

SOUTHWESTERN ENERGY

Location: Ohio County, WV
 Slot: Slot 5H
 Well: Dallas Hall OHI 5H
 Facility: Dallas Hall OHI Pad Wellbore: Dallas Hall OHI 5H PWB

Plot reference wellpath is Dallas Hall OHI 5H PWP Rev-A.0 Grid System: NAD83 / UTM Zone 17 North, US feet
 True vertical depths are referenced to SDC 41 (KB) North Reference: Grid north
 Measured depths are referenced to SDC 41 (KB) Scale: True distance
 SDC 41 (KB) to Mean Sea Level: 1300 feet Depths are in feet
 Mean Sea Level to Ground level (At Slot: Slot 5H): -1274 feet Created by: atenjon on 2019-01-07
 Coordinates are in feet referenced to Slot Database: WA_MPL_EASTERLUS_Detr

Location Information

Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Dallas Hall OHI Pad	1748601.815	14575539.433	40°08'00.176"N	80°36'46.588"W
Slot	Local N (ft)	Grid East (US ft)	Latitude	Longitude
Slot 5H	-15.92	1748617.150	40°08'00.018"N	80°36'46.391"W

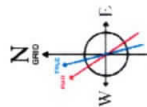
Comment: Slot 2
 SDC 41 (KB) to Ground level (At Slot: Slot 5H) 26ft
 Mean Sea Level to Ground level (At Slot: Slot 5H) -1274ft
 SDC 41 (KB) to Mean Sea Level 1300ft

Well Profile Data

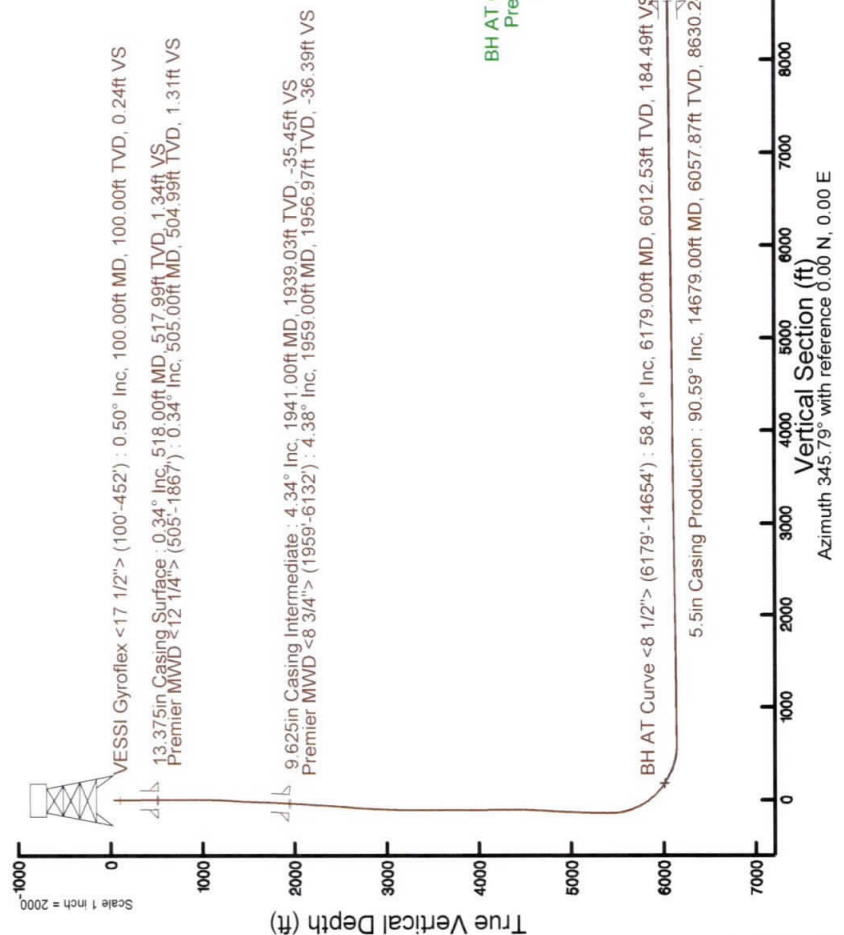
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (#/100ft)	VS (ft)
Tie On	6132.00	54.630	352.110	5986.60	264.77	453.01	11.54	145.47
BH Projection	6204.00	62.800	350.500	6023.96	325.54	443.68	11.51	206.67
End of 3D Arc	6250.71	58.421	351.084	6046.88	365.70	437.16	9.44	247.20
End of 3D Arc	6603.63	90.625	342.116	6140.00	691.36	357.42	9.44	582.47
End of Tangent	14669.47	90.625	342.116	6052.00	8367.00	-2119.38	0.00	8631.25

Comments

API: 47-069-00273-0000
 BH Job #: 109516472
 Rig: SDC 41
 Duration: 12/31/2018 - 01/03/2019



User specified Dip: 67.45° Field: 52606 nT
 Magnetic North is 8.11 degrees West of True North (at 31/Dec/2018)
 Grid North is 0.25 degrees East of True North
 To correct azimuth from Magnetic to Grid subtract 8.36 degrees
 To correct azimuth from Magnetic to Grid subtract 8.36 degrees



REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot 5H
Area	Ohio County, WV	Well	Dallas Hall OHI 5H
Field	Ohio	Wellbore	Dallas Hall OHI 5H AWB
Facility	Dallas Hall 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	0.999613	Report Generated	07/Jan/2019 at 10:07
Convergence at slot	0.25° East	Database/Source file	WA_MPL_EASTERNUS_Defn/Dallas_Hall_OHI_5H_AWP_Proj_14680_.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-15.92	15.34	1748617.15	14575523.52	40°08'00.018"N	80°36'46.391"W
Facility Reference Pt			1748601.82	14575539.43	40°08'00.176"N	80°36'46.588"W
Field Reference Pt			0.00	0.00	0°00'00.000"	85°29'19.478"W

WELLPATH DATUM

Calculation method	Minimum curvature	SDC 41 (KB) to Facility Vertical Datum	1300.00ft
Horizontal Reference Pt	Slot	SDC 41 (KB) to Mean Sea Level	1300.00ft
Vertical Reference Pt	SDC 41 (KB)	SDC 41 (KB) to Ground Level at Slot (Slot 5H)	26.00ft
MD Reference Pt	SDC 41 (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	345.86°

