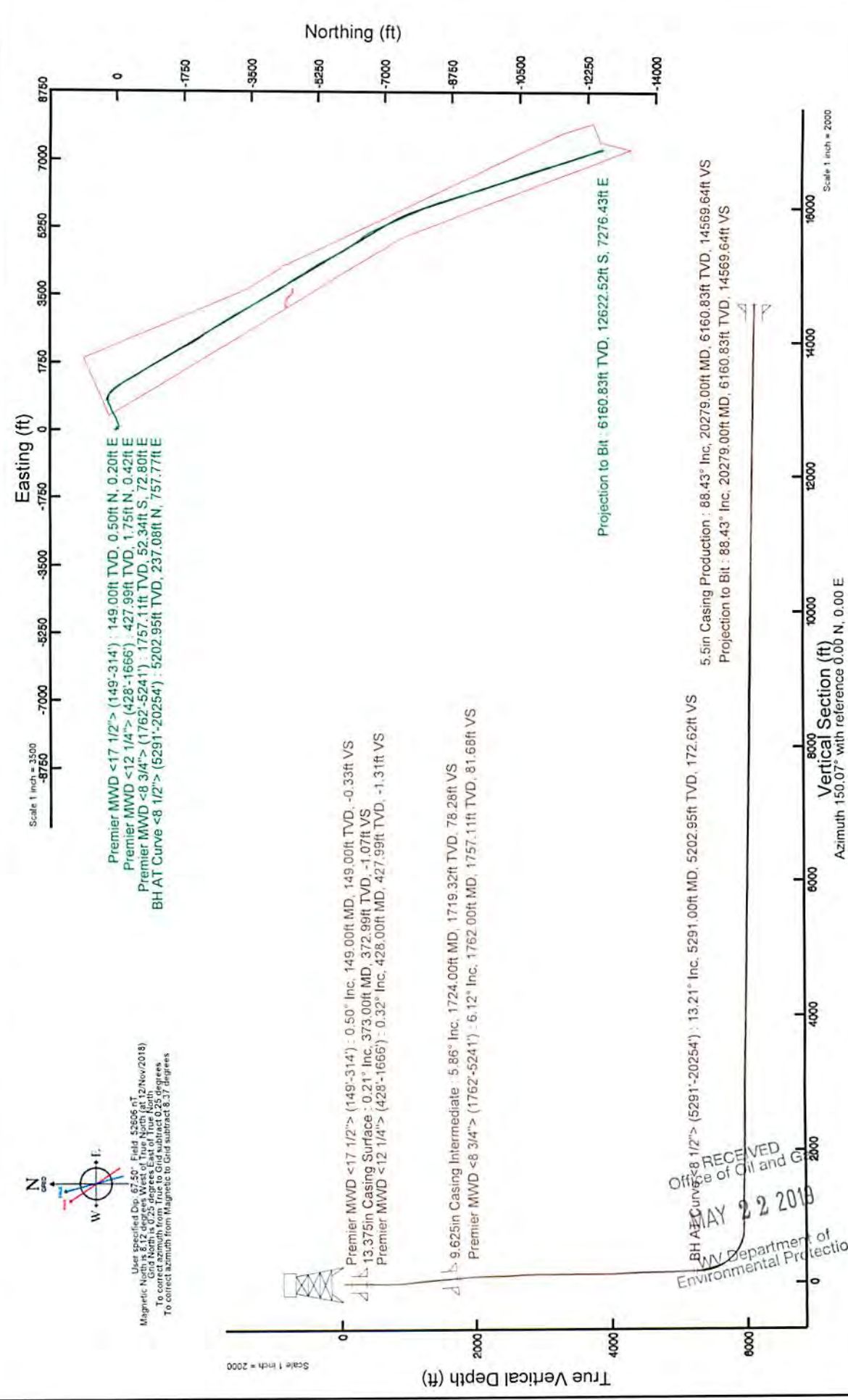


SOUTHWESTERN ENERGY
 location: Ohio County, WV
 Slot: Slot 10H
 Well: Benjamin Honecker OHI 10H
 Field: Ohio
 Facility: Benjamin Honecker OHI Pad Wellbore: Benjamin Honecker OHI 10H PWB

Plot reference wellpath is Benjamin Honecker OHI 10H PWP Rev-B.D Grid System: NAD83 / UTM Zone 17 North, US feet
 True vertical depths are referenced to SDC 42 (RKB)
 Measured depths are referenced to SDC 42 (RKB)
 SDC 42 (RKB) to Mean Sea Level: 1130 feet
 Mean Sea Level to Ground level (At Slot Slot 10H): -1104 feet
 Coordinates are in feet referenced to Slot



Location Information			
Facility Name	Grid East (US ft)	Grid North (US ft)	Longitude
Benjamin Honecker OHI Pad	1745036.530	14583332.530	40°09'17.198"N 80°36'40.524"W
Slot	Local N (ft)	Grid East (US ft)	Grid North (US ft)
Slot 10H	-46.02	1749045.420	14583286.530
Slot 42 (RKB)	to Ground level (At Slot Slot 10H)		26ft
Mean Sea Level to Ground level (At Slot Slot 10H)			-1104ft
SDC 42 (RKB) to Mean Sea Level			1130ft
Comments			
API: 47-069-00244-0000			
BH Job #: 109479712			
Rpt: SDC 42			
Duration: 11/09/2018 - 11/15/2018			



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 Office of Oil and Gas
 MAY 22 2019
 WV Department of Environmental Protection

REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY		Slot	Slot 10H
Area	Ohio County, WV		Well	Benjamin Honecker OHI 10H
Field	Ohio		Wellbore	Benjamin Honecker OHI 10H AWB
Facility	Benjamin Honecker OHI Pad			

REPORT SETUP INFORMATION

Projection System	NAD83 / UTM Zone 17 North, US feet		Software System	WellArchitect® 5.1
North Reference	Grid		User	Atenjen
Scale	0.999614		Report Generated	29/Nov/2018 at 09:22
Convergence at slot	0.25° East		Database/Source file	WA_MPL_EASTERONUS_Defn/Benjamin_Honecker_OHI_10H_AWP_Proj_20279_.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-46.02	6.89	1749045.42	14583286.53	40°09'16.743"N	80°36'40.438"W
Facility Reference Pt			1749038.53	14583332.53	40°09'17.198"N	80°36'40.524"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	1130.00ft
Horizontal Reference Pt	Slot	SDC 42 (RKB) to Mean Sea Level	1130.00ft
Vertical Reference Pt	SDC 42 (RKB)	SDC 42 (RKB) to Ground Level at Slot (Slot 10H)	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	150.07°

REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot 10H
Area	Ohio County, WV	Well	Benjamin Honecker OHI 10H
Field	Ohio	Wellbore	Benjamin Honecker OHI 10H AWB
Facility	Benjamin Honecker OHI Pad		

