

SWN PRODUCTION COMPANY, LLC

Location: Brooke County, WV
 Field: Brooke
 Facility: Edward Zatta BRK Pad

Slot: Slot 8H
 Well: Edward Zatta BRK 8H
 Wellbore: Edward Zatta BRK 8H PWB

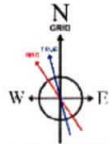


Location Information

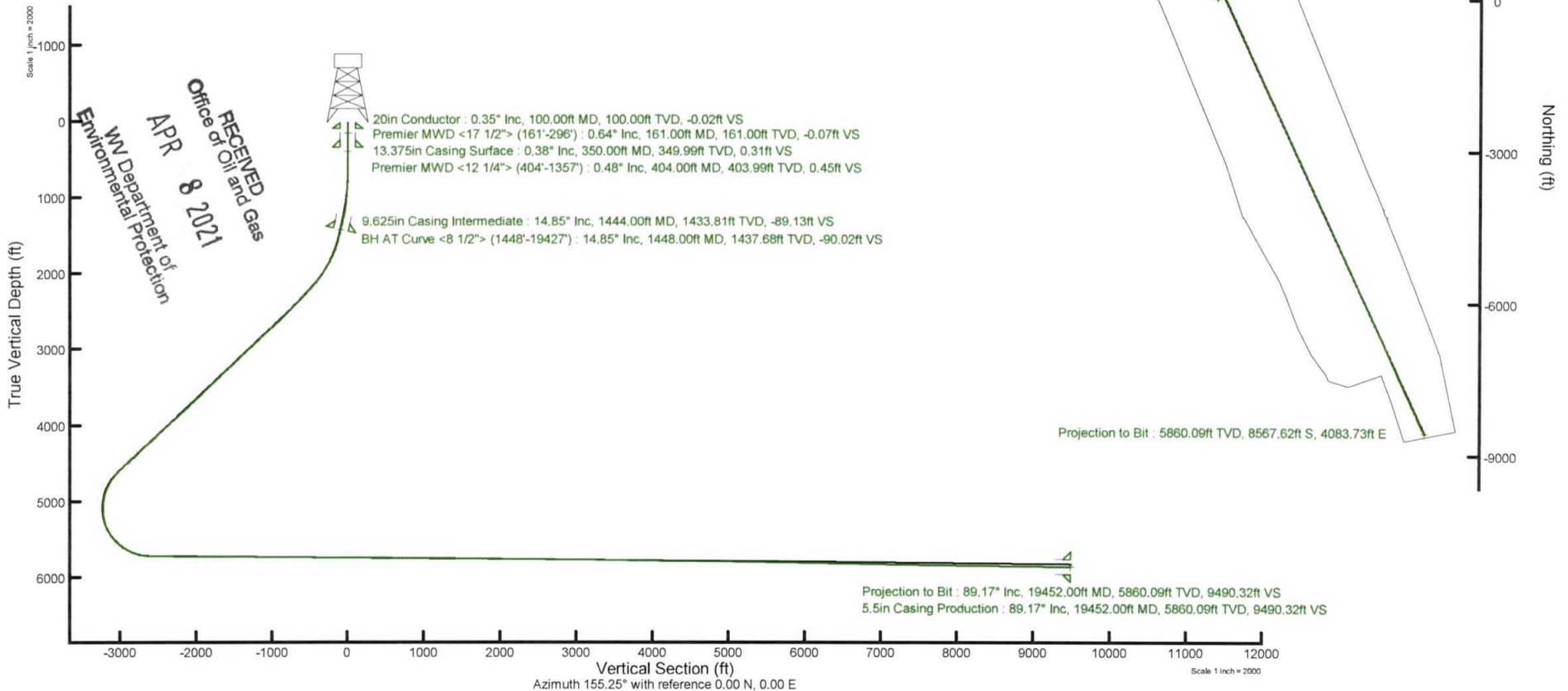
Facility Name		Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	
Edward Zatta BRK Pad		1742964.478	14616708.482	40°14'47.4000"N	80°37'57.0000"W	
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Slot 8H	-48.40	2.72	1742967.200	14616660.100	40°14'46.9216"N	80°37'56.9675"W
SDC 41 (KB) to Ground level (At Slot: Slot 8H)				26ft		
Mean Sea Level to Ground level (At Slot: Slot 8H)				-1218ft		
SDC 41 (KB) to Mean Sea Level				1244ft		

API: 47-009-00302-0000
 BH Job #: 110552425
 Rig: SDC 41
 Duration: 09/22/2020 - 09/27/2020

Plot reference wellpath is Edward Zatta BRK 8H PWB Rev-D.D	Grid System: NAD83 / UTM Zone 17 North US feet
True vertical depths are referenced to SDC 41 (KB)	North Reference: Grid north
Reference wellpath measured depths are referenced to SDC 41 (KB)	Scale: True distance
SDC 41 (KB) to Mean Sea Level: 1244 feet	Coordinates are in feet referenced to Slot
Mean Sea Level to Ground level (At Slot: Slot 8H): -1218 feet	Depths are in feet
Offset wellpath MDs are referenced to each path's default MD datum	Created by: alerjen on 2020-09-29; Database: WA_MPL_EASTERNUS_Defn



User specified Dip: 67.40° Field: 52297 nT
 Magnetic North is 8.21 degrees West of True North (at 9/15/2020)
 Grid North is 0.24 degrees East of True North
 To correct azimuth from True to Grid subtract 0.24 degrees
 To correct azimuth from Magnetic to Grid subtract 8.45 degrees



REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Edward Zatta BRK 8H
Field	Brooke	API	47-009-00302-00-00
Facility	Edward Zatta BRK Pad	Wellbore	Edward Zatta BRK 8H AWB
Slot	Slot 8H		

REPORT SETUP INFORMATION			
Projection System	NAD83 / UTM Zone 17 North, US feet	Software System	WellArchitect® 6.0
North Reference	Grid	User	Atenjen
Scale	0.999612	Report Generated	9/29/2020 at 6:20:13 PM
Convergence at slot	0.24° East	Database	WA_MPL_EASTERNUS_Defn

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-48.40	2.72	1742967.20	14616660.10	40°14'46.9216"N	80°37'56.9675"W
Facility Reference Pt			1742964.48	14616708.48	40°14'47.4000"N	80°37'57.0000"W
Field Reference Pt			0.00	0.00	0°00'0.0000"	85°29'19.4780"W

WELLPATH DATUM			
Calculation method	Minimum curvature	SDC 41 (KB) to Facility Vertical Datum	1244.00ft
Horizontal Reference Pt	Slot	SDC 41 (KB) to Mean Sea Level	1244.00ft
Vertical Reference Pt	SDC 41 (KB)	SDC 41 (KB) to Ground Level at Slot (Slot 8H)	26.00ft
MD Reference Pt	SDC 41 (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	155.25°

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Field	Brooke	API	47-009-00302-00-00
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Slot	Slot 8H		

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North Reference	Grid	User	Atenjen
Scale	0.999612	Report Generated	9/29/2020 at 6:20:13 PM
Convergence at slot	0.24° East	Database	WA_MPL_EASTERNUS_Defn

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MD Reference Pt	SDC 41 (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	155.25°

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Actual Wellpath Report
Edward Zatta BRK 8H AWP Proj: 19452'
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Field	Brooke	API	47-009-00302-00-00
Facility	Edward Zatta BRK Pad	Wellbore	Edward Zatta BRK 8H AWB
Slot	Slot 8H		