Actual Wellpath Report

Dallas Hall OHI 5H AWP Proj: 14680'

Page 2 of 9

REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot 5H
SOUTHWESTERN ENERGY	Well	Dallas Hall OHI 5H
Area	Wellbore	Dallas Hall OHI 5H AWB
Field		
Facility		

WELLPATH DATA (178 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	303.750	0.00	0.00	0.00	0.00	1748617.15	14575523.52	40°08'00.018"N	80°36'46.391"W	0.00	0.000	0.00	0.00	0.00
26.00	0.000	303.750	26.00	0.00	0.00	0.00	1748617.15	14575523.52	40°08'00.018"N	80°36'46.391"W	0.00	0.000	0.00	0.00	0.00
100.00	0.500	303.750	100.00	0.24	0.18	-0.27	1748616.88	14575523.70	40°08'00.020"N	80°36'46.395"W	0.32	303.750	0.68	0.68	-76.01
200.00	0.420	258.660	200.00	0.58	0.35	-0.99	1748616.16	14575523.87	40°08'00.022"N	80°36'46.404"W	1.05	289.445	0.36	-0.08	-45.09
300.00	0.380	324.610	299.99	0.91	0.55	-1.54	1748615.61	14575524.07	40°08'00.024"N	80°36'46.411"W	1.64	289.564	0.44	-0.04	65.95
400.00	0.450	254.460	399.99	1.21	0.71	-2.11	1748615.04	14575524.23	40°08'00.025"N	80°36'46.419"W	2.23	288.654	0.48	0.07	-70.15
452.00	0.490	260.230	451.99	1.22	0.62	-2.53	1748614.62	14575524.14	40°08'00.024"N	80°36'46.424"W	2.60	283.793	0.12	0.08	11.10
505.00	0.340	280.590	504.99	1.30	0.61	-2.91	1748614.24	14575524.13	40°08'00.024"N	80°36'46.429"W	2.97	281.875	0.39	-0.28	38.42
597.00	0.420	248.700	596.99	1.37	0.54	-3.49	1748613.66	14575524.06	40°08'00.024"N	80°36'46.436"W	3.53	278.780	0.24	0.09	-34.66
688.00	0.450	242.820	687.98	1.29	0.29	-4.13	1748613.02	14575523.81	40°08'00.021"N	80°36'46.445"W	4.14	273.963	0.03	0.03	-0.31
780.00	0.690	258.420	779.98	1.21	-0.01	-5.00	1748612.16	14575523.51	40°08'00.018"N	80°36'46.456"W	5.00	269.882	0.26	0.26	4.78
870.00	0.680	280.690	869.97	1.41	-0.07	-6.04	1748611.11	14575523.45	40°08'00.018"N	80°36'46.469"W	6.04	269.324	0.37	-0.01	30.97
960.00	0.690	263.220	959.97	1.70	-0.04	-7.10	1748610.05	14575523.48	40°08'00.018"N	80°36'46.483"W	7.10	269.708	0.23	0.01	-19.41
1050.00	1.450	245.360	1049.95	1.56	-0.57	-8.68	1748608.48	14575522.95	40°08'00.013"N	80°36'46.503"W	8.69	266.209	0.91	0.84	-19.84
1141.00	2.250	222.990	1140.90	0.38	-2.36	-10.94	1748606.21	14575521.16	40°07'59.995"N	80°36'46.532"W	11.19	257.819	1.17	0.88	-24.58
1232.00	2.900	198.680	1231.81	-2.52	-5.85	-12.90	1748604.26	14575517.67	40°07'59.961"N	80°36'46.558"W	14.16	245.602	1.38	0.71	-26.71
1325.00	3.820	166.690	1324.66	-7.60	-11.09	-12.94	1748604.22	14575512.43	40°07'59.909"N	80°36'46.559"W	17.04	229.385	2.21	0.99	-34.40
1415.00	4.300	144.600	1414.44	-13.74	-16.76	-10.29	1748606.86	14575506.77	40°07'59.853"N	80°36'46.525"W	19.67	211.549	1.80	0.53	-24.54
1533.00	4.170	101.440	1532.15	-19.72	-21.22	-3.52	1748613.63	14575502.31	40°07'59.808"N	80°36'46.438"W	21.51	189.423	2.64	-0.11	-36.58
1625.00	4.430	98.600	1623.89	-22.53	-22.41	3.27	1748620.42	14575501.11	40°07'59.796"N	80°36'46.351"W	22.65	171.700	0.37	0.28	-3.09
1718.00	4.240	100.090	1716.62	-25.33	-23.55	10.21	1748627.35	14575499.98	40°07'59.785"N	80°36'46.261"W	25.67	156.572	0.24	-0.20	1.60
1811.00	4.120	115.860	1809.38	-28.89	-25.61	16.60	1748633.74	14575497.92	40°07'59.764"N	80°36'46.179"W	30.52	147.056	1.24	-0.13	16.96
1867.00	4.190	120.510	1865.23	-31.62	-27.53	20.17	1748637.31	14575496.00	40°07'59.745"N	80°36'46.133"W	34.13	143.770	0.61	0.13	8.30
1959.00	4.380	118.520	1956.97	-36.36	-30.91	26.15	1748643.29	14575492.62	40°07'59.711"N	80°36'46.056"W	40.49	139.768	0.26	0.21	-2.16
2006.00	4.220	116.130	2003.84	-38.70	-32.53	29.28	1748646.42	14575491.00	40°07'59.695"N	80°36'46.016"W	43.77	138.009	0.51	-0.34	-5.09
2099.00	5.530	110.790	2096.50	-43.48	-35.63	36.54	1748653.68	14575487.91	40°07'59.664"N	80°36'45.923"W	51.04	134.274	1.49	1.41	-5.74
2191.00	6.180	119.210	2188.03	-49.41	-39.62	45.01	1748662.14	14575483.92	40°07'59.625"N	80°36'45.814"W	59.96	131.355	1.17	0.71	9.15
2284.00	5.930	115.800	2280.51	-55.93	-44.15	53.70	1748670.83	14575479.38	40°07'59.579"N	80°36'45.702"W	69.52	129.425	0.47	-0.27	-3.67
2377.00	6.300	119.500	2372.98	-62.54	-48.76	62.47	1748679.60	14575474.78	40°07'59.534"N	80°36'45.590"W	79.25	127.971	0.58	0.40	3.98
2470.00	6.100	114.640	2465.43	-69.16	-53.33	71.40	1748688.53	14575470.21	40°07'59.488"N	80°36'45.475"W	89.12	126.755	0.60	-0.22	-5.23

