

SOUTHWESTERN ENERGY

Location: Wetzel County, WV Slot: Slot #205
 Field: Wetzel Well: Hohman HBP S WTZ 205H
 Facility: Hohman HBP S WTZ Pad Wellbore: Hohman HBP S WTZ 205H PWB



API: 47-103-03172-0000
 Job#: 8523705
 Rig: SDC-46
 Duration: 05/05/17 - 05/19/17



Plot reference wellpath is Hohman HBP S WTZ 205H PWB Rev-A-0	Grid System: NAD83 / UTM Zone 17 North, US feet
True vertical depths are referenced to SDC 46 (RKB)	* = Wellpath was transformed from a different geodetic datum
Measured depths are referenced to SDC 46 (RKB)	North Reference: Grid north
SDC 46 (RKB) to Mean Sea Level 1493.5 feet	Scale: True distance
Mean Sea Level to Ground level (At Slot: Slot #205): -1467.5 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: amarcar on 2017-05-19
	Database: WA_MPL_EASTERNUS_Defn

Location Information

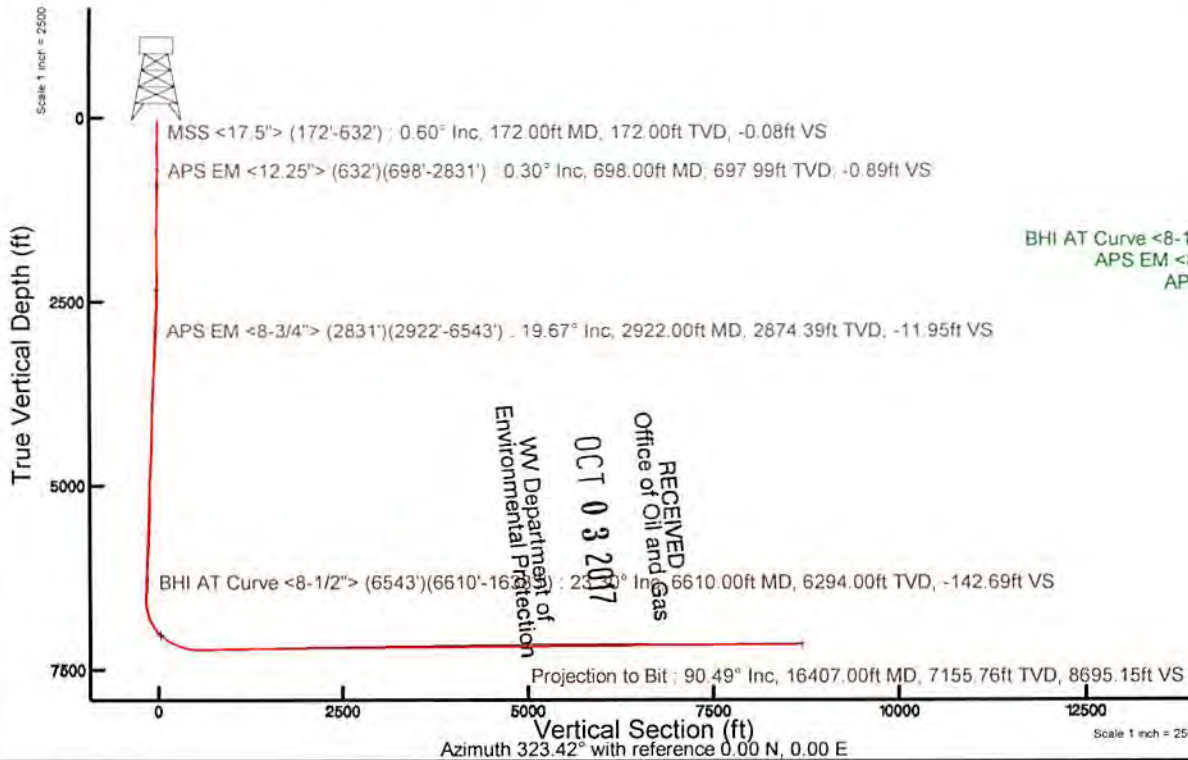
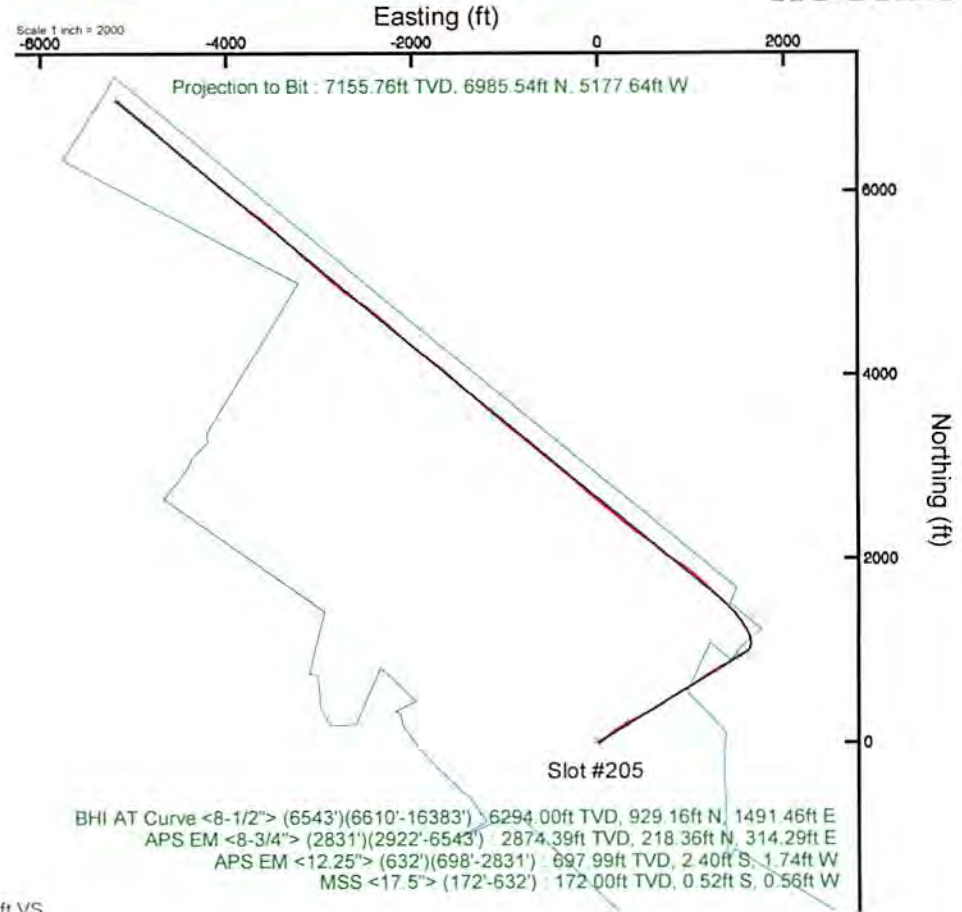
Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude		
Hohman HBP S WTZ Pad	1722990.370	14410707.650	39°40'51.568"N	80°42'23.432"W		
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Slot #205	-52.13	13.16	1723003.520	14410655.540	39°40'51.052"N	80°42'23.266"W

