



**Actual Wellpath Report**  
 Glenn Didriksen OHI 405H AWP Proj: 13477'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	SOUTHWESTERN ENERGY	Slot	Slot #405
Area	Ohio County, WV	Well	Glenn Didriksen OHI 405H
Field	Ohio	Wellbore	Glenn Didriksen OHI 405H AWP
Facility	Glenn Didriksen OHI Pad 1		

REPORT SETUP INFORMATION			
Projection System	NAD83 / UTM Zone 17 North, US feet	Software System	WellArchitect@ 5.1
North Reference	Grid	User	Atenjen
Scale	0.999615	Report Generated	5/30/2019 at 4:14:03 PM
Convergence at slot	0.26° East	Database/Source file	WA_MPL_EASTERNUS_Defri/Glenn_Didriksen_OHI_405H_AWP_Proj_13477_.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	22.13	-8.97	1753627.73	14568503.96	40°06'50.403"N	80°35'42.269"W
Facility Reference Pt			1753636.70	14568481.84	40°06'50.184"N	80°35'42.155"W
Field Reference Pt			0.00	0.00	0°00'00.000"	85°29'19.478"W

WELLPATH DATUM			
Calculation method	Minimum curvature	SDC 41 (KB) to Facility Vertical Datum	1408.80ft
Horizontal Reference Pt	Slot	SDC 41 (KB) to Mean Sea Level	1408.80ft
Vertical Reference Pt	SDC 41 (KB)	SDC 41 (KB) to Ground Level at Slot (Slot #405)	26.00ft
MD Reference Pt	SDC 41 (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	358.65°

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Area	Ohio County, WV	Wellbore	Glenn Didriksen OHI 405H AWB
Field	Ohio		
Facility	Glenn Didriksen OHI Pad 1		

## WELLPATH DATA (162 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	226.620	0.00	0.00	0.00	0.00	1753627.73	14568503.96	40°06'50.403"N	80°35'42.269"W	0.00	0.000	0.00	0.00	0.00
26.00	0.000	226.620	26.00	0.00	0.00	0.00	1753627.73	14568503.96	40°06'50.403"N	80°35'42.269"W	0.00	0.000	0.00	0.00	0.00
100.00	0.100	226.620	100.00	-0.04	-0.04	-0.05	1753627.68	14568503.92	40°06'50.403"N	80°35'42.270"W	0.06	226.620	0.14	0.14	-180.24
200.00	0.110	282.530	200.00	-0.08	-0.08	-0.20	1753627.53	14568503.88	40°06'50.402"N	80°35'42.272"W	0.22	247.755	0.10	0.01	55.91
300.00	0.110	254.770	300.00	-0.08	-0.09	-0.39	1753627.34	14568503.87	40°06'50.402"N	80°35'42.274"W	0.40	257.317	0.05	0.00	-27.76
400.00	0.230	293.370	400.00	-0.02	-0.03	-0.67	1753627.06	14568503.93	40°06'50.403"N	80°35'42.278"W	0.67	267.130	0.16	0.12	38.60
500.00	0.250	287.390	500.00	0.14	0.11	-1.06	1753626.67	14568504.07	40°06'50.404"N	80°35'42.283"W	1.07	275.999	0.03	0.02	-5.98
600.00	0.360	273.200	600.00	0.23	0.19	-1.58	1753626.15	14568504.16	40°06'50.405"N	80°35'42.289"W	1.59	276.997	0.13	0.11	-14.19
700.00	0.350	290.960	700.00	0.37	0.32	-2.18	1753625.55	14568504.28	40°06'50.406"N	80°35'42.297"W	2.20	278.372	0.11	-0.01	17.76
750.00	0.210	285.410	749.99	0.46	0.40	-2.41	1753625.32	14568504.36	40°06'50.407"N	80°35'42.300"W	2.44	279.415	0.28	-0.28	-11.10