WELLPATH DATA (232 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]
0.00	0.000	22.330	0.00	0.00	0.00	0.00	1749045.42	14583286.53	40°09'16.743"N	80°36'40.438"W	0.00	0.000	0.00	0.00	0.00
26.00	0.000	22.330	26.00	0.00	0.00	0.00	1749045.42	14583286.53	40°09'16.743"N	80°36'40.438"W	0.00	0.000	0.00	0.00	0.00
149.00	0.500	22.330	149.00	-0.33	0.50	0.20	1749045.62	14583287.03	40°09'16.748"N	80°36'40.435"W	0.54	22.330	0.41	0.41	18.15
241.00	0.330	30.570	241.00	-0.70	1.10	0.49	1749045.91	14583287.63	40°09'16.754"N	80°36'40.432"W	1.20	24.142	0.20	-0.18	8.96
314.00	0.200	16.720	314.00	-0.90	1.40	0.63	1749046.05	14583287.93	40°09'16.757"N	80°36'40.433"W	1.54	24.406	0.20	-0.18	-18.97
428.00	0.320	300.220	427.99	-1.31	1.75	0.42	1749045.84	14583288.28	40°09'16.761"N	80°36'40.433"W	1.80	13.402	0.29	0.11	-67.11
519.00	0.300	310.280	518.99	-1.75	2.03	0.02	1749045.44	14583288.56	40°09'16.763"N	80°36'40.438"W	2.03	0.439	0.06	-0.02	11.05
611.00	0.450	311.030	610.99	-2.32	2.42	-0.44	1749044.98	14583288.95	40°09'16.767"N	80°36'40.444"W	2.46	349.698	0.16	0.16	0.82
701.00	0.400	302.360	700.99	-2.93	2.82	-0.97	1749044.45	14583289.35	40°09'16.771"N	80°36'40.450"W	2.99	340.998	0.09	-0.06	-9.63
791.00	0.750	178.210	790.99	-2.69	2.40	-1.22	1749044.20	14583289.93	40°09'16.767"N	80°36'40.454"W	2.70	333.099	1.14	0.39	-137.94
881.00	3.150	158.190	880.93	0.28	-0.48	-0.28	1749045.14	14583286.05	40°09'16.739"N	80°36'40.442"W	0.56	210.425	2.73	2.67	-22.24
972.00	5.990	144.280	971.63	7.48	-6.66	3.42	1749048.84	14583279.87	40°09'16.677"N	80°36'40.394"W	7.49	152.818	3.33	3.12	-15.29
1062.00	7.370	135.850	1061.02	17.74	-14.61	10.18	1749055.60	14583271.92	40°09'16.598"N	80°36'40.308"W	17.81	145.132	1.88	1.53	-9.37
1153.00	6.210	126.110	1151.38	27.90	-21.70	18.22	1749063.64	14583264.84	40°09'16.528"N	80°36'40.205"W	28.34	139.978	1.79	-1.27	-10.70
1243.00	5.990	117.110	1240.88	36.29	-26.71	26.34	1749071.75	14583259.83	40°09'16.478"N	80°36'40.100"W	37.51	135.404	1.09	-0.24	-10.00
1334.00	7.030	113.430	1331.29	44.74	-31.09	35.67	1749081.08	14583255.45	40°09'16.435"N	80°36'39.980"W	47.32	131.072	1.23	1.14	-4.04
1424.00	6.340	114.300	1420.68	53.19	-35.32	45.26	1749090.66	14583251.22	40°09'16.392"N	80°36'39.857"W	57.41	127.974	0.77	-0.77	0.97
1515.00	5.080	122.920	1511.22	60.86	-39.58	53.22	1749098.62	14583246.96	40°09'16.350"N	80°36'39.755"W	66.32	126.641	1.67	-1.38	9.47
1605.00	5.160	126.610	1600.87	68.11	-44.16	59.81	1749105.21	14583242.39	40°09'16.304"N	80°36'39.670"W	74.35	126.440	0.38	0.09	4.10
1666.00	5.490	123.460	1661.60	73.24	-47.41	64.45	1749109.84	14583239.14	40°09'16.272"N	80°36'39.611"W	80.01	126.337	0.72	0.54	-5.16
1762.00	6.120	118.000	1757.11	81.68	-52.34	72.80	1749118.19	14583234.21	40°09'16.223"N	80°36'39.503"W	89.66	125.715	0.87	0.66	-5.69
1807.00	6.490	119.460	1801.84	85.90	-54.72	77.13	1749122.52	14583231.83	40°09'16.199"N	80°36'39.448"W	94.57	125.352	0.90	0.82	3.24
1898.00	8.080	93.850	1892.12	93.89	-57.68	87.99	1749133.38	14583228.88	40°09'16.170"N	80°36'39.308"W	105.21	123.244	3.93	1.75	-28.14
1988.00	9.570	78.740	1981.07	99.80	-56.64	101.64	1749147.02	14583229.91	40°09'16.179"N	80°36'39.132"W	116.36	119.129	3.05	1.66	-16.79
2079.00	11.180	69.390	2070.58	103.65	-52.06	117.32	1749162.70	14583234.49	40°09'16.224"N	80°36'38.930"W	128.35	113.928	2.55	1.77	-10.27
2170.00	12.230	66.830	2159.69	106.21	-45.16	134.44	1749179.81	14583241.39	40°09'16.291"N	80°36'38.709"W	141.82	108.568	1.29	1.15	-2.81
2260.00	13.550	64.560	2247.42	108.16	-36.88	152.73	1749198.09	14583249.67	40°09'16.372"N	80°36'38.473"W	157.12	103.575	1.57	1.47	-2.52
2351.00	14.770	62.720	2335.66	109.53	-26.96	172.66	1749218.02	14583259.56	40°09'16.469"N	80°36'38.216"W	174.76	98.882	1.43	1.34	-2.02
2441.00	14.730	66.950	2422.69	111.43	-17.24	193.39	1749238.73	14583269.29	40°09'16.565"N	80°36'37.948"W	194.16	95.096	1.20	-0.04	4.70
2531.00	12.590	75.520	2510.15	115.42	-10.31	213.42	1749258.76	14583276.22	40°09'16.632"N	80°36'37.690"W	213.67	92.766	3.27	-2.38	9.52



Actual Wellpath Report

Benjamin Honecker OHI 10H AWP Proj:20279'
Page 3 of 11



05/31/2019

REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot 10H
Area	Ohio County, WV	Well	Benjamin Honecker OHI 10H
Field	Ohio	Wellbore	Benjamin Honecker OHI 10H AWB
Facility	Benjamin Honecker OHI Pad		

