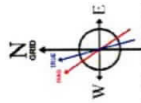


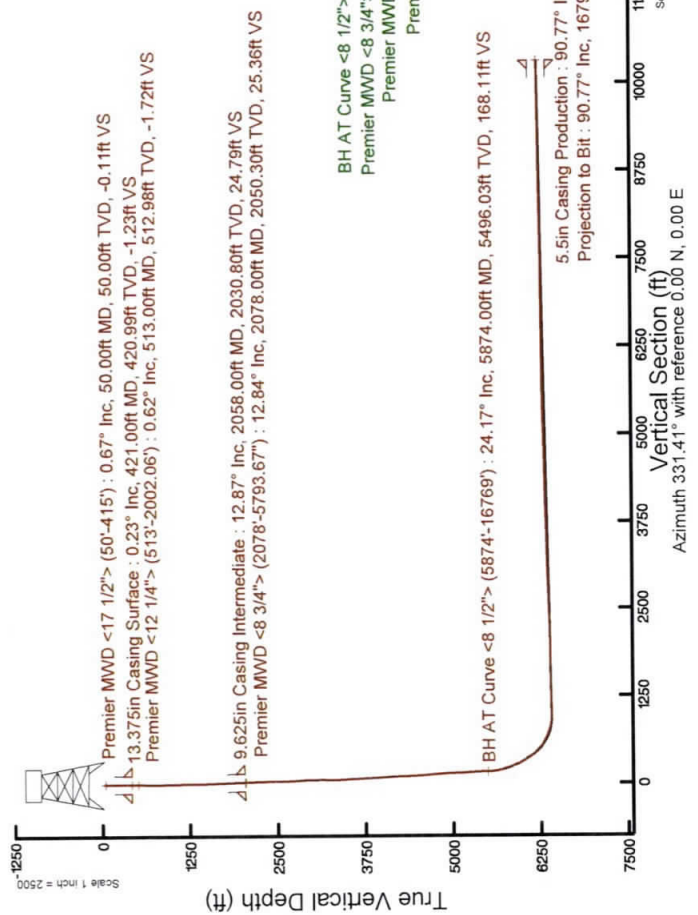
# SOUTHWESTERN ENERGY

Location: Brooke County, WV  
 Slot: Slot 401H  
 Field: Brooke  
 Well: Sandra Parr BRK 401H  
 Facility: Sandra Parr BRK Pad Wellbore: Sandra Parr BRK 401H PWB

Plot reference wellpath is Sandra Parr BRK 401H PWP Rev-C.0  
 Grid System: NAD83 / UTM Zone 17 North, US feet  
 North Reference: Grid north  
 True vertical depths are referenced to SDC 42 (KB)  
 Scale: True distance  
 Measured depths are referenced to SDC 42 (KB)  
 Depths are in feet  
 SDC 42 (KB) to Mean Sea Level: 1302.2 feet  
 Created by: atjenon on 2019-02-08  
 Database: WA\_MPL\_EASTERNUUS\_Dierh  
 Coordinates are in feet referenced to Slot



User specified Dip: 67.54° Field: 52644 nT  
 Magnetic North is 8.44 degrees West of True North (at 23Jan/2019)  
 To correct azimuth from True to Grid subtract 0.31 degrees  
 To correct azimuth from Magnetic to Grid subtract 8.75 degrees



## Location Information

Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Sandra Parr BRK Pad	1774090.396	14592474.069	40°10'46.360"N	80°31'17.133"W
Slot	Local N (ft)	Local E (ft)	Grid North (US ft)	Grid East (US ft)
Slot 401H	-5.06	-1774034.636	14592469.014	1774034.636
SDC 42 (KB) to Ground level (At Slot: Slot 401H)	26ft			
Mean Sea Level to Ground level (At Slot: Slot 401H)	-1276.2ft			
SDC 42 (KB) to Mean Sea Level	1302.2ft			

## Comments

API: 47-009-00265-0000  
 BH Job #: 109629309  
 Rig: SDC 42  
 Duration: 02/02/2019 - 02/05/2019



### REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot 401H
Area	Brooke County, WV	Well	Sandra Parr BRK 401H
Field	Brooke	Wellbore	Sandra Parr BRK 401H AWB
Facility	Sandra Parr BRK Pad		

### REPORT SETUP INFORMATION

Projection System	NAD83 / UTM Zone 17 North, US feet	Software System	WellArchitect® 5.1
North Reference	Grid	User	Atenjen
Scale	0.999620	Report Generated	08/Feb/2019 at 10:06
Convergence at slot	0.31° East	Database/Source file	WA_MPL_EASTERNUS_Defn/Sandra_Parr_BRK_401H_AWP_Proj_16794_.xml

### WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-5.06	-55.78	1774034.64	14592469.01	40°10'46.313"N	80°31'17.852"W
Facility Reference Pt			1774090.40	14592474.07	40°10'46.360"N	80°31'17.133"W
Field Reference Pt			0.00	0.00	0°00'00.000"	85°29'19.478"W

### WELLPATH DATUM

Calculation method	Minimum curvature	SDC 42 (KB) to Facility Vertical Datum	1302.20ft
Horizontal Reference Pt	Slot	SDC 42 (KB) to Mean Sea Level	1302.20ft
Vertical Reference Pt	SDC 42 (KB)	SDC 42 (KB) to Ground Level at Slot (Slot 401H)	26.00ft
MD Reference Pt	SDC 42 (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	331.41°

## REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot 401H
Area	Brooke County, WV	Well	Sandra Parr BRK 401H
Field	Brooke	Wellbore	Sandra Parr BRK 401H AWB
Facility	Sandra Parr BRK Pad		