840.00	0.340	48.830	839.99	0.68	0.62	-2.37	1753625.36	14568504.58	40°06'50.409"N	80°35'42.299"W	2.45	284.652	0.54	0.14	137.13
931.00	1.770	56.990	930.98	1.59	1.56	-0.99	1753626.74	14568505.52	40°06'50.419"N	80°35'42.282"W	1.85	327.712	1.58	1.57	8.97
1022.00	3.850	56.420	1021.86	3.95	4.02	2.74	1753630.47	14568507.98	40°06'50.443"N	80°35'42.234"W	4.86	34.254	2.29	2.29	-0.63
1112.00	6.580	54.690	1111.48	8.45	8.67	9.46	1753637.19	14568512.63	40°06'50.488"N	80°35'42.147"W	12.84	47.501	3.04	3.03	-1.92
1205.00	9.190	52.550	1203.59	15.80	16.27	19.71	1753647.43	14568520.22	40°06'50.563"N	80°35'42.014"W	25.56	50.463	2.82	2.81	-2.30
1327.00	12.360	53.670	1323.43	29.03	29.93	37.97	1753665.68	14568533.88	40°06'50.697"N	80°35'41.779"W	48.35	51.750	2.60	2.60	0.92
1419.00	13.230	58.410	1413.14	39.98	41.28	54.87	1753682.58	14568545.23	40°06'50.809"N	80°35'41.560"W	68.66	53.044	1.48	1.48	5.15
1512.00	13.350	63.430	1503.66	49.91	51.66	73.54	1753701.24	14568555.60	40°06'50.910"N	80°35'41.319"W	89.87	54.913	1.25	1.25	5.40
1604.00	13.040	69.550	1593.23	57.83	60.03	92.76	1753720.46	14568563.97	40°06'50.992"N	80°35'41.072"W	110.49	57.089	1.55	-0.34	6.65
1696.00	14.100	70.250	1682.82	64.77	67.45	113.03	1753740.77	14568571.38	40°06'51.065"N	80°35'40.810"W	131.63	59.175	1.17	1.15	0.76
1787.00	14.600	72.340	1770.82	77.52	74.67	134.40	1753783.17	14568578.61	40°06'51.135"N	80°35'40.535"W	153.75	60.942	0.79	0.55	2.30
1880.00	12.880	73.330	1861.16	71.49	81.20	155.50	1753802.39	14568585.13	40°06'51.199"N	80°35'40.263"W	175.42	62.426	1.87	-1.85	1.06
1973.00	12.070	72.990	1951.96	82.88	87.02	174.72	1753802.39	14568590.95	40°06'51.255"N	80°35'40.015"W	195.20	63.524	0.87	-0.87	-0.37
2064.00	11.860	72.210	2040.99	88.10	92.66	192.73	1753820.38	14568596.59	40°06'51.310"N	80°35'39.783"W	213.84	64.322	0.29	-0.23	-0.86
2157.00	11.550	73.930	2132.05	93.17	98.16	210.77	1753838.42	14568602.08	40°06'51.364"N	80°35'39.550"W	232.51	65.028	0.50	-0.33	1.85
2250.00	12.130	72.290	2223.07	98.28	103.71	229.03	1753856.67	14568607.63	40°06'51.418"N	80°35'39.315"W	251.41	65.638	0.72	0.62	-1.76
2277.00	12.260	71.230	2249.46	99.94	105.49	234.44	1753862.08	14568609.41	40°06'51.435"N	80°35'39.245"W	257.09	65.774	0.96	0.48	-3.93
2367.00	11.510	70.030	2337.53	105.67	111.64	251.93	1753879.56	14568615.55	40°06'51.495"N	80°35'39.020"W	275.56	66.101	0.88	-0.83	-1.33
2460.00	13.290	72.870	2428.36	111.54	117.95	270.87	1753898.49	14568621.87	40°06'51.557"N	80°35'38.776"W	295.44	66.469	2.02	1.91	3.05
2562.00	14.330	78.870	2517.71	116.35	123.27	292.15	1753919.76	14568627.18	40°06'51.608"N	80°35'38.502"W	317.09	67.124	1.92	1.13	6.52