WELLPATH DATA (232 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]
2621.00	11.130	80.090	2598.23	121.01	-6.36	231.47	1749276.80	14583280.17	40°09'16.670"N	80°36'37.457"W	231.56	91.574	1.93	-1.62	5.08
2711.00	9.900	78.760	2686.72	126.46	-3.36	247.62	1749292.94	14583283.17	40°09'16.699"N	80°36'37.249"W	247.64	90.777	1.39	-1.37	-1.48
2802.00	9.540	69.430	2776.42	130.19	0.82	262.35	1749307.67	14583287.34	40°09'16.740"N	80°36'37.059"W	262.36	89.822	1.77	-0.40	-10.25
2892.00	10.460	62.410	2865.05	131.74	7.22	276.58	1749321.89	14583293.75	40°09'16.803"N	80°36'36.876"W	276.67	88.505	1.70	1.02	-7.80
2982.00	11.040	60.390	2953.47	132.12	15.26	291.31	1749336.62	14583301.79	40°09'16.881"N	80°36'36.686"W	291.71	87.001	0.77	0.64	-2.24
3073.00	11.470	58.070	3042.72	131.85	24.35	306.57	1749351.87	14583310.87	40°09'16.971"N	80°36'36.489"W	307.53	85.458	0.69	0.47	-2.55
3163.00	12.050	66.640	3130.83	130.98	34.25	322.01	1749367.30	14583320.77	40°09'17.068"N	80°36'36.289"W	323.82	83.929	0.72	0.64	-1.59
3253.00	12.810	59.510	3218.72	130.32	44.48	338.45	1749383.74	14583330.99	40°09'17.168"N	80°36'36.077"W	341.36	82.513	1.09	0.84	3.19
3344.00	13.210	60.550	3307.39	130.31	54.71	356.20	1749401.48	14583341.22	40°09'17.269"N	80°36'35.848"W	360.38	81.268	0.51	0.44	1.14
3434.00	13.400	63.360	3394.97	130.99	64.44	374.47	1749419.75	14583350.95	40°09'17.384"N	80°36'35.612"W	379.98	80.236	0.75	0.21	3.12
3524.00	13.710	64.470	3482.46	132.41	73.71	393.42	1749438.69	14583360.22	40°09'17.455"N	80°36'35.367"W	400.27	79.388	0.45	0.34	1.23
3615.00	13.480	61.120	3570.92	133.43	83.49	412.44	1749457.70	14583369.98	40°09'17.550"N	80°36'35.122"W	420.80	78.557	0.90	-0.25	-3.68
3705.00	13.350	58.770	3658.46	133.39	93.94	430.51	1749475.76	14583380.43	40°09'17.653"N	80°36'34.888"W	440.64	77.691	0.62	-0.14	-2.61
3795.00	14.280	59.970	3745.86	133.13	104.88	449.00	1749494.25	14583391.37	40°09'17.760"N	80°36'34.650"W	461.09	76.852	1.08	1.03	1.33
3886.00	15.250	59.670	3833.85	133.03	116.54	469.05	1749514.29	14583403.03	40°09'17.875"N	80°36'34.391"W	483.31	76.047	1.07	1.07	-0.33
3976.00	13.210	59.630	3921.08	132.87	127.72	488.14	1749533.37	14583414.20	40°09'17.984"N	80°36'34.144"W	504.57	75.338	2.27	-2.27	-0.04
4066.00	10.580	69.570	4009.15	134.15	135.80	504.76	1749549.99	14583422.28	40°09'18.063"N	80°36'33.930"W	522.71	74.941	3.69	-2.92	11.04
4157.00	10.320	75.750	4098.65	137.74	140.73	520.49	1749565.71	14583427.20	40°09'18.111"N	80°36'33.727"W	539.18	74.870	1.26	-0.29	6.79
4247.00	10.350	73.140	4187.19	141.74	145.06	536.04	1749581.25	14583431.53	40°09'18.153"N	80°36'33.526"W	555.32	74.858	0.52	0.03	-2.90
4337.00	11.730	71.850	4275.52	145.44	150.25	552.47	1749597.68	14583436.72	40°09'18.204"N	80°36'33.314"W	572.54	74.786	1.56	1.53	-1.43
4428.00	12.730	70.190	4364.45	149.09	156.53	570.70	1749615.89	14583443.00	40°09'18.265"N	80°36'33.079"W	591.77	74.662	1.16	1.10	-1.82
4518.00	13.570	68.040	4452.09	152.30	163.84	589.82	1749635.01	14583450.31	40°09'18.337"N	80°36'32.833"W	612.15	74.476	1.08	0.93	-2.39
4608.00	14.790	64.810	4539.35	154.71	172.68	610.01	1749655.19	14583459.14	40°09'18.423"N	80°36'32.572"W	633.98	74.194	1.62	1.36	-3.59
4698.00	15.010	62.920	4626.33	156.24	182.87	630.78	1749675.95	14583469.33	40°09'18.523"N	80°36'32.304"W	656.75	73.832	0.59	0.24	-2.10
4789.00	14.100	63.170	4714.40	157.42	193.24	651.16	1749696.33	14583479.70	40°09'18.625"N	80°36'32.041"W	679.23	73.471	1.00	-1.00	0.27
4879.00	13.280	62.830	4801.85	158.51	202.91	670.14	1749715.30	14583489.36	40°09'18.719"N	80°36'31.796"W	700.19	73.154	0.92	-0.91	-0.38
4970.00	13.380	68.010	4890.40	160.47	211.62	689.20	1749734.36	14583498.07	40°09'18.805"N	80°36'31.550"W	720.96	72.931	1.32	0.11	5.69
5060.00	13.260	70.910	4977.98	163.85	218.90	708.61	1749753.76	14583505.34	40°09'18.876"N	80°36'31.300"W	741.65	72.833	0.75	-0.13	3.22
5150.00	13.080	70.560	5065.61	167.65	225.66	727.97	1749773.11	14583512.11	40°09'18.942"N	80°36'31.050"W	762.15	72.777	0.22	-0.20	-0.39
5241.00	13.040	68.550	5154.26	171.03	232.85	747.24	1749792.37	14583519.29	40°09'19.012"N	80°36'30.801"W	782.68	72.692	0.50	-0.04	-2.21

REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot 10H
Area	Ohio County, WV	Well	Benjamin Honecker OHI 10H
Field	Ohio	Wellbore	Benjamin Honecker OHI 10H AWB
Facility	Benjamin Honecker OHI Pad		

WELLPATH DATA (232 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [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]
5291.00	13.210	67.620	5202.95	172.62	237.08	1749802.90	14583523.52	40°09'19.053"N	80°36'30.666"W	793.99	72.627	0.54	0.34	-1.86
5373.00	14.100	92.290	5282.70	179.18	240.26	1749821.55	14583526.69	40°09'19.084"N	80°36'30.425"W	812.75	72.806	7.13	1.09	30.09
5418.00	16.730	112.260	5326.11	187.23	237.58	1749833.03	14583524.02	40°09'19.057"N	80°36'30.277"W	822.95	73.220	13.08	5.84	44.38
5463.00	19.020	119.150	5368.94	198.64	231.55	1749845.42	14583517.99	40°09'18.997"N	80°36'30.118"W	833.14	73.863	6.92	5.09	15.31
5554.00	18.560	99.400	5455.18	220.56	221.96	1749872.68	14583508.40	40°09'18.901"N	80°36'29.767"W	856.83	74.987	6.98	-0.51	-21.70
5644.00	25.410	104.210	5538.59	243.11	214.87	1749905.56	14583501.31	40°09'18.829"N	80°36'29.344"W	886.89	75.979	7.86	7.61	5.34
5735.00	32.350	107.420	5618.23	274.66	202.77	1749947.75	14583489.22	40°09'18.708"N	80°36'28.801"W	925.17	77.340	7.81	7.63	3.53
5825.00	38.610	124.490	5691.66	317.84	179.58	1749994.01	14583466.04	40°09'18.477"N	80°36'28.207"W	965.80	79.284	12.97	6.96	18.97
5915.00	46.780	134.450	5757.83	374.92	140.60	1750040.68	14583427.08	40°09'18.089"N	80°36'27.608"W	1005.53	81.962	11.76	9.08	11.07
6005.00	54.140	139.330	5815.10	442.45	89.89	1750087.92	14583376.39	40°09'17.586"N	80°36'27.002"W	1046.77	85.074	9.18	8.18	5.42
6096.00	60.430	141.960	5864.27	517.94	30.69	1750136.37	14583317.20	40°09'16.999"N	80°36'26.381"W	1091.81	88.389	7.33	6.91	2.89
6186.00	69.290	147.410	5902.49	598.95	-35.78	1750183.27	14583250.77	40°09'16.340"N	80°36'25.780"W	1138.85	91.800	11.26	9.84	6.06
6231.00	73.630	149.090	5916.79	641.58	-72.05	1750205.70	14583214.51	40°09'15.981"N	80°36'25.494"W	1162.96	93.552	10.27	9.64	3.73
6276.00	77.190	149.570	5928.13	685.12	-109.50	1750227.90	14583177.07	40°09'15.610"N	80°36'25.210"W	1188.00	95.289	7.98	7.91	1.07
6321.00	80.300	150.460	5936.91	729.24	-147.73	1750249.94	14583138.86	40°09'15.231"N	80°36'24.928"W	1214.01	96.989	7.18	6.91	1.98
6366.00	83.650	150.990	5943.19	773.79	-186.59	1750271.72	14583100.01	40°09'14.846"N	80°36'24.650"W	1240.88	98.648	7.54	7.44	1.18
6411.00	86.800	151.270	5946.94	818.62	-225.85	1750293.36	14583060.76	40°09'14.457"N	80°36'24.373"W	1268.69	100.255	7.03	7.00	0.62
6456.00	88.620	151.090	5948.73	863.58	-265.25	1750315.03	14583021.39	40°09'14.067"N	80°36'24.096"W	1297.50	101.796	4.06	4.04	-0.40
6547.00	89.140	150.970	5950.51	954.55	-344.85	1750339.08	14582941.82	40°09'13.278"N	80°36'23.533"W	1358.66	104.703	0.59	0.57	-0.13
6637.00	88.680	149.940	5952.23	1044.53	-423.13	1750403.43	14582863.57	40°09'12.503"N	80°36'22.966"W	1422.91	107.300	1.25	-0.51	-1.14
6727.00	88.710	148.600	5954.28	1134.49	-500.47	1750449.39	14582786.26	40°09'11.737"N	80°36'22.378"W	1491.02	109.612	1.49	0.03	-1.49
6830.00	88.920	147.570	5956.41	1237.41	-587.88	1750503.81	14582698.88	40°09'10.870"N	80°36'21.682"W	1572.94	111.947	1.02	0.20	-1.00
6920.00	88.550	147.900	5958.39	1327.31	-663.96	1750551.82	14582622.83	40°09'10.116"N	80°36'21.068"W	1646.77	113.778	0.55	-0.41	0.37
7011.00	88.680	147.420	5960.59	1418.20	-740.82	1750600.47	14582545.99	40°09'09.355"N	80°36'20.446"W	1723.04	115.464	0.55	0.14	-0.53
7101.00	88.950	150.500	5962.45	1508.16	-817.91	1750646.84	14582468.94	40°09'08.591"N	80°36'19.853"W	1798.76	117.046	3.43	0.30	3.42
7191.00	88.650	151.620	5964.34	1598.12	-896.65	1750690.36	14582390.22	40°09'07.811"N	80°36'19.297"W	1874.02	118.585	1.29	-0.33	1.24
7281.00	88.770	150.330	5966.36	1688.09	-975.33	1750734.00	14582311.58	40°09'07.032"N	80°36'18.739"W	1950.59	120.001	1.44	0.13	-1.43
7372.00	88.710	150.390	5968.37	1779.06	-1054.40	1750778.98	14582232.54	40°09'06.248"N	80°36'18.164"W	2029.61	121.299	0.09	-0.07	0.07
7462.00	88.680	151.060	5970.42	1869.03	-1132.89	1750822.96	14582154.08	40°09'05.471"N	80°36'17.602"W	2108.44	122.501	0.74	-0.03	0.74
7553.00	88.370	149.990	5972.76	1960.00	-1212.08	1750867.70	14582074.92	40°09'04.686"N	80°36'17.030"W	2189.16	123.619	1.22	-0.34	-1.18

REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot 10H
Area	Ohio County, WV	Well	Benjamin Honecker OHI 10H
Field	Ohio	Wellbore	Benjamin Honecker OHI 10H AWB
Facility	Benjamin Honecker OHI Pad		

WELLPATH DATA (232 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]
7643.00	88.580	150.180	5975.15	2049.97	-1290.06	1867.86	1750912.55	14581996.97	40°09'03.913"N	80°36'16.457"W	2270.06	124.631	0.31	0.23	0.21
7734.00	88.490	150.700	5977.48	2140.94	-1369.19	1912.74	1750987.42	14581917.87	40°09'03.130"N	80°36'15.883"W	2352.29	125.596	0.58	-0.10	0.57
7824.00	89.020	149.130	5979.44	2230.91	-1447.05	1957.84	1751002.50	14581840.05	40°09'02.358"N	80°36'15.307"W	2434.56	126.468	1.84	0.59	-1.74
7914.00	89.050	147.650	5980.95	2320.86	-1523.70	2004.98	1751049.62	14581763.42	40°09'01.599"N	80°36'14.704"W	2518.25	127.233	1.60	0.03	-1.60
8005.00	89.570	150.200	5982.05	2411.83	-1601.64	2051.92	1751096.54	14581685.51	40°09'00.826"N	80°36'14.104"W	2603.00	127.974	2.82	0.57	2.76
8095.00	89.570	152.650	5982.72	2501.79	-1680.67	2094.96	1751139.56	14581606.51	40°09'00.044"N	80°36'13.554"W	2685.80	128.738	2.72	0.00	2.72
8186.00	89.290	153.090	5983.63	2592.68	-1761.65	2136.45	1751181.04	14581525.56	40°08'59.241"N	80°36'13.025"W	2769.09	129.508	0.57	-0.31	0.48
8276.00	89.720	154.160	5984.41	2682.50	-1842.28	2176.43	1751221.01	14581444.96	40°08'58.443"N	80°36'12.515"W	2851.47	130.247	1.28	0.48	1.19
8366.00	89.570	151.990	5984.96	2772.37	-1922.52	2217.18	1751261.74	14581364.76	40°08'57.648"N	80°36'11.994"W	2934.62	130.929	2.42	-0.17	-2.41
8457.00	89.450	148.350	5985.74	2863.35	-2001.45	2262.44	1751306.98	14581285.86	40°08'56.866"N	80°36'11.416"W	3020.67	131.497	4.00	-0.13	-4.00
8547.00	89.850	147.750	5986.29	2953.29	-2077.81	2310.07	1751354.59	14581209.53	40°08'56.110"N	80°36'10.807"W	3107.04	131.970	0.80	0.44	-0.67
8637.00	89.320	144.390	5986.94	3043.06	-2152.47	2360.29	1751404.80	14581134.89	40°08'55.369"N	80°36'10.165"W	3194.39	132.363	3.78	-0.59	-3.73
8727.00	89.850	142.270	5987.60	3132.43	-2224.65	2414.04	1751458.52	14581062.74	40°08'54.654"N	80°36'09.477"W	3282.78	132.662	2.43	0.59	-2.36
8818.00	89.850	144.610	5987.83	3222.81	-2297.74	2468.24	1751512.70	14580989.68	40°08'53.929"N	80°36'08.783"W	3372.21	132.951	2.57	0.00	2.57
8908.00	89.200	146.570	5988.58	3312.53	-2371.99	2519.09	1751563.54	14580915.46	40°08'53.193"N	80°36'08.132"W	3460.08	133.277	2.29	-0.72	2.18
8998.00	89.200	147.970	5989.84	3402.41	-2447.69	2567.75	1751612.17	14580839.79	40°08'52.443"N	80°36'07.510"W	3547.47	133.629	1.56	0.00	1.56
9089.00	89.170	146.830	5991.13	3493.30	-2524.34	2616.77	1751661.17	14580763.17	40°08'51.683"N	80°36'06.883"W	3635.90	133.970	1.25	-0.03	-1.25
9179.00	89.170	146.760	5992.43	3583.14	-2599.64	2666.05	1751710.44	14580687.90	40°08'50.937"N	80°36'06.253"W	3723.70	134.277	0.60	0.00	-0.08
9269.00	89.260	147.290	5993.67	3673.01	-2675.13	2715.03	1751759.40	14580612.44	40°08'50.189"N	80°36'05.627"W	3811.53	134.576	0.68	0.10	0.59
9360.00	89.200	149.280	5994.89	3763.95	-2752.53	2762.86	1751807.21	14580535.07	40°08'49.422"N	80°36'05.015"W	3899.98	134.893	2.19	-0.07	2.19
9450.00	89.170	148.340	5996.17	3853.92	-2829.52	2809.47	1751853.80	14580458.11	40°08'48.659"N	80°36'04.420"W	3987.39	135.204	1.04	-0.03	-1.04
9541.00	89.200	148.010	5997.47	3944.86	-2906.83	2857.45	1751901.76	14580380.83	40°08'47.893"N	80°36'03.806"W	4076.11	135.491	0.36	0.03	-0.36
9631.00	89.140	147.380	5998.77	4034.77	-2982.89	2905.54	1751949.83	14580304.80	40°08'47.139"N	80°36'03.191"W	4164.11	135.753	0.70	-0.07	-0.70
9721.00	88.860	149.550	6000.34	4124.72	-3059.58	2952.61	1751996.88	14580228.14	40°08'46.379"N	80°36'02.590"W	4251.93	136.019	2.43	-0.31	2.41
9812.00	88.800	152.900	6002.20	4215.67	-3139.32	2996.39	1752040.65	14580148.43	40°08'45.589"N	80°36'02.030"W	4339.78	136.334	3.68	-0.07	3.68
9902.00	88.650	152.570	6004.20	4305.55	-3219.30	3037.61	1752081.85	14580068.48	40°08'44.797"N	80°36'01.504"W	4426.17	136.663	0.40	-0.17	-0.37
9992.00	88.680	150.390	6006.30	4395.49	-3298.35	3080.57	1752124.79	14579989.46	40°08'44.014"N	80°36'00.956"W	4513.21	136.955	2.42	0.03	-2.42
10083.00	88.680	149.910	6008.39	4486.47	-3377.26	3125.85	1752170.06	14579910.59	40°08'43.232"N	80°36'00.377"W	4601.83	137.214	0.53	0.00	-0.53
10173.00	88.610	150.530	6010.52	4576.44	-3455.35	3170.54	1752214.73	14579832.52	40°08'42.459"N	80°35'59.806"W	4689.54	137.461	0.69	-0.08	0.69
10264.00	88.580	150.500	6012.75	4667.41	-3534.54	3215.32	1752259.49	14579753.37	40°08'41.674"N	80°35'59.234"W	4778.20	137.708	0.05	-0.03	-0.03



