

# SOUTHWESTERN ENERGY

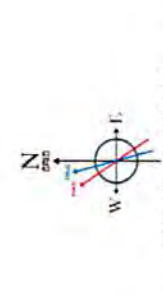
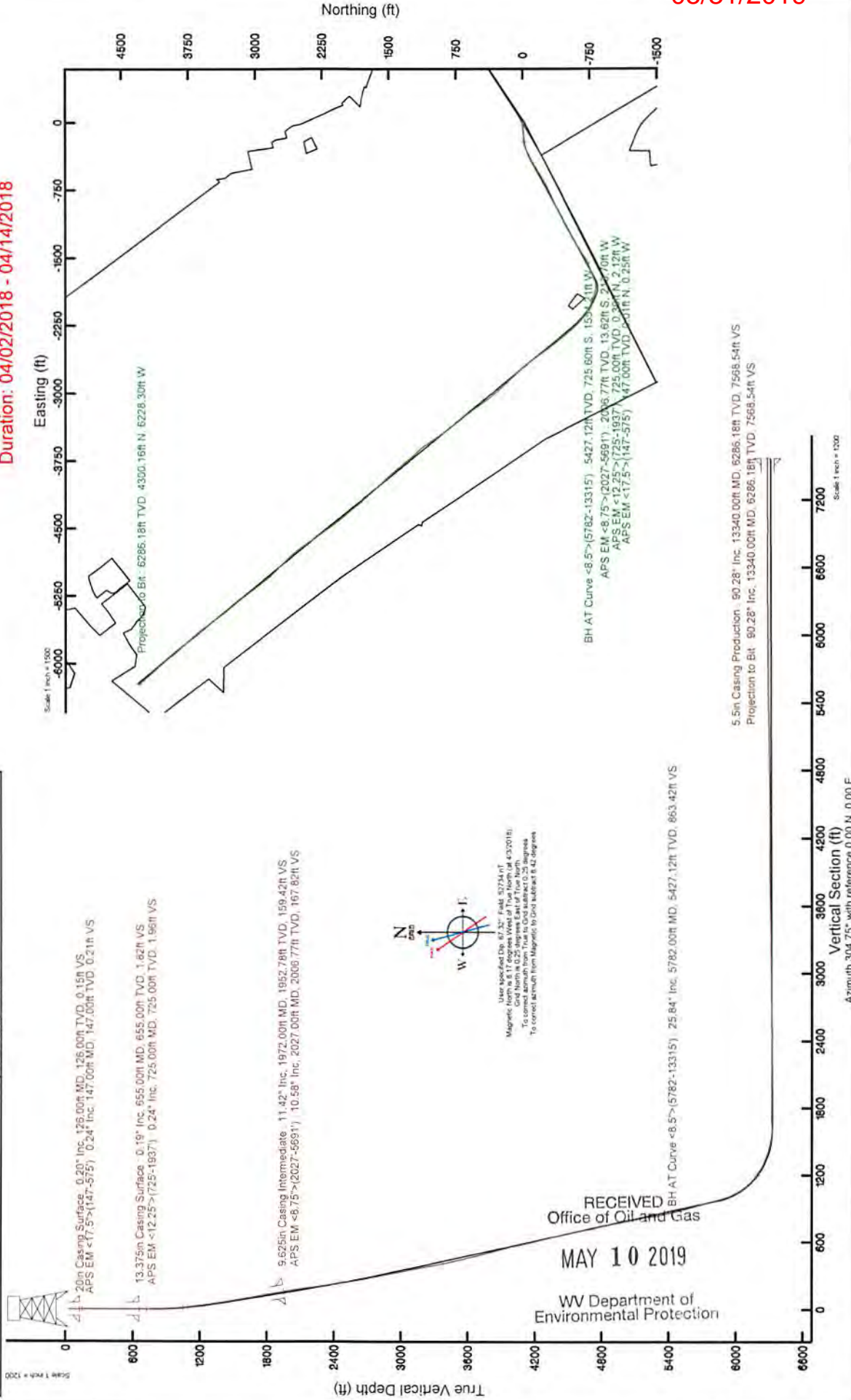
Location: Ohio County, WV  
 Field: Ohio  
 Facility: Brian Dykko OHI 201H PWB

Grid System: NAD83 (UTM Zone 17 North, US feet)
* - Wellbore was transformed from a different geoid datum.
Measured depths are referenced to SDC 42 (RKB)
North Reference: Grid north
Scale: True distance
SDC 42 (RKB) to Mean Sea Level: 1248.4 feet
Mean Sea Level to Ground level (At Slot Slot 201H): -1222.4 feet
Coordinates are in feet referenced to Slot
Created by: thomazac on 2018-04-26
Database: WA_Pennsylvania



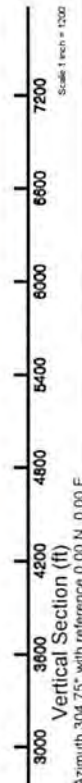
Location Information			
Facility Name	Grid East (US ft)	Grid North (US ft)	Longitude
Brian Dykko OHI Pad	1750181.170	14537893.350	80°35'28.383"W
Slot	Local E (ft)	Local N (ft)	Local S (ft)
Slot 201H	9.00	-31.62	-1750149.500
SDC 42 (RKB) to Ground level (At Slot Slot 201H)	-14537902.440	26ft	
Mean Sea Level to Mean Sea Level	-1222.4ft	1248.4ft	

API: 47-069-00251-0000  
 Job #: 9096878  
 Rig: SDC 42  
 Duration: 04/02/2018 - 04/14/2018



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5.5in Casing Production: 90.28° Inc, 13340.00ft MD, 6286.18ft TVD, 7568.54ft VS  
 Projection to BH: 90.28° Inc, 13340.00ft MD, 6286.18ft TVD, 7568.54ft VS



