

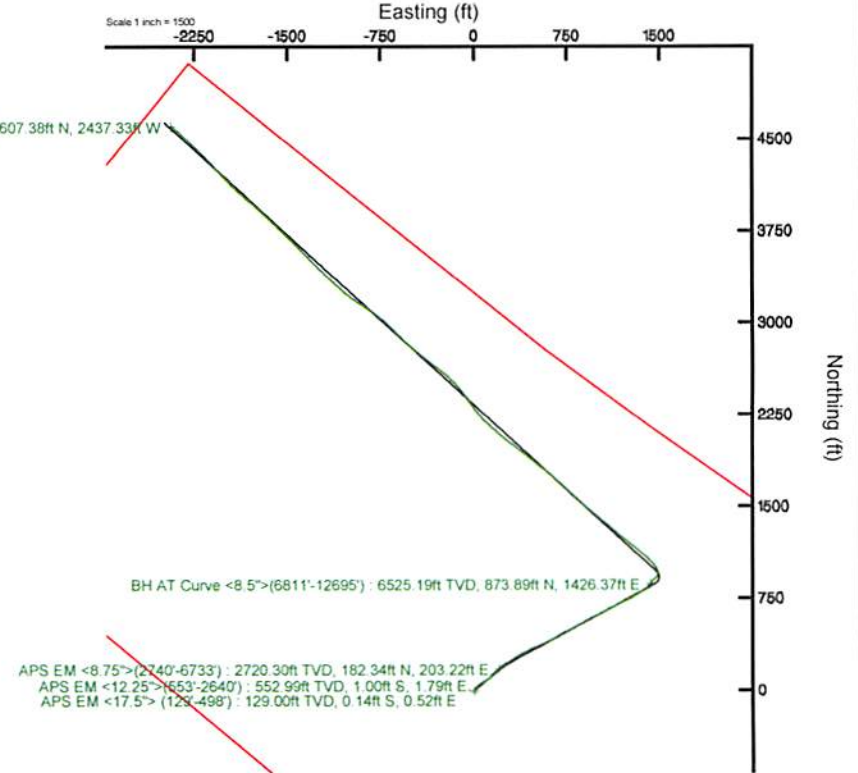
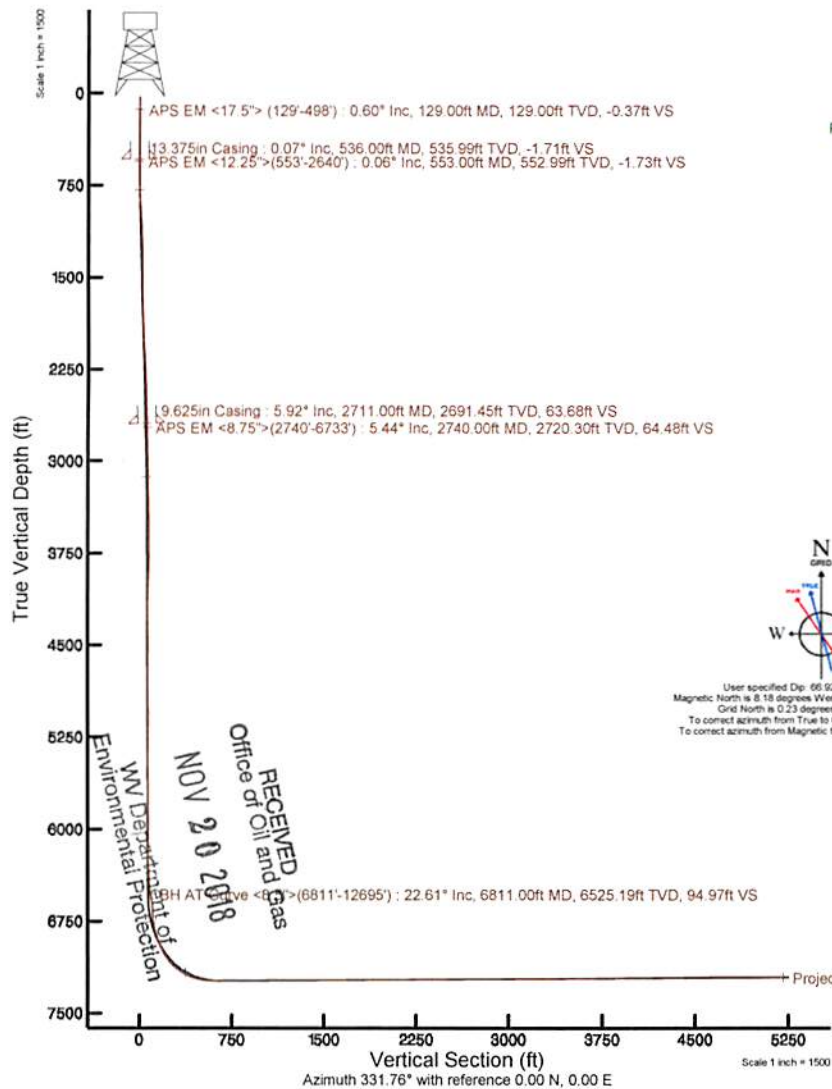
SOUTHWESTERN ENERGY

Location: Wetzel County, WV Slot: Slot 205H
 Field: Wetzel Well: Daniel Durig WTZ 205H
 Facility: Daniel Durig Pad Wellbore: Daniel Durig WTZ 205H PWB