## WELLPATH DATA (186 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]
0.00H	0.000	115.540	0.00	0.00	0.00	0.00	1774034.64	14592469.01	40°10'46.313"N	80°31'17.852"W	0.00	0.000	0.00	0.00	0.00
26.00	0.000	115.540	26.00	0.00	0.00	0.00	1774034.64	14592469.01	40°10'46.313"N	80°31'17.852"W	0.00	0.000	0.00	0.00	0.00
50.00	0.670	115.540	50.00	-0.11	-0.06	0.13	1774034.76	14592468.95	40°10'46.312"N	80°31'17.850"W	0.14	115.540	2.79	2.79	481.42
100.00	0.670	47.340	100.00	-0.28	0.01	0.61	1774035.24	14592469.03	40°10'46.313"N	80°31'17.844"W	0.61	88.906	1.50	0.00	-136.40
150.00	0.230	87.860	150.00	-0.25	0.21	0.92	1774035.56	14592469.23	40°10'46.315"N	80°31'17.840"W	0.95	76.949	1.03	-0.88	81.04
200.00	0.850	100.360	199.99	-0.53	0.15	1.39	1774036.02	14592469.16	40°10'46.314"N	80°31'17.834"W	1.39	83.803	1.25	1.24	25.00
250.00	0.560	81.620	249.99	-0.85	0.12	1.99	1774036.63	14592469.13	40°10'46.314"N	80°31'17.828"W	2.00	86.571	0.73	-0.58	-37.48
300.00	0.420	74.650	299.99	-0.97	0.20	2.41	1774037.05	14592469.22	40°10'46.315"N	80°31'17.821"W	2.42	85.175	0.30	-0.28	-13.94
350.00	0.150	111.020	349.99	-1.07	0.23	2.65	1774037.28	14592469.24	40°10'46.315"N	80°31'17.818"W	2.66	85.068	0.62	-0.54	72.74
400.00	0.170	116.140	399.99	-1.18	0.17	2.78	1774037.41	14592469.19	40°10'46.315"N	80°31'17.816"W	2.78	86.447	0.05	0.04	10.24
415.00	0.210	111.000	414.99	-1.22	0.15	2.82	1774037.46	14592469.17	40°10'46.314"N	80°31'17.816"W	2.83	86.902	0.29	0.27	-34.27
513.44	0.620	105.480	513.42	-1.72	-0.05	3.50	1774038.14	14592468.96	40°10'46.312"N	80°31'17.807"W	3.50	90.884	0.42	0.42	-5.61
602.98	0.770	203.680	602.96	-2.43	-0.73	3.73	1774038.36	14592468.28	40°10'46.306"N	80°31'17.804"W	3.80	101.142	1.18	0.17	109.67
699.03	2.480	231.170	698.97	-3.19	-2.63	1.85	1774036.49	14592466.39	40°10'46.287"N	80°31'17.828"W	3.21	144.853	1.91	1.78	28.62
794.36	4.650	244.820	794.11	-3.33	-5.57	-3.25	1774031.38	14592463.45	40°10'46.258"N	80°31'17.894"W	6.45	210.308	2.43	2.28	14.32
889.97	6.870	249.110	889.23	-2.33	-9.25	-12.10	1774022.54	14592459.76	40°10'46.222"N	80°31'18.009"W	15.24	232.600	2.36	2.32	4.49
984.93	9.200	250.390	983.25	-0.39	-13.83	-24.56	1774010.08	14592455.19	40°10'46.178"N	80°31'18.169"W	28.19	240.622	2.46	2.45	1.35
1079.47	11.090	245.940	1076.31	1.51	-20.07	-39.99	1773994.66	14592448.95	40°10'46.117"N	80°31'18.369"W	44.74	243.345	2.16	2.00	-4.71
1175.13	12.500	243.700	1169.95	2.65	-28.41	-57.67	1773976.99	14592440.61	40°10'46.035"N	80°31'18.597"W	64.29	243.773	1.55	1.47	-2.34
1271.12	14.100	239.420	1263.36	2.66	-38.96	-77.05	1773957.62	14592430.07	40°10'45.932"N	80°31'18.847"W	86.34	243.175	1.96	1.67	-4.46
1366.44	13.410	244.760	1355.95	2.90	-49.58	-97.04	1773937.63	14592419.45	40°10'45.828"N	80°31'19.106"W	108.98	242.936	1.52	-0.72	5.60
1462.86	11.330	250.490	1450.13	5.05	-57.51	-116.09	1773918.59	14592411.52	40°10'45.751"N	80°31'19.352"W	129.55	243.644	2.50	-2.16	5.94
1558.91	11.880	250.890	1544.22	8.17	-63.90	-134.32	1773900.36	14592405.14	40°10'45.689"N	80°31'19.587"W	148.75	244.558	0.58	0.57	0.42
1655.21	13.600	248.710	1638.15	11.24	-71.26	-154.24	1773880.45	14592397.78	40°10'45.617"N	80°31'19.844"W	169.91	245.203	1.85	1.79	-2.26
1752.78	13.000	249.740	1733.10	14.29	-79.22	-175.22	1773859.48	14592389.82	40°10'45.539"N	80°31'20.115"W	192.30	245.671	0.66	-0.61	1.06
1849.43	12.180	250.960	1827.42	17.55	-86.32	-195.06	1773839.65	14592382.73	40°10'45.470"N	80°31'20.371"W	213.31	246.130	0.89	-0.85	1.26
1945.90	13.090	250.750	1921.56	21.02	-93.24	-214.99	1773819.72	14592375.81	40°10'45.403"N	80°31'20.628"W	234.34	246.555	0.94	0.94	-0.22
2002.06	12.940	250.200	1976.27	23.01	-97.46	-226.92	1773807.81	14592371.59	40°10'45.362"N	80°31'20.782"W	246.96	246.756	0.35	-0.27	-0.98
2078.90	12.840	248.530	2051.18	25.38	-103.50	-242.96	1773791.77	14592365.55	40°10'45.303"N	80°31'20.989"W	264.08	246.925	0.50	-0.13	-2.17
2140.16	13.500	247.250	2110.83	26.95	-108.76	-255.88	1773778.85	14592360.30	40°10'45.252"N	80°31'21.156"W	278.04	246.973	1.18	1.08	-2.09

## REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot 401H
Area	Brooke County, WV	Well	Sandra Parr BRK 401H
Field	Brooke	Wellbore	Sandra Parr BRK 401H AWB
Facility	Sandra Parr BRK Pad		

