

REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot #405H
Area	Ohio County, WV	Well	Edward Dremak OHI 405H
Field	Ohio	Wellbore	Edward Dremak OHI 405H AWP
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	26/Feb/2019 at 08:36
Convergence at slot	0.22° East	Database/Source file	WA_MPL_EASTERNUS_Defn/Edward_Dremak_OHI_405H_AWP_Proj_24726_.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-9.67	47.76	1737788.57	14584694.67	40°09'31.126"N	80°39'05.396"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 (RKB) to Facility Vertical Datum	1114.00ft
Horizontal Reference Pt	Slot	SDC 40 (RKB) to Mean Sea Level	1114.00ft
Vertical Reference Pt	SDC 40 (RKB)	SDC 40 (RKB) to Ground Level at Slot (Slot #405H)	26.00ft
MD Reference Pt	SDC 40 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	350.96°

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Actual Wellpath Report

Edward Dremak OHI 405H AWP Proj: 24726'

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Facility	Edward Dremak OHI Pad		

WELLPATH DATA (280 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	135.660	0.00	0.00	0.00	0.00	1737788.57	14584694.67	40°09'31.126"N	80°39'05.396"W	0.00	0.000	0.00	0.00	0.00
26.00	0.000	135.660	26.00	0.00	0.00	0.00	1737788.57	14584694.67	40°09'31.126"N	80°39'05.396"W	0.00	0.000	0.00	0.00	0.00
151.00	0.770	135.660	151.00	-0.69	-0.60	0.59	1737789.16	14584694.07	40°09'31.120"N	80°39'05.389"W	0.84	135.660	0.62	0.62	108.53
227.00	0.680	144.320	226.99	-1.51	-1.33	1.21	1737789.78	14584693.34	40°09'31.112"N	80°39'05.381"W	1.80	137.825	0.19	-0.12	11.39
300.00	0.310	143.220	299.99	-2.07	-1.84	1.58	1737790.15	14584692.83	40°09'31.107"N	80°39'05.376"W	2.43	139.421	0.51	-0.51	-1.51
419.00	0.140	173.420	418.99	-2.50	-2.24	1.79	1737790.36	14584692.43	40°09'31.103"N	80°39'05.373"W	2.87	141.471	0.17	-0.14	25.38
510.00	1.150	148.550	509.98	-3.45	-3.13	2.28	1737790.85	14584691.54	40°09'31.095"N	80°39'05.367"W	3.87	144.006	1.13	1.11	-27.33
603.00	2.730	144.510	602.92	-6.30	-5.73	4.05	1737792.62	14584688.94	40°09'31.089"N	80°39'05.344"W	7.02	144.769	1.70	1.70	-4.34
695.00	4.440	131.400	694.74	-11.01	-9.87	7.99	1737796.56	14584684.80	40°09'31.028"N	80°39'05.291"W	12.70	141.007	2.05	1.86	-14.25
788.00	5.150	115.990	787.42	-16.18	-14.08	14.45	1737803.01	14584680.59	40°09'30.986"N	80°39'05.211"W	20.17	134.272	1.57	0.76	-16.57
881.00	5.960	93.710	879.99	-19.64	-16.22	23.02	1737811.58	14584678.45	40°09'30.964"N	80°39'05.101"W	28.16	125.181	2.46	0.87	-23.96
974.00	7.100	79.060	972.39	-20.51	-15.45	33.48	1737822.04	14584679.23	40°09'30.972"N	80°39'04.966"W	36.87	114.767	2.16	1.23	-15.75
1067.00	8.650	70.120	1064.52	-19.01	-11.98	45.70	1737834.25	14584682.70	40°09'31.006"N	80°39'04.808"W	47.24	104.686	2.12	1.67	-9.61
1159.00	10.080	64.550	1155.29	-15.43	-6.16	59.48	1737848.02	14584688.51	40°09'31.062"N	80°39'04.631"W	59.80	95.917	1.84	1.55	-6.05
1252.00	11.180	66.750	1246.69	-10.92	0.89	75.11	1737863.65	14584695.56	40°09'31.132"N	80°39'04.429"W	75.12	89.319	1.26	1.18	2.37
1345.00	12.520	72.650	1337.71	-7.25	7.46	93.02	1737881.55	14584702.12	40°09'31.196"N	80°39'04.198"W	93.32	85.416	1.94	1.44	6.34
1438.00	12.210	72.830	1428.56	-4.40	13.37	112.03	1737900.56	14584708.03	40°09'31.253"N	80°39'03.953"W	112.83	83.196	0.34	-0.33	0.19
1530.00	11.450	69.440	1518.60	-1.20	19.45	129.88	1737918.40	14584714.11	40°09'31.313"N	80°39'03.723"W	131.33	81.485	1.12	-0.83	-3.68
1623.00	11.620	66.200	1609.72	3.03	26.47	147.09	1737935.61	14584721.13	40°09'31.381"N	80°39'03.501"W	149.46	79.799	0.72	0.18	-3.48
1712.00	11.470	64.680	1696.92	7.79	33.87	163.29	1737951.80	14584728.53	40°09'31.454"N	80°39'03.292"W	166.77	78.282	0.38	-0.17	-1.71
1818.00	11.490	61.380	1800.80	14.29	43.43	182.09	1737970.59	14584738.09	40°09'31.548"N	80°39'03.049"W	187.20	76.584	0.62	0.02	-3.11
1911.00	14.040	62.190	1891.50	21.02	53.14	200.20	1737988.69	14584747.78	40°09'31.643"N	80°39'02.815"W	207.13	75.136	2.75	2.74	0.87
2004.00	17.070	65.330	1981.08	28.33	64.10	222.59	1738011.07	14584758.74	40°09'31.750"N	80°39'02.526"W	231.63	73.935	3.38	3.26	3.38
2096.00	19.960	67.080	2068.31	35.74	75.85	249.33	1738037.80	14584770.49	40°09'31.866"N	80°39'02.181"W	260.61	73.079	3.20	3.14	1.90
2189.00	22.550	67.200	2154.98	43.79	88.95	280.39	1738068.85	14584783.58	40°09'31.994"N	80°39'01.781"W	294.16	72.400	2.79	2.78	0.13
2282.00	24.530	67.880	2240.24	52.40	103.13	314.72	1738103.16	14584797.76	40°09'32.133"N	80°39'01.338"W	331.18	71.857	2.15	2.13	0.73
2374.00	26.270	70.010	2323.34	60.59	117.28	351.55	1738139.98	14584811.90	40°09'32.271"N	80°39'00.863"W	370.59	71.551	2.14	1.89	2.32
2467.00	28.790	69.570	2405.80	68.93	132.14	391.88	1738180.30	14584826.75	40°09'32.416"N	80°39'00.342"W	413.56	71.367	2.72	2.71	-0.47
2557.00	30.300	69.630	2484.10	77.67	147.60	433.47	1738221.87	14584842.22	40°09'32.567"N	80°38'59.806"W	457.92	71.196	1.68	1.68	0.07
2649.00	31.390	68.480	2563.09	87.41	164.47	477.52	1738265.91	14584859.08	40°09'32.732"N	80°38'59.238"W	505.05	70.995	1.35	1.18	-1.25

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Ohio County, WV	Wellbore	Edward Dremak OHI 405H AWB
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Edward Dremak OHI Pad		

