

Actual Wellpath Report

OXFD1FHS AWP (Curve&Lateral) Proj: 14792'
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REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot F
Area	Doddridge Co., WV	Well	OXFD1FHS
Field	Doddridge	Wellbore	OXFD1FHS 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	11/5/2013 at 2:46:29 PM
Convergence at slot	n/a	Database/Source file	Well Architect Eastern US/OXFD1FHS_AWB.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-96.04	-28.07	1624539.86	273137.44	39°14'32.344"N	80°49'32.438"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 F)	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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Area	Doddridge Co., WV	Well	OXFD1FHS
Field	Doddridge	Wellbore	OXFD1FHS AWB
Facility	Oxford Pad		

WELLPATH DATA (182 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	72.990	0.00	0.00	0.00	0.00	1624539.86	273137.44	39°14'32.344"N	80°49'32.438"W	0.00	0.000	0.00	0.00	0.00
18.60	0.000	72.990	18.60	0.00	0.00	0.00	1624539.86	273137.44	39°14'32.344"N	80°49'32.438"W	0.00	0.000	0.00	0.00	0.00
100.00	0.290	72.990	100.00	0.01	0.06	0.20	1624540.06	273137.50	39°14'32.344"N	80°49'32.435"W	0.21	72.990	0.36	0.36	0.00
200.00	0.360	78.470	200.00	0.07	0.20	0.75	1624540.61	273137.63	39°14'32.346"N	80°49'32.428"W	0.77	75.216	0.08	0.07	5.48
300.00	0.340	85.000	300.00	0.19	0.29	1.35	1624541.21	273137.71	39°14'32.347"N	80°49'32.421"W	1.38	78.051	0.04	0.02	6.53
400.00	0.540	98.230	399.99	0.49	0.24	2.11	1624541.98	273137.65	39°14'32.346"N	80°49'32.411"W	2.13	83.406	0.22	0.20	13.23
500.00	1.040	104.430	499.98	1.23	-0.05	3.46	1624543.32	273137.34	39°14'32.343"N	80°49'32.394"W	3.46	90.820	0.51	0.50	6.20
600.00	1.520	93.050	599.96	2.26	-0.35	5.66	1624545.51	273137.01	39°14'32.340"N	80°49'32.366"W	5.67	93.500	0.54	0.48	-11.38
670.00	1.980	94.240	669.93	3.12	-0.48	7.79	1624547.65	273136.84	39°14'32.339"N	80°49'32.339"W	7.81	93.561	0.66	0.66	1.70
770.00	2.790	103.620	769.84	5.18	-1.10	11.88	1624551.72	273136.08	39°14'32.332"N	80°49'32.287"W	11.94	95.690	0.90	0.81	9.38
862.00	2.560	130.290	861.74	8.20	-3.04	15.63	1624555.44	273134.17	39°14'32.314"N	80°49'32.239"W	15.92	101.016	1.36	-0.25	28.99
957.00	2.470	160.030	956.65	12.09	-6.34	17.94	1624557.71	273130.84	39°14'32.281"N	80°49'32.210"W	19.03	109.454	1.36	-0.09	31.31
1052.00	1.480	143.560	1051.60	15.32	-9.25	19.37	1624559.09	273127.91	39°14'32.252"N	80°49'32.192"W	21.47	115.523	1.19	-1.04	-17.34
1147.00	1.210	95.570	1146.57	16.93	-10.33	21.10	1624560.80	273126.80	39°14'32.242"N	80°49'32.170"W	23.49	116.094	1.18	-0.28	-50.52
1210.00	1.030	61.420	1209.56	17.13	-10.13	22.26	1624561.96	273126.99	39°14'32.244"N	80°49'32.155"W	24.45	114.465	1.08	0.29	-54.21
1273.00	0.930	67.510	1272.55	17.02	-9.66	23.23	1624562.94	273127.44	39°14'32.248"N	80°49'32.143"W	25.16	112.583	0.23	-0.16	9.67
1368.00	0.650	296.710	1367.55	16.60	-9.12	23.46	1624563.18	273127.97	39°14'32.254"N	80°49'32.140"W	25.17	111.252	1.52	-0.29	-137.68
1463.00	1.150	282.270	1462.54	15.70	-8.68	22.05	1624561.77	273128.44	39°14'32.258"N	80°49'32.158"W	23.69	111.488	0.57	0.53	-15.20
1558.00	1.230	167.960	1557.53	16.20	-9.47	21.33	1624561.04	273127.65	39°14'32.250"N	80°49'32.167"W	23.34	113.951	2.11	0.08	-120.33
1652.00	1.850	144.510	1651.49	18.66	-11.70	22.42	1624562.10	273125.42	39°14'32.228"N	80°49'32.153"W	25.28	117.551	0.93	0.66	-24.95
1741.00	1.520	96.210	1740.46	20.56	-12.99	24.43	1624564.09	273124.09	39°14'32.215"N	80°49'32.127"W	27.67	118.011	1.59	-0.37	-54.27
1831.00	0.600	58.290	1830.44	20.99	-12.87	26.01	1624565.68	273124.18	39°14'32.217"N	80°49'32.107"W	29.02	116.332	1.23	-1.02	-42.13
1921.00	0.740	295.020	1920.44	20.49	-12.38	25.89	1624565.56	273124.68	39°14'32.221"N	80°49'32.109"W	28.70	115.560	1.31	0.16	-136.97
2010.00	1.330	305.520	2009.42	19.23	-11.54	24.53	1624564.21	273125.54	39°14'32.230"N	80°49'32.126"W	27.10	115.194	0.69	0.66	11.80
2100.00	1.080	272.830	2099.41	18.04	-10.89	22.83	1624562.52	273126.22	39°14'32.236"N	80°49'32.148"W	25.29	115.501	0.80	-0.28	-36.32
2189.00	0.510	237.210	2188.40	17.80	-11.06	21.66	1624561.35	273126.06	39°14'32.234"N	80°49'32.163"W	24.32	117.057	0.82	-0.64	-40.02
2279.00	0.810	152.860	2278.39	18.52	-11.85	21.61	1624561.29	273125.28	39°14'32.227"N	80°49'32.163"W	24.64	118.727	1.02	0.33	-93.72
2368.00	1.720	140.660	2367.37	20.41	-13.44	22.74	1624562.40	273123.67	39°14'32.211"N	80°49'32.149"W	26.42	120.575	1.06	1.02	-13.71
2458.00	1.510	136.880	2457.33	22.77	-15.35	24.41	1624564.04	273121.73	39°14'32.192"N	80°49'32.128"W	28.84	122.159	0.26	-0.23	-4.20
2524.00	1.780	126.530	2523.31	24.43	-16.59	25.83	1624565.44	273120.47	39°14'32.180"N	80°49'32.109"W	30.70	122.717	0.61	0.41	-15.68

