

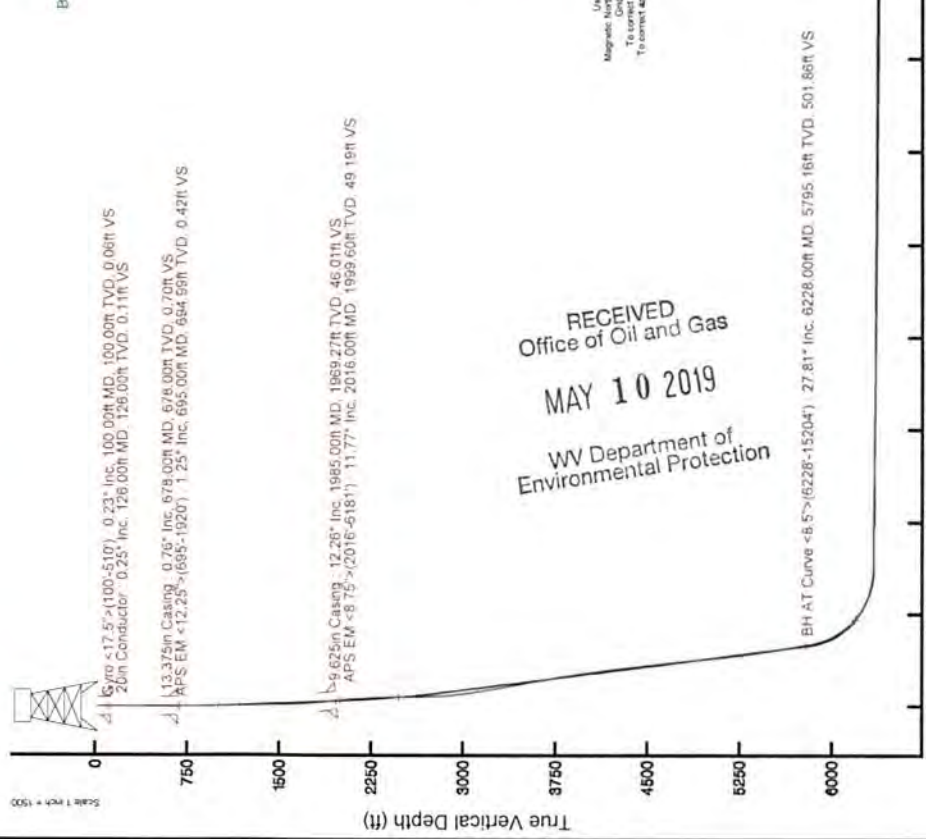
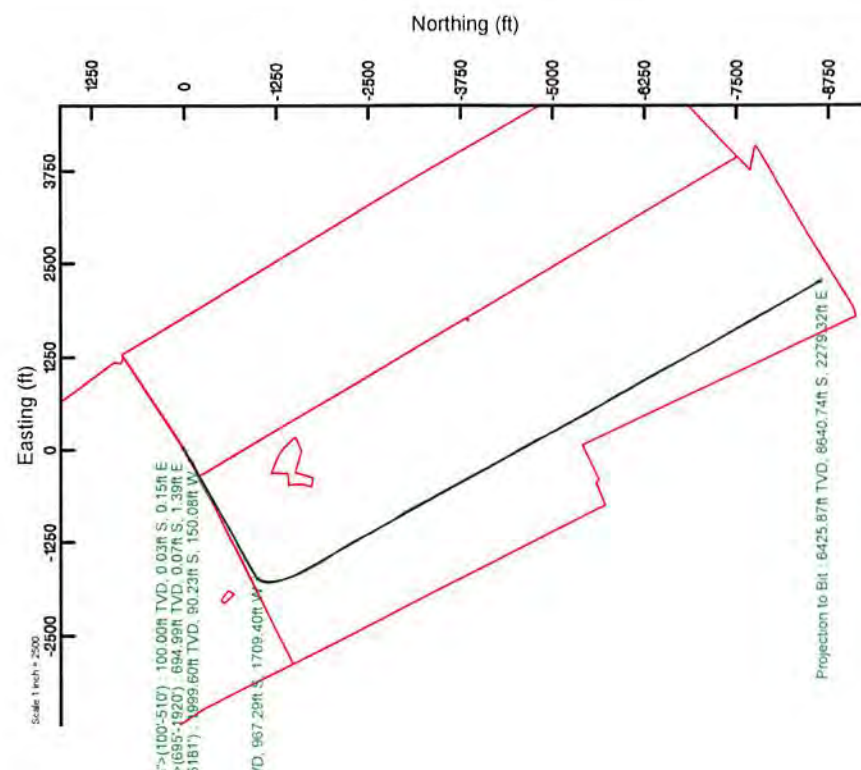
# SOUTHWESTERN ENERGY

Location: Ohio County, WV  
 Field: Ohio  
 Facility: Brian Dyko OHI Pad  
 Well: Brian Dyko OHI 206H  
 Wellbore: Brian Dyko OHI 206H PWB

Reference wellbore is Brian Dyko OHI 206H PWB Rvd 0.0	Grid System: NAD83 / UTM Zone 17 North, US feet
True vertical depths are referenced to SDC 42 (RRB)	* * Wellpath was transformed from a different geoidic datum
Measured depths are referenced to SDC 42 (RRB)	North Reference: Grid north
SDC 42 (RRB) to Mean Sea Level: 1248.4 feet	Scale: True distance
Mean Sea Level to Ground level (At Slot Slot 206H): -1222.4 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: Bormuzic on 2018/06/07
	Database: WA_Perms/Perms

