

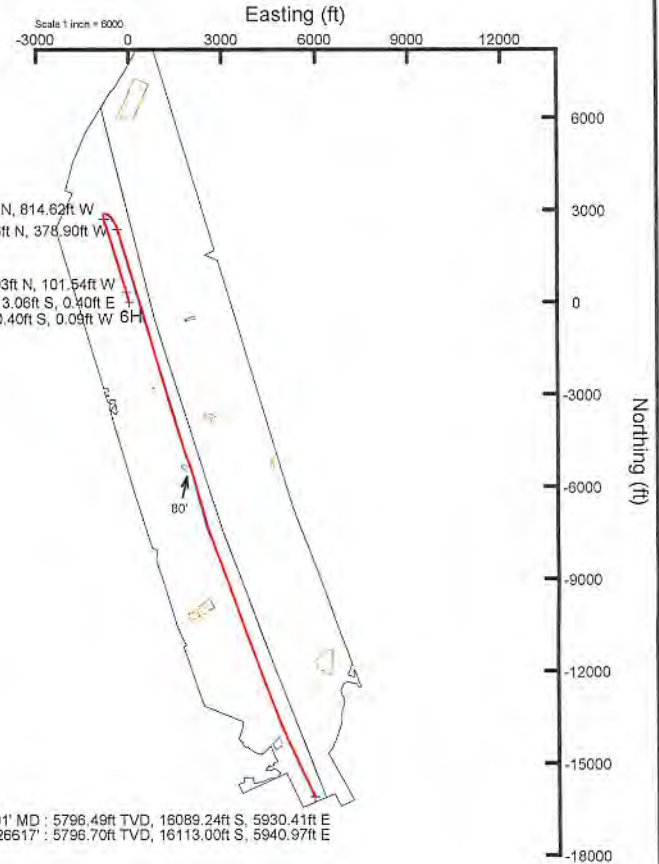
Location: Ohio County, WV  
Field: Ohio  
Facility: Roth OHI Pad

Slot: 6H  
Well: Roth OHI 6H  
Wellbore: Roth OHI 6H AWB

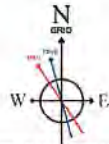
Plot reference wellpath is Roth OHI 6H AWP Proj 25917	Grid System: NAD83 / UTM Zone 17 North, US feet
True vertical depths are referenced to SDC40 (KB)	North Reference: Grid north
Reference wellpath measured depths are referenced to SDC40 (KB)	Scale: True distance
SDC40 (KB) to Mean Sea Level: 1229.91 feet	Coordinates are in feet referenced to Grid
Mean Sea Level to Ground level (At Slot: 6H): -1003.91 feet	Depths are in feet
Other wellbore MDs are referenced to each path's debut MD origin	Created by: swarden on 2023-01-26, Database: WA_MPL_EASTERNUS_Ohio

Location Information					
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	
Roth OHI Pad	1727905.720	14581923.940	40°09'4.1151"N	80°41'12.8573"W	
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude
6H	0.02	-0.57	1727905.153	14581925.655	40°09'4.1153"N
SDC40 (KB) to Ground level (At Slot: 6H)	26R				
Mean Sea Level to Ground level (At Slot: 6H)	-1003.91R				
SDC40 (KB) to Mean Sea Level	1029.91R				

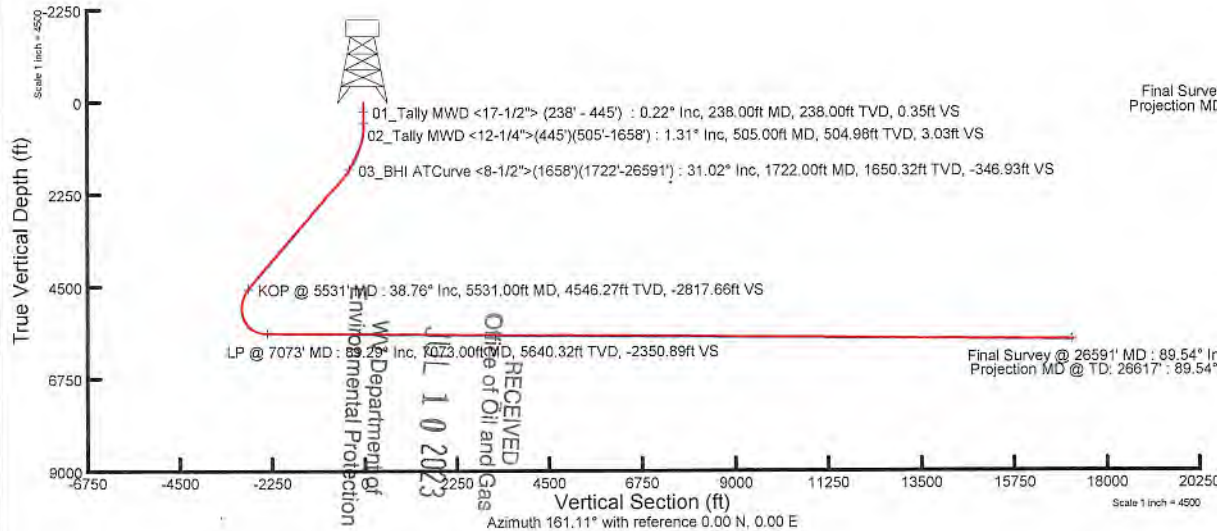
Bottom Hole Location									
MD (ft)	Inch (")	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
25617.06	85.548	156.020	5796.70	-451.13.00	5840.97	1723643.79	14555818.09	40°00'24.6720"N	80°39'57.1360"W



API:47-069-00349-0000  
BH Job #:111588286  
Rig: SDC 40  
Duration:12/28/2022-1/04/2023



HOGM2022v1.0 (1900 0 to 2023 0) Dip: 67.07° Field: 52026.7 nT  
Magnetic North is 8.02 degrees West of True North (at 12/12/2022)  
Grid North is 0.20 degrees East of True North  
To correct azimuth from True to Grid subtract 0.20 degrees  
To correct azimuth from Magnetic to Grid subtract 8.22 degrees



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Well Name: Roth OHI 6H 47069003490000

LITHOLOGY/FORMATION	TOP DEPTH, MD (FT)	TOP DEPTH, TVD (FT)	BOTTOM DEPTH, MD (FT)	BOTTOM DEPTH, TVD (FT)	QUANTITY AND TYPE OF FLUID
Base of Fresh Water	0.00	0.00	423.00	423.00	
Top of Salt Water	1119.00	1119.00	NA	NA	
Pittsburgh Coal	179.00	179.00	184.00	184.00	
Pottsville (ss)	370.00	370.00	426.00	426.00	
Raven Cliff (ss)	692.00	692.00	940.00	934.00	
Maxton (ss)	1117.00	1104.00	1199.00	1182.00	
Big Injun (ss)	1364.00	1334.00	1539.00	1489.00	
Berea (siltstone)	1883.00	1783.00	2009.00	1880.00	
Rhinestreet (shale)	6240.00	5202.00	6404.00	5345.00	
Cashaqua (shale)	6404.00	5345.00	6465.00	5394.00	
Middlesex (shale)	6465.00	5394.00	6560.00	6463.00	
Burket (shale)	6560.00	6463.00	6582.00	5478.00	
Tully (ls)	6582.00	5478.00	6660.00	5526.00	
Mahantango (shale)	6660.00	5526.00	6800.00	5593.00	
Marcellus (shale)	6800.00	5593.00	NA	NA	GAS

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REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Roth OHI 6H
Field	Ohio	API	47-069-00349-0000
Facility	Roth OHI Pad	Wellbore	Roth OHI 6H AWB
Slot	6H		

REPORT SETUP INFORMATION			
Projection System	NAD83 / UTM Zone 17 North, US feet	Software System	WellArchitect® 6.0
North Reference	Grid	User	Scurdan
Scale	0.999609	Report Generated	1/9/2023 at 10:48:31 AM
Convergence at slot	0.20° 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	0.02	-0.57	1727905.15	14581925.66	40°09'4.1153"N	80°41'12.8646"W
Facility Reference Pt			1727905.72	14581925.64	40°09'4.1151"N	80°41'12.8573"W
Field Reference Pt			0.00	0.00	0°00'0.0000"	85°29'19.4780"W

WELLPATH DATUM			
Calculation method	Minimum curvature	SDC40 (KB) to Facility Vertical Datum	1029.91ft
Horizontal Reference Pt	Slot	SDC40 (KB) to Mean Sea Level	1029.91ft
Vertical Reference Pt	SDC40 (KB)	SDC40 (KB) to Ground Level at Slot (6H)	26.00ft
MD Reference Pt	SDC40 (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	161.11°

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REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Roth OHI 6H
Field	Ohio	API	47-069-00349-0000
Facility	Roth OHI Pad	Wellbore	Roth OHI 6H AWB
Slot	6H		