17.06.005



REFERENCE WELLPATH IDENTIFICATION

Operator NOBLE ENERGY
 Area Daddridge Co, WV
 Field Daddridge
 Facility Oxford Pad

WELLPATH DATA (182 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]	DLS [ft]	Build Rate [ft/100ft]	Turn Rate [ft/100ft]
2634.00	1.950	128.440	2633.25	27.45	-18.77	28.67	1624568.25	273118.25	39°14'32.158"N	80°49'32.073"W	34.27	123.219	0.16	1.74
2724.00	0.930	124.240	2723.22	29.34	-20.14	30.47	1624570.03	273116.86	39°14'32.145"N	80°49'32.050"W	36.52	123.458	0.13	-4.67
2813.00	0.820	127.320	2812.21	30.47	-20.93	31.57	1624571.12	273116.05	39°14'32.137"N	80°49'32.036"W	37.88	123.538	0.13	3.46
2903.00	0.400	249.820	2902.21	31.01	-21.43	31.79	1624571.33	273115.55	39°14'32.132"N	80°49'32.034"W	38.34	123.980	1.21	-0.47
3002.00	1.910	269.300	3001.18	30.46	-21.57	29.82	1624569.36	273115.41	39°14'32.131"N	80°49'32.059"W	36.80	125.878	1.55	19.68
3082.00	0.840	223.280	3081.16	30.29	-22.01	28.08	1624567.61	273115.02	39°14'32.126"N	80°49'32.081"W	35.68	128.088	1.82	-57.52
3172.00	1.490	216.320	3171.14	31.23	-23.43	26.94	1624566.45	273113.61	39°14'32.112"N	80°49'32.095"W	35.70	131.021	0.74	-7.73
3262.00	1.480	186.390	3261.11	32.92	-25.53	26.12	1624565.59	273111.53	39°14'32.091"N	80°49'32.106"W	36.52	134.352	0.85	-33.26
3351.00	1.520	212.030	3350.08	34.68	-27.67	25.36	1624564.81	273109.40	39°14'32.070"N	80°49'32.115"W	37.54	137.497	0.75	28.81
3441.00	1.630	283.580	3440.06	34.71	-28.39	23.48	1624562.92	273108.71	39°14'32.063"N	80°49'32.139"W	36.84	140.390	2.05	79.50
3531.00	1.950	310.950	3530.02	32.66	-27.08	21.08	1624560.54	273110.05	39°14'32.076"N	80°49'32.170"W	34.32	142.099	1.00	30.41
3620.00	1.480	308.470	3618.98	30.36	-25.37	19.04	1624557.05	273111.79	39°14'32.111"N	80°49'32.125"W	29.40	143.117	0.53	-2.79
3710.00	1.540	331.070	3708.94	28.17	-23.59	17.54	1624557.05	273113.59	39°14'32.111"N	80°49'32.196"W	31.72	143.117	0.53	-2.79
3800.00	0.750	355.300	3798.93	26.41	-21.95	16.91	1624556.44	273115.25	39°14'32.127"N	80°49'32.223"W	27.71	142.384	0.66	25.11
3889.00	0.630	356.510	3887.92	25.38	-20.88	16.83	1624556.38	273116.32	39°14'32.137"N	80°49'32.254"W	26.82	141.122	0.14	1.36
3979.00	1.370	5.940	3977.91	23.93	-19.31	16.91	1624556.49	273117.88	39°14'32.153"N	80°49'32.223"W	25.67	138.789	0.84	10.48
4076.00	0.890	48.040	4074.89	22.27	-17.43	17.22	1624556.82	273119.76	39°14'32.171"N	80°49'32.219"W	24.50	135.352	0.52	8.29
4165.00	0.920	43.060	4163.88	21.43	-16.28	17.91	1624557.53	273120.90	39°14'32.183"N	80°49'32.210"W	24.21	132.265	0.60	38.27
4255.00	0.800	52.950	4253.87	20.97	-15.42	18.95	1624558.58	273121.74	39°14'32.191"N	80°49'32.197"W	24.43	129.130	0.16	-0.13
4345.00	0.960	87.750	4343.86	21.02	-15.01	20.21	1624559.84	273122.13	39°14'32.195"N	80°49'32.181"W	25.17	126.606	0.18	38.67
4435.00	1.090	95.600	4433.84	21.62	-15.07	21.81	1624561.45	273122.06	39°14'32.195"N	80°49'32.161"W	26.51	124.630	0.21	8.72
4524.00	0.440	2.810	4522.84	21.67	-14.81	22.67	1624562.31	273122.30	39°14'32.197"N	80°49'32.150"W	27.08	123.146	1.34	-104.26
4611.00	0.460	1.160	4612.83	21.01	-14.10	22.70	1624562.35	273123.01	39°14'32.204"N	80°49'32.149"W	26.72	121.850	0.03	-1.83
4703.00	0.310	43.360	4701.83	20.57	-13.57	22.87	1624562.53	273123.54	39°14'32.210"N	80°49'32.147"W	26.59	120.679	0.35	-0.17
4793.00	0.570	83.240	4791.83	20.57	-13.34	23.48	1624563.14	273123.76	39°14'32.212"N	80°49'32.127"W	27.01	119.598	0.43	47.42
4882.00	0.660	105.260	4880.82	20.96	-13.42	24.42	1624564.07	273123.66	39°14'32.211"N	80°49'32.113"W	29.04	118.486	0.27	24.74
4972.00	0.860	115.730	4970.82	21.75	-13.85	25.52	1624565.18	273123.21	39°14'32.207"N	80°49'32.112"W	29.42	118.390	1.58	138.27
5061.00	0.740	238.790	5059.81	22.34	-14.44	25.63	1624565.28	273122.63	39°14'32.201"N	80°49'32.120"W	29.22	121.060	0.56	-46.33
5151.00	0.450	197.090	5149.81	22.73	-15.08	25.03	1624564.67	273122.00	39°14'32.188"N	80°49'32.120"W	29.53	122.152	0.25	-33.71

