

SOUTHWESTERN ENERGY

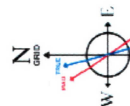
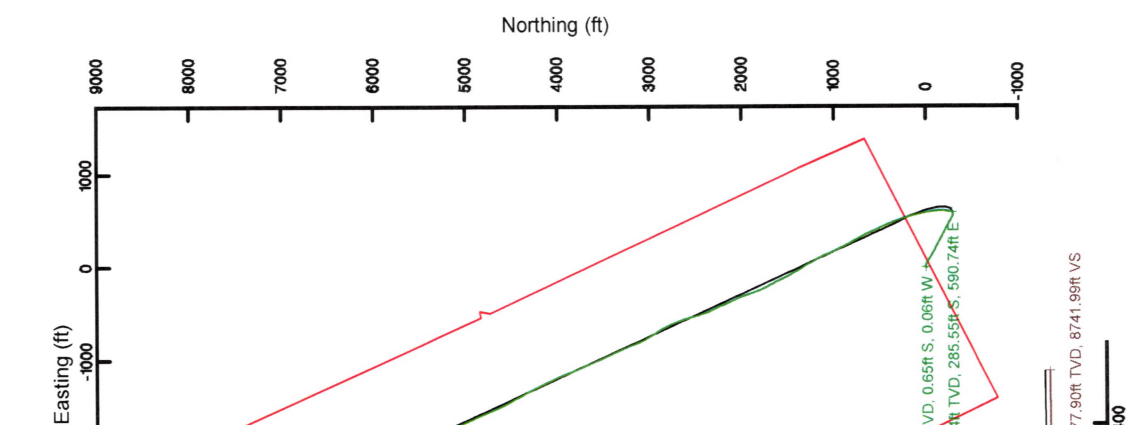
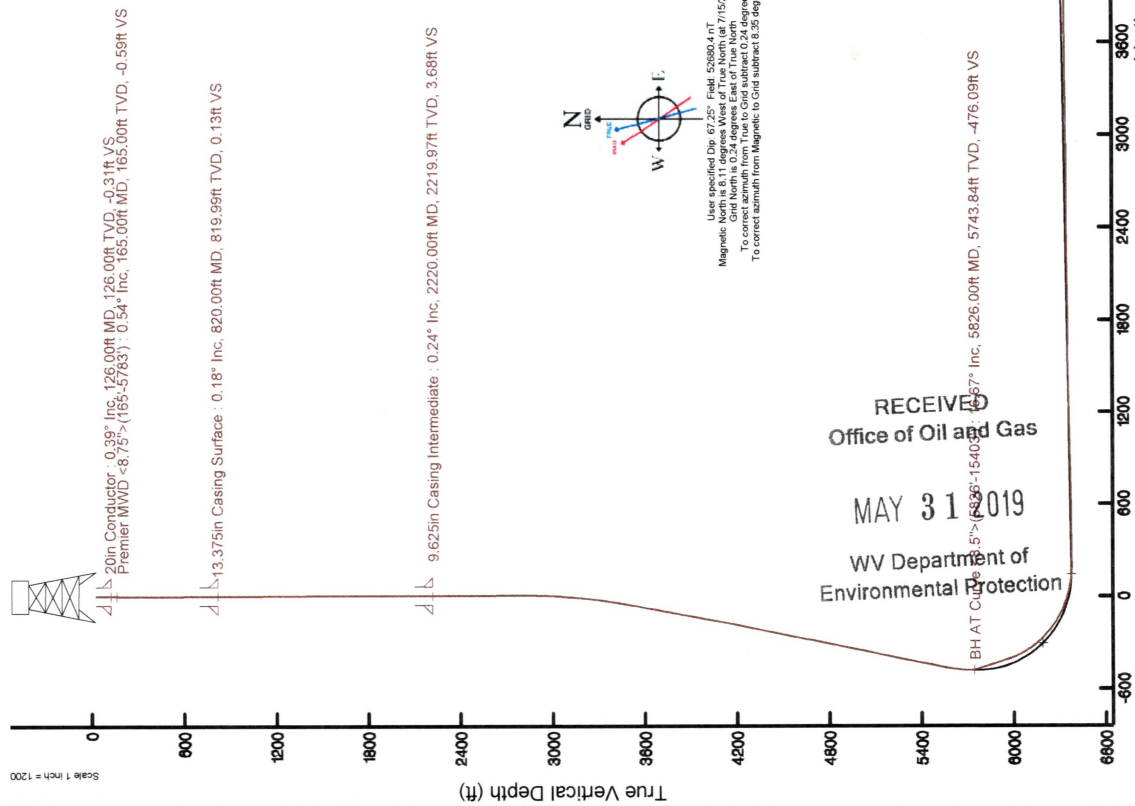
Location: Marshall County, WV
 Field: Marshall
 Facility: BW Edge MSH Pad
 Slot: Slot #05
 Well: BW Edge MSH 5H
 Wellbore: BW Edge MSH 5H PWB

Plot reference wellbore is BW Edge MSH 5H PWB Rev=8.1	Grid System: NAD83 / UTM Zone 17 North, US feet
True vertical depths are referenced to SDC 42 (RKB)	* = Wellbore was transformed from a different geoidetic datum
Measured depths are referenced to SDC 42 (RKB)	North Reference: Grid north
SDC 42 (RKB) to Mean Sea Level: 1280 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot, Slot #05): -1254 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: thomsuzc on 2018-07-23
	Database: WA, Pennsylvania



Location Information			
Facility Name	Grid East (US ft)	Grid North (US ft)	Longitude
BW Edge MSH Pad	1744732.480	14529346.800	80° 37' 38.914" W
Local N (ft)	Grid East (US ft)	Grid North (US ft)	Latitude
10.24	1744741.680	14529357.040	40° 00' 23.782" N
Slot	Local E (ft)	Local N (ft)	Latitude
SDC 42 (RKB)	9.20	1744741.680	40° 00' 23.782" N
SDC 42 (RKB) to Mud line (At Slot, Slot #05)			26ft
Mean Sea Level to Mud line (At Slot, Slot #05)			-1254ft
			1280ft

Comments
 API: 47-051-01845-0000
 BH Job #: 9215078
 Rtg: SDC 42
 Duration: 07/16/2018 - 07/19/2018



User specified Dip: 07° 00' 00" East, 65269.4° T
 Magnetic North is 11.11 degrees West of True North (at 7/15/2018)
 Grid North is 0.24 degrees East of True North
 To correct azimuth from True to Grid subtract 0.24 degrees
 To correct azimuth from Magnetic to Grid subtract 0.25 degrees

RECEIVED
 Office of Oil and Gas
 MAY 31 2019
 WV Department of Environmental Protection

