

REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Well	Edward Dremak OHI 6H
Field	Ohio	API/Legal	Edward Dremak OHI 6H
Facility	Edward Dremak OHI Pad	Wellbore	Edward Dremak OHI 6H AWB
Slot	Slot #6H		

REPORT SETUP INFORMATION

Projection System	NAD83 / UTM Zone 17 North, US feet	Software System	WellArchitect@ 6.0
North Reference	Grid	User	Atenjen
Scale	0.999611	Report Generated	12/11/2019 at 9:22:24 AM
Convergence at slot	0.22° East	Database	WA_MPL_EASTERNUS_Defn

WELLPATH LOCATION

Local coordinates		Grid coordinates		Geographic coordinates	
North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
23.32	21.66	1737762.48	14584727.64	40°09'31.4526"N	80°39'5.7308"W
		1737740.83	14584704.33	40°09'31.2230"N	80°39'6.0110"W
Field Reference Pt	Facility Reference Pt				
		0.00	0.00	0°00'0.0000"	85°29'19.4780"W

WELLPATH DATUM

Calculation method	Minimum curvature	SDC 42 (KB) to Facility Vertical Datum	1114.00ft
Horizontal Reference Pt	Slot	SDC 42 (KB) to Mean Sea Level	1114.00ft
Vertical Reference Pt	SDC 42 (KB)	SDC 42 (KB) to Ground Level at Slot (Slot #6H)	26.00ft
MD Reference Pt	SDC 42 (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	166.73°

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Actual Wellpath Report

Edward Dremak OHI 6H AWP Proj: 15608
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Facility	Edward Dremak OHI Pad
Slot	Slot #6H

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AP/ Legal	
Wellbore	Edward Dremak OHI 6H AWB

MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(us ft)	(us ft)			(ft)	(ft)	(ft)	(%/100ft)	(%/100ft)
0.00	0.00	122.220	26.00	0.00	0.00	0.00	1737762.48	14584727.64	40°09'31.4526"N	80°39'5.7308"W	0.00	0.00	0.00	0.00	0.00
26.00	0.00	122.220	26.00	0.00	0.00	0.00	1737762.48	14584727.64	40°09'31.4526"N	80°39'5.7308"W	0.00	0.00	0.00	0.00	0.00
151.00	0.620	122.220	151.00	0.48	-0.36	0.57	1737763.05	14584727.28	40°09'31.4490"N	80°39'5.7234"W	0.68	122.220	0.50	0.50	0.00
211.00	0.430	121.310	211.00	0.87	-0.65	1.04	1737763.52	14584726.99	40°09'31.4461"N	80°39'5.7174"W	1.23	122.053	0.32	-0.32	-1.52
303.00	0.150	293.970	302.99	1.04	-0.78	1.22	1737763.71	14584726.86	40°09'31.4448"N	80°39'5.7151"W	1.45	122.544	0.63	-0.30	187.67
388.00	0.170	306.970	387.99	0.88	-0.66	1.02	1737763.50	14584726.98	40°09'31.4460"N	80°39'5.7177"W	1.22	122.867	0.05	0.02	15.29
427.00	0.160	297.720	426.99	0.80	-0.60	0.93	1737763.41	14584727.04	40°09'31.4466"N	80°39'5.7189"W	1.10	122.906	0.07	-0.03	-23.72
519.00	0.150	276.700	518.99	0.67	-0.53	0.69	1737763.18	14584727.12	40°09'31.4474"N	80°39'5.7219"W	0.87	127.173	0.06	-0.01	-22.85
609.00	0.230	223.490	608.99	0.73	-0.64	0.45	1737762.93	14584727.00	40°09'31.4462"N	80°39'5.7250"W	0.79	144.881	0.21	0.09	-59.12
