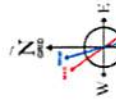
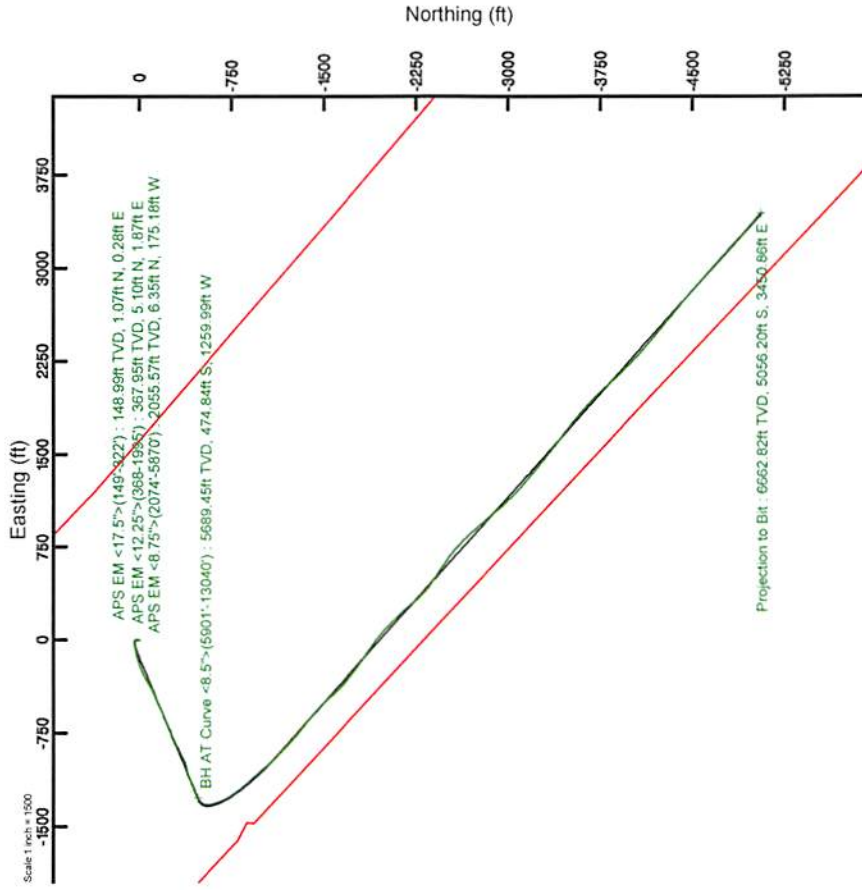
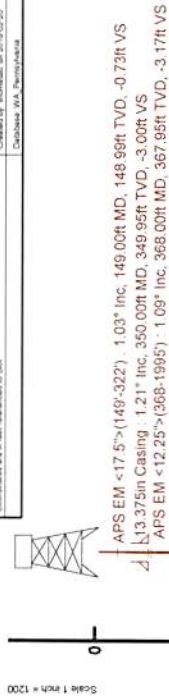


SOUTHWESTERN ENERGY

Location: Marshall County, WV
 Field: Marshall
 Facility: Columbia Gas Transmission MSH Pad

Slot: Slot 6H
 Well: Columbia Gas Transmission MSH 6H
 Wellbore: Columbia Gas Transmission MSH 6H PWB

API reference wellbore is Columbia Gas Transmission MSH 6H PWB Slot 6H	Grid System: NAD83 / UTM Zone 17 North, US Foot
True vertical depths are referenced to SDC 42 (KB)	* * * * * Wellbore was built from a different geologic datum
Measured depths are referenced to SDC 42 (KB)	North Datum: Grid north
SDC 42 (KB) to Mean Sea Level: 809.5 ft	Scale: True distance
Mean Sea Level to Mud line (AI Slot - Slot 6H): -783.5 ft	Depth are in feet
Coordinates are in feet referenced to Grid	Created by: Brownlee on 2018-02-20
	Database: WA_Pennsylvania



Use specified for: 1817 Feet, 50.84ft, 7
 Magnetic North is 6.31 degrees West of True North (at 100/2018)
 True North is 0.25 degrees East of Grid North
 To convert azimuth from Magnetic to Grid subtract 6.56 degrees

API: 47-051-01937-0000

Job #: 8957259

Rig: SDC 42

Duration: 01/26/2018 - 02/09/2018

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BH AT Curve <8.5> (5901'-13040'): 16.95° Inc, 5901.00ft MD, 5689.45ft TVD, -316.17ft VS

Projection to Bit: 86.89° Inc, 13065.00ft MD, 6662.82ft TVD, 6121.56ft VS



REFERENCE WELLPATH IDENTIFICATION			
Operator	SOUTHWESTERN ENERGY	Slot	Slot 6H
Area	Marshall County, WV	Well	Columbia Gas Transmission MSH 6H
Field	Marshall	Wellbore	Columbia Gas Transmission MSH 6H AWB
Facility	Columbia Gas Transmission 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	0.999613	Report Generated	2/20/2018 at 7:57:24 AM
Convergence at slot	0.25° East	Database/Source file	WA_Pennsylvania/Columbia_Gas_Transmission_MSH_6H_AWP_Proj_13065_MD.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-3.45	34.97	1748600.84	14437574.98	39°45'16.236"N	80°36'54.265"W
Facility Reference Pt			1748565.88	14437578.43	39°45'16.272"N	80°36'54.713"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 (KB) to Facility Vertical Datum	809.50ft
Horizontal Reference Pt	Slot	SDC 42 (KB) to Mean Sea Level	809.50ft
Vertical Reference Pt	SDC 42 (KB)	SDC 42 (KB) to Mud Line at Slot (Slot 6H)	26.00ft
MD Reference Pt	SDC 42 (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	145.77°

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Actual Wellpath Report

Columbia Gas Transmission MSH 6H AWP Proj: 13065 MD



REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot 6H
Area	Marshall County, WV	Well	Columbia Gas Transmission MSH 6H
Field	Marshall	Wellbore	Columbia Gas Transmission MSH 6H AWB
Facility	Columbia Gas Transmission MSH Pad		