WELLPATH DATA (218 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	60.080	0.00	0.00	0.00	0.00	1742967.20	14616660.10	40°14'46.9216"N	80°37'56.9675"W	0.00	0.000	0.00	0.00	0.00
26.00	0.000	60.080	26.00	0.00	0.00	0.00	1742967.20	14616660.10	40°14'46.9216"N	80°37'56.9675"W	0.00	0.000	0.00	0.00	0.00
161.00	0.640	60.080	161.00	-0.07	0.38	0.65	1742967.85	14616660.48	40°14'46.9253"N	80°37'56.9590"W	0.75	60.080	0.47	0.20	0.00
222.00	0.520	89.050	221.99	0.01	0.55	1.23	1742968.43	14616660.65	40°14'46.9270"N	80°37'56.9516"W	1.34	65.807	0.51	-0.20	47.49
296.00	0.280	82.980	295.99	0.20	0.58	1.74	1742968.94	14616660.68	40°14'46.9272"N	80°37'56.9450"W	1.83	71.624	0.33	-0.32	-8.20
404.00	0.480	86.610	403.99	0.45	0.64	2.45	1742969.65	14616660.74	40°14'46.9278"N	80°37'56.9358"W	2.54	75.444	0.19	0.19	3.36
495.00	1.320	58.080	494.98	0.46	1.21	3.72	1742970.92	14616661.31	40°14'46.9334"N	80°37'56.9194"W	3.92	71.946	1.02	0.92	-31.35
585.00	2.090	57.860	584.94	0.12	2.64	5.99	1742973.19	14616662.73	40°14'46.9474"N	80°37'56.8900"W	6.55	66.268	0.86	0.86	-0.24
676.00	3.140	43.310	675.84	-1.03	5.33	9.11	1742976.31	14616665.43	40°14'46.9739"N	80°37'56.8497"W	10.55	59.658	1.36	1.15	-15.99
767.00	4.340	36.290	766.65	-3.63	9.92	12.86	1742980.05	14616670.02	40°14'47.0191"N	80°37'56.8011"W	16.24	52.344	1.41	1.32	-7.71
857.00	5.040	29.110	856.35	-7.61	16.12	16.80	1742983.99	14616676.21	40°14'47.0802"N	80°37'56.7500"W	23.28	46.176	1.01	0.78	-7.98
948.00	5.470	18.430	946.97	-13.13	23.73	20.11	1742987.30	14616683.82	40°14'47.1552"N	80°37'56.7069"W	31.10	40.285	1.17	0.47	-11.74
1039.00	6.140	12.040	1037.50	-20.19	32.60	22.50	1742989.69	14616692.69	40°14'47.2428"N	80°37'56.6756"W	39.61	34.609	1.02	0.74	-7.02
1129.00	8.580	10.690	1126.75	-29.51	43.91	24.75	1742991.94	14616703.99	40°14'47.3545"N	80°37'56.6460"W	50.40	29.407	2.72	2.71	-1.50
1220.00	11.330	7.260	1216.37	-42.63	59.45	27.14	1742994.33	14616719.53	40°14'47.5079"N	80°37'56.6143"W	65.35	24.535	3.09	3.02	-3.77
1311.00	13.970	5.540	1305.16	-59.69	79.25	29.33	1742996.52	14616739.32	40°14'47.7036"N	80°37'56.5850"W	84.50	20.307	2.93	2.90	-1.89
1357.00	14.830	3.610	1349.71	-69.67	90.65	30.23	1742997.42	14616750.72	40°14'47.8162"N	80°37'56.5727"W	95.56	18.444	2.14	1.87	-4.20
1448.00	14.850	5.240	1437.68	-90.02	113.89	32.03	1742999.22	14616773.94	40°14'48.0457"N	80°37'56.5483"W	118.31	15.709	0.46	0.02	1.79
1539.00	16.190	1.980	1525.36	-111.45	138.18	33.54	1743000.72	14616798.23	40°14'48.2857"N	80°37'56.5276"W	142.19	13.641	1.76	1.47	-3.58
1630.00	18.760	2.280	1612.15	-135.82	165.49	34.56	1743001.74	14616825.52	40°14'48.5555"N	80°37'56.5130"W	169.06	11.795	2.83	2.82	0.33
1720.00	23.460	8.040	1696.10	-163.79	197.71	37.64	1743004.82	14616857.73	40°14'48.8738"N	80°37'56.4715"W	201.26	10.779	5.70	5.22	6.40
1811.00	26.690	359.430	1778.54	-197.68	236.10	39.97	1743007.16	14616896.11	40°14'49.2531"N	80°37'56.4394"W	239.46	9.609	5.35	3.55	-9.46
1902.00	30.710	359.860	1858.34	-237.47	279.79	39.71	1743006.90	14616939.78	40°14'49.6848"N	80°37'56.4404"W	282.60	8.078	4.42	4.42	0.47
1992.00	33.440	359.730	1934.60	-280.94	327.58	39.54	1743006.72	14616987.55	40°14'50.1571"N	80°37'56.4401"W	329.96	6.882	3.03	3.03	-0.14
2083.00	37.460	0.340	2008.71	-328.84	380.35	39.58	1743006.77	14617040.30	40°14'50.6785"N	80°37'56.4367"W	382.40	5.942	4.43	4.42	0.67
2174.00	40.940	0.480	2079.22	-380.89	437.85	40.00	1743007.18	14617097.78	40°14'51.2468"N	80°37'56.4283"W	439.68	5.220	3.83	3.82	0.15
2264.00	44.570	0.090	2145.29	-436.24	498.94	40.29	1743007.48	14617158.85	40°14'51.8504"N	80°37'56.4212"W	500.56	4.617	4.04	4.03	-0.43
2355.00	44.700	355.240	2210.07	-495.31	562.78	37.69	1743004.87	14617222.66	40°14'52.4814"N	80°37'56.4514"W	564.04	3.831	3.75	0.14	-5.33
2446.00	44.590	349.330	2274.84	-556.40	626.10	29.11	1742996.30	14617285.95	40°14'53.1074"N	80°37'56.5585"W	626.77	2.662	4.56	-0.12	-6.49
2536.00	44.570	344.410	2338.96	-618.23	687.58	14.77	1742981.97	14617347.41	40°14'53.7155"N	80°37'56.7402"W	687.74	1.231	3.84	-0.02	-5.47



Actual Wellpath Report

Edward Zatta BRK 8H AWP Proj: 19452'
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Field	Brooke	API	47-009-00302-00-00
Facility	Edward Zatta BRK Pad	Wellbore	Edward Zatta BRK 8H AWB
Slot	Slot 8H		

