



**Actual Wellpath Report**  
 Charles Jamison MSH 206H AWP Proj: 23035'  
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REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Charles Jamison MSH 206H
Field	Marshall	API/Legal	
Facility	Charles Jamison MSH Pad	Wellbore	Charles Jamison MSH 206H AWB
Slot	Slot 206H		

REPORT SETUP INFORMATION			
Projection System	NAD83 / UTM Zone 17 North, US feet	Software System	WellArchitect® 6.0
North Reference	Grid	User	Atenjen
Scale	0.999614	Report Generated	3/24/2020 at 2:17:43 PM
Convergence at slot	0.25° 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	-13.66	-22.00	1750616.51	14451198.27	39°47'30.8360"N	80°36'27.6826"W
Facility Reference Pt			1750638.50	14451211.92	39°47'30.9700"N	80°36'27.4000"W
Field Reference Pt			0.00	0.00	0°00'0.0000"	85°29'19.4780"W

WELLPATH DATUM			
Calculation method	Minimum curvature	SDC 46 (KB) to Facility Vertical Datum	1362.70ft
Horizontal Reference Pt	Slot	SDC 46 (KB) to Mean Sea Level	1362.70ft
Vertical Reference Pt	SDC 46 (KB)	SDC 46 (KB) to Mud Line at Slot (Slot 206H)	26.00ft
MD Reference Pt	SDC 46 (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	147.68°

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WELLPATH DATA (263 stations) † = interpolated, ‡ = extrapolated station															
MD (ft)	Inclination (°)	Azimuth (°)	TVD (ft)	Vert Sect (ft)	North (ft)	East (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	Closure Dist (ft)	Closure Dir (°)	DLS (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	156.080	0.00	0.00	0.00	0.00	1750616.51	14451198.27	39°47'30.8360"N	80°36'27.6826"W	0.00	0.000	0.00	0.00	0.00
26.00	0.00	156.080	26.00	0.00	0.00	0.00	1750616.51	14451198.27	39°47'30.8360"N	80°36'27.6826"W	0.00	0.000	0.00	0.00	0.00
207.00	0.330	156.080	207.00	0.52	-0.48	0.21	1750616.72	14451197.79	39°47'30.8312"N	80°36'27.6799"W	0.52	156.080	0.18	0.18	0.00
298.00	0.460	134.880	298.00	1.13	-0.97	0.58	1750617.09	14451197.30	39°47'30.8263"N	80°36'27.6753"W	1.13	149.376	0.21	0.14	-23.30
388.00	0.210	134.730	388.00	1.64	-1.34	0.95	1750617.46	14451196.93	39°47'30.8226"N	80°36'27.6705"W	1.65	144.772	0.28	-0.28	-0.17
496.00	0.440	150.330	496.00	2.25	-1.84	1.30	1750617.80	14451196.43	39°47'30.8177"N	80°36'27.6661"W	2.25	144.916	0.23	0.21	14.44
586.00	0.400	170.040	586.00	2.89	-2.45	1.52	1750618.03	14451195.82	39°47'30.8116"N	80°36'27.6632"W	2.89	148.212	0.17	-0.04	21.90
677.00	0.700	164.910	677.00	3.71	-3.30	1.72	1750618.23	14451194.97	39°47'30.8032"N	80°36'27.6607"W	3.72	152.489	0.33	0.33	-5.64
767.00	0.910	170.330	767.00	4.90	-4.54	1.98	1750618.49	14451193.73	39°47'30.7910"N	80°36'27.6574"W	4.95	156.393	0.25	0.23	6.02
858.00	0.620	174.110	858.00	6.00	-5.74	2.16	1750618.66	14451192.53	39°47'30.7791"N	80°36'27.6553"W	6.13	159.420	0.32	-0.32	4.15
948.00	0.420	192.150	948.00	6.68	-6.55	2.14	1750618.65	14451191.72	39°47'30.7712"N	80°36'27.6556"W	6.89	161.932	0.28	-0.22	20.04
975.00	0.440	191.540	975.00	6.82	-6.75	2.09	1750618.60	14451191.53	39°47'30.7692"N	80°36'27.6561"W	7.06	162.751	0.08	0.07	-2.26
1038.00	0.340	226.660	1038.00	7.03	-7.11	1.91	1750618.42	14451191.16	39°47'30.7656"N	80°36'27.6585"W	7.36	164.965	0.40	-0.16	55.75
1129.00	1.610	296.460	1129.00	5.99	-6.73	0.57	1750617.08	14451191.55	39°47'30.7695"N	80°36'27.6757"W	6.75	175.162	1.68	1.40	76.70
1220.00	3.880	299.120	1220.00	2.19	-4.66	-3.27	1750613.25	14451193.61	39°47'30.7901"N	80°36'27.7247"W	5.69	215.025	2.50	2.49	2.92
1311.00	6.750	298.290	1311.00	-5.17	-0.63	-10.67	1750605.85	14451197.64	39°47'30.8302"N	80°36'27.8193"W	10.68	266.645	3.15	3.15	-0.91
1401.00	9.360	297.000	1401.00	-16.08	5.20	-21.85	1750594.67	14451203.47	39°47'30.8883"N	80°36'27.9622"W	22.46	283.401	2.91	2.90	-1.43
1492.00	11.820	296.260	1492.00	-30.40	12.69	-36.80	1750579.72	14451210.95	39°47'30.9630"N	80°36'28.1533"W	38.93	289.025	2.71	2.70	-0.81
1583.00	13.910	297.070	1583.00	-47.77	21.79	-54.90	1750561.83	14451220.05	39°47'31.0537"N	80°36'28.3847"W	59.07	291.650	2.31	2.30	0.89
1673.00	15.420	300.340	1673.00	-67.71	32.76	-74.86	1750541.68	14451231.02	39°47'31.1630"N	80°36'28.6398"W	81.72	293.634	1.91	1.68	3.63
1764.00	15.540	302.980	1764.00	-89.53	45.51	-95.53	1750521.02	14451243.76	39°47'31.2898"N	80°36'28.9038"W	105.81	295.472	0.79	0.13	2.90
1855.00	12.150	299.520	1855.00	-109.05	56.86	-114.09	1750502.46	14451255.11	39°47'31.4029"N	80°36'29.1410"W	127.48	296.492	3.83	-3.73	-3.80
1945.00	11.000	292.150	1945.00	-124.39	64.77	-130.29	1750486.27	14451263.01	39°47'31.4817"N	80°36'29.3480"W	145.50	296.433	2.08	-1.28	-8.19
2036.00	12.170	288.760	2036.00	-138.92	71.13	-147.41	1750469.15	14451269.37	39°47'31.5453"N	80°36'29.5671"W	163.68	295.757	1.49	1.29	-3.73
2126.00	13.710	287.490	2126.00	-154.45	77.38	-166.57	1750450.01	14451275.62	39°47'31.6079"N	80°36'29.8121"W	183.67	294.918	1.74	1.71	-1.41
2217.00	14.500	289.550	2217.00	-171.65	84.44	-187.59	1750428.99	14451282.67	39°47'31.6785"N	80°36'30.0810"W	205.72	294.233	1.03	0.87	2.26
2307.00	15.600	294.570	2307.00	-190.65	93.24	-209.22	1750407.38	14451291.47	39°47'31.7665"N	80°36'30.3576"W	229.05	294.021	1.89	1.22	5.58
2398.00	15.340	296.860	2398.00	-211.24	103.77	-231.08	1750385.52	14451302.00	39°47'31.8714"N	80°36'30.6371"W	253.31	294.182	0.73	-0.29	2.52
2489.00	14.700	297.860	2489.00	-231.59	114.60	-252.03	1750364.58	14451312.83	39°47'31.9794"N	80°36'30.9048"W	276.86	294.452	0.76	-0.70	1.10
2589.00	13.240	293.890	2589.00	-252.12	125.17	-273.72	1750342.90	14451323.39	39°47'32.0848"N	80°36'31.1821"W	300.98	294.574	1.75	-1.46	-3.97