WELLPATH DATA (280 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]
2742.00	30.310	70.250	2642.93	97.00	181.29	522.14	1738310.51	14584875.89	40°09'32.897"N	80°38'58.662"W	552.72	70.853	1.52	-1.16	1.90
2835.00	29.650	72.500	2723.49	104.75	196.14	566.17	1738354.52	14584890.73	40°09'33.042"N	80°38'58.094"W	599.18	70.893	1.40	-0.71	2.42
2928.00	29.820	71.550	2804.24	111.92	210.37	610.05	1738398.38	14584904.96	40°09'33.181"N	80°38'57.529"W	645.30	70.974	0.54	0.18	-1.02
3020.00	30.250	70.490	2883.89	119.87	225.35	653.59	1738441.90	14584919.93	40°09'33.327"N	80°38'56.967"W	691.35	70.976	0.74	0.47	-1.15
3113.00	29.260	74.270	2964.63	126.77	239.34	697.55	1738485.85	14584933.91	40°09'33.464"N	80°38'56.400"W	737.47	71.062	2.28	-1.06	4.06
3206.00	28.660	74.350	3046.00	131.99	251.51	740.90	1738529.18	14584946.09	40°09'33.582"N	80°38'55.841"W	782.43	71.249	0.65	-0.65	0.09
3298.00	27.950	73.540	3127.00	137.31	263.57	782.82	1738571.09	14584958.14	40°09'33.700"N	80°38'55.301"W	826.01	71.392	0.88	-0.77	-0.88
3391.00	28.530	74.020	3208.93	142.81	275.86	825.08	1738613.32	14584970.43	40°09'33.820"N	80°38'54.756"W	869.97	71.513	0.67	0.62	0.52
3484.00	29.520	72.410	3290.25	148.90	288.90	868.27	1738656.50	14584983.46	40°09'33.947"N	80°38'54.199"W	915.07	71.596	1.36	1.06	-1.73
3577.00	29.470	70.860	3371.20	156.32	303.33	911.72	1738699.94	14584997.88	40°09'34.088"N	80°38'53.638"W	960.86	71.598	0.82	-0.05	-1.67
3670.00	28.940	69.900	3452.38	164.65	318.56	954.47	1738742.66	14585013.11	40°09'34.236"N	80°38'53.087"W	1006.22	71.543	0.76	-0.57	-1.03
3762.00	29.350	71.710	3532.73	172.55	333.29	996.78	1738784.96	14585027.83	40°09'34.380"N	80°38'52.541"W	1051.02	71.512	1.06	0.45	1.97
3852.00	28.790	71.520	3611.40	179.65	347.08	1038.28	1738826.44	14585041.61	40°09'34.515"N	80°38'52.006"W	1094.75	71.516	0.63	-0.62	-0.21
3945.00	29.420	71.400	3692.65	187.12	361.46	1081.16	1738869.31	14585055.99	40°09'34.655"N	80°38'51.453"W	1139.99	71.514	0.68	0.68	-0.13
4038.00	28.740	70.820	3773.93	194.85	376.09	1123.93	1738912.06	14585070.62	40°09'34.798"N	80°38'50.902"W	1185.19	71.498	0.79	-0.73	-0.62
4130.00	29.580	71.020	3854.27	202.66	390.75	1166.29	1738954.41	14585085.26	40°09'34.942"N	80°38'50.355"W	1230.01	71.477	0.92	0.91	0.22
4223.00	28.960	70.350	3935.39	210.77	405.78	1209.21	1738997.30	14585100.30	40°09'35.088"N	80°38'49.802"W	1275.48	71.449	0.75	-0.67	-0.72
4316.00	30.200	71.890	4016.27	218.60	420.63	1252.64	1739040.72	14585115.13	40°09'35.233"N	80°38'49.242"W	1321.38	71.438	1.56	1.33	1.66
4409.00	29.510	71.200	4096.93	226.18	435.28	1296.56	1739084.62	14585129.78	40°09'35.376"N	80°38'48.675"W	1367.67	71.442	0.83	-0.74	-0.74
4501.00	28.370	70.940	4177.44	233.82	449.72	1338.67	1739126.71	14585144.21	40°09'35.518"N	80°38'48.132"W	1412.19	71.430	1.25	-1.24	-0.28
4594.00	29.370	70.880	4258.88	241.66	464.40	1381.10	1739169.13	14585158.89	40°09'35.661"N	80°38'47.585"W	1457.09	71.414	1.08	1.08	-0.06
4687.00	28.090	69.690	4340.43	249.93	479.48	1423.18	1739211.20	14585173.96	40°09'35.808"N	80°38'47.042"W	1501.78	71.381	1.51	-1.38	-1.28
4780.00	28.840	70.780	4422.19	258.17	494.46	1464.90	1739252.90	14585188.94	40°09'35.955"N	80°38'46.504"W	1546.10	71.348	0.98	0.81	1.17
4872.00	30.490	72.650	4502.13	265.47	508.73	1508.13	1739296.11	14585203.20	40°09'36.094"N	80°38'45.946"W	1591.62	71.360	2.06	1.79	2.03
4965.00	29.620	72.680	4582.62	272.19	522.60	1552.59	1739340.56	14585217.07	40°09'36.229"N	80°38'45.373"W	1638.19	71.397	0.94	-0.94	0.03
5058.00	30.310	71.880	4663.19	279.20	536.74	1596.84	1739384.78	14585231.20	40°09'36.367"N	80°38'44.802"W	1684.63	71.421	0.86	0.74	-0.86
5151.00	29.520	70.850	4743.80	286.93	551.56	1640.79	1739428.72	14585246.01	40°09'36.512"N	80°38'44.236"W	1731.01	71.420	1.01	-0.85	-1.11
5243.00	28.450	69.680	4824.28	295.20	566.60	1682.75	1739470.66	14585261.05	40°09'36.659"N	80°38'43.694"W	1775.58	71.391	1.32	-1.16	-1.27
5336.00	26.880	68.030	4906.65	304.24	582.16	1723.02	1739510.92	14585276.61	40°09'36.811"N	80°38'43.175"W	1818.72	71.331	1.88	-1.69	-1.77
5429.00	26.850	67.200	4989.61	313.94	598.17	1761.88	1739549.76	14585292.60	40°09'36.968"N	80°38'42.674"W	1860.65	71.247	0.40	-0.03	-0.89

