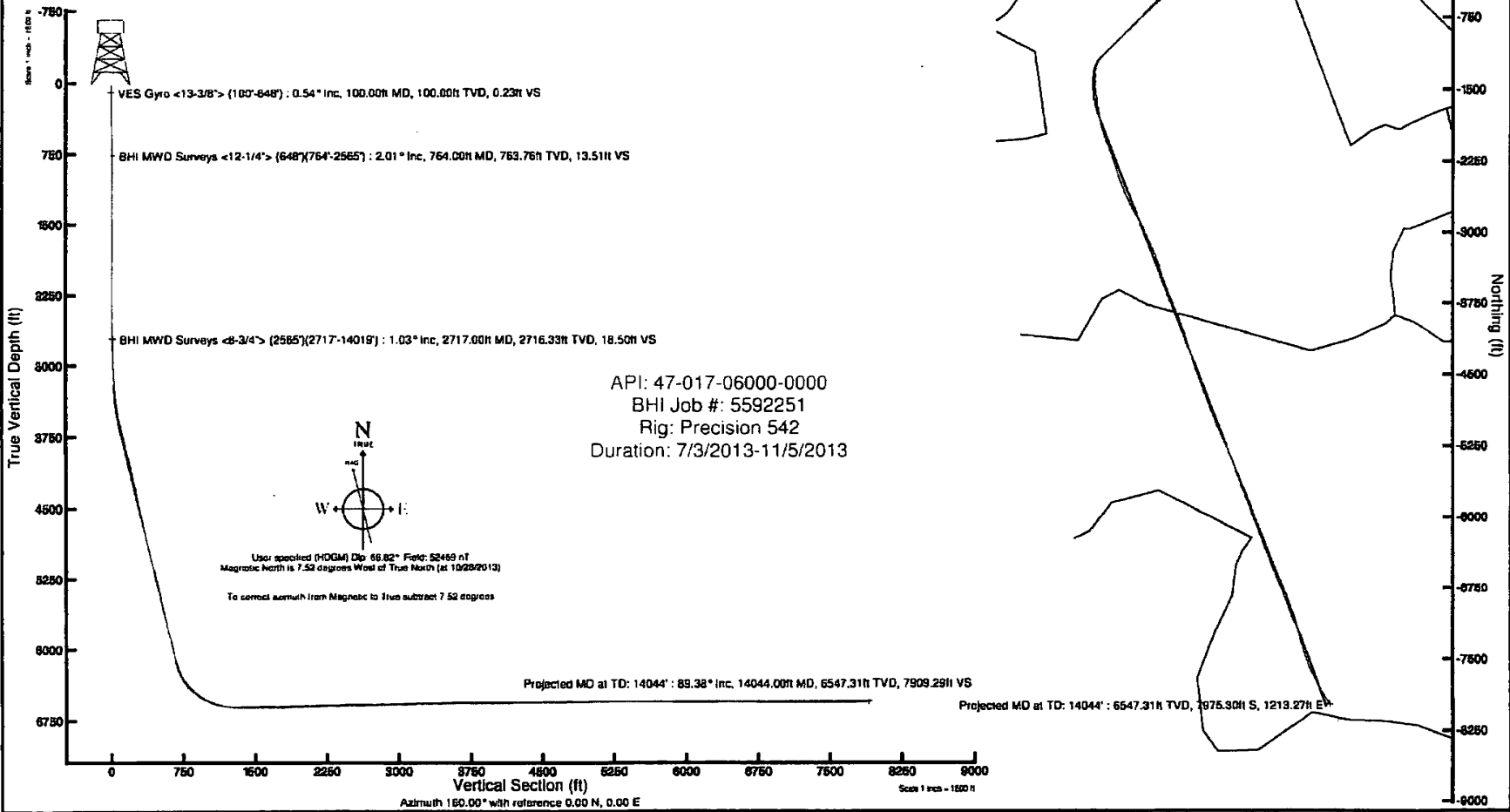
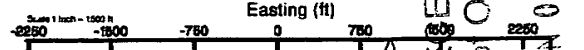
# NOBLE ENERGY

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

Slot: Slot A  
Well: OXFD1AHS  
Wellbore: OXFD1AHS PWB



Plot software used: ODF 2012 Rev. 0.4	Plot System: 800777 Lambert West 8 1/2 in. SP, Southern Area 800777, 800 777
Scale and origin are indicated in Plot area 401 (PT)	North Reference: North
Plot on 4x6 inch or other size paper: 11x8.5 inch	Scale: 1 inch = 1000 ft
When data from the field is used, check it: 1:100 scale	Origin: 0,0
Check units are in feet, otherwise in Meters	Created by: 1/1/2013



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# Actual Wellpath Report

OXFD1AHS AWP Proj: 14044'

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WV Department of  
Environmental Protection

## REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot A
Area	Doddridge Co., WV	Well	OXFD1AHS
Field	Doddridge	Wellbore	OXFD1AHS (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	11/7/2013 at 11:02:32 AM
Convergence at slot	n/a	Database/Source file	Well Architect Eastern US/OXFD1AHS_AWB.xml

## WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-0.00	-0.02	1624569.32	273233.05	39°14'33.293"N	80°49'32.081"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 A)	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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# Actual Wellpath Report

OXFD1AHS AWP Proj: 14044'  
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## REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot A
Area	Doddridge Co., WV	Well	OXFD1AHS
Field	Doddridge	Wellbore	OXFD1AHS (AWB)
Facility	Oxford Pad		