Comment: 205H

SDC 46 (RKB) to Ground level (At Slot: Slot #205)	26ft
Mean Sea Level to Ground level (At Slot: Slot #205)	-1467.5ft
SDC 46 (RKB) to Mean Sea Level	1493.5ft

Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	26.00	0.000	56.304	26.00	0.00	0.00	0.00	0.00
Start Nudge	800.00	0.000	56.304	800.00	0.00	0.00	0.00	0.00
End Nudge	1050.00	5.000	56.304	1049.68	6.05	9.07	2.00	-0.55
Start Build	1900.00	5.000	56.304	1896.45	47.15	70.71	0.00	-4.28
End Build	2775.44	22.504	58.545	2743.49	156.59	246.73	2.00	-21.29
Curve KOP	6907.98	22.504	58.545	6561.36	981.97	1596.02	0.00	-162.59
Landing Point	7990.70	90.423	309.839	7226.00	1591.40	1275.96	9.00	517.53
Total Depth	16395.95	90.423	309.839	7164.00	6975.88	-5177.86	0.00	8687.53



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North Arrow

User specified Dip: 66.98° Field: 52454 nT
 Magnetic North is 7.87 degrees West of True North (at 24/Apr/2017)
 Grid North is 0.19 degrees East of True North
 To correct azimuth from True to Grid subtract 0.19 degrees
 To correct azimuth from Magnetic to Grid subtract 8.06 degrees



Actual Wellpath Report

Hohman HBP S WTZ 205H AWP Proj: 16407'
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REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot #205
Area	Wetzel County, WV	Well	Hohman HBP S WTZ 205H
Field	Wetzel	Wellbore	Hohman HBP S WTZ 205H AWB
Facility	Hohman HBP S WTZ Pad		

REPORT SETUP INFORMATION

Projection System	NAD83 / UTM Zone 17 North, US feet	Software System	WellArchitect® 5.0
North Reference	Grid	User	Amarcar
Scale	0.999608	Report Generated	19/May/2017 at 12:47
Convergence at slot	0.19° East	Database/Source file	WA_MPL_EASTERNUS_Defn/Hohman_HBP_S_WTZ_205H_AWP_Proj_16407_.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-52.13	13.16	1723003.52	14410655.54	39°40'51.052"N	80°42'23.266"W
Facility Reference Pt			1722990.37	14410707.65	39°40'51.568"N	80°42'23.432"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 (RKB) to Facility Vertical Datum	1493.50ft
Horizontal Reference Pt	Slot	SDC 46 (RKB) to Mean Sea Level	1493.50ft
Vertical Reference Pt	SDC 46 (RKB)	SDC 46 (RKB) to Ground Level at Slot (Slot #205)	26.00ft
MD Reference Pt	SDC 46 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	323.42°

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Actual Wellpath Report

Hohman HBP S WTZ 205H AWP Proj: 16407

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REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY
Area	Wellzel County, WV
Field	Wellzel
Facility	Hohman HBP S WTZ Pad
Slot	Slot #205
	Hohman HBP S WTZ 205H
	Hohman HBP S WTZ 205H AWB

WELLPATH DATA (191 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	0.00	227.280	0.00	0.00	0.00	0.00	1723003.52	14410655.54	39°40'51.052"N	80°42'23.266"W	0.00	0.00	0.00	0.00	0.00
26.00	0.00	227.280	26.00	0.00	0.00	0.00	1723003.52	14410655.54	39°40'51.052"N	80°42'23.266"W	0.00	0.00	0.00	0.00	0.00
172.00	0.60	227.280	172.00	-0.08	-0.52	-0.56	1723002.96	14410655.02	39°40'51.047"N	80°42'23.273"W	0.76	227.280	0.41	-90.90	0.00
265.00	0.40	151.680	264.99	-0.46	-1.13	-0.77	1723002.75	14410654.41	39°40'51.041"N	80°42'23.276"W	1.37	213.999	0.68	-0.22	-81.29
358.00	0.70	175.480	357.99	-1.26	-1.99	-0.57	1723002.95	14410653.55	39°40'51.032"N	80°42'23.274"W	2.07	195.917	0.40	-0.34	25.59
447.00	0.40	313.480	446.99	-1.41	-2.32	-0.75	1723002.77	14410653.23	39°40'51.029"N	80°42'23.276"W	2.43	197.932	1.16	-0.32	155.06
541.00	0.40	244.580	540.99	-1.03	-2.23	-1.28	1723002.24	14410653.31	39°40'51.030"N	80°42'23.283"W	2.57	209.924	0.48	0.00	-73.30
632.00	0.00	157.980	631.99	-0.96	-2.37	-1.57	1723001.95	14410653.17	39°40'51.029"N	80°42'23.286"W	2.84	213.570	0.44	-0.44	126.84
698.00	0.30	260.130	697.99	-0.89	-2.40	-1.74	1723001.78	14410653.14	39°40'51.028"N	80°42'23.289"W	2.96	215.998	0.45	-0.45	-151.32
791.00	0.70	70.050	790.98	-0.96	-2.22	-1.39	1723002.13	14410653.32	39°40'51.030"N	80°42'23.284"W	2.62	212.058	1.15	0.51	182.71
884.00	3.50	70.200	883.91	-1.95	-1.05	1.87	1723005.39	14410654.49	39°40'51.042"N	80°42'23.242"W	2.14	119.360	2.94	2.94	0.16
977.00	5.81	68.580	976.60	-4.01	1.63	8.92	1723012.44	14410657.17	39°40'51.036"N	80°42'23.152"W	9.07	79.635	2.49	2.48	-1.74
1070.00	6.25	1069.09	1069.09	-5.35	6.27	17.44	1723020.95	14410661.81	39°40'51.113"N	80°42'23.043"W	18.53	70.214	1.63	0.47	-14.87
1162.00	6.80	50.510	1160.49	-5.19	12.63	25.73	1723029.24	14410668.16	39°40'51.176"N	80°42'22.937"W	28.66	63.861	0.79	0.60	-4.61
1255.00	7.30	55.310	1252.79	-5.11	19.49	34.84	1723038.34	14410675.02	39°40'51.243"N	80°42'22.820"W	39.92	60.773	0.83	0.54	5.16
1348.00	5.83	64.820	1345.18	-6.24	24.86	43.97	1723047.47	14410680.39	39°40'51.296"N	80°42'22.703"W	50.51	60.513	1.96	-1.58	10.23
1440.00	5.00	69.200	1436.77	-8.25	28.28	51.95	1723055.45	14410683.80	39°40'51.330"N	80°42'22.601"W	59.14	61.440	1.01	-0.90	4.76
1533.00	4.18	57.280	1529.47	-9.58	31.55	58.59	1723062.08	14410687.07	39°40'51.362"N	80°42'22.516"W	66.54	61.699	1.35	-0.88	-12.82
1626.00	4.18	44.170	1622.23	-9.27	35.81	63.80	1723067.30	14410691.34	39°40'51.404"N	80°42'22.449"W	73.16	60.695	1.03	0.00	-14.10
1719.00	4.66	42.140	1714.95	-7.98	41.04	68.70	1723072.19	14410696.57	39°40'51.455"N	80°42'22.386"W	80.02	59.144	0.54	0.52	-2.18
1812.00	6.83	44.930	1807.48	-6.43	47.76	75.14	1723078.63	14410703.28	39°40'51.522"N	80°42'22.303"W	89.03	57.559	2.35	2.33	3.00
1905.00	9.37	47.480	1899.54	-4.83	56.79	84.63	1723088.11	14410712.31	39°40'51.611"N	80°42'22.182"W	101.92	56.134	2.76	2.73	2.74
1997.00	11.57	47.380	1990.00	-3.08	68.10	96.94	1723100.42	14410723.62	39°40'51.722"N	80°42'22.024"W	118.47	54.910	2.39	2.39	-0.11
2090.00	12.30	48.540	2080.99	-1.26	80.98	111.22	1723114.70	14410736.48	39°40'51.849"N	80°42'21.840"W	137.58	53.943	0.83	0.78	1.25
2183.00	13.61	46.530	2171.62	0.90	95.06	126.59	1723130.06	14410750.57	39°40'51.987"N	80°42'21.643"W	158.31	53.094	1.49	1.41	-2.16
2275.00	13.54	46.880	2261.05	3.42	109.87	142.31	1723145.77	14410765.37	39°40'52.133"N	80°42'21.442"W	179.78	52.329	0.12	0.39	0.78
2368.00	14.21	50.880	2351.34	5.17	124.51	159.11	1723162.57	14410780.00	39°40'52.277"N	80°42'21.226"W	202.04	51.955	1.26	0.72	4.29
2461.00	16.84	55.950	2440.95	5.08	139.26	179.13	1723182.58	14410794.75	39°40'52.422"N	80°42'20.969"W	226.90	52.138	3.18	2.83	5.45
2554.00	18.70	59.270	2529.51	2.96	154.42	203.11	1723206.55	14410809.90	39°40'52.572"N	80°42'20.662"W	255.15	52.754	2.28	2.00	3.57
2646.00	21.09	58.290	2618.04	0.05	170.66	229.87	1723233.30	14410826.14	39°40'52.731"N	80°42'20.319"W	286.30	53.409	2.62	2.60	-1.07

