

Location: Ohio County, WV
Field: Ohio (NAD 27 SP)
Facility: Roth OHI Pad

Slot: 210H
Well: Roth OHI 210H
Wellbore: Roth OHI 210H AWB

Plot reference wellpath is Roth OH 210H awp Proj: 22115"

Grid System: NAD27 / Lambert West Virginia SP. Northern Zone (4701). US feet

True vertical depths are referenced to EDC 501 (KB)

* = Wellpath was transformed from a different geodetic datum

Reference wellpath measured depths are referenced to EDC 501 (KB)

North Reference: Grid north

EDC 501 (KB) to Mean Sea Level: 1029.93 feet

Scale: True distance

Mean Sea Level to Ground level (At Slot: 210H): -1003.93 feet

Coordinates are in feet referenced to Slot

Offset wellpath MDs are referenced to each path's default MD datum

Depths are in feet

Created by: tranlam on 2025-03-24; Database: WA_MPL_EASTERNUS_Defn

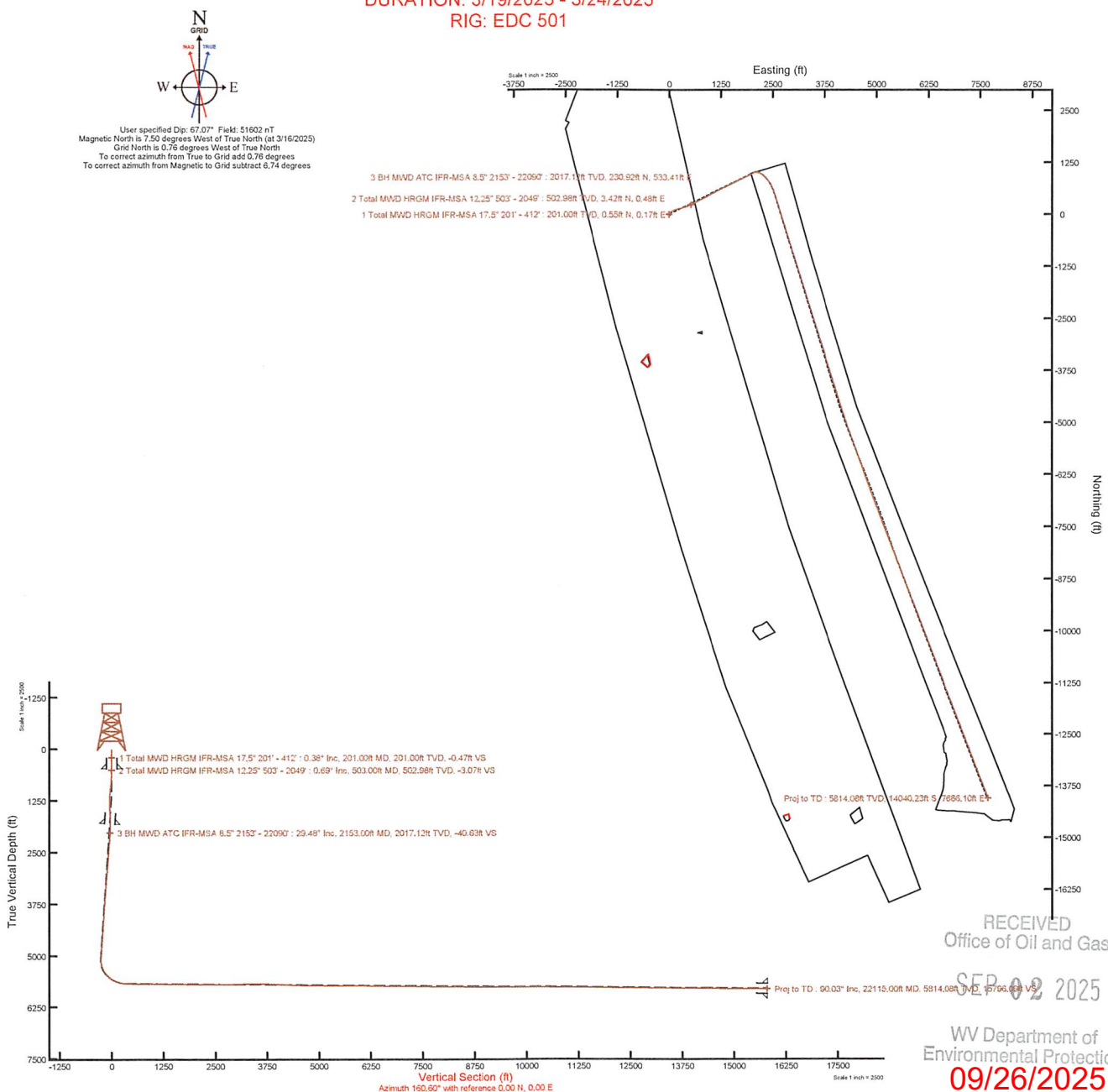
Location Information

Facility Name			Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Roth OHI Pad			1668142.420	603595.100	40°09'4.1355"N	80°41'13.7812"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
210H	0.00	0.00	1668142.420	603595.100	40°09'4.1355"N	80°41'13.7812"W
EDC 501 (KB) to Ground level (At Slot: 210H)					26ft	
Mean Sea Level to Ground level (At Slot: 210H)					-1003.93ft	
EDC 501 (KB) to Mean Sea Level					1029.93ft	

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
22115.00	90.030	159.120	5814.08	-14040.23	7686.10	1675828.37	589555.14	40°06'46.3894"N	80°39'32.4773"W

API: 47069003740000
BH JOB: 112621586
DURATION: 3/19/2025 - 3/24/2025
RIG: EDC 501





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Roth OHI 210H awp Proj: 22115'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	EXPAND ENERGY	Well	Roth OHI 210H
Field	Ohio (NAD 27 SP)	API	47069003740000
Facility	Roth OHI Pad	Wellbore	Roth OHI 210H AWB
Slot	210H		

REPORT SETUP INFORMATION			
Projection System	NAD27 / Lambert West Virginia SP, Northern Zone (4701), US feet	Software System	WellArchitect® 6.0
North Reference	Grid	User	Tranlam
Scale	0.999983	Report Generated	3/24/2025 at 11:05:05 AM
Convergence at slot	0.76° West	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	0.00	0.00	1668142.42	603595.10	40°09'4.1355"N	80°41'13.7812"W
Facility Reference Pt			1668142.42	603595.10	40°09'4.1355"N	80°41'13.7812"W
Field Reference Pt			609601.22	0.00	38°23'48.7532"N	84°21'9.7646"W

WELLPATH DATUM			
Calculation method	Minimum curvature	EDC 501 (KB) to Facility Vertical Datum	1029.93ft
Horizontal Reference Pt	Slot	EDC 501 (KB) to Mean Sea Level	1029.93ft
Vertical Reference Pt	EDC 501 (KB)	EDC 501 (KB) to Ground Level at Slot (210H)	26.00ft
MD Reference Pt	EDC 501 (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	160.60°

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Operator	EXPAND ENERGY	Well	Roth OHI 210H
Field	Ohio (NAD 27 SP)	API	47069003740000
Facility	Roth OHI Pad	Wellbore	Roth OHI 210H AWB
Slot	210H		