698.00	0.920	221.990	697.99	1.24	-1.30	-0.15	1737762.33	14584726.34	40°09'31.4397"N	80°39'5.7328"W	1.31	186.491	0.78	0.78	-1.69
785.00	1.840	232.370	784.96	2.21	-2.68	-1.72	1737760.76	14584724.97	40°09'31.4262"N	80°39'5.7531"W	3.18	212.758	1.09	1.06	11.93
872.00	2.870	237.690	871.89	3.50	-4.69	-4.67	1737757.81	14584722.95	40°09'31.4064"N	80°39'5.7912"W	6.62	224.852	1.21	1.18	6.11
958.00	4.140	237.900	957.72	5.20	-7.49	-9.12	1737753.37	14584720.15	40°09'31.3789"N	80°39'5.8486"W	11.80	230.586	1.48	1.48	0.24
1045.00	6.320	236.370	1044.36	7.88	-11.82	-15.77	1737746.72	14584715.83	40°09'31.3365"N	80°39'5.9345"W	19.70	233.153	2.51	2.51	-1.76
1132.00	7.430	235.010	1130.73	11.63	-17.69	-24.36	1737738.13	14584709.96	40°09'31.2787"N	80°39'6.0455"W	30.11	234.012	1.29	1.28	-1.56
1218.00	7.830	232.110	1215.97	16.13	-24.48	-33.54	1737728.95	14584703.17	40°09'31.2120"N	80°39'6.1640"W	41.52	233.877	0.65	0.47	-3.37
1305.00	8.230	234.170	1302.12	20.98	-31.76	-43.27	1737719.23	14584695.89	40°09'31.1404"N	80°39'6.2897"W	53.67	233.716	0.57	0.46	2.37
1392.00	8.440	236.150	1388.20	25.62	-38.97	-53.62	1737708.88	14584688.69	40°09'31.0696"N	80°39'6.4233"W	66.28	233.993	0.41	0.24	2.28
1478.00	7.490	236.060	1473.37	29.81	-45.61	-63.51	1737699.00	14584682.05	40°09'31.0043"N	80°39'6.5511"W	78.19	234.315	1.10	-1.10	-0.10
1565.00	7.450	236.300	1559.63	33.79	-51.91	-72.91	1737689.60	14584675.76	40°09'30.9425"N	80°39'6.6724"W	89.50	234.551	0.06	-0.05	0.28
1599.00	7.180	236.570	1593.35	35.29	-54.30	-76.51	1737686.00	14584673.36	40°09'30.9190"N	80°39'6.7190"W	93.82	234.638	0.80	-0.79	0.79
1707.00	6.540	229.130	1700.58	40.46	-62.04	-86.80	1737675.72	14584665.62	40°09'30.8429"N	80°39'6.8518"W	106.69	234.443	1.01	-0.59	-6.89
1798.00	8.920	244.670	1790.76	44.34	-68.45	-97.10	1737665.42	14584659.21	40°09'30.7799"N	80°39'6.9848"W	118.80	234.816	3.46	2.62	17.08
1887.00	9.670	245.660	1878.59	47.22	-74.49	-110.14	1737652.38	14584653.18	40°09'30.7208"N	80°39'7.1531"W	132.96	235.931	0.86	0.84	1.11
1976.00	8.130	238.240	1966.52	50.65	-80.88	-122.31	1737640.22	14584646.79	40°09'30.6581"N	80°39'7.3101"W	146.63	236.523	2.15	-1.73	-8.34
2066.00	7.900	232.770	2055.64	55.18	-87.97	-132.64	1737629.89	14584639.70	40°09'30.5884"N	80°39'7.4436"W	159.16	236.446	0.88	-0.26	-6.08
2156.00	7.590	239.830	2144.82	59.42	-94.70	-142.70	1737619.83	14584632.98	40°09'30.5223"N	80°39'7.5735"W	171.27	236.431	1.11	-0.34	7.84
2245.00	8.940	246.770	2232.89	62.32	-100.38	-154.14	1737608.40	14584627.30	40°09'30.4666"N	80°39'7.7211"W	183.95	236.926	1.88	1.52	7.80
2333.00	9.290	244.470	2319.78	65.01	-106.14	-166.83	1737595.71	14584621.54	40°09'30.4102"N	80°39'7.8849"W	197.74	237.635	0.57	0.40	-2.61
2422.00	9.310	240.530	2407.61	68.55	-112.78	-179.58	1737582.97	14584614.91	40°09'30.3451"N	80°39'8.0494"W	212.06	237.871	0.72	0.02	-4.43