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5522.00	28.030	67.230	5072.14	324.12	614.76	1801.39	1739589.26	14585309.19	40°09'37.130"N	80°38'42.164"W	1903.41	71.157	1.27	1.27	0.03
5615.00	28.290	69.110	5154.14	333.83	631.08	1842.13	1739629.98	14585325.50	40°09'37.290"N	80°38'41.638"W	1947.23	71.089	0.99	0.28	2.02
5707.00	29.050	69.930	5234.86	342.58	646.52	1883.48	1739671.31	14585340.94	40°09'37.441"N	80°38'41.105"W	1991.35	71.055	0.93	0.83	0.89
5783.00	28.520	66.780	5301.47	350.56	660.01	1917.49	1739705.31	14585354.42	40°09'37.573"N	80°38'40.666"W	2027.90	71.006	2.11	-0.70	-4.14
5830.00	28.950	58.030	5342.70	357.74	670.46	1937.46	1739725.27	14585364.87	40°09'37.675"N	80°38'40.408"W	2050.19	70.912	8.99	0.91	-18.62
5876.00	30.020	48.990	5382.76	368.18	683.91	1955.60	1739743.40	14585378.31	40°09'37.807"N	80°38'40.174"W	2071.74	70.724	9.94	2.33	-19.65
5923.00	31.540	40.960	5423.16	382.31	700.92	1972.53	1739760.33	14585395.31	40°09'37.975"N	80°38'39.955"W	2093.37	70.438	9.31	3.23	-17.09
5969.00	34.220	35.430	5461.79	399.28	720.55	1987.93	1739775.72	14585414.94	40°09'38.168"N	80°38'39.756"W	2114.48	70.076	8.74	5.83	-12.02
6015.00	36.960	33.650	5499.20	418.68	742.61	2003.09	1739790.88	14585436.98	40°09'38.386"N	80°38'39.559"W	2136.31	69.659	6.37	5.96	-3.87
6061.00	39.980	31.150	5535.21	440.14	766.77	2018.40	1739806.18	14585461.14	40°09'38.624"N	80°38'39.361"W	2159.14	69.199	7.38	6.57	-5.43
6108.00	43.410	26.130	5570.31	464.90	794.21	2033.33	1739821.11	14585488.57	40°09'38.894"N	80°38'39.167"W	2182.94	68.665	10.18	7.30	-10.68
6154.00	45.860	19.110	5603.06	492.39	824.02	2045.71	1739833.48	14585518.37	40°09'39.188"N	80°38'39.006"W	2205.43	68.060	11.97	5.33	-15.26
6201.00	48.100	13.490	5635.14	523.43	856.98	2055.32	1739843.08	14585551.31	40°09'39.514"N	80°38'38.881"W	2226.82	67.366	9.95	4.77	-11.96
6247.00	49.960	7.900	5665.31	556.11	891.09	2061.73	1739849.50	14585585.41	40°09'39.851"N	80°38'38.797"W	2246.06	66.626	10.02	4.04	-12.15
6293.00	54.050	3.470	5693.63	591.16	927.14	2065.28	1739853.04	14585621.45	40°09'40.207"N	80°38'38.749"W	2263.84	65.824	11.69	8.89	-9.63
6340.00	59.110	0.570	5719.52	629.64	966.33	2066.64	1739854.40	14585660.62	40°09'40.594"N	80°38'38.729"W	2281.40	64.940	11.93	10.77	-6.17
6386.00	64.520	359.880	5741.23	669.65	1006.86	2066.79	1739854.55	14585701.13	40°09'40.994"N	80°38'38.725"W	2298.99	64.027	11.83	11.76	-1.50
6429.00	69.410	358.090	5758.06	708.82	1046.41	2066.08	1739853.84	14585740.67	40°09'41.385"N	80°38'38.733"W	2315.95	63.139	12.00	11.37	-4.16
6476.00	73.040	355.900	5773.18	753.06	1090.83	2063.73	1739851.50	14585785.08	40°09'41.824"N	80°38'38.760"W	2334.29	62.140	8.89	7.72	-4.66
6522.00	75.030	354.120	5785.83	797.17	1134.89	2059.88	1739847.65	14585829.11	40°09'42.260"N	80°38'38.808"W	2351.83	61.148	5.71	4.33	-3.87
6568.00	77.880	351.950	5796.61	841.86	1179.27	2054.46	1739842.22	14585873.48	40°09'42.699"N	80°38'38.875"W	2368.86	60.144	7.71	6.20	-4.72
6615.00	81.200	348.140	5805.14	888.05	1224.78	2046.46	1739834.23	14585918.97	40°09'43.149"N	80°38'38.976"W	2384.97	59.100	10.65	7.06	-8.11
6661.00	85.410	344.840	5810.51	933.58	1269.18	2035.79	1739823.56	14585963.35	40°09'43.588"N	80°38'39.111"W	2399.01	58.059	11.60	9.15	-7.17
6707.00	90.370	346.530	5812.20	979.34	1313.71	2024.43	1739812.20	14586007.86	40°09'44.028"N	80°38'39.255"W	2413.32	57.019	11.39	10.78	3.67
6800.00	91.170	346.530	5810.95	1072.05	1404.14	2002.77	1739790.55	14586098.26	40°09'44.923"N	80°38'39.530"W	2445.95	54.966	0.86	0.86	0.00
6893.00	91.200	346.130	5809.03	1164.73	1494.49	1980.79	1739768.59	14586188.57	40°09'45.817"N	80°38'39.808"W	2481.34	52.966	0.43	0.03	-0.43
6986.00	90.710	344.110	5807.48	1257.23	1584.35	1956.91	1739744.72	14586278.40	40°09'46.706"N	80°38'40.111"W	2517.87	51.006	2.23	-0.53	-2.17
7078.00	90.370	342.080	5806.61	1348.36	1672.37	1930.16	1739717.98	14586366.38	40°09'47.576"N	80°38'40.451"W	2553.89	49.093	2.24	-0.37	-2.21
7171.00	90.370	341.030	5806.01	1440.10	1760.58	1900.74	1739688.57	14586454.57	40°09'48.449"N	80°38'40.825"W	2590.84	47.192	1.13	0.00	-1.13
7264.00	90.180	340.890	5805.56	1531.69	1848.50	1870.40	1739658.24	14586542.44	40°09'49.319"N	80°38'41.212"W	2629.70	45.338	0.25	-0.20	-0.15

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REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot #405H
SOUTHWESTERN ENERGY	Well	Edward Dremak OHI 405H
Ohio County, WV	Wellbore	Edward Dremak OHI 405H AWB
Ohio		
Edward Dremak OHI Pad		

WELLPATH DATA (280 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]
7357.00	90.180	340.770	5805.27	1623.24	1936.34	1839.86	1739627.71	14586630.25	40°09'50.188"N	80°38'41.600"W	2671.05	43.537	0.13	0.00	-0.13
7449.00	90.310	341.210	5804.88	1713.85	2023.32	1809.90	1739597.76	14586717.20	40°09'51.049"N	80°38'41.982"W	2714.69	41.813	0.50	0.14	0.48
7542.00	90.250	342.340	5804.42	1805.65	2111.65	1780.81	1739568.69	14586805.50	40°09'51.923"N	80°38'42.352"W	2762.31	40.142	1.22	-0.06	1.22
7632.00	90.250	341.760	5804.03	1894.56	2197.27	1753.08	1739540.96	14586891.08	40°09'52.770"N	80°38'42.705"W	2810.92	38.584	0.64	0.00	-0.64
7725.00	90.460	341.290	5803.45	1986.30	2285.48	1723.61	1739511.50	14586979.25	40°09'53.643"N	80°38'43.080"W	2862.55	37.022	0.55	0.23	-0.51
7817.00	90.060	341.120	5803.04	2076.97	2372.57	1693.96	1739481.87	14587066.31	40°09'54.505"N	80°38'43.457"W	2915.24	35.526	0.47	-0.43	-0.18
7910.00	89.880	343.100	5803.08	2168.86	2461.07	1665.40	1739453.32	14587154.77	40°09'55.381"N	80°38'43.821"W	2971.60	34.086	2.14	-0.19	2.13
8003.00	89.910	342.420	5803.25	2260.91	2549.89	1637.83	1739425.76	14587243.56	40°09'56.260"N	80°38'44.171"W	3030.58	32.713	0.73	0.03	-0.73
8096.00	89.820	343.310	5803.47	2352.98	2638.76	1610.44	1739398.38	14587332.40	40°09'57.139"N	80°38'44.519"W	3091.37	31.396	0.96	-0.10	0.96
8189.00	89.850	344.710	5803.74	2445.29	2728.16	1584.82	1739372.77	14587421.76	40°09'58.023"N	80°38'44.845"W	3155.07	30.153	1.51	0.03	1.51
8281.00	89.850	346.630	5803.98	2536.90	2817.29	1562.05	1739350.01	14587510.86	40°09'58.905"N	80°38'45.133"W	3221.35	29.006	2.09	0.00	2.09
8374.00	89.850	347.260	5804.23	2629.67	2907.89	1541.04	1739329.01	14587601.42	40°09'59.801"N	80°38'45.399"W	3290.99	27.921	0.68	0.00	0.68
8464.00	90.340	348.160	5804.08	2719.52	2995.82	1521.88	1739309.86	14587689.32	40°10'00.671"N	80°38'45.642"W	3360.22	26.931	1.14	0.54	1.00
8556.00	90.400	347.140	5803.48	2811.36	3085.69	1502.21	1739290.19	14587779.15	40°10'01.560"N	80°38'45.890"W	3431.93	25.958	1.11	0.07	-1.11
8649.00	91.080	347.540	5802.28	2904.17	3176.42	1481.83	1739269.82	14587869.85	40°10'02.457"N	80°38'46.148"W	3505.06	25.009	0.85	0.73	0.43
8738.00	91.110	348.390	5800.58	2993.03	3263.45	1463.27	1739251.27	14587956.84	40°10'03.318"N	80°38'46.383"W	3576.49	24.151	0.96	0.03	0.96
8831.00	90.990	346.090	5798.88	3085.81	3354.13	1442.74	1739230.74	14588047.49	40°10'04.215"N	80°38'46.643"W	3651.26	23.274	2.48	-0.13	-2.47
8924.00	90.990	341.210	5797.27	3178.02	3443.33	1416.57	1739204.58	14588136.65	40°10'05.097"N	80°38'46.975"W	3723.33	22.362	5.25	0.00	-5.25
9016.00	91.230	340.410	5795.49	3268.56	3530.20	1386.33	1739174.36	14588223.49	40°10'05.957"N	80°38'47.360"W	3792.66	21.440	0.91	0.26	-0.87
9109.00	91.050	339.050	5793.64	3359.76	3617.42	1354.12	1739142.16	14588310.68	40°10'06.820"N	80°38'47.771"W	3862.56	20.523	1.47	-0.19	-1.46
9202.00	90.920	339.320	5792.04	3450.79	3704.34	1321.08	1739109.13	14588397.56	40°10'07.680"N	80°38'48.192"W	3932.86	19.628	0.32	-0.14	0.29
9294.00	90.980	337.420	5790.51	3540.56	3789.84	1287.17	1739075.24	14588483.03	40°10'08.527"N	80°38'48.624"W	4002.47	18.759	2.07	0.07	-2.07
9387.00	91.140	340.850	5788.79	3631.55	3876.72	1254.06	1739042.14	14588569.87	40°10'09.386"N	80°38'49.046"W	4074.51	17.926	3.69	0.17	3.69
9480.00	90.920	343.240	5787.12	3723.41	3965.17	1225.40	1739013.49	14588658.29	40°10'10.261"N	80°38'49.411"W	4150.20	17.173	2.58	-0.24	2.57
9572.00	90.620	342.370	5785.88	3814.47	4053.05	1198.20	1738986.30	14588746.13	40°10'11.131"N	80°38'49.757"W	4226.45	16.469	1.00	-0.33	-0.95
9665.00	90.580	340.460	5784.91	3906.17	4141.19	1168.57	1738956.68	14588834.24	40°10'12.003"N	80°38'50.134"W	4302.90	15.758	2.05	-0.04	-2.05
9758.00	90.120	339.860	5784.34	3997.52	4228.67	1137.00	1738925.13	14588921.68	40°10'12.869"N	80°38'50.536"W	4378.86	15.050	0.81	-0.49	-0.65
9851.00	89.820	341.260	5784.39	4088.99	4316.36	1106.05	1738894.15	14589009.34	40°10'13.737"N	80°38'50.930"W	4455.82	14.373	1.54	-0.32	1.51
9943.00	89.720	344.950	5784.76	4180.11	4404.38	1079.32	1738867.47	14589097.32	40°10'14.607"N	80°38'51.270"W	4534.69	13.769	4.01	-0.11	4.01
10036.00	90.580	347.850	5784.51	4272.81	4494.76	1057.45	1738845.61	14589187.67	40°10'15.501"N	80°38'51.547"W	4617.47	13.239	3.25	0.92	3.12