WELLPATH DATA (243 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]
0.00†	0.000	17.220	0.00	0.00	0.00	0.00	1668142.42	603595.10	40°09'4.1355"N	80°41'13.7812"W	0.00	0.000	0.00
26.00	0.000	17.220	26.00	0.00	0.00	0.00	1668142.42	603595.10	40°09'4.1355"N	80°41'13.7812"W	0.00	0.000	0.00
201.00	0.380	17.220	201.00	-0.47	0.55	0.17	1668142.59	603595.65	40°09'4.1410"N	80°41'13.7791"W	0.58	17.220	0.22
262.00	0.530	351.360	262.00	-0.91	1.03	0.19	1668142.61	603596.13	40°09'4.1457"N	80°41'13.7790"W	1.04	10.449	0.41
412.00	0.580	17.470	411.99	-2.19	2.44	0.31	1668142.73	603597.54	40°09'4.1597"N	80°41'13.7776"W	2.46	7.320	0.17
503.00	0.690	2.760	502.98	-3.07	3.42	0.48	1668142.90	603598.52	40°09'4.1694"N	80°41'13.7757"W	3.46	7.944	0.22
594.00	1.580	29.330	593.97	-4.41	5.06	1.12	1668143.54	603600.16	40°09'4.1857"N	80°41'13.7677"W	5.19	12.455	1.11
686.00	4.600	38.520	685.82	-7.20	9.06	4.04	1668146.46	603604.16	40°09'4.2256"N	80°41'13.7308"W	9.92	24.029	3.32
777.00	8.290	41.570	776.23	-12.33	16.82	10.67	1668153.09	603611.92	40°09'4.3032"N	80°41'13.6467"W	19.92	32.375	4.07
869.00	12.230	43.970	866.74	-19.91	28.80	21.84	1668164.26	603623.90	40°09'4.4230"N	80°41'13.5049"W	36.14	37.167	4.31
960.00	15.740	45.960	955.03	-29.38	44.33	37.41	1668179.83	603639.42	40°09'4.5784"N	80°41'13.3071"W	58.00	40.161	3.89
1052.00	18.240	50.250	1043.01	-39.60	62.21	57.45	1668199.87	603657.31	40°09'4.7578"N	80°41'13.0520"W	84.68	42.722	3.04
1144.00	19.480	59.050	1130.09	-47.68	79.31	81.68	1668224.10	603674.41	40°09'4.9299"N	80°41'12.7429"W	113.85	45.844	3.37
1235.00	21.580	68.210	1215.33	-51.41	93.33	110.24	1668252.66	603688.43	40°09'5.0722"N	80°41'12.3775"W	144.45	49.749	4.21
1327.00	25.760	73.040	1299.58	-51.27	105.45	145.10	1668287.51	603700.55	40°09'5.1965"N	80°41'11.9308"W	179.37	53.992	5.01
1419.00	28.620	74.170	1381.40	-49.04	117.29	185.42	1668327.84	603712.39	40°09'5.3188"N	80°41'11.4135"W	219.41	57.684	3.16
1510.00	30.120	75.700	1460.71	-45.66	128.88	228.52	1668370.94	603723.98	40°09'5.4389"N	80°41'10.8606"W	262.36	60.578	1.84
1602.00	30.830	75.530	1540.00	-41.58	140.47	273.72	1668416.13	603735.57	40°09'5.5593"N	80°41'10.2806"W	307.66	62.833	0.78
1694.00	30.880	74.380	1618.98	-38.00	152.72	319.28	1668461.69	603747.82	40°09'5.6863"N	80°41'9.6959"W	353.93	64.437	0.64
1786.00	30.890	72.940	1697.93	-35.48	166.00	364.60	1668507.01	603761.10	40°09'5.8235"N	80°41'9.1147"W	400.61	65.520	0.80
1877.00	30.620	70.870	1776.14	-34.41	180.45	408.82	1668551.24	603775.55	40°09'5.9720"N	80°41'8.5476"W	446.88	66.184	1.20
1969.00	29.660	68.850	1855.70	-35.00	196.35	452.19	1668594.60	603791.44	40°09'6.1347"N	80°41'7.9919"W	492.98	66.529	1.52
2049.00	27.800	67.330	1925.85	-36.67	210.68	487.87	1668630.28	603805.77	40°09'6.2810"N	80°41'7.5349"W	531.42	66.644	2.50
2153.00	29.480	64.820	2017.12	-40.63	230.92	533.41	1668675.82	603826.01	40°09'6.4869"N	80°41'6.9519"W	581.25	66.592	1.99
2245.00	28.330	63.180	2097.66	-45.73	250.40	573.38	1668715.79	603845.49	40°09'6.6846"N	80°41'6.4406"W	625.67	66.409	1.52
2336.00	28.330	63.290	2177.76	-51.26	269.84	611.94	1668754.35	603864.94	40°09'6.8818"N	80°41'5.9474"W	668.79	66.204	0.06
2428.00	28.360	63.540	2258.73	-56.72	289.39	651.00	1668793.41	603884.49	40°09'7.0801"N	80°41'5.4477"W	712.42	66.033	0.13
2520.00	28.360	62.870	2339.69	-62.35	309.09	690.01	1668832.41	603904.19	40°09'7.2798"N	80°41'4.9487"W	756.07	65.870	0.35
2611.00	28.400	62.990	2419.75	-68.12	328.78	728.52	1668870.93	603923.87	40°09'7.4793"N	80°41'4.4561"W	799.27	65.711	0.08
2703.00	28.370	63.180	2500.69	-73.84	348.57	767.52	1668909.93	603943.67	40°09'7.6800"N	80°41'3.9573"W	842.97	65.575	0.10

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Operator	EXPAND ENERGY	Well	Roth OHI 210H
Field	Ohio (NAD 27 SP)	API	47069003740000
Facility	Roth OHI Pad	Wellbore	Roth OHI 210H AWB
Slot	210H		