WELLPATH DATA (285 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	192.950	0.00	0.00	0.00	0.00	1727905.15	14581925.65	40°09'4.1153"N	80°41'12.8646"W	0.00	0.000	0.00	0.00	0.00
26.00	0.000	192.950	26.00	0.00	0.00	0.00	1727905.15	14581925.65	40°09'4.1153"N	80°41'12.8646"W	0.00	0.000	0.00	0.00	0.00
238.00	0.220	192.950	238.00	0.35	-0.40	-0.09	1727905.06	14581925.26	40°09'4.1114"N	80°41'12.8658"W	0.41	192.950	0.10	0.10	0.00
329.00	0.390	176.180	329.00	0.79	-0.88	-0.11	1727905.04	14581924.78	40°09'4.1066"N	80°41'12.8661"W	0.88	187.140	0.21	0.19	-18.43
419.00	0.590	164.810	418.99	1.55	-1.63	0.03	1727905.19	14581924.03	40°09'4.0992"N	80°41'12.8643"W	1.63	178.871	0.25	0.22	-12.63
445.00	0.890	170.950	444.99	1.88	-1.96	0.10	1727905.25	14581923.70	40°09'4.0960"N	80°41'12.8634"W	1.96	177.107	1.19	1.15	23.62
505.00	1.310	160.180	504.98	3.03	-3.06	0.40	1727905.56	14581922.59	40°09'4.0850"N	80°41'12.8595"W	3.09	172.471	0.78	0.70	-17.95
595.00	0.220	108.180	594.97	4.16	-4.08	0.92	1727906.07	14581921.57	40°09'4.0749"N	80°41'12.8530"W	4.19	167.336	1.32	-1.21	-57.78
686.00	2.320	352.220	685.95	2.46	-2.31	0.83	1727905.99	14581923.34	40°09'4.0924"N	80°41'12.8540"W	2.46	160.170	2.66	2.31	-127.43
777.00	5.620	349.430	776.72	-3.76	3.89	-0.23	1727904.92	14581929.55	40°09'4.1538"N	80°41'12.8674"W	3.90	356.581	3.63	3.63	-3.07
869.00	9.670	348.130	867.88	-15.89	15.89	-2.65	1727902.50	14581941.54	40°09'4.2724"N	80°41'12.8980"W	16.11	350.533	4.41	4.40	-1.41
960.00	14.490	346.750	956.84	-34.82	34.46	-6.83	1727898.32	14581960.10	40°09'4.4561"N	80°41'12.9510"W	35.13	348.784	5.31	5.30	-1.52
1052.00	19.850	345.730	1044.71	-61.86	60.82	-13.33	1727891.83	14581986.45	40°09'4.7168"N	80°41'13.0335"W	62.26	347.641	5.84	5.83	-1.11
1141.00	24.170	343.430	1127.20	-95.14	92.94	-22.25	1727882.91	14582018.56	40°09'5.0345"N	80°41'13.1469"W	95.57	346.536	4.95	4.85	-2.58
1232.00	26.530	338.630	1209.44	-134.07	129.74	-34.97	1727870.19	14582055.34	40°09'5.3986"N	80°41'13.3091"W	134.37	344.913	3.44	2.59	-5.27
1323.00	26.800	336.140	1290.77	-174.81	167.42	-50.68	1727854.50	14582093.01	40°09'5.7715"N	80°41'13.5096"W	174.93	343.160	1.26	0.30	-2.74
1414.00	23.590	339.450	1373.10	-213.46	203.25	-65.37	1727839.81	14582128.82	40°09'6.1261"N	80°41'13.6972"W	213.50	342.170	3.85	-3.53	3.64
1505.00	23.550	345.530	1456.52	-249.80	237.90	-76.31	1727828.88	14582163.47	40°09'6.4689"N	80°41'13.8365"W	249.84	342.216	2.67	-0.04	6.68
1596.00	26.300	345.660	1539.04	-288.03	275.05	-85.85	1727819.34	14582200.59	40°09'6.8363"N	80°41'13.9576"W	288.13	342.666	3.02	3.02	0.14
1668.00	27.180	344.710	1594.41	-315.85	302.01	-92.98	1727812.21	14582227.55	40°09'7.1030"N	80°41'14.0483"W	316.00	342.888	1.58	1.42	-1.53
1722.00	31.020	343.440	1650.32	-346.93	331.93	-101.54	1727803.65	14582257.46	40°09'7.3990"N	80°41'14.1572"W	347.11	342.991	6.08	6.00	-1.98
1812.00	34.960	343.530	1725.80	-395.88	378.91	-115.47	1727789.73	14582304.41	40°09'7.8637"N	80°41'14.3344"W	396.11	343.052	4.38	4.38	0.10
1903.00	38.310	343.790	1798.81	-450.12	431.01	-130.74	1727774.47	14582356.49	40°09'8.3791"N	80°41'14.5287"W	450.40	343.126	3.69	3.68	0.29
1994.00	41.100	343.920	1868.81	-508.18	486.84	-146.90	1727758.31	14582412.31	40°09'8.9314"N	80°41'14.7343"W	508.52	343.210	3.07	3.07	0.14
2084.00	41.030	343.850	1936.67	-567.23	543.64	-163.31	1727741.91	14582469.08	40°09'9.4933"N	80°41'14.9431"W	567.64	343.280	0.09	-0.08	-0.08
2175.00	41.070	343.690	2005.30	-626.93	601.02	-180.01	1727725.21	14582526.44	40°09'10.0609"N	80°41'15.1556"W	627.40	343.327	0.12	0.04	-0.18
2265.00	41.160	343.520	2073.10	-686.06	657.80	-196.71	1727708.52	14582583.19	40°09'10.6225"N	80°41'15.3681"W	686.58	343.351	0.16	0.10	-0.19
2356.00	41.050	343.570	2141.67	-745.83	715.17	-213.66	1727691.58	14582640.55	40°09'11.1901"N	80°41'15.5838"W	746.41	343.366	0.13	-0.12	0.05
2447.00	41.040	344.020	2210.30	-805.52	772.55	-230.34	1727674.91	14582697.91	40°09'11.7577"N	80°41'15.7959"W	806.16	343.398	0.32	-0.01	0.49
2538.00	40.920	344.070	2279.00	-865.12	829.93	-246.74	1727658.51	14582755.26	40°09'12.3253"N	80°41'16.0046"W	865.84	343.443	0.14	-0.13	0.05

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REFERENCE WELLPATH IDENTIFICATION				
Operator	SWN PRODUCTION COMPANY, LLC		Well	Roth OHI 6H
Field	Ohio		API	47-069-00349-0000
Facility	Roth OHI Pad		Wellbore	Roth OHI 6H AWB
Slot	6H			

WELLPATH DATA (285 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]
2629.00	40.940	343.760	2347.75	-924.66	887.22	-263.26	1727642.00	14582812.52	40°09'12.8919"N	80°41'16.2147"W	925.45	343.473	0.22	0.02	-0.34
2720.00	40.950	343.950	2416.49	-984.23	944.50	-279.84	1727625.42	14582869.78	40°09'13.4586"N	80°41'16.4257"W	985.08	343.496	0.14	0.01	0.21
2810.00	41.060	343.810	2484.41	-1043.21	1001.23	-296.24	1727609.03	14582926.49	40°09'14.0197"N	80°41'16.6343"W	1044.13	343.518	0.16	0.12	-0.16
2900.00	41.010	343.550	2552.30	-1102.24	1057.94	-312.84	1727592.43	14582983.17	40°09'14.5807"N	80°41'16.8455"W	1103.22	343.527	0.20	-0.06	-0.29
2991.00	41.090	343.580	2620.92	-1161.95	1115.25	-329.75	1727575.53	14583040.47	40°09'15.1477"N	80°41'17.0607"W	1162.98	343.529	0.09	0.09	0.03
3082.00	41.050	343.620	2689.53	-1221.68	1172.61	-346.63	1727558.66	14583097.80	40°09'15.7151"N	80°41'17.2755"W	1222.77	343.532	0.05	-0.04	0.04
3172.00	41.020	343.990	2757.41	-1280.70	1229.35	-363.11	1727542.19	14583154.52	40°09'16.2763"N	80°41'17.4852"W	1281.85	343.545	0.27	-0.03	0.41
3264.00	41.040	343.150	2826.82	-1341.03	1287.28	-380.19	1727525.11	14583212.42	40°09'16.8494"N	80°41'17.7025"W	1342.25	343.546	0.60	0.02	-0.91
3354.00	40.820	342.860	2894.81	-1399.96	1343.66	-397.42	1727507.88	14583268.79	40°09'17.4072"N	80°41'17.9219"W	1401.21	343.523	0.32	-0.24	-0.32
3445.00	40.790	343.100	2963.69	-1459.40	1400.53	-414.83	1727490.49	14583325.63	40°09'17.9697"N	80°41'18.1435"W	1460.67	343.501	0.18	-0.03	0.26
3536.00	41.000	342.750	3032.48	-1518.94	1457.48	-432.32	1727473.00	14583382.56	40°09'18.5331"N	80°41'18.3663"W	1520.24	343.478	0.34	0.23	-0.38
3626.00	40.800	342.970	3100.51	-1577.84	1513.78	-449.69	1727455.64	14583438.84	40°09'19.0901"N	80°41'18.5874"W	1579.17	343.455	0.27	-0.22	0.24
3717.00	40.870	342.640	3169.36	-1637.32	1570.63	-467.28	1727438.06	14583495.67	40°09'19.6525"N	80°41'18.8113"W	1638.67	343.432	0.25	0.08	-0.36
3808.00	40.850	342.670	3238.18	-1696.83	1627.45	-485.03	1727420.31	14583552.47	40°09'20.2146"N	80°41'19.0374"W	1698.19	343.404	0.03	-0.02	0.03
3898.00	40.630	343.080	3306.37	-1755.54	1683.59	-502.33	1727403.03	14583608.58	40°09'20.7699"N	80°41'19.2576"W	1756.93	343.387	0.38	-0.24	0.46
3989.00	40.760	342.670	3375.37	-1814.85	1740.29	-519.80	1727385.56	14583665.26	40°09'21.3309"N	80°41'19.4800"W	1816.26	343.370	0.33	0.14	-0.45
4079.00	40.500	342.650	3443.67	-1873.43	1796.23	-537.26	1727368.10	14583721.18	40°09'21.8843"N	80°41'19.7025"W	1874.86	343.348	0.29	-0.29	-0.02
4170.00	41.150	342.860	3512.53	-1932.90	1853.05	-554.90	1727350.47	14583777.98	40°09'22.4464"N	80°41'19.9270"W	1934.35	343.330	0.73	0.71	0.23
4260.00	40.730	342.930	3580.52	-1991.84	1909.41	-572.25	1727333.13	14583834.32	40°09'23.0040"N	80°41'20.1479"W	1993.32	343.317	0.47	-0.47	0.08
4351.00	41.050	342.930	3649.31	-2051.38	1966.36	-589.73	1727315.65	14583891.24	40°09'23.5673"N	80°41'20.3705"W	2052.89	343.305	0.35	0.35	0.00
4442.00	41.100	342.680	3717.91	-2111.15	2023.48	-607.41	1727297.98	14583948.34	40°09'24.1324"N	80°41'20.5956"W	2112.68	343.291	0.19	0.05	-0.27
4532.00	41.070	342.970	3785.75	-2170.27	2079.99	-624.87	1727280.53	14584004.82	40°09'24.6914"N	80°41'20.8180"W	2171.82	343.279	0.21	-0.03	0.32
4624.00	41.080	343.300	3855.10	-2230.68	2137.83	-642.41	1727263.00	14584062.65	40°09'25.2637"N	80°41'21.0412"W	2232.27	343.275	0.24	0.01	0.36
4715.00	40.270	342.760	3924.12	-2289.95	2194.56	-659.72	1727245.69	14584119.35	40°09'25.8249"N	80°41'21.2616"W	2291.58	343.268	0.97	-0.89	-0.59
4806.00	40.390	342.430	3993.49	-2348.83	2250.76	-677.34	1727228.08	14584175.53	40°09'26.3808"N	80°41'21.4860"W	2350.47	343.252	0.27	0.13	-0.36
4896.00	40.370	342.520	4062.05	-2407.12	2306.36	-694.89	1727210.53	14584231.11	40°09'26.9309"N	80°41'21.7096"W	2408.77	343.233	0.07	-0.02	0.10
4987.00	40.440	343.170	4131.35	-2466.07	2362.72	-712.29	1727193.14	14584287.45	40°09'27.4884"N	80°41'21.9311"W	2467.75	343.224	0.47	0.08	0.71
5077.00	40.400	342.630	4199.86	-2524.40	2418.50	-729.45	1727175.99	14584343.20	40°09'28.0402"N	80°41'22.1496"W	2526.11	343.216	0.39	-0.04	-0.60
5167.00	40.400	342.660	4268.40	-2582.71	2474.17	-746.85	1727158.60	14584398.85	40°09'28.5909"N	80°41'22.3712"W	2584.43	343.203	0.02	0.00	0.03
5260.00	40.450	342.610	4339.20	-2643.00	2531.73	-764.85	1727140.61	14584456.39	40°09'29.1604"N	80°41'22.6004"W	2644.74	343.190	0.06	0.05	-0.05