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Slot	Slot 206H			

WELLPATH DATA (263 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)
2700.00	11.810	288.370	2662.01	-271.47	133.90	-296.12	1750320.50	14451332.11	39°47'32.1720"N	80°36'31.4686"W	324.99	294.331	1.68	-1.29	-4.97
2791.00	14.600	291.870	2750.59	-287.98	141.11	-315.61	1750301.03	14451339.32	39°47'32.2441"N	80°36'31.7178"W	345.71	294.099	3.19	3.07	3.85
2881.00	17.630	299.430	2837.06	-309.19	152.03	-338.01	1750278.63	14451350.24	39°47'32.3530"N	80°36'32.0042"W	370.63	294.217	4.09	3.37	8.40
2971.00	19.380	303.890	2922.41	-334.87	167.06	-362.28	1750254.37	14451365.26	39°47'32.5026"N	80°36'32.3143"W	398.94	294.755	2.50	1.94	4.96
3062.00	21.330	305.050	3007.72	-363.96	184.98	-388.37	1750228.30	14451383.18	39°47'32.6808"N	80°36'32.6475"W	430.17	295.469	2.19	2.14	1.27
3152.00	23.550	303.910	3090.90	-395.53	204.41	-416.69	1750199.98	14451402.61	39°47'32.8741"N	80°36'33.0093"W	464.13	296.131	2.51	2.47	-1.27
3242.00	25.570	301.490	3172.75	-429.42	224.59	-448.18	1750168.51	14451422.78	39°47'33.0749"N	80°36'33.4115"W	501.30	296.617	2.51	2.24	-2.69
3332.00	26.530	301.330	3253.61	-464.86	245.19	-481.91	1750134.79	14451443.37	39°47'33.2799"N	80°36'33.8425"W	540.70	296.966	1.07	1.07	-0.18
3423.00	28.880	299.730	3334.17	-502.49	266.66	-518.36	1750098.35	14451464.83	39°47'33.4936"N	80°36'34.3082"W	582.93	297.223	2.71	2.58	-1.76
3514.00	30.230	299.110	3413.33	-542.02	288.70	-557.46	1750059.27	14451486.86	39°47'33.7182"N	80°36'34.8079"W	627.78	297.379	1.52	1.48	-0.68
3604.00	31.980	298.150	3490.39	-582.66	310.97	-598.27	1750018.47	14451509.12	39°47'33.9350"N	80°36'35.3295"W	674.26	297.465	2.02	1.94	-1.07
3695.00	33.910	299.270	3566.75	-625.96	334.75	-641.67	1749975.09	14451532.89	39°47'34.1719"N	80°36'35.8841"W	723.74	297.551	2.22	2.12	1.23
3786.00	33.310	299.790	3642.54	-670.37	359.58	-685.49	1749931.28	14451557.71	39°47'34.4191"N	80°36'36.4442"W	774.08	297.679	0.73	-0.66	0.57
3876.00	32.670	299.840	3718.03	-713.69	383.94	-728.01	1749888.78	14451582.06	39°47'34.6617"N	80°36'36.9875"W	823.05	297.807	0.71	-0.71	0.06
3966.00	34.890	298.630	3792.83	-757.68	408.37	-771.68	1749845.13	14451606.48	39°47'34.9050"N	80°36'37.5456"W	873.07	297.887	2.58	2.47	-1.34
4056.00	34.420	297.560	3868.86	-802.18	432.47	-816.83	1749800.00	14451630.57	39°47'35.1451"N	80°36'38.1226"W	924.25	297.899	0.85	-0.52	-1.19
4147.00	34.480	299.300	3941.91	-847.09	456.97	-862.09	1749754.75	14451655.07	39°47'35.3892"N	80°36'38.7011"W	975.72	297.927	1.08	0.07	1.91
4237.00	33.630	299.260	4016.47	-891.43	481.62	-906.05	1749710.81	14451679.71	39°47'35.6347"N	80°36'39.2629"W	1026.10	297.994	0.94	-0.94	-0.04
4328.00	32.780	298.550	4092.61	-935.11	505.71	-949.67	1749667.21	14451703.79	39°47'35.8747"N	80°36'39.8204"W	1075.93	298.036	1.03	-0.93	-0.78
4418.00	33.360	298.220	4168.03	-977.94	529.06	-992.88	1749624.02	14451727.12	39°47'36.1072"N	80°36'40.3726"W	1125.04	298.051	0.67	0.64	-0.37
4508.00	32.030	297.210	4243.77	-1020.05	551.67	-1035.91	1749581.00	14451749.73	39°47'36.3326"N	80°36'40.9227"W	1173.65	298.038	1.60	-1.48	-1.12
4599.00	32.150	296.170	4320.87	-1061.50	573.39	-1079.10	1749537.83	14451771.44	39°47'36.5490"N	80°36'41.4748"W	1221.98	297.984	0.62	0.13	-1.14
4689.00	31.320	295.860	4397.41	-1101.79	594.15	-1121.64	1749495.30	14451792.19	39°47'36.7561"N	80°36'42.0186"W	1269.29	297.911	0.94	-0.92	-0.34
4780.00	30.990	295.740	4475.29	-1141.76	614.64	-1164.03	1749452.93	14451812.67	39°47'36.9604"N	80°36'42.5605"W	1316.34	297.835	0.37	-0.36	-0.13
4870.00	31.890	298.890	4552.08	-1182.27	636.19	-1205.72	1749411.26	14451834.22	39°47'37.1751"N	80°36'43.0934"W	1363.27	297.818	2.08	1.00	3.50
4961.00	32.750	298.210	4628.98	-1224.76	659.44	-1248.46	1749368.54	14451857.46	39°47'37.4067"N	80°36'43.6396"W	1411.92	297.843	1.03	0.95	-0.75
5051.00	32.950	298.780	4704.59	-1267.38	682.73	-1291.36	1749325.65	14451880.74	39°47'37.6387"N	80°36'44.1880"W	1460.73	297.865	0.41	0.22	0.63
5142.00	33.460	299.750	4780.73	-1311.21	707.10	-1334.83	1749282.20	14451905.09	39°47'37.8814"N	80°36'44.7435"W	1510.55	297.911	0.81	0.56	1.07
5232.00	33.070	298.900	4855.98	-1354.66	731.28	-1377.87	1749239.17	14451929.26	39°47'38.1222"N	80°36'45.2936"W	1559.90	297.956	0.68	-0.43	-0.94
5322.00	33.830	296.830	4931.08	-1397.69	754.45	-1421.73	1749195.34	14451952.43	39°47'38.3531"N	80°36'45.8541"W	1609.50	297.953	1.52	0.84	-2.30