API: 47-103-03192-0000
 Job#: 8841842
 Rig: SDC 46
 Duration: 01/24/2018 - 02/02/2018

Location Information					
Facility Name		Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Daniel Durig Pad		1741901.656	14423820.627	39°43'00.529"N	80°38'20.783"W
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude
Slot 205H	19.94	1.80	1741903.450	14423840.560	39°43'00.728"N
SDC 46 (KB) to Ground level (At Slot: Slot 205H)				26ft	
Mean Sea Level to Ground level (At Slot: Slot 205H)				-1401ft	
SDC 46 (KB) to Mean Sea Level				1427ft	



Plot reference wellpath is Daniel Durig WTZ 205H PWB Rev-A 0	Grid System: NAD83 / UTM Zone 17 North, US feet
True vertical depths are referenced to SDC 46 (KB)	* = Wellpath was transformed from a different geoidetic datum
Measured depths are referenced to SDC 46 (KB)	North Reference: Grid north
SDC 46 (KB) to Mean Sea Level: 1427 feet	Scale: True distance
Mean Sea Level to Ground level (At Slot: Slot 205H): -1401 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: Balmuccini on 2018-02-12
	Drafting: WVA, Pennsylvania

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REFERENCE WELLPATH IDENTIFICATION			
Operator	SOUTHWESTERN ENERGY	Slot	Slot 205H
Area	Wetzel County, WV	Well	Daniel Durig WTZ 205H
Field	Wetzel	Wellbore	Daniel Durig WTZ 205H AWB
Facility	Daniel Durig 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	2/12/2018 at 10:21:56 AM
Convergence at slot	0.24° East	Database/Source file	WA_Pennsylvania/Daniel_Durig_WTZ_205H_AWP_Proj_12720_MD.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	19.94	1.80	1741903.45	14423840.56	39°43'00.726"N	80°38'20.759"W
Facility Reference Pt			1741901.66	14423820.63	39°43'00.529"N	80°38'20.783"W
Field Reference Pt			0.00	0.00	0°00'00.000"	85°29'19.478"W

WELLPATH DATUM			
Calculation method	Minimum curvature	SDC 46 (KB) to Facility Vertical Datum	1427.00ft
Horizontal Reference Pt	Slot	SDC 46 (KB) to Mean Sea Level	1427.00ft
Vertical Reference Pt	SDC 46 (KB)	SDC 46 (KB) to Ground Level at Slot (Slot 205H)	26.00ft
MD Reference Pt	SDC 46 (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	331.76°

REFERENCE WELLPATH IDENTIFICATION			
Operator	SOUTHWESTERN ENERGY	Slot	Slot 205H
Area	Wetzel County, WV	Well	Daniel Durig WTZ 205H
Field	Wetzel	Wellbore	Daniel Durig WTZ 205H AWB
Facility	Daniel Durig Pad		

