

### REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot #605H
Area	Ohio County, WV	Well	Edward Dremak OHI 605H
Field	Ohio	Wellbore	Edward Dremak OHI 605H AWB
Facility	Edward Dremak OHI Pad		

### REPORT SETUP INFORMATION

Projection System	NAD83 / UTM Zone 17 North, US feet	Software System	WellArchitect® 5.1
North Reference	Grid	User	Atenjen
Scale	0.999611	Report Generated	19/Mar/2019 at 09:43
Convergence at slot	0.22° East	Database/Source file	WA_MPL_EASTERNUS_Defn/Edward_Dremak_OHI_605H_AWP_Proj_19174_.xml

### WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-23.38	46.27	1737787.08	14584680.96	40°09'30.990"N	80°39'05.416"W
Facility Reference Pt			1737740.83	14584704.33	40°09'31.223"N	80°39'06.011"W
Field Reference Pt			0.00	0.00	0°00'00.000"	85°29'19.478"W

### WELLPATH DATUM

Calculation method	Minimum curvature	SDC 40 (KB) to Facility Vertical Datum	1113.40ft
Horizontal Reference Pt	Slot	SDC 40 (KB) to Mean Sea Level	1113.40ft
Vertical Reference Pt	SDC 40 (KB)	SDC 40 (KB) to Ground Level at Slot (Slot #605H)	26.00ft
MD Reference Pt	SDC 40 (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	357.43°

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# Actual Wellpath Report

Edward Dremak OHI 605H AWP Proj: 19174'

Page 2 of 11



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Field		
Facility		

## WELLPATH DATA (218 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	140.430	0.00	0.00	0.00	0.00	1737787.08	14584680.96	40°09'30.990"N	80°39'05.416"W	0.00	0.000	0.00	0.00	0.00
26.00	0.000	140.430	26.00	0.00	0.00	0.00	1737787.08	14584680.96	40°09'30.990"N	80°39'05.416"W	0.00	0.000	0.00	0.00	0.00
149.00	0.150	140.430	149.00	-0.13	-0.12	0.10	1737787.18	14584680.84	40°09'30.989"N	80°39'05.415"W	0.16	140.430	0.12	0.12	114.17
240.00	0.300	185.490	240.00	-0.46	-0.45	0.16	1737787.24	14584680.51	40°09'30.986"N	80°39'05.414"W	0.48	161.040	0.24	0.16	49.52
298.00	0.430	192.370	298.00	-0.82	-0.82	0.09	1737787.18	14584680.15	40°09'30.982"N	80°39'05.415"W	0.82	173.400	0.24	0.22	11.86
389.00	0.510	165.010	389.00	-1.55	-1.54	0.13	1737787.21	14584679.42	40°09'30.975"N	80°39'05.415"W	1.55	175.323	0.26	0.09	-30.07
419.00	0.760	192.610	418.99	-1.87	-1.86	0.12	1737787.20	14584679.10	40°09'30.972"N	80°39'05.415"W	1.87	176.404	1.29	0.83	92.00
510.00	2.020	181.410	509.96	-4.05	-4.06	-0.05	1737787.03	14584676.91	40°09'30.950"N	80°39'05.417"W	4.06	180.763	1.41	1.38	-12.31
603.00	5.100	180.650	602.77	-9.81	-9.83	-0.14	1737786.94	14584671.14	40°09'30.893"N	80°39'05.419"W	9.83	180.823	3.31	3.31	-0.82
695.00	6.870	170.260	694.27	-19.36	-19.34	0.74	1737787.82	14584661.63	40°09'30.799"N	80°39'05.408"W	19.36	177.799	2.25	1.92	-11.29
788.00	7.390	150.000	786.57	-30.19	-30.01	4.68	1737791.76	14584650.97	40°09'30.693"N	80°39'05.357"W	30.37	171.144	2.75	0.56	-21.78
881.00	7.870	116.220	878.79	-38.57	-38.00	13.38	1737800.46	14584642.98	40°09'30.614"N	80°39'05.246"W	40.29	160.601	4.78	0.52	-36.32
974.00	8.740	92.210	970.84	-42.22	-41.09	26.16	1737813.23	14584639.89	40°09'30.583"N	80°39'05.081"W	48.71	147.518	3.81	0.94	-25.82
1067.00	9.060	75.290	1062.74	-41.27	-39.50	40.30	1737827.37	14584641.48	40°09'30.598"N	80°39'04.899"W	56.43	134.425	2.83	0.34	-18.19
1159.00	10.510	65.930	1153.40	-36.67	-34.24	54.97	1737842.03	14584646.74	40°09'30.650"N	80°39'04.710"W	64.76	121.917	2.33	1.58	-10.17
1252.00	11.730	72.390	1244.66	-31.11	-27.92	71.73	1737858.78	14584653.05	40°09'30.712"N	80°39'04.494"W	76.97	111.269	1.87	1.31	6.95
1345.00	13.860	78.690	1335.35	-26.96	-22.88	91.67	1737878.71	14584658.10	40°09'30.761"N	80°39'04.237"W	94.48	104.012	2.73	2.29	6.77
1438.00	13.870	77.600	1425.64	-23.37	-18.30	113.48	1737900.51	14584662.67	40°09'30.805"N	80°39'03.956"W	114.94	99.160	0.28	0.01	-1.17
1530.00	14.100	74.250	1514.91	-18.93	-12.89	135.03	1737922.06	14584668.08	40°09'30.858"N	80°39'03.678"W	135.64	95.452	0.91	0.25	-3.64
1604.00	16.210	72.680	1586.33	-14.24	-7.37	153.57	1737940.59	14584673.60	40°09'30.911"N	80°39'03.439"W	153.75	92.746	2.90	2.85	-2.12
1674.00	18.280	72.020	1653.18	-8.84	-1.07	173.34	1737960.35	14584679.90	40°09'30.973"N	80°39'03.184"W	173.34	90.353	2.97	2.96	-0.94
1730.00	19.460	71.140	1706.17	-3.89	4.66	190.52	1737977.53	14584685.62	40°09'31.029"N	80°39'02.962"W	190.58	88.599	2.17	2.11	-1.57
1822.00	18.070	73.030	1793.28	3.96	13.78	218.67	1738005.67	14584694.74	40°09'31.118"N	80°39'02.599"W	219.11	86.395	1.65	-1.51	2.05
1913.00	18.380	73.210	1879.72	10.99	22.04	245.91	1738032.89	14584703.00	40°09'31.198"N	80°39'02.248"W	246.89	84.878	0.35	0.34	0.20
2006.00	21.310	68.510	1967.19	20.08	32.47	275.68	1738062.65	14584713.42	40°09'31.300"N	80°39'01.864"W	277.58	83.282	3.59	3.15	-5.05
2099.00	24.290	65.420	2052.92	32.73	46.82	308.80	1738095.76	14584727.52	40°09'31.439"N	80°39'01.437"W	312.30	81.415	3.45	3.20	-3.32
2191.00	25.920	65.360	2136.22	47.38	62.88	344.29	1738131.24	14584743.87	40°09'31.598"N	80°39'00.979"W	349.98	79.650	1.77	1.77	-0.07
2284.00	28.350	65.490	2218.98	63.27	80.51	382.86	1738169.79	14584761.45	40°09'31.771"N	80°39'00.481"W	391.24	78.124	2.61	2.61	0.14
2377.00	30.670	65.930	2299.91	80.21	99.35	424.62	1738211.53	14584780.28	40°09'31.955"N	80°38'59.942"W	436.08	76.831	2.51	2.49	0.47
2470.00	32.610	69.950	2379.09	96.44	117.62	469.82	1738256.72	14584798.54	40°09'32.134"N	80°38'59.359"W	484.33	75.945	3.08	2.09	4.32