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Field	Ohio	Wellbore	Glenn Didriksen OHI 405H AWB
Facility	Glenn Didriksen OHI Pad 1		

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## WELLPATH DATA (162 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]
2645.00	16.490	78.830	2607.36	120.56	128.04	316.39	1753944.00	14568631.96	40°06'51.654"N	80°35'38.189"W	341.32	67.967	2.32	2.32	-0.04
2738.00	16.710	78.600	2696.48	125.14	133.24	342.45	1753970.04	14568637.15	40°06'51.704"N	80°35'37.854"W	367.46	68.739	0.25	0.24	-0.25
2830.00	17.990	80.040	2784.29	129.57	138.32	369.41	1753996.99	14568642.22	40°06'51.753"N	80°35'37.506"W	394.45	69.473	1.47	1.39	1.57
2921.00	20.180	79.080	2870.29	134.29	143.72	398.66	1754026.24	14568647.63	40°06'51.805"N	80°35'37.129"W	423.78	70.175	2.43	2.41	-1.05
3013.00	21.120	79.200	2956.38	139.65	149.83	430.53	1754058.09	14568653.74	40°06'51.864"N	80°35'36.719"W	455.85	70.811	1.02	1.02	0.13
3106.00	22.750	79.330	3042.64	145.31	156.30	464.66	1754092.21	14568660.20	40°06'51.927"N	80°35'36.279"W	490.24	71.408	1.75	1.75	0.14
3198.00	25.300	79.260	3126.66	151.40	163.26	501.46	1754129.00	14568667.16	40°06'51.994"N	80°35'35.805"W	527.37	71.966	2.77	2.77	-0.08
3291.00	26.690	80.050	3210.25	157.77	170.57	541.56	1754169.08	14568674.47	40°06'52.064"N	80°35'35.289"W	567.78	72.517	1.54	1.49	0.85
3384.00	28.220	79.390	3292.78	164.43	178.23	583.74	1754211.25	14568682.12	40°06'52.138"N	80°35'34.745"W	610.35	73.021	1.68	1.65	-0.71
3476.00	29.260	80.350	3373.44	171.17	186.01	627.29	1754254.78	14568689.89	40°06'52.213"N	80°35'34.184"W	654.29	73.484	1.24	1.13	1.04
3568.00	29.670	79.130	3453.54	178.19	194.07	671.82	1754299.29	14568697.95	40°06'52.291"N	80°35'33.611"W	699.29	73.888	0.79	0.45	-1.33
3661.00	29.660	77.610	3534.35	186.40	203.35	716.90	1754344.35	14568707.23	40°06'52.380"N	80°35'33.030"W	745.18	74.164	0.81	-0.01	-1.63
3754.00	27.860	78.630	3615.88	194.59	212.57	760.68	1754388.12	14568716.45	40°06'52.469"N	80°35'32.466"W	789.82	74.387	2.01	-1.94	1.10
3847.00	27.970	81.780	3698.06	200.98	219.97	803.57	1754430.99	14568723.85	40°06'52.541"N	80°35'31.913"W	833.13	74.691	1.59	0.12	3.39
3939.00	28.750	83.200	3779.02	205.66	225.68	846.89	1754474.30	14568729.55	40°06'52.595"N	80°35'31.355"W	876.45	75.079	1.12	0.85	1.54
4031.00	28.790	83.540	3859.67	209.73	230.79	890.88	1754518.26	14568734.66	40°06'52.644"N	80°35'30.789"W	920.29	75.476	0.18	0.04	0.37
4124.00	29.750	80.090	3940.80	215.16	237.28	935.86	1754563.23	14568741.15	40°06'52.706"N	80°35'30.210"W	965.47	75.773	2.09	1.03	-3.71
4216.00	29.070	77.030	4020.94	223.06	246.22	980.13	1754607.48	14568750.09	40°06'52.792"N	80°35'29.639"W	1010.59	75.898	1.79	-0.74	-3.33
4309.00	28.310	77.980	4102.53	231.70	255.89	1023.72	1754651.25	14568759.75	40°06'52.886"N	80°35'29.078"W	1055.21	75.966	0.95	-0.82	1.02
4402.00	29.970	77.530	4183.75	240.26	265.50	1067.97	1754695.29	14568769.36	40°06'52.978"N	80°35'28.508"W	1100.48	76.039	1.80	1.78	-0.48
4494.00	31.830	77.250	4262.69	249.49	275.81	1114.07	1754741.37	14568779.67	40°06'53.078"N	80°35'27.913"W	1147.71	76.095	2.03	2.02	-0.30
4587.00	32.170	77.770	4341.56	259.01	286.47	1162.19	1754789.47	14568790.32	40°06'53.181"N	80°35'27.294"W	1196.98	76.153	0.47	0.37	0.56
4679.00	31.580	79.160	4419.69	267.61	296.19	1209.79	1754837.05	14568800.04	40°06'53.275"N	80°35'26.680"W	1245.52	76.243	1.02	-0.64	1.51
4771.00	31.530	79.820	4498.08	275.27	304.97	1257.12	1754884.37	14568808.82	40°06'53.360"N	80°35'26.071"W	1293.59	76.364	0.38	-0.05	0.72
4864.00	31.380	79.460	4577.42	282.87	313.70	1304.86	1754932.09	14568817.54	40°06'53.444"N	80°35'25.456"W	1342.04	76.482	0.26	-0.16	-0.39
4957.00	31.420	79.710	4656.80	290.50	322.46	1352.52	1754979.73	14568826.29	40°06'53.528"N	80°35'24.842"W	1390.43	76.590	0.15	0.04	0.27
5050.00	31.100	79.610	4736.30	298.04	331.12	1399.99	1755027.18	14568834.95	40°06'53.612"N	80°35'24.230"W	1438.62	76.693	0.35	-0.34	-0.11
5142.00	30.670	78.490	4815.25	305.92	340.09	1446.36	1755073.53	14568843.92	40°06'53.698"N	80°35'23.633"W	1485.80	76.768	0.78	-0.47	-1.22
5235.00	30.560	77.690	4895.29	314.60	349.86	1492.70	1755119.85	14568853.69	40°06'53.793"N	80°35'23.036"W	1533.15	76.809	0.45	-0.12	-0.86
5328.00	30.410	77.560	4975.43	323.62	359.97	1538.78	1755165.92	14568863.79	40°06'53.891"N	80°35'22.442"W	1580.33	76.833	0.18	-0.16	-0.14