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Actual Wellpath Report

Hohman HBP S WTZ 205H AWP Proj: 16407'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	SOUTHWESTERN ENERGY	Slot	Slot #205
Area	Wetzel County, WV	Well	Hohman HBP S WTZ 205H
Field	Wetzel	Wellbore	Hohman HBP S WTZ 205H AWB
Facility	Hohman HBP S WTZ Pad		

WELLPATH DATA (191 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]
2739.00	21.430	59.780	2702.68	-3.25	188.01	258.79	1723262.21	14410843.47	39°40'52.902"N	80°42'19.948"W	319.87	54.002	0.69	0.37	1.60
2831.00	19.900	62.290	2788.76	-7.52	203.75	287.18	1723290.58	14410859.21	39°40'53.056"N	80°42'19.585"W	352.11	54.644	1.92	-1.66	2.73
2922.00	19.670	61.070	2874.39	-11.95	218.36	314.29	1723317.69	14410873.81	39°40'53.200"N	80°42'19.237"W	382.70	55.210	0.52	-0.25	-1.34
3015.00	19.930	60.030	2961.89	-15.86	233.85	341.72	1723345.11	14410889.30	39°40'53.352"N	80°42'18.886"W	414.08	55.615	0.47	0.28	-1.12
3107.00	19.420	63.870	3048.52	-20.44	248.42	369.04	1723372.41	14410903.86	39°40'53.495"N	80°42'18.536"W	444.86	56.053	1.51	-0.55	4.17
3200.00	18.160	64.590	3136.57	-26.05	261.45	396.01	1723399.37	14410916.88	39°40'53.623"N	80°42'18.190"W	474.53	56.567	1.38	-1.35	0.77
3293.00	19.040	64.090	3224.71	-31.67	274.30	422.75	1723426.10	14410929.73	39°40'53.749"N	80°42'17.848"W	503.94	57.023	0.96	0.95	-0.54
3386.00	19.640	63.140	3312.46	-37.11	287.99	450.33	1723453.68	14410943.41	39°40'53.883"N	80°42'17.494"W	534.54	57.401	0.73	0.65	-1.02
3478.00	20.920	63.500	3398.75	-42.60	302.30	478.83	1723482.16	14410957.72	39°40'54.024"N	80°42'17.129"W	566.27	57.734	1.40	1.39	0.39
3571.00	21.560	62.100	3485.44	-48.08	317.70	508.79	1723512.11	14410973.12	39°40'54.175"N	80°42'16.745"W	599.83	58.018	0.88	0.69	-1.51
3664.00	21.640	61.670	3571.91	-53.12	333.84	538.98	1723542.29	14410989.25	39°40'54.334"N	80°42'16.359"W	634.00	58.227	0.19	0.09	-0.46
3757.00	22.490	62.540	3658.09	-58.40	350.18	569.86	1723573.16	14411005.58	39°40'54.494"N	80°42'15.963"W	668.86	58.429	0.98	0.91	0.94
3849.00	22.170	61.070	3743.20	-63.50	366.69	600.67	1723603.95	14411022.09	39°40'54.656"N	80°42'15.568"W	703.75	58.597	0.70	-0.35	-1.60
3942.00	22.150	58.650	3829.33	-67.44	384.30	631.00	1723634.27	14411039.69	39°40'54.829"N	80°42'15.179"W	738.81	58.657	0.98	-0.02	-2.60
4035.00	21.680	57.610	3915.61	-70.29	402.62	660.48	1723663.74	14411058.00	39°40'55.010"N	80°42'14.802"W	773.52	58.634	0.66	-0.51	-1.12
4128.00	22.370	55.110	4001.82	-72.07	421.95	689.50	1723692.75	14411077.32	39°40'55.200"N	80°42'14.430"W	808.36	58.535	1.25	0.74	-2.69
4221.00	22.940	52.610	4087.65	-72.33	443.08	718.42	1723721.65	14411098.44	39°40'55.408"N	80°42'14.059"W	844.06	58.336	1.20	0.61	-2.69
4314.00	22.470	52.580	4173.44	-71.82	464.88	746.93	1723750.16	14411120.24	39°40'55.622"N	80°42'13.693"W	879.79	58.102	0.51	-0.51	-0.03
4409.00	22.160	57.780	4261.34	-72.91	485.47	776.51	1723779.72	14411140.82	39°40'55.825"N	80°42'13.314"W	915.78	57.987	2.10	-0.33	5.47
4502.00	22.740	60.070	4347.29	-76.33	503.79	806.93	1723810.13	14411159.13	39°40'56.005"N	80°42'12.924"W	951.28	58.022	1.13	0.62	2.46
4595.00	22.090	57.540	4433.26	-79.67	522.14	837.26	1723840.45	14411177.48	39°40'56.185"N	80°42'12.535"W	986.73	58.051	1.25	-0.70	-2.72
4688.00	22.090	57.700	4519.44	-82.23	540.87	866.80	1723869.97	14411196.20	39°40'56.369"N	80°42'12.157"W	1021.70	58.036	0.06	0.00	0.17
4780.00	22.930	60.850	4604.43	-85.84	558.85	897.07	1723900.24	14411214.17	39°40'56.546"N	80°42'11.769"W	1056.91	58.078	1.60	0.91	3.42
4873.00	22.480	60.020	4690.22	-90.22	576.56	928.30	1723931.45	14411231.87	39°40'56.720"N	80°42'11.369"W	1092.77	58.156	0.59	-0.48	-0.89
4966.00	22.360	59.580	4776.19	-94.16	594.40	958.95	1723962.09	14411249.70	39°40'56.895"N	80°42'10.976"W	1128.23	58.208	0.22	-0.13	-0.47
5059.00	24.020	61.020	4861.68	-98.57	612.53	990.77	1723993.90	14411267.83	39°40'57.073"N	80°42'10.568"W	1164.82	58.274	1.89	1.78	1.55
5151.00	24.490	59.030	4945.56	-102.91	631.41	1023.50	1724026.61	14411286.70	39°40'57.259"N	80°42'10.149"W	1202.59	58.329	1.02	0.51	-2.16
5244.00	22.990	53.170	5030.70	-104.71	652.22	1054.57	1724057.67	14411307.51	39°40'57.463"N	80°42'09.751"W	1239.96	58.374	3.00	-1.61	-6.30
5337.00	23.870	51.950	5116.03	-104.15	674.71	1083.92	1724087.02	14411329.98	39°40'57.685"N	80°42'09.374"W	1276.76	58.409	0.08	0.95	-1.31
5430.00	23.850	57.560	5201.09	-105.03	696.39	1114.61	1724117.69	14411351.66	39°40'57.898"N	80°42'08.981"W	1314.28	58.433	2.44	-0.02	6.03