Projection to Bit: 90.49° Inc, 15428.00ft MD, 6277.90ft TVD, 8741.99ft VS
 Scale: 1 inch = 1200

Vertical Section (ft)
 Azimuth 339.28° with reference 0.00 N, 0.00 E

REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot #05
Area	Marshall County, WV	Well	BW Edge MSH 5H
Field	Marshall	Wellbore	BW Edge MSH 5H AWB
Facility	BW Edge MSH Pad		

REPORT SETUP INFORMATION

Projection System	NAD83 / UTM Zone 17 North, US feet	Software System	WellArchitect® 5.0
North Reference	Grid	User	Thomsuzc
Scale	0.999612	Report Generated	8/1/2018 at 8:56:20 AM
Convergence at slot	0.24° East	Database/Source file	WA_Pennsylvania/BW_Edge_MSH_5H_AWP_Proj_15428_MD.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	10.24	9.20	1744741.68	14529357.04	40°00'23.782"N	80°37'38.795"W
Facility Reference Pt			1744732.48	14529346.80	40°00'23.681"N	80°37'38.914"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	1280.00ft
Horizontal Reference Pt	Slot	SDC 42 (RKB) to Mean Sea Level	1280.00ft
Vertical Reference Pt	SDC 42 (RKB)	SDC 42 (RKB) to Mud Line at Slot (Slot #05)	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	339.28°

RECEIVED
Office of Oil and Gas
MAY 31 2019
WV Department of Environmental Protection

REFERENCE WELLPATH IDENTIFICATION

Operator	SLOT #05
SOUTHWESTERN ENERGY	Slot
Marshall County, WV	Well
Marshall	Wellbore
BW Edge MSH Pad	BW Edge MSH 5H AWB

WELLPATH DATA (189 stations) † = interpolated/extrapolated station

MD	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	184.840	0.00	0.00	0.00	0.00	1744741.68	14529357.04	40°00'23.782"N	80°37'38.795"W	0.00	0.000	0.00	0.00	0.00
26.00	0.000	184.840	26.00	0.00	0.00	0.00	1744741.68	14529357.04	40°00'23.782"N	80°37'38.795"W	0.00	0.000	0.00	0.00	0.00
165.00	0.540	184.840	165.00	-0.59	-0.65	-0.06	1744741.62	14529356.39	40°00'23.775"N	80°37'38.796"W	0.66	184.840	0.39	0.39	-126.01
225.00	0.320	194.350	225.00	-0.98	-1.10	-0.12	1744741.56	14529355.94	40°00'23.771"N	80°37'38.796"W	1.10	186.278	0.38	-0.37	15.85
317.00	0.210	237.070	317.00	-1.23	-1.44	-0.33	1744741.35	14529355.67	40°00'23.767"N	80°37'38.799"W	1.47	192.773	0.24	-0.12	46.43
407.00	0.230	256.260	406.99	-1.24	-1.57	-0.64	1744741.04	14529355.40	40°00'23.766"N	80°37'38.803"W	1.70	202.172	0.08	0.02	21.32
498.00	0.350	274.350	497.99	-1.10	-1.59	-1.09	1744740.59	14529355.45	40°00'23.766"N	80°37'38.809"W	1.93	214.501	0.16	0.13	19.88
589.00	0.310	308.830	588.99	-0.77	-1.42	-1.56	1744740.12	14529355.62	40°00'23.768"N	80°37'38.815"W	2.11	227.815	0.22	-0.04	37.89
642.00	0.190	307.970	641.99	-0.57	-1.27	-1.74	1744739.94	14529355.77	40°00'23.769"N	80°37'38.817"W	2.16	233.882	0.23	-0.23	-1.62
679.00	0.310	311.700	678.99	-0.43	-1.17	-1.87	1744739.81	14529355.87	40°00'23.770"N	80°37'38.819"W	2.20	237.965	0.33	0.32	10.08
745.00	0.280	319.590	744.99	-0.12	-0.93	-2.11	1744739.58	14529356.11	40°00'23.773"N	80°37'38.822"W	2.30	246.237	0.08	-0.05	11.95
823.00	0.180	29.620	822.99	0.14	-0.68	-2.17	1744739.51	14529356.37	40°00'23.775"N	80°37'38.823"W	2.27	252.702	0.35	-0.13	89.78
868.00	0.340	25.080	867.99	0.27	-0.49	-2.08	1744739.60	14529356.55	40°00'23.777"N	80°37'38.822"W	2.13	256.649	0.36	0.36	-10.09
958.00	0.260	48.590	957.99	0.53	-0.12	-1.81	1744739.87	14529356.92	40°00'23.781"N	80°37'38.818"W	1.81	266.336	0.16	-0.09	26.12
1049.00	0.420	15.220	1048.99	0.88	0.34	-1.57	1744740.11	14529357.38	40°00'23.785"N	80°37'38.815"W	1.60	282.322	0.27	0.18	-36.67
1139.00	0.480	1.360	1138.98	1.49	1.04	-1.47	1744740.21	14529358.08	40°00'23.792"N	80°37'38.814"W	1.80	305.176	0.14	0.07	-15.40
1229.00	0.450	325.280	1228.98	2.18	1.71	-1.66	1744740.02	14529358.74	40°00'23.799"N	80°37'38.816"W	2.38	315.687	0.32	-0.03	-40.09
1320.00	0.520	301.580	1319.98	2.86	2.22	-2.22	1744739.46	14529359.25	40°00'23.804"N	80°37'38.823"W	3.14	314.936	0.23	0.08	-26.04
1410.00	0.280	303.690	1409.98	3.36	2.55	-2.75	1744738.93	14529359.59	40°00'23.807"N	80°37'38.830"W	3.75	312.840	0.27	-0.27	2.34
1501.00	0.430	333.900	1500.97	3.88	2.98	-3.09	1744738.60	14529360.02	40°00'23.811"N	80°37'38.834"W	4.29	314.006	0.26	0.16	33.20
1592.00	0.270	312.610	1591.97	4.41	3.43	-3.39	1744738.29	14529360.47	40°00'23.816"N	80°37'38.838"W	4.83	315.323	0.22	-0.18	-23.40
1682.00	0.090	254.760	1681.97	4.61	3.56	-3.62	1744738.06	14529360.60	40°00'23.817"N	80°37'38.841"W	5.07	314.515	0.26	-0.20	-64.28
1773.00	0.240	220.910	1772.97	4.52	3.39	-3.81	1744737.87	14529360.43	40°00'23.815"N	80°37'38.844"W	5.10	311.686	0.19	0.16	-37.20
1863.00	0.090	124.380	1862.97	4.38	3.21	-3.88	1744737.80	14529360.25	40°00'23.814"N	80°37'38.844"W	5.04	309.643	0.30	-0.17	-107.26
1953.00	0.310	134.740	1952.97	4.10	3.00	-3.65	1744738.04	14529360.04	40°00'23.811"N	80°37'38.842"W	4.72	309.461	0.25	0.24	11.48
2043.00	0.420	85.980	2042.97	3.78	2.85	-3.14	1744738.54	14529359.89	40°00'23.810"N	80°37'38.835"W	4.25	312.225	0.35	0.12	-54.16
2133.00	0.340	71.680	2132.97	3.68	2.96	-2.56	1744739.12	14529360.00	40°00'23.811"N	80°37'38.828"W	3.91	319.134	0.14	-0.09	-15.93
2255.00	0.200	57.640	2254.97	3.70	3.19	-2.04	1744739.62	14529360.23	40°00'23.813"N	80°37'38.821"W	3.78	327.415	0.13	-0.11	-11.47
2345.00	0.290	11.480	2344.96	3.91	3.47	-1.86	1744739.82	14529360.51	40°00'23.816"N	80°37'38.819"W	3.94	331.764	0.21	0.07	-51.38
2435.00	0.380	9.480	2434.96	4.34	3.97	-1.78	1744739.90	14529361.01	40°00'23.821"N	80°37'38.817"W	4.35	335.887	0.13	0.13	-2.22

