



CNX GAS COMPANY, LLC

Location: Doddridge Co., WV
 Field: Doddridge
 Facility: OXFD-11 Pad

Slot: Slot K
 Well: OXFD-11K-HS
 Wellbore: OXFD-11K-HS PWB



Plot reference wellpath is OXFD-11K-HS PWB Rev-B 0

True vertical depths are referenced to Patterson 324 (RKB)	Grid System: NAD27 / Lambert West Virginia SP, Northern Zone (4701), US feet
Measured depths are referenced to Patterson 324 (RKB)	North Reference: Grid north
Patterson 324 (RKB) to Mean Sea Level: 1332.45 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: Slot K): -1307.95 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: fulmjcs on 10/16/2014

Location Information

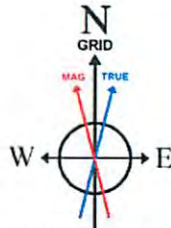
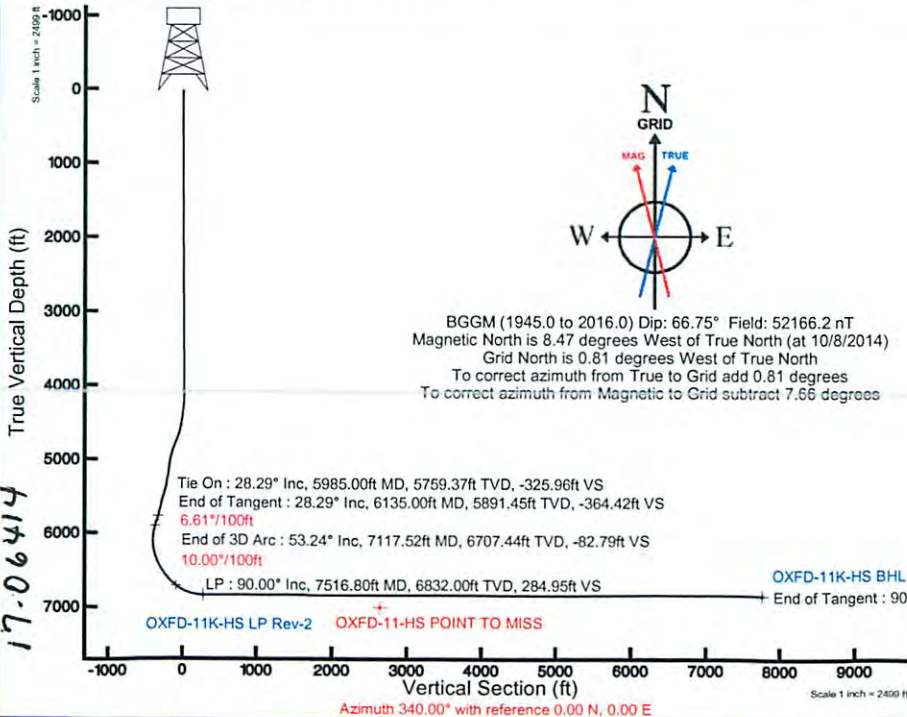
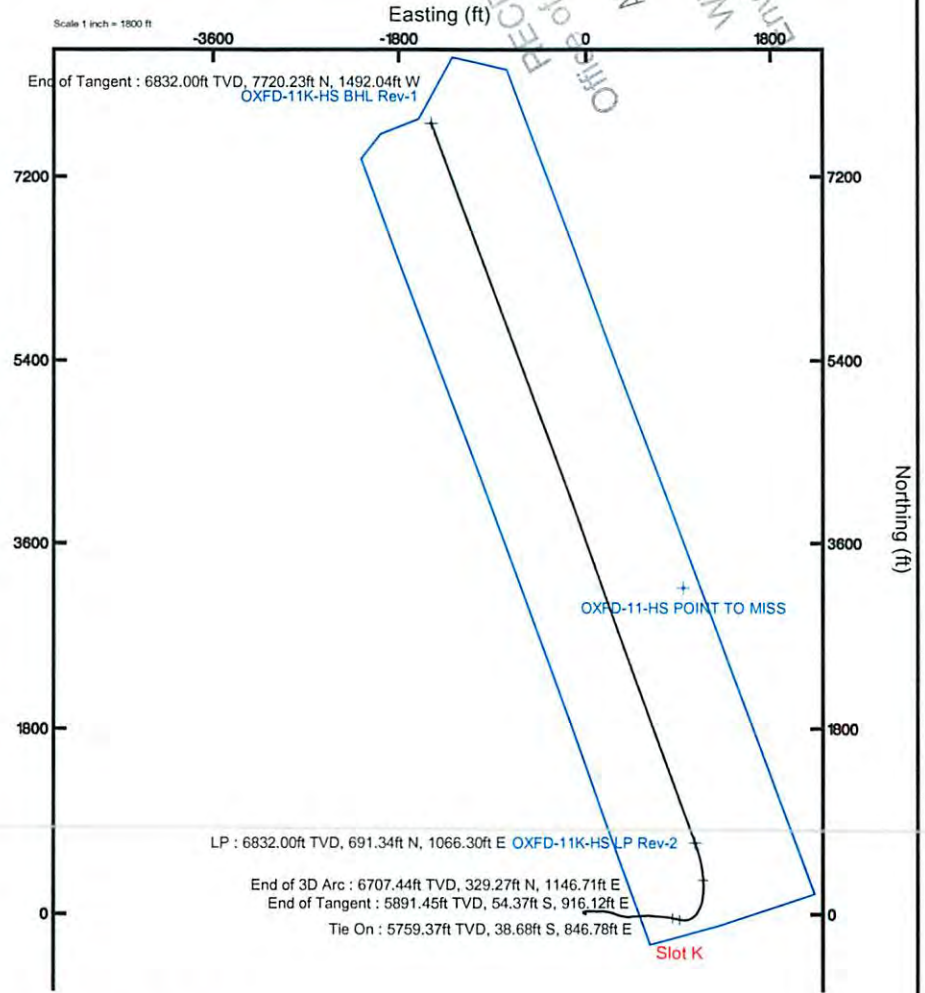
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude		
OXFD-11 Pad	1641688.000	246757.000	39°10'14.064"N	80°45'49.782"W		
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Slot K	75.00	66.00	1641754.000	246832.000	39°10'14.814"N	80°45'48.957"W
Patterson 324 (RKB) to Mud line (At Slot: Slot K)					24.5ft	
Mean Sea Level to Mud line (At Slot: Slot K)					-1307.95ft	
Patterson 324 (RKB) to Mean Sea Level					1332.45ft	

Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	5985.00	28.290	102.750	5759.37	-38.68	846.78	4.82	-325.96
End of Tangent	6135.00	28.290	102.750	5891.45	-54.37	916.12	0.00	-364.42
End of 3D Arc	7117.52	53.242	356.830	6707.44	329.27	1146.71	6.61	-82.79
LP	7516.80	90.000	340.000	6832.00	691.34	1066.30	10.00	284.95
End of Tangent	14996.80	90.000	340.000	6832.00	7720.23	-1492.04	0.00	7764.95

Targets

Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
OXFD-11K-HS BHL Rev-1	14996.80	6832.00	7720.23	-1492.04	1642022.05	254503.00	39°11'30.905"N	80°46'09.285"W
OXFD-11K-HS LP Rev-2	7516.80	6832.00	691.34	1066.30	1642820.27	247523.32	39°10'21.795"N	80°45'35.643"W
OXFD-11-HS POINT TO MISS	7000.03	3162.54	952.61	1842706.78	249964.45	39°10'46.202"N	80°45'37.424"W	



BGGM (1945.0 to 2016.0) Dip: 66.75° Field: 52166.2 nT
 Magnetic North is 8.47 degrees West of True North (at 10/8/2014)
 Grid North is 0.81 degrees West of True North
 To correct azimuth from True to Grid add 0.81 degrees
 To correct azimuth from Magnetic to Grid subtract 7.66 degrees

Azimuth 340.00° with reference 0.00 N, 0.00 E

17-06414

ACTUAL WELLPATH REPORT (CSV version)