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Field	Ohio		API	47-069-00349-0000
Facility	Roth OHI Pad		Wellbore	Roth OHI 6H AWB
Slot	6H			

WELLPATH DATA (285 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]
5350.00	40.450	343.510	4407.69	-2701.35	2587.58	-781.86	1727123.60	14584512.22	40°09'29.7129"N	80°41'22.8170"W	2703.13	343.187	0.65	0.00	1.00
5441.00	40.460	343.340	4476.93	-2760.35	2644.18	-798.70	1727106.76	14584568.79	40°09'30.2727"N	80°41'23.0314"W	2762.17	343.192	0.12	0.01	-0.19
5531.00	38.760	344.460	4546.27	-2817.66	2699.30	-814.62	1727090.85	14584623.89	40°09'30.8180"N	80°41'23.2340"W	2819.54	343.207	2.05	-1.89	1.24
5623.00	31.050	351.360	4621.69	-2869.85	2750.60	-825.93	1727079.55	14584675.17	40°09'31.3253"N	80°41'23.3772"W	2871.92	343.286	9.40	-8.38	7.50
5713.00	26.100	358.260	4700.72	-2911.65	2793.37	-830.02	1727075.46	14584717.93	40°09'31.7482"N	80°41'23.4280"W	2914.08	343.451	6.60	-5.50	7.67
5804.00	19.520	8.150	4784.59	-2944.36	2828.48	-828.47	1727077.01	14584753.02	40°09'32.0951"N	80°41'23.4065"W	2947.32	343.675	8.35	-7.23	10.87
5894.00	16.510	25.810	4870.23	-2966.87	2854.90	-820.76	1727084.71	14584779.44	40°09'32.3559"N	80°41'23.3060"W	2970.54	343.961	6.89	-3.34	19.62
5985.00	12.960	54.710	4958.34	-2978.96	2872.47	-806.78	1727098.69	14584796.99	40°09'32.5290"N	80°41'23.1251"W	2983.62	344.312	8.85	-3.90	31.76
6076.00	13.930	82.320	5046.94	-2979.71	2879.84	-787.57	1727117.89	14584804.36	40°09'32.6011"N	80°41'22.8775"W	2985.59	344.705	7.07	1.07	30.34
6166.00	18.990	99.760	5133.27	-2970.57	2878.80	-762.38	1727143.08	14584803.32	40°09'32.5900"N	80°41'22.5530"W	2978.04	345.167	7.80	5.62	19.38
6259.00	24.240	112.850	5219.75	-2950.58	2868.81	-729.83	1727175.61	14584793.34	40°09'32.4902"N	80°41'22.1342"W	2960.19	345.727	7.63	5.65	14.08
6349.00	30.330	122.060	5299.74	-2920.59	2849.55	-693.49	1727211.93	14584774.08	40°09'32.2986"N	80°41'21.6671"W	2932.72	346.322	8.22	6.77	10.23
6440.00	37.280	127.810	5375.33	-2879.66	2820.41	-652.19	1727253.22	14584744.96	40°09'32.0092"N	80°41'21.1364"W	2894.83	346.980	8.40	7.64	6.32
6530.00	44.350	133.960	5443.42	-2828.80	2781.80	-607.94	1727297.46	14584706.36	40°09'31.6261"N	80°41'20.5682"W	2847.45	347.672	9.03	7.86	6.83
6621.00	52.110	141.210	5504.04	-2766.59	2731.62	-562.44	1727342.93	14584656.20	40°09'31.1287"N	80°41'19.9845"W	2788.92	348.365	10.38	8.53	7.97
6711.00	60.250	145.740	5554.11	-2695.38	2671.53	-518.11	1727387.25	14584596.13	40°09'30.5333"N	80°41'19.4163"W	2721.30	349.024	9.96	9.04	5.03
6802.00	68.020	152.160	5593.81	-2615.42	2601.40	-476.07	1727429.27	14584526.03	40°09'29.8389"N	80°41'18.8780"W	2644.60	349.629	10.63	8.54	7.05
6892.00	76.300	156.930	5621.38	-2530.41	2524.10	-439.36	1727465.96	14584448.77	40°09'29.0737"N	80°41'18.4088"W	2562.06	350.126	10.49	9.20	5.30
6983.00	85.200	160.960	5635.99	-2440.76	2440.37	-407.17	1727498.14	14584365.07	40°09'28.2452"N	80°41'17.9979"W	2474.11	350.528	10.71	9.78	4.43
7073.00	89.290	162.370	5640.32	-2350.89	2355.06	-378.90	1727526.40	14584279.79	40°09'27.4011"N	80°41'17.6377"W	2385.34	350.860	4.81	4.54	1.57
7165.00	89.480	162.440	5641.31	-2258.92	2267.37	-351.09	1727554.20	14584192.13	40°09'26.5336"N	80°41'17.2835"W	2294.39	351.198	0.22	0.21	0.08
7255.00	89.690	162.770	5641.96	-2168.95	2181.49	-324.19	1727581.09	14584106.28	40°09'25.6840"N	80°41'16.9409"W	2205.44	351.547	0.43	0.23	0.37
7346.00	89.420	163.090	5642.67	-2078.00	2094.50	-297.48	1727607.79	14584019.33	40°09'24.8235"N	80°41'16.6008"W	2115.52	351.916	0.46	-0.30	0.35
7438.00	89.660	163.750	5643.40	-1986.08	2006.33	-271.23	1727634.03	14583931.19	40°09'23.9512"N	80°41'16.2667"W	2024.58	352.301	0.76	0.26	0.72
7529.00	88.950	163.880	5644.51	-1895.19	1918.94	-245.86	1727659.39	14583843.84	40°09'23.0868"N	80°41'15.9440"W	1934.63	352.699	0.79	-0.78	0.14
7619.00	88.710	163.210	5646.35	-1805.29	1832.64	-220.37	1727684.86	14583757.58	40°09'22.2332"N	80°41'15.6196"W	1845.85	353.143	0.79	-0.27	-0.74
7711.00	89.140	163.240	5648.07	-1713.37	1744.58	-193.83	1727711.40	14583669.54	40°09'21.3619"N	80°41'15.2817"W	1755.31	353.660	0.47	0.47	0.03
7801.00	89.080	162.970	5649.47	-1623.43	1658.47	-167.67	1727737.54	14583583.47	40°09'20.5101"N	80°41'14.9488"W	1666.92	354.227	0.31	-0.07	-0.30
7892.00	89.660	163.100	5650.47	-1532.49	1571.44	-141.12	1727764.08	14583496.47	40°09'19.6491"N	80°41'14.6108"W	1577.76	354.868	0.65	0.64	0.14
7983.00	90.090	163.250	5650.67	-1441.55	1484.33	-114.78	1727790.41	14583409.40	40°09'18.7875"N	80°41'14.2755"W	1488.76	355.578	0.50	0.47	0.16