WELLPATH DATA (243 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]
2794.00	28.470	62.950	2580.73	-79.52	368.19	806.13	1668948.54	603963.29	40°09'7.8789"N	80°41'3.4635"W	886.24	65.452	0.16
2886.00	28.420	63.460	2661.62	-85.16	387.95	845.25	1668987.65	603983.04	40°09'8.0792"N	80°41'2.9631"W	930.03	65.346	0.27
2978.00	28.430	63.490	2742.53	-90.59	407.50	884.43	1669026.83	604002.60	40°09'8.2776"N	80°41'2.4619"W	973.80	65.262	0.02
3069.00	28.380	61.090	2822.58	-96.85	427.63	922.75	1669065.15	604022.72	40°09'8.4814"N	80°41'1.9719"W	1017.02	65.136	1.26
3160.00	28.250	61.290	2902.69	-103.91	448.43	960.57	1669102.97	604043.52	40°09'8.6919"N	80°41'1.4884"W	1060.09	64.975	0.18
3252.00	28.360	61.300	2983.69	-110.96	469.38	998.83	1669141.23	604064.47	40°09'8.9039"N	80°41'0.9993"W	1103.62	64.830	0.12
3344.00	29.100	61.310	3064.36	-118.10	490.62	1037.62	1669180.02	604085.71	40°09'9.1188"N	80°41'0.5034"W	1147.76	64.694	0.80
3435.00	29.350	61.270	3143.78	-125.29	511.96	1076.59	1669218.99	604107.05	40°09'9.3348"N	80°41'0.0052"W	1192.12	64.567	0.28
3527.00	29.100	61.460	3224.07	-132.50	533.48	1116.01	1669258.41	604128.57	40°09'9.5526"N	80°40'59.5012"W	1236.97	64.451	0.29
3618.00	29.390	61.310	3303.47	-139.62	554.78	1155.04	1669297.44	604149.87	40°09'9.7681"N	80°40'59.0023"W	1281.37	64.345	0.33
3710.00	27.480	62.910	3384.37	-146.10	575.28	1193.75	1669336.14	604170.37	40°09'9.9757"N	80°40'58.5073"W	1325.13	64.270	2.23
3801.00	29.050	63.310	3464.51	-151.72	594.77	1232.18	1669374.58	604189.86	40°09'10.1733"N	80°40'58.0157"W	1368.22	64.234	1.74
3893.00	29.190	63.730	3544.88	-157.23	614.73	1272.25	1669414.65	604209.82	40°09'10.3757"N	80°40'57.5031"W	1412.98	64.211	0.27
3984.00	29.430	64.040	3624.24	-162.44	634.34	1312.25	1669454.65	604229.43	40°09'10.5747"N	80°40'56.9913"W	1457.53	64.201	0.31
4076.00	29.010	63.340	3704.53	-167.84	654.24	1352.51	1669494.91	604249.33	40°09'10.7766"N	80°40'56.4763"W	1502.44	64.186	0.59
4168.00	28.510	62.980	3785.18	-173.58	674.23	1392.01	1669534.40	604269.31	40°09'10.9792"N	80°40'55.9711"W	1546.70	64.157	0.58
4259.00	29.820	63.700	3864.64	-179.17	694.12	1431.64	1669574.04	604289.21	40°09'11.1810"N	80°40'55.4641"W	1591.04	64.134	1.49
4351.00	29.760	63.950	3944.48	-184.57	714.28	1472.66	1669615.05	604309.37	40°09'11.3855"N	80°40'54.9393"W	1636.75	64.125	0.15
4443.00	29.650	63.790	4024.39	-189.91	734.36	1513.59	1669655.98	604329.45	40°09'11.5892"N	80°40'54.4157"W	1682.33	64.118	0.15
4534.00	29.350	63.800	4103.60	-195.22	754.15	1553.80	1669696.19	604349.23	40°09'11.7900"N	80°40'53.9013"W	1727.14	64.110	0.33
4626.00	28.470	63.440	4184.13	-200.62	773.91	1593.64	1669736.03	604368.99	40°09'11.9904"N	80°40'53.3916"W	1771.62	64.098	0.98
4717.00	28.700	63.720	4264.04	-205.94	793.28	1632.64	1669775.02	604388.36	40°09'12.1869"N	80°40'52.8927"W	1815.16	64.085	0.29
4809.00	29.870	63.690	4344.28	-211.34	813.22	1672.98	1669815.37	604408.30	40°09'12.3891"N	80°40'52.3766"W	1860.16	64.076	1.27
4901.00	29.880	63.830	4424.05	-216.80	833.48	1714.08	1669856.47	604428.56	40°09'12.5947"N	80°40'51.8507"W	1905.98	64.069	0.08
4992.00	29.900	63.760	4502.95	-222.18	853.50	1754.77	1669897.16	604448.59	40°09'12.7979"N	80°40'51.3302"W	1951.33	64.062	0.04
5084.00	29.870	63.710	4582.72	-227.65	873.79	1795.88	1669938.26	604468.87	40°09'13.0036"N	80°40'50.8043"W	1997.17	64.055	0.04
5176.00	29.850	63.850	4662.50	-233.09	894.02	1836.97	1669979.36	604489.11	40°09'13.2090"N	80°40'50.2785"W	2042.97	64.049	0.08
5267.00	29.510	63.580	4741.56	-238.49	913.98	1877.37	1670019.75	604509.06	40°09'13.4114"N	80°40'49.7617"W	2088.03	64.041	0.40
5359.00	27.900	63.470	4822.25	-243.94	933.68	1916.92	1670059.31	604528.76	40°09'13.6111"N	80°40'49.2557"W	2132.22	64.031	1.75
5451.00	29.100	63.650	4903.10	-249.32	953.22	1956.23	1670098.61	604548.30	40°09'13.8094"N	80°40'48.7528"W	2176.11	64.021	1.31

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Slot	210H		

WELLPATH DATA (243 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]
5543.00	29.860	63.820	4983.19	-254.73	973.25	1996.83	1670139.21	604568.34	40°09'14.0126"N	80°40'48.2334"W	2221.39	64.015	0.83
5634.00	29.810	64.020	5062.13	-259.99	993.16	2037.49	1670179.87	604588.24	40°09'14.2146"N	80°40'47.7131"W	2266.66	64.014	0.12
5726.00	30.070	79.450	5141.97	-259.07	1007.42	2080.78	1670223.15	604602.50	40°09'14.3611"N	80°40'47.1582"W	2311.82	64.166	8.36
5818.00	31.160	95.240	5221.28	-245.57	1009.47	2127.21	1670269.59	604604.55	40°09'14.3874"N	80°40'46.5606"W	2354.58	64.613	8.80
5909.00	34.120	108.630	5298.00	-220.00	999.15	2174.92	1670317.29	604594.23	40°09'14.2916"N	80°40'45.9445"W	2393.44	65.326	8.56
6001.00	38.360	120.020	5372.27	-182.36	976.59	2224.16	1670366.54	604571.67	40°09'14.0750"N	80°40'45.3066"W	2429.12	66.295	8.63
6092.00	44.200	129.460	5440.69	-133.67	942.24	2273.19	1670415.57	604537.32	40°09'13.7420"N	80°40'44.6694"W	2460.74	67.486	9.37
6184.00	50.430	135.410	5503.07	-74.05	896.53	2322.92	1670465.30	604491.62	40°09'13.2968"N	80°40'44.0213"W	2489.93	68.896	8.27
6275.00	56.930	140.660	5556.96	-6.36	841.98	2371.79	1670514.16	604437.07	40°09'12.7641"N	80°40'43.3828"W	2516.81	70.455	8.52
6367.00	64.210	145.410	5602.15	69.98	777.96	2419.82	1670562.20	604373.05	40°09'12.1377"N	80°40'42.7535"W	2541.80	72.178	9.10
6459.00	71.030	151.440	5637.19	153.06	705.51	2464.22	1670606.59	604300.60	40°09'11.4276"N	80°40'42.1695"W	2563.23	74.023	9.57
6550.00	77.440	158.130	5661.93	240.10	626.34	2501.41	1670643.79	604221.43	40°09'10.6501"N	80°40'41.6772"W	2578.64	75.943	9.98
6642.00	85.160	160.180	5675.83	330.93	541.41	2533.73	1670676.10	604136.50	40°09'9.8151"N	80°40'41.2467"W	2590.93	77.938	8.68
6734.00	89.350	162.880	5680.24	422.79	454.28	2562.83	1670705.20	604049.37	40°09'8.9578"N	80°40'40.8573"W	2602.78	79.948	5.42
6825.00	89.480	162.880	5681.17	513.71	367.32	2589.62	1670731.99	603962.41	40°09'8.1020"N	80°40'40.4977"W	2615.54	81.927	0.14
6917.00	89.410	162.470	5682.06	605.65	279.49	2617.02	1670759.38	603874.59	40°09'7.2377"N	80°40'40.1301"W	2631.90	83.904	0.45
7009.00	89.420	162.380	5683.00	697.59	191.79	2644.79	1670787.16	603786.89	40°09'6.3747"N	80°40'39.7576"W	2651.74	85.852	0.10
7100.00	89.260	163.000	5684.05	788.53	104.92	2671.87	1670814.24	603700.02	40°09'5.5198"N	80°40'39.3943"W	2673.93	87.751	0.70
7192.00	89.350	163.020	5685.16	880.44	16.94	2698.75	1670841.12	603612.04	40°09'4.6539"N	80°40'39.0333"W	2698.80	89.640	0.10
7283.00	89.350	162.780	5686.20	971.36	-70.03	2725.50	1670867.87	603525.07	40°09'3.7980"N	80°40'38.6741"W	2726.40	91.472	0.26
7375.00	89.320	162.650	5687.26	1063.29	-157.87	2752.84	1670895.21	603437.23	40°09'2.9336"N	80°40'38.3073"W	2757.36	93.282	0.15
7466.00	89.380	162.660	5688.30	1154.23	-244.73	2779.97	1670922.33	603350.38	40°09'2.0788"N	80°40'37.9433"W	2790.72	95.031	0.07
7558.00	89.350	162.880	5689.32	1246.16	-332.59	2807.22	1670949.58	603262.52	40°09'1.2141"N	80°40'37.5776"W	2826.85	96.757	0.24
7649.00	89.600	162.790	5690.15	1337.08	-419.53	2834.07	1670976.44	603175.57	40°09'0.3585"N	80°40'37.2172"W	2864.95	98.420	0.29
7741.00	89.380	162.420	5690.97	1429.02	-507.32	2861.57	1671003.94	603087.79	40°08'59.4946"N	80°40'36.8482"W	2906.20	100.053	0.47
7833.00	89.850	162.380	5691.59	1520.97	-595.01	2889.39	1671031.76	603000.10	40°08'58.6316"N	80°40'36.4752"W	2950.02	101.636	0.51
7925.00	89.850	163.000	5691.83	1612.91	-682.85	2916.76	1671059.13	602912.27	40°08'57.7673"N	80°40'36.1079"W	2995.63	103.176	0.67
8016.00	89.880	163.060	5692.04	1703.83	-769.88	2943.32	1671085.69	602825.23	40°08'56.9107"N	80°40'35.7513"W	3042.35	104.658	0.07
8108.00	88.680	162.240	5693.20	1795.76	-857.69	2970.76	1671113.12	602737.43	40°08'56.0466"N	80°40'35.3832"W	3092.09	106.104	1.58
8199.00	89.080	162.210	5694.98	1886.71	-944.33	2998.53	1671140.89	602650.79	40°08'55.1941"N	80°40'35.0110"W	3143.72	107.481	0.44