## WELLPATH DATA (186 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]
2236.63	16.350	248.110	2204.03	29.68	-118.18	-278.87	1773755.87	14592350.88	40°10'45.160"N	80°31'21.453"W	302.88	247.034	2.96	2.95	0.89
2333.21	17.420	245.330	2296.45	32.26	-129.28	-304.62	1773730.13	14592339.78	40°10'45.052"N	80°31'21.786"W	330.92	247.004	1.39	1.11	-2.88
2430.48	19.120	243.600	2388.81	33.86	-142.44	-332.13	1773702.64	14592326.63	40°10'44.923"N	80°31'22.141"W	361.38	246.787	1.83	1.75	-1.78
2527.00	20.410	241.180	2479.65	34.40	-157.58	-361.03	1773673.74	14592311.49	40°10'44.775"N	80°31'22.514"W	393.93	246.420	1.58	1.34	-2.51
2622.17	20.540	243.250	2568.81	34.87	-173.10	-390.48	1773644.30	14592295.98	40°10'44.623"N	80°31'22.895"W	427.13	246.092	0.77	0.14	2.18
2718.33	20.440	247.240	2658.89	37.12	-187.19	-421.03	1773613.77	14592281.90	40°10'44.486"N	80°31'23.289"W	460.77	246.030	1.46	-0.10	4.15
2814.23	22.760	249.990	2748.05	41.58	-200.02	-453.91	1773580.90	14592269.07	40°10'44.361"N	80°31'23.714"W	496.02	246.219	2.64	2.42	2.87
2909.98	25.770	249.550	2835.33	47.30	-213.63	-490.82	1773544.00	14592255.47	40°10'44.228"N	80°31'24.190"W	535.30	246.479	3.15	3.14	-0.46
3006.39	27.230	248.060	2921.61	52.82	-229.19	-530.92	1773503.92	14592239.91	40°10'44.076"N	80°31'24.708"W	578.28	246.650	1.66	1.51	-1.55
3103.02	26.040	244.920	3007.99	56.68	-246.45	-570.64	1773484.21	14592222.66	40°10'43.908"N	80°31'25.221"W	621.58	246.642	1.91	-1.23	-3.25
3198.01	26.040	244.920	3093.33	59.23	-264.12	-608.41	1773426.46	14592204.99	40°10'43.735"N	80°31'25.709"W	663.27	246.533	0.00	0.00	0.00
3293.61	26.660	237.640	3179.02	59.10	-284.50	-645.54	1773389.34	14592184.62	40°10'43.536"N	80°31'26.188"W	705.46	246.216	3.44	0.65	-7.62
3390.21	25.570	240.140	3255.76	57.22	-306.48	-681.93	1773352.97	14592162.65	40°10'43.321"N	80°31'26.659"W	747.64	245.799	1.60	-1.13	2.59
3486.84	23.820	245.690	3353.56	58.21	-324.90	-717.81	1773317.10	14592144.24	40°10'43.140"N	80°31'27.122"W	787.91	245.647	3.00	-1.81	5.74
3583.55	25.250	249.050	3441.54	62.41	-340.32	-754.87	1773280.05	14592128.83	40°10'42.990"N	80°31'27.601"W	828.04	245.733	2.07	1.48	3.47
3680.03	26.280	248.200	3528.43	67.67	-355.61	-793.92	1773241.02	14592113.54	40°10'42.841"N	80°31'28.105"W	869.92	245.872	1.13	1.07	-0.88
3776.48	27.380	245.090	3614.50	71.62	-372.88	-833.86	1773201.09	14592096.28	40°10'42.672"N	80°31'28.621"W	913.44	245.907	1.85	1.14	-3.22
3873.13	26.580	246.640	3700.63	75.02	-390.82	-873.87	1773161.10	14592078.35	40°10'42.497"N	80°31'29.137"W	957.28	245.905	1.10	-0.83	1.60
3969.29	24.640	249.340	3787.35	79.75	-406.42	-912.38	1773122.60	14592062.75	40°10'42.345"N	80°31'29.634"W	998.81	245.989	2.35	-2.02	2.81
4065.42	23.740	246.940	3875.04	84.38	-421.07	-948.94	1773086.06	14592048.10	40°10'42.202"N	80°31'30.106"W	1038.16	246.072	1.39	-0.94	-2.50
4161.68	24.690	247.960	3962.83	88.54	-436.21	-985.40	1773049.61	14592032.98	40°10'42.055"N	80°31'30.577"W	1077.63	246.123	1.08	0.99	1.06
4255.78	26.380	249.830	4047.73	93.84	-450.79	-1023.25	1773011.78	14592018.40	40°10'41.913"N	80°31'31.066"W	1118.14	246.224	1.99	1.80	1.99
4352.36	26.820	248.170	4134.09	99.55	-466.29	-1063.61	1772971.43	14592002.90	40°10'41.762"N	80°31'31.587"W	1161.34	246.327	0.89	0.46	-1.72
4448.09	26.900	244.320	4219.50	103.19	-483.71	-1103.18	1772931.88	14591985.49	40°10'41.592"N	80°31'32.098"W	1204.57	246.324	1.82	0.08	-4.02
4544.74	26.430	244.460	4305.87	105.44	-502.46	-1142.29	1772892.78	14591966.75	40°10'41.408"N	80°31'32.603"W	1247.92	246.257	0.49	-0.49	0.14
4641.41	26.460	245.500	4392.43	108.12	-520.66	-1181.30	1772853.78	14591948.55	40°10'41.230"N	80°31'33.107"W	1290.96	246.214	0.48	0.03	1.08
4738.35	26.060	246.060	4479.36	111.39	-538.26	-1228.59	1772814.68	14591930.96	40°10'41.059"N	80°31'33.612"W	1333.84	246.200	0.49	-0.41	0.58
4831.86	25.870	251.890	4563.45	116.77	-552.94	-1258.59	1772776.53	14591916.29	40°10'40.916"N	80°31'34.105"W	1374.69	246.283	2.74	-0.20	6.23
4928.30	25.340	251.780	4650.41	124.31	-565.93	-1298.19	1772736.94	14591903.30	40°10'40.789"N	80°31'34.616"W	1416.18	246.446	0.55	-0.55	-0.11
5024.52	26.390	249.950	4737.00	131.19	-579.70	-1337.84	1772697.31	14591889.54	40°10'40.655"N	80°31'35.128"W	1458.03	246.572	1.37	1.09	-1.90

## REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot 401H
SOUTHWESTERN ENERGY	Well	Sandra Parr BRK 401H
Brooke County, WV	Wellbore	Sandra Parr BRK 401H AWB
Brooke		
Sandra Parr BRK Pad		