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ARRANGEMENT WELL PATH IDENTIFICATION

Operator NOBLE ENERGY
 Area Daddridge Co., WV
 Field Daddridge
 Facility Oxford Pad

WELL PATH DATA (182 stations)

MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East (ft)	Grid North (ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (ft/100ft)	Build Rate (ft/100ft)	Turn Rate (°/100ft)
5330.00	0.700	178.720	5328.80	24.15	-16.57	25.08	1624564.69	273120.50	39°14'32.180"N	80°49'32.119"W	30.06	123.450	0.35	0.33	12.92
5419.00	1.030	155.970	5417.79	25.46	-17.84	25.42	1624565.01	273119.22	39°14'32.167"N	80°49'32.115"W	31.06	125.067	0.53	0.37	-25.56
5430.00	2.830	153.420	5428.78	25.83	-18.18	25.58	1624565.17	273118.89	39°14'32.164"N	80°49'32.113"W	31.38	125.396	16.38	16.36	-23.18
5491.00	4.420	157.820	5489.66	29.68	-21.70	27.14	1624566.68	273115.34	39°14'32.129"N	80°49'32.093"W	34.75	128.642	2.64	2.61	7.21
5580.00	3.510	152.970	5578.45	35.81	-27.30	29.68	1624569.13	273109.70	39°14'32.074"N	80°49'32.061"W	40.33	132.615	1.09	-1.02	-5.45
5670.00	0.660	356.130	5668.40	38.04	-29.24	30.89	1624570.32	273107.75	39°14'32.055"N	80°49'32.045"W	42.54	134.426	4.58	-3.17	-174.27
5759.00	2.820	174.070	5757.37	39.68	-30.91	31.09	1624570.49	273106.08	39°14'32.038"N	80°49'32.043"W	43.84	134.836	3.91	2.43	199.93
5849.00	2.330	157.820	5847.28	43.65	-34.80	32.01	1624571.35	273102.17	39°14'32.000"N	80°49'32.031"W	47.28	137.999	0.97	-0.54	-18.06
5939.00	0.280	357.750	5937.26	45.27	-36.28	32.69	1624572.01	273100.68	39°14'31.985"N	80°49'32.022"W	48.83	137.981	2.88	-2.28	-177.86
5984.00	1.670	158.010	5982.25	45.82	-36.78	32.93	1624572.24	273100.18	39°14'31.980"N	80°49'32.010"W	49.36	138.160	1.09	1.09	156.13
6028.00	8.060	156.880	6026.07	49.55	-40.21	34.38	1624573.64	273096.73	39°14'31.946"N	80°49'32.001"W	52.91	139.470	14.52	14.52	-2.57
6073.00	13.580	153.230	6070.25	57.95	-47.84	38.00	1624577.15	273089.05	39°14'31.871"N	80°49'31.955"W	61.09	141.535	12.35	12.27	-8.11
6118.00	15.980	150.440	6113.76	69.31	-57.94	43.44	1624582.44	273078.86	39°14'31.771"N	80°49'31.886"W	72.42	143.142	5.56	4.31	-6.30
6163.00	17.920	150.220	6156.80	82.24	-69.34	49.93	1624588.76	273067.37	39°14'31.658"N	80°49'31.803"W	85.45	144.242	4.31	4.31	-0.49
6208.00	20.740	152.050	6199.26	96.95	-82.39	57.11	1624595.74	273054.22	39°14'31.529"N	80°49'31.712"W	100.25	145.273	6.41	6.27	4.07