WELLPATH DATA (142 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	105.430	0.00	0.00	0.00	0.00	1741903.45	14423840.56	39°43'00.726"N	80°38'20.759"W	0.00	0.000	0.00	0.00	0.00
26.00	0.000	105.430	26.00	0.00	0.00	0.00	1741903.45	14423840.56	39°43'00.726"N	80°38'20.759"W	0.00	0.000	0.00	0.00	0.00
129.00	0.600	105.430	129.00	-0.37	-0.14	0.52	1741903.97	14423840.42	39°43'00.725"N	80°38'20.752"W	0.54	105.430	0.58	0.58	102.36
221.00	0.350	116.480	220.99	-0.93	-0.40	1.24	1741904.69	14423840.16	39°43'00.722"N	80°38'20.743"W	1.30	107.808	0.29	-0.27	12.01
313.00	0.160	151.030	312.99	-1.29	-0.63	1.55	1741905.00	14423839.93	39°43'00.720"N	80°38'20.739"W	1.67	112.273	0.26	-0.21	37.55
405.00	0.100	155.310	404.99	-1.50	-0.82	1.65	1741905.09	14423839.74	39°43'00.718"N	80°38'20.738"W	1.84	116.491	0.07	-0.07	4.65
498.00	0.100	125.830	497.99	-1.65	-0.94	1.74	1741905.19	14423839.62	39°43'00.717"N	80°38'20.737"W	1.98	118.342	0.05	0.00	-31.70
553.00	0.060	166.370	552.99	-1.73	-1.00	1.79	1741905.24	14423839.56	39°43'00.716"N	80°38'20.736"W	2.05	119.116	0.12	-0.07	73.71
651.00	0.180	27.030	650.99	-1.69	-0.91	1.87	1741905.32	14423839.65	39°43'00.717"N	80°38'20.735"W	2.08	115.917	0.23	0.12	-142.18
693.00	1.500	24.780	692.99	-1.32	-0.35	2.13	1741905.58	14423840.21	39°43'00.722"N	80°38'20.732"W	2.16	99.374	3.14	3.14	-5.36
739.00	2.910	34.150	738.95	-0.42	1.16	3.04	1741906.49	14423841.72	39°43'00.737"N	80°38'20.720"W	3.25	69.105	3.15	3.07	20.37
786.00	3.060	26.500	785.89	0.86	3.27	4.27	1741907.72	14423843.83	39°43'00.758"N	80°38'20.704"W	5.38	52.550	0.90	0.32	-16.28
878.00	5.730	30.130	877.61	4.69	9.44	7.67	1741911.12	14423850.00	39°43'00.819"N	80°38'20.660"W	12.17	39.096	2.92	2.90	3.95
971.00	7.720	34.710	969.97	9.96	18.59	13.56	1741917.01	14423859.15	39°43'00.909"N	80°38'20.585"W	23.01	36.104	2.21	2.14	4.92
1064.00	10.060	38.520	1061.84	16.01	30.08	22.18	1741925.62	14423870.63	39°43'01.022"N	80°38'20.474"W	37.37	36.396	2.59	2.52	4.10
1157.00	10.080	45.980	1153.42	21.43	42.10	33.09	1741936.53	14423882.64	39°43'01.141"N	80°38'20.333"W	53.54	38.168	1.40	0.02	8.02
1250.00	10.990	52.870	1244.85	25.01	53.10	46.01	1741949.44	14423893.64	39°43'01.249"N	80°38'20.167"W	70.26	40.906	1.67	0.98	7.41
1342.00	9.580	60.330	1335.37	26.56	62.19	59.65	1741963.08	14423902.72	39°43'01.338"N	80°38'19.992"W	86.17	43.809	2.11	-1.53	8.11
1435.00	8.180	68.520	1427.26	25.97	68.44	72.54	1741975.96	14423908.97	39°43'01.399"N	80°38'19.827"W	99.73	46.664	2.02	-1.51	8.81
1528.00	7.950	61.170	1519.34	25.26	73.96	84.33	1741987.74	14423914.50	39°43'01.454"N	80°38'19.676"W	112.17	48.745	1.14	-0.25	-7.90
1620.00	6.900	52.230	1610.57	26.24	80.42	94.27	1741997.68	14423920.95	39°43'01.517"N	80°38'19.549"W	123.91	49.534	1.69	-1.14	-9.72
1714.00	6.730	51.600	1703.91	28.15	87.30	103.05	1742006.46	14423927.82	39°43'01.585"N	80°38'19.436"W	135.06	49.731	0.20	-0.18	-0.67
1806.00	6.330	50.820	1795.31	30.06	93.85	111.21	1742014.61	14423934.37	39°43'01.649"N	80°38'19.331"W	145.51	49.838	0.45	-0.43	-0.85
1899.00	5.910	49.250	1887.78	32.07	100.21	118.81	1742022.21	14423940.74	39°43'01.712"N	80°38'19.233"W	155.43	49.852	0.49	-0.45	-1.69
1992.00	6.600	44.190	1980.23	34.72	107.17	126.16	1742029.56	14423947.69	39°43'01.780"N	80°38'19.139"W	165.54	49.652	0.95	0.74	-5.44
2085.00	8.570	39.520	2072.41	38.96	116.35	134.30	1742037.69	14423956.87	39°43'01.871"N	80°38'19.034"W	177.69	49.095	2.22	2.12	-5.02
2177.00	8.780	43.850	2163.36	43.71	126.70	143.52	1742046.92	14423967.21	39°43'01.972"N	80°38'18.916"W	191.45	48.562	0.75	0.23	4.71
2270.00	9.440	47.560	2255.19	47.77	136.97	154.07	1742057.46	14423977.47	39°43'02.073"N	80°38'18.780"W	206.15	48.363	0.95	0.71	3.99
2362.00	8.140	46.220	2345.98	51.58	147.11	164.91	1742068.30	14423987.62	39°43'02.173"N	80°38'18.641"W	220.99	48.264	0.40	-0.33	-1.46
2455.00	8.910	47.670	2437.83	55.31	157.08	175.57	1742078.95	14423997.57	39°43'02.271"N	80°38'18.504"W	235.58	48.182	0.35	-0.25	1.56

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Actual Wellpath Report

Daniel Durig WTZ 205H AWP Proj: 12720*MD
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REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY
Area	Well County, WV
Field	Wellbore
Facility	Daniel Durig Pad
	Daniel Durig WTZ 205H AWP
	Daniel Durig WTZ 205H