WELLPATH DATA (178 stations) † = interpolated/extrapolated station

MD	Inclination	Azimuth	TVD	Vert Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate
[ft]	[°]	[°]	[ft]	[ft]	[ft]	[ft]	[US ft]	[US ft]	[N]	[W]	[ft]	[°]	[°/100ft]	[°/100ft]	[°/100ft]
0.00	0.00	14.730	0.00	0.00	0.00	0.00	1748600.84	14437574.98	39°45'16.236"N	80°36'54.265"W	0.00	0.00	0.00	0.00	0.00
26.00	0.00	14.730	26.00	0.00	0.00	0.00	1748600.84	14437574.98	39°45'16.236"N	80°36'54.265"W	0.00	0.00	0.00	0.00	0.00
149.00	1.030	14.730	148.99	-0.73	1.07	0.28	1748601.12	14437576.05	39°45'16.247"N	80°36'54.262"W	1.11	14.730	0.84	0.84	11.98
209.00	1.040	17.010	208.98	-1.42	2.11	0.58	1748601.42	14437577.09	39°45'16.257"N	80°36'54.258"W	2.19	15.297	0.07	0.02	3.80
299.00	1.190	21.720	298.97	-2.46	3.76	1.16	1748602.00	14437578.74	39°45'16.273"N	80°36'54.250"W	3.94	17.175	0.20	0.17	5.23
322.00	1.390	28.840	321.96	-2.72	4.23	1.39	1748602.22	14437579.21	39°45'16.278"N	80°36'54.247"W	4.45	18.145	1.11	0.87	30.96
368.00	1.090	29.000	367.95	-3.17	5.10	1.87	1748602.71	14437580.08	39°45'16.287"N	80°36'54.241"W	5.43	20.108	0.65	-0.65	0.35
427.00	1.020	28.500	426.94	-3.66	6.05	2.39	1748603.23	14437581.03	39°45'16.296"N	80°36'54.234"W	6.51	21.547	0.12	-0.12	-0.85
518.00	2.490	12.570	517.90	-5.38	8.69	3.21	1748604.04	14437583.67	39°45'16.322"N	80°36'54.224"W	9.26	20.245	1.69	1.62	-17.51
608.00	3.500	11.520	607.77	-8.64	13.29	4.18	1748605.02	14437588.27	39°45'16.368"N	80°36'54.211"W	13.93	17.457	1.12	1.12	-1.17
692.00	3.290	15.070	691.62	-12.00	18.13	5.32	1748606.16	14437593.10	39°45'16.415"N	80°36'54.196"W	18.90	16.348	0.35	-0.25	4.23
774.00	3.270	356.290	773.49	-15.55	22.74	5.78	1748606.62	14437597.71	39°45'16.461"N	80°36'54.190"W	23.46	14.261	1.30	-0.02	-22.90
857.00	4.430	327.960	856.31	-20.79	27.82	3.93	1748604.76	14437602.79	39°45'16.511"N	80°36'54.213"W	28.09	8.032	2.64	1.40	-34.13
939.00	4.030	326.580	938.09	-26.84	32.91	0.66	1748601.50	14437607.87	39°45'16.562"N	80°36'54.255"W	32.91	1.146	0.50	-0.49	-1.68
1020.00	3.500	301.820	1018.92	-31.94	36.59	-3.01	1748597.83	14437611.55	39°45'16.598"N	80°36'54.302"W	36.71	355.296	2.09	-0.65	-30.57
1104.00	4.220	283.390	1102.73	-36.57	38.65	-8.20	1748592.65	14437613.62	39°45'16.619"N	80°36'54.368"W	39.51	348.029	1.70	0.86	-21.94
1185.00	4.860	275.780	1183.48	-40.98	39.69	-14.51	1748586.34	14437614.66	39°45'16.629"N	80°36'54.449"W	42.26	339.920	1.08	0.79	-9.40
1269.00	5.710	267.610	1267.12	-45.47	39.87	-22.22	1748578.62	14437614.84	39°45'16.631"N	80°36'54.548"W	45.65	330.866	1.35	1.01	-9.73
1353.00	7.030	262.600	1350.60	-49.99	39.04	-31.50	1748569.35	14437614.00	39°45'16.624"N	80°36'54.666"W	50.16	321.102	1.70	1.57	-5.96
1435.00	7.420	259.180	1431.95	-54.36	37.40	-41.67	1748559.18	14437612.36	39°45'16.608"N	80°36'54.797"W	55.99	311.904	0.71	0.48	-4.17
1519.00	9.450	257.980	1515.04	-59.13	34.94	-53.75	1748531.95	14437606.70	39°45'16.584"N	80°36'54.951"W	64.11	303.029	2.43	2.42	-1.43
1602.00	12.090	258.120	1596.57	-65.01	31.73	-68.92	1748531.27	14437603.29	39°45'16.520"N	80°36'55.385"W	92.07	287.918	2.85	2.75	3.41
1685.00	14.370	260.950	1677.36	-72.70	28.32	-87.60	1748513.27	14437603.29	39°45'16.520"N	80°36'55.385"W	92.07	287.918	2.85	2.75	3.41
1770.00	14.760	259.690	1759.63	-81.57	24.73	-108.67	1748492.21	14437599.70	39°45'16.485"N	80°36'55.655"W	111.45	282.819	0.59	0.46	-1.48
1854.00	14.870	256.960	1840.84	-89.81	20.38	-129.70	1748471.19	14437595.35	39°45'16.443"N	80°36'55.925"W	131.29	278.930	0.84	0.13	-3.25
1938.00	12.750	252.870	1922.40	-96.43	15.22	-149.06	1748451.84	14437590.19	39°45'16.393"N	80°36'56.173"W	149.83	275.829	2.78	-2.52	-4.87
1995.00	11.910	250.610	1978.09	-99.79	11.41	-160.62	1748440.28	14437588.39	39°45'16.356"N	80°36'56.321"W	161.02	274.064	1.70	-1.47	-3.96
2074.00	10.600	251.080	2055.57	-103.79	6.35	-175.18	1748425.73	14437581.33	39°45'16.307"N	80°36'56.508"W	175.30	272.076	1.66	-1.66	0.59
2116.00	10.600	251.100	2096.85	-105.83	3.85	-182.49	1748418.42	14437578.82	39°45'16.282"N	80°36'56.602"W	182.53	271.207	0.01	0.00	0.05
2199.00	13.610	250.530	2178.00	-110.34	-1.88	-198.93	1748401.99	14437573.10	39°45'16.226"N	80°36'56.812"W	198.93	269.458	3.63	3.63	-0.69