**API: 47-069-00247-000**  
**BH Job #: 9154709**  
**Rig: SDC 42**  
**Duration: 05/18/2018 - 05/27/2018**

Location Information			
Facility Name	Grid East (US ft)	Grid North (US ft)	Longitude
Brian Dyko OHI Pad	1750181.170	14537893.350	40°11'47.94"N
Slot	Local N (ft)	Local E (ft)	Latitude
Slot 206H	-15.72	-38.80	40°11'47.78"N
Mean Sea Level to Ground level (At Slot Slot 206H)			26ft
SDC 42 (RRB) to Mean Sea Level			1248.4ft



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BH AT Curve <math>\langle -8.5^\circ \rangle</math> (6226'-15204') 27.81' Inc. 6226.00ft MD, 5795.16ft TVD, 501.86ft VS  
 Projection to Bit: 89.11' Inc. 15229.00ft MD, 6425.87ft TVD, 8936.31ft VS

Use magnetic Dip from Table 85716-7  
 Magnetic North is 1.17 degrees East of True North (M 51772016)  
 Grid North is 0.25 degrees East of True North  
 To correct azimuth from True to Grid subtract 0.25 degrees  
 To correct azimuth from Magnetic to Grid subtract 8.42 degrees

Scale 1 inch = 1500

Scale 1 inch = 1500  
 Azimuth: 165.30° with reference 0.00 N, 0.00 E

### REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot 206H
Area	Ohio County, WV	Well	Brian Dytko OHI 206H
Field	Ohio	Wellbore	Brian Dytko OHI 206H 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	6/7/2018 at 8:47:55 AM
Convergence at slot	0.26° East	Database/Source file	WA_Pennsylvania/Brian_Dytko_OHI_206H_AWP_Proj_15229_MD.xml

### WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-15.72	-38.80	1750142.39	14537877.64	40°01'47.788"N	80°36'28.883"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 206H)	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	165.30°

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05/31/2019

## REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot 206H
Area	Ohio County, WV	Well	Brian Dytko OHI 206H
Field	Ohio	Wellbore	Brian Dytko OHI 206H AWB
Facility	Brian Dytko OHI Pad		

## WELLPATH DATA (187 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	99.830	0.00	0.00	0.00	0.00	1750142.39	14537877.64	40°01'47.788"N	80°36'28.883"W	0.00	0.000	0.00	0.00	0.00
26.00	0.000	99.830	26.00	0.00	0.00	0.00	1750142.39	14537877.64	40°01'47.788"N	80°36'28.883"W	0.00	0.000	0.00	0.00	0.00
100.00	0.230	99.830	100.00	0.06	-0.03	0.15	1750142.54	14537877.61	40°01'47.787"N	80°36'28.881"W	0.15	99.830	0.31	0.31	134.91
200.00	0.290	101.360	200.00	0.26	-0.11	0.59	1750142.98	14537877.53	40°01'47.786"N	80°36'28.875"W	0.60	100.473	0.06	0.06	1.53
300.00	0.260	94.680	300.00	0.44	-0.18	1.07	1750143.46	14537877.46	40°01'47.786"N	80°36'28.869"W	1.08	99.467	0.04	-0.03	-6.68
400.00	0.190	153.290	400.00	0.68	-0.34	1.37	1750143.76	14537877.30	40°01'47.784"N	80°36'28.865"W	1.41	104.142	0.23	-0.07	58.61
500.00	0.100	45.810	500.00	0.80	-0.43	1.50	1750143.89	14537877.21	40°01'47.783"N	80°36'28.863"W	1.56	106.014	0.24	-0.09	-107.48
510.00	0.020	41.230	510.00	0.79	-0.42	1.51	1750143.90	14537877.22	40°01'47.783"N	80°36'28.863"W	1.57	105.680	0.80	-0.80	-45.80
