



SWN PRODUCTION COMPANY, LLC



Location: Ohio County, WV
 Field: Ohio VW
 Facility: Carl Rotter OHI Pad

Slot: Slot 8H
 Well: Carl Rotter OHI 8H
 Wellbore: Carl Rotter OHI 8H AWB

Plot reference wellpath is Carl Rotter OHI 8H AWB_ awp 50' - 24972' Proj: 24997'
 True vertical depths are referenced to SDC 40 (KB)
 Reference wellpath measured depths are referenced to SDC 40 (KB)
 SDC 40 (KB) to Mean Sea Level: 1362.7 feet
 Mean Sea Level to Ground level (At Slot: Slot 8H): -1336.7 feet
 Offset wellpath MDs are referenced to each path's default MD datum

Grid System: NAD83 / UTM Zone 17 North, US feet
 North Reference: Grid north
 Scale: True distance
 Coordinates are in feet referenced to Slot
 Depths are in feet
 Created by: tranlam on 2022-04-18; Database: WA_MPL_EASTERNUS_Defn

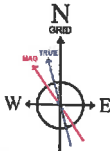
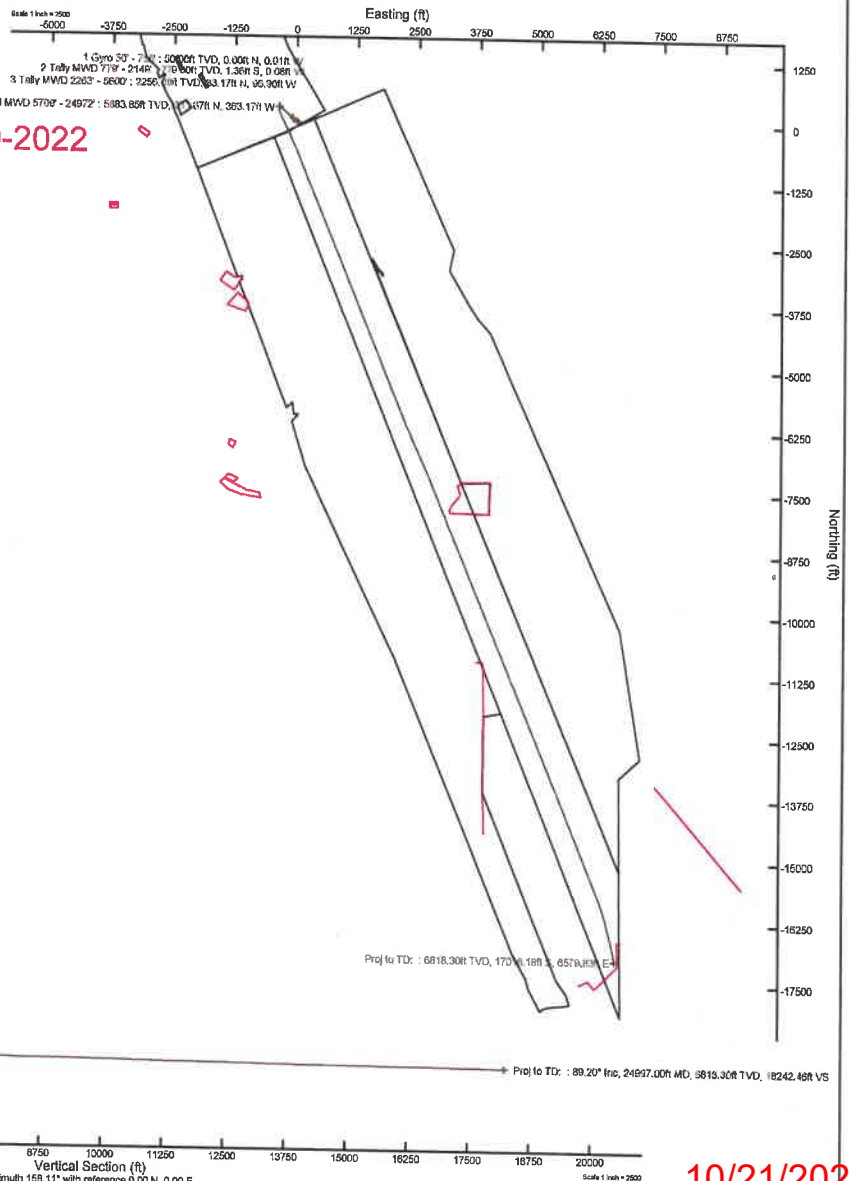
Bottom Hole Location

MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
24997.00	89.200	167.840	6818.30	-17016.18	6579.83	1774923.86	14547022.97	40°03'16.9974"N	80°31'9.5579"W

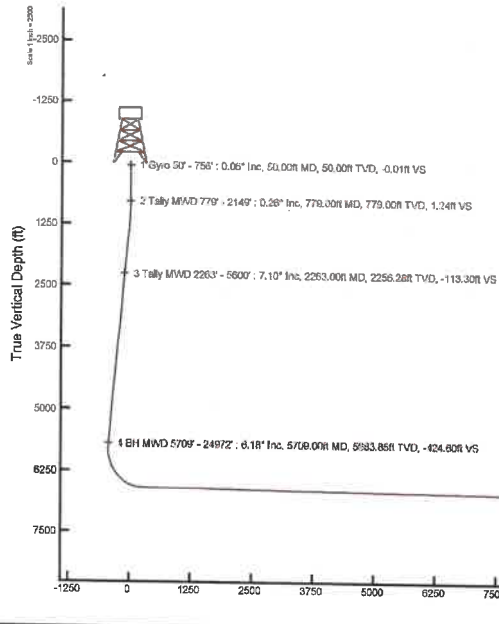
Location Information

Facility Name			Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Carl Rotter OHI Pad			1768372.772	14564065.056	40°06'5.8140"N	80°32'32.7080"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Slot 8H	-32.44	-25.23	1768346.550	14564032.630	40°06'5.4948"N	80°32'33.0477"W
SDC 40 (KB) to Ground level (At Slot: Slot 8H)					26ft	
Mean Sea Level to Ground level (At Slot: Slot 8H)					-1336.7ft	
SDC 40 (KB) to Mean Sea Level					1362.7ft	

API: 47069003300000
 BH JOB:111260086
 DURATION: 04-04-2022 to 04-09-2022
 RIG: SDC 40



HDCM2022v1.0 (1900.0 to 2023.0) Dip: 87.08° Field: 52259.8 nT
 Magnetic North is 8.46 degrees West of True North (at 3/21/2022)
 Grid North is 0.29 degrees East of True North
 To correct azimuth from True to Grid subtract 0.29 degrees
 To correct azimuth from Magnetic to Grid subtract 8.75 degrees



10/21/2022

REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Carl Rotter OHI 8H
Field	Ohio VW	API	47069003300000
Facility	Carl Rotter OHI Pad	Wellbore	Carl Rotter OHI 8H AWB
Slot	Slot 8H		

REPORT SETUP INFORMATION			
Projection System	NAD83 / UTM Zone 17 North, US feet	Software System	WellArchitect® 6.0
North Reference	Grid	User	Tranlam
Scale	0.999619	Report Generated	4/18/2022 at 1:03:20 AM
Convergence at slot	0.29° 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
Slot Location	-32.44	-26.23	1768346.55	14564032.63	40°06'5.4948"N	80°32'33.0477"W
Facility Reference Pt			1768372.77	14564065.06	40°06'5.8140"N	80°32'32.7080"W
Field Reference Pt			0.00	0.00	0°00'0.0000"	85°29'19.4780"W

WELLPATH DATUM			
Calculation method	Minimum curvature	SDC 40 (KB) to Facility Vertical Datum	1362.70ft
Horizontal Reference Pt	Slot	SDC 40 (KB) to Mean Sea Level	1362.70ft
Vertical Reference Pt	SDC 40 (KB)	SDC 40 (KB) to Ground Level at Slot (Slot 8H)	26.00ft
MD Reference Pt	SDC 40 (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	158.11°