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Actual Wellpath Report

Columbia Gas Transmission MSH 6H AWP Proj: 13065'MD
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REFERENCE WELLPATH IDENTIFICATION			
Operator	SOUTHWESTERN ENERGY	Slot	Slot 6H
Area	Marshall County, WV	Well	Columbia Gas Transmission MSH 6H
Field	Marshall	Wellbore	Columbia Gas Transmission MSH 6H AWB
Facility	Columbia Gas Transmission MSH 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]
2281.00	17.370	249.280	2257.00	-115.66	-9.43	-219.48	1748381.45	14437565.55	39°45'16.152"N	80°36'57.076"W	219.68	267.539	4.60	4.59	-1.52
2364.00	19.760	246.930	2335.68	-121.27	-19.32	-243.98	1748356.96	14437555.67	39°45'16.056"N	80°36'57.390"W	244.74	265.473	3.02	2.88	-2.83
2448.00	20.940	245.380	2414.44	-126.53	-31.13	-270.69	1748330.26	14437543.86	39°45'15.940"N	80°36'57.733"W	272.47	263.439	1.54	1.40	-1.85
2532.00	22.440	241.310	2492.49	-130.58	-45.08	-298.40	1748302.55	14437529.91	39°45'15.803"N	80°36'58.088"W	301.79	261.408	2.53	1.79	-4.85
2615.00	21.870	239.610	2569.36	-133.14	-60.51	-325.63	1748275.33	14437514.49	39°45'15.652"N	80°36'58.438"W	331.21	259.473	1.03	-0.69	-2.05
2699.00	21.300	238.620	2647.47	-134.95	-76.37	-352.15	1748248.82	14437498.64	39°45'15.497"N	80°36'58.778"W	360.34	257.764	0.81	-0.68	-1.18
2781.00	21.310	239.520	2723.87	-136.67	-91.68	-377.71	1748223.28	14437483.33	39°45'15.346"N	80°36'59.106"W	388.68	256.356	0.40	0.01	1.10
2864.00	22.250	244.910	2800.95	-140.15	-106.00	-404.94	1748196.06	14437469.02	39°45'15.206"N	80°36'59.456"W	418.58	255.331	2.66	1.13	6.49
2946.00	22.310	246.160	2876.83	-145.42	-118.87	-433.24	1748167.77	14437456.16	39°45'15.080"N	80°36'59.819"W	449.25	254.657	0.58	0.07	1.52
3029.00	21.970	245.960	2953.71	-151.01	-131.56	-461.83	1748139.19	14437443.47	39°45'14.956"N	80°37'00.186"W	480.20	254.099	0.42	-0.41	-0.24
3111.00	20.140	245.230	3030.23	-156.04	-143.73	-488.66	1748112.37	14437431.31	39°45'14.837"N	80°37'00.530"W	509.35	253.610	2.25	-2.23	-0.89
3196.00	17.800	247.050	3110.61	-160.99	-154.93	-513.91	1748087.13	14437420.11	39°45'14.727"N	80°37'00.854"W	536.76	253.224	2.84	-2.75	2.14
3280.00	17.320	246.070	3190.70	-165.74	-165.00	-537.16	1748063.89	14437410.04	39°45'14.628"N	80°37'01.152"W	561.93	252.924	0.67	-0.57	-1.17
3364.00	16.870	243.660	3270.99	-169.65	-175.48	-559.51	1748041.54	14437399.56	39°45'14.526"N	80°37'01.439"W	586.39	252.587	1.00	-0.54	-2.87
3449.00	16.360	245.210	3352.44	-173.30	-185.98	-581.44	1748019.63	14437389.08	39°45'14.423"N	80°37'01.720"W	610.45	252.263	0.79	-0.60	1.82
3533.00	16.430	245.930	3433.02	-177.34	-195.78	-603.02	1747998.05	14437379.27	39°45'14.327"N	80°37'01.997"W	634.01	252.013	0.26	0.08	0.86
3616.00	17.290	248.130	3512.45	-182.05	-205.16	-625.19	1747975.90	14437369.90	39°45'14.235"N	80°37'02.281"W	657.99	251.832	1.29	1.04	2.65
3698.00	18.990	246.860	3590.38	-187.23	-214.95	-648.77	1747952.33	14437360.12	39°45'14.140"N	80°37'02.584"W	683.45	251.669	2.13	2.07	-1.55
3781.00	18.290	245.310	3669.02	-191.98	-225.69	-673.02	1747928.08	14437349.37	39°45'14.034"N	80°37'02.895"W	709.85	251.461	1.03	-0.84	-1.87
3864.00	17.160	246.230	3748.08	-196.36	-236.07	-696.06	1747905.05	14437339.00	39°45'13.933"N	80°37'03.190"W	735.00	251.265	1.40	-1.36	1.11
3947.00	16.490	245.290	3827.53	-200.54	-245.93	-717.96	1747883.16	14437329.15	39°45'13.836"N	80°37'03.471"W	758.92	251.092	0.87	-0.81	-1.13
4030.00	16.480	248.660	3907.12	-205.11	-255.14	-739.63	1747861.50	14437319.94	39°45'13.746"N	80°37'03.749"W	782.40	250.968	1.15	-0.01	4.06
4114.00	18.300	249.570	3987.28	-210.91	-264.08	-763.09	1747838.05	14437311.00	39°45'13.659"N	80°37'04.050"W	807.49	250.911	2.19	2.17	1.08
4195.00	17.600	247.430	4064.33	-216.42	-273.22	-786.31	1747814.83	14437301.87	39°45'13.570"N	80°37'04.348"W	832.43	250.839	1.19	-0.86	-2.64
4279.00	17.530	244.110	4144.42	-220.82	-283.62	-809.42	1747791.73	14437291.47	39°45'13.468"N	80°37'04.644"W	857.67	250.690	1.20	-0.08	-3.95
4361.00	19.020	242.790	4222.28	-224.25	-295.12	-832.42	1747768.75	14437279.98	39°45'13.355"N	80°37'04.939"W	883.18	250.479	1.89	1.82	-1.61
4447.00	18.600	241.200	4303.69	-227.26	-308.13	-856.90	1747744.27	14437266.97	39°45'13.227"N	80°37'05.254"W	910.62	250.222	0.77	-0.49	-1.85
4530.00	19.840	241.980	4382.06	-230.04	-321.13	-880.93	1747720.25	14437253.98	39°45'13.100"N	80°37'05.562"W	937.64	249.972	1.53	1.49	0.94
4613.00	21.460	245.090	4459.73	-234.02	-334.14	-907.14	1747694.05	14437240.97	39°45'12.973"N	80°37'05.898"W	966.72	249.779	2.36	1.95	3.75
4695.00	21.530	243.530	4536.03	-238.48	-347.17	-934.21	1747666.99	14437227.95	39°45'12.845"N	80°37'06.246"W	996.63	249.614	0.70	0.09	-1.90