Actual Wellpath Report

Roth OHI 210H awp Proj: 22115'

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REFERENCE WELLPATH IDENTIFICATION

Operator	EXPAND ENERGY	Well	Roth OHI 210H
Field	Ohio (NAD 27 SP)	API	47069003740000
Facility	Roth OHI Pad	Wellbore	Roth OHI 210H AWB
Slot	210H		

WELLPATH DATA (243 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]
8291.00	90.920	162.840	5694.98	1978.65	-1032.08	3026.16	1671168.52	602563.04	40°08'54.3305"N	80°40'34.6405"W	3197.31	108.832	2.11
8382.00	89.970	162.560	5694.27	2069.59	-1118.96	3053.22	1671195.58	602476.16	40°08'53.4756"N	80°40'34.2774"W	3251.80	110.127	1.09
8474.00	89.850	162.460	5694.41	2161.53	-1206.70	3080.87	1671223.23	602388.42	40°08'52.6121"N	80°40'33.9066"W	3308.76	111.389	0.17
8566.00	89.880	162.830	5694.63	2253.48	-1294.52	3108.31	1671250.67	602300.61	40°08'51.7479"N	80°40'33.5385"W	3367.10	112.610	0.40
8657.00	89.880	162.580	5694.82	2344.41	-1381.40	3135.36	1671277.72	602213.73	40°08'50.8929"N	80°40'33.1755"W	3426.19	113.778	0.27
8749.00	89.940	162.540	5694.97	2436.36	-1469.17	3162.94	1671305.29	602125.96	40°08'50.0291"N	80°40'32.8056"W	3487.50	114.915	0.08
8840.00	89.910	162.510	5695.09	2527.31	-1555.97	3190.26	1671332.62	602039.16	40°08'49.1750"N	80°40'32.4392"W	3549.48	116.000	0.05
8932.00	89.910	162.460	5695.23	2619.26	-1643.71	3217.95	1671360.31	601951.43	40°08'48.3116"N	80°40'32.0679"W	3613.44	117.058	0.05
9024.00	89.780	162.620	5695.48	2711.21	-1731.47	3245.55	1671387.91	601863.67	40°08'47.4480"N	80°40'31.6977"W	3678.53	118.079	0.22
9115.00	89.850	162.340	5695.77	2802.16	-1818.25	3272.95	1671415.30	601776.89	40°08'46.5940"N	80°40'31.3303"W	3744.09	119.054	0.32
9207.00	91.880	164.820	5694.38	2894.01	-1906.47	3298.95	1671441.30	601688.67	40°08'45.7256"N	80°40'30.9807"W	3810.21	120.024	3.48
9298.00	89.880	162.230	5692.99	2984.87	-1993.71	3324.75	1671467.11	601601.43	40°08'44.8669"N	80°40'30.6338"W	3876.71	120.949	3.60
9390.00	91.910	162.690	5691.55	3076.80	-2081.42	3352.47	1671494.83	601513.72	40°08'44.0038"N	80°40'30.2621"W	3946.06	121.835	2.26
9482.00	91.910	162.330	5688.48	3168.70	-2169.12	3380.11	1671522.46	601426.02	40°08'43.1408"N	80°40'29.8915"W	4016.24	122.690	0.39
9573.00	91.690	161.840	5685.62	3259.62	-2255.66	3408.08	1671550.44	601339.48	40°08'42.2892"N	80°40'29.5167"W	4086.94	123.499	0.59
9665.00	89.820	162.310	5684.41	3351.58	-2343.19	3436.39	1671578.75	601251.96	40°08'41.4280"N	80°40'29.1374"W	4159.25	124.289	2.10
9756.00	89.940	162.340	5684.60	3442.54	-2429.89	3464.02	1671606.38	601165.26	40°08'40.5748"N	80°40'28.7671"W	4231.29	125.048	0.14
9848.00	89.880	162.340	5684.75	3534.50	-2517.55	3491.93	1671634.29	601077.59	40°08'39.7122"N	80°40'28.3930"W	4304.84	125.790	0.07
9940.00	88.860	162.380	5685.76	3626.45	-2605.22	3519.81	1671662.16	600989.93	40°08'38.8495"N	80°40'28.0193"W	4379.07	126.507	1.11
10031.00	88.770	162.670	5687.64	3717.38	-2692.00	3547.13	1671689.48	600903.15	40°08'37.9955"N	80°40'27.6530"W	4452.98	127.196	0.33
10123.00	88.370	162.410	5689.94	3809.30	-2779.74	3574.73	1671717.08	600815.42	40°08'37.1321"N	80°40'27.2829"W	4528.31	127.869	0.52
10215.00	88.060	162.210	5692.80	3901.21	-2867.34	3602.67	1671745.02	600727.81	40°08'36.2701"N	80°40'26.9084"W	4604.44	128.516	0.40
10307.00	87.870	162.540	5696.07	3993.11	-2954.97	3630.51	1671772.86	600640.19	40°08'35.4078"N	80°40'26.5352"W	4681.07	129.143	0.41
10399.00	86.920	162.190	5700.25	4084.97	-3042.55	3658.35	1671800.70	600552.60	40°08'34.5459"N	80°40'26.1620"W	4758.22	129.749	1.10
10490.00	87.200	162.520	5704.92	4175.80	-3129.16	3685.90	1671828.25	600466.00	40°08'33.6937"N	80°40'25.7928"W	4835.03	130.330	0.48
10582.00	86.700	162.370	5709.81	4267.63	-3216.75	3713.61	1671855.95	600378.41	40°08'32.8318"N	80°40'25.4213"W	4913.08	130.899	0.57
10673.00	87.010	162.500	5714.81	4358.44	-3303.38	3741.03	1671883.38	600291.79	40°08'31.9793"N	80°40'25.0536"W	4990.75	131.445	0.37
10765.00	88.580	163.820	5718.34	4450.28	-3391.36	3767.66	1671910.01	600203.80	40°08'31.1133"N	80°40'24.6960"W	5069.18	131.991	2.23
10856.00	87.040	162.570	5721.82	4541.11	-3478.41	3793.95	1671936.29	600116.76	40°08'30.2566"N	80°40'24.3429"W	5147.17	132.516	2.18
10948.00	89.630	162.480	5724.50	4633.02	-3566.12	3821.56	1671963.91	600029.05	40°08'29.3935"N	80°40'23.9726"W	5227.00	133.020	2.82