Actual Wellpath Report

Benjamin Honecker OHI 10H AWP Proj:20279
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05/31/2019

REFERENCE WELLPATH IDENTIFICATION	
Operator	SOUTHWESTERN ENERGY
Area	Ohio County, WV
Field	Ohio
Facility	Benjamin Honecker OHI Pad
Slot	Slot 10H
Well	Benjamin Honecker OHI 10H
Wellbore	Benjamin Honecker OHI 10H AWB

WELLPATH DATA (232 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)
10354.00	88.860	152.220	6014.76	14757.36	-3613.50	3258.44	1752302.60	14579674.43	40°08'40.892"N	80°35'58.684"W	4865.68	137.958	1.94	0.31	1.91
10444.00	88.890	152.010	6016.53	14847.29	-3693.04	3300.53	1752344.66	14579594.93	40°08'40.104"N	80°35'58.146"W	4952.98	138.212	0.24	0.03	-0.23
10535.00	88.890	149.920	6018.30	14938.26	-3772.58	3344.68	1752388.80	14579515.41	40°08'39.316"N	80°35'57.582"W	5041.75	138.441	2.30	0.00	-2.30
10625.00	88.920	149.110	6020.02	15028.23	-3850.13	3390.33	1752434.43	14579437.90	40°08'38.548"N	80°35'56.999"W	5130.09	138.634	0.90	0.03	-0.90
10716.00	88.950	149.480	6021.71	15119.21	-3928.35	3436.79	1752480.87	14579359.70	40°08'37.772"N	80°35'56.405"W	5219.53	138.818	0.41	0.03	0.41
10806.00	88.860	150.430	6023.43	15209.19	-4006.25	3481.84	1752525.91	14579281.84	40°08'37.001"N	80°35'55.830"W	5307.85	139.006	1.06	-0.10	1.06
10897.00	88.890	150.580	6025.21	15300.17	-4085.44	3526.64	1752570.69	14579202.68	40°08'36.216"N	80°35'55.268"W	5397.03	139.199	0.17	0.03	0.16
10987.00	88.950	151.060	6026.91	15390.15	-4164.00	3570.51	1752614.54	14579124.15	40°08'35.438"N	80°35'54.697"W	5485.20	139.388	0.54	0.07	0.53
11078.00	88.950	149.610	6028.58	15481.13	-4243.06	3615.54	1752659.55	14579045.12	40°08'34.655"N	80°35'54.122"W	5574.56	139.565	1.59	0.00	-1.59
11168.00	89.020	146.350	6030.17	15571.04	-4319.34	3663.24	1752707.24	14578968.86	40°08'33.899"N	80°35'53.512"W	5663.58	139.699	3.62	0.08	-3.62
11259.00	88.980	143.680	6031.76	15661.67	-4393.88	3715.41	1752759.38	14578894.35	40°08'33.160"N	80°35'52.845"W	5754.17	139.783	2.93	-0.04	-2.93
11349.00	88.920	143.040	6033.41	15751.03	-4466.09	3769.11	1752813.06	14578822.18	40°08'32.444"N	80°35'52.188"W	5843.98	139.838	0.71	-0.07	-0.71
11439.00	88.950	145.090	6035.08	15840.52	-4538.94	3821.92	1752865.85	14578749.35	40°08'31.721"N	80°35'51.482"W	5933.72	139.902	2.28	0.03	2.28
11530.00	88.770	148.090	6036.89	15931.32	-4614.88	3872.01	1752915.92	14578673.44	40°08'30.969"N	80°35'50.841"W	6024.08	140.002	3.30	-0.20	3.30
11620.00	88.980	151.320	6038.66	16021.29	-4692.56	3917.39	1752961.29	14578595.79	40°08'30.199"N	80°35'50.261"W	6112.78	140.145	3.60	0.23	3.59
11710.00	88.980	149.510	6040.26	16111.27	-4770.82	3961.82	1753005.70	14578517.57	40°08'29.424"N	80°35'49.694"W	6201.34	140.293	2.01	0.00	-2.01
11801.00	88.800	147.680	6042.03	16202.22	-4848.47	4009.23	1753053.09	14578439.95	40°08'28.654"N	80°35'48.088"W	6291.38	140.412	2.02	-0.20	-2.01
11891.00	89.020	145.810	6043.74	16292.05	-4923.71	4058.57	1753102.41	14578364.73	40°08'27.909"N	80°35'46.457"W	6380.82	140.502	2.09	0.24	-2.08
11981.00	88.920	145.580	6045.36	16381.77	-4998.04	4109.28	1753153.11	14578290.43	40°08'27.172"N	80°35'47.808"W	6470.44	140.574	0.28	-0.11	-0.26
12071.00	89.020	147.140	6046.97	16471.57	-5072.96	4159.13	1753202.93	14578215.54	40°08'26.429"N	80°35'47.171"W	6559.97	140.653	1.74	0.11	1.73
12162.00	89.020	148.990	6048.53	16562.50	-5150.17	4207.26	1753251.04	14578138.36	40°08'25.664"N	80°35'46.556"W	6650.21	140.754	2.03	0.00	2.03
12252.00	88.770	149.220	6050.27	16652.47	-5227.38	4253.46	1753297.23	14578061.18	40°08'24.899"N	80°35'45.965"W	6739.25	140.865	0.38	-0.28	0.26
12343.00	88.890	150.990	6052.12	16743.44	-5306.26	4298.80	1753342.55	14577982.34	40°08'24.118"N	80°35'45.386"W	6829.06	140.988	1.95	0.13	1.95
12433.00	89.050	153.560	6053.74	16833.35	-5385.90	4340.66	1753384.40	14577902.72	40°08'23.329"N	80°35'44.852"W	6917.32	141.134	2.86	0.18	2.86
12524.00	89.050	154.680	6055.25	16924.11	-5467.77	4380.38	1753424.10	14577820.89	40°08'22.518"N	80°35'44.345"W	7006.01	141.301	1.23	0.00	1.23
12614.00	88.830	153.330	6056.92	17013.88	-5548.64	4419.82	1753463.52	14577740.04	40°08'21.717"N	80°35'43.842"W	7093.82	141.461	1.52	-0.24	-1.50
12705.00	88.920	152.410	6058.70	17104.76	-5629.62	4461.31	1753504.99	14577659.10	40°08'20.915"N	80°35'43.313"W	7183.02	141.604	1.02	0.10	-1.01
12795.00	88.950	151.550	6060.38	17194.69	-5709.05	4503.58	1753547.25	14577579.70	40°08'20.128"N	80°35'42.773"W	7271.55	141.732	0.96	0.03	-0.96
12886.00	89.260	153.160	6061.80	17285.60	-5789.65	4545.79	1753589.45	14577499.13	40°08'19.330"N	80°35'42.234"W	7361.00	141.862	1.80	0.34	1.77
12976.00	88.920	150.680	6063.23	17375.54	-5869.04	4588.15	1753631.79	14577419.77	40°08'18.543"N	80°35'41.694"W	7449.61	141.983	2.78	-0.38	-2.76

REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot 10H
Area	Ohio County, WV	Well	Benjamin Honecker OHI 10H
Field	Ohio	Wellbore	Benjamin Honecker OHI 10H AWB
Facility	Benjamin Honecker OHI Pad		

WELLPATH DATA (232 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)
13066.00	89.110	148.720	6064.77	7465.52	-5946.73	4633.55	1753677.17	14577342.11	40°08'17.773"N	80°35'41.114"W	7538.79	142.075	2.19	0.21	-2.18
13157.00	88.890	146.660	6066.36	7556.42	-6023.62	4682.18	1753725.78	14577265.25	40°08'17.011"N	80°35'40.492"W	7629.34	142.142	2.28	-0.24	-2.26
13247.00	88.980	145.020	6068.04	7646.16	-6098.08	4732.70	1753776.28	14577190.82	40°08'16.273"N	80°35'39.846"W	7719.14	142.185	1.82	0.10	-1.82
13338.00	88.980	145.160	6069.66	7736.80	-6172.69	4784.77	1753828.33	14577116.23	40°08'15.534"N	80°35'39.180"W	7810.01	142.219	0.15	0.00	0.15
13428.00	88.860	143.860	6071.35	7826.36	-6245.96	4837.01	1753880.55	14577043.00	40°08'14.807"N	80°35'38.512"W	7899.92	142.245	1.45	-0.13	-1.44
13518.00	88.740	143.230	6073.24	7915.75	-6318.33	4890.48	1753934.00	14576970.65	40°08'14.090"N	80°35'37.827"W	7989.87	142.260	0.71	-0.13	-0.70
13608.00	88.860	143.520	6075.12	8005.12	-6390.55	4944.16	1753987.66	14576898.47	40°08'13.374"N	80°35'37.141"W	8079.84	142.272	0.35	0.13	0.32
13699.00	89.080	143.900	6076.76	8095.55	-6463.88	4998.01	1754041.49	14576825.16	40°08'12.646"N	80°35'36.452"W	8170.79	142.288	0.48	0.24	0.42
13790.00	89.170	146.950	6078.15	8186.23	-6538.79	5049.64	1754093.10	14576750.28	40°08'11.904"N	80°35'35.791"W	8261.64	142.323	3.35	0.10	3.35
13881.00	89.050	150.570	6079.56	8277.18	-6616.58	5096.82	1754140.26	14576672.52	40°08'11.133"N	80°35'35.188"W	8352.05	142.393	3.98	-0.13	3.98
13971.00	89.140	153.560	6080.98	8367.10	-6696.07	5138.97	1754182.40	14576593.06	40°08'10.346"N	80°35'34.650"W	8440.76	142.495	3.32	0.10	3.32
14061.00	89.020	154.860	6082.43	8456.85	-6777.09	5178.12	1754221.53	14576512.07	40°08'09.543"N	80°35'34.151"W	8528.89	142.618	1.45	-0.13	1.44
14152.00	89.110	155.730	6083.91	8547.46	-6859.75	5216.15	1754259.54	14576429.44	40°08'08.725"N	80°35'33.666"W	8617.68	142.751	0.96	0.10	0.96
14242.00	89.140	156.260	6085.29	8636.97	-6941.96	5252.76	1754296.14	14576347.27	40°08'07.911"N	80°35'33.200"W	8705.30	142.886	0.59	0.03	0.59
14333.00	89.140	156.670	6086.65	8727.39	-7025.38	5289.09	1754332.46	14576263.88	40°08'07.085"N	80°35'32.737"W	8793.77	143.026	0.45	0.00	0.45
14423.00	89.020	156.300	6088.10	8816.82	-7107.90	5325.00	1754368.35	14576181.40	40°08'06.267"N	80°35'32.280"W	8881.32	143.161	0.43	-0.13	-0.41
14513.00	89.110	156.040	6089.57	8906.30	-7190.21	5361.35	1754404.69	14576099.11	40°08'05.452"N	80°35'31.816"W	8969.02	143.290	0.31	0.10	-0.29
14604.00	88.890	155.230	6091.16	8996.85	-7273.09	5398.89	1754442.21	14576016.26	40°08'04.632"N	80°35'31.338"W	9057.92	143.413	0.92	-0.24	-0.89
14694.00	88.980	155.420	6092.83	9086.46	-7354.86	5436.46	1754479.76	14575934.53	40°08'03.822"N	80°35'30.859"W	9145.98	143.529	0.23	0.10	0.21
14785.00	88.950	155.790	6094.47	9177.02	-7437.72	5474.03	1754517.33	14575851.70	40°08'03.001"N	80°35'30.380"W	9234.98	143.648	0.41	-0.03	0.41
14877.00	88.980	155.740	6096.13	9268.55	-7521.60	5511.79	1754555.07	14575767.85	40°08'02.171"N	80°35'29.899"W	9324.93	143.766	0.06	0.03	-0.05
14968.00	89.940	156.720	6096.99	9359.02	-7604.88	5548.47	1754591.73	14575684.61	40°08'01.346"N	80°35'29.432"W	9413.80	143.886	1.51	1.05	1.08
15059.00	89.910	156.830	6097.11	9449.40	-7688.50	5584.35	1754627.60	14575601.01	40°08'00.518"N	80°35'28.975"W	9502.53	144.008	0.13	-0.03	0.12
15151.00	90.060	157.120	6097.13	9540.73	-7773.17	5620.34	1754663.57	14575516.38	40°07'59.680"N	80°35'28.516"W	9592.21	144.131	0.35	0.16	0.32
15241.00	89.850	155.920	6097.21	9630.16	-7855.72	5656.20	1754699.42	14575433.86	40°07'58.862"N	80°35'28.060"W	9680.13	144.246	1.35	-0.23	-1.33
15332.00	89.850	155.310	6097.44	9720.73	-7938.60	5693.77	1754736.97	14575351.01	40°07'58.042"N	80°35'27.581"W	9769.36	144.351	0.67	0.00	-0.67
15417.00	89.910	157.010	6097.62	9805.25	-8016.35	5728.12	1754771.32	14575273.30	40°07'57.272"N	80°35'27.143"W	9852.57	144.452	2.00	0.07	2.00
15507.00	89.690	157.440	6097.94	9894.55	-8099.33	5762.96	1754806.14	14575190.35	40°07'56.450"N	80°35'26.700"W	9940.36	144.567	0.54	-0.24	0.48
15598.00	89.820	157.570	6098.33	9984.78	-8183.40	5797.78	1754840.95	14575106.31	40°07'55.618"N	80°35'26.256"W	10029.07	144.683	0.20	0.14	0.14
15688.00	89.970	160.000	6098.49	10073.73	-8267.30	5830.34	1754873.50	14575022.45	40°07'54.787"N	80°35'25.842"W	10116.38	144.807	2.71	0.17	2.70

REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot 10H
Area	Ohio County, WV	Well	Benjamin Honecker OHI 10H
Field	Ohio	Wellbore	Benjamin Honecker OHI 10H AWB
Facility	Benjamin Honecker OHI Pad		

WELLPATH DATA (232 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)
15779.00	89.910	161.810	6098.59	10163.11	-8353.29	5860.11	1754903.25	14574936.49	40°07'53.936"N	80°35'25.464"W	10203.84	144.949	1.99	-0.07	1.99
15869.00	89.850	162.000	6098.77	10251.19	-8438.83	5888.06	1754931.20	14574850.97	40°07'53.090"N	80°35'25.109"W	10289.96	145.095	0.22	-0.07	0.21
15959.00	89.910	161.740	6098.96	10339.29	-8524.37	5916.07	1754959.19	14574765.48	40°07'52.243"N	80°35'24.754"W	10376.16	145.239	0.30	0.07	-0.29
16049.00	89.750	161.900	6099.23	10427.41	-8609.87	5944.15	1754987.26	14574680.00	40°07'51.397"N	80°35'24.397"W	10462.45	145.379	0.25	-0.18	0.18
16140.00	89.480	161.840	6099.84	10516.48	-8696.35	5972.47	1755015.57	14574593.56	40°07'50.541"N	80°35'24.038"W	10549.74	145.520	0.30	-0.30	-0.07
16230.00	89.510	162.400	6100.63	10604.49	-8782.00	6000.10	1755043.19	14574507.94	40°07'49.693"N	80°35'23.687"W	10636.01	145.658	0.62	0.03	0.62
16321.00	89.450	162.000	6101.46	10693.43	-8868.69	6027.76	1755070.84	14574421.28	40°07'48.835"N	80°35'23.336"W	10723.23	145.797	0.23	-0.07	-0.22
16411.00	89.480	162.560	6102.30	10781.35	-8954.46	6055.01	1755098.07	14574335.54	40°07'47.987"N	80°35'22.991"W	10809.51	145.933	0.40	0.03	0.40
16502.00	89.570	163.830	6103.05	10869.97	-9041.57	6081.31	1755124.37	14574248.47	40°07'47.125"N	80°35'22.657"W	10896.44	146.075	1.40	0.10	1.40
16592.00	89.540	164.230	6103.75	10957.31	-9128.10	6106.07	1755149.12	14574161.98	40°07'46.288"N	80°35'22.343"W	10982.09	146.220	0.45	-0.03	0.44
16682.00	89.540	165.300	6104.48	11044.36	-9214.93	6129.72	1755172.76	14574075.18	40°07'45.409"N	80°35'22.044"W	11067.45	146.368	1.19	0.00	1.19
16772.00	89.290	164.340	6105.40	11131.39	-9301.78	6153.29	1755196.32	14573988.36	40°07'44.550"N	80°35'21.746"W	11152.85	146.515	1.10	-0.28	-1.07
16862.00	89.450	162.310	6106.38	11218.98	-9387.99	6179.11	1755222.13	14573902.19	40°07'43.697"N	80°35'21.419"W	11239.03	146.647	2.26	0.18	-2.26
16953.00	89.420	161.420	6107.28	11308.06	-9474.46	6207.43	1755250.44	14573815.75	40°07'42.841"N	80°35'21.059"W	11326.86	146.768	0.98	-0.03	-0.98
17043.00	89.420	161.240	6108.19	11396.32	-9559.72	6236.24	1755279.24	14573730.52	40°07'41.987"N	80°35'20.693"W	11413.99	146.882	0.20	0.00	-0.20
17134.00	89.420	161.340	6109.11	11485.57	-9645.91	6265.43	1755308.42	14573644.37	40°07'41.144"N	80°35'20.323"W	11502.14	146.995	0.11	0.00	0.11
17224.00	89.480	160.900	6109.98	11573.90	-9731.06	6294.55	1755337.53	14573559.25	40°07'40.301"N	80°35'19.953"W	11589.44	147.103	0.49	0.07	-0.49
17315.00	89.450	160.540	6110.83	11663.33	-9816.96	6324.60	1755367.56	14573473.39	40°07'39.451"N	80°35'19.571"W	11677.89	147.208	0.40	-0.03	-0.40
17405.00	89.480	160.040	6111.67	11751.90	-9901.68	6354.95	1755397.90	14573388.70	40°07'38.612"N	80°35'19.185"W	11765.57	147.307	0.56	0.03	-0.56
17495.00	89.540	160.030	6112.44	11840.54	-9986.27	6385.68	1755428.62	14573304.14	40°07'37.775"N	80°35'18.795"W	11853.37	147.403	0.07	0.07	-0.01
17586.00	89.450	160.160	6113.24	11930.14	-10071.83	6416.66	1755459.59	14573218.61	40°07'36.928"N	80°35'18.401"W	11942.16	147.499	0.17	-0.10	0.14
17676.00	89.510	160.160	6114.06	12018.75	-10156.48	6447.20	1755490.12	14573133.99	40°07'36.090"N	80°35'18.013"W	12029.99	147.593	0.07	0.07	0.00
17767.00	88.950	159.730	6115.28	12108.39	-10241.96	6478.41	1755521.31	14573048.55	40°07'35.244"N	80°35'17.616"W	12118.89	147.685	0.78	-0.62	-0.47
17857.00	89.230	159.670	6116.71	12197.11	-10326.36	6509.63	1755552.52	14572964.19	40°07'34.409"N	80°35'17.220"W	12206.92	147.773	0.32	0.31	-0.07
17947.00	89.260	159.790	6117.90	12285.83	-10410.78	6540.81	1755583.68	14572879.80	40°07'33.573"N	80°35'16.823"W	12294.97	147.860	0.14	0.03	0.13
18038.00	89.230	160.080	6119.09	12375.47	-10496.24	6572.02	1755614.89	14572794.36	40°07'32.727"N	80°35'16.426"W	12383.97	147.948	0.32	-0.03	0.32
18128.00	89.350	159.980	6120.21	12464.11	-10580.83	6602.76	1755645.61	14572709.81	40°07'31.890"N	80°35'16.036"W	12471.98	148.035	0.17	0.13	-0.11
18218.00	89.320	161.290	6121.25	12552.58	-10665.73	6632.60	1755675.44	14572624.95	40°07'31.049"N	80°35'15.657"W	12559.82	148.124	1.46	-0.03	1.46
18308.00	89.170	162.030	6122.44	12640.73	-10751.15	6660.91	1755703.75	14572539.56	40°07'30.204"N	80°35'15.297"W	12647.33	148.220	0.84	-0.17	0.82
18398.00	89.140	161.940	6123.77	12728.79	-10836.73	6688.75	1755731.57	14572454.01	40°07'29.357"N	80°35'14.944"W	12734.75	148.316	0.11	-0.03	-0.10

REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot 10H
Area	Ohio County, WV	Well	Benjamin Honecker OHI 10H
Field	Ohio	Wellbore	Benjamin Honecker OHI 10H AWB
Facility	Benjamin Honecker OHI Pad		