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Actual Wellpath Report

Columbia Gas Transmission MSH 6H AWP Proj: 13065.MD



REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY
Area	Marshall County, WV
Field	Marshall
Facility	Columbia Gas Transmission MSH Pad
Slot	Slot 6H
	Columbia Gas Transmission MSH 6H
	Well
	Wellbore
	Columbia Gas Transmission MSH 6H AWB

WELLPATH DATA (178 stations)

MD	Inclination	Azimuth	TVD	Vent Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(US ft)	(US ft)	(ft)	(ft)	(ft)	(°)	(%/100ft)	(%/100ft)	(%/100ft)
4779.00	20.150	243.370	4614.53	-242.47	-360.52	-960.95	1747640.27	14437214.60	39°45'12.714"N	80°37'06.589"W	1026.35	249.435	1.64	-1.64	-0.19
4863.00	17.450	250.910	4694.05	-247.68	-371.13	-985.79	1747615.43	14437204.00	39°45'12.610"N	80°37'06.907"W	1053.34	249.370	4.32	-3.21	8.98
4948.00	16.550	256.960	4775.34	-255.38	-378.03	-1009.63	1747591.60	14437197.10	39°45'12.543"N	80°37'07.213"W	1078.08	249.473	2.33	-1.06	7.12
5032.00	16.140	255.710	4855.95	-263.69	-383.61	-1032.60	1747568.64	14437191.52	39°45'12.489"N	80°37'07.507"W	1101.55	249.620	0.64	-0.49	-1.49
5116.00	14.600	253.090	4936.94	-270.82	-389.57	-1054.04	1747547.21	14437185.56	39°45'12.431"N	80°37'07.782"W	1123.73	249.716	2.01	-1.83	-3.12
5199.00	15.210	250.430	5017.15	-276.69	-396.26	-1074.31	1747526.95	14437178.87	39°45'12.366"N	80°37'08.042"W	1145.06	249.753	1.10	0.73	-3.20
5283.00	15.870	249.170	5098.08	-282.14	-404.04	-1095.43	1747505.84	14437171.10	39°45'12.290"N	80°37'08.313"W	1167.57	249.754	0.88	0.79	-1.50
5367.00	15.850	249.540	5178.88	-287.54	-412.13	-1116.91	1747484.36	14437163.01	39°45'12.211"N	80°37'08.588"W	1190.52	249.746	0.12	-0.02	0.44
5450.00	16.820	249.680	5258.53	-293.12	-420.26	-1138.79	1747462.49	14437154.88	39°45'12.131"N	80°37'08.869"W	1213.87	249.744	1.17	1.17	0.17
5533.00	16.580	249.660	5338.03	-298.85	-428.55	-1161.16	1747440.13	14437146.60	39°45'12.050"N	80°37'09.166"W	1237.72	249.742	0.29	-0.29	-0.02
5617.00	17.380	246.820	5418.37	-304.13	-437.65	-1183.93	1747417.37	14437137.50	39°45'11.961"N	80°37'09.448"W	1262.23	249.713	1.37	0.95	-3.38
5701.00	17.570	244.620	5498.49	-308.49	-448.03	-1206.92	1747394.39	14437127.13	39°45'11.860"N	80°37'09.743"W	1287.39	249.634	0.82	0.23	-2.62
5784.00	17.350	242.720	5577.67	-311.91	-459.07	-1229.24	1747372.08	14437116.09	39°45'11.751"N	80°37'10.029"W	1312.16	249.521	0.74	-0.27	-2.29
5870.00	17.120	242.870	5659.81	-315.03	-470.72	-1251.90	1747349.43	14437104.44	39°45'11.637"N	80°37'10.320"W	1337.47	249.394	0.27	-0.27	0.17
5901.00	16.950	243.090	5689.45	-316.17	-474.84	-1259.99	1747341.34	14437100.32	39°45'11.597"N	80°37'10.424"W	1346.49	249.350	0.59	-0.55	0.71
5943.00	16.860	243.550	5729.63	-317.77	-480.33	-1270.90	1747330.43	14437094.84	39°45'11.543"N	80°37'10.564"W	1358.64	249.296	0.38	-0.21	1.10
5983.00	19.310	239.250	5767.66	-318.96	-486.29	-1281.78	1747319.56	14437088.87	39°45'11.485"N	80°37'10.703"W	1370.93	249.224	6.97	6.12	-10.75
6026.00	19.370	227.500	5808.24	-318.37	-494.75	-1293.15	1747308.19	14437080.42	39°45'11.402"N	80°37'10.849"W	1384.56	249.064	9.04	0.14	-27.33
6068.00	19.370	213.980	5847.89	-314.78	-505.24	-1302.18	1747299.16	14437069.94	39°45'11.298"N	80°37'10.966"W	1396.76	248.794	10.65	0.00	-32.19
6110.00	19.380	204.100	5887.52	-308.53	-517.38	-1308.92	1747282.42	14437057.80	39°45'11.179"N	80°37'11.052"W	1407.47	248.433	7.80	0.02	-23.52
6152.00	19.390	196.360	5927.14	-300.44	-530.44	-1313.73	1747284.77	14437044.76	39°45'11.050"N	80°37'11.115"W	1416.78	248.013	6.11	0.02	-18.43
6194.00	19.300	187.270	5966.78	-290.82	-544.01	-1316.58	1747284.72	14437031.18	39°45'10.916"N	80°37'11.152"W	1424.54	247.550	7.17	-0.21	-21.64
6235.00	20.920	178.800	6005.29	-279.60	-558.05	-1317.28	1747284.07	14437017.15	39°45'10.777"N	80°37'11.162"W	1430.61	247.041	8.12	3.95	-20.66
6276.00	23.840	171.030	6043.21	-265.97	-573.56	-1315.84	1747285.52	14437001.64	39°45'10.624"N	80°37'11.144"W	1435.41	246.448	10.12	7.12	-18.95
6316.00	26.030	167.450	6079.48	-250.50	-590.11	-1312.67	1747288.68	14436985.09	39°45'10.460"N	80°37'11.104"W	1439.21	245.794	6.65	5.48	-8.95
6357.00	27.760	165.350	6116.04	-233.14	-608.14	-1308.30	1747293.05	14436967.08	39°45'10.282"N	80°37'11.049"W	1442.73	245.070	4.81	4.22	-5.12
6398.00	30.870	163.590	6151.79	-214.13	-627.47	-1302.91	1747298.44	14436947.76	39°45'10.090"N	80°37'10.981"W	1446.13	244.285	7.87	7.59	-4.29
6441.00	33.040	160.310	6188.27	-192.27	-649.09	-1295.84	1747305.50	14436926.14	39°45'09.876"N	80°37'10.892"W	1449.32	243.394	6.46	5.05	-7.63
6483.00	35.660	156.650	6222.95	-169.16	-671.12	-1287.13	1747314.21	14436904.12	39°45'09.658"N	80°37'10.782"W	1451.59	242.462	7.94	6.24	-8.71
6525.00	39.170	153.360	6256.31	-143.98	-694.22	-1276.33	1747325.01	14436881.03	39°45'09.429"N	80°37'10.645"W	1452.91	241.457	9.61	8.36	-7.83