Actual Wellpath Report

Dallas Hall OHI 5H AWP Proj: 14680'

Page 3 of 9

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Operator	Slot	Slot 5H
SOUTHWESTERN ENERGY	Well	Dallas Hall OHI 5H
Area	Wellbore	Dallas Hall OHI 5H AWB
Field		
Facility		

WELLPATH DATA (178 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]
2563.00	6.220	124.870	2557.90	-76.06	-58.27	80.03	1748697.15	14575465.27	40°07'59.439"N	80°36'45.364"W	98.99	126.059	1.19	0.13	11.00
2656.00	6.130	121.870	2650.36	-83.43	-63.77	88.38	1748705.50	14575459.77	40°07'59.384"N	80°36'45.257"W	108.99	125.813	0.36	-0.10	-3.23
2748.00	4.190	125.520	2741.98	-89.53	-68.32	95.29	1748712.40	14575455.23	40°07'59.339"N	80°36'45.168"W	117.25	125.640	2.14	-2.11	3.97
2841.00	3.770	120.120	2834.76	-94.25	-71.83	100.70	1748717.81	14575451.72	40°07'59.304"N	80°36'45.099"W	123.69	125.500	0.60	-0.45	-5.81
2934.00	3.830	117.770	2927.56	-98.46	-74.81	106.09	1748723.20	14575448.74	40°07'59.274"N	80°36'45.030"W	129.81	125.189	0.18	0.06	-2.53
3027.00	2.730	143.580	3020.41	-102.58	-78.04	110.15	1748727.26	14575445.51	40°07'59.242"N	80°36'44.978"W	135.00	125.315	1.95	-1.18	27.75
3119.00	0.930	173.060	3112.36	-105.35	-80.54	111.54	1748728.65	14575443.01	40°07'59.217"N	80°36'44.960"W	137.58	125.832	2.15	-1.96	32.04
3212.00	0.640	174.540	3205.35	-106.61	-81.81	111.69	1748728.79	14575441.74	40°07'59.205"N	80°36'44.958"W	138.44	126.222	0.31	-0.31	1.59
3305.00	0.420	179.540	3298.34	-107.46	-82.67	111.74	1748728.84	14575440.89	40°07'59.196"N	80°36'44.957"W	138.99	126.495	0.24	-0.24	5.38
3398.00	0.110	205.030	3391.34	-107.86	-83.09	111.70	1748728.81	14575440.46	40°07'59.192"N	80°36'44.958"W	139.22	126.643	0.35	-0.33	27.41
3490.00	0.130	96.930	3483.34	-107.97	-83.18	111.77	1748728.88	14575440.37	40°07'59.191"N	80°36'44.957"W	139.32	126.657	0.21	0.02	-117.50
3583.00	0.130	182.440	3576.34	-108.10	-83.30	111.87	1748728.98	14575440.25	40°07'59.190"N	80°36'44.956"W	139.48	126.672	0.19	0.00	91.95
3676.00	0.050	358.730	3669.34	-108.17	-83.36	111.86	1748728.97	14575440.19	40°07'59.189"N	80°36'44.956"W	139.51	126.694	0.19	-0.09	189.56
3769.00	0.480	351.000	3762.34	-107.74	-82.94	111.80	1748728.91	14575440.61	40°07'59.194"N	80°36'44.957"W	139.21	126.569	0.46	0.46	-8.31
3862.00	0.550	316.570	3855.34	-106.96	-82.23	111.43	1748728.54	14575441.32	40°07'59.201"N	80°36'44.961"W	138.49	126.424	0.34	0.08	-37.02
3954.00	1.380	55.010	3947.33	-106.18	-81.27	112.04	1748729.14	14575442.28	40°07'59.210"N	80°36'44.954"W	138.41	125.958	1.69	0.90	107.00
4047.00	2.970	70.630	4040.26	-105.56	-79.83	115.23	1748732.33	14575443.72	40°07'59.224"N	80°36'44.912"W	140.18	124.715	1.81	1.71	16.80
4140.00	4.450	64.850	4133.06	-104.65	-77.50	120.77	1748737.87	14575446.05	40°07'59.247"N	80°36'44.841"W	143.50	122.689	1.64	1.59	-6.22
4233.00	5.810	66.070	4225.69	-103.17	-74.06	128.34	1748745.44	14575449.49	40°07'59.281"N	80°36'44.743"W	148.17	119.987	1.47	1.46	1.31
4325.00	6.860	74.430	4317.13	-102.24	-70.69	137.89	1748754.98	14575452.85	40°07'59.314"N	80°36'44.620"W	154.95	117.144	1.52	1.14	9.09
4418.00	8.020	80.860	4409.34	-102.66	-68.17	149.64	1748766.73	14575455.37	40°07'59.338"N	80°36'44.469"W	164.44	114.492	1.53	1.25	6.91
4511.00	9.110	86.150	4501.31	-104.54	-66.65	163.39	1748780.48	14575456.90	40°07'59.352"N	80°36'44.292"W	176.46	112.190	1.44	1.17	5.69
4603.00	10.340	89.490	4591.98	-107.79	-66.08	178.92	1748796.00	14575457.46	40°07'59.357"N	80°36'44.092"W	190.73	110.272	1.47	1.34	3.63
4696.00	11.900	88.990	4683.23	-111.94	-65.84	196.85	1748813.93	14575457.70	40°07'59.359"N	80°36'43.861"W	207.57	108.493	1.68	1.68	-0.54
4788.00	14.230	90.300	4772.85	-116.91	-65.73	217.65	1748834.71	14575457.81	40°07'59.359"N	80°36'43.593"W	227.36	106.805	2.55	2.53	1.42
4881.00	17.030	85.220	4862.40	-121.98	-64.66	242.65	1748859.71	14575458.89	40°07'59.369"N	80°36'43.271"W	251.12	104.920	3.35	3.01	-5.46
4974.00	16.980	81.730	4951.34	-125.58	-61.57	269.66	1748886.71	14575461.97	40°07'59.398"N	80°36'42.923"W	276.60	102.861	1.10	-0.05	-3.75
5067.00	15.920	85.020	5040.53	-129.00	-58.51	295.81	1748912.85	14575465.03	40°07'59.427"N	80°36'42.586"W	301.54	101.188	1.52	-1.14	3.54
5159.00	14.940	83.120	5129.22	-132.51	-55.99	320.15	1748937.18	14575467.55	40°07'59.451"N	80°36'42.273"W	325.01	99.920	1.20	-1.07	-2.07
5252.00	15.290	84.140	5219.00	-135.79	-53.30	344.25	1748961.27	14575470.24	40°07'59.476"N	80°36'41.962"W	348.36	98.802	0.47	0.38	1.10