WELLPATH DATA (142 stations)													
MD	Inclination	TDV	Vert Sect	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]	[ft]	[ft]	[°]	[°/100ft]	[°/100ft]	[°/100ft]
2548.00	8.500	2529.76	58.66	166.49	186.03	1742089.40	39°43'02.364"N	80°38'18.370"W	249.65	48.171	0.45	-0.44	0.71
2640.00	7.090	2620.91	61.62	174.84	195.31	1742098.68	39°43'02.446"N	80°38'18.251"W	262.13	48.165	1.54	-1.53	-0.70
2740.00	5.440	2720.30	64.48	182.34	203.22	1742106.59	39°43'02.520"N	80°38'18.149"W	273.04	48.100	1.67	-1.65	-2.65
2833.00	6.680	2812.78	66.70	188.81	210.59	1742113.95	39°43'02.584"N	80°38'18.054"W	282.84	48.121	1.53	-1.33	7.13
2925.00	9.150	2903.90	68.47	196.30	220.79	1742124.16	39°43'02.657"N	80°38'17.923"W	295.44	48.360	2.74	2.68	3.86
3018.00	9.700	2995.65	70.58	205.30	233.08	1742136.43	39°43'02.746"N	80°38'17.766"W	310.60	48.625	0.77	0.59	-3.02
3111.00	11.360	3087.08	72.91	215.31	246.80	1742150.16	39°43'02.844"N	80°38'17.590"W	327.52	48.898	1.86	1.78	2.96
3204.00	13.400	3177.91	74.16	225.82	263.72	1742167.07	39°43'02.947"N	80°38'17.373"W	347.19	49.428	2.54	2.19	5.99
3299.00	15.370	3269.93	74.56	237.33	284.33	1742187.67	39°43'03.060"N	80°38'17.108"W	370.36	50.148	2.07	2.07	0.16
3392.00	17.310	3359.17	75.56	250.59	306.87	1742210.20	39°43'03.190"N	80°38'16.819"W	396.19	50.766	2.22	2.09	-2.72
3485.00	19.430	3447.43	77.88	266.45	331.51	1742234.83	39°43'03.346"N	80°38'16.503"W	425.32	51.209	2.39	2.28	-2.31
3577.00	22.130	3533.43	81.04	284.60	358.63	1742261.94	39°43'03.524"N	80°38'16.155"W	457.84	51.566	2.93	2.93	0.03
3670.00	24.490	3618.85	82.61	303.36	390.24	1742293.54	39°43'03.708"N	80°38'15.749"W	494.28	52.139	3.56	2.54	6.31
3763.00	24.100	3703.62	81.41	320.40	424.49	1742327.77	39°43'03.875"N	80°38'15.310"W	531.83	52.955	1.37	-0.42	3.16
3855.00	23.550	3787.78	80.17	336.87	457.79	1742361.06	39°43'04.037"N	80°38'14.883"W	568.38	53.652	1.35	-0.60	-3.00
3948.00	23.190	3873.16	78.24	352.59	491.13	1742394.39	39°43'04.191"N	80°38'14.456"W	604.59	54.324	2.16	-0.39	5.35
4041.00	23.430	3958.57	74.73	366.83	525.06	1742428.31	39°43'04.330"N	80°38'14.021"W	640.51	55.060	0.26	0.26	-0.05
4134.00	22.600	4044.16	71.71	381.32	558.41	1742461.64	39°43'04.472"N	80°38'13.593"W	676.18	55.672	1.07	-0.89	-1.49
4227.00	21.590	4130.33	69.64	396.01	590.15	1742493.37	39°43'04.616"N	80°38'13.186"W	710.71	56.137	1.22	-1.09	-1.46
4319.00	20.430	4216.22	68.59	410.68	619.69	1742522.90	39°43'04.760"N	80°38'12.808"W	743.42	56.467	1.44	-1.26	-1.95
4412.00	22.030	4302.91	69.43	427.34	648.93	1742552.12	39°43'04.923"N	80°38'12.433"W	777.00	56.634	2.46	1.72	-4.87
4505.00	22.600	4388.94	71.61	445.94	678.95	1742582.13	39°43'05.106"N	80°38'12.048"W	812.30	56.703	0.62	0.61	0.17
4598.00	21.610	4475.11	72.84	463.57	709.17	1742612.34	39°43'05.279"N	80°38'11.660"W	847.24	56.828	1.60	-1.06	3.17
4691.00	21.440	4561.63	72.08	479.03	739.57	1742642.73	39°43'05.431"N	80°38'11.270"W	881.15	57.068	1.43	-0.18	3.87
4783.00	22.530	4646.94	70.67	494.07	770.55	1742673.70	39°43'05.578"N	80°38'10.873"W	915.34	57.332	1.32	-1.18	-1.58
4876.00	21.880	4733.04	70.60	510.63	801.53	1742704.67	39°43'05.740"N	80°38'10.475"W	950.37	57.500	1.44	-0.70	-3.32
4968.00	22.420	4818.25	70.95	527.35	831.92	1742735.05	39°43'05.904"N	80°38'10.086"W	984.98	57.630	0.92	0.59	1.88
5061.00	24.010	4903.72	70.59	544.38	864.39	1742767.50	39°43'06.071"N	80°38'09.669"W	1021.52	57.798	1.72	1.71	0.58
5154.00	22.750	4989.09	71.59	562.70	896.39	1742799.49	39°43'06.251"N	80°38'09.259"W	1058.37	57.882	2.48	-1.35	-5.24
5247.00	22.620	5074.90	73.19	581.06	927.18	1742830.27	39°43'06.431"N	80°38'08.864"W	1094.21	57.925	1.25	-0.14	3.22



Actual Wellpath Report

Daniel Durig WTZ 205H AWP Proj: 12720*MD
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REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot 205H
Area	Wetzel County, WV	Well	Daniel Durig WTZ 205H
Field	Wetzel	Wellbore	Daniel Durig WTZ 205H AWB
Facility	Daniel Durig Pad		