6253.00	25.620	154.710	6240.62	114.54	-98.24	65.00	1624603.40	273038.26	39°14'31.373"N	80°49'31.612"W	117.80	146.507	11.09	10.84	5.91
6298.00	29.540	150.290	6280.50	135.31	-117.20	73.62	1624611.74	273019.17	39°14'31.185"N	80°49'31.502"W	138.40	147.863	8.86	8.71	3.51
6342.00	32.070	157.060	6318.29	157.80	-137.89	82.54	1624620.35	272998.35	39°14'30.981"N	80°49'31.389"W	160.71	149.095	5.82	5.75	1.75
6387.00	34.920	157.120	6355.81	182.60	-160.76	92.21	1624629.68	272975.34	39°14'30.755"N	80°49'31.266"W	185.33	150.163	6.33	6.33	0.13
6432.00	38.960	156.820	6391.77	209.60	-185.64	102.79	1624639.89	272950.31	39°14'30.509"N	80°49'31.131"W	212.20	151.028	8.99	8.98	0.67
6476.00	43.090	156.300	6424.96	238.43	-212.13	114.28	1624650.99	272923.65	39°14'30.247"N	80°49'30.985"W	240.96	151.688	9.42	9.39	-1.18
6521.00	47.490	156.710	6456.61	270.34	-241.46	127.02	1624663.30	272894.14	39°14'29.957"N	80°49'30.823"W	272.83	152.253	9.80	9.78	0.91
6566.00	51.820	157.770	6485.73	304.59	-273.08	140.28	1624676.09	272862.33	39°14'29.645"N	80°49'30.655"W	307.00	152.811	9.81	9.64	2.36
6612.00	55.910	158.800	6512.85	341.72	-307.59	154.01	1624689.31	272827.62	39°14'29.304"N	80°49'30.480"W	344.00	153.403	9.05	8.87	2.24
6656.00	60.360	160.480	6536.07	379.07	-342.62	167.00	1624701.78	272792.41	39°14'28.957"N	80°49'30.315"W	381.15	154.015	10.67	10.11	1.82
6701.00	64.630	161.180	6556.85	418.97	-380.31	180.10	1624714.32	272754.52	39°14'28.585"N	80°49'30.149"W	420.80	154.660	9.59	9.49	1.56
6745.00	69.550	162.340	6573.97	459.47	-418.80	192.77	1624726.42	272715.86	39°14'28.204"N	80°49'29.988"W	461.03	155.284	11.44	11.18	2.64
6790.00	75.510	162.310	6587.48	502.34	-459.68	205.80	1624738.84	272674.80	39°14'27.800"N	80°49'29.822"W	503.64	155.882	13.24	13.24	-0.07
6835.00	80.660	162.040	6596.76	546.32	-501.58	219.27	1624751.70	272632.70	39°14'27.386"N	80°49'29.651"W	547.41	156.387	11.46	11.44	-0.60
6880.00	83.240	160.930	6603.07	590.86	-543.82	233.42	1624765.22	272590.25	39°14'26.960"N	80°49'29.471"W	591.80	156.770	6.73	5.73	-2.47

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Actual Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION

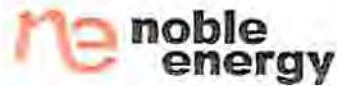
Operator	NOBLE ENERGY	Slot	Slot F
Area	Doddridge Co., WV	Well	OXFD1FHS
Field	Doddridge	Wellbore	OXFD1FHS AWB
Facility	Oxford Pad		