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Operator	SOUTHWESTERN ENERGY	Slot	Slot 5H
Area	Ohio County, WV	Well	Dallas Hall OHI 5H
Field	Ohio	Wellbore	Dallas Hall OHI 5H AWB
Facility	Dallas Hall OHI Pad		

WELLPATH DATA (178 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]
5345.00	15.400	84.260	5308.68	-139.36	-50.82	368.74	1748985.75	14575472.72	40°07'59.500"N	80°36'41.647"W	372.22	97.847	0.12	0.12	0.13
5391.00	15.000	83.260	5353.07	-141.02	-49.51	380.73	1748997.73	14575474.03	40°07'59.512"N	80°36'41.492"W	383.93	97.409	1.04	-0.87	-2.17
5438.00	15.000	73.540	5398.48	-141.56	-47.07	392.60	1749009.60	14575476.47	40°07'59.536"N	80°36'41.339"W	395.42	96.837	5.35	0.00	-20.68
5484.00	16.260	64.200	5442.79	-140.01	-42.58	404.11	1749021.11	14575480.96	40°07'59.580"N	80°36'41.191"W	406.35	96.015	6.11	2.74	-20.30
5530.00	17.520	56.190	5486.81	-136.38	-35.92	415.67	1749032.65	14575487.61	40°07'59.645"N	80°36'41.042"W	417.21	94.939	5.75	2.74	-17.41
5577.00	18.940	47.020	5531.46	-130.32	-26.78	427.13	1749044.11	14575496.75	40°07'59.735"N	80°36'40.894"W	427.97	93.588	6.80	3.02	-19.51
5623.00	20.240	37.110	5574.80	-121.74	-15.35	437.39	1749054.37	14575508.18	40°07'59.848"N	80°36'40.761"W	437.66	92.009	7.75	2.83	-21.54
5669.00	22.530	27.200	5617.65	-110.13	-11.16	446.23	1749063.20	14575522.37	40°07'59.987"N	80°36'40.646"W	446.23	90.148	9.28	4.98	-21.54
5716.00	24.530	21.590	5660.74	-95.45	15.93	453.93	1749070.91	14575539.44	40°08'00.156"N	80°36'40.546"W	454.21	87.990	6.38	4.26	-11.94
5762.00	26.150	13.980	5702.33	-78.75	34.65	459.90	1749076.87	14575558.16	40°08'00.341"N	80°36'40.468"W	461.20	85.691	7.90	3.52	-16.54
5809.00	29.140	7.370	5743.97	-58.96	56.06	463.87	1749080.84	14575579.56	40°08'00.552"N	80°36'40.416"W	467.24	83.109	9.11	6.36	-14.06
5855.00	32.500	3.380	5783.47	-36.75	79.51	466.04	1749083.00	14575603.00	40°08'00.784"N	80°36'40.387"W	472.77	80.318	8.55	7.30	-8.67
5901.00	35.990	0.430	5821.49	-11.87	105.37	466.87	1749083.83	14575628.85	40°08'01.039"N	80°36'40.375"W	478.61	77.281	8.40	7.59	-6.41
5948.00	38.690	357.400	5858.86	15.89	133.87	466.30	1749083.27	14575657.33	40°08'01.321"N	80°36'40.380"W	485.14	73.982	6.95	5.74	-6.45
5994.00	41.760	355.480	5893.98	45.09	163.51	464.44	1749081.41	14575686.96	40°08'01.614"N	80°36'40.403"W	492.38	70.605	7.20	6.67	-4.17
6041.00	45.680	353.640	5927.94	77.19	195.83	461.35	1749078.32	14575719.28	40°08'01.933"N	80°36'40.441"W	501.19	67.000	8.77	8.34	-3.91
6086.00	49.420	353.390	5958.31	110.10	228.82	457.59	1749074.57	14575752.25	40°08'02.259"N	80°36'40.487"W	511.62	63.433	8.32	8.31	-0.56
6132.00	54.630	352.110	5986.60	146.08	264.77	453.01	1749069.98	14575788.19	40°08'02.615"N	80°36'40.544"W	524.71	59.694	11.54	11.33	-2.78
6179.00	58.410	350.310	6012.53	185.11	303.50	447.00	1749063.98	14575826.91	40°08'02.998"N	80°36'40.619"W	540.30	55.824	8.65	8.04	-3.83
6200.00	59.960	349.450	6023.29	203.10	321.26	443.83	1749060.81	14575844.65	40°08'03.174"N	80°36'40.659"W	547.90	54.102	8.18	7.38	-4.10
6243.00	64.390	348.250	6043.35	241.06	358.56	436.47	1749053.45	14575881.94	40°08'03.542"N	80°36'40.752"W	564.86	50.597	10.59	10.30	-2.79
6289.00	66.150	347.050	6062.60	282.82	399.37	427.54	1749044.52	14575922.73	40°08'03.946"N	80°36'40.865"W	585.05	46.951	4.50	3.83	-2.61
6335.00	65.940	346.480	6081.27	324.85	440.29	417.91	1749034.90	14575963.64	40°08'04.351"N	80°36'40.986"W	607.04	43.506	1.22	-0.46	-1.24
6382.00	69.170	346.330	6099.21	368.28	482.51	407.70	1749024.69	14576005.84	40°08'04.769"N	80°36'41.115"W	631.69	40.197	6.88	6.87	-0.32
6428.00	73.850	346.420	6113.80	411.90	524.89	397.43	1749014.42	14576048.21	40°08'05.188"N	80°36'41.245"W	658.38	37.132	10.18	10.17	0.20
6474.00	77.650	346.160	6125.12	456.47	568.20	386.86	1749003.86	14576091.50	40°08'05.616"N	80°36'41.379"W	687.39	34.249	8.28	8.26	-0.57
6521.00	81.570	346.560	6133.59	502.69	613.11	375.96	1748992.97	14576136.40	40°08'06.061"N	80°36'41.517"W	719.21	31.517	8.38	8.34	0.85
6567.00	85.870	345.850	6138.63	548.40	657.51	365.06	1748982.07	14576180.77	40°08'06.500"N	80°36'41.654"W	752.06	29.040	9.47	9.35	-1.54
6612.00	90.150	345.850	6140.19	593.36	701.11	354.07	1748971.08	14576224.35	40°08'06.931"N	80°36'41.793"W	785.44	26.795	9.51	9.51	0.00
6704.00	90.400	345.950	6139.75	685.36	790.33	331.66	1748948.68	14576313.55	40°08'07.814"N	80°36'42.077"W	857.10	22.765	0.29	0.27	0.11