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5421.00	30.450	79.150	5055.62	332.04	369.48	1584.91	1755212.03	14568873.30	40°06'53.982"N	80°35'21.848"W	1627.41	76.877	0.87	0.04	1.71
5514.00	29.250	78.890	5136.28	339.78	378.29	1630.36	1755257.45	14568882.11	40°06'54.068"N	80°35'21.262"W	1673.67	76.937	1.30	-1.29	-0.28
5607.00	28.740	80.500	5217.63	346.80	386.36	1674.70	1755301.79	14568890.17	40°06'54.145"N	80°35'20.691"W	1718.69	77.009	1.00	-0.55	1.73
5699.00	28.290	81.810	5298.47	352.53	393.12	1718.10	1755345.16	14568896.93	40°06'54.210"N	80°35'20.132"W	1762.50	77.112	0.84	-0.49	1.42
5792.00	27.440	78.300	5380.69	359.01	400.60	1760.90	1755387.95	14568904.41	40°06'54.282"N	80°35'19.581"W	1805.89	77.183	1.99	-0.91	-3.77
5885.00	27.390	76.250	5463.25	367.45	410.03	1802.66	1755429.69	14568913.84	40°06'54.373"N	80°35'19.043"W	1848.71	77.186	1.02	-0.05	-2.20
5978.00	27.890	76.120	5545.63	376.76	420.34	1844.56	1755471.57	14568924.13	40°06'54.473"N	80°35'18.503"W	1891.84	77.163	0.54	0.54	-0.14
6070.00	26.210	76.090	5627.67	385.85	430.38	1886.17	1755512.17	14568934.18	40°06'54.571"N	80°35'17.979"W	1933.67	77.140	1.83	-1.83	-0.03
6163.00	27.700	73.250	5710.46	396.06	441.55	1925.81	1755552.79	14568945.34	40°06'54.679"N	80°35'17.456"W	1975.78	77.086	2.12	1.60	-3.05
6209.00	27.210	70.290	5751.29	402.21	448.18	1945.95	1755572.92	14568951.97	40°06'54.744"N	80°35'17.196"W	1996.89	77.030	3.15	-1.07	-6.43
6256.00	28.060	62.690	5792.94	410.43	456.88	1965.89	1755592.86	14568960.66	40°06'54.829"N	80°35'16.939"W	2018.28	76.917	7.71	1.81	-16.17
6302.00	29.740	56.450	5833.22	421.25	468.15	1985.02	1755611.98	14568971.93	40°06'54.939"N	80°35'16.692"W	2039.48	76.730	7.50	3.65	-13.57
6349.00	30.370	49.380	5873.91	434.99	482.33	2003.76	1755630.71	14568986.11	40°06'55.079"N	80°35'16.450"W	2060.99	76.466	7.65	1.34	-15.04
6395.00	30.380	40.570	5913.61	451.01	498.75	2020.16	1755647.11	14569002.52	40°06'55.240"N	80°35'16.238"W	2080.81	76.132	9.68	0.02	-19.15
6441.00	31.720	32.150	5953.04	469.76	517.83	2034.17	1755661.11	14569021.59	40°06'55.428"N	80°35'16.057"W	2099.04	75.718	9.87	2.91	-18.30
6488.00	32.340	25.580	5992.90	491.28	539.64	2046.17	1755673.11	14569043.39	40°06'55.643"N	80°35'15.901"W	2116.14	75.226	7.53	1.32	-13.98
6534.00	35.010	21.730	6031.18	514.40	563.00	2056.37	1755683.31	14569066.74	40°06'55.873"N	80°35'15.768"W	2132.05	74.689	7.43	5.80	-8.37
6580.00	37.690	17.250	6068.23	539.87	588.70	2065.43	1755692.36	14569090.88	40°06'56.127"N	80°35'15.650"W	2147.69	74.091	8.20	5.83	-9.74
6627.00	39.890	12.220	6104.87	568.15	617.16	2072.88	1755699.81	14569120.43	40°06'56.408"N	80°35'15.552"W	2162.81	73.420	8.17	4.68	-10.70
6673.00	40.900	8.450	6139.91	597.33	646.48	2078.22	1755705.15	14569150.19	40°06'56.697"N	80°35'15.482"W	2176.45	72.721	5.75	2.20	-8.20
6719.00	42.600	7.210	6174.23	627.57	676.82	2082.39	1755709.31	14569180.52	40°06'56.997"N	80°35'15.426"W	2189.62	71.995	4.11	3.70	-2.70
6766.00	45.620	4.580	6207.98	660.02	709.35	2088.73	1755712.65	14569213.04	40°06'57.318"N	80°35'15.381"W	2203.05	71.217	7.51	6.43	-5.60
6812.00	49.340	4.730	6239.06	693.73	743.14	2088.48	1755715.40	14569246.81	40°06'57.652"N	80°35'15.344"W	2216.75	70.413	8.09	8.09	0.33
6859.00	54.330	2.630	6268.09	730.53	780.00	2090.83	1755717.75	14569283.66	40°06'58.016"N	80°35'15.312"W	2231.58	69.542	11.18	10.62	-4.47
6905.00	58.080	0.330	6293.68	768.70	818.21	2091.80	1755718.72	14569321.85	40°06'58.394"N	80°35'15.297"W	2246.12	68.637	9.15	8.15	-5.00
6952.00	60.150	358.700	6317.80	809.02	858.53	2091.45	1755718.37	14569362.16	40°06'58.792"N	80°35'15.299"W	2260.81	67.682	5.32	4.40	-3.47
6998.00	62.170	357.260	6339.99	849.31	898.80	2090.02	1755716.94	14569402.41	40°06'59.190"N	80°35'15.315"W	2275.09	66.730	5.18	4.39	-3.13
7044.00	64.440	355.030	6360.66	890.36	939.80	2087.25	1755714.18	14569443.40	40°06'59.596"N	80°35'15.348"W	2289.07	65.760	6.57	4.93	-4.85
7091.00	67.130	353.390	6379.94	933.09	982.44	2082.92	1755709.85	14569486.02	40°07'00.017"N	80°35'15.401"W	2302.99	64.748	6.55	5.72	-3.49
7136.00	72.260	350.790	6395.55	975.00	1024.22	2077.10	1755704.03	14569527.78	40°07'00.430"N	80°35'15.474"W	2315.90	63.752	12.62	11.40	-5.78