WELLPATH DATA (142 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]
5339.00	22.460	65.550	5159.88	72.36	596.99	958.61	1742861.69	14424437.32	39°43'06.588"N	80°38'08.461"W	1129.31	58.087	2.03	-0.17	5.27
5432.00	21.730	62.580	5246.05	70.94	612.27	990.07	1742893.13	14424452.59	39°43'06.737"N	80°38'08.057"W	1164.09	58.267	1.43	-0.78	-3.19
5525.00	22.270	63.670	5332.28	70.10	628.02	1021.15	1742924.20	14424468.33	39°43'06.892"N	80°38'07.659"W	1198.81	58.408	0.73	0.58	1.17
5621.00	21.830	62.550	5421.26	69.25	644.31	1053.29	1742956.33	14424484.62	39°43'07.051"N	80°38'07.247"W	1234.73	58.545	0.63	-0.46	-1.17
5713.00	23.950	59.130	5506.01	69.87	661.78	1084.50	1742987.53	14424502.08	39°43'07.223"N	80°38'06.846"W	1270.47	58.608	2.72	2.30	-3.72
5806.00	25.300	62.660	5590.56	70.43	680.60	1118.36	1743021.37	14424520.89	39°43'07.407"N	80°38'06.412"W	1309.17	58.677	2.15	1.45	3.80
5899.00	25.690	60.680	5674.50	70.49	699.59	1153.59	1743056.59	14424539.88	39°43'07.594"N	80°38'05.960"W	1349.15	58.765	1.01	0.42	-2.13
5991.00	23.650	65.150	5758.11	69.78	717.12	1187.72	1743090.71	14424557.40	39°43'07.766"N	80°38'05.523"W	1387.42	58.878	3.00	-2.22	4.86
6084.00	23.190	65.620	5843.45	67.44	732.51	1221.33	1743124.30	14424572.79	39°43'07.916"N	80°38'05.092"W	1424.16	59.046	0.53	-0.49	0.51
6177.00	22.550	62.810	5929.14	65.88	748.22	1253.87	1743156.83	14424588.49	39°43'08.070"N	80°38'04.674"W	1460.15	59.174	1.36	-0.69	-3.02
6269.00	22.000	58.710	6014.28	66.48	765.23	1284.29	1743187.24	14424605.49	39°43'08.237"N	80°38'04.284"W	1494.99	59.212	1.79	-0.60	-4.46
6362.00	20.090	59.920	6101.07	67.92	782.29	1313.00	1743215.94	14424622.54	39°43'08.405"N	80°38'03.916"W	1528.38	59.213	2.11	-2.05	1.30
6455.00	20.070	56.610	6188.42	69.86	799.08	1340.15	1743243.07	14424639.32	39°43'08.569"N	80°38'03.568"W	1560.29	59.194	1.22	-0.02	-3.56
6548.00	18.020	55.130	6276.32	72.96	816.08	1365.27	1743268.19	14424656.32	39°43'08.736"N	80°38'03.245"W	1590.59	59.131	2.26	-2.20	-1.59
6641.00	17.430	53.490	6364.91	76.62	832.59	1388.27	1743291.18	14424672.83	39°43'08.899"N	80°38'02.950"W	1618.80	59.047	0.83	-0.63	-1.76
6733.00	19.110	42.400	6452.30	83.60	851.92	1409.51	1743312.41	14424692.15	39°43'09.089"N	80°38'02.677"W	1646.96	58.851	4.19	1.83	-12.05
6811.00	22.610	33.350	6525.19	94.97	873.89	1426.37	1743329.26	14424714.11	39°43'09.305"N	80°38'02.460"W	1672.79	58.506	6.09	4.49	-11.60
6903.00	19.830	48.080	6611.01	107.09	899.11	1447.72	1743350.61	14424739.32	39°43'09.554"N	80°38'02.186"W	1704.20	58.158	6.51	-3.02	16.01
6996.00	15.670	55.770	6699.57	112.13	916.72	1469.86	1743372.73	14424756.92	39°43'09.727"N	80°38'01.902"W	1732.30	58.049	5.13	-4.47	8.27
7089.00	15.350	19.990	6789.39	121.66	935.40	1484.48	1743387.35	14424775.59	39°43'09.911"N	80°38'01.713"W	1754.61	57.784	10.14	-0.34	-38.47
7181.00	21.140	348.770	6876.93	145.72	963.20	1485.42	1743388.29	14424803.38	39°43'10.186"N	80°38'01.700"W	1770.37	57.039	12.14	6.29	-33.93
7271.00	23.250	330.680	6960.35	179.04	994.65	1473.54	1743376.42	14424834.82	39°43'10.497"N	80°38'01.850"W	1777.82	55.981	7.91	2.34	-20.10
7364.00	34.970	318.290	7041.54	223.50	1030.70	1446.70	1743349.59	14424870.86	39°43'10.854"N	80°38'02.192"W	1776.32	54.532	14.11	12.60	-13.32
7457.00	46.650	314.140	7111.82	281.86	1074.31	1404.55	1743307.45	14424914.45	39°43'11.287"N	80°38'02.729"W	1768.30	52.589	12.89	12.56	-4.46
7550.00	58.390	311.390	7168.31	351.47	1124.22	1350.38	1743253.30	14424964.34	39°43'11.782"N	80°38'03.420"W	1757.10	50.222	12.84	12.62	-2.96
7642.00	71.660	309.160	7207.08	428.86	1177.94	1286.84	1743189.79	14425018.04	39°43'12.316"N	80°38'04.230"W	1744.57	47.530	14.59	14.42	-2.42
7735.00	81.690	308.470	7228.48	512.08	1234.58	1216.41	1743119.39	14425074.66	39°43'12.878"N	80°38'05.128"W	1733.16	44.575	10.81	10.78	-0.74
7828.00	90.280	310.740	7234.99	597.92	1293.67	1145.01	1743048.02	14425133.73	39°43'13.465"N	80°38'06.039"W	1727.61	41.512	9.55	9.24	2.44
7921.00	90.710	310.980	7234.19	684.80	1354.51	1074.68	1742977.71	14425194.54	39°43'14.069"N	80°38'06.936"W	1729.06	38.429	0.53	0.46	0.26
8013.00	90.310	309.580	7233.37	770.38	1413.94	1004.46	1742907.52	14425253.95	39°43'14.659"N	80°38'07.832"W	1734.40	35.390	1.67	-0.43	-1.61