Actual Wellpath Report

Dallas Hall OHI 5H AWP Proj: 14680'

Page 5 of 9

REFERENCE WELLPATH IDENTIFICATION

		Slot	Slot 5H
Operator	SOUTHWESTERN ENERGY		
Area	Ohio County, WV		Dallas Hall OHI 5H
Field	Ohio		Dallas Hall OHI 5H AWB
Facility	Dallas Hall OHI Pad		

WELLPATH DATA (178 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]	[US ft]	[US ft]			[ft]	[°]	[°/100ft]	[°/100ft]	[°/100ft]
6796.00	90.490	343.640	6139.03	777.34	879.10	307.53	1748924.56	14576402.28	40°08'08.692"N	80°36'42.383"W	931.34	19.281	2.51	0.10	-2.51
6888.00	90.340	340.530	6138.36	869.12	966.63	279.24	1748896.28	14576489.77	40°08'09.558"N	80°36'42.742"W	1006.15	16.113	3.38	-0.16	-3.38
6978.00	90.430	340.500	6137.76	958.73	1051.47	249.22	1748866.27	14576574.59	40°08'10.398"N	80°36'43.124"W	1080.60	13.334	0.11	0.10	-0.03
7070.00	90.280	342.760	6137.19	1050.47	1138.78	220.22	1748837.29	14576661.86	40°08'11.262"N	80°36'43.492"W	1159.88	10.945	2.46	-0.16	2.46
7161.00	90.340	341.620	6136.70	1141.28	1225.41	192.39	1748809.47	14576748.46	40°08'12.119"N	80°36'43.846"W	1240.43	8.923	1.25	0.07	-1.25
7253.00	90.460	341.700	6136.06	1233.03	1312.74	163.44	1748780.53	14576835.75	40°08'12.983"N	80°36'44.213"W	1322.88	7.097	0.16	0.13	0.09
7344.00	90.650	340.490	6135.17	1323.71	1398.83	133.96	1748751.06	14576921.80	40°08'13.835"N	80°36'44.588"W	1405.23	5.470	1.35	0.21	-1.33
7435.00	90.770	339.470	6134.05	1414.23	1484.32	102.81	1748719.92	14577007.26	40°08'14.682"N	80°36'44.984"W	1487.88	3.962	1.13	0.13	-1.12
7525.00	90.800	338.390	6132.81	1503.56	1568.29	70.46	1748687.58	14577091.20	40°08'15.513"N	80°36'45.396"W	1569.87	2.572	1.20	0.03	-1.20
7617.00	90.770	337.150	6131.55	1594.63	1653.44	35.66	1748652.79	14577176.32	40°08'16.356"N	80°36'45.840"W	1653.83	1.235	1.35	-0.03	-1.35
7708.00	90.890	337.450	6130.23	1684.61	1737.39	0.54	1748617.69	14577260.23	40°08'17.187"N	80°36'46.287"W	1737.39	0.018	0.36	0.13	0.33
7800.00	90.830	340.220	6128.85	1775.90	1823.16	-32.67	1748584.50	14577345.97	40°08'18.036"N	80°36'46.710"W	1823.46	358.974	3.01	-0.07	3.01
7892.00	90.890	343.940	6127.47	1867.67	1910.67	-60.97	1748556.21	14577433.45	40°08'18.902"N	80°36'47.069"W	1911.65	358.172	4.04	0.07	4.04
7983.00	90.830	343.540	6126.11	1958.60	1998.02	-86.44	1748530.74	14577520.77	40°08'19.766"N	80°36'47.392"W	1999.89	357.523	0.44	-0.07	-0.44
8075.00	90.860	339.730	6124.75	2050.33	2085.31	-115.42	1748501.77	14577608.02	40°08'20.630"N	80°36'47.761"W	2088.50	356.832	4.14	0.03	-4.14
8167.00	90.800	338.950	6123.42	2141.72	2171.39	-147.88	1748469.33	14577694.06	40°08'21.482"N	80°36'48.174"W	2176.42	356.104	0.85	-0.07	-0.85
8260.00	90.800	341.500	6122.12	2234.25	2258.89	-179.34	1748437.88	14577781.53	40°08'22.348"N	80°36'48.574"W	2265.99	355.461	2.74	0.00	2.74
8353.00	90.680	344.740	6120.92	2327.13	2347.86	-206.33	1748410.90	14577870.47	40°08'23.228"N	80°36'48.916"W	2356.91	354.978	3.49	-0.13	3.48
8445.00	90.830	350.980	6119.70	2419.02	2437.75	-225.67	1748391.57	14577960.32	40°08'24.118"N	80°36'49.160"W	2448.17	354.711	6.78	0.16	6.78
8537.00	90.830	350.990	6118.37	2510.64	2528.60	-240.08	1748377.16	14578051.14	40°08'25.016"N	80°36'49.341"W	2539.98	354.576	0.01	0.00	0.01
8630.00	90.340	348.980	6117.42	2603.39	2620.18	-256.26	1748360.99	14578142.68	40°08'25.922"N	80°36'49.544"W	2632.68	354.414	2.22	-0.53	-2.16
8723.00	90.310	346.290	6116.89	2696.33	2711.01	-276.17	1748341.09	14578233.48	40°08'26.820"N	80°36'49.795"W	2725.04	354.183	2.89	-0.03	-2.89
8815.00	90.620	343.280	6116.15	2788.30	2799.77	-300.31	1748316.96	14578322.20	40°08'27.698"N	80°36'50.101"W	2815.83	353.878	3.29	0.34	-3.27
8908.00	90.460	340.890	6115.27	2881.09	2888.25	-328.91	1748288.36	14578410.65	40°08'28.574"N	80°36'50.465"W	2906.92	353.503	2.58	-0.17	-2.57
8999.00	90.620	338.130	6114.41	2971.52	2973.48	-360.76	1748256.53	14578495.85	40°08'29.417"N	80°36'50.870"W	2995.29	353.082	3.04	0.18	-3.03
9091.00	90.520	337.060	6113.50	3062.56	3058.53	-395.83	1748221.48	14578580.87	40°08'30.259"N	80°36'51.317"W	3084.04	352.626	1.17	-0.11	-1.16
9183.00	90.400	338.130	6112.76	3153.60	3143.58	-430.89	1748186.43	14578665.88	40°08'31.101"N	80°36'51.763"W	3172.98	352.195	1.17	-0.13	1.16
9275.00	90.430	339.580	6112.09	3244.91	3229.39	-464.08	1748153.25	14578751.65	40°08'31.951"N	80°36'52.186"W	3262.56	351.822	1.58	0.03	1.58
9368.00	90.580	341.530	6111.27	3337.50	3317.07	-495.03	1748122.31	14578839.30	40°08'32.819"N	80°36'52.580"W	3353.81	351.512	2.10	0.16	2.10
9459.00	90.550	343.430	6110.37	3428.34	3403.84	-522.43	1748094.93	14578926.04	40°08'33.677"N	80°36'52.927"W	3443.70	351.274	2.09	-0.03	2.09