## WELLPATH DATA (186 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]
5121.06	28.390	250.050	4822.71	137.83	-594.89	-1379.57	1772655.59	14591874.35	40°10'40.507"N	80°31'35.666"W	1502.36	246.674	2.07	2.07	0.10
5217.21	28.030	247.070	4907.44	143.49	-611.49	-1421.86	1772613.32	14591857.76	40°10'40.346"N	80°31'36.212"W	1547.78	246.729	1.51	-0.37	-3.10
5313.60	27.680	243.000	4992.67	146.34	-630.48	-1462.67	1772572.52	14591838.78	40°10'40.160"N	80°31'36.739"W	1592.77	246.682	2.01	-0.36	-4.22
5409.84	26.750	244.420	5078.26	148.10	-649.98	-1502.13	1772533.08	14591819.28	40°10'39.969"N	80°31'37.249"W	1636.72	246.602	1.18	-0.97	1.48
5505.12	26.300	248.760	5163.52	151.93	-666.89	-1541.15	1772494.08	14591802.38	40°10'39.804"N	80°31'37.753"W	1679.25	246.601	2.09	-0.47	4.55
5600.53	25.810	247.670	5249.23	156.90	-682.44	-1580.06	1772455.18	14591786.84	40°10'39.653"N	80°31'38.255"W	1721.14	246.640	0.72	-0.51	-1.14
5696.70	26.000	247.450	5335.74	161.40	-698.47	-1618.89	1772416.36	14591770.81	40°10'39.496"N	80°31'38.757"W	1763.15	246.662	0.22	0.20	-0.23
5793.67	25.420	246.740	5423.11	165.57	-714.84	-1657.64	1772377.62	14591754.44	40°10'39.337"N	80°31'39.257"W	1805.21	246.672	0.68	-0.60	-0.73
5874.00	24.170	244.690	5496.03	168.11	-728.68	-1688.35	1772346.93	14591740.61	40°10'39.202"N	80°31'39.653"W	1838.89	246.655	1.89	-1.56	-2.55
5970.00	23.800	261.700	5583.85	175.96	-739.90	-1725.33	1772309.96	14591729.40	40°10'39.093"N	80°31'40.131"W	1877.29	246.788	7.19	-0.39	17.72
6066.00	23.800	274.840	5671.75	193.36	-741.06	-1763.83	1772271.48	14591728.24	40°10'39.083"N	80°31'40.627"W	1913.18	247.211	5.51	0.00	13.69
6162.00	23.810	287.930	5759.64	218.11	-733.45	-1801.59	1772233.73	14591735.84	40°10'39.160"N	80°31'41.113"W	1945.17	247.848	5.49	0.01	13.64
6258.00	24.250	299.650	5847.37	248.95	-717.73	-1837.18	1772198.15	14591751.56	40°10'39.318"N	80°31'41.570"W	1972.40	248.661	4.99	0.46	12.21
6354.00	25.320	312.120	5934.59	285.12	-694.19	-1869.57	1772165.78	14591775.09	40°10'39.552"N	80°31'41.986"W	1994.29	249.630	5.55	1.11	12.99
6450.00	29.080	323.110	6020.01	327.62	-661.73	-1898.83	1772136.53	14591807.54	40°10'39.874"N	80°31'42.360"W	2010.83	250.787	6.52	3.92	11.45
6546.00	35.200	330.630	6101.29	378.44	-618.90	-1926.44	1772108.93	14591850.35	40°10'40.299"N	80°31'42.713"W	2023.41	252.190	7.61	6.38	7.83
6642.00	42.450	335.330	6176.05	438.52	-565.26	-1953.57	1772081.81	14591903.97	40°10'40.830"N	80°31'43.059"W	2033.71	253.862	8.15	7.55	4.90
6738.00	49.590	337.450	6242.67	507.28	-501.98	-1981.15	1772054.24	14591967.22	40°10'41.457"N	80°31'43.410"W	2043.75	255.782	7.60	7.44	2.21
6835.00	59.000	336.170	6299.22	585.61	-429.68	-2012.18	1772023.23	14592039.49	40°10'42.173"N	80°31'43.805"W	2057.54	257.946	9.76	9.70	-1.32
6931.00	68.610	336.160	6341.55	671.36	-350.98	-2046.95	1771988.47	14592118.17	40°10'42.953"N	80°31'44.247"W	2076.82	260.270	10.01	10.01	-0.01
7027.00	70.870	336.750	6374.79	761.06	-268.42	-2082.92	1771952.51	14592200.69	40°10'43.770"N	80°31'44.705"W	2100.14	262.657	2.42	2.35	0.61
7075.00	73.970	337.520	6389.29	806.58	-226.27	-2100.69	1771934.75	14592242.83	40°10'44.188"N	80°31'44.931"W	2112.84	263.852	6.64	6.46	1.60
7123.00	78.920	338.310	6400.53	852.93	-183.04	-2118.23	1771917.22	14592286.04	40°10'44.616"N	80°31'45.154"W	2126.12	265.061	10.44	10.31	1.65
7171.00	84.270	339.920	6407.55	899.97	-138.69	-2135.14	1771900.31	14592330.38	40°10'45.055"N	80°31'45.369"W	2139.64	266.283	11.63	11.15	3.35
7219.00	89.750	341.440	6410.05	947.26	-93.47	-2151.00	1771884.46	14592375.58	40°10'45.503"N	80°31'45.570"W	2153.03	267.512	11.85	11.42	3.17
7316.00	91.050	342.070	6409.37	1042.68	-1.36	-2181.36	1771854.11	14592467.66	40°10'46.415"N	80°31'46.320"W	2181.36	269.964	1.49	1.34	0.65
7411.00	91.110	342.640	6407.58	1135.93	89.16	-2210.15	1771825.33	14592558.14	40°10'47.211"N	80°31'46.320"W	2211.95	272.310	0.60	0.06	0.60
7508.00	91.170	343.380	6405.65	1230.93	181.91	-2238.49	1771797.00	14592650.85	40°10'48.229"N	80°31'46.679"W	2245.87	274.646	0.77	0.06	0.76
7604.00	90.740	344.350	6404.05	1324.66	274.11	-2265.17	1771770.33	14592743.02	40°10'49.141"N	80°31'47.016"W	2281.69	276.900	1.11	-0.45	1.01
7700.00	90.740	344.210	6402.81	1418.24	366.51	-2291.17	1771744.34	14592835.39	40°10'50.056"N	80°31'47.345"W	2320.30	279.088	0.15	0.00	-0.15

# Actual Wellpath Report

Sandra Parr BRK 401H AWP Proj: 16794'

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## REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot 401H
SOUTHWESTERN ENERGY	Well	Sandra Parr BRK 401H
Area	Wellbore	Sandra Parr BRK 401H AWP
Field		
Facility		