Azimuth 304.75° with reference 0.00 N, 0.00 E



### REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot 201H
Area	Ohio County, WV	Well	Brian Dytko OHI 201H
Field	Ohio	Wellbore	Brian Dytko OHI 201H AWB
Facility	Brian Dytko OHI Pad		

### REPORT SETUP INFORMATION

Projection System	NAD83 / UTM Zone 17 North, US feet	Software System	WellArchitect® 5.0
North Reference	Grid	User	Thomsuzc
Scale	0.999614	Report Generated	4/26/2018 at 8:14:26 AM
Convergence at slot	0.26° East	Database/Source file	WA_Pennsylvania/Brian_Dytko_OHI_201H_AWP_Proj_13340_MD.xml

### WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	9.09	-31.62	1750149.56	14537902.44	40°01'48.032"N	80°36'28.789"W
Facility Reference Pt			1750181.17	14537893.35	40°01'47.941"N	80°36'28.383"W
Field Reference Pt			0.00	0.00	0°00'00.000"	85°29'19.478"W

### WELLPATH DATUM

Calculation method	Minimum curvature	SDC 42 (RKB) to Facility Vertical Datum	1248.40ft
Horizontal Reference Pt	Slot	SDC 42 (RKB) to Mean Sea Level	1248.40ft
Vertical Reference Pt	SDC 42 (RKB)	SDC 42 (RKB) to Ground Level at Slot (Slot 201H)	26.00ft
MD Reference Pt	SDC 42 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	304.75°

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05/31/2019



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Area	Ohio County, WV	Well	Brian Dytko OHI 201H
Field	Ohio	Wellbore	Brian Dytko OHI 201H AWB
Facility	Brian Dytko OHI Pad		

## WELLPATH DATA (163 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)
0.00H	0.000	272.220	0.00	0.00	0.00	0.00	1750149.56	14537902.44	40°01'48.032"N	80°36'28.789"W	0.00	0.000	0.00	0.00	0.00
26.00	0.000	272.220	26.00	0.00	0.00	0.00	1750149.56	14537902.44	40°01'48.032"N	80°36'28.789"W	0.00	0.000	0.00	0.00	0.00
147.00	0.240	272.220	147.00	0.21	0.01	-0.25	1750149.31	14537902.45	40°01'48.033"N	80°36'28.792"W	0.25	272.220	0.20	0.20	-72.55
238.00	0.270	288.450	328.00	0.59	0.12	-0.63	1750148.93	14537902.56	40°01'48.034"N	80°36'28.797"W	0.64	280.693	0.13	0.03	28.84
329.00	0.180	303.650	329.00	0.94	0.30	-0.94	1750148.62	14537902.74	40°01'48.035"N	80°36'28.801"W	0.99	287.748	0.10	-0.10	5.70
411.00	0.120	282.300	411.00	1.15	0.39	-1.13	1750148.43	14537902.83	40°01'48.036"N	80°36'28.804"W	1.20	289.048	0.10	-0.07	-26.04
493.00	0.190	278.540	493.00	1.35	0.43	-1.35	1750148.21	14537902.87	40°01'48.037"N	80°36'28.806"W	1.42	287.636	0.09	0.09	-4.59
566.00	0.200	273.110	566.00	1.57	0.45	-1.60	1750147.96	14537902.89	40°01'48.037"N	80°36'28.810"W	1.66	285.872	0.03	0.01	-7.44
575.00	0.190	293.220	575.00	1.60	0.46	-1.63	1750147.94	14537902.90	40°01'48.037"N	80°36'28.810"W	1.69	285.819	0.76	-0.11	223.44
725.00	0.240	237.630	725.00	1.95	0.39	-2.12	1750147.44	14537902.83	40°01'48.036"N	80°36'28.816"W	2.16	280.437	0.14	0.03	-37.06
