

SOUTHWESTERN ENERGY



API: 47-009-00196-0000
 Job#: 8680420
 Rig: SDC-46
 Duration: 07/24/17 - 08/02/17

Location: Brooke County, WV
 Slot: Slot #206
 Well: John Good Jr BRK 206H
 Facility: John Good Jr BRK Pad Wellbore: John Good Jr BRK 206H PWB

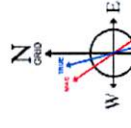
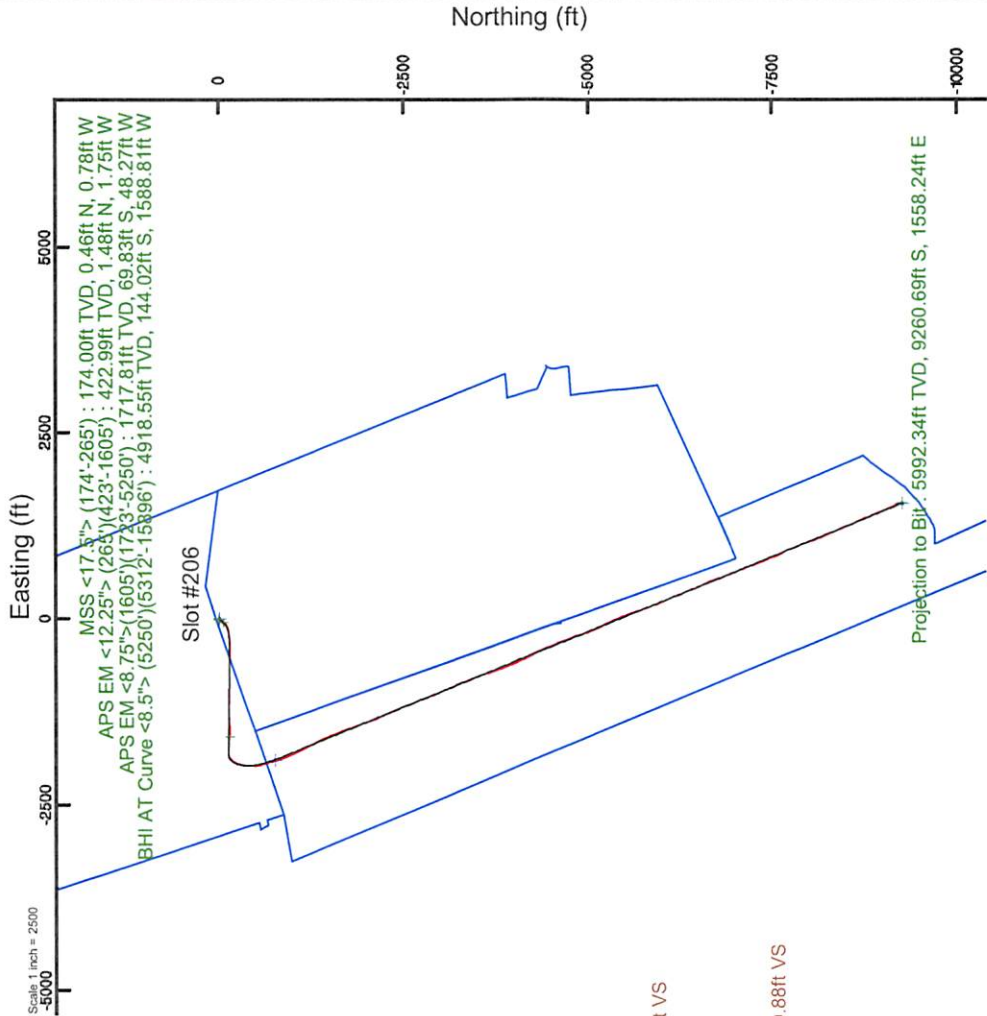
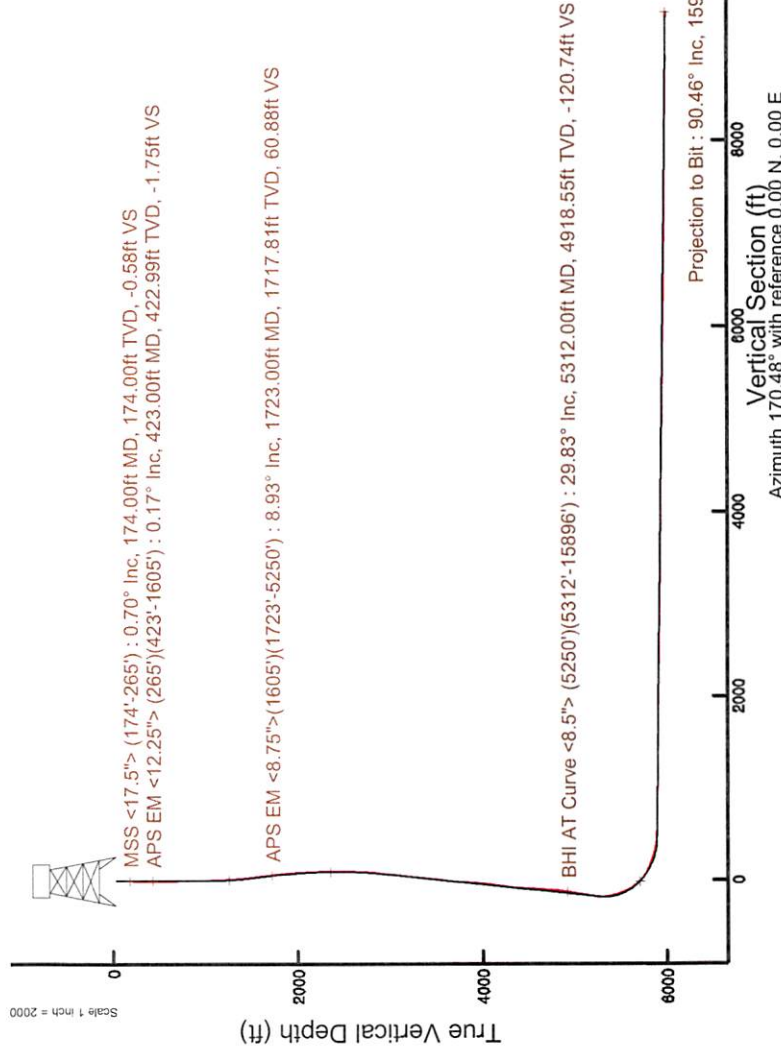
Plot reference wellpath is: John Good Jr BRK 206H PWB Rev-A.0 Grid System: NAD83 / UTM Zone 17 North, US feet
 True vertical depths are referenced to SDC-46 (RKB) North Reference: Grid north
 Measured depths are referenced to SDC-46 (RKB) Scale: True distance
 SDC-46 (RKB) to Mean Sea Level: 1178.6 feet Depths are in feet
 Mean Sea Level to Ground level (At Slot: Slot #206): -1152.6 feet Created by: amarc on 2017-06-04
 Coordinates are in feet referenced to Slot Database: WA_MPL_EASTERNUS_Defn

Location Information

Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
John Good Jr BRK Pad	1757463.232	14608504.851	40°13'25.666"N	80°34'50.452"W
Slot #206	13.42	-3.38	40°13'25.799"N	80°34'50.495"W
SDC-46 (RKB) to Ground level (At Slot: Slot #206)	1757459.850	14608518.270	26ft	
Mean Sea Level to Ground level (At Slot: Slot #206)			-1152.6ft	
SDC-46 (RKB) to Mean Sea Level			1178.6ft	

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	220.000	26.00	0.00	0.00	0.00	0.00
Start Nudge	1000.00	0.000	220.000	1000.00	0.00	0.00	0.00	0.00
End Nudge	1500.00	10.000	220.000	1497.47	-33.34	-27.98	2.00	28.25
Start Build/Turn	1756.43	10.000	220.000	1750.00	-67.45	-56.60	0.00	57.16
End Build/Turn	3001.03	30.077	270.889	2919.81	-146.64	-444.01	2.00	71.19
Curve KOP	5732.77	30.077	270.889	5283.72	-125.41	-1812.90	0.00	-176.15
Landing Point	6739.66	89.326	157.908	5890.00	-760.47	-1899.33	10.00	435.86
Total Depth	15920.28	89.326	157.908	5998.00	-9266.47	1553.21	0.00	9395.74