## WELLPATH DATA (183 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	105.980	0.00	0.00	0.00	0.00	1624569.32	273233.05	39°14'33.293"N	80°49'32.081"W	0.00	0.000	0.00	0.00	0.00
18.60	0.000	105.980	18.60	0.00	0.00	0.00	1624569.32	273233.05	39°14'33.293"N	80°49'32.081"W	0.00	0.000	0.00	0.00	0.00
100.00	0.540	105.980	100.00	0.23	-0.11	0.37	1624569.69	273232.94	39°14'33.292"N	80°49'32.077"W	0.38	105.980	0.66	0.66	0.00
200.00	1.090	112.340	199.99	1.14	-0.60	1.70	1624571.01	273232.43	39°14'33.287"N	80°49'32.060"W	1.80	109.330	0.56	0.55	6.36
300.00	1.330	122.000	299.97	2.70	-1.57	3.57	1624572.86	273231.42	39°14'33.277"N	80°49'32.036"W	3.90	113.811	0.31	0.24	9.66
400.00	2.000	124.980	399.92	5.04	-3.19	5.98	1624575.25	273229.77	39°14'33.261"N	80°49'32.005"W	6.78	118.070	0.68	0.67	2.98
500.00	1.620	128.090	499.87	7.67	-5.06	8.52	1624577.77	273227.86	39°14'33.243"N	80°49'31.973"W	9.91	120.707	0.39	-0.38	3.11
600.00	1.220	130.000	599.84	9.79	-6.62	10.45	1624579.67	273226.28	39°14'33.228"N	80°49'31.948"W	12.37	122.345	0.40	-0.40	1.91
648.00	1.730	121.930	647.83	10.81	-7.33	11.46	1624580.67	273225.55	39°14'33.221"N	80°49'31.936"W	13.60	122.609	1.14	1.06	-16.81
764.00	2.010	110.810	763.76	13.51	-8.98	14.84	1624584.03	273223.85	39°14'33.204"N	80°49'31.893"W	17.35	121.167	0.39	0.24	-9.59
796.00	2.150	125.260	795.74	14.37	-9.52	15.86	1624585.04	273223.29	39°14'33.199"N	80°49'31.880"W	18.50	120.987	1.69	0.44	45.16
891.00	0.740	75.300	890.71	15.89	-10.40	17.91	1624587.07	273222.39	39°14'33.190"N	80°49'31.854"W	20.71	120.140	1.86	-1.48	-52.59
986.00	0.440	275.820	985.71	15.79	-10.20	18.14	1624587.30	273222.58	39°14'33.192"N	80°49'31.851"W	20.81	119.362	1.22	-0.32	-167.87
1081.00	0.660	312.370	1080.71	15.15	-9.80	17.37	1624586.54	273223.00	39°14'33.196"N	80°49'31.861"W	19.94	119.427	0.42	0.23	38.47
1176.00	0.230	354.210	1175.70	14.48	-9.24	16.95	1624586.13	273223.56	39°14'33.202"N	80°49'31.866"W	19.30	118.601	0.54	-0.45	44.04
1271.00	0.430	272.430	1270.70	14.16	-9.04	16.57	1624585.76	273223.77	39°14'33.204"N	80°49'31.871"W	18.87	118.600	0.48	0.21	-86.08
1365.00	0.170	91.430	1364.70	14.07	-9.02	16.36	1624585.54	273223.79	39°14'33.204"N	80°49'31.873"W	18.68	118.882	0.64	-0.28	190.43
1460.00	1.030	125.930	1459.70	14.83	-9.53	17.19	1624586.37	273223.27	39°14'33.199"N	80°49'31.863"W	19.65	118.998	0.94	0.91	36.32
1555.00	1.490	118.990	1554.67	16.47	-10.63	18.96	1624588.12	273222.14	39°14'33.188"N	80°49'31.840"W	21.74	119.269	0.51	0.48	-7.31
1650.00	1.530	72.280	1649.64	17.46	-10.84	21.25	1624590.41	273221.90	39°14'33.186"N	80°49'31.811"W	23.86	117.027	1.26	0.04	-49.17
1744.00	1.340	65.320	1743.61	17.42	-10.00	23.45	1624592.61	273222.71	39°14'33.194"N	80°49'31.783"W	25.49	113.099	0.27	-0.20	-7.40
1833.00	0.920	324.750	1832.60	16.64	-8.98	23.98	1624593.16	273223.72	39°14'33.204"N	80°49'31.777"W	25.61	110.534	1.98	-0.47	-113.00
1923.00	2.150	274.460	1922.57	15.24	-8.26	21.88	1624591.07	273224.47	39°14'33.211"N	80°49'31.803"W	23.39	110.684	1.91	1.37	-55.88
2013.00	2.700	276.370	2012.49	13.60	-7.89	18.09	1624587.29	273224.89	39°14'33.215"N	80°49'31.851"W	19.74	113.576	0.62	0.61	2.12
2102.00	1.500	271.490	2101.43	12.25	-7.63	14.84	1624584.05	273225.20	39°14'33.218"N	80°49'31.893"W	16.69	117.212	1.36	-1.35	-5.48
2192.00	0.550	261.260	2191.42	11.73	-7.67	13.24	1624582.44	273225.19	39°14'33.217"N	80°49'31.913"W	15.30	120.078	1.07	-1.06	-11.37
2281.00	0.690	246.930	2280.41	11.68	-7.94	12.32	1624581.52	273224.93	39°14'33.214"N	80°49'31.925"W	14.66	122.802	0.23	0.16	-16.10
2371.00	0.840	224.100	2370.40	11.99	-8.63	11.36	1624580.55	273224.26	39°14'33.208"N	80°49'31.937"W	14.27	127.206	0.37	0.17	-25.37
2461.00	1.040	181.810	2460.39	13.04	-9.92	10.88	1624580.05	273222.97	39°14'33.195"N	80°49'31.943"W	14.72	132.354	0.78	0.22	-46.99
2550.00	1.320	167.100	2549.37	14.81	-11.72	11.08	1624580.23	273221.16	39°14'33.177"N	80°49'31.940"W	16.13	136.613	0.46	0.31	-16.53

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# Actual Wellpath Report

OXFD1AHS AWP Proj: 14044'

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## REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot A
Area	Doddridge Co., WV	Well	OXFD1AHS
Field	Doddridge	Wellbore	OXFD1AHS (AWB)
Facility	Oxford Pad		