772.00	0.780	278.440	771.99	2.29	0.38	-2.52	1750147.04	14537902.82	40°01'48.036"N	80°36'28.822"W	2.55	278.682	1.32	1.15	86.83
855.00	2.660	257.250	854.95	4.10	0.04	-4.96	1750144.61	14537902.48	40°01'48.033"N	80°36'28.853"W	4.96	270.491	2.35	2.27	-25.53
954.00	5.360	249.280	953.70	8.27	-2.10	-11.52	1750138.04	14537900.34	40°01'48.012"N	80°36'29.937"W	11.71	259.667	2.78	2.73	-8.05
1020.00	6.810	261.300	1019.33	12.86	-3.78	-18.28	1750131.29	14537898.66	40°01'47.996"N	80°36'29.024"W	18.66	258.303	2.91	2.20	18.21
1105.00	8.560	265.300	1103.57	21.40	-5.06	-29.56	1750120.01	14537897.38	40°01'47.984"N	80°36'29.169"W	29.99	260.279	2.15	2.06	4.71
1188.00	9.940	263.760	1185.48	31.58	-6.35	-42.84	1750106.74	14537896.09	40°01'47.972"N	80°36'29.340"W	43.31	261.570	1.69	1.66	-1.86
1272.00	11.130	264.860	1268.07	43.27	-7.86	-58.12	1750091.46	14537894.58	40°01'47.957"N	80°36'29.537"W	58.65	262.295	1.44	1.42	1.31
1354.00	10.780	264.370	1348.57	55.19	-9.32	-73.64	1750075.95	14537893.12	40°01'47.943"N	80°36'29.736"W	74.23	262.793	0.44	-0.43	-0.60
1437.00	10.920	267.660	1430.09	67.37	-10.41	-89.22	1750060.38	14537892.04	40°01'47.933"N	80°36'29.937"W	89.82	263.346	0.76	0.17	3.96
1522.00	12.610	267.090	1513.30	81.14	-11.21	-106.53	1750043.07	14537891.24	40°01'47.926"N	80°36'30.159"W	107.12	263.994	1.99	1.99	-0.67
1604.00	12.570	268.490	1593.33	95.42	-11.90	-124.39	1750025.22	14537890.55	40°01'47.920"N	80°36'30.389"W	124.96	264.537	0.38	-0.05	1.71
1689.00	12.300	268.470	1676.34	110.18	-12.38	-142.69	1750006.93	14537890.06	40°01'47.916"N	80°36'30.624"W	143.22	265.040	0.32	-0.32	-0.02
1770.00	12.660	269.660	1755.42	124.40	-12.67	-160.19	1749989.44	14537889.78	40°01'47.914"N	80°36'30.849"W	160.69	265.479	0.55	0.44	1.47
1854.00	12.540	269.490	1837.40	139.38	-12.80	-178.51	1749971.12	14537889.64	40°01'47.914"N	80°36'31.085"W	178.97	265.898	0.15	-0.14	-0.20
1937.00	11.960	268.820	1918.51	153.70	-13.06	-196.12	1749953.52	14537889.39	40°01'47.912"N	80°36'31.311"W	196.55	266.191	0.72	-0.70	-0.81
2027.00	10.580	267.410	2006.77	167.82	-13.62	-213.70	1749935.95	14537888.82	40°01'47.907"N	80°36'31.537"W	214.13	266.352	1.56	-1.53	-0.57
2110.00	10.240	262.070	2088.41	179.30	-14.99	-228.62	1749921.03	14537887.46	40°01'47.894"N	80°36'31.729"W	229.11	266.250	1.23	-0.41	-0.43
2193.00	11.960	254.080	2169.86	190.17	-18.36	-244.19	1749905.46	14537884.08	40°01'47.862"N	80°36'31.929"W	244.88	265.699	2.78	2.07	-0.63
2275.00	13.510	260.360	2249.84	201.14	-23.91	-261.39	1749888.27	14537878.54	40°01'47.807"N	80°36'32.151"W	262.48	264.773	2.14	1.89	-0.34
2359.00	15.250	248.960	2331.20	213.05	-31.18	-280.94	1749868.73	14537871.27	40°01'47.737"N	80°36'32.402"W	282.67	263.667	2.11	2.07	-0.97