User specified Dip: 67.74° Field: 52715 mT
 Magnetic North is 0.27 degrees East of True North
 Grid North is 0.27 degrees East of True North
 To correct azimuth from True to Grid subtract 0.27 degrees
 To correct azimuth from Magnetic to Grid subtract 8.59 degrees

Projection to Bit : 90.46° Inc, 15920.00ft MD, 5992.34ft TVD, 9390.87ft VS
 Scale 1 inch = 2000

Vertical Section (ft)
 Azimuth 170.48° with reference 0.00 N, 0.00 E

REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot #206
Area	Brooke County, WV	Well	John Good Jr BRK 206H
Field	Brooke	Wellbore	John Good Jr BRK 206H AWB
Facility	John Good Jr BRK Pad		

REPORT SETUP INFORMATION

Projection System	NAD83 / UTM Zone 17 North, US feet	Software System	WellArchitect® 5.1
North Reference	Grid	User	Amarcar
Scale	0.999616	Report Generated	04/Aug/2017 at 14:38
Convergence at slot	0.27° East	Database/Source file	WA_MPL_EASTERNUS_Defn/John_Good_Jr_BRK_206H_AWP_Proj_15920_.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	13.42	-3.38	1757459.85	14608518.27	40°13'25.799"N	80°34'50.495"W
Facility Reference Pt			1757463.23	14608504.85	40°13'25.666"N	80°34'50.452"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	26.00ft
Horizontal Reference Pt	Slot	SDC-46 (RKB) to Mean Sea Level	1178.60ft
Vertical Reference Pt	SDC-46 (RKB)	SDC-46 (RKB) to Ground Level at Slot (Slot #206)	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	170.48°

Actual Wellpath Report

John Good Jr BRK 206H AWP Proj: 15920'

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REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot #206
Area	Brooke County, WV	Well	John Good Jr BRK 206H
Field	Brooke	Wellbore	John Good Jr BRK 206H AWB
Facility	John Good Jr BRK Pad		

WELLPATH DATA (184 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	300.480	0.00	0.00	0.00	0.00	1757459.85	14608518.27	40°13'25.799"N	80°34'50.495"W	0.00	0.000	0.00	0.00	0.00
26.00	0.000	300.480	26.00	0.00	0.00	0.00	1757459.85	14608518.27	40°13'25.799"N	80°34'50.495"W	0.00	0.000	0.00	0.00	0.00
174.00	0.700	300.480	174.00	-0.58	0.46	-0.78	1757459.07	14608518.73	40°13'25.803"N	80°34'50.505"W	0.90	300.480	0.47	0.47	-40.22
265.00	0.300	326.480	264.99	-1.16	0.94	-1.39	1757458.46	14608519.21	40°13'25.808"N	80°34'50.513"W	1.68	304.050	0.49	-0.44	28.57
423.00	0.170	325.030	422.99	-1.75	1.48	-1.75	1757458.10	14608519.75	40°13'25.813"N	80°34'50.517"W	2.29	310.106	0.08	-0.08	-0.92
512.00	0.240	180.310	511.99	-1.68	1.40	-1.83	1757458.02	14608519.67	40°13'25.813"N	80°34'50.518"W	2.30	307.387	0.44	0.08	-162.61
605.00	0.240	151.590	604.99	-1.30	1.03	-1.74	1757458.11	14608519.30	40°13'25.809"N	80°34'50.517"W	2.02	300.702	0.13	0.00	-30.88
697.00	0.270	194.670	696.99	-0.92	0.65	-1.70	1757458.15	14608518.92	40°13'25.805"N	80°34'50.517"W	1.82	290.992	0.21	0.03	46.83
790.00	0.760	172.550	789.99	-0.11	-0.17	-1.68	1757458.17	14608518.10	40°13'25.797"N	80°34'50.516"W	1.69	264.177	0.56	0.53	-23.78
893.00	0.820	204.920	892.98	1.06	-1.39	-1.88	1757457.97	14608516.88	40°13'25.785"N	80°34'50.519"W	2.33	233.553	0.48	0.06	34.81
976.00	2.020	212.770	975.95	2.82	-3.37	-3.04	1757456.81	14608514.90	40°13'25.766"N	80°34'50.534"W	4.54	222.112	1.30	1.29	8.44
1068.00	3.030	210.930	1067.86	5.87	-6.82	-5.17	1757454.68	14608511.46	40°13'25.732"N	80°34'50.562"W	8.56	217.186	1.10	1.10	-2.00
1161.00	3.530	215.940	1160.70	9.75	-11.24	-8.12	1757451.74	14608507.03	40°13'25.688"N	80°34'50.600"W	13.87	215.822	0.62	0.54	5.39
1254.00	4.570	215.380	1253.47	14.38	-16.58	-11.94	1757447.91	14608501.69	40°13'25.636"N	80°34'50.650"W	20.43	215.758	1.12	1.12	-0.60
1347.00	5.980	212.900	1346.07	20.58	-23.67	-16.72	1757443.14	14608494.61	40°13'25.566"N	80°34'50.712"W	28.98	215.232	1.54	1.52	-2.67
1439.00	7.600	213.870	1437.43	28.54	-32.75	-22.71	1757437.15	14608485.54	40°13'25.476"N	80°34'50.790"W	39.85	214.744	1.77	1.76	1.05
1532.00	9.420	216.650	1529.40	38.28	-43.96	-30.68	1757429.18	14608474.33	40°13'25.366"N	80°34'50.893"W	53.61	214.914	2.01	1.96	2.99
1605.00	9.760	216.050	1601.38	46.75	-53.76	-37.89	1757421.97	14608464.54	40°13'25.269"N	80°34'50.987"W	65.77	215.179	0.49	0.47	-0.82
1723.00	8.930	209.350	1717.81	60.88	-69.83	-48.27	1757411.60	14608448.47	40°13'25.111"N	80°34'51.121"W	84.88	214.654	1.16	-0.70	-5.68
1816.00	9.010	211.960	1809.68	71.96	-82.30	-55.66	1757404.21	14608436.01	40°13'24.988"N	80°34'51.217"W	99.35	214.071	0.45	0.09	2.81
1909.00	9.150	229.570	1901.53	81.21	-93.27	-65.14	1757394.73	14608425.03	40°13'24.880"N	80°34'51.340"W	113.77	214.932	2.98	0.15	18.94
2002.00	11.260	246.450	1993.07	87.21	-101.70	-79.10	1757380.78	14608416.61	40°13'24.798"N	80°34'51.521"W	128.84	217.876	3.91	2.27	18.15
2095.00	13.340	247.060	2083.93	91.91	-109.51	-97.31	1757362.58	14608408.80	40°13'24.721"N	80°34'51.756"W	146.49	221.624	2.24	2.24	0.66
2187.00	14.470	247.830	2173.24	96.89	-117.98	-117.73	1757342.17	14608400.33	40°13'24.638"N	80°34'52.020"W	166.67	224.938	1.24	1.23	0.84
2280.00	15.670	252.010	2263.04	101.28	-126.25	-140.43	1757319.47	14608392.07	40°13'24.558"N	80°34'52.313"W	188.84	228.045	1.74	1.29	4.49
2373.00	17.550	257.360	2352.16	103.90	-133.20	-166.06	1757293.85	14608385.13	40°13'24.490"N	80°34'52.644"W	212.88	231.268	2.60	2.02	5.75
2465.00	20.800	261.750	2439.05	104.29	-138.58	-195.77	1757264.15	14608379.75	40°13'24.439"N	80°34'53.027"W	239.86	234.708	3.86	3.53	4.77
2558.00	24.160	264.720	2524.97	102.51	-142.70	-231.08	1757228.86	14608375.63	40°13'24.399"N	80°34'53.482"W	271.59	238.303	3.81	3.61	3.19
2650.00	26.220	265.230	2608.22	99.44	-146.12	-270.08	1757189.87	14608372.21	40°13'24.367"N	80°34'53.985"W	307.08	241.586	2.25	2.24	0.55
2743.00	27.640	266.030	2691.13	95.65	-149.32	-312.08	1757147.89	14608369.00	40°13'24.338"N	80°34'54.527"W	345.96	244.430	1.58	1.53	0.86

REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot #206
SOUTHWESTERN ENERGY	Well	John Good Jr BRK 206H
Area	Wellbore	John Good Jr BRK 206H AWB
Field		
Facility		

WELLPATH DATA (184 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]
2836.00	29.000	266.990	2773.00	91.01	-152.00	-356.11	1757103.87	14608366.33	40°13'24.313"N	80°34'55.095"W	387.20	246.886	1.54	1.46	1.03
2929.00	30.750	272.140	2853.65	83.65	-152.30	-402.40	1757057.61	14608366.03	40°13'24.313"N	80°34'55.692"W	430.25	249.270	3.34	1.88	5.54
3024.00	30.120	271.750	2935.56	74.08	-150.66	-450.49	1757009.53	14608367.67	40°13'24.331"N	80°34'56.312"W	475.02	251.508	0.69	-0.66	-0.41
3117.00	29.620	271.910	3016.21	64.96	-149.18	-496.78	1756963.26	14608369.14	40°13'24.348"N	80°34'56.908"W	518.70	253.285	0.54	-0.54	0.17
3210.00	29.680	273.530	3097.03	55.21	-147.00	-542.74	1756917.32	14608371.33	40°13'24.371"N	80°34'57.500"W	562.29	254.845	0.86	0.06	1.74
3303.00	29.220	270.930	3178.02	45.89	-145.21	-588.42	1756871.66	14608373.11	40°13'24.391"N	80°34'58.089"W	606.07	256.137	1.46	-0.49	-2.80
3396.00	30.970	271.230	3258.48	37.31	-144.33	-635.04	1756825.06	14608373.99	40°13'24.402"N	80°34'58.690"W	651.23	257.195	1.89	1.88	0.32
3488.00	30.450	269.120	3337.58	29.40	-144.18	-682.02	1756778.10	14608374.14	40°13'24.406"N	80°34'59.296"W	697.09	258.063	1.30	-0.57	-2.29
3581.00	30.220	268.520	3417.84	22.58	-145.15	-728.97	1756731.16	14608373.18	40°13'24.398"N	80°34'59.901"W	743.28	258.739	0.41	-0.25	-0.65
3674.00	30.210	273.500	3498.22	14.04	-144.32	-775.73	1756684.42	14608374.00	40°13'24.409"N	80°35'00.504"W	789.04	259.461	2.69	-0.01	5.35
3766.00	28.490	273.260	3578.41	3.97	-141.66	-820.75	1756639.42	14608376.66	40°13'24.437"N	80°35'01.084"W	832.88	260.207	1.87	-1.87	-0.26
3859.00	28.160	272.010	3660.28	-5.33	-139.63	-864.82	1756595.36	14608378.69	40°13'24.459"N	80°35'01.652"W	876.02	260.828	0.73	-0.35	-1.34
3952.00	30.430	269.820	3741.38	-13.54	-138.94	-910.31	1756549.89	14608379.39	40°13'24.468"N	80°35'02.239"W	920.85	261.322	2.70	2.44	-2.35
4044.00	29.680	265.820	3821.02	-19.44	-140.67	-956.33	1756503.89	14608377.66	40°13'24.453"N	80°35'02.832"W	966.62	261.632	2.32	-0.82	-4.35
4137.00	27.420	266.250	3902.70	-23.73	-143.75	-1000.67	1756459.57	14608374.58	40°13'24.425"N	80°35'03.404"W	1010.94	261.825	2.44	-2.43	0.46
4230.00	27.170	270.690	3985.36	-29.65	-144.89	-1043.27	1756416.98	14608373.43	40°13'24.416"N	80°35'03.953"W	1053.29	262.093	2.21	-0.27	4.77
4322.00	27.820	273.380	4066.97	-38.17	-143.37	-1085.71	1756374.56	14608374.95	40°13'24.432"N	80°35'04.500"W	1095.14	262.477	1.52	0.71	2.92
4415.00	29.920	274.650	4148.41	-48.69	-140.21	-1130.50	1756329.79	14608378.11	40°13'24.466"N	80°35'05.077"W	1139.16	262.930	2.35	2.26	1.37
4508.00	33.830	273.880	4227.37	-60.37	-136.58	-1179.46	1756280.84	14608381.74	40°13'24.504"N	80°35'05.708"W	1187.34	263.395	4.23	4.20	-0.83
4600.00	32.880	270.580	4304.22	-70.69	-134.60	-1229.99	1756230.34	14608383.73	40°13'24.526"N	80°35'06.360"W	1237.33	263.755	2.23	-1.03	-3.59
4693.00	30.340	266.450	4383.42	-77.56	-135.79	-1278.69	1756181.65	14608382.53	40°13'24.516"N	80°35'06.987"W	1285.88	263.938	3.59	-2.73	-4.44
4786.00	29.950	264.710	4463.85	-81.72	-139.39	-1325.25	1756135.11	14608378.93	40°13'24.483"N	80°35'07.588"W	1332.56	263.996	1.03	-0.42	-1.87
4879.00	31.650	266.160	4543.73	-85.84	-143.16	-1372.72	1756087.66	14608375.16	40°13'24.448"N	80°35'08.200"W	1380.16	264.046	1.99	1.83	1.56
4972.00	32.050	266.610	4622.73	-90.89	-146.26	-1421.69	1756038.71	14608372.07	40°13'24.420"N	80°35'08.832"W	1429.20	264.126	0.50	0.43	0.48
5065.00	29.940	267.480	4702.44	-96.36	-148.74	-1469.52	1755990.90	14608369.59	40°13'24.397"N	80°35'09.448"W	1477.02	264.221	2.32	-2.27	0.94
5157.00	28.280	269.930	4782.82	-102.73	-149.77	-1514.25	1755946.18	14608368.55	40°13'24.389"N	80°35'10.025"W	1521.64	264.351	2.22	-1.80	2.66
5250.00	28.870	275.720	4864.51	-112.26	-147.56	-1558.63	1755901.82	14608370.77	40°13'24.413"N	80°35'10.597"W	1565.60	264.592	3.04	0.63	6.23
5312.00	29.830	277.630	4918.55	-120.74	-144.02	-1588.81	1755871.65	14608374.30	40°13'24.449"N	80°35'10.986"W	1595.32	264.820	2.16	1.55	3.08
5406.00	32.200	275.270	4999.11	-134.03	-138.62	-1636.93	1755823.55	14608379.71	40°13'24.505"N	80°35'11.606"W	1642.79	265.160	2.83	2.52	-2.51
5499.00	32.290	275.030	5077.77	-146.59	-134.16	-1686.35	1755774.15	14608384.16	40°13'24.551"N	80°35'12.243"W	1691.68	265.451	0.17	0.10	-0.26

REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot #206
Area	Brooke County, WV	Well	John Good Jr BRK 206H
Field	Brooke	Wellbore	John Good Jr BRK 206H AWB
Facility	John Good Jr BRK Pad		