WELLPATH DATA (218 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]
2624.00	44.460	339.690	2401.73	-679.46	746.24	-4.23	1742962.97	14617406.05	40°14'54.2960"N	80°37'56.9821"W	746.25	359.675	3.76	-0.12	-5.36
2714.00	44.630	335.200	2465.89	-742.51	804.51	-28.43	1742938.78	14617464.30	40°14'54.8728"N	80°37'57.2912"W	805.01	357.976	3.50	0.19	-4.99
2805.00	44.740	335.070	2530.59	-806.51	862.57	-55.34	1742911.88	14617522.33	40°14'55.4476"N	80°37'57.6351"W	864.34	356.329	0.16	0.12	-0.14
2896.00	47.060	335.180	2593.91	-871.85	921.85	-82.83	1742884.41	14617581.59	40°14'56.0346"N	80°37'57.9864"W	925.57	354.866	2.55	2.55	0.12
2986.00	47.090	333.740	2655.21	-937.74	981.31	-111.24	1742856.00	14617641.03	40°14'56.6233"N	80°37'58.3496"W	987.60	353.533	1.17	0.03	-1.60
3077.00	46.970	333.110	2717.24	-1004.29	1040.86	-141.03	1742826.23	14617700.56	40°14'57.2130"N	80°37'58.7306"W	1050.37	352.284	0.52	-0.13	-0.69
3168.00	46.950	333.130	2779.35	-1070.76	1100.19	-171.10	1742796.17	14617759.86	40°14'57.8004"N	80°37'59.1152"W	1113.41	351.160	0.03	-0.02	0.02
3258.00	47.040	333.700	2840.73	-1136.54	1159.04	-200.55	1742766.73	14617818.69	40°14'58.3833"N	80°37'59.4920"W	1176.27	350.183	0.47	0.10	0.63
3351.00	46.800	333.250	2904.25	-1204.44	1219.82	-230.89	1742736.40	14617879.45	40°14'58.9851"N	80°37'59.8799"W	1241.48	349.282	0.44	-0.26	-0.48
3443.00	46.750	333.270	2967.26	-1271.43	1279.69	-261.05	1742706.25	14617939.29	40°14'59.5779"N	80°38'0.2657"W	1306.04	348.470	0.06	-0.05	0.02
3535.00	46.810	333.350	3030.26	-1338.44	1339.59	-291.16	1742676.15	14617999.17	40°15'0.1711"N	80°38'0.6509"W	1370.87	347.737	0.09	0.07	0.09
3628.00	46.700	333.320	3093.98	-1406.14	1400.13	-321.56	1742645.76	14618059.68	40°15'0.7706"N	80°38'1.0398"W	1436.58	347.065	0.12	-0.12	-0.03
3721.00	46.640	333.650	3157.79	-1473.76	1460.66	-351.76	1742615.57	14618120.19	40°15'1.3700"N	80°38'1.4260"W	1502.42	346.460	0.27	-0.06	0.35
3812.00	46.760	333.570	3220.20	-1539.96	1519.99	-381.20	1742586.15	14618179.50	40°15'1.9574"N	80°38'1.8025"W	1567.06	345.921	0.15	0.13	-0.09
3904.00	46.800	333.270	3283.21	-1606.97	1579.95	-411.20	1742556.16	14618239.43	40°15'2.5511"N	80°38'2.1862"W	1632.58	345.412	0.24	0.04	-0.33
3995.00	46.190	333.260	3345.85	-1672.93	1638.89	-440.89	1742526.48	14618298.35	40°15'3.1349"N	80°38'2.5660"W	1697.16	344.943	0.67	-0.67	-0.01
4088.00	46.700	333.550	3409.93	-1740.30	1699.16	-471.06	1742496.32	14618358.60	40°15'3.7316"N	80°38'2.9519"W	1763.25	344.505	0.59	0.55	0.31
4179.00	46.440	332.870	3472.49	-1806.34	1758.15	-500.85	1742466.55	14618417.57	40°15'4.3158"N	80°38'3.3329"W	1828.10	344.099	0.61	-0.29	-0.75
4270.00	45.570	332.900	3535.70	-1871.75	1816.42	-530.69	1742436.72	14618475.81	40°15'4.8928"N	80°38'3.7146"W	1892.36	343.714	0.96	-0.96	0.03
4361.00	45.720	332.320	3599.32	-1936.75	1874.19	-560.62	1742406.80	14618533.56	40°15'5.4649"N	80°38'4.0976"W	1956.25	343.347	0.48	0.16	-0.64
4448.00	45.810	332.650	3660.01	-1999.01	1929.48	-589.42	1742378.01	14618588.82	40°15'6.0124"N	80°38'4.4661"W	2017.50	343.013	0.29	0.10	0.38
4535.00	47.610	328.220	3719.68	-2062.07	1984.51	-620.68	1742346.76	14618643.84	40°15'6.5575"N	80°38'4.8663"W	2079.31	342.632	4.24	2.07	-5.09
4621.00	47.880	332.620	3777.52	-2125.47	2039.85	-652.08	1742315.37	14618699.15	40°15'7.1056"N	80°38'5.2684"W	2141.54	342.272	3.80	0.31	5.12
4708.00	47.780	332.630	3835.93	-2189.89	2097.11	-681.73	1742285.74	14618756.39	40°15'7.6726"N	80°38'5.6477"W	2205.13	341.992	0.12	-0.11	0.01
4797.00	47.850	332.540	3895.69	-2255.76	2155.65	-712.09	1742255.38	14618814.91	40°15'8.2524"N	80°38'6.0362"W	2270.22	341.720	0.11	0.08	-0.10
4889.00	47.870	332.680	3957.42	-2323.91	2216.22	-743.48	1742224.01	14618875.45	40°15'8.8522"N	80°38'6.4378"W	2337.60	341.455	0.11	0.02	0.15
4980.00	46.950	332.230	4019.01	-2390.82	2275.62	-774.46	1742193.04	14618934.83	40°15'9.4404"N	80°38'6.8342"W	2403.79	341.205	1.07	-1.01	-0.49
5070.00	47.000	332.900	4080.41	-2456.54	2334.01	-804.77	1742162.74	14618993.20	40°15'10.0187"N	80°38'7.2220"W	2468.86	340.976	0.55	0.06	0.74
5161.00	47.050	332.690	4142.45	-2523.06	2393.23	-835.21	1742132.31	14619052.40	40°15'10.6051"N	80°38'7.6115"W	2534.78	340.762	0.18	0.05	-0.23
5252.00	47.120	332.190	4204.41	-2589.63	2452.31	-866.05	1742101.49	14619111.45	40°15'11.1902"N	80°38'8.0060"W	2600.74	340.549	0.41	0.08	-0.55

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Field	Brooke	API	47-009-00302-00-00
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Slot	Slot 8H		