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Slot	Slot #6H		

WELLPATH DATA (182 stations)

MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(US ft)	(US ft)			(ft)	(°)	(%/100ft)	(%/100ft)	(%/100ft)
2512.00	9.100	236.160	2496.46	73.08	-120.32	-191.83	1737570.72	14584607.36	40°09'30.27"N	80°39'8.20"W	226.45	237.903	0.81	-0.23	-4.86
2601.00	9.100	232.420	2584.34	78.45	-128.54	-203.26	1737559.30	14584599.16	40°09'30.1903"N	80°39'8.3551"W	240.49	237.691	0.66	0.00	-4.20
2689.00	9.250	235.400	2671.21	83.89	-136.80	-214.59	1737547.97	14584590.90	40°09'30.1091"N	80°39'8.5015"W	254.49	237.484	0.57	0.17	3.39
2779.00	7.980	237.170	2760.19	88.61	-144.29	-225.80	1737536.77	14584583.41	40°09'30.0355"N	80°39'8.6462"W	267.96	237.420	1.44	-1.41	1.97
2869.00	7.810	233.410	2849.34	93.12	-151.32	-235.96	1737526.62	14584576.38	40°09'29.9664"N	80°39'8.7774"W	280.31	237.327	0.60	-0.19	-4.18
2959.00	8.050	234.670	2938.48	97.91	-158.61	-246.01	1737516.57	14584569.09	40°09'29.8947"N	80°39'8.9072"W	292.71	237.188	0.33	0.27	1.40
3048.00	8.070	233.700	3026.60	102.69	-165.91	-256.13	1737506.45	14584561.79	40°09'29.8230"N	80°39'9.0379"W	305.17	237.066	0.15	0.02	-1.09
3138.00	7.780	228.460	3115.74	108.05	-173.69	-265.78	1737496.81	14584554.02	40°09'29.7464"N	80°39'9.1626"W	317.50	236.834	0.86	-0.32	-5.82
3228.00	7.220	234.870	3204.98	113.04	-180.99	-274.96	1737487.63	14584546.72	40°09'29.6747"N	80°39'9.2813"W	329.18	236.646	1.12	-0.62	7.12
3317.00	8.120	243.270	3293.18	116.59	-187.03	-285.15	1737477.44	14584540.68	40°09'29.6154"N	80°39'9.4128"W	341.02	236.739	1.61	1.01	9.44
3407.00	7.780	242.210	3382.32	119.59	-192.73	-296.22	1737466.38	14584534.98	40°09'29.5595"N	80°39'9.5556"W	353.40	236.950	0.41	-0.38	-1.18
3497.00	7.500	236.780	3471.52	123.12	-198.79	-306.52	1737456.08	14584528.93	40°09'29.5000"N	80°39'9.6886"W	365.34	237.035	0.86	-0.31	-6.03
3586.00	8.190	239.930	3559.69	126.94	-205.15	-316.87	1737445.74	14584522.57	40°09'29.4376"N	80°39'9.8222"W	377.48	237.48	0.91	0.78	3.54
3676.00	8.720	242.040	3648.71	130.52	-211.56	-328.44	1737434.17	14584516.16	40°09'29.3747"N	80°39'9.9716"W	390.68	237.213	0.68	0.59	2.34
3766.00	8.240	236.680	3737.72	134.46	-218.30	-339.86	1737422.76	14584509.42	40°09'29.3085"N	80°39'10.1189"W	403.93	237.286	1.03	-0.53	-5.96
3856.00	7.580	229.010	3826.87	139.44	-225.74	-349.73	1737412.89	14584501.99	40°09'29.2354"N	80°39'10.2464"W	416.25	237.159	1.38	-0.73	-8.52
3945.00	7.780	231.830	3915.07	144.70	-233.31	-358.89	1737403.73	14584494.42	40°09'29.1609"N	80°39'10.3649"W	428.06	236.973	0.48	0.22	3.17
4035.00	7.750	243.520	4004.25	148.65	-239.78	-369.11	1737393.51	14584487.95	40°09'29.0974"N	80°39'10.4968"W	440.16	236.992	1.75	-0.03	12.99
4125.00	9.330	244.920	4093.25	151.53	-245.58	-381.15	1737381.48	14584482.16	40°09'29.0405"N	80°39'10.6522"W	453.42	237.206	1.77	1.76	1.56
4215.00	8.550	239.570	4182.16	155.00	-252.06	-393.53	1737369.11	14584475.68	40°09'28.9769"N	80°39'10.8119"W	467.33	237.360	1.27	-0.87	-5.94
4304.00	8.510	230.370	4270.17	158.81	-258.67	-404.96	1737357.68	14584469.07	40°09'28.9121"N	80°39'10.9594"W	480.52	237.431	0.14	-0.04	0.90
4394.00	7.710	237.740	4359.27	162.65	-265.18	-415.85	1737346.79	14584462.56	40°09'28.8481"N	80°39'11.1001"W	493.21	237.475	0.98	-0.89	-2.92
4484.00	8.940	241.430	4448.32	166.46	-271.75	-427.10	1737335.55	14584456.00	40°09'28.7837"N	80°39'11.2453"W	506.22	237.533	1.49	1.37	4.10
4574.00	10.620	244.500	4537.01	170.06	-278.67	-440.73	1737321.93	14584449.08	40°09'28.7159"N	80°39'11.4211"W	521.44	237.695	1.95	1.87	3.41
4663.00	10.250	241.410	4624.54	173.89	-285.99	-455.08	1737307.58	14584441.77	40°09'28.6441"N	80°39'11.6064"W	537.48	237.854	0.75	-0.42	-3.47
4753.00	9.680	238.520	4713.19	178.37	-293.77	-468.57	1737294.10	14584433.99	40°09'28.5677"N	80°39'11.7804"W	553.04	237.914	0.84	-0.63	-3.21
4843.00	9.020	235.480	4801.99	183.29	-301.72	-480.83	1737281.84	14584426.04	40°09'28.4896"N	80°39'11.9388"W	567.66	237.892	0.92	-0.73	-3.38
4932.00	8.390	231.770	4889.96	188.56	-309.69	-491.68	1737270.99	14584418.07	40°09'28.4113"N	80°39'12.0881"W	581.08	237.795	0.95	-0.71	-4.17
5022.00	7.390	236.740	4979.11	193.31	-316.93	-501.68	1737261.00	14584410.84	40°09'28.3401"N	80°39'12.2081"W	593.40	237.718	1.34	-1.11	5.52
5112.00	6.890	236.610	5068.41	197.15	-323.07	-511.03	1737251.65	14584404.69	40°09'28.2797"N	80°39'12.3288"W	604.59	237.699	0.56	-0.56	-0.14