## WELLPATH DATA (183 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]
2565.00	1.680	163.500	2564.37	15.20	-12.10	11.18	1624580.32	273220.78	39°14'33.173"N	80°49'31.939"W	16.48	137.263	2.48	2.40	-24.00
2717.00	1.030	122.310	2716.33	18.50	-14.97	12.97	1624582.07	273217.89	39°14'33.145"N	80°49'31.916"W	19.81	139.093	0.74	-0.43	-27.10
2762.00	1.640	205.480	2761.32	19.27	-15.77	13.03	1624582.12	273217.09	39°14'33.137"N	80°49'31.916"W	20.46	140.419	4.07	1.36	184.82
2807.00	3.410	221.220	2806.27	20.37	-17.36	11.88	1624580.94	273215.52	39°14'33.121"N	80°49'31.930"W	21.03	145.617	4.19	3.93	34.98
2851.00	5.700	225.620	2850.13	21.90	-19.87	9.45	1624578.48	273213.05	39°14'33.097"N	80°49'31.961"W	22.00	154.559	5.26	5.20	10.00
2896.00	7.570	232.930	2894.83	23.70	-23.22	5.49	1624574.47	273209.75	39°14'33.063"N	80°49'32.012"W	23.86	166.699	4.55	4.16	16.24
2941.00	9.330	235.970	2939.34	25.45	-27.05	0.10	1624569.02	273206.01	39°14'33.026"N	80°49'32.080"W	27.05	179.787	4.03	3.91	6.76
2985.00	10.670	239.840	2982.67	27.03	-31.09	-6.38	1624562.48	273202.06	39°14'32.986"N	80°49'32.162"W	31.74	191.593	3.41	3.05	8.80
3030.00	11.780	241.920	3026.81	28.41	-35.34	-14.03	1624554.77	273197.92	39°14'32.944"N	80°49'32.260"W	38.03	201.654	2.63	2.47	4.62
3075.00	12.770	243.700	3070.78	29.61	-39.71	-22.54	1624546.19	273193.68	39°14'32.900"N	80°49'32.368"W	45.66	209.584	2.36	2.20	3.96
3120.00	12.410	242.330	3114.70	30.80	-44.16	-31.29	1624537.39	273189.36	39°14'32.857"N	80°49'32.479"W	54.12	215.316	1.04	-0.80	-3.04
3164.00	12.080	238.210	3157.70	32.37	-48.78	-39.39	1624529.22	273184.86	39°14'32.811"N	80°49'32.582"W	62.70	218.918	2.12	-0.75	-9.36
3209.00	13.510	227.270	3201.59	35.36	-54.83	-47.25	1624521.27	273178.93	39°14'32.751"N	80°49'32.682"W	72.38	220.754	6.24	3.18	-24.31
3254.00	15.030	221.260	3245.20	40.20	-62.78	-54.96	1624513.44	273171.09	39°14'32.672"N	80°49'32.780"W	83.44	221.199	4.71	3.38	-13.36
3298.00	16.700	225.290	3287.52	45.59	-71.52	-63.22	1624505.06	273162.47	39°14'32.586"N	80°49'32.885"W	95.45	221.474	4.54	3.80	9.16
3343.00	17.980	230.290	3330.48	50.63	-80.51	-73.16	1624494.99	273153.63	39°14'32.497"N	80°49'33.011"W	108.78	222.261	4.36	2.84	11.11
3388.00	19.770	236.230	3373.06	54.79	-89.18	-84.83	1624483.19	273145.14	39°14'32.412"N	80°49'33.159"W	123.08	223.568	5.83	3.98	13.20
3432.00	21.900	233.320	3414.18	58.91	-98.22	-97.60	1624470.29	273136.29	39°14'32.322"N	80°49'33.322"W	138.46	224.819	5.38	4.84	-6.61
3477.00	23.490	228.310	3455.70	64.64	-109.20	-111.03	1624456.70	273125.51	39°14'32.214"N	80°49'33.492"W	155.73	225.476	5.56	3.53	-11.13
3522.00	24.620	223.770	3496.80	72.10	-121.93	-124.21	1624443.33	273112.97	39°14'32.088"N	80°49'33.660"W	174.05	225.530	4.82	2.51	-10.09
3567.00	26.390	222.870	3537.41	80.80	-136.03	-137.50	1624429.84	273099.07	39°14'31.948"N	80°49'33.829"W	193.42	225.307	4.03	3.93	-2.00
3612.00	27.450	223.310	3577.53	90.02	-150.91	-151.42	1624415.70	273084.40	39°14'31.801"N	80°49'34.006"W	213.78	225.097	2.40	2.36	0.98
3656.00	28.840	226.170	3616.33	98.86	-165.64	-166.03	1624400.87	273069.89	39°14'31.656"N	80°49'34.192"W	234.52	225.068	4.40	3.16	6.50
3701.00	29.050	228.410	3655.71	107.27	-180.41	-182.03	1624384.65	273055.36	39°14'31.510"N	80°49'34.395"W	256.28	225.257	2.45	0.47	4.98
3790.00	27.680	224.430	3734.03	124.14	-209.51	-212.67	1624353.59	273026.70	39°14'31.222"N	80°49'34.784"W	298.54	225.428	2.62	-1.54	-4.47
3880.00	29.000	224.080	3813.24	142.70	-240.12	-242.48	1624323.33	272996.55	39°14'30.920"N	80°49'35.163"W	341.25	225.281	1.48	1.47	-0.39
3969.00	28.690	223.250	3891.20	161.75	-271.17	-272.13	1624293.23	272965.93	39°14'30.613"N	80°49'35.540"W	384.17	225.100	0.57	-0.35	-0.93
4059.00	29.140	223.010	3969.98	181.42	-302.93	-301.87	1624263.02	272934.62	39°14'30.299"N	80°49'35.918"W	427.66	224.900	0.52	0.50	-0.27
4148.00	27.590	223.380	4048.29	200.49	-333.76	-330.81	1624233.63	272904.22	39°14'29.994"N	80°49'36.286"W	469.93	224.746	1.75	-1.74	0.42
4238.00	29.670	227.200	4127.29	218.46	-364.05	-361.48	1624202.52	272874.39	39°14'29.695"N	80°49'36.676"W	513.03	224.797	3.08	2.31	4.24