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5341.00	47.070	332.720	4265.00	-2654.74	2510.11	-896.19	1742071.36	14619169.23	40°15'11.7626"N	80°38'8.3918"W	2665.30	340.352	0.44	-0.06	0.60
5431.00	47.150	332.650	4326.25	-2720.61	2568.70	-926.45	1742041.11	14619227.80	40°15'12.3428"N	80°38'8.7789"W	2730.66	340.167	0.11	0.09	-0.08
5521.00	46.500	332.530	4387.83	-2786.18	2626.96	-956.67	1742010.91	14619286.04	40°15'12.9198"N	80°38'9.1655"W	2795.74	339.990	0.73	-0.72	-0.13
5610.00	46.630	332.460	4449.02	-2850.73	2684.29	-986.51	1741981.07	14619343.34	40°15'13.4874"N	80°38'9.5474"W	2859.83	339.821	0.16	0.15	-0.08
5700.00	46.620	332.530	4510.83	-2916.07	2742.31	-1016.73	1741950.87	14619401.34	40°15'14.0620"N	80°38'9.9340"W	2924.72	339.658	0.06	-0.01	0.08
5790.00	46.530	332.360	4572.70	-2981.36	2800.26	-1046.96	1741920.65	14619459.27	40°15'14.6359"N	80°38'10.3209"W	2989.58	339.500	0.17	-0.10	-0.19
5879.00	41.350	331.840	4636.76	-3043.00	2854.83	-1075.84	1741891.78	14619513.82	40°15'15.1763"N	80°38'10.6905"W	3050.82	339.351	5.83	-5.82	-0.58
5969.00	34.960	331.240	4707.50	-3098.46	2903.69	-1102.30	1741865.33	14619562.66	40°15'15.6603"N	80°38'11.0292"W	3105.88	339.212	7.11	-7.10	-0.67
6058.00	27.140	328.240	4783.69	-3144.12	2943.37	-1125.29	1741842.34	14619602.32	40°15'16.0533"N	80°38'11.3237"W	3151.15	339.077	8.95	-8.79	-3.37
6147.00	19.290	325.610	4865.42	-3178.81	2972.81	-1144.31	1741823.33	14619631.75	40°15'16.3449"N	80°38'11.5674"W	3185.44	338.947	8.89	-8.82	-2.96
6237.00	12.610	323.110	4951.91	-3203.10	2992.96	-1158.62	1741809.03	14619651.89	40°15'16.5446"N	80°38'11.7509"W	3209.39	338.838	7.46	-7.42	-2.78
6326.00	7.200	297.350	5039.59	-3217.02	3003.30	-1169.42	1741798.24	14619662.23	40°15'16.6473"N	80°38'11.8896"W	3222.94	338.725	7.72	-6.08	-28.94
6416.00	6.810	212.110	5129.12	-3218.55	3001.37	-1177.28	1741790.37	14619660.30	40°15'16.6285"N	80°38'11.9911"W	3224.01	338.582	10.53	-0.43	-94.71
6506.00	12.050	177.410	5217.94	-3206.92	2987.44	-1179.70	1741787.96	14619646.38	40°15'16.4910"N	80°38'12.0230"W	3211.93	338.452	8.35	5.82	-38.56
6596.00	19.890	178.580	5304.40	-3184.13	2962.72	-1178.89	1741788.76	14619621.66	40°15'16.2466"N	80°38'12.0140"W	3188.65	338.302	8.72	8.71	1.30
6686.00	28.540	171.250	5386.42	-3149.33	2926.08	-1175.24	1741792.42	14619585.04	40°15'15.8845"N	80°38'11.9687"W	3153.28	338.118	10.16	9.61	-8.14
6775.00	36.770	160.780	5461.35	-3102.26	2879.80	-1163.20	1741804.45	14619538.78	40°15'15.4266"N	80°38'11.8160"W	3105.85	338.005	11.19	9.25	-11.76
6865.00	45.520	155.860	5529.08	-3043.21	2824.94	-1141.16	1741826.49	14619483.94	40°15'14.8836"N	80°38'11.5345"W	3046.73	338.003	10.36	9.72	-5.47
6954.00	52.990	155.490	5587.13	-2975.83	2763.55	-1113.39	1741854.24	14619422.57	40°15'14.2758"N	80°38'11.1796"W	2979.40	338.056	8.40	8.39	-0.42
7044.00	61.070	152.590	5636.07	-2900.42	2695.77	-1080.29	1741887.33	14619354.82	40°15'13.6047"N	80°38'10.7563"W	2904.17	338.162	9.37	8.98	-3.22
7133.00	67.990	156.320	5674.33	-2820.14	2623.30	-1045.74	1741921.87	14619282.38	40°15'12.8872"N	80°38'10.3146"W	2824.06	338.266	8.65	7.78	4.19
7223.00	75.760	157.320	5702.31	-2734.71	2544.73	-1012.11	1741955.48	14619203.84	40°15'12.1094"N	80°38'9.8850"W	2738.62	338.311	8.70	8.63	1.11
7313.00	86.240	156.520	5716.37	-2645.98	2463.07	-977.31	1741990.27	14619122.21	40°15'11.3010"N	80°38'9.4404"W	2649.88	338.358	11.68	11.64	-0.89
7404.00	89.510	156.930	5719.74	-2555.08	2379.54	-941.38	1742026.19	14619038.72	40°15'10.4742"N	80°38'8.9815"W	2558.99	338.416	3.62	3.59	0.45
7500.00	89.230	155.890	5720.80	-2459.11	2291.57	-902.96	1742064.59	14618950.78	40°15'9.6033"N	80°38'8.4907"W	2463.06	338.494	1.12	-0.29	-1.08
7590.00	90.120	156.360	5721.31	-2369.12	2209.28	-866.54	1742101.00	14618868.51	40°15'8.7886"N	80°38'8.0253"W	2373.14	338.584	1.12	0.99	0.52
7680.00	89.780	155.270	5721.39	-2279.13	2127.18	-829.67	1742137.86	14618786.45	40°15'7.9758"N	80°38'7.5541"W	2283.25	338.693	1.27	-0.38	-1.21
7769.00	90.000	155.760	5721.56	-2190.13	2046.18	-792.78	1742174.73	14618705.48	40°15'7.1739"N	80°38'7.0827"W	2194.39	338.821	0.60	0.25	0.55
7859.00	89.660	154.580	5721.82	-2100.13	1964.50	-754.99	1742212.51	14618623.84	40°15'6.3653"N	80°38'6.5996"W	2104.59	338.977	1.36	-0.38	-1.31
7949.00	89.450	152.940	5722.52	-2010.17	1883.78	-715.20	1742252.28	14618543.15	40°15'5.5660"N	80°38'6.0907"W	2014.98	339.210	1.84	-0.23	-1.82

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Actual Wellpath Report

Edward Zatta BRK 8H AWP Proj: 19452'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLe	Well	Edward Zatta BRK 8H
Field	Brooke	API	47-009-00302-00-00
Facility	Edward Zatta BRK Pad	Wellbore	Edward Zatta BRK 8H AWB
Slot	Slot 8H		