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(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(US ft)	(US ft)			(ft)	(ft)	(%/100ft)	(%/100ft)	(%/100ft)
5202.00	11.330	210.540	5157.29	205.39	-333.67	-520.04	1737242.65	14584394.10	40°09'28.1754"N	80°39'12.4453"W	617.88	237.315	6.62	237.315	-28.97
5291.00	16.910	192.310	5243.61	223.40	-353.87	-527.25	1737235.44	14584373.91	40°09'27.9760"N	80°39'12.5392"W	634.99	236.132	7.95	236.132	-20.48
5380.00	22.280	177.070	5327.48	251.71	-383.41	-529.15	1737233.54	14584344.39	40°09'27.6842"N	80°39'12.5652"W	653.45	234.074	8.28	234.074	-17.12
5470.00	27.420	167.450	5409.15	289.25	-420.71	-523.77	1737238.92	14584307.09	40°09'27.3154"N	80°39'12.4977"W	671.81	231.227	7.25	231.227	-10.69
5560.00	32.340	161.950	5487.18	334.00	-463.86	-511.79	1737250.89	14584263.96	40°09'26.8885"N	80°39'12.3457"W	690.73	227.813	6.25	227.813	-6.11
5650.00	37.200	160.460	5561.09	385.06	-512.42	-495.23	1737267.45	14584215.42	40°09'26.4080"N	80°39'12.1348"W	712.62	224.022	5.48	224.022	-1.66
5708.00	40.200	162.080	5606.35	421.16	-546.76	-483.60	1737279.07	14584181.09	40°09'26.0682"N	80°39'11.9867"W	729.94	221.492	5.46	221.492	2.79
5752.00	43.720	168.940	5639.08	450.53	-575.22	-476.31	1737286.36	14584152.65	40°09'25.7867"N	80°39'11.8943"W	746.82	219.626	13.13	219.626	15.59
5798.00	48.620	175.300	5670.95	483.52	-608.06	-471.84	1737290.83	14584119.82	40°09'25.4620"N	80°39'11.8384"W	769.65	217.811	14.58	217.811	13.83
5841.00	54.020	177.900	5697.81	516.57	-641.55	-469.88	1737292.79	14584086.34	40°09'25.1310"N	80°39'11.8148"W	795.22	216.219	13.41	216.219	6.05
5883.00	60.090	177.510	5722.82	554.45	-680.11	-468.33	1737294.34	14584047.80	40°09'24.7499"N	80°39'11.7968"W	825.76	214.552	13.21	214.552	-0.85
5933.00	65.160	175.560	5743.96	594.69	-720.86	-465.84	1737296.82	14584007.06	40°09'24.3471"N	80°39'11.7668"W	858.28	212.872	11.65	212.872	-4.24
5976.00	68.800	172.840	5760.78	633.92	-760.22	-461.83	1737300.83	14583967.72	40°09'23.9579"N	80°39'11.7171"W	889.51	211.279	10.27	211.279	-6.33
6022.00	72.520	169.900	5776.01	677.17	-803.12	-455.31	1737307.35	14583924.83	40°09'23.5338"N	80°39'11.6353"W	923.21	209.550	10.09	209.550	-6.39
6068.00	77.440	168.070	5787.93	721.54	-846.71	-446.82	1737315.84	14583881.26	40°09'23.1027"N	80°39'11.5281"W	957.38	207.821	11.36	207.821	-3.98
6112.00	81.940	166.080	5795.80	764.82	-888.89	-437.13	1737325.52	14583839.10	40°09'22.6855"N	80°39'11.4055"W	990.56	206.187	11.15	206.187	-4.52
6158.00	86.030	163.960	5800.62	810.53	-933.07	-425.31	1737337.34	14583794.93	40°09'22.2485"N	80°39'11.2554"W	1025.43	204.504	10.00	204.504	-4.61
6248.00	88.800	162.830	5804.68	900.28	-1019.22	-399.61	1737363.02	14583708.82	40°09'21.3961"N	80°39'10.9289"W	1094.76	201.409	3.32	201.409	-1.26
6337.00	89.290	163.080	5806.17	989.07	-1104.30	-373.53	1737389.10	14583623.77	40°09'20.5544"N	80°39'10.5972"W	1165.76	198.688	0.62	198.688	0.28
6430.00	88.550	162.780	5807.92	1081.85	-1193.19	-346.24	1737416.38	14583534.92	40°09'19.6750"N	80°39'10.2502"W	1242.41	196.182	0.86	196.182	-0.32
6520.00	88.980	162.580	5809.86	1171.61	-1279.08	-319.45	1737443.16	14583449.06	40°09'18.8251"N	80°39'9.9095"W	1318.37	194.023	0.53	194.023	-0.22
6609.00	88.550	162.960	5811.78	1260.37	-1364.07	-293.09	1737469.50	14583364.10	40°09'17.9842"N	80°39'9.5743"W	1395.20	192.127	0.64	192.127	0.43
6702.00	88.830	162.900	5813.90	1353.14	-1452.95	-265.80	1737496.79	14583275.26	40°09'17.1049"N	80°39'9.2273"W	1477.06	190.367	0.31	190.367	-0.06
6794.00	88.180	162.670	5816.30	1444.89	-1540.80	-238.58	1737523.99	14583187.45	40°09'16.2357"N	80°39'8.8812"W	1559.16	188.802	0.75	188.802	-0.25
6883.00	89.010	162.660	5818.49	1533.64	-1625.73	-212.07	1737550.49	14583102.55	40°09'15.3954"N	80°39'8.5441"W	1639.50	187.432	0.93	187.432	-0.01
6975.00	89.720	162.660	5819.51	1625.40	-1713.54	-184.65	1737577.90	14583014.77	40°09'14.5266"N	80°39'8.1954"W	1723.46	186.151	0.77	186.151	0.00
7068.00	90.000	162.990	5819.73	1718.19	-1802.39	-157.19	1737605.35	14582925.95	40°09'13.6475"N	80°39'7.8462"W	1809.24	184.984	0.47	184.984	0.35
7161.00	89.780	163.690	5819.91	1811.02	-1891.49	-130.53	1737632.00	14582836.89	40°09'12.7660"N	80°39'7.5073"W	1895.99	183.948	0.79	183.948	0.75
7253.00	89.010	160.670	5820.88	1902.72	-1979.06	-102.38	1737660.14	14582749.36	40°09'11.8995"N	80°39'7.1492"W	1981.71	182.961	3.39	182.961	-3.28
7346.00	89.750	165.220	5821.89	1995.48	-2067.94	-75.11	1737687.40	14582660.51	40°09'11.0202"N	80°39'6.8026"W	2069.31	182.080	4.96	182.080	4.89