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# Actual Wellpath Report

Edward Dremak OHI 605H AWP Proj: 19174'  
Page 3 of 11



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Ohio County, WV	Wellbore	Edward Dremak OHI 605H AWB
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Edward Dremak OHI Pad		

## WELLPATH DATA (218 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]
2559.00	33.650	72.270	2453.63	110.09	133.35	515.84	1738302.72	14584814.26	40°09'32.288"N	80°38'58.766"W	532.80	75.506	1.84	1.17	2.61
2652.00	34.470	72.710	2530.67	123.51	149.02	565.51	1738352.37	14584829.93	40°09'32.441"N	80°38'58.125"W	584.82	75.237	0.92	0.88	0.47
2745.00	36.020	71.630	2606.62	137.65	165.46	616.60	1738403.44	14584846.36	40°09'32.601"N	80°38'57.466"W	638.41	74.979	1.80	1.67	-1.16
2837.00	37.000	70.230	2680.57	153.20	183.35	668.32	1738455.14	14584864.24	40°09'32.776"N	80°38'56.799"W	693.02	74.659	1.40	1.07	-1.52
2930.00	35.850	71.290	2755.40	169.05	201.55	720.46	1738507.26	14584882.44	40°09'32.954"N	80°38'56.127"W	748.12	74.371	1.41	-1.24	1.14
3023.00	36.250	69.880	2830.59	184.91	219.75	772.07	1738558.85	14584900.63	40°09'33.132"N	80°38'55.461"W	802.73	74.112	0.99	0.43	-1.52
3116.00	37.180	67.050	2905.15	202.99	240.17	823.77	1738610.53	14584921.04	40°09'33.311"N	80°38'54.794"W	858.06	73.746	2.08	1.00	-3.04
3208.00	35.030	68.890	2979.47	221.07	260.52	874.01	1738660.75	14584941.38	40°09'33.531"N	80°38'54.146"W	912.01	73.402	2.62	-2.34	2.00
3301.00	34.540	70.060	3055.86	237.42	279.12	923.69	1738710.41	14584959.98	40°09'33.713"N	80°38'53.505"W	964.94	73.186	0.89	-0.53	1.26
3394.00	34.190	67.320	3132.63	254.28	298.19	972.59	1738759.29	14584979.04	40°09'33.899"N	80°38'52.875"W	1017.27	72.955	1.70	-0.38	-2.95
3486.00	35.200	67.450	3208.27	272.23	318.33	1020.93	1738807.61	14584999.17	40°09'34.096"N	80°38'52.251"W	1069.41	72.682	1.10	1.10	0.14
3579.00	36.530	69.680	3283.64	289.83	338.22	1071.64	1738858.31	14585019.05	40°09'34.291"N	80°38'51.597"W	1123.75	72.484	2.00	1.43	2.40
3672.00	37.020	71.710	3358.13	305.85	356.62	1124.19	1738910.83	14585037.44	40°09'34.470"N	80°38'50.919"W	1179.39	72.400	1.41	0.53	2.18
3765.00	36.260	69.500	3432.76	321.91	375.04	1176.53	1738963.15	14585055.86	40°09'34.650"N	80°38'50.244"W	1234.86	72.320	1.64	-0.82	-2.38
3855.00	37.130	69.610	3504.92	338.41	393.82	1226.92	1739013.53	14585074.63	40°09'34.834"N	80°38'49.594"W	1288.58	72.204	0.97	0.97	0.12
3947.00	37.860	71.650	3577.92	354.59	412.39	1279.75	1739066.33	14585093.19	40°09'35.015"N	80°38'48.913"W	1344.55	72.139	1.57	0.79	2.22
4040.00	37.260	70.280	3651.64	370.65	430.87	1333.34	1739119.90	14585111.67	40°09'35.196"N	80°38'48.222"W	1401.23	72.092	1.11	-0.65	-1.47
4133.00	38.220	70.840	3725.18	387.17	449.81	1387.02	1739173.56	14585130.60	40°09'35.381"N	80°38'47.529"W	1458.13	72.032	1.10	1.03	0.60
4226.00	37.540	69.610	3798.59	404.05	469.13	1440.75	1739227.27	14585149.91	40°09'35.570"N	80°38'46.836"W	1515.21	71.964	1.09	-0.73	-1.32
4319.00	37.850	69.940	3872.18	421.30	488.79	1494.11	1739280.61	14585169.56	40°09'35.762"N	80°38'46.148"W	1572.03	71.885	0.40	0.33	0.35
4411.00	39.040	72.970	3944.24	437.02	506.95	1548.34	1739334.81	14585187.72	40°09'35.939"N	80°38'45.449"W	1629.22	71.871	2.42	1.29	3.29
4504.00	38.570	71.650	4016.71	452.22	524.66	1603.86	1739390.31	14585205.42	40°09'36.112"N	80°38'44.733"W	1687.49	71.886	1.02	-0.51	-1.42
4597.00	37.610	74.010	4089.91	466.69	541.61	1658.66	1739445.09	14585222.36	40°09'36.277"N	80°38'44.026"W	1744.85	71.916	1.88	-1.03	2.54
4689.00	36.430	73.270	4163.37	479.89	557.20	1711.81	1739498.22	14585237.95	40°09'36.430"N	80°38'43.341"W	1800.21	71.970	1.37	-1.28	-0.80
4782.00	37.850	72.120	4237.50	494.17	573.91	1765.41	1739551.80	14585254.65	40°09'36.593"N	80°38'42.649"W	1856.36	71.991	1.70	1.53	-1.24
4875.00	36.940	68.880	4311.39	510.60	592.74	1818.64	1739605.01	14585273.48	40°09'36.777"N	80°38'41.963"W	1912.80	71.948	2.33	-0.98	-3.48
4968.00	37.030	69.480	4385.68	528.12	612.63	1870.94	1739657.29	14585293.35	40°09'36.971"N	80°38'41.288"W	1968.68	71.869	0.40	0.10	0.65
5060.00	37.920	71.940	4458.70	544.21	631.11	1923.76	1739710.09	14585311.82	40°09'37.151"N	80°38'40.607"W	2024.64	71.837	1.89	0.97	2.67
5153.00	36.660	70.570	4532.69	559.90	649.20	1977.12	1739763.43	14585329.91	40°09'37.328"N	80°38'39.919"W	2080.98	71.822	1.62	-1.35	-1.47
5246.00	35.930	72.670	4607.64	574.90	666.57	2029.35	1739815.64	14585347.27	40°09'37.498"N	80°38'39.245"W	2136.02	71.817	1.55	-0.78	2.26