WELLPATH DATA (218 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]
8038.00	89.570	151.330	5723.29	-1921.31	1805.11	-673.61	1742293.86	14618464.50	40°15'4.7868"N	80°38'5.5584"W	1926.70	339.536	1.81	0.13	-1.81
8128.00	89.380	149.730	5724.11	-1831.62	1726.76	-629.33	1742338.11	14618386.19	40°15'4.0108"N	80°38'4.9916"W	1837.87	339.975	1.79	-0.21	-1.78
8217.00	89.660	150.230	5724.86	-1743.00	1649.70	-584.81	1742382.62	14618309.16	40°15'3.2475"N	80°38'4.4215"W	1750.29	340.481	0.64	0.31	0.56
8310.00	89.910	152.570	5725.20	-1650.22	1568.05	-540.29	1742427.12	14618227.54	40°15'2.4389"N	80°38'3.8517"W	1658.53	340.988	2.53	0.27	2.52
8399.00	89.660	155.450	5725.54	-1561.25	1488.06	-501.29	1742466.10	14618147.58	40°15'1.6469"N	80°38'3.3530"W	1570.23	341.383	3.25	-0.28	3.24
8488.00	89.630	155.490	5726.09	-1472.25	1407.10	-464.35	1742503.04	14618066.65	40°15'0.8453"N	80°38'2.8808"W	1481.74	341.737	0.06	-0.03	0.04
8578.00	89.570	155.870	5726.72	-1382.25	1325.09	-427.28	1742540.09	14617984.67	40°15'0.0333"N	80°38'2.4072"W	1392.27	342.128	0.43	-0.07	0.42
8665.00	89.540	155.740	5727.39	-1295.26	1245.73	-391.63	1742575.73	14617905.35	40°14'59.2477"N	80°38'1.9516"W	1305.84	342.548	0.15	-0.03	-0.15
8755.00	89.690	156.210	5728.00	-1205.27	1163.53	-354.98	1742612.35	14617823.18	40°14'58.4339"N	80°38'1.4834"W	1216.48	343.033	0.55	0.17	0.52
8844.00	89.260	156.590	5728.81	-1116.29	1081.98	-319.36	1742647.97	14617741.66	40°14'57.6266"N	80°38'1.0282"W	1128.12	343.556	0.64	-0.48	0.43
8931.00	89.050	156.450	5730.10	-1029.32	1002.19	-284.70	1742682.62	14617661.90	40°14'56.8367"N	80°38'0.5855"W	1041.84	344.142	0.29	-0.24	-0.16
9022.00	89.110	156.200	5731.56	-938.35	918.86	-248.16	1742719.14	14617578.60	40°14'56.0118"N	80°38'0.1187"W	951.78	344.887	0.28	0.07	-0.27
9111.00	89.480	156.840	5732.65	-849.38	837.24	-212.70	1742754.58	14617497.01	40°14'55.2037"N	80°37'59.6658"W	863.83	345.745	0.83	0.42	0.72
9200.00	90.090	157.080	5732.99	-760.42	755.34	-177.87	1742789.40	14617415.14	40°14'54.3930"N	80°37'59.2210"W	776.00	346.749	0.74	0.69	0.27
9290.00	89.380	156.660	5733.40	-670.46	672.57	-142.52	1742824.74	14617332.41	40°14'53.5737"N	80°37'58.7695"W	687.51	348.036	0.92	-0.79	-0.47
9380.00	90.490	156.440	5733.51	-580.48	590.01	-106.70	1742860.54	14617249.88	40°14'52.7563"N	80°37'58.3120"W	599.58	349.749	1.26	1.23	-0.24
9473.00	89.110	156.040	5733.83	-487.50	504.89	-69.23	1742897.99	14617164.80	40°14'51.9137"N	80°37'57.8333"W	509.62	352.192	1.54	-1.48	-0.43
9562.00	89.660	157.060	5734.79	-398.53	423.25	-33.82	1742933.39	14617083.19	40°14'51.1055"N	80°37'57.3810"W	424.60	355.432	1.30	0.62	1.15
9652.00	89.380	155.850	5735.54	-308.56	340.75	2.13	1742969.33	14617000.71	40°14'50.2887"N	80°37'56.9218"W	340.75	0.358	1.38	-0.31	-1.34
9745.00	89.630	155.900	5736.34	-215.56	255.87	40.14	1743007.33	14616915.87	40°14'49.4485"N	80°37'56.4361"W	259.00	8.916	0.27	0.27	0.05
9835.00	90.000	155.390	5736.63	-125.57	173.88	77.26	1743044.43	14616833.92	40°14'48.6367"N	80°37'55.9619"W	190.27	23.955	0.70	0.41	-0.57
9924.00	89.690	155.380	5736.87	-36.57	92.97	114.33	1743081.48	14616753.04	40°14'47.8356"N	80°37'55.4882"W	147.36	50.881	0.35	-0.35	-0.01
10017.00	89.450	155.380	5737.57	56.43	8.43	153.07	1743120.21	14616668.53	40°14'46.9986"N	80°37'54.9931"W	153.30	86.848	0.26	-0.26	0.00
10110.00	89.780	155.170	5738.20	149.43	-76.04	191.97	1743159.09	14616584.09	40°14'46.1623"N	80°37'54.4960"W	206.48	111.610	0.42	0.35	-0.23
10200.00	89.480	155.230	5738.78	239.42	-157.74	229.72	1743196.83	14616502.42	40°14'45.3534"N	80°37'54.0135"W	278.66	124.477	0.34	-0.33	0.07
10289.00	89.630	155.260	5739.47	328.42	-238.56	266.98	1743234.08	14616421.63	40°14'44.5532"N	80°37'53.5373"W	358.04	131.782	0.17	0.17	0.03
10382.00	89.600	154.130	5740.09	421.41	-322.63	306.73	1743273.81	14616337.59	40°14'43.7208"N	80°37'53.0291"W	445.17	136.447	1.22	-0.03	-1.22
10475.00	89.480	155.240	5740.84	514.41	-406.70	346.50	1743313.56	14616253.56	40°14'42.8885"N	80°37'52.5209"W	534.29	139.570	1.20	-0.13	1.19
10567.00	89.660	156.000	5741.53	606.40	-490.49	384.47	1743351.52	14616169.80	40°14'42.0589"N	80°37'52.0356"W	623.22	141.909	0.85	0.20	0.83
10660.00	90.060	156.220	5741.76	699.39	-575.52	422.14	1743389.17	14616084.80	40°14'41.2171"N	80°37'51.5545"W	713.74	143.741	0.49	0.43	0.24

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REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Edward Zatta BRK 8H
Field	Brooke	API	47-009-00302-00-00
Facility	Edward Zatta BRK Pad	Wellbore	Edward Zatta BRK 8H AWB
Slot	Slot 8H		