Southwestern Energy

# Actual Wellpath Report

Glenn Didriksen OHI 405H AWP Proj: 13477'

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## REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot #405
Area	Ohio County, WV	Well	Glenn Didriksen OHI 405H
Field	Ohio	Wellbore	Glenn Didriksen OHI 405H AWB
Facility	Glenn Didriksen OHI Pad 1		WV Department of Environmental Protection

OCT 21 2019

## WELLPATH DATA (162 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)
7182.00	78.780	349.280	6407.05	1019.01	1068.06	2069.39	17556696.32	14569671.61	40°07'00.864"N	80°35'15.570"W	2328.76	62.701	14.53	14.17	-3.28
7229.00	81.570	347.680	6415.06	1064.58	1113.43	2060.14	17556687.07	145696616.96	40°07'01.312"N	80°35'15.687"W	2341.77	61.610	6.82	5.94	-3.40
7275.00	83.480	345.250	6421.05	1109.16	1157.77	2049.47	17556676.40	14569661.28	40°07'01.751"N	80°35'15.821"W	2353.88	60.537	6.68	4.15	-5.28
7321.00	86.060	343.520	6425.24	1153.55	1201.88	2037.14	17556664.08	14569705.37	40°07'02.188"N	80°35'15.977"W	2365.26	59.460	6.74	5.61	-3.76
7360.00	87.750	341.200	6427.35	1190.93	1238.99	2025.33	17556652.28	14569742.47	40°07'02.555"N	80°35'16.127"W	2374.25	58.544	7.35	4.33	-5.95
7438.00	91.140	341.530	6428.10	1265.39	1312.88	2000.42	17556627.37	14569816.34	40°07'03.286"N	80°35'16.443"W	2392.76	56.723	4.37	4.35	0.42
7531.00	91.230	338.740	6426.18	1353.55	1400.32	1968.82	1755595.79	14569903.74	40°07'04.152"N	80°35'16.845"W	2416.02	54.578	3.00	0.10	-3.00
7624.00	91.200	336.510	6424.21	1440.33	1486.29	1933.43	1755560.41	14569889.68	40°07'05.003"N	80°35'17.295"W	2438.69	52.449	2.40	-0.03	-2.40
7716.00	91.080	337.000	6422.38	1525.68	1570.81	1897.13	1755524.13	14570074.16	40°07'05.840"N	80°35'17.758"W	2463.04	50.375	0.55	-0.13	0.53
7809.00	91.320	337.180	6420.43	1612.15	1656.45	1860.93	1755487.94	14570159.77	40°07'06.688"N	80°35'18.218"W	2491.37	48.327	0.32	0.26	0.19
7902.00	91.230	337.600	6418.36	1698.80	1742.29	1825.19	1755452.21	14570245.57	40°07'07.538"N	80°35'18.673"W	2523.27	46.331	0.46	-0.10	0.45
7995.00	91.260	338.020	6416.34	1785.70	1828.38	1790.07	1755417.11	14570331.63	40°07'08.390"N	80°35'19.120"W	2558.77	44.394	0.45	0.03	0.45
8086.00	91.140	340.840	6414.43	1871.60	1913.55	1758.11	1755385.16	14570416.77	40°07'09.233"N	80°35'19.527"W	2598.58	42.576	3.10	-0.13	3.10
8179.00	91.320	342.070	6412.44	1960.42	2001.70	1728.54	1755355.60	14570504.88	40°07'10.106"N	80°35'19.902"W	2644.74	40.812	1.34	0.19	1.32
8271.00	91.200	342.110	6410.41	2048.58	2089.22	1700.25	1755327.33	14570592.37	40°07'10.972"N	80°35'20.261"W	2693.64	39.140	0.14	-0.13	0.04
8364.00	91.290	342.490	6408.39	2137.80	2177.79	1671.99	1755299.07	14570680.91	40°07'11.848"N	80°35'20.619"W	2745.60	37.515	0.42	0.10	0.41
8457.00	91.320	342.080	6406.28	2227.01	2266.36	1643.69	1755270.79	14570769.44	40°07'12.725"N	80°35'20.978"W	2799.67	35.952	0.44	0.03	-0.44
8548.00	91.260	342.870	6404.23	2314.38	2353.11	1616.30	1755243.40	14570856.16	40°07'13.583"N	80°35'21.326"W	2854.75	34.484	0.87	-0.07	0.87
8641.00	91.320	342.490	6402.13	2403.77	2441.87	1588.62	1755215.74	14570944.89	40°07'14.462"N	80°35'21.677"W	2913.15	33.047	0.41	0.06	-0.41
8734.00	91.320	340.890	6399.99	2492.70	2530.14	1559.41	1755186.54	14571033.30	40°07'15.335"N	80°35'22.048"W	2972.10	31.647	1.72	0.00	-1.72
8825.00	91.350	338.130	6397.87	2578.64	2615.35	1527.57	1755156.71	14571118.30	40°07'16.179"N	80°35'22.452"W	3028.78	30.288	3.03	0.03	-3.03
8916.00	91.260	335.510	6395.80	2663.08	2698.98	1491.76	1755118.92	14571201.89	40°07'17.007"N	80°35'22.908"W	3083.80	28.930	2.88	-0.10	-2.88
9009.00	91.230	336.950	6393.78	2749.03	2784.06	1454.29	1755081.45	14571286.95	40°07'17.849"N	80°35'23.386"W	3141.01	27.681	1.55	-0.03	1.55
9102.00	91.290	335.820	6391.73	2835.07	2869.25	1417.04	1755044.22	14571372.11	40°07'18.693"N	80°35'23.860"W	3200.10	26.283	1.22	0.06	-1.22
9195.00	91.720	335.290	6389.29	2920.59	2953.89	1378.57	1755005.77	14571456.71	40°07'19.531"N	80°35'24.350"W	3259.74	25.018	0.73	0.46	-0.57
9288.00	91.970	333.330	6386.29	3005.28	3037.65	1338.28	1754965.49	14571540.43	40°07'20.361"N	80°35'24.864"W	3319.38	23.777	2.12	0.27	-2.11
9380.00	91.050	330.510	6383.87	3087.41	3118.78	1294.99	1754922.22	14571621.54	40°07'21.164"N	80°35'25.416"W	3376.95	22.549	3.22	-1.00	-3.07
9473.00	89.660	333.880	6383.29	3170.65	3201.03	1251.62	1754878.87	14571703.75	40°07'22.979"N	80°35'25.970"W	3437.02	21.366	3.92	-1.49	3.62
9566.00	90.890	338.180	6382.85	3256.48	3285.99	1213.85	1754841.11	14571788.67	40°07'22.820"N	80°35'26.451"W	3503.02	20.274	4.81	1.32	4.62
9658.00	91.050	339.080	6381.29	3342.90	3371.65	1180.33	1754807.60	14571874.30	40°07'23.668"N	80°35'26.877"W	3572.28	19.294	0.99	0.17	0.98