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Actual Wellpath Report

Columbia Gas Transmission MSH 6H AWP Proj: 13065'MD
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REFERENCE WELLPATH IDENTIFICATION			
Operator	SOUTHWESTERN ENERGY	Slot	Slot 6H
Area	Marshall County, WV	Well	Columbia Gas Transmission MSH 6H
Field	Marshall	Wellbore	Columbia Gas Transmission MSH 6H AWB
Facility	Columbia Gas Transmission MSH 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]
6567.00	42.000	150.580	6288.20	-116.82	-718.33	-1263.47	1747337.86	14436856.93	39°45'09.191"N	80°37'10.481"W	1453.39	240.380	8.00	6.74	-6.62
6609.00	45.330	148.100	6318.58	-87.89	-743.25	-1248.67	1747352.65	14436832.02	39°45'08.944"N	80°37'10.293"W	1453.14	239.237	8.91	7.93	-5.90
6650.00	48.470	145.400	6346.60	-57.96	-768.27	-1232.25	1747369.07	14436807.01	39°45'08.696"N	80°37'10.084"W	1452.13	238.058	9.04	7.66	-6.59
6691.00	51.510	143.410	6372.95	-26.58	-793.79	-1213.96	1747387.35	14436781.49	39°45'08.443"N	80°37'09.852"W	1450.45	236.820	8.29	7.41	-4.85
6733.00	54.630	141.250	6398.19	6.93	-820.36	-1193.44	1747407.86	14436754.94	39°45'08.179"N	80°37'09.590"W	1448.20	235.496	8.49	7.43	-5.14
6774.00	58.400	140.130	6420.80	40.98	-846.80	-1171.78	1747429.52	14436728.51	39°45'07.917"N	80°37'09.314"W	1445.73	234.146	9.47	9.20	-2.73
6816.00	61.030	139.340	6441.98	77.05	-874.47	-1148.34	1747452.95	14436700.85	39°45'07.643"N	80°37'09.016"W	1443.39	232.710	6.47	6.26	-1.88
6858.00	65.240	138.880	6460.96	114.25	-902.79	-1123.81	1747477.46	14436672.54	39°45'07.362"N	80°37'08.703"W	1441.52	231.224	10.07	10.02	-1.10
6899.00	68.910	138.920	6476.93	151.74	-931.24	-1098.99	1747502.27	14436644.10	39°45'07.080"N	80°37'08.387"W	1440.48	229.723	8.95	8.95	0.10
6941.00	71.210	138.920	6491.25	190.93	-961.00	-1073.05	1747528.21	14436614.35	39°45'06.784"N	80°37'08.057"W	1440.47	228.153	5.48	5.48	0.00
6983.00	74.490	138.350	6503.63	230.75	-991.11	-1046.53	1747554.72	14436584.25	39°45'06.486"N	80°37'07.719"W	1441.37	226.558	7.92	7.81	-1.36
7025.00	77.720	138.510	6513.72	271.18	-1021.61	-1019.48	1747581.75	14436553.76	39°45'06.183"N	80°37'07.374"W	1443.27	224.940	7.70	7.69	0.38
7067.00	81.910	138.510	6521.14	312.18	-1052.57	-992.10	1747609.12	14436522.82	39°45'05.876"N	80°37'07.025"W	1446.43	223.306	9.98	9.98	0.00
7110.00	83.280	136.760	6526.68	354.39	-1084.08	-963.37	1747637.84	14436491.33	39°45'05.564"N	80°37'06.659"W	1450.28	221.626	5.14	3.19	-4.07
7150.00	85.130	134.620	6530.72	393.56	-1112.55	-935.57	1747665.63	14436462.86	39°45'05.281"N	80°37'06.305"W	1453.64	220.061	7.05	4.62	-5.35
7192.00	87.600	134.100	6533.39	434.65	-1141.85	-905.61	1747695.58	14436433.57	39°45'04.990"N	80°37'05.923"W	1457.38	218.418	6.01	5.88	-1.24
7276.00	88.920	133.630	6535.94	516.80	-1200.03	-845.07	1747756.09	14436375.41	39°45'04.413"N	80°37'05.151"W	1467.73	215.154	1.67	1.57	-0.56
7359.00	88.890	132.240	6537.52	597.71	-1256.56	-784.32	1747816.82	14436318.91	39°45'03.851"N	80°37'04.376"W	1481.25	211.972	1.67	-0.04	-1.67
7441.00	88.800	128.910	6539.18	676.82	-1309.87	-722.06	1747879.06	14436265.61	39°45'03.322"N	80°37'03.582"W	1495.71	208.865	4.06	-0.11	-4.06
7523.00	88.580	129.090	6541.05	755.31	-1361.47	-658.35	1747942.75	14436214.04	39°45'02.809"N	80°37'02.769"W	1512.29	205.807	0.35	-0.27	0.22
7606.00	88.490	129.910	6543.17	834.96	-1414.24	-594.33	1748006.75	14436161.29	39°45'02.285"N	80°37'01.952"W	1534.05	202.794	0.99	-0.11	0.99
7688.00	90.220	134.430	6544.10	914.63	-1469.27	-533.57	1748067.47	14436106.28	39°45'01.739"N	80°37'01.177"W	1563.16	199.959	5.90	2.11	5.51
7772.00	89.880	137.500	6544.02	997.39	-1529.65	-475.19	1748125.83	14436045.92	39°45'01.139"N	80°37'00.433"W	1601.76	197.258	3.68	-0.40	3.65
7855.00	90.120	138.960	6544.02	1079.67	-1591.56	-419.90	1748181.10	14435984.04	39°45'00.525"N	80°36'59.729"W	1646.02	194.780	1.78	0.29	1.76
7939.00	91.350	132.800	6542.94	1162.38	-1651.82	-361.46	1748239.52	14435923.80	39°44'59.927"N	80°36'58.984"W	1690.91	192.343	7.48	1.46	-7.33
8022.00	90.280	129.110	6541.76	1242.59	-1706.21	-298.80	1748302.16	14435869.43	39°44'59.387"N	80°36'58.184"W	1732.18	189.933	4.63	-1.29	-4.45
8106.00	89.910	127.470	6541.62	1322.71	-1758.26	-232.87	1748368.06	14435817.40	39°44'58.870"N	80°36'57.343"W	1773.61	187.544	2.00	-0.44	-1.95
8190.00	89.780	126.170	6541.85	1402.16	-1808.60	-165.62	1748435.28	14435767.08	39°44'58.370"N	80°36'56.485"W	1816.17	185.232	1.56	-0.15	-1.55
8272.00	89.750	125.000	6542.19	1479.12	-1856.31	-98.94	1748501.94	14435719.39	39°44'57.895"N	80°36'55.634"W	1858.95	183.051	1.43	-0.04	-1.43
8356.00	89.820	124.950	6542.50	1557.65	-1904.46	-30.11	1748570.74	14435671.26	39°44'57.416"N	80°36'54.755"W	1904.70	180.906	0.10	0.08	-0.06