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WELLPATH DATA (263 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]	
5413.00	34.460	296.600	5006.39	-1441.49	777.41	-1467.35	1749149.73	14451975.38	39°47'38.5819"N	80°36'46.4373"W	1660.57	297.915	0.71	0.69	-0.25	
5503.00	32.770	297.450	5081.34	-1484.34	800.04	-1511.74	1749105.36	14451998.00	39°47'38.8075"N	80°36'47.0047"W	1710.38	297.889	1.95	-1.88	0.94	
5593.00	32.620	296.670	5157.08	-1526.18	822.16	-1555.03	1749062.08	14452020.11	39°47'39.0279"N	80°36'47.5581"W	1758.99	297.866	0.50	-0.17	-0.87	
5684.00	31.380	298.540	5234.25	-1567.90	844.49	-1597.76	1749019.37	14452042.43	39°47'39.2504"N	80°36'48.1043"W	1807.21	297.858	1.74	-1.36	2.05	
5774.00	31.380	298.340	5311.09	-1608.79	866.81	-1638.97	1748978.18	14452064.74	39°47'39.4727"N	80°36'48.6310"W	1854.07	297.873	0.12	0.00	-0.22	
5865.00	30.460	298.240	5389.15	-1649.53	888.97	-1680.14	1748937.02	14452086.89	39°47'39.6935"N	80°36'49.1573"W	1900.83	297.883	1.01	-1.01	-0.11	
5955.00	32.980	299.650	5465.70	-1691.03	911.88	-1721.54	1748895.64	14452109.80	39°47'39.9217"N	80°36'49.6863"W	1948.13	297.910	2.92	2.80	1.57	
6046.00	34.750	299.600	5541.28	-1735.77	936.95	-1765.62	1748851.58	14452134.86	39°47'40.1713"N	80°36'50.2496"W	1998.82	297.953	1.95	1.95	-0.05	
6136.00	35.020	300.210	5615.09	-1781.32	962.61	-1810.23	1748806.98	14452160.51	39°47'40.4268"N	80°36'50.8198"W	2050.26	298.002	0.49	0.30	0.68	
6227.00	33.750	299.510	5690.19	-1826.77	988.20	-1854.80	1748762.43	14452186.09	39°47'40.6816"N	80°36'51.3894"W	2101.63	298.048	1.46	-1.40	-0.77	
6317.00	33.600	297.850	5765.09	-1870.41	1012.15	-1898.58	1748718.67	14452210.03	39°47'40.9202"N	80°36'51.9489"W	2151.52	298.063	1.04	-0.17	-1.84	
6408.00	34.340	296.440	5840.56	-1914.20	1035.34	-1943.82	1748673.44	14452233.21	39°47'41.1513"N	80°36'52.5273"W	2202.36	298.041	1.19	0.81	-1.55	
6498.00	33.100	295.290	5915.42	-1956.66	1057.15	-1988.77	1748628.51	14452255.01	39°47'41.3687"N	80°36'53.1019"W	2252.28	297.993	1.55	-1.38	-1.28	
6543.00	33.080	296.030	5953.12	-1977.49	1067.78	-2010.92	1748606.37	14452265.64	39°47'41.4747"N	80°36'53.3850"W	2276.83	297.968	0.90	-0.04	1.64	
6661.00	32.540	292.200	6052.30	-2030.75	1093.91	-2069.24	1748548.07	14452291.76	39°47'41.7354"N	80°36'54.1308"W	2340.60	297.863	1.82	-0.46	-3.25	
6751.00	32.070	293.420	6128.37	-2070.21	1112.55	-2113.58	1748503.75	14452310.39	39°47'41.9215"N	80°36'54.6978"W	2388.51	297.762	0.89	-0.52	1.36	
6841.00	30.640	293.570	6205.23	-2108.95	1131.22	-2156.53	1748460.82	14452329.05	39°47'42.1078"N	80°36'55.2470"W	2435.22	297.680	1.59	-1.59	0.17	
6932.00	24.360	289.660	6285.91	-2142.97	1146.82	-2195.50	1748421.86	14452344.65	39°47'42.2637"N	80°36'55.7454"W	2476.98	297.580	7.18	-6.90	-4.30	
7022.00	20.110	274.750	6369.27	-2166.95	1154.36	-2228.44	1748368.94	14452352.18	39°47'42.3396"N	80°36'56.1670"W	2509.68	297.385	7.81	-4.72	-16.57	
7113.00	17.130	249.000	6455.64	-2179.03	1150.85	-2256.59	1748360.79	14452348.67	39°47'42.3060"N	80°36'56.5279"W	2533.11	297.021	9.52	-3.27	-28.30	
7203.00	17.830	221.320	6541.63	-2177.75	1135.72	-2278.10	1748339.29	14452333.55	39°47'42.1575"N	80°36'56.8043"W	2545.51	296.498	9.19	0.78	-30.76	
7293.00	21.900	201.420	6626.35	-2163.92	1109.71	-2293.35	1748324.05	14452307.55	39°47'41.9010"N	80°36'57.0011"W	2547.73	295.821	8.71	4.52	-22.11	
7384.00	26.450	185.010	6709.45	-2137.73	1073.66	-2301.33	1748316.07	14452271.51	39°47'41.5451"N	80°36'57.1053"W	2539.46	295.011	8.88	5.00	-18.03	
7474.00	33.780	178.690	6787.26	-2100.28	1028.61	-2302.51	1748314.89	14452226.48	39°47'41.0999"N	80°36'57.1229"W	2521.82	294.072	8.86	8.14	-7.02	
7565.00	40.730	170.670	6859.68	-2051.18	973.92	-2297.11	1748320.29	14452171.81	39°47'40.5593"N	80°36'57.0567"W	2495.04	292.976	9.30	7.64	-8.81	
7655.00	49.160	164.300	6923.37	-1991.39	912.03	-2283.11	1748334.29	14452109.94	39°47'39.9470"N	80°36'56.8807"W	2458.53	291.775	10.61	9.37	-7.08	
7700.00	53.220	160.390	6951.57	-1957.48	878.64	-2272.45	1748344.95	14452076.57	39°47'39.6166"N	80°36'56.7459"W	2436.40	291.139	11.28	9.02	-8.69	
7745.00	57.850	157.650	6977.04	-1921.11	844.03	-2259.14	1748358.24	14452041.97	39°47'39.2740"N	80°36'56.5774"W	2411.66	290.486	11.45	10.29	-6.09	
7791.00	60.790	155.700	7000.51	-1882.04	807.71	-2243.47	1748373.91	14452005.66	39°47'38.9144"N	80°36'56.3787"W	2384.44	289.800	7.36	6.39	-4.24	
7836.00	63.730	154.880	7021.45	-1842.57	771.53	-2226.82	1748390.55	14451969.50	39°47'38.5562"N	80°36'56.1674"W	2356.69	289.110	6.73	6.53	-1.82	

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REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Charles Jamison MSH 206H
Field	Marshall	API/Legal	
Facility	Charles Jamison MSH Pad	Wellbore	Charles Jamison MSH 206H AWB
Slot	Slot 206H		