Prepared by Baker Hughes

Software System: WellArchitect® 4.0.1

REFERENCE WELLPATH IDENTIFICATION

Operator CNX GAS COMPANY, LLC
 Area Doddridge Co., WV
 Field Doddridge
 Facility OXFD-11 Pad
 Slot Slot K
 Well OXFD-11K-HS
 Wellbore OXFD-11K-HS AWB
 Wellpath OXFD-11K-HS AWP
 Sidetrack (none)

REPORT SETUP INFORMATION

Projection NAD27 / Lambert West Virginia SP, Northern Zone (4701), US feet
 North Refe Grid
 Scale 0.999972
 Convergen 0.81° West
 Software S WellArchitect® 4.0.1
 User Gendouw
 Report Ger 10/23/2014 at 9:54:23 PM
 DataBase/WellArchitectDB/ev1011.xml

WELLPATH	Local North [ft]	Local East [ft]	Easting [US ft]	Northing [US ft]	Latitude	Longitude
Slot Locatic	75	66	1641754	246832	39°10'14.8	80°45'48.957"W
Facility Ref			1641688	246757	39°10'14.0	80°45'49.782"W
Field Refer			1640277	240427.6	39°09'11.3	80°46'06.561"W

WELLPATH DATUM

Calculation Minimum curvature
 Horizontal Slot
 Vertical Re Patterson 324 (RKB)
 MD Refere Patterson 324 (RKB)
 Field Vertic Mean Sea Level
 Patterson ± 1332.45ft
 Patterson ± 1332.45ft
 Patterson ± 24.50ft
 Section Ori N 0.00, E 0.00 ft
 Section Azi 340.00°

WELLPATH DATA † = interpolated/extrapolated station

	MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]
†	0	0	314.99	0	0	0	0	0
	24.5	0	314.99	24.5	0	0	0	0
	112	0.2	314.99	112	0.14	0.11	-0.11	0.23
	212	0.27	306.94	212	0.49	0.37	-0.42	0.08
	312	0.32	315.88	312	0.95	0.72	-0.8	0.07
	412	0.34	308.87	412	1.46	1.1	-1.23	0.05
	512	0.36	280.39	511.99	1.87	1.34	-1.77	0.17
	612	0.36	288.3	611.99	2.22	1.5	-2.38	0.05
	712	0.1	288.49	711.99	2.47	1.63	-2.76	0.26
	812	0.29	277.2	811.99	2.64	1.69	-3.09	0.19
	912	0.34	281.42	911.99	2.91	1.78	-3.63	0.06
	1012	0.52	309.34	1011.99	3.46	2.12	-4.27	0.27
	1112	0.66	304.04	1111.98	4.31	2.73	-5.1	0.15
	1212	0.45	294.79	1211.98	5.06	3.22	-5.94	0.23
	1312	0.37	327.77	1311.97	5.65	3.66	-6.46	0.25
	1412	0.57	313.03	1411.97	6.41	4.27	-7	0.23
	1512	0.42	282.07	1511.97	7.04	4.69	-7.72	0.3
	1612	0.66	304.63	1611.96	7.71	5.09	-8.55	0.52
	1712	0.36	300.19	1711.96	8.42	5.58	-9.3	0.3
	1812	0.58	280.07	1811.96	8.91	5.82	-10.07	0.27
	1912	0.41	293.58	1911.95	9.41	6.05	-10.9	0.12
	2012	0.46	307.52	2011.95	10	6.44	-11.54	0.12