## WELLPATH DATA (186 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]	Buidl Rate [°/100ft]	Turn Rate [°/100ft]
7797.00	91.170	340.900	6401.20	1513.38	459.02	-2320.25	1771715.28	14592927.86	40°10'50.971"N	80°31'47.713"W	2365.21	281.191	3.44	0.44	-3.41
7893.00	90.800	337.250	6399.54	1608.49	548.66	-2354.52	1771681.01	14593017.47	40°10'51.859"N	80°31'48.148"W	2417.60	283.117	3.82	-0.39	-3.80
7989.00	90.620	339.220	6398.36	1703.80	637.81	-2390.11	1771645.44	14593106.58	40°10'52.742"N	80°31'48.601"W	2473.75	284.941	2.06	-0.19	2.05
8094.00	90.680	342.200	6397.28	1797.54	727.46	-2421.49	1771614.07	14593196.20	40°10'53.629"N	80°31'48.999"W	2528.40	286.721	3.14	0.06	3.14
8180.00	91.420	342.450	6395.52	1891.78	818.91	-2450.63	1771584.94	14593287.61	40°10'54.535"N	80°31'49.368"W	2583.84	288.478	0.81	0.77	0.26
8276.00	91.320	341.720	6393.22	1986.09	910.23	-2480.15	1771555.43	14593378.90	40°10'55.439"N	80°31'49.742"W	2641.91	290.153	0.77	-0.10	-0.76
8372.00	91.480	343.040	6390.88	2080.31	1001.70	-2509.20	1771526.39	14593470.33	40°10'56.344"N	80°31'50.111"W	2701.76	291.762	1.38	0.17	1.38
8469.00	91.480	342.860	6388.37	2175.32	1094.40	-2537.64	1771497.97	14593563.00	40°10'57.262"N	80°31'50.471"W	2763.57	293.329	0.19	0.00	-0.19
8563.00	91.480	342.370	6385.94	2267.49	1184.08	-2565.71	1771469.90	14593652.64	40°10'58.149"N	80°31'50.826"W	2825.76	294.773	0.52	0.00	-0.52
8660.00	91.820	343.570	6383.15	2362.48	1276.79	-2594.11	1771441.52	14593745.31	40°10'59.067"N	80°31'51.186"W	2891.29	296.206	1.29	0.35	1.24
8756.00	91.690	343.800	6380.21	2456.25	1368.88	-2621.06	1771414.57	14593837.37	40°10'59.978"N	80°31'51.527"W	2956.99	297.576	0.28	-0.14	0.24
8852.00	91.720	344.750	6377.35	2549.79	1461.24	-2647.07	1771388.58	14593929.70	40°11'00.892"N	80°31'51.855"W	3023.61	298.900	0.99	0.03	0.99
8949.00	91.820	346.570	6374.36	2643.76	1555.17	-2671.08	1771364.57	14594023.59	40°11'01.822"N	80°31'52.158"W	3090.83	300.209	1.88	0.10	1.88
9044.00	91.880	345.650	6371.29	2735.60	1647.34	-2693.88	1771341.79	14594115.73	40°11'02.734"N	80°31'52.446"W	3157.64	301.446	0.97	0.06	-0.97
9141.00	92.090	343.360	6367.93	2830.02	1740.76	-2719.77	1771315.90	14594209.11	40°11'03.658"N	80°31'52.773"W	3229.15	302.621	2.37	0.22	-2.36
9237.00	91.720	341.840	6364.74	2924.14	1832.31	-2748.46	1771287.22	14594300.62	40°11'04.564"N	80°31'53.137"W	3303.24	303.690	1.63	-0.39	-1.58
9333.00	91.720	342.760	6361.86	3018.36	1923.72	-2777.64	1771258.06	14594392.00	40°11'05.469"N	80°31'53.506"W	3378.75	304.706	0.96	0.00	0.96
9429.00	91.380	343.860	6359.26	3112.26	2015.64	-2805.20	1771230.51	14594483.89	40°11'06.379"N	80°31'53.855"W	3454.27	305.699	1.20	-0.35	1.15
9525.00	91.450	343.350	6356.89	3206.07	2107.71	-2832.29	1771203.43	14594575.92	40°11'07.290"N	80°31'54.198"W	3530.48	306.656	0.54	0.07	-0.53
9621.00	91.380	341.180	6354.52	3300.32	2199.12	-2861.52	1771174.21	14594667.29	40°11'08.195"N	80°31'54.568"W	3608.93	307.543	2.26	-0.07	-2.26
9717.00	91.170	340.990	6352.38	3394.93	2289.91	-2892.63	1771143.11	14594758.05	40°11'09.094"N	80°31'54.963"W	3689.31	308.366	0.29	-0.22	-0.20
9813.00	91.320	342.490	6350.30	3489.35	2381.05	-2922.70	1771113.05	14594849.16	40°11'09.996"N	80°31'55.344"W	3769.83	309.169	1.57	0.16	1.56
9909.00	91.600	344.920	6347.85	3583.11	2473.16	-2949.63	1771086.13	14594941.23	40°11'10.908"N	80°31'55.685"W	3849.26	309.979	2.55	0.29	2.53
10006.00	91.420	345.560	6345.29	3677.26	2566.92	-2974.33	1771061.44	14595034.96	40°11'11.836"N	80°31'55.997"W	3928.84	310.795	0.69	-0.19	0.66
10102.00	91.420	344.980	6342.92	3770.44	2659.74	-2998.73	1771037.06	14595127.74	40°11'12.754"N	80°31'56.305"W	4008.32	311.572	0.60	0.00	-0.60
10197.00	91.570	346.390	6340.44	3862.47	2751.76	-3022.21	1771013.58	14595219.72	40°11'13.665"N	80°31'56.601"W	4087.29	312.318	1.49	0.16	1.48
10293.00	91.230	346.670	6338.09	3955.12	2845.07	-3044.57	1770991.23	14595313.02	40°11'14.588"N	80°31'56.883"W	4167.00	313.060	0.46	-0.35	0.29
10389.00	91.350	345.510	6335.93	4047.96	2938.25	-3067.64	1770968.17	14595406.14	40°11'15.510"N	80°31'57.174"W	4247.79	313.766	1.21	0.12	-1.21
10485.00	90.920	344.830	6334.03	4141.19	3031.03	-3092.21	1770943.61	14595498.89	40°11'16.428"N	80°31'57.484"W	4330.00	314.428	0.84	-0.45	-0.71
10582.00	91.080	343.660	6332.34	4235.75	3124.37	-3118.54	1770917.29	14595592.19	40°11'17.352"N	80°31'57.817"W	4414.41	315.054	1.22	0.16	-1.21