WELLPATH DATA (263 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]	
7881.00	67.540	163.910	7040.01	-1801.87	734.58	-2209.11	1748408.26	14451932.56	39°47'38.1902"N	80°36'55.9424"W	2328.04	288.393	8.69	8.47	-2.16	
7926.00	71.650	152.770	7055.70	-1759.90	696.90	-2190.18	1748427.18	14451894.89	39°47'37.8170"N	80°36'55.7020"W	2298.38	287.651	9.44	9.13	-2.53	
7971.00	75.160	152.170	7068.55	-1716.94	658.66	-2170.25	1748447.10	14451856.67	39°47'37.4383"N	80°36'55.4488"W	2268.00	286.883	7.90	7.80	-1.33	
8017.00	76.650	151.670	7079.75	-1672.44	619.30	-2149.25	1748468.09	14451817.33	39°47'37.0484"N	80°36'55.1819"W	2236.70	286.074	3.41	3.24	-1.09	
8062.00	78.010	148.390	7089.62	-1628.58	581.27	-2127.32	1748490.02	14451779.32	39°47'36.6717"N	80°36'54.9031"W	2205.30	285.283	7.73	3.02	-7.29	
8107.00	81.380	146.960	7097.67	-1584.32	543.87	-2103.65	1748513.68	14451741.93	39°47'36.3010"N	80°36'54.6018"W	2172.81	284.496	8.12	7.49	-3.18	
8153.00	81.690	145.520	7104.44	-1538.83	506.04	-2078.36	1748538.95	14451704.12	39°47'35.9261"N	80°36'54.2800"W	2139.08	283.684	3.17	0.67	-3.13	
8198.00	82.350	146.310	7110.69	-1494.29	469.13	-2053.39	1748563.92	14451667.22	39°47'35.5603"N	80°36'53.9621"W	2106.30	282.869	2.27	1.47	1.78	
8288.00	85.010	145.860	7120.60	-1404.88	394.91	-2003.48	1748613.81	14451593.02	39°47'34.8247"N	80°36'53.3268"W	2042.03	281.151	3.00	2.96	-0.50	
8379.00	84.910	145.560	7128.59	-1314.29	320.01	-1952.41	1748664.86	14451518.16	39°47'34.0823"N	80°36'52.6767"W	1978.46	279.308	0.35	-0.11	-0.33	
8469.00	86.580	145.830	7135.27	-1224.59	245.88	-1901.83	1748715.42	14451444.05	39°47'33.3475"N	80°36'52.0328"W	1917.66	277.367	1.88	1.86	0.30	
8559.00	86.610	146.780	7140.61	-1134.78	171.13	-1851.99	1748765.24	14451369.33	39°47'32.6067"N	80°36'51.3984"W	1859.88	275.279	1.05	0.03	1.06	
8650.00	88.030	147.620	7144.87	-1043.88	94.72	-1802.75	1748814.46	14451292.96	39°47'31.8495"N	80°36'50.7719"W	1805.24	273.008	1.81	1.56	0.92	
8740.00	89.600	149.170	7146.73	-953.92	18.09	-1755.60	1748861.59	14451216.36	39°47'31.0902"N	80°36'50.1720"W	1755.69	270.591	2.45	1.74	1.72	
8830.00	89.420	149.260	7147.50	-863.95	-59.22	-1709.53	1748907.64	14451139.07	39°47'30.3242"N	80°36'49.5862"W	1710.56	266.016	0.22	-0.20	0.10	
8920.00	89.510	149.370	7148.34	-773.99	-136.62	-1663.61	1748953.55	14451061.71	39°47'29.5573"N	80°36'49.0021"W	1669.21	265.305	0.16	0.10	0.12	
9011.00	90.650	150.220	7148.21	-683.06	-215.26	-1617.83	1748999.31	14450983.09	39°47'28.7782"N	80°36'48.4200"W	1632.09	262.421	1.56	1.25	0.93	
9101.00	90.000	148.670	7147.70	-593.10	-292.76	-1572.08	1749045.04	14450905.63	39°47'28.0104"N	80°36'47.8382"W	1599.10	259.451	1.87	-0.72	-1.72	
9191.00	89.750	147.970	7147.90	-503.11	-369.35	-1524.81	1749092.29	14450829.07	39°47'27.2514"N	80°36'47.2370"W	1568.91	256.384	0.83	-0.28	-0.78	
9282.00	90.060	148.380	7148.05	-412.11	-446.66	-1476.81	1749140.27	14450751.79	39°47'26.4854"N	80°36'46.6263"W	1542.88	253.172	0.55	0.34	0.43	
9372.00	89.910	148.050	7148.07	-322.12	-523.15	-1429.39	1749187.67	14450675.32	39°47'25.7274"N	80°36'46.0231"W	1522.12	249.898	0.38	-0.17	-0.34	
9462.00	90.180	148.530	7148.00	-232.12	-599.72	-1382.09	1749234.96	14450598.79	39°47'24.9687"N	80°36'45.4213"W	1506.59	246.543	0.61	0.30	0.53	
9553.00	89.940	148.390	7147.91	-141.13	-677.27	-1334.49	1749282.54	14450521.26	39°47'24.2002"N	80°36'44.8159"W	1496.51	243.091	0.31	-0.25	-0.15	
9643.00	89.850	148.490	7148.07	-51.14	-753.96	-1287.36	1749329.63	14450444.60	39°47'23.4403"N	80°36'44.2167"W	1491.91	239.644	0.15	-0.10	0.11	
9734.00	89.690	147.210	7148.44	39.86	-831.00	-1238.96	1749378.03	14450367.59	39°47'22.6768"N	80°36'43.6006"W	1491.84	236.149	1.42	-0.18	-1.41	
9824.00	89.480	148.510	7149.09	129.85	-907.21	-1191.08	1749425.89	14450291.41	39°47'21.9217"N	80°36'42.9916"W	1497.23	232.705	1.46	-0.23	1.44	
9915.00	89.350	147.990	7150.02	220.84	-984.59	-1143.20	1749473.76	14450214.07	39°47'21.1550"N	80°36'42.3825"W	1508.74	229.263	0.59	-0.14	-0.57	
10005.00	89.600	148.260	7150.84	310.84	-1061.01	-1095.67	1749521.26	14450137.67	39°47'20.3976"N	80°36'41.7779"W	1525.20	225.921	0.41	0.28	0.30	
10095.00	89.600	148.680	7151.47	400.82	-1137.72	-1048.61	1749568.31	14450060.99	39°47'19.6375"N	80°36'41.1793"W	1547.25	222.666	0.47	0.00	0.47	
10186.00	89.480	148.540	7152.20	491.81	-1215.40	-1001.21	1749615.89	14449983.34	39°47'18.8678"N	80°36'40.5764"W	1574.68	219.481	0.20	-0.13	-0.15	

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REFERENCE WELLPATH IDENTIFICATION				
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Field	Marshall		API/Legal	
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Slot	Slot 206H			

WELLPATH DATA (263 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]	
10276.00	89.420	148.730	7153.07	581.79	-1292.25	-954.37	1749662.51	14449906.53	39°47'18.1064"N	80°36'39.9807"W	1606.46	216.447	0.22	-0.07	0.21	
10367.00	89.380	148.530	7154.02	672.78	-1369.94	-907.00	1749709.86	14449828.86	39°47'17.3365"N	80°36'39.3782"W	1642.98	213.508	0.22	-0.04	-0.22	
10457.00	89.660	149.300	7154.77	762.75	-1447.01	-860.54	1749756.31	14449751.82	39°47'16.5729"N	80°36'38.7873"W	1683.56	210.740	0.91	0.31	0.86	
10548.00	89.820	148.640	7155.19	853.73	-1524.99	-813.63	1749803.20	14449673.87	39°47'15.8002"N	80°36'38.1907"W	1728.46	208.081	0.75	0.18	-0.73	
10638.00	89.780	147.930	7155.50	943.72	-1601.55	-766.32	1749850.49	14449597.34	39°47'15.0416"N	80°36'37.5889"W	1775.44	205.570	0.79	-0.04	-0.79	
10728.00	89.850	148.520	7155.79	1033.71	-1678.06	-718.92	1749897.86	14449520.86	39°47'14.2834"N	80°36'36.9861"W	1825.58	203.192	0.66	0.08	0.66	
10819.00	89.820	148.520	7156.05	1124.70	-1755.67	-671.40	1749945.37	14449443.29	39°47'13.5144"N	80°36'36.3817"W	1879.67	200.928	0.03	-0.03	0.00	
10909.00	89.820	148.050	7156.34	1214.70	-1832.23	-624.09	1749992.66	14449366.76	39°47'12.7558"N	80°36'35.7799"W	1935.60	198.810	0.52	0.00	-0.52	
10999.00	90.580	149.620	7156.02	1304.68	-1909.23	-577.52	1750039.22	14449289.78	39°47'11.9927"N	80°36'35.1876"W	1994.67	196.830	1.94	0.84	1.74	
11089.00	90.400	149.030	7155.25	1394.64	-1986.64	-531.61	1750085.11	14449212.40	39°47'11.2258"N	80°36'34.6038"W	2056.53	194.981	0.69	-0.20	-0.66	
11180.00	90.370	149.030	7154.64	1485.61	-2064.66	-484.78	1750131.92	14449134.41	39°47'10.4527"N	80°36'34.0083"W	2120.81	193.214	0.03	-0.03	0.00	
11271.00	90.520	148.450	7153.93	1576.59	-2142.45	-437.56	1750179.12	14449056.65	39°47'9.6819"N	80°36'33.4078"W	2186.67	191.543	0.66	0.16	-0.64	
11361.00	90.340	148.480	7153.26	1666.58	-2219.15	-390.49	1750226.17	14448979.98	39°47'8.9219"N	80°36'32.8091"W	2253.25	189.980	0.20	-0.20	0.03	
11452.00	90.310	147.500	7152.74	1757.57	-2296.32	-342.25	1750274.39	14448902.85	39°47'8.1572"N	80°36'32.1956"W	2321.68	188.477	1.08	-0.03	-1.08	
11542.00	90.310	147.620	7152.26	1847.57	-2372.27	-293.98	1750322.65	14448826.92	39°47'7.4045"N	80°36'31.5814"W	2390.42	187.064	0.13	0.00	0.13	
11632.00	89.850	146.950	7152.13	1937.57	-2447.99	-245.34	1750371.27	14448751.23	39°47'6.6541"N	80°36'30.9626"W	2460.26	185.723	0.90	-0.51	-0.74	
11723.00	90.150	147.070	7152.13	2028.56	-2524.32	-195.79	1750420.80	14448674.93	39°47'5.8976"N	80°36'30.3322"W	2531.90	184.435	0.36	0.33	0.13	
11813.00	90.430	147.480	7151.67	2118.56	-2600.03	-147.13	1750469.43	14448599.24	39°47'5.1473"N	80°36'29.7132"W	2604.19	183.239	0.55	0.31	0.46	
11903.00	90.340	147.470	7151.07	2208.56	-2675.92	-98.74	1750517.80	14448523.39	39°47'4.3953"N	80°36'29.0976"W	2677.74	182.113	0.10	-0.10	-0.01	
11994.00	90.520	147.610	7150.39	2299.55	-2752.70	-49.90	1750566.62	14448446.64	39°47'3.6343"N	80°36'28.4763"W	2753.15	181.039	0.25	0.20	0.15	
12084.00	90.400	147.350	7149.66	2389.55	-2828.58	-1.52	1750614.99	14448370.78	39°47'2.8823"N	80°36'27.8609"W	2828.58	180.031	0.32	-0.13	-0.29	
12174.00	90.400	147.650	7149.04	2479.55	-2904.49	46.83	1750663.32	14448294.91	39°47'2.1301"N	80°36'27.2457"W	2904.86	179.076	0.33	0.00	0.33	
12265.00	90.150	147.370	7148.60	2570.55	-2981.24	95.71	1750712.19	14448218.18	39°47'1.3694"N	80°36'26.6239"W	2982.78	178.161	0.41	-0.27	-0.31	
12356.00	90.710	147.980	7147.92	2661.54	-3058.14	144.37	1750760.82	14448141.32	39°47'0.6074"N	80°36'26.0050"W	3061.54	177.297	0.91	0.62	0.67	
12446.00	90.620	147.160	7146.87	2751.54	-3134.10	192.63	1750809.07	14448065.39	39°46'59.8546"N	80°36'25.3911"W	3140.01	176.483	0.92	-0.10	-0.91	
12536.00	90.460	147.420	7146.02	2841.53	-3209.82	241.26	1750857.68	14447989.70	39°46'59.1042"N	80°36'24.7724"W	3218.87	175.701	0.34	-0.18	0.29	
12627.00	90.430	146.730	7145.32	2932.52	-3286.20	290.72	1750907.12	14447913.34	39°46'58.3472"N	80°36'24.1431"W	3299.04	174.944	0.76	-0.03	-0.76	
12717.00	90.920	147.130	7144.26	3022.51	-3361.62	339.83	1750956.21	14447837.96	39°46'57.5998"N	80°36'23.5184"W	3378.75	174.228	0.70	0.54	0.44	
12807.00	90.830	147.080	7142.88	3112.49	-3437.18	388.70	1751005.06	14447762.43	39°46'56.8509"N	80°36'22.8966"W	3459.09	173.548	0.11	-0.10	-0.06	
12898.00	90.770	146.440	7141.61	3203.47	-3513.28	438.58	1751054.92	14447686.35	39°46'56.0966"N	80°36'22.2620"W	3540.55	172.884	0.71	-0.07	-0.70	