Actual Wellpath Report

Dallas Hall OHI 5H AWP Proj: 14680'

Page 6 of 9

REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot 5H
SOUTHWESTERN ENERGY	Well	Dallas Hall OHI 5H
Ohio County, WV	Wellbore	Dallas Hall OHI 5H AWB
Ohio		
Dallas Hall OHI Pad		

WELLPATH DATA (178 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]
9551.00	90.280	340.780	6109.71	3520.13	3491.38	-550.69	1748066.67	14579013.55	40°08'34.543"N	80°36'53.287"W	3534.55	351.037	2.90	-0.29	-2.88
9644.00	90.580	339.340	6109.01	3612.65	3578.80	-582.41	1748034.97	14579100.93	40°08'35.409"N	80°36'53.690"W	3625.88	350.757	1.58	0.32	-1.55
9737.00	90.680	338.350	6107.99	3704.94	3665.53	-615.97	1748001.42	14579187.62	40°08'36.267"N	80°36'54.117"W	3716.92	350.461	1.07	0.11	-1.06
9830.00	90.620	341.400	6106.93	3797.42	3752.84	-647.96	1747969.44	14579274.90	40°08'37.131"N	80°36'54.524"W	3808.36	350.204	3.28	-0.06	3.28
9922.00	90.680	343.140	6105.89	3889.23	3840.46	-675.97	1747941.44	14579362.48	40°08'37.998"N	80°36'54.880"W	3899.49	350.017	1.89	0.07	1.89
10015.00	90.650	339.940	6104.81	3981.95	3928.65	-705.42	1747912.01	14579450.65	40°08'38.871"N	80°36'55.254"W	3991.48	349.821	3.44	-0.03	-3.44
10108.00	90.800	337.060	6103.63	4074.16	4015.17	-739.49	1747877.94	14579537.13	40°08'39.728"N	80°36'55.688"W	4082.70	349.564	3.10	0.16	-3.10
10200.00	90.650	341.370	6102.47	4165.52	4101.15	-772.13	1747845.32	14579623.08	40°08'40.579"N	80°36'56.104"W	4173.20	349.338	4.69	-0.16	4.68
10293.00	90.800	346.690	6101.29	4258.43	4190.52	-797.71	1747819.75	14579712.41	40°08'41.463"N	80°36'56.428"W	4265.77	349.222	5.72	0.16	5.72
10386.00	90.740	348.490	6100.04	4351.37	4281.34	-817.69	1747799.78	14579803.19	40°08'42.361"N	80°36'56.681"W	4358.72	349.187	1.94	-0.06	1.94
10479.00	90.400	345.750	6099.11	4444.34	4371.98	-838.42	1747779.06	14579893.81	40°08'43.258"N	80°36'56.942"W	4451.65	349.144	2.97	-0.37	-2.95
10571.00	90.400	343.420	6098.47	4536.31	4460.67	-862.87	1747754.62	14579982.45	40°08'44.135"N	80°36'57.252"W	4543.36	349.052	2.53	0.00	-2.53
10664.00	90.580	345.280	6097.68	4629.27	4550.21	-887.96	1747729.54	14580071.96	40°08'45.021"N	80°36'57.570"W	4636.04	348.958	2.01	0.19	2.00
10757.00	90.520	348.090	6096.78	4722.24	4640.70	-909.37	1747708.13	14580162.42	40°08'45.916"N	80°36'57.841"W	4728.96	348.913	3.02	-0.06	3.02
10849.00	90.490	348.900	6095.97	4814.14	4730.85	-927.72	1747689.79	14580252.53	40°08'46.808"N	80°36'58.072"W	4820.95	348.905	0.88	-0.03	0.88
10942.00	90.400	345.130	6095.25	4907.10	4821.45	-948.61	1747668.91	14580343.10	40°08'47.704"N	80°36'58.336"W	4913.88	348.869	4.05	-0.10	-4.05
11035.00	90.430	339.950	6094.58	4999.91	4910.13	-976.51	1747641.02	14580431.74	40°08'48.582"N	80°36'58.691"W	5006.29	348.752	5.57	0.03	-5.57
11128.00	90.490	337.520	6093.83	5092.19	4996.79	-1010.23	1747607.31	14580518.37	40°08'49.440"N	80°36'59.120"W	5097.89	348.570	2.61	0.06	-2.61
11220.00	90.520	337.890	6093.02	5183.25	5081.91	-1045.13	1747572.42	14580603.45	40°08'50.282"N	80°36'59.565"W	5188.27	348.379	0.40	0.03	0.40
11313.00	90.460	336.360	6092.22	5275.17	5167.59	-1081.28	1747536.29	14580689.10	40°08'51.130"N	80°37'00.025"W	5279.50	348.182	1.65	-0.06	-1.65
11406.00	90.580	337.730	6091.38	5367.06	5253.22	-1115.55	1747500.03	14580774.70	40°08'51.978"N	80°37'00.488"W	5370.78	347.990	1.48	0.13	1.47
11498.00	90.550	339.730	6090.47	5458.34	5338.94	-1150.92	1747466.68	14580860.39	40°08'52.827"N	80°37'00.913"W	5461.59	347.835	2.17	-0.03	2.17
11591.00	90.460	341.590	6089.65	5550.95	5426.69	-1181.72	1747435.89	14580948.10	40°08'53.695"N	80°37'01.304"W	5553.86	347.715	2.00	-0.10	2.00
11684.00	90.460	341.820	6088.90	5643.70	5514.98	-1210.91	1747406.71	14581036.36	40°08'54.569"N	80°37'01.675"W	5646.36	347.616	0.25	0.00	0.25
11776.00	90.740	342.820	6087.94	5735.52	5602.63	-1238.85	1747378.78	14581123.98	40°08'55.436"N	80°37'02.030"W	5737.97	347.531	1.13	0.30	1.09
11869.00	90.650	341.280	6086.81	5828.31	5691.10	-1267.51	1747350.14	14581212.41	40°08'56.312"N	80°37'02.395"W	5830.54	347.444	1.66	-0.10	-1.66
11962.00	90.830	341.620	6085.61	5921.02	5779.26	-1297.09	1747320.56	14581300.53	40°08'57.184"N	80°37'02.771"W	5923.03	347.350	0.41	0.19	0.37
12055.00	90.770	341.570	6084.31	6013.76	5867.49	-1326.45	1747291.21	14581388.73	40°08'58.057"N	80°37'03.144"W	6015.56	347.261	0.08	-0.06	-0.05
12147.00	90.770	340.570	6083.08	6105.43	5954.51	-1356.29	1747261.38	14581475.71	40°08'58.918"N	80°37'03.523"W	6107.02	347.168	1.09	0.00	-1.09
12240.00	90.620	340.380	6081.95	6198.01	6042.15	-1387.37	1747230.32	14581563.33	40°08'59.786"N	80°37'03.919"W	6199.39	347.068	0.26	-0.16	-0.20