Actual Wellpath Report

Roth OHI 210H awp Proj: 22115'

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REFERENCE WELLPATH IDENTIFICATION

Operator	EXPAND ENERGY	Well	Roth OHI 210H
Field	Ohio (NAD 27 SP)	API	47069003740000
Facility	Roth OHI Pad	Wellbore	Roth OHI 210H AWB
Slot	210H		

WELLPATH DATA (243 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]
11040.00	89.940	162.350	5724.84	4724.97	-3653.82	3849.35	1671991.70	599941.35	40°08'28.5304"N	80°40'23.6000"W	5307.34	133.507	0.37
11132.00	89.820	162.500	5725.03	4816.92	-3741.52	3877.13	1672019.48	599853.65	40°08'27.6674"N	80°40'23.2276"W	5388.06	133.980	0.21
11223.00	89.630	163.020	5725.47	4907.86	-3828.43	3904.10	1672046.45	599766.74	40°08'26.8121"N	80°40'22.8658"W	5467.99	134.439	0.61
11315.00	89.480	162.290	5726.18	4999.79	-3916.25	3931.53	1672073.87	599678.93	40°08'25.9479"N	80°40'22.4979"W	5549.23	134.888	0.81
11406.00	89.570	162.270	5726.94	5090.75	-4002.92	3959.23	1672101.57	599592.25	40°08'25.0949"N	80°40'22.1268"W	5630.18	135.314	0.10
11498.00	89.630	162.320	5727.58	5182.71	-4090.56	3987.20	1672129.55	599504.61	40°08'24.2325"N	80°40'21.7518"W	5712.31	135.733	0.08
11590.00	89.720	162.540	5728.10	5274.66	-4178.27	4014.98	1672157.32	599416.91	40°08'23.3694"N	80°40'21.3795"W	5794.65	136.142	0.26
11681.00	89.720	162.670	5728.55	5365.60	-4265.11	4042.18	1672184.52	599330.07	40°08'22.5149"N	80°40'21.0147"W	5876.26	136.537	0.14
11773.00	89.630	162.410	5729.07	5457.55	-4352.87	4069.78	1672212.13	599242.32	40°08'21.6512"N	80°40'20.6446"W	5959.08	136.925	0.30
11865.00	89.450	162.400	5729.81	5549.50	-4440.56	4097.59	1672239.93	599154.62	40°08'20.7883"N	80°40'20.2718"W	6042.26	137.300	0.20
11956.00	89.480	162.600	5730.66	5640.45	-4527.35	4124.96	1672267.30	599067.84	40°08'19.9343"N	80°40'19.9049"W	6124.71	137.663	0.22
12048.00	89.690	162.160	5731.32	5732.40	-4615.03	4152.80	1672295.14	598980.16	40°08'19.0714"N	80°40'19.5317"W	6208.40	138.018	0.53
12140.00	89.480	162.240	5731.99	5824.36	-4702.62	4180.93	1672323.27	598892.57	40°08'18.2095"N	80°40'19.1549"W	6292.44	138.361	0.24
12231.00	89.410	162.470	5732.87	5915.31	-4789.34	4208.51	1672350.85	598805.86	40°08'17.3562"N	80°40'18.7852"W	6375.68	138.693	0.26
12323.00	89.420	162.340	5733.81	6007.26	-4877.03	4236.32	1672378.66	598718.17	40°08'16.4933"N	80°40'18.4125"W	6460.01	139.022	0.14
12414.00	89.410	162.070	5734.74	6098.22	-4963.67	4264.13	1672406.47	598631.53	40°08'15.6407"N	80°40'18.0399"W	6543.76	139.335	0.30
12506.00	89.660	160.170	5735.49	6190.21	-5050.71	4293.90	1672436.23	598544.49	40°08'14.7844"N	80°40'17.6421"W	6629.27	139.630	2.08
12598.00	89.510	159.810	5736.15	6282.20	-5137.16	4325.38	1672467.71	598458.04	40°08'13.9343"N	80°40'17.2223"W	6715.60	139.903	0.42
12689.00	89.260	159.730	5737.13	6373.19	-5222.54	4356.84	1672499.18	598372.66	40°08'13.0947"N	80°40'16.8029"W	6801.25	140.164	0.29
12781.00	89.290	160.200	5738.29	6465.18	-5308.96	4388.36	1672530.69	598286.24	40°08'12.2447"N	80°40'16.3826"W	6887.87	140.423	0.51
12873.00	89.230	160.200	5739.48	6557.17	-5395.52	4419.52	1672561.85	598199.69	40°08'11.3935"N	80°40'15.9669"W	6974.51	140.679	0.07
12964.00	89.510	160.270	5740.48	6648.16	-5481.15	4450.29	1672592.62	598114.06	40°08'10.5512"N	80°40'15.5564"W	7060.32	140.926	0.32
13056.00	89.540	160.450	5741.25	6740.15	-5567.79	4481.21	1672623.54	598027.41	40°08'9.6991"N	80°40'15.1438"W	7147.14	141.171	0.20
13148.00	89.170	160.130	5742.28	6832.15	-5654.40	4512.24	1672654.57	597940.81	40°08'8.8473"N	80°40'14.7299"W	7234.12	141.410	0.53
13239.00	89.350	160.160	5743.46	6923.14	-5739.98	4543.14	1672685.47	597855.23	40°08'8.0056"N	80°40'14.3176"W	7320.35	141.639	0.20
13331.00	89.350	160.300	5744.50	7015.13	-5826.55	4574.26	1672716.59	597768.66	40°08'7.1541"N	80°40'13.9025"W	7407.60	141.866	0.15
13423.00	89.450	160.420	5745.46	7107.12	-5913.20	4605.18	1672747.51	597682.02	40°08'6.3019"N	80°40'13.4899"W	7494.90	142.089	0.17
13514.00	89.420	160.190	5746.36	7198.12	-5998.87	4635.84	1672778.17	597596.35	40°08'5.4593"N	80°40'13.0808"W	7581.39	142.304	0.25
13606.00	89.320	160.390	5747.37	7290.11	-6085.47	4666.87	1672809.20	597509.74	40°08'4.6075"N	80°40'12.6668"W	7668.94	142.516	0.24
13698.00	89.230	160.400	5748.54	7382.10	-6172.13	4697.74	1672840.07	597423.09	40°08'3.7552"N	80°40'12.2549"W	7756.54	142.724	0.10