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Area	Ohio County, WV	Well	Brian Dytko OHI 201H
Field	Ohio	Wellbore	Brian Dytko OHI 201H AWB
Facility	Brian Dytko OHI Pad		

## WELLPATH DATA (163 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]
2443.00	16.940	246.060	2411.91	225.63	-40.11	-302.44	1749847.24	14537862.34	40°01'47.649"N	80°36'32.679"W	305.09	262.445	2.23	2.01	-3.45
2528.00	18.160	243.750	2492.95	238.49	-50.99	-325.64	1749824.05	14537851.46	40°01'47.543"N	80°36'32.978"W	329.61	261.100	1.65	1.44	-2.72
2612.00	19.730	244.550	2572.40	251.89	-62.88	-350.18	1749799.51	14537839.59	40°01'47.426"N	80°36'33.294"W	355.78	259.821	1.89	1.87	-0.95
2697.00	21.620	244.290	2651.92	266.74	-75.84	-377.25	1749772.46	14537826.63	40°01'47.299"N	80°36'33.643"W	384.80	258.633	2.23	2.22	-0.31
2780.00	23.560	241.580	2728.55	281.77	-90.37	-405.62	1749744.10	14537812.11	40°01'47.157"N	80°36'34.009"W	415.56	257.440	2.65	2.34	-3.27
2865.00	24.850	240.010	2806.08	297.05	-107.38	-436.03	1749713.70	14537795.10	40°01'46.990"N	80°36'34.400"W	449.06	256.165	1.70	1.52	-1.85
2947.00	25.460	240.280	2880.30	312.00	-124.73	-466.26	1749683.48	14537777.76	40°01'46.820"N	80°36'34.790"W	482.65	255.023	0.76	0.74	0.33
3031.00	24.380	238.800	2956.48	326.85	-142.66	-496.77	1749652.98	14537759.83	40°01'46.644"N	80°36'35.183"W	516.85	253.977	1.48	-1.29	-1.76
3113.00	25.650	238.230	3030.79	340.82	-160.78	-526.34	1749623.43	14537741.73	40°01'46.466"N	80°36'35.564"W	550.34	253.014	1.58	1.55	-0.70
3196.00	26.540	239.110	3105.33	355.63	-179.76	-557.52	1749592.25	14537722.75	40°01'46.280"N	80°36'35.966"W	585.78	252.130	1.17	1.07	1.06
3275.00	26.030	237.880	3176.16	369.72	-198.03	-587.35	1749562.44	14537704.48	40°01'46.101"N	80°36'36.351"W	619.84	251.368	0.94	-0.65	-1.56
3358.00	24.940	237.350	3251.08	383.59	-217.16	-617.51	1749532.29	14537685.37	40°01'45.913"N	80°36'36.740"W	654.58	250.625	1.34	-1.31	-0.64
3440.00	25.420	240.250	3325.29	397.82	-235.22	-647.35	1749502.47	14537667.31	40°01'45.736"N	80°36'37.124"W	688.76	250.031	1.61	0.59	3.54
3525.00	25.510	242.110	3402.03	414.08	-252.83	-679.36	1749470.46	14537649.70	40°01'45.563"N	80°36'37.537"W	724.89	249.587	0.95	0.11	2.19
3608.00	25.360	243.160	3476.99	430.75	-269.22	-711.02	1749438.82	14537633.32	40°01'45.403"N	80°36'37.945"W	760.28	249.261	0.57	-0.18	1.27
3690.00	25.340	243.880	3551.09	447.65	-284.87	-742.44	1749407.40	14537617.68	40°01'45.249"N	80°36'38.349"W	795.22	249.008	0.38	-0.02	0.88
3777.00	25.900	245.440	3629.54	466.41	-300.97	-776.44	1749373.42	14537601.59	40°01'45.092"N	80°36'38.787"W	832.73	248.812	1.01	0.64	1.79
3860.00	25.630	245.520	3704.29	484.85	-315.94	-809.27	1749340.61	14537586.62	40°01'44.945"N	80°36'39.210"W	868.75	248.674	0.33	-0.33	0.10
3944.00	26.850	245.840	3779.63	503.94	-331.23	-843.11	1749306.78	14537571.33	40°01'44.796"N	80°36'39.646"W	905.84	248.552	1.46	1.45	0.38
4026.00	27.040	246.030	3852.73	523.18	-346.39	-877.04	1749272.86	14537556.19	40°01'44.647"N	80°36'40.083"W	942.96	248.449	0.25	0.23	0.23
4111.00	27.880	245.160	3928.15	543.27	-362.58	-912.73	1749237.19	14537540.00	40°01'44.489"N	80°36'40.543"W	982.11	248.334	1.10	0.99	-1.02
4193.00	25.760	243.190	4001.33	561.46	-378.68	-946.04	1749203.89	14537523.91	40°01'44.331"N	80°36'40.972"W	1019.01	248.185	2.80	-2.59	-2.40
4276.00	25.110	242.310	4076.28	578.20	-395.00	-977.73	1749172.21	14537507.60	40°01'44.171"N	80°36'41.380"W	1054.50	248.002	0.91	-0.78	-1.06
4360.00	25.780	242.170	4152.14	594.86	-411.81	-1009.66	1749140.29	14537490.79	40°01'44.007"N	80°36'41.792"W	1090.41	247.811	0.80	0.80	-0.17
4443.00	27.770	243.050	4226.23	612.34	-429.00	-1042.86	1749107.10	14537473.61	40°01'43.838"N	80°36'42.219"W	1127.65	247.640	2.44	2.40	1.06
4526.00	29.410	241.810	4299.11	630.78	-447.39	-1078.06	1749071.91	14537456.23	40°01'43.658"N	80°36'42.673"W	1167.21	247.462	2.10	1.98	-0.19
4609.00	27.450	240.370	4372.10	648.32	-466.48	-1112.66	1749037.33	14537436.15	40°01'43.471"N	80°36'43.119"W	1206.49	247.254	2.50	-2.36	-0.73
4692.00	26.550	241.320	4446.05	664.89	-484.84	-1145.56	1749004.44	14537417.79	40°01'43.291"N	80°36'43.543"W	1243.94	247.060	1.20	-1.08	0.34
4774.00	26.170	239.060	4519.53	680.53	-502.93	-1177.15	1748972.87	14537399.71	40°01'43.113"N	80°36'43.950"W	1280.09	246.866	1.31	-0.46	-0.76
4858.00	25.100	239.100	4595.26	695.51	-521.60	-1208.33	1748941.70	14537381.04	40°01'42.930"N	80°36'44.352"W	1316.10	246.651	1.27	-1.27	0.25