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# Actual Wellpath Report

OXFD1AHS AWP Proj: 14044'

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## REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot A
Area	Doddridge Co., WV	Well	OXFD1AHS
Field	Doddridge	Wellbore	OXFD1AHS (AWB)
Facility	Oxford Pad		

## WELLPATH DATA (183 stations)

MD [ft]	Inclination [°]	Azimuth [°]	FVD [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]
4327.00	28.530	228.970	4205.06	234.62	-392.97	-393.67	1624169.91	272845.95	39°14'29.409"N	80°49'37.085"W	556.24	225.051	1.60	-1.28	1.99
4417.00	27.440	226.800	4284.53	250.51	-421.27	-425.01	1624138.16	272818.11	39°14'29.129"N	80°49'37.483"W	598.42	225.253	1.66	-1.21	-2.41
4507.00	28.190	225.090	4364.13	267.63	-450.48	-455.18	1624107.56	272789.35	39°14'28.840"N	80°49'37.867"W	640.41	225.297	1.22	0.83	-1.90
4596.00	29.420	225.450	4442.12	285.57	-480.66	-485.65	1624076.65	272759.63	39°14'28.542"N	80°49'38.254"W	683.29	225.296	1.40	1.38	0.40
4686.00	29.690	226.780	4520.41	303.54	-511.43	-517.64	1624044.21	272729.34	39°14'28.238"N	80°49'38.660"W	727.67	225.346	0.79	0.30	1.48
4775.00	29.580	228.600	4597.77	320.25	-541.05	-550.18	1624011.24	272700.20	39°14'27.945"N	80°49'39.074"W	771.64	225.480	1.02	-0.12	2.04
4865.00	29.650	229.410	4676.01	336.18	-570.22	-583.75	1623977.24	272671.52	39°14'27.657"N	80°49'39.501"W	816.04	225.672	0.45	0.08	0.90
4954.00	29.680	228.760	4753.35	351.90	-599.07	-617.04	1623943.54	272643.17	39°14'27.372"N	80°49'39.924"W	860.01	225.846	0.36	0.03	-0.73
5044.00	29.290	224.300	4831.70	369.53	-629.52	-649.17	1623910.96	272613.20	39°14'27.071"N	80°49'40.332"W	904.28	225.880	2.48	-0.43	-4.96
5134.00	29.750	224.600	4910.02	388.65	-661.18	-680.23	1623879.44	272582.01	39°14'26.758"N	80°49'40.727"W	948.61	225.814	0.54	0.51	0.33
5223.00	29.710	226.730	4987.31	406.84	-692.02	-711.79	1623847.43	272551.64	39°14'26.453"N	80°49'41.128"W	992.74	225.807	1.19	-0.04	2.39
5313.00	29.800	228.840	5065.44	423.72	-722.02	-744.87	1623813.91	272522.12	39°14'26.157"N	80°49'41.548"W	1037.37	225.892	1.17	0.10	2.34
5403.00	29.810	229.910	5143.54	439.48	-751.15	-778.82	1623779.53	272493.50	39°14'25.869"N	80°49'41.980"W	1082.03	226.036	0.59	0.01	1.19
5492.00	29.800	227.080	5220.77	455.69	-780.46	-811.94	1623745.99	272464.69	39°14'25.579"N	80°49'42.401"W	1126.21	226.133	1.58	-0.01	-3.18
5582.00	29.630	224.500	5298.94	473.98	-811.56	-843.91	1623713.56	272434.07	39°14'25.272"N	80°49'42.807"W	1170.82	226.120	1.43	-0.19	-2.87
5671.00	29.360	222.720	5376.40	493.45	-843.28	-874.13	1623682.87	272402.79	39°14'24.958"N	80°49'43.191"W	1214.59	226.029	1.03	-0.30	-2.00
5761.00	27.450	223.030	5455.57	512.97	-874.65	-903.26	1623653.29	272371.85	39°14'24.648"N	80°49'43.561"W	1257.34	225.922	2.13	-2.12	0.34
5851.00	29.200	223.030	5534.79	532.34	-905.87	-932.40	1623623.69	272341.07	39°14'24.339"N	80°49'43.932"W	1299.99	225.827	1.94	1.94	0.00
5940.00	29.490	222.730	5612.37	552.22	-937.83	-962.08	1623593.55	272309.55	39°14'24.023"N	80°49'44.309"W	1343.55	225.731	0.37	0.33	-0.34
6030.00	29.680	224.160	5690.63	572.08	-970.09	-992.63	1623562.52	272277.75	39°14'23.705"N	80°49'44.697"W	1387.94	225.658	0.81	0.21	1.59
6120.00	29.650	225.530	5768.84	591.02	-1001.67	-1024.04	1623530.65	272246.64	39°14'23.392"N	80°49'45.096"W	1432.48	225.633	0.75	-0.03	1.52
6209.00	29.620	226.040	5846.20	609.07	-1032.36	-1055.58	1623498.66	272216.42	39°14'23.089"N	80°49'45.497"W	1476.49	225.637	0.29	-0.03	0.57
6299.00	29.500	227.570	5924.48	626.55	-1062.75	-1087.95	1623465.85	272186.51	39°14'22.789"N	80°49'45.909"W	1520.88	225.671	0.85	-0.13	1.70
6388.00	29.800	225.230	6001.83	644.18	-1093.11	-1119.83	1623433.53	272156.63	39°14'22.489"N	80°49'46.314"W	1564.89	225.692	1.34	0.34	-2.63
6478.00	29.680	220.760	6079.99	664.44	-1125.74	-1150.25	1623402.63	272124.45	39°14'22.166"N	80°49'46.700"W	1609.46	225.617	2.47	-0.13	-4.97
6523.00	29.750	219.140	6119.07	675.61	-1142.84	-1164.58	1623388.06	272107.57	39°14'21.997"N	80°49'46.882"W	1631.66	225.540	1.79	0.16	-3.60
6567.00	29.570	217.670	6157.31	687.01	-1159.90	-1178.10	1623374.28	272090.71	39°14'21.829"N	80°49'47.054"W	1653.26	225.446	1.70	-0.41	-3.34
6612.00	31.110	215.040	6196.14	699.61	-1178.21	-1191.56	1623360.55	272072.60	39°14'21.648"N	80°49'47.225"W	1675.71	225.323	4.52	3.42	-5.84
6657.00	33.910	211.720	6234.09	714.06	-1198.41	-1204.84	1623346.98	272052.60	39°14'21.448"N	80°49'47.394"W	1699.36	225.153	7.38	6.22	-7.38
6702.00	36.550	204.270	6270.86	731.44	-1221.32	-1216.96	1623334.52	272029.87	39°14'21.221"N	80°49'47.548"W	1724.12	224.898	11.20	5.87	-16.56