Actual Wellpath Report

Roth OHI 210H awp Proj: 22115'

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REFERENCE WELLPATH IDENTIFICATION

Operator	EXPAND ENERGY	Well	Roth OHI 210H
Field	Ohio (NAD 27 SP)	API	47069003740000
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WELLPATH DATA (243 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]
13790.00	89.260	160.290	5749.75	7474.09	-6258.77	4728.68	1672871.01	597336.46	40°08'2.9031"N	80°40'11.8421"W	7844.27	142.928	0.12
13881.00	89.420	160.280	5750.80	7565.09	-6344.43	4759.38	1672901.70	597250.80	40°08'2.0606"N	80°40'11.4326"W	7931.17	143.124	0.18
13973.00	89.450	159.910	5751.70	7657.08	-6430.92	4790.70	1672933.02	597164.30	40°08'1.2099"N	80°40'11.0149"W	8019.20	143.316	0.40
14064.00	89.290	160.350	5752.71	7748.07	-6516.50	4821.62	1672963.95	597078.72	40°08'0.3683"N	80°40'10.6024"W	8106.35	143.502	0.51
14156.00	89.350	159.750	5753.80	7840.06	-6602.97	4853.01	1672995.34	596992.25	40°07'59.5178"N	80°40'10.1838"W	8194.57	143.685	0.66
14248.00	89.230	159.020	5754.94	7932.03	-6689.08	4885.40	1673027.73	596906.15	40°07'58.6712"N	80°40'9.7524"W	8283.17	143.857	0.80
14339.00	89.510	158.880	5755.94	8022.99	-6774.00	4918.08	1673060.41	596821.23	40°07'57.8362"N	80°40'9.3175"W	8371.06	144.019	0.34
14431.00	89.140	159.560	5757.02	8114.95	-6860.01	4950.72	1673093.05	596735.23	40°07'56.9905"N	80°40'8.8829"W	8459.87	144.183	0.84
14523.00	89.880	159.740	5757.81	8206.93	-6946.26	4982.71	1673125.04	596648.97	40°07'56.1423"N	80°40'8.4566"W	8548.57	144.347	0.83
14614.00	89.170	159.510	5758.56	8297.92	-7031.56	5014.40	1673156.72	596563.67	40°07'55.3035"N	80°40'8.0345"W	8636.38	144.506	0.82
14706.00	89.970	159.350	5759.25	8389.90	-7117.70	5046.72	1673189.04	596477.54	40°07'54.4565"N	80°40'7.6040"W	8725.31	144.662	0.89
14798.00	89.230	158.950	5759.90	8481.86	-7203.67	5079.46	1673221.78	596391.57	40°07'53.6112"N	80°40'7.1680"W	8814.41	144.812	0.91
14889.00	89.720	158.950	5760.73	8572.82	-7288.59	5112.15	1673254.47	596306.65	40°07'52.7763"N	80°40'6.7331"W	8902.67	144.955	0.54
14981.00	89.540	159.220	5761.32	8664.79	-7374.53	5144.99	1673287.31	596220.71	40°07'51.9313"N	80°40'6.2959"W	8991.92	145.098	0.35
15072.00	89.290	159.030	5762.25	8755.75	-7459.55	5177.41	1673319.73	596135.69	40°07'51.0953"N	80°40'5.8643"W	9080.22	145.237	0.35
15163.00	89.660	159.090	5763.09	8846.71	-7544.54	5209.93	1673352.25	596050.71	40°07'50.2597"N	80°40'5.4314"W	9168.61	145.373	0.41
15255.00	89.420	158.710	5763.82	8938.67	-7630.36	5243.05	1673385.37	595964.88	40°07'49.4159"N	80°40'4.9907"W	9258.08	145.506	0.49
15346.00	90.000	159.640	5764.29	9029.64	-7715.42	5275.40	1673417.72	595879.83	40°07'48.5796"N	80°40'4.5601"W	9346.53	145.638	1.20
15438.00	89.660	159.280	5764.56	9121.62	-7801.57	5307.68	1673450.00	595793.68	40°07'47.7324"N	80°40'4.1301"W	9435.89	145.771	0.54
15529.00	89.450	158.750	5765.27	9212.58	-7886.53	5340.27	1673482.59	595708.72	40°07'46.8971"N	80°40'3.6964"W	9524.49	145.897	0.63
15621.00	89.510	159.410	5766.10	9304.55	-7972.46	5373.12	1673515.43	595622.79	40°07'46.0522"N	80°40'3.2592"W	9614.08	146.022	0.72
15712.00	89.480	159.380	5766.90	9395.52	-8057.64	5405.14	1673547.46	595537.62	40°07'45.2146"N	80°40'2.8327"W	9702.63	146.146	0.05
15804.00	89.600	158.760	5767.64	9487.49	-8143.56	5438.01	1673580.32	595451.69	40°07'44.3697"N	80°40'2.3953"W	9792.32	146.266	0.69
15895.00	89.660	159.170	5768.23	9578.45	-8228.50	5470.67	1673612.98	595366.76	40°07'43.5347"N	80°40'1.9606"W	9881.11	146.382	0.46
15987.00	89.820	159.390	5768.65	9670.42	-8314.55	5503.22	1673645.53	595280.72	40°07'42.6886"N	80°40'1.5273"W	9970.81	146.500	0.30
16079.00	89.970	158.960	5768.81	9762.39	-8400.53	5535.93	1673678.24	595194.73	40°07'41.8431"N	80°40'1.0919"W	10060.59	146.615	0.50
16170.00	89.820	159.610	5768.98	9853.37	-8485.65	5568.11	1673710.43	595109.61	40°07'41.0061"N	80°40'0.6633"W	10149.39	146.728	0.73
16262.00	89.630	159.090	5769.42	9945.35	-8571.74	5600.56	1673742.87	595023.53	40°07'40.1596"N	80°40'0.2313"W	10239.19	146.840	0.60
16354.00	89.600	159.000	5770.04	10037.31	-8657.65	5633.46	1673775.77	594937.62	40°07'39.3149"N	80°39'59.7934"W	10329.12	146.948	0.10
16446.00	89.540	159.180	5770.73	10129.28	-8743.59	5666.29	1673808.60	594851.68	40°07'38.4699"N	80°39'59.3564"W	10419.08	147.055	0.21



Actual Wellpath Report

Roth OHI 210H awp Proj: 22115'

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REFERENCE WELLPATH IDENTIFICATION

Operator	EXPAND ENERGY	Well	Roth OHI 210H
Field	Ohio (NAD 27 SP)	API	47069003740000
Facility	Roth OHI Pad	Wellbore	Roth OHI 210H AWB
Slot	210H		