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Page 4 of 11



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5339.00	34.910	71.660	4683.43	589.09	683.07	2080.66	1739866.93	14585363.77	40°09'37.659"N	80°38'38.583"W	2189.91	71.825	1.26	-1.10	-1.09
5431.00	35.720	71.860	4758.50	603.45	699.71	2131.17	1739917.42	14585380.40	40°09'37.821"N	80°38'37.932"W	2243.10	71.824	0.89	0.88	0.22
5524.00	37.140	72.720	4833.33	617.87	716.51	2183.78	1739970.01	14585397.19	40°09'37.985"N	80°38'37.253"W	2298.32	71.835	1.62	1.53	0.92
5617.00	35.550	69.890	4908.24	633.14	734.14	2235.98	1740022.19	14585414.82	40°09'38.157"N	80°38'36.580"W	2353.42	71.823	2.48	-1.71	-3.04
5710.00	35.760	69.680	4983.80	649.58	752.88	2286.85	1740073.04	14585433.55	40°09'38.340"N	80°38'35.924"W	2407.59	71.777	0.26	0.23	-0.23
5803.00	36.670	70.410	5058.84	665.99	771.62	2338.50	1740124.67	14585452.29	40°09'38.524"N	80°38'35.258"W	2462.51	71.739	1.08	0.98	0.78
5896.00	36.980	70.540	5133.28	682.24	790.25	2391.03	1740177.18	14585470.91	40°09'38.706"N	80°38'34.580"W	2518.24	71.711	0.34	0.33	0.14
5988.00	37.980	70.480	5206.29	698.54	808.93	2443.81	1740229.93	14585489.58	40°09'38.888"N	80°38'33.900"W	2574.21	71.685	1.09	1.09	-0.07
6081.00	39.470	70.770	5278.84	715.36	828.23	2498.69	1740284.79	14585508.87	40°09'39.077"N	80°38'33.192"W	2632.38	71.661	1.61	1.60	0.31
6172.00	39.440	69.110	5349.11	732.73	848.06	2553.01	1740339.09	14585528.69	40°09'39.270"N	80°38'32.491"W	2690.18	71.624	1.16	-0.03	-1.82
6248.00	37.100	55.620	5408.87	752.44	869.66	2594.56	1740380.62	14585550.28	40°09'39.482"N	80°38'31.955"W	2736.43	71.470	11.40	-3.08	-17.75
6340.00	41.390	51.060	5480.12	785.12	904.46	2641.14	1740427.19	14585585.07	40°09'39.824"N	80°38'31.353"W	2791.72	71.096	5.62	4.66	-4.96
6430.00	48.410	48.520	5543.84	823.96	945.51	2689.57	1740475.60	14585626.10	40°09'40.228"N	80°38'30.727"W	2850.92	70.631	8.05	7.80	-2.82
6523.00	50.680	38.390	5604.27	873.05	996.83	2738.04	1740524.05	14585677.40	40°09'40.733"N	80°38'30.100"W	2913.85	69.995	8.63	2.44	-10.89
6615.00	49.670	26.980	5663.30	930.54	1056.09	2776.12	1740562.12	14585736.64	40°09'41.317"N	80°38'29.607"W	2970.22	69.172	9.58	-1.10	-12.40
6662.00	51.620	22.930	5693.11	962.77	1089.03	2791.43	1740577.42	14585769.57	40°09'41.642"N	80°38'29.408"W	2996.35	68.688	7.85	4.15	-8.62
6708.00	56.270	19.960	5720.18	996.73	1123.64	2805.00	1740590.98	14585804.16	40°09'41.984"N	80°38'29.231"W	3021.68	68.170	11.38	10.11	-6.46
6754.00	62.250	15.820	5743.69	1033.76	1161.25	2817.09	1740603.07	14585841.76	40°09'42.355"N	80°38'29.073"W	3047.05	67.598	15.12	13.00	-9.00
6801.00	68.050	11.790	5763.44	1074.66	1202.64	2827.23	1740613.20	14585883.14	40°09'42.763"N	80°38'28.941"W	3072.39	66.956	14.60	12.36	-8.57
6847.00	70.810	7.340	5779.60	1116.75	1245.10	2834.37	1740620.34	14585925.58	40°09'43.183"N	80°38'28.847"W	3095.79	66.285	10.85	5.98	-9.67
6894.00	74.300	3.800	5793.69	1161.13	1289.71	2838.70	1740624.68	14585970.17	40°09'43.623"N	80°38'28.788"W	3117.95	65.566	10.33	7.43	-7.53
6940.00	78.540	359.210	5804.50	1205.70	1334.39	2839.86	1740625.83	14586014.83	40°09'44.065"N	80°38'28.771"W	3137.74	64.832	13.38	9.22	-9.98
6986.00	82.720	354.150	5811.99	1251.06	1379.67	2837.22	1740623.19	14586060.09	40°09'44.512"N	80°38'28.803"W	3154.89	64.068	14.15	9.09	-11.00
7033.00	88.030	349.590	5815.78	1297.66	1426.02	2830.59	1740616.57	14586106.42	40°09'44.971"N	80°38'28.886"W	3169.51	63.262	14.87	11.30	-9.70
7079.00	90.620	344.730	5816.32	1342.90	1470.85	2820.38	1740606.35	14586151.23	40°09'45.414"N	80°38'29.015"W	3180.87	62.458	11.97	5.63	-10.57
7172.00	90.650	340.540	5815.29	1432.79	1559.58	2792.63	1740578.62	14586239.94	40°09'46.292"N	80°38'29.368"W	3198.60	60.818	4.51	0.03	-4.51
7265.00	90.680	338.470	5814.21	1521.27	1646.68	2760.07	1740546.07	14586327.00	40°09'47.154"N	80°38'29.783"W	3213.96	59.179	2.23	0.03	-2.23
7357.00	90.740	337.390	5813.07	1607.98	1731.94	2725.50	1740511.52	14586412.22	40°09'47.998"N	80°38'30.223"W	3229.24	57.566	1.18	0.07	-1.17
7450.00	90.710	339.050	5811.90	1695.79	1818.29	2691.00	1740477.03	14586498.54	40°09'48.853"N	80°38'30.663"W	3247.72	55.953	1.79	-0.03	1.78
7543.00	90.770	341.590	5810.69	1784.66	1905.84	2659.69	1740445.73	14586586.06	40°09'49.719"N	80°38'31.062"W	3272.03	54.376	2.73	0.06	2.73