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Actual Wellpath Report

Edward Dremak OHI 405H AWP Proj: 24726'

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Operator	Slot	Slot #405H
SOUTHWESTERN ENERGY	Well	Edward Dremak OHI 405H
Ohio County, WV	Wellbore	Edward Dremak OHI 405H AWB
Ohio		
Edward Dremak OHI Pad		

WELLPATH DATA (280 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]
10129.00	90.580	347.290	5783.57	4365.64	4585.57	1037.44	1738825.60	14589278.45	40°10'16.400"N	80°38'51.801"W	4701.46	12.748	0.60	0.00	-0.60
10222.00	90.680	345.830	5782.55	4458.36	4676.02	1015.82	1738804.00	14589368.86	40°10'17.294"N	80°38'52.074"W	4785.08	12.257	1.57	0.11	-1.57
10315.00	90.650	344.350	5781.47	4550.86	4765.88	991.90	1738780.08	14589458.68	40°10'18.183"N	80°38'52.378"W	4868.00	11.757	1.59	-0.03	-1.59
10407.00	90.430	343.280	5780.60	4642.14	4854.23	966.25	1738754.45	14589547.00	40°10'19.057"N	80°38'52.704"W	4949.46	11.258	1.19	-0.24	-1.16
10500.00	90.280	343.490	5780.03	4734.33	4943.34	939.66	1738727.86	14589636.08	40°10'19.939"N	80°38'53.042"W	5031.86	10.763	0.28	-0.16	0.23
10590.00	90.770	345.600	5779.20	4823.75	5030.08	915.68	1738703.89	14589722.78	40°10'20.797"N	80°38'53.346"W	5112.74	10.317	2.41	0.54	2.34
10682.00	90.340	345.770	5778.31	4915.36	5119.22	892.93	1738681.16	14589811.88	40°10'21.679"N	80°38'53.635"W	5196.51	9.894	0.50	-0.47	0.18
10775.00	90.650	347.670	5777.51	5008.10	5209.72	871.57	1738659.80	14589902.35	40°10'22.574"N	80°38'53.905"W	5282.13	9.497	2.07	0.33	2.04
10865.00	90.580	350.030	5776.54	5098.02	5298.01	854.17	1738642.41	14589990.61	40°10'23.447"N	80°38'54.125"W	5366.43	9.159	2.62	-0.08	2.62
10954.00	90.800	351.300	5775.47	5187.01	5385.83	839.74	1738627.98	14590078.39	40°10'24.315"N	80°38'54.306"W	5450.90	8.862	1.45	0.25	1.43
11045.00	90.370	349.370	5774.54	5278.00	5475.52	824.46	1738612.71	14590168.05	40°10'25.202"N	80°38'54.499"W	5537.25	8.563	2.17	-0.47	-2.12
11136.00	90.310	348.510	5774.00	5368.94	5564.83	807.00	1738595.26	14590257.33	40°10'26.086"N	80°38'54.719"W	5623.04	8.251	0.95	-0.07	-0.95
11225.00	90.430	346.660	5773.43	5457.78	5651.75	787.87	1738576.13	14590344.20	40°10'26.945"N	80°38'54.961"W	5706.40	7.936	2.08	0.13	-2.08
11318.00	90.430	344.680	5772.73	5550.38	5741.84	764.85	1738553.13	14590434.27	40°10'27.837"N	80°38'55.253"W	5792.56	7.588	2.13	0.00	-2.13
11411.00	90.370	341.430	5772.08	5642.48	5830.79	737.75	1738526.04	14590523.18	40°10'28.717"N	80°38'55.598"W	5877.28	7.211	3.50	-0.06	-3.49
11504.00	90.280	338.890	5771.55	5733.82	5918.26	706.19	1738494.49	14590610.62	40°10'29.582"N	80°38'56.000"W	5960.25	6.805	2.73	-0.10	-2.73
11596.00	90.250	336.990	5771.13	5823.45	6003.52	671.64	1738459.95	14590695.85	40°10'30.426"N	80°38'56.440"W	6040.98	6.383	2.07	-0.03	-2.07
11686.00	90.220	336.750	5770.76	5910.74	6086.29	636.29	1738424.61	14590778.58	40°10'31.245"N	80°38'56.892"W	6119.46	5.968	0.27	-0.03	-0.27
11779.00	90.280	337.820	5770.35	6001.10	6172.07	600.38	1738388.71	14590864.33	40°10'32.094"N	80°38'57.350"W	6201.20	5.556	1.15	0.06	1.15
11872.00	90.060	339.550	5770.08	6091.97	6258.71	566.57	1738354.92	14590950.93	40°10'32.952"N	80°38'57.781"W	6284.30	5.173	1.88	-0.24	1.86
11965.00	90.310	342.720	5769.77	6183.60	6346.70	536.51	1738324.87	14591038.89	40°10'33.823"N	80°38'58.164"W	6369.34	4.832	3.42	0.27	3.41
12057.00	90.400	343.260	5769.20	6274.70	6434.67	509.59	1738292.97	14591126.83	40°10'34.693"N	80°38'58.506"W	6454.82	4.528	0.60	0.10	0.59
12150.00	90.490	345.160	5768.48	6367.05	6524.16	484.29	1738272.67	14591216.28	40°10'35.578"N	80°38'58.828"W	6542.11	4.245	2.05	0.10	2.04
12243.00	90.550	348.560	5767.64	6459.80	6614.71	463.15	1738251.54	14591306.79	40°10'36.474"N	80°38'59.095"W	6630.90	4.005	3.66	0.06	3.66
12336.00	90.710	348.690	5766.62	6552.71	6705.87	444.81	1738233.21	14591397.92	40°10'37.376"N	80°38'59.327"W	6720.61	3.795	0.22	0.17	0.14
12428.00	90.430	347.640	5765.70	6644.60	6795.91	425.94	1738214.35	14591487.92	40°10'38.266"N	80°38'59.565"W	6809.25	3.586	1.18	-0.30	-1.14
12521.00	90.800	348.550	5764.70	6737.48	6886.91	406.76	1738195.17	14591578.88	40°10'39.166"N	80°38'59.808"W	6898.91	3.380	1.06	0.40	0.98
12614.00	90.710	348.790	5763.48	6830.39	6978.08	388.49	1738176.91	14591670.03	40°10'40.068"N	80°39'00.039"W	6988.89	3.187	0.28	-0.10	0.26
12707.00	91.050	349.070	5762.05	6923.32	7069.34	370.64	1738159.06	14591761.25	40°10'40.970"N	80°39'00.264"W	7079.05	3.001	0.47	0.37	0.30
12799.00	91.020	347.060	5760.39	7015.19	7159.34	351.61	1738140.05	14591851.21	40°10'41.860"N	80°39'00.505"W	7167.96	2.812	2.18	-0.03	-2.18