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Field	Ohio VW	API	47069003300000
Facility	Carl Rotter OHI Pad	Wellbore	Carl Rotter OHI 8H AWB
Slot	Slot 8H		

WELLPATH DATA (286 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	DLS [°/100ft]	Comments
0.00†	0.000	275.520	0.00	0.00	0.00	0.00	1768346.55	14564032.63	40°06'5.4948"N	80°32'33.0477"W	0.00	
26.00	0.000	275.520	26.00	0.00	0.00	0.00	1768346.55	14564032.63	40°06'5.4948"N	80°32'33.0477"W	0.00	
50.00	0.060	275.520	50.00	-0.01	0.00	-0.01	1768346.54	14564032.63	40°06'5.4948"N	80°32'33.0479"W	0.25	1 Gyro 50' - 756'
100.00	0.030	262.330	100.00	-0.02	0.00	-0.05	1768346.50	14564032.63	40°06'5.4948"N	80°32'33.0484"W	0.06	
150.00	0.060	211.320	150.00	-0.01	-0.02	-0.08	1768346.47	14564032.61	40°06'5.4946"N	80°32'33.0487"W	0.09	
200.00	0.080	162.360	200.00	0.04	-0.08	-0.08	1768346.47	14564032.55	40°06'5.4940"N	80°32'33.0488"W	0.12	
250.00	0.090	166.130	250.00	0.12	-0.15	-0.06	1768346.49	14564032.48	40°06'5.4933"N	80°32'33.0485"W	0.02	
300.00	0.100	174.790	300.00	0.20	-0.23	-0.05	1768346.50	14564032.40	40°06'5.4925"N	80°32'33.0484"W	0.03	
350.00	0.170	178.130	350.00	0.31	-0.35	-0.04	1768346.51	14564032.28	40°06'5.4913"N	80°32'33.0483"W	0.14	
400.00	0.070	158.130	400.00	0.41	-0.45	-0.03	1768346.52	14564032.18	40°06'5.4903"N	80°32'33.0481"W	0.21	
450.00	0.140	191.860	450.00	0.49	-0.54	-0.03	1768346.52	14564032.09	40°06'5.4894"N	80°32'33.0481"W	0.18	
500.00	0.140	167.000	500.00	0.60	-0.66	-0.03	1768346.52	14564031.97	40°06'5.4883"N	80°32'33.0481"W	0.12	
550.00	0.060	267.910	550.00	0.65	-0.72	-0.04	1768346.51	14564031.91	40°06'5.4877"N	80°32'33.0483"W	0.32	
600.00	0.150	194.910	600.00	0.70	-0.78	-0.08	1768346.47	14564031.85	40°06'5.4870"N	80°32'33.0488"W	0.29	
650.00	0.110	167.000	650.00	0.80	-0.89	-0.09	1768346.46	14564031.74	40°06'5.4860"N	80°32'33.0489"W	0.15	
700.00	0.170	206.170	700.00	0.89	-1.01	-0.11	1768346.44	14564031.62	40°06'5.4848"N	80°32'33.0492"W	0.22	
750.00	0.300	167.200	750.00	1.07	-1.20	-0.11	1768346.44	14564031.43	40°06'5.4829"N	80°32'33.0493"W	0.40	
756.00	0.400	175.020	756.00	1.11	-1.24	-0.11	1768346.44	14564031.39	40°06'5.4826"N	80°32'33.0492"W	1.84	
779.00	0.260	156.070	779.00	1.24	-1.36	-0.08	1768346.47	14564031.27	40°06'5.4813"N	80°32'33.0489"W	0.76	2 Tally MWD 779' - 2149'
870.00	0.860	327.210	870.00	0.77	-0.98	-0.37	1768346.18	14564031.65	40°06'5.4851"N	80°32'33.0525"W	1.23	
960.00	1.570	335.190	959.97	-1.12	0.71	-1.25	1768345.30	14564033.34	40°06'5.5018"N	80°32'33.0638"W	0.81	
1051.00	2.240	331.190	1050.92	-4.13	3.40	-2.63	1768343.92	14564036.03	40°06'5.5285"N	80°32'33.0813"W	0.75	
1142.00	3.490	323.930	1141.81	-8.58	7.20	-5.12	1768341.43	14564039.82	40°06'5.5661"N	80°32'33.1131"W	1.43	
1234.00	4.660	317.490	1233.57	-14.80	12.21	-9.29	1768337.26	14564044.84	40°06'5.6159"N	80°32'33.1665"W	1.36	
1327.00	5.940	315.790	1326.18	-22.79	18.45	-15.20	1768331.35	14564051.07	40°06'5.6778"N	80°32'33.2421"W	1.39	
1419.00	6.430	311.980	1417.64	-31.81	25.31	-22.35	1768324.21	14564057.93	40°06'5.7460"N	80°32'33.3337"W	0.69	
1510.00	7.160	308.480	1508.00	-41.32	32.24	-30.58	1768315.98	14564064.86	40°06'5.8150"N	80°32'33.4391"W	0.92	
1601.00	6.730	301.970	1598.33	-50.55	38.60	-39.54	1768307.02	14564071.21	40°06'5.8782"N	80°32'33.5540"W	0.98	
1693.00	5.690	301.700	1689.79	-58.58	43.85	-47.99	1768298.57	14564076.46	40°06'5.9305"N	80°32'33.6624"W	1.13	
1785.00	5.750	301.150	1781.33	-65.93	48.63	-55.82	1768290.75	14564081.24	40°06'5.9781"N	80°32'33.7628"W	0.09	

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Field	Ohio VW	API	47069003300000
Facility	Carl Rotter OHI Pad	Wellbore	Carl Rotter OHI 8H AWB
Slot	Slot 8H		