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Actual Wellpath Report
Edward Dremak OHI 6H AWP Proj: 15608



REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY
Field	Ohio
Facility	Edward Dremak OHI Pad
Slot	Slot #6H
Well	Edward Dremak OHI 6H
API/Legal	Wellbore
Edward Dremak OHI 6H AWB	

WELLPATH DATA (182 stations)

MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate
[ft]	[°]	[°]	[ft]	[ft]	[ft]	[ft]	[US ft]	[US ft]			[ft]	[°]	[°/100ft]	[°/100ft]	[°/100ft]
10181.00	89.630	161.760	5850.28	4823.30	-4775.39	764.22	1738526.40	14579954.12	40°08'44.2325"N	80°38'56.1311"W	4836.16	170.908	2.01	-0.66	-1.90
10274.00	89.200	163.400	5851.23	4916.05	-4864.12	792.06	1738554.23	14579865.43	40°08'43.3546"N	80°38'55.7772"W	4928.19	170.751	1.82	-0.46	-1.76
10363.00	89.350	162.990	5852.36	5004.88	-4949.31	817.79	1738579.95	14579780.27	40°08'42.5118"N	80°38'55.4502"W	5016.42	170.618	0.49	-0.17	-0.46
10453.00	91.320	165.040	5851.83	5094.76	-5035.82	842.57	1738604.72	14579693.79	40°08'41.6559"N	80°38'55.1355"W	5105.82	170.502	3.16	2.19	2.28
10543.00	91.230	161.450	5849.83	5184.56	-5121.96	868.50	1738630.65	14579607.68	40°08'40.8036"N	80°38'54.8059"W	5195.08	170.376	3.99	-0.10	-3.99
10633.00	89.780	159.160	5849.04	5273.98	-5206.69	898.83	1738660.96	14579522.99	40°08'39.9652"N	80°38'54.4197"W	5283.70	170.206	3.01	-1.61	-2.54
10723.00	89.970	163.550	5849.23	5363.57	-5291.94	927.60	1738689.72	14579437.77	40°08'39.1216"N	80°38'54.0536"W	5372.63	170.058	4.88	0.21	4.88
10813.00	89.630	162.420	5849.55	5453.37	-5378.00	953.93	1738716.04	14579351.74	40°08'38.2701"N	80°38'53.7189"W	5461.95	169.942	1.31	-0.38	-1.26
10904.00	89.720	161.690	5850.06	5544.07	-5464.57	981.97	1738744.07	14579265.21	40°08'37.4135"N	80°38'53.3623"W	5552.10	169.813	0.81	0.10	-0.80
10993.00	89.940	163.790	5850.33	5632.84	-5549.56	1008.37	1738770.46	14579180.25	40°08'36.5727"N	80°38'53.0266"W	5640.43	169.702	2.37	0.25	2.36
11083.00	90.030	161.520	5850.35	5722.61	-5635.46	1035.20	1738797.28	14579094.38	40°08'35.7227"N	80°38'52.6855"W	5729.75	169.591	2.52	0.10	-2.52
11173.00	89.820	163.810	5850.47	5812.38	-5721.37	1062.02	1738824.08	14579008.51	40°08'34.8727"N	80°38'52.3446"W	5819.10	169.484	2.56	-0.23	2.54
11263.00	89.970	160.370	5850.63	5902.07	-5806.99	1089.69	1738851.75	14578922.92	40°08'34.0255"N	80°38'51.9927"W	5908.35	169.372	3.83	0.17	-3.82