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Actual Wellpath Report

Columbia Gas Transmission MSH 6H AWP Proj: 13065 MD



REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY
Area	Marshall County, WV
Field	Marshall
Facility	Columbia Gas Transmission MSH Pad
Slot	Slot 6H
Well	Columbia Gas Transmission MSH 6H
Wellbore	Columbia Gas Transmission MSH 6H AWP

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]	[ft]	[US ft]	[US ft]	[N]	[W]	[ft]	[°]	[°/100ft]	[°/100ft]	[°/100ft]
8439.00	89.940	129.840	6542.68	1636.39	-1954.86	35.81	1748636.64	14435620.88	39°44'56.916"N	80°36'53.914"W	1955.18	178.951	5.89	0.14	5.89
8520.00	89.690	133.540	6542.94	1714.94	-2008.72	96.29	1748697.09	14435667.04	39°44'56.381"N	80°36'53.143"W	2011.03	177.256	4.58	-0.31	4.57
8600.00	89.940	134.400	6543.20	1793.25	-2064.26	153.86	1748754.64	14435611.52	39°44'55.829"N	80°36'52.409"W	2069.99	175.737	1.12	0.31	1.08
8683.00	89.880	136.230	6543.33	1874.87	-2123.27	212.23	1748812.98	14435452.54	39°44'55.244"N	80°36'51.665"W	2133.85	174.292	2.21	-0.07	2.20
8766.00	90.030	139.210	6543.39	1957.04	-2184.67	268.06	1748868.79	14435391.16	39°44'54.635"N	80°36'50.954"W	2201.06	173.005	3.59	0.18	3.59
8849.00	89.720	139.970	6543.57	2039.56	-2247.87	321.86	1748922.58	14435327.98	39°44'54.008"N	80°36'50.268"W	2270.80	171.851	0.99	-0.37	0.92
8933.00	89.720	132.370	6543.98	2122.32	-2308.42	379.99	1748980.68	14435267.46	39°44'53.407"N	80°36'49.527"W	2339.49	170.652	9.05	0.00	-9.05
9013.00	89.690	127.250	6544.40	2199.21	-2359.62	441.42	1749042.09	14435216.27	39°44'52.898"N	80°36'48.744"W	2400.56	169.404	6.40	-0.04	-6.40
9097.00	89.540	123.180	6544.96	2277.85	-2408.05	510.03	1749110.68	14435167.87	39°44'52.417"N	80°36'47.868"W	2461.47	168.041	4.85	-0.18	-4.85
9181.00	89.380	124.110	6545.75	2355.66	-2454.59	579.66	1749180.57	14435121.35	39°44'51.954"N	80°36'46.975"W	2522.17	166.706	1.12	-0.19	1.11
9265.00	89.600	125.630	6546.50	2434.12	-2502.61	648.87	1749249.46	14435073.34	39°44'51.476"N	80°36'46.096"W	2585.36	165.465	1.83	0.26	1.81
9348.00	89.450	128.660	6547.19	2512.76	-2552.72	715.02	1749315.58	14435023.25	39°44'50.978"N	80°36'45.252"W	2650.97	164.352	3.65	-0.18	3.65
9431.00	89.600	134.070	6547.88	2593.12	-2607.55	777.29	1749377.83	14434968.45	39°44'50.434"N	80°36'44.447"W	2720.93	163.401	6.52	0.18	6.52
9514.00	88.400	135.120	6549.33	2674.50	-2665.81	836.38	1749436.90	14434910.21	39°44'49.855"N	80°36'43.704"W	2793.94	162.581	1.92	-1.45	1.27
9598.00	88.370	137.930	6551.69	2757.43	-2726.74	894.15	1749494.64	14434849.30	39°44'49.251"N	80°36'42.968"W	2869.60	161.845	3.34	-0.04	3.35
9682.00	88.520	140.750	6553.97	2840.83	-2790.43	948.85	1749549.33	14434855.64	39°44'48.619"N	80°36'42.271"W	2947.34	161.220	3.36	0.18	3.36
9764.00	88.370	138.430	6556.20	2922.32	-2852.84	1001.99	1749602.44	14434723.25	39°44'48.000"N	80°36'41.594"W	3023.68	160.647	2.83	-0.18	-2.83
9847.00	88.250	141.370	6558.65	3004.84	-2916.29	1055.42	1749655.85	14434659.82	39°44'47.371"N	80°36'40.914"W	3101.40	160.105	3.54	-0.14	3.54
9930.00	89.450	136.750	6560.31	3087.23	-2978.96	1109.78	1749710.19	14434597.18	39°44'46.749"N	80°36'40.221"W	3178.96	159.568	5.75	1.45	-5.57
10015.00	87.540	135.600	6562.55	3171.01	-3040.26	1168.62	1749769.00	14434535.99	39°44'46.141"N	80°36'39.471"W	3257.12	158.974	2.62	-2.25	-1.35
10097.00	88.370	131.560	6565.47	3251.09	-3096.74	1227.97	1749828.33	14434479.45	39°44'45.580"N	80°36'38.715"W	3331.32	158.370	5.03	1.01	-4.93
10181.00	89.020	129.330	6567.39	3332.08	-3151.21	1291.87	1749892.21	14434424.99	39°44'45.039"N	80°36'37.900"W	3405.74	157.708	2.76	0.77	-2.65
10263.00	88.770	130.410	6568.97	3410.93	-3203.77	1354.80	1749955.11	14434372.46	39°44'44.517"N	80°36'37.097"W	3478.45	157.078	1.35	-0.30	1.32
10348.00	89.080	128.660	6570.56	3492.52	-3257.86	1420.34	1750020.63	14434318.38	39°44'43.979"N	80°36'36.261"W	3554.01	156.444	2.09	0.36	-2.06
10431.00	88.830	128.210	6572.08	3571.73	-3309.45	1485.34	1750085.60	14434266.82	39°44'43.467"N	80°36'35.432"W	3627.49	155.829	0.62	-0.30	-0.54
10515.00	88.860	128.420	6573.77	3651.85	-3361.52	1551.24	1750151.47	14434214.77	39°44'42.949"N	80°36'34.591"W	3702.18	155.228	0.25	0.04	0.25
10598.00	88.800	128.370	6575.47	3731.05	-3413.05	1616.27	1750216.49	14434163.25	39°44'42.437"N	80°36'33.761"W	3776.41	154.660	0.09	-0.07	-0.06
10680.00	88.710	128.360	6577.25	3809.27	-3463.94	1680.55	1750280.74	14434112.39	39°44'41.932"N	80°36'32.941"W	3850.08	154.119	0.11	-0.11	-0.01
10763.00	88.800	127.980	6579.05	3888.37	-3515.22	1745.79	1750345.95	14434061.13	39°44'41.422"N	80°36'32.109"W	3924.86	153.589	0.47	0.11	-0.46
10846.00	88.920	130.210	6580.70	3967.86	-3567.55	1810.19	1750410.33	14434008.82	39°44'40.902"N	80°36'31.287"W	4000.52	153.097	2.69	0.14	2.69