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# Actual Wellpath Report

Edward Dremak OHI 605H AWP Proj: 19174'

Page 5 of 11



## REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot #605H
Area	Ohio County, WV	Well	Edward Dremak OHI 605H
Field	Ohio	Wellbore	Edward Dremak OHI 605H AWB
Facility	Edward Dremak OHI Pad		

## WELLPATH DATA (218 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]
7632.00	90.710	343.590	5809.55	1870.68	1990.75	2633.06	1740419.11	14586670.94	40°09'50.559"N	80°38'31.401"W	3300.92	52.909	2.25	-0.07	2.25
7725.00	90.490	343.060	5808.57	1960.87	2079.84	2606.38	1740392.44	14586759.99	40°09'51.441"N	80°38'31.740"W	3334.50	51.411	0.62	-0.24	-0.57
7818.00	90.430	341.230	5807.82	2050.58	2168.35	2577.87	1740363.94	14586848.46	40°09'52.316"N	80°38'32.102"W	3368.55	49.931	1.97	-0.06	-1.97
7911.00	90.220	340.510	5807.30	2139.72	2256.21	2547.39	1740333.47	14586936.29	40°09'53.186"N	80°38'32.490"W	3402.89	48.469	0.81	-0.23	-0.77
8004.00	90.550	341.000	5806.67	2228.80	2344.01	2516.74	1740302.83	14587024.06	40°09'54.055"N	80°38'32.881"W	3439.24	47.035	0.64	0.35	0.53
8096.00	90.550	340.190	5805.79	2316.86	2430.78	2486.17	1740272.28	14587110.79	40°09'54.913"N	80°38'33.270"W	3477.03	45.645	0.88	0.00	-0.88
8189.00	90.490	340.160	5804.94	2405.67	2518.27	2454.63	1740240.75	14587198.24	40°09'55.779"N	80°38'33.670"W	3516.66	44.267	0.07	-0.06	-0.03
8282.00	90.400	340.650	5804.22	2494.59	2605.88	2423.44	1740209.58	14587285.82	40°09'56.646"N	80°38'34.069"W	3558.61	42.923	0.54	-0.10	0.53
8374.00	90.460	339.560	5803.53	2582.41	2692.38	2392.14	1740178.28	14587372.29	40°09'57.502"N	80°38'34.468"W	3601.56	41.621	1.19	0.07	-1.18
8464.00	90.370	339.220	5802.88	2667.98	2776.62	2360.46	1740146.62	14587456.50	40°09'58.336"N	80°38'34.871"W	3644.36	40.369	0.39	-0.10	-0.38
8557.00	90.460	340.910	5802.21	2756.74	2864.04	2328.75	1740114.92	14587543.89	40°09'59.201"N	80°38'35.275"W	3691.32	39.115	1.82	0.10	1.82
8649.00	90.220	342.520	5801.66	2845.30	2951.39	2299.89	1740086.07	14587631.20	40°10'00.066"N	80°38'35.642"W	3741.68	37.928	1.77	-0.26	1.75
8739.00	90.430	343.520	5801.15	2932.46	3037.47	2273.61	1740059.81	14587717.24	40°10'00.917"N	80°38'35.977"W	3794.14	36.816	1.14	0.23	1.11
8832.00	90.370	343.160	5800.50	3022.66	3126.56	2246.94	1740033.15	14587806.30	40°10'01.799"N	80°38'36.315"W	3850.21	35.703	0.39	-0.06	-0.39
8924.00	90.490	342.340	5799.81	3111.66	3214.42	2219.66	1740005.88	14587894.12	40°10'02.668"N	80°38'36.662"W	3906.33	34.626	0.90	0.13	-0.89
9017.00	90.620	343.080	5798.91	3201.60	3303.21	2192.02	1739978.25	14587982.88	40°10'03.546"N	80°38'37.014"W	3964.36	33.568	0.81	0.14	0.80
9110.00	90.800	343.880	5797.76	3291.85	3392.36	2165.58	1739951.82	14588072.00	40°10'04.429"N	80°38'37.350"W	4024.66	32.553	0.88	0.19	0.86
9202.00	90.770	344.440	5796.50	3381.38	3480.86	2140.47	1739926.72	14588160.46	40°10'05.304"N	80°38'37.668"W	4086.32	31.588	0.61	-0.03	0.61
9295.00	90.400	344.410	5795.55	3471.99	3570.44	2115.50	1739901.76	14588250.01	40°10'06.190"N	80°38'37.985"W	4150.11	30.647	0.40	-0.40	-0.03
9388.00	90.310	343.110	5794.97	3562.35	3659.73	2089.50	1739875.76	14588339.26	40°10'07.074"N	80°38'38.316"W	4214.21	29.724	1.40	-0.10	-1.40
9480.00	90.430	342.730	5794.38	3651.42	3747.67	2062.48	1739848.75	14588427.17	40°10'07.944"N	80°38'38.659"W	4277.71	28.826	0.43	0.13	-0.41
9573.00	90.460	343.820	5793.65	3741.59	3836.73	2035.71	1739822.00	14588516.19	40°10'08.825"N	80°38'39.000"W	4343.34	27.950	1.17	0.03	1.17
9666.00	90.340	343.600	5793.01	3831.93	3925.99	2009.63	1739795.92	14588605.42	40°10'09.708"N	80°38'39.331"W	4410.45	27.107	0.27	-0.13	-0.24
9758.00	90.340	345.390	5792.46	3921.59	4014.64	1985.04	1739771.34	14588694.03	40°10'10.585"N	80°38'39.643"W	4478.58	26.310	1.95	0.00	1.95
9851.00	90.280	347.000	5791.96	4012.81	4104.95	1962.85	1739749.16	14588784.31	40°10'11.478"N	80°38'39.924"W	4550.10	25.556	1.73	-0.06	1.73
9944.00	90.400	348.320	5791.40	4104.46	4195.80	1942.91	1739729.29	14588875.12	40°10'12.377"N	80°38'40.176"W	4623.84	24.848	1.43	0.13	1.42
10037.00	90.280	349.190	5790.85	4196.39	4287.01	1924.84	1739711.16	14588966.30	40°10'13.279"N	80°38'40.405"W	4699.30	24.180	0.94	-0.13	0.94
10130.00	90.000	348.990	5790.63	4288.41	4378.33	1907.23	1739693.57	14589057.58	40°10'14.182"N	80°38'40.627"W	4775.70	23.538	0.37	-0.30	-0.22
10222.00	90.060	348.090	5790.58	4379.30	4468.49	1888.96	1739675.30	14589147.71	40°10'15.074"N	80°38'40.857"W	4851.35	22.915	0.98	0.07	-0.98
10315.00	90.120	347.290	5790.43	4470.96	4559.35	1869.13	1739655.48	14589238.54	40°10'15.972"N	80°38'41.108"W	4927.61	22.291	0.86	0.06	-0.86