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Actual Wellpath Report

Hohman HBP S WTZ 205H AWP Proj: 16407'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	SOUTHWESTERN ENERGY	Slot	Slot #205
Area	Wetzel County, WV	Well	Hohman HBP S WTZ 205H
Field	Wetzel	Wellbore	Hohman HBP S WTZ 205H AWB
Facility	Hohman HBP S WTZ Pad		

WELLPATH DATA (191 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)
5522.00	22.900	53.710	5285.54	-106.46	716.97	1144.74	1724147.81	14411372.22	39°40'58.100"N	80°42'08.594"W	1350.73	57.940	1.95	-1.03	-4.18
5615.00	21.650	53.420	5371.60	-106.55	737.90	1173.10	1724176.16	14411393.15	39°40'58.306"N	80°42'08.231"W	1385.88	57.829	1.35	-1.34	-0.31
5708.00	21.380	60.270	5458.14	-108.57	756.53	1201.60	1724204.65	14411411.78	39°40'58.490"N	80°42'07.865"W	1419.93	57.805	2.72	-0.29	7.37
5801.00	21.080	62.190	5544.83	-113.14	772.74	1231.12	1724234.15	14411427.98	39°40'58.649"N	80°42'07.487"W	1453.54	57.884	0.81	-0.32	2.06
5893.00	20.870	56.680	5630.74	-116.59	789.47	1259.44	1724262.47	14411444.70	39°40'58.813"N	80°42'07.124"W	1486.43	57.919	2.16	-0.23	-6.01
5986.00	20.440	56.130	5717.76	-118.30	807.63	1286.77	1724289.78	14411462.85	39°40'58.992"N	80°42'06.774"W	1519.22	57.886	0.50	-0.46	-0.57
6079.00	19.610	63.620	5805.15	-121.83	823.61	1314.24	1724317.24	14411478.83	39°40'59.149"N	80°42'06.422"W	1550.99	57.925	2.90	-0.89	8.05
6172.00	21.370	64.450	5892.26	-127.84	837.86	1343.51	1724346.50	14411493.07	39°40'59.289"N	80°42'06.047"W	1583.36	58.051	1.92	1.89	0.89
6264.00	24.400	63.250	5977.01	-134.29	853.64	1375.61	1724378.58	14411508.85	39°40'59.444"N	80°42'05.636"W	1618.95	58.178	3.33	3.29	-1.30
6357.00	24.890	60.960	6061.54	-140.14	871.79	1409.87	1724412.84	14411526.99	39°40'59.622"N	80°42'05.197"W	1657.64	58.270	1.15	0.53	-2.46
6450.00	23.030	53.730	6146.54	-142.80	892.06	1441.66	1724444.61	14411547.25	39°40'59.821"N	80°42'04.789"W	1695.33	58.252	3.73	-2.00	-7.77
6543.00	22.540	52.310	6232.29	-142.56	913.72	1470.43	1724473.37	14411568.90	39°41'00.034"N	80°42'04.420"W	1731.20	58.143	0.79	-0.53	-1.53
6610.00	23.300	55.080	6294.00	-142.69	929.16	1491.46	1724494.39	14411584.33	39°41'00.186"N	80°42'04.151"W	1757.21	58.078	1.97	1.13	4.13
6702.00	22.820	61.320	6378.66	-145.67	948.14	1522.03	1724524.95	14411603.30	39°41'00.373"N	80°42'03.759"W	1793.20	58.080	2.71	-0.52	6.78
6795.00	24.330	66.120	6463.90	-152.36	964.55	1555.38	1724558.29	14411619.71	39°41'00.534"N	80°42'03.332"W	1830.18	58.195	2.63	1.62	5.16
6888.00	23.990	60.550	6548.77	-158.92	981.60	1589.36	1724592.26	14411636.75	39°41'00.701"N	80°42'02.896"W	1868.05	58.300	2.48	-0.37	-5.99
6935.00	22.790	47.540	6591.94	-159.18	992.45	1604.41	1724607.30	14411647.60	39°41'00.808"N	80°42'02.703"W	1886.56	58.260	11.26	-2.55	-27.68
6981.00	22.660	34.380	6634.39	-155.37	1005.79	1615.99	1724618.88	14411660.93	39°41'00.939"N	80°42'02.554"W	1903.43	58.102	11.03	-0.28	-28.61
7028.00	20.790	21.950	6678.08	-148.06	1021.01	1624.23	1724627.11	14411676.14	39°41'01.089"N	80°42'02.448"W	1918.48	57.846	10.54	-3.98	-26.45
7074.00	20.140	13.900	6721.18	-138.75	1036.27	1629.18	1724632.06	14411691.40	39°41'01.240"N	80°42'02.384"W	1930.83	57.541	6.27	-1.41	-17.50
7121.00	21.310	10.890	6765.14	-127.83	1052.51	1632.74	1724635.62	14411707.64	39°41'01.400"N	80°42'02.338"W	1942.58	57.193	3.37	2.49	-6.40
7167.00	25.440	9.460	6807.36	-115.32	1070.47	1635.95	1724638.82	14411725.59	39°41'01.578"N	80°42'02.297"W	1955.05	56.801	9.06	8.98	-3.11
7214.00	30.120	2.500	6848.94	-99.14	1092.23	1638.12	1724641.00	14411747.34	39°41'01.793"N	80°42'02.268"W	1968.86	56.306	12.10	9.96	-14.81
7260.00	31.850	352.480	6888.40	-79.56	1115.81	1637.04	1724639.91	14411770.91	39°41'02.026"N	80°42'02.281"W	1981.14	55.722	11.81	3.76	-21.78
7307.00	34.700	342.350	6927.72	-56.04	1140.88	1631.35	1724634.23	14411795.97	39°41'02.274"N	80°42'02.352"W	1990.71	55.033	13.27	6.06	-21.55
7353.00	37.950	338.040	6964.78	-29.96	1166.48	1622.09	1724624.97	14411821.56	39°41'02.527"N	80°42'02.470"W	1997.96	54.279	8.98	7.07	-9.37
7400.00	42.200	333.240	7000.75	-0.40	1194.00	1609.57	1724612.45	14411849.07	39°41'02.800"N	80°42'02.629"W	2004.08	53.431	11.17	9.04	-10.21
7446.00	46.060	330.830	7033.76	31.26	1222.27	1594.53	1724597.42	14411877.33	39°41'03.079"N	80°42'02.820"W	2009.10	52.528	9.15	8.39	-5.24
7492.00	51.190	328.810	7064.16	65.55	1252.08	1577.17	1724580.06	14411907.13	39°41'03.375"N	80°42'03.041"W	2013.74	51.555	11.63	11.15	-4.39
7539.00	55.510	327.250	7092.21	103.13	1284.06	1557.19	1724560.10	14411939.09	39°41'03.691"N	80°42'03.291"W	2018.33	50.491	9.57	9.19	-3.32