Actual Wellpath Report

BW Edge MSH 5H AWP Proj: 15428'MD

Page 3 of 10

REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot #05
Area	Marshall County, WV	Well	BW Edge MSH 5H
Field	Marshall	Wellbore	BW Edge MSH 5H AWB
Facility	BW Edge MSH Pad		

WELLPATH DATA (189 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]
2525.00	0.350	22.130	2524.96	4.80	4.52	-1.62	1744740.06	14529361.55	40°00'23.826"N	80°37'38.815"W	4.80	340.228	0.10	-0.03	14.14
2616.00	0.380	32.930	2615.96	5.18	5.03	-1.35	1744740.33	14529362.07	40°00'23.831"N	80°37'38.812"W	5.21	344.918	0.08	0.03	11.87
2706.00	0.420	34.830	2705.96	5.54	5.55	-1.00	1744740.68	14529362.59	40°00'23.836"N	80°37'38.807"W	5.64	349.742	0.05	0.04	2.11
2796.00	0.460	28.850	2795.95	5.97	6.14	-0.64	1744741.04	14529363.17	40°00'23.842"N	80°37'38.803"W	6.17	354.032	0.07	0.04	-6.64
2887.00	1.640	104.130	2886.94	5.46	6.14	0.80	1744742.48	14529363.18	40°00'23.842"N	80°37'38.784"W	6.19	7.405	1.74	1.30	82.73
2977.00	3.890	106.550	2976.83	2.87	4.95	4.97	1744746.65	14529361.99	40°00'23.830"N	80°37'38.731"W	7.02	45.115	2.50	2.50	2.69
3067.00	6.350	106.590	3066.46	-1.99	2.66	12.67	1744754.35	14529359.70	40°00'23.807"N	80°37'38.632"W	12.95	78.133	2.73	2.73	0.04
3158.00	7.920	107.570	3156.76	-8.93	-0.67	23.47	1744765.14	14529356.37	40°00'23.774"N	80°37'38.493"W	23.48	91.628	1.73	1.73	1.08
3248.00	8.680	115.750	3245.82	-17.69	-5.49	35.50	1744777.17	14529351.55	40°00'23.726"N	80°37'38.339"W	35.92	98.790	1.56	0.84	9.09
3339.00	9.830	123.520	3335.63	-28.98	-12.76	48.16	1744789.82	14529344.28	40°00'23.653"N	80°37'38.177"W	49.82	104.842	1.86	1.26	8.54
3429.00	11.130	125.240	3424.13	-42.41	-22.02	61.66	1744803.32	14529335.03	40°00'23.561"N	80°37'38.004"W	65.48	109.650	1.49	1.44	1.91
3519.00	12.410	123.950	3512.24	-57.50	-32.43	76.78	1744818.43	14529324.62	40°00'23.458"N	80°37'37.810"W	83.35	112.899	1.45	1.42	-1.43
3609.00	13.480	123.150	3599.95	-73.86	-43.57	93.59	1744835.23	14529313.49	40°00'23.347"N	80°37'37.595"W	103.23	114.964	1.21	1.19	-0.89
3700.00	13.090	121.390	3688.51	-90.56	-54.74	111.26	1744852.90	14529302.33	40°00'23.236"N	80°37'37.368"W	124.00	116.195	0.62	-0.43	-1.93
3790.00	13.830	119.680	3776.04	-106.89	-65.37	129.31	1744870.94	14529291.69	40°00'23.130"N	80°37'37.137"W	144.89	116.819	0.93	0.82	-1.90
3881.00	13.430	118.800	3864.48	-123.31	-75.85	148.02	1744889.64	14529281.22	40°00'23.026"N	80°37'36.897"W	166.32	117.132	0.50	-0.44	-0.97
3971.00	13.700	117.210	3951.97	-139.17	-85.76	166.66	1744908.27	14529271.32	40°00'22.927"N	80°37'36.658"W	187.42	117.229	0.51	0.30	-1.77
4061.00	13.990	115.960	4039.35	-155.00	-95.39	185.91	1744927.52	14529261.69	40°00'22.831"N	80°37'36.411"W	208.96	117.162	0.46	0.32	-1.39
4152.00	14.290	119.110	4127.60	-171.58	-105.67	205.62	1744947.22	14529251.41	40°00'22.729"N	80°37'36.158"W	231.18	117.199	0.91	0.33	3.46
4243.00	15.500	119.810	4215.54	-189.55	-117.18	225.98	1744967.57	14529239.91	40°00'22.614"N	80°37'35.897"W	254.55	117.408	1.34	1.33	0.77
4333.00	15.250	117.160	4302.32	-207.62	-128.56	246.95	1744988.53	14529228.53	40°00'22.501"N	80°37'35.628"W	278.41	117.502	0.83	-0.28	-2.94
4424.00	14.780	116.120	4390.21	-224.96	-139.13	268.02	1745009.59	14529217.96	40°00'22.396"N	80°37'35.358"W	301.98	117.435	0.60	-0.52	-1.14
4517.00	15.270	120.150	4480.03	-243.12	-150.51	289.26	1745030.83	14529206.59	40°00'22.282"N	80°37'35.086"W	326.07	117.489	1.24	0.53	4.33
4608.00	14.940	120.720	4567.89	-261.58	-162.52	309.70	1745051.26	14529194.58	40°00'22.163"N	80°37'34.824"W	349.76	117.688	0.40	-0.36	0.63
4698.00	14.780	115.990	4654.88	-279.01	-173.48	330.00	1745071.55	14529183.63	40°00'22.054"N	80°37'34.563"W	372.82	117.730	1.36	-0.18	-5.26
4788.00	15.150	117.530	4741.83	-296.14	-183.94	350.75	1745092.29	14529173.17	40°00'21.949"N	80°37'34.297"W	396.05	117.674	0.60	0.41	1.71
4879.00	14.560	117.680	4829.79	-313.57	-194.75	371.42	1745112.96	14529162.36	40°00'21.842"N	80°37'34.032"W	419.38	117.670	0.65	-0.65	0.16
4969.00	15.680	117.010	4916.67	-331.03	-205.53	392.27	1745133.80	14529151.59	40°00'21.734"N	80°37'33.765"W	442.86	117.652	1.26	1.24	-0.74
5060.00	15.280	115.400	5004.37	-348.77	-216.26	414.06	1745155.58	14529140.86	40°00'21.627"N	80°37'33.485"W	467.14	117.578	0.65	-0.44	-1.77
5150.00	15.770	119.700	5091.09	-366.75	-227.41	435.40	1745176.91	14529129.72	40°00'21.516"N	80°37'33.212"W	491.21	117.578	1.39	0.54	4.78



REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot #05
SOUTHWESTERN ENERGY	Well	BW Edge MSH 5H
Area	Wellbore	BW Edge MSH 5H AWB
Field		
Facility		

WELLPATH DATA (189 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]
5240.00	15.510	120.670	5177.76	-385.58	-239.60	456.37	1745197.87	14529117.53	40°00'21.395"N	80°37'32.943"W	515.45	117.700	0.41	-0.29	1.08
5331.00	14.890	120.090	5266.57	-404.14	-251.67	476.95	1745218.45	14529105.47	40°00'21.275"N	80°37'32.679"W	539.28	117.819	0.70	-0.68	-0.64
5421.00	14.150	120.580	5352.70	-421.69	-263.07	496.43	1745237.92	14529094.08	40°00'21.161"N	80°37'32.430"W	561.82	117.920	0.83	-0.82	0.54
5512.00	14.210	120.610	5440.93	-439.09	-274.41	515.62	1745257.10	14529082.73	40°00'21.048"N	80°37'32.184"W	584.09	118.022	0.87	0.07	0.03
5602.00	14.740	121.010	5528.07	-456.71	-285.94	534.94	1745276.41	14529071.22	40°00'20.934"N	80°37'31.936"W	606.56	118.125	0.60	0.59	0.44
5647.00	14.520	111.170	5571.62	-464.97	-290.92	545.11	1745286.58	14529066.23	40°00'20.884"N	80°37'31.805"W	617.88	118.089	5.54	-0.49	-21.87
5692.00	15.260	100.680	5615.11	-471.82	-294.06	556.19	1745297.65	14529063.10	40°00'20.853"N	80°37'31.663"W	629.14	117.866	6.20	1.64	-23.31
5737.00	16.220	87.330	5658.44	-476.86	-294.86	568.29	1745309.75	14529062.29	40°00'20.844"N	80°37'31.508"W	640.23	117.423	8.31	2.13	-29.67
5783.00	16.770	70.960	5702.57	-479.04	-292.40	580.99	1745322.44	14529064.76	40°00'20.868"N	80°37'31.344"W	650.42	116.715	10.14	1.20	-35.59
5826.00	16.670	38.810	5743.84	-476.09	-285.55	590.74	1745332.19	14529071.60	40°00'20.935"N	80°37'31.219"W	656.14	115.798	21.25	-0.23	-74.77
5871.00	20.310	6.390	5786.92	-465.84	-272.73	595.67	1745337.12	14529084.42	40°00'21.062"N	80°37'31.155"W	655.13	114.601	23.88	8.09	-72.04
5916.00	19.280	6.600	5828.96	-452.29	-257.58	597.39	1745338.84	14529099.56	40°00'21.211"N	80°37'31.132"W	650.56	113.325	2.29	-2.29	0.47
5962.00	19.560	9.070	5872.34	-438.86	-242.44	599.48	1745340.92	14529114.70	40°00'21.361"N	80°37'31.104"W	646.64	112.019	1.89	0.61	5.37
6007.00	19.800	9.050	5914.72	-425.70	-227.47	601.86	1745343.31	14529129.66	40°00'21.509"N	80°37'31.073"W	643.42	110.704	0.53	0.53	-0.04
6052.00	21.600	8.430	5956.81	-411.85	-211.75	604.28	1745345.72	14529145.37	40°00'21.664"N	80°37'31.041"W	640.30	109.311	4.03	4.00	-1.38
6098.00	24.130	4.790	5999.19	-395.97	-194.00	606.30	1745347.75	14529163.12	40°00'21.839"N	80°37'31.014"W	636.59	107.743	6.30	5.50	-7.91
6143.00	28.220	1.040	6039.57	-377.78	-174.19	607.27	1745348.71	14529182.92	40°00'22.035"N	80°37'31.000"W	631.75	106.005	9.80	9.09	-8.33
6188.00	31.870	357.650	6078.52	-356.61	-151.67	606.97	1745348.42	14529205.43	40°00'22.258"N	80°37'31.003"W	625.64	104.030	8.94	8.11	-7.53
6233.00	36.340	354.290	6115.78	-332.45	-126.52	605.16	1745346.60	14529230.57	40°00'22.506"N	80°37'31.025"W	618.24	101.809	10.78	9.93	-7.47
6279.00	40.640	351.800	6151.78	-304.64	-98.12	601.66	1745343.11	14529258.96	40°00'22.787"N	80°37'31.068"W	609.61	99.262	9.93	9.35	-5.41
6324.00	44.550	350.280	6184.90	-274.83	-68.04	596.91	1745338.35	14529289.03	40°00'23.084"N	80°37'31.128"W	600.77	96.503	8.98	8.69	-3.38
6369.00	48.550	350.480	6215.84	-242.78	-35.84	591.45	1745332.90	14529321.22	40°00'23.403"N	80°37'31.196"W	592.53	93.467	8.89	8.89	0.44
6414.00	52.780	350.220	6244.36	-208.63	-1.53	585.61	1745327.07	14529355.51	40°00'23.742"N	80°37'31.269"W	585.62	90.150	9.41	9.40	-0.58
6459.00	57.980	348.670	6270.22	-172.40	34.65	578.86	1745320.31	14529391.68	40°00'24.100"N	80°37'31.354"W	579.90	86.574	9.86	9.44	-3.44
6505.00	61.950	346.620	6293.88	-133.38	73.17	570.41	1745311.86	14529430.18	40°00'24.481"N	80°37'31.461"W	575.08	82.690	9.54	8.74	-4.46
6550.00	65.230	345.350	6314.21	-93.52	112.11	560.68	1745302.14	14529469.10	40°00'24.866"N	80°37'31.584"W	571.78	78.693	9.62	9.29	-2.82
6595.00	69.210	344.950	6331.63	-52.25	152.20	550.05	1745291.51	14529509.18	40°00'25.263"N	80°37'31.718"W	570.72	74.533	8.88	8.84	-0.89
6640.00	72.830	348.450	6348.36	-9.90	193.11	538.46	1745279.93	14529550.07	40°00'25.668"N	80°37'31.865"W	572.04	70.271	8.12	7.49	-3.33
6685.00	75.540	342.600	6366.72	33.28	234.49	525.83	1745267.31	14529591.44	40°00'26.077"N	80°37'32.025"W	575.75	65.966	6.82	6.58	-1.89
6731.00	79.090	341.820	6386.70	78.11	277.24	512.11	1745253.59	14529634.17	40°00'26.500"N	80°37'32.199"W	582.34	61.571	8.53	8.37	-1.70