610.00	0.100	117.070	610.00	0.84	-0.45	1.60	1750143.99	14537877.19	40°01'47.783"N	80°36'28.862"W	1.66	105.732	0.10	0.08	75.84
651.00	0.060	75.770	651.00	0.87	-0.46	1.65	1750144.04	14537877.18	40°01'47.783"N	80°36'28.862"W	1.72	105.609	0.17	-0.10	-100.73
695.00	1.250	323.130	694.99	0.42	-0.07	1.39	1750143.78	14537877.57	40°01'47.787"N	80°36'28.865"W	1.39	92.983	2.90	2.70	-256.00
777.00	1.690	271.330	776.97	-0.74	0.67	-0.36	1750142.03	14537878.31	40°01'47.794"N	80°36'28.887"W	0.76	331.951	1.64	0.54	-63.17
873.00	1.120	228.690	872.94	-0.70	0.08	-2.47	1750139.92	14537877.72	40°01'47.788"N	80°36'28.915"W	2.47	271.770	1.21	-0.59	-45.14
958.00	2.040	229.690	957.91	0.33	-1.46	-4.24	1750138.15	14537876.18	40°01'47.773"N	80°36'28.937"W	4.48	251.026	1.08	1.08	1.99
1046.00	3.350	238.860	1045.81	1.74	-3.80	-7.64	1750134.76	14537873.84	40°01'47.750"N	80°36'28.981"W	8.53	243.537	1.56	1.49	10.42
1133.00	4.370	241.990	1132.61	3.22	-6.67	-12.74	1750129.66	14537870.97	40°01'47.722"N	80°36'29.047"W	14.38	242.354	1.20	1.17	3.60
1220.00	5.550	241.250	1219.28	5.01	-10.25	-19.35	1750123.04	14537867.39	40°01'47.687"N	80°36'29.132"W	21.90	242.087	1.36	1.36	-0.85
1309.00	7.800	241.010	1307.68	7.54	-15.25	-28.41	1750113.99	14537862.40	40°01'47.638"N	80°36'29.249"W	32.25	241.774	2.53	2.53	-0.27
1399.00	9.830	246.530	1396.61	10.22	-21.27	-40.80	1750101.60	14537856.38	40°01'47.579"N	80°36'29.408"W	46.01	242.466	2.44	2.26	6.13
1486.00	10.390	247.230	1482.26	12.45	-27.26	-54.85	1750087.56	14537850.39	40°01'47.521"N	80°36'29.589"W	61.25	243.568	0.66	0.64	0.80
1573.00	11.340	244.100	1567.70	15.22	-34.04	-69.78	1750072.64	14537843.62	40°01'47.454"N	80°36'29.782"W	77.64	243.996	1.29	1.09	-3.60
1661.00	12.510	241.080	1653.80	19.24	-42.43	-85.90	1750056.52	14537835.23	40°01'47.372"N	80°36'29.989"W	95.81	243.716	1.51	1.33	-3.43
1747.00	13.590	237.300	1737.58	24.65	-52.39	-102.56	1750039.87	14537825.27	40°01'47.274"N	80°36'30.204"W	115.16	242.941	1.60	1.26	-4.40
1834.00	13.310	233.090	1822.19	31.59	-63.93	-119.17	1750023.27	14537813.74	40°01'47.161"N	80°36'30.418"W	135.23	241.789	1.17	-0.32	-4.84
1920.00	13.310	230.180	1905.88	39.54	-76.21	-134.69	1750007.76	14537801.46	40°01'47.040"N	80°36'30.618"W	154.75	240.497	0.78	0.00	-3.38
2016.00	11.770	224.890	1999.60	49.19	-90.23	-150.08	1749992.36	14537787.45	40°01'46.902"N	80°36'30.817"W	175.12	238.987	2.00	-1.60	-5.11
2102.00	11.230	227.470	2083.87	57.54	-102.10	-162.45	1749980.01	14537775.58	40°01'46.786"N	80°36'30.977"W	191.87	237.850	0.87	-0.63	3.00
2182.00	13.380	239.170	2162.04	63.75	-112.11	-176.14	1749966.32	14537765.57	40°01'46.687"N	80°36'31.153"W	208.79	237.523	4.10	2.69	1.63
2265.00	15.520	245.680	2242.41	68.27	-121.61	-194.51	1749947.96	14537756.08	40°01'46.594"N	80°36'31.390"W	229.39	237.986	3.23	2.58	7.84
2352.00	16.410	246.970	2326.06	72.00	-131.21	-216.42	1749926.05	14537746.48	40°01'46.500"N	80°36'31.672"W	253.09	238.773	1.10	1.02	1.88

## REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot 206H
SOUTHWESTERN ENERGY	Well	Brian Dytko OHI 206H
Area	Wellbore	Brian Dytko OHI 206H AWB
Field		
Facility		

## WELLPATH DATA (187 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]
2436.00	16.780	250.320	2406.56	74.77	-139.94	-238.76	1749903.72	14537737.76	40°01'46.415"N	80°36'31.960"W	276.75	239.626	1.22	0.44	3.99
2519.00	17.960	253.240	2485.78	76.27	-147.66	-262.30	1749880.19	14537730.04	40°01'46.340"N	80°36'32.263"W	301.00	240.622	1.77	1.42	3.52
2603.00	19.400	254.450	2565.43	76.94	-155.07	-287.90	1749854.60	14537722.63	40°01'46.268"N	80°36'32.592"W	327.00	241.692	1.36	1.29	1.44
2687.00	20.400	253.700	2644.51	77.55	-162.85	-315.15	1749827.36	14537714.85	40°01'46.192"N	80°36'32.943"W	354.74	242.673	1.65	1.62	-0.89
2771.00	22.420	251.180	2722.71	79.11	-172.13	-344.37	1749798.15	14537705.58	40°01'46.102"N	80°36'33.319"W	384.99	243.442	2.64	2.40	-3.00
2854.00	24.200	249.470	2798.93	81.97	-183.20	-375.28	1749767.25	14537694.51	40°01'45.993"N	80°36'33.717"W	417.61	243.980	2.29	2.14	-2.06
2936.00	25.950	244.930	2873.21	86.91	-196.70	-407.28	1749735.27	14537681.02	40°01'45.861"N	80°36'34.129"W	452.29	244.221	3.17	2.13	-5.54
3022.00	27.660	240.850	2949.97	95.28	-214.40	-441.76	1749700.80	14537663.32	40°01'45.688"N	80°36'34.574"W	491.04	244.111	2.92	1.99	-4.74
3106.00	28.670	240.060	3024.02	105.44	-233.95	-476.25	1749666.32	14537643.78	40°01'45.496"N	80°36'35.018"W	530.61	243.838	1.28	1.20	-0.94
3191.00	28.650	240.330	3098.61	116.07	-254.22	-511.63	1749630.96	14537623.52	40°01'45.298"N	80°36'35.474"W	571.30	243.578	0.15	-0.02	0.32
3275.00	28.710	239.230	3172.30	126.85	-274.51	-546.46	1749596.14	14537603.24	40°01'45.099"N	80°36'35.923"W	611.53	243.328	0.63	0.07	-1.31
3360.00	29.170	236.870	3246.69	139.06	-296.27	-581.35	1749561.26	14537581.48	40°01'44.885"N	80°36'36.373"W	652.49	242.995	1.45	0.54	-2.78
3444.00	28.410	235.800	3320.31	152.20	-318.70	-615.02	1749527.61	14537559.07	40°01'44.665"N	80°36'36.807"W	692.69	242.607	1.09	-0.90	-1.27
3528.00	27.880	234.970	3394.37	165.69	-341.20	-647.63	1749495.01	14537536.57	40°01'44.444"N	80°36'37.227"W	732.01	242.218	0.78	-0.63	-0.99
3611.00	28.170	233.150	3467.64	179.82	-364.08	-679.20	1749463.45	14537513.69	40°01'44.219"N	80°36'37.634"W	770.63	241.806	1.09	0.35	-2.19
3695.00	28.030	234.090	3541.74	194.44	-387.56	-711.05	1749431.61	14537490.23	40°01'43.988"N	80°36'38.045"W	809.81	241.408	0.55	-0.17	1.12
3778.00	26.710	234.540	3615.45	208.11	-409.82	-742.04	1749400.63	14537467.98	40°01'43.770"N	80°36'38.445"W	847.69	241.089	1.61	-1.59	0.54
3862.00	26.510	234.400	3690.55	221.48	-431.68	-772.66	1749370.03	14537446.12	40°01'43.555"N	80°36'38.840"W	885.08	240.808	0.25	-0.24	-0.17
3945.00	26.950	234.690	3764.68	234.71	-453.34	-803.07	1749339.63	14537424.48	40°01'43.342"N	80°36'39.232"W	922.19	240.555	0.55	0.53	0.35
4030.00	27.120	236.710	3840.40	247.67	-475.10	-834.99	1749307.73	14537402.72	40°01'43.129"N	80°36'39.643"W	960.69	240.360	1.10	0.20	2.38
4113.00	26.450	237.470	3914.49	259.36	-495.43	-866.39	1749276.34	14537382.40	40°01'42.929"N	80°36'40.048"W	998.04	240.238	0.91	-0.81	0.92
4195.00	26.220	238.130	3987.98	270.30	-514.81	-897.17	1749245.57	14537363.03	40°01'42.739"N	80°36'40.445"W	1034.38	240.152	0.45	-0.28	0.80
4278.00	25.590	238.690	4062.64	280.84	-533.81	-928.05	1749214.70	14537344.04	40°01'42.563"N	80°36'40.843"W	1070.62	240.093	0.81	-0.76	0.67
4364.00	25.860	240.050	4140.12	291.07	-552.83	-960.17	1749182.59	14537325.03	40°01'42.366"N	80°36'41.257"W	1107.95	240.069	0.75	0.31	1.58
4452.00	26.730	240.230	4219.01	301.28	-572.23	-993.98	1749148.80	14537305.63	40°01'42.176"N	80°36'41.693"W	1146.93	240.071	0.99	0.99	0.20
4543.00	25.660	239.960	4300.66	311.81	-592.26	-1028.80	1749113.99	14537285.61	40°01'41.979"N	80°36'42.141"W	1187.10	240.072	1.18	-1.18	-0.20
4625.00	25.420	240.860	4374.65	320.89	-609.72	-1059.54	1749083.26	14537268.16	40°01'41.808"N	80°36'42.537"W	1222.45	240.082	0.56	-0.29	1.00
4708.00	27.030	242.140	4449.11	329.63	-627.21	-1091.78	1749051.03	14537250.68	40°01'41.637"N	80°36'42.953"W	1259.11	240.123	2.06	1.94	1.64
4797.00	28.050	242.920	4528.02	338.72	-646.18	-1128.29	1749014.54	14537231.71	40°01'41.451"N	80°36'43.423"W	1300.23	240.200	1.22	1.15	0.88
4884.00	27.380	243.050	4605.04	347.35	-664.56	-1164.34	1748978.50	14537213.34	40°01'41.271"N	80°36'43.888"W	1340.64	240.284	0.77	-0.77	0.25

## REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot 206H
Area	Ohio County, WV	Well	Brian Dytko OHI 206H
Field	Ohio	Wellbore	Brian Dytko OHI 206H AWB
Facility	Brian Dytko OHI Pad		

## WELLPATH DATA (187 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]
4973.00	27.170	243.490	4684.14	355.85	-682.91	-1200.76	1748942.09	14537195.00	40°01'41.091"N	80°36'44.357"W	1381.37	240.372	0.33	-0.24	0.49
5058.00	27.980	245.130	4759.49	363.35	-699.96	-1236.22	1748906.65	14537177.96	40°01'40.924"N	80°36'44.814"W	1420.63	240.481	1.31	0.95	1.93
5143.00	27.950	244.870	4834.56	370.47	-716.80	-1272.35	1748870.54	14537161.12	40°01'40.759"N	80°36'45.279"W	1460.37	240.604	0.15	-0.04	-0.31
5229.00	27.540	243.880	4910.68	378.06	-734.11	-1308.44	1748834.45	14537143.81	40°01'40.589"N	80°36'45.744"W	1500.32	240.705	0.72	-0.48	-1.15
5317.00	27.550	242.740	4988.70	386.51	-752.39	-1344.80	1748798.11	14537125.54	40°01'40.410"N	80°36'46.212"W	1540.97	240.774	0.60	0.01	-1.30
5403.00	28.210	242.300	5064.72	395.41	-770.95	-1380.48	1748762.45	14537106.99	40°01'40.229"N	80°36'46.672"W	1581.17	240.818	0.80	0.77	-0.51
5488.00	27.840	241.110	5139.75	404.79	-789.88	-1415.64	1748727.30	14537088.07	40°01'40.043"N	80°36'47.125"W	1621.10	240.840	0.79	-0.44	-1.40
5574.00	26.950	243.550	5216.11	413.69	-808.26	-1450.68	1748692.28	14537069.69	40°01'39.863"N	80°36'47.577"W	1660.65	240.875	1.67	-1.03	2.84
5663.00	26.930	240.140	5295.46	423.06	-827.28	-1486.21	1748656.75	14537050.68	40°01'39.676"N	80°36'48.034"W	1700.95	240.898	1.74	-0.02	-3.83
5749.00	25.760	237.910	5372.52	433.74	-846.90	-1518.94	1748624.04	14537031.06	40°01'39.484"N	80°36'48.456"W	1739.09	240.858	1.78	-1.36	-2.59
5837.00	27.610	238.720	5451.15	445.28	-867.65	-1552.57	1748590.42	14537010.32	40°01'39.280"N	80°36'48.890"W	1778.56	240.801	2.14	2.10	0.92
5924.00	28.750	238.220	5527.83	457.18	-889.14	-1587.59	1748555.42	14536988.84	40°01'39.069"N	80°36'49.341"W	1819.62	240.749	1.34	1.31	-0.57
6010.00	28.500	237.630	5603.32	469.48	-911.02	-1622.50	1748520.52	14536966.98	40°01'38.855"N	80°36'49.791"W	1860.77	240.686	0.44	-0.29	-0.69
6095.00	28.850	237.430	5677.90	481.93	-932.91	-1656.91	1748486.13	14536945.09	40°01'38.640"N	80°36'50.235"W	1901.49	240.618	0.43	0.41	-0.24
6181.00	27.820	236.440	5753.59	494.78	-955.18	-1691.12	1748451.93	14536922.83	40°01'38.421"N	80°36'50.675"W	1942.23	240.541	1.32	-1.20	-1.15
6228.00	27.810	236.510	5795.16	501.86	-967.29	-1709.40	1748433.65	14536910.72	40°01'38.302"N	80°36'50.911"W	1964.10	240.496	0.07	-0.02	0.15
6264.00	27.680	234.840	5827.03	507.49	-976.74	-1723.24	1748419.82	14536901.28	40°01'38.210"N	80°36'51.090"W	1980.80	240.455	2.19	-0.36	-4.64
6346.00	27.530	219.020	5899.79	525.38	-1002.47	-1750.78	1748392.29	14536875.56	40°01'37.957"N	80°36'51.445"W	2017.47	240.205	8.92	-0.18	-19.29
6432.00	29.140	200.950	5975.62	554.21	-1037.53	-1770.82	1748372.26	14536840.51	40°01'37.611"N	80°36'51.705"W	2052.38	239.634	10.11	1.87	-21.01
6516.00	32.960	188.470	6047.65	591.89	-1079.29	-1781.51	1748361.57	14536798.77	40°01'37.199"N	80°36'51.844"W	2082.94	238.791	8.89	4.55	-14.86
6601.00	39.440	179.930	6116.25	639.35	-1129.24	-1784.89	1748358.19	14536748.83	40°01'36.705"N	80°36'51.891"W	2112.11	237.680	9.65	7.62	-10.05
6685.00	46.950	172.440	6177.48	695.74	-1186.47	-1780.81	1748362.27	14536691.63	40°01'36.139"N	80°36'51.841"W	2139.86	236.326	10.81	8.94	-8.92
6770.00	54.500	165.860	6231.29	761.29	-1250.94	-1768.25	1748374.83	14536627.18	40°01'35.502"N	80°36'51.683"W	2166.00	234.723	10.71	8.88	-7.74
6854.00	63.640	162.880	6274.43	833.25	-1320.23	-1748.77	1748394.30	14536557.93	40°01'34.816"N	80°36'51.437"W	2191.16	232.949	11.30	10.88	-3.55
6896.00	67.660	162.110	6291.74	871.46	-1356.71	-1737.26	1748405.81	14536521.46	40°01'34.455"N	80°36'51.291"W	2204.25	232.012	9.72	9.57	-1.83
6938.00	71.920	161.740	6306.25	910.80	-1394.17	-1725.03	1748418.03	14536484.01	40°01'34.085"N	80°36'51.136"W	2217.98	231.055	10.18	10.14	-0.88
6980.00	75.510	160.750	6318.02	951.00	-1432.33	-1712.07	1748430.99	14536445.86	40°01'33.707"N	80°36'50.971"W	2232.21	230.084	8.84	8.55	-2.66
7021.00	78.700	159.700	6327.17	990.81	-1469.94	-1698.55	1748444.50	14536408.27	40°01'33.335"N	80°36'50.800"W	2246.28	229.127	8.17	7.78	-2.56
7063.00	81.600	158.180	6334.35	1031.93	-1508.55	-1683.68	1748459.37	14536369.68	40°01'32.952"N	80°36'50.611"W	2260.64	228.140	7.77	6.90	-3.62
7106.00	84.420	155.930	6339.59	1074.16	-1547.84	-1667.04	1748476.00	14536330.40	40°01'32.563"N	80°36'50.399"W	2274.83	227.123	8.37	6.56	-5.33

## REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot 206H
Area	Ohio County, WV	Well	Brian Dytko OHI 206H
Field	Ohio	Wellbore	Brian Dytko OHI 206H AWB
Facility	Brian Dytko OHI Pad		