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Actual Wellpath Report

Hohman HBP S WTZ 205H AWP Proj: 16407'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	SOUTHWESTERN ENERGY	Slot	Slot #205
Area	Wetzel County, WV	Well	Hohman HBP S WTZ 205H
Field	Wetzel	Wellbore	Hohman HBP S WTZ 205H AWB
Facility	Hohman HBP S WTZ Pad		

WELLPATH DATA (191 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]
7585.00	59.420	326.070	7116.94	141.84	1316.44	1535.88	1724538.79	14411971.46	39°41'04.012"N	80°42'03.566"W	2022.85	49.399	8.77	8.50	-2.57
7632.00	63.360	325.000	7139.44	183.06	1350.45	1512.53	1724515.45	14412005.46	39°41'04.349"N	80°42'03.863"W	2027.67	48.240	8.62	8.38	-2.28
7678.00	67.520	322.080	7158.56	224.89	1384.08	1487.66	1724490.59	14412039.07	39°41'04.682"N	80°42'04.180"W	2031.94	47.066	10.73	9.04	-6.35
7725.00	68.940	318.410	7176.00	268.46	1417.62	1459.75	1724462.69	14412072.60	39°41'05.014"N	80°42'04.535"W	2034.82	45.839	7.86	3.02	-7.81
7771.00	69.760	314.220	7192.23	311.16	1448.74	1430.02	1724432.98	14412103.70	39°41'05.323"N	80°42'04.914"W	2035.63	44.628	8.71	1.78	-9.11
7817.00	72.910	312.960	7206.95	354.09	1478.78	1398.46	1724401.43	14412133.73	39°41'05.621"N	80°42'05.317"W	2035.30	43.401	7.32	6.85	-2.74
7864.00	77.120	313.290	7219.10	398.75	1509.81	1365.33	1724368.31	14412164.75	39°41'05.929"N	80°42'05.739"W	2035.59	42.123	8.98	8.96	0.70
7910.00	81.410	313.490	7227.66	443.25	1540.85	1332.49	1724335.49	14412195.78	39°41'06.236"N	80°42'06.158"W	2037.09	40.853	9.34	9.33	0.43
8003.00	89.540	313.940	7234.99	534.55	1604.86	1265.54	1724268.56	14412259.77	39°41'06.871"N	80°42'07.012"W	2043.82	38.258	8.76	8.74	0.48
8096.00	91.140	313.420	7234.44	626.21	1669.09	1198.29	1724201.34	14412323.97	39°41'07.508"N	80°42'07.869"W	2054.69	35.676	1.81	1.72	-0.56
8189.00	91.450	315.910	7232.34	718.09	1734.44	1132.17	1724135.24	14412389.30	39°41'08.156"N	80°42'08.712"W	2071.25	33.135	2.70	0.33	2.68
8282.00	91.080	313.520	7230.29	809.99	1799.85	1066.10	1724069.20	14412454.68	39°41'08.805"N	80°42'09.554"W	2091.90	30.639	2.60	-0.40	-2.57
8374.00	91.200	308.910	7228.46	899.87	1860.44	996.93	1724000.05	14412515.25	39°41'09.406"N	80°42'10.437"W	2110.71	28.185	5.01	0.13	-5.01
8467.00	91.020	303.630	7226.65	988.69	1915.43	921.99	1723925.14	14412570.22	39°41'09.952"N	80°42'11.393"W	2125.78	25.704	5.68	-0.19	-5.68
8560.00	91.050	300.530	7224.97	1075.29	1964.81	843.21	1723846.40	14412619.58	39°41'10.442"N	80°42'12.398"W	2138.10	23.227	3.33	0.03	-3.33
8652.00	90.550	302.320	7223.69	1160.58	2012.77	764.71	1723767.93	14412667.52	39°41'10.919"N	80°42'13.400"W	2153.14	20.803	2.02	-0.54	1.95
8745.00	91.020	311.720	7222.41	1249.69	2068.70	690.55	1723693.80	14412723.42	39°41'11.474"N	80°42'14.347"W	2180.91	18.460	10.12	0.51	10.11
8838.00	91.480	312.130	7220.38	1340.80	2130.82	621.37	1723624.65	14412785.52	39°41'12.090"N	80°42'15.229"W	2219.57	16.257	0.66	0.49	0.44
8931.00	91.230	306.700	7218.18	1430.97	2189.83	549.57	1723552.88	14412844.51	39°41'12.676"N	80°42'16.145"W	2257.74	14.088	5.84	-0.27	-5.84
9024.00	90.980	303.230	7216.39	1519.16	2243.11	473.38	1723476.72	14412897.76	39°41'13.205"N	80°42'17.117"W	2292.52	11.917	3.74	-0.27	-3.73
9116.00	91.200	307.500	7214.64	1606.60	2296.33	398.39	1723401.75	14412950.97	39°41'13.733"N	80°42'18.074"W	2330.64	9.842	4.65	0.24	4.64
9209.00	91.140	309.280	7212.74	1696.39	2354.07	325.52	1723328.91	14413008.69	39°41'14.306"N	80°42'19.004"W	2376.47	7.873	1.91	-0.06	1.91
9302.00	91.080	309.850	7210.94	1786.67	2413.30	253.84	1723257.26	14413067.89	39°41'14.894"N	80°42'19.918"W	2426.61	6.004	0.62	-0.06	0.61
9395.00	91.140	309.890	7209.13	1877.06	2472.91	182.47	1723185.92	14413127.47	39°41'15.485"N	80°42'20.829"W	2479.63	4.220	0.08	0.06	0.04
9487.00	91.050	310.740	7207.38	1966.65	2532.42	112.33	1723115.81	14413186.96	39°41'16.076"N	80°42'21.723"W	2534.91	2.540	0.93	-0.10	0.92
9580.00	91.140	310.810	7205.60	2057.38	2593.14	41.92	1723045.42	14413247.66	39°41'16.678"N	80°42'22.622"W	2593.48	0.926	0.12	0.10	0.08
9673.00	91.170	309.920	7203.72	2147.95	2653.36	-28.92	1722974.61	14413307.86	39°41'17.276"N	80°42'23.525"W	2653.52	359.375	0.96	0.03	-0.96
9766.00	91.200	311.010	7201.80	2238.57	2713.70	-99.66	1722903.90	14413368.17	39°41'17.874"N	80°42'24.428"W	2715.53	357.897	1.17	0.03	1.17
9859.00	90.490	311.680	7200.43	2329.50	2775.13	-169.47	1722834.11	14413429.58	39°41'18.484"N	80°42'25.318"W	2780.30	356.505	1.05	-0.76	0.72
9952.00	90.430	312.480	7199.68	2420.68	2837.45	-238.50	1722765.12	14413491.88	39°41'19.102"N	80°42'26.198"W	2847.46	355.195	0.86	-0.06	0.86