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# Actual Wellpath Report

OXFD1AHS AWP Proj: 14044'

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## REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot A
Area	Doddridge Co., WV	Well	OXFD1AHS
Field	Doddridge	Wellbore	OXFD1AHS (AWB)
Facility	Oxford Pad		

## WELLPATH DATA (183 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]
6747.00	39.170	196.840	6306.41	752.42	-1247.15	-1226.59	1623324.51	272004.18	39°14'20.966"N	80°49'47.670"W	1749.26	224.524	11.68	5.82	-16.51
6791.00	41.350	189.410	6340.00	776.22	-1274.81	-1232.99	1623317.70	271976.62	39°14'20.693"N	80°49'47.752"W	1773.53	224.045	11.98	4.95	-16.89
6836.00	42.690	183.800	6373.44	803.14	-1304.71	-1236.44	1623313.82	271946.78	39°14'20.397"N	80°49'47.796"W	1797.51	223.461	8.86	2.98	-12.47
6881.00	45.650	180.490	6405.72	832.18	-1336.03	-1237.59	1623312.21	271915.48	39°14'20.088"N	80°49'47.810"W	1821.15	222.809	8.34	6.58	-7.36
6926.00	49.190	180.100	6436.17	863.25	-1369.16	-1237.75	1623311.55	271882.36	39°14'19.760"N	80°49'47.812"W	1845.71	222.114	7.89	7.87	-0.87
6971.00	52.720	179.450	6464.51	896.14	-1404.10	-1237.61	1623311.18	271847.42	39°14'19.415"N	80°49'47.810"W	1871.68	221.394	7.92	7.84	-1.44
7016.00	55.770	177.540	6490.80	930.77	-1440.60	-1236.64	1623311.61	271810.91	39°14'19.054"N	80°49'47.798"W	1898.58	220.643	7.60	6.78	-4.24
7060.00	59.220	174.550	6514.45	966.42	-1477.61	-1234.06	1623313.64	271773.87	39°14'18.688"N	80°49'47.765"W	1925.16	219.868	9.71	7.84	-6.80
7105.00	63.410	173.560	6536.04	1004.71	-1516.86	-1229.97	1623317.15	271734.56	39°14'18.300"N	80°49'47.713"W	1952.87	219.037	9.51	9.31	-2.20
7150.00	67.940	172.650	6554.57	1044.64	-1557.56	-1225.04	1623321.48	271693.80	39°14'17.898"N	80°49'47.651"W	1981.59	218.186	10.23	10.07	-2.02
7195.00	71.130	172.680	6570.30	1085.76	-1599.37	-1219.66	1623326.24	271651.91	39°14'17.485"N	80°49'47.582"W	2011.35	217.329	7.09	7.09	0.07
7240.00	75.030	172.110	6583.40	1127.81	-1642.03	-1213.96	1623331.31	271609.17	39°14'17.063"N	80°49'47.510"W	2042.05	216.476	8.75	8.67	-1.27
7285.00	78.600	171.610	6593.66	1170.68	-1685.40	-1207.76	1623336.88	271565.72	39°14'16.635"N	80°49'47.431"W	2073.46	215.625	8.01	7.93	-1.11
7330.00	82.310	170.240	6601.12	1214.24	-1729.21	-1200.76	1623343.23	271521.81	39°14'16.202"N	80°49'47.342"W	2105.23	214.776	8.77	8.24	-3.04
7375.00	85.340	168.810	6605.96	1258.36	-1773.20	-1192.62	1623350.71	271477.71	39°14'15.767"N	80°49'47.238"W	2136.95	213.924	7.44	6.73	-3.18
7419.00	85.560	167.210	6609.45	1301.79	-1816.10	-1183.51	1623359.19	271434.68	39°14'15.343"N	80°49'47.123"W	2167.70	213.091	3.66	0.50	-3.64
7464.00	88.090	166.310	6611.95	1346.40	-1859.83	-1173.22	1623368.83	271390.80	39°14'14.910"N	80°49'46.992"W	2198.96	212.245	5.97	5.62	-2.00
7509.00	87.410	164.040	6613.71	1391.18	-1903.30	-1161.72	1623379.69	271347.18	39°14'14.481"N	80°49'46.846"W	2229.83	211.399	5.26	-1.51	-5.04
7554.00	88.120	160.740	6615.47	1436.10	-1946.15	-1148.11	1623392.66	271304.13	39°14'14.057"N	80°49'46.673"W	2259.57	210.538	7.50	1.58	-7.33
7643.00	90.980	159.120	6616.17	1525.09	-2029.73	-1117.58	1623421.96	271220.11	39°14'13.231"N	80°49'46.285"W	2317.06	208.837	3.69	3.21	-1.82
7733.00	91.140	158.970	6614.50	1615.06	-2113.76	-1085.40	1623452.90	271135.61	39°14'12.401"N	80°49'45.876"W	2376.15	207.180	0.24	0.18	-0.17
7823.00	91.050	160.720	6612.78	1705.04	-2198.23	-1054.39	1623482.65	271050.70	39°14'11.566"N	80°49'45.481"W	2438.03	205.625	1.95	-0.10	1.94
7912.00	91.420	163.020	6610.86	1793.97	-2282.79	-1026.71	1623509.09	270965.75	39°14'10.730"N	80°49'45.130"W	2503.05	204.216	2.62	0.42	2.58
8002.00	91.350	162.510	6608.69	1883.83	-2368.72	-1000.05	1623534.47	270879.43	39°14'09.881"N	80°49'44.791"W	2571.17	202.889	0.57	-0.08	-0.57
8092.00	91.540	159.940	6606.42	1973.78	-2453.90	-971.09	1623562.17	270793.84	39°14'09.039"N	80°49'44.423"W	2639.06	201.590	2.86	0.21	-2.86
8181.00	91.540	157.400	6604.03	2062.71	-2536.77	-938.73	1623593.30	270710.51	39°14'08.220"N	80°49'44.011"W	2704.88	200.307	2.85	0.00	-2.85
8271.00	91.570	156.670	6601.58	2152.56	-2619.60	-903.63	1623627.17	270627.17	39°14'07.401"N	80°49'43.565"W	2771.08	199.032	0.81	0.03	-0.81
8361.00	91.600	156.100	6599.09	2242.35	-2702.03	-867.59	1623661.99	270544.22	39°14'06.586"N	80°49'43.107"W	2837.90	197.801	0.63	0.03	-0.63
8450.00	91.420	151.100	6596.75	2330.73	-2781.70	-828.05	1623700.35	270463.98	39°14'05.799"N	80°49'42.605"W	2902.33	196.577	5.62	-0.20	-5.62
8540.00	91.600	149.120	6594.38	2419.36	-2859.70	-783.21	1623744.03	270385.33	39°14'05.028"N	80°49'42.035"W	2965.01	195.317	2.21	0.20	-2.20