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2112	0.44	311.24	2111.95	10.68	6.94	-12.15	0.04
2212	0.51	293.35	2211.94	11.32	7.37	-12.85	0.16
2312	0.55	295.16	2311.94	11.96	7.75	-13.69	0.04
2412	0.47	290.58	2411.93	12.57	8.1	-14.51	0.09
2512	0.75	279.58	2511.93	13.16	8.35	-15.54	0.3
2612	0.45	278.24	2611.92	13.67	8.51	-16.57	0.3
2712	0.73	285.24	2711.92	14.22	8.74	-17.57	0.29
2899	0.99	296.61	2898.9	16.08	9.78	-20.17	0.17
2931	0.71	287.88	2930.89	16.41	9.96	-20.6	0.96
2962	0.33	255.66	2961.89	16.53	10	-20.87	1.5
3057	0.48	274.72	3056.89	16.73	9.96	-21.54	0.21
3152	0.54	261.82	3151.89	16.98	9.93	-22.38	0.14
3246	1.11	249.62	3245.88	17.07	9.55	-23.67	0.63
3339	0.56	13.23	3338.87	17.44	9.68	-24.41	1.61
3433	1.08	42.97	3432.86	18.23	10.78	-23.7	0.7
3528	1.23	41.89	3527.84	19.12	12.19	-22.41	0.16
3623	1	46.57	3622.82	19.93	13.52	-21.12	0.26
3717	0.77	20.66	3716.81	20.73	14.67	-20.31	0.48
3812	0.94	27.19	3811.8	21.75	15.96	-19.72	0.21
3906	2.25	60.69	3905.76	22.57	17.55	-17.76	1.65
4001	2.78	68.66	4000.67	22.93	19.3	-13.99	0.67
4033	4.29	68.16	4032.61	22.98	20.03	-12.16	4.72
4064	4.68	70.5	4063.52	23.01	20.89	-9.89	1.39
4096	5.66	66.2	4095.39	23.1	21.96	-7.21	3.29
4127	7.82	74.92	4126.17	23.02	23.12	-3.78	7.69
4159	9.84	77.94	4157.79	22.46	24.26	1	6.47
4190	12.08	77.26	4188.22	21.68	25.53	6.75	7.24
4222	13.39	84.01	4219.44	20.36	26.66	13.7	6.19
4253	14.86	88.73	4249.5	18.22	27.12	21.25	6.02
4285	16.05	95.3	4280.34	15.01	26.8	29.76	6.61
4318	17.06	95.02	4311.98	11.01	25.96	39.12	3.07
4350	18.71	90.39	4342.43	7.24	25.51	48.93	6.8
4379	20.56	84.46	4369.74	4.34	25.97	58.65	9.37
4411	21.28	88.4	4399.64	1.11	26.67	70.05	4.94
4443	22.09	93.58	4429.37	-3.13	26.46	81.86	6.49
4474	22.64	95.17	4458.04	-8	25.56	93.62	2.64
4505	24.5	93.68	4486.46	-13.12	24.61	105.98	6.3
4537	26.9	87.37	4515.29	-17.95	24.52	119.84	11.37
4568	28.32	87.34	4542.76	-22.24	25.18	134.19	4.58
4600	30.61	88.21	4570.62	-27.04	25.79	149.92	7.28
4631	32.2	92.33	4597.08	-32.65	25.7	166.06	8.62
4663	32.55	96.66	4624.11	-39.75	24.35	183.13	7.33
4695	33.88	100.08	4650.89	-48.09	21.79	200.47	7.18
4726	35.75	102.38	4676.34	-57.27	18.34	217.82	7.37
4758	36.17	103.71	4702.24	-67.52	14.09	236.13	2.77
4789	35.53	103.45	4727.37	-77.56	9.83	253.77	2.12
4821	35.16	106.62	4753.47	-88.18	5.03	271.65	5.85
4852	33.03	108.39	4779.14	-98.75	-0.19	288.22	7.58
4883	32.05	108.44	4805.27	-109.11	-5.45	304.04	3.16
4915	31.57	107.92	4832.47	-119.54	-10.72	320.07	1.73
4946	29.19	106.44	4859.21	-129.02	-15.35	335.04	8.05
4978	27.07	102.13	4887.43	-137.53	-19.09	349.65	9.17
5009	25.47	101.43	4915.23	-144.76	-21.9	363.08	5.26
5041	24.97	102.25	4944.18	-151.95	-24.69	376.42	1.91
5072	23.95	101.91	4972.4	-158.77	-27.38	388.97	3.32
5103	23.29	97.12	5000.8	-164.89	-29.44	401.21	6.54
5135	22.97	91.22	5030.23	-170.03	-30.36	413.73	7.31
5167	23.59	85.25	5059.63	-173.97	-29.96	426.36	7.62
5198	25.5	82.9	5087.83	-177.1	-28.62	439.16	6.92
5230	27.95	83.32	5116.41	-180.36	-26.9	453.45	7.68
5261	30.42	84.09	5143.47	-183.95	-25.24	468.47	8.06
5293	32.68	85.75	5170.74	-188.27	-23.77	485.15	7.57
5324	33.2	87.48	5196.76	-193.09	-22.77	501.98	3.47
5356	32.7	87.14	5223.61	-198.27	-21.96	519.36	1.67
5387	31.72	86.89	5249.84	-203.1	-21.1	535.86	3.19
5419	31.23	86.51	5277.13	-207.9	-20.14	552.54	1.65
5451	31.91	85.48	5304.39	-212.52	-18.97	569.25	2.71
5482	31.73	86.08	5330.73	-216.96	-17.76	585.55	1.17
5514	32.65	87.21	5357.82	-221.85	-16.77	602.57	3.44