WELLPATH DATA (243 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]
16537.00	90.120	159.490	5771.00	10220.25	-8828.73	5698.41	1673840.72	594766.54	40°07'37.6327"N	80°39'58.9288"W	10508.02	147.160	0.72
16629.00	89.850	159.210	5771.03	10312.23	-8914.82	5730.85	1673873.16	594680.45	40°07'36.7861"N	80°39'58.4967"W	10597.96	147.265	0.42
16720.00	89.260	158.750	5771.73	10403.19	-8999.77	5763.49	1673905.80	594595.51	40°07'35.9510"N	80°39'58.0624"W	10687.08	147.364	0.82
16812.00	89.850	159.040	5772.45	10495.15	-9085.59	5796.62	1673938.93	594509.68	40°07'35.1071"N	80°39'57.6217"W	10777.23	147.462	0.71
16904.00	88.920	159.200	5773.43	10587.11	-9171.54	5829.40	1673971.71	594423.73	40°07'34.2620"N	80°39'57.1853"W	10867.34	147.560	1.03
16995.00	89.450	158.360	5774.73	10678.05	-9256.36	5862.34	1674004.65	594338.92	40°07'33.4281"N	80°39'56.7472"W	10956.61	147.653	1.09
17087.00	89.570	157.890	5775.52	10769.96	-9341.74	5896.62	1674038.92	594253.54	40°07'32.5889"N	80°39'56.2917"W	11047.09	147.739	0.53
17179.00	89.410	158.860	5776.33	10861.89	-9427.26	5930.52	1674072.82	594168.03	40°07'31.7481"N	80°39'55.8410"W	11137.51	147.827	1.07
17270.00	89.880	159.210	5776.90	10952.85	-9512.23	5963.08	1674105.38	594083.05	40°07'30.9127"N	80°39'55.4077"W	11226.79	147.917	0.64
17362.00	89.690	159.010	5777.24	11044.82	-9598.18	5995.88	1674138.19	593997.10	40°07'30.0675"N	80°39'54.9711"W	11317.05	148.007	0.30
17454.00	89.690	159.330	5777.74	11136.79	-9684.17	6028.60	1674170.90	593911.12	40°07'29.2221"N	80°39'54.5357"W	11407.33	148.097	0.35
17545.00	89.600	159.120	5778.31	11227.76	-9769.25	6060.87	1674203.18	593826.04	40°07'28.3855"N	80°39'54.1060"W	11496.63	148.184	0.25
17637.00	89.380	159.330	5779.12	11319.73	-9855.26	6093.50	1674235.81	593740.03	40°07'27.5397"N	80°39'53.6717"W	11586.93	148.272	0.33
17728.00	89.660	159.090	5779.89	11410.70	-9940.34	6125.80	1674268.10	593654.96	40°07'26.7032"N	80°39'53.2417"W	11676.29	148.356	0.41
17820.00	89.780	159.400	5780.34	11502.68	-10026.36	6158.40	1674300.71	593568.93	40°07'25.8573"N	80°39'52.8077"W	11766.64	148.441	0.36
17912.00	89.570	158.950	5780.86	11594.65	-10112.35	6191.11	1674333.41	593482.94	40°07'25.0118"N	80°39'52.3724"W	11857.04	148.524	0.54
18003.00	89.540	158.940	5781.56	11685.61	-10197.27	6223.80	1674366.10	593398.02	40°07'24.1768"N	80°39'51.9374"W	11946.55	148.603	0.03
18095.00	89.420	159.210	5782.40	11777.57	-10283.20	6256.66	1674398.96	593312.10	40°07'23.3319"N	80°39'51.5002"W	12037.03	148.682	0.32
18187.00	89.290	159.430	5783.44	11869.54	-10369.27	6289.15	1674431.45	593226.03	40°07'22.4856"N	80°39'51.0677"W	12127.45	148.762	0.28
18278.00	89.510	159.260	5784.39	11960.51	-10454.42	6321.24	1674463.54	593140.89	40°07'21.6483"N	80°39'50.6403"W	12216.91	148.841	0.31
18370.00	89.350	159.370	5785.30	12052.49	-10540.48	6353.74	1674496.04	593054.82	40°07'20.8021"N	80°39'50.2077"W	12307.39	148.919	0.21
18462.00	89.410	158.930	5786.30	12144.45	-10626.45	6386.48	1674528.78	592968.85	40°07'19.9567"N	80°39'49.7719"W	12397.93	148.994	0.48
18553.00	89.230	159.530	5787.38	12235.42	-10711.53	6418.75	1674561.05	592883.78	40°07'19.1201"N	80°39'49.3424"W	12487.48	149.068	0.69
18645.00	89.290	159.530	5788.57	12327.39	-10797.71	6450.92	1674593.22	592797.59	40°07'18.2726"N	80°39'48.9140"W	12577.96	149.144	0.07
18737.00	89.480	159.110	5789.55	12419.36	-10883.78	6483.41	1674625.70	592711.53	40°07'17.4263"N	80°39'48.4815"W	12668.52	149.218	0.50
18828.00	89.570	159.190	5790.31	12510.33	-10968.82	6515.80	1674658.09	592626.49	40°07'16.5902"N	80°39'48.0504"W	12758.16	149.288	0.13
18919.00	89.350	159.070	5791.17	12601.30	-11053.84	6548.21	1674690.51	592541.47	40°07'15.7541"N	80°39'47.6190"W	12847.82	149.358	0.28
19011.00	89.410	159.260	5792.16	12693.26	-11139.82	6580.93	1674723.23	592455.49	40°07'14.9087"N	80°39'47.1835"W	12938.48	149.427	0.22
19103.00	89.820	159.510	5792.78	12785.24	-11225.93	6613.33	1674755.62	592369.39	40°07'14.0620"N	80°39'46.7523"W	13029.11	149.497	0.52
19194.00	89.450	159.510	5793.36	12876.22	-11311.17	6645.18	1674787.47	592284.15	40°07'13.2238"N	80°39'46.3281"W	13118.73	149.566	0.41



Actual Wellpath Report

Roth OHI 210H awp Proj: 22115'

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REFERENCE WELLPATH IDENTIFICATION

Operator	EXPAND ENERGY	Well	Roth OHI 210H
Field	Ohio (NAD 27 SP)	API	47069003740000
Facility	Roth OHI Pad	Wellbore	Roth OHI 210H AWB
Slot	210H		