WELLPATH DATA (218 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]	
10753.00	90.310	155.930	5741.46	792.38	-660.53	459.85	1743426.87	14615999.83	40°14'40.3755"N	80°37'51.0727"W	804.84	145.155	0.41	0.27	-0.31	
10846.00	89.170	155.540	5741.88	885.37	-745.31	498.07	1743465.07	14615915.08	40°14'39.5361"N	80°37'50.5844"W	896.42	146.247	1.30	-1.23	-0.42	
10938.00	89.170	155.270	5743.21	977.36	-828.96	536.35	1743503.35	14615831.47	40°14'38.7080"N	80°37'50.0952"W	987.34	147.096	0.29	0.00	-0.29	
11031.00	89.290	154.950	5744.46	1070.35	-913.31	575.49	1743542.47	14615747.14	40°14'37.8728"N	80°37'49.5950"W	1079.50	147.784	0.37	0.13	-0.34	
11123.00	89.480	155.460	5745.45	1162.35	-996.83	614.07	1743581.03	14615663.66	40°14'37.0459"N	80°37'49.1020"W	1170.79	148.366	0.59	0.21	0.55	
11216.00	89.200	155.010	5746.52	1255.34	-1081.27	653.03	1743619.97	14615579.25	40°14'36.2099"N	80°37'48.6042"W	1263.16	148.870	0.57	-0.30	-0.48	
11309.00	89.660	155.570	5747.45	1348.34	-1165.75	691.90	1743658.83	14615494.81	40°14'35.3735"N	80°37'48.1074"W	1355.62	149.310	0.78	0.49	0.60	
11401.00	89.170	154.920	5748.39	1440.33	-1249.29	730.42	1743697.34	14615411.30	40°14'34.5464"N	80°37'47.6152"W	1447.15	149.686	0.88	-0.53	-0.71	
11494.00	89.380	155.400	5749.56	1533.32	-1333.68	769.49	1743736.39	14615326.94	40°14'33.7108"N	80°37'47.1160"W	1539.74	150.016	0.56	0.23	0.52	
11587.00	89.260	155.340	5750.67	1626.32	-1418.21	808.24	1743775.13	14615242.44	40°14'32.8739"N	80°37'46.6208"W	1632.35	150.321	0.14	-0.13	-0.06	
11680.00	89.570	155.210	5751.62	1719.31	-1502.68	847.14	1743814.01	14615158.01	40°14'32.0376"N	80°37'46.1237"W	1725.02	150.588	0.36	0.33	-0.14	
11772.00	89.380	155.550	5752.46	1811.31	-1586.31	885.47	1743852.32	14615074.41	40°14'31.2095"N	80°37'45.6340"W	1816.71	150.830	0.42	-0.21	0.37	
11865.00	89.350	155.350	5753.49	1904.30	-1670.90	924.10	1743890.94	14614989.85	40°14'30.3721"N	80°37'45.1403"W	1909.42	151.055	0.22	-0.03	-0.22	
11958.00	89.350	155.260	5754.55	1997.29	-1755.39	962.96	1743929.78	14614905.40	40°14'29.5356"N	80°37'44.6439"W	2002.17	151.252	0.10	0.00	-0.10	
12050.00	89.540	155.500	5755.44	2089.29	-1839.02	1001.28	1743968.09	14614821.80	40°14'28.7075"N	80°37'44.1542"W	2093.93	151.433	0.33	0.21	0.26	
12143.00	89.350	155.390	5756.34	2182.28	-1923.61	1039.93	1744006.72	14614737.24	40°14'27.8701"N	80°37'43.6604"W	2186.71	151.604	0.24	-0.20	-0.12	
12236.00	89.510	155.450	5757.26	2275.28	-2008.17	1078.61	1744045.39	14614652.71	40°14'27.0328"N	80°37'43.1662"W	2279.51	151.759	0.18	0.17	0.06	
12329.00	89.450	155.590	5758.11	2368.27	-2092.81	1117.14	1744083.91	14614568.11	40°14'26.1948"N	80°37'42.6738"W	2372.31	151.907	0.16	-0.06	0.15	
12420.00	89.420	155.320	5759.00	2459.27	-2175.58	1154.94	1744121.69	14614485.37	40°14'25.3753"N	80°37'42.1909"W	2463.14	152.038	0.30	-0.03	-0.30	
12513.00	89.540	155.230	5759.85	2552.27	-2260.05	1193.84	1744160.58	14614400.93	40°14'24.5390"N	80°37'41.6939"W	2555.99	152.155	0.16	0.13	-0.10	
12606.00	89.420	155.260	5760.69	2645.26	-2344.50	1232.78	1744199.50	14614316.51	40°14'23.7029"N	80°37'41.1963"W	2648.86	152.264	0.13	-0.13	0.03	
12698.00	89.480	154.550	5761.58	2737.26	-2427.82	1271.80	1744238.50	14614233.23	40°14'22.8780"N	80°37'40.6977"W	2740.76	152.352	0.77	0.07	-0.77	
12790.00	89.020	155.760	5762.78	2829.25	-2511.29	1310.45	1744277.14	14614149.79	40°14'22.0515"N	80°37'40.2038"W	2832.64	152.443	1.41	-0.50	1.32	
12883.00	89.480	155.090	5764.00	2922.24	-2595.86	1349.12	1744315.80	14614065.25	40°14'21.2142"N	80°37'39.7097"W	2925.51	152.538	0.87	0.49	-0.72	
12976.00	89.380	155.710	5764.92	3015.23	-2680.41	1387.84	1744354.49	14613980.73	40°14'20.3770"N	80°37'39.2151"W	3018.40	152.626	0.68	-0.11	0.67	
13068.00	89.380	155.270	5765.92	3107.22	-2764.12	1426.00	1744392.64	14613897.06	40°14'19.5483"N	80°37'38.7275"W	3110.28	152.711	0.48	0.00	-0.48	
13158.00	89.020	154.760	5767.17	3197.21	-2845.69	1464.01	1744430.64	14613815.52	40°14'18.7407"N	80°37'38.2418"W	3200.20	152.776	0.69	-0.40	-0.57	
13251.00	89.540	154.980	5768.34	3290.20	-2929.88	1503.50	1744470.12	14613731.36	40°14'17.9071"N	80°37'37.7372"W	3293.13	152.835	0.61	0.56	0.24	
13344.00	88.890	155.310	5769.62	3383.20	-3014.26	1542.59	1744509.19	14613647.02	40°14'17.0716"N	80°37'37.2378"W	3386.05	152.898	0.78	-0.70	0.35	
13433.00	88.890	154.980	5771.34	3472.18	-3095.00	1579.99	1744546.57	14613566.31	40°14'16.2722"N	80°37'36.7599"W	3474.96	152.956	0.37	0.00	-0.37	



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Actual Wellpath Report

Edward Zatta BRK 8H AWP Proj: 19452'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Edward Zatta BRK 8H
Field	Brooke	API	47-009-00302-00-00
Facility	Edward Zatta BRK Pad	Wellbore	Edward Zatta BRK 8H AWB
Slot	Slot 8H		