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Facility	Brian Dytko OHI Pad		

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4941.00	24.730	240.080	4670.53	710.19	-539.30	-1238.48	1748911.56	14537363.35	40°01'42.757"N	80°36'44.740"W	1350.81	246.469	0.67	-0.45	1.18
5024.00	26.330	243.400	4745.43	726.45	-556.21	-1269.99	1748880.06	14537346.45	40°01'42.591"N	80°36'45.146"W	1386.45	246.348	2.59	1.93	4.00
5107.00	27.510	241.050	4819.44	743.77	-573.73	-1303.22	1748846.84	14537328.94	40°01'42.419"N	80°36'45.574"W	1423.92	246.239	1.91	1.42	-2.83
5190.00	26.320	238.950	4893.45	759.80	-592.50	-1335.76	1748812.32	14537310.17	40°01'42.235"N	80°36'45.994"W	1461.27	246.080	1.83	-1.43	-2.53
5272.00	27.230	237.740	4966.66	774.58	-611.89	-1367.20	1748782.89	14537290.79	40°01'42.045"N	80°36'46.399"W	1497.88	245.889	1.29	1.11	-1.48
5356.00	26.550	237.850	5041.57	789.45	-632.14	-1399.35	1748750.75	14537270.55	40°01'41.845"N	80°36'46.813"W	1535.50	245.690	0.81	-0.81	0.13
5438.00	26.180	238.170	5115.04	803.83	-651.43	-1430.23	1748719.88	14537251.26	40°01'41.657"N	80°36'47.211"W	1571.60	245.512	0.48	-0.45	0.39
5522.00	24.530	236.300	5190.95	817.61	-670.88	-1460.49	1748689.64	14537231.82	40°01'41.466"N	80°36'47.601"W	1607.20	245.328	2.18	-1.96	-2.23
5607.00	24.450	236.400	5268.30	830.58	-690.40	-1489.82	1748660.32	14537212.31	40°01'41.274"N	80°36'47.979"W	1642.01	245.136	0.11	-0.09	0.12
5691.00	24.510	241.080	5344.76	844.72	-708.45	-1519.55	1748630.60	14537194.27	40°01'41.097"N	80°36'48.363"W	1676.58	245.004	2.31	0.07	5.57
5782.00	25.840	246.140	5427.12	863.42	-725.60	-1554.21	1748595.95	14537177.12	40°01'40.929"N	80°36'48.809"W	1715.25	244.974	2.78	1.46	5.56
5864.00	26.810	247.050	5500.62	882.61	-740.04	-1587.59	1748562.59	14537162.69	40°01'40.788"N	80°36'49.239"W	1751.60	245.008	1.28	1.18	1.11
5947.00	26.730	248.460	5574.72	902.98	-754.19	-1622.19	1748528.00	14537148.54	40°01'40.649"N	80°36'49.685"W	1788.94	245.065	0.77	-0.10	1.70
6029.00	26.800	247.570	5647.94	923.23	-768.02	-1656.43	1748493.78	14537134.72	40°01'40.514"N	80°36'50.126"W	1825.82	245.125	0.50	0.09	-1.09
6114.00	26.810	247.290	5723.81	943.93	-782.73	-1691.82	1748458.39	14537120.01	40°01'40.370"N	80°36'50.581"W	1864.12	245.172	0.15	0.01	-0.33
6198.00	26.800	245.810	5798.78	963.89	-797.80	-1726.57	1748423.66	14537104.95	40°01'40.223"N	80°36'51.029"W	1901.98	245.200	0.79	-0.01	-1.76
6282.00	26.260	249.640	5873.94	984.29	-812.03	-1761.27	1748388.97	14537090.73	40°01'40.084"N	80°36'51.476"W	1939.45	245.248	2.14	-0.64	4.56
6367.00	27.120	270.550	5950.05	1011.13	-818.40	-1798.36	1748351.90	14537084.36	40°01'40.022"N	80°36'51.953"W	1975.82	245.531	11.05	1.01	24.60
6449.00	34.090	277.730	6020.61	1047.11	-815.12	-1839.88	1748310.39	14537087.63	40°01'40.057"N	80°36'52.486"W	2012.36	246.105	9.58	8.50	8.76
6532.00	41.020	282.720	6086.38	1093.15	-805.99	-1889.57	1748260.72	14537096.77	40°01'40.149"N	80°36'53.125"W	2054.29	246.900	9.11	8.35	6.01
6613.00	48.310	287.980	6143.97	1146.84	-790.77	-1944.36	1748205.95	14537111.98	40°01'40.302"N	80°36'53.828"W	2099.01	247.868	10.09	9.00	6.49
6697.00	56.130	292.690	6195.41	1211.10	-767.59	-2006.48	1748143.85	14537135.14	40°01'40.533"N	80°36'54.625"W	2148.30	249.065	10.31	9.31	5.61
6780.00	62.560	297.520	6237.73	1281.44	-737.24	-2071.03	1748079.33	14537165.49	40°01'40.836"N	80°36'55.454"W	2198.34	250.405	9.22	7.75	5.82
6864.00	67.850	305.640	6272.99	1357.47	-697.27	-2135.84	1748014.55	14537205.45	40°01'41.234"N	80°36'56.284"W	2246.77	251.920	10.80	6.30	9.67
6946.00	73.840	312.460	6299.92	1434.61	-648.46	-2195.87	1747954.54	14537254.23	40°01'41.719"N	80°36'57.053"W	2289.62	253.548	10.72	7.30	8.32
7028.00	80.450	316.600	6318.16	1513.33	-592.41	-2252.79	1747897.64	14537310.26	40°01'42.275"N	80°36'57.782"W	2329.38	255.267	9.44	8.06	6.95
7112.00	85.260	319.070	6328.60	1594.48	-530.65	-2308.71	1747841.74	14537372.00	40°01'42.888"N	80°36'58.497"W	2368.91	257.056	6.43	5.73	6.94
7195.00	89.970	322.370	6332.06	1674.17	-466.48	-2361.19	1747789.29	14537436.14	40°01'43.524"N	80°36'59.168"W	2406.83	258.824	6.93	5.67	6.98
7277.00	90.430	321.930	6331.77	1752.42	-401.73	-2411.50	1747738.99	14537500.86	40°01'44.166"N	80°36'59.812"W	2444.74	260.542	0.78	0.56	-0.34
7361.00	89.940	321.780	6331.50	1832.70	-335.67	-2463.39	1747687.13	14537566.90	40°01'44.821"N	80°37'00.475"W	2486.15	262.240	0.61	-0.58	-0.8



### REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot 201H
SOUTHWESTERN ENERGY	Well	Brian Dytko OHI 201H
Area	Wellbore	Brian Dytko OHI 201H AWB
Field		
Facility		