Gas
Co
of
section

REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot #05
Area	Marshall County, WV	Well	BW Edge MSH 5H
Field	Marshall	Wellbore	BW Edge MSH 5H AWB
Facility	BW Edge MSH Pad		

WELLPATH DATA (189 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]
6776.00	83.270	339.960	6375.48	122.57	319.26	497.55	1745239.03	14529676.17	40°00'26.916"N	80°37'32.384"W	591.17	57.313	9.54	8.62	-4.13
6821.00	87.260	337.590	6379.20	167.40	361.05	481.31	1745222.81	14529717.95	40°00'27.330"N	80°37'32.590"W	601.68	53.125	10.30	8.87	-5.27
6867.00	90.650	336.730	6380.03	213.36	403.43	463.46	1745204.96	14529760.31	40°00'27.749"N	80°37'32.817"W	614.46	48.962	7.60	7.37	-1.87
6912.00	90.550	335.860	6379.56	258.29	444.63	445.37	1745186.88	14529801.50	40°00'28.157"N	80°37'33.047"W	629.33	45.048	1.95	-0.22	-1.93
7002.00	90.800	335.670	6378.50	348.12	526.69	408.43	1745149.95	14529883.53	40°00'28.970"N	80°37'33.518"W	666.50	37.792	0.35	0.28	-0.21
7093.00	90.550	335.620	6377.43	438.93	609.59	370.91	1745112.44	14529966.39	40°00'29.790"N	80°37'33.995"W	713.56	31.319	0.28	-0.27	-0.05
7183.00	90.400	330.960	6376.68	528.41	689.96	330.47	1745072.02	14530046.73	40°00'30.586"N	80°37'34.511"W	765.02	25.593	5.18	-0.17	-5.18
7273.00	90.490	331.380	6375.99	617.51	768.80	287.07	1745028.64	14530125.54	40°00'31.367"N	80°37'35.064"W	820.65	20.476	0.48	0.10	0.47
7363.00	91.200	332.250	6374.66	706.73	848.12	244.57	1744986.15	14530204.83	40°00'32.153"N	80°37'35.606"W	882.68	16.086	1.25	0.79	0.97
7454.00	91.230	332.670	6372.73	797.07	928.79	202.50	1744944.10	14530285.47	40°00'32.952"N	80°37'36.143"W	950.61	12.300	0.46	0.03	0.46
7544.00	91.390	336.460	6370.67	886.72	1010.03	163.87	1744905.48	14530366.68	40°00'33.756"N	80°37'36.635"W	1023.24	9.215	4.21	0.18	4.21
7634.00	91.020	336.530	6368.78	976.60	1092.55	127.98	1744869.61	14530449.16	40°00'34.573"N	80°37'37.091"W	1100.02	6.681	0.42	-0.41	0.08
7725.00	91.170	331.540	6367.04	1067.17	1174.32	88.16	1744829.80	14530530.90	40°00'35.383"N	80°37'37.599"W	1177.62	4.293	5.48	0.16	-5.48
7815.00	91.080	331.030	6365.27	1156.28	1253.24	44.92	1744786.59	14530609.79	40°00'36.165"N	80°37'38.150"W	1254.04	2.053	0.58	-0.10	-0.57
7905.00	91.080	329.090	6363.57	1245.10	1331.21	0.02	1744741.70	14530687.73	40°00'36.937"N	80°37'38.723"W	1331.21	0.001	2.16	0.00	-2.16
7996.00	91.140	329.210	6361.81	1334.66	1409.32	-46.64	1744695.06	14530765.81	40°00'37.711"N	80°37'39.318"W	1410.09	358.105	0.15	0.07	0.13
8086.00	91.080	331.550	6360.07	1423.55	1487.54	-91.11	1744650.61	14530844.00	40°00'38.486"N	80°37'39.886"W	1490.32	356.495	2.60	-0.07	2.60
8176.00	91.140	334.880	6358.32	1513.02	1567.85	-131.65	1744610.08	14530924.28	40°00'39.281"N	80°37'40.403"W	1573.37	355.200	3.70	0.07	3.70
8267.00	89.600	332.690	6357.74	1603.59	1649.48	-171.85	1744569.90	14531005.88	40°00'40.089"N	80°37'40.915"W	1658.41	354.052	2.94	-1.69	-2.41
8357.00	89.110	332.020	6358.75	1692.93	1729.20	-213.60	1744528.16	14531085.57	40°00'40.879"N	80°37'41.447"W	1742.35	352.958	0.92	-0.54	-0.74
8448.00	90.490	337.710	6359.07	1783.62	1811.55	-252.24	1744489.54	14531167.89	40°00'41.694"N	80°37'41.939"W	1829.03	352.073	6.43	1.52	6.25
8538.00	90.740	343.370	6358.10	1873.56	1896.37	-282.21	1744459.58	14531252.67	40°00'42.534"N	80°37'42.320"W	1917.25	351.536	6.29	0.28	6.29
8628.00	90.890	338.060	6356.82	1963.49	1981.28	-311.92	1744429.88	14531337.55	40°00'43.374"N	80°37'42.697"W	2005.68	351.053	5.90	0.17	-5.90
8719.00	90.740	336.120	6355.52	2054.41	2065.09	-347.34	1744394.48	14531421.33	40°00'44.204"N	80°37'43.148"W	2094.10	350.452	2.14	-0.16	-2.13
8809.00	90.740	335.660	6354.36	2144.24	2147.23	-384.10	1744357.73	14531503.44	40°00'45.017"N	80°37'43.616"W	2181.32	349.858	0.51	0.00	-0.51
8899.00	90.680	337.820	6353.25	2234.14	2229.91	-419.64	1744322.21	14531586.08	40°00'45.835"N	80°37'44.068"W	2269.05	349.342	2.40	-0.07	2.40
8990.00	90.650	332.060	6352.19	2324.84	2312.30	-458.16	1744283.70	14531668.44	40°00'46.651"N	80°37'44.559"W	2357.25	348.792	6.33	-0.03	-6.33
9080.00	90.520	341.080	6351.27	2414.64	2394.79	-493.91	1744247.96	14531750.90	40°00'47.468"N	80°37'45.014"W	2445.19	348.346	10.02	-0.14	10.02
9170.00	90.800	343.780	6350.23	2504.49	2480.58	-521.07	1744220.81	14531836.65	40°00'48.317"N	80°37'45.358"W	2534.71	348.137	3.02	0.31	3.00
9261.00	89.850	344.360	6349.72	2595.17	2568.08	-546.05	1744195.84	14531924.12	40°00'49.182"N	80°37'45.675"W	2625.49	347.996	1.22	-1.04	0.64