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# Actual Wellpath Report

Edward Dremak OHI 605H AWP Proj: 19174'  
Page 6 of 11



## REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot #605H
SOUTHWESTERN ENERGY	Well	Edward Dremak OHI 605H
Ohio County, WV	Wellbore	Edward Dremak OHI 605H AWB
Ohio		
Edward Dremak OHI Pad		

## WELLPATH DATA (218 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]
10408.00	90.490	348.630	5789.94	4562.69	4650.31	1849.73	1739636.09	14589329.45	40°10'16.872"N	80°38'41.353"W	5004.68	21.691	1.49	0.40	1.44
10501.00	90.680	349.170	5788.99	4654.65	4741.56	1831.83	1739618.19	14589420.67	40°10'17.774"N	80°38'41.579"W	5083.11	21.123	0.62	0.20	0.58
10590.00	90.580	348.990	5788.01	4742.70	4828.94	1814.97	1739601.34	14589508.02	40°10'18.639"N	80°38'41.792"W	5158.76	20.599	0.23	-0.11	-0.20
10683.00	90.550	346.640	5787.09	4834.39	4919.84	1795.34	1739581.72	14589598.88	40°10'19.538"N	80°38'42.040"W	5237.18	20.048	2.53	-0.03	-2.53
10776.00	90.550	343.120	5786.20	4925.15	5009.60	1771.09	1739557.48	14589688.60	40°10'20.426"N	80°38'42.348"W	5313.46	19.470	3.78	0.00	-3.78
10868.00	90.710	340.770	5785.19	5013.79	5097.06	1742.58	1739528.98	14589776.03	40°10'21.291"N	80°38'42.711"W	5386.70	18.874	2.56	0.17	-2.55
10955.00	90.580	340.900	5784.21	5097.17	5179.23	1714.02	1739500.43	14589858.17	40°10'22.104"N	80°38'43.074"W	5455.48	18.311	0.21	-0.15	0.15
11045.00	90.620	340.070	5783.26	5183.25	5264.06	1683.95	1739470.38	14589942.96	40°10'22.944"N	80°38'43.457"W	5526.84	17.739	0.92	0.04	-0.92
11136.00	90.890	339.940	5782.06	5270.07	5349.56	1652.84	1739439.28	14590028.43	40°10'23.790"N	80°38'43.854"W	5599.08	17.169	0.92	0.30	-0.14
11226.00	90.950	339.420	5780.62	5355.77	5433.95	1621.59	1739408.04	14590112.79	40°10'24.625"N	80°38'44.252"W	5670.75	16.616	0.58	0.07	-0.58
11319.00	90.370	338.330	5779.55	5443.93	5520.69	1588.08	1739374.54	14590199.50	40°10'25.483"N	80°38'44.679"W	5744.57	16.048	1.33	-0.62	-1.17
11411.00	90.520	340.300	5778.83	5531.36	5606.76	1555.58	1739342.06	14590285.53	40°10'26.335"N	80°38'45.093"W	5818.55	15.507	2.15	0.16	2.14
11504.00	90.280	341.860	5778.18	5620.60	5694.73	1525.43	1739311.91	14590373.46	40°10'27.206"N	80°38'45.477"W	5895.49	14.996	1.70	-0.26	1.68
11597.00	90.490	344.350	5777.56	5710.70	5783.70	1498.40	1739284.90	14590462.41	40°10'28.086"N	80°38'45.821"W	5974.65	14.524	2.69	0.23	2.68
11687.00	90.620	345.150	5776.69	5798.50	5870.53	1474.73	1739261.24	14590549.20	40°10'28.945"N	80°38'46.121"W	6052.93	14.101	0.90	0.14	0.89
11780.00	90.830	344.540	5775.51	5889.26	5960.29	1450.42	1739236.94	14590638.92	40°10'29.833"N	80°38'46.430"W	6134.23	13.677	0.69	0.23	-0.66
11872.00	90.620	343.700	5774.35	5978.78	6048.77	1425.25	1739211.77	14590727.37	40°10'30.708"N	80°38'46.750"W	6214.41	13.259	0.94	-0.23	-0.91
11965.00	90.550	342.850	5773.40	6068.95	6137.83	1398.49	1739185.02	14590816.39	40°10'31.589"N	80°38'47.090"W	6295.13	12.836	0.92	-0.08	-0.91
12058.00	90.650	341.480	5772.42	6158.66	6226.35	1370.01	1739156.55	14590904.88	40°10'32.465"N	80°38'47.452"W	6375.30	12.409	1.48	0.11	-1.47
12151.00	90.520	341.390	5771.47	6248.05	6314.51	1340.40	1739126.96	14590993.00	40°10'33.338"N	80°38'47.829"W	6455.21	11.984	0.17	-0.14	-0.10
12243.00	90.490	341.030	5770.66	6336.39	6401.60	1310.77	1739097.32	14591080.06	40°10'34.199"N	80°38'48.206"W	6534.42	11.572	0.39	-0.03	-0.39
12336.00	90.280	342.070	5770.04	6425.84	6489.82	1281.34	1739067.94	14591168.24	40°10'35.072"N	80°38'48.581"W	6615.10	11.169	1.14	-0.23	1.12
12429.00	90.180	342.350	5769.66	6515.57	6578.37	1252.92	1739039.51	14591256.76	40°10'35.948"N	80°38'48.943"W	6696.62	10.783	0.32	-0.11	0.30
12522.00	90.220	342.270	5769.34	6605.35	6666.97	1224.66	1739011.26	14591345.33	40°10'36.825"N	80°38'49.302"W	6778.52	10.409	0.10	0.04	-0.09
12614.00	91.230	342.940	5768.18	6694.28	6754.76	1197.16	1738983.77	14591433.08	40°10'37.694"N	80°38'49.652"W	6860.02	10.050	1.32	1.10	0.73
12707.00	90.120	345.200	5767.08	6784.75	6844.17	1171.64	1738958.26	14591522.46	40°10'38.578"N	80°38'49.976"W	6943.73	9.714	2.71	-1.19	2.43
12800.00	90.060	346.400	5766.93	6875.84	6934.33	1148.83	1738935.46	14591612.58	40°10'39.470"N	80°38'50.265"W	7028.85	9.407	1.29	-0.06	1.29
12893.00	90.860	348.540	5766.91	6967.43	7025.10	1128.65	1738915.29	14591703.32	40°10'40.368"N	80°38'50.521"W	7115.19	9.127	2.46	0.86	2.30
12985.00	90.920	348.340	5764.76	7058.29	7115.23	1110.22	1738896.87	14591793.41	40°10'41.259"N	80°38'50.754"W	7201.32	8.869	0.23	0.07	-0.22
13078.00	90.800	346.460	5763.36	7149.85	7205.97	1089.93	1738876.59	14591884.12	40°10'42.157"N	80°38'51.010"W	7287.94	8.601	2.03	-0.13	-2.02