WELLPATH DATA (218 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]
13526.00	89.260	154.640	5772.84	3565.16	-3179.14	1619.57	1744586.14	14613482.20	40°14'15.4391"N	80°37'36.2541"W	3567.90	153.004	0.54	0.40	-0.37
13616.00	89.020	155.000	5774.19	3655.15	-3260.58	1657.85	1744624.41	14613400.79	40°14'14.6327"N	80°37'35.7648"W	3657.85	153.049	0.48	-0.27	0.40
13709.00	89.200	155.730	5775.64	3748.14	-3345.10	1696.62	1744663.15	14613316.30	40°14'13.7958"N	80°37'35.2696"W	3750.76	153.106	0.81	0.19	0.78
13802.00	89.110	155.780	5777.01	3841.12	-3429.89	1734.80	1744701.32	14613231.55	40°14'12.9564"N	80°37'34.7819"W	3843.66	153.170	0.11	-0.10	0.05
13891.00	88.950	154.980	5778.52	3930.11	-3510.79	1771.87	1744738.38	14613150.68	40°14'12.1554"N	80°37'34.3083"W	3932.58	153.220	0.92	-0.18	-0.90
13982.00	89.020	155.170	5780.13	4021.10	-3593.30	1810.22	1744776.71	14613068.20	40°14'11.3385"N	80°37'33.8183"W	4023.52	153.262	0.22	0.08	0.21
14070.00	88.920	154.450	5781.71	4109.08	-3672.92	1847.66	1744814.14	14612988.61	40°14'10.5501"N	80°37'33.3398"W	4111.47	153.295	0.83	-0.11	-0.82
14160.00	89.540	155.360	5782.92	4199.07	-3754.41	1885.83	1744852.30	14612907.15	40°14'9.7432"N	80°37'32.8521"W	4201.43	153.330	1.22	0.69	1.01
14248.00	89.170	155.630	5783.91	4287.06	-3834.48	1922.33	1744888.78	14612827.11	40°14'8.9505"N	80°37'32.3859"W	4289.36	153.374	0.52	-0.42	0.31
14338.00	89.170	155.670	5785.21	4377.05	-3916.47	1959.43	1744925.87	14612745.16	40°14'8.1388"N	80°37'31.9119"W	4379.28	153.421	0.04	0.00	0.04
14427.00	89.200	155.340	5786.48	4466.04	-3997.45	1996.33	1744962.75	14612664.21	40°14'7.3370"N	80°37'31.4406"W	4468.21	153.462	0.37	0.03	-0.37
14517.00	89.230	155.020	5787.71	4556.03	-4079.13	2034.11	1745000.51	14612582.56	40°14'6.5283"N	80°37'30.9579"W	4558.17	153.496	0.36	0.03	-0.36
14606.00	89.480	156.120	5788.71	4645.02	-4160.15	2070.91	1745037.30	14612501.57	40°14'5.7261"N	80°37'30.4878"W	4647.10	153.536	1.27	0.28	1.24
14697.00	88.950	155.400	5789.96	4736.01	-4243.12	2108.27	1745074.65	14612418.63	40°14'4.9046"N	80°37'30.0106"W	4738.02	153.579	0.98	-0.58	-0.79
14790.00	88.860	153.560	5791.74	4828.98	-4327.03	2148.33	1745114.69	14612334.76	40°14'4.0738"N	80°37'29.4987"W	4830.99	153.596	1.98	-0.10	-1.98
14880.00	89.540	155.840	5793.00	4918.96	-4408.38	2186.78	1745153.13	14612253.44	40°14'3.2683"N	80°37'29.0073"W	4920.96	153.616	2.64	0.76	2.53
14972.00	89.230	155.930	5793.98	5010.95	-4492.35	2224.37	1745190.70	14612169.50	40°14'2.4370"N	80°37'28.5273"W	5012.88	153.658	0.35	-0.34	0.10
15064.00	89.080	155.570	5795.34	5102.94	-4576.22	2262.15	1745228.47	14612085.66	40°14'1.6066"N	80°37'28.0447"W	5104.81	153.696	0.42	-0.16	-0.39
15157.00	88.890	155.380	5796.99	5195.92	-4660.82	2300.75	1745267.05	14612001.10	40°14'0.7690"N	80°37'27.5517"W	5197.76	153.727	0.29	-0.20	-0.20
15250.00	89.170	155.440	5798.56	5288.91	-4745.37	2339.44	1745305.73	14611916.58	40°13'59.9318"N	80°37'27.0574"W	5290.70	153.757	0.31	0.30	0.06
15342.00	89.260	155.290	5799.82	5380.90	-4828.99	2377.79	1745344.06	14611832.99	40°13'59.1039"N	80°37'26.5676"W	5382.66	153.784	0.19	0.10	-0.16
15434.00	89.170	155.690	5801.08	5472.89	-4912.69	2415.95	1745382.21	14611749.32	40°13'58.2752"N	80°37'26.0801"W	5474.61	153.813	0.45	-0.10	0.43
15527.00	89.380	155.660	5802.26	5565.88	-4997.43	2454.25	1745420.50	14611664.62	40°13'57.4362"N	80°37'25.5908"W	5567.55	153.844	0.23	0.23	-0.03
15620.00	89.140	155.120	5803.46	5658.87	-5081.97	2492.98	1745459.21	14611580.11	40°13'56.5991"N	80°37'25.0962"W	5660.51	153.870	0.64	-0.26	-0.58
15712.00	88.800	155.360	5805.11	5750.85	-5165.50	2531.50	1745497.72	14611496.61	40°13'55.7721"N	80°37'24.6040"W	5752.47	153.891	0.45	-0.37	0.26
15805.00	89.140	155.200	5806.79	5843.84	-5249.97	2570.39	1745536.59	14611412.18	40°13'54.9358"N	80°37'24.1073"W	5845.43	153.914	0.40	0.37	-0.17
15894.00	88.950	155.490	5808.27	5932.83	-5330.84	2607.51	1745573.69	14611331.34	40°13'54.1351"N	80°37'23.6331"W	5934.39	153.935	0.39	-0.21	0.33
15984.00	89.080	155.670	5809.82	6022.81	-5412.78	2644.71	1745610.88	14611249.43	40°13'53.3238"N	80°37'23.1579"W	6024.34	153.960	0.25	0.14	0.20
16074.00	88.920	154.590	5811.39	6112.80	-5494.42	2682.56	1745648.71	14611167.83	40°13'52.5155"N	80°37'22.6745"W	6114.31	153.977	1.21	-0.18	-1.20
16163.00	89.080	155.180	5812.94	6201.78	-5574.99	2720.33	1745686.46	14611087.28	40°13'51.7177"N	80°37'22.1919"W	6203.28	153.990	0.69	0.18	0.66



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Field	Brooke	API	47-009-00302-00-00
Facility	Edward Zatta BRK Pad	Wellbore	Edward Zatta BRK 8H AWB
Slot	Slot 8H		

WELLPATH DATA (218 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]	
16251.00	89.260	155.640	5814.22	6289.77	-5655.00	2756.94	1745723.07	14611007.30	40°13'50.9255"N	80°37'21.7242"W	6291.24	154.010	0.56	0.20	0.52	
16341.00	88.800	154.770	5815.74	6379.76	-5736.69	2794.68	1745760.79	14610925.65	40°13'50.1167"N	80°37'21.2422"W	6381.21	154.027	1.09	-0.51	-0.97	
16430.00	88.890	155.400	5817.53	6468.74	-5817.39	2832.16	1745798.26	14610844.98	40°13'49.3176"N	80°37'20.7633"W	6470.18	154.041	0.71	0.10	0.71	
16518.00	89.050	155.170	5819.11	6556.72	-5897.32	2868.95	1745835.03	14610765.08	40°13'48.5262"N	80°37'20.2934"W	6558.14	154.058	0.32	0.18	-0.26	
16606.00	89.380	155.570	5820.32	6644.71	-5977.30	2905.62	1745871.69	14610685.13	40°13'47.7343"N	80°37'19.8250"W	6646.11	154.075	0.59	0.37	0.45	
16694.00	89.200	155.330	5821.41	6732.71	-6057.34	2942.18	1745908.23	14610605.12	40°13'46.9418"N	80°37'19.3580"W	6734.08	154.093	0.34	-0.20	-0.27	
16783.00	88.830	155.810	5822.94	6821.69	-6138.36	2978.99	1745945.02	14610524.13	40°13'46.1397"N	80°37'18.8880"W	6823.04	154.112	0.68	-0.42	0.54	
16871.00	88.920	155.060	5824.67	6909.67	-6218.38	3015.56	1745981.59	14610444.14	40°13'45.3474"N	80°37'18.4208"W	6911.00	154.129	0.86	0.10	-0.85	
16960.00	88.950	154.780	5826.32	6998.66	-6298.98	3053.28	1746019.29	14610363.58	40°13'44.5494"N	80°37'17.9389"W	6999.97	154.139	0.32	0.03	-0.31	
17049.00	88.610	155.090	5828.22	7087.64	-6379.58	3090.98	1746056.97	14610283.01	40°13'43.7513"N	80°37'17.4574"W	7088.94	154.149	0.52	-0.38	0.35	
17137.00	88.770	155.280	5830.23	7175.61	-6459.43	3127.90	1746093.88	14610203.19	40°13'42.9606"N	80°37'16.9857"W	7176.91	154.162	0.28	0.18	0.22	
17226.00	89.600	156.710	5831.50	7264.59	-6540.72	3164.10	1746130.07	14610121.93	40°13'42.1558"N	80°37'16.5235"W	7265.85	154.184	1.86	0.93	1.61	
17314.00	88.860	155.050	5832.68	7352.58	-6621.03	3200.06	1746166.01	14610041.65	40°13'41.3607"N	80°37'16.0643"W	7353.80	154.205	2.07	-0.84	-1.89	
17403.00	89.380	156.230	5834.05	7441.56	-6702.09	3236.76	1746202.70	14609960.62	40°13'40.5581"N	80°37'15.5956"W	7442.76	154.222	1.45	0.58	1.33	
17492.00	89.140	155.480	5835.19	7530.55	-6783.30	3273.16	1746239.09	14609879.45	40°13'39.7541"N	80°37'15.1307"W	7531.72	154.241	0.88	-0.27	-0.84	
17580.00	89.080	155.280	5836.56	7618.54	-6863.29	3309.82	1746275.73	14609799.49	40°13'38.9621"N	80°37'14.6626"W	7619.69	154.254	0.24	-0.07	-0.23	
17668.00	89.450	155.760	5837.69	7706.53	-6943.37	3346.28	1746312.18	14609719.44	40°13'38.1692"N	80°37'14.1969"W	7707.66	154.269	0.69	0.42	0.55	
17757.00	89.200	156.300	5838.74	7795.51	-7024.69	3382.44	1746348.32	14609638.15	40°13'37.3641"N	80°37'13.7353"W	7796.61	154.289	0.67	-0.28	0.61	
17846.00	88.950	155.720	5840.18	7884.49	-7105.99	3418.62	1746384.48	14609556.88	40°13'36.5592"N	80°37'13.2733"W	7885.56	154.308	0.71	-0.28	-0.65	
17934.00	89.570	156.290	5841.31	7972.48	-7186.38	3454.40	1746420.25	14609476.52	40°13'35.7633"N	80°37'12.8164"W	7973.51	154.327	0.96	0.70	0.65	
18023.00	89.910	156.110	5841.72	8061.47	-7267.81	3490.31	1746456.15	14609395.13	40°13'34.9571"N	80°37'12.3579"W	8062.46	154.348	0.43	0.38	-0.20	
18111.00	89.230	155.920	5842.38	8149.45	-7348.21	3526.08	1746491.91	14609314.76	40°13'34.1611"N	80°37'11.9012"W	8150.42	154.366	0.80	-0.77	-0.22	
18200.00	89.050	155.530	5843.71	8238.44	-7429.33	3562.67	1746528.48	14609233.67	40°13'33.3579"N	80°37'11.4340"W	8239.39	154.380	0.48	-0.20	-0.44	
18289.00	88.950	154.760	5845.27	8327.43	-7510.07	3600.07	1746565.87	14609152.96	40°13'32.5584"N	80°37'10.9562"W	8328.37	154.389	0.87	-0.11	-0.87	
18377.00	89.320	155.490	5846.59	8415.42	-7589.90	3637.08	1746602.87	14609073.16	40°13'31.7680"N	80°37'10.4835"W	8416.35	154.396	0.93	0.42	0.83	
18466.00	89.510	155.120	5847.50	8504.41	-7670.75	3674.27	1746640.03	14608992.34	40°13'30.9674"N	80°37'10.0086"W	8505.33	154.406	0.47	0.21	-0.42	
18555.00	89.320	155.420	5848.41	8593.41	-7751.59	3711.50	1746677.25	14608911.53	40°13'30.1671"N	80°37'9.5331"W	8594.32	154.415	0.40	-0.21	0.34	
18643.00	89.200	155.510	5849.55	8681.40	-7831.64	3748.04	1746713.77	14608831.52	40°13'29.3745"N	80°37'9.0665"W	8682.30	154.425	0.17	-0.14	0.10	
18732.00	89.450	155.520	5850.60	8770.39	-7912.63	3784.92	1746750.64	14608750.56	40°13'28.5726"N	80°37'8.5955"W	8771.27	154.436	0.28	0.28	0.01	
18820.00	89.290	155.690	5851.56	8858.38	-7992.76	3821.26	1746786.97	14608670.45	40°13'27.7791"N	80°37'8.1314"W	8859.25	154.448	0.27	-0.18	0.19	