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12989.00	91.140	147.280	7140.09	3294.45	-3589.47	488.32	1751104.64	14447610.20	39°46'55.3415"N	80°36'21.6292"W	3622.53	172.253	1.01	0.41	0.92	
13079.00	90.890	147.510	7138.50	3384.43	-3665.27	536.81	1751153.11	14447534.42	39°46'54.5903"N	80°36'21.0124"W	3704.37	171.668	0.38	-0.28	0.26	
13170.00	90.800	147.670	7137.16	3475.42	-3742.09	585.58	1751201.86	14447457.63	39°46'53.8290"N	80°36'20.3921"W	3787.63	171.106	0.20	-0.10	0.18	
13260.00	91.140	147.510	7135.63	3565.41	-3818.06	633.81	1751250.07	14447381.69	39°46'53.0761"N	80°36'19.7786"W	3870.31	170.575	0.42	0.38	-0.18	
13351.00	91.230	147.920	7133.75	3656.39	-3894.97	682.40	1751298.65	14447304.81	39°46'52.3139"N	80°36'19.1605"W	3954.30	170.063	0.46	0.10	0.45	
13441.00	90.860	147.920	7132.11	3746.37	-3971.22	730.20	1751346.42	14447228.59	39°46'51.5583"N	80°36'18.5526"W	4037.79	169.581	0.41	-0.41	0.00	
13532.00	90.680	147.100	7130.89	3837.37	-4047.97	779.07	1751395.28	14447151.87	39°46'50.7977"N	80°36'17.9309"W	4122.26	169.106	0.92	-0.20	-0.90	
13622.00	90.710	146.160	7129.80	3927.34	-4123.12	828.57	1751444.76	14447076.75	39°46'50.0528"N	80°36'17.3012"W	4205.55	168.637	1.04	0.03	-1.04	
13713.00	91.050	147.610	7128.40	4018.32	-4199.33	878.28	1751494.45	14447000.57	39°46'49.2975"N	80°36'16.6688"W	4290.19	168.187	1.64	0.37	1.59	
13803.00	90.740	146.990	7126.99	4108.31	-4275.06	926.89	1751543.04	14446924.87	39°46'48.5470"N	80°36'16.0504"W	4374.39	167.767	0.77	-0.34	-0.69	
13893.00	90.830	147.550	7125.76	4198.30	-4350.76	975.55	1751591.68	14446849.20	39°46'47.7968"N	80°36'15.4314"W	4458.79	167.362	0.63	0.10	0.62	
13984.00	90.890	146.650	7124.39	4289.28	-4427.16	1024.97	1751641.09	14446772.83	39°46'47.0396"N	80°36'14.8027"W	4544.26	166.965	0.99	0.07	-0.99	
14074.00	90.830	146.650	7123.04	4379.26	-4502.33	1074.45	1751690.54	14446697.69	39°46'46.2946"N	80°36'14.1733"W	4628.76	166.578	0.07	-0.07	0.00	
14164.00	90.950	147.470	7121.65	4469.24	-4577.85	1123.38	1751739.45	14446622.20	39°46'45.5461"N	80°36'13.5509"W	4713.67	166.212	0.92	0.13	0.91	
14255.00	90.710	146.970	7120.33	4560.23	-4654.35	1172.64	1751788.70	14446545.73	39°46'44.7879"N	80°36'12.9242"W	4799.80	165.859	0.61	-0.26	-0.55	
14345.00	90.550	146.970	7119.34	4650.21	-4729.80	1221.70	1751837.73	14446470.31	39°46'44.0401"N	80°36'12.3002"W	4885.03	165.517	0.18	-0.18	0.00	
14435.00	90.740	146.930	7118.32	4740.20	-4805.23	1270.78	1751886.79	14446394.90	39°46'43.2925"N	80°36'11.6758"W	4970.43	165.187	0.22	0.21	-0.04	
14526.00	90.860	147.060	7117.05	4831.18	-4881.54	1320.34	1751936.34	14446318.62	39°46'42.5362"N	80°36'11.0453"W	5056.95	164.865	0.19	0.13	0.14	
14616.00	90.400	146.450	7116.06	4921.17	-4956.80	1369.68	1751985.65	14446243.39	39°46'41.7902"N	80°36'10.4177"W	5142.56	164.553	0.85	-0.51	-0.68	
14707.00	90.550	146.880	7115.31	5012.15	-5032.83	1419.68	1752035.64	14446167.39	39°46'41.0367"N	80°36'9.7815"W	5229.23	164.247	0.50	0.16	0.47	
14797.00	90.740	147.390	7114.30	5102.14	-5108.42	1468.52	1752084.46	14446091.83	39°46'40.2875"N	80°36'9.1603"W	5315.31	163.962	0.60	0.21	0.57	
14887.00	90.860	147.560	7113.04	5192.13	-5184.30	1516.90	1752132.82	14446015.98	39°46'39.5355"N	80°36'8.5449"W	5401.66	163.691	0.23	0.13	0.19	
14977.00	90.890	146.780	7111.67	5282.11	-5259.91	1565.69	1752181.59	14445940.40	39°46'38.7861"N	80°36'7.9244"W	5487.99	163.424	0.87	0.03	-0.87	
15068.00	90.250	146.770	7110.78	5373.10	-5336.03	1615.55	1752231.43	14445864.31	39°46'38.0317"N	80°36'7.2901"W	5575.23	163.156	0.70	-0.70	-0.01	
15158.00	90.370	146.800	7110.27	5463.09	-5411.33	1664.85	1752280.71	14445789.04	39°46'37.2854"N	80°36'6.6630"W	5661.64	162.899	0.14	0.13	0.03	
15249.00	90.520	146.730	7109.57	5554.07	-5487.44	1714.72	1752330.57	14445712.96	39°46'36.5310"N	80°36'6.0285"W	5749.11	162.647	0.18	0.16	-0.08	
15339.00	90.150	148.020	7109.04	5644.07	-5563.24	1763.24	1752379.07	14445637.19	39°46'35.7798"N	80°36'5.4114"W	5835.98	162.414	1.49	-0.41	1.43	
15430.00	90.120	148.120	7108.83	5735.06	-5640.47	1811.37	1752427.18	14445559.99	39°46'35.0145"N	80°36'4.7994"W	5924.18	162.196	0.11	-0.03	0.11	
15520.00	90.620	148.950	7108.25	5825.05	-5717.23	1858.35	1752474.14	14445483.26	39°46'34.2538"N	80°36'4.2021"W	6011.67	161.994	1.08	0.56	0.92	
15611.00	90.120	147.800	7107.66	5916.04	-5794.71	1906.06	1752521.83	14445405.80	39°46'33.4859"N	80°36'3.5954"W	6100.15	161.792	1.38	-0.55	-1.26	