Office of Oil and Gas

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REFERENCE WELLPATH IDENTIFICATION			
Operator	SOUTHWESTERN ENERGY	Slot	Slot 205H
Area	Wetzel County, WV	Well	Daniel Durig WTZ 205H
Field	Wetzel	Wellbore	Daniel Durig WTZ 205H AWB
Facility	Daniel Durig Pad		

WELLPATH DATA (142 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]
8106.00	90.280	310.570	7232.89	856.77	1473.76	933.25	1742836.34	14425313.74	39°43'15.253"N	80°38'08.740"W	1744.40	32.344	1.15	-0.03	1.15
8198.00	90.370	313.390	7232.37	943.33	1535.29	864.87	1742767.98	14425375.25	39°43'15.864"N	80°38'09.612"W	1762.13	29.394	3.07	0.10	3.07
8291.00	90.280	313.110	7231.84	1031.52	1599.01	797.13	1742700.27	14425438.95	39°43'16.497"N	80°38'10.475"W	1786.69	26.497	0.32	-0.10	-0.30
8384.00	90.120	311.840	7231.51	1119.30	1661.81	728.54	1742631.71	14425501.72	39°43'17.120"N	80°38'11.350"W	1814.49	23.673	1.38	-0.17	-1.37
8476.00	90.220	311.790	7231.24	1205.78	1723.15	659.97	1742563.17	14425563.03	39°43'17.729"N	80°38'12.224"W	1845.21	20.957	0.12	0.11	-0.05
8569.00	90.280	309.810	7230.83	1292.62	1783.91	589.58	1742492.80	14425623.77	39°43'18.332"N	80°38'13.122"W	1878.81	18.289	2.13	0.06	-2.13
8662.00	90.250	309.050	7230.40	1378.64	1842.98	517.75	1742420.99	14425682.82	39°43'18.919"N	80°38'14.038"W	1914.32	15.692	0.82	-0.03	-0.82
8755.00	90.180	309.640	7230.06	1464.62	1901.94	445.83	1742349.10	14425741.76	39°43'19.505"N	80°38'14.955"W	1953.49	13.192	0.64	-0.08	0.63
8844.00	90.150	307.650	7229.80	1546.47	1957.51	376.32	1742279.62	14425797.31	39°43'20.057"N	80°38'15.842"W	1993.36	10.882	2.24	-0.03	-2.24
8937.00	90.120	307.390	7229.58	1631.27	2014.15	302.56	1742205.89	14425853.93	39°43'20.619"N	80°38'16.783"W	2036.75	8.543	0.28	-0.03	-0.28
9030.00	90.180	310.040	7229.34	1716.84	2072.32	230.00	1742133.36	14425912.07	39°43'21.197"N	80°38'17.709"W	2085.04	6.333	2.85	0.06	2.85
9123.00	90.220	312.310	7229.01	1803.89	2133.54	160.00	1742063.39	14425973.27	39°43'21.805"N	80°38'18.601"W	2139.53	4.289	2.44	0.04	2.44
9215.00	90.250	314.340	7228.63	1891.17	2196.66	93.08	1741996.49	14426036.36	39°43'22.431"N	80°38'19.455"W	2198.63	2.426	2.21	0.03	2.21
9308.00	90.310	321.200	7228.18	1981.35	2265.48	30.61	1741934.05	14426105.16	39°43'23.114"N	80°38'20.251"W	2265.69	0.774	7.38	0.06	7.38
9401.00	90.400	325.550	7227.60	2073.33	2340.10	-24.86	1741878.60	14426179.75	39°43'23.854"N	80°38'20.957"W	2340.23	359.391	4.68	0.10	4.68
9493.00	90.340	322.100	7227.01	2164.44	2414.35	-79.15	1741824.33	14426253.97	39°43'24.589"N	80°38'21.648"W	2415.65	358.122	3.75	-0.07	-3.75
9586.00	90.310	319.010	7226.48	2255.65	2486.16	-138.23	1741765.27	14426325.75	39°43'25.301"N	80°38'22.400"W	2490.00	356.818	3.32	-0.03	-3.32
9679.00	90.310	313.860	7225.98	2345.31	2553.52	-202.30	1741701.23	14426393.08	39°43'25.970"N	80°38'23.217"W	2561.52	355.470	5.54	0.00	-5.54
9772.00	90.800	307.720	7225.08	2432.11	2614.25	-272.67	1741630.88	14426453.78	39°43'26.573"N	80°38'24.114"W	2628.43	354.045	6.62	0.53	-6.60
9864.00	90.310	306.760	7224.18	2515.81	2669.92	-345.91	1741557.67	14426509.43	39°43'27.126"N	80°38'25.048"W	2692.23	352.618	1.17	-0.53	-1.04
9957.00	90.280	308.660	7223.71	2600.73	2726.80	-419.48	1741484.13	14426566.29	39°43'27.691"N	80°38'25.987"W	2758.87	351.254	2.04	-0.03	2.04
10049.00	90.370	311.880	7223.18	2686.32	2786.26	-489.67	1741413.97	14426625.73	39°43'28.281"N	80°38'26.882"W	2828.96	350.032	3.50	0.10	3.50
10142.00	90.220	314.130	7222.71	2774.37	2849.68	-557.67	1741346.00	14426689.13	39°43'28.911"N	80°38'27.749"W	2903.74	348.927	2.42	-0.16	2.42
10234.00	90.280	316.240	7222.30	2862.54	2914.94	-622.51	1741281.18	14426754.37	39°43'29.558"N	80°38'28.576"W	2980.67	347.945	2.29	0.07	2.29
10327.00	90.250	314.360	7221.87	2951.73	2981.04	-687.92	1741215.80	14426820.44	39°43'30.214"N	80°38'29.410"W	3059.39	347.006	2.02	-0.03	-2.02
10420.00	90.340	309.540	7221.39	3039.20	3043.19	-757.07	1741146.68	14426882.57	39°43'30.831"N	80°38'30.291"W	3135.95	346.030	5.18	0.10	-5.18
10512.00	90.220	305.250	7220.94	3122.98	3099.05	-830.14	1741073.63	14426938.40	39°43'31.386"N	80°38'31.224"W	3208.31	345.004	4.66	-0.13	-4.66
10605.00	90.280	302.780	7220.54	3205.28	3151.07	-907.22	1740996.58	14426990.40	39°43'31.903"N	80°38'32.208"W	3279.07	343.938	2.66	0.06	-2.66
10698.00	90.310	306.710	7220.06	3288.12	3204.06	-983.62	1740920.21	14427043.37	39°43'32.430"N	80°38'33.183"W	3351.65	342.934	4.23	0.03	4.23
10791.00	90.340	312.670	7219.53	3374.26	3263.43	-1055.16	1740848.71	14427102.72	39°43'33.019"N	80°38'34.095"W	3429.77	342.083	6.41	0.03	6.41