### WELLPATH DATA (163 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]
7443.00	89.820	323.100	6331.67	1910.82	-270.67	-2513.37	1747637.16	14537631.87	40°01'45.466"N	80°37'01.114"W	2527.91	263.853	1.62	-0.15	1.61
7527.00	91.200	325.870	6330.92	1989.88	-202.31	-2562.16	1747588.39	14537700.21	40°01'46.143"N	80°37'01.737"W	2570.14	265.485	3.68	1.64	3.30
7612.00	90.490	323.470	6329.67	2069.78	-132.98	-2611.31	1747539.27	14537769.51	40°01'46.831"N	80°37'02.365"W	2614.69	267.085	2.94	-0.84	-2.82
7696.00	90.340	321.240	6329.06	2149.83	-66.47	-2662.61	1747487.99	14537835.99	40°01'47.490"N	80°37'03.021"W	2663.44	268.570	2.66	-0.18	-2.65
7780.00	90.520	318.750	6328.43	2230.87	-2.13	-2716.60	1747434.01	14537900.31	40°01'48.128"N	80°37'03.712"W	2716.60	269.955	2.97	0.21	-2.96
7864.00	90.830	317.570	6327.44	2312.57	60.44	-2772.63	1747378.01	14537962.86	40°01'48.749"N	80°37'04.428"W	2773.29	271.249	1.45	0.37	-1.40
7947.00	91.110	316.840	6326.04	2393.61	121.34	-2829.01	1747321.65	14538023.73	40°01'49.353"N	80°37'05.150"W	2831.61	272.456	0.94	0.34	-0.88
8029.00	90.580	317.340	6324.83	2473.70	181.39	-2884.83	1747265.85	14538083.76	40°01'49.949"N	80°37'05.864"W	2890.53	273.598	0.89	-0.65	0.61
8112.00	90.490	318.630	6324.05	2554.49	243.05	-2940.38	1747210.32	14538145.40	40°01'50.560"N	80°37'06.575"W	2950.41	274.725	1.56	-0.11	1.55
8196.00	90.310	319.460	6323.46	2635.89	306.49	-2995.44	1747155.28	14538208.81	40°01'51.190"N	80°37'07.279"W	3011.08	275.842	1.01	-0.21	0.99
8279.00	90.370	321.870	6322.97	2715.70	370.68	-3048.04	1747102.70	14538272.97	40°01'51.826"N	80°37'07.952"W	3070.50	276.934	2.90	0.07	2.90
8363.00	90.400	324.460	6322.41	2795.39	437.90	-3098.40	1747052.37	14538340.17	40°01'52.493"N	80°37'08.595"W	3129.19	278.044	3.08	0.04	3.08
8447.00	90.370	325.290	6321.84	2874.26	506.60	-3146.73	1747004.06	14538408.85	40°01'53.174"N	80°37'09.213"W	3187.25	279.146	0.99	-0.04	0.99
8528.00	90.550	323.730	6321.19	2950.49	572.55	-3193.75	1746957.05	14538474.77	40°01'53.827"N	80°37'09.814"W	3244.66	280.164	1.94	0.22	-1.93
8610.00	90.370	322.010	6320.53	3028.41	637.92	-3243.24	1746907.58	14538540.11	40°01'54.475"N	80°37'10.447"W	3305.38	281.128	2.11	-0.22	-2.10
8691.00	91.140	322.390	6319.47	3105.68	701.92	-3292.88	1746857.96	14538604.09	40°01'55.110"N	80°37'11.081"W	3366.86	282.033	1.06	0.95	0.47
8774.00	90.550	322.620	6318.24	3184.72	767.76	-3343.40	1746807.46	14538669.90	40°01'55.763"N	80°37'11.727"W	3430.42	282.933	0.76	-0.71	0.28
8858.00	90.430	321.810	6317.52	3264.84	834.15	-3394.86	1746756.01	14538736.26	40°01'56.421"N	80°37'12.385"W	3495.84	283.805	0.97	-0.14	-0.96
8939.00	90.400	322.570	6316.94	3342.11	898.14	-3444.52	1746706.38	14538800.23	40°01'57.055"N	80°37'13.020"W	3559.69	284.614	0.94	-0.04	0.94
9024.00	91.050	326.650	6315.86	3422.03	967.41	-3493.73	1746657.19	14538869.48	40°01'57.742"N	80°37'13.649"W	3625.20	285.477	4.86	0.76	4.80
9106.00	91.320	327.310	6314.17	3497.92	1036.15	-3538.41	1746612.53	14538938.19	40°01'58.423"N	80°37'14.219"W	3686.99	286.322	0.87	0.33	0.80
9190.00	91.170	324.150	6312.34	3576.33	1105.54	-3585.69	1746565.26	14539007.55	40°01'59.111"N	80°37'14.823"W	3752.25	287.136	3.77	-0.18	-3.76
9274.00	91.020	317.600	6310.73	3656.96	1170.66	-3638.65	1746512.32	14539072.65	40°01'59.757"N	80°37'15.501"W	3822.34	287.834	7.80	-0.18	-7.80
9356.00	89.970	317.970	6310.03	3736.85	1231.39	-3693.75	1746457.28	14539133.35	40°02'00.359"N	80°37'16.206"W	3893.60	288.437	1.36	-1.28	0.45
9439.00	91.110	319.950	6309.24	3817.30	1293.99	-3748.24	1746402.75	14539195.92	40°02'00.980"N	80°37'16.903"W	3965.31	289.046	2.75	1.37	2.39
9523.00	90.490	321.040	6308.07	3898.14	1358.79	-3801.67	1746349.37	14539260.70	40°02'01.623"N	80°37'17.586"W	4037.20	289.668	1.49	-0.74	1.00
9606.00	89.720	320.530	6307.92	3977.91	1423.10	-3854.14	1746296.91	14539324.98	40°02'02.260"N	80°37'18.257"W	4108.48	290.266	1.11	-0.93	-0.91
9690.00	89.630	318.430	6308.39	4059.14	1486.95	-3908.72	1746242.36	14539388.81	40°02'02.894"N	80°37'18.955"W	4181.99	290.828	2.50	-0.11	-2.60
9775.00	89.290	316.890	6309.20	4141.98	1549.77	-3965.96	1746185.14	14539451.61	40°02'03.517"N	80°37'19.688"W	4258.01	291.344	1.86	-0.40	-1.61
9859.00	89.200	317.340	6310.30	4224.03	1611.31	-4023.12	1746128.00	14539513.13	40°02'04.127"N	80°37'20.419"W	4333.80	291.827	0.55	-0.11	-0.94



## REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot 201H
SOUTHWESTERN ENERGY	Well	Brian Dytko OHI 201H
Area	Wellbore	Brian Dytko OHI 201H AWB
Field		
Facility		