WV Department of Environmental Protection

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## REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot #605H
Area	Ohio County, WV	Well	Edward Dremak OHI 605H
Field	Ohio	Wellbore	Edward Dremak OHI 605H AWB
Facility	Edward Dremak OHI Pad		

## WELLPATH DATA (218 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]	Buidl Rate ["/100ft]	Turn Rate ["/100ft]
13171.00	90.340	344.350	5762.44	7240.80	7295.96	1066.50	1738853.17	14591974.07	40°10'43.047"N	80°38'51.307"W	7373.50	8.316	2.32	-0.49	-2.27
13263.00	90.490	342.100	5761.77	7329.98	7384.04	1039.95	1738826.63	14592062.12	40°10'43.918"N	80°38'51.645"W	7456.91	8.017	2.45	0.16	-2.45
13356.00	90.430	342.150	5761.02	7419.68	7472.55	1011.41	1738798.09	14592150.59	40°10'44.794"N	80°38'52.008"W	7540.68	7.708	0.08	-0.06	0.05
13449.00	90.710	343.000	5760.10	7509.57	7561.27	983.56	1738770.26	14592239.28	40°10'45.672"N	80°38'52.363"W	7624.98	7.411	0.96	0.30	0.91
13541.00	90.800	342.980	5758.89	7598.65	7649.24	956.63	1738743.34	14592327.21	40°10'46.542"N	80°38'52.705"W	7708.82	7.129	0.11	0.10	-0.04
13634.00	90.920	343.170	5757.49	7688.73	7738.19	929.55	1738716.26	14592416.13	40°10'47.422"N	80°38'53.049"W	7793.82	6.850	0.26	0.13	0.23
13727.00	90.800	342.620	5756.09	7778.74	7827.07	902.20	1738688.92	14592504.97	40°10'48.302"N	80°38'53.397"W	7878.90	6.575	0.61	-0.13	-0.59
13820.00	90.800	342.830	5754.80	7868.69	7915.87	874.58	1738661.32	14592593.73	40°10'49.180"N	80°38'53.748"W	7964.03	6.305	0.23	0.00	0.23
13912.00	90.770	342.820	5753.54	7957.71	8003.76	847.42	1738634.17	14592681.59	40°10'50.050"N	80°38'54.094"W	8048.49	6.044	0.03	-0.03	-0.01
14005.00	90.860	342.440	5752.21	8047.61	8092.51	819.66	1738606.42	14592770.30	40°10'50.928"N	80°38'54.447"W	8133.91	5.784	0.42	0.10	-0.41
14098.00	90.770	342.930	5750.89	8137.54	8181.28	791.98	1738578.75	14592859.05	40°10'51.806"N	80°38'54.799"W	8219.53	5.529	0.54	-0.10	0.53
14191.00	90.650	343.620	5749.74	8227.71	8270.34	765.22	1738552.00	14592948.07	40°10'52.688"N	80°38'55.139"W	8305.67	5.286	0.75	-0.13	0.74
14283.00	90.800	345.610	5748.57	8317.41	8359.03	740.81	1738527.61	14593036.73	40°10'53.565"N	80°38'55.449"W	8391.79	5.065	2.17	0.16	2.16
14376.00	90.800	346.670	5747.27	8408.60	8449.31	718.54	1738500.34	14593126.97	40°10'54.458"N	80°38'55.732"W	8479.81	4.861	1.14	0.00	1.14
14469.00	90.890	348.320	5745.90	8500.19	8540.09	698.40	1738485.21	14593217.72	40°10'55.356"N	80°38'55.986"W	8568.60	4.675	1.78	0.10	1.77
14562.00	90.890	347.330	5744.46	8591.87	8630.99	678.79	1738465.61	14593308.58	40°10'56.255"N	80°38'56.234"W	8657.64	4.497	1.06	0.00	-1.06
14654.00	90.770	344.980	5743.13	8682.08	8720.30	656.78	1738443.61	14593397.86	40°10'57.138"N	80°38'56.513"W	8745.00	4.307	2.56	-0.13	-2.55
14747.00	90.800	343.560	5741.85	8772.63	8809.81	631.57	1738418.41	14593487.33	40°10'58.024"N	80°38'56.834"W	8832.42	4.100	1.53	0.03	-1.53
14840.00	90.830	341.170	5740.53	8862.42	8898.42	603.40	1738390.25	14593575.91	40°10'58.901"N	80°38'57.192"W	8918.86	3.879	2.57	0.03	-2.57
14932.00	90.800	340.610	5739.22	8950.60	8985.34	573.29	1738360.14	14593662.79	40°10'59.761"N	80°38'57.576"W	9003.61	3.651	0.61	-0.03	-0.61
15025.00	90.800	340.750	5737.90	9039.65	9073.10	542.52	1738329.39	14593750.51	40°11'00.629"N	80°38'57.968"W	9089.30	3.422	0.15	0.03	0.15
15118.00	90.800	340.390	5736.57	9128.64	9160.79	511.59	1738298.47	14593838.17	40°11'01.497"N	80°38'58.362"W	9175.07	3.196	0.39	-0.03	-0.39
15211.00	90.800	342.510	5735.28	9218.03	9248.95	482.01	1738268.90	14593926.29	40°11'02.369"N	80°38'58.738"W	9261.50	2.983	2.28	0.00	2.28
15304.00	90.770	344.410	5734.00	9308.27	9338.09	455.53	1738242.44	14594015.40	40°11'03.251"N	80°38'59.075"W	9349.19	2.793	2.04	-0.03	2.04
15397.00	90.740	345.190	5732.78	9399.01	9427.82	431.15	1738218.07	14594105.10	40°11'04.139"N	80°38'59.385"W	9437.68	2.618	0.84	-0.03	0.84
15489.00	90.680	345.940	5731.64	9489.04	9516.91	408.22	1738195.14	14594194.15	40°11'05.020"N	80°38'59.675"W	9525.66	2.456	0.82	-0.07	0.82
15582.00	90.830	345.390	5730.41	9580.07	9607.01	385.20	1738172.13	14594284.21	40°11'05.911"N	80°38'59.968"W	9614.73	2.296	0.61	0.16	-0.59
15675.00	90.620	344.740	5729.23	9670.91	9696.86	361.23	1738148.17	14594374.03	40°11'06.800"N	80°39'00.272"W	9703.59	2.133	0.73	-0.23	-0.70
15768.00	90.680	344.260	5728.18	9761.54	9786.47	336.38	1738123.33	14594463.61	40°11'07.687"N	80°39'00.587"W	9792.25	1.969	0.52	0.06	-0.52
15860.00	90.460	344.890	5727.26	9851.23	9875.15	311.91	1738098.87	14594552.25	40°11'08.564"N	80°39'00.898"W	9880.08	1.809	0.73	-0.24	0.68