Actual Wellpath Report

Daniel Durig WZ 205H AWP Proj: 12720'MD
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REFERENCE WELLPATH IDENTIFICATION			
Operator	SOUTHWESTERN ENERGY	Slot	Slot 205H
Area	Wetzel County, WV	Well	Daniel Durig WZ 205H
Field	Wetzel	Wellbore	Daniel Durig WZ 205H AWB
Facility	Daniel Durig Pad		

WELLPATH DATA (142 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]	
10883.00	90.220	313.430	7219.08	3461.40	3326.23	-1122.38	1740781.50	14427165.49	39°43'33.643"N	80°38'34.952"W	3510.49	341.354	0.84	-0.13	0.83	
10976.00	90.520	313.120	7218.48	3549.60	3389.98	-1190.09	1740713.82	14427229.22	39°43'34.275"N	80°38'35.816"W	3592.81	340.656	0.46	0.32	-0.33	
11069.00	90.520	315.160	7217.64	3638.23	3454.74	-1256.83	1740647.11	14427293.95	39°43'34.918"N	80°38'36.667"W	3676.25	340.009	2.19	0.00	2.19	
11162.00	90.620	315.750	7216.71	3727.48	3521.02	-1322.06	1740581.91	14427360.20	39°43'35.575"N	80°38'37.498"W	3761.04	339.420	0.64	0.11	0.63	
11254.00	90.650	315.980	7215.69	3815.96	3587.04	-1386.12	1740517.87	14427426.20	39°43'36.231"N	80°38'38.315"W	3845.54	338.872	0.25	0.03	0.25	
11347.00	90.550	315.180	7214.72	3905.27	3653.46	-1451.21	1740452.81	14427492.60	39°43'36.889"N	80°38'39.144"W	3931.13	338.336	0.87	-0.11	-0.86	
11440.00	90.550	314.330	7213.83	3994.20	3718.94	-1517.25	1740386.80	14427558.05	39°43'37.539"N	80°38'39.986"W	4016.53	337.806	0.91	0.00	-0.91	
11533.00	90.650	314.550	7212.85	4082.97	3784.05	-1583.64	1740320.43	14427623.13	39°43'38.185"N	80°38'40.833"W	4102.07	337.290	0.26	0.11	0.24	
11625.00	90.580	313.770	7211.86	4170.66	3848.14	-1649.64	1740254.45	14427687.20	39°43'38.821"N	80°38'41.674"W	4186.82	336.796	0.85	-0.08	-0.85	
11718.00	90.520	312.610	7210.97	4258.81	3911.78	-1717.44	1740186.68	14427750.82	39°43'39.453"N	80°38'42.539"W	4272.20	336.296	1.25	-0.06	-1.25	
11811.00	90.550	311.070	7210.10	4346.24	3973.82	-1786.72	1740117.43	14427812.83	39°43'40.069"N	80°38'43.422"W	4357.02	335.790	1.66	0.03	-1.66	
11903.00	90.520	310.040	7209.24	4432.01	4033.63	-1856.62	1740047.56	14427872.61	39°43'40.662"N	80°38'44.314"W	4440.40	335.284	1.12	-0.03	-1.12	
11996.00	90.830	314.260	7208.15	4519.59	4096.02	-1925.55	1739978.66	14427934.98	39°43'41.282"N	80°38'45.193"W	4526.05	334.822	4.55	0.33	4.54	
12089.00	90.550	316.690	7207.03	4608.84	4162.31	-1990.75	1739913.48	14428001.25	39°43'41.939"N	80°38'46.024"W	4613.89	334.439	2.63	-0.30	2.61	
12182.00	90.620	317.530	7206.08	4698.82	4230.45	-2054.04	1739850.21	14428069.36	39°43'42.615"N	80°38'46.831"W	4702.74	334.102	0.91	0.08	0.90	
12275.00	90.370	317.290	7205.28	4788.91	4298.91	-2116.98	1739787.30	14428137.80	39°43'43.294"N	80°38'47.633"W	4791.89	333.782	0.37	-0.27	-0.26	
12367.00	90.000	315.770	7204.98	4877.68	4365.68	-2180.27	1739724.03	14428204.53	39°43'43.957"N	80°38'48.439"W	4879.83	333.462	1.70	-0.40	-1.65	
12460.00	90.060	314.460	7204.93	4966.78	4431.57	-2245.89	1739658.43	14428270.40	39°43'44.610"N	80°38'49.276"W	4968.18	333.124	1.41	0.06	-1.41	
12553.00	90.120	313.330	7204.78	5055.29	4496.05	-2312.91	1739591.44	14428334.85	39°43'45.250"N	80°38'50.131"W	5056.09	332.777	1.22	0.06	-1.22	
12645.00	90.180	312.460	7204.54	5142.35	4558.67	-2380.31	1739524.07	14428397.45	39°43'45.872"N	80°38'50.990"W	5142.70	332.429	0.95	0.07	-0.95	
12695.00	90.000	309.530	7204.46	5189.09	4591.46	-2418.04	1739486.35	14428430.23	39°43'46.197"N	80°38'51.471"W	5189.27	332.227	5.87	-0.36	-5.86	
12720.00	90.000	309.530	7204.46	5212.24	4607.38	-2437.33	1739467.08	14428446.14	39°43'46.355"N	80°38'51.717"W	5212.34	332.121	0.00	0.00	0.00	