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Edward Dremak OHI 405H AWP Proj: 24726'
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SOUTHWESTERN ENERGY	Well	Edward Dremak OHI 405H
Area	Wellbore	Edward Dremak OHI 405H AWB
Field		
Facility		

WELLPATH DATA (280 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]
12892.00	90.770	342.520	5758.93	7107.61	7249.04	327.22	1738115.67	14591940.88	40°10'42.748"N	80°39'00.814"W	7256.42	2.585	4.89	-0.27	-4.88
12985.00	90.650	340.830	5757.78	7199.38	7337.32	297.99	1738086.44	14592029.12	40°10'43.621"N	80°39'01.186"W	7343.37	2.326	1.82	-0.13	-1.82
13077.00	90.680	341.710	5756.71	7290.06	7424.44	268.45	1738056.91	14592116.20	40°10'44.483"N	80°39'01.563"W	7429.29	2.071	0.96	0.03	0.96
13170.00	90.740	340.480	5755.56	7381.68	7512.41	238.32	1738026.80	14592204.14	40°10'45.354"N	80°39'01.946"W	7516.19	1.817	1.32	0.06	-1.32
13263.00	90.710	340.520	5754.38	7473.13	7600.07	207.28	1737995.77	14592291.77	40°10'46.221"N	80°39'02.342"W	7602.90	1.562	0.05	-0.03	0.04
13356.00	90.710	340.860	5753.23	7564.63	7687.83	176.53	1737965.03	14592379.50	40°10'47.090"N	80°39'02.733"W	7689.86	1.315	0.37	0.00	0.37
13448.00	90.680	341.280	5752.11	7655.25	7774.85	146.68	1737935.20	14592466.48	40°10'47.951"N	80°39'03.114"W	7776.23	1.081	0.46	-0.03	0.46
13541.00	90.650	341.810	5751.04	7747.00	7863.06	117.25	1737905.77	14592554.66	40°10'48.824"N	80°39'03.488"W	7863.94	0.854	0.57	-0.03	0.57
13634.00	90.680	341.610	5749.96	7838.78	7951.36	88.06	1737876.60	14592642.92	40°10'49.697"N	80°39'03.860"W	7951.84	0.635	0.22	0.03	-0.22
13726.00	90.770	343.310	5748.79	7929.76	8039.07	60.34	1737848.88	14592730.60	40°10'50.565"N	80°39'04.213"W	8039.30	0.430	1.85	0.10	1.85
13819.00	90.980	346.280	5747.37	8022.20	8128.79	35.95	1737824.51	14592820.28	40°10'51.453"N	80°39'04.522"W	8128.87	0.253	3.20	0.23	3.19
13912.00	90.830	347.080	5745.90	8114.93	8219.28	14.53	1737803.09	14592910.73	40°10'52.348"N	80°39'04.794"W	8219.29	0.101	0.88	-0.16	0.86
14005.00	90.890	346.560	5744.51	8207.67	8309.82	-6.67	1737781.90	14593001.24	40°10'53.243"N	80°39'05.062"W	8309.82	359.954	0.56	0.06	-0.56
14097.00	91.230	345.910	5742.80	8299.34	8399.16	-28.56	1737760.02	14593090.55	40°10'54.127"N	80°39'05.340"W	8399.21	359.805	0.80	0.37	-0.71
14190.00	91.420	347.170	5740.65	8392.04	8489.58	-50.20	1737738.39	14593180.93	40°10'55.021"N	80°39'05.614"W	8489.73	359.661	1.37	0.20	1.35
14283.00	91.230	345.610	5738.50	8484.72	8579.94	-72.08	1737716.52	14593271.26	40°10'55.915"N	80°39'05.891"W	8580.24	359.519	1.69	-0.20	-1.68
14376.00	91.050	343.840	5736.65	8577.14	8669.64	-96.57	1737692.03	14593360.91	40°10'56.802"N	80°39'06.202"W	8670.17	359.362	1.91	-0.19	-1.90
14468.00	90.950	343.470	5735.05	8668.38	8757.90	-122.46	1737666.16	14593449.15	40°10'57.676"N	80°39'06.531"W	8758.76	359.199	0.42	-0.11	-0.40
14561.00	90.950	343.170	5733.51	8760.55	8846.98	-149.15	1737639.48	14593538.19	40°10'58.557"N	80°39'06.871"W	8848.24	359.034	0.32	0.00	-0.32
14654.00	90.950	343.240	5731.96	8852.68	8936.00	-176.02	1737612.62	14593627.17	40°10'59.438"N	80°39'07.212"W	8937.73	358.872	0.08	0.00	0.08
14746.00	90.920	342.790	5730.46	8943.79	9023.97	-202.89	1737585.76	14593715.11	40°11'00.308"N	80°39'07.554"W	9026.25	358.712	0.49	-0.03	-0.49
14839.00	90.740	343.000	5729.12	9035.86	9112.85	-230.24	1737558.42	14593803.96	40°11'01.187"N	80°39'07.902"W	9115.76	358.553	0.30	-0.19	0.23
14932.00	90.740	343.410	5727.91	9128.00	9201.88	-257.11	1737531.56	14593892.95	40°11'02.068"N	80°39'08.244"W	9205.47	358.400	0.44	0.00	0.44
15025.00	90.800	343.530	5726.66	9220.20	9291.02	-283.57	1737505.11	14593982.06	40°11'02.950"N	80°39'08.580"W	9295.35	358.252	0.14	0.06	0.13
15118.00	90.400	343.020	5725.89	9312.35	9380.09	-310.33	1737478.36	14594071.09	40°11'03.831"N	80°39'08.921"W	9385.22	358.105	0.70	-0.43	-0.55
15210.00	90.400	342.460	5725.05	9403.41	9467.94	-337.63	1737451.08	14594158.91	40°11'04.700"N	80°39'09.268"W	9473.96	357.958	0.61	0.00	-0.61
15303.00	90.520	341.760	5724.30	9495.30	9556.44	-366.19	1737422.52	14594247.37	40°11'05.576"N	80°39'09.631"W	9563.45	357.806	0.76	0.13	-0.75
15396.00	90.490	341.650	5723.48	9587.08	9644.74	-395.39	1737393.34	14594335.63	40°11'06.450"N	80°39'10.003"W	9652.84	357.652	0.12	-0.03	-0.12
15489.00	90.370	342.160	5722.78	9678.92	9733.13	-424.27	1737364.46	14594424.00	40°11'07.324"N	80°39'10.371"W	9742.38	357.504	0.56	-0.13	0.55
15582.00	90.520	341.740	5722.06	9770.77	9821.55	-453.09	1737335.66	14594512.38	40°11'08.199"N	80°39'10.738"W	9832.00	357.359	0.48	0.16	-0.45

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Actual Wellpath Report

Edward Dremak OHI 405H AWP Proj: 24726'
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REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot #405H
Area	Ohio County, WV	Well	Edward Dremak OHI 405H
Field	Ohio	Wellbore	Edward Dremak OHI 405H AWB
Facility	Edward Dremak OHI Pad		