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Field	Ohio		API	47-069-00349-0000
Facility	Roth OHI Pad		Wellbore	Roth OHI 6H AWB
Slot	6H			

**WELLPATH DATA (285 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]
8074.00	90.030	164.820	5650.57	-1350.67	1396.84	-89.76	1727815.43	14583321.95	40°09'17.9220"N	80°41'13.9571"W	1399.73	356.323	1.73	-0.07	1.73
8166.00	88.710	160.140	5651.59	-1258.73	1309.14	-62.07	1727843.11	14583234.28	40°09'17.0544"N	80°41'13.6046"W	1310.61	357.285	5.29	-1.43	-5.09
8257.00	89.850	164.250	5652.73	-1167.78	1222.53	-34.25	1727870.91	14583147.70	40°09'16.1975"N	80°41'13.2503"W	1223.01	358.395	4.69	1.25	4.52
8348.00	89.720	163.080	5653.07	-1076.87	1135.20	-8.66	1727896.50	14583080.41	40°09'15.3337"N	80°41'12.9246"W	1135.24	359.563	1.29	-0.14	-1.29
8439.00	90.650	163.970	5652.78	-985.95	1047.94	17.15	1727922.29	14582973.19	40°09'14.4705"N	80°41'12.5962"W	1048.08	0.937	1.41	1.02	0.98
8529.00	90.120	163.150	5652.17	-896.04	961.63	42.62	1727947.75	14582886.90	40°09'13.6166"N	80°41'12.2721"W	962.57	2.538	1.08	-0.59	-0.91
8620.00	90.150	163.130	5651.96	-805.09	874.54	69.01	1727974.14	14582799.85	40°09'12.7551"N	80°41'11.9362"W	877.26	4.512	0.04	0.03	-0.02
8712.00	90.280	163.220	5651.61	-713.15	786.48	95.64	1728000.75	14582711.82	40°09'11.8839"N	80°41'11.5972"W	792.27	6.933	0.17	0.14	0.10
8803.00	90.150	163.160	5651.27	-622.22	699.37	121.96	1728027.06	14582624.75	40°09'11.0222"N	80°41'11.2623"W	709.92	9.892	0.16	-0.14	-0.07
8894.00	90.800	163.330	5650.52	-531.28	612.23	148.19	1728053.28	14582537.65	40°09'10.1602"N	80°41'10.9284"W	629.91	13.607	0.74	0.71	0.19
8985.00	88.860	162.580	5650.79	-440.33	525.23	174.86	1728079.95	14582450.68	40°09'9.2996"N	80°41'10.5889"W	553.58	18.414	2.29	-2.13	-0.82
9076.00	89.970	163.270	5651.72	-349.39	438.25	201.58	1728106.65	14582363.73	40°09'8.4391"N	80°41'10.2487"W	482.39	24.701	1.44	1.22	0.76
9167.00	90.310	164.180	5651.49	-258.48	350.90	227.08	1728132.14	14582276.42	40°09'7.5750"N	80°41'9.9243"W	417.97	32.908	1.07	0.37	1.00
9268.00	90.120	162.650	5651.11	-157.57	254.11	255.91	1728160.96	14582179.66	40°09'6.6174"N	80°41'9.5574"W	360.64	45.203	1.53	-0.19	-1.51
9364.00	89.290	162.910	5651.61	-61.61	162.41	284.33	1728189.37	14582088.00	40°09'5.7103"N	80°41'9.1956"W	327.44	60.265	0.91	-0.86	0.27
9461.00	89.540	162.970	5652.60	35.33	69.68	312.78	1728217.81	14581995.31	40°09'4.7930"N	80°41'8.8334"W	320.45	77.440	0.27	0.26	0.06
9557.00	89.200	163.110	5653.65	131.27	-22.14	340.79	1728245.80	14581903.53	40°09'3.8847"N	80°41'8.4770"W	341.50	93.716	0.38	-0.35	0.15
9654.00	89.260	163.190	5654.96	228.20	-114.96	368.90	1728273.91	14581810.74	40°09'2.9664"N	80°41'8.1191"W	386.40	107.309	0.10	0.06	0.08
9751.00	89.350	163.040	5656.14	325.14	-207.77	397.07	1728302.07	14581717.96	40°09'2.0482"N	80°41'7.7606"W	448.15	117.621	0.18	0.09	-0.15
9848.00	88.180	163.400	5658.23	422.05	-300.62	425.07	1728330.05	14581625.15	40°09'1.1297"N	80°41'7.4043"W	520.63	125.269	1.26	-1.21	0.37
9944.00	90.220	163.080	5659.57	517.97	-392.53	452.75	1728357.72	14581533.28	40°09'0.2205"N	80°41'7.0520"W	599.22	130.925	2.15	2.12	-0.33
10041.00	89.480	164.030	5659.82	614.88	-485.56	480.21	1728385.17	14581440.29	40°08'59.3002"N	80°41'6.7026"W	682.91	135.317	1.24	-0.76	0.98
10137.00	90.460	164.570	5659.87	710.72	-577.98	506.18	1728411.14	14581347.91	40°08'58.3861"N	80°41'6.3723"W	768.30	138.788	1.17	1.02	0.56
10234.00	88.950	164.200	5660.37	807.56	-671.39	532.29	1728437.24	14581254.53	40°08'57.4620"N	80°41'6.0404"W	856.80	141.592	1.60	-1.56	-0.38
10331.00	89.420	162.900	5661.75	904.46	-764.41	559.76	1728464.69	14581161.55	40°08'56.5419"N	80°41'5.6909"W	947.44	143.786	1.42	0.48	-1.34
10427.00	90.430	164.980	5661.88	1000.34	-856.66	586.31	1728491.24	14581069.34	40°08'55.6293"N	80°41'5.3532"W	1038.09	145.611	2.41	1.05	2.17
10524.00	89.200	163.480	5662.19	1097.19	-950.00	612.67	1728517.59	14580976.03	40°08'54.7060"N	80°41'5.0180"W	1130.43	147.181	2.00	-1.27	-1.55
10620.00	90.030	165.880	5662.83	1192.99	-1042.58	638.04	1728542.94	14580883.49	40°08'53.7902"N	80°41'4.6956"W	1222.32	148.534	2.65	0.86	2.50
10717.00	89.690	164.020	5663.07	1289.77	-1136.25	663.22	1728568.11	14580789.85	40°08'52.8637"N	80°41'4.3756"W	1315.64	149.728	1.95	-0.35	-1.92
10813.00	89.110	163.800	5664.08	1385.65	-1228.48	689.83	1728594.71	14580697.66	40°08'51.9513"N	80°41'4.0372"W	1408.91	150.685	0.65	-0.60	-0.23