## WELLPATH DATA (187 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]
7148.00	88.250	154.620	6342.27	1115.42	-1585.91	-1649.51	1748493.52	14536292.35	40°01'32.187"N	80°36'50.176"W	2288.23	226.126	9.64	9.12	-3.12
7188.00	90.150	155.400	6342.83	1154.77	-1622.16	-1632.61	1748510.41	14536256.11	40°01'31.828"N	80°36'49.961"W	2301.48	225.184	5.13	4.75	1.95
7272.00	89.970	154.440	6342.74	1237.40	-1698.24	-1597.01	1748546.00	14536106.06	40°01'31.074"N	80°36'49.507"W	2331.19	223.240	1.16	-0.21	-1.14
7355.00	90.090	151.090	6342.70	1318.41	-1772.02	-1559.03	1748583.97	14536180.30	40°01'30.343"N	80°36'49.023"W	2360.22	221.341	4.04	0.14	-4.04
7440.00	89.880	147.120	6342.72	1400.02	-1844.95	-1515.39	1748627.59	14536033.41	40°01'29.621"N	80°36'48.466"W	2387.52	219.399	4.68	-0.25	-4.67
7523.00	89.510	146.930	6343.16	1478.83	-1914.58	-1470.22	1748672.74	14535963.81	40°01'28.931"N	80°36'47.889"W	2413.95	217.521	0.50	-0.45	-0.23
7605.00	89.350	146.620	6343.98	1556.58	-1983.17	-1425.29	1748717.65	14535895.24	40°01'28.251"N	80°36'47.316"W	2442.21	215.705	0.43	-0.20	-0.38
7688.00	89.230	146.170	6345.01	1635.10	-2052.29	-1379.36	1748763.57	14535826.15	40°01'27.566"N	80°36'46.729"W	2472.76	213.905	0.56	-0.14	-0.54
7774.00	89.290	147.790	6346.12	1716.73	-2124.39	-1332.50	1748810.41	14535754.07	40°01'26.852"N	80°36'46.131"W	2507.71	212.097	1.88	0.07	1.88
7862.00	89.480	149.020	6347.06	1800.92	-2199.34	-1286.40	1748856.49	14535679.15	40°01'26.109"N	80°36'45.543"W	2547.93	210.323	1.41	0.22	1.40
7948.00	89.380	151.400	6347.92	1883.95	-2273.97	-1243.68	1748899.20	14535604.55	40°01'25.370"N	80°36'44.998"W	2591.85	208.675	2.77	-0.12	2.77
8031.00	89.750	154.750	6348.55	1965.05	-2347.96	-1206.10	1748936.76	14535530.59	40°01'24.637"N	80°36'44.519"W	2639.62	207.189	4.06	0.45	4.04
8114.00	89.850	154.810	6348.84	2046.65	-2423.05	-1170.73	1748972.11	14535455.53	40°01'23.893"N	80°36'44.068"W	2691.05	205.788	0.14	0.12	0.07
8203.00	89.450	154.190	6349.38	2134.08	-2503.37	-1132.42	1749010.41	14535375.24	40°01'23.098"N	80°36'43.580"W	2747.59	204.340	0.83	-0.45	-0.70
8290.00	89.380	150.390	6350.27	2218.82	-2580.38	-1091.97	1749050.84	14535298.26	40°01'22.355"N	80°36'43.065"W	2801.92	202.937	4.37	-0.08	-4.37
8378.00	89.290	147.490	6351.29	2303.24	-2655.75	-1046.58	1749096.22	14535222.92	40°01'21.588"N	80°36'42.485"W	2854.53	201.508	3.30	-0.10	-3.30
8464.00	89.290	152.590	6352.36	2386.18	-2730.23	-1003.65	1749139.13	14535148.47	40°01'20.850"N	80°36'41.938"W	2908.86	200.184	5.93	0.00	5.93
8549.00	89.940	150.860	6352.93	2468.80	-2805.08	-963.39	1749179.38	14535073.65	40°01'20.109"N	80°36'41.424"W	2965.90	198.955	2.17	0.76	-2.04
8635.00	89.110	143.970	6353.64	2550.59	-2877.50	-917.10	1749225.64	14535001.26	40°01'19.391"N	80°36'40.834"W	3020.11	197.678	8.07	-0.97	-8.01
8723.00	89.320	145.330	6354.85	2632.93	-2949.26	-866.19	1749276.53	14534929.52	40°01'18.680"N	80°36'40.183"W	3073.83	196.367	1.56	0.24	1.55
8808.00	89.510	148.990	6355.72	2713.68	-3020.66	-820.11	1749322.60	14534858.15	40°01'17.972"N	80°36'39.595"W	3130.01	195.190	4.31	0.22	4.31
8894.00	89.420	152.470	6356.52	2796.90	-3095.67	-778.07	1749364.62	14534783.17	40°01'17.229"N	80°36'39.059"W	3191.95	194.109	4.05	-0.10	4.05
8980.00	90.030	155.420	6356.93	2881.21	-3172.92	-740.30	1749402.38	14534705.95	40°01'16.464"N	80°36'38.578"W	3258.14	193.133	3.50	0.71	3.43
9069.00	90.180	155.420	6356.77	2968.89	-3253.85	-703.28	1749439.38	14534625.05	40°01'15.663"N	80°36'38.106"W	3328.99	192.196	0.17	0.17	0.00
9155.00	89.780	150.510	6356.80	3052.88	-3330.43	-664.20	1749478.45	14534548.50	40°01'14.904"N	80°36'37.608"W	3396.02	191.279	5.73	-0.47	-5.71
9243.00	89.720	148.340	6357.18	3137.51	-3406.19	-619.44	1749523.19	14534472.77	40°01'14.154"N	80°36'37.037"W	3462.06	190.307	2.47	-0.07	-0.17
9330.00	90.310	151.760	6357.16	3221.44	-3481.56	-576.01	1749566.60	14534397.43	40°01'13.407"N	80°36'36.483"W	3528.89	189.394	3.99	0.68	3.93
9416.00	89.940	153.260	6356.97	3305.30	-3557.85	-536.32	1749606.28	14534321.17	40°01'12.651"N	80°36'35.977"W	3598.05	188.572	1.80	-0.43	-0.74
9501.00	89.780	151.190	6357.18	3388.09	-3633.05	-496.71	1749645.87	14534246.00	40°01'11.907"N	80°36'35.473"W	3666.85	187.785	2.44	-0.19	-2.44
9586.00	89.750	150.890	6357.53	3470.47	-3707.42	-455.55	1749687.01	14534171.66	40°01'11.170"N	80°36'34.948"W	3735.31	187.005	0.35	-0.04	-0.35



# Actual Wellpath Report

Brian Dytko OHI 206H AWP Proj: 15229'MD  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	SOUTHWESTERN ENERGY	Slot	Slot 206H
Area	Ohio County, WV	Well	Brian Dytko OHI 206H
Field	Ohio	Wellbore	Brian Dytko OHI 206H AWB
Facility	Brian Dytko OHI Pad		