Actual Wellpath Report

BW Edge MSH 5H AWP Proj: 15428MD

Page 6 of 10

REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot #05
Area	Marshall County, WV	Well	BW Edge MSH 5H
Field	Marshall	Wellbore	BW Edge MSH 5H AWB
Facility	BW Edge MSH Pad		

WELLPATH DATA (189 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]
9352.00	89.820	341.210	6349.98	2685.98	2654.99	-572.98	1744168.92	14532011.00	40°00'50.042"N	80°37'46.016"W	2716.11	347.822	3.46	-0.03	-3.46
9442.00	90.920	337.360	6349.40	2775.96	2739.15	-604.81	1744137.11	14532095.13	40°00'50.875"N	80°37'46.421"W	2805.13	347.549	4.45	1.22	-4.28
9532.00	90.060	332.250	6348.63	2865.66	2820.56	-643.10	1744098.83	14532176.50	40°00'51.681"N	80°37'46.909"W	2892.95	347.156	5.76	-0.96	-5.68
9623.00	91.230	329.330	6347.60	2955.64	2899.97	-687.51	1744054.44	14532255.88	40°00'52.468"N	80°37'47.475"W	2980.35	346.663	3.46	1.29	-3.21
9713.00	90.180	327.700	6346.49	3044.05	2976.71	-734.50	1744007.46	14532332.59	40°00'53.228"N	80°37'48.075"W	3065.99	346.139	2.15	-1.17	-1.81
9803.00	90.650	332.100	6345.84	3132.82	3054.56	-779.63	1743962.36	14532410.41	40°00'53.999"N	80°37'48.651"W	3152.48	345.682	4.92	0.52	4.89
9894.00	91.080	337.740	6344.47	3223.51	3136.93	-818.18	1743923.82	14532492.75	40°00'54.815"N	80°37'49.142"W	3241.88	345.382	6.22	0.47	6.20
9984.00	91.420	338.320	6342.50	3313.47	3220.38	-851.84	1743890.17	14532576.16	40°00'55.641"N	80°37'49.570"W	3331.14	345.184	0.75	0.38	0.64
10075.00	90.400	335.810	6341.06	3404.38	3304.17	-887.30	1743854.73	14532659.92	40°00'56.471"N	80°37'50.021"W	3421.23	344.968	2.98	-1.12	-2.76
10165.00	90.370	335.570	6340.45	3494.20	3386.18	-924.35	1743817.69	14532741.90	40°00'57.283"N	80°37'50.493"W	3510.08	344.732	0.27	-0.03	-0.27
10256.00	90.120	335.050	6340.06	3584.98	3468.86	-962.36	1743779.70	14532824.55	40°00'58.101"N	80°37'50.977"W	3599.88	344.495	0.63	-0.27	-0.57
10346.00	90.250	336.660	6339.77	3674.82	3550.99	-999.17	1743742.90	14532906.64	40°00'58.914"N	80°37'51.446"W	3688.88	344.285	1.79	0.14	1.79
10437.00	90.340	337.310	6339.30	3765.74	3634.74	-1034.75	1743707.33	14532990.37	40°00'59.743"N	80°37'51.899"W	3779.16	344.109	0.72	0.10	0.71
10527.00	90.340	335.940	6338.77	3855.64	3717.35	-1070.46	1743671.64	14533072.94	40°01'00.561"N	80°37'52.353"W	3868.41	343.936	1.52	0.00	-1.52
10617.00	90.280	336.490	6338.28	3945.51	3799.71	-1106.75	1743635.36	14533155.27	40°01'01.377"N	80°37'52.815"W	3957.61	343.761	0.61	-0.07	0.61
10708.00	91.140	339.570	6337.16	4036.47	3884.08	-1140.79	1743601.33	14533239.61	40°01'02.212"N	80°37'53.248"W	4048.14	343.632	3.51	0.95	3.38
10798.00	91.170	337.860	6335.34	4126.44	3967.92	-1173.45	1743568.68	14533323.41	40°01'03.042"N	80°37'53.664"W	4137.80	343.525	1.90	0.03	-1.90
10888.00	91.080	334.460	6333.57	4216.28	4050.21	-1209.82	1743532.33	14533405.68	40°01'03.856"N	80°37'54.127"W	4227.04	343.369	3.78	-0.10	-3.78
10979.00	91.110	334.130	6331.84	4306.92	4132.19	-1249.28	1743492.89	14533487.62	40°01'04.668"N	80°37'54.630"W	4316.91	343.178	0.36	0.03	-0.36
11069.00	91.230	334.110	6330.00	4396.54	4213.15	-1288.56	1743453.63	14533568.55	40°01'05.470"N	80°37'55.130"W	4405.79	342.994	0.14	0.13	-0.02
11159.00	91.110	332.250	6328.16	4486.00	4293.45	-1329.15	1743413.04	14533648.82	40°01'06.265"N	80°37'55.648"W	4494.48	342.799	2.07	-0.13	-2.07
11250.00	91.200	331.450	6326.33	4576.22	4373.67	-1372.08	1743370.14	14533729.00	40°01'07.059"N	80°37'56.195"W	4583.84	342.583	0.88	0.10	-0.88
11340.00	90.620	331.630	6324.90	4665.39	4452.78	-1414.96	1743327.27	14533808.09	40°01'07.843"N	80°37'56.742"W	4672.19	342.371	0.67	-0.64	0.20
11431.00	91.080	331.380	6323.55	4755.54	4532.75	-1458.37	1743283.88	14533888.02	40°01'08.635"N	80°37'57.296"W	4761.58	342.165	0.58	0.51	-0.27
11521.00	91.080	333.410	6321.85	4844.87	4612.48	-1500.06	1743242.20	14533967.73	40°01'09.425"N	80°37'57.827"W	4850.28	341.985	2.26	0.00	2.26
11611.00	90.620	338.350	6319.96	4934.67	4694.59	-1536.79	1743205.49	14534049.81	40°01'10.238"N	80°37'58.295"W	4939.73	341.874	5.54	0.27	5.53
11701.00	90.950	337.420	6318.18	5024.62	4777.97	-1570.64	1743171.65	14534133.15	40°01'11.063"N	80°37'58.726"W	5029.50	341.803	1.15	-0.41	-1.08
11792.00	90.920	335.350	6316.70	5115.49	4861.33	-1607.09	1743135.22	14534216.48	40°01'11.888"N	80°37'59.190"W	5120.08	341.707	2.27	-0.03	-2.27
11882.00	90.650	335.400	6315.46	5205.27	4943.14	-1644.58	1743097.74	14534298.25	40°01'12.698"N	80°37'59.668"W	5209.54	341.598	0.31	-0.30	0.06
11973.00	90.710	335.680	6314.38	5296.07	5025.94	-1682.32	1743060.02	14534381.02	40°01'13.518"N	80°38'00.148"W	5300.02	341.493	0.23	0.07	0.22