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Slot	6H		

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10910.00	89.690	163.540	5665.09	1482.55	-1321.56	717.10	1728621.97	14580604.61	40°08'51.0305"N	80°41'3.6903"W	1503.58	151.515	0.66	0.60	-0.27
11006.00	89.850	163.370	5665.48	1578.47	-1413.59	744.44	1728649.30	14580512.62	40°08'50.1202"N	80°41'3.3424"W	1597.63	152.227	0.24	0.17	-0.18
11103.00	89.350	164.190	5666.15	1675.36	-1506.72	771.53	1728676.38	14580419.52	40°08'49.1989"N	80°41'2.9978"W	1692.77	152.885	0.99	-0.52	0.85
11199.00	89.880	163.510	5666.80	1771.25	-1598.93	798.23	1728703.07	14580327.35	40°08'48.2867"N	80°41'2.6582"W	1787.11	153.470	0.90	0.55	-0.71
11295.00	90.920	164.370	5666.13	1867.12	-1691.18	824.79	1728729.62	14580235.14	40°08'47.3742"N	80°41'2.3204"W	1881.59	154.002	1.41	1.08	0.90
11392.00	89.170	164.980	5666.05	1963.93	-1784.73	850.42	1728755.24	14580141.63	40°08'46.4489"N	80°41'1.9946"W	1976.99	154.522	1.91	-1.80	0.63
11488.00	88.710	162.700	5667.83	2059.80	-1876.91	877.14	1728781.94	14580049.48	40°08'45.5370"N	80°41'1.6549"W	2071.75	154.952	2.42	-0.48	-2.38
11585.00	89.050	163.580	5669.72	2156.72	-1969.72	905.26	1728810.06	14579956.71	40°08'44.6188"N	80°41'1.2969"W	2167.79	155.317	0.97	0.35	0.91
11682.00	89.140	164.190	5671.26	2253.59	-2062.90	932.18	1728836.97	14579863.57	40°08'43.6971"N	80°41'0.9545"W	2263.74	155.683	0.64	0.09	0.63
11779.00	89.720	164.690	5672.22	2350.42	-2156.34	958.20	1728862.98	14579770.16	40°08'42.7728"N	80°41'0.6238"W	2359.65	156.041	0.79	0.60	0.52
11875.00	90.030	164.180	5672.43	2446.26	-2248.82	983.96	1728888.73	14579677.72	40°08'41.8580"N	80°41'0.2963"W	2454.66	156.368	0.62	0.32	-0.53
11971.00	90.620	164.520	5671.89	2542.11	-2341.26	1009.86	1728914.61	14579585.32	40°08'40.9436"N	80°40'59.9671"W	2549.76	156.668	0.71	0.61	0.35
12068.00	87.970	162.060	5673.08	2639.01	-2434.14	1037.74	1728942.49	14579492.47	40°08'40.0248"N	80°40'59.6123"W	2646.12	156.910	3.73	-2.73	-2.54
12164.00	90.770	164.110	5674.14	2734.93	-2525.97	1065.67	1728970.40	14579400.68	40°08'39.1164"N	80°40'59.2570"W	2741.56	157.126	3.61	2.92	2.14
12261.00	90.090	164.520	5673.41	2831.78	-2619.35	1091.89	1728996.61	14579307.33	40°08'38.1926"N	80°40'58.9236"W	2837.82	157.371	0.82	-0.70	0.42
12358.00	89.690	164.260	5673.59	2928.62	-2712.77	1117.99	1729022.70	14579213.95	40°08'37.2685"N	80°40'58.5918"W	2934.12	157.602	0.49	-0.41	-0.27
12454.00	89.320	164.060	5674.42	3024.48	-2805.12	1144.19	1729048.90	14579121.63	40°08'36.3550"N	80°40'58.2586"W	3029.50	157.810	0.44	-0.39	-0.21
12551.00	88.890	164.160	5675.94	3121.34	-2898.41	1170.75	1729075.44	14579028.39	40°08'35.4322"N	80°40'57.9210"W	3125.92	158.005	0.46	-0.44	0.10
12647.00	88.550	163.950	5678.08	3217.18	-2990.69	1197.11	1729101.80	14578936.14	40°08'34.5193"N	80°40'57.5857"W	3221.38	158.185	0.42	-0.35	-0.22
12744.00	89.320	164.150	5679.89	3314.04	-3083.94	1223.76	1729128.44	14578842.93	40°08'33.5969"N	80°40'57.2468"W	3317.87	158.356	0.82	0.79	0.21
12840.00	89.320	163.740	5681.03	3409.91	-3176.19	1250.31	1729154.97	14578750.72	40°08'32.6844"N	80°40'56.9093"W	3413.42	158.513	0.43	0.00	-0.43
12936.00	89.140	163.580	5682.32	3505.81	-3268.30	1277.32	1729181.97	14578658.64	40°08'31.7731"N	80°40'56.5658"W	3509.04	158.653	0.25	-0.19	-0.17
13033.00	89.880	162.650	5683.15	3602.75	-3361.11	1305.49	1729210.13	14578565.86	40°08'30.8550"N	80°40'56.2073"W	3605.74	158.773	1.23	0.76	-0.96
13130.00	90.180	162.120	5683.09	3699.72	-3453.57	1334.84	1729239.47	14578473.45	40°08'29.9403"N	80°40'55.8336"W	3702.56	158.868	0.63	0.31	-0.55
13226.00	90.920	162.380	5682.17	3795.70	-3544.99	1364.11	1729268.73	14578382.06	40°08'29.0358"N	80°40'55.4609"W	3798.39	158.953	0.82	0.77	0.27
13323.00	89.080	164.420	5682.17	3892.61	-3637.94	1391.82	1729296.42	14578289.15	40°08'28.1163"N	80°40'55.1084"W	3895.09	159.064	2.83	-1.90	2.10
13419.00	89.290	161.440	5683.54	3988.54	-3729.69	1419.99	1729324.59	14578197.43	40°08'27.2086"N	80°40'54.7499"W	3990.86	159.157	3.11	0.22	-3.10
13516.00	90.980	164.010	5683.31	4085.49	-3822.30	1448.79	1729353.38	14578104.86	40°08'26.2924"N	80°40'54.3833"W	4087.66	159.241	3.17	1.74	2.65
13612.00	89.630	163.200	5682.80	4181.40	-3914.40	1475.89	1729380.46	14578012.80	40°08'25.3814"N	80°40'54.0387"W	4183.39	159.341	1.64	-1.41	-0.84
13709.00	89.630	162.980	5683.43	4278.34	-4007.20	1504.10	1729408.66	14577920.03	40°08'24.4633"N	80°40'53.6797"W	4280.18	159.426	0.23	0.00	-0.23

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REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Roth OHI 6H
Field	Ohio	API	47-069-00349-0000
Facility	Roth OHI Pad	Wellbore	Roth OHI 6H AWB
Slot	6H		

WELLPATH DATA (285 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]
13805.00	88.370	162.880	5685.10	4374.27	-4098.95	1532.28	1729436.83	14577828.31	40°08'23.5556"N	80°40'53.3211"W	4375.99	159.503	1.32	-1.31	-0.10
13902.00	90.340	162.390	5686.19	4471.23	-4191.52	1561.23	1729465.76	14577735.78	40°08'22.6398"N	80°40'52.9527"W	4472.84	159.571	2.09	2.03	-0.51
13998.00	90.550	161.930	5685.45	4567.21	-4282.90	1590.63	1729495.16	14577644.44	40°08'21.7357"N	80°40'52.5782"W	4568.74	159.625	0.53	0.22	-0.48
14095.00	89.750	162.210	5685.19	4664.19	-4375.19	1620.50	1729525.01	14577552.18	40°08'20.8227"N	80°40'52.1980"W	4665.65	159.676	0.87	-0.82	0.29
14192.00	90.150	162.140	5685.28	4761.17	-4467.53	1650.19	1729554.69	14577459.88	40°08'19.9091"N	80°40'51.8200"W	4762.56	159.727	0.42	0.41	-0.07
14288.00	90.430	162.270	5684.79	4857.16	-4558.94	1679.53	1729584.02	14577368.51	40°08'19.0048"N	80°40'51.4464"W	4858.47	159.776	0.32	0.29	0.14
14384.00	89.510	162.280	5684.84	4953.13	-4650.38	1708.75	1729613.23	14577277.10	40°08'18.1001"N	80°40'51.0744"W	4954.38	159.824	0.96	-0.96	0.01
14480.00	88.740	161.920	5686.31	5049.11	-4741.72	1738.26	1729642.73	14577185.80	40°08'17.1964"N	80°40'50.6987"W	5050.30	159.868	0.89	-0.80	-0.38
14577.00	89.660	160.470	5687.66	5146.09	-4833.53	1769.52	1729673.98	14577094.02	40°08'16.2880"N	80°40'50.3004"W	5147.26	159.893	1.77	0.95	-1.49
14674.00	89.820	162.410	5688.10	5243.09	-4925.48	1800.39	1729704.84	14577002.11	40°08'15.3783"N	80°40'49.9072"W	5244.22	159.921	2.01	0.16	2.00
14771.00	89.350	159.450	5688.81	5340.07	-5017.15	1832.08	1729736.51	14576910.48	40°08'14.4714"N	80°40'49.5034"W	5341.19	159.940	3.09	-0.48	-3.05
14867.00	89.690	159.210	5689.61	5436.02	-5106.96	1865.97	1729770.39	14576820.70	40°08'13.5826"N	80°40'49.0713"W	5437.18	159.929	0.43	0.35	-0.25
14964.00	90.220	159.950	5689.69	5532.99	-5197.87	1899.81	1729804.21	14576729.83	40°08'12.6831"N	80°40'48.6398"W	5534.18	159.923	0.94	0.55	0.76
15060.00	89.450	156.500	5689.96	5628.85	-5287.00	1935.42	1729839.81	14576640.73	40°08'11.8010"N	80°40'48.1855"W	5630.12	159.894	3.68	-0.80	-3.59
15157.00	89.540	160.290	5690.82	5725.72	-5377.17	1971.12	1729875.50	14576550.80	40°08'10.9087"N	80°40'47.7299"W	5727.06	159.868	3.91	0.09	3.91
15253.00	90.550	161.340	5690.74	5821.72	-5467.83	2002.67	1729907.04	14576459.97	40°08'10.0116"N	80°40'47.3279"W	5823.05	159.884	1.52	1.05	1.09
15350.00	90.000	164.930	5690.28	5918.64	-5560.65	2030.81	1729935.16	14576367.20	40°08'9.0934"N	80°40'46.9700"W	5919.88	159.937	3.74	-0.57	3.70
15447.00	88.770	163.760	5691.32	6015.47	-5654.04	2056.98	1729961.32	14576273.84	40°08'8.1696"N	80°40'46.6373"W	6016.59	160.008	1.75	-1.27	-1.21
15543.00	89.780	163.170	5692.53	6111.38	-5746.06	2084.30	1729988.63	14576181.85	40°08'7.2592"N	80°40'46.2899"W	6112.41	160.063	1.22	1.05	-0.61
15640.00	90.550	164.060	5692.25	6208.29	-5839.12	2111.66	1730015.98	14576088.83	40°08'6.3387"N	80°40'45.9419"W	6209.22	160.118	1.21	0.79	0.92
15736.00	88.830	163.750	5692.77	6304.17	-5931.35	2138.27	1730042.58	14575996.64	40°08'5.4263"N	80°40'45.6036"W	6305.01	160.176	1.82	-1.79	-0.32
15833.00	89.690	165.910	5694.03	6400.95	-6024.96	2163.65	1730067.95	14575903.07	40°08'4.5004"N	80°40'45.2812"W	6401.68	160.246	2.40	0.89	2.23
15930.00	88.890	164.220	5695.23	6497.71	-6118.67	2188.65	1730092.94	14575809.39	40°08'3.5734"N	80°40'44.9637"W	6498.33	160.318	1.93	-0.82	-1.74
16026.00	90.060	164.820	5696.11	6593.53	-6211.18	2214.27	1730118.55	14575716.92	40°08'2.6583"N	80°40'44.6381"W	6594.07	160.379	1.37	1.22	0.62
16123.00	89.230	165.560	5696.71	6690.28	-6304.95	2239.06	1730143.34	14575623.18	40°08'1.7307"N	80°40'44.3233"W	6690.73	160.449	1.15	-0.86	0.76
16219.00	89.230	164.080	5698.00	6786.07	-6397.59	2264.20	1730168.46	14575530.58	40°08'0.8144"N	80°40'44.0040"W	6786.44	160.510	1.54	0.00	-1.54
16316.00	90.000	163.540	5698.65	6882.96	-6490.74	2291.24	1730195.49	14575437.46	40°07'59.8929"N	80°40'43.6601"W	6883.28	160.557	0.97	0.79	-0.56
16412.00	89.290	165.110	5699.25	6978.80	-6583.17	2317.18	1730221.42	14575345.08	40°07'58.9786"N	80°40'43.3305"W	6979.07	160.609	1.79	-0.74	1.64
16508.00	89.080	164.040	5700.61	7074.62	-6675.70	2342.71	1730246.94	14575252.58	40°07'58.0633"N	80°40'43.0061"W	7074.83	160.662	1.14	-0.22	-1.11
16604.00	89.750	165.600	5701.59	7170.41	-6768.34	2367.84	1730272.07	14575159.97	40°07'57.1469"N	80°40'42.6868"W	7170.57	160.718	1.77	0.70	1.63