WELLPATH DATA (280 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]
15674.00	90.710	341.040	5721.07	9861.48	9908.74	-482.44	1737306.32	14594599.53	40°11'09.062"N	80°39'11.111"W	9920.47	357.213	0.79	0.21	-0.76
15767.00	90.710	341.810	5719.92	9953.19	9996.89	-512.07	1737276.70	14594687.64	40°11'09.934"N	80°39'11.489"W	10009.99	357.068	0.83	0.00	0.83
15860.00	90.800	345.670	5718.70	10045.43	10086.14	-538.10	1737250.68	14594776.87	40°11'10.817"N	80°39'11.820"W	10100.48	356.946	4.15	0.10	4.15
15953.00	90.650	346.630	5717.52	10138.09	10176.43	-560.36	1737228.43	14594867.12	40°11'11.710"N	80°39'12.102"W	10191.84	356.948	1.04	-0.16	1.03
16045.00	90.950	346.650	5716.23	10229.82	10285.93	-581.61	1737207.18	14594956.58	40°11'12.596"N	80°39'12.371"W	10282.39	356.757	0.33	0.33	0.02
16138.00	91.260	346.970	5714.44	10322.56	10356.46	-602.83	1737185.97	14595047.08	40°11'13.491"N	80°39'12.640"W	10373.99	356.669	0.48	0.33	0.34
16231.00	90.800	345.120	5712.77	10415.20	10446.70	-625.25	1737163.56	14595137.28	40°11'14.384"N	80°39'12.924"W	10465.39	356.575	2.05	-0.49	-1.99
16323.00	90.770	341.840	5711.51	10506.39	10534.88	-651.41	1737137.42	14595225.43	40°11'15.256"N	80°39'13.257"W	10555.00	356.462	3.57	-0.03	-3.57
16416.00	90.370	339.640	5710.58	10597.91	10622.66	-682.08	1737106.75	14595313.18	40°11'16.125"N	80°39'13.648"W	10644.54	356.326	2.40	-0.43	-2.37
16509.00	90.620	339.490	5709.78	10689.07	10709.81	-714.55	1737074.30	14595400.29	40°11'16.987"N	80°39'14.062"W	10733.62	356.183	0.31	0.27	-0.16
16601.00	90.520	339.310	5708.86	10779.20	10795.92	-746.92	1737041.94	14595486.37	40°11'17.839"N	80°39'14.475"W	10821.73	356.042	0.22	-0.11	-0.20
16694.00	90.490	340.740	5708.04	10870.50	10883.32	-778.69	1737010.19	14595573.73	40°11'18.704"N	80°39'14.879"W	10911.14	355.908	1.54	-0.03	1.54
16787.00	90.520	343.530	5707.22	10962.39	10971.82	-807.21	1736981.67	14595662.20	40°11'19.580"N	80°39'15.243"W	11001.48	355.792	3.00	0.03	3.00
16880.00	90.680	344.370	5706.25	11054.69	11061.19	-832.92	1736955.97	14595751.54	40°11'20.464"N	80°39'15.569"W	11092.51	355.694	0.92	0.17	0.90
16969.00	90.740	344.770	5705.15	11143.13	11146.98	-856.60	1736932.30	14595837.29	40°11'21.313"N	80°39'15.870"W	11179.84	355.606	0.45	0.07	0.45
17062.00	90.650	344.350	5704.02	11235.54	11236.61	-881.36	1736907.56	14595926.89	40°11'22.199"N	80°39'16.185"W	11271.13	355.515	0.46	-0.10	-0.45
17152.00	90.710	342.940	5702.95	11324.80	11322.96	-906.70	1736882.23	14596013.21	40°11'23.054"N	80°39'16.507"W	11359.21	355.422	1.57	0.07	-1.57
17244.00	90.800	342.990	5701.74	11415.90	11410.92	-933.65	1736855.29	14596101.13	40°11'23.924"N	80°39'16.850"W	11449.05	355.322	0.11	0.10	0.05
17337.00	90.770	343.800	5700.47	11508.08	11500.03	-960.22	1736828.72	14596190.20	40°11'24.805"N	80°39'17.188"W	11540.05	355.227	0.87	-0.03	0.87
17430.00	90.680	345.450	5699.29	11600.50	11589.69	-984.88	1736804.08	14596279.83	40°11'25.692"N	80°39'17.501"W	11631.47	355.143	1.78	-0.10	1.77
17522.00	90.800	348.390	5698.10	11692.25	11679.29	-1005.69	1736783.27	14596369.39	40°11'26.579"N	80°39'17.765"W	11722.51	355.078	3.20	0.13	3.20
17615.00	91.140	349.500	5696.53	11785.18	11770.55	-1023.52	1736765.45	14596460.62	40°11'27.481"N	80°39'17.990"W	11814.97	355.030	1.25	0.37	1.19
17708.00	90.860	349.240	5694.90	11878.13	11861.94	-1040.68	1736748.30	14596551.97	40°11'28.385"N	80°39'18.206"W	11907.50	354.986	0.41	-0.30	-0.28
17801.00	90.800	348.560	5693.56	11971.06	11953.19	-1058.58	1736730.40	14596643.18	40°11'29.287"N	80°39'18.432"W	11999.97	354.939	0.73	-0.06	-0.73
17893.00	90.830	348.320	5692.25	12062.96	12043.31	-1077.01	1736711.98	14596733.27	40°11'30.179"N	80°39'18.665"W	12091.38	354.890	0.26	0.03	-0.26
17986.00	90.860	347.560	5690.88	12155.82	12134.25	-1096.44	1736692.56	14596824.17	40°11'31.078"N	80°39'18.911"W	12183.69	354.837	0.82	0.03	-0.82
18079.00	90.860	346.820	5689.48	12248.61	12234.93	-1117.06	1736671.95	14596914.81	40°11'31.975"N	80°39'19.172"W	12275.86	354.779	0.80	0.00	-0.80
18171.00	90.770	346.450	5688.17	12340.34	12314.42	-1138.32	1736650.69	14597004.28	40°11'32.860"N	80°39'19.442"W	12366.92	354.719	0.41	-0.10	-0.40
18264.00	90.800	346.010	5686.90	12433.01	12404.74	-1160.46	1736628.57	14597094.56	40°11'33.753"N	80°39'19.723"W	12458.90	354.656	0.47	0.03	-0.47
18350.00	90.680	345.420	5685.79	12518.64	12488.08	-1181.68	1736607.36	14597177.86	40°11'34.578"N	80°39'19.992"W	12543.86	354.595	0.70	-0.14	-0.69

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Actual Wellpath Report

Edward Dremak OHI 405H AWP Proj: 24726'
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Operator	SOUTHWESTERN ENERGY	Slot	Slot #405H
Area	Ohio County, WV	Well	Edward Dremak OHI 405H
Field	Ohio	Wellbore	Edward Dremak OHI 405H AWB
Facility	Edward Dremak OHI Pad		