WELLPATH DATA (184 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]
5592.00	31.650	276.720	5156.66	-159.66	-129.13	-1735.33	1755725.19	14608389.19	40°13'24.603"N	80°35'12.874"W	1740.12	265.744	1.18	-0.69	1.82
5685.00	32.440	274.670	5235.49	-172.60	-124.24	-1784.42	1755676.12	14608394.07	40°13'24.654"N	80°35'13.506"W	1788.74	266.017	1.45	0.85	-2.20
5731.00	31.620	263.930	5274.52	-176.35	-124.51	-1808.73	1755651.82	14608393.80	40°13'24.652"N	80°35'13.820"W	1813.01	266.062	12.50	-1.78	-23.35
5777.00	30.370	251.800	5313.99	-175.32	-129.43	-1831.79	1755628.77	14608388.89	40°13'24.605"N	80°35'14.117"W	1836.36	265.958	13.83	-2.72	-26.37
5824.00	28.710	240.410	5354.92	-169.65	-138.72	-1852.91	1755607.65	14608379.60	40°13'24.514"N	80°35'14.390"W	1858.10	265.718	12.44	-3.53	-24.23
5870.00	27.320	232.960	5395.54	-160.98	-150.54	-1870.95	1755589.62	14608367.79	40°13'24.398"N	80°35'14.624"W	1877.00	265.400	8.18	-3.02	-16.20
5917.00	26.390	228.600	5437.47	-150.47	-163.94	-1887.40	1755573.18	14608354.39	40°13'24.266"N	80°35'14.836"W	1894.51	265.036	4.63	-1.98	-9.28
5963.00	27.080	227.500	5478.55	-139.37	-177.78	-1902.79	1755557.80	14608340.56	40°13'24.130"N	80°35'15.036"W	1911.07	264.662	1.85	1.50	-2.39
6009.00	31.450	221.110	5518.68	-126.05	-193.91	-1918.41	1755542.18	14608324.44	40°13'23.972"N	80°35'15.238"W	1928.18	264.228	11.67	9.50	-13.89
6056.00	33.930	212.890	5558.26	-108.58	-214.17	-1933.60	1755526.99	14608304.18	40°13'23.772"N	80°35'15.435"W	1945.43	263.679	10.81	5.28	-17.49
6102.00	36.490	203.160	5595.87	-87.57	-237.55	-1945.97	1755514.64	14608280.81	40°13'23.542"N	80°35'15.596"W	1960.41	263.040	13.39	5.57	-21.15
6148.00	37.920	197.560	5632.51	-63.46	-263.61	-1955.61	1755504.99	14608254.76	40°13'23.284"N	80°35'15.722"W	1973.30	262.323	7.99	3.11	-12.17
6195.00	41.700	192.710	5668.62	-36.12	-292.65	-1963.42	1755497.19	14608225.74	40°13'22.998"N	80°35'15.824"W	1985.10	261.522	10.40	8.04	-10.32
6241.00	45.350	191.240	5701.97	-6.64	-323.63	-1969.97	1755490.64	14608194.76	40°13'22.692"N	80°35'15.910"W	1996.38	260.671	8.23	7.93	-3.20
6288.00	50.480	188.360	5733.46	26.27	-357.99	-1975.87	1755484.74	14608160.42	40°13'22.353"N	80°35'15.989"W	2008.04	259.730	11.82	10.91	-6.13
6334.00	55.570	184.750	5761.13	61.57	-394.48	-1980.03	1755480.59	14608123.94	40°13'21.992"N	80°35'16.044"W	2018.94	258.732	12.72	11.07	-7.85
6380.00	62.190	179.350	5784.90	100.12	-433.80	-1981.37	1755479.25	14608084.64	40°13'21.604"N	80°35'16.064"W	2028.30	257.651	17.55	14.39	-11.74
6427.00	66.380	175.890	5805.29	142.12	-476.09	-1979.59	1755481.03	14608042.37	40°13'21.186"N	80°35'16.044"W	2036.03	256.477	11.11	8.91	-7.36
6473.00	68.190	171.420	5823.06	184.47	-518.24	-1974.89	1755485.72	14608000.23	40°13'20.769"N	80°35'15.986"W	2041.76	255.296	9.79	3.93	-9.72
6519.00	72.440	167.670	5838.56	227.76	-560.81	-1967.02	1755493.59	14607957.67	40°13'20.348"N	80°35'15.887"W	2045.40	254.087	12.01	9.24	-8.15
6566.00	74.520	164.760	5851.93	272.69	-604.56	-1956.27	1755504.33	14607913.94	40°13'19.915"N	80°35'15.751"W	2047.56	252.827	7.40	4.43	-6.19
6612.00	74.390	164.210	5864.26	316.76	-647.27	-1944.42	1755516.18	14607871.25	40°13'19.493"N	80°35'15.600"W	2049.32	251.588	1.19	-0.28	-1.20
6658.00	78.920	163.140	5874.87	361.19	-690.21	-1931.84	1755528.76	14607828.33	40°13'19.068"N	80°35'15.441"W	2051.44	250.339	10.10	9.85	-2.33
6704.00	83.090	162.380	5882.06	406.20	-733.59	-1918.37	1755542.22	14607784.96	40°13'18.638"N	80°35'15.270"W	2053.85	249.073	9.21	9.07	-1.63
6797.00	87.880	161.970	5889.38	497.92	-821.82	-1890.00	1755570.58	14607696.76	40°13'17.765"N	80°35'14.909"W	2060.95	246.499	5.17	5.15	-0.44
6890.00	89.320	159.230	5891.65	589.50	-909.51	-1859.12	1755601.44	14607609.11	40°13'16.897"N	80°35'14.517"W	2069.67	243.932	3.33	1.55	-2.95
6982.00	89.260	156.040	5892.79	679.18	-994.57	-1824.12	1755636.43	14607524.08	40°13'16.055"N	80°35'14.070"W	2077.64	241.399	3.47	-0.07	-3.47
7075.00	89.260	153.610	5893.99	768.71	-1078.72	-1784.57	1755675.97	14607439.96	40°13'15.222"N	80°35'13.566"W	2085.27	238.848	2.61	0.00	-2.61
7168.00	89.170	153.030	5895.27	857.56	-1161.81	-1742.82	1755717.71	14607356.91	40°13'14.399"N	80°35'13.032"W	2094.57	236.311	0.63	-0.10	-0.62
7261.00	89.200	153.490	5896.59	946.39	-1244.86	-1700.98	1755759.53	14607273.89	40°13'13.576"N	80°35'12.498"W	2107.84	233.802	0.50	0.03	0.49

REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot #206
Area	Brooke County, WV	Well	John Good Jr BRK 206H
Field	Brooke	Wellbore	John Good Jr BRK 206H AWB
Facility	John Good Jr BRK Pad		