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# Actual Wellpath Report

OXFD1AHS AWP Proj: 14044'

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## REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot A
Area	Doddridge Co., WV	Well	OXFD1AHS
Field	Doddridge	Wellbore	OXFD1AHS (AWB)
Facility	Oxford Pad		

## WELLPATH DATA (183 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]
8629.00	91.420	155.570	6592.03	2507.49	-2938.46	-741.94	1623784.13	270305.97	39°14'04.250"N	80°49'41.510"W	3030.68	194.171	7.25	-0.20	7.25
8719.00	91.540	157.060	6589.70	2597.27	-3020.85	-705.80	1623819.05	270223.06	39°14'03.435"N	80°49'41.051"W	3102.21	193.151	1.66	0.13	1.66
8808.00	91.450	155.150	6587.38	2686.03	-3102.19	-669.76	1623853.88	270141.20	39°14'02.631"N	80°49'40.593"W	3173.67	192.183	2.15	-0.10	-2.15
8898.00	91.660	158.020	6584.94	2775.83	-3184.74	-634.02	1623888.41	270058.14	39°14'01.816"N	80°49'40.139"W	3247.23	191.259	3.20	0.23	3.19
8987.00	90.620	159.300	6583.17	2864.78	-3267.62	-601.64	1623919.56	269974.79	39°14'00.996"N	80°49'39.727"W	3322.54	190.432	1.85	-1.17	1.44
9077.00	90.590	162.260	6582.22	2954.76	-3352.59	-572.01	1623947.93	269889.40	39°14'00.157"N	80°49'39.351"W	3401.03	189.682	3.29	-0.03	3.29
9166.00	90.580	162.690	6581.31	3043.67	-3437.45	-545.21	1623973.47	269804.15	39°13'59.318"N	80°49'39.010"W	3480.42	189.013	0.48	-0.01	0.48
9255.00	91.140	160.800	6579.97	3132.62	-3521.96	-517.34	1624000.09	269719.25	39°13'58.483"N	80°49'38.656"W	3559.75	188.356	2.21	0.63	-2.12
9345.00	91.080	158.540	6578.23	3222.59	-3606.33	-486.08	1624030.10	269634.42	39°13'57.649"N	80°49'38.259"W	3638.94	187.676	2.51	-0.07	-2.51
9435.00	91.350	157.870	6576.32	3312.53	-3689.88	-452.67	1624062.27	269550.40	39°13'56.823"N	80°49'37.834"W	3717.54	186.994	0.80	0.30	-0.74
9524.00	91.170	157.600	6574.36	3401.44	-3772.22	-418.96	1624094.77	269467.57	39°13'56.009"N	80°49'37.405"W	3795.42	186.338	0.36	-0.20	-0.30
9614.00	91.080	158.710	6572.60	3491.37	-3855.74	-385.48	1624127.01	269383.57	39°13'55.184"N	80°49'36.980"W	3874.96	185.709	1.24	-0.10	1.23
9703.00	91.050	159.490	6570.94	3580.34	-3938.87	-353.73	1624157.52	269299.98	39°13'54.362"N	80°49'36.577"W	3954.72	185.132	0.88	-0.03	0.88
9793.00	90.710	161.330	6569.56	3670.33	-4023.65	-323.56	1624186.44	269214.77	39°13'53.524"N	80°49'36.193"W	4036.64	184.598	2.08	-0.38	2.04
9882.00	90.520	161.770	6568.60	3759.29	-4108.07	-295.40	1624213.35	269129.95	39°13'52.690"N	80°49'35.835"W	4118.67	184.113	0.54	-0.21	0.49
9972.00	90.650	163.270	6567.69	3849.19	-4193.91	-268.37	1624239.12	269043.72	39°13'51.841"N	80°49'35.492"W	4202.48	183.661	1.67	0.14	1.67
10062.00	90.680	163.690	6566.64	3939.02	-4280.18	-242.78	1624263.43	268957.08	39°13'50.988"N	80°49'35.166"W	4287.06	183.246	0.47	0.03	0.47
10151.00	90.710	163.170	6565.56	4027.86	-4365.48	-217.40	1624287.55	268871.42	39°13'50.145"N	80°49'34.844"W	4370.89	182.851	0.59	0.03	-0.58
10241.00	91.080	159.910	6564.15	4117.80	-4450.83	-188.91	1624314.77	268785.67	39°13'49.302"N	80°49'34.482"W	4454.84	182.430	3.65	0.41	-3.62
10331.00	90.710	159.620	6562.75	4207.79	-4535.26	-157.78	1624344.65	268700.79	39°13'48.467"N	80°49'34.086"W	4538.01	181.993	0.52	-0.41	-0.32
10420.00	90.950	160.410	6561.46	4296.78	-4618.89	-127.37	1624373.82	268616.72	39°13'47.641"N	80°49'33.700"W	4620.65	181.580	0.93	0.27	0.89
10509.00	90.890	160.350	6560.03	4385.77	-4702.72	-97.49	1624402.46	268532.47	39°13'46.812"N	80°49'33.320"W	4703.73	181.188	0.10	-0.07	-0.07
10599.00	90.740	159.010	6558.75	4475.75	-4787.10	-66.24	1624432.46	268447.63	39°13'45.978"N	80°49'32.923"W	4787.56	180.793	1.50	-0.17	-1.49
10689.00	90.400	159.360	6557.86	4565.74	-4871.23	-34.26	1624463.20	268363.05	39°13'45.147"N	80°49'32.517"W	4871.35	180.403	0.54	-0.38	0.39
10779.00	90.340	159.350	6557.27	4655.73	-4955.44	-2.53	1624493.68	268278.38	39°13'44.314"N	80°49'32.113"W	4955.45	180.029	0.07	-0.07	-0.01
10868.00	90.370	156.980	6556.72	4744.68	-5038.05	30.57	1624525.56	268195.29	39°13'43.498"N	80°49'31.693"W	5038.15	179.652	2.66	0.03	-2.66
10958.00	91.320	155.950	6555.40	4834.49	-5120.55	66.51	1624560.27	268112.27	39°13'42.682"N	80°49'31.236"W	5120.99	179.256	1.56	1.06	-1.14
11047.00	90.460	154.830	6554.01	4923.19	-5201.46	103.56	1624596.13	268030.83	39°13'41.883"N	80°49'30.765"W	5202.49	178.859	1.59	-0.97	-1.26
11137.00	90.580	157.430	6553.20	5012.98	-5283.75	139.98	1624631.32	267948.02	39°13'41.069"N	80°49'30.303"W	5285.60	178.482	2.89	0.13	2.89
11226.00	90.590	158.910	6552.29	5101.92	-5366.36	173.07	1624663.19	267864.93	39°13'40.253"N	80°49'29.882"W	5369.15	178.153	1.66	0.01	1.66