11353.00	89.170	160.690	5851.31	5991.54	-5891.84	1119.69	1738881.73	14578838.10	40°08'33.1858"N	80°38'51.6108"W	5997.29	169.240	0.96	-0.89	0.36
11443.00	89.110	163.150	5852.66	6081.21	-5977.38	1147.61	1738909.65	14578752.60	40°08'32.3394"N	80°38'51.2556"W	6086.55	169.132	2.73	-0.07	2.73
11533.00	89.450	159.850	5853.79	6170.81	-6062.71	1176.17	1738938.19	14578667.30	40°08'31.4951"N	80°38'50.8923"W	6175.75	169.021	3.69	0.38	-3.67
11622.00	88.800	161.130	5855.15	6259.27	-6146.59	1205.88	1738967.89	14578583.45	40°08'30.6650"N	80°38'50.5139"W	6263.77	168.900	1.61	-0.73	1.44
11712.00	89.260	163.050	5856.68	6348.96	-6232.21	1233.56	1738995.56	14578497.66	40°08'29.8178"N	80°38'50.1620"W	6353.12	168.804	2.19	0.51	2.13
11802.00	89.320	163.570	5857.79	6438.79	-6318.42	1259.40	1739021.39	14578411.70	40°08'28.9650"N	80°38'49.8336"W	6442.71	168.727	0.58	0.07	0.58
11892.00	89.910	163.530	5858.40	6528.65	-6404.73	1284.89	1739046.87	14578325.42	40°08'28.1110"N	80°38'49.5098"W	6532.34	168.656	0.66	-0.04	-0.04
11982.00	89.630	164.950	5858.76	6618.56	-6491.34	1309.33	1739071.30	14578238.84	40°08'27.2542"N	80°38'49.1995"W	6622.08	168.596	1.61	-0.31	1.58
12071.00	90.340	162.770	5858.78	6707.45	-6576.83	1334.07	1739096.03	14578153.38	40°08'26.4084"N	80°38'48.8854"W	6710.77	168.533	2.58	0.80	-2.45
12161.00	89.230	159.290	5859.12	6796.99	-6661.94	1363.32	1739125.27	14578068.32	40°08'25.5663"N	80°38'48.5131"W	6799.99	168.434	4.06	-1.23	-3.87
12251.00	89.080	163.270	5860.45	6886.55	-6747.14	1392.20	1739154.13	14577983.14	40°08'24.7231"N	80°38'48.1456"W	6889.27	168.341	4.42	-0.17	4.42
12340.00	90.580	163.700	5860.71	6975.40	-6832.46	1417.50	1739179.42	14577897.85	40°08'23.8790"N	80°38'47.8243"W	6977.96	168.279	1.75	1.69	0.48
12430.00	89.570	164.860	5860.59	7065.32	-6919.10	1441.88	1739203.80	14577811.25	40°08'23.0219"N	80°38'47.5147"W	7067.74	168.229	1.71	-1.12	1.29
12520.00	89.720	162.510	5861.15	7155.18	-7005.46	1467.16	1739229.07	14577724.92	40°08'22.1674"N	80°38'47.1936"W	7157.45	168.171	2.62	0.17	-2.61
12609.00	90.830	163.850	5860.72	7244.01	-7090.65	1492.91	1739254.81	14577639.76	40°08'21.3246"N	80°38'46.8664"W	7246.11	168.110	1.96	1.25	1.51
12702.00	89.320	162.750	5860.60	7336.84	-7179.73	1519.54	1739281.52	14577550.72	40°08'20.4433"N	80°38'46.5269"W	7338.78	168.049	2.01	-1.62	-1.18
12794.00	91.910	164.370	5859.61	7428.68	-7267.95	1546.87	1739307.55	14577462.54	40°08'19.5705"N	80°38'46.1962"W	7430.49	167.994	3.32	2.82	1.76