# Actual Wellpath Report

Glenn Didriksen OHI 405H AWP Proj: 13477'

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## REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot #405
Area	Ohio County, WV	Well	Glenn Didriksen OHI 405H
Field	Ohio	Wellbore	Glenn Didriksen OHI 405H AWB
Facility	Glenn Didriksen OHI Pad 1		

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WV Department of  
Environmental Protection

## WELLPATH DATA (162 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 (ft/100ft)	Build Rate (ft/100ft)	Turn Rate (ft/100ft)
9751.00	90.800	338.960	6379.79	3430.49	3458.47	1147.04	1754774.32	14571961.09	40°07'24.528"N	80°35'27.301"W	3643.72	18.349	0.30	-0.27	-0.13
9844.00	90.310	340.380	6378.89	3518.42	3545.67	1114.73	1754742.03	14572048.26	40°07'25.391"N	80°35'27.712"W	3716.77	17.453	1.62	-0.53	1.53
9937.00	90.460	345.890	6378.26	3608.00	3634.63	1087.76	1754715.07	14572137.19	40°07'26.271"N	80°35'28.053"W	3793.91	16.661	5.93	0.16	5.92
10029.00	90.586	346.060	6377.43	3697.75	3723.89	1065.46	1754692.78	14572226.41	40°07'27.154"N	80°35'28.335"W	3873.31	15.967	0.23	0.13	0.18
10122.00	90.526	341.690	6376.53	3787.65	3813.20	1039.64	1754666.97	14572315.69	40°07'28.038"N	80°35'28.662"W	3952.39	15.251	4.70	-0.06	-4.70
10215.00	90.340	342.730	6375.84	3876.85	3901.75	1011.23	1754638.57	14572404.20	40°07'28.915"N	80°35'29.023"W	4030.66	14.530	1.13	-0.19	1.12
10307.00	90.496	342.440	6375.17	3965.25	3989.53	983.69	1754611.04	14572491.95	40°07'29.783"N	80°35'29.372"W	4109.02	13.851	0.35	0.16	-0.32
10400.00	91.050	339.380	6373.92	4053.81	4077.40	953.28	1754580.65	14572579.78	40°07'30.653"N	80°35'29.758"W	4187.35	13.159	3.34	0.60	-3.29
10493.00	90.770	335.130	6372.44	4140.37	4163.14	917.34	1754554.72	14572665.49	40°07'31.502"N	80°35'30.216"W	4263.01	12.426	4.58	-0.30	-4.57
10584.00	90.800	335.720	6371.19	4223.99	4245.89	879.50	1754506.89	14572748.20	40°07'32.321"N	80°35'30.698"W	4336.02	11.703	0.65	0.03	0.65
10677.00	91.080	341.980	6369.67	4311.43	4332.57	845.96	1754473.37	14572834.85	40°07'33.179"N	80°35'31.125"W	4414.38	11.048	6.74	0.30	6.73
10769.00	91.320	342.700	6367.74	4399.71	4420.21	818.06	1754445.47	14572922.46	40°07'34.047"N	80°35'31.479"W	4495.27	10.485	0.82	0.26	0.78
10862.00	91.880	340.130	6365.14	4488.49	4508.32	788.44	1754415.86	14573010.53	40°07'34.919"N	80°35'31.855"W	4576.74	9.920	2.83	0.60	-2.76
10954.00	91.140	335.400	6362.72	4574.39	4593.42	753.64	1754381.08	14573095.61	40°07'35.761"N	80°35'32.298"W	4654.84	9.318	5.20	-0.80	-5.14