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Area	Marshall County, WV
Field	Marshall
Facility	Columbia Gas Transmission MSH Pad
Well	Columbia Gas Transmission MSH 6H AWP
Slot	Slot 6H

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)	(ft)	(US ft)	(US ft)	(°N)	(°W)	(ft)	(°)	(ft)	(ft/100ft)	(°/100ft)
10928.00	88.370	132.460	6582.64	4047.24	-3621.68	1871.74	1750471.85	14433954.70	39°44'40.36"N	80°36'30.50"W	4076.76	152.669	2.82	-0.67	2.74
11010.00	88.220	133.550	6585.08	4127.18	-3677.59	1931.68	1750531.77	14433898.82	39°44'39.80"N	80°36'29.73"W	4154.04	152.289	1.34	-0.18	1.33
11093.00	88.830	135.520	6587.22	4208.56	-3735.78	1990.82	1750590.89	14433840.65	39°44'39.23"N	80°36'28.98"W	4233.13	151.947	2.48	0.73	2.37
11176.00	88.830	137.440	6588.91	4290.45	-3795.95	2047.96	1750648.00	14433780.51	39°44'38.63"N	80°36'28.25"W	4313.16	151.653	2.31	0.00	2.31
11260.00	88.310	137.420	6591.01	4373.53	-3857.79	2104.77	1750704.79	14433718.69	39°44'38.02"N	80°36'27.53"W	4394.61	151.384	0.62	-0.62	-0.02
11343.00	87.810	137.170	6593.82	4455.58	-3918.75	2161.03	1750761.03	14433667.75	39°44'37.41"N	80°36'26.81"W	4475.11	151.125	0.67	-0.60	-0.30
11427.00	87.850	135.820	6597.00	4538.48	-3979.63	2218.81	1750818.79	14433596.90	39°44'36.81"N	80°36'26.07"W	4556.38	150.859	1.61	0.05	-1.61
11511.00	87.820	134.020	6600.17	4620.86	-4038.90	2278.25	1750878.20	14433537.65	39°44'36.22"N	80°36'25.32"W	4637.14	150.574	2.14	-0.04	-2.14
11592.00	87.880	132.310	6603.21	4699.84	-4094.27	2337.28	1750937.21	14433482.30	39°44'35.67"N	80°36'24.69"W	4714.44	150.279	2.11	0.07	-2.11
11677.00	87.850	129.800	6606.38	4781.99	-4150.05	2401.33	1751001.24	14433426.54	39°44'35.12"N	80°36'23.75"W	4794.72	149.946	2.95	-0.04	-2.95
11757.00	87.780	129.260	6609.43	4858.74	-4200.93	2462.99	1751062.87	14433375.68	39°44'34.61"N	80°36'22.96"W	4869.72	149.617	0.68	-0.09	-0.68
11840.00	87.880	129.240	6612.57	4938.26	-4253.41	2527.22	1751127.07	14433323.22	39°44'34.09"N	80°36'22.14"W	4947.56	149.283	0.12	0.12	-0.02
11924.00	87.690	129.780	6615.82	5018.84	-4306.81	2591.97	1751191.81	14433269.84	39°44'33.56"N	80°36'21.32"W	5026.63	148.969	0.68	-0.23	0.64
12008.00	87.660	129.210	6619.23	5099.41	-4360.19	2656.74	1751256.55	14433216.48	39°44'33.03"N	80°36'20.49"W	5105.84	148.645	0.68	-0.04	-0.68
12091.00	87.850	129.460	6622.48	5178.96	-4412.76	2720.89	1751320.67	14433163.93	39°44'32.51"N	80°36'19.67"W	5184.18	148.342	0.38	0.23	0.30
12175.00	87.820	130.380	6625.65	5259.70	-4466.63	2785.27	1751385.02	14433110.09	39°44'31.97"N	80°36'18.85"W	5263.88	148.053	1.10	-0.04	1.10
12260.00	87.720	131.810	6628.96	5341.87	-4522.46	2849.27	1751449.01	14433054.28	39°44'31.42"N	80°36'18.03"W	5345.18	147.788	1.69	-0.12	1.68
12342.00	87.720	131.960	6632.22	5421.41	-4577.16	2910.27	1751509.98	14432999.60	39°44'30.87"N	80°36'17.26"W	5424.03	147.551	0.18	0.00	0.18
12426.00	87.750	132.000	6635.54	5502.92	-4633.30	2972.67	1751572.35	14432943.48	39°44'30.31"N	80°36'16.46"W	5504.93	147.316	0.06	0.04	0.05
12510.00	87.780	131.200	6638.82	5584.30	-4689.03	3035.43	1751635.09	14432887.78	39°44'29.76"N	80°36'15.65"W	5585.77	147.083	0.95	0.04	-0.95
12594.00	87.850	131.620	6642.02	5665.62	-4744.55	3098.39	1751698.02	14432832.28	39°44'29.21"N	80°36'14.86"W	5666.63	146.854	0.51	0.08	0.50
12675.00	87.720	131.500	6645.15	5744.08	-4798.24	3158.95	1751758.56	14432778.60	39°44'28.68"N	80°36'14.09"W	5744.75	146.641	0.22	-0.16	-0.15
12758.00	87.820	132.290	6648.38	5824.60	-4853.63	3220.69	1751820.28	14432723.24	39°44'28.13"N	80°36'13.30"W	5824.99	146.433	0.96	0.12	0.95
12843.00	87.780	132.550	6651.64	5907.24	-4910.92	3283.39	1751882.95	14432665.97	39°44'27.56"N	80°36'12.50"W	5907.43	146.234	0.31	-0.05	0.31
12927.00	87.020	130.460	6655.45	5988.56	-4966.53	3346.23	1751945.77	14432610.38	39°44'27.01"N	80°36'11.70"W	5988.62	146.030	2.65	-0.90	-2.49
13010.00	86.920	130.620	6659.84	6068.54	-5020.40	3409.22	1752008.73	14432555.53	39°44'26.47"N	80°36'10.89"W	6068.54	145.821	0.23	-0.12	0.19
13040.00	86.890	130.710	6661.46	6097.46	-5039.92	3431.94	1752031.44	14432507.02	39°44'26.28"N	80°36'10.60"W	6097.46	145.747	0.32	-0.10	0.30
13065.00	86.890	130.710	6662.82	6121.56	-5056.20	3450.86	1752050.36	14432502.74	39°44'26.19"N	80°36'10.36"W	6121.57	145.686	0.00	0.00	0.00