Gas
Log
of
Protection

REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot #05
Area	Marshall County, WV	Well	BW Edge MSH 5H
Field	Marshall	Wellbore	BW Edge MSH 5H AWB
Facility	BW Edge MSH Pad		

WELLPATH DATA (189 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]
12063.00	90.980	335.940	6313.06	5385.89	5108.00	-1719.25	1743023.10	14534463.05	40°01'14.330"N	80°38'00.619"W	5389.57	341.398	0.48	0.30	0.38
12154.00	90.650	334.440	6311.76	5476.65	5190.59	-1757.43	1742984.94	14534545.61	40°01'15.148"N	80°38'01.105"W	5480.04	341.295	1.69	-0.36	-1.65
12244.00	90.620	334.730	6310.76	5566.34	5271.88	-1796.05	1742946.33	14534626.86	40°01'15.953"N	80°38'01.597"W	5569.42	341.187	0.32	-0.03	0.32
12335.00	90.460	335.800	6309.91	5657.11	5354.52	-1834.13	1742908.27	14534709.48	40°01'16.771"N	80°38'02.082"W	5659.94	341.092	1.19	-0.18	1.18
12425.00	90.490	337.420	6309.16	5747.01	5437.12	-1869.85	1742872.56	14534792.04	40°01'17.589"N	80°38'02.537"W	5749.66	341.022	1.80	0.03	1.80
12515.00	90.890	340.160	6308.08	5836.99	5521.01	-1902.41	1742840.01	14534875.90	40°01'18.419"N	80°38'02.951"W	5839.58	340.987	3.08	0.44	3.04
12606.00	90.060	341.770	6307.32	5927.94	5607.03	-1932.09	1742810.35	14534961.88	40°01'19.271"N	80°38'03.328"W	5930.57	340.987	1.99	-0.91	1.77
12696.00	90.400	343.650	6306.96	6017.78	5692.96	-1958.83	1742783.61	14535047.78	40°01'20.121"N	80°38'03.667"W	6020.53	341.013	2.12	0.38	2.09
12787.00	90.370	342.740	6306.35	6108.56	5780.07	-1985.14	1742757.31	14535134.86	40°01'20.983"N	80°38'04.001"W	6111.46	341.045	1.00	-0.03	-1.00
12877.00	90.950	338.070	6305.31	6198.51	5864.83	-2015.31	1742727.15	14535219.58	40°01'21.822"N	80°38'04.384"W	6201.43	341.036	5.23	0.64	-5.19
12967.00	91.020	335.500	6303.76	6288.41	5947.52	-2050.78	1742691.70	14535302.24	40°01'22.640"N	80°38'04.836"W	6291.16	340.975	2.86	0.08	-2.86
13057.00	90.800	333.630	6302.33	6378.09	6028.78	-2089.43	1742653.06	14535383.47	40°01'23.445"N	80°38'05.328"W	6380.59	340.885	2.09	-0.24	-2.08
13148.00	90.860	334.400	6301.02	6468.69	6110.57	-2129.29	1742613.21	14535465.23	40°01'24.255"N	80°38'05.836"W	6470.94	340.789	0.85	0.07	0.85
13238.00	90.920	334.130	6299.62	6558.34	6191.64	-2168.37	1742574.16	14535546.27	40°01'25.057"N	80°38'06.334"W	6560.35	340.699	0.31	0.07	-0.30
13329.00	90.460	332.860	6298.52	6648.86	6273.06	-2208.98	1742533.56	14535627.66	40°01'25.864"N	80°38'06.852"W	6650.63	340.601	1.48	-0.51	-1.40
13419.00	90.550	333.080	6297.73	6738.32	6353.23	-2249.88	1742492.68	14535707.80	40°01'26.658"N	80°38'07.373"W	6739.84	340.499	0.26	0.10	0.24
13509.00	90.490	334.030	6296.91	6827.86	6433.81	-2289.95	1742452.62	14535788.34	40°01'27.455"N	80°38'07.884"W	6829.19	340.408	1.06	-0.07	1.06
13600.00	90.650	332.370	6296.01	6918.34	6515.03	-2330.98	1742411.61	14535869.53	40°01'28.260"N	80°38'08.407"W	6919.47	340.314	1.83	0.18	-1.82
13691.00	90.520	333.850	6295.08	7008.81	6596.18	-2372.13	1742370.47	14535950.65	40°01'29.063"N	80°38'08.932"W	7009.75	340.220	1.63	-0.14	1.63
13781.00	90.620	335.970	6294.18	7098.54	6677.68	-2410.29	1742332.32	14536032.12	40°01'29.870"N	80°38'09.418"W	7099.36	340.153	2.36	0.11	2.36
13871.00	90.490	338.000	6293.31	7188.46	6760.51	-2445.48	1742297.15	14536114.92	40°01'30.690"N	80°38'09.866"W	7189.22	340.113	2.26	-0.14	2.26
13962.00	90.680	337.570	6292.38	7279.42	6844.75	-2479.88	1742262.76	14536199.12	40°01'31.524"N	80°38'10.304"W	7280.14	340.084	0.52	0.21	-0.47
14052.00	90.460	336.800	6291.49	7369.35	6927.70	-2514.78	1742227.88	14536282.04	40°01'32.345"N	80°38'10.748"W	7370.02	340.049	0.89	-0.24	-0.86
14143.00	90.580	336.150	6290.66	7460.24	7011.14	-2551.10	1742191.57	14536365.44	40°01'33.171"N	80°38'11.211"W	7460.84	340.005	0.73	0.13	-0.71
14234.00	90.580	336.640	6289.74	7551.12	7094.52	-2587.54	1742155.15	14536448.79	40°01'33.997"N	80°38'11.675"W	7551.66	339.962	0.54	0.00	0.54
14324.00	90.580	336.240	6288.83	7641.01	7177.04	-2623.44	1742119.27	14536531.29	40°01'34.814"N	80°38'12.132"W	7641.49	339.921	0.33	0.00	-0.33
14415.00	90.650	336.060	6287.93	7731.87	7260.30	-2660.16	1742082.56	14536614.51	40°01'35.638"N	80°38'12.600"W	7732.29	339.877	0.31	-0.03	-0.31
14505.00	90.490	335.660	6287.11	7821.68	7342.23	-2697.39	1742045.34	14536696.41	40°01'36.449"N	80°38'13.074"W	7822.04	339.828	1.11	-0.07	-1.11
14595.00	90.550	335.560	6286.30	7911.46	7424.00	-2734.98	1742007.76	14536778.15	40°01'37.259"N	80°38'13.553"W	7911.76	339.776	0.56	0.07	0.56
14685.00	90.620	336.560	6285.38	8001.31	7506.25	-2771.50	1741971.26	14536860.37	40°01'38.073"N	80°38'14.018"W	8001.56	339.735	1.11	0.08	1.11

REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY		Slot	Slot #05
Area	Marshall County, WV		Well	BW Edge MSH 5H
Field	Marshall		Wellbore	BW Edge MSH 5H AWB
Facility	BW Edge MSH Pad			

WELLPATH DATA (189 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]
14776.00	90.550	336.790	6284.45	8092.21	7589.81	-2807.53	1741935.24	14536943.89	40°01'38.900"N	80°38'14.477"W	8092.43	339.700	0.26	-0.08	0.25
14866.00	90.580	337.300	6283.56	8182.14	7672.68	-2842.63	1741900.16	14537026.73	40°01'39.721"N	80°38'14.924"W	8182.33	339.671	0.57	0.03	0.57
14957.00	90.550	337.220	6282.66	8273.08	7756.60	-2877.80	1741865.00	14537110.62	40°01'40.551"N	80°38'15.371"W	8273.25	339.644	0.09	-0.03	-0.09
15047.00	90.650	336.650	6281.72	8363.00	7839.40	-2913.06	1741829.75	14537193.39	40°01'41.371"N	80°38'15.820"W	8363.14	339.615	0.64	0.11	-0.63
15137.00	90.520	333.090	6280.80	8452.71	7920.87	-2951.27	1741791.56	14537274.82	40°01'42.178"N	80°38'16.307"W	8452.82	339.565	3.96	-0.14	-3.96
15227.00	90.580	332.060	6279.94	8542.09	8000.75	-2992.72	1741750.12	14537354.67	40°01'42.969"N	80°38'16.836"W	8542.15	339.491	1.15	0.07	-1.14
15318.00	90.650	333.150	6278.96	8632.47	8081.53	-3034.59	1741708.27	14537435.43	40°01'43.769"N	80°38'17.370"W	8632.49	339.419	1.20	0.08	1.20
15403.00	90.490	334.530	6278.12	8717.08	8157.82	-3072.06	1741670.81	14537511.68	40°01'44.524"N	80°38'17.848"W	8717.09	339.365	1.63	-0.19	1.62
15428.00	90.490	334.530	6277.90	8741.99	8180.39	-3082.81	1741660.07	14537534.24	40°01'44.747"N	80°38'17.985"W	8742.00	339.351	0.00	0.00	0.00

HOLE & CASING SECTIONS - Ref Wellbore: BW Edge MSH 5H AWB Ref Wellpath: BW Edge MSH 5H AWP Proj: 15428'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]
28in Open Hole	26.00	126.00	100.00	26.00	126.00	0.00	0.00	-0.34	-0.03
20in Conductor	26.00	126.00	100.00	26.00	126.00	0.00	0.00	-0.34	-0.03
17.5in Open Hole	126.00	820.00	694.00	126.00	819.99	-0.34	-0.03	-0.68	-2.17
13.375in Casing Surface	26.00	820.00	794.00	26.00	819.99	0.00	0.00	-0.68	-2.17
12.25in Open Hole	820.00	2220.00	1400.00	819.99	2219.97	-0.68	-2.17	3.12	-2.15
9.625in Casing Intermediate	26.00	2220.00	2194.00	26.00	2219.97	0.00	0.00	3.12	-2.15
8.75in Open Hole	2220.00	5853.00	3633.00	2219.97	5769.62	3.12	-2.15	-278.51	594.46
8.5in Open Hole	5853.00	15428.00	9575.00	5769.62	6277.90	-278.51	594.46	8180.39	-3082.81

RECEIVED
Office of Oil and Gas
MAY 31 2019
WV Department of
Environmental Protection

REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot #05
SOUTHWESTERN ENERGY	Well	BW Edge MSH 5H
Area	Wellbore	BW Edge MSH 5H AWB
Field		
Facility		

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
BW Edge MSH 5H BHL Rev-4	6244.00	8176.15	-3092.85	1741650.03	14537530.01	40°01'44.706"N	80°38'18.114"W	point
BW Edge MSH 5H LP Rev-5	6377.00	353.92	459.31	1745200.81	14529710.82	40°00'27.260"N	80°37'32.873"W	point

WELLPATH COMPOSITION - Ref Wellbore: BW Edge MSH 5H AWB Ref Wellpath: BW Edge MSH 5H AWP Proj: 15428'MD

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
26.00	5783.00	OWSG MWD rev2 + HRGM	01_Premier MWD <8.75"> (165'-5783')	BW Edge MSH 5H AWB
5783.00	15403.00	BHI AutoTrak Curve (Short)	02_BH/AT Curve <8-1/2"> (5783)(5826'-15403')	BW Edge MSH 5H AWB
15403.00	15428.00	Blind Drilling (std)	Projection to bit	BW Edge MSH 5H AWB

RECEIVED
Office of Oil and Gas
MAY 31 2019
WV Department of
Environmental Protection

REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot #05
SOUTHWESTERN ENERGY	Well	BW Edge MSH 5H
Marshall County, WV	Wellbore	BW Edge MSH 5H AWB
Marshall		
BW Edge MSH Pad		

COMMENTS

Wellpath general comments

API: 47-051-01845-0000

BH Job #: 9215078

Rig: SDC 42

Duration: 07/16/2018 - 07/19/2018

RECEIVED
Office of Oil and Gas

MAY 31 2019

WV Department of
Environmental Protection