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Field	Ohio	API	47-069-00349-0000
Facility	Roth OHI Pad	Wellbore	Roth OHI 6H AWB
Slot	6H		

**WELLPATH DATA (285 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]
16701.00	89.380	165.360	5702.33	7267.12	-6862.24	2392.16	1730296.38	14575066.11	40°07'56.2181"N	80°40'42.3781"W	7267.24	160.782	0.45	-0.38	-0.25
16798.00	89.450	164.480	5703.32	7363.90	-6955.89	2417.40	1730321.60	14574972.50	40°07'55.2917"N	80°40'42.0576"W	7363.99	160.836	0.91	0.07	-0.91
16894.00	89.780	165.470	5703.96	7459.68	-7048.61	2442.28	1730346.48	14574879.82	40°07'54.3746"N	80°40'41.7415"W	7459.73	160.889	1.09	0.34	1.03
16990.00	88.980	165.080	5705.00	7555.42	-7141.45	2466.68	1730370.87	14574787.01	40°07'53.4563"N	80°40'41.4317"W	7555.45	160.945	0.93	-0.83	-0.41
17087.00	89.510	162.060	5706.28	7652.31	-7234.47	2494.11	1730398.29	14574694.03	40°07'52.5361"N	80°40'41.0829"W	7652.33	160.978	3.16	0.55	-3.11
17183.00	89.420	160.650	5707.18	7748.30	-7325.43	2524.80	1730428.96	14574603.11	40°07'51.6362"N	80°40'40.6920"W	7748.32	160.983	1.47	-0.09	-1.47
17280.00	89.380	160.960	5708.19	7845.30	-7417.03	2556.69	1730460.84	14574511.54	40°07'50.7298"N	80°40'40.2857"W	7845.32	160.981	0.32	-0.04	0.32
17376.00	89.570	160.890	5709.07	7941.29	-7507.75	2588.07	1730492.20	14574420.86	40°07'49.8322"N	80°40'39.8861"W	7941.31	160.980	0.21	0.20	-0.07
17473.00	89.320	160.780	5710.01	8038.29	-7599.37	2619.91	1730524.03	14574329.27	40°07'48.9256"N	80°40'39.4804"W	8038.31	160.978	0.28	-0.26	-0.11
17569.00	89.570	161.440	5710.94	8134.28	-7690.20	2650.99	1730555.10	14574238.48	40°07'48.0270"N	80°40'39.0846"W	8134.30	160.980	0.74	0.26	0.69
17666.00	89.380	160.710	5711.83	8231.28	-7781.95	2682.45	1730586.54	14574146.77	40°07'47.1192"N	80°40'38.6839"W	8231.30	160.981	0.78	-0.20	-0.75
17763.00	89.720	160.840	5712.59	8328.27	-7873.54	2714.38	1730618.47	14574055.21	40°07'46.2129"N	80°40'38.2769"W	8328.29	160.978	0.38	0.35	0.13
17859.00	89.170	160.860	5713.52	8424.26	-7964.22	2745.88	1730649.95	14573964.57	40°07'45.3157"N	80°40'37.8758"W	8424.29	160.977	0.57	-0.57	0.02
17955.00	88.890	161.120	5715.15	8520.25	-8054.97	2777.14	1730681.20	14573873.85	40°07'44.4178"N	80°40'37.4775"W	8520.27	160.977	0.40	-0.29	0.27
18052.00	89.140	161.020	5716.81	8617.24	-8146.71	2808.60	1730712.65	14573782.15	40°07'43.5100"N	80°40'37.0768"W	8617.26	160.978	0.28	0.26	-0.10
18148.00	89.230	160.930	5718.18	8713.23	-8237.46	2839.90	1730743.93	14573691.44	40°07'42.6122"N	80°40'36.6782"W	8713.25	160.978	0.13	0.09	-0.09
18245.00	88.980	159.720	5719.70	8810.20	-8328.78	2872.55	1730776.57	14573600.15	40°07'41.7085"N	80°40'36.2621"W	8810.23	160.971	1.27	-0.26	-1.25
18341.00	88.860	159.520	5721.50	8906.15	-8418.76	2905.97	1730809.98	14573510.21	40°07'40.8182"N	80°40'35.8360"W	8906.19	160.956	0.24	-0.12	-0.21
18438.00	89.080	159.990	5723.25	9003.11	-8509.75	2939.53	1730843.53	14573419.25	40°07'39.9178"N	80°40'35.4082"W	9003.15	160.943	0.53	0.23	0.48
18534.00	88.770	159.290	5725.05	9099.06	-8599.73	2972.93	1730876.91	14573329.30	40°07'39.0273"N	80°40'34.9825"W	9099.11	160.930	0.80	-0.32	-0.73
18631.00	88.920	159.820	5727.00	9196.01	-8690.61	3006.80	1730910.77	14573238.47	40°07'38.1281"N	80°40'34.5507"W	9196.06	160.915	0.57	0.15	0.55
18727.00	89.110	159.720	5728.65	9291.97	-8780.67	3040.00	1730943.95	14573148.44	40°07'37.2369"N	80°40'34.1276"W	9292.03	160.903	0.22	0.20	-0.10
18824.00	89.290	159.950	5730.01	9388.93	-8871.72	3073.43	1730977.37	14573057.43	40°07'36.3360"N	80°40'33.7015"W	9389.00	160.892	0.30	0.19	0.24
18921.00	89.350	159.920	5731.16	9485.90	-8962.82	3106.71	1731010.64	14572966.36	40°07'35.4345"N	80°40'33.2774"W	9485.98	160.883	0.07	0.06	-0.03
19017.00	89.290	159.990	5732.30	9581.88	-9053.00	3139.61	1731043.53	14572876.22	40°07'34.5422"N	80°40'32.8580"W	9581.96	160.873	0.10	-0.06	0.07
19114.00	89.380	160.010	5733.43	9678.85	-9144.14	3172.78	1731076.69	14572785.11	40°07'33.6403"N	80°40'32.4352"W	9678.94	160.865	0.10	0.09	0.02
19211.00	89.350	159.980	5734.50	9775.83	-9235.29	3205.97	1731109.86	14572694.00	40°07'32.7384"N	80°40'32.0124"W	9775.93	160.856	0.04	-0.03	-0.03
19307.00	89.720	159.380	5735.28	9871.80	-9325.31	3239.30	1731143.18	14572604.01	40°07'31.8476"N	80°40'31.5875"W	9871.90	160.844	0.73	0.39	-0.62
19404.00	87.850	160.160	5737.34	9968.74	-9416.30	3272.83	1731176.70	14572513.06	40°07'30.9472"N	80°40'31.1601"W	9968.86	160.834	2.09	-1.93	0.80
19501.00	89.850	159.940	5739.28	10065.70	-9507.45	3305.92	1731209.77	14572421.94	40°07'30.0452"N	80°40'30.7384"W	10065.82	160.826	2.07	2.06	-0.23