WELLPATH DATA (187 stations)																
MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate	
[ft]	[°]	[°]	[ft]	[ft]	[ft]	[ft]	[US ft]	[US ft]			[ft]	[°]	[°/100ft]	[°/100ft]	[°/100ft]	
12264.00	88.920	150.940	6376.77	6065.35	-6050.62	838.51	1750980.57	14531829.37	40°00'47.958"N	80°36'18.448"W	6108.45	172.110	1.65	-0.03	-1.65	
12349.00	88.920	150.360	6378.37	6147.57	-6124.70	880.16	1751022.21	14531755.32	40°00'47.224"N	80°36'17.917"W	6187.62	171.822	0.68	0.00	-0.68	
12435.00	88.120	150.330	6380.60	6230.63	-6199.41	922.70	1751064.73	14531680.64	40°00'46.484"N	80°36'17.375"W	6267.70	171.534	0.93	-0.93	-0.03	
12520.00	88.150	150.740	6383.36	6312.78	-6273.38	964.48	1751106.50	14531606.70	40°00'45.751"N	80°36'16.842"W	6347.08	171.260	0.48	0.04	0.48	
12608.00	88.180	150.930	6386.18	6397.95	-6350.18	1007.35	1751149.35	14531529.93	40°00'44.990"N	80°36'16.296"W	6429.58	170.986	0.22	0.03	0.22	
12695.00	88.120	151.200	6388.99	6482.23	-6426.28	1049.42	1751191.40	14531453.86	40°00'44.236"N	80°36'15.759"W	6511.40	170.725	0.32	-0.07	0.31	
12781.00	88.340	151.540	6391.64	6565.66	-6501.73	1090.60	1751232.57	14531378.44	40°00'43.489"N	80°36'15.234"W	6592.56	170.478	0.47	0.26	0.40	
12862.00	88.680	152.620	6393.75	6644.49	-6573.27	1128.52	1751270.47	14531306.92	40°00'42.780"N	80°36'14.751"W	6669.44	170.258	1.40	0.42	1.33	
12946.00	88.680	152.010	6395.69	6726.32	-6647.64	1167.54	1751309.47	14531232.58	40°00'42.043"N	80°36'14.254"W	6749.39	170.039	0.73	0.00	-0.73	
13030.00	89.170	151.860	6397.26	6808.03	-6721.75	1207.05	1751348.97	14531158.50	40°00'41.309"N	80°36'13.750"W	6829.26	169.820	0.61	0.58	-0.18	
13113.00	89.510	152.550	6398.22	6888.86	-6795.17	1245.75	1751387.66	14531085.11	40°00'40.582"N	80°36'13.257"W	6908.41	169.611	0.93	0.41	0.83	
13195.00	89.540	152.310	6398.90	6968.80	-6867.85	1283.70	1751425.59	14531012.46	40°00'39.862"N	80°36'12.773"W	6986.79	169.413	0.29	0.04	-0.29	
13279.00	89.540	151.880	6399.57	7050.58	-6942.08	1323.01	1751464.89	14530938.25	40°00'39.127"N	80°36'12.273"W	7067.03	169.210	0.51	0.00	-0.51	
13362.00	89.600	151.360	6400.19	7131.22	-7015.10	1362.46	1751504.32	14530865.26	40°00'38.403"N	80°36'11.770"W	7146.19	169.009	0.63	0.07	-0.63	
13446.00	89.540	150.680	6400.83	7212.62	-7088.58	1403.16	1751545.00	14530791.81	40°00'37.675"N	80°36'11.251"W	7226.12	168.803	0.81	-0.07	-0.81	
13531.00	89.260	150.440	6401.72	7294.82	-7162.60	1444.93	1751586.76	14530717.82	40°00'36.942"N	80°36'10.718"W	7306.90	168.595	0.43	-0.33	-0.28	
13615.00	89.230	149.280	6402.82	7375.78	-7235.24	1487.11	1751628.92	14530645.21	40°00'36.222"N	80°36'10.180"W	7386.49	168.385	1.38	-0.04	-1.38	
13699.00	89.230	149.890	6403.95	7456.63	-7307.67	1529.63	1751671.43	14530572.80	40°00'35.505"N	80°36'09.638"W	7466.05	168.178	0.73	0.00	0.73	
13782.00	89.230	149.940	6405.07	7536.65	-7379.48	1571.23	1751713.01	14530501.02	40°00'34.793"N	80°36'09.108"W	7544.90	167.980	0.06	0.00	0.06	
13870.00	89.080	149.520	6406.36	7621.41	-7455.48	1615.59	1751757.35	14530425.06	40°00'34.040"N	80°36'08.542"W	7628.52	167.773	0.51	-0.17	-0.48	
13952.00	89.110	150.940	6407.66	7700.58	-7526.65	1656.29	1751798.04	14530353.92	40°00'33.335"N	80°36'08.023"W	7706.73	167.589	1.73	0.04	1.73	
14036.00	89.170	150.060	6408.92	7781.78	-7599.75	1697.65	1751839.38	14530280.84	40°00'32.611"N	80°36'07.496"W	7787.05	167.408	1.05	0.07	-1.05	
14119.00	89.230	150.110	6410.08	7861.87	-7671.68	1739.04	1751880.76	14530208.94	40°00'31.898"N	80°36'06.968"W	7866.32	167.228	0.09	0.07	0.06	
14203.00	89.200	151.320	6411.23	7943.15	-7744.94	1780.13	1751921.83	14530135.71	40°00'31.173"N	80°36'06.444"W	7946.88	167.056	1.44	-0.04	1.44	
14288.00	89.230	152.180	6412.39	8025.77	-7819.81	1820.35	1751962.04	14530060.87	40°00'30.431"N	80°36'05.931"W	8028.89	166.896	1.01	0.04	1.01	
14372.00	89.200	153.280	6413.55	8107.75	-7894.46	1858.84	1752000.51	14529986.24	40°00'29.692"N	80°36'05.441"W	8110.35	166.750	1.31	-0.04	1.31	
14456.00	89.170	152.850	6414.74	8189.84	-7969.34	1896.88	1752038.54	14529911.39	40°00'28.950"N	80°36'04.956"W	8191.98	166.611	0.51	-0.04	-0.51	
14539.00	89.140	152.180	6415.96	8270.77	-8042.96	1935.19	1752076.82	14529837.80	40°00'28.221"N	80°36'04.468"W	8272.50	166.471	0.81	-0.04	-0.81	
14622.00	89.230	151.790	6417.14	8351.53	-8116.23	1974.17	1752115.79	14529764.56	40°00'27.495"N	80°36'03.972"W	8352.88	166.329	0.48	0.11	-0.47	
14706.00	89.170	151.350	6418.32	8433.12	-8190.09	2014.15	1752155.76	14529690.73	40°00'26.763"N	80°36'03.462"W	8434.12	166.184	0.53	-0.07	-0.52	

## REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot 206H
Area	Ohio County, WV	Well	Brian Dytko OHI 206H
Field	Ohio	Wellbore	Brian Dytko OHI 206H AWB
Facility	Brian Dytko OHI Pad		

## WELLPATH DATA (187 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]
14790.00	89.170	149.840	6419.53	8514.36	-8263.26	2055.39	1752196.98	14529617.59	40°00'26.038"N	80°36'02.936"W	8515.05	166.032	1.80	0.00	-1.80
14874.00	89.170	150.010	6420.75	8595.34	-8335.95	2097.48	1752239.06	14529544.93	40°00'25.318"N	80°36'02.400"W	8595.78	165.876	0.20	0.00	0.20
14957.00	89.170	149.910	6421.95	8675.38	-8407.79	2139.03	1752280.59	14529473.11	40°00'24.606"N	80°36'01.870"W	8675.62	165.726	0.12	0.00	-0.12
15040.00	89.170	150.010	6423.16	8755.41	-8479.63	2180.57	1752322.12	14529401.30	40°00'23.895"N	80°36'01.340"W	8755.52	165.579	0.12	0.00	0.12
15126.00	89.230	148.400	6424.36	8838.03	-8553.50	2224.60	1752366.12	14529327.46	40°00'23.163"N	80°36'00.779"W	8838.05	165.421	1.87	0.07	-1.87
15204.00	89.110	147.600	6425.49	8912.49	-8619.64	2265.93	1752407.44	14529261.35	40°00'22.507"N	80°36'00.251"W	8912.50	165.271	1.04	-0.15	-1.03
15229.00	89.110	147.600	6425.87	8936.31	-8640.74	2279.32	1752420.82	14529240.25	40°00'22.298"N	80°36'00.080"W	8936.32	165.223	0.00	0.00	0.00

## HOLE & CASING SECTIONS - Ref Wellbore: Brian Dytko OHI 206H AWB    Ref Wellpath: Brian Dytko OHI 206H AWP Proj: 15229'MD

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
20in Conductor	26.00	126.00	100.00	26.00	126.00	0.00	0.00	-0.04	0.25
17.5in Open Hole	126.00	698.00	572.00	126.00	697.99	-0.04	0.25	-0.02	1.35
13.375in Casing	26.00	678.00	652.00	26.00	678.00	0.00	0.00	-0.31	1.56
12.25in Open Hole	698.00	2005.00	1307.00	697.99	1988.83	-0.02	1.35	-88.63	-148.48
9.625in Casing	26.00	1985.00	1959.00	26.00	1969.27	0.00	0.00	-85.73	-145.46
8.75in Open Hole	2005.00	6256.00	4251.00	1988.83	5819.94	-88.63	-148.48	-974.61	-1720.19
8.5in Open Hole	6256.00	15229.00	8973.00	5819.94	6425.87	-974.61	-1720.19	-8640.74	2279.32

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REFERENCE WELLPATH IDENTIFICATION			
Operator	SOUTHWESTERN ENERGY	Slot	Slot 206H
Area	Ohio County, WV	Well	Brian Dytko OHI 206H
Field	Ohio	Wellbore	Brian Dytko OHI 206H 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 206H LP Rev-4	6344.00	-1581.01	-1640.17	1748502.86	14536297.24	40°01'32.235"N	80°36'50.055"W	point
Brian Dytko OHI 206H BHL Rev-3	6413.00	-8644.03	2267.70	1752409.21	14529236.96	40°00'22.266"N	80°36'00.230"W	point

WELLPATH COMPOSITION - Ref Wellbore: Brian Dytko OHI 206H AWB    Ref Wellpath: Brian Dytko OHI 206H AWP Proj: 15229'MD				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
26.00	510.00	BHI Generic gyro - northseeking (Standard)	02_Gyro <17-1/2"> (100'-510')	Brian Dytko OHI 206H AWB
510.00	651.00	BHI NaviTrak (Axial)	01_APS EM <17-1/2"> (148'-651')	Brian Dytko OHI 206H AWB
651.00	1920.00	BHI NaviTrak (Axial)	03_APS EM <12-1/4"> (651')(695'-1920')	Brian Dytko OHI 206H AWB
1920.00	6181.00	BHI NaviTrak (Axial)	04_APS EM <8-3/4"> (1920')(2016'-6181')	Brian Dytko OHI 206H AWB
6181.00	15204.00	BHI AutoTrak Curve (Short)	05_BH AT Curve <8-1/2"> (6181')(6228'-15204')	Brian Dytko OHI 206H AWB
15204.00	15229.00	Blind Drilling (std)	Projection to bit	Brian Dytko OHI 206H AWB

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REFERENCE WELLPATH IDENTIFICATION			
Operator	SOUTHWESTERN ENERGY	Slot	Slot 206H
Area	Ohio County, WV	Well	Brian Dytko OHI 206H
Field	Ohio	Wellbore	Brian Dytko OHI 206H AWB
Facility	Brian Dytko OHI Pad		

**COMMENTS**

Wellpath general comments  
 API: 47-069-00247-000  
 BH Job #: 9154709  
 Rig: SDC 42  
 Duration: 05/18/2018 - 05/27/2018

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