WELLPATH DATA (286 stations)												
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
1875.00	5.710	309.260	1870.89	-73.46	53.79	-63.14	1768283.43	14564086.40	40°06'6.0296"N	80°32'33.8567"W	0.90	
1966.00	6.020	312.800	1961.41	-81.73	59.90	-70.15	1768276.43	14564092.51	40°06'6.0903"N	80°32'33.9465"W	0.52	
2057.00	6.880	312.660	2051.83	-90.97	66.84	-77.66	1768268.92	14564099.44	40°06'6.1592"N	80°32'34.0427"W	0.95	
2149.00	7.080	310.790	2143.15	-100.98	74.27	-86.00	1768260.58	14564106.87	40°06'6.2331"N	80°32'34.1496"W	0.33	
2263.00	7.100	307.700	2256.28	-113.30	83.17	-96.90	1768249.69	14564115.77	40°06'6.3216"N	80°32'34.2892"W	0.33	3 Tally MWD 2263' - 5600'
2352.00	5.870	304.760	2344.71	-121.85	89.13	-104.99	1768241.60	14564121.73	40°06'6.3809"N	80°32'34.3929"W	1.43	
2441.00	5.200	300.320	2433.29	-128.84	93.76	-112.21	1768234.38	14564126.35	40°06'6.4270"N	80°32'34.4855"W	0.89	
2530.00	4.850	308.160	2521.95	-135.28	98.12	-118.65	1768227.95	14564130.71	40°06'6.4704"N	80°32'34.5681"W	0.87	
2622.00	4.550	317.020	2613.65	-142.06	103.19	-124.20	1768222.40	14564135.78	40°06'6.5209"N	80°32'34.6391"W	0.85	
2710.00	4.420	316.550	2701.38	-148.47	108.21	-128.91	1768217.69	14564140.80	40°06'6.5707"N	80°32'34.6994"W	0.15	
2799.00	4.220	315.030	2790.12	-154.67	113.02	-133.58	1768213.02	14564145.60	40°06'6.6184"N	80°32'34.7592"W	0.26	
2889.00	5.280	313.520	2879.81	-161.48	118.21	-138.92	1768207.68	14564150.80	40°06'6.6700"N	80°32'34.8277"W	1.19	
2981.00	5.430	312.980	2971.41	-169.27	124.09	-145.18	1768201.43	14564156.68	40°06'6.7284"N	80°32'34.9077"W	0.17	
3072.00	4.870	309.090	3062.04	-176.55	129.46	-151.33	1768195.28	14564162.04	40°06'6.7818"N	80°32'34.9865"W	0.72	
3163.00	5.500	313.070	3152.67	-183.88	134.88	-157.51	1768189.10	14564167.46	40°06'6.8356"N	80°32'35.0657"W	0.80	
3253.00	5.270	316.340	3242.27	-191.62	140.81	-163.51	1768183.10	14564173.39	40°06'6.8946"N	80°32'35.1426"W	0.43	
3344.00	5.930	313.570	3332.84	-199.78	147.08	-169.81	1768176.81	14564179.65	40°06'6.9568"N	80°32'35.2231"W	0.78	
3435.00	7.490	315.240	3423.21	-209.52	154.53	-177.39	1768169.23	14564187.10	40°06'7.0308"N	80°32'35.3202"W	1.73	
3525.00	7.730	314.700	3512.42	-220.48	162.95	-185.82	1768160.80	14564195.52	40°06'7.1145"N	80°32'35.4282"W	0.28	
3619.00	7.660	312.690	3605.57	-231.94	171.65	-194.92	1768151.71	14564204.21	40°06'7.2009"N	80°32'35.5447"W	0.30	
3711.00	7.320	309.420	3696.79	-242.62	179.52	-203.95	1768142.67	14564212.09	40°06'7.2792"N	80°32'35.6604"W	0.59	
3801.00	6.920	306.160	3786.10	-252.25	186.36	-212.76	1768133.87	14564218.92	40°06'7.3472"N	80°32'35.7733"W	0.63	
3891.00	6.560	312.360	3875.47	-261.48	193.03	-220.94	1768125.70	14564225.58	40°06'7.4135"N	80°32'35.8781"W	0.90	
3982.00	5.980	308.900	3965.93	-270.30	199.51	-228.47	1768118.17	14564232.06	40°06'7.4779"N	80°32'35.9746"W	0.76	
4073.00	4.320	309.890	4056.56	-277.46	204.68	-234.79	1768111.85	14564237.23	40°06'7.5294"N	80°32'36.0555"W	1.83	
4164.00	4.930	319.440	4147.26	-284.18	209.85	-239.96	1768106.68	14564242.40	40°06'7.5807"N	80°32'36.1218"W	1.08	
4250.00	6.450	327.590	4232.84	-292.43	216.74	-244.95	1768101.69	14564249.28	40°06'7.6490"N	80°32'36.1856"W	2.00	
4341.00	7.350	313.200	4323.19	-302.74	225.04	-251.93	1768094.71	14564257.58	40°06'7.7314"N	80°32'36.2749"W	2.13	
4432.00	6.760	307.100	4413.50	-312.61	232.25	-260.45	1768086.20	14564264.79	40°06'7.8031"N	80°32'36.3840"W	1.05	
4523.00	5.970	304.550	4503.94	-321.14	238.17	-268.62	1768078.03	14564270.71	40°06'7.8620"N	80°32'36.4887"W	0.92	

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Field	Ohio VW		API	47069003300000
Facility	Carl Rotter OHI Pad		Wellbore	Carl Rotter OHI 8H AWB
Slot	Slot 8H			

WELLPATH DATA (286 stations)												
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4613.00	5.870	304.860	4593.46	-328.89	243.45	-276.25	1768070.41	14564275.99	40°06'7.9146"N	80°32'36.5866"W	0.12	
4707.00	5.990	308.610	4686.95	-337.18	249.26	-284.03	1768062.63	14564281.79	40°06'7.9724"N	80°32'36.6863"W	0.43	
4797.00	5.850	305.170	4776.47	-345.12	254.83	-291.45	1768055.22	14564287.37	40°06'8.0278"N	80°32'36.7814"W	0.42	
4888.00	5.830	308.220	4867.00	-353.02	260.36	-298.87	1768047.80	14564292.89	40°06'8.0829"N	80°32'36.8765"W	0.34	
4981.00	5.400	306.960	4959.56	-360.86	265.92	-306.08	1768040.59	14564298.44	40°06'8.1381"N	80°32'36.9689"W	0.48	
5072.00	5.550	309.720	5050.14	-368.39	271.30	-312.88	1768033.79	14564303.83	40°06'8.1917"N	80°32'37.0561"W	0.33	
5164.00	6.070	308.880	5141.67	-376.55	277.20	-320.09	1768026.58	14564309.72	40°06'8.2503"N	80°32'37.1485"W	0.57	
5256.00	6.060	309.760	5233.15	-385.07	283.36	-327.61	1768019.07	14564315.88	40°06'8.3116"N	80°32'37.2449"W	0.10	
5344.00	5.870	309.100	5320.68	-393.09	289.17	-334.67	1768012.01	14564321.69	40°06'8.3693"N	80°32'37.3354"W	0.23	
5435.00	6.330	310.030	5411.16	-401.59	295.33	-342.13	1768004.56	14564327.85	40°06'8.4306"N	80°32'37.4309"W	0.52	
5525.00	5.670	307.390	5500.67	-409.79	301.22	-349.46	1767997.23	14564333.73	40°06'8.4892"N	80°32'37.5248"W	0.79	
5600.00	4.810	303.420	5575.35	-415.56	305.20	-355.03	1767991.66	14564337.71	40°06'8.5288"N	80°32'37.5962"W	1.24	
5709.00	6.180	312.370	5683.85	-424.60	311.67	-363.17	1767983.51	14564344.18	40°06'8.5932"N	80°32'37.7007"W	1.48	4 BH MWD 5709' - 24972'
5799.00	5.910	294.490	5773.36	-432.32	316.86	-370.97	1767975.72	14564349.37	40°06'8.6448"N	80°32'37.8007"W	2.10	
5890.00	4.750	196.150	5864.11	-432.75	315.18	-376.29	1767970.40	14564347.69	40°06'8.6285"N	80°32'37.8692"W	8.90	
5980.00	11.660	183.150	5953.14	-421.56	302.50	-377.83	1767968.87	14564335.02	40°06'8.5033"N	80°32'37.8899"W	7.90	
6071.00	18.270	175.660	6041.02	-399.60	279.07	-377.25	1767969.44	14564311.59	40°06'8.2717"N	80°32'37.8840"W	7.55	
6163.00	22.840	166.490	6127.16	-368.16	247.30	-371.99	1767974.70	14564279.84	40°06'7.9575"N	80°32'37.8183"W	6.06	
6254.00	27.110	162.510	6209.64	-329.99	210.34	-361.62	1767985.06	14564242.89	40°06'7.5917"N	80°32'37.6874"W	5.04	
6345.00	34.300	158.580	6287.84	-283.62	166.63	-346.01	1768000.68	14564199.19	40°06'7.1590"N	80°32'37.4893"W	8.20	
6437.00	41.270	154.950	6360.51	-227.32	114.94	-323.66	1768023.01	14564147.52	40°06'6.6470"N	80°32'37.2052"W	7.95	
6527.00	44.720	155.040	6426.33	-166.05	59.33	-297.73	1768048.94	14564091.93	40°06'6.0961"N	80°32'36.8751"W	3.83	
6618.00	54.410	154.900	6485.28	-96.97	-3.36	-268.45	1768078.20	14564029.27	40°06'5.4752"N	80°32'36.5025"W	10.65	
6708.00	63.730	155.080	6531.49	-19.97	-73.24	-235.85	1768110.79	14563959.41	40°06'4.7829"N	80°32'36.0876"W	10.36	
6799.00	71.100	154.640	6566.41	63.86	-149.25	-200.17	1768146.45	14563883.44	40°06'4.0300"N	80°32'35.6335"W	8.11	
6890.00	80.140	155.220	6588.99	151.78	-229.02	-162.87	1768183.74	14563803.70	40°06'3.2399"N	80°32'35.1588"W	9.95	
6981.00	88.770	156.610	6597.77	242.20	-311.63	-125.95	1768220.65	14563721.12	40°06'2.4217"N	80°32'34.6891"W	9.60	
7072.00	89.050	155.920	6599.50	333.14	-394.91	-89.33	1768257.25	14563637.87	40°06'1.5968"N	80°32'34.2234"W	0.82	
7162.00	89.140	155.750	6600.93	423.06	-477.02	-52.49	1768294.08	14563555.79	40°06'0.7835"N	80°32'33.7548"W	0.21	
7253.00	89.350	156.100	6602.12	513.98	-560.09	-15.37	1768331.18	14563472.75	40°05'59.9607"N	80°32'33.2826"W	0.45	