WELLPATH DATA (182 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]
6925.00	89.510	160.030	6605.91	635.75	-586.13	248.42	1624779.59	272547.73	39°14'26.551"N	80°49'29.280"W	636.60	157.031	14.08	13.93	-2.00
6969.00	90.460	159.330	6605.92	679.75	-627.39	263.70	1624794.26	272506.25	39°14'26.143"N	80°49'29.086"W	680.56	157.202	2.68	2.16	-1.59
7014.00	90.340	158.890	6605.61	724.74	-669.43	279.74	1624809.69	272463.98	39°14'25.727"N	80°49'28.882"W	725.53	157.321	1.01	-0.27	-0.98
7059.00	90.620	158.810	6605.23	769.73	-711.40	295.98	1624825.30	272421.78	39°14'25.312"N	80°49'28.676"W	770.52	157.410	0.65	0.62	-0.18
7104.00	91.260	158.830	6604.49	814.71	-753.35	312.24	1624840.93	272379.59	39°14'24.898"N	80°49'28.469"W	815.50	157.488	1.42	1.42	0.04
7194.00	91.140	159.150	6602.61	904.68	-837.35	344.50	1624871.95	272295.13	39°14'24.067"N	80°49'28.059"W	905.45	157.637	0.38	-0.13	0.36
7283.00	91.140	160.290	6600.84	993.66	-920.82	375.34	1624901.56	272211.22	39°14'23.243"N	80°49'27.667"W	994.38	157.823	1.28	0.00	1.28
7373.00	91.050	161.320	6599.12	1083.63	-1005.80	404.92	1624929.88	272125.82	39°14'22.403"N	80°49'27.291"W	1084.25	158.071	1.15	-0.10	1.14
7463.00	91.350	162.610	6597.23	1173.56	-1091.35	432.78	1624956.47	272039.86	39°14'21.557"N	80°49'26.937"W	1174.03	158.369	1.47	0.33	1.43
7552.00	91.450	161.110	6595.06	1262.48	-1175.90	460.48	1624982.92	271954.92	39°14'20.721"N	80°49'26.585"W	1262.85	158.615	1.69	0.11	-1.69
7642.00	91.450	158.400	6592.78	1352.44	-1260.31	491.61	1625012.80	271870.06	39°14'19.887"N	80°49'26.190"W	1352.80	158.691	3.01	0.00	-3.01
7731.00	90.950	157.630	6590.92	1441.37	-1342.82	524.92	1625044.89	271787.08	39°14'19.072"N	80°49'25.766"W	1441.77	158.649	1.03	-0.56	-0.87
7821.00	91.350	156.860	6589.11	1531.25	-1425.80	559.73	1625078.47	271703.60	39°14'18.251"N	80°49'25.324"W	1531.73	158.566	0.96	0.44	-0.86
7911.00	91.260	160.180	6587.06	1621.18	-1509.51	592.67	1625110.17	271619.41	39°14'17.424"N	80°49'24.905"W	1621.69	158.564	3.69	-0.10	3.69
8000.00	90.650	159.440	6585.58	1710.17	-1593.03	623.38	1625139.64	271535.45	39°14'16.598"N	80°49'24.515"W	1710.66	158.629	1.08	-0.69	-0.83
8090.00	90.680	157.970	6584.53	1800.14	-1676.88	656.06	1625171.08	271451.13	39°14'15.770"N	80°49'24.100"W	1800.65	158.633	1.63	0.03	-1.63
8180.00	90.620	156.550	6583.51	1890.02	-1759.87	690.85	1625204.64	271367.63	39°14'14.949"N	80°49'23.658"W	1890.62	158.567	1.58	-0.07	-1.58
8269.00	90.740	154.230	6582.45	1978.72	-1840.78	727.91	1625240.50	271286.19	39°14'14.150"N	80°49'23.187"W	1979.47	158.424	2.61	0.13	-2.61
8359.00	90.680	158.410	6581.34	2068.51	-1923.18	764.04	1625275.41	271203.28	39°14'13.335"N	80°49'22.728"W	2069.39	158.333	4.64	-0.07	4.64
8449.00	90.580	162.430	6580.35	2158.49	-2007.95	794.20	1625304.31	271118.07	39°14'12.497"N	80°49'22.344"W	2159.31	158.420	4.47	-0.11	4.47
8538.00	90.980	161.150	6579.14	2247.43	-2092.48	822.01	1625330.87	271033.14	39°14'11.662"N	80°49'21.991"W	2248.15	158.553	1.51	0.45	-1.44
8628.00	90.580	160.040	6577.91	2337.42	-2177.36	851.90	1625359.51	270947.83	39°14'10.823"N	80°49'21.611"W	2338.08	158.632	1.31	-0.44	-1.23
8717.00	90.370	158.520	6577.17	2426.40	-2260.60	883.39	1625389.76	270864.14	39°14'10.000"N	80°49'21.211"W	2427.07	158.656	1.72	-0.24	-1.71
8807.00	90.830	159.960	6576.23	2516.39	-2344.75	915.29	1625420.42	270779.53	39°14'09.169"N	80°49'20.806"W	2517.06	158.676	1.68	0.51	1.60
8896.00	90.830	163.360	6574.94	2605.33	-2429.21	943.29	1625447.16	270694.68	39°14'08.334"N	80°49'20.450"W	2605.92	158.778	3.82	0.00	3.82
8986.00	90.520	162.880	6573.88	2695.19	-2515.32	969.42	1625472.02	270608.19	39°14'07.483"N	80°49'20.118"W	2695.67	158.923	0.63	-0.34	-0.53
9075.00	90.460	162.940	6573.12	2784.07	-2600.39	995.57	1625496.91	270522.75	39°14'06.642"N	80°49'19.785"W	2784.45	159.050	0.10	-0.07	0.07
9164.00	90.180	162.120	6572.62	2872.98	-2685.28	1022.29	1625522.38	270437.47	39°14'05.803"N	80°49'19.446"W	2873.29	159.158	0.97	-0.31	-0.92
9254.00	90.280	161.930	6572.26	2962.93	-2770.89	1050.06	1625548.88	270351.47	39°14'04.957"N	80°49'19.093"W	2963.18	159.245	0.24	0.11	-0.21
9343.00	90.580	159.510	6571.59	3051.91	-2854.89	1079.45	1625577.02	270267.05	39°14'04.126"N	80°49'18.720"W	3052.14	159.288	2.74	0.31	-2.72

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OXFD1FHS AWP (Curve&Lateral) Proj: 14792'
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REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot F
Area	Doddridge Co., WV	Well	OXFD1FHS
Field	Doddridge	Wellbore	OXFD1FHS AWB
Facility	Oxford Pad		