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Southwestern Energy

REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Well	Edward Dremak OHI 6H
Field	Ohio	AP/Legal	
Facility	Edward Dremak OHI Pad	Wellbore	Edward Dremak OHI 6H AWB
Slot	Slot #6H		

WELLPATH DATA (182 stations)

MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(US ft)	(US ft)			(ft)	(°)	(ft)	(ft/100ft)	(°/100ft)
12887.00	89.420	163.260	5858.53	7521.55	-7357.25	1571.59	1739333.45	14577373.27	40°08'18.6870"N	80°38'45.8671"W	7523.23	167.942	2.93	-2.68	-1.19
12980.00	89.660	165.150	5859.28	7614.45	-7446.73	1596.90	1739358.76	14577283.82	40°08'17.8017"N	80°38'45.5458"W	7616.03	167.897	2.05	0.26	2.03
13073.00	90.280	162.040	5859.33	7707.30	-7535.93	1623.16	1739385.01	14577194.66	40°08'16.9192"N	80°38'45.2122"W	7708.76	167.845	3.41	0.67	-3.34
13165.00	88.710	163.250	5860.14	7799.06	-7623.74	1650.60	1739412.44	14577106.89	40°08'16.0504"N	80°38'44.8634"W	7800.37	167.784	2.15	-1.71	1.32
13258.00	89.940	165.910	5861.24	7891.97	-7713.37	1675.33	1739437.15	14577017.29	40°08'15.1637"N	80°38'44.5497"W	7893.21	167.746	3.15	1.32	2.86
13351.00	91.350	163.130	5860.19	7984.89	-7802.98	1700.14	1739461.96	14576927.71	40°08'14.2772"N	80°38'44.2348"W	7986.05	167.708	3.35	1.52	-2.99
13444.00	88.890	163.350	5859.99	8077.71	-7892.02	1726.96	1739488.76	14576838.70	40°08'13.3962"N	80°38'43.8941"W	8078.76	167.657	2.66	-2.65	0.24
13536.00	89.260	162.880	5861.48	8169.51	-7980.05	1753.68	1739515.47	14576750.72	40°08'12.5253"N	80°38'43.5546"W	8170.47	167.606	0.65	0.40	-0.51
13629.00	90.310	163.940	5861.83	8262.35	-8069.17	1780.23	1739542.01	14576661.63	40°08'11.6435"N	80°38'43.2173"W	8263.22	167.559	1.60	1.13	1.14
13721.00	89.230	161.040	5862.20	8354.09	-8156.90	1807.90	1739569.68	14576573.93	40°08'10.7755"N	80°38'42.8655"W	8354.85	167.503	3.36	-1.17	-3.15
13814.00	89.350	165.570	5863.35	8446.89	-8245.95	1834.61	1739596.38	14576484.92	40°08'9.8945"N	80°38'42.5262"W	8447.57	167.457	4.87	0.13	4.87
13907.00	90.030	162.590	5863.85	8539.78	-8335.37	1860.12	1739621.87	14576395.53	40°08'9.0098"N	80°38'42.2024"W	8540.40	167.420	3.29	0.73	-3.20
14000.00	89.750	164.190	5864.03	8632.62	-8424.48	1886.70	1739648.45	14576306.45	40°08'8.1281"N	80°38'41.8647"W	8633.17	167.377	1.75	-0.30	1.72
14091.00	89.420	157.060	5864.69	8723.04	-8510.27	1916.87	1739678.60	14576220.70	40°08'7.2792"N	80°38'41.4807"W	8723.48	167.306	7.84	-0.36	-7.84
14181.00	89.140	159.990	5865.82	8812.10	-8594.01	1949.81	1739711.53	14576136.99	40°08'6.4504"N	80°38'41.0609"W	8812.42	167.217	3.27	-0.31	3.26
14271.00	88.770	160.500	5867.47	8901.51	-8678.70	1980.23	1739741.94	14576052.34	40°08'5.6123"N	80°38'40.6736"W	8901.75	167.147	0.70	-0.41	0.57
14360.00	89.260	163.890	5869.00	8990.21	-8763.41	2007.43	1739769.13	14575967.66	40°08'4.7741"N	80°38'40.3277"W	8990.39	167.098	3.85	0.55	3.81
14453.00	89.690	160.500	5869.85	9082.90	-8851.94	2035.87	1739797.55	14575879.16	40°08'3.8981"N	80°38'39.9662"W	9083.04	167.048	3.67	0.46	-3.65
14541.00	89.050	160.730	5870.82	9170.39	-8934.94	2065.07	1739826.75	14575796.19	40°08'3.0767"N	80°38'39.5945"W	9170.48	166.986	0.77	-0.73	0.26
14634.00	89.290	163.920	5872.16	9263.10	-9023.53	2093.30	1739854.97	14575707.64	40°08'2.2002"N	80°38'39.2356"W	9263.16	166.939	3.44	0.26	3.43
14725.00	89.170	163.360	5873.39	9353.95	-9110.84	2118.93	1739880.59	14575620.36	40°08'1.3364"N	80°38'38.9101"W	9354.00	166.907	0.63	-0.13	-0.62
14814.00	89.140	164.350	5874.70	9442.83	-9196.32	2143.68	1739905.32	14575534.92	40°08'0.4907"N	80°38'38.5959"W	9442.86	166.879	1.11	-0.03	1.11
14903.00	89.570	164.300	5875.70	9531.75	-9282.01	2167.72	1739929.36	14575449.27	40°07'59.6430"N	80°38'38.2908"W	9531.77	166.855	0.49	-0.06	-0.06
14996.00	89.290	164.350	5876.63	9624.66	-9371.54	2192.85	1739954.47	14575359.77	40°07'58.7572"N	80°38'37.9719"W	9624.68	166.830	0.31	-0.30	0.05
15088.00	89.570	165.340	5877.54	9716.61	-9460.34	2216.90	1739978.51	14575271.01	40°07'57.8788"N	80°38'37.6669"W	9716.61	166.812	1.12	0.30	1.08
15178.00	89.380	165.040	5878.37	9806.57	-9547.34	2239.90	1740001.51	14575184.03	40°07'57.0181"N	80°38'37.3752"W	9806.58	166.797	0.39	-0.21	-0.33
15267.00	89.540	164.420	5879.20	9895.51	-9633.20	2263.34	1740024.94	14575098.21	40°07'56.1687"N	80°38'37.0779"W	9895.51	166.778	0.72	0.18	-0.70
15356.00	89.320	162.840	5880.09	9984.37	-9718.58	2288.42	1740050.01	14575012.86	40°07'55.3240"N	80°38'36.7594"W	9984.37	166.750	1.79	-0.25	-1.78
15445.00	89.140	162.500	5881.29	10073.14	-9803.53	2314.93	1740076.51	14574927.94	40°07'54.4834"N	80°38'36.4225"W	10073.14	166.714	0.43	-0.20	-0.38
15535.00	89.380	163.610	5882.45	10162.95	-9889.62	2344.16	1740102.72	14574841.89	40°07'53.6317"N	80°38'36.0892"W	10162.95	166.682	1.26	0.27	1.23