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# Actual Wellpath Report

Edward Dremak OHI 605H AWP Proj: 19174'  
Page 8 of 11



## REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot #605H
SOUTHWESTERN ENERGY	Well	Edward Dremak OHI 605H
Ohio County, WV	Wellbore	Edward Dremak OHI 605H AWB
Ohio		
Edward Dremak OHI Pad		

## WELLPATH DATA (218 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]
15953.00	90.400	345.390	5726.57	9942.10	9965.04	288.06	1738075.03	14594642.10	40°11'09.453"N	80°39'01.201"W	9969.20	1.656	0.54	-0.06	0.54
16046.00	90.250	345.080	5726.04	10033.00	10054.97	264.36	1738051.34	14594732.00	40°11'10.343"N	80°39'01.502"W	10058.44	1.506	0.37	-0.16	-0.33
16138.00	90.310	345.050	5725.59	10122.86	10143.86	240.65	1738027.64	14594820.85	40°11'11.222"N	80°39'01.803"W	10146.71	1.359	0.07	0.07	-0.03
16231.00	90.430	346.740	5724.99	10213.98	10234.05	217.99	1738004.98	14594911.01	40°11'12.114"N	80°39'02.090"W	10236.37	1.220	1.82	0.13	1.82
16324.00	90.830	348.580	5723.97	10305.62	10324.89	198.11	1737985.12	14595001.82	40°11'13.013"N	80°39'02.342"W	10326.79	1.099	2.02	0.43	1.98
16417.00	90.710	347.540	5722.72	10397.37	10415.87	178.87	1737965.89	14595092.76	40°11'13.912"N	80°39'02.585"W	10417.40	0.984	1.13	-0.13	-1.12
16509.00	90.800	347.520	5721.50	10487.99	10505.69	159.01	1737946.03	14595182.54	40°11'14.801"N	80°39'02.836"W	10506.89	0.867	0.10	0.10	-0.02
16602.00	90.740	347.030	5720.25	10579.53	10596.40	138.53	1737925.55	14595273.22	40°11'15.698"N	80°39'03.096"W	10597.30	0.749	0.53	-0.06	-0.53
16694.00	90.710	344.040	5719.09	10669.54	10685.46	115.55	1737902.59	14595362.25	40°11'16.579"N	80°39'03.387"W	10686.09	0.620	3.25	-0.03	-3.25
16787.00	90.680	342.220	5717.96	10759.64	10774.45	88.57	1737875.61	14595451.20	40°11'17.459"N	80°39'03.730"W	10774.82	0.471	1.96	-0.03	-1.96
16880.00	90.400	342.030	5717.08	10849.34	10862.96	60.02	1737847.08	14595539.67	40°11'18.335"N	80°39'04.094"W	10863.12	0.317	0.36	-0.30	-0.20
16973.00	90.460	341.670	5716.39	10938.92	10951.33	31.05	1737818.12	14595628.01	40°11'19.209"N	80°39'04.462"W	10951.37	0.162	0.39	0.06	-0.39
17063.00	90.310	340.930	5715.78	11025.38	11036.57	2.20	1737789.28	14595713.22	40°11'20.053"N	80°39'04.830"W	11036.57	0.011	0.84	-0.17	-0.82
17152.00	90.680	341.910	5715.01	11110.92	11120.93	-26.16	1737760.93	14595797.55	40°11'20.888"N	80°39'05.191"W	11209.60	359.721	1.18	0.42	1.10
17245.00	90.460	342.460	5714.09	11200.64	11209.47	-54.61	1737732.49	14595886.05	40°11'21.764"N	80°39'05.553"W	11209.60	359.721	0.64	-0.24	0.59
17338.00	90.550	344.870	5713.27	11290.96	11298.70	-80.76	1737706.35	14595975.25	40°11'22.647"N	80°39'05.886"W	11298.99	359.590	2.59	0.10	2.59
17430.00	90.770	346.990	5712.21	11381.10	11387.93	-103.13	1737684.00	14596084.44	40°11'23.529"N	80°39'06.169"W	11388.40	359.481	2.32	0.24	2.30
17523.00	91.320	349.180	5710.51	11472.85	11478.91	-122.32	1737664.81	14596155.38	40°11'24.429"N	80°39'06.412"W	11479.56	359.389	2.43	0.59	2.35
17616.00	91.260	346.690	5708.42	11564.54	11569.82	-141.76	1737645.38	14596246.26	40°11'25.328"N	80°39'06.658"W	11570.69	359.298	2.68	-0.06	-2.68
17709.00	91.110	343.080	5706.49	11655.29	11659.57	-166.00	1737621.15	14596335.97	40°11'26.216"N	80°39'06.966"W	11660.75	359.184	3.88	-0.16	-3.88
17801.00	90.680	341.340	5705.06	11744.05	11747.16	-194.10	1737593.06	14596423.53	40°11'27.083"N	80°39'07.323"W	11748.76	359.053	1.95	-0.47	-1.89
17894.00	90.580	341.790	5704.03	11833.50	11835.38	-223.51	1737563.66	14596511.71	40°11'27.955"N	80°39'07.698"W	11837.49	358.918	0.50	-0.11	0.48
17987.00	90.550	342.290	5703.12	11923.16	11923.84	-252.18	1737535.00	14596600.14	40°11'28.831"N	80°39'08.063"W	11926.51	358.788	0.54	-0.03	0.54
18079.00	90.650	341.770	5702.15	12011.85	12011.35	-280.57	1737506.63	14596687.62	40°11'29.697"N	80°39'08.424"W	12014.63	358.662	0.58	0.11	-0.57
18172.00	90.620	341.960	5701.12	12101.43	12099.73	-309.51	1737477.69	14596775.96	40°11'30.571"N	80°39'08.793"W	12103.68	358.535	0.21	-0.03	0.20
18265.00	90.520	342.050	5700.20	12191.08	12188.17	-338.24	1737448.97	14596864.37	40°11'31.446"N	80°39'09.158"W	12192.86	358.410	0.14	-0.11	0.10
18350.00	90.580	342.030	5699.38	12273.03	12269.03	-364.45	1737422.77	14596945.19	40°11'32.246"N	80°39'09.492"W	12274.44	358.299	0.07	0.07	-0.02
18435.00	90.150	342.430	5698.84	12355.05	12349.97	-390.39	1737396.84	14597026.10	40°11'33.047"N	80°39'09.822"W	12356.14	358.189	0.69	-0.51	0.47
18520.00	90.120	342.200	5698.64	12437.11	12430.95	-416.21	1737371.03	14597107.05	40°11'33.848"N	80°39'10.151"W	12437.92	358.082	0.27	-0.04	-0.27
18605.00	90.800	344.660	5697.96	12519.58	12512.41	-440.45	1737346.80	14597188.48	40°11'34.654"N	80°39'10.459"W	12520.16	357.984	3.00	0.80	2.89