WELLPATH DATA (182 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]
9433.00	89.750	158.460	6571.33	3141.89	-2938.90	1111.72	1625608.05	270182.57	39°14'03.296"N	80°49'18.310"W	3142.14	159.279	1.49	-0.92	-1.17
9523.00	90.220	158.070	6571.36	3231.85	-3022.50	1145.05	1625640.14	270098.49	39°14'02.470"N	80°49'17.886"W	3232.13	159.251	0.68	0.52	-0.43
9613.00	89.880	156.190	6571.28	3321.73	-3105.42	1180.02	1625673.89	270015.07	39°14'01.650"N	80°49'17.442"W	3322.06	159.194	2.12	-0.38	-2.09
9702.00	89.780	156.940	6571.54	3410.57	-3187.08	1215.42	1625708.07	269932.90	39°14'00.843"N	80°49'16.992"W	3410.97	159.125	0.85	-0.11	0.84
9791.00	89.720	157.320	6571.93	3499.46	-3269.08	1250.01	1625741.45	269850.40	39°14'00.032"N	80°49'16.552"W	3499.92	159.074	0.43	-0.07	0.43
9881.00	89.880	160.010	6572.25	3589.43	-3352.91	1282.75	1625772.95	269766.10	39°13'59.204"N	80°49'16.136"W	3589.91	159.064	2.99	0.18	2.99
9971.00	89.880	160.670	6572.43	3679.42	-3437.66	1313.03	1625801.97	269680.92	39°13'58.366"N	80°49'15.752"W	3679.88	159.095	0.73	0.00	0.73
10060.00	90.340	160.980	6572.26	3768.41	-3521.72	1342.26	1625829.96	269596.44	39°13'57.535"N	80°49'15.380"W	3768.84	159.136	0.62	0.52	0.35
10150.00	90.060	161.660	6571.95	3858.39	-3606.98	1371.09	1625857.52	269510.76	39°13'56.693"N	80°49'15.014"W	3858.78	159.187	0.82	-0.31	0.76
10239.00	90.180	161.820	6571.76	3947.35	-3691.50	1398.97	1625884.16	269425.85	39°13'55.857"N	80°49'14.659"W	3947.69	159.245	0.22	0.13	0.18
10329.00	90.280	160.440	6571.40	4037.33	-3776.66	1428.08	1625912.00	269340.27	39°13'55.016"N	80°49'14.290"W	4037.64	159.287	1.54	0.11	-1.53
10419.00	90.830	160.560	6570.53	4127.32	-3861.49	1458.12	1625940.79	269255.01	39°13'54.177"N	80°49'13.908"W	4127.62	159.313	0.63	0.61	0.13
10508.00	90.250	165.270	6569.69	4216.18	-3946.53	1484.26	1625965.67	269169.59	39°13'53.337"N	80°49'13.576"W	4216.41	159.389	5.33	-0.65	5.29
10598.00	90.550	158.060	6569.06	4306.08	-4031.91	1512.55	1625992.70	269083.81	39°13'52.493"N	80°49'13.216"W	4306.28	159.437	8.02	0.33	-8.01
10687.00	90.830	157.550	6567.99	4395.00	-4114.31	1546.17	1626025.09	269000.93	39°13'51.678"N	80°49'12.789"W	4395.24	159.404	0.65	0.31	0.57
10777.00	91.350	159.120	6566.28	4484.95	-4197.93	1579.39	1626057.07	268916.83	39°13'50.852"N	80°49'12.367"W	4485.21	159.382	1.84	0.38	1.74
10867.00	91.260	152.930	6564.23	4574.66	-4280.10	1615.93	1626092.40	268834.13	39°13'50.040"N	80°49'11.903"W	4574.99	159.316	6.88	-0.10	-6.88
10956.00	91.600	157.070	6562.00	4663.28	-4360.72	1653.52	1626128.80	268752.96	39°13'49.243"N	80°49'11.425"W	4663.69	159.234	4.67	0.38	4.65
11046.00	91.790	157.190	6559.34	4753.12	-4443.61	1688.49	1626162.53	268669.57	39°13'48.423"N	80°49'10.981"W	4753.59	159.194	0.25	0.21	0.13
11135.00	91.910	159.970	6556.47	4842.04	-4526.41	1720.97	1626193.79	268586.30	39°13'47.605"N	80°49'10.568"W	4842.53	159.183	3.12	0.13	3.12
11225.00	91.380	159.210	6553.88	4932.00	-4610.73	1752.34	1626223.91	268501.54	39°13'46.772"N	80°49'10.170"W	4932.49	159.190	1.03	-0.59	-0.84
11315.00	89.720	155.740	6553.02	5021.89	-4693.84	1786.81	1626257.15	268417.93	39°13'45.950"N	80°49'09.732"W	5022.43	159.160	4.27	-1.84	-3.86
11404.00	88.860	154.680	6554.12	5110.57	-4774.63	1824.13	1626293.27	268336.60	39°13'45.152"N	80°49'09.258"W	5111.22	159.091	1.53	-0.97	-1.19
11494.00	88.890	159.420	6555.89	5200.41	-4857.47	1859.20	1626327.11	268253.26	39°13'44.333"N	80°49'08.812"W	5201.12	159.056	5.27	0.03	5.27
11583.00	89.260	160.670	6557.33	5289.40	-4941.11	1889.57	1626356.25	268169.18	39°13'43.506"N	80°49'08.426"W	5290.09	159.072	1.46	0.42	1.40
11673.00	89.320	164.000	6558.44	5379.30	-5026.85	1916.88	1626382.28	268083.05	39°13'42.659"N	80°49'08.079"W	5379.93	159.127	3.70	0.07	3.70
11763.00	89.200	164.390	6559.61	5469.05	-5113.44	1941.39	1626405.51	267996.11	39°13'41.803"N	80°49'07.768"W	5469.57	159.210	0.45	-0.13	0.43
11852.00	89.420	159.700	6560.68	5557.97	-5198.07	1968.81	1626431.68	267911.08	39°13'40.966"N	80°49'07.419"W	5558.44	159.255	5.28	0.25	-5.27
11942.00	89.450	157.140	6561.57	5647.92	-5281.76	2001.91	1626463.54	267826.93	39°13'40.139"N	80°49'06.999"W	5648.41	159.242	2.84	0.03	-2.84
12031.00	88.890	155.840	6562.85	5736.74	-5363.36	2037.41	1626497.83	267744.81	39°13'39.333"N	80°49'06.548"W	5737.30	159.199	1.59	0.63	-1.46