WELLPATH DATA (243 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]
19286.00	89.570	159.620	5794.15	12968.20	-11397.38	6677.30	1674819.59	592197.94	40°07'12.3760"N	80°39'45.9003"W	13209.34	149.636	0.18
19378.00	90.250	159.760	5794.29	13060.19	-11483.66	6709.23	1674851.52	592111.66	40°07'11.5275"N	80°39'45.4749"W	13299.93	149.705	0.75
19469.00	89.350	159.050	5794.61	13151.17	-11568.84	6741.24	1674883.53	592026.48	40°07'10.6899"N	80°39'45.0488"W	13389.64	149.770	1.26
19561.00	89.480	158.750	5795.55	13243.12	-11654.67	6774.36	1674916.65	591940.66	40°07'9.8460"N	80°39'44.6082"W	13480.48	149.832	0.36
19653.00	89.350	159.120	5796.49	13335.08	-11740.51	6807.43	1674949.71	591854.81	40°07'9.0020"N	80°39'44.1684"W	13571.32	149.894	0.43
19744.00	89.450	159.340	5797.44	13426.05	-11825.60	6839.69	1674981.98	591769.73	40°07'8.1653"N	80°39'43.7389"W	13661.12	149.956	0.27
19836.00	89.260	159.110	5798.48	13518.02	-11911.61	6872.32	1675014.61	591683.72	40°07'7.3196"N	80°39'43.3046"W	13751.92	150.017	0.32
19928.00	89.230	159.210	5799.69	13609.98	-11997.58	6905.05	1675047.34	591597.75	40°07'6.4742"N	80°39'42.8690"W	13842.75	150.078	0.11
20020.00	89.600	159.080	5800.63	13701.95	-12083.55	6937.80	1675080.09	591511.78	40°07'5.6289"N	80°39'42.4332"W	13933.60	150.138	0.43
20111.00	89.260	159.120	5801.53	13792.91	-12168.56	6970.26	1675112.55	591426.78	40°07'4.7930"N	80°39'42.0013"W	14023.49	150.196	0.38
20203.00	89.350	158.870	5802.65	13884.87	-12254.44	7003.24	1675145.52	591340.90	40°07'3.9486"N	80°39'41.5626"W	14114.41	150.253	0.29
20294.00	89.540	159.110	5803.53	13975.83	-12339.38	7035.86	1675178.15	591255.95	40°07'3.1134"N	80°39'41.1286"W	14204.36	150.308	0.34
20386.00	89.410	159.010	5804.37	14067.79	-12425.30	7068.74	1675211.02	591170.04	40°07'2.2686"N	80°39'40.6911"W	14295.29	150.365	0.18
20478.00	89.320	159.060	5805.39	14159.75	-12511.21	7101.66	1675243.94	591084.13	40°07'1.4239"N	80°39'40.2532"W	14386.24	150.420	0.11
20570.00	89.290	159.070	5806.51	14251.71	-12597.13	7134.53	1675276.81	590998.21	40°07'0.5791"N	80°39'39.8158"W	14477.19	150.474	0.03
20661.00	89.450	160.300	5807.51	14342.69	-12682.46	7166.12	1675308.40	590912.88	40°06'59.7399"N	80°39'39.3951"W	14567.02	150.532	1.36
20753.00	89.350	158.970	5808.47	14434.67	-12768.70	7198.13	1675340.41	590826.64	40°06'58.8918"N	80°39'38.9687"W	14657.86	150.589	1.45
20844.00	89.600	159.260	5809.31	14525.64	-12853.72	7230.57	1675372.85	590741.63	40°06'58.0558"N	80°39'38.5371"W	14747.86	150.641	0.42
20936.00	89.510	159.900	5810.02	14617.62	-12939.94	7262.67	1675404.95	590655.41	40°06'57.2080"N	80°39'38.1096"W	14838.74	150.696	0.70
21028.00	89.380	159.250	5810.91	14709.60	-13026.15	7294.77	1675437.05	590569.20	40°06'56.3602"N	80°39'37.6821"W	14929.64	150.751	0.72
21119.00	89.320	158.670	5811.94	14800.56	-13111.08	7327.44	1675469.72	590484.28	40°06'55.5251"N	80°39'37.2475"W	15019.71	150.800	0.64
21211.00	89.420	159.190	5812.96	14892.51	-13196.92	7360.51	1675502.79	590398.43	40°06'54.6811"N	80°39'36.8076"W	15110.79	150.850	0.58
21303.00	89.350	159.070	5813.94	14984.47	-13282.88	7393.29	1675535.56	590312.48	40°06'53.8359"N	80°39'36.3715"W	15201.83	150.900	0.15
21395.00	89.660	159.040	5814.74	15076.44	-13368.80	7426.17	1675568.45	590226.56	40°06'52.9911"N	80°39'35.9340"W	15292.90	150.948	0.34
21486.00	90.030	158.990	5814.98	15167.40	-13453.76	7458.76	1675601.04	590141.60	40°06'52.1557"N	80°39'35.5005"W	15383.00	150.996	0.41
21578.00	90.060	159.080	5814.91	15259.37	-13539.67	7491.68	1675633.95	590055.69	40°06'51.3109"N	80°39'35.0626"W	15474.10	151.044	0.10
21670.00	90.030	158.110	5814.84	15351.31	-13625.32	7525.25	1675667.53	589970.04	40°06'50.4688"N	80°39'34.6162"W	15565.31	151.088	1.05
21761.00	90.250	158.880	5814.62	15442.25	-13709.99	7558.61	1675700.89	589885.38	40°06'49.6365"N	80°39'34.1729"W	15655.55	151.131	0.88
21853.00	90.060	159.200	5814.37	15534.21	-13795.90	7591.52	1675733.80	589799.47	40°06'48.7917"N	80°39'33.7350"W	15746.68	151.177	0.40
21945.00	90.180	158.740	5814.18	15626.18	-13881.77	7624.54	1675766.81	589713.60	40°06'47.9474"N	80°39'33.2959"W	15837.84	151.222	0.52



Actual Wellpath Report

Roth OHI 210H awp Proj: 22115'

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REFERENCE WELLPATH IDENTIFICATION

Operator	EXPAND ENERGY	Well	Roth OHI 210H
Field	Ohio (NAD 27 SP)	API	47069003740000
Facility	Roth OHI Pad	Wellbore	Roth OHI 210H AWB
Slot	210H		

WELLPATH DATA (243 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]
22037.00	89.940	158.540	5814.08	15718.12	-13967.45	7658.05	1675800.32	589627.92	40°06'47.1050"N	80°39'32.8504"W	15929.07	151.265	0.34
22090.00	90.030	159.120	5814.09	15771.10	-14016.87	7677.19	1675819.46	589578.50	40°06'46.6191"N	80°39'32.5959"W	15981.61	151.290	1.11
22115.00‡	90.030	159.120	5814.08	15796.09	-14040.23	7686.10	1675828.37	589555.14	40°06'46.3894"N	80°39'32.4773"W	16006.38	151.302	0.00

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Actual Wellpath Report

Roth OHI 210H awp Proj: 22115'

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REFERENCE WELLPATH IDENTIFICATION

Operator	EXPAND ENERGY	Well	Roth OHI 210H
Field	Ohio (NAD 27 SP)	API	47069003740000
Facility	Roth OHI Pad	Wellbore	Roth OHI 210H AWB
Slot	210H		

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Roth OHI 210H LP rev 1	5675.00	498.55	2541.20	1670683.57	604093.65	40°09'9.3925"N	80°40'41.1434"W	point
Roth OHI 210H p1	5719.90	-4634.19	4121.66	1672264.00	598961.00	40°08'18.8781"N	80°40'19.9294"W	point
Roth OHI 210H p3	5742.81	-7197.03	5102.30	1673244.62	596398.21	40°07'53.6797"N	80°40'6.8752"W	point
Roth OHI 210H p5	5752.57	-8297.50	5493.85	1673636.17	595297.76	40°07'42.8558"N	80°40'1.6506"W	point
Roth OHI 210H p7	5784.03	-11821.77	6817.81	1674960.10	591773.56	40°07'8.2004"N	80°39'44.0211"W	point
Roth OHI 210H BHL rev 1	5804.00	-14049.03	7663.40	1675805.67	589546.34	40°06'46.2996"N	80°39'32.7680"W	point

WELLPATH COMPOSITION - Ref Wellbore: Roth OHI 210H AWB Ref Wellpath: Roth OHI 210H awp Proj: 22115'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
26.00	412.00	OWSG MWD rev2 + IFR1 + Multi-Station Correction	1 Total MWD HRGM IFR-MSA 17.5" 201' - 412'	Roth OHI 210H AWB	3/17/2025
412.00	2049.00	OWSG MWD rev2 + IFR1 + Multi-Station Correction	2 Total MWD HRGM IFR-MSA 12.25" 503' - 2049'	Roth OHI 210H AWB	3/17/2025
2049.00	22115.00	OWSG MWD rev2 + IFR1 + Multi-Station Correction	3 BH MWD ATC IFR-MSA 8.5" 2153' - 22090'	Roth OHI 210H AWB	3/17/2025

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