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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]
19598.00	89.540	160.050	5739.80	10162.68	-9598.60	3339.11	1731242.95	14572330.83	40°07'29.1433"N	80°40'30.3155"W	10162.81	160.819	0.34	-0.32	0.11
19694.00	89.420	160.230	5740.67	10258.66	-9688.89	3371.72	1731275.54	14572240.58	40°07'28.2499"N	80°40'29.9000"W	10258.80	160.812	0.23	-0.13	0.19
19791.00	89.320	159.540	5741.74	10355.63	-9779.96	3405.07	1731308.89	14572149.54	40°07'27.3487"N	80°40'29.4749"W	10355.78	160.804	0.72	-0.10	-0.71
19888.00	89.820	159.770	5742.47	10452.60	-9870.91	3438.80	1731342.60	14572058.63	40°07'26.4487"N	80°40'29.0450"W	10452.76	160.793	0.57	0.52	0.24
19984.00	89.750	159.830	5742.83	10548.57	-9961.01	3471.95	1731375.73	14571968.57	40°07'25.5572"N	80°40'28.6226"W	10548.75	160.784	0.10	-0.07	0.06
20081.00	89.510	160.330	5743.45	10645.56	-10052.20	3504.99	1731408.77	14571877.41	40°07'24.6548"N	80°40'28.2014"W	10645.74	160.777	0.57	-0.25	0.52
20178.00	89.780	160.030	5744.05	10742.54	-10143.45	3537.88	1731441.64	14571786.19	40°07'23.7519"N	80°40'27.7824"W	10742.73	160.772	0.42	0.28	-0.31
20274.00	90.150	159.980	5744.11	10838.52	-10233.66	3570.71	1731474.46	14571696.01	40°07'22.8592"N	80°40'27.3641"W	10838.72	160.765	0.39	0.39	-0.05
20371.00	89.450	158.830	5744.45	10935.48	-10324.46	3604.83	1731508.56	14571605.25	40°07'21.9607"N	80°40'26.9291"W	10935.69	160.753	1.39	-0.72	-1.19
20468.00	89.260	159.720	5745.54	11032.42	-10415.18	3639.15	1731542.87	14571514.57	40°07'21.0630"N	80°40'26.4916"W	11032.65	160.740	0.94	-0.20	0.92
20564.00	89.420	160.040	5746.65	11128.39	-10505.31	3672.17	1731575.88	14571424.47	40°07'20.1711"N	80°40'26.0708"W	11128.63	160.733	0.37	0.17	0.33
20661.00	89.200	159.850	5747.82	11225.37	-10596.43	3705.43	1731609.13	14571333.40	40°07'19.2695"N	80°40'25.6469"W	11225.62	160.726	0.30	-0.23	-0.20
20758.00	89.630	159.920	5748.81	11322.34	-10687.50	3738.79	1731642.47	14571242.35	40°07'18.3683"N	80°40'25.2218"W	11322.60	160.719	0.45	0.44	0.07
20855.00	89.230	159.990	5749.77	11419.31	-10778.62	3772.04	1731675.71	14571151.27	40°07'17.4666"N	80°40'24.7982"W	11419.59	160.712	0.42	-0.41	0.07
20952.00	88.980	160.060	5751.29	11516.28	-10869.78	3805.17	1731708.82	14571060.15	40°07'16.5648"N	80°40'24.3760"W	11516.57	160.706	0.27	-0.26	0.07
21048.00	89.080	159.130	5752.91	11612.24	-10959.74	3838.63	1731742.28	14570970.23	40°07'15.6744"N	80°40'23.9495"W	11612.54	160.697	0.97	0.10	-0.97
21145.00	89.290	160.180	5754.29	11709.19	-11050.68	3872.35	1731775.98	14570879.32	40°07'14.7745"N	80°40'23.5197"W	11709.51	160.689	1.10	0.22	1.08
21241.00	89.230	159.900	5755.53	11805.17	-11140.90	3905.12	1731808.74	14570789.13	40°07'13.8817"N	80°40'23.1022"W	11805.50	160.683	0.30	-0.06	-0.29
21338.00	89.230	159.430	5756.83	11902.13	-11231.85	3938.83	1731842.43	14570698.22	40°07'12.9818"N	80°40'22.6726"W	11902.47	160.675	0.48	0.00	-0.48
21435.00	89.510	159.820	5757.90	11999.09	-11322.78	3972.60	1731876.19	14570607.33	40°07'12.0820"N	80°40'22.2423"W	11999.45	160.667	0.49	0.29	0.40
21532.00	89.050	160.210	5759.12	12096.06	-11413.93	4005.75	1731909.32	14570516.22	40°07'11.1800"N	80°40'21.8199"W	12096.43	160.661	0.62	-0.47	0.40
21628.00	89.230	160.020	5760.56	12192.04	-11504.19	4038.40	1731941.96	14570425.99	40°07'10.2868"N	80°40'21.4039"W	12192.42	160.657	0.27	0.19	-0.20
21725.00	89.380	159.790	5761.74	12289.01	-11595.28	4071.72	1731975.27	14570334.93	40°07'9.3855"N	80°40'20.9793"W	12289.40	160.651	0.28	0.15	-0.24
21821.00	89.350	160.100	5762.80	12384.98	-11685.45	4104.64	1732008.18	14570244.80	40°07'8.4932"N	80°40'20.5598"W	12385.39	160.646	0.32	-0.03	0.32
21918.00	89.420	160.000	5763.84	12481.96	-11776.63	4137.73	1732041.26	14570153.66	40°07'7.5910"N	80°40'20.1381"W	12482.38	160.641	0.13	0.07	-0.10
22015.00	89.230	159.960	5764.99	12578.94	-11867.76	4170.94	1732074.45	14570062.56	40°07'6.6892"N	80°40'19.7151"W	12579.37	160.636	0.20	-0.20	-0.04
22111.00	89.170	159.860	5766.33	12674.91	-11957.91	4203.91	1732107.41	14569972.45	40°07'5.7971"N	80°40'19.2949"W	12675.35	160.630	0.12	-0.06	-0.10
22208.00	89.170	159.960	5767.73	12771.87	-12049.00	4237.23	1732140.71	14569881.39	40°07'4.8958"N	80°40'18.8704"W	12772.33	160.625	0.10	0.00	0.10
22304.00	89.510	159.830	5768.84	12867.85	-12139.14	4270.22	1732173.70	14569791.29	40°07'4.0038"N	80°40'18.4500"W	12868.32	160.620	0.38	0.35	-0.14
22401.00	88.620	159.570	5770.42	12964.80	-12230.10	4303.87	1732207.33	14569700.36	40°07'3.1037"N	80°40'18.0212"W	12965.29	160.613	0.96	-0.92	-0.27

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REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Roth OHI 6H
Field	Ohio	API	47-069-00349-0000
Facility	Roth OHI Pad	Wellbore	Roth OHI 6H AWB
Slot	6H		

WELLPATH DATA (285 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]
22497.00	89.080	160.100	5772.35	13060.76	-12320.20	4336.96	1732240.41	14569610.30	40°07'2.2121"N	80°40'17.5996"W	13061.26	160.607	0.73	0.48	0.55
22593.00	88.950	159.750	5774.00	13156.72	-12410.36	4369.91	1732273.34	14569520.18	40°07'1.3200"N	80°40'17.1798"W	13157.24	160.602	0.39	-0.14	-0.36
22689.00	89.570	159.810	5775.24	13252.69	-12500.43	4403.08	1732306.50	14569430.14	40°07'0.4287"N	80°40'16.7570"W	13253.22	160.596	0.65	0.65	0.06
22786.00	89.510	159.790	5776.02	13349.66	-12591.46	4436.58	1732339.98	14569339.14	40°06'59.5279"N	80°40'16.3303"W	13350.21	160.590	0.07	-0.06	-0.02
22882.00	89.480	159.950	5776.86	13445.63	-12681.59	4469.61	1732373.01	14569249.05	40°06'58.6360"N	80°40'15.9093"W	13446.20	160.585	0.17	-0.03	0.17
22979.00	89.020	158.330	5778.13	13542.57	-12772.23	4504.15	1732407.53	14569158.45	40°06'57.7391"N	80°40'15.4691"W	13543.16	160.575	1.74	-0.47	-1.67
23076.00	89.600	159.200	5779.30	13639.48	-12862.63	4539.28	1732442.65	14569068.08	40°06'56.8444"N	80°40'15.0213"W	13640.10	160.562	1.08	0.60	0.90
23172.00	89.480	158.720	5780.07	13735.41	-12952.23	4573.74	1732477.10	14568978.52	40°06'55.9577"N	80°40'14.5819"W	13736.06	160.551	0.52	-0.12	-0.50
23269.00	89.630	158.770	5780.82	13832.32	-13042.63	4608.91	1732512.25	14568888.16	40°06'55.0631"N	80°40'14.1336"W	13833.01	160.538	0.16	0.15	0.05
23365.00	90.000	159.170	5781.13	13928.25	-13132.23	4643.36	1732546.68	14568798.59	40°06'54.1764"N	80°40'13.6945"W	13928.97	160.527	0.57	0.39	0.42
23461.00	89.750	158.840	5781.34	14024.19	-13221.86	4677.75	1732581.06	14568709.00	40°06'53.2894"N	80°40'13.2561"W	14024.94	160.517	0.43	-0.26	-0.34
23558.00	89.850	158.870	5781.68	14121.11	-13312.33	4712.74	1732616.04	14568618.56	40°06'52.3941"N	80°40'12.8100"W	14121.90	160.505	0.11	0.10	0.03
23654.00	89.660	158.640	5782.09	14217.03	-13401.80	4747.53	1732650.81	14568529.12	40°06'51.5087"N	80°40'12.3666"W	14217.85	160.494	0.31	-0.20	-0.24
23751.00	89.880	156.640	5782.48	14313.85	-13491.50	4784.43	1732687.70	14568439.46	40°06'50.6209"N	80°40'11.8959"W	14314.73	160.474	2.07	0.23	-2.06
23848.00	89.600	159.040	5782.92	14410.68	-13581.33	4821.01	1732724.27	14568349.67	40°06'49.7319"N	80°40'11.4293"W	14411.62	160.456	2.49	-0.29	2.47
23944.00	89.510	158.750	5783.67	14506.60	-13670.89	4855.58	1732758.82	14568260.14	40°06'48.8456"N	80°40'10.9887"W	14507.58	160.446	0.32	-0.09	-0.30
24041.00	89.420	158.140	5784.57	14603.49	-13761.10	4891.21	1732794.44	14568169.97	40°06'47.9528"N	80°40'10.5344"W	14604.51	160.433	0.64	-0.09	-0.63
24138.00	89.780	158.450	5785.25	14700.37	-13851.22	4927.09	1732830.30	14568079.88	40°06'47.0609"N	80°40'10.0770"W	14701.44	160.419	0.49	0.37	0.32
24234.00	90.000	158.830	5785.43	14796.29	-13940.63	4962.05	1732865.25	14567990.51	40°06'46.1761"N	80°40'9.6312"W	14797.40	160.407	0.46	0.23	0.40
24331.00	90.370	156.470	5785.12	14893.10	-14030.33	4998.93	1732902.12	14567900.84	40°06'45.2883"N	80°40'9.1608"W	14894.28	160.389	2.46	0.38	-2.43
24428.00	90.280	157.160	5784.57	14989.83	-14119.50	5037.12	1732940.29	14567811.71	40°06'44.4057"N	80°40'8.6736"W	14991.09	160.366	0.72	-0.09	0.71
24524.00	89.540	156.540	5784.72	15085.56	-14207.76	5074.86	1732978.02	14567723.48	40°06'43.5321"N	80°40'8.1920"W	15086.91	160.344	1.01	-0.77	-0.65
24621.00	89.660	154.770	5785.40	15182.11	-14296.13	5114.85	1733017.99	14567635.14	40°06'42.6573"N	80°40'7.6817"W	15183.58	160.314	1.83	0.12	-1.82
24717.00	89.290	154.940	5786.28	15277.54	-14383.03	5155.64	1733058.76	14567548.28	40°06'41.7971"N	80°40'7.1608"W	15279.14	160.280	0.42	-0.39	0.18
24814.00	89.260	154.700	5787.51	15373.95	-14470.81	5196.90	1733100.01	14567460.54	40°06'40.9282"N	80°40'6.6339"W	15375.70	160.245	0.25	-0.03	-0.25
24910.00	89.260	154.610	5788.75	15469.33	-14557.56	5237.99	1733141.09	14567373.82	40°06'40.0694"N	80°40'6.1092"W	15471.24	160.211	0.09	0.00	-0.09
25006.00	89.570	154.830	5789.73	15564.73	-14644.36	5278.99	1733182.07	14567287.05	40°06'39.2101"N	80°40'5.5858"W	15566.79	160.177	0.40	0.32	0.23
25103.00	89.720	154.560	5790.33	15661.12	-14732.05	5320.45	1733223.51	14567199.40	40°06'38.3420"N	80°40'5.0564"W	15663.35	160.143	0.32	0.15	-0.28
25200.00	89.780	155.270	5790.75	15757.55	-14819.90	5361.57	1733264.62	14567111.58	40°06'37.4723"N	80°40'4.5313"W	15759.95	160.111	0.73	0.06	0.73
25296.00	89.690	155.080	5791.19	15853.04	-14907.03	5401.88	1733304.91	14567024.49	40°06'36.6098"N	80°40'4.0168"W	15855.59	160.081	0.22	-0.09	-0.20