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# Actual Wellpath Report

OXFD1AHS AWP Proj: 14044'

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WV Department of Environmental Protection

## REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot A
Area	Doddridge Co., WV	Well	OXFD1AHS
Field	Doddridge	Wellbore	OXFD1AHS (AWB)
Facility	Oxford Pad		

## WELLPATH DATA (183 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]
11316.00	90.620	158.130	6551.34	5191.89	-5450.11	206.03	1624694.90	267780.71	39°13'39.425"N	80°49'29.463"W	5454.00	177.835	0.87	0.03	-0.87
11406.00	90.580	158.280	6550.39	5281.84	-5533.67	239.44	1624727.08	267696.67	39°13'38.599"N	80°49'29.039"W	5538.85	177.522	0.17	-0.04	0.17
11495.00	90.460	157.360	6549.59	5370.77	-5616.08	273.04	1624759.46	267613.77	39°13'37.785"N	80°49'28.612"W	5622.71	177.217	1.04	-0.13	-1.03
11585.00	90.520	156.730	6548.82	5460.65	-5698.95	308.14	1624793.33	267530.40	39°13'36.966"N	80°49'28.166"W	5707.27	176.905	0.70	0.07	-0.70
11674.00	90.460	158.380	6548.06	5549.56	-5781.20	342.11	1624826.09	267447.66	39°13'36.153"N	80°49'27.734"W	5791.31	176.613	1.86	-0.07	1.85
11764.00	90.520	161.040	6547.29	5639.55	-5865.60	373.32	1624856.04	267362.81	39°13'35.318"N	80°49'27.338"W	5877.47	176.358	2.96	0.07	2.96
11854.00	90.370	160.000	6546.59	5729.54	-5950.45	403.33	1624884.80	267277.53	39°13'34.480"N	80°49'26.956"W	5964.10	176.122	1.17	-0.17	-1.16
11943.00	90.460	159.100	6545.94	5818.53	-6033.84	434.42	1624914.66	267193.70	39°13'33.656"N	80°49'26.561"W	6049.45	175.882	1.02	0.10	-1.01
12033.00	90.520	154.260	6545.17	5908.35	-6116.46	470.04	1624949.05	267110.56	39°13'32.839"N	80°49'26.109"W	6134.49	175.606	5.38	0.07	-5.38
12122.00	89.850	158.990	6544.88	5997.17	-6198.13	505.34	1624983.14	267028.38	39°13'32.032"N	80°49'25.660"W	6218.69	175.339	5.37	-0.75	5.31
12212.00	89.850	160.510	6545.12	6087.17	-6282.56	536.49	1625013.04	266943.50	39°13'31.197"N	80°49'25.264"W	6305.43	175.119	1.69	0.00	1.69
12302.00	89.910	158.560	6545.31	6177.16	-6366.88	567.96	1625043.25	266858.73	39°13'30.364"N	80°49'24.864"W	6392.16	174.902	2.17	0.07	-2.17
12391.00	89.910	159.450	6545.45	6266.15	-6449.97	599.84	1625073.91	266775.19	39°13'29.543"N	80°49'24.459"W	6477.80	174.687	1.00	0.00	1.00
12481.00	89.880	159.490	6545.61	6356.14	-6534.25	631.41	1625104.22	266690.45	39°13'28.710"N	80°49'24.058"W	6564.69	174.481	0.06	-0.03	0.04
12571.00	90.120	157.450	6545.61	6446.11	-6617.97	664.43	1625136.01	266606.26	39°13'27.882"N	80°49'23.639"W	6651.24	174.267	2.28	0.27	-2.27
12661.00	89.780	158.640	6545.69	6536.05	-6701.44	698.08	1625168.42	266522.30	39°13'27.057"N	80°49'23.211"W	6737.70	174.053	1.38	-0.38	1.32
12751.00	89.970	159.470	6545.89	6626.04	-6785.49	730.25	1625199.35	266437.79	39°13'26.226"N	80°49'22.802"W	6824.67	173.857	0.95	0.21	0.92
12840.00	90.280	160.220	6545.69	6715.04	-6869.04	760.92	1625228.78	266353.80	39°13'25.401"N	80°49'22.413"W	6911.06	173.679	0.91	0.35	0.84
12930.00	90.220	159.470	6545.30	6805.03	-6953.53	791.93	1625258.54	266268.87	39°13'24.566"N	80°49'22.019"W	6998.48	173.503	0.84	-0.07	-0.83
13019.00	90.180	161.990	6544.99	6894.02	-7037.53	821.30	1625286.66	266184.44	39°13'23.735"N	80°49'21.645"W	7085.30	173.344	2.83	-0.04	2.83
13109.00	90.030	165.050	6544.83	6983.84	-7123.83	846.83	1625310.91	266097.78	39°13'22.882"N	80°49'21.321"W	7173.98	173.221	3.40	-0.17	3.40
13198.00	90.000	166.780	6544.80	7072.36	-7210.15	868.48	1625331.30	266011.15	39°13'22.029"N	80°49'21.046"W	7262.26	173.132	1.94	-0.03	1.94
13288.00	89.940	165.980	6544.85	7161.80	-7297.62	889.68	1625351.20	265923.39	39°13'21.165"N	80°49'20.777"W	7351.65	173.049	0.89	-0.07	-0.89
13378.00	90.090	161.280	6544.83	7251.60	-7383.94	915.04	1625375.28	265836.70	39°13'20.311"N	80°49'20.455"W	7440.42	172.936	5.22	0.17	-5.22
13467.00	89.970	160.970	6544.78	7340.58	-7468.16	943.83	1625402.82	265752.07	39°13'19.479"N	80°49'20.089"W	7527.56	172.797	0.37	-0.13	-0.35
13557.00	90.000	160.300	6544.80	7430.57	-7553.06	973.67	1625431.41	265666.74	39°13'18.640"N	80°49'19.710"W	7615.56	172.654	0.75	0.03	-0.74
13647.00	89.910	153.890	6544.87	7520.41	-7635.93	1008.68	1625465.19	265583.37	39°13'17.821"N	80°49'19.265"W	7702.26	172.475	7.12	-0.10	-7.12
13737.00	89.940	150.520	6544.99	7609.57	-7715.53	1050.64	1625505.97	265503.16	39°13'17.034"N	80°49'18.732"W	7786.74	172.246	3.74	0.03	-3.74
13826.00	89.880	152.590	6545.13	7697.60	-7793.78	1093.03	1625547.20	265424.29	39°13'16.260"N	80°49'18.193"W	7870.05	172.017	2.33	-0.07	2.33
13916.00	89.350	146.230	6545.74	7786.02	-7871.21	1138.81	1625591.83	265346.20	39°13'15.495"N	80°49'17.612"W	7953.17	171.768	7.09	-0.59	-7.07