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Actual Wellpath Report

Columbia Gas Transmission MSH 6H AWP Proj: 13065'MD
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REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot 6H
Area	Marshall County, WV	Well	Columbia Gas Transmission MSH 6H
Field	Marshall	Wellbore	Columbia Gas Transmission MSH 6H AWB
Facility	Columbia Gas Transmission MSH Pad		

HOLE & CASING SECTIONS

- Ref Wellbore: Columbia Gas Transmission MSH 6H AWB Ref Wellpath: Columbia Gas Transmission MSH 6H AWP Proj: 13065'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]
17.5in Open Hole	126.00	369.00	243.00	126.00	368.95	0.71	0.19	5.11	1.88
13.375in Casing	26.00	350.00	324.00	26.00	349.95	0.00	0.00	4.78	1.69
12.25in Open Hole	369.00	2069.00	1700.00	368.95	2050.65	5.11	1.88	6.65	-174.31
9.625in Casing	26.00	2050.00	2024.00	26.00	2031.99	0.00	0.00	7.81	-170.93
8.75in Open Hole	2069.00	5898.00	3829.00	2050.65	5686.58	6.65	-174.31	-474.45	-1259.21
8.5in Open Hole	5898.00	13065.00	7167.00	5686.58	6662.82	-474.45	-1259.21	-5056.20	3450.86

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Columbia Gas Transmission MSH 6H LP Rev-2	6532.00	-1119.76	-924.50	1747676.70	14436455.66	39°45'05.209"N	80°37'06.163"W	point
Columbia Gas Transmission MSH 6H BHL Rev-2	6638.00	-5060.40	3442.82	1752042.32	14432516.55	39°44'26.078"N	80°36'10.471"W	point

WELLPATH COMPOSITION - Ref Wellbore: Columbia Gas Transmission MSH 6H AWB Ref Wellpath: Columbia Gas Transmission MSH 6H AWP Proj: 13065'MD

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
26.00	322.00	BHI NaviTrak (Axial)	01_APS EM <17.5"> (149'-322')	Columbia Gas Transmission MSH 6H AWB
322.00	1995.00	BHI NaviTrak (Axial)	02_APS EM <12.25">(322')(368'-1995')	Columbia Gas Transmission MSH 6H AWB
1995.00	5870.00	BHI NaviTrak (Axial)	03_APS EM <8-3/4"> (1995')(2074'-5870')	Columbia Gas Transmission MSH 6H AWB
5870.00	13040.00	BHI AutoTrak Curve (Short)	04_BH AT Curve <8.5">(5870')(5901'-13040')	Columbia Gas Transmission MSH 6H AWB
13040.00	13065.00	Blind Drilling (std)	Projection to bit	Columbia Gas Transmission MSH 6H AWB

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REFERENCE WELLPATH IDENTIFICATION			
Operator	SOUTHWESTERN ENERGY	Slot	Slot 6H
Area	Marshall County, WV	Well	Columbia Gas Transmission MSH 6H
Field	Marshall	Wellbore	Columbia Gas Transmission MSH 6H AWB
Facility	Columbia Gas Transmission MSH Pad		

COMMENTS
<p>Wellpath general comments API: 47-051-01937-0000 Job #: 8957259 Rig: SDC 42 Duration: 01/26/2018 - 02/09/2018</p>

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