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5545	33.61	91.45	5383.78	-227.46	-16.58	619.5	8.09
5577	34.37	95	5410.31	-234.52	-17.59	637.36	6.64
5608	34.33	95.77	5435.91	-242.02	-19.23	654.77	1.41
5640	33.69	95.59	5462.43	-249.77	-21	672.58	2.02
5671	33.18	94.51	5488.3	-257	-22.51	689.6	2.53
5703	32.48	95.14	5515.19	-264.29	-23.96	706.88	2.43
5733	32.74	93.96	5540.46	-271	-25.25	723	2.29
5765	32.56	94.01	5567.41	-278.02	-26.45	740.22	0.57
5796	30.77	94.17	5593.79	-284.66	-27.61	756.45	5.78
5828	29.84	93.95	5621.42	-291.25	-28.75	772.56	2.93
5859	28.98	95.17	5648.42	-297.57	-29.96	787.73	3.38
5891	28.49	96.72	5676.48	-304.3	-31.55	803.03	2.79
5923	27.95	98.48	5704.68	-311.31	-33.55	818.03	3.1
5954	28.11	99.61	5732.04	-318.38	-35.84	832.42	1.79
5985	28.29	102.75	5759.37	-325.96	-38.68	846.78	4.82
6075	28.47	103.55	5838.55	-349.36	-48.41	888.44	0.47
6113	27.91	100.71	5872.04	-358.9	-52.19	905.98	3.83
6162	26.1	91.71	5915.72	-368.75	-54.64	928.04	9.11
6207	25.37	84.78	5956.26	-374.88	-54.06	947.54	6.88
6256	25.22	80.29	6000.57	-379.42	-51.34	968.28	3.93
6301	24.85	76.93	6041.34	-382.27	-47.59	986.94	3.26
6349	24.21	73.52	6085.01	-384.09	-42.51	1006.21	3.24
6395	24.13	69.23	6126.98	-384.55	-36.5	1024.04	3.82
6443	23.39	58.44	6170.94	-382.5	-28.03	1041.35	9.18
6489	23.67	48.87	6213.13	-377.34	-17.18	1056.09	8.32
6537	24.57	43	6256.94	-369.34	-3.54	1070.15	5.34
6583	25.62	38.47	6298.6	-359.8	11.24	1082.86	4.76
6633	27.26	33.08	6343.38	-347.26	29.31	1095.84	5.81
6678	29.15	27.28	6383.04	-333.63	47.69	1106.49	7.39
6726	31.08	20.62	6424.57	-316.29	69.68	1116.22	8.03
6772	33.35	15.7	6463.49	-297	92.97	1123.82	7.54
6821	36.91	11.21	6503.57	-273.47	120.39	1130.33	8.97
6866	39.92	8.19	6538.83	-249.18	147.94	1135.02	7.88
6912	42.99	5.37	6573.3	-221.99	178.17	1138.59	7.81
6961	44.97	2.84	6608.56	-190.93	212.11	1141.01	5.4
7009	47.8	0.28	6641.67	-158.61	246.84	1141.94	7.05
7056	50.73	357.97	6672.34	-124.97	282.44	1141.38	7.26
7107	53.91	356.6	6703.51	-86.43	322.75	1139.45	6.59
7150	56.46	355.68	6728.06	-52.52	357.97	1137.07	6.18
7199	60.83	354.42	6753.55	-12.12	399.64	1133.45	9.18
7245	65.63	353	6774.27	27.77	440.45	1128.94	10.79
7293	70.81	350.8	6792.07	71.37	484.56	1122.65	11.6
7340	74.96	348.68	6805.9	115.63	528.75	1114.64	9.83
7388	77.47	347.27	6817.34	161.79	574.33	1104.93	5.96
7435	78.76	346.54	6827.02	207.45	619.13	1094.51	3.14
7483	84.11	345.1	6834.16	254.65	665.13	1082.88	11.53
7530	89.78	343.7	6836.67	301.42	710.31	1070.27	12.42
7626	90	338.39	6836.85	397.37	801.07	1039.09	5.54
7720	89.82	337.62	6837	491.32	888.23	1003.89	0.84
7816	89.91	337.73	6837.23	587.24	977.04	967.42	0.15
7910	90.43	335.17	6836.95	681.05	1063.2	929.87	2.78
8006	90.43	335.36	6836.23	776.72	1150.39	889.7	0.2
8101	90.37	335.26	6835.56	871.4	1236.7	850.02	0.12
8195	90.31	342.18	6835.01	965.31	1324.24	815.92	7.36
8290	90.98	344.67	6833.94	1060.13	1415.28	788.83	2.71
8385	90.95	341.05	6832.34	1154.98	1506.03	760.84	3.81
8480	90.89	339.63	6830.81	1249.97	1595.48	728.88	1.5
8575	90.86	339.04	6829.36	1344.95	1684.35	695.36	0.62
8670	90.92	339.34	6827.88	1439.93	1773.15	661.61	0.32
8764	90.86	340.7	6826.42	1533.91	1861.48	629.5	1.45
8858	90.86	341.23	6825.01	1627.89	1950.33	598.85	0.56
8954	90.89	342.2	6823.55	1723.83	2041.47	568.73	1.01
9048	90.92	340.19	6822.06	1817.8	2130.43	538.44	2.14
9143	90.92	340.21	6820.54	1912.78	2219.81	506.26	0.02
9238	90.95	340.17	6818.99	2007.77	2309.17	474.07	0.05
9333	90.92	339.94	6817.44	2102.76	2398.46	441.67	0.21
9428	90.46	340.18	6816.29	2197.75	2487.76	409.27	0.55
9523	90.52	341.32	6815.48	2292.74	2577.44	377.95	1.2
9618	90.37	340.38	6814.74	2387.72	2667.18	346.79	1