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REFERENCE WELLPATH IDENTIFICATION			
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Field	Ohio	API/Legal	
Facility	Edward Dremak OHI Pad	Wellbore	Edward Dremak OHI 6H AWB
Slot	Slot #6H		

WELLPATH DATA (182 stations) † = interpolated, ‡ = extrapolated station

MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate
15583.00	89.290	162.420	5883.01	10210.84	-9935.52	2355.18	1740116.74	14574796.01	40°07'53.1775"N	80°38'35.9111"W	10210.85	166.664	2.49	-0.19	-2.48
15608.00	89.290	162.420	5883.31	10235.77	-9959.35	2362.73	1740124.29	14574772.19	40°07'52.9417"N	80°38'35.8151"W	10235.78	166.654	0.00	0.00	0.00

HOLE & CASING SECTIONS - Ref Wellbore: Edward Dremak OHI 6H AWB Ref Wellpath: Edward Dremak OHI 6H AWP Proj: 15608

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
20in Conductor	26.00	126.00	100.00	26.00	126.00	0.00	0.00	0.00	-0.23
17.5in Open Hole	126.00	362.00	236.00	126.00	361.99	-0.23	0.37	-0.70	1.08
13.375in Casing Surface	26.00	362.00	336.00	26.00	361.99	0.00	0.00	-0.70	1.08
12.25in Open Hole	362.00	1651.00	1289.00	361.99	1644.96	-0.70	1.08	-57.95	-81.71
9.625in Casing Intermediate	26.00	1651.00	1625.00	26.00	1644.96	0.00	0.00	-57.95	-81.71
8.75in Open Hole	26.00	5710.00	5684.00	26.00	5607.88	0.00	0.00	-547.99	-483.20
8.5in Open Hole	5710.00	15608.00	9898.00	5607.88	5883.31	-547.99	-483.20	-9959.35	-2362.73
5.5in Casing Production	26.00	15608.00	15582.00	26.00	5883.31	0.00	0.00	-9959.35	-2362.73

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REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Well	Edward Dremak OHI 6H
Field	Ohio	API/ Legal	
Facility	Edward Dremak OHI Pad	Wellbore	Edward Dremak OHI 6H AWB
Slot	Slot #6H		

TARGETS							
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude
Edward Dremak North Hardlines 1	5802.50	-166.50	798.74	1738560.91	14584561.21	40°09'29.7762"N	80°38'55.4520"W
2D Polygon: dimensions not calculated							
Edward Dremak North Hardlines 2	5802.50	-2359.69	627.41	1738389.65	14582368.87	40°09'8.1098"N	80°38'57.7700"W
2D Polygon: dimensions not calculated							
Edward Dremak OHI 6H LP Rev-2	5802.50	-924.67	-419.86	1737342.79	14583803.34	40°09'22.3313"N	80°39'11.1848"W
2D Polygon: dimensions not calculated							
Edward Dremak South Hardlines 1	5802.50	-11220.41	4775.60	1742536.21	14573511.62	40°07'40.3831"N	80°38'4.8181"W
2D Polygon: dimensions not calculated							
Edward Dremak South Hardlines 2	5802.50	-12962.97	4911.94	1742672.50	14571769.74	40°07'23.1575"N	80°38'3.1551"W
2D Polygon: dimensions not calculated							
Edward Dremak South Unit 1	5802.50	-10783.42	6248.45	1744008.49	14573948.44	40°07'44.6412"N	80°37'45.8337"W
2D Polygon: dimensions not calculated							
Edward Dremak South Unit 2	5802.50	-13681.57	4914.64	1742675.20	14571051.42	40°07'16.0562"N	80°38'3.1584"W
2D Polygon: dimensions not calculated							
Edward Dremak OHI 6H BHL Rev-2	5934.53	-9962.20	2350.39	1740111.95	14574769.34	40°07'52.9141"N	80°38'35.9742"W
point							

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Slot	Slot #6H		

WELLPATH COMPOSITION - Ret Wellbore: Edward Dremak OHI 6H AWB				Ref Wellpath: Edward Dremak OHI 6H AWP Proj: 15608			
Start MD	End MD	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date		
[ft]	[ft]						
26.00	303.00	OWSG MWD rev2 + HRGM	01 Premier MWD <17 1/2"> (151-303)	Edward Dremak OHI 6H AWB	11/22/2019		
303.00	1599.00	OWSG MWD rev2 + HRGM	02 Premier MWD <12 1/4"> (388-1599)	Edward Dremak OHI 6H AWB	11/22/2019		
1599.00	5650.00	OWSG MWD rev2 + HRGM	03 Premier MWD <8 3/4"> (1707-5650)	Edward Dremak OHI 6H AWB	11/22/2019		
5650.00	15608.00	BH AutoTrak Curve (2019) (Short spacing)	04 BH AT Curve <8 1/2"> (5708-15583)	Edward Dremak OHI 6H AWB	11/22/2019		

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COMMENTS
Wellpath general comments API: 47-069-00316-0000 BH Job #: 110140963A Rig: SDC 42 Duration: 12/08/2019 - 12/10/2019

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