Actual Wellpath Report

Dallas Hall OHI 5H AWP Proj: 14680'

Page 7 of 9

REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot 5H
SOUTHWESTERN ENERGY	Well	Dallas Hall OHI 5H
Ohio County, WV	Wellbore	Dallas Hall OHI 5H AWB
Ohio		
Dallas Hall OHI Pad		

WELLPATH DATA (178 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]
12332.00	90.770	339.020	6080.83	6289.47	6128.43	-1419.29	1747198.41	14581649.57	40°09'00.640"N	80°37'04.325"W	6290.63	346.961	1.49	0.16	-1.48
12424.00	90.680	341.390	6079.67	6381.01	6214.98	-1450.44	1747167.27	14581736.09	40°09'01.496"N	80°37'04.721"W	6381.99	346.864	2.58	-0.10	2.58
12514.00	90.460	342.870	6078.77	6470.81	6300.63	-1478.06	1747139.67	14581821.70	40°09'02.344"N	80°37'05.072"W	6471.68	346.798	1.66	-0.24	1.64
12607.00	90.490	344.300	6078.00	6563.73	6389.84	-1504.33	1747113.40	14581910.87	40°09'03.227"N	80°37'05.406"W	6564.53	346.752	1.54	0.03	1.54
12700.00	90.520	346.040	6077.18	6656.72	6479.73	-1528.14	1747089.61	14582000.73	40°09'04.116"N	80°37'05.707"W	6657.49	346.730	1.87	0.03	1.87
12793.00	90.580	347.800	6076.29	6749.69	6570.31	-1549.18	1747068.57	14582091.28	40°09'05.012"N	80°37'05.973"W	6750.48	346.733	1.89	0.06	1.89
12886.00	90.490	348.640	6075.42	6842.61	6661.35	-1568.17	1747049.59	14582182.28	40°09'05.912"N	80°37'06.213"W	6843.44	346.753	0.91	-0.10	0.90
12978.00	90.370	343.620	6074.73	6934.58	6750.63	-1590.21	1747027.55	14582271.53	40°09'06.796"N	80°37'06.492"W	6935.40	346.745	5.46	-0.13	-5.46
13070.00	90.430	340.030	6074.09	7026.33	6838.03	-1618.90	1746998.87	14582358.89	40°09'07.661"N	80°37'06.856"W	7027.05	346.680	3.90	0.07	-3.90
13163.00	90.550	340.740	6073.29	7118.90	6925.63	-1650.12	1746967.67	14582446.46	40°09'08.527"N	80°37'07.253"W	7119.50	346.598	0.77	0.13	0.76
13256.00	90.430	340.210	6072.50	7211.49	7013.28	-1681.20	1746936.60	14582534.07	40°09'09.395"N	80°37'07.649"W	7211.97	346.520	0.58	-0.13	-0.57
13348.00	90.550	341.840	6071.71	7303.16	7100.27	-1711.12	1746906.70	14582621.03	40°09'10.256"N	80°37'08.029"W	7303.54	346.450	1.78	0.13	1.77
13441.00	90.430	342.100	6070.92	7395.94	7188.70	-1739.90	1746877.93	14582709.43	40°09'11.131"N	80°37'08.395"W	7396.26	346.394	0.31	-0.13	0.28
13534.00	90.370	342.220	6070.27	7488.74	7277.23	-1768.39	1746849.45	14582797.92	40°09'12.007"N	80°37'08.757"W	7489.01	346.342	0.14	-0.06	0.13
13626.00	90.400	340.650	6069.65	7580.46	7364.43	-1797.68	1746820.17	14582885.09	40°09'12.870"N	80°37'09.130"W	7580.67	346.282	1.71	0.03	-1.71
13718.00	90.710	339.960	6068.76	7672.03	7451.05	-1828.68	1746789.18	14582971.67	40°09'13.727"N	80°37'09.524"W	7672.17	346.211	0.82	0.34	-0.75
13810.00	90.680	339.790	6067.64	7763.52	7537.42	-1860.34	1746757.54	14583058.01	40°09'14.582"N	80°37'09.927"W	7763.61	346.136	0.19	-0.03	-0.18
13903.00	90.710	339.420	6066.51	7855.96	7624.59	-1892.74	1746725.14	14583145.14	40°09'15.445"N	80°37'10.339"W	7856.00	346.059	0.40	0.03	-0.40
13996.00	90.650	339.510	6065.41	7948.37	7711.67	-1925.36	1746692.53	14583232.19	40°09'16.307"N	80°37'10.755"W	7948.39	345.982	0.12	-0.06	0.10
14089.00	90.650	339.990	6064.35	8040.84	7798.92	-1957.55	1746660.36	14583319.41	40°09'17.170"N	80°37'11.164"W	8040.84	345.910	0.52	0.00	0.52
14181.00	90.680	341.580	6063.29	8132.47	7885.78	-1987.83	1746630.10	14583406.24	40°09'18.030"N	80°37'11.550"W	8132.47	345.852	1.73	0.03	1.73
14274.00	90.710	344.430	6062.16	8225.34	7974.71	-2015.00	1746602.93	14583495.13	40°09'18.910"N	80°37'11.895"W	8225.34	345.820	3.06	0.03	3.06
14367.00	90.650	347.040	6061.05	8318.32	8064.82	-2037.92	1746580.03	14583585.21	40°09'19.801"N	80°37'12.185"W	8318.32	345.819	2.81	-0.06	2.81
14460.00	90.490	347.020	6060.13	8411.30	8155.45	-2058.79	1746559.16	14583675.80	40°09'20.698"N	80°37'12.449"W	8411.30	345.832	0.17	-0.17	-0.02
14552.00	90.590	346.930	6059.26	8503.28	8245.08	-2079.52	1746538.44	14583765.39	40°09'21.584"N	80°37'12.711"W	8503.28	345.844	0.15	0.11	-0.10
14644.00	90.680	346.830	6058.24	8595.26	8334.67	-2100.40	1746517.56	14583854.95	40°09'22.471"N	80°37'12.975"W	8595.26	345.856	0.15	0.10	-0.11
14634.00	90.590	346.830	6058.13	8605.25	8344.41	-2102.68	1746515.29	14583864.68	40°09'22.567"N	80°37'13.004"W	8605.25	345.857	0.90	-0.90	0.00
14680.00	90.590	346.830	6057.86	8631.25	8369.72	-2108.61	1746509.36	14583889.99	40°09'22.817"N	80°37'13.078"W	8631.25	345.860	0.00	0.00	0.00