# Actual Wellpath Report

Sandra Parr BRK 401H AWP Proj: 16794'

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## REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot 401H
SOUTHWESTERN ENERGY	Well	Sandra Parr BRK 401H
Brooke County, WV	Wellbore	Sandra Parr BRK 401H AWP
Brooke		
Sandra Parr BRK Pad		

## WELLPATH DATA (186 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]
10678.00	91.080	341.460	6330.53	4329.91	3215.94	-3147.31	1770888.53	14595683.72	40°11'18.258"N	80°31'58.182"W	4499.75	315.618	2.29	0.00	-2.29
10775.00	91.020	341.050	6328.75	4425.47	3307.77	-3178.47	1770857.38	14595775.53	40°11'19.167"N	80°31'58.577"W	4587.38	316.142	0.43	-0.06	-0.42
10870.00	91.050	342.200	6327.03	4518.95	3397.91	-3208.41	1770827.45	14595865.63	40°11'20.060"N	80°31'58.957"W	4673.30	316.643	1.21	0.03	1.21
10966.00	91.420	344.890	6324.96	4612.77	3489.95	-3235.60	1770800.27	14595957.64	40°11'20.970"N	80°31'59.301"W	4759.08	317.166	2.83	0.39	2.80
11062.00	91.140	344.700	6322.82	4706.14	3582.57	-3260.77	1770775.11	14596050.22	40°11'21.887"N	80°31'59.619"W	4844.32	317.692	0.35	-0.29	-0.20
11159.00	91.230	346.550	6320.81	4800.14	3676.51	-3284.85	1770751.04	14596144.12	40°11'22.817"N	80°31'59.923"W	4930.21	318.220	1.91	0.09	1.91
11255.00	91.200	347.540	6318.78	4892.57	3770.04	-3306.36	1770729.54	14596237.62	40°11'23.742"N	80°32'00.194"W	5014.50	318.749	1.03	-0.03	1.03
11351.00	91.390	349.160	6316.61	4984.38	3864.04	-3325.74	1770710.16	14596331.58	40°11'24.672"N	80°32'00.437"W	5098.17	319.282	1.70	0.20	1.69
11448.00	91.600	347.160	6314.08	5077.23	3958.94	-3345.64	1770690.28	14596426.44	40°11'25.611"N	80°32'00.687"W	5183.29	319.799	2.07	0.22	-2.06
11543.00	92.160	345.530	6310.96	5168.96	4051.20	-3368.05	1770667.87	14596518.67	40°11'26.523"N	80°32'00.969"W	5268.39	320.261	1.81	0.59	-1.72
11640.00	91.140	342.050	6308.17	5263.65	4144.29	-3395.11	1770640.82	14596611.72	40°11'27.445"N	80°32'01.312"W	5357.42	320.675	3.74	-1.05	-3.59
11736.00	91.140	339.390	6306.26	5358.36	4234.88	-3426.80	1770609.14	14596702.28	40°11'28.342"N	80°32'01.714"W	5447.68	321.021	2.77	0.00	-2.77
11833.00	90.860	334.610	6304.56	5454.86	4324.13	-3464.69	1770571.27	14596791.49	40°11'29.226"N	80°32'02.196"W	5540.95	321.297	4.94	-0.29	-4.93
11929.00	90.800	335.500	6303.17	5550.65	4411.16	-3505.17	1770530.80	14596878.49	40°11'30.088"N	80°32'02.712"W	5634.23	321.529	0.93	-0.06	0.93
12025.00	90.650	337.590	6301.96	5646.25	4499.22	-3543.38	1770492.61	14596966.51	40°11'30.960"N	80°32'03.198"W	5726.99	321.778	2.18	-0.16	2.18
12121.00	90.370	338.510	6301.10	5741.61	4588.25	-3579.26	1770456.74	14597055.52	40°11'31.842"N	80°32'03.655"W	5819.21	322.043	1.00	-0.29	0.96
12218.00	90.710	340.610	6300.19	5837.62	4679.14	-3613.13	1770422.88	14597146.37	40°11'32.741"N	80°32'04.085"W	5911.77	322.325	2.19	0.35	2.16
12314.00	90.490	342.480	6299.18	5932.11	4770.19	-3643.52	1770392.51	14597237.38	40°11'33.643"N	80°32'04.470"W	6002.49	322.627	1.96	-0.23	1.95
12410.00	90.460	343.970	6298.39	6026.07	4862.10	-3671.22	1770364.81	14597329.26	40°11'34.552"N	80°32'04.821"W	6092.44	322.945	1.55	-0.03	1.55
12507.00	90.550	343.530	6297.53	6120.82	4955.22	-3698.36	1770337.68	14597422.34	40°11'35.474"N	80°32'05.165"W	6183.21	323.264	0.46	0.09	-0.45
12602.00	90.520	343.660	6296.64	6213.68	5046.35	-3725.19	1770310.86	14597513.44	40°11'36.376"N	80°32'05.504"W	6272.38	323.565	0.14	-0.03	0.14
12699.00	90.580	343.090	6295.71	6308.57	5139.29	-3752.94	1770283.12	14597606.34	40°11'37.296"N	80°32'05.855"W	6363.72	323.861	0.59	0.06	-0.59
12794.00	90.650	343.230	6294.69	6401.57	5230.21	-3780.46	1770255.61	14597697.23	40°11'38.196"N	80°32'06.204"W	6453.45	324.140	0.16	0.07	0.15
12891.00	90.550	345.550	6293.68	6496.08	5323.62	-3806.56	1770229.53	14597790.60	40°11'39.120"N	80°32'06.534"W	6544.53	324.434	2.39	-0.10	2.39
12987.00	90.460	345.640	6292.83	6589.15	5416.60	-3830.44	1770205.65	14597883.55	40°11'40.040"N	80°32'06.835"W	6634.14	324.733	0.13	-0.09	0.09
13084.00	90.620	344.410	6291.92	6683.42	5510.30	-3855.51	1770180.60	14597977.21	40°11'40.967"N	80°32'07.152"W	6725.20	325.020	1.28	0.16	1.27
13180.00	90.620	343.200	6290.88	6777.17	5602.48	-3882.28	1770153.84	14598069.36	40°11'41.880"N	80°32'07.491"W	6816.15	325.280	1.26	0.00	-1.26
13276.00	90.550	343.860	6289.90	6871.03	5694.54	-3909.50	1770126.63	14598161.38	40°11'42.791"N	80°32'07.835"W	6907.38	325.529	0.69	-0.07	0.69
13372.00	90.520	344.340	6289.00	6964.68	5786.86	-3935.79	1770100.34	14598253.67	40°11'43.704"N	80°32'08.168"W	6998.45	325.779	0.50	-0.03	0.50
13468.00	90.800	344.770	6287.90	7058.16	5879.39	-3961.36	1770074.79	14598346.16	40°11'44.620"N	80°32'08.491"W	7089.40	326.029	0.53	0.29	0.45

## REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot 401H
SOUTHWESTERN ENERGY	Well	Sandra Parr BRK 401H
Brooke County, WV	Wellbore	Sandra Parr BRK 401H AWP
Brooke		
Sandra Parr BRK Pad		

## WELLPATH DATA (186 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]
13584.00	90.800	344.330	6286.56	7151.63	5971.91	-3986.93	1770049.23	14598438.65	40°11'45.536"N	80°32'08.814"W	7180.48	326.272	0.46	0.00	-0.46
13660.00	90.830	344.000	6285.19	7245.26	6064.26	-4013.12	1770023.04	14598530.96	40°11'46.450"N	80°32'09.146"W	7271.89	326.505	0.35	0.03	-0.34
13756.00	90.800	345.740	6283.82	7338.61	6156.92	-4038.18	1769998.00	14598623.58	40°11'47.367"N	80°32'09.462"W	7363.05	326.740	1.81	-0.03	1.81
13852.00	90.890	345.080	6282.41	7431.74	6249.81	-4062.36	1769973.83	14598716.44	40°11'48.286"N	80°32'09.768"W	7454.05	326.976	0.69	0.09	-0.69
13948.00	90.920	341.690	6280.89	7525.63	6341.78	-4089.80	1769946.40	14598808.37	40°11'49.196"N	80°32'10.115"W	7546.16	327.182	3.53	0.03	-3.53
14044.00	90.800	338.690	6279.45	7620.48	6432.08	-4122.33	1769913.88	14598898.64	40°11'50.090"N	80°32'10.528"W	7639.71	327.344	3.13	-0.12	-3.13
14140.00	90.770	339.390	6278.14	7715.62	6521.71	-4156.66	1769879.56	14598988.24	40°11'50.978"N	80°32'10.965"W	7733.73	327.488	0.73	-0.03	0.73
14236.00	90.860	341.030	6276.77	7810.48	6612.03	-4189.16	1769847.07	14599078.52	40°11'51.872"N	80°32'11.377"W	7827.39	327.643	1.71	0.09	1.71
14332.00	90.860	341.670	6275.33	7905.03	6702.98	-4219.86	1769816.39	14599169.44	40°11'52.772"N	80°32'11.767"W	7920.68	327.808	0.67	0.00	0.67
14429.00	90.860	340.910	6273.87	8000.58	6794.84	-4250.97	1769785.29	14599261.26	40°11'53.681"N	80°32'12.162"W	8015.03	327.969	0.78	0.00	-0.78
14523.00	90.890	340.770	6272.44	8093.30	6883.63	-4281.82	1769754.45	14599350.01	40°11'54.560"N	80°32'12.553"W	8106.68	328.117	0.15	0.03	-0.15
14620.00	90.710	340.570	6271.08	8189.02	6975.15	-4313.92	1769722.36	14599441.50	40°11'55.466"N	80°32'12.961"W	8201.38	328.264	0.28	-0.19	-0.21
14715.00	90.830	342.750	6269.81	8282.49	7065.31	-4343.81	1769692.48	14599531.63	40°11'56.359"N	80°32'13.340"W	8293.81	328.416	2.30	0.13	2.29
14810.00	90.800	341.730	6268.45	8375.79	7155.77	-4372.78	1769663.52	14599622.06	40°11'57.254"N	80°32'13.707"W	8386.08	328.572	1.07	-0.03	-1.07
14905.00	90.800	344.420	6267.05	8468.81	7246.64	-4400.44	1769635.88	14599712.89	40°11'58.154"N	80°32'14.057"W	8478.07	328.732	2.83	0.09	2.83
15001.00	90.830	345.030	6265.61	8562.22	7339.24	-4425.72	1769610.60	14599805.45	40°11'59.070"N	80°32'14.377"W	8570.38	328.909	0.64	-0.06	0.64
15095.00	90.770	344.540	6264.30	8653.66	7429.93	-4450.39	1769585.94	14599896.11	40°11'59.968"N	80°32'14.689"W	8660.82	329.079	0.53	-0.06	-0.52
15190.00	90.710	342.290	6263.07	8746.57	7520.97	-4477.50	1769558.84	14599987.11	40°12'00.869"N	80°32'15.032"W	8752.88	329.233	2.37	-0.06	-2.37
15285.00	90.680	340.620	6261.92	8840.10	7611.02	-4507.72	1769528.64	14600077.13	40°12'01.760"N	80°32'15.415"W	8845.74	329.363	1.76	-0.03	-1.76
15380.00	90.680	342.810	6260.79	8933.56	7701.22	-4537.52	1769498.85	14600167.29	40°12'02.653"N	80°32'15.793"W	8938.56	329.494	2.31	0.00	2.31
15475.00	90.650	344.030	6259.69	9026.47	7792.26	-4564.62	1769471.75	14600258.30	40°12'03.554"N	80°32'16.137"W	9030.78	329.639	1.28	-0.03	1.28
15570.00	90.620	345.420	6258.64	9118.91	7883.89	-4589.65	1769446.74	14600349.90	40°12'04.461"N	80°32'16.453"W	9122.54	329.794	1.46	-0.03	1.46
15666.00	90.650	344.530	6257.57	9212.22	7976.61	-4614.53	1769421.86	14600442.58	40°12'05.378"N	80°32'16.768"W	9215.21	329.950	0.93	0.03	-0.93
15761.00	90.680	342.990	6256.47	9305.02	8067.81	-4641.10	1769395.31	14600533.74	40°12'06.281"N	80°32'17.104"W	9307.49	330.090	1.62	0.03	-1.62
15856.00	90.770	344.090	6255.27	9397.89	8158.90	-4668.01	1769368.40	14600624.80	40°12'07.182"N	80°32'17.445"W	9399.90	330.225	1.16	0.09	1.16
15951.00	90.680	343.540	6254.07	9490.66	8250.13	-4694.49	1769341.93	14600716.00	40°12'08.085"N	80°32'17.780"W	9492.26	330.359	0.59	-0.09	-0.58
16046.00	90.680	344.230	6252.94	9583.41	8341.39	-4720.86	1769315.58	14600807.22	40°12'08.988"N	80°32'18.113"W	9584.64	330.492	0.73	0.00	0.73
16142.00	90.680	344.310	6251.80	9677.00	8433.79	-4746.88	1769289.56	14600899.59	40°12'09.903"N	80°32'18.443"W	9677.90	330.627	0.08	0.00	0.08
16238.00	90.650	343.670	6250.69	9770.68	8526.06	-4773.36	1769263.10	14600991.82	40°12'10.816"N	80°32'18.778"W	9771.32	330.757	0.67	-0.03	-0.67
16334.00	90.680	343.300	6249.57	9864.55	8618.09	-4800.65	1769235.82	14601083.82	40°12'11.727"N	80°32'19.123"W	9864.97	330.880	0.39	0.03	-0.39