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**REFERENCE WELLPATH IDENTIFICATION**

Operator	SWN PRODUCTION COMPANY, LLC	Well	Roth OHI 6H
Field	Ohio	API	47-069-00349-0000
Facility	Roth OHI Pad	Wellbore	Roth OHI 6H AWB
Slot	6H		

**WELLPATH DATA (285 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]
25393.00	89.600	155.720	5791.80	15949.55	-14995.22	5442.26	1733345.27	14566936.33	40°06'35.7368"N	80°40'3.5014"W	15952.27	160.053	0.67	-0.09	0.66
25489.00	89.750	156.090	5792.34	16045.15	-15082.86	5481.45	1733384.44	14566848.73	40°06'34.8694"N	80°40'3.0012"W	16048.02	160.028	0.42	0.16	0.39
25586.00	89.750	155.850	5792.76	16141.76	-15171.45	5520.95	1733423.93	14566760.17	40°06'33.9924"N	80°40'2.4971"W	16144.77	160.003	0.25	0.00	-0.25
25683.00	89.660	156.240	5793.26	16238.38	-15260.09	5560.33	1733463.30	14566671.56	40°06'33.1150"N	80°40'1.9945"W	16241.54	159.980	0.41	-0.09	0.40
25779.00	89.820	156.140	5793.70	16334.03	-15347.92	5599.08	1733502.04	14566583.77	40°06'32.2456"N	80°40'1.4999"W	16337.33	159.957	0.20	0.17	-0.10
25875.00	89.820	155.410	5794.00	16429.61	-15435.47	5638.48	1733541.41	14566496.26	40°06'31.3791"N	80°40'0.9972"W	16433.08	159.933	0.76	0.00	-0.76
25972.00	89.630	156.330	5794.47	16526.20	-15523.99	5678.13	1733581.05	14566407.77	40°06'30.5028"N	80°40'0.4911"W	16529.83	159.909	0.97	-0.20	0.95
26068.00	89.780	155.780	5794.96	16621.83	-15611.73	5717.09	1733620.00	14566320.07	40°06'29.6344"N	80°39'59.9939"W	16625.62	159.887	0.59	0.16	-0.57
26165.00	89.750	155.880	5795.36	16718.42	-15700.22	5756.81	1733659.70	14566231.61	40°06'28.7584"N	80°39'59.4870"W	16722.37	159.864	0.11	-0.03	0.10
26261.00	89.940	155.760	5795.82	16814.01	-15787.80	5796.13	1733699.00	14566144.06	40°06'27.8915"N	80°39'58.9852"W	16818.14	159.840	0.23	0.20	-0.13
26358.00	89.850	156.050	5795.80	16910.61	-15876.35	5835.73	1733738.59	14566055.55	40°06'27.0150"N	80°39'58.4798"W	16914.91	159.818	0.31	-0.09	0.30
26454.00	90.000	156.070	5795.92	17006.23	-15964.09	5874.68	1733777.53	14565967.84	40°06'26.1465"N	80°39'57.9827"W	17010.70	159.797	0.16	0.16	0.02
26551.00	89.660	155.940	5796.21	17102.85	-16052.70	5914.13	1733816.96	14565879.26	40°06'25.2693"N	80°39'57.4794"W	17107.49	159.775	0.38	-0.35	-0.13
26591.00	89.540	156.030	5796.49	17142.69	-16089.24	5930.41	1733833.23	14565842.74	40°06'24.9076"N	80°39'57.2716"W	17147.40	159.766	0.37	-0.30	0.22
26617.00‡	89.540	156.030	5796.70	17168.59	-16113.00	5940.97	1733843.79	14565818.99	40°06'24.6725"N	80°39'57.1369"W	17173.35	159.761	0.00	0.00	0.00

**HOLE & CASING SECTIONS - Ref Wellbore: Roth OHI 6H AWB Ref Wellpath: Roth OHI 6H AWP Proj: 26617'**

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]
17.5in Open Hole	26.00	474.00	448.00	26.00	473.99	0.00	0.00	-2.45	0.21
13.375in Casing Surface	26.00	474.00	448.00	26.00	473.99	0.00	0.00	-2.45	0.21
12.25in Open Hole	474.00	1727.00	1253.00	473.99	1654.60	-2.45	0.21	334.41	-102.28
9.625in Casing Intermediate	26.00	1707.00	1681.00	26.00	1637.41	0.00	0.00	324.61	-99.38
8.5in Open Hole	1727.00	26617.00	24890.00	1654.60	5796.70	334.41	-102.28	-16113.00	5940.97
5.5in Casing Production	26.00	26617.00	26591.00	26.00	5796.70	0.00	0.00	-16113.00	5940.97

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REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Roth OHI 6H
Field	Ohio	API	47-069-00349-0000
Facility	Roth OHI Pad	Wellbore	Roth OHI 6H AWB
Slot	6H		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Roth OHI 6H LP	5629.91	2380.35	-395.28	1727510.03	14584305.07	40°09'27.6517"N	80°41'17.8475"W	point
Roth OHI 6H WP1	5629.91	-4888.60	1783.67	1729688.12	14577038.98	40°08'15.7434"N	80°40'50.1209"W	point
Roth OHI 6H WP2	5629.91	-5357.24	1957.73	1729862.12	14576570.52	40°08'11.1061"N	80°40'47.9014"W	point
Roth OHI 6H WP3	5629.91	-5846.40	2071.08	1729975.42	14576081.55	40°08'6.2681"N	80°40'46.4647"W	point
Roth OHI 6H WP4	5629.91	-7483.38	2563.86	1730468.00	14574445.22	40°07'50.0739"N	80°40'40.1966"W	point
Roth OHI 6H LP Rev-2	5646.00	2380.35	-395.28	1727510.03	14584305.07	40°09'27.6517"N	80°41'17.8475"W	point
Roth OHI 6H WP5	5774.51	-13725.99	4862.16	1732765.40	14568205.06	40°06'48.3008"N	80°40'10.9066"W	point
Roth OHI 6H BHL rev 1	5796.91	-16115.69	5933.88	1733836.70	14565816.31	40°06'24.6462"N	80°39'57.2282"W	point

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Field	Ohio	API	47-069-00349-0000
Facility	Roth OHI Pad	Wellbore	Roth OHI 6H AWB
Slot	6H		

**TARGETS**

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Roth OHI 6H BHL rev 2	5813.00	-16115.69	5933.88	1733836.70	14565816.31	40°06'24.6462"N	80°39'57.2282"W	point

**WELLPATH COMPOSITION - Ref Wellbore: Roth OHI 6H AWB Ref Wellpath: Roth OHI 6H AWP Proj: 26617'**

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
26.00	445.00	OWSG MWD rev2 + HRGM	01_Tally MWD <17-1/2"> (238' - 445')	Roth OHI 6H AWB	12/27/2022
445.00	1658.00	OWSG MWD rev2 + HRGM	02_Tally MWD <12-1/4">(445')(505'-1658')	Roth OHI 6H AWB	12/27/2022
1658.00	26617.00	BH AutoTrak Curve/eXpress (2019) (HRGM, Short spacing)	03_BH ATCurve <8-1/2">(1658')(1722'-26591')	Roth OHI 6H AWB	12/27/2022

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Field	Ohio	API	47-069-00349-0000
Facility	Roth OHI Pad	Wellbore	Roth OHI 6H AWB
Slot	6H		

**COMMENTS**

Wellpath general comments  
 API:47-069-00349-0000  
 BH Job #:111588286  
 Rig: SDC 40  
 Duration:12/28/2022-1/04/2023  
 01\_Tally MWD <17-1/2"> (238' - 445')  
 02\_Tally MWD <12-1/4">(445')(505'-1658')  
 03\_BHI ATCurve <8-1/2">(1658')(1722'-26591')  
 Projection MD @ TD: 26617'

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