Actual Wellpath Report

Dallas Hall OHI 5H AWP Proj: 14680'

Page 8 of 9

REFERENCE WELLPATH IDENTIFICATION			
Operator	SOUTHWESTERN ENERGY	Slot	Slot 5H
Area	Ohio County, WV	Well	Dallas Hall OHI 5H
Field	Ohio	Wellbore	Dallas Hall OHI 5H AWB
Facility	Dallas Hall OHI Pad		

HOLE & CASING SECTIONS - Ref Wellbore: Dallas Hall OHI 5H AWB Ref Wellpath: Dallas Hall OHI 5H AWP Proj: 14680'									
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	518.00	492.00	26.00	517.99	0.00	0.00	0.62	-2.98
13.375in Casing Surface	26.00	518.00	492.00	26.00	517.99	0.00	0.00	0.62	-2.98
12.25in Open Hole	518.00	1941.00	1423.00	517.99	1939.03	0.62	-2.98	-30.26	24.95
9.625in Casing Intermediate	26.00	1941.00	1915.00	26.00	1939.03	0.00	0.00	-30.26	24.95
8.75in Open Hole	1941.00	6204.00	4263.00	1939.03	6025.27	-30.26	24.95	324.67	443.19
8.5in Open Hole	6204.00	14679.00	8475.00	6025.27	6057.87	324.67	443.19	8368.75	-2108.38
5.5in Casing Production	26.00	14679.00	14653.00	26.00	6057.87	0.00	0.00	8368.75	-2108.38

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Dallas Hall OHI 5H BHL Rev-2	6052.00	8367.00	-2119.38	1746498.60	14583887.27	40°09'22.791"N	80°37'13.217"W	point
Dallas Hall OHI 5H LP Rev-2	6140.00	691.36	357.42	1748974.43	14576214.61	40°08'06.835"N	80°36'41.751"W	point

WELLPATH COMPOSITION - Ref Wellbore: Dallas Hall OHI 5H AWB Ref Wellpath: Dallas Hall OHI 5H AWP Proj: 14680'			Wellbore
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment
26.00	452.00	VESSI GyroFlex v4	Dallas Hall OHI 5H AWB
452.00	1867.00	OWSG MWD rev2 + HRGM	Dallas Hall OHI 5H AWB
1867.00	6132.00	OWSG MWD rev2 + HRGM	Dallas Hall OHI 5H AWB
6132.00	14654.00	BHI AutoTrak Curve (Short)	Dallas Hall OHI 5H AWB
14654.00	14680.00	Blind Drilling (std)	Dallas Hall OHI 5H AWB

Actual Wellpath Report

Dallas Hall OHI 5H AWP Proj: 14680

Page 9 of 9

REFERENCE WELLPATH IDENTIFICATION

Operator	Area	Field	Facility	Slot	Well	Wellbore	Slot 5H
SOUTHWESTERN ENERGY	Ohio County, WV	Ohio	Dallas Hall OHI Pad	Well	Dallas Hall OHI 5H	Dallas Hall OHI 5H AWB	

COMMENTS

Wellpath general comments
 API: 47-069-00273-0000
 BH Job #: 109516472
 Rig: SDC 41
 Duration: 12/31/2018 - 01/03/2019