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Southwestern Energy

Actual Wellpath Report

Hohman HBP S WTZ 205H AWP Proj: 16407



REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY
Area	Wellzel County, WV
Field	Wellzel
Facility	Hohman HBP S WTZ Pad
Slot	Slot #205
	Hohman HBP S WTZ 205H
	Hohman HBP S WTZ 205H AWB

WELLPATH DATA (191 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)	(ft)	(ft)	(ft)	(°)	(ft/100ft)	(°/100ft)	(°/100ft)
10044.00	90.830	310.400	7198.67	2510.66	2898.34	-307.46	1722696.19	14413552.73	39°41'19".06"N	80°42'27".07"W	2914.60	353.945	2.30	0.43	-2.26
10137.00	90.920	308.990	7197.25	2601.00	2957.73	-379.01	1722624.66	14413612.10	39°41'20".29"N	80°42'27".99"W	2981.91	352.698	1.52	0.10	-1.52
10229.00	90.860	309.400	7195.82	2690.16	3015.86	-450.30	1722553.40	14413670.21	39°41'20".82"N	80°42'28".90"W	3049.29	351.508	0.45	-0.07	0.45
10322.00	90.950	309.310	7194.35	2780.37	3074.83	-522.20	1722481.53	14413729.15	39°41'21".45"N	80°42'29".81"W	3118.85	350.361	0.14	0.10	-0.10
10415.00	90.850	310.180	7192.86	2870.72	3134.28	-593.70	1722410.06	14413788.58	39°41'22".04"N	80°42'30".73"W	3190.01	349.274	0.84	-0.06	0.94
10508.00	90.920	310.850	7191.39	2961.36	3194.69	-664.39	1722339.39	14413848.97	39°41'22".64"N	80°42'31".63"W	3263.04	348.252	0.72	0.03	0.72
10600.00	90.980	309.750	7189.87	3050.94	3254.18	-734.54	1722269.27	14413908.44	39°41'23".26"N	80°42'32".52"W	3336.06	347.280	1.20	0.07	-1.20
10693.00	90.920	309.330	7188.32	3141.21	3313.38	-806.25	1722197.59	14413967.62	39°41'23".82"N	80°42'33".44"W	3410.06	346.324	0.46	-0.06	-0.45
10786.00	90.890	309.360	7186.85	3231.41	3372.34	-878.16	1722125.70	14414026.55	39°41'24".40"N	80°42'34".35"W	3484.80	345.404	0.05	-0.03	0.03
10879.00	91.020	310.330	7185.30	3321.80	3431.91	-949.56	1722054.34	14414086.10	39°41'24".99"N	80°42'35".26"W	3560.85	344.534	1.05	0.14	1.04
10971.00	90.250	310.760	7184.28	3411.48	3491.71	-1019.46	1721984.46	14414145.88	39°41'25".59"N	80°42'36".16"W	3637.49	343.724	0.96	-0.84	0.47
11064.00	90.220	309.410	7183.03	3501.97	3551.60	-1090.60	1721913.34	14414205.74	39°41'26".18"N	80°42'37".06"W	3715.27	342.929	1.45	-0.03	-1.45
11157.00	90.860	309.550	7183.03	3592.22	3610.72	-1162.39	1721841.59	14414264.84	39°41'26".77"N	80°42'37".96"W	3793.21	342.155	0.70	0.69	0.15
11249.00	90.830	313.340	7181.67	3682.20	3671.60	-1231.33	1721772.67	14414325.69	39°41'27".37"N	80°42'38".86"W	3872.57	341.460	4.12	-0.03	4.12
11342.00	90.920	311.590	7180.25	3773.49	3734.38	-1299.93	1721704.10	14414388.45	39°41'28".00"N	80°42'39".73"W	3954.16	340.807	1.88	0.10	-1.88
11435.00	90.890	307.570	7178.78	3863.76	3793.61	-1371.58	1721632.48	14414447.66	39°41'28".58"N	80°42'40".65"W	4033.95	340.123	4.32	-0.03	-4.32
11528.00	91.050	311.100	7177.20	3953.93	3852.54	-1443.49	1721560.60	14414506.57	39°41'29".17"N	80°42'41".57"W	4114.09	339.460	3.80	0.17	3.80
11620.00	90.770	314.270	7175.74	4044.30	3914.90	-1511.10	1721493.01	14414568.90	39°41'29".79"N	80°42'42".43"W	4196.41	338.894	3.46	-0.30	3.45
11713.00	90.980	310.650	7174.32	4136.15	3980.03	-1577.47	1721426.67	14414634.00	39°41'30".36"N	80°42'43".27"W	4281.25	338.379	0.47	0.23	0.41
11806.00	91.140	310.180	7172.60	4227.41	4042.73	-1646.10	1721358.06	14414696.68	39°41'31".05"N	80°42'44".15"W	4365.01	337.845	4.81	0.17	-4.81
11898.00	90.770	307.830	7171.07	4316.49	4100.62	-1717.58	1721286.61	14414754.55	39°41'31".63"N	80°42'45".06"W	4445.81	337.273	2.59	-0.40	-2.55
11991.00	90.520	309.080	7170.02	4406.33	4158.46	-1790.40	1721213.82	14414812.36	39°41'32".20"N	80°42'45".99"W	4527.51	336.706	1.37	-0.27	1.34
12084.00	90.400	309.390	7169.27	4496.49	4217.28	-1862.44	1721141.82	14414871.16	39°41'32".79"N	80°42'46".91"W	4610.22	336.173	0.36	-0.13	0.33
12177.00	90.550	309.100	7168.50	4586.66	4276.11	-1934.46	1721069.83	14414929.97	39°41'33".37"N	80°42'47".83"W	4693.32	335.659	0.35	0.16	-0.31
12269.00	90.710	309.200	7167.49	4675.81	4334.19	-2005.80	1720998.51	14414988.02	39°41'33".95"N	80°42'48".74"W	4775.82	335.166	0.21	0.11	0.11
12362.00	90.580	312.070	7166.45	4766.13	4393.52	-2077.41	1720926.93	14415047.33	39°41'34".55"N	80°42'49".65"W	4859.90	334.694	0.96	-0.14	2.35
12455.00	90.800	310.280	7165.33	4857.00	4454.74	-2147.40	1720856.97	14415108.52	39°41'35".14"N	80°42'50".55"W	4945.30	334.264	2.37	0.24	0.35
12547.00	90.180	311.940	7164.54	4947.21	4516.42	-2215.65	1720788.74	14415170.18	39°41'35".75"N	80°42'51".42"W	5030.62	333.868	0.76	-0.67	-0.36
12640.00	90.030	311.280	7164.37	5038.24	4578.18	-2285.19	1720719.23	14415231.91	39°41'36".37"N	80°42'52".30"W	5116.81	333.474	0.73	-0.16	-0.71
12733.00	90.150	310.860	7164.22	5129.09	4639.28	-2355.30	1720649.15	14415292.99	39°41'36".97"N	80°42'53".20"W	5202.91	333.084	0.47	0.13	-0.45