REFERENCE WELLPATH IDENTIFICATION				
Operator	SWN PRODUCTION COMPANY, LLC		Well	Carl Rotter OHI 8H
Field	Ohio VW		API	47069003300000
Facility	Carl Rotter OHI Pad		Wellbore	Carl Rotter OHI 8H AWB
Slot	Slot 8H			

WELLPATH DATA (286 stations)												
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7342.00	88.890	158.360	6603.49	602.95	-642.14	19.07	1768365.61	14563390.73	40°05'59.1481"N	80°32'32.8449"W	2.59	
7434.00	89.050	159.090	6605.15	694.93	-727.86	52.44	1768398.97	14563305.05	40°05'58.2994"N	80°32'32.4211"W	0.81	
7524.00	91.660	157.340	6604.59	784.92	-811.42	85.84	1768432.36	14563221.52	40°05'57.4719"N	80°32'31.9968"W	3.49	
7615.00	89.290	157.910	6603.83	875.91	-895.56	120.48	1768466.98	14563137.41	40°05'56.6387"N	80°32'31.5567"W	2.68	
7705.00	89.200	158.170	6605.02	965.90	-979.02	154.13	1768500.62	14563053.98	40°05'55.8122"N	80°32'31.1292"W	0.31	
7795.00	89.750	158.290	6605.84	1055.89	-1062.60	187.51	1768533.98	14562970.44	40°05'54.9846"N	80°32'30.7052"W	0.63	
7888.00	90.180	158.340	6605.90	1148.89	-1149.02	221.87	1768568.34	14562884.05	40°05'54.1289"N	80°32'30.2687"W	0.47	
7979.00	89.570	157.970	6606.10	1239.89	-1233.48	255.73	1768602.18	14562799.62	40°05'53.2925"N	80°32'29.8386"W	0.78	
8070.00	90.120	155.750	6606.35	1330.86	-1317.16	291.49	1768637.93	14562715.98	40°05'52.4638"N	80°32'29.3840"W	2.51	
8163.00	89.910	158.560	6606.32	1423.84	-1402.85	327.59	1768674.02	14562630.32	40°05'51.6151"N	80°32'28.9252"W	3.03	
8253.00	88.400	157.870	6607.65	1513.83	-1486.41	360.99	1768707.40	14562546.79	40°05'50.7876"N	80°32'28.5010"W	1.84	
8345.00	89.450	155.490	6609.37	1605.78	-1570.87	397.40	1768743.80	14562462.36	40°05'49.9511"N	80°32'28.0381"W	2.83	
8435.00	88.890	158.700	6610.68	1695.74	-1653.76	432.42	1768778.80	14562379.51	40°05'49.1303"N	80°32'27.5929"W	3.62	
8526.00	88.770	157.360	6612.54	1786.72	-1738.13	466.46	1768812.83	14562295.17	40°05'48.2948"N	80°32'27.1606"W	1.48	
8616.00	88.650	157.370	6614.56	1876.69	-1821.18	501.08	1768847.44	14562212.15	40°05'47.4724"N	80°32'26.7205"W	0.13	
8708.00	88.680	158.010	6616.71	1968.66	-1906.27	536.00	1768882.34	14562127.09	40°05'46.6297"N	80°32'26.2769"W	0.70	
8799.00	88.890	157.930	6618.64	2059.64	-1990.60	570.13	1768916.46	14562042.79	40°05'45.7946"N	80°32'25.8434"W	0.25	
8889.00	88.210	158.030	6620.91	2149.61	-2074.01	603.86	1768950.18	14561959.41	40°05'44.9686"N	80°32'25.4148"W	0.76	
8980.00	90.030	157.550	6622.31	2240.59	-2158.25	638.25	1768984.56	14561875.21	40°05'44.1344"N	80°32'24.9779"W	2.07	
9070.00	89.510	158.850	6622.67	2330.59	-2241.81	671.67	1769017.97	14561791.68	40°05'43.3070"N	80°32'24.5534"W	1.56	
9161.00	88.710	155.960	6624.09	2421.56	-2325.80	706.63	1769052.91	14561707.72	40°05'42.4751"N	80°32'24.1092"W	3.29	
9251.00	88.890	159.250	6625.97	2511.53	-2408.98	740.90	1769087.17	14561624.57	40°05'41.6514"N	80°32'23.6737"W	3.66	
9342.00	88.890	155.930	6627.73	2602.49	-2493.08	775.59	1769121.84	14561540.50	40°05'40.8185"N	80°32'23.2330"W	3.65	
9433.00	89.510	159.270	6629.01	2693.47	-2577.20	810.25	1769156.49	14561456.42	40°05'39.9855"N	80°32'22.7926"W	3.73	
9523.00	88.680	155.640	6630.43	2783.44	-2660.29	844.75	1769190.98	14561373.36	40°05'39.1626"N	80°32'22.3542"W	4.14	
9614.00	89.570	157.730	6631.82	2874.39	-2743.85	880.76	1769226.97	14561289.83	40°05'38.3351"N	80°32'21.8964"W	2.50	
9706.00	89.350	158.260	6632.68	2966.39	-2829.14	915.23	1769261.43	14561204.57	40°05'37.4904"N	80°32'21.4586"W	0.62	
9796.00	89.230	158.400	6633.80	3056.38	-2912.78	948.46	1769294.65	14561120.97	40°05'36.6623"N	80°32'21.0366"W	0.20	
9887.00	89.260	158.090	6635.00	3147.37	-2997.29	982.19	1769328.36	14561036.49	40°05'35.8254"N	80°32'20.6083"W	0.34	
9979.00	88.740	157.980	6636.60	3239.36	-3082.60	1016.59	1769362.75	14560951.22	40°05'34.9806"N	80°32'20.1713"W	0.58	

REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Carl Rotter OHI 8H
Field	Ohio VW	API	47069003300000
Facility	Carl Rotter OHI Pad	Wellbore	Carl Rotter OHI 8H AWB
Slot	Slot 8H		