## WELLPATH DATA (163 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]
9943.00	90.430	318.110	6310.57	4305.88	1673.46	-4079.63	1746071.52	14539575.25	40°02'04.744"N	80°37'21.142"W	4409.52	292.303	1.73	1.46	0.92
10027.00	90.430	318.060	6309.94	4387.61	1735.97	-4135.74	1746015.43	14539637.74	40°02'05.364"N	80°37'21.860"W	4485.30	292.770	0.06	0.00	-0.06
10111.00	90.490	319.530	6309.27	4469.10	1799.16	-4191.07	1745960.12	14539700.91	40°02'05.991"N	80°37'22.568"W	4560.93	293.233	1.75	0.07	1.75
10194.00	90.890	321.840	6308.27	4548.90	1863.37	-4243.65	1745907.56	14539765.09	40°02'06.628"N	80°37'23.241"W	4634.73	293.706	2.82	0.48	2.78
10279.00	90.830	319.710	6306.99	4630.58	1929.21	-4297.39	1745853.84	14539830.90	40°02'07.280"N	80°37'23.928"W	4710.56	294.176	2.51	-0.07	-2.51
10363.00	90.830	317.640	6305.78	4712.10	1992.28	-4352.85	1745798.40	14539893.94	40°02'07.906"N	80°37'24.637"W	4787.12	294.593	2.46	0.00	-2.46
10444.00	90.580	321.040	6304.78	4790.47	2053.71	-4405.62	1745745.65	14539955.35	40°02'08.515"N	80°37'25.313"W	4860.78	294.993	4.21	-0.31	4.20
10526.00	90.800	324.330	6303.79	4868.47	2118.91	-4455.31	1745695.98	14540020.53	40°02'09.162"N	80°37'25.948"W	4933.52	295.435	4.02	0.27	4.01
10608.00	90.830	324.550	6302.63	4945.67	2185.61	-4503.00	1745648.31	14540087.20	40°02'09.823"N	80°37'26.557"W	5005.39	295.890	0.27	0.04	0.27
10693.00	90.800	323.530	6301.42	5025.88	2254.41	-4552.90	1745598.42	14540155.97	40°02'10.505"N	80°37'27.195"W	5080.48	296.343	1.20	-0.04	-1.20
10777.00	90.800	323.790	6300.24	5105.34	2322.06	-4602.68	1745548.67	14540223.60	40°02'11.175"N	80°37'27.831"W	5155.25	296.771	0.31	0.00	0.31
10861.00	90.890	323.990	6299.00	5184.69	2389.92	-4652.17	1745499.19	14540291.43	40°02'11.848"N	80°37'28.464"W	5230.15	297.190	0.26	0.11	0.24
10946.00	90.860	324.790	6297.71	5264.74	2459.01	-4701.66	1745449.72	14540360.50	40°02'12.533"N	80°37'29.097"W	5305.88	297.610	0.94	-0.04	0.94
11030.00	90.830	323.170	6296.47	5344.04	2526.94	-4751.05	1745400.35	14540428.40	40°02'13.206"N	80°37'29.728"W	5381.26	298.007	1.93	-0.04	-1.93
11114.00	90.740	319.040	6295.32	5424.61	2592.30	-4803.78	1745347.65	14540493.74	40°02'13.854"N	80°37'30.402"W	5458.60	298.353	4.92	-0.11	-4.92
11198.00	90.460	315.270	6294.44	5506.63	2653.88	-4860.89	1745290.56	14540555.29	40°02'14.465"N	80°37'31.133"W	5538.17	298.633	4.50	-0.33	-4.49
11282.00	90.400	315.500	6293.81	5589.19	2713.67	-4919.88	1745231.59	14540615.05	40°02'15.059"N	80°37'31.888"W	5618.65	298.880	0.28	-0.07	0.27
11363.00	90.400	315.310	6293.24	5668.79	2771.35	-4976.75	1745174.74	14540672.71	40°02'15.631"N	80°37'32.616"W	5696.35	299.112	0.23	0.00	-0.23
11446.00	90.430	317.490	6292.64	5750.07	2831.45	-5033.98	1745117.53	14540732.79	40°02'16.227"N	80°37'33.349"W	5775.65	299.356	2.63	0.04	2.63
11529.00	90.460	323.990	6291.99	5829.82	2895.68	-5086.48	1745065.06	14540796.99	40°02'16.864"N	80°37'34.020"W	5852.97	299.652	7.83	0.04	7.83
11612.00	90.370	322.950	6291.39	5908.42	2962.37	-5135.88	1745015.67	14540863.66	40°02'17.525"N	80°37'34.652"W	5928.99	299.976	1.26	-0.11	-1.25
11695.00	90.550	323.250	6290.73	5987.20	3028.74	-5185.72	1744965.86	14540930.00	40°02'18.183"N	80°37'35.289"W	6005.41	300.287	0.42	0.22	0.36
11779.00	90.310	322.110	6290.10	6067.12	3095.54	-5236.64	1744914.95	14540996.78	40°02'18.845"N	80°37'35.940"W	6083.15	300.589	1.39	-0.29	-1.36
11861.00	90.430	320.900	6289.57	6145.63	3159.71	-5287.68	1744863.93	14541060.93	40°02'19.482"N	80°37'36.593"W	6159.82	300.861	1.48	0.15	-1.48
11944.00	90.280	319.950	6289.05	6225.54	3223.69	-5340.55	1744811.08	14541124.88	40°02'20.116"N	80°37'37.269"W	6238.08	301.116	1.16	-0.18	-1.14
12026.00	90.280	321.080	6288.65	6304.46	3286.97	-5392.70	1744758.96	14541188.14	40°02'20.744"N	80°37'37.936"W	6315.48	301.363	1.38	0.00	0.38
12111.00	90.340	322.910	6288.19	6385.63	3353.95	-5445.03	1744706.64	14541255.08	40°02'21.408"N	80°37'38.606"W	6395.10	301.632	2.15	0.07	0.15
12194.00	89.910	322.780	6288.01	6464.52	3420.10	-5495.16	1744656.53	14541321.21	40°02'22.063"N	80°37'39.246"W	6472.54	301.897	0.54	-0.52	-0.6
12277.00	89.910	322.200	6288.14	6543.58	3485.94	-5545.70	1744606.02	14541387.02	40°02'22.716"N	80°37'39.893"W	6550.31	302.153	0.70	0.00	-0.70
12361.00	89.880	324.480	6288.29	6623.19	3553.32	-5595.85	1744555.89	14541454.36	40°02'23.384"N	80°37'40.534"W	6628.69	302.415	2.71	-0.04	-2.71





## REFERENCE WELLPATH IDENTIFICATION

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SOUTHWESTERN ENERGY	Well	Brian Dytko OHI 201H
Area	Wellbore	Brian Dytko OHI 201H AWB
Field		
Facility		