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REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Charles Jamison MSH 206H
Field	Marshall	API/Legal	
Facility	Charles Jamison MSH Pad	Wellbore	Charles Jamison MSH 206H AWB
Slot	Slot 206H		

WELLPATH DATA (263 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]
15701.00	90.090	148.730	7107.49	6006.04	-5871.26	1953.40	1752569.15	14445329.29	39°46'32.7274"N	80°36'2.9935"W	6187.68	161.597	1.03	-0.03	1.03
15791.00	90.180	148.600	7107.28	6096.02	-5948.13	2000.20	1752615.94	14445252.45	39°46'31.9656"N	80°36'2.3984"W	6275.43	161.414	0.18	0.10	-0.14
15882.00	90.310	147.770	7106.89	6187.02	-6025.46	2048.18	1752663.89	14445175.15	39°46'31.1993"N	80°36'1.7884"W	6364.05	161.226	0.92	0.14	-0.91
15973.00	90.250	148.270	7106.45	6278.01	-6102.64	2096.37	1752712.07	14445097.99	39°46'30.4344"N	80°36'1.1756"W	6452.68	161.041	0.55	-0.07	0.55
16063.00	90.650	148.360	7105.74	6368.01	-6179.23	2143.64	1752759.32	14445021.44	39°46'29.6755"N	80°36'0.5745"W	6540.49	160.868	0.46	0.44	0.10
16153.00	90.370	148.380	7104.94	6457.99	-6255.86	2190.84	1752806.50	14444944.84	39°46'28.9161"N	80°35'59.9744"W	6628.39	160.699	0.31	-0.31	0.02
16243.00	90.550	148.120	7104.22	6547.99	-6332.38	2238.20	1752853.84	14444868.34	39°46'28.1577"N	80°35'59.3723"W	6716.29	160.534	0.35	0.20	-0.29
16333.00	90.220	149.540	7103.61	6637.96	-6409.39	2284.78	1752900.40	14444791.37	39°46'27.3947"N	80°35'58.7801"W	6804.44	160.380	1.62	-0.37	1.58
16423.00	90.370	148.440	7103.15	6727.94	-6486.52	2331.14	1752946.75	14444714.26	39°46'26.6303"N	80°35'58.1907"W	6892.69	160.232	1.23	0.17	-1.22
16514.00	90.370	149.190	7102.56	6818.92	-6564.37	2378.26	1752993.85	14444636.45	39°46'25.8589"N	80°35'57.5917"W	6981.91	160.085	0.82	0.00	0.82
16604.00	90.150	148.460	7102.15	6908.90	-6641.37	2424.85	1753040.42	14444559.48	39°46'25.0958"N	80°35'56.9994"W	7070.20	159.942	0.85	-0.24	-0.81
16694.00	90.150	149.720	7101.92	6998.87	-6718.59	2471.08	1753086.63	14444482.29	39°46'24.3307"N	80°35'56.4118"W	7158.61	159.807	1.40	0.00	1.40
16785.00	89.850	148.430	7101.92	7089.84	-6796.65	2517.85	1753133.38	14444404.26	39°46'23.5572"N	80°35'55.8173"W	7248.03	159.673	1.46	-0.33	-1.42
16876.00	89.940	148.590	7102.08	7180.83	-6874.25	2565.38	1753180.89	14444326.69	39°46'22.7882"N	80°35'55.2130"W	7337.33	159.535	0.20	0.10	0.18
16966.00	89.630	148.020	7102.42	7270.82	-6950.82	2612.66	1753228.16	14444250.14	39°46'22.0293"N	80°35'54.6118"W	7425.63	159.400	0.72	-0.34	-0.63
17057.00	89.750	148.130	7102.91	7361.82	-7028.06	2660.79	1753276.26	14444172.94	39°46'21.2639"N	80°35'53.9999"W	7514.88	159.264	0.18	0.13	0.12
17146.00	89.940	148.620	7103.15	7450.81	-7103.84	2707.45	1753322.91	14444097.19	39°46'20.5129"N	80°35'53.4066"W	7602.29	159.137	0.59	0.21	0.55
17236.00	90.060	148.770	7103.15	7540.80	-7180.74	2754.22	1753369.66	14444020.32	39°46'19.7509"N	80°35'52.8121"W	7690.82	159.015	0.21	0.13	0.17
17326.00	90.090	148.820	7103.04	7630.78	-7257.72	2800.85	1753416.27	14443943.37	39°46'18.9881"N	80°35'52.2194"W	7779.41	158.898	0.06	0.03	0.06
17417.00	89.970	149.290	7102.99	7721.76	-7335.76	2847.64	1753463.04	14443865.35	39°46'18.2147"N	80°35'51.6246"W	7869.08	158.785	0.53	-0.13	0.52
17507.00	89.750	147.550	7103.21	7811.74	-7412.43	2894.77	1753510.16	14443788.71	39°46'17.4549"N	80°35'51.0254"W	7957.63	158.668	1.95	-0.24	-1.93
17597.00	89.880	148.960	7103.50	7901.74	-7488.97	2942.12	1753557.49	14443712.21	39°46'16.6965"N	80°35'50.4234"W	8046.16	158.552	1.57	0.14	1.57
17688.00	90.030	148.550	7103.57	7992.72	-7566.77	2989.32	1753604.67	14443634.44	39°46'15.9255"N	80°35'49.8234"W	8135.85	158.443	0.48	0.16	-0.45
17778.00	89.820	147.980	7103.69	8082.72	-7643.31	3036.66	1753651.99	14443557.93	39°46'15.1669"N	80°35'49.2215"W	8224.45	158.332	0.67	-0.23	-0.63
17869.00	89.750	148.510	7104.03	8173.71	-7720.69	3084.55	1753699.86	14443480.58	39°46'14.4001"N	80°35'48.6127"W	8314.05	158.222	0.59	-0.08	0.58
17959.00	89.660	148.190	7104.49	8263.70	-7797.30	3131.78	1753747.07	14443403.99	39°46'13.6409"N	80°35'48.0123"W	8402.73	158.117	0.37	-0.10	-0.36
18050.00	89.850	148.340	7104.88	8354.70	-7874.70	3179.64	1753794.92	14443326.63	39°46'12.8739"N	80°35'47.4037"W	8492.41	158.012	0.27	0.21	0.16
18140.00	89.910	147.850	7105.07	8444.69	-7951.10	3227.21	1753842.46	14443250.26	39°46'12.1167"N	80°35'46.7990"W	8581.07	157.909	0.55	0.07	-0.54
18231.00	89.820	148.020	7105.29	8535.69	-8028.22	3275.52	1753890.76	14443173.17	39°46'11.3525"N	80°35'46.1848"W	8670.71	157.805	0.21	-0.10	0.19
18322.00	89.820	147.730	7105.57	8626.69	-8105.28	3323.91	1753939.13	14443096.13	39°46'10.5887"N	80°35'45.5695"W	8760.36	157.702	0.32	0.00	-0.32