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Actual Wellpath Report

Hohman HBP S WTZ 205H AWP Proj: 16407'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	SOUTHWESTERN ENERGY	Slot	Slot #205
Area	Wetzel County, WV	Well	Hohman HBP S WTZ 205H
Field	Wetzel	Wellbore	Hohman HBP S WTZ 205H AWP
Facility	Hohman HBP S WTZ Pad		

WELLPATH DATA (191 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]
12825.00	90.000	309.330	7164.10	5218.61	4698.53	-2425.68	1720578.80	14415352.21	39°41'37.564"N	80°42'54.100"W	5287.73	332.694	1.67	-0.16	-1.66
12918.00	90.090	304.120	7164.03	5307.66	4754.12	-2500.19	1720504.31	14415407.79	39°41'38.116"N	80°42'55.051"W	5371.46	332.260	5.60	0.10	-5.60
13011.00	90.250	301.910	7163.75	5394.81	4804.79	-2578.17	1720426.37	14415458.43	39°41'38.619"N	80°42'56.047"W	5452.79	331.783	2.38	0.17	-2.38
13104.00	90.030	303.290	7163.53	5481.74	4854.89	-2656.52	1720348.05	14415508.52	39°41'39.116"N	80°42'57.047"W	5534.17	331.313	1.50	-0.24	1.48
13196.00	90.030	308.750	7163.48	5569.50	4908.97	-2730.90	1720273.70	14415562.58	39°41'39.653"N	80°42'57.996"W	5617.46	330.912	5.93	0.00	5.93
13289.00	90.120	311.060	7163.36	5659.91	4968.63	-2802.24	1720202.39	14415622.21	39°41'40.245"N	80°42'58.907"W	5704.37	330.578	2.49	0.10	2.48
13382.00	90.060	310.650	7163.21	5750.69	5029.47	-2872.58	1720132.08	14415683.02	39°41'40.849"N	80°42'59.804"W	5792.00	330.267	0.45	-0.06	-0.44
13471.00	90.000	312.850	7163.16	5837.84	5088.73	-2938.97	1720065.71	14415742.26	39°41'41.436"N	80°43'00.651"W	5876.45	329.992	2.47	-0.07	2.47
13564.00	90.120	310.290	7163.07	5928.85	5150.43	-3008.54	1719996.16	14415803.94	39°41'42.048"N	80°43'01.539"W	5964.75	329.709	2.76	0.13	-2.75
13656.00	90.090	307.440	7162.90	6017.89	5208.15	-3080.17	1719924.56	14415861.64	39°41'42.621"N	80°43'02.453"W	6050.81	329.399	3.10	-0.03	-3.10
13749.00	90.060	311.270	7162.77	6108.09	5267.11	-3152.07	1719852.70	14415920.58	39°41'43.206"N	80°43'03.370"W	6138.24	329.102	4.12	-0.03	4.12
13841.00	90.180	313.530	7162.58	6198.38	5329.15	-3220.00	1719784.79	14415982.59	39°41'43.821"N	80°43'04.236"W	6226.41	328.859	2.46	0.13	2.46
13934.00	90.030	314.630	7162.41	6290.15	5393.84	-3286.81	1719718.01	14416047.26	39°41'44.462"N	80°43'05.089"W	6316.38	328.643	1.19	-0.16	1.18
14026.00	89.970	313.030	7162.41	6380.86	5457.55	-3353.17	1719651.67	14416110.94	39°41'45.094"N	80°43'05.935"W	6405.36	328.433	1.74	-0.07	-1.74
14119.00	89.320	310.630	7162.99	6471.95	5519.57	-3422.46	1719582.41	14416172.93	39°41'45.709"N	80°43'06.819"W	6494.53	328.199	2.67	-0.70	-2.58
14212.00	89.480	311.660	7163.96	6562.82	5580.76	-3492.49	1719512.40	14416234.10	39°41'46.316"N	80°43'07.712"W	6583.49	327.961	1.12	0.17	1.11
14305.00	89.600	311.830	7164.71	6653.89	5642.68	-3561.88	1719443.05	14416295.99	39°41'46.930"N	80°43'08.598"W	6672.84	327.738	0.22	0.13	0.18
14398.00	89.570	309.980	7165.38	6744.68	5703.57	-3632.16	1719372.79	14416356.86	39°41'47.534"N	80°43'09.494"W	6761.90	327.510	1.99	-0.03	-1.99
14490.00	89.420	306.670	7166.19	6833.49	5760.61	-3704.32	1719300.66	14416413.88	39°41'48.100"N	80°43'10.415"W	6848.84	327.257	3.60	-0.16	-3.60
14583.00	89.380	305.320	7167.17	6922.21	5815.26	-3779.56	1719225.45	14416468.51	39°41'48.643"N	80°43'11.375"W	6935.59	326.979	1.45	-0.04	-1.45
14676.00	90.000	307.960	7167.67	7011.24	5870.76	-3854.18	1719150.86	14416523.98	39°41'49.193"N	80°43'12.328"W	7022.85	326.715	2.92	0.67	2.84
14769.00	90.370	309.730	7167.37	7101.25	5929.09	-3926.61	1719078.46	14416582.29	39°41'49.772"N	80°43'13.252"W	7111.42	326.485	1.94	0.40	1.90
14861.00	90.490	307.870	7166.68	7190.26	5986.73	-3998.30	1719006.80	14416639.91	39°41'50.344"N	80°43'14.167"W	7199.12	326.263	2.03	0.13	-2.02
14954.00	90.580	308.780	7165.81	7280.05	6044.40	-4071.26	1718933.87	14416697.55	39°41'50.916"N	80°43'15.098"W	7287.65	326.037	0.98	0.10	0.98
15047.00	89.970	312.030	7165.36	7370.65	6104.67	-4142.06	1718863.09	14416757.80	39°41'51.514"N	80°43'16.002"W	7377.24	325.843	3.56	-0.66	3.49
15139.00	89.970	311.610	7165.41	7460.77	6166.01	-4210.63	1718794.55	14416819.12	39°41'52.122"N	80°43'16.876"W	7466.53	325.672	0.46	0.00	-0.46
15232.00	89.880	308.500	7165.53	7551.24	6225.85	-4281.80	1718723.41	14416878.94	39°41'52.716"N	80°43'17.784"W	7556.13	325.482	3.35	-0.10	-3.34
15324.00	90.000	307.080	7165.63	7639.83	6282.23	-4354.50	1718650.75	14416935.89	39°41'53.275"N	80°43'18.712"W	7643.83	325.272	1.55	0.13	-1.54
15417.00	90.370	309.180	7165.33	7729.53	6339.65	-4427.65	1718577.91	14416992.69	39°41'53.845"N	80°43'19.646"W	7732.74	325.069	2.29	0.40	2.26
15510.00	90.550	311.390	7164.58	7820.09	6399.77	-4498.59	1718506.75	14417052.91	39°41'54.441"N	80°43'20.551"W	7822.69	324.895	2.38	0.19	2.38