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9714	90.46	340.86	6814.05	2483.72	2757.74	314.93	0.51
9809	90.4	340.6	6813.33	2578.7	2847.42	283.58	0.28
9904	90.37	340.24	6812.7	2673.7	2936.92	251.75	0.38
9998	90.95	340.44	6811.61	2767.69	3025.43	220.12	0.65
10093	90.89	339.14	6810.09	2862.68	3114.57	187.31	1.37
10188	90.86	339.92	6808.64	2957.66	3203.56	154.09	0.82
10282	90.22	340.69	6807.75	3051.65	3292.06	122.41	1.07
10377	90.22	343.7	6807.39	3146.57	3382.5	93.37	3.17
10472	90.18	343	6807.05	3241.41	3473.51	66.15	0.74
10567	90.22	343.57	6806.72	3336.25	3564.5	38.83	0.6
10663	90.15	343.11	6806.41	3432.09	3656.47	11.3	0.48
10758	90.18	339.77	6806.14	3527.05	3746.51	-18.93	3.52
10853	90.15	337.55	6805.87	3622.01	3834.99	-53.5	2.34
10948	90.12	338.28	6805.64	3716.95	3923.02	-89.22	0.77
11044	90.15	337.95	6805.42	3812.9	4012.1	-125	0.35
11137	90.18	339.67	6805.15	3905.87	4098.81	-158.61	1.85
11232	90.74	339.62	6804.38	4000.87	4187.88	-191.66	0.59
11328	90.65	339.8	6803.22	4096.86	4277.91	-224.95	0.21
11423	90.74	340.62	6802.07	4191.85	4367.3	-257.11	0.87
11519	91.69	338.14	6800.03	4287.82	4457.12	-290.9	2.77
11614	92.37	335.9	6796.67	4382.62	4544.52	-327.97	2.46
11709	92.52	336.71	6792.61	4477.34	4631.43	-366.11	0.87
11804	91.63	337.86	6789.17	4572.16	4719	-402.77	1.53
11899	91.72	338.82	6786.4	4667.08	4807.25	-437.82	1.01
11994	91.72	338.75	6783.55	4762.02	4895.78	-472.18	0.07
12090	91.72	338.29	6780.66	4857.94	4985.07	-507.32	0.48
12185	92.1	338.87	6777.5	4952.86	5073.46	-541.99	0.73
12280	92.28	339.79	6773.87	5047.78	5162.27	-575.5	0.99
12375	92.16	340.71	6770.19	5142.71	5251.62	-607.58	0.98
12470	92.13	341.14	6766.63	5237.63	5341.34	-638.6	0.45
12565	92.34	341.23	6762.93	5332.54	5431.19	-669.22	0.24
12660	91.63	340.74	6759.64	5427.47	5520.96	-700.15	0.91
12755	91.69	341.65	6756.88	5522.41	5610.85	-730.76	0.96
12850	91.6	341.69	6754.16	5617.33	5700.99	-760.63	0.1
12944	91.75	343.86	6751.41	5711.17	5790.73	-788.45	2.31
13039	92.09	342.89	6748.23	5805.95	5881.7	-815.61	1.08
13135	92.15	341.8	6744.67	5901.8	5973.12	-844.71	1.14
13230	92.28	340.84	6741	5996.71	6063.05	-875.11	1.02
13325	92.18	341.01	6737.31	6091.62	6152.76	-906.13	0.21
13420	92.16	341.1	6733.71	6186.54	6242.55	-936.95	0.1
13514	91.63	338.74	6730.6	6280.48	6330.78	-969.21	2.57
13608	90.34	338.73	6728.98	6374.44	6418.37	-1003.29	1.37
13703	90.25	339.21	6728.5	6469.42	6507.04	-1037.38	0.51
13798	91.17	337.24	6727.32	6564.36	6595.25	-1072.62	2.29
13892	91.29	339.19	6725.3	6658.29	6682.51	-1107.5	2.08
13987	91.14	339.76	6723.29	6753.27	6771.46	-1140.8	0.62
14082	91.23	338.34	6721.32	6848.23	6860.16	-1174.76	1.5
14176	91.17	339.85	6719.35	6942.2	6947.95	-1208.29	1.61
14271	91.72	341.46	6716.96	7037.16	7037.55	-1239.75	1.79
14366	91.63	342.26	6714.18	7132.06	7127.79	-1269.31	0.85
14461	91.66	343.07	6711.45	7226.92	7218.44	-1297.61	0.85
14556	91.63	341.94	6708.72	7321.79	7309.01	-1326.15	1.19
14651	91.6	341.01	6706.05	7416.72	7399.05	-1356.33	0.98
14746	91.66	340.47	6703.35	7511.67	7488.69	-1387.65	0.57
14840	91.63	339.67	6700.65	7605.63	7577.03	-1419.68	0.85
14935	91.63	339.83	6697.94	7700.59	7666.12	-1452.54	0.17
14973	91.63	339.59	6696.86	7738.58	7701.75	-1465.72	0.63
14999	91.63	339.59	6696.12	7764.57	7726.1	-1474.78	0

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
OXFD-11K-HS BHL Rev		6832	7720.23	-1492.04	1640262	254552	39°11'30.9	80°46'09.2	point
OXFD-11K-HS LP Rev-2		6832	691.34	1066.3	1642820	247523.3	39°10'21.7	80°45'35.5	point
OXFD-11-HS POINT TO		7000.03	3162.54	952.81	1642707	249994.5	39°10'46.2	80°45'37.4	point

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WELLPATH COMPOSITION Ref Wellbore: OXFD-11K-HS AWB Ref Wellpath: OXFD-11K-HS AWP
Log Name/ Start MD End MD Pos Unc Model
[ft] [ft]

17.06414

01_Gyro (1	24.5	2712 Generic gyro - northseeking (Standard)
02_Weather	2712	5985 ISCWSA MWD, Rev. 2 (Standard)
03_BHI AT	5985	14973 NaviTrak (AT Curve Short Spaced)
Projection	14973	14999 Blind Drilling (std)

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