WELLPATH DATA (286 stations)												
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
10069.00	88.650	159.300	6638.65	3329.33	-3166.39	1049.36	1769395.51	14560867.45	40°05'34.1509"N	80°32'19.7552"W	1.47	
10160.00	89.170	156.290	6640.39	3420.30	-3250.62	1083.74	1769429.88	14560783.26	40°05'33.3168"N	80°32'19.3184"W	3.36	
10251.00	89.600	159.280	6641.36	3511.28	-3334.85	1118.14	1769464.27	14560699.06	40°05'32.4827"N	80°32'18.8814"W	3.32	
10343.00	88.610	155.290	6642.80	3603.24	-3419.68	1153.66	1769499.76	14560614.26	40°05'31.6425"N	80°32'18.4302"W	4.47	
10434.00	89.010	157.380	6644.69	3694.17	-3503.01	1190.17	1769536.27	14560530.97	40°05'30.8172"N	80°32'17.9659"W	2.34	
10521.00	90.000	158.740	6645.44	3781.17	-3583.70	1222.68	1769568.76	14560450.30	40°05'30.0181"N	80°32'17.5531"W	1.93	
10612.00	88.620	158.170	6646.54	3872.15	-3668.33	1256.09	1769602.16	14560365.70	40°05'29.1801"N	80°32'17.1288"W	1.64	
10700.00	88.250	158.100	6648.94	3960.12	-3749.97	1288.85	1769634.91	14560284.10	40°05'28.3716"N	80°32'16.7127"W	0.43	
10791.00	90.550	160.030	6649.89	4051.09	-3834.95	1321.36	1769667.41	14560199.15	40°05'27.5302"N	80°32'16.3001"W	3.30	
10882.00	87.780	157.010	6651.22	4142.06	-3919.60	1354.67	1769700.70	14560114.53	40°05'26.6920"N	80°32'15.8772"W	4.50	
10972.00	91.880	157.340	6651.49	4232.03	-4002.54	1389.58	1769735.59	14560031.63	40°05'25.8706"N	80°32'15.4336"W	4.57	
11063.00	88.060	157.560	6651.53	4323.01	-4086.56	1424.47	1769770.47	14559947.63	40°05'25.0385"N	80°32'14.9903"W	4.20	
11154.00	90.620	158.140	6652.58	4413.99	-4170.84	1458.77	1769804.76	14559863.39	40°05'24.2039"N	80°32'14.5546"W	2.88	
11245.00	88.650	158.180	6653.16	4504.99	-4255.30	1492.62	1769838.60	14559778.96	40°05'23.3675"N	80°32'14.1247"W	2.17	
11337.00	88.800	158.570	6655.21	4596.96	-4340.80	1526.52	1769872.49	14559693.49	40°05'22.5208"N	80°32'13.6943"W	0.45	
11427.00	89.230	158.520	6656.76	4686.95	-4424.55	1559.43	1769905.39	14559609.77	40°05'21.6915"N	80°32'13.2764"W	0.48	
11519.00	89.630	157.310	6657.67	4778.94	-4509.80	1594.02	1769939.96	14559524.56	40°05'20.8473"N	80°32'12.8371"W	1.39	
11611.00	88.580	157.980	6659.11	4870.92	-4594.87	1629.01	1769974.93	14559439.52	40°05'20.0048"N	80°32'12.3927"W	1.35	
11702.00	88.550	156.970	6661.39	4961.89	-4678.90	1663.86	1770009.77	14559355.52	40°05'19.1727"N	80°32'11.9499"W	1.11	
11793.00	89.720	158.110	6662.76	5052.87	-4762.99	1698.62	1770044.52	14559271.47	40°05'18.3399"N	80°32'11.5083"W	1.79	
11884.00	90.120	158.110	6662.89	5143.87	-4847.42	1732.55	1770078.43	14559187.06	40°05'17.5038"N	80°32'11.0775"W	0.44	
11976.00	90.220	159.360	6662.62	5235.86	-4933.16	1765.91	1770111.79	14559101.36	40°05'16.6548"N	80°32'10.6539"W	1.36	
12067.00	88.120	155.220	6663.93	5326.82	-5017.07	1801.03	1770146.89	14559017.48	40°05'15.8238"N	80°32'10.2077"W	5.10	
12158.00	90.000	160.820	6665.43	5417.77	-5101.41	1835.07	1770180.92	14558933.18	40°05'14.9886"N	80°32'9.7754"W	6.49	
12248.00	88.680	155.110	6666.47	5507.72	-5184.79	1868.82	1770214.65	14558849.82	40°05'14.1629"N	80°32'9.3468"W	6.51	
12339.00	89.780	157.810	6667.69	5598.66	-5268.20	1905.15	1770250.97	14558766.45	40°05'13.3367"N	80°32'8.8849"W	3.20	
12429.00	89.170	157.990	6668.51	5688.66	-5351.59	1939.01	1770284.82	14558683.09	40°05'12.5110"N	80°32'8.4549"W	0.71	
12521.00	89.540	159.090	6669.55	5780.65	-5437.20	1972.67	1770318.46	14558597.51	40°05'11.6632"N	80°32'8.0277"W	1.26	
12613.00	88.770	157.790	6670.91	5872.64	-5522.75	2006.47	1770352.25	14558511.99	40°05'10.8160"N	80°32'7.5985"W	1.64	
12703.00	88.860	157.000	6672.77	5962.61	-5605.82	2041.06	1770386.83	14558428.96	40°05'9.9934"N	80°32'7.1591"W	0.88	

REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Carl Rotter OHI 8H
Field	Ohio VW	API	47069003300000
Facility	Carl Rotter OHI Pad	Wellbore	Carl Rotter OHI 8H AWB
Slot	Slot 8H		

WELLPATH DATA (286 stations)												
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
12794.00	90.740	157.120	6673.09	6053.59	-5689.62	2076.52	1770422.28	14558345.19	40°05'9.1634"N	80°32'6.7084"W	2.07	
12886.00	88.000	159.200	6674.10	6145.57	-5775.00	2110.74	1770456.48	14558259.84	40°05'8.3179"N	80°32'6.2739"W	3.74	
12978.00	90.860	157.970	6675.01	6237.55	-5860.63	2144.33	1770490.06	14558174.24	40°05'7.4700"N	80°32'5.8476"W	3.38	
13070.00	89.350	158.400	6674.84	6329.55	-5946.04	2178.52	1770524.23	14558088.87	40°05'6.6242"N	80°32'5.4135"W	1.71	
13161.00	90.150	155.940	6675.24	6420.53	-6029.90	2213.82	1770559.52	14558005.04	40°05'5.7936"N	80°32'4.9649"W	2.84	
13253.00	90.280	157.160	6674.90	6512.49	-6114.30	2250.43	1770596.12	14557920.67	40°05'4.9577"N	80°32'4.4996"W	1.33	
13343.00	88.460	156.110	6675.89	6602.45	-6196.91	2286.12	1770631.79	14557838.09	40°05'4.1395"N	80°32'4.0460"W	2.33	
13434.00	89.450	154.700	6677.54	6693.33	-6279.64	2323.99	1770669.65	14557755.40	40°05'3.3200"N	80°32'3.5644"W	1.89	
13525.00	89.080	158.140	6678.71	6784.27	-6363.02	2360.38	1770706.03	14557672.05	40°05'2.4942"N	80°32'3.1018"W	3.80	
13616.00	88.920	154.990	6680.30	6875.21	-6446.49	2396.56	1770742.19	14557588.61	40°05'1.6674"N	80°32'2.6420"W	3.47	
13707.00	91.320	156.160	6680.11	6966.11	-6529.34	2434.19	1770779.80	14557505.79	40°05'0.8468"N	80°32'2.1635"W	2.93	
13797.00	88.280	153.790	6680.42	7055.96	-6610.88	2472.25	1770817.85	14557424.29	40°05'0.0391"N	80°32'1.6793"W	4.28	
13888.00	88.920	157.390	6682.65	7146.83	-6693.70	2509.84	1770855.43	14557341.49	40°04'59.2186"N	80°32'1.2013"W	4.02	
13979.00	88.620	157.240	6684.60	7237.80	-6777.64	2544.93	1770890.50	14557257.58	40°04'58.3873"N	80°32'0.7556"W	0.37	
14069.00	89.050	156.240	6686.43	7327.75	-6860.31	2580.46	1770926.02	14557174.95	40°04'57.5686"N	80°32'0.3040"W	1.21	
14160.00	89.080	155.820	6687.92	7418.68	-6943.45	2617.42	1770962.97	14557091.84	40°04'56.7450"N	80°31'59.8341"W	0.46	
14251.00	89.020	156.640	6689.43	7509.62	-7026.72	2654.10	1770999.63	14557008.60	40°04'55.9203"N	80°31'59.3679"W	0.90	
14341.00	88.520	154.450	6691.36	7599.50	-7108.62	2691.35	1771036.86	14556926.73	40°04'55.1090"N	80°31'58.8942"W	2.50	
14432.00	90.490	156.640	6692.14	7690.40	-7191.45	2729.01	1771074.52	14556843.94	40°04'54.2886"N	80°31'58.4152"W	3.24	
14523.00	89.970	158.530	6691.78	7781.39	-7275.57	2763.71	1771109.20	14556759.85	40°04'53.4555"N	80°31'57.9745"W	2.15	
14613.00	88.250	156.720	6693.18	7871.37	-7358.77	2797.96	1771143.44	14556676.68	40°04'52.6315"N	80°31'57.5395"W	2.77	
14704.00	88.120	157.690	6696.06	7962.31	-7442.62	2833.20	1771178.66	14556592.86	40°04'51.8010"N	80°31'57.0918"W	1.07	
14795.00	88.550	157.970	6698.70	8053.27	-7526.86	2867.52	1771212.98	14556508.66	40°04'50.9668"N	80°31'56.6560"W	0.56	
14885.00	88.280	157.240	6701.19	8143.23	-7610.04	2901.80	1771247.24	14556425.51	40°04'50.1430"N	80°31'56.2206"W	0.86	
14976.00	88.430	157.970	6703.80	8234.19	-7694.14	2936.46	1771281.88	14556341.44	40°04'49.3102"N	80°31'55.7805"W	0.82	
15069.00	89.110	157.950	6705.80	8327.17	-7780.32	2971.35	1771316.76	14556255.29	40°04'48.4567"N	80°31'55.3375"W	0.73	
15159.00	88.650	156.940	6707.56	8417.14	-7863.42	3005.86	1771351.26	14556172.22	40°04'47.6337"N	80°31'54.8991"W	1.23	
15250.00	90.580	157.900	6708.17	8508.13	-7947.44	3040.80	1771386.18	14556088.24	40°04'46.8016"N	80°31'54.4553"W	2.37	
15341.00	88.680	157.480	6708.76	8599.12	-8031.62	3075.34	1771420.71	14556004.09	40°04'45.9679"N	80°31'54.0167"W	2.14	
15433.00	90.650	160.550	6709.30	8691.09	-8117.50	3108.28	1771453.64	14555918.24	40°04'45.1175"N	80°31'53.5987"W	3.96	

REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Carl Rotter OHI 8H
Field	Ohio VW	API	47069003300000
Facility	Carl Rotter OHI Pad	Wellbore	Carl Rotter OHI 8H AWB
Slot	Slot 8H		

WELLPATH DATA (286 stations)												
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
15523.00	90.620	155.770	6708.30	8781.06	-8201.02	3141.75	1771487.10	14555834.76	40°04'44.2905"N	80°31'53.1738"W	5.31	
15614.00	89.290	156.030	6708.37	8871.99	-8284.08	3178.91	1771524.24	14555751.72	40°04'43.4677"N	80°31'52.7014"W	1.49	
15707.00	89.540	156.240	6709.32	8964.93	-8369.13	3216.53	1771561.85	14555666.71	40°04'42.6254"N	80°31'52.2232"W	0.35	
15797.00	90.550	159.350	6709.25	9054.92	-8452.44	3250.54	1771595.85	14555583.43	40°04'41.8003"N	80°31'51.7913"W	3.63	
15890.00	89.780	156.240	6708.98	9147.90	-8538.53	3285.68	1771630.98	14555497.37	40°04'40.9477"N	80°31'51.3451"W	3.45	
15981.00	90.310	158.810	6708.91	9238.89	-8622.61	3320.47	1771665.75	14555413.32	40°04'40.1150"N	80°31'50.9033"W	2.88	
16072.00	88.830	156.220	6709.59	9329.87	-8706.68	3355.27	1771700.53	14555329.28	40°04'39.2824"N	80°31'50.4614"W	3.28	
16163.00	89.660	156.720	6710.79	9420.83	-8790.11	3391.59	1771736.84	14555245.89	40°04'38.4561"N	80°31'49.9998"W	1.06	
16254.00	88.520	157.950	6712.24	9511.80	-8874.07	3426.65	1771771.89	14555161.96	40°04'37.6246"N	80°31'49.5544"W	1.84	
16345.00	89.350	156.530	6713.93	9602.77	-8957.96	3461.85	1771807.07	14555078.10	40°04'36.7937"N	80°31'49.1074"W	1.81	
16435.00	89.780	158.550	6714.61	9692.76	-9041.13	3496.23	1771841.44	14554994.97	40°04'35.9700"N	80°31'48.6707"W	2.29	
16526.00	87.970	158.310	6716.40	9783.74	-9125.74	3529.68	1771874.88	14554910.39	40°04'35.1322"N	80°31'48.2462"W	2.01	
16617.00	90.400	157.650	6717.69	9874.72	-9210.08	3563.79	1771908.98	14554826.08	40°04'34.2969"N	80°31'47.8131"W	2.77	
16708.00	89.380	158.430	6717.87	9965.72	-9294.48	3597.82	1771942.99	14554741.71	40°04'33.4611"N	80°31'47.3811"W	1.41	
16798.00	88.860	157.910	6719.25	10055.71	-9378.01	3631.28	1771976.44	14554658.21	40°04'32.6338"N	80°31'46.9564"W	0.82	
16889.00	89.320	158.230	6720.70	10146.70	-9462.42	3665.27	1772010.41	14554573.84	40°04'31.7980"N	80°31'46.5250"W	0.62	
16980.00	88.770	157.410	6722.21	10237.68	-9546.67	3699.61	1772044.75	14554489.62	40°04'30.9636"N	80°31'46.0888"W	1.08	
17070.00	89.200	157.060	6723.81	10327.66	-9629.65	3734.43	1772079.55	14554406.67	40°04'30.1418"N	80°31'45.6466"W	0.62	
17162.00	89.690	158.100	6724.70	10419.65	-9714.69	3769.52	1772114.63	14554321.66	40°04'29.2996"N	80°31'45.2010"W	1.25	
17253.00	88.620	158.520	6726.04	10510.63	-9799.23	3803.15	1772148.24	14554237.15	40°04'28.4623"N	80°31'44.7742"W	1.26	
17343.00	88.580	156.890	6728.24	10600.60	-9882.48	3837.28	1772182.36	14554153.94	40°04'27.6379"N	80°31'44.3408"W	1.81	
17434.00	89.540	158.640	6729.73	10691.58	-9966.70	3871.71	1772216.77	14554069.75	40°04'26.8039"N	80°31'43.9037"W	2.19	
17526.00	88.650	157.740	6731.19	10783.57	-10052.10	3905.88	1772250.94	14553984.38	40°04'25.9582"N	80°31'43.4699"W	1.38	
17617.00	88.710	157.480	6733.28	10874.54	-10136.22	3940.54	1772285.58	14553900.30	40°04'25.1251"N	80°31'43.0299"W	0.29	
17708.00	88.890	157.620	6735.19	10965.52	-10220.30	3975.28	1772320.31	14553816.25	40°04'24.2923"N	80°31'42.5887"W	0.25	
17798.00	88.620	157.630	6737.14	11055.49	-10303.51	4009.53	1772354.55	14553733.07	40°04'23.4683"N	80°31'42.1538"W	0.30	
17889.00	89.170	158.260	6738.90	11146.48	-10387.83	4043.70	1772388.70	14553648.78	40°04'22.6332"N	80°31'41.7201"W	0.92	
17979.00	88.740	157.930	6740.54	11236.46	-10471.32	4077.27	1772422.25	14553565.33	40°04'21.8064"N	80°31'41.2939"W	0.60	
18070.00	89.290	157.270	6742.10	11327.44	-10555.44	4111.94	1772456.91	14553481.24	40°04'20.9733"N	80°31'40.8537"W	0.94	
18161.00	89.080	157.950	6743.40	11418.43	-10639.57	4146.60	1772491.56	14553397.14	40°04'20.1401"N	80°31'40.4136"W	0.78	

REFERENCE WELLPATH IDENTIFICATION

Operator	SWN PRODUCTION COMPANY, LLC	Well	Carl Rotter OHI 8H
Field	Ohio VW	API	47069003300000
Facility	Carl Rotter OHI Pad	Wellbore	Carl Rotter OHI 8H AWB
Slot	Slot 8H		