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BAKER HUGHES

Operator NOBLE ENERGY
 Area Doddridge Co., WV
 Field Doddridge
 Facility Oxford Pad

WELLPATH DATA (182 stations)

MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closeure Dir	DLS	Build Rate	Turn Rate
[ft]	[°]	[°]	[ft]	[ft]	[ft]	[ft]	[US m]	[US m]	[ft]	[ft]	[ft]	[°/100ft]	[°/100ft]	[°/100ft]
12121.00	89.050	158.790	6564.47	5826.62	-5446.37	2072.11	1626531.30	267661.30	39°13'38.512"N	80°49'06.107"W	Closeure Dir	5827.23	159.170	3.28
12211.00	89.010	161.080	6566.00	5916.60	-5330.89	2102.98	1626560.92	267576.34	39°13'37.677"N	80°49'05.115"W	Closeure Dir	5917.20	159.182	2.54
12300.00	89.080	162.070	6567.48	6005.55	-5615.32	2131.11	1626587.80	267491.51	39°13'36.842"N	80°49'05.358"W	Closeure Dir	6006.11	159.217	1.11
12390.00	89.380	162.250	6568.69	6095.48	-5700.98	2158.68	1626614.10	267405.45	39°13'35.995"N	80°49'05.007"W	Closeure Dir	6095.99	159.261	0.33
12480.00	89.780	160.920	6569.66	6185.44	-5786.37	2187.11	1626641.26	267319.66	39°13'35.151"N	80°49'04.646"W	Closeure Dir	6185.91	159.295	1.48
12570.00	89.350	162.800	6570.66	6275.38	-5871.88	2215.12	1626668.01	267233.74	39°13'34.296"N	80°49'04.290"W	Closeure Dir	6275.81	159.331	2.09
12659.00	89.450	162.450	6571.59	6364.28	-5956.82	2241.70	1626693.33	267148.43	39°13'33.467"N	80°49'03.953"W	Closeure Dir	6364.66	159.377	0.11
12749.00	89.380	160.410	6572.51	6454.25	-6042.12	2270.36	1626720.73	267062.71	39°13'32.624"N	80°49'03.589"W	Closeure Dir	6454.59	159.406	2.27
12839.00	89.750	160.720	6573.19	6544.24	-6126.99	2300.30	1626749.42	266977.41	39°13'31.785"N	80°49'03.208"W	Closeure Dir	6544.57	159.438	0.08
12928.00	89.820	160.500	6573.53	6633.23	-6210.94	2329.85	1626777.72	266893.04	39°13'30.955"N	80°49'02.833"W	Closeure Dir	6633.55	159.478	0.25
13017.00	89.260	154.890	6574.24	6722.12	-6293.25	2363.61	1626810.27	266810.25	39°13'30.141"N	80°49'02.404"W	Closeure Dir	6722.47	159.415	6.33
13107.00	89.260	153.200	6575.41	6811.63	-6374.16	2403.00	1626848.45	266728.76	39°13'29.342"N	80°49'01.903"W	Closeure Dir	6812.07	159.444	1.88
13197.00	89.350	156.420	6576.50	6901.24	-6455.58	2441.30	1626885.54	266646.79	39°13'28.537"N	80°49'01.417"W	Closeure Dir	6901.78	159.285	3.58
13286.00	89.350	157.260	6577.51	6990.10	-6537.41	2476.30	1626919.33	266564.46	39°13'27.728"N	80°49'00.972"W	Closeure Dir	6990.69	159.254	0.94
13376.00	89.820	163.010	6578.16	7080.06	-6622.01	2506.87	1626948.65	266479.42	39°13'26.892"N	80°49'00.584"W	Closeure Dir	7080.64	159.265	6.39
13465.00	89.660	163.530	6578.56	7168.91	-6707.24	2532.49	1626973.00	266393.82	39°13'26.049"N	80°49'00.258"W	Closeure Dir	7169.42	159.315	0.18
13555.00	89.820	159.980	6578.97	7258.85	-6792.71	2560.66	1626999.91	266307.96	39°13'25.205"N	80°48'59.901"W	Closeure Dir	7259.33	159.345	3.95
13644.00	89.380	161.640	6579.59	7347.84	-6876.75	2589.91	1627027.92	266223.49	39°13'24.374"N	80°48'59.529"W	Closeure Dir	7348.29	159.363	1.93
13734.00	89.380	163.040	6580.57	7437.76	-6962.51	2617.21	1627053.95	266137.35	39°13'23.526"N	80°48'59.182"W	Closeure Dir	7438.16	159.399	1.56
13823.00	89.290	160.690	6581.60	7526.70	-7047.07	2644.91	1627080.40	266052.38	39°13'22.691"N	80°48'58.830"W	Closeure Dir	7527.07	159.428	2.64
13913.00	89.380	160.950	6582.65	7616.68	-7132.07	2674.48	1627108.71	265966.96	39°13'21.850"N	80°48'58.455"W	Closeure Dir	7617.04	159.444	0.10
14002.00	89.480	158.850	6583.53	7705.67	-7215.64	2705.06	1627138.05	265882.95	39°13'21.024"N	80°48'58.066"W	Closeure Dir	7706.03	159.450	2.36
14092.00	89.420	159.070	6584.40	7795.65	-7299.64	2737.37	1627169.12	265798.49	39°13'20.194"N	80°48'57.656"W	Closeure Dir	7796.02	159.444	0.07
14181.00	89.260	159.700	6585.42	7884.64	-7382.93	2768.70	1627199.22	265714.74	39°13'19.371"N	80°48'57.258"W	Closeure Dir	7885.01	159.443	0.71
14271.00	89.450	158.710	6586.43	7974.63	-7467.06	2800.65	1627229.92	265630.16	39°13'18.539"N	80°48'56.852"W	Closeure Dir	7975.01	159.411	1.10
14360.00	89.110	156.600	6587.55	8063.54	-7549.37	2834.48	1627262.53	265547.36	39°13'17.726"N	80°48'56.422"W	Closeure Dir	8063.95	159.421	2.37
14450.00	89.170	156.150	6588.90	8153.35	-7631.82	2870.55	1627297.37	265464.39	39°13'16.911"N	80°48'55.964"W	Closeure Dir	8153.81	159.387	0.07
14539.00	89.170	160.270	6590.19	8242.28	-7714.43	2903.57	1627329.18	265381.31	39°13'16.094"N	80°48'55.545"W	Closeure Dir	8242.77	159.375	4.63
14629.00	89.230	159.600	6591.45	8332.27	-7798.96	2934.45	1627358.80	265296.33	39°13'15.259"N	80°48'55.153"W	Closeure Dir	8332.75	159.381	0.07
14718.00	89.110	160.960	6592.74	8421.25	-7882.73	2964.48	1627387.59	265212.13	39°13'14.431"N	80°48'54.771"W	Closeure Dir	8421.73	159.390	1.53