1706000



# Actual Wellpath Report

OXFD1AHS AWP Proj: 14044'

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## REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot A
Area	Doddridge Co., WV	Well	OXFD1AHS
Field	Doddridge	Wellbore	OXFD1AHS (AWB)
Facility	Oxford Pad		

## WELLPATH DATA (183 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]
14006.00	89.200	143.130	6546.88	7872.80	-7944.63	1190.83	1625642.76	265272.02	39°13'14.769"N	80°49'16.951"W	8033.38	171.475	3.45	-0.17	-3.44
14019.00	89.380	143.950	6547.04	7885.27	-7955.09	1198.55	1625650.33	265261.45	39°13'14.666"N	80°49'16.852"W	8044.87	171.432	6.46	1.38	6.31
14044.00	89.380	143.950	6547.31	7909.29	-7975.30	1213.27	1625664.74	265241.03	39°13'14.466"N	80°49'16.666"W	8067.06	171.350	0.00	0.00	0.00

## TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
OXFD1AHS 5200 VS		6549.00	-5458.33	207.15	1624695.91	267772.47	39°13'39.344"N	80°49'29.449"W	point
OXFD1AHS BHL Rev-2		6549.00	-7991.66	1171.74	1625622.98	265225.28	39°13'14.305"N	80°49'17.193"W	point
OXFD1AHS 3500 VS		6567.00	-3869.43	-397.85	1624114.44	269370.06	39°13'55.048"N	80°49'37.137"W	point
OXFD1AHS LP Rev-2		6609.00	-1832.21	-1173.55	1623368.91	271418.43	39°14'15.183"N	80°49'46.996"W	point

## WELLPATH COMPOSITION - Ref Wellbore: OXFD1AHS (AWB) Ref Wellpath: OXFD1AHS AWP Proj: 14044'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
18.60	648.00	Generic gyro - northseeking (Standard)	VES Gyro (100'-648')	OXFD1AHS (AWB)
648.00	2565.00	NaviTrak (MagCorr)	BHI MWD Surveys (648')(764'-2565')	OXFD1AHS (AWB)
2565.00	14019.00	NaviTrak (MagCorr)	BHI MWD Surveys (2565')(2717'-14019')	OXFD1AHS (AWB)
14019.00	14044.00	Blind Drilling (std)	Projection to bit	OXFD1AHS (AWB)

17-06000



# Actual Wellpath Report

OXFD1AHS AWP Proj: 14044'

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## REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot A
Area	Doddridge Co., WV	Well	OXFD1AHS
Field	Doddridge	Wellbore	OXFD1AHS (AWB)
Facility	Oxford Pad		

## COMMENTS

### Wellpath general comments

API: 47-017-06000-0000

BHI Job #: 5592251

Rig: Precision 542

Duration: 7/3/2013-11/5/2013

VES Gyro <13-3/8"> (100'-648')

BHI MWD Surveys <12-1/4"> (648')(764'-2565')

BHI MWD Surveys <8-3/4"> (2565')(2717'-14019')

Projected MD at TD: 14044'