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REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY
Area	Wetzel County, WV
Field	Wetzel
Facility	Hohman HBP S WTZ Pad
Slot	Slot #205
Well	Hohman HBP S WTZ 205H
Wellbore	Hohman HBP S WTZ 205H AWB

WELLPATH DATA (191 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]
15603.00	90.620	311.050	7163.63	7910.99	6461.05	-4568.54	1718436.78	14417114.05	39°41'55.04"N	80°43'21.44"W	7913.08	324.736	0.37	0.08	-0.37
15695.00	90.680	312.140	7162.59	8001.03	6522.12	-4637.34	1718368.01	14417175.09	39°41'55.65"N	80°43'22.32"W	8002.69	324.587	1.19	0.07	1.18
15788.00	90.520	312.530	7161.62	8092.29	6584.75	-4706.08	1718299.29	14417237.70	39°41'56.27"N	80°43'23.19"W	8093.59	324.447	0.45	-0.17	0.42
15878.00	90.490	312.100	7160.82	8180.60	6645.34	-4772.63	1718232.77	14417298.26	39°41'56.87"N	80°43'24.04"W	8181.60	324.314	0.48	-0.03	-0.48
15970.00	90.650	310.420	7159.91	8270.53	6706.00	-4841.78	1718163.65	14417358.90	39°41'57.47"N	80°43'24.93"W	8271.24	324.170	1.83	0.17	-1.83
16063.00	90.580	309.140	7158.91	8360.90	6765.51	-4913.25	1718092.21	14417418.38	39°41'58.06"N	80°43'25.84"W	8361.34	324.012	1.38	-0.08	-1.38
16156.00	90.490	310.170	7158.04	8451.22	6824.85	-4984.84	1718020.64	14417477.70	39°41'58.65"N	80°43'26.75"W	8451.47	323.856	1.11	-0.10	1.11
16249.00	90.550	308.860	7157.20	8541.49	6884.02	-5056.59	1717948.93	14417536.85	39°41'59.24"N	80°43'27.67"W	8541.59	323.701	1.41	0.06	-1.41
16341.00	90.520	310.260	7156.34	8630.81	6942.61	-5127.51	1717878.03	14417595.41	39°41'59.82"N	80°43'28.57"W	8630.83	323.562	1.52	-0.03	1.52
16383.00	90.490	310.720	7155.97	8671.74	6969.88	-5159.45	1717846.10	14417622.67	39°42'00.09"N	80°43'28.98"W	8671.74	323.489	1.10	-0.07	1.10
16407.00	90.490	310.720	7155.76	8695.15	6985.54	-5177.64	1717827.92	14417638.32	39°42'00.25"N	80°43'29.21"W	8695.15	323.454	0.00	0.00	0.00

HOLE & CASING SECTIONS - Ref Wellbore: Hohman HBP S WTZ 205H AWB Ref Wellpath: Hohman HBP S WTZ 205H AWP Proj: 16407

String/Diameter	Start MD	End MD	Interval	Start TVD	End TVD	Start N/S	Start E/W	End N/S	End E/W
	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]	[ft]
17.5in Open Hole	26.00	703.00	677.00	26.00	702.99	0.00	0.00	-2.40	-1.76
13.375in Casing Surface	26.00	688.00	662.00	26.00	687.99	0.00	0.00	-2.39	-1.69
12.25in Open Hole	703.00	2907.00	2204.00	702.99	2860.27	-2.40	-1.76	215.92	309.86
9.625in Casing Intermediate	26.00	2887.00	2861.00	26.00	2841.44	0.00	0.00	212.69	303.93
8.75in Open Hole	2907.00	6618.00	3711.00	2860.27	6301.35	215.92	309.86	930.95	1494.06
8.5in Open Hole	6618.00	16407.00	9789.00	6301.35	7155.76	930.95	1494.06	6985.54	-5177.64

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REFERENCE WELLPATH IDENTIFICATION			
Operator	SOUTHWESTERN ENERGY	Slot	Slot #205
Area	Wetzel County, WV	Well	Hohman HBP S WTZ 205H
Field	Wetzel	Wellbore	Hohman HBP S WTZ 205H AWB
Facility	Hohman HBP S WTZ Pad		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Hohman HBP S 205H BHL Rev-3	7164.00	6975.88	-5177.86	1717827.70	14417628.67	39°42'00.155"N	80°43'29.219"W	point
Hohman HBP S 205H LP Rev-1	7226.00	1591.40	1275.96	1724278.98	14412246.31	39°41'06.738"N	80°42'06.879"W	point

WELLPATH COMPOSITION - Ref Wellbore: Hohman HBP S WTZ 205H AWB Ref Wellpath: Hohman HBP S WTZ 205H AWP Proj: 16407'				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
26.00	632.00	OWSG EMS rev2 - Standard	01_MSS <17.5"> (172'-632')	Hohman HBP S WTZ 205H AWB
632.00	2831.00	BHI NaviTrak (Axial)	02_APS EM <12.25"> (632')(698'-2831')	Hohman HBP S WTZ 205H AWB
2831.00	6543.00	BHI NaviTrak (Axial)	03_APS EM <8-3/4"> (2831')(2922'-6543')	Hohman HBP S WTZ 205H AWB
6543.00	16383.00	BHI AutoTrak Curve (Short)	04_BHI AT Curve <8-1/2"> (6543')(6610'-16383')	Hohman HBP S WTZ 205H AWB
16383.00	16407.00	Blind Drilling (std)	Projection to bit	Hohman HBP S WTZ 205H AWB

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REFERENCE WELLPATH IDENTIFICATION			
Operator	SOUTHWESTERN ENERGY	Slot	Slot #205
Area	Wetzel County, WV	Well	Hohman HBP S WTZ 205H
Field	Wetzel	Wellbore	Hohman HBP S WTZ 205H AWP
Facility	Hohman HBP S WTZ Pad		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
172.00	0.600	227.280	172.00	MSS <17.5"> (172'-632')
698.00	0.300	260.130	697.99	APS EM <12.25"> (632')(698'-2831')
2922.00	19.670	61.070	2874.39	APS EM <8-3/4"> (2831')(2922'-6543')
6610.00	23.300	55.080	6294.00	BHI AT Curve <8-1/2"> (6543')(6610'-16383')
16407.00	90.490	310.720	7155.76	Projection to Bit

COMMENTS
<p>Wellpath general comments API: 47-103-03172-0000 Job#: 8523705 Rig: SDC-46 Duration: 05/05/17 - 05/19/17</p>

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