## WELLPATH DATA (163 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]
12444.00	89.880	321.400	6288.47	6702.03	3619.54	-5645.86	1744505.89	14541520.58	40°02'24.041"N	80°37'41.173"W	6706.48	302.664	3.71	0.00	-3.71
12528.00	89.940	318.180	6288.60	6783.14	3683.68	-5700.08	1744451.69	14541584.69	40°02'24.677"N	80°37'41.867"W	6786.79	302.873	3.83	0.07	-3.83
12610.00	89.910	319.540	6288.71	6862.67	3745.44	-5754.44	1744397.76	14541646.42	40°02'25.289"N	80°37'42.557"W	6865.65	303.061	1.66	-0.04	1.66
12692.00	89.850	318.520	6288.88	6942.13	3807.35	-5807.79	1744344.02	14541708.31	40°02'25.903"N	80°37'43.245"W	6944.52	303.247	1.25	-0.07	-1.24
12775.00	90.220	318.570	6288.83	7022.74	3869.56	-5862.74	1744289.09	14541770.49	40°02'26.520"N	80°37'43.948"W	7024.61	303.426	0.45	0.45	0.06
12859.00	90.340	322.630	6288.42	7103.53	3934.45	-5916.05	1744235.81	14541835.36	40°02'27.164"N	80°37'44.630"W	7104.89	303.626	4.84	0.14	4.83
12941.00	90.310	320.980	6287.95	7181.92	3998.89	-5966.75	1744185.13	14541899.78	40°02'27.803"N	80°37'45.279"W	7182.84	303.830	2.01	-0.04	-2.01
13024.00	90.150	319.170	6287.62	7261.96	4062.54	-6020.01	1744131.88	14541963.40	40°02'28.434"N	80°37'45.960"W	7262.56	304.013	2.19	-0.19	-2.18
13108.00	90.280	318.220	6287.30	7343.48	4125.64	-6075.46	1744076.46	14542026.48	40°02'29.060"N	80°37'46.670"W	7343.85	304.179	1.14	0.15	-1.13
13190.00	90.250	318.390	6286.93	7423.20	4186.87	-6130.00	1744021.94	14542087.68	40°02'29.667"N	80°37'47.368"W	7423.40	304.334	0.21	-0.04	0.21
13272.00	90.310	318.810	6286.52	7502.81	4248.38	-6184.23	1743967.73	14542149.17	40°02'30.277"N	80°37'48.062"W	7502.89	304.488	0.52	0.07	0.51
13315.00	90.280	319.960	6286.30	7544.42	4281.02	-6212.22	1743939.75	14542181.80	40°02'30.601"N	80°37'48.420"W	7544.45	304.572	2.68	-0.07	2.67
13340.00	90.280	319.960	6286.18	7568.54	4300.16	-6228.30	1743923.68	14542200.93	40°02'30.791"N	80°37'48.625"W	7568.56	304.622	0.00	0.00	0.00

## HOLE & CASING SECTIONS - Ref Wellbore: Brian Dytko OHI 201H AWB Ref Wellpath: Brian Dytko OHI 201H AWP Proj: 13340'MD

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	End N/S [ft]	Start E/W [ft]	End E/W [ft]	End E/W [ft]
20in Casing Surface	26.00	126.00	100.00	26.00	126.00	0.00	0.00	0.00	0.00	-0.17
17.5in Open Hole	126.00	699.00	573.00	126.00	699.00	0.01	0.01	-0.17	0.44	-2.03
13.375in Casing Surface	26.00	655.00	629.00	26.00	655.00	0.00	0.00	0.00	0.49	-1.88
12.25in Open Hole	699.00	2027.00	1328.00	699.00	2006.77	0.44	0.44	-2.03	-13.62	-213.70
9.625in Casing Intermediate	26.00	1972.00	1946.00	26.00	1952.78	0.00	0.00	0.00	-13.24	-203.21
8.75in Open Hole	2027.00	5811.00	3784.00	2006.77	5453.19	-13.62	-13.62	-213.70	-730.71	-1565.86
8.5in Open Hole	5811.00	13340.00	7529.00	5453.19	6286.18	-730.71	-730.71	-1565.86	4300.16	-6228.30
5.5in Casing Production	26.00	13340.00	13314.00	26.00	6286.18	0.00	0.00	0.00	4300.16	-6228.30

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**REFERENCE WELLPATH IDENTIFICATION**

Operator	SOUTHWESTERN ENERGY	Slot	Slot 201H
Area	Ohio County, WV	Well	Brian Dytko OHI 201H
Field	Ohio	Wellbore	Brian Dytko OHI 201H AWB
Facility	Brian Dytko OHI Pad		

**TARGETS**

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Brian Dytko OHI 201H BHL Rev-3	6313.00	4312.65	-6215.62	1743936.35	14542213.42	40°02'30.914"N	80°37'48.462"W	point
Brian Dytko OHI 201H LP Rev-3	6327.00	-522.81	-2294.04	1747856.41	14537379.83	40°01'42.965"N	80°36'58.308"W	point

**WELLPATH COMPOSITION - Ref Wellbore: Brian Dytko OHI 201H AWB Ref Wellpath: Brian Dytko OHI 201H AWP Proj: 13340'MD**

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment
26.00	575.00	BHI NaviTrak (Axial)	01_APS EM <17-1/2"> (147'-575')
575.00	1937.00	BHI NaviTrak (Axial)	02_APS EM <12-1/4"> (575')(725'-1937')
1937.00	5691.00	BHI NaviTrak (Axial)	03_APS EM <8-3/4"> (1937')(2027'-5691')
5691.00	13315.00	BHI AutoTrak Curve (Short)	04_BH AT Curve <8-1/2"> (5691')(5782'-13315')
13315.00	13340.00	Blind Drilling (std)	Projection to bit

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**REFERENCE WELLPATH IDENTIFICATION**

Operator	Slot	Slot 201H
SOUTHWESTERN ENERGY	Well	Brian Dytko OHI 201H
Ohio County, WV	Wellbore	Brian Dytko OHI 201H AWB
Ohio		
Brian Dytko OHI Pad		

**COMMENTS**

Wellpath general comments  
API: 47-069-00251-0000  
Job #: 9096878  
Rig: SDC 42  
Duration: 04/02/2018 - 04/14/2018

05/31/2019

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