11047.00	90.890	334.420	6361.07	4659.51	4677.63	714.21	1754341.67	14573179.78	40°07'36.595"N	80°35'32.800"W	4731.85	8.681	1.09	-0.27	-1.05
11140.00	91.050	334.760	6359.50	4744.42	4761.62	674.31	1754301.78	14573263.74	40°07'37.427"N	80°35'33.309"W	4809.13	8.060	0.40	0.17	0.37
11233.00	90.400	336.360	6358.32	4829.96	4846.28	635.84	1754263.33	14573348.37	40°07'38.265"N	80°35'33.799"W	4887.82	7.475	1.86	-0.70	1.72
11324.00	90.550	339.760	6357.56	4915.13	4930.68	601.85	1754229.34	14573432.73	40°07'39.101"N	80°35'34.232"W	4967.27	6.959	3.74	0.16	3.74
11417.00	90.920	343.450	6356.37	5004.02	5018.90	572.51	1754200.02	14573520.92	40°07'39.974"N	80°35'34.605"W	5051.45	6.508	3.99	0.40	3.97
11510.00	90.310	338.280	6355.37	5092.54	5106.73	542.03	1754169.55	14573608.71	40°07'40.843"N	80°35'34.992"W	5135.41	6.059	5.60	-0.66	-5.56
11603.00	90.370	338.040	6354.82	5179.65	5193.05	507.44	1754134.97	14573695.00	40°07'41.698"N	80°35'35.432"W	5217.78	5.581	0.27	0.06	-0.26
11695.00	89.720	339.450	6354.75	5266.16	5278.79	474.09	1754101.63	14573780.71	40°07'42.547"N	80°35'35.856"W	5300.04	5.132	1.69	-0.71	1.53
11788.00	90.550	341.960	6354.53	5354.62	5366.56	443.36	1754070.92	14573868.44	40°07'43.415"N	80°35'36.247"W	5384.84	4.723	2.84	0.89	2.70
11880.00	91.260	338.180	6353.08	5441.80	5453.02	412.01	1754039.58	14573954.87	40°07'44.271"N	80°35'36.645"W	5468.56	4.321	4.18	0.77	-4.11
11973.00	90.460	335.130	6351.68	5528.01	5538.39	375.16	1754002.75	14574040.20	40°07'45.117"N	80°35'37.114"W	5551.08	3.875	3.39	-0.86	-3.28
12066.00	90.400	337.050	6350.98	5613.89	5623.40	337.47	1753965.07	14574125.18	40°07'45.958"N	80°35'37.595"W	5633.52	3.434	2.07	-0.06	2.06
12159.00	90.460	336.950	6350.28	5700.33	5709.00	301.14	1753928.75	14574210.75	40°07'46.806"N	80°35'38.057"W	5716.94	3.019	0.13	0.06	-0.11
12250.00	90.460	336.500	6349.55	5784.74	5792.60	265.18	1753892.81	14574294.31	40°07'47.634"N	80°35'38.515"W	5798.66	2.621	0.49	0.00	-0.49
12343.00	90.460	336.470	6348.81	5870.87	5877.87	228.08	1753855.72	14574379.55	40°07'48.478"N	80°35'38.988"W	5882.29	2.222	0.03	0.00	-0.03
12434.00	90.370	336.070	6348.15	5955.01	5961.17	191.46	1753819.11	14574462.83	40°07'49.303"N	80°35'39.455"W	5964.25	1.840	0.45	-0.10	-0.44





Southwestern Energy

# Actual Wellpath Report

Glenn Didriksen OHI 405H AWP Proj: 13477'

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a GE COMPANY

Office of Oil and Gas



## REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot #405
Area	Ohio County, WV	Well	Glenn Didriksen OHI 405H
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Facility	Glenn Didriksen OHI Pad 1		