WELLPATH DATA (286 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS ["/100ft]	Comments
18251.00	89.540	157.900	6744.48	11508.42	-10722.97	4180.42	1772525.37	14553313.77	40°04'19.3142"N	80°31'39.9843"W	0.51	
18342.00	89.660	157.560	6745.12	11599.42	-10807.18	4214.90	1772559.84	14553229.60	40°04'18.4803"N	80°31'39.5464"W	0.40	
18434.00	89.080	157.630	6746.13	11691.41	-10892.23	4249.97	1772594.89	14553144.58	40°04'17.6380"N	80°31'39.1012"W	0.64	
18525.00	89.230	157.210	6747.47	11782.39	-10976.24	4284.91	1772629.81	14553060.60	40°04'16.8059"N	80°31'38.6575"W	0.49	
18618.00	89.570	157.510	6748.44	11875.38	-11062.07	4320.70	1772665.60	14552974.80	40°04'15.9558"N	80°31'38.2030"W	0.49	
18710.00	89.660	157.260	6749.06	11967.37	-11146.99	4356.08	1772700.96	14552889.91	40°04'15.1148"N	80°31'37.7537"W	0.29	
18801.00	89.940	157.370	6749.38	12058.36	-11230.95	4391.18	1772736.04	14552805.98	40°04'14.2832"N	80°31'37.3080"W	0.33	
18891.00	89.510	159.250	6749.81	12148.35	-11314.58	4424.44	1772769.29	14552722.39	40°04'13.4551"N	80°31'36.8859"W	2.14	
18982.00	89.230	156.000	6750.81	12239.33	-11398.71	4459.07	1772803.91	14552638.29	40°04'12.6219"N	80°31'36.4462"W	3.58	
19072.00	89.880	157.680	6751.51	12329.30	-11481.45	4494.46	1772839.29	14552555.58	40°04'11.8024"N	80°31'35.9966"W	2.00	
19163.00	89.480	157.910	6752.02	12420.30	-11565.70	4528.85	1772873.67	14552471.36	40°04'10.9680"N	80°31'35.5600"W	0.51	
19254.00	89.600	157.340	6752.75	12511.29	-11649.84	4563.49	1772908.29	14552387.25	40°04'10.1347"N	80°31'35.1202"W	0.64	
19345.00	89.690	157.280	6753.31	12602.28	-11733.80	4598.60	1772943.38	14552303.33	40°04'9.3032"N	80°31'34.6745"W	0.12	
19436.00	88.620	157.440	6754.66	12693.26	-11817.78	4633.62	1772978.40	14552219.38	40°04'8.4715"N	80°31'34.2297"W	1.19	
19527.00	88.860	157.820	6756.66	12784.24	-11901.91	4668.25	1773013.01	14552135.28	40°04'7.6383"N	80°31'33.7901"W	0.49	
19617.00	89.080	157.530	6758.28	12874.22	-11985.15	4702.43	1773047.18	14552052.08	40°04'6.8139"N	80°31'33.3562"W	0.40	
19708.00	89.050	157.640	6759.76	12965.21	-12069.26	4737.12	1773081.86	14551967.99	40°04'5.9808"N	80°31'32.9157"W	0.13	
19799.00	88.980	158.070	6761.32	13056.19	-12153.54	4771.42	1773116.14	14551883.75	40°04'5.1462"N	80°31'32.4803"W	0.48	
19889.00	89.080	157.590	6762.85	13146.18	-12236.87	4805.38	1773150.09	14551800.45	40°04'4.3209"N	80°31'32.0492"W	0.54	
19980.00	88.980	157.680	6764.39	13237.16	-12321.01	4840.00	1773184.69	14551716.34	40°04'3.4876"N	80°31'31.6097"W	0.15	
20071.00	89.110	158.030	6765.91	13328.15	-12405.29	4874.30	1773218.98	14551632.10	40°04'2.6530"N	80°31'31.1744"W	0.41	
20161.00	89.260	157.520	6767.19	13418.14	-12488.59	4908.33	1773253.00	14551548.82	40°04'1.8280"N	80°31'30.7423"W	0.59	
20252.00	89.230	157.700	6768.39	13509.12	-12572.73	4942.99	1773287.65	14551464.72	40°04'0.9947"N	80°31'30.3022"W	0.20	
20345.00	89.230	157.820	6769.63	13602.11	-12658.80	4978.19	1773322.83	14551378.68	40°04'0.1423"N	80°31'29.8555"W	0.13	
20435.00	89.260	157.480	6770.82	13692.10	-12742.03	5012.41	1773357.04	14551295.48	40°03'59.3180"N	80°31'29.4210"W	0.38	
20527.00	89.200	157.640	6772.06	13784.09	-12827.06	5047.53	1773392.14	14551210.49	40°03'58.4759"N	80°31'28.9752"W	0.19	
20617.00	89.320	157.620	6773.22	13874.08	-12910.28	5081.78	1773426.38	14551127.30	40°03'57.6517"N	80°31'28.5404"W	0.14	
20708.00	89.170	157.580	6774.42	13965.07	-12994.40	5116.45	1773461.04	14551043.21	40°03'56.8185"N	80°31'28.1002"W	0.17	
20799.00	89.780	158.120	6775.25	14056.06	-13078.68	5150.76	1773495.33	14550958.96	40°03'55.9839"N	80°31'27.6648"W	0.90	
20889.00	89.720	157.500	6775.65	14146.06	-13162.02	5184.75	1773529.31	14550875.66	40°03'55.1586"N	80°31'27.2333"W	0.69	

REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Carl Rotter OHI 8H
Field	Ohio VW	API	47069003300000
Facility	Carl Rotter OHI Pad	Wellbore	Carl Rotter OHI 8H AWB
Slot	Slot 8H		

WELLPATH DATA (286 stations)												
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
20980.00	89.750	157.860	6776.07	14237.06	-13246.20	5219.31	1773563.86	14550791.51	40°03'54.3249"N	80°31'26.7946"W	0.40	
21072.00	89.750	158.170	6776.47	14329.06	-13331.51	5253.75	1773598.29	14550706.23	40°03'53.4800"N	80°31'26.3575"W	0.34	
21162.00	89.690	157.800	6776.91	14419.05	-13414.94	5287.49	1773632.01	14550622.83	40°03'52.6537"N	80°31'25.9293"W	0.42	
21253.00	89.260	157.610	6777.74	14510.05	-13499.14	5322.01	1773666.52	14550538.67	40°03'51.8199"N	80°31'25.4911"W	0.52	
21345.00	89.420	157.600	6778.80	14602.04	-13584.19	5357.06	1773701.55	14550453.64	40°03'50.9775"N	80°31'25.0462"W	0.17	
21435.00	89.540	157.970	6779.62	14692.03	-13667.51	5391.08	1773735.57	14550370.36	40°03'50.1524"N	80°31'24.6143"W	0.43	
21526.00	89.630	158.130	6780.28	14783.03	-13751.91	5425.10	1773769.57	14550285.99	40°03'49.3165"N	80°31'24.1827"W	0.20	
21617.00	89.690	157.980	6780.82	14874.03	-13836.31	5459.10	1773803.56	14550201.62	40°03'48.4806"N	80°31'23.7511"W	0.18	
21708.00	89.480	157.790	6781.48	14965.03	-13920.62	5493.36	1773837.81	14550117.35	40°03'47.6457"N	80°31'23.3163"W	0.31	
21800.00	89.720	157.720	6782.12	15057.02	-14005.77	5528.19	1773872.62	14550032.23	40°03'46.8024"N	80°31'22.8742"W	0.27	
21891.00	89.570	157.860	6782.68	15148.02	-14090.01	5562.59	1773907.00	14549948.02	40°03'45.9681"N	80°31'22.4376"W	0.23	
21982.00	89.540	157.930	6783.39	15239.02	-14174.32	5596.83	1773941.23	14549863.74	40°03'45.1331"N	80°31'22.0031"W	0.08	
22073.00	89.510	157.340	6784.14	15330.01	-14258.47	5631.45	1773975.85	14549779.62	40°03'44.2997"N	80°31'21.5635"W	0.65	
22164.00	89.690	157.720	6784.78	15421.00	-14342.56	5666.23	1774010.61	14549695.56	40°03'43.4669"N	80°31'21.1220"W	0.46	
22254.00	89.450	157.340	6785.45	15510.99	-14425.73	5700.63	1774045.00	14549612.43	40°03'42.6432"N	80°31'20.6854"W	0.50	
22345.00	89.450	158.040	6786.33	15601.99	-14509.91	5735.17	1774079.53	14549528.28	40°03'41.8095"N	80°31'20.2469"W	0.77	
22436.00	89.110	157.450	6787.47	15692.98	-14594.13	5769.63	1774113.97	14549444.10	40°03'40.9754"N	80°31'19.8096"W	0.75	
22526.00	89.080	157.640	6788.89	15782.96	-14677.29	5804.01	1774148.33	14549360.96	40°03'40.1518"N	80°31'19.3732"W	0.21	
22617.00	89.050	157.690	6790.38	15873.95	-14761.45	5838.58	1774182.90	14549276.83	40°03'39.3182"N	80°31'18.9344"W	0.06	
22708.00	89.820	158.000	6791.27	15964.94	-14845.73	5872.90	1774217.20	14549192.59	40°03'38.4836"N	80°31'18.4989"W	0.91	
22800.00	89.910	157.700	6791.49	16056.94	-14930.94	5907.59	1774251.87	14549107.41	40°03'37.6397"N	80°31'18.0586"W	0.34	
22890.00	89.660	157.630	6791.83	16146.94	-15014.19	5941.79	1774286.06	14549024.20	40°03'36.8152"N	80°31'17.6245"W	0.29	
22981.00	89.480	157.470	6792.51	16237.93	-15098.29	5976.54	1774320.80	14548940.13	40°03'35.9823"N	80°31'17.1834"W	0.26	
23073.00	89.420	157.770	6793.40	16329.92	-15183.35	6011.56	1774355.81	14548855.10	40°03'35.1398"N	80°31'16.7389"W	0.33	
23163.00	89.020	157.820	6794.62	16419.91	-15266.67	6045.57	1774389.81	14548771.81	40°03'34.3146"N	80°31'16.3072"W	0.45	
23254.00	89.420	158.070	6795.86	16510.90	-15351.00	6079.74	1774423.96	14548687.51	40°03'33.4794"N	80°31'15.8737"W	0.52	
23345.00	89.260	157.980	6796.91	16601.90	-15435.39	6113.79	1774458.00	14548603.16	40°03'32.6437"N	80°31'15.4416"W	0.20	
23436.00	89.170	157.800	6798.15	16692.89	-15519.69	6148.04	1774492.23	14548518.89	40°03'31.8089"N	80°31'15.0070"W	0.22	
23528.00	89.200	157.800	6799.46	16784.88	-15604.86	6182.80	1774526.98	14548433.75	40°03'30.9653"N	80°31'14.5659"W	0.03	
23618.00	89.450	157.650	6800.52	16874.87	-15688.14	6216.91	1774561.08	14548350.51	40°03'30.1406"N	80°31'14.1329"W	0.32	