WELLPATH DATA (232 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]
18489.00	89.230	162.130	6125.06	12817.80	-10923.28	6716.81	1755759.62	14572367.49	40°07'28.500"N	80°35'14.588"W	12823.17	148.412	0.23	0.10	0.21
18579.00	89.140	161.450	6126.34	12905.91	-11008.76	6744.93	1755787.73	14572282.04	40°07'27.654"N	80°35'14.231"W	12910.73	148.505	0.76	-0.10	-0.76
18669.00	89.230	161.690	6127.62	12994.10	-11094.14	6773.38	1755816.17	14572196.70	40°07'26.809"N	80°35'13.870"W	12998.41	148.594	0.28	0.10	0.27
18760.00	89.230	163.620	6128.85	13082.90	-11180.99	6800.51	1755843.29	14572109.88	40°07'25.950"N	80°35'13.526"W	13086.69	148.691	2.12	0.00	2.12
18851.00	89.290	165.320	6130.02	13171.03	-11268.66	6824.87	1755887.64	14572022.25	40°07'25.083"N	80°35'13.218"W	13174.27	148.799	1.87	0.07	1.87
18941.00	89.230	164.460	6131.18	13258.03	-11355.54	6848.33	1755891.09	14571935.40	40°07'24.223"N	80°35'12.921"W	13260.76	148.907	0.96	-0.07	-0.96
19032.00	89.320	162.770	6132.33	13346.49	-11442.83	6874.00	1755916.75	14571848.14	40°07'23.359"N	80°35'12.596"W	13348.79	149.006	1.86	0.10	-1.86
19123.00	89.320	161.340	6133.41	13435.49	-11529.40	6902.03	1755944.77	14571761.61	40°07'22.502"N	80°35'12.240"W	13437.45	149.093	1.57	0.00	-1.57
19213.00	89.200	162.420	6134.58	13523.58	-11614.92	6930.02	1755972.75	14571676.12	40°07'21.656"N	80°35'11.885"W	13525.22	149.178	1.21	-0.13	1.20
19304.00	89.230	163.310	6135.82	13612.31	-11701.88	6956.83	1755999.54	14571589.20	40°07'20.795"N	80°35'11.545"W	13613.64	149.268	0.98	0.03	0.98
19394.00	88.550	161.960	6137.57	13700.14	-11787.76	6983.68	1756026.39	14571503.35	40°07'19.945"N	80°35'11.204"W	13701.20	149.355	1.68	-0.76	-1.50
19486.00	88.520	160.850	6139.92	13790.31	-11874.92	7013.01	1756055.70	14571416.22	40°07'19.083"N	80°35'10.832"W	13791.16	149.435	1.21	-0.03	-1.21
19577.00	88.460	161.730	6142.32	13879.54	-11961.08	7042.19	1756084.87	14571330.09	40°07'18.230"N	80°35'10.462"W	13880.20	149.512	0.97	-0.07	0.97
19669.00	88.460	160.470	6144.79	13969.81	-12048.09	7071.98	1756114.65	14571243.12	40°07'17.369"N	80°35'10.083"W	13970.30	149.588	1.37	0.00	-1.37
19760.00	88.550	161.270	6147.16	14059.16	-12134.03	7101.79	1756144.45	14571157.21	40°07'16.518"N	80°35'09.705"W	14059.52	149.660	0.88	0.10	0.88
19851.00	88.490	160.840	6149.51	14148.47	-12220.08	7131.32	1756173.97	14571071.20	40°07'15.667"N	80°35'09.330"W	14148.71	149.733	0.48	-0.07	-0.47
19942.00	88.520	160.020	6151.89	14237.95	-12305.79	7161.79	1756204.43	14570985.52	40°07'14.818"N	80°35'08.943"W	14238.11	149.801	0.90	0.03	-0.90
20032.00	88.520	159.760	6154.21	14326.60	-12390.27	7192.73	1756235.35	14570901.07	40°07'13.982"N	80°35'08.550"W	14326.70	149.864	0.29	0.00	-0.29
20124.00	88.460	158.940	6156.64	14417.37	-12476.33	7225.16	1756267.77	14570815.04	40°07'13.130"N	80°35'08.137"W	14417.41	149.924	0.89	-0.07	-0.89
20213.00	88.460	160.790	6159.03	14505.03	-12559.86	7255.78	1756298.39	14570731.55	40°07'12.303"N	80°35'07.748"W	14505.05	149.985	2.08	0.00	2.08
20254.00	88.430	162.200	6160.14	14545.21	-12598.72	7268.79	1756311.39	14570692.70	40°07'11.918"N	80°35'07.583"W	14545.21	150.017	3.44	-0.07	3.44
20279.00	88.430	162.200	6160.83	14569.64	-12622.52	7276.43	1756319.03	14570668.92	40°07'11.683"N	80°35'07.486"W	14569.64	150.038	0.00	0.00	0.00

REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot 10H
Area	Ohio County, WV	Well	Benjamin Honecker OHI 10H
Field	Ohio	Wellbore	Benjamin Honecker OHI 10H AWB
Facility	Benjamin Honecker OHI Pad		

HOLE & CASING SECTIONS - Ref Wellbore: Benjamin Honecker OHI 10H AWB Ref Wellpath: Benjamin Honecker OHI 10H AWP Proj:20279'

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
17.5in Open Hole	26.00	373.00	347.00	26.00	372.99	0.00	0.00	0.00	1.59
13.375in Casing Surface	26.00	373.00	347.00	26.00	372.99	0.00	0.00	0.00	1.59
12.25in Open Hole	373.00	1724.00	1351.00	372.99	1719.32	1.59	0.60	-50.42	69.33
9.625in Casing Intermediate	26.00	1724.00	1698.00	26.00	1719.32	0.00	0.00	-50.42	69.33
8.75in Open Hole	1724.00	5318.00	3594.00	1719.32	5229.24	-50.42	69.33	239.00	763.62
8.5in Open Hole	5318.00	20279.00	14961.00	5229.24	6160.83	239.00	763.62	-12622.52	7276.43
5.5in Casing Production	26.00	20279.00	20253.00	26.00	6160.83	0.00	0.00	-12622.52	7276.43

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Benjamin Honecker OHI 10H LP Rev-3	5944.00	-204.13	1239.01	1750283.95	14583082.48	40°09'14.672"N	80°36'24.493"W	point
Benjamin Honecker OHI 10H TP Rev-3	6070.57	-7211.35	5395.23	1754438.55	14576077.98	40°08'05.242"N	80°35'31.381"W	point
Benjamin Honecker OHI 10H BHL Rev-2	6159.00	-12626.48	7269.04	1756311.64	14570664.96	40°07'11.644"N	80°35'07.582"W	point

WELLPATH COMPOSITION - Ref Wellbore: Benjamin Honecker OHI 10H AWB Ref Wellpath: Benjamin Honecker OHI 10H AWP Proj:20279'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment
26.00	314.00	OWSG MWD rev2 + HRGM	01 Premier MWD <17 1/2"> (149'-314')
314.00	1666.00	OWSG MWD rev2 + HRGM	02 Premier MWD <12 1/4"> (428'-1666')
1666.00	5241.00	OWSG MWD rev2 + HRGM	03 Premier MWD <8 3/4"> (1762'-5241')
5241.00	20254.00	BHI AutoTrak Curve (Short)	04 BH AT Curve <8 1/2"> (5291'-20254')
20254.00	20279.00	Blind Drilling (std)	Projection to bit

05/31/2019

Office of Oil and Gas
MAY 22 2019
Department of Protection

REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot 10H
Area	Ohio County, WV	Well	Benjamin Honecker OHI 10H
Field	Ohio	Wellbore	Benjamin Honecker OHI 10H AWB
Facility	Benjamin Honecker OHI Pad		

COMMENTS

Wellpath general comments
API: 47-069-00244-0000
BH Job #: 109479712
Rig: SDC 42
Duration: 11/08/2018 - 11/15/2018

05/31/2019

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Environmental Protection