OCT 21 2019

WV Department of Environmental Protection

## WELLPATH DATA (162 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)
12526.00	90.180	338.030	6347.71	6040.54	6045.89	155.58	1753783.25	14574547.51	40°07'50.142"N	80°35'39.912"W	6047.89	1.474	2.14	-0.21	2.13
12619.00	90.460	341.450	6347.19	6128.51	6133.12	123.39	1753751.07	14574634.70	40°07'51.005"N	80°35'40.321"W	6134.36	1.153	3.69	0.30	3.68
12711.00	90.430	341.860	6346.47	6216.49	6220.44	94.43	1753722.12	14574721.99	40°07'51.869"N	80°35'40.689"W	6221.16	0.870	0.45	-0.03	0.45
12805.00	90.460	341.740	6345.74	6306.45	6309.73	65.07	1753692.78	14574811.25	40°07'52.753"N	80°35'41.061"W	6310.07	0.591	0.13	0.03	-0.13
12898.00	90.460	342.980	6344.99	6395.71	6398.36	36.89	1753664.61	14574899.84	40°07'53.630"N	80°35'41.419"W	6398.46	0.330	1.33	0.00	1.33
12990.00	90.460	341.930	6344.26	6484.06	6486.07	9.16	1753636.89	14574987.52	40°07'54.498"N	80°35'41.771"W	6486.08	0.081	1.14	0.00	-1.14
13081.00	90.460	340.180	6343.53	6570.79	6572.14	-20.38	1753607.35	14575073.55	40°07'55.350"N	80°35'42.146"W	6572.17	359.822	1.92	0.00	-1.92
13174.00	90.370	338.730	6342.85	6658.62	6659.22	-53.02	1753574.73	14575160.60	40°07'56.212"N	80°35'42.561"W	6659.43	359.544	1.56	-0.10	-1.56
13267.00	90.400	338.800	6342.23	6746.07	6745.90	-86.70	1753541.06	14575247.25	40°07'57.070"N	80°35'42.990"W	6746.46	359.264	0.08	0.03	0.08
13359.00	90.520	340.050	6341.49	6832.94	6832.03	-119.03	1753508.74	14575333.34	40°07'57.923"N	80°35'43.401"W	6833.07	359.002	1.36	0.13	1.36
13452.00	90.460	338.530	6340.69	6920.67	6919.01	-151.92	1753475.87	14575420.29	40°07'58.784"N	80°35'43.819"W	6920.68	358.742	1.64	-0.06	-1.63
13477.00	90.460	338.530	6340.49	6944.15	6942.28	-161.07	1753466.72	14575443.55	40°07'59.014"N	80°35'43.936"W	6944.15	358.671	0.00	0.00	0.00

## HOLE & CASING SECTIONS - Ref Wellbore: Glenn Didriksen OHI 405H AWB Ref Wellpath: Glenn Didriksen OHI 405H AWP Proj: 13477'

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	100.00	74.00	26.00	100.00	0.00	0.00	-0.04	-0.05
17.5in Open Hole	100.00	755.00	655.00	100.00	754.99	-0.04	-0.05	0.41	-2.43
13.375in Casing Surface	26.00	755.00	729.00	26.00	754.99	0.00	0.00	0.41	-2.43
12.25in Open Hole	755.00	2328.00	1573.00	754.99	2299.34	0.41	-2.43	108.98	244.50
9.625in Casing Intermediate	26.00	2328.00	2302.00	26.00	2299.34	0.00	0.00	108.98	244.50
8.75in Open Hole	2328.00	7384.00	5056.00	2299.34	6428.07	108.98	244.50	1261.70	2017.62
8.5in Open Hole	7384.00	13477.00	6093.00	6428.07	6340.49	1261.70	2017.62	6942.28	-161.07
5.5in Casing Production	26.00	13477.00	13451.00	26.00	6340.49	0.00	0.00	6942.28	-161.07

# Actual Wellpath Report

Glenn Didriksen OHI 405H AWP Proj: 13477'

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## REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot #405
Area	Ohio County, WV	Well	Glenn Didriksen OHI 405H
Field	Ohio	Wellbore	Glenn Didriksen OHI 405H AWP
Facility	Glenn Didriksen OHI Pad 1		

## TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Glenn Didriksen OHI 405H BHL Rev-4	6359.00	6942.73	-164.07	1753463.72	14575444.01	40°07'59.019"N	80°35'43.974"W	point
Glenn Didriksen OHI 405H LP Rev-6	6445.98	1248.06	2026.07	1755653.01	14569751.54	40°07'02.644"N	80°35'16.117"W	point

## WELLPATH COMPOSITION - Ref Wellbore: Glenn Didriksen OHI 405H AWP Ref Wellpath: Glenn Didriksen OHI 405H AWP Proj: 13477'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
26.00	750.00	BHI Generic gyro - northseeking (Standard)	01_Gyro NS CT <17' 1/2"> (100'-750')	Glenn Didriksen OHI 405H AWP
750.00	2277.00	OWMSG MWD rev2 + HRGM	02_Premier MWD <12' 1/4"> (840'-2277')	Glenn Didriksen OHI 405H AWP
2277.00	7321.00	OWMSG MWD rev2 + HRGM	03_Premier MWD <8' 3/4"> (2367'-7321')	Glenn Didriksen OHI 405H AWP
7321.00	13452.00	BHI AutoTrak Curve (Short)	04_BH AT Curve <8' 1/2"> (7360'-13452')	Glenn Didriksen OHI 405H AWP
13452.00	13477.00	Blind Drilling (std)	Projection to bit	Glenn Didriksen OHI 405H AWP

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# Actual Wellpath Report

Glenn Didriksen OHI 405H AWP Proj: 13477'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	SOUTHWESTERN ENERGY	Slot	Slot #405
Area	Ohio County, WV	Well	Glenn Didriksen OHI 405H
Field	Ohio	Wellbore	Glenn Didriksen OHI 405H AWP
Facility	Glenn Didriksen OHI Pad 1		

## COMMENTS

Wellpath general comments  
 API: 47-069-00284-0000  
 BH Job #: 109802815  
 Rig: SDC 41  
 Duration: 05/17/2019 - 05/18/2019

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