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Field	Brooke	API	47-009-00302-00-00
Facility	Edward Zatta BRK Pad	Wellbore	Edward Zatta BRK 8H AWB
Slot	Slot 8H		

WELLPATH DATA (218 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]
18909.00	89.320	155.570	5852.64	8947.38	-8073.83	3857.98	1746823.68	14608589.42	40°13'26.9765"N	80°37'7.6625"W	8948.23	154.460	0.14	0.03	-0.13
18997.00	89.420	155.460	5853.61	9035.37	-8153.91	3894.45	1746860.14	14608509.37	40°13'26.1836"N	80°37'7.1967"W	9036.21	154.470	0.17	0.11	-0.12
19086.00	89.230	155.550	5854.66	9124.36	-8234.89	3931.35	1746897.02	14608428.42	40°13'25.3818"N	80°37'6.7256"W	9125.19	154.480	0.24	-0.21	0.10
19174.00	89.110	155.230	5855.93	9212.35	-8314.89	3967.99	1746933.65	14608348.45	40°13'24.5897"N	80°37'6.2576"W	9213.17	154.489	0.39	-0.14	-0.36
19264.00	89.290	155.600	5857.19	9302.34	-8396.72	4005.43	1746971.07	14608266.65	40°13'23.7795"N	80°37'5.7795"W	9303.14	154.498	0.46	0.20	0.41
19353.00	88.980	155.390	5858.53	9391.33	-8477.70	4042.35	1747007.97	14608185.71	40°13'22.9777"N	80°37'5.3081"W	9392.12	154.507	0.42	-0.35	-0.24
19427.00	89.170	155.230	5859.73	9465.32	-8544.93	4073.25	1747038.86	14608118.51	40°13'22.3121"N	80°37'4.9134"W	9466.10	154.513	0.34	0.26	-0.22
19452.00‡	89.170	155.230	5860.09	9490.32	-8567.62	4083.73	1747049.33	14608095.82	40°13'22.0873"N	80°37'4.7797"W	9491.10	154.515	0.00	0.00	0.00

HOLE & CASING SECTIONS - Ref Wellbore: Edward Zatta BRK 8H AWB Ref Wellpath: Edward Zatta BRK 8H AWP Proj: 19452'									
String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
20in Conductor	26.00	100.00	74.00	26.00	100.00	0.00	0.00	0.11	0.20
17.5in Open Hole	100.00	350.00	250.00	100.00	349.99	0.11	0.20	0.61	2.05
13.375in Casing Surface	26.00	350.00	324.00	26.00	349.99	0.00	0.00	0.61	2.05
12.25in Open Hole	350.00	1452.00	1102.00	349.99	1441.54	0.61	2.05	114.91	32.12
9.625in Casing Intermediate	26.00	1444.00	1418.00	26.00	1433.81	0.00	0.00	112.87	31.94
8.5in Open Hole	1452.00	19452.00	18000.00	1441.54	5860.09	114.91	32.12	-8567.62	4083.73
5.5in Casing Production	26.00	19452.00	19426.00	26.00	5860.09	0.00	0.00	-8567.62	4083.73

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Slot	Slot 8H		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Edward Zatta BRK 8H LP Rev-3	5716.00	2414.36	-965.65	1742001.93	14619073.52	40°15'10.8192"N	80°38'9.2926"W	point
Edward Zatta BRK 8H BHL Rev-3	5821.57	-8570.47	4098.09	1747063.69	14608092.97	40°13'22.0586"N	80°37'4.5947"W	point

WELLPATH COMPOSITION - Ref Wellbore: Edward Zatta BRK 8H AWB Ref Wellpath: Edward Zatta BRK 8H AWP Proj: 19452'					
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
26.00	296.00	OWSG MWD rev2 + HRGM	01_Premier MWD <17 1/2"> (161'-296')	Edward Zatta BRK 8H AWB	9/22/2020
296.00	1357.00	OWSG MWD rev2 + HRGM	02_Premier MWD <12 1/4"> (404'-1357')	Edward Zatta BRK 8H AWB	9/22/2020
1357.00	19452.00	BH AutoTrak Curve (2019) (Short spacing)	03_BH AT Curve <8 1/2"> (1448'-19427')	Edward Zatta BRK 8H AWB	9/22/2020

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REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Edward Zatta BRK 8H
Field	Brooke	API	47-009-00302-00-00
Facility	Edward Zatta BRK Pad	Wellbore	Edward Zatta BRK 8H AWB
Slot	Slot 8H		

COMMENTS
<p>Wellpath general comments API: 47-009-00302-0000 BH Job #: 110552425 Rig: SDC 41 Duration: 09/22/2020 - 09/27/2020</p>

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