REFERENCE WELLPATH IDENTIFICATION

Operator	SWN PRODUCTION COMPANY, LLC	Well	Carl Rotter OHI 8H
Field	Ohio VW	API	47069003300000
Facility	Carl Rotter OHI Pad	Wellbore	Carl Rotter OHI 8H AWB
Slot	Slot 8H		

WELLPATH DATA (286 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	DLS [°/100ft]	Comments
23709.00	89.170	157.770	6801.62	16965.86	-15772.33	6251.42	1774595.58	14548266.34	40°03'29.3067"N	80°31'13.6949"W	0.33	
23800.00	89.480	159.810	6802.69	17056.84	-15857.16	6284.34	1774628.48	14548181.55	40°03'28.4667"N	80°31'13.2775"W	2.27	
23890.00	89.600	161.890	6803.41	17146.73	-15942.17	6313.86	1774657.99	14548096.57	40°03'27.6251"N	80°31'12.9037"W	2.31	
23981.00	89.420	164.000	6804.19	17237.40	-16029.16	6340.55	1774684.67	14548009.62	40°03'26.7640"N	80°31'12.5665"W	2.33	
24072.00	89.290	163.670	6805.22	17327.94	-16116.56	6365.88	1774709.99	14547922.25	40°03'25.8990"N	80°31'12.2468"W	0.39	
24162.00	89.200	165.950	6806.40	17417.31	-16203.40	6389.46	1774733.56	14547835.44	40°03'25.0396"N	80°31'11.9496"W	2.54	
24253.00	89.170	165.640	6807.70	17507.48	-16291.61	6411.79	1774755.88	14547747.27	40°03'24.1667"N	80°31'11.6686"W	0.34	
24344.00	89.080	165.770	6809.09	17597.67	-16379.78	6434.26	1774778.34	14547659.13	40°03'23.2942"N	80°31'11.3858"W	0.17	
24435.00	89.380	165.830	6810.31	17687.85	-16467.99	6456.58	1774800.65	14547570.95	40°03'22.4213"N	80°31'11.1048"W	0.34	
24527.00	89.080	165.510	6811.55	17779.04	-16557.12	6479.35	1774823.41	14547481.86	40°03'21.5393"N	80°31'10.8182"W	0.48	
24618.00	89.200	167.840	6812.91	17869.01	-16645.65	6500.31	1774844.37	14547393.36	40°03'20.6632"N	80°31'10.5547"W	2.56	
24709.00	89.200	167.920	6814.18	17958.68	-16734.62	6519.42	1774863.47	14547304.43	40°03'19.7831"N	80°31'10.3152"W	0.09	
24800.00	89.110	167.810	6815.52	18048.35	-16823.57	6538.55	1774882.59	14547215.51	40°03'18.9030"N	80°31'10.0754"W	0.16	
24893.00	89.230	168.000	6816.87	18139.99	-16914.50	6558.03	1774902.07	14547124.61	40°03'18.0034"N	80°31'9.8311"W	0.24	
24972.00	89.200	167.840	6817.95	18217.83	-16991.74	6574.56	1774918.59	14547047.40	40°03'17.2392"N	80°31'9.6239"W	0.21	
24997.00‡	89.200	167.840	6818.30	18242.46	-17016.18	6579.83	1774923.86	14547022.97	40°03'16.9974"N	80°31'9.5579"W	0.00	Proj to TD:

HOLE & CASING SECTIONS - Ref Wellbore: Carl Rotter OHI 8H AWB Ref Wellpath: Carl Rotter OHI 8H AWB_ awp 50' - 24972' Proj: 24997'

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]
12.25in Casing	26.00	787.00	761.00	26.00	787.00	0.00	0.00	-1.39	-0.07
9.625in Casing	26.00	2231.00	2205.00	26.00	2224.53	0.00	0.00	80.73	-93.79
5.5in Casing	26.00	24994.00	24968.00	26.00	6818.26	0.00	0.00	-17013.25	6579.20

REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Carl Rotter OHI 8H
Field	Ohio VW	API	47069003300000
Facility	Carl Rotter OHI Pad	Wellbore	Carl Rotter OHI 8H AWB
Slot	Slot 8H		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Carl Rotter OHI 8H LP Rev-2	6599.00	-333.72	-122.89	1768223.71	14563699.04	40°06'2.2032"N	80°32'34.6512"W	point
Carl Rotter OHI 8H BHL Rev-3	6807.38	-17016.09	6580.83	1774924.86	14547023.07	40°03'16.9983"N	80°31'9.5450"W	point

WELLPATH COMPOSITION - Ref Wellbore: Carl Rotter OHI 8H AWB Ref Wellpath: Carl Rotter OHI 8H AWB_awp 50' - 24972' Proj: 24997'					
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
26.00	756.00	BH Generic gyro - northseeking (Standard)	1 Gyro 50' - 756'	Carl Rotter OHI 8H AWB	4/4/2022
756.00	2149.00	OWSG MWD rev2 + HRGM	2 Tally MWD 779' - 2149'	Carl Rotter OHI 8H AWB	4/4/2022
2149.00	5600.00	OWSG MWD rev2 + HRGM	3 Tally MWD 2263' - 5600'	Carl Rotter OHI 8H AWB	4/4/2022
5600.00	24997.00	BH AutoTrak Curve/eXpress (2019) (HRGM, Short spacing)	4 BH MWD 5709' - 24972'	Carl Rotter OHI 8H AWB	4/4/2022