WELLPATH DATA (184 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]
7353.00	89.170	154.640	5897.90	1034.63	-1327.58	-1660.74	1755799.75	14607191.20	40°13'12.757"N	80°35'11.984"W	2126.16	231.362	1.25	-0.03	1.25
7446.00	89.140	155.490	5899.27	1124.27	-1411.90	-1621.54	1755838.94	14607106.91	40°13'11.922"N	80°35'11.484"W	2150.09	228.953	0.91	-0.03	0.91
7539.00	89.230	156.910	5900.59	1214.38	-1496.98	-1584.02	1755876.45	14607021.86	40°13'11.079"N	80°35'11.005"W	2179.47	226.618	1.53	0.10	1.53
7632.00	89.260	158.050	5901.82	1304.99	-1582.88	-1548.40	1755912.05	14606936.00	40°13'10.229"N	80°35'10.551"W	2214.29	224.369	1.23	0.03	1.23
7725.00	89.200	159.350	5903.07	1396.02	-1669.52	-1514.62	1755945.81	14606849.39	40°13'09.371"N	80°35'10.121"W	2254.19	222.215	1.40	-0.06	1.40
7818.00	89.200	160.290	5904.37	1487.41	-1756.80	-1482.54	1755977.88	14606762.15	40°13'08.507"N	80°35'09.713"W	2298.76	220.161	1.01	0.00	1.01
7910.00	89.200	160.450	5905.65	1577.97	-1843.45	-1451.64	1756008.77	14606675.53	40°13'07.650"N	80°35'09.320"W	2346.39	218.219	0.17	0.00	0.17
8003.00	89.260	161.710	5906.90	1669.71	-1931.41	-1421.49	1756038.91	14606587.60	40°13'06.779"N	80°35'08.936"W	2398.12	216.352	1.36	0.06	1.35
8096.00	89.140	159.800	5908.20	1761.36	-2019.20	-1390.84	1756069.55	14606499.85	40°13'05.910"N	80°35'08.547"W	2451.86	214.559	2.06	-0.13	2.05
8189.00	89.260	157.600	5909.50	1852.39	-2105.84	-1357.06	1756103.31	14606413.25	40°13'05.052"N	80°35'08.116"W	2505.23	212.799	2.37	0.13	-2.37
8281.00	89.200	156.770	5910.74	1941.91	-2190.63	-1321.39	1756138.97	14606328.49	40°13'04.213"N	80°35'07.662"W	2558.31	211.098	0.90	-0.07	-0.90
8374.00	89.170	156.070	5912.06	2032.12	-2275.86	-1284.19	1756176.15	14606243.29	40°13'03.369"N	80°35'07.187"W	2613.17	209.435	0.75	-0.03	-0.75
8466.00	89.200	155.970	5913.37	2121.19	-2359.91	-1246.81	1756213.53	14606159.27	40°13'02.537"N	80°35'06.710"W	2669.02	207.849	0.11	0.03	-0.11
8559.00	89.200	158.280	5914.67	2211.66	-2445.58	-1210.66	1756249.66	14606073.64	40°13'01.688"N	80°35'06.250"W	2728.84	206.337	2.48	0.00	2.48
8652.00	89.050	158.700	5916.09	2302.63	-2532.09	-1176.57	1756283.74	14605987.16	40°13'00.832"N	80°35'05.815"W	2792.09	204.922	0.48	-0.16	0.45
8745.00	89.140	157.790	5917.55	2393.50	-2618.46	-1142.10	1756318.19	14605900.83	40°12'59.977"N	80°35'05.376"W	2856.69	203.566	0.98	0.10	-0.98
8837.00	89.080	158.400	5918.98	2483.35	-2703.80	-1107.78	1756352.50	14605815.51	40°12'59.132"N	80°35'04.939"W	2921.94	202.280	0.67	-0.07	0.66
8930.00	89.110	158.470	5920.45	2574.29	-2790.28	-1073.60	1756386.66	14605729.07	40°12'58.276"N	80°35'04.504"W	2989.70	201.045	0.08	0.03	0.08
9023.00	89.010	159.850	5921.98	2665.47	-2877.18	-1040.52	1756419.73	14605642.20	40°12'57.415"N	80°35'04.083"W	3059.56	199.882	1.49	-0.11	1.48
9116.00	89.080	157.400	5923.53	2756.46	-2963.77	-1006.63	1756453.60	14605555.65	40°12'56.558"N	80°35'03.651"W	3130.05	198.760	2.64	0.08	-2.63
9205.00	89.200	156.640	5924.86	2843.01	-3045.70	-971.89	1756488.33	14605473.75	40°12'55.747"N	80°35'03.208"W	3197.00	197.698	0.86	0.13	-0.85
9298.00	89.230	156.120	5926.14	2933.20	-3130.90	-934.63	1756525.58	14605388.58	40°12'54.903"N	80°35'02.733"W	3267.42	196.621	0.56	0.03	-0.56
9391.00	89.230	155.860	5927.39	3023.23	-3215.84	-896.80	1756563.40	14605303.67	40°12'54.062"N	80°35'02.250"W	3338.55	195.582	0.28	0.00	-0.28
9483.00	89.110	156.900	5928.72	3112.45	-3300.12	-859.94	1756600.24	14605219.42	40°12'53.228"N	80°35'01.780"W	3410.33	194.605	1.14	-0.13	1.13
9576.00	89.140	159.610	5930.14	3203.32	-3386.49	-825.49	1756634.68	14605133.09	40°12'52.372"N	80°35'01.342"W	3485.65	193.699	2.91	0.03	2.91
9669.00	89.200	159.870	5931.49	3294.68	-3473.73	-793.29	1756666.87	14605045.89	40°12'51.509"N	80°35'00.932"W	3563.16	192.864	0.29	0.06	0.28
9761.00	89.080	159.570	5932.87	3385.05	-3560.01	-761.41	1756698.74	14604959.63	40°12'50.655"N	80°35'00.526"W	3640.53	192.072	0.35	-0.13	-0.33
9854.00	89.350	160.840	5934.14	3476.55	-3647.51	-729.92	1756730.22	14604872.17	40°12'49.789"N	80°35'00.125"W	3719.82	191.316	1.40	0.29	1.37
9947.00	89.480	162.190	5935.09	3568.41	-3735.70	-700.43	1756759.69	14604784.01	40°12'48.916"N	80°34'59.751"W	3800.80	190.619	1.46	0.14	1.45
10039.00	89.450	159.960	5935.95	3659.16	-3822.72	-670.60	1756789.51	14604697.03	40°12'48.055"N	80°34'59.371"W	3881.09	189.950	2.42	-0.03	-2.42

REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot #206
Area	Brooke County, WV	Well	John Good Jr BRK 206H
Field	Brooke	Wellbore	John Good Jr BRK 206H AWB
Facility	John Good Jr BRK Pad		

WELLPATH DATA (184 stations)

MD	Inclination	Azimuth	TVD	Vert. Sect	North	East	Grid East	Grid North	Latitude	Longitude	Closure Dist	Closure Dir	DLS	Build Rate	Turn Rate
	[°]	[°]	[ft]	[ft]	[ft]	[ft]	[US ft]	[US ft]			[ft]	[°]	[°/100ft]	[°/100ft]	[°/100ft]
10132.00	89.540	158.490	5936.77	3750.37	-3909.67	-637.61	1756822.48	14604610.11	40°12'47.194"N	80°34'58.952"W	3961.32	189.263	1.58	0.10	-1.58
10225.00	89.480	155.320	5937.57	3840.75	-3995.20	-601.14	1756858.94	14604524.61	40°12'46.347"N	80°34'58.487"W	4040.17	188.557	3.41	-0.06	-3.41
10317.00	89.380	158.580	5938.48	3930.18	-4079.84	-565.12	1756894.95	14604440.01	40°12'45.509"N	80°34'58.027"W	4118.79	187.886	3.54	-0.11	3.54
10410.00	89.380	155.350	5939.49	4020.59	-4165.41	-528.74	1756931.31	14604354.47	40°12'44.662"N	80°34'57.564"W	4198.83	187.234	3.47	0.00	-3.47
10503.00	89.480	151.430	5940.42	4109.46	-4248.54	-487.09	1756972.94	14604271.37	40°12'43.838"N	80°34'57.032"W	4276.37	186.540	4.22	0.11	-4.22
10596.00	89.450	154.590	5941.28	4198.16	-4331.39	-444.89	1757015.13	14604188.55	40°12'43.017"N	80°34'56.493"W	4354.18	185.865	3.40	-0.03	3.40
10689.00	89.450	156.820	5942.18	4288.07	-4416.15	-406.64	1757053.37	14604103.83	40°12'42.178"N	80°34'56.005"W	4434.83	185.261	2.40	0.00	2.40
10781.00	89.450	156.780	5943.06	4377.46	-4500.70	-370.39	1757089.60	14604019.30	40°12'41.341"N	80°34'55.543"W	4515.92	184.705	0.04	0.00	-0.04
10874.00	89.480	157.250	5943.93	4467.90	-4586.32	-334.08	1757125.90	14603933.72	40°12'40.493"N	80°34'55.080"W	4598.47	184.166	0.51	0.03	0.51
10967.00	89.230	158.210	5944.98	4558.60	-4672.37	-298.84	1757161.13	14603847.70	40°12'39.641"N	80°34'54.631"W	4681.92	183.660	1.07	-0.27	1.03
11060.00	89.200	159.340	5946.25	4649.66	-4759.06	-265.17	1757194.78	14603761.05	40°12'38.783"N	80°34'54.203"W	4766.44	183.189	1.22	-0.03	1.22
11152.00	89.230	160.560	5947.51	4740.10	-4845.47	-233.64	1757226.30	14603674.67	40°12'37.928"N	80°34'53.801"W	4851.10	182.761	1.33	0.03	1.33
11245.00	89.140	162.180	5948.83	4831.91	-4933.58	-203.93	1757256.00	14603586.59	40°12'37.055"N	80°34'53.424"W	4937.80	182.367	1.74	-0.10	1.74
11338.00	89.170	161.050	5950.20	4923.79	-5021.83	-174.60	1757285.32	14603498.38	40°12'36.182"N	80°34'53.051"W	5024.86	181.991	1.22	0.03	-1.22
11431.00	89.230	156.770	5951.50	5014.87	-5108.57	-141.15	1757318.76	14603411.67	40°12'35.323"N	80°34'52.625"W	5110.52	181.583	4.60	0.06	-4.60
11523.00	89.140	152.740	5952.81	5103.40	-5191.76	-101.92	1757357.97	14603328.52	40°12'34.499"N	80°34'52.125"W	5192.76	181.125	4.38	-0.10	-4.38
11616.00	89.200	152.310	5954.16	5191.86	-5274.26	-59.02	1757400.85	14603246.05	40°12'33.682"N	80°34'51.577"W	5274.59	180.641	0.47	0.06	-0.46
11709.00	89.170	155.950	5955.48	5281.07	-5357.92	-18.45	1757441.40	14603162.42	40°12'32.854"N	80°34'51.059"W	5357.95	180.197	3.91	-0.03	3.91
11802.00	89.170	158.690	5956.83	5371.61	-5443.71	17.40	1757477.24	14603076.67	40°12'32.004"N	80°34'50.602"W	5443.74	179.817	2.95	0.00	2.95
11895.00	89.170	160.260	5958.18	5462.89	-5530.79	50.00	1757509.83	14602989.61	40°12'31.142"N	80°34'50.187"W	5531.02	179.482	1.69	0.00	1.69
11988.00	89.080	160.350	5959.60	5554.42	-5618.34	81.34	1757541.63	14602902.10	40°12'30.275"N	80°34'49.789"W	5618.93	179.171	0.14	-0.10	0.10
12080.00	89.200	160.940	5960.98	5645.06	-5705.13	111.83	1757571.63	14602815.34	40°12'29.416"N	80°34'49.401"W	5706.23	178.877	0.65	0.13	0.64
12173.00	89.230	160.990	5962.25	5736.77	-5793.04	142.16	1757601.95	14602727.47	40°12'28.546"N	80°34'49.015"W	5794.78	178.594	0.06	0.03	0.05
12266.00	89.080	157.800	5963.63	5828.01	-5880.07	174.88	1757634.66	14602640.47	40°12'27.685"N	80°34'48.599"W	5882.67	178.296	3.43	-0.16	-3.43
12359.00	89.170	156.990	5965.05	5918.58	-5965.91	210.62	1757670.39	14602554.66	40°12'26.835"N	80°34'48.144"W	5969.63	177.978	0.88	0.10	-0.87
12452.00	89.170	155.780	5966.39	6008.77	-6051.11	247.87	1757707.62	14602469.49	40°12'25.991"N	80°34'47.689"W	6056.19	177.654	1.30	0.00	-1.30
12545.00	89.140	157.450	5967.76	6099.05	-6136.46	284.78	1757744.52	14602384.18	40°12'25.146"N	80°34'47.198"W	6143.07	177.343	1.80	-0.03	1.80
12637.00	89.110	157.900	5969.17	6188.75	-6221.56	319.72	1757779.45	14602299.12	40°12'24.303"N	80°34'46.753"W	6229.77	177.058	0.49	-0.03	0.49
12730.00	89.200	157.230	5970.54	6279.39	-6307.51	355.21	1757814.92	14602213.20	40°12'23.452"N	80°34'46.301"W	6317.50	176.777	0.73	0.10	-0.72
12823.00	89.140	158.940	5971.89	6370.21	-6393.78	389.91	1757849.61	14602126.96	40°12'22.598"N	80°34'45.859"W	6405.65	176.510	1.84	-0.06	1.84

REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot #206
Area	Brooke County, WV	Well	John Good Jr BRK 206H
Field	Brooke	Wellbore	John Good Jr BRK 206H AWB
Facility	John Good Jr BRK Pad		

WELLPATH DATA (184 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]	[°]	[°/100ft]	[°/100ft]	[°/100ft]
12915.00	89.570	156.480	5972.92	6459.92	-6478.89	424.80	1757884.49	14602041.88	40°12'21.756"N	80°34'45.414"W	6492.80	176.249	2.71	0.47	-2.67
13008.00	89.380	156.380	5973.78	6550.13	-6564.13	461.99	1757921.66	14601956.68	40°12'20.912"N	80°34'44.940"W	6580.36	175.974	0.23	-0.20	-0.11
13101.00	89.450	156.270	5974.73	6640.31	-6649.29	499.33	1757958.99	14601871.54	40°12'20.068"N	80°34'44.464"W	6668.02	175.705	0.14	0.08	-0.12
13194.00	89.510	161.490	5975.57	6731.37	-6736.01	532.83	1757992.47	14601784.86	40°12'19.210"N	80°34'44.038"W	6757.05	175.477	5.61	0.06	5.61
13286.00	89.450	161.080	5976.41	6822.18	-6823.15	562.35	1758021.98	14601697.76	40°12'18.347"N	80°34'43.663"W	6846.28	175.288	0.45	-0.07	-0.45
13379.00	89.570	157.830	5977.20	6913.45	-6910.22	594.98	1758054.60	14601610.72	40°12'17.485"N	80°34'43.247"W	6935.78	175.079	3.50	0.13	-3.49
13472.00	89.380	157.350	5978.05	7004.10	-6996.19	630.43	1758090.04	14601524.78	40°12'16.634"N	80°34'42.796"W	7024.54	174.851	0.56	-0.20	-0.52
13565.00	89.600	159.030	5978.88	7094.97	-7082.53	664.98	1758124.57	14601438.48	40°12'15.779"N	80°34'42.356"W	7113.67	174.636	1.82	0.24	1.81
13658.00	89.600	159.920	5979.53	7186.25	-7169.62	697.59	1758157.17	14601351.42	40°12'14.917"N	80°34'41.941"W	7203.48	174.443	0.96	0.00	0.96
13751.00	89.570	159.240	5980.20	7277.57	-7256.77	730.03	1758189.60	14601264.30	40°12'14.054"N	80°34'41.528"W	7293.40	174.255	0.73	-0.03	-0.73
13843.00	89.540	158.400	5980.92	7367.73	-7342.65	763.02	1758222.57	14601178.45	40°12'13.204"N	80°34'41.108"W	7382.19	174.067	0.54	-0.03	-0.54
13936.00	89.540	158.930	5981.66	7458.81	-7429.38	796.59	1758256.14	14601091.76	40°12'12.346"N	80°34'40.681"W	7471.96	173.880	0.20	0.00	0.20
14029.00	89.510	156.480	5982.44	7549.50	-7515.41	831.87	1758291.40	14601005.76	40°12'11.494"N	80°34'40.231"W	7561.31	173.684	2.63	-0.03	-2.63
14122.00	89.570	155.030	5983.18	7639.44	-7600.21	870.06	1758329.57	14600921.00	40°12'10.654"N	80°34'39.745"W	7649.85	173.469	1.56	0.06	-1.56
14215.00	89.510	154.840	5983.93	7729.03	-7684.45	909.46	1758368.96	14600836.79	40°12'09.820"N	80°34'39.242"W	7738.08	173.250	0.21	-0.06	-0.20
14307.00	89.320	156.810	5984.87	7818.03	-7768.37	947.13	1758406.61	14600752.90	40°12'08.989"N	80°34'38.762"W	7825.89	173.049	2.15	-0.21	2.14
14400.00	89.320	158.860	5985.97	7908.76	-7854.49	982.21	1758441.68	14600666.82	40°12'08.136"N	80°34'38.315"W	7915.66	172.872	2.20	0.00	2.20
14493.00	89.290	158.730	5987.10	7999.83	-7941.18	1015.85	1758475.31	14600580.16	40°12'07.278"N	80°34'37.887"W	8005.89	172.710	0.14	-0.03	-0.14
14586.00	89.290	160.830	5988.25	8091.20	-8028.44	1047.99	1758507.43	14600492.93	40°12'06.414"N	80°34'37.478"W	8096.55	172.563	2.26	0.00	2.26
14679.00	89.320	159.150	5989.38	8182.64	-8115.82	1079.81	1758539.24	14600405.59	40°12'05.549"N	80°34'37.073"W	8187.33	172.421	1.81	0.03	-1.81
14771.00	89.350	157.430	5990.45	8272.55	-8201.28	1113.84	1758573.26	14600320.16	40°12'04.703"N	80°34'36.640"W	8276.57	172.266	1.87	0.03	-1.87
14864.00	89.290	157.310	5991.55	8363.12	-8287.11	1149.62	1758609.02	14600234.36	40°12'03.853"N	80°34'36.184"W	8366.47	172.102	0.14	-0.06	-0.13
14957.00	89.320	156.500	5992.68	8453.52	-8372.65	1186.09	1758645.49	14600148.85	40°12'03.006"N	80°34'35.719"W	8456.25	171.937	0.87	0.03	-0.87
15050.00	89.260	157.600	5993.83	8543.96	-8458.28	1222.35	1758681.73	14600063.25	40°12'02.158"N	80°34'35.257"W	8546.15	171.777	1.18	-0.06	1.18
15142.00	89.320	157.190	5994.97	8633.57	-8543.21	1257.71	1758717.08	14599978.36	40°12'01.317"N	80°34'34.807"W	8635.29	171.625	0.45	0.07	-0.45
15232.00	89.290	156.370	5996.06	8721.00	-8625.91	1293.19	1758752.55	14599895.69	40°12'00.498"N	80°34'34.354"W	8722.31	171.474	0.91	-0.03	-0.91
15325.00	89.630	155.700	5996.94	8811.06	-8710.89	1330.97	1758790.30	14599810.74	40°11'59.657"N	80°34'33.873"W	8811.99	171.313	0.81	0.37	-0.72
15418.00	90.000	158.830	5997.24	8901.58	-8796.65	1366.90	1758826.23	14599725.01	40°11'58.807"N	80°34'33.415"W	8902.22	171.167	3.39	0.40	3.37
15511.00	90.980	156.870	5996.45	8992.32	-8882.78	1401.96	1758861.27	14599638.92	40°11'57.955"N	80°34'32.968"W	8992.74	171.031	2.36	1.05	-2.11
15603.00	90.520	159.220	5995.24	9082.15	-8968.10	1436.36	1758895.65	14599553.64	40°11'57.110"N	80°34'32.531"W	9082.39	170.901	2.60	-0.50	2.55

REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY		Slot	Slot #206
Area	Brooke County, WV		Well	John Good Jr BRK 206H
Field	Brooke		Wellbore	John Good Jr BRK 206H AWB
Facility	John Good Jr BRK Pad			

WELLPATH DATA (184 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]
15696.00	90.550	156.810	5994.37	9172.95	-9054.32	1471.17	1758930.45	14599467.44	40°11'56.256"N	80°34'32.087"W	9173.07	170.771	2.59	0.03	-2.59
15789.00	90.550	156.630	5993.48	9263.27	-9139.75	1507.92	1758967.19	14599382.05	40°11'55.410"N	80°34'31.619"W	9263.31	170.631	0.19	0.00	-0.19
15896.00	90.460	157.950	5992.54	9367.44	-9238.45	1549.23	1759008.48	14599283.39	40°11'54.433"N	80°34'31.093"W	9367.44	170.480	1.24	-0.08	1.23
15920.00	90.460	157.950	5992.34	9390.87	-9260.69	1558.24	1759017.49	14599261.16	40°11'54.213"N	80°34'30.978"W	9390.87	170.449	0.00	0.00	0.00

HOLE & CASING SECTIONS - Ref Wellbore: John Good Jr BRK 206H AWB Ref Wellpath: John Good Jr BRK 206H AWP Proj: 15920'

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	End N/S [ft]	Start E/W [ft]	End E/W [ft]
17.5in Open Hole	26.00	400.00	374.00	26.00	399.99	0.00	1.42	0.00	-1.71
13.375in Casing Surface	26.00	380.00	354.00	26.00	379.99	0.00	1.36	0.00	-1.67
12.25in Open Hole	400.00	1680.00	1280.00	399.99	1675.35	1.42	-63.99	-1.71	-44.81
9.625in Casing Intermediate	26.00	1660.00	1634.00	26.00	1655.62	0.00	-61.27	0.00	-43.07
8.75in Open Hole	1680.00	5341.00	3661.00	1675.35	4943.62	-63.99	-142.18	-44.81	-1603.28
8.5in Open Hole	5341.00	15920.00	10579.00	4943.62	5992.34	-142.18	-9260.69	-1603.28	1558.24

REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot #206
Area	Brooke County, WV	Well	John Good Jr BRK 206H
Field	Brooke	Wellbore	John Good Jr BRK 206H AWB
Facility	John Good Jr BRK Pad		

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
John Good Jr BRK 206H LP Rev-2	5890.00	-760.47	-1899.33	1755561.25	14607758.10	40°13'18.372"N	80°35'15.026"W	point
John Good Jr N LL	5897.00	-13.47	3.41	1757463.26	14608504.81	40°13'25.666"N	80°34'50.452"W	polygon
John Good Jr S LL	5897.00	-13.47	3.41	1757463.26	14608504.81	40°13'25.666"N	80°34'50.452"W	polygon
John Good Jr SW LL	5897.00	-13.47	3.41	1757463.26	14608504.81	40°13'25.666"N	80°34'50.452"W	polygon
John Good Jr BRK 206H BHL Rev-2	5998.00	-9266.47	1553.21	1759012.46	14599255.38	40°11'54.156"N	80°34'31.043"W	point

WELLPATH COMPOSITION - Ref Wellbore: John Good Jr BRK 206H AWB Ref Wellpath: John Good Jr BRK 206H AWP Proj: 15920'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
26.00	265.00	OWSG EMS rev2 - Standard	01 MSS <17.5"> (174'-265')	John Good Jr BRK 206H AWB
265.00	1605.00	BHI NaviTrak (Axial)	02_APS EM <12.25"> (265')(423'-1605')	John Good Jr BRK 206H AWB
1605.00	5250.00	BHI NaviTrak (Axial)	03_APS EM <8.75"> (1605')(1723'-5250')	John Good Jr BRK 206H AWB
5250.00	15896.00	BHI AutoTrak Curve (Short)	04_BHI AT Curve <8.5"> (5250')(5312'-15896')	John Good Jr BRK 206H AWB
15896.00	15920.00	Blind Drilling (std)	Projection to bit	John Good Jr BRK 206H AWB

REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot #206
Area	Brooke County, WV	Well	John Good Jr BRK 206H
Field	Brooke	Wellbore	John Good Jr BRK 206H AWB
Facility	John Good Jr BRK Pad		

WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
174.00	0.700	300.480	174.00	MSS <17.5"> (174'-265')
423.00	0.170	325.030	422.99	APS EM <12.25"> (265')(423'-1605')
1723.00	8.930	209.350	1717.81	APS EM <8.75">(1605')(1723'-5250')
5312.00	29.830	277.630	4918.55	BHI AT Curve <8.5"> (5250')(5312'-15896')
15920.00	90.460	157.950	5992.34	Projection to Bit

COMMENTS

Wellpath general comments
API: 47-009-00196-0000
Job#: 8680420
Rig: SDC-46
Duration: 07/24/17 - 08/02/17

Top Hole Latitude: 40°15'00"

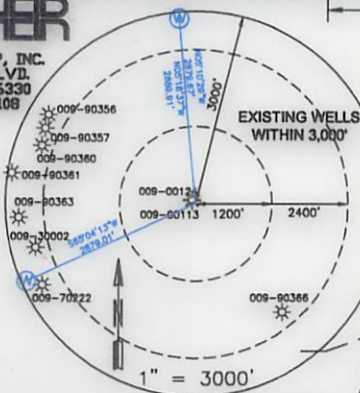
10,956'

Bottom Hole Latitude: 40°15'00"-9,444'