WELLPATH DATA (280 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]
18435.00	90.890	343.910	5684.62	12603.12	12570.04	-1204.15	1736584.89	14597259.79	40°11'35.389"N	80°39'20.277"W	12627.58	354.528	1.79	0.25	-1.78
18519.00	90.920	343.780	5683.29	12686.46	12650.71	-1227.52	1736561.53	14597340.43	40°11'36.187"N	80°39'20.574"W	12710.13	354.458	0.16	0.04	-0.15
18605.00	90.800	342.370	5682.00	12771.64	12732.98	-1252.55	1736536.51	14597422.67	40°11'37.001"N	80°39'20.893"W	12794.44	354.382	1.65	-0.14	-1.64
18691.00	90.990	341.860	5680.66	12856.60	12814.81	-1278.96	1736510.11	14597504.47	40°11'37.810"N	80°39'21.229"W	12878.47	354.301	0.63	0.22	-0.59
18776.00	90.920	342.010	5679.24	12940.54	12895.61	-1305.32	1736483.76	14597585.23	40°11'38.610"N	80°39'21.565"W	12961.50	354.220	0.19	-0.08	0.18
18860.00	91.110	342.230	5677.76	13023.53	12975.54	-1331.10	1736457.99	14597665.13	40°11'39.401"N	80°39'21.893"W	13043.64	354.143	0.35	0.23	0.26
18948.00	90.830	342.880	5676.27	13110.57	13059.48	-1357.48	1736431.62	14597749.04	40°11'40.231"N	80°39'22.229"W	13129.84	354.066	0.80	-0.32	0.74
19034.00	90.830	344.970	5675.02	13195.91	13142.10	-1381.29	1736405.12	14597831.63	40°11'41.048"N	80°39'22.531"W	13214.49	354.000	2.43	0.00	2.43
19120.00	91.080	345.660	5673.59	13281.48	13225.28	-1403.09	1736386.03	14597914.78	40°11'41.871"N	80°39'22.808"W	13299.50	353.944	0.85	0.29	0.80
19212.00	91.260	344.590	5671.71	13372.98	13314.18	-1426.70	1736362.43	14598003.64	40°11'42.751"N	80°39'23.108"W	13390.40	353.884	1.18	0.20	-1.16
19305.00	90.920	342.690	5669.94	13465.20	13403.39	-1452.89	1736336.25	14598092.82	40°11'43.633"N	80°39'23.441"W	13481.91	353.813	2.08	-0.37	-2.04
19398.00	90.740	341.230	5668.59	13557.05	13491.81	-1481.69	1736310.46	14598181.20	40°11'44.508"N	80°39'23.808"W	13572.93	353.733	1.58	-0.19	-1.57
19491.00	90.650	340.040	5667.46	13648.53	13579.54	-1512.52	1736276.64	14598268.90	40°11'45.376"N	80°39'24.201"W	13663.51	353.644	1.28	-0.10	-1.28
19583.00	90.680	338.960	5666.40	13738.69	13665.71	-1544.74	1736244.44	14598355.03	40°11'46.229"N	80°39'24.612"W	13752.74	353.551	1.17	0.03	-1.17
19676.00	90.680	339.340	5665.29	13829.71	13752.61	-1577.84	1736211.35	14598441.90	40°11'47.089"N	80°39'25.034"W	13842.83	353.455	0.41	0.00	0.41
19769.00	90.710	340.050	5664.16	13920.91	13839.82	-1610.11	1736179.09	14598529.08	40°11'47.952"N	80°39'25.445"W	13933.17	353.364	0.76	0.03	0.76
19862.00	90.650	341.460	5663.06	14012.43	13927.62	-1640.76	1736148.46	14598616.84	40°11'48.821"N	80°39'25.836"W	14023.93	353.281	1.52	-0.06	1.52
19954.00	90.770	344.200	5661.92	14103.49	14015.50	-1667.91	1736121.31	14598704.69	40°11'49.690"N	80°39'26.181"W	14114.40	353.213	2.98	0.13	2.98
20047.00	90.740	345.630	5660.69	14195.97	14105.29	-1692.11	1736097.12	14598794.44	40°11'50.578"N	80°39'26.489"W	14206.42	353.159	1.54	-0.03	1.54
20140.00	90.650	347.000	5659.57	14288.65	14195.64	-1714.11	1736075.13	14598884.76	40°11'51.472"N	80°39'26.788"W	14298.75	353.115	1.48	-0.10	1.47
20233.00	90.550	347.040	5658.59	14381.43	14286.26	-1735.00	1736054.25	14598975.34	40°11'52.368"N	80°39'27.032"W	14391.23	353.076	0.12	-0.11	0.04
20318.00	90.680	346.040	5657.68	14466.17	14368.92	-1754.78	1736034.47	14599057.97	40°11'53.186"N	80°39'27.283"W	14475.67	353.037	1.19	0.15	-1.18
20411.00	90.370	345.990	5656.83	14558.82	14459.16	-1777.26	1736012.01	14599148.17	40°11'54.079"N	80°39'27.568"W	14567.97	352.993	0.34	-0.33	-0.05
20503.00	90.550	347.280	5656.09	14650.55	14548.66	-1798.52	1735990.75	14599237.64	40°11'54.964"N	80°39'27.838"W	14659.41	352.953	1.42	0.20	1.40
20592.00	90.340	347.710	5655.40	14739.38	14635.55	-1817.79	1735971.49	14599324.49	40°11'55.823"N	80°39'28.082"W	14748.00	352.920	0.54	-0.24	0.48
20681.00	90.430	347.710	5654.80	14828.24	14722.51	-1836.74	1735952.55	14599411.42	40°11'56.683"N	80°39'28.322"W	14836.64	352.889	0.10	0.10	0.00
20771.00	90.460	347.770	5654.10	14918.09	14810.55	-1855.85	1735933.45	14599499.33	40°11'57.553"N	80°39'28.564"W	14926.27	352.858	0.07	0.03	0.07
20860.00	90.550	347.820	5653.32	15006.96	14897.44	-1874.66	1735914.64	14599586.26	40°11'58.413"N	80°39'28.802"W	15014.92	352.828	0.12	0.10	0.06
20946.00	90.460	346.980	5652.56	15092.79	14981.36	-1893.42	1735895.89	14599670.17	40°11'59.243"N	80°39'29.040"W	15100.54	352.797	0.98	-0.10	-0.98
21033.00	90.620	346.410	5651.74	15179.54	15066.02	-1913.44	1735875.88	14599754.80	40°12'00.081"N	80°39'29.293"W	15187.04	352.762	0.68	0.18	-0.66

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21120.00	90.550	343.800	5650.85	15266.07	15150.09	-1935.80	1735853.52	14599838.83	40°12'00.912"N	80°39'29.577"W	15273.26	352.718	3.00	-0.08	-3.00
21205.00	90.310	343.110	5650.21	15350.34	15231.56	-1960.01	1735829.33	1459920.28	40°12'01.718"N	80°39'29.885"W	15357.15	352.667	0.86	-0.28	-0.81
21300.00	90.550	339.700	5649.50	15444.01	15321.59	-1990.29	1735799.05	1460010.27	40°12'02.609"N	80°39'30.271"W	15450.32	352.599	3.60	0.25	-3.59
21394.00	90.520	338.650	5648.62	15536.02	15409.44	-2023.71	1735765.65	1460098.08	40°12'03.479"N	80°39'30.697"W	15541.76	352.518	1.12	-0.03	-1.12
21488.00	90.490	340.030	5647.79	15628.09	15497.39	-2056.87	1735732.50	1460186.00	40°12'04.349"N	80°39'31.120"W	15633.29	352.440	1.47	-0.03	1.47
21583.00	90.650	342.150	5646.85	15721.67	15587.25	-2087.66	1735701.73	14600275.83	40°12'05.238"N	80°39'31.513"W	15726.44	352.372	2.24	0.17	2.23
21678.00	90.520	340.710	5645.88	15815.35	15677.30	-2117.91	1735671.49	14600365.84	40°12'06.129"N	80°39'31.898"W	15819.71	352.306	1.52	-0.14	-1.52
21773.00	90.710	341.610	5644.86	15908.96	15767.21	-2148.59	1735640.82	14600455.71	40°12'07.019"N	80°39'32.289"W	15912.93	352.240	0.97	0.20	0.95
21867.00	90.740	342.080	5643.67	16001.77	15856.52	-2177.87	1735611.55	14600544.99	40°12'07.902"N	80°39'32.662"W	16005.38	352.179	0.50	0.03	0.50
21962.00	90.580	343.520	5642.57	16095.79	15947.26	-2205.96	1735583.47	14600635.69	40°12'08.800"N	80°39'33.020"W	16099.11	352.124	1.53	-0.17	1.52
22057.00	90.550	343.740	5641.64	16190.01	16038.41	-2232.74	1735556.71	14600726.80	40°12'09.702"N	80°39'33.360"W	16193.07	352.075	0.23	-0.03	0.23
22151.00	90.800	346.060	5640.53	16283.47	16129.15	-2257.22	1735532.23	14600817.51	40°12'10.599"N	80°39'33.671"W	16286.33	352.033	2.48	0.27	2.47
22244.00	90.890	348.470	5639.16	16376.26	16219.84	-2277.72	1735511.74	14600908.17	40°12'11.496"N	80°39'33.931"W	16378.99	352.006	2.59	0.10	2.59
22337.00	90.710	347.980	5637.86	16469.15	16310.88	-2296.69	1735492.77	14600999.17	40°12'12.397"N	80°39'34.171"W	16471.78	351.985	0.56	-0.19	-0.53
22432.00	90.740	345.680	5636.66	16563.89	16403.36	-2318.34	1735471.14	14601091.62	40°12'13.312"N	80°39'34.445"W	16566.38	351.955	2.42	0.03	-2.42
22526.00	90.580	344.630	5635.57	16657.40	16494.22	-2342.42	1735447.07	14601182.44	40°12'14.210"N	80°39'34.751"W	16659.72	351.917	1.13	-0.17	-1.12
22621.00	90.620	345.470	5634.58	16751.89	16586.00	-2366.92	1735422.57	14601274.18	40°12'15.118"N	80°39'35.062"W	16754.03	351.878	0.89	0.04	0.88
22716.00	90.710	345.510	5633.48	16846.45	16677.96	-2390.72	1735398.78	14601366.11	40°12'16.028"N	80°39'35.365"W	16848.44	351.842	0.10	0.09	0.04
22810.00	90.550	344.270	5632.44	16939.91	16768.81	-2415.23	1735374.29	14601456.82	40°12'16.926"N	80°39'35.676"W	16941.75	351.804	1.33	-0.17	-1.32
22905.00	90.520	344.220	5631.56	17034.26	16860.13	-2441.02	1735348.51	14601548.21	40°12'17.830"N	80°39'36.004"W	17035.92	351.762	0.06	-0.03	-0.05
23000.00	90.490	343.910	5630.72	17128.57	16951.48	-2467.10	1735322.44	14601639.52	40°12'18.734"N	80°39'36.335"W	17130.07	351.719	0.33	-0.03	-0.33
23094.00	90.620	343.750	5629.81	17221.83	17041.76	-2493.28	1735296.27	14601729.76	40°12'19.627"N	80°39'36.668"W	17223.18	351.676	0.22	0.14	-0.17
23188.00	90.520	343.420	5628.87	17315.05	17131.92	-2519.84	1735269.72	14601819.89	40°12'20.519"N	80°39'37.006"W	17316.24	351.633	0.37	-0.11	-0.35
23283.00	90.680	343.490	5627.88	17409.23	17222.98	-2546.89	1735242.68	14601910.91	40°12'21.420"N	80°39'37.350"W	17410.28	351.588	0.18	0.17	0.07
23377.00	90.650	343.630	5626.79	17502.44	17313.13	-2573.49	1735216.08	14602001.03	40°12'22.311"N	80°39'37.689"W	17503.35	351.545	0.15	-0.03	0.15
23472.00	90.680	342.890	5625.68	17596.58	17404.10	-2600.85	1735188.73	14602091.96	40°12'23.211"N	80°39'38.037"W	17597.36	351.501	0.78	0.03	-0.78
23566.00	90.650	342.000	5624.59	17689.56	17493.76	-2629.05	1735160.55	14602181.59	40°12'24.099"N	80°39'38.396"W	17690.21	351.453	0.73	-0.03	-0.73
23661.00	90.650	341.000	5623.52	17783.29	17583.90	-2659.03	1735130.58	14602271.69	40°12'24.990"N	80°39'38.778"W	17783.81	351.401	1.26	0.00	-1.26
23755.00	90.580	339.660	5622.51	17875.67	17672.41	-2690.67	1735098.95	14602360.16	40°12'25.866"N	80°39'39.181"W	17876.06	351.343	1.43	-0.07	-1.43
23849.00	90.490	339.490	5621.63	17967.81	17760.49	-2723.47	1735066.16	14602448.22	40°12'26.738"N	80°39'39.600"W	17968.09	351.282	0.20	-0.10	-0.18