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Actual Wellpath Report

OXFD1FHS AWP (Curve&Lateral) Proj: 14792'
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REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot F
Area	Doddridge Co., WV	Well	OXFD1FHS
Field	Doddridge	Wellbore	OXFD1FHS AWB
Facility	Oxford Pad		

WELLPATH DATA (182 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]
14767.00	89.010	160.010	6593.54	8470.25	-7928.91	2980.84	1627403.27	265165.72	39°13'13.974"N	80°48'54.563"W	8470.72	159.396	1.95	-0.20	-1.94
14792.00	89.010	160.010	6593.97	8495.24	-7952.40	2989.39	1627411.47	265142.11	39°13'13.742"N	80°48'54.455"W	8495.71	159.398	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
OXFD1FHS LP Plat		5965.00	-562.87	173.32	1624704.85	272572.09	39°14'26.780"N	80°49'30.235"W	point
OXFD1FHS BHL Rev-4		6467.10	-7953.41	2987.40	1627409.46	265141.13	39°13'13.732"N	80°48'54.480"W	point
OXFD1FHS LP Rev-4		6604.00	-598.32	253.85	1624784.85	272535.47	39°14'26.430"N	80°49'29.211"W	point

WELLPATH COMPOSITION - Ref Wellbore: OXFD1FHS AWB Ref Wellpath: OXFD1FHS AWP (Curve&Lateral) Proj: 14792'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
18.60	670.00	Generic gyro - northseeking (Standard)	VES Gyro (100'-670')	OXFD1FHS AWB
670.00	5419.00	NaviTrak (MagCorr)	BHI MWD Surveys (670')(770'-6702')	OXFD1FHS AWB
5419.00	14767.00	NaviTrak (MagCorr)	BHI AT Curve (5960')(5430'-14767')	OXFD1FHS AWB
14767.00	14792.00	Blind Drilling (std)	Projection to bit	OXFD1FHS AWB

Environmental Protection Department of Energy & Environment
 Approved by: [Signature]
 Date: 5/2/14
 E.D.

17-06005



Actual Wellpath Report

OXFD1FHS AWP (Curve&Lateral) Proj: 14792'
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REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY	Slot	Slot F
Area	Doddridge Co., WV	Well	OXFD1FHS
Field	Doddridge	Wellbore	OXFD1FHS AWB
Facility	Oxford Pad		

COMMENTS

Wellpath general comments
API: 47-017-06005-0100
BHI Job #: 5591464
Rig: Precision 542
Duration: 7/28/2013-8/12/2013
VES Gyro (100'-670')
BHI MWD Surveys (670')(770'-5960')
BHI AT Curve (5960')(5430'-14767')
Projected MD at TD: 14792'
API: 47-017-06005-0000
BHI Job #: 5591464
Rig: Precision 542
Duration: 7/28/2013-8/1/2013
VES Gyro (100'-670')
BHI MWD Surveys (670')(770'-6702')
Projected MD at TD: 6755'

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Office of Oil and Gas
JUN 25 2014
WV Department of
Environmental Protection

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