### REFERENCE WELLPATH IDENTIFICATION

Operator	Slot	Slot 401H
SOUTHWESTERN ENERGY	Well	Sandra Parr BRK 401H
Area	Wellbore	Sandra Parr BRK 401H AWB
Field		
Facility		

### WELLPATH DATA (186 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]
16429.00	90.680	343.070	6248.44	9957.56	8709.01	-4828.17	1769208.30	14601174.70	40°12'12.627"N	80°32'19.472"W	9957.82	330.997	0.31	0.00	-0.31
16520.00	90.680	344.860	6247.36	10046.38	8796.45	-4853.35	1769183.13	14601262.10	40°12'13.492"N	80°32'19.790"W	10046.52	331.113	2.03	0.00	2.03
16611.00	90.650	344.000	6246.31	10135.04	8884.10	-4877.78	1769158.72	14601349.72	40°12'14.359"N	80°32'20.099"W	10135.08	331.231	0.95	-0.03	-0.95
16701.00	90.680	342.250	6245.26	10223.15	8970.22	-4903.90	1769132.61	14601435.81	40°12'15.212"N	80°32'20.430"W	10223.16	331.335	1.94	0.03	-1.94
16769.00	90.770	341.390	6244.40	10290.03	9034.81	-4925.11	1769111.40	14601500.38	40°12'15.851"N	80°32'20.699"W	10290.03	331.404	1.27	0.13	-1.26
16794.00	90.770	341.390	6244.07	10314.65	9058.51	-4933.09	1769103.43	14601524.06	40°12'16.086"N	80°32'20.801"W	10314.65	331.428	0.00	0.00	0.00

### HOLE & CASING SECTIONS - Ref Wellbore: Sandra Parr BRK 401H AWB Ref Wellpath: Sandra Parr BRK 401H AWP Proj: 16794'

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]	End EW [ft]
17.5in Open Hole	26.00	421.00	395.00	26.00	420.99	0.00	0.00	0.00	0.00	2.84
13.375in Casing Surface	26.00	421.00	395.00	26.00	420.99	0.00	0.00	0.00	0.00	2.84
12.25in Open Hole	421.00	2058.00	1637.00	420.99	2030.80	0.14	-101.82	2.84	-101.82	-238.62
9.625in Casing Intermediate	26.00	2058.00	2032.00	26.00	2030.80	0.00	-101.82	0.00	-101.82	-238.62
8.75in Open Hole	2058.00	5872.00	3814.00	2030.80	5494.21	-101.82	-728.33	-238.62	-728.33	-1687.61
8.5in Open Hole	5872.00	16794.00	10922.00	5494.21	6244.07	-728.33	9058.51	-1687.61	9058.51	-4933.09
5.5in Casing Production	26.00	16794.00	16768.00	26.00	6244.07	0.00	9058.51	0.00	9058.51	-4933.09

### REFERENCE WELLPATH IDENTIFICATION

Operator	SOUTHWESTERN ENERGY	Slot	Slot 401H
Area	Brooke County, WV	Well	Sandra Parr BRK 401H
Field	Brooke	Wellbore	Sandra Parr BRK 401H AWB
Facility	Sandra Parr BRK Pad		

### TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Sandra Parr BRK 401H BHL Rev-2	6246.20	9057.21	-4935.60	1769100.92	14601522.77	40°12'16.073"N	80°32'20.833"W	point
Sandra Parr BRK 401H LP Rev-2	6410.00	-99.67	-2146.62	1771888.84	14592369.38	40°10'45.441"N	80°31'45.514"W	point

### WELLPATH COMPOSITION - Ref Wellbore: Sandra Parr BRK 401H AWB Ref Wellpath: Sandra Parr BRK 401H AWP Proj: 16794'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
26.00	415.00	OWSG MWD rev2 + HRGM	01_Premier MWD <17 1/2"> (50'-415')	Sandra Parr BRK 401H AWB
415.00	2002.06	OWSG MWD rev2 + HRGM	02_Premier MWD <12 1/4"> (513'-2002.06')	Sandra Parr BRK 401H AWB
2002.06	5793.67	OWSG MWD rev2 + HRGM	03_Premier MWD <8 3/4"> (2078'-5793.67')	Sandra Parr BRK 401H AWB
5793.67	16769.00	BHI AutoTrak Curve (Short)	04_BH AT Curve <8 1/2"> (5874'-16769')	Sandra Parr BRK 401H AWB
16769.00	16794.00	Blind Drilling (std)	Projection to bit	Sandra Parr BRK 401H AWB

**REFERENCE WELLPATH IDENTIFICATION**

Operator	SOUTHWESTERN ENERGY	Slot	Slot 401H
Area	Brooke County, WV	Well	Sandra Parr BRK 401H
Field	Brooke	Wellbore	Sandra Parr BRK 401H AWB
Facility	Sandra Parr BRK Pad		

**COMMENTS**

Wellpath general comments  
 API: 47-009-00265-0000  
 BH Job #: 109629309  
 Rig: SDC 42  
 Duration: 02/02/2019 - 02/05/2019