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REFERENCE WELLPATH IDENTIFICATION			
Operator	SOUTHWESTERN ENERGY	Slot	Slot 205H
Area	Wetzel County, WV	Well	Daniel Durig WTZ 205H
Field	Wetzel	Wellbore	Daniel Durig WTZ 205H AWB
Facility	Daniel Durig Pad		

HOLE & CASING SECTIONS - Ref Wellbore: Daniel Durig WTZ 205H AWB Ref Wellpath: Daniel Durig WTZ 205H AWP Proj: 12720'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	550.00	424.00	126.00	549.99	-0.14	0.49	-0.99	1.79
13.375in Casing	26.00	536.00	510.00	26.00	535.99	0.00	0.00	-0.98	1.78
12.25in Open Hole	550.00	2731.00	2181.00	549.99	2711.35	-0.99	1.79	181.73	202.61
9.625in Casing	26.00	2711.00	2685.00	26.00	2691.45	0.00	0.00	180.33	201.18
8.75in Open Hole	2731.00	6804.00	4073.00	2711.35	6518.72	181.73	202.61	871.66	1424.89
8.5in Open Hole	6804.00	12720.00	5916.00	6518.72	7204.46	871.66	1424.89	4607.38	-2437.33

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Daniel Durig WTZ 205H BHL Rev-2	7208.00	4632.45	-2488.02	1739416.40	14428471.20	39°43'46.605"N	80°38'52.365"W	point
Daniel Durig WTZ 205H LP Rev-2	7237.00	1323.18	1090.67	1742993.69	14425163.22	39°43'13.759"N	80°38'06.733"W	point

WELLPATH COMPOSITION - Ref Wellbore: Daniel Durig WTZ 205H AWB Ref Wellpath: Daniel Durig WTZ 205H AWP Proj: 12720'MD				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
26.00	498.00	BHI NaviTrak (Axial)	01_APS EM <17.5">(129'-498')	Daniel Durig WTZ 205H AWB
498.00	2640.00	BHI NaviTrak (Axial)	02_APS EM <12.25">(498')(553'-2640')	Daniel Durig WTZ 205H AWB
2640.00	6733.00	BHI NaviTrak (Axial)	03_APS EM <8.75">(2640')(2740'-6733')	Daniel Durig WTZ 205H AWB
6733.00	12695.00	BHI AutoTrak Curve (Short)	04_BH AT Curve <8.5">(6733')(6811'-12695')	Daniel Durig WTZ 205H AWB
12695.00	12720.00	Blind Drilling (std)	Projection to bit	Daniel Durig WTZ 205H AWB

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REFERENCE WELLPATH IDENTIFICATION			
Operator	SOUTHWESTERN ENERGY	Slot	Slot 205H
Area	Wetzel County, WV	Well	Daniel Durig WTZ 205H
Field	Wetzel	Wellbore	Daniel Durig WTZ 205H AWB
Facility	Daniel Durig Pad		

COMMENTS
<p>Wellpath general comments API: 47-103-03192-0000 Job#: 8841842 Rig: SDC 46 Duration: 01/24/2018 - 02/02/2018</p>