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REFERENCE WELLPATH IDENTIFICATION				
Operator	SWN PRODUCTION COMPANY, LLC		Well	Charles Jamison MSH 206H
Field	Marshall		API/Legal	
Facility	Charles Jamison MSH Pad		Wellbore	Charles Jamison MSH 206H AWB
Slot	Slot 206H			

WELLPATH DATA (263 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]	
18412.00	90.000	148.270	7105.71	8716.69	-8181.61	3371.60	1753986.80	14443019.84	39°46'9.8323"N	80°35'44.9631"W	8849.09	157.604	0.63	0.20	0.60	
18503.00	90.060	148.840	7105.66	8807.68	-8259.24	3419.07	1754034.26	14442942.23	39°46'9.0629"N	80°35'44.3597"W	8938.97	157.512	0.63	0.07	0.63	
18594.00	89.820	148.410	7105.76	8898.67	-8336.94	3466.45	1754081.62	14442864.57	39°46'8.2930"N	80°35'43.7574"W	9028.89	157.423	0.54	-0.26	-0.47	
18684.00	89.080	148.400	7106.62	8988.65	-8413.59	3513.60	1754128.75	14442787.94	39°46'7.5333"N	80°35'43.1580"W	9117.78	157.334	0.82	-0.82	-0.01	
18774.00	89.170	147.670	7108.00	9078.64	-8489.93	3561.24	1754176.37	14442711.63	39°46'6.7767"N	80°35'42.5523"W	9206.60	157.244	0.82	0.10	-0.81	
18865.00	89.230	148.370	7109.27	9169.63	-8567.12	3609.43	1754224.54	14442634.48	39°46'6.0118"N	80°35'41.9397"W	9296.42	157.154	0.77	0.07	0.77	
18956.00	89.200	148.710	7110.52	9260.61	-8644.73	3656.92	1754272.01	14442556.89	39°46'5.2426"N	80°35'41.3360"W	9386.40	157.071	0.38	-0.03	0.37	
19046.00	89.290	148.500	7111.70	9350.59	-8721.55	3703.80	1754318.87	14442480.11	39°46'4.4814"N	80°35'40.7401"W	9475.42	156.990	0.25	0.10	-0.23	
19137.00	89.320	148.320	7112.81	9441.58	-8799.06	3751.47	1754366.52	14442402.63	39°46'3.7133"N	80°35'40.1342"W	9565.40	156.909	0.20	0.03	-0.20	
19227.00	89.170	147.950	7113.99	9531.57	-8875.49	3798.97	1754414.01	14442326.23	39°46'2.9568"N	80°35'39.5302"W	9654.35	156.828	0.44	-0.17	-0.41	
19318.00	89.200	148.520	7115.29	9622.55	-8952.85	3846.87	1754461.89	14442248.90	39°46'2.1891"N	80°35'38.9213"W	9744.33	156.748	0.63	0.03	0.63	
19409.00	88.920	148.280	7116.78	9713.53	-9030.35	3894.55	1754509.55	14442171.43	39°46'1.4211"N	80°35'38.3152"W	9834.36	156.671	0.41	-0.31	-0.26	
19499.00	89.110	148.190	7118.33	9803.52	-9106.85	3941.92	1754556.90	14442094.95	39°46'0.6629"N	80°35'37.7130"W	9923.38	156.595	0.23	0.21	-0.10	
19590.00	89.080	148.420	7119.76	9894.50	-9184.27	3989.73	1754604.69	14442017.56	39°45'59.8957"N	80°35'37.1053"W	10013.43	156.519	0.25	-0.03	0.25	
19680.00	89.170	148.980	7121.14	9984.47	-9261.16	4036.48	1754651.42	14441940.70	39°45'59.1337"N	80°35'36.5111"W	10102.59	156.450	0.63	0.10	0.62	
19771.00	89.200	149.110	7122.43	10075.44	-9339.20	4083.28	1754698.21	14441862.70	39°45'58.3604"N	80°35'35.9163"W	10192.83	156.384	0.15	0.03	0.14	
19862.00	89.110	148.080	7123.77	10166.42	-9416.85	4130.69	1754745.60	14441785.07	39°45'57.5908"N	80°35'35.3136"W	10282.99	156.315	1.14	-0.10	-1.13	
19952.00	89.230	148.290	7125.08	10256.40	-9493.32	4178.14	1754793.02	14441708.63	39°45'56.8330"N	80°35'34.7106"W	10372.08	156.245	0.27	0.13	0.23	
20042.00	89.230	148.400	7126.29	10346.39	-9569.93	4225.36	1754840.23	14441632.06	39°45'56.0738"N	80°35'34.1102"W	10461.22	156.177	0.12	0.00	0.12	
20133.00	89.230	147.910	7127.51	10437.38	-9647.22	4273.37	1754888.22	14441554.79	39°45'55.3078"N	80°35'33.4999"W	10551.33	156.108	0.54	0.00	-0.54	
20224.00	89.290	147.910	7128.69	10528.37	-9724.31	4321.71	1754936.55	14441477.73	39°45'54.5438"N	80°35'32.8854"W	10641.40	156.039	0.07	0.07	0.00	
20314.00	90.180	148.840	7129.10	10618.36	-9800.95	4368.90	1754983.72	14441401.13	39°45'53.7843"N	80°35'32.2855"W	10730.60	155.974	1.43	0.99	1.03	
20404.00	89.350	148.190	7129.47	10708.35	-9877.69	4415.91	1755030.70	14441324.41	39°45'53.0237"N	80°35'31.6881"W	10819.85	155.913	1.17	-0.92	-0.72	
20495.00	89.690	148.890	7130.23	10799.33	-9955.31	4463.40	1755078.18	14441246.82	39°45'52.2545"N	80°35'31.0845"W	10910.10	155.851	0.85	0.37	0.77	
20585.00	89.540	147.210	7130.84	10889.33	-10031.68	4511.02	1755125.78	14441170.49	39°45'51.4977"N	80°35'30.4791"W	10999.27	155.788	1.87	-0.17	-1.87	
20676.00	89.690	148.710	7131.45	10980.32	-10108.81	4559.30	1755174.04	14441093.38	39°45'50.7332"N	80°35'29.8654"W	11089.42	155.724	1.66	0.16	1.65	
20766.00	88.860	148.210	7132.59	11070.30	-10185.51	4606.37	1755221.09	14441016.71	39°45'49.9731"N	80°35'29.2671"W	11178.69	155.665	1.08	-0.92	-0.56	
20857.00	89.540	148.540	7133.86	11161.29	-10262.99	4654.08	1755268.79	14440939.27	39°45'49.2053"N	80°35'28.6606"W	11268.96	155.607	0.83	0.75	0.36	
20948.00	89.660	147.970	7134.49	11252.28	-10340.37	4701.96	1755316.64	14440861.91	39°45'48.4384"N	80°35'28.0521"W	11359.21	155.548	0.64	0.13	-0.63	
21038.00	90.060	148.630	7134.71	11342.27	-10416.94	4749.25	1755363.92	14440785.37	39°45'47.6795"N	80°35'27.4510"W	11448.50	155.491	0.85	0.44	0.73	

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REFERENCE WELLPATH IDENTIFICATION			
Operator	SWN PRODUCTION COMPANY, LLC	Well	Charles Jamison MSH 206H
Field	Marshall	API/Legal	
Facility	Charles Jamison MSH Pad	Wellbore	Charles Jamison MSH 206H AWB
Slot	Slot 206H		