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### REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot #605H
Area	Ohio County, WV	Well	Edward Dremak OHI 605H
Field	Ohio	Wellbore	Edward Dremak OHI 605H AWB
Facility	Edward Dremak OHI Pad		

### WELLPATH DATA (218 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]
18691.00	90.710	346.700	5696.82	12603.76	12595.73	-461.72	1737325.54	14597271.77	40°11'35.478"N	80°39'10.729"W	12604.19	357.901	2.37	-0.10	2.37
18784.00	90.770	347.300	5695.62	12695.22	12686.34	-482.64	1737304.63	14597362.34	40°11'36.375"N	80°39'10.994"W	12695.51	357.821	0.65	0.06	0.65
18869.00	90.860	347.900	5694.41	12778.96	12769.35	-500.89	1737286.39	14597445.31	40°11'37.196"N	80°39'11.225"W	12779.17	357.754	0.71	0.11	0.71
18953.00	90.710	344.630	5693.26	12861.35	12850.92	-520.83	1737266.46	14597526.86	40°11'38.002"N	80°39'11.478"W	12861.47	357.679	3.90	-0.18	-3.89
19042.00	91.260	341.390	5691.73	12947.52	12936.02	-546.83	1737240.47	14597611.92	40°11'38.844"N	80°39'11.809"W	12947.57	357.579	3.69	0.62	-3.64
19128.00	91.480	341.120	5689.68	13030.10	13017.43	-574.45	1737212.85	14597693.30	40°11'39.650"N	80°39'12.160"W	13030.10	357.473	0.40	0.26	-0.31
19149.00	91.390	341.040	5689.15	13050.24	13037.29	-581.26	1737206.05	14597713.15	40°11'39.846"N	80°39'12.247"W	13050.24	357.447	0.57	-0.43	-0.38
19174.00	91.390	341.040	5688.54	13074.22	13060.93	-589.38	1737197.93	14597736.78	40°11'40.080"N	80°39'12.351"W	13074.22	357.416	0.00	0.00	0.00

### HOLE & CASING SECTIONS - Ref Wellbore: Edward Dremak OHI 605H AWB Ref Wellpath: Edward Dremak OHI 605H AWP Proj: 19174'

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	End N/S [ft]	Start E/W [ft]	End E/W [ft]	End E/W [ft]
20in Conductor	26.00	126.00	100.00	26.00	126.00	0.00	0.00	0.00	0.00	-0.08
17.5in Open Hole	126.00	355.00	229.00	126.00	355.00	-0.08	-0.08	0.07	0.07	-1.26
13.375in Casing Surface	26.00	355.00	329.00	26.00	355.00	0.00	0.00	0.00	0.00	-1.26
12.25in Open Hole	355.00	1672.00	1317.00	355.00	1651.28	-1.26	-1.26	0.07	0.07	-1.26
9.625in Casing Intermediate	26.00	1652.00	1626.00	26.00	1632.26	0.00	0.00	0.00	0.00	-3.15
8.75in Open Hole	1672.00	6240.00	4568.00	1651.28	5402.50	-1.26	-1.26	172.75	172.75	166.89
8.5in Open Hole	6240.00	19174.00	12934.00	5402.50	5688.54	866.98	866.98	2590.53	2590.53	2590.53
5.5in Casing Production	26.00	19174.00	19148.00	26.00	5688.54	0.00	0.00	0.00	0.00	-589.38

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### REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot #605H
Area	Ohio County, WV	Well	Edward Dremak OHI 605H
Field	Ohio	Wellbore	Edward Dremak OHI 605H AWB
Facility	Edward Dremak OHI Pad		

### TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Edward Dremak OHI 605H BHL Rev-2	5686.00	13080.18	-587.28	1737200.03	14597756.03	40°11'40.271"N	80°39'12.323"W	point
Edward Dremak OHI 605H LP Rev-3	5815.00	1504.03	2732.16	1740518.18	14586184.40	40°09'45.746"N	80°38'30.150"W	point

### WELLPATH COMPOSITION - Ref Wellbore: Edward Dremak OHI 605H AWB Ref Wellpath: Edward Dremak OHI 605H AWP Proj: 19174'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
26.00	298.00	OWSG MWD rev2 + HRGM	01_Premier MWD <17 1/2"> (149'-298')	Edward Dremak OHI 605H AWB
298.00	1604.00	OWSG MWD rev2 + HRGM	02_Premier MWD <12 1/4"> (389'-1604')	Edward Dremak OHI 605H AWB
1604.00	6172.00	OWSG MWD rev2 + HRGM	03_Premier MWD <8 3/4"> (1674'-6172')	Edward Dremak OHI 605H AWB
6172.00	19149.00	BHI AutoTrak Curve (Short)	04_BH AT Curve <8 1/2"> (6248'-19149')	Edward Dremak OHI 605H AWB
19149.00	19174.00	Blind Drilling (std)	Projection to bit	Edward Dremak OHI 605H AWB

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**REFERENCE WELLPATH IDENTIFICATION**

Operator	SOUTHWESTERN ENERGY	Slot	Slot #605H
Area	Ohio County, WV	Well	Edward Dremak OHI 605H
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Facility	Edward Dremak OHI Pad		

**COMMENTS**

Wellpath general comments  
 API: 47-069-00291-0000  
 BH Job #: 109652154  
 Rig: SDC 40  
 Duration: 02/23/2019 - 02/27/2019

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