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Actual Wellpath Report

Edward Dremak OHI 405H AWP Proj: 24726'

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REFERENCE WELLPATH IDENTIFICATION

Operator	Slot
SOUTHWESTERN ENERGY	Slot #405H
Area	Edward Dremak OHI 405H
Field	Edward Dremak OHI 405H AWB
Facility	Edward Dremak OHI Pad

WELLPATH DATA (280 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]
23944.00	90.620	339.640	5620.71	18060.94	17849.51	-2756.64	1735033.01	14602537.20	40°12'27.619"N	80°39'40.023"W	18061.12	351.221	0.21	0.14	0.16
24038.00	90.620	339.650	5619.69	18153.10	17937.64	-2789.33	1735000.33	14602625.29	40°12'28.491"N	80°39'40.440"W	18153.21	351.161	0.01	0.00	0.01
24133.00	90.580	341.270	5618.70	18246.50	18027.16	-2821.10	1734968.57	14602714.78	40°12'29.377"N	80°39'40.845"W	18246.56	351.106	1.71	-0.04	1.71
24228.00	90.550	343.570	5617.76	18340.44	18117.71	-2849.79	1734939.89	14602805.29	40°12'30.273"N	80°39'41.210"W	18340.47	351.061	2.42	-0.03	2.42
24322.00	90.650	346.120	5616.78	18433.89	18208.43	-2874.37	1734915.33	14602895.98	40°12'31.170"N	80°39'41.523"W	18433.90	351.029	2.71	0.11	2.71
24417.00	90.620	347.940	5615.72	18528.66	18300.99	-2895.69	1734894.02	14602988.51	40°12'32.086"N	80°39'41.793"W	18528.66	351.009	1.92	-0.03	1.92
24512.00	90.430	348.380	5614.85	18623.54	18393.97	-2915.18	1734874.53	14603081.44	40°12'33.005"N	80°39'42.039"W	18623.54	350.994	0.50	-0.20	0.46
24606.00	90.650	348.200	5613.97	18717.43	18486.01	-2934.25	1734855.46	14603173.45	40°12'33.915"N	80°39'42.281"W	18717.43	350.981	0.30	0.23	-0.19
24701.00	90.620	347.660	5612.91	18812.29	18578.90	-2954.12	1734835.61	14603266.31	40°12'34.834"N	80°39'42.532"W	18812.29	350.965	0.57	-0.03	-0.57
24726.00	90.620	347.660	5612.64	18837.25	18603.32	-2959.46	1734830.27	14603290.72	40°12'35.076"N	80°39'42.600"W	18837.25	350.961	0.00	0.00	0.00

HOLE & CASING SECTIONS - Ref Wellbore: Edward Dremak OHI 405H AWB Ref Wellpath: Edward Dremak OHI 405H AWP Proj: 24726'

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]	
	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End	Start	End
17.5in Open Hole	26.00	356.00	26.00	356.00	330.00	356.00	26.00	355.99	0.00	355.99	0.00	0.00	0.00	-2.06	0.00	0.00	0.00	1.72
13.375in Casing Surface	26.00	356.00	26.00	356.00	330.00	356.00	26.00	355.99	0.00	355.99	0.00	0.00	0.00	-2.06	0.00	0.00	0.00	1.72
12.25in Open Hole	356.00	1780.00	356.00	1780.00	1424.00	1780.00	355.99	1763.57	-2.06	1763.57	-2.06	1.72	39.88	39.88	175.41	175.41	175.41	175.41
9.625in Casing Intermediate	26.00	1780.00	26.00	1780.00	1754.00	1780.00	26.00	1763.57	0.00	1763.57	0.00	0.00	39.88	39.88	175.41	175.41	175.41	175.41
8.75in Open Hole	1780.00	5774.00	1780.00	5774.00	3994.00	5774.00	1763.57	5293.56	39.88	5293.56	175.41	175.41	658.32	658.32	1913.53	1913.53	1913.53	1913.53

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REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot #405H
Area	Ohio County, WV	Well	Edward Dremak OHI 405H
Field	Ohio	Wellbore	Edward Dremak OHI 405H 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 405H BHL Rev-6	5610.00	18604.84	-2974.51	1734815.22	14603292.23	40°12'35.091"N	80°39'42.794"W	point
Edward Dremak OHI 405H LP Rev-5	5810.00	1297.23	2018.19	1739805.97	14585991.39	40°09'43.866"N	80°38'39.336"W	point

WELLPATH COMPOSITION - Ref Wellbore: Edward Dremak OHI 405H AWB Ref Wellpath: Edward Dremak OHI 405H AWP Proj: 24726'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
26.00	300.00	OWSG MWD rev2 + HRGM	01_Premier MWD <17 1/2"> (151'-300')	Edward Dremak OHI 405H AWB
300.00	1712.00	OWSG MWD rev2 + HRGM	02_Premier MWD <12 1/4"> (419'-1712')	Edward Dremak OHI 405H AWB
1712.00	5707.00	OWSG MWD rev2 + HRGM	03_Premier MWD <8 3/4"> (1818'-5707')	Edward Dremak OHI 405H AWB
5707.00	24701.00	BHI AutoTrak Curve (Short)	04_BH AT Curve <8 1/2"> (5783'-24701')	Edward Dremak OHI 405H AWB
24701.00	24726.00	Blind Drilling (std)	Projection to bit	Edward Dremak OHI 405H AWB

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REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot #405H
Area	Ohio County, WV	Well	Edward Dremak OHI 405H
Field	Ohio	Wellbore	Edward Dremak OHI 405H AWB
Facility	Edward Dremak OHI Pad		

COMMENTS

Wellpath general comments
 API: 47-069-00228-0000
 BH Job #: 109617530
 Rig: SDC 40
 Duration: 02/07/2019 - 02/14/2019

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