WELLPATH DATA (263 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]	
21128.00	90.220	146.070	7134.49	11432.27	-10492.71	4797.80	1755412.45	14440709.63	39°45'46.9285"N	80°35'26.8337"W	11537.59	155.428	2.85	0.18	-2.84	
21219.00	88.250	144.370	7135.71	11523.17	-10567.44	4849.70	1755464.33	14440634.93	39°45'46.1876"N	80°35'26.1735"W	11627.14	155.348	2.86	-2.16	-1.87	
21310.00	88.430	142.250	7138.35	11613.86	-10640.38	4904.05	1755518.65	14440562.02	39°45'45.4644"N	80°35'25.4818"W	11716.12	155.255	2.34	0.20	-2.33	
21400.00	88.180	141.590	7141.01	11703.36	-10711.19	4959.53	1755574.12	14440491.23	39°45'44.7621"N	80°35'24.7755"W	11803.67	155.155	0.78	-0.28	-0.73	
21491.00	87.590	141.970	7144.29	11793.82	-10782.64	5015.79	1755630.36	14440419.82	39°45'44.0534"N	80°35'24.0592"W	11892.16	155.053	0.68	-0.54	0.42	
21582.00	88.000	142.410	7147.71	11884.34	-10854.48	5071.54	1755686.08	14440348.00	39°45'43.3409"N	80°35'23.3496"W	11980.83	154.957	0.59	0.34	0.48	
21673.00	89.080	143.640	7150.03	11975.01	-10927.16	5126.25	1755740.78	14440275.35	39°45'42.6202"N	80°35'22.6532"W	12069.85	154.867	1.80	1.19	1.35	
21766.00	88.340	142.970	7152.12	12067.71	-11001.71	5181.81	1755796.31	14440200.83	39°45'41.8810"N	80°35'21.9462"W	12160.95	154.780	1.07	-0.80	-0.72	
21859.00	88.250	143.080	7154.89	12160.36	-11075.97	5237.72	1755852.20	14440126.60	39°45'41.1445"N	80°35'21.2346"W	12251.97	154.691	0.15	-0.10	0.12	
21949.00	88.340	143.040	7157.57	12250.03	-11147.87	5291.79	1755906.24	14440054.72	39°45'40.4315"N	80°35'20.5465"W	12340.10	154.607	0.11	0.10	-0.04	
22042.00	88.220	142.740	7160.36	12342.67	-11222.00	5347.87	1755962.31	14439980.62	39°45'39.6963"N	80°35'19.8327"W	12431.14	154.520	0.35	-0.13	-0.32	
22134.00	88.310	142.800	7163.14	12434.29	-11295.22	5403.51	1756017.92	14439907.43	39°45'38.9702"N	80°35'19.1246"W	12521.18	154.434	0.12	0.10	0.07	
22227.00	88.150	144.520	7166.02	12527.01	-11370.10	5458.59	1756072.98	14439832.59	39°45'38.2277"N	80°35'18.4237"W	12612.51	154.355	1.86	-0.17	1.85	
22320.00	88.180	146.960	7168.99	12619.90	-11446.92	5510.92	1756125.29	14439755.80	39°45'37.4662"N	80°35'17.7582"W	12704.41	154.292	2.62	0.03	2.62	
22413.00	88.280	148.450	7171.87	12712.85	-11525.49	5560.58	1756174.93	14439677.25	39°45'36.6874"N	80°35'17.1269"W	12796.75	154.245	1.50	0.11	1.60	
22505.00	87.260	148.140	7175.45	12804.78	-11603.70	5608.89	1756223.22	14439599.07	39°45'35.9123"N	80°35'16.5129"W	12888.19	154.202	1.16	-1.11	-0.34	
22595.00	86.460	148.870	7180.38	12894.63	-11680.32	5655.84	1756270.15	14439522.48	39°45'35.1529"N	80°35'15.9162"W	12977.61	154.163	1.20	-0.89	0.81	
22688.00	86.550	148.690	7186.05	12987.44	-11759.71	5703.95	1756318.25	14439443.12	39°45'34.3662"N	80°35'15.3048"W	13070.04	154.125	0.22	0.10	-0.19	
22781.00	87.320	148.670	7191.02	13080.29	-11839.04	5752.23	1756366.50	14439363.82	39°45'33.5800"N	80°35'14.6914"W	13162.49	154.086	0.83	0.83	-0.02	
22874.00	87.350	148.420	7195.34	13173.18	-11918.29	5800.70	1756414.96	14439284.61	39°45'32.7946"N	80°35'14.0753"W	13254.95	154.048	0.27	0.03	-0.27	
22966.00	87.230	148.400	7199.69	13265.07	-11996.57	5848.84	1756463.08	14439206.36	39°45'32.0188"N	80°35'13.4635"W	13346.41	154.009	0.13	-0.13	-0.02	
23010.00	87.200	149.610	7201.83	13309.01	-12034.24	5871.47	1756485.70	14439168.70	39°45'31.6455"N	80°35'13.1760"W	13390.19	153.992	2.75	-0.07	2.75	
23035.00	87.200	149.610	7203.05	13333.96	-12055.78	5884.11	1756498.33	14439147.17	39°45'31.4320"N	80°35'13.0155"W	13415.09	153.984	0.00	0.00	0.00	

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REFERENCE WELLPATH IDENTIFICATION			
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Field	Marshall	API/Legal	
Facility	Charles Jamison MSH Pad	Wellbore	Charles Jamison MSH 206H AWB
Slot	Slot 206H		

HOLE & CASING SECTIONS - Ref Wellbore: Charles Jamison MSH 206H AWB Ref Wellpath: Charles Jamison MSH 206H AWP Proj: 23035'									
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	-0.08	0.04
17.5in Open Hole	100.00	443.00	343.00	100.00	442.99	-0.08	0.04	-1.54	1.11
13.375in Casing Surface	26.00	443.00	417.00	26.00	442.99	0.00	0.00	-1.54	1.11
12.25in Open Hole	443.00	2592.00	2149.00	442.99	2556.57	-1.54	1.11	125.45	-274.34
9.625in Casing Intermediate	26.00	2592.00	2566.00	26.00	2556.57	0.00	0.00	125.45	-274.34
8.75in Open Hole	2592.00	6608.00	4016.00	2556.57	6007.68	125.45	-274.34	1082.71	-2042.94
8.5in Open Hole	6608.00	23035.00	16427.00	6007.68	7203.05	1082.71	-2042.94	-12055.78	5884.11
5.5in Casing Production	26.00	23035.00	23009.00	26.00	7203.05	0.00	0.00	-12055.78	5884.11

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Charles Jamison MSH 206H LP Rev-5	7083.00	560.46	-2097.76	1748519.56	14451758.51	39°47'36.4647"N	80°36'54.5256"W	point
Charles Jamison MSH 206H BHL Rev-6	7420.25	-12054.83	5884.11	1756498.34	14439148.12	39°45'31.4415"N	80°35'13.0153"W	point

WELLPATH COMPOSITION - Ref Wellbore: Charles Jamison MSH 206H AWB Ref Wellpath: Charles Jamison MSH 206H AWP Proj: 23035'						
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date	
26.00	586.00	OWSG MWD rev2 + HRGM	01 Premier MWD <17 1/2"> (207'-586')	Charles Jamison MSH 206H AWB	3/12/2020	
586.00	2589.00	OWSG MWD rev2 + HRGM	02 Premier MWD <12 1/4"> (667'-2589')	Charles Jamison MSH 206H AWB	3/12/2020	
2589.00	6543.00	OWSG MWD rev2 + HRGM	03 Premier MWD <8 3/4"> (2700'-6543')	Charles Jamison MSH 206H AWB	3/12/2020	
6543.00	23035.00	BH AutoTrak Curve (2019) (Short spacing)	04 BH AT Curve <8 1/2"> (6661'-23010')	Charles Jamison MSH 206H AWB	3/12/2020	

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Slot	Slot 206H		

COMMENTS
Wellpath general comments API: 47-051-02295-0000 BH Job #: 110308799A Rig: SDC 46 Duration: 03/16/2020 - 03/20/2020

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