THRASHER

THE THRASHER GROUP, INC.
600 WHITE OAKS BLVD.
BRIDGEPORT, WV 26330
PHONE 304-624-4108

GRID NORTH
UTM, NAD83 DATUM, ZONE 17, US FT



TRACT	ADJOINER	TAX PARCEL
A	JOHN PRATHER GOOD III & LAURIE THOMAS	03-832-0119-0000
B	JOHN PRATHER GOOD JR IRREVOCABLE TRUST	03-833-0057-0000
C	MARK T. NICHOLSON	03-838-0045-0000
D	MARK T. NICHOLSON	03-838-0046-0000
E	HARRY J. LOWE	03-838-0047-0000
F	LESLIE & GAYLENE ELSON	03-838-0051-0000
G	LESLIE & GAYLENE ELSON	03-838-0052-0000
H	LESLIE & GAYLENE ELSON	03-838-0050-0000
I	LESLIE & GAYLENE ELSON	03-838-0049-0000
J	PENNY M. STUMPF	03-838-0057-0000
K	MATTHEW T. NICHOLSON	03-838-0043-0000
L	MARK T. NICHOLSON & KIMBERLY J. NICHOLSON	03-838-0042-0001
M	ROY T. NICHOLSON	03-838-0042-0000
N	ROY T. NICHOLSON	03-838-0041-0000
O	AMY LYNN RICE	03-838-0040-0000
P	GEORGE S RICE	03-838-0039-0000
Q	BRIAN CORWIN	03-843-0026-0000
R	BETHANY VOLUNTEER FIRE DEPARTMENT	03-843-0063-0000
S	ROBERT & MARY MOZINGO	03-843-0006-0001
T	BRIAN LEE BECK	03-843-0007-0000
U	WINDSOR POWER HOUSE COAL CO	03-843-0008-0000
V	MARY W. CHAMBERS	03-843-0012-0000
W	MARY W. CHAMBERS	03-843-0013-0000
X	WINDSOR POWER HOUSE COAL CO	03-843-0015-0000
Y	MARY W. CHAMBERS	03-843-0014-0000
Z	WINDSOR POWER HOUSE COAL CO	03-843-0016-0000
AA	WINDSOR POWER HOUSE COAL CO	03-842-0048-0000
AB	JOHN B. DAUGHERTY	03-837-0085-0000
AC	KEITH LOHSE	03-837-0087-0000
AD	THEODORE W. BUNNELL	03-837-0086-0000
AE	WILLIAM E. JOHNSTON & GLORIA BOHMAN	03-837-0088-0000
AF	JOSEPH K. BOHMAN, SR. & GLORIA J. BOHMAN	03-837-0089-0001
AG	JOSEPH K. & GLORIA BOHMAN	03-837-0070-0000
AH	JOHN E. & SHERRILL J. RIPLEY	03-837-0061-0000
AI	TRAVIS POLEN	03-837-0059-0000
AJ	JEREMY S. PERSINGER	03-837-0057-0000
AK	ERIVAN CORWIN, RICHARD CORWIN, DIANE E. DIGHT, JOEY TENHANT	03-837-0056-0000
AL	MARLIN G. SR & JOY CRAWFORD	03-837-0055-0000
AM	LAWRENCE PAUL SMITH, SR.	03-837-0054-0000
AN	WILLIAM E. & HAZEL E. JOHNSTON	03-837-0053-0001
AO	CLEO KLAGES	03-837-0052-0000
AP	BONNIE LUCACENA & SHAYNE SCHULTZNER	03-837-0049-0000
AQ	LLOYD M. & ALICE MEDHA	03-832-0125-0000
AR	BRAFORD L. JONES & SHARON E. SNIDER	03-832-0123-0000
AS	TRAVIS A. MILLER	03-832-0122-0000
AT	CRAIG & COURTNEY HAVELKA	03-832-0121-0000

SURFACE HOLE LOCATION (SHL):
UTM (NAD83, ZONE 17, METERS):
NORTHING: 4,452,685.274
EASTING: 535,674.834

LANDING POINT LOCATION (LPL):
UTM (NAD83, ZONE 17, METERS):
NORTHING: 4,452,408.079
EASTING: 535,108.130

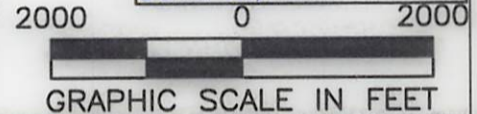
BOTTOM HOLE LOCATION (BHL):
UTM (NAD83, ZONE 17, METERS):
NORTHING: 4,449,862.634
EASTING: 536,149.743

TRACT	SURFACE OWNER	TAX PARCEL	ACRES
1	JOHN P. GOOD III, TRUSTEE OF THE JOHN P. GOOD JR. IRREVOCABLE TRUST	03-838-0001-0000	66.57
2	PHYLLIS A. MARSH, TRUSTEE OF THE PHYLLIS A. MARSH LIVING TRUST	03-832-0118-0000	60.023
3	BONNIE LEE LUCACENA, SHELBY CARRELL, SHAYNE SCHULTZNER, SHARON SCHULTZNER, SUEY SCHULTZNER, CHEW SHARRIE, JOHN THOMAS RODGERS, PAIGE ELIZABETH ROLLINS	03-837-0048-0000	81.50
4	WILDA L. RIPLEY, JOHN E. RIPLEY, & SHERRILL J. RIPLEY	03-837-0062-0000	95.40
5	DEANNA ARACIO AND MORGAN A. ARACIO, TENANTS IN COMMON	03-837-0084-0000	8.30
6	LESLIE & GAYLENE ELSON	03-838-0053-0000	0.46
7	LESLIE & GAYLENE ELSON	03-838-0054-0000	0.47
8	LESLIE & GAYLENE ELSON	03-838-0055-0000	0.45
9	LESLIE & GAYLENE ELSON	03-838-0048-0000	0.45
10	LEONA MAE BECK	03-843-0006-0000	12.81

I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

P.S. 2270

Michael S. Wolf 8/23/17



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS WVDEP OFFICE OF OIL & GAS 601 57TH STREET CHARLESTON, WV 25034	MINIMUM DEGREE OF ACCURACY: 1/200 PROVEN SOURCE OF ELEVATION: SURVEY GRADE GPS (NAVD 88, US FT)	COMPANY: JOHN GOOD JR OPERATOR'S WELL #: BRK 206H API WELL #: 47 009 00196 STATE COUNTY PERMIT
	WELL TYPE: OIL <input type="checkbox"/> WASTE DISPOSAL <input type="checkbox"/> PRODUCTION <input checked="" type="checkbox"/> DEEP <input type="checkbox"/> GAS <input checked="" type="checkbox"/> LIQUID INJECTION <input type="checkbox"/> STORAGE <input type="checkbox"/> SHALLOW <input checked="" type="checkbox"/>	WATERSHED: BUFFALO CREEK DISTRICT: BUFFALO COUNTY: BROOKE SURFACE OWNER: JOHN P. GOOD III, TRUSTEE OF THE JOHN P GOOD JR., IRREVOCABLE TRUST OIL & GAS ROYALTY OWNER: JOHN P. GOOD, JR.

DRILL <input type="checkbox"/> DRILL DEEPER <input type="checkbox"/> REDRILL <input type="checkbox"/> FRACTURE OR STIMULATE <input type="checkbox"/> PLUG OFF OLD FORMATION <input type="checkbox"/> PERFORATE NEW FORMATION <input type="checkbox"/>	CONVERT <input type="checkbox"/> PLUG & ABANDON <input type="checkbox"/> CLEAN OUT & REPLUG <input type="checkbox"/> OTHER CHANGE <input checked="" type="checkbox"/> (SPECIFY) AS-DRILLED	TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: 5,992' TVD 15,920' TMD
WELL OPERATOR: SWN PRODUCTION COMPANY, LLC ADDRESS: P.O. BOX 1300 CITY: JANE LEW STATE: WV ZIP CODE: 26378	DESIGNATED AGENT: DEE SOUTHALL ADDRESS: P.O. BOX 1300 CITY: JANE LEW STATE: WV ZIP CODE: 26378	REVISIONS: DATE: 08-18-2017

LEGEND: ○ PROPOSED SURFACE HOLE / BOTTOM HOLE * EXISTING / PRODUCING WELLHEAD LPL * LANDING POINT LOCATION ⊙ EXISTING WATER WELL ⊕ EXISTING SPRING --- SURVEYED BOUNDARY --- DRILLING UNIT = = = LEASE BOUNDARY --- PROPOSED PATH --- AS-DRILLED PATH	DRAWN BY: R. DOERR SCALE: 1" = 2000' DRAWING NO